PLANNING BOARD

Tuesday, January 14, 2025 at 4:30 PM
Room 24 (Ground Level of City Hall) and Zoom

MEMBERS
Brandon Mazer, Chair
David Silk, Vice Chair
Justin Barker
Marpheen Chann
Sean Murphy
Austin Smith

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AGENDA:

WORKSHOP - 4:30 PM

i. Major Site Plan; 125 Thompson's Point Road; CPI Management, LLC and Forefront Partners I, LP, Co-Applicants. The Planning Board will hold a hybrid workshop to consider a proposal to develop a new six-story, 255-unit residential building with attached six-story structured parking for 463 vehicles, along with other associated improvements at 125 Thompson's Point Road. This development was contemplated in the Thompson's Point Master Development Plan. The subject property totals 4.67 acres and is zoned B-5 Urban Commercial. A project and plan summary are available for viewing on the city's CSS Portal (https://css.portlandmaine.gov/) by referencing Plan Number PL-003090-2024.

PUBLIC HEARING - 5:30 PM

1. ROLL CALL AND DECLARATION OF QUORUM

2. COMMUNICATION AND REPORTS

2024 Planning Board Yearly Accomplishments

3. REPORT OF ATTENDANCE AT THE MEETING HELD ON DECEMBER 10, 2024

Workshop
203 Fore Street: Barker, Mazer, Murphy, Smith, Chann, Silk and Stanley present.

Public Hearing
Planning Board Officer Elections: Barker, Mazer, Murphy, Smith, Chann, Silk and Stanley present.
19 Willis Street/33 Montreal Street: Barker, Mazer, Murphy, Smith, Chann, Silk and Stanley present.
Design Manual: Barker, Mazer, Murphy, Smith, Chann, Silk and Stanley present.
Technical Manual: Barker, Mazer, Murphy, Smith, Chann, and Stanley present. Silk absent.

4. REPORTS OF DECISIONS AT THE MEETING HELD ON DECEMBER 10, 2024

i. Planning Board Officer Elections; Barker motioned, and Stanley seconded a motion to elect Mazer as Chair. Vote 7-0.

ii. Remand of Level III Site Plan and Subdivision; 19 Willis Street/33 Montreal Street: 37 Montreal, LLC, Applicant. Barker motioned, and Chann seconded a motion to table the public hearing to a date certain of January 14, 2025, to allow staff time to provide additional materials to the Board related to the City of Portland Historic Preservation Advisory Review. Vote 7-0.

iii. Design Manual; City of Portland, Applicant. Barker motioned and Silk seconded the motion to find that the proposed changes to the City of Portland Design Manual are consistent with the requirement of Section 2.1.10.p in the City of Portland Land Use Code and approve the amendments as presented. Vote 7-0.

iv. Technical Manual; City of Portland, Applicant. Barker motioned and Stanley seconded the proposed revisions are consistent with the requirements of section 2.1.10.p in the City of Portland Land Use Code. Vote 6-0 (Silk absent).

5. NEW BUSINESS

i. Remand of Level III Site Plan and Subdivision; 19 Willis Street/33 Montreal Street; 37 Montreal, LLC, Applicant. The Planning Board will hold a hybrid public hearing to reconsider Application PL-000807-2019 in order to make additional findings of fact pursuant to orders from the Maine Supreme Judicial Court and Maine Superior Court related to height, setback, and design review requirements in connection with the approved application for a four-story, 12-unit residential building at 19 Willis Street. The development site is located within an R-6 zone. The application associated with the remand order, PL-000807-2019, was originally approved by the Planning Board at its December 14, 2021 meeting. Materials associated with this item will be posted to the City's Agenda Center the Friday before this public hearing.

ii. Major Site Plan; 331 Veranda Street; Martin's Point Health Care, Applicant. The Planning Board will hold a hybrid public hearing to consider a proposal by Martin's Point Health Care to redevelop existing Building 7 at their Veranda Street campus, located at 331 Veranda Street, and construct a new 50,586 square foot administrative office building with structured parking. The subject property totals 13.95 acres, and is located in the B-5 Urban Commercial zone, and the Shoreland zone. A project and plan summary are available for viewing on the city's CSS Portal (https://css.portlandmaine.gov/) by referencing Plan Number PL-002766-2023.

iii. Phased Major Site Plan and Conditional Use; 197 Oxford Street; Reveler Development and Avesta Housing Corporation d/b/a Avesta Oxford Street, LP, Co-Applicants. The Planning Board will hold a hybrid public hearing to consider a three-phased major site plan, which would involve the construction of an affordable housing development at 197 Oxford Street with 48 affordable and "housing first" residential units, a 24-unit market rate housing project at 50 Cedar Street, and a 24-unit market rate housing project at 158 Lancaster Street. The subject properties are located in the R-6 Residential Neighborhood, and together, total approximately 1.58 acres across a two-block area in the Bayside Neighborhood. A project and plan summary are available for viewing on the city's CSS Portal (https://css.portlandmaine.gov/) by referencing Plan Number PL-002885-2024 and CU-002904-2024.

To:	Chair Mazer & Members of the Planning Board
From:	Natasha Kypfer, Senior Planner
Date:	January 10, 2025
Re:	125 Thompson's Point Road
Project ID:	PL-003090-2024
CBL:	201 A005001
Meeting Date:	January 14, 2025

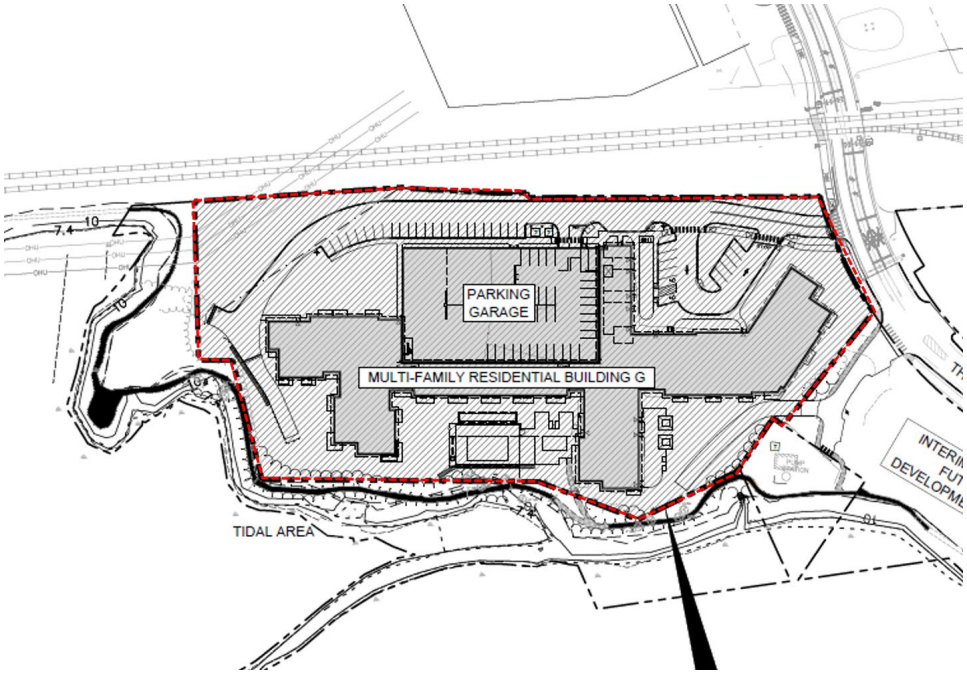


Figure 1: A snip of the proposed development site, outlined in red, from the Overall Campus Plan provided by the applicant (Plan 19).

I. INTRODUCTION

At the workshop on January 14, the Planning Board will review a major site plan application to facilitate the development of a new, six-story, 255-unit multi-family residential building with attached six-story structured parking for 463 vehicles, plus additional surface level parking for 35 vehicles on property located at 125 Thompson's Point Road. The development of a residential project in this location was originally envisioned as part of the Thompson's Point Master Plan, (Attachment 1). This first workshop is intended to guide the Planning Board through the original 2014 Master Development Plan approval, to provide background information relative to pending proceeding status, and to present findings from the City's first round of review, in order to assist in review of this Level III site plan.

The Planning and Urban Development Department mailed 55 notices advertising this meeting to property owners within 500 feet of the site. A legal advertisement ran in the January 2, 2025 and January 3, 2025 editions of the *Portland Press Herald*.

Owner: *Current:* Forefront Partners I, LP, Chris Thompson & Jed Troubh
Under Contract: CPI Management, LLC (Cathartes, Rob Simmons)

Applicant:	Placemaker Partners, LLC, Bo Kennedy, P.E.
Applicant Representatives:	Cathartes, Rob Simmons
	Embarc Designs, Robert Del Savio
	Carroll Associates, Patrick Carroll

II. REQUIRED REVIEWS

Review	Applicable Standards (as of 8/15/2013) *
Level III Site Plan Review	Section 14.526
* Approval of Master Development Plans confer pending proceeding status upon the development with the effect of maintaining the applicability of municipal regulations in effect at the time of approval for as long as the Master Development Plan approval remains valid, including permissible extensions. See attached memo dated June 30, 2023 (Attachment 2). Further, the complete Land Use Code, effective 8/15/2013 is included (Attachment 6).	

III. PROJECT DATA

Existing Zoning	B-5, Urban Commercial Mixed Use Zone
Property Size	4.67 ac.
Existing Use	Vacant Lot, used as surface parking overflow
Proposed Use	Multi-family Residential with Retail

IV. BACKGROUND AND EXISTING CONDITIONS



Figure 2: Aerial view of the proposed development site, with a red oval around the general site, from Google Maps.

The project site is located within the Thompson's Point campus, totaling ~32.67 acres, immediately adjacent to the Portland Transportation Center and located on a peninsula of land that extends along the banks of the Fore River. Positioned southwest of downtown Portland, Thompson's Point was previously an industrial site, bounded by railroad tracks to the north, and otherwise surrounded by water, with Interstate I-295 and U.S. Route 1 running to the east.

To date, the Thompson's Point campus now comprises multiple uses, including: a seasonal outdoor concert venue, adjoining the Depot Pavilion, that operates in collaboration with the State Theatre; Brick South, an event function hall; Halo at the Point, another event space; and, the Rink, a winter ice skating

locale, seasonally located within the Depot Pavilion. Other uses include the Children's Museum & Theatre of Maine, the International Cryptozoology Museum, craft breweries/distilleries and other food and beverage service uses. Portland Trails maintains the Thompson's Point Trail, formerly Fore River Trail, which is a gravel and boardwalk path running along the Fore River and rail tracks. Hotel Portland, a 148-room boutique brand hotel with restaurant and bar (Application # 2017-241), was originally approved by the Planning Board in July of 2018, and broke ground in late 2024. This project is expected to be completed in 2026.



Figure 3: A snip of the street view at 125 Thompson's Point Road, showing current conditions, from Google Maps

Brief History of Thompson's Point Campus Evolution

The vision for the Thompson's Point redevelopment was originally laid out in the Forefront at Thompson's Point Site Plan ("Forefront") application (Application # 2011-274), approved on June 5, 2012. These plans included the campus concept design with over 600,000 square feet of non-garage building space dedicated to event, hotel, office, and restaurant uses. Subsequently, a Master Development Plan (MDP) was sought, and approved by the Planning Board, which worked to establish a cohesive development program, allowing for multiple development phases over an extended timeframe. The MDP is detailed in the below section. Additionally, on January 12, 2016, the Planning Board approved a revised overall site plan and subdivision plan (Applications # 2015 133 and 2015-159) for a 19-lot subdivision of the Thompson's Point campus. In concert with this Site Plan application, Forefront is pursuing an amendment to Sectional 2 and 4 Subdivision Plat for review by the Planning Authority, which seeks to: consolidate Lots 17, 18, and 19 into a single development lot, the revised Lot 17 and split Lot 8 into two development lots, the revised Lots 8 and 18. As a result, Forefront's 19-lot subdivision will be reduced to 18 total lots, but the effective development area will remain the same.

Pending Proceeding Status

The MDP was approved by the Planning Board (Application # 2013-262), on March 11, 2014. Therefore, the approval of the MDP confers pending proceeding status upon the development with the effect of maintaining the applicability of municipal regulations in effect at the time of approval for as long as the MDP approval remains valid, including permissible extensions. Following its original approval, the MDP was extended twice, as noted in the February 14, 2020 (to March 11, 2022) and March 1, 2022 (to March 11, 2024) letters by the prior Planning and Urban Development Director (Attachment 1). Further, please see the attached memo dated June 30, 2023 (Attachment 2) detailing the project's pending proceeding status. The 255 residential units proposed with this development are proposed as market rate units. On October 19, 2015, the City Council adopted Inclusionary Zoning regulations which went into effect on

November 18, 2015 (Order 82-15/16). The Forefront's MDP was approved before the Inclusionary Zoning regulations were implemented and therefore is not subject to Portland's Inclusionary Zoning requirements.

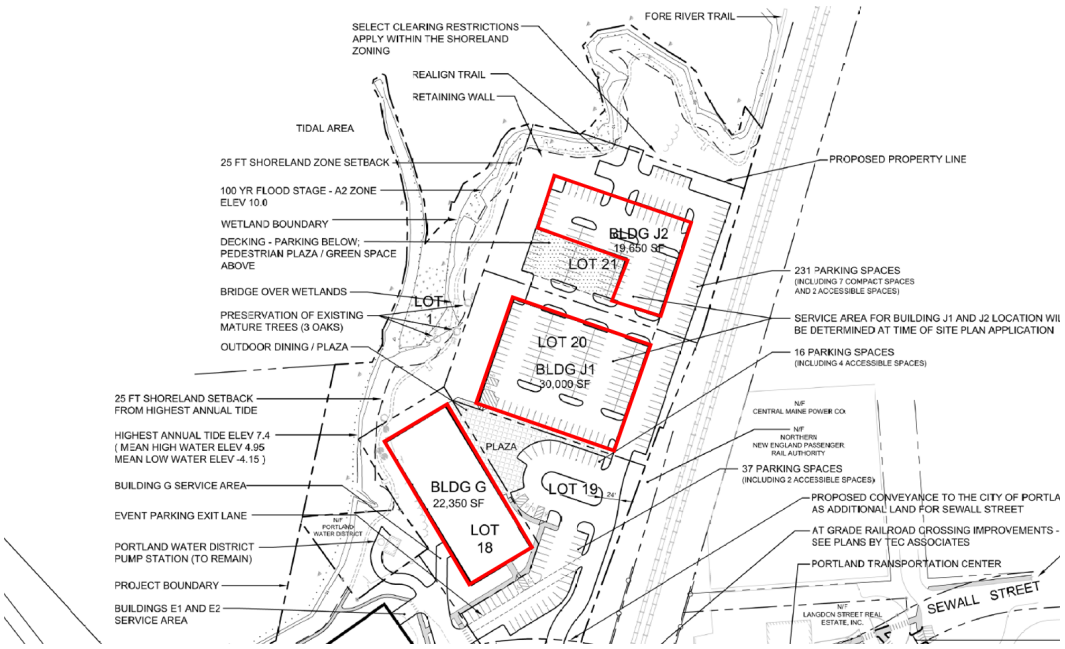


Figure 4: A snip of the original Master Plan, Application # 2013-262, with Buildings G, J1, and J2 highlighted (Attachment 1).

Prior MDP Approval

In March 2014, when the MDP was approved by the Planning Board, the site location as seen in Figure 4 above from their MDP Master Site Layout Plan (Plan 45), the site was originally envisioned as having three separate buildings, which the table below details based upon the MDP's proposed development program. Further, approximately 286 total parking spaces were proposed in conjunction with Buildings G, J1, and J2.

Building	Footprint (Square Feet)	Floor Area (Square Feet)	Height	Number of Units	Use
G	22,350	180, 000	9 floors	n/a	Office
J1	30,000	160,000	6 Floors	160	Condominiums
J2	19,650	196,500	TBD	160	Condominiums

MaineDOT Traffic Movement Permit (TMP) Approval

The full build out of the Thompson's Point campus site received a MaineDOT TMP back in 2012 (# Reg. 01-00155-A-N), for 734 trip ends during the AM peak hour and 1,091 trip ends during the PM peak hour. The TMP received an extension in 2024, to March 1, 2027. Further, a trip generation and parking demand summary was prepared by Gorrill Palmer on September 4, 2024, and revised December 10, 2024, for this application (Attachment J).

Other Applicable Permits

The applicant indicated they have submitted a Site Location of Development (SLOD) amendment to permit # L-13760 and NRPA permit, which is presently still under review by the Maine Department of Environmental Protection. Further, an Army Corps of Engineers General Permit application has also been submitted for the proposed fill of the two wetlands (8,618± square feet) on the project site.

V. PROPOSED DEVELOPMENT



Figure 5: A snip from the 3D Plan, showing a view of the drop-off court, provided by the applicant (Plan 9).

The proposed mixed-use development site (Plan 21) includes a six-story, 255-unit multi-family residential building with attached six-story structured parking for 463 vehicles, plus additional surface level parking for 35 vehicles located along the northern frontage. The residential portion of the building is proposed to total 50,208 square feet in footprint, and the adjoining parking garage is proposed to total 25,943 square feet in footprint. As seen below in Figure 5, programing for the site includes a drop-off parking and entry zone serving as the main entry point, and various amenities for residents including a pool, bocce court, multiple pergolas, and private trail connection to the existing public trail network.

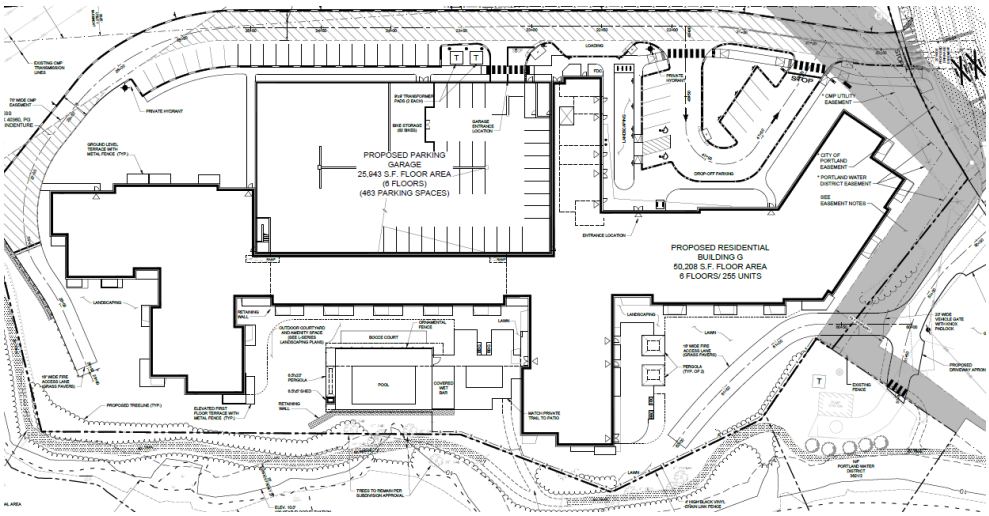


Figure 6: A snip from the Site Layout Plan, provided by the applicant (Plan 21) showing the building configuration.

VI. RIGHT, TITLE, AND INTEREST

The current owners of the property, Forefront Partners I, LP, are under contract in a Purchase and Sale Agreement with Cathartes, to purchase the subject property at Thompson's Point, as documented in a letter dated July 8, 2024 (Attachment D). Further, referenced in the City of Portland's assessing records is a deed recorded at the Cumberland County Registry of Deeds (Book 36502 Page 035) on February 14, 2020, as evidence of right, title, and interest in the property by Forefront Partners I, LP.

VII. FINANCIAL AND TECHNICAL CAPACITY

The applicant has submitted a letter from M&T Bank, dated July 24, 2024, as demonstration of their financial capacity to complete the proposed development (Attachment H). Accompanying this, the applicant included the technical capacity documentation which includes details on the following project partners and consultant team: Placemaker Partners, LLCs, Sebago Technics, Inc., Embarc Design, Carroll Associates, Summit Geoengineering Services, and Credere Associates, Inc. (also, Attachment H).

VIII. ZONING ANALYSIS

DIMENSIONAL AND USE REQUIREMENTS

A zoning review has been conducted on this application and this project meets the requirements of the B-5, Urban Commercial Zone based on Section 14-230.4 (LUC, 8-15-2013), see below.

	Required	Proposed
Lot Size	None	4.637 ac.
Frontage	None	139'
Front Setback	None	34'
Rear Setback	None	39'
Side Setback	None	10'
Structure Height (Max.)	120' *	68'
Lot Coverage (Max.)	100%	63 %
Off-Street Parking Spaces	None	498 (*463 garage, 35 surface spots*)
Bicycle Parking	None	102
* Order 119-13/14, effective 1/15/2014, provided an update to the B-5 dimensional requirements, increasing the maximum building height from sixty-five (65) feet for parcels of land located on Thompson's Point, and also subject to an approved Master Development Plan to: one hundred twenty (120) feet (Attachment 5).		

B-5 Urban Commercial Mixed Use Zone – Purpose Statement: *T*o provide zones in areas of the peninsula near the central business district where a mixture of uses, including marine, industrial, commercial, and residential, is encouraged. The B-5 and B-5b zones are characterized by larger underdeveloped lots with great potential for denser, clustered, urban mixed-use development and more efficient reuse of existing land and buildings. It is anticipated that such denser, mixed uses would rely on a shared infrastructure system, including service alleys, parking lots, public transportation facilities, stormwater management, and driveways.

The proposed uses of residential and commercial/retail are permitted uses within the B-5, Urban Commercial Mixed Use Zone, per Section 14-230.1 of the Land Use Code, 8-15-2013.

IX. PROJECT REVIEW

The proposed development has been reviewed by staff for conformance with the relevant review standards of the City of Portland's Site Plan Ordinance, Section 14.526 and Section 14.497. Staff will detail each site plan standard in detail at a future Planning Board meeting. However, following an initial development review round by City staff and the third-party reviewers, the following key topic areas standout to discuss with the Planning Board and the applicant team:

- Subdivision standards: The applicant shall submit a subdivision standards assessment, detailing the application's compliance with the review standards listed in Section 14.497.
- Construction timing: The applicant should be prepared to provide and discuss their projected project construction timing, due to the TMP expiration on March 1, 2027, which will be considered expired if construction of the project has not been completed by that date, or unless a modification is approved prior to that date (Attachment K).
- Emergency access: In the first round of project review comments (Attachment 3), City staff requested a feasibility analysis for establishing a fire lane from Hobart and Powsland Street that meets the standards of Section 3 of the Technical Manual. However, the applicant stated the suggestion is infeasible and further review was not warranted.
- TDM: The applicant shall update their campus-wide TDM plan.
- Floodplain management: Demonstrate compliance with the City's current floodplain requirements.
- Building design: In line with the first design review comments (Attachment 4) and the applicant's subsequent responses (Attachment X), City staff suggests:
    - Staff requests that the applicant prepare additional renderings to illustrate the parking garage as viewed from Thompson Point roadway and adjacent properties, particularly from the north side of existing railway tracks. Staff is concerned that the sloped parking decks at the structured garage are not properly screened as visible from the street and from adjacent properties. As outlined in the design review memo, dated October 18, 2024, Staff recommends additional architectural and/or landscape screening elements, such as perforated facade screening to reinforce a horizontal datum, vertical landscaping with vine-trellis systems or other appropriate vegetation.
    - Staff suggest greater ground-floor activation along building facades oriented towards the Thompson Point roadway. Staff recommends incorporating a pedestrian scaled entry for residents (potentially at the termination of the Level 1 corridor) to allow direct access from the sidewalk and more connectivity to the street. Alternatively, Staff suggests additional architectural articulation that orient the building towards the street with the incorporation of facade materials and organization of materials at a pedestrian scale found throughout the Thompson's Point development.

The review comments listed above are provided in more detail in staff's review letter dated November 6, 2024 (Attachment 3), and were based upon the applicant's original submission, dated September 30, 2024. The applicant resubmitted this application on December 24, 2024 in response to the City's initial review, and those materials are now included in this packet for consideration by the Board and the public. The City is still in the process of reviewing these updated materials, and will detail additional rounds of review in subsequent reports to the Board. Prior review comments that have clearly been addressed, are not included above.

X. NEIGBORHOOD MEETING AND PUBLIC COMMENT

As a requirement for this project, the applicant held a neighborhood meeting on October 16, 2024 at the *Halo at the Point* event space, wherein two members of the public attended (Attachment W), as well as members of the project team from Placemaker Partners, LLC, Cathartes, Carroll Associates, and Embarc Designs. Questions raised at the meeting were pertaining to: the height of the structured parking garage, visibility of the garage, whether the residential units would be condos or apartments, the mix of residential units, and the process in the event of a train crossing and EMS services are needed to access the site.

The Planning and Urban Development Department has received no public comment regarding this application at the time of publication of this memo.

XI. NEXT STEPS

- Address Board and Staff comments
- Schedule a subsequent Planning Board meeting

XII. ATTACHMENTS

Staff Attachments

1. Original MDP Plan, Approval Letter, Public Hearing Report, & Ext. Letters
2. PUD Memo: MDP Pending Proceeding, 6/30/2023
3. Project Review Comments – First Submission, 11/6/2024
4. Design Review Memo – First Submission, 10/28/2024
5. Order 119-13/14, Effective 1-15-2014
6. LUC Chapter 14, Effective 8/15/2013

Applicant's Documents

A. Cover Letter
B. Major Site Plan Checklist
C. Supporting Narrative
D. Right, Title, & Interest
E. Local, State, Federal, FAA & Historic Permits
F. Zoning Analysis Table
G. Conformity with Applicable Site and Zoning Standards
H. Financial and Technical Capacity
I. General Construction Management
J. Traffic and Parking Demand Summary
K. Traffic Supplemental Package
L. Supplemental Stormwater Memo, Multi-Family
M. Utility Correspondence
N. Fire Checklist, Multi-Family
O. Geotechnical Exploration Data
P. Letter of Authorization
Q. Easements
R. TDM, Multi-Family
S. Lighting Specifications
T. Building Site Photos
U. Trail Photos
V. Exterior Lighting Cut Sheets
W. Neighborhood Meeting, 10/16/2024

X. Comment Response Letter – Round 1, 12/24/2024

Plans

1. A1.1 – Ground Floor Plan, Level 1
2. A1.2 – Ground Floor Plan, Level 2
3. A1.3 – Ground Floor Plan, Level 3-6
4. A1.4 – Roof Plan
5. A1.7 – Site Line Studies of Rooftop Mechanical Equipment
6. A2.1 – South Elevations
7. A2.2 – East & West Elevations & Building Sections
8. A2.3 – North Elevation & Garage Section
9. A2.4 – Three-Dimensional Views
10. A2.5 – Building Materials
11. C1.0 – Cover Sheet
12. C1.2 – General Notes
13. C11.0 – Sanitary Sewer & Water Line Profiles
14. C12.0 – Panhandle Util Profile, SD 1
15. C12.1 – Panhandle Util Profile, SD 2
16. C12.2– Panhandle Util Profile, SD 3
17. C2.0 – Existing Conditions
18. C2.1 – Demolitions and Removals
19. C3.0 – Overall Campus Plan
20. C3.1A – Site Layout Plan w/o Easements
21. C3.1B – Site Layout Plan w/ Easements
22. C4.0 – Utility Plan
23. C5.0 – Grading Plan
24. C5.1 – Interim Overall SMP
25. C5.2 – SMP-1
26. C5.3 – SMP-2
27. C5.4 – SMP-3
28. C6.0 – Erosion Control and Construction Management Plan
29. C7.0 – Stormwater Details, Jellyfish Systems
30. C7.1 – Stormwater Details, Subsurface Storage
31. C7.2 – Stormwater Details, Filterra Units
32. C8.0 – Pavement and Sidewalk Details
33. C8.1 – Curbing and Sidewalk Details
34. C8.2 – Parking and Traffic Control Details
35. C8.3 – Stormwater Details
36. C8.4 – Stormwater & Sewer Details
37. C8.5.1 – ESC Details, 1
38. C8.5.2 – ESC Details, 2
39. C8.8 – Water & Gas Details
40. C8.9 – Typical Section
41. C9.0 – Fire Safety Plan
42. E.0 – Photometric Plan
43. L.100 – Landscape Plan
44. L.200 – Landscape Details
45. Master Site Layout
46. Master Site Layout Overlay
47. Subdivision Sectional, Plat 2
48. Subdivision Sectional, Plat 4

Att. 1

MASTER PLAN NOTES:

THIS MASTER PLAN IS SUBJECT TO CONDITIONS OF APPROVAL AS STATED IN THE PLANNING AUTHORITY LETTER OF APPROVAL DATED JUNE 5, 2012 AND JUNE 19, 2013

ZONING SPACE AND BULK SUMMARY

ZONE:	B-5 URBAN COMMERCIAL BUSINESS ZONE	
	REQUIREMENT	PROVIDED
MINIMUM LOT SIZE	NONE	SEE SUBDIVISION PLAN C-2.1
MINIMUM FRONTAGE	NONE	185.84
YARD DIMENSIONS		
FRONT SETBACK	NONE	N/A
SIDE SETBACK	NONE	N/A
REAR SETBACK	NONE	N/A
MAXIMUM LOT COVERAGE	100%	55% ±
MAXIMUM BUILDING HEIGHT	120 FT	120 FT

PARKING SUMMARY

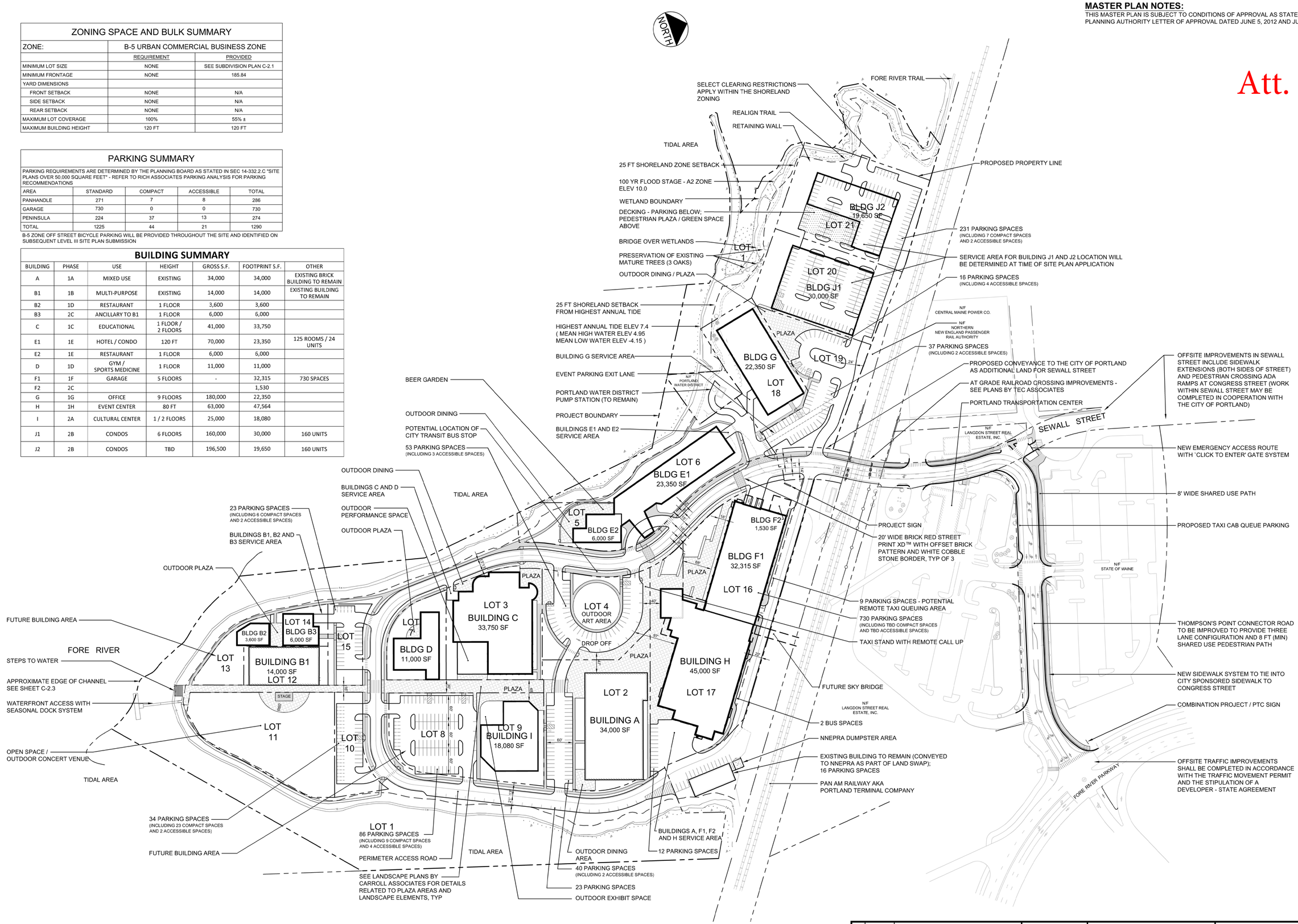
PARKING REQUIREMENTS ARE DETERMINED BY THE PLANNING BOARD AS STATED IN SEC 14-332.2.C "SITE PLANS OVER 50,000 SQUARE FEET" - REFER TO RICH ASSOCIATES PARKING ANALYSIS FOR PARKING RECOMMENDATIONS

AREA	STANDARD	COMPACT	ACCESSIBLE	TOTAL
PANHANDLE	271	7	8	286
GARAGE	730	0	0	730
PENINSULA	224	37	13	274
TOTAL	1225	44	21	1290

B-5 ZONE OFF STREET BICYCLE PARKING WILL BE PROVIDED THROUGHOUT THE SITE AND IDENTIFIED ON SUBSEQUENT LEVEL III SITE PLAN SUBMISSION

BUILDING SUMMARY

BUILDING	PHASE	USE	HEIGHT	GROSS S.F.	FOOTPRINT S.F.	OTHER
A	1A	MIXED USE	EXISTING	34,000	34,000	EXISTING BRICK BUILDING TO REMAIN
B1	1B	MULTI-PURPOSE	EXISTING	14,000	14,000	EXISTING BUILDING TO REMAIN
B2	1D	RESTAURANT	1 FLOOR	3,600	3,600	
B3	2C	ANCILLARY TO B1	1 FLOOR	6,000	6,000	
C	1C	EDUCATIONAL	1 FLOOR / 2 FLOORS	41,000	33,750	
E1	1E	HOTEL / CONDO	120 FT	70,000	23,350	125 ROOMS / 24 UNITS
E2	1E	RESTAURANT	1 FLOOR	6,000	6,000	
D	1D	GYM / SPORTS MEDICINE	1 FLOOR	11,000	11,000	
F1	1F	GARAGE	5 FLOORS	-	32,315	730 SPACES
F2	2C				1,530	
G	1G	OFFICE	9 FLOORS	180,000	22,350	
H	1H	EVENT CENTER	80 FT	63,000	47,564	
I	2A	CULTURAL CENTER	1 / 2 FLOORS	25,000	18,080	
J1	2B	CONDOS	6 FLOORS	160,000	30,000	160 UNITS
J2	2B	CONDOS	TBD	196,500	19,650	160 UNITS



REV	DATE	DESCRIPTION
3	03.04.14	UPDATED PROGRAM USE TABLE
2	01.23.14	REVISED PER CITY COMMENTS
1	11.26.13	SUBMITTED TO CITY FOR MASTER PLAN APPLICATION

REVISIONS

P.E. STEPHEN R. BUSHEY
LIC. #7429

PROJECT
THE FOREFRONT AT THOMPSON'S POINT

SHEET TITLE
MASTER PLAN

CLIENT
FOREFRONT PARTNERS I , LP

FAY, SPOFFORD & THORNDIKE, INC.
ENGINEERS · PLANNERS · SCIENTISTS
778 MAIN ST, SUITE 8, SOUTH PORTLAND, ME 04106

DRAWN:	DED	DATE:	OCT 2013
DESIGNED:	BEK	SCALE:	1" = 80'
CHECKED:	SRB	JOB NO.	2982.05
FILE NAME:	2982.05-SITE LAYOUT		
SHEET	C-3.00		

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CITY OF PORTLAND, MAINE

PLANNING BOARD

Stuart O'Brien, Chair
Timothy Dean, Vice Chair
Elizabeth Boepple
Sean Dundon
Bill Hall
Carol Morrissette
Jack Soley

March 12, 2014

Chris Thompson
Forefront Partners I, LP
55 Lisbon Street
Lewiston, ME 04240

Bo Kennedy
FST
778 Main Street, Suite 8
S. Portland, ME 04106

Project Name: Forefront at Thompson's Point – Master Development Plan
Project ID: 2013-262
CBL: 201-A-5
Applicant: Forefront Partners I, LP
Planner: Nell Donaldson

Dear Mr. Thompson:

On February 11 and March 11, 2014, the Planning Board considered your master development plan application for the Forefront at Thompson's Point. The Planning Board reviewed the proposal for conformance with the master development plan standards of the city's land use code, made findings that the proposal met the required standards and voted to approve the application with the conditions presented below.

MASTER PLAN

The Planning Board voted (6-0, Boepple abstained) that the proposed plans are in conformance with the master plan standards of the city's land use code, subject to the following conditions of approval, which must be met prior to subdivision approval, unless otherwise stated:

1. The applicant shall provide a summary of existing and/or proposed easements, covenants, public or private rights-of-way, or other burdens on the site, including the proposed easement to the Department of Public Services to use the private drive system for turn-around access and easements and conditions relating to public use of trails and open space on the site, for review and approval by the Department of Public Services and the Planning Authority;

2. The applicant shall provide evidence of water capacity from the Portland Water District, for review and approval by the Planning Authority;

3. The applicant shall provide evidence of sewer capacity from the Department of Public Services, for review and approval by the Planning Authority;

4. The applicant shall submit a revised report from a certified fire protection engineer describing evacuation procedures; add a note to the master development plan indicating that all buildings will include sprinkler and fire alarm systems, except for buildings determined by the Fire Prevention Bureau to be exempt from such regulations; and revise the event management plan to indicate that free and clear fire access will be maintained at all times during events, for review and approval by the city's Fire Prevention Bureau;

5. The off-site transportation-related improvements as heretofore required through prior approvals shall represent the off-site transportation-related improvements required for the master development plan and subsequent Level III subdivision and site plan review, so long as the existing Traffic Movement Permit applies; additional requirements for on-site transportation improvements shall be addressed through subdivision and site plan review.

The approval is based on the submitted plans and findings related to master development plan standards as contained in the Planning Board Report and Addendum for application 2013-262, which are attached.

STANDARD CONDITIONS OF APPROVAL & REQUIREMENTS
Please note the following standard conditions of approval and requirements for all approved master development plans:

1. **Separate Level III Subdivision/Site Plan Approvals Required** This approval establishes the general parameters to be adhered to for the development, including the supporting documentation for floor area ratio and/or residential density, general types of uses, building coverage, generalized open space plans and infrastructure systems. This master development plan approval shall not be construed as final authorization of the development. Approval shall confer pending proceeding status upon the development with the effect of maintaining the applicability of regulations in effect at the time of approval for as long as the master development plan approval remains valid, including permissible extensions if granted. Separate Level III subdivision and site plan approvals are required. Level III subdivision and site plans for each phase shall be in general conformance with the master development plan.

2. **Master Development Plan Amendments** A minor amendment to a master development Plan shall be defined as a change which is generally consistent with the approved master development plan layout of buildings, circulation infrastructure, and open spaces, and:

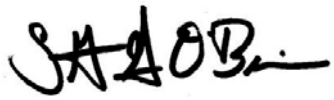
i. Does not propose any new general type of use beyond those approved initially;
ii. Does not increase the building ground coverage, floor area ratio or residential density of the Master Development Plan;
iii. Does not decrease any specified area regulations or enumerated parking ratios; and
iv. Does not substantially change access, circulation, or infrastructure on or adjacent to the site.

The Planning Authority shall be authorized to approve such minor amendments to a master development plan upon written application and explanation of the change(s) by the owner (or its agent) of the property. No further public hearings shall be required.

3. **Master Development Plan Expiration** An approved master development plan shall expire six (6) years from the date of approval unless, prior to the expiration of the master development plan, a written request for an extension is submitted to the Planning Authority. Only two (2) such extensions may be granted by the Planning Authority, and each such extension shall be limited to two (2) years from the date of expiration of the master development plan. The Planning Authority may grant an extension provided there have not been substantial changes to the underlying zoning or site plan standards since the date of the master development plan approval that would have a substantial impact on the approval. The Planning Authority may condition the extension on an amendment of the master development plan to comply with such applicable ordinance or site plan standard changes per *Section 14-532(d)* of the city's land use ordinance. Approved major or minor amendments to a master development plan do not alter the expiration date for the master development plan.

If there are any questions, please contact Nell Donaldson at (207) 874-8723.

Sincerely,



Stuart O'Brien, Chair
Portland Planning Board

Attachments:
1. Planning Board Report & Addendum

Electronic Distribution:
cc: Jeff Levine, Director of Planning and Urban Development
Alexander Jaegerman, Planning Division Director
Barbara Barhydt, Development Review Services Manager
Philip DiPierro, Development Review Coordinator, Planning
Marge Schmuckal, Zoning Administrator, Inspections Division
Tammy Munson, Inspection Division Director
Lannie Dobson, Administration, Inspections Division
Brad Saucier, Administration, Inspections Division
Michael Bobinsky, Public Services Director
Katherine Earley, Engineering Services Manager, Public Services
Bill Clark, Project Engineer, Public Services
David Margolis-Pineo, Deputy City Engineer, Public Services
Doug Roncarati, Stormwater Coordinator, Public Services
Greg Vining, Associate Engineer, Public Services
Michelle Sweeney, Associate Engineer

John Low, Associate Engineer, Public Services
Matt Doughty, Field Inspection Coordinator, Public Services
Mike Farmer, Project Engineer, Public Services
Jane Ward, Administration, Public Services
Jeff Tarling, City Arborist, Public Services
Captain Chris Pirone, Fire Department
Thomas Errico, P.E., TY Lin Associates
David Senus, P.E., Woodard and Curran
Rick Blackburn, Assessor's Department
Approval Letter File

Memorandum
Planning and Urban Development Department
Planning Division

To:	Stuart O'Brien, Chair, and Members of the Portland Planning Board
From:	Nell Donaldson, Planner
Date:	March 6, 2014
Re:	Addendum to 2/11/14 Board report, Thompson's Point Master Development Plan
Project #:	2013-262 **CBL:** 201 A 005001
Meeting Date:	March 11, 2014

I. INTRODUCTION

On February 11, 2014, the Planning Board held a final hearing on the master development plan for the Forefront at Thompson's Point. This plan, which had been reviewed by the board at a previous workshop held on January 28, 2014, represented a reiteration of a prior, approved subdivision for the site. As such, the application relied heavily on materials submitted as a product of earlier reviews. Due to time constraints, the Planning Board was not able to deliberate fully on the final master development plan during the February 11 hearing. However, several questions, mainly related to potential transportation impacts and the approach to the site's existing Traffic Movement Permit (TMP), the form and scale of the proposed buildings, and the process of managing future amendments to the master development plan, were raised. The board elected to table the plan and requested that the applicant consider these aspects of the project and return to the board at the next available hearing date on February 25. The applicant subsequently requested to be moved to the March 11 hearing, based on staff availability and a desire to develop additional supporting materials.

This addendum to the February 11 Planning Board report reviews additional materials submitted by the applicant and discusses items which were raised in the Board hearing or in the intervening time. On the basis of these materials and items, this addendum also presents a revised motion with updated conditions of approval.

II. REVISED SUBMITTALS

Following several meetings with planning staff, the applicant provided additional supporting materials to the Planning Division during the week of March 3. The materials included a revised trip generation analysis for the master development plan, intended to fit within the limits of the existing TMP, a revised parking analysis, additional renderings, and revised master plan graphics. These materials are discussed in detail below.

1. Revised Trip Generation Analysis

At the February 11 hearing, board members and members of the public raised a number of concerns regarding potential traffic and transportation impacts resulting from the project. Staff's report to the board, which referenced comments from Thomas Errico, consulting traffic engineer, provided brief overviews of the master plan's approach to transportation infrastructure; the existing Traffic Movement Permit (TMP), including off-site mitigation currently funded through the EDA grant and FHWA funding processes; the parking plan; the draft events management plan; and the draft transportation demand management plan *(Attachment 1)*. It should be reiterated that Mr. Errico expressed his satisfaction with the applicant's request to rely on the previously-developed events management and transportation demand management plans; Mr. Errico's comments note that these plans will be more fully vetted under subdivision and site plan review.

Existing Traffic Movement Permit (TMP)
As previously discussed, the applicant's plan relies heavily on the existing Traffic Movement Permit for the site, developed as a product of previous reviews. This permit, which was issued by the Maine Department of Transportation in June of 2012, includes a number of assumptions regarding uses *(Attachment 1, See J under 'Applicants' Submittals')*. Based on these assumptions, the TMP permits a certain number of AM and PM peak hour weekday trips (734 AM and 1,091 PM trips to be exact). It should be noted that the permit speaks to allowable trips and not to specific uses; modification of uses is permissible under the existing TMP so long as the program does not generate traffic exceeding the number of permitted AM and PM trips.

Based on the projected trip generation and the quantity of permitted trips, the TMP requires a substantial degree of on-site and off-site mitigation. This includes:

1. Overhead illumination for all entrances;
2. Widening of the Thompson's Point Connector Road to include an 8 ft. shared bike/pedestrian path; 3 ft. shoulders, two 11 ft. travel lanes, and one 11 ft. concrete flush median (which would transition to an exclusive outbound left-turn lane at the Fore River Parkway and be used as a reversible lane during events);
3. A provision that no concerts/sporting events be held between 4-7 pm Monday-Friday;
4. A provision that, during 'large' concerts/sporting events, flaggers and uniformed police officers be present to manage the reversible lane on the Thompson's Point Connector Road; help pedestrians cross at crosswalks, manage inbound and outbound buses at the Portland Transportation Center (PTC) entrance, assist PTC patrons leaving the PTC parking lot in merging with the outbound flow, and direct traffic at the Thompson's Point Connector Road/Fore River Parkway;
5. Improvements to the Fore River Parkway/Thompson's Point Connector Road/I-295 Exit 5A SB intersection, including the reconstruction of the southbound off-ramp to include a separate 13 ft. left turn lane and a 13 ft. through lane, the addition of a queue detector to pre-empt the signal as necessary, and the modification of signal phasing;
6. Improvements to the Fore River Parkway/Congress Street/I-295 Exit 5B intersection, including widening the southbound off-ramp to include two 12 ft. right-turn lanes, the installation of a queue detector to pre-empt the signal as necessary, modification of signal phasing, and the restriping of Congress Street westbound to lengthen the existing left-turn lane;
7. Improvements to the Congress Street/Stevens Avenue intersection, including restriping Stevens Avenue to create an exclusive left turn lane and a shared left-through-right lane, modification of signal phasing, and payment of an impact fee of $15,000 for inlaid thermoplastic paint skips, retro-reflective back plates, and overhead lane signage;
8. Payment of an impact fee of $15,000 for inlaid thermoplastic paint skips, retro-reflective back plates, and overhead lane signage at the Congress Street/Westbrook Street intersection;
9. Payment of an impact fee of $15,000 for inlaid thermoplastic paint skips, retro-reflective back plates, and overhead lane signage at the Congress Street/Frost Street intersection; and
10. A provision that transportation demand management strategies be used to offset additional traffic impacts.

The TMP also states explicitly that, if any supporting data changes, the applicant shall "request in writing from MaineDOT a decision of what impacts those changes will have on the permit. The applicant will then be required to submit those changes for review and approval and additional mitigation as a result of those changes may be required at the expense of the applicant."

In terms of history, it should be noted that staff's final report to the Planning Board on the original subdivision/Level III site plan for the project, published in June 2012, discussed the improvements required as a product of the TMP. The report did not raise significant issues related to the off-site

mitigation requirements.

It should also be noted that, as a product of the original planning process, additional off-site traffic investments are planned which will provide capacity that will benefit the Forefront at Thompson's Point. These investments include sidewalk improvements, trail connections, and lighting improvements.

As discussed in the February 11 Planning Board report, the applicant originally proposed a development program for the master plan that resulted in trip generation exceeding the existing TMP thresholds cited above. The applicant suggested a monitoring approach and, as necessary, modification of the TMP under site plan review at later phases of the project. The city's consulting traffic engineer, Tom Errico, generally agreed with this approach. However, he requested a letter from MDOT verifying their concurrence and suggested that monitoring occur at each phase of site plan review to ensure that trip generation thresholds not be exceeded. These recommendations were included in the February 11 Board report as conditions of approval.

Revised Trip Generation Analysis
Recognizing that, regardless of Mr. Errico's or MDOT's comfort with the approach to the TMP, the Board and public had concerns regarding modifications to the TMP at later stages of buildout, the applicant has chosen to submit supplemental materials which alter their development program and reassess their trip generation numbers in an effort to fit within the trip generation thresholds of the existing TMP. The applicant's revised trip generation analysis describes their approach (*Attachment B).*

In their revised analysis, the applicant has generally achieved a reduction in trip generation through three mechanisms: the modification of uses, reduction in occupancy, and the reassessment of projected trip generation numbers using revised trip generation ratios from the Institute of Traffic Engineers (ITE). Together, these have the effect of reducing the projected AM peak hour trip generation from 1,146 to 800 and the PM peak hour trip generation from 1,314 to 1,015. The trip generation changes include the following:

- In the original master plan submittal, Building B3 was proposed as a 6,000 SF restaurant generating 69 AM and 66 PM peak hour trips. In the applicant's revised trip generation analysis, the building's use has been changed such that it will be "ancillary to the Depot building and will not generate additional traffic" *(Attachment B)*. In conversation, the applicant has further explained that this building will serve as back-of-house operations for the performance space contained in the adjacent Depot. As such, no trips are estimated to be generated as a product of this building.
- In the original master plan submittal, Building C1, the Circus Conservatory of America, was estimated to generate 123 AM and 104 PM peak hour trips. These trip generation figures were based on ITE rates for community colleges using square footage as the independent variable. In the revised submittal, the applicant has recalculated trip generation figures using the ITE rate for community colleges, but basing the total on student population and staffing numbers rather than on square footage. This results in a decrease in trip generation to 25 AM and 21 PM trips.
- The original master plan submittal projected 70 AM peak hour trips as a product of Building E1, the hotel. In the revised trip generation analysis, this figure has been reduced to 54 using an ITE-based trip generation rate referenced in prior approvals.
- Under the original master plan application, the event center was proposed with an occupancy of 2,866 and projected to generate 115 AM and 224 PM peak hour trips. In the revised submittal, the occupancy has been reduced to 2,500, resulting in a decrease in trip generation to 100 AM and 195 PM peak hour trips.
- Lastly, in the original master plan submittal, Building J1 was proposed as a 160,000 SF office building. In the revised trip generation analysis, this building has been converted to 160 residential condominium units. Based on ITE ratios, this results in a decrease in AM peak hour

trips from 273 to 70 and in PM peak hour trips from 258 to 83.

It should be noted that the revised trip generation analysis also assumes a 100 trip "buffer" customarily provided by MDOT when considering TMP thresholds. While the revised cumulative PM trip generation figure stands well below the TMP threshold of 1,091 trips, the total AM trip generation figure of 800 actually exceeds the 734 trips permitted under the TMP. The buffer is needed in this case in order to accommodate these excess trips.

The applicant states in their revised trip generation analysis that "[t]he MaineDOT requires any development that exceeds their permitted trips by more than 99 trip ends in any peak hour to receive a permit modification. Since the proposed Master Plan does not exceed the 99 trip end threshold, a MaineDOT permit modification is not required. This was confirmed with MaineDOT" *(Attachment B).*

Tom Errico, consulting traffic engineer, has reviewed the revised trip generation analysis. He writes,

> *The applicant has revised the trip generation analysis to reflect the current development program and I concur with the methods used and the conclusions. Accordingly, the proposed project will comply with the MaineDOT Traffic Movement Permit (TMP) from a trip generation threshold perspective. In the issuance of a TMP, MaineDOT allows for a "buffer" of 100 trips above that noted in the Permit before a modified permit is required. As detailed by the applicant, the Project will generate less trips during the AM and PM peak hours when considering the buffer trips. I find the Master Plan to be in compliance with the TMP.*

NNEPRA/Portland Transportation Center Consultation
At the hearing on February 11, Board members raised questions regarding the involvement of Northern New England Passenger Rail Authority (NNEPRA) and the Portland Transportation Center in the planning of traffic mitigation measures. In terms of history, a stakeholder meeting was held in September of 2011, as the traffic movement permit was being developed, in order to discuss potential improvements and user conflicts on the Thompson's Point Connector Road and its surroundings. Representatives of NNEPRA, Concord Coach Lines (who owns the adjacent Portland Transportation Center), Amtrak, the city, and MDOT attended.

It should be noted that this meeting coincided with NNEPRA's *Portland Station Location Evaluation,* which considered future rail service in the context of several alternatives to the existing Portland Transportation Center site. The NNEPRA study, concluded in October of 2011, resulted in the decision to remain in the current location and invest in its improvement as a "thriving transportation hub." This decision was based, at least in part, on the "potential for increased transit connections, expansion and development associated with the Forefront project." NNEPRA's Executive Director, Patricia Quinn, has more recently indicated her organization's endorsement of the project as revised under the master plan, noting that the "project as proposed provides wonderful and exciting opportunities for the Downeaster, the City of Portland, and all of southeastern Maine" *(Attachment PC-1).*

In terms of coordination with the Portland Transportation Center, as mentioned during the February 11 hearing, the PTC contracted with Sebago Technics to conduct an independent assessment of the Thompson's Point traffic impact study during the initial subdivision and site plan review. The TMP was revised following the release of this report in an effort to accommodate concerns raised by the PTC.

Revised conditions of approval
Given Mr. Errico's review of the revised trip generation analysis, original conditions from the February 11 Board report that required written approval from MDOT regarding the TMP approach and traffic

monitoring are no longer germane. (It should be noted that compliance with the TMP will be assessed as the applicant proceeds through site plan review.) As such, these conditions of approval have been eliminated.

Further, at the applicant's request, staff has added a condition of approval related to the off-site transportation improvements required through the TMP and prior planning work, to which the applicant has made significant financial commitment. This condition is intended to define the off-site mitigation required so long as the existing TMP applies.

2. Revised Parking Analysis

The applicant's additional materials also include a revised parking analysis that recalculates peak parking demand *(Attachments C and D)*. In the original master plan submittal, the peak parking demand, represented by an average day with a live theater event after 5 PM, was estimated at 1,877 spaces. In the revised analysis, this figure has dropped to 1,822 spaces "as a result of [a] minor modification of the "outbuildings" near the old Union Station Depot outdoor event structure at the tip of the point (the removal of the second restaurant use and its consolidation with the proposed boathouse/café structure next to the "Depot")" *(Attachment C).*

Mr. Errico noted in his comments in the February 11 Board report that the peak parking demand exceeds the proposed parking supply at full buildout, 1,290 spaces. Even under the revised parking analysis, this remains the case. Mr. Errico stated previously that "during the site plan approval process the applicant will be required to demonstrate that adequate parking supply will be provided for the proposed uses" *(Attachment 1).* Again, this will remain the case. The applicant has indicated that they intend to use a combination of transportation demand management strategies, many of which are outlined in the transportation demand management plan, to accommodate peak parking demand without "over-building" parking infrastructure. It should be noted that the proposed parking supply is more than adequate to meet the projected demand on the average day without events. Mr. Errico has reviewed the revised parking analysis and writes,

> *I have reviewed the parking demand analysis and I find the method and estimates to be reasonable. I would note that the evaluation of parking supply adequacy will be conducted during each phase of the project. In general the project will provide sufficient parking for typical days and during large events a host of strategies will be employed that may include off-site parking with shuttle services. The on-going review will be linked to the TDM plan and Event Management Plan and will be adjusted as actual parking needs and management are better understood. Accordingly, I find the parking program under the Master Plan to be acceptable.*

3. Additional Renderings

At the February 11, 2014 hearing, Board members also raised questions regarding the design and massing of the proposed master plan, particularly as seen from the adjacent neighborhood to the north. In response, the applicant has provided renderings showing the site from residential streets across the railroad tracks *(Attachment E).* It should be noted that the applicant has also provided links to the walk-throughs shown at the February 11 hearing.

4. Revised Plans

In keeping with the changes to the development program as represented in the revised trip generation and parking analyses, the applicant has provided updated master plan graphics *(Plans 1 and 2).* The updated development program includes changes in uses for Buildings B3 (from restaurant to "ancillary") and J1 (from office to residential) and slight changes in the program for Building J2 (from 120 to160 residential units) and the event center (a decrease in occupancy). Altogether, these changes result in less commercial

square footage and more residential density. The increased emphasis on residential development advances the notion of the site as a transit-oriented development and in many ways allows for a more efficient use of the site overall. The revised development program is as follows:

Table 1: Forefront at Thompson's Point, Proposed Development Program

	Building	Height	Floor area	Footprint	Units	Rooms	Seats	Surface parking	Garage parking	Total parking
1A	Building A: Office, Café, Retail	Existing	34,000	34,000				71		*71*
1B	Building B1: Multi-Purpose (Live Theater)	Existing	14,000	14,000				436		*507*
	Boat Launch									
1C	Building C: Educational	1-2 Floors	41,000	33,750				(175)		*332*
1D	Building B2: Restaurant	1 Floor	3,600	3,600				(19)		*313*
	Building D: Gym & Medical Office	1 Floor	11,000	11,000						
	Portions of West Side Trail & Outdoor Stage									
1E	Building E1: Hotel & Condominiums	120 ft	70,000	23,350	24	125		144		*457*
	Building E2: Restaurant	1 Floor	6,000	6,000						
	Remainder of West Side Trail									
1F	Building F1: Parking Garage	5 Floors	161,575	32,315				15	730	*1,202*
	Building F2: Parking Garage		1,530	1,530						
1G	Building G: Office	9 Floors	180,000	22,350				58		*1,260*
1H	Building H: Event Center	80 ft	63,000	47,564			4,800	30		*1,290*
2A	Building I: Cultural Center	1-2 Floors	25,000	18,080						*1,290*
2B	Building J1: Condominiums	6 Floors	160,000	30,000	160			(78)	78	*1,290*
	Building J2: Condominiums	TBD	196,500	19,650	160			(48)	48	
2C	Building B3: Ancillary to B1	1 Floor	6,000	6,000						*1,290*
	TOTAL		***973,205***	***303,189***	***344***	***125***	***4,800***	***434***	***856***	***1,290***

III. ADDITIONAL DISCUSSION ITEMS & MODIFICATIONS TO CONDITIONS

In addition to the supplemental materials provided by the applicant, there are several discussion items which have emerged in the time since the February 11 hearing. All of these relate to the original conditions of approval from the February 11 Board report.

1. Trail and Open Space Access

Following the hearing, representatives of Portland Trails and the city's Department of Public Services raised questions regarding bike and pedestrian access along the northern edge of the site *(Attachment 3)*. The city's *Bicycle and Pedestrian Plan* and PACTS's *Regional Bicycle and Pedestrian Plan* identify the existing rail line in this location as an alignment for a future bike/pedestrian trail link, and Portland Trails and the city's Department of Public Services expressed a desire to identify this link in some capacity in the master plan. The link would serve a different purpose from the proposed perimeter trail, which has

always been a foundational element of the master plan; a bicycle/pedestrian way along the rail corridor, when combined with other bicycle and pedestrian links defined in regional long-range planning efforts, would provide a commutable alternative to Congress Street, with direct access from outlying neighborhoods to the peninsula.

In conversations following the correspondence with DPS and Portland Trails, the applicant stated clearly that a lack of space precludes the creation of a dedicated trail or bicycle lane paralleling the railroad tracks at the northern edge of the site. However, they also expressed a willingness, in concept, to create a bicycle/pedestrian way in some capacity, through pavement markings, signage, or other mechanisms, that would establish a more direct east-west route and link with the greater Portland Trails network. It is assumed that the details of this arrangement would be resolved under Level III site plan/subdivision review.

Also related to trails and open spaces, staff requested clarification from the applicant on the terms of public access to the perimeter trail, boat launch, and water on Thompson's Point. In conversation, the applicant stated explicitly that, as will be the case under the easement for the panhandle trail, the boat launch, water access, and perimeter trail will be accessible for public use through a license or other such agreement. That agreement would include provisions reserving the right of the applicant to limit public access at particular times (e.g. during events on site).

2. Fire

Staff has suggested a minor modification to the condition of approval relating to fire safety, based on conversations conducted with Chris Pirone of the Fire Prevention Bureau regarding the Depot building at the southern end of the peninsula. Captain Pirone has indicated that this building may not require a sprinkler, depending on its use. As such, staff has modified the condition of approval to state that all buildings will be sprinklered except as determined to be exempt by the Fire Prevention Bureau.

3. Phasing Plan

Lastly, staff was able to review the master phasing plan; as a result, the original condition of approval relating to this phasing plan has been eliminated.

IV. MASTER DEVELOPMENT PLAN AMENDMENTS

As noted in the February 11 report, the city's site plan ordinance includes language related to the procedure for processing master plan amendments (*Section 14-532(b)).* The ordinance defines "minor" amendments, or those that simply require administrative approval, as those which are "generally consistent" with the approved master plan layout, circulation, infrastructure, and open spaces. A minor amendment is qualified as a change which:

> *(i) Does not propose any new general type of use beyond those approved initially;*
> *(ii) Does not increase the building ground coverage, floor area ratio or residential density of the Master Development Plan;*
> *(iii) Does not decrease any specified area regulations or enumerated parking ratios; and*
> *(iv) Does not substantially change access, circulation, or infrastructure on or adjacent to the site.*

It is implied that changes which do not meet these conditions would require Planning Board review.

However, at the February 11 hearing, both board members and the applicant pressed for further clarification on thresholds triggering board review of future master plan changes. In internal discussions, as well as in discussions with the applicant, staff considered a series of thresholds, such as when an applicant proposes an increase in net square footage, a change of use, changes in trip generation, or

substantial changes in circulation or the location of buildings. On closer inspection, however, this list of potential additional thresholds was found to closely mirror the language of the existing ordinance. As such, no condition of approval related to amendments is suggested here.

V. STAFF RECOMMENDATION

Subject to the proposed motions and conditions of approval listed below, Planning Division staff recommends that the Planning Board approve the master development plan for the Forefront at Thompson's Point.

VI. PROPOSED MOTION – MASTER DEVELOPMENT PLAN

On the basis of the application, plans, reports and other information submitted by the applicant; findings and recommendations contained in the Planning Board report for the public hearing on February 11, 2014 and the addendum to said report for the public hearing on March 11, 2014 for application 2013-262 relevant to the master development plan regulations; and the testimony presented at the Planning Board hearing, the Planning Board finds that the plan **is/is not** in conformance with the master development plan standards of the land use code, subject to the following conditions of approval, which must be met prior to subdivision approval unless otherwise stated:

1. The applicant shall provide a summary of existing and/or proposed easements, covenants, public or private rights-of-way, or other burdens on the site, including the proposed easement to the Department of Public Services to use the private drive system for turn-around access and easements and conditions relating to public use of trails and open space on the site, for review and approval by the Department of Public Services and the Planning Authority;

2. The applicant shall provide evidence of water capacity from the Portland Water District, for review and approval by the Planning Authority;

3. The applicant shall provide evidence of sewer capacity from the Department of Public Services, for review and approval by the Planning Authority;

4. The applicant shall submit a revised report from a certified fire protection engineer describing evacuation procedures; add a note to the master development plan indicating that all buildings will include sprinkler and fire alarm systems, except for buildings determined by the Fire Prevention Bureau to be exempt from such regulations; and revise the event management plan to indicate that free and clear fire access will be maintained at all times during events, for review and approval by the city's Fire Prevention Bureau;

5. The off-site transportation-related improvements as heretofore required through prior approvals shall represent the off-site transportation-related improvements required for the master development plan, so long as the existing Traffic Movement Permit applies; additional requirements for on-site transportation improvements shall be addressed through subdivision and site plan review.

VII. ATTACHMENTS

PLANNING BOARD REPORT ATTACHMENTS

1. Planning Board report for hearing date 2/11/14
2. Traffic Engineer review (memo from Thomas Errico, 12/30/13)
3. Bicycle-Pedestrian Coordinator memo (memo from Bruce Hyman, 2/27/14)

APPLICANT'S SUBMITTALS

A. Cover letter (from Bo Kennedy, FST, Inc., dated 3/4/14)
B. Trip generation summary/methodology
C. Parking memorandum (from Chris Thompson, Forefront Partners, I, dated 3/1/14)
D. Parking summary
E. Renderings of panhandle

PUBLIC COMMENT

PC-1. Letter from Patricia Quinn, NNEPRA

PLANS

Plan 1 Revised Master Plan
Plan 2 Revised Master Plan

PLANNING BOARD REPORT
PORTLAND, MAINE

The Forefront at Thompson's Point, Portland, Maine
Master Development Plan
Application #2013-262
Thompson's Point Development Company, Inc., d/b/a Forefront Partners I, LP, Applicant

Submitted to: Portland Planning Board: Public Hearing Date: February 11, 2014 CBL: 201-A-5	Prepared by: Nell Donaldson, Planner Date: February 7, 2014

I. INTRODUCTION

The Thompson's Point Development Company, Inc, doing business as Forefront Partners I, LP, appears before the Planning Board for a final review of the proposed master development plan for the Forefront at Thompson's Point. The plans represent a final iteration of a preliminary application that was presented to the board at a workshop on January 28, 2014.

Thompson's Point consists of approximately 30 acres of land located adjacent to the Portland Transportation Center. The applicant's master development plan for the Forefront at Thompson's Point involves a mixed-use development including an event center, hotel, sports medicine facility, parking structure, educational facility, residential units, restaurants, and office uses.

The project is subject to master development plan review under *Section 14-524* of the city's ordinance. A total of 262 notices were sent to property owners within 500 feet of the site and a legal ad for the Planning Board hearing ran on February 3 and 4, 2014.

Applicant: Forefront Partners, I LP
Consultants: Stephen Bushey, FST, Inc; Owens McCullough, Sebago Technics; Bill Hopkins, Archetype

II. REQUIRED REVIEWS

Review	***Applicable Standards***
Master Development Plan	*Section 14-524(a)3c(iii)*
Site Location of Development Act	*Technical Manual Chapter 14 (to be completed at time of subdivision review)*

III. PROJECT DATA

Existing Zoning	B-5 Urban Mixed Use
Existing Use	Manufacturing, construction, and storage
Proposed Use	Mixed-Use/TOD
Parcel Size	32.67 acres

	Existing	*Proposed*	*Net Change*
Building Footprint	123,684 SF	303,189 SF	179,505 SF
Building Floor Area	123,684 SF	973,205 SF	849,521 SF
Impervious Surface Area	908,661 SF	761,430 SF	-147,231 SF
Parking Spaces	Undetermined	1,290	
Estimated Cost of Project	$100-110 million		

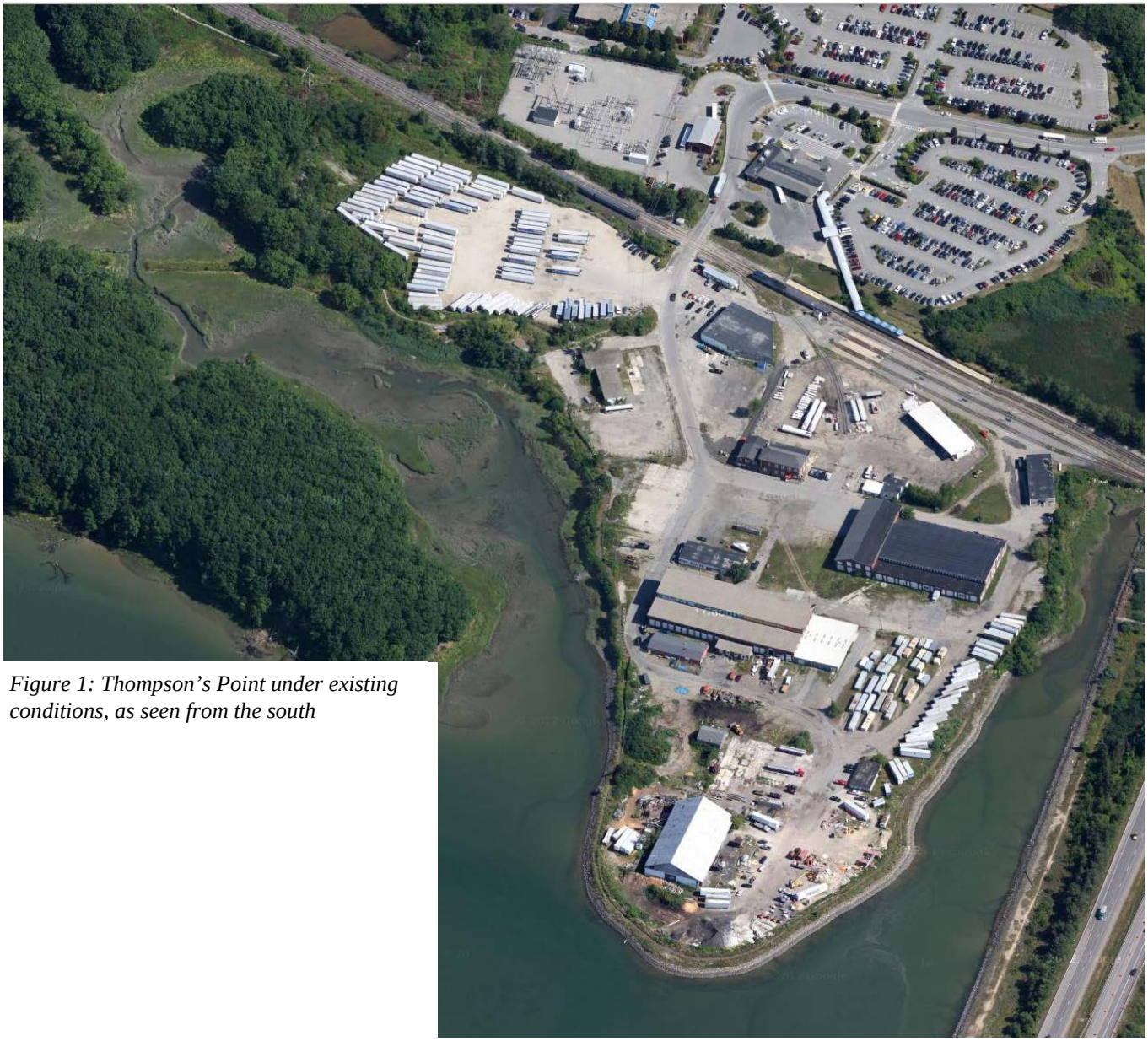


Figure 1: Thompson's Point under existing conditions, as seen from the south

IV. EXISTING CONDITIONS and BACKGROUND

Thompson's Point is a typical industrial site, bounded by railroad tracks to the north and the Fore River to the west, south, and east, and currently occupied by vacant buildings, semi-trailer box storage, and various other temporary uses *(Figure 1)*. The site does house an extension of the Fore River trail and some remnant natural areas on its western panhandle. It is a unique site in terms of its large size and its proximity to both the river and regional public transportation resources. It is zoned for urban commercial mixed-use development under the B-5 zone and is designated as a Tax Increment Financing (TIF) District.

The original plans for the Forefront at Thompson's Point, also submitted by the Thompson's Point Development Company, were approved on June 5, 2012. These plans included over 600,000 SF of non-garage building space dedicated to office, hotel, restaurant, and event center uses designed around a campus concept. In the spring of 2013, the proposed development program changed, and the applicant submitted reconfigured subdivision and site

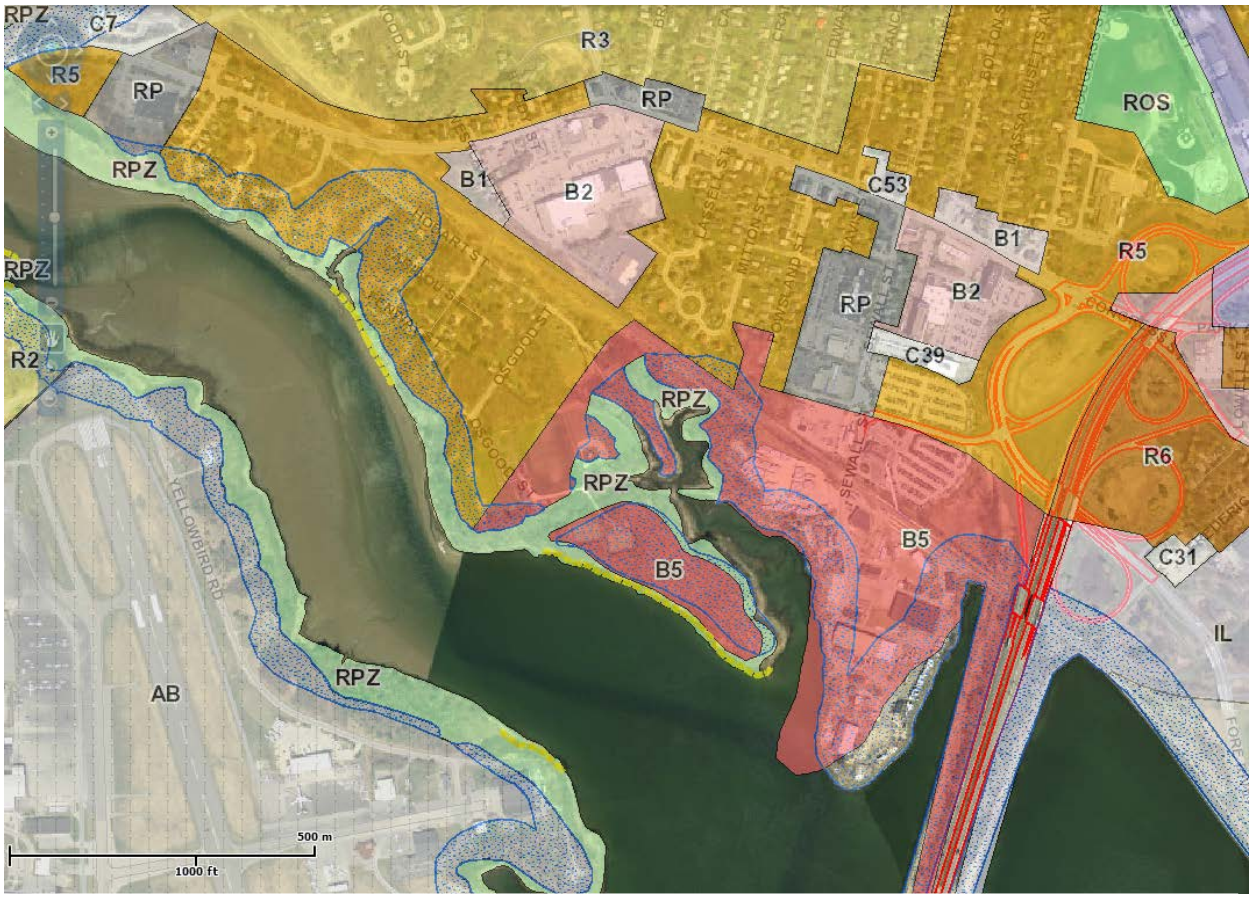


Figure 2: Thompson's Point, zoning context

plans designed to, among other things, retain existing rail-era brick buildings on the site. Amended subdivision and site plans, modified to include these buildings, were approved administratively on June 19, 2013.

In the time since these approvals, efforts to start work on off-site transportation-related improvements required through both MDOT Traffic Movement Permit (TMP) and city review processes has begun. These improvements are funded almost entirely by an EDA grant and include work to enhance bicycle and pedestrian connections, vehicular access to the adjacent highway and street networks, and the surrounding streetscape. The work is scheduled to begin in March 2014 and continue throughout the year.

V. PROPOSED DEVELOPMENT

In the time since the original approvals, the applicant has also engaged in negotiations to obtain purchase and sale agreements for two adjacent parcels critical to the development of the entire Thompson's Point peninsula. The recent acquisition of development rights to these parcels, owned by Suburban Propane and Northern New England Passenger Rail Authority (NNEPRA), has allowed the applicant to change its long-term vision for the site. In this vein, the applicant has submitted this new master development plan for the Forefront at Thompson's Point,. This plan encompasses many of the original programmatic elements of the approved subdivision. However, the physical design, affected by the additional acreage at the site's north end, is markedly different.

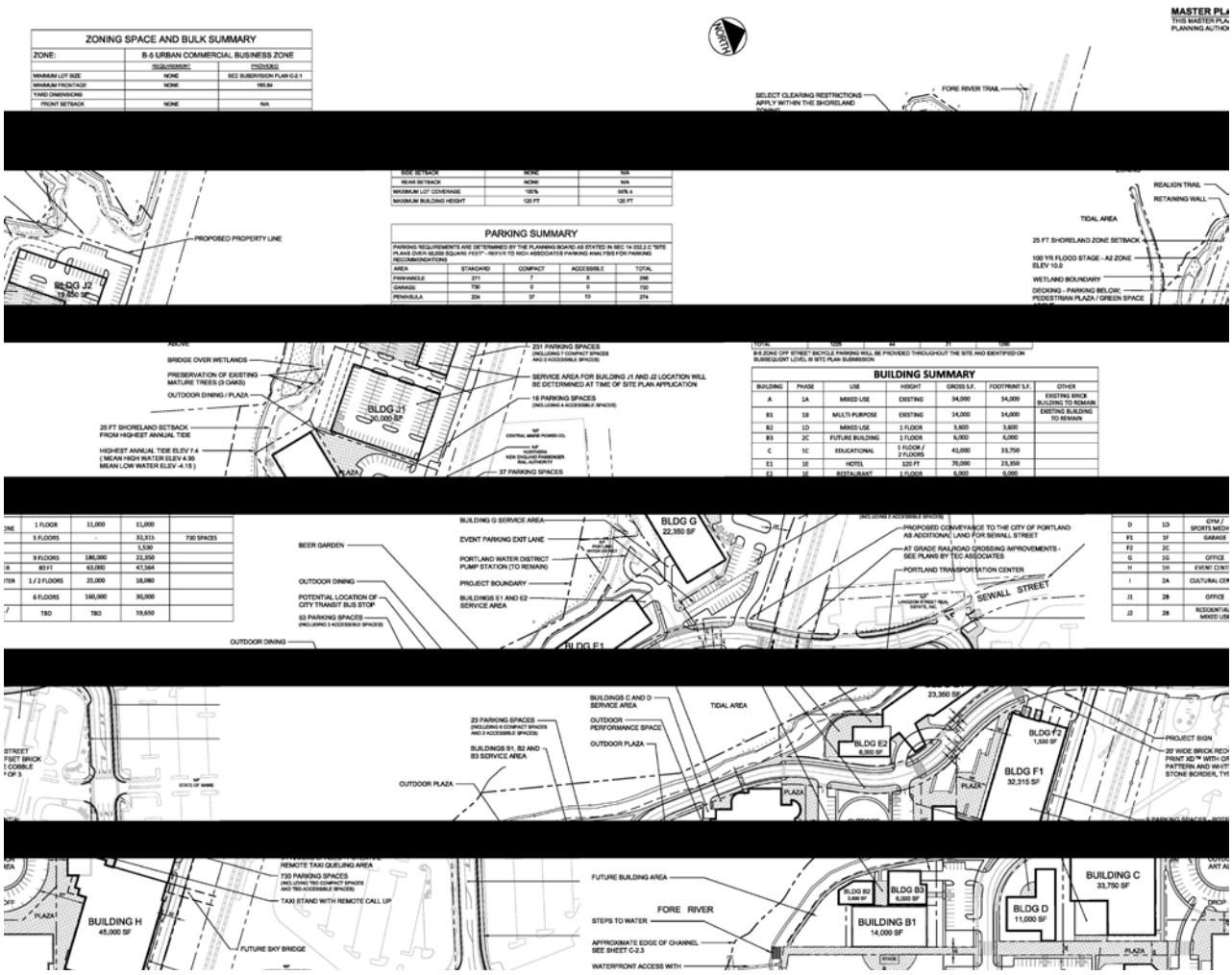


Figure 3: Revised Forefront at Thompson's Point master plan

The original Forefront at Thompson's Point plan demolished all existing structures and, as noted above, developed over 600,000 SF of non-garage square footage, comprised of institutional, office, restaurant, hotel, and event center uses. The centerpiece of the scheme was a 70,000 SF event center and concert hall. The plans included significant open space, surface parking, a perimeter trail, and public access to a shoreline boat launch. The amendments to these plans, approved in June of 2013, modified the plan to retain some of the existing buildings on site.

In the master development plan, much of this program remains. The applicant still envisions office, restaurant, educational/institutional, restaurant, hotel, event center, and garage space. The master development plan also includes live theater space, a post-secondary education complex, an 18,000 SF cultural center, and residential development. This 970,000 SF development program, by incorporating a more diverse mix of uses, including residential, advances the concept of the site as a transit-oriented development. The preliminary development program for the Forefront at Thompson's Point master plan is outlined in Table 1.

With the negotiations to acquire the Suburban Propane and NNEPRA sites and the decision to renovate four of the existing structures on the site under the master plan, the composition of the site has changed dramatically *(Figure 3)*. The master plan retains the trail surrounding the peninsula, but shortens the ring road. The development program is now organized around a stronger central core enclosed by the proposed event center and garage, a hotel and restaurant, the renovated Brick North building (to contain office, retail, and restaurant uses),

Table 1: Forefront at Thompson's Point, Proposed Development Program

Phase	Building	Height	Floor area	Footprint	Units	Rooms	Seats	Surface parking	Garage parking	Total parking
1A	Building A: Office, Café, Retail	Existing	34,000	34,000				71		*71*
1B	Building B1: Multi-Purpose (Live Theater)	Existing	14,000	14,000				436		*507*
	Boat Launch									
1C	Building C: Educational	1-2 Floors	41,000	33,750				(175)		*332*
1D	Building B2: Restaurant	1 Floor	3,600	3,600				(19)		*313*
	Building D: Gym & Medical Office	1 Floor	11,000	11,000						
	Portions of West Side Trail & Outdoor Stage									
1E	Building E1: Hotel & Condominiums	120 ft	70,000	23,350	24	125		144		*457*
	Building E2: Restaurant	1 Floor	6,000	6,000						
	Remainder of West Side Trail									
1F	Building F1: Parking Garage	5 Floors	161,575	32,315				15	730	*1,202*
	Building F2: Parking Garage		1,530	1,530						
1G	Building G: Office	9 Floors	180,000	22,350				58		*1,260*
1H	Building H: Event Center	80 ft	63,000	47,564			4,800	30		*1,290*
2A	Building I: Cultural Center	1-2 Floors	25,000	18,080						*1,290*
2B	Building J1: Office	6 Floors	160,000	30,000				(78)	78	*1,290*
	Building J2: Condominiums	TBD	196,500	19,650	120			(48)	48	
2C	Building B3: Restaurant	1 Floor	6,000	6,000						*1,290*
	TOTAL		***973,205***	***303,189***	***144***	***125***	***4,800***	***434***	***856***	***1,290***

the renovated Brick South building (to be occupied by the Circus Conservatory of America), the cultural center, and outdoor theater space/concert venue. Access from the Thompson's Point Connector Road is retained, and additional pedestrian access is provided via a sky bridge from the Portland Transportation Center.

This application is subject to master development plan review under *Section 14-524(a)3c(iii)* of the city's code. Following master development plan approval, the project will be reviewed under the city's subdivision and site plan ordinances. In addition to these municipal reviews, it should be noted that the original subdivision for the Forefront at Thompson's Point was reviewed under the state's Site Location of Development Act, for which the city had delegated review authority. Per correspondence with the Maine Department of Environmental Protection (MDEP), the city will remain the reviewing entity under the SLDA for the re-envisioned project considered here.

The original Forefront at Thompson's Point was also subject to the following state and federal permitting:

- U.S. Army Corps of Engineers General or Individual Permit (Wetland Impact)

- Natural Resources Protection Act (NRPA) Permit issued by Maine Department of Environmental Protection
- MDOT Traffic Movement Permit (issued by MDOT)
- MDEP Air Emissions License

The applicant has provided evidence of state and federal permits related to the approved subdivision plan *(Attachment J)*. In the final plan submission, the applicant has also provided a letter addressed to the Maine DEP outlining changes from the approved subdivision plan and the intent to comply with the conditions of the original NRPA permit *(Attachment L)*. Similar coordination with respect to other permitting entities will be required during subdivision review. Ultimately, evidence of new or updated permits, or documentation from reviewing entities regarding the applicability of the existing permits, will be required at the time of Level III subdivision and site plan review.

VI. PUBLIC COMMENT

The Planning Division has received no written comments from neighbors on the project. However, as noted in staff's prior workshop memo, the applicant has provided documentation from a neighborhood meeting held on December 23, 2013 *(Attachment J)*. The concerns expressed at this meeting generally focused on parking and traffic impacts, particularly during large events to be held on site. There was also some discussion of design and building height. These concerns were echoed during the board's workshop on January 28, 2014, where members of the public raised concerns regarding traffic impacts, event management, parking supply, trail access, and visual impacts from the abutting neighborhoods.

VII. RIGHT, TITLE, & INTEREST

The applicant has provided a deed demonstrating ownership of the original Thompson's Point site. In addition, the applicant has provided letters from Suburban Propane, Inc. and the Northern New England Passenger Rail Authority indicating that purchase and sale agreements have been signed for those adjacent parcels *(Attachment G)*.

VIII. FINANCIAL & TECHNICAL CAPACITY

The applicant has provided a copy of a letter from TD Bank attesting to the Thompson's Point Development Company's ability to complete the project and "see that it operates effectively over the long term" *(Attachment I)*.

IX. ZONING ANALYSIS

The Forefront at Thompson's Point lies in a B-5 zone, and is also subject to shoreland and floodplain regulations under the city's land use code. Marge Schmuckal, zoning administrator, has provided the following comments on the revised master plan:

> *I am under the realization that this review is only for a Master Plan and is not a site plan review. The applicant states that the team is working on an update to the acoustical study and compliance with B-5 Noise Performance Standards which will be forwarded upon completion. I will need that study during the Site Plan review stage.*
>
> *I have reviewed page C-3.00 where the HAT (Highest Annual Tide) for 2013 is denoted along with the 25 foot shoreland zone setback and the current 100 year flood elevation. All three of these meet the current Land Use Ordinance.*
>
> *The applicant mentions that they will comply with the Shoreland tree clearing certification as part of the Condition of Compliance. Again, I can confirm this regulation during the Site Plan Review process.*

In reference to off-street loading requirements, I will default the final review of this requirement, along with the other B-5 dimensional requirements during the Site Plan review application.

X. MASTER PLAN SUBMISSION REQUIREMENTS (*Section 14-527(e)*)

Section 14-527 of the city's site plan ordinance outlines master development plan submittal requirements. The applicant has generally met these requirements, including the submission of a digital 3D model of the development. In accordance with the submittal requirements, the city has requested a summary of existing and/or proposed easements, covenants, public or private rights-of-way, including the proposed easement to the Department of Public Services to use the private drive system for turn-around access and conditions relating to public use of trails and open space on the site, as requested under previous reviews. This has been included as a condition of approval.

XI. MASTER DEVELOPMENT PLAN STANDARDS (*Section 14-524(a)3.c(iii)*)

Section 14-524 of the city's land use code establishes standards under which master development plan applications must be reviewed. Per this section, master development plans must be:

a. A designated tract of land consisting of a parcel or parcels of contiguous land or land on both sides of a public street, totaling one (1) acre or more;
Altogether, the Thompson's Point site, when expanded to include the adjacent Suburban Propane and NNEPRA parcels, encompasses 32.67 acres.

b. Developed in a comprehensive, design-integrated manner, according to an overall master development plan;
The applicant has submitted a master plan for the Forefront at Thompson's Point which incorporates all major aspects of the site in a comprehensive manner.

c. Consistent with the objectives of this ordinance;
The application and development plan are generally consistent with the objectives of the city's ordinance, including the purpose of the B-5 zone, which is "to provide zones in areas of the peninsula near the central business district where a mixture of uses, including marine, industrial, commercial, and residential, is encouraged. The B-5 and B-5b zones are characterized by larger underdeveloped lots with great potential for denser, clustered, urban mixed use development and more efficient reuse of existing land and buildings. It is anticipated that such denser, mixed uses would rely on a shared infrastructure system, including service alleys, parking lots, public transportation facilities, stormwater management, and driveways."

d. Consistent with the City's Comprehensive Plan and consistent with City Council approved master plans and facility plans for off-premise infrastructure, including but not limited to, trails, pedestrian and bicycle network, view corridors, environmental management, sewer and stormwater, streets, or other facilities (see Section 15 of the Technical Manual);
The Forefront at Thompson's Point master plan is also generally consistent with the city's long-range transportation and economic planning work, including the following goals and policies from the comprehensive plan, among others:

- …Encourage sustainable development patterns and opportunities within the city by promoting efficient land use, conservation of natural resources, and easy access to public transportation, services, and public amenities (21);
- Create local multi-modal centers for the city's commuters and mass transit passengers, building on the presence of existing centers of activity, connected with each other and with regional transportation centers (24);
- Create a variety of job opportunities for the full spectrum of the labor pool which are appropriate to our current and potential skills, provide good pay and benefits, are rewarding/satisfying (37); and

- Encourage higher density housing for both rental and home ownership opportunities, particularly located near services, such as schools, businesses, institutions, employers, and public transportation (44).

e. Developed so as to locate buildings and improvements in a manner that provides usable open space, preserves significant natural features, as defined by the site plan ordinance standards, and preserves existing trees to the maximum extent possible;
As an industrial site, Thompson's Point is largely developed, with very few remaining natural features. Those natural features which do exist include emergent and existing wetlands and stands of trees along the westerly shoreline, at the far western end of panhandle, and along the northeastern shore. The Forefront at Thompson's Point master plan generally reorganizes the site in an efficient manner which allows for minimal wetland alteration, the preservation of some specimen trees, and the creation of significant new open spaces, both in hardscaped and landscaped areas.

In terms of landscape preservation, during the original approval process for the Forefront at Thompson's Point, the city arborist identified mature red oaks and a small stand of sapling white oaks meriting





Figures 4 & 5: Aerial view of the Forefront at Thompson's Point; rendering of the central 'quad area,' including the façade of the proposed event center

preservation in the western panhandle. In the revised submittal, these trees are shown on the master plan and referenced in the landscape narrative, where the applicant has stated that "several significant oak trees have been identified for preservation and all efforts will be made to protect the trees and provide adequate zones around them during construction" *(Attachment N)*. Notes have also been added to the master plan relating to clearing restrictions within the shoreland zone *(Plan 2)*. The applicant states in their narrative that "tree removal…will be certified by our forester to insure consistency with the Shoreland Zoning Vegetation Management requirements."

As noted previously, under the master plan, a central plaza, framed by the event center, renovated Brick North Building, and renovated Brick South building, forms the core element of the site's new open space network *(Figure 5)*. The plan links this plaza with a large, grassed open space area at the southern end of the peninsula, intended for outdoor concerts, via a tree-lined pedestrian walkway which runs the length of the peninsula's spine *(Figure 4)*. Exhibit, outdoor performance, and parking areas flank this corridor to the east and west. Additional, smaller hardscaped areas adjoin most of the site's proposed buildings. The applicant's landscape narrative emphasizes the use of native trees and shrubs, with a naturalized treatment at the perimeter of the site and more formal landscape design at the site's interior.

The plans also show a perimeter trail around the majority of the peninsula, much of which is proposed in the footprint of the existing trail. This path would link with the Fore River Trail and the Portland Trails network to the west. It would transition to sidewalk approximately one-third of the way up the eastern side of the peninsula.

Jeff Tarling, the city's arborist, has indicated his general approval of the master development plan. He writes,

> *The Thompson Point 'Landscape Master Plan' is a new look for many of the landscape treatment recommendations considered for this site in earlier renditions. Particularly important are guidelines for the shoreland zones and the upland parts of the site. 'Tree save' areas are shown for the Red Oak trees growing near the foot of the slope near building 'H' and Area 'A'.*
>
> *Overall, Thompson Point is a very visible and environmentally sensitive site with the location surrounded on three sides by the Fore River and Turning Basin. Creating a Master Plan will help guide future site work and the corresponding landscape treatment needed.*

f. Developed so as to be in conformance with Portland's Historic Preservation Ordinance standards for designated landmarks or for properties within designated historic districts or designated historic landscapes, if applicable. When proposed adjacent to or within one hundred (100) feet of designated landmarks, historic districts or historic landscapes, the Master Plan shall be developed so as to be generally compatible with the major character-defining elements of the landmark or portion of the district in the immediate vicinity of the proposed development;

The site is not located in a historic preservation district; nor is it adjacent to a designated landmark or designated historic landscape. However, the previous review for the Forefront at Thompson's Point included documentation from the Maine Historic Preservation Commission stating that the two existing brick buildings are likely eligible for designation under the National Register of Historic Places due to the lack of other existing early rail-era structures in the city. These are slated for redevelopment under the master plan. It should also be noted that the early 19th century Cumberland and Oxford Canal crossed the site; evidence of the channel and tow path remain visible in the western panhandle area. The previously-approved subdivision and site plans were deemed by the city to have no impact on these historical remnants. The applicant has noted their location and has stated that the master plan will, likewise, have no impact.

g. An efficient use of land which properly considers topography and protects significant natural features including, but not limited to, waterways, wetlands, floodplains and wildlife;
As noted above, the existing Thompson's Point site is largely developed with industrial buildings and associated paved and gravel areas. Generally, the proposed master plan respects the minimal natural features which do remain on the site.

The site is largely flat, with the exception of the northwestern panhandle, where there are several small bluffs and rocky outcroppings. These areas will require regrading under the proposed plans *(Plan 15)*. The panhandle buildings are proposed with a retaining wall.

The site is adjacent to the Fore River and its tidal flats, and as a result, the site houses fresh and saltwater wetlands on its perimeter. As with the original subdivision and site plan applications for the Forefront at Thompson's Point, the master plan proposes minimal activity in these areas, namely a seasonal dock at the southern end of the peninsula in the location of coastal wetlands and several drainage outfalls which coincide with freshwater wetlands in the panhandle area. The applicant has noted that the location and size of the seasonal dock slated for the southern end of the peninsula may change as subsequent subdivision and site plans evolve. All of these plan elements were previously reviewed under the National Resources Protection Act (NRPA) by the Maine Department of Environmental Protection (MDEP) as a product of the prior plans. As noted above, the applicant has provided a letter to MDEP generally stating their intent to comply with the conditions of the previous permit *(Attachment L)*. The original Thompson's Point approval also involved a permit from the Army Corps of Engineers regarding wetland impacts. As previously stated, the applicant will be required to provide evidence of updated permits, or the continued applicability of the previous ones, during Level III subdivision and site plan review.

During the original approval, the Maine Department of Inland Fisheries & Wildlife (MDIFW) reviewed the plans under NRPA and found that the mudflats and riparian zones below the highest annual tide (HAT) line on the western and eastern shorelines qualify as significant migratory shorebird feeding and roosting areas, respectively. This finding resulted in changes to the original plan for the site, including the selection of alternative plantings for shoreline areas to enhance screening between the shore and proposed trail yet minimize the potential for increased predatory activity. The applicant has identified these areas in the revised submittal, and, again, has reiterated the intent to comply with the conditions of the previous permit.

h. An efficient use of land demonstrating full coordination of its own site development and surrounding context including, but not limited to, the land uses and functions contemplated, architecture, open space and pedestrian networks, vehicular access and circulation, and all other infrastructure;
As noted above, in the Forefront at Thompson's Point master plan, the applicant has redesigned the Thompson's Point site to adaptively reuse existing buildings, increase densities in the panhandle area, and introduce a more balanced mix of uses, including residential development. These changes allow for a more efficient use of the site in general, and further the concept of the site as a transit-oriented development. The plans show development clustered at the northern end of the peninsula, with open space as an organizing concept linking the more developed portions of the site with the dominant open space feature at the southern end of the site and the shore. Circulation networks and infrastructure plans have been reviewed and have not elicited major concerns from staff *(Plans 15-19)*.

i. Linked and coordinated with surrounding land uses, infrastructure and off-site public facilities, including but not limited to the public school system, where appropriate, in a manner that is safe, efficient, non-injurious to the public, and an improvement or benefit to the public where possible; and
j. Designed with sizing of street and other infrastructure systems to accommodate the overall service demand of the Master Plan;
As noted during prior review processes, the Thompson's Point site both suffers and benefits from its isolated geography as a peninsula "across the tracks" and on the banks of the Fore River. Because of its isolation, the site essentially serves as its own neighborhood. Efforts have been made to coordinate uses with those surrounding the peninsula – the access to the regional transportation system lends itself to use for regional destinations such as the event center, theater, or higher education facility; the proposed medical and hotel uses integrate well with the neighboring medical office and hotel node immediately adjacent; and the residential use, though certainly different in scale and form, echoes residential uses found to the north. The master plan integrates open space uses in a manner that retains access from the greater neighborhood and provides for connections to regional open space, particularly to the west.

Circulation & Parking System
The site generally has limited vehicular access, although its proximity to a major interstate connection is an asset. The master development plan benefits from prior transportation planning work completed during the original site plan and subdivision review. This work resulted in funding for transportation-related improvements on the Thompson's Point Connector Road, Fore River Parkway, Sewall Street, and Congress Street. These improvements are intended to provide the capacity to handle trips to and from the site via all modes, and, as noted above, are slated for completion in 2014-2015. Likewise, the master plan benefits from developed events management and transportation demand management (TDM) plans created and vetted during prior review processes.

Generally, the site benefits from good transit, pedestrian, and bicycle access. Thompson's Point is located adjacent to the city's Transportation Center, including its local bus, intercity bus, intercity rail, and taxi service. As noted previously, the site also benefits from a high degree of trail connectivity.

The applicant has provided a trip generation and parking analysis, including trip generation calculations, and a revised master circulation plan in the final submittal *(Attachment M and Plan 19)*. The proposal continues to rely on one vehicular access point via the Thompson's Point Connector Road from Fore River Parkway. This three-lane connector road crosses the existing Portland Terminal Company railroad line at grade and, once past the proposed garage entrance, continues as a private two-lane, two-way perimeter road that circumnavigates the peninsula. Access to almost all of the site's buildings is provided via this ring road, with a subsidiary loop providing a connection to the western panhandle. A vehicular way is also provided through the center of the site.

Pedestrian access is proposed via sidewalk from both Sewall Street and the Fore River Parkway via the Thompson's Point Connector Road. (Note that while Sewall Street is a dead-end street with no vehicular access to the Thompson's Point Connector Road or the site, pedestrian, bike, and emergency vehicle access is proposed via a path and emergency gate.) Under the master development plan, the site would also be accessible via pedestrian or bicycle from the existing Portland Trails network to the west. The master plan depicts a skybridge to the Portland Transportation Center, which would ultimately provide a second major pedestrian access point to the north. It should be noted that the original approvals for the project included sidewalk connection on only one side of the Thompson's Point Connector Road across the Portland Terminal Company right-of-way. A waiver was granted for this condition. During prior review processes, staff also identified the need for additional pedestrian signal improvements at the Thompson's Point Connector Road/Fore River Parkway. These plan elements will be considered under

subdivision and site plan review. Generally, Tom Errico, the city's consulting engineer, has stated that he finds the master plan acceptable from a transportation perspective. He writes,

> *In general I find the Master Plan layout to be acceptable with the following comments that can be addressed during the site plan review process (a detailed review of site plan elements has not been conducted and so this should not be considered an approval of the site plan):*
>
> - *I believe the pedestrian crossing from the main entry roadway into the event center area (building H) needs special considerations.*
> - *A sidewalk connection from the back side of parking garage to the main roadway should be included.*
> - *I am concerned about the number of driveways that intersect the main circulation road in the vicinity of the hotel and parking garage.*
> - *The on-street parking spaces on the circulatory roadway do not have access to a sidewalk and will not work well for passengers entering and exiting vehicles.*

As noted in staff's prior memo to the board, the applicant has found that trip generation under the master plan exceeds thresholds from the existing Traffic Movement Permit (TMP), issued for the original site plan/subdivision by the Maine Department of Transportation (MDOT) *(Attachment J)*. The applicant has asked for master plan approval under the existing TMP, with a follow-up traffic analysis to be conducted after the completion of Phase I of the master plan, as the site is expected to approach approved trip generation levels. This analysis would assess actual trip generation and compare it against the TMP-approved trip generation levels. Pending the results of this study and projections for the remainder of the site, additional mitigation would be required. The city has requested a letter from MDOT verifying that they find this approach acceptable. The applicant has provided documentation requesting this letter *(Attachment P)* and has stated that MDOT has verbally agreed to this approach. Of the trip generation estimates and TMP, Tom Errico, the city's consulting traffic engineer, writes,

> *I have reviewed the updated traffic generation estimate conducted by the applicant and I generally concur with their findings. As noted the project is anticipated to exceed the trip threshold established by the current Traffic Movement Permit (TMP) and therefore modification to the TMP will be required in the future. I am comfortable with this approach, but would like to see documentation from MaineDOT supporting this approach. It is my suggestion that during each Site Plan approval phase, the applicant shall submit trip generation information that documents current trip generation levels (through both field monitoring and standard ITE trip generation methods), trip generation estimates for the Phase under consideration, and how the project complies with the TMP. I would note that the TMP is flexible on land use implementation and is relevant as it relates to trip levels during the peak hours of consideration.*

Conditions of approval related to MDOT's acceptance of the TMP approach, as well as Mr. Errico's request for trip generation estimates during Level III subdivision and site plan review, have been suggested.

Vehicular parking is proposed throughout the site, with a total of 1,290 spaces (approximately 856 garage spaces and 434 surface) at full buildout. Most of the proposed surface parking is located at the exterior of the site in double-loaded parking areas. Interior spaces are proposed in the event center garage and under residential and office buildings on the western panhandle. All of the garage parking is proposed for later phases of the project. The applicant's parking analysis calculates peak parking demand under each phase

of development, as well as peak cumulative parking demand at full buildout. It should be noted that the peak cumulative parking demand exceeds the proposed parking supply. Of this, Mr. Errico writes,

> *The application materials indicate that a total parking supply of 1290 parking spaces will be provided during full build-out of the project. According to the parking analysis conducted by Gorrill-Palmer, a parking demand of 1699 parking spaces is estimated during the weekday typical time period and 1877 parking spaces are estimated during evening event conditions. Accordingly, an insufficient parking supply will be provided under full build conditions. During the Site Plan approval process the applicant will be required to display that adequate parking supply will be provided for the proposed uses.*

The revised submittal includes the previous TDM plan, dated September 2011 *(Attachment J).* The TDM plan describes a scheme centered around the creation of what is functionally a transportation management association for the entire peninsula, which would coordinate the various entities on the site in a set of shared transportation demand management strategies designed to maximize the use of adjacent transit infrastructure, increase transit opportunities, reduce peak hour vehicle trip impacts, reduce parking demand, and encourage healthier transportation options. Proposed TDM-related strategies include the promotion of carpooling and car-sharing, the addition of express bus service, and the provision of shuttle service during peak events. This TDM plan will be fully reviewed at the time of Level III subdivision and site plan review. Mr. Errico notes,

> *The applicant has provided the TDM Plan that was developed in 2011 and approved as part of the original approval. In concept I find the TDM Plan to be acceptable but want to emphasize the importance of the measures included in the Plan and how the traffic study and parking analyses assume some level of TDM success. The applicant will be required to update the TDM Plan at the next Site Plan review stage to reflect the proposed implementation schedule (including what specific strategies are being implemented, implementation dates, and specific monitoring activities).*

The applicant has also provided an updated events management plan in the revised submittal *(Attachment O).* This plan restricts events to weekdays after 7 pm or weekends. The plan also includes various strategies, in conceptual form, which are designed to facilitate the movement of large numbers of visitors to and from the site. These include the use of a reversible lane on the Thompson's Point Connector Road, police officers to direct traffic at the Thompson's Point Connector Road/Fore River Parkway, traffic control personnel throughout the site (including the parking garage), and directional signage. As with the TDM plan, it is anticipated that this event management plan will be more fully vetted under subdivision and site plan review.

> *The applicant has provided a general approach to managing event traffic volumes as part of the Master Plan. I would note that a detailed traffic management plan was developed in conjunction with the original application and that plan should continue to be used (if the applicant suggests deviating from the Plan, those details should be provided). I would note that the Traffic Management Plan is a live plan and will be reviewed and adjusted over time as conditions in the area are monitored.*

It should be noted that the applicant has submitted documentation requesting that special events occur on the site during the coming summer. It is assumed that the applicant may not have completed subdivision or site plan review under the master development plan by that time. Of this, Mr. Errico writes,

> *It is my understanding that some events may occur during the summer of 2014 and those events will be permitted through the City Special Event Permit process. I would note that the applicant*

would be required to provide details on traffic management and parking under a scenario where the full EDA off-site traffic improvements are not in place. DPS would review the details of the traffic and parking analysis at the time of the requested permit and approval of the details is not issued as part of the Master Plan.

Master development plan approval should not be construed as approval for these special events.

During the initial review, the city raised concerns regarding pedestrian connections from the Connector Road to the panhandle trails. This concern was voiced previously by Portland Trails, which has noted the potential for through trail traffic coming from the Fore River Trail to the west and the Fore River Parkway pedestrian accommodations to the east. In the revised master plan, the applicant has added a pedestrian connection to the panhandle trail immediately north of Building E1.

John Peverada, the city's parking manager, has repeatedly stressed the need for taxi accommodations in the master development plan. The applicant has indicated in the revised master plan that a taxi queuing area may be provided on the inbound side of the loop road to the north of the event center garage. An additional taxi stand is shown in the circle directly in front of the event center.

Water
Regarding water infrastructure, an existing 12" water main terminates at a fire line supply meter pit at the end of the Sewall Street extension. Per their master utility plan and their utility analysis, the applicant intends to extend 8"+ water onto the site from this main, providing both domestic and fire protection service *(Attachment E and Plan 17)*. The applicant has requested an updated capacity letter from the Portland Water District (PWD). This has not yet been received, and has thus been included as a condition of approval. City staff has not identified areas of major concern with respect to water service provision.

Sewer
As with the original plans for the site, the applicant proposes to connect sanitary sewer services into the PWD pump station directly adjacent to the property. The PWD has previously provided a capacity letter indicating the ability to accept the project's sanitary sewer discharge. An updated letter has not yet been received by the city; as such, it has been included as a condition of approval. At the request of the Department of Public Services, the prior approval also included a condition relating to revised wastewater flow projections and the potential need for upgrades to the PWD pump station. It is assumed that this condition will be addressed during subdivision review. David Margolis-Pineo, of the city's Department of Public Services, adds,

The City expects, as originally proposed, that all sources of inflow into the sanitary sewers on Thompson Point be eliminated as build out of the Thompsons Point Master Plan progresses. Also that all abandoned laterals connected to the sanitary system be sealed at the sewer main.

The applicant has stated in their final narrative that they concur with this approach *(Attachment A)*.

Gas & Electric
In their master utility plan and utility analysis, the applicant shows new gas service extending onto the site from Sewall Street/Thompson's Point Connector Road and underground electric from an existing pole on the southwestern side of the railroad tracks. Public Services has indicated no concerns with this arrangement as proposed.

Stormwater

The applicant has provided a master grading and drainage plan which shows preliminary contour lines *(Plan 15)*. In addition, in the revised submittal, they have included a stormwater schematic which illustrates, in more detail, potential storage and water quality treatments proposed for each of the various stormwater management zones of the site *(Plan 16)*. This diagram includes notes relating the intent to comply with city and MDEP water quality treatment standards, as requested by David Senus, consulting civil engineer, during the preliminary review. Mr. Senus has indicated his satisfaction with the revisions as submitted *(Attachment 5).*

Fire
The applicant has provided an updated fire safety compliance plan showing hydrant locations and fire vehicle turning radii on the proposed master plan layout *(Plan 18).* In addition, the applicant has submitted an assessment from a certified fire protection engineer *(Attachment O)*. Captain Chris Pirone, of the city's Fire Prevention Bureau, has reviewed the submittal and offers the following comments,

> *I am comfortable with the FPE's analysis regarding the issues he addressed in his report, which focused on water supply, hydrants and access roads.*
>
> *However, as requested in the most recent Thompson's Point meeting with their Team, I requested that the FPE report needed to analyze the evacuation procedures from the buildings once outside the buildings and where there staging areas would be.*
>
> *I encourage them to have the FPE contact me to discuss this process which then will need to be added to his report.*
>
> *Lastly, as a reminder, when Fire Chief LaMontagne gave the approval for the single access road the condition he placed on the development was that all buildings would need to have sprinkler and fire alarm systems even if codes did not require them. He also required and approved the event management plan that would always allow free and clear access into the point; basically an emergency access lane which would be maintained by event staff.*

A condition of approval relating to these comments has been suggested.

Schools
Lastly, the plan includes 144 residential units in high-density, high-rise settings. Both of the buildings intended for residential use appear on the western panhandle of the site. While these units may ultimately house families with school-age children, the applicant has stated that they expect "minimal impact on the city's public school system" *(Attachment C).* Any students from the development would likely attend Ocean Avenue Elementary and King Middle Schools.

k. Designed to create a street grid pattern that reflects average city block sizes of the neighborhood for street connectivity;
The master plan, which is proposed with private streets, is not organized around a traditional grid pattern *(Figure 2)*. In this way, it differs from those neighborhoods immediately to the north, which house long rectilinear blocks with limited connectivity. Instead, the project adheres to a campus-like concept, with a central 'quad' created by the hotel, existing Brick South building (slated for use as the Circus Conservatory of America), the Brick North building (slated for mixed use), and the garage and event center. Internal circulation patterns allow vehicles and pedestrians to cut through this quad or to circumnavigate the peninsula. A short loop is also provided to the panhandle area. As described above, vehicular access to the site as a whole, however, remains solely via the single access point at the





Figures 6 & 7: Aerial view of the Forefront at Thompson's Point from the north (above) and southeast, looking over the central open space feature (below)

Thompson's Point Connector Road. Pedestrian and bicycle connectivity is slightly higher, with access via the skybridge and trail, as well as the Thompson's Point Connector Road.

l. Designed as to create a cohesive identity through building scale, massing, and articulation; use of quality exterior materials, architectural detailing at pedestrian scale; consistency of design and materials for streetscape and pedestrian amenities; framing of outdoor open space and linkages; a clear conveyance of the function and significance of various buildings, entrances, and features; and to generally comply with design and development standards of the zone in which it is located;
The drawings for the Forefront at Thompson's Point master plan depict an overall scheme for the site which incorporates existing and new buildings, single-story industrial architecture with high-rise residential/hotel and event center/garage design, and significant open space *(Figures 4-7 and Attachment D)*. The applicant uses several tools to make the site cohere, namely consistent streetscape and landscaping, integrated plaza spaces, integrated design taking cues from the existing brick buildings slated for adaptive reuse, and a logical pattern of form and massing which announces entry and a clear progression onto the site.

The city's site plan standards state that projects "in the…B-5 zone…shall be designed to support the development of dense, mixed use neighborhoods with attractive, safe, and convenient street level pedestrian environments as demonstrated by compliance with all applicable design standards listed in the Design Manual." The B-5 design standards provide guidance related to building and parking lot siting. Generally, these standards are oriented toward more urban environments; many of the design standards reference proximity and orientation toward the street. Given the campus-like concept employed here, where an urban street grid is not used as an organizing concept, many of the standards don't apply. It should be noted that the applicant has generally oriented buildings towards the central spine of the site, with parking toward the perimeter, and has organized the site in an effort to create a dense and mixed-use neighborhood, in keeping with the spirit of the design standards.

m. Inclusive of provisions for the ownership and maintenance of usable open space as appropriate; and
Per the preliminary submittal, the open space slated for the Forefront at Thompson's Point is proposed on both independent and common lots. In the revised submittal, the applicant has stated that open space will be "owned and managed by the applicant's professional property management company. The trail area (easement to the city) will be maintained by Portland Trails; however the ownership and control of access is [to be] managed by the applicant. The boat launch and water access [will be] privately owned but he public [will be] encouraged to use the facilities within the rules established by the owner" *(Attachment X).* It is assumed that further details regarding ownership and maintenance of open space will be addressed under subdivision review.

n. For areas proposed as future development phase(s), the proposed interim conditions shall be managed and maintained to ensure stable, safe and attractive site conditions.
In the final submittal, the applicant has continued to provide a phasing plan consisting of two phases with 11 sub-phases. However, the applicant has also provided a master plan graphic which shows four simplified "sections" which may be used for future subdivision recording purposes *(Plan 22).* It is assumed that, under each of the eventual proposed sections, multiple site plan reviews would occur for distinct buildings which might come online at any time. Given the timing of this submittal, the city has not had an opportunity to fully review this sectional recording/phasing plan. As such, its review has been included as a condition of approval. It should be noted that, while this plan is labeled as a "subdivision plan," approval of the master development plan here should not be construed as approval of the subdivision.

XII. SITE LOCATION OF DEVELOPMENT ACT

As previously noted, under the prior subdivision and site plan review a site law permit was approved for the Forefront at Thompson's Point under the city's delegated review authority. The MDEP has granted the city the authority to continue delegated review of the Forefront at Thompson's Point under state site law. Chapter 14 of the city's *Technical Manual* enumerates standards for local site location of development review. All of these, including the standards regarding financial and technical capacity, traffic movement, and the protection of natural resources, echo master plan, subdivision, and site plan standards outlined in the city's land use ordinance. The applicant has stated their intent to comply with their existing SLDA permit. As noted previously, a formal review will occur at the time of subdivision application.

XIII. MASTER DEVELOPMENT PLAN AMENDMENTS

At the workshop on the Forefront master plan, Planning Board members raised questions regarding potential future amendments to the plan and the formal review process. The land use code includes language related to Planning Board decisions on the master plan, including the following,

> *(Section 14-524(a)3.f.(iv)) Decisions. The Planning Board shall approve, approve with conditions, or deny a MasterDevelopment Plan application based upon the applicable review standards…An approval, including an approval of waivers, establishes the general parameters to be adhered to for the development, including the supporting documentation for floor area ratio and/or residential density, general types of uses, building coverage, generalized open space plans and infrastructure systems.*

Under *Section 14-532(b) Revisions and amendments to Master Plans and approved site plans,* the land use ordinance further defines a "minor" master plan amendment, which, per the ordinance, may be approved administratively. According to the ordinance, a change qualifies as a minor amendment when it is "generally consistent" with the approved master plan layout, circulation, infrastructure, and open spaces, and:

> *(i) Does not propose any new general type of use beyond those approved initially;*
> *(ii) Does not increase the building ground coverage, floor area ratio or residential density of the Master Development Plan;*
> *(iii) Does not decrease any specified area regulations or enumerated parking ratios; and*
> *(iv) Does not substantially change access, circulation, or infrastructure on or adjacent to the site.*

It is implied that changes which do not meet these conditions would require Planning Board review.

XIV. STAFF RECOMMENDATION

Subject to the proposed motions and conditions of approval listed below, Planning Division staff recommends that the Planning Board approve the master development plan for the Forefront at Thompson's Point.

XV. PROPOSED MOTIONS – MASTER DEVELOPMENT PLAN

On the basis of the application, plans, reports and other information submitted by the applicant; findings and recommendations contained in the Planning Board Report for the public hearing on February 11, 2014 for application 2013-262 relevant to the master development plan regulations; and the testimony presented at the Planning Board hearing, the Planning Board finds that the plan **is/is not** in conformance with the master development plan standards of the land use code, subject to the following conditions of approval, which must be met prior to subdivision approval unless otherwise stated:

1. The applicant shall provide a summary of existing and/or proposed easements, covenants, public or private rights-of-way, or other burdens on the site, including the proposed easement to the Department of Public Services to use the private drive system for turn-around access and conditions relating to public use of trails and open space on the site, for review and approval by the Department of Public Services and the Planning Authority;

2. The applicant shall provide correspondence from the Maine Department of Transportation indicating their acceptance of the proposed approach to monitoring and traffic analysis related to the existing Traffic Movement Permit, for review and approval by the city's Department of Public Services;

3. For each Level III site plan/subdivision review, the applicant shall submit trip generation information that documents current trip generation levels and trip generation estimates complying with the TMP, for review and approval by the city's Department of Public Services;

4. The applicant shall provide evidence of water capacity from the Portland Water District, for review and approval by the Planning Authority;

5. The applicant shall provide evidence of sewer capacity from the Department of Public Services, for review and approval by the Planning Authority;

6. The applicant shall submit a revised report from a certified fire protection engineer describing evacuation procedures, add a note to the master development plan indicating that all buildings will include sprinkler and fire alarm systems, and revise the event management plan to indicate that free and clear fire access will be maintained at all times during events, for review and approval by the city's Fire Prevention Bureau; and

7. The applicant shall revise the master phasing plan for review and approval by the Planning Authority.

XVI. ATTACHMENTS

PLANNING BOARD REPORT ATTACHMENTS

1. Zoning administrator review (memo from Marge Schmuckal, 2/6/14)
2. City arborist review (memo from Jeff Tarling, 2/3/14)
3. Traffic Engineer review (memo from Thomas Errico, 2/6/14)
4. Department of Public Services review (memo from David Margolis-Pineo, 1/13/14)
5. Civil Engineer review (memo from David Senus, 2/3/14)
6. Fire Prevention Bureau review (memo from Chris Pirone, 1/30/14)

APPLICANT'S SUBMITTALS

A. Cover Letter (from Bo Kennedy, FST, Inc., dated 1/24/14)
B. Master Development Plan Development Review Application
C. Master Plan Submission Supporting Narrative
D. Site Graphics
E. Utility Analysis
F. Evidence of Right, Title, and Interest
G. Conformity with Applicable Design Standards
H. Letter of Financial Capacity
I. Neighborhood Meeting Minutes
J. Evidence of Prior Permitting
K. Utility Capacity Request Letters
L. Letter to MDEP (from Bo Kennedy, FST, Inc., dated 1/23/14)
M. Trip Generation and Parking Summary (with supporting data)
N. Landscaping Response (from Carroll Associates, dated 1/23/14)
O. Updated Event Management Plan
P. Letter to MDOT (from Randall Dunton, Gorrill-Palmer Consulting Engineers, Inc., dated 1/15/14)
Q. Updated Fire Protection Review (from W. Mark Cummings, PE, dated 1/29/14)

C. PLANS

Plan 1 Overall Existing Conditions Plan
Plan 2 Master Plan
Plan 3 Master Plan Phase I
Plan 4 Master Plan Phase IA
Plan 5 Master Plan Phase IB
Plan 6 Master Plan Phase IC
Plan 7 Master Plan Phase ID
Plan 8 Master Plan Phase IE
Plan 9 Master Plan Phase IF
Plan 10 Master Plan Phase IG
Plan 11 Master Plan Phase IH
Plan 12 Master Plan Phase 2A
Plan 13 Master Plan Phase 2B
Plan 14 Master Plan Phase 2C
Plan 15 Master Grading and Drainage Plan
Plan 16 Master Stormwater Management Strategy Schematic
Plan 17 Master Utility Plan
Plan 18 Master Fire Protection Plan
Plan 19 Master Circulation Plan
Plan 20 Expanded View of Event Center Plaza
Plan 21 Landscape Master Plan
Plan 22 Amended Subdivision Plan (Draft Sectional Recording "Phases")
Plan 23 Master Plan (Draft Sectional Recording "Phases")

CITY OF PORTLAND

Planning & Urban Development

Christine Grimando, AICP, Director

February 14, 2020

Chris Thompson
Forefront Partners I, LP
55 Lisbon Street
Lewiston, ME 04240

Bo Kennedy
Placemaker Partners, LLC
501 Danforth Street
Portland, ME 04102

Project Name:	Forefront at Thompson's Point – Master Development Plan		
Project ID:	2013-262	CBL:	201-A-5
Applicant:	Forefront Partners I, LP		
Planner:	Shukria Wiar		

Dear Mr. Thompson:

Thank you for your letter dated January 30, 2020 requesting a two- year extension of the approval for your Master Development Plan for the Forefront located at Thompson's Point. I understand that you will continue to pursue fulfillment of the Master Development Plan through future Site Plan applications.

In my capacity as Director of the Planning & Urban Development Department and under the provisions of Section 14-532 (d), Expiration of Master Development Plan, I am granting your request to extend the approval for application ID 2013-262 to March 11, 2022.

If there are any questions, please contact Shukria Wiar at 756-8083 or at shukriaw@portlandmaine.gov.

Sincerely,

Christine Grimando, AICP
City Planning Director

Planning & Urban Development
Christine Grimando, AICP
Director

March 1, 2022

Bo Kennedy
Placemaker Partners, LLC
501 Danforth St
Portland, ME 04102

Project Name: Forefront at Thompson's Point – Master Development Plan
Project ID: 2013-262 CBL: 201-A-5
Applicant: Forefront Partners I, LP

Mr. Kennedy:

Thank you for your letter dated January 19, 2022 requesting an extension of the approval of the Master Development Plan for the Forefront at Thompson's Point project.

In my capacity as Director and under the provisions of Land Use Code Sec. 14.13, Extension of Approvals, I am granting your request to extend your approval to March 11, 2024.

If there are any questions, please contact James Rather, Development Review Manager at (207) 874-8699.

Sincerely,



Christine Grimando, AICP
Director, Planning and Urban Development

Planning & Urban Development
Christine Grimando, AICP
Director

To: Brandon Mazer, Chair, and members of the Planning Board

From: Christine Grimando, Planning & Urban Development Director

Date: June 30, 2023

RE: Master Development Plan Pending Proceeding

A question was raised in the course of the review of recent site plan applications for Portland Foreside/58 Fore Street, regarding whether a Master Development Plan (MDP) approved under a previous iteration of the Land Use Code (Code) was subject to the expiration provisions of the current Code, or whether the section in the Code in place at the time of MDP approval (for 58 Fore Street, December 2016, but the question extends to all MDPs) would apply. The Planning & Urban Development Department has determined the current Code's expiration section applies to this and other previously approved MDPs. Discussion of prior and current expiration sections, how pending proceeding is determined, and how the applicable Code standard is determined follows below.

MDP Expiration Under 2016 & 2023 Versions Of The Land Use Code
The current Code states:

> *Master development plans approved under this article shall expire six years from the date of approval if no site work or building construction has commenced.* (sec. 14.12.2) and *Master development plan approvals may be extended by the Planning Authority up to two times, for up to two years from the date of expiration of the original master development plan approval.* (sec. 14.13.4).

The Code in effect in December 2016 states:

> *Master Development Plan approval may be sought separately or currently with the Phase I Final Level III site plan approval, and shall have an initial approval period of six (6) years, with potential extension periods as provided for in section 14-532(d). (14-524(f)(i))*
>
> *Prior to the expiration of the Master Development Plan, an applicant may submit a written request to the Planning Authority for an extension of a Master Development Plan approval and associated waivers. Only two (2) such extensions may be granted by the Planning Authority, and*

each such extension shall be limited to two (2) years from the date of expiration of the Master Development Plan. (14-532(d))

The expiration language currently in effect means that once site work has commenced, the MDP won't expire, whereas the 2016 MDP expiration language included a finite 10 year end, assuming two two-year extensions were granted. Under the current and 2016 versions of the Code, Individual Site Plan approvals, including those that are part of an MDP, expire in one year, with possible extensions up to a maximum of three years. Lapses in construction for a period in excess of 12 months will also result in a site plan expiration. (2016 14-532(c)(1), 2023 14.12.1; 14.13.3)

Pending Proceeding

Pending proceeding is a term that, in context of development applications, indicates that substantive review has begun, which, in turn, determines which set of regulations an application is reviewed under. For the purposes of applications that are within the jurisdiction of a land use (Historic or Planning) Board, pending proceeding status is conferred when the Board holds its first review, whether that is a workshop or public hearing. For the purposes of administrative/staff reviewed applications, this occurs when the first substantive comments are provided. For applications in-review when the City adopts, through Council action or referendum, amendments to the City Code, it is important to understand whether an application is pending in order to determine what standards they are held to. A submitted application, accepted for the purposes of beginning review, does not have pending proceeding status, but a development application that has been before the Board for an initial workshop does, and may continue in the review and approval process under the Code in effect at the time of the first workshop.

Determining when an application has pending proceeding status is not outlined in the Land Use Code, but there are two references to the term in the Land Use Code: 1) Section 14.5.1 states that voluntary, non-binding pre-application meetings do not confer pending proceeding status; and 2) Section 14.3.2 (formerly 2016 Section 14.524(f)(iv)) states MDP a*pproval shall confer pending proceeding status upon the development with the effect of maintaining the applicability of regulations in effect at the time of approval for as long as the master development plan approval remains valid, including permissible extensions if granted*.

Sec. 14.3.2 is the reason a subsequent site plan application (or subdivision application where applicable) that is a component of an MDP is still reviewed under the regulations in effect at the time of the MDP approval, even if standards of the Code are amended over time. Pending proceeding status is one of the benefits of an MDP approval, and it offers a degree of regulatory predictability for both property developers and the City for these large multi-year phased projects. Without pending proceeding status, it would be difficult to predict all of the potential regulatory changes that could impact a project that is expected to be built out over years. For instance, if maximum heights were reduced, or minimum parking standards increased (to name a few examples of standards that could change over time in the City's Code), site plans that are phases of previously approved MDPs are not held to more stringent or restrictive standards that were adopted during a valid MDP approval period.

Though an MDP and its associated applications have pending proceeding status for the life of the MDP's approval, nothing *prohibits* an applicant of an MDP approved under a previous version of the Code from seeking review under the current version of the Code. Becoming more conforming with the adopted Land Use Code is generally something the standards encourage; a previous approval may proceed under the Code it was reviewed under, but it is not compelled to remain non-compliant with current standards.

In the event an applicant proposes to develop a site to meet current regulations that differ from the regulations in effect at the time of MDP approval, they may do so. However, substantive changes to an approved MDP would require an amendment, and substantive amendments related to areas of the Code that have been changed since the application was originally approved would be reviewed under the current Code. An applicant with an approved site plan who wishes to make use of a new provision in the Land Use Code is also free to apply for an amendment, and this also could subject them to new sections of the current Code if the amendment broaches sections that have since been amended. For example, a proposed change to the total housing units would be reviewed for consistency not only with residential density standards, but with other applicable Code requirements such as inclusionary zoning; or, as previously mentioned, if maximum heights were lowered since an approval was granted, and an amendment to a prior approval was submitted to alter heights of buildings, the new standards would apply.

Project Review Letter | 11-6-2024 | PL-003090-2024 | 125 Thompson's Point Road
Submission #1: 9-30-2024
Planner: Natasha Kypfer – nkypfer@portlandmaine.gov – (207) 874-8725

Dear Bo Kennedy and Rob Simmons,

We have completed our preliminary review of your submission of the application (PL-003090-2024), a major site plan project, proposing a new six-story building with 255 residential units and an attached parking structure at 125 Thompson's Point Road, in the B-5 Urban Commercial zone. This development triggers major site plan review by the Planning Board, and is subject to the following regulations:

- Site Plan, Major – Article 14.6

An overview of the City's review can be viewed in the attached project review worksheets and peer review comments.

Next Steps
Please review our feedback and reach out if you have any questions or would like to discuss this feedback in more detail. Please prepare a written response to all feedback, and provide updated plans, documents, and other materials as necessary to address the comments. The applicant shall notify me, as the project review manager, when a resubmission is uploaded to ProjectDox.

The initial Planning Board workshop for this item is tentatively scheduled for January 14, 2025.

Sincerely,
Natasha M. Kypfer

Natasha Kypfer
Senior Planner

Attachments

1. Site Plan Worksheet
2. Zoning Worksheet
3. Design Review Memo, 10-28-2024

General Comments:

- Please add the AE flood zone on the current FEMA map as an overlay on the site plan.
- Please update the title of the supporting narrative to Major Site Plan, instead of Minor (Att. B).
- A number of permits have been received throughout the development of the Master Development Plan from State and Federal agencies and it is unclear what is relevant to this phase and which permits may still be active. Submit a summary of what permits are relevant specifically to this project, including the agency, permit, the date of original issue, dates of expirations, and dates of extensions or notifications as applicable. For example, it is noted that an Army Corps of Engineers self-verification form was included that was submitted for work to be completed for 2023 into 2024, which will likely need to be resubmitted unless the Army Corps has noted that it will remain valid.

Site Plan Review Standards (Sec. 14.6)		
Transportation Standards (Sec. 14.6.1)		
Standard	***Discussion***	***Finding***
Impact on Surrounding Street Systems	Overview: As part of the existing Master Development Plan (MDP), the overall project was reviewed under a Traffic Movement Permit (TMP) application, which addresses impacts on the surrounding street network and for the anticipated increases in traffic congestion. The TMP (Identification #: Reg. 01-00155-A-N) was issued on June 13, 2012 with a traffic study completed as part of the approved MaineDOT TMP, citing for 734 trip ends during the AM peak hour and 1,091 trip ends during the PM peak hour. Further, the TMP received an extension in 2024, through to March 1, 2027. According to the September 4, 2024 traffic memorandum prepared by Gorrill Palmer Associates, the proposed project is not forecasted to exceed the number of trips permitted under the existing TMP. Staff has reviewed the trip generation estimate and would like to review the trip generation calculations for all of the uses, regardless if previously approved from a documentation perspective and ensuring that calculations accurately reflect the scale of proposed uses.	Not Met
	Updates & Additional Information Requested • Staff would like to review the trip generation calculations for all of the uses, regardless if previously approved from a documentation perspective. However, one initial comment on the trip generation estimate is as follows: o The Brewery & Sit-Down Restaurant (14,644 SF) noted in the table should match the area used in the trip generation calculation (4,624 SF).	
Access and Circulation	Overview: The project site is accessed via Thompson's Point Road at the intersection of Fore River Parkway, and includes a public railroad crossing proximate to the two-way driveway, which terminates at a turnaround hammer head. The Thompson's Point Trail (formerly named the Fore River Trail) runs southerly to the development area, with the site's proposed pedestrian circulation well-integrated to the public trail system. Further, a proposed six-foot-wide sidewalk along the front façade of the building connects to the existing sidewalk network throughout the Thompson's Point campus. City Staff are requesting updates to the submitted materials to delineate sidewalk/pavement removal & replacement, current City details reflecting updates from 2022, and dimensions for all parking areas and roadways. Measurements are requested for the intersection of Thompson's Point Road & the site's access road to confirm compliance with MaineDOT sight distance requirements.	Not Met
	Updates & Additional Information Requested • Show limits of removal and replacement of sidewalk/pavement for Utility trenching on site plan.	

	• Update application documents to include current Technical Manual details or reference to each of the City standard details (figure # and name). CAD files can be obtained upon request. • Update the plan set to replace the detectable warning ramps in ROW at drive entrance to align with Standard Detail I-7 of the Technical Manual. • Update the plan set to include dimensions for all interior and exterior parking areas and roadways. • Submit sight distance measurements for the access road intersection with Thompson's Point Road.	
Public Transit Access	Overview: This project is within a quarter mile of fixed transit, as the Greater Portland Metro's BREEZ line services bus stops at both the Portland Transportation Center (PTC) and Thompson's Point, operating Monday - Saturday. The application materials indicate the closest of which transit stop is approximately 665 feet / 0.13 miles walking-distance from the front door of the site. Per the Technical Manual Section 1.17.2, transit shelters shall be located within the site, directly adjacent to the right-of-way on which the public transportation route is established or located within a public sidewalk area long the property frontage.	Met
Parking	Overview: This project proposes to provide 457 parking spaces within a parking garage structure attached to the proposed residential "Building G" residential structure. In addition, 35 off-street parking spaces are proposed along the front façade of the building and the drop-off court by the main entrance. Per the application materials, 26 ADA parking stalls are proposed on-site and 102 bicycle parking spaces are provided in the form of bicycle racks located in front and inside the proposed building. Further, while the Technical Manual Section 1.14 outlines new structured and surface parking lots of five or more spaces to provide Level 2 EV charging or higher to 20% of total parking, this project proposes roughly 10% (46 spaces) through a combination of Level 2 chargers, Level 1 chargers, and EV-ready spaces. City staff are requesting the submission of a parking supply analysis and a parking management plan to understand interactions with other uses on Thompson's Point (e.g., outdoor concerts/events) and backup information for the submitted parking demand analysis. Updated materials should also include consistent information on the number of parking space proposed for the site.	Not Met
	Updates & Additional Information Requested: • Update project documents to list a consistent number of proposed parking spaces for the parking garage structure. • The applicant has conducted a parking analysis for the proposed residential use. City Staff find the estimate of 334 parking spaces per ITE methods to be reasonable, but would also request that the applicant provide a parking management plan if the proposed parking spaces are to be shared with other uses on Thompson's Point. • The applicant also conducted a parking demand analysis for the entire Thompson's Point site, without an outdoor concert/event. The estimate is based upon a mix of methodologies: methods from ITE, client supplied information, and customized calculations. Similar to the trip generation comment above, all back up information shall be provided for documentation purposes. Staff would further note that a parking supply analysis should also be provided with this submission.	
Transportation Demand Management	Overview: A TDM Plan is required for this project, as it exceeds the thresholds as detailed in the LUC Section 14.6.1.E.1. The project has an approved Thompson's Point campus-wide Transportation Demand Management Plan (TDM) for managing and reducing traffic trips and parking demand in place as part of the Master Development Plan (MDP). The provided Attachment P summarizes TDM	Not Met

	initiatives and references previously prepared TDM strategy reports which was approved in 2011, and subsequently updated in 2015 and 2018.	
	Updates & Additional Information Requested • In satisfying this standard, the applicant shall update their Transportation Demand Management Plan and incorporate data, as well as updated data, on concerts and other significant events that occur on the Thompson's Point campus, so that the City can better understand current parking demand and assess whether the mitigation strategies in place are sufficient.	
Environmental Quality Standards (Sec. 14.6.2)		
Standard	***Discussion***	***Finding***
Preservation of Significant Natural Features	Overview: The parcel's current use is as a gravel surface parking lot resulting in the anticipated site disturbance unlikely to disrupt any significant natural features. While the landscaping plan identifies trees to be preserved, it does not include a tree survey as noted below. Further, the applicant attests no known populations of trees or plants present on the site have been classified as Endangered and Threatened in Maine, nor known habitats/communities, present that appear on the state or federal endangered or threatened animal list.	Met
Landscape Preservation	Overview: The submitted landscaping plan notes existing trees identified to preserve and protect (e.g. a handful of significant oaks along the southern property line that had previously been requested for preservation by the former City Arborist), but a tree survey was not included as part of the application submission. Per section 4.3.1. of the Technical Manual, projects are required to submit a tree survey from a licensed land surveyor arborist, forester, or landscape architect clearly identifying the forest type and location, size, and species of all existing trees 10" DBH or greater on the site and in the City right of way. Updates & Additional Information Requested • Submit a tree survey for the site that meets the standards of Section 4.3.1. of the Technical Manual.	Not Met
Site Landscaping and Buffers	Overview: The landscape plan proposes to screen the development from the existing trail, pool and outdoor amenities programing area, and around the entire perimeter of the building itself. The site location is buffered by both the rail line and Fore River, which will sufficiently buffer the proposed site use from the public right-of-way and neighboring campus properties. Further, the site has ±139 feet of street frontage and is required to plant one tree per 25-35 feet on center (4), within the public right-of-way. In their materials, the applicant cites that limited street trees have been proposed in location and quantities where possible, noting underground utility conflicts and that the rest of the site is heavily planted. Section 4.6.4 of the Technical Manual allows for the use of street tree alternatives (e.g., existing trees in the right of way or within 20 feet of the right of way, plantings on public land in the surrounding neighborhood, contribution to the City of Portland Tree Fund). City Staff are requesting if and how street tree alternatives will be used for the site. Updates & Additional Information Requested • Identify what street tree alternatives are proposed to meet the standards of Section 4.6.4. of the Technical Manual.	Not Met
Water Quality, Stormwater Management and Erosion Control	Overview: The September 2024 stormwater report summarizes changes to the water quality treatment zones and providing detailed computations of development tributary to the respective stormwater management systems sized to convey and treat stormwater runoff from the proposed redevelopment. The bulk of the new building, parking structure, central courtyard, and northerly courtyards will drain to a series of roof drains, catch basin inlets, and storm drain piping to convey runoff to a treatment system. City staff are requesting updates to the provided plans and materials, as individually detailed below.	Not Met

	Updates & Additional Information Requested • The project is required to comply with MaineDEP Chapter 500 and City of Portland Technical Manual Section 5 standards for stormwater management, including to be reviewed for a Site Location of Development (SLOD) Permit. As was noted as part of the MDP, this can be reviewed by the City of Portland, but requires evaluation of the site as a whole. This would modify how the amount of required treatment is evaluated, and it is expected based on what information has been provided that the project will meet the requirements for SLOD. o Basic Standards – The Applicant has provided plans and details as required for erosion and sedimentation controls. ▪ Double rows of sediment barrier should be provided adjacent to any resources, including coastal wetlands. ▪ Temporary sediment barrier will also be required downstream of any outfall installations during construction in addition to any of the permanent erosion control measures that have been shown. o General/Redevelopment Standards – The Applicant has provided a detailed description of stormwater treatment for this project, and has related it to the overall site. Based on the information provided, it appears that the project will meet the required thresholds for the State for Stormwater and Site requirements, and the City's thresholds for redevelopment as well. As noted above, the project should provide documentation for the Site Location of Development Permit. Comments on the proposed stormwater systems are provided separately below as well. o Flooding Standards – The Applicant has noted that the Flooding Standard has previously been waived due to the site's discharge to a tidal water body. This remains valid for this phase of the project. • We did not see structure information, including rims and inverts, for stormwater or utility structures included on any of the plans provided. This should be provided as part of the site plan submission. • The site grading should be checked with the proposed stormwater systems. With variations in fill over the tops of the stormwater storage systems, and the need for emergency vehicular access over one of the systems, the layout and inverts of the systems and connecting structures should be reviewed to ensure there are no concerns with cover (either too much or too little). This will require providing invert information for the associated manholes as well. • The Applicant should review the proposed HydroCAD model, specifically, the way that the diversion structures are modeled may not accurately represent what is happening on the site. The models include a 1.4" vertical orifice/grate as part of the model, but this is not shown on the diversion manhole details. In addition, the way the model is routed, with all flow primary, it does not appear to show how flow is diverted into the Jellyfish filters. In addition, the model should be checked to make sure that it matches with other features on the plans, including pipe materials, inverts, and the number of chambers within the storage systems. • The Applicant has noted that the intent of the Inspection and Maintenance Manual has remained the same since approval in June 2012. The Applicant should confirm that the systems proposed as part of this phase of work are specifically included in their O&M plan, and these systems should be added to the Stormwater Maintenance Agreement.	

	• Any floor drains located within the lower levels of the parking garage should be directed through an oil-water separator and be discharged into the sanitary sewer system. It is unclear if any such internal drains are being proposed. The stormwater management plans clearly show that stormwater runoff from the uncovered top parking level will be directed into the storm drain system, which makes sense.	
Public Infrastructure and Community Safety Standards (Sec. 14.6.3)		
Standard	***Discussion***	***Finding***
Consistency with City Master Plans	Overview: The proposed development of the subject property is a permitted use within the B-5 zone, and complies with applicable zoning as established under the City's comprehensive plan, *Portland's Plan 2030*. Staff suggests the applicant include reference to other applicable studies in their narrative materials, such as: One Climate Future and the Peninsula Transportation Plan.	Met
Public Safety and Fire Prevention	Overview: The project site is accessible from Thompson's Point Road, however, for the purposes of emergency vehicle access one access point for ingress/egress is not sufficient for a development of this scale. Further, the included Utility Plan shows the location of all existing and proposed fire hydrants, with a service radius of 100' and 250', meeting the Technical Manual Section 3.2.1 standard of within 500'. Fire & Life Safety reviewers are requiring that the viability of a secondary means of ingress/egress be explored. City Staff are requesting that, at a minimum, options stemming off of Hobart Street and Powsland Street, be explored. Updates & Additional Information Requested • Submit a feasibility analysis of establishing a fire lane from Hobart Street and Powsland Street that meets the standards of Section 3 of the Technical Manual. Based on the materials submitted, additional information and/or implementation of a fire lane may be requested by City Staff.	Not Met
Public Utilities	Overview: Per the applicant's submittal, the existing 12" water main (publicly owned), 15" sewer main (publicly owned), and electrical/communications (private) duct bank serving the project is shown on the accompanying utility plan. The proposed development will construct new utility stubs for the development lot. The Department of Public Works is currently in the process of reviewing the sewer capacity and infrastructure impacts in the area with the Portland Water District. Once this review is complete, City Staff will follow up with any additional comments/requested additional information under a separate cover. City Staff are recommending that an assessment be completed on whether backflow preventers should be installed on the proposed private sanitary sewer lines prior to connection to the City system, as well as exploring the feasibility of relocating the two transformers to a less obtrusive location (e.g., plan left of the parking structure) in the landscaped area. Ability to serve letters will be recommended as a condition of approval. Updates & Additional Information Requested • Submit a written response documenting if consideration has been made in installing backflow preventers on the private sanitary lines. • Submit a written response documenting the feasibility of relocating the two transformers to a less obtrusive location, including, but not limited to plan left of the parking structure in the landscaped area. • When available, submit copies of ability to serve letters from utility providers.	Not Met
Site Design Standards (Sec. 14.6.4)		

Standard	Discussion	Finding
Massing, Ventilation and Wind Impact	Overview: The proposed multi-family residential building is located at the panhandle portion of the property site of the Thompson's Point development, with direct access to the Thompson's Point roadway. Originally envisioned with the MDP as a clustered arrangement of three new buildings, the proposal is for a single multi-family residential building with attached parking structure, six-stories or 68 feet in height. Further, the HVAC equipment is proposed to be located on the roof, with the applicant's noting the equipment will exhaust away from the adjacent residential properties.	Met
Shadow	Overview: Shadow standards are not applicable in the B-5 zone; thus, this development is exempt.	Met
Snow and Ice Loading	Overview: Snow storage is proposed to be located temporarily along the edges of the drive aisles and landscaped areas until such a time when the stockpiles need to be removed from the property. Snow removal on the parking roof deck which is a flat roof and is designed to store snowfall, will be plowed to a drop chute where it can be managed on the ground.	Met
View Corridors	Overview: This site is not located along a public view corridor identified in the Downtown Vision View Corridor Protection Plan.	Met
Historic Resources	Overview: The subject property is not within a Historic District; therefore, this standard does not apply.	Met
Exterior Lighting	Overview: All development must adhere to the site lighting standards provided for in the Technical Manual, Section 12, for: site lighting, architectural and specialty lighting, and street lighting. This project proposes site lighting, with 27 outdoor wall-mounted fixtures proposed in total along the four structure planes; the photometric plan is provided with the submission, as well as cut sheets and lighting specification materials.	Met
Noise and Vibration	Overview: In the City, all HVAC, AHU, emergency generators, and similar equipment are required to meet applicable state and federal emissions requirements and are further required to be located and/or screened in such a manner as to mitigate noise and vibration impacts. Per the application materials, HVAC equipment has not been specified and selected yet, but systems are proposed to be centralized on the roof. Updates & Additional Information Requested • When available, provide an updated roof plan that includes selected HVAC equipment with screening details.	Not Met
Signage and Wayfinding	Overview: Any signage associated with the redevelopment of this project will be required to be reviewed by the Permitting and Inspections Department separately, with a sign permit to meet the standards of Article of the Land Use Code.	Met
Design Standards	Overview: Per the LUC Section 14.6.4.I.a, developments in the B-5 zone shall be designed to support the development of dense, mixed-use neighborhoods with attractive, safe, and convenient street-level pedestrian environments. Updates & Additional Information Requested • Provide revisions based on the attached Design Review Memo, dated October 28, 2024. Please note that supplemental design comments may follow.	Not Met

Zoning Use Review (Article 6)

Use Permissions (Sec. 6.5.6)

Proposed Use	*Permitted, Conditional or Accessory Use*	*Zone*	*Use Std*
Multi-family dwellings	Permitted	B-5	n/a

Zoning Dimensional Review (Article 7)

Dimensional Standards (Table 7-A)

Standard	*Requirement 1*	*Requirement 2*	*Proposed*	*Finding*
Lot Area	None	n/a	4.637 acres	
Lot Area per Dwelling Unit	None	n/a	799 sq. ft.	
Min. Street Frontage	None	n/a	139' ±	
Front Setback	None	n/a	34'	
Rear Setback	None	n/a	39'	
Side Setback	None	n/a	10'	
Stepbacks	None	n/a	None	
Structure Height	120'	n/a	68'	
Max. Lot Coverage	100%	n/a	63%	
Off-Street Parking Spaces	None	n/a	498	
Loading Bays	None	n/a	1	

Other: Please add the AE flood zone on the current FEMA map as an overlay on the site plan.

Subject:	125 Thompson's Point Road
Zone:	B5
Date of Review:	Monday, October 28, 2024 Land Use Code Chapter 14.6.4.I Design standards
Reviewer(s):	Natasha Kypfer (Senior Planner); Zachary Powell (Senior Planner); Sean King (Urban Designer); Kevin Kraft (Director)
Project ID:	PL-003090-2024

I. INTRODUCTION

The project at 125 Thompson's Point for 255 residential units was reviewed according to the *City of Portland Design Manual* section ***(c) B-5 and B-5b Urban Commercial Business Zone*** and section ***(i)*** *two-family, special needs independent living units,* ***multiple-family****, lodging houses, bed and breakfasts and emergency shelters* design standards. In addition, design guidelines identified in the Thompson's Point Master Development Plan were reviewed.

II. DESIGN REVIEW COMMENTS: **bold** text denotes recent updates met, red text denotes standards not met which require resubmission.

(I.) Thompson's Point Master Development Plan standards - *Designed as to create a cohesive identity through building scale, massing, and articulation; use of quality exterior materials, architectural detailing at pedestrian scale; consistency of design and materials for streetscape and pedestrian amenities; framing of outdoor open space and linkages; a clear conveyance of the function and significance of various buildings, entrances, and features; and to generally comply with design and development standards of the zone in which it is located;*

The Master Development Plan approved a layout with a clustered arrangement of new buildings (G, J1 and J2) that expand along the shoreland as a natural boundary and the railroad corridor as an infrastructure boundary.

The proposed multi-family residential building is located at the north property of the Thompson's Point development with direct access to the Thompson's Point roadway. The proposed structure height is six-stories (averaging 68-feet), which is a departure from the existing low-medium building heights located throughout the development. However, the approved Master Development Plan illustrated taller structures at this site to demonstrate the maximum allowable building heights at 125-feet. Staff suggests that the applicant consider an increase to the proposed building height, as shown in figure 1, to add vertical scale towards the center of the proposed building footprint.



Figure 1: Staff diagram in blue from applicant's rendering (view from waterfront)

(c.) B-5 and B-5b Urban Commercial Business Zones

Standard (1) a. Shared Infrastructure: Shared circulation, parking, and transportation infrastructure shall be provided to the extent practicable, with utilization of joint curb cuts, walkways, service alleys, bus pull-out areas, and related infrastructure shared with abutting lots and roadways. Easements for access for abutting properties and shared internal access points at property lines shall be provided where possible to facilitate present or future sharing of access and infrastructure.

Staff comments – The proposed development will utilize the existing Thompson Point private roadway, sidewalk and bicycle facilities as the primary point of entry and exit. Within the site development location, a new two-way drive is proposed to allow access to the drop-off court, building entries, primary structured parking entry and emergency access. Staff recommends a reduction in angled parking spaces to provide prioritization of the pedestrian facilities into the primary building entrance. To encourage the drop-off court as a pedestrian plaza that only allow infrequent vehicular drop-off that is more conducive with a transit-oriented and walkable development.

Standard (1) b. Buildings and uses shall be located close to the street where practicable. Corner lots shall fill into the corner and shall provide an architectural presence and focus to mark the corner.

Staff comments – Thompson's Point development is an anomalous, isolated site located on the water without an established urban context or street connectivity to the city. Therefore, some of the standards of the B-5 are harder to apply in this case due to the irregular configuration of lots that vary in size, orientation, and relationship to the private vehicular road. The proposed residential building is setback from the Thompson Point roadway that Staff finds deviates from this design standard to locate buildings close to the street where practicable. Staff recommends that the applicant provide additional ground-floor activation and pedestrian oriented uses (eg. articulated building entries or active use) to achieve an architectural presence and focus at the street.

Standard (1) c. Buildings shall be oriented toward the street and shall include prominent facades with windows and entrances oriented toward the street. Uses that include public access to a building or commercial/office uses in mixed-use developments shall be oriented toward major streets whenever possible.

Staff comments – The proposed building spans the site with several building wings to create a courtyard building arrangement. Staff finds the facades are balanced with windows and articulated entries throughout the facades, however do not establish a prominent façade oriented toward the street. Staff acknowledges that due to the unique site factors and historical arrangement of existing buildings, strict compliance to require a building location closest to the street may not be appropriate. The proposed exterior façade materials include a variety of fibercement cladding and tones with an organized fenestration pattern that is a departure from the existing buildings found at Thompson Point, which include a mix of adaptive reuse brick industrial-era structures and contemporary buildings.

Staff suggests the applicant create a more pedestrian scaled façade and building orientation towards the Thompson Point roadway. Staff recommends a more cohesive arrangement of exterior façade materials that respond to the existing character of buildings, particularly at the street-facing facades of Brick North & South buildings. Staff suggest a replacement of exterior material at the ground level facing the street for brick and detailing around fenestrations to provide greater articulation at the pedestrian scale.

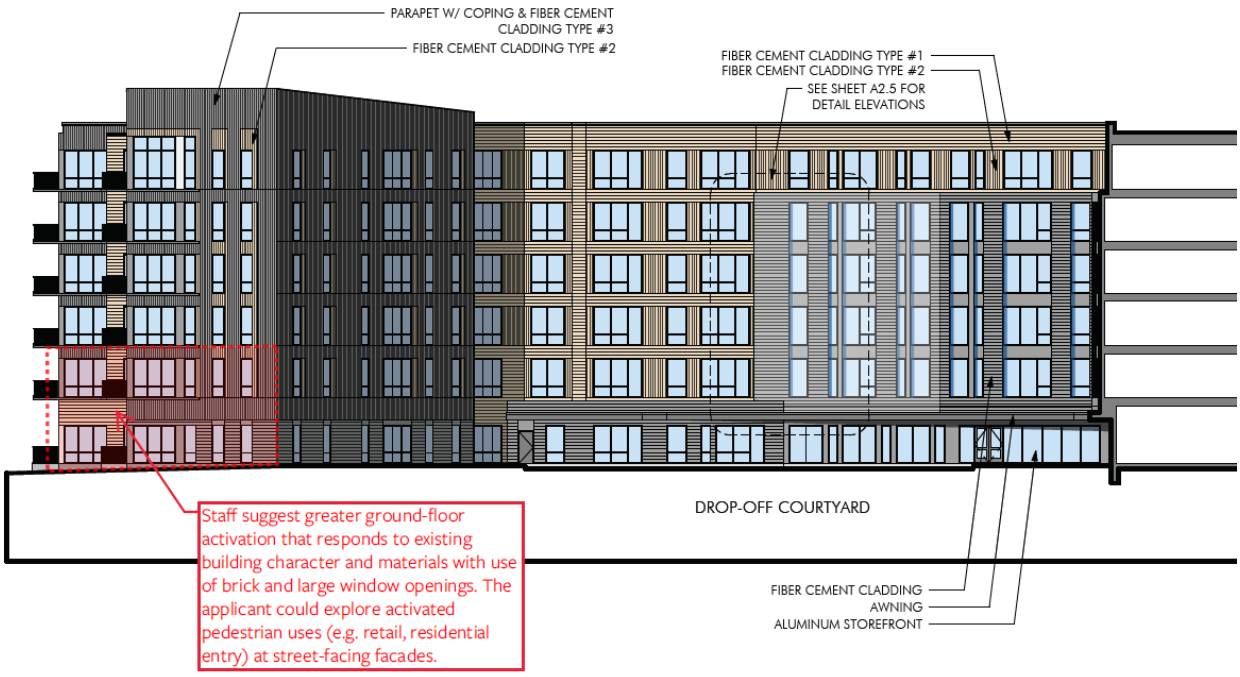
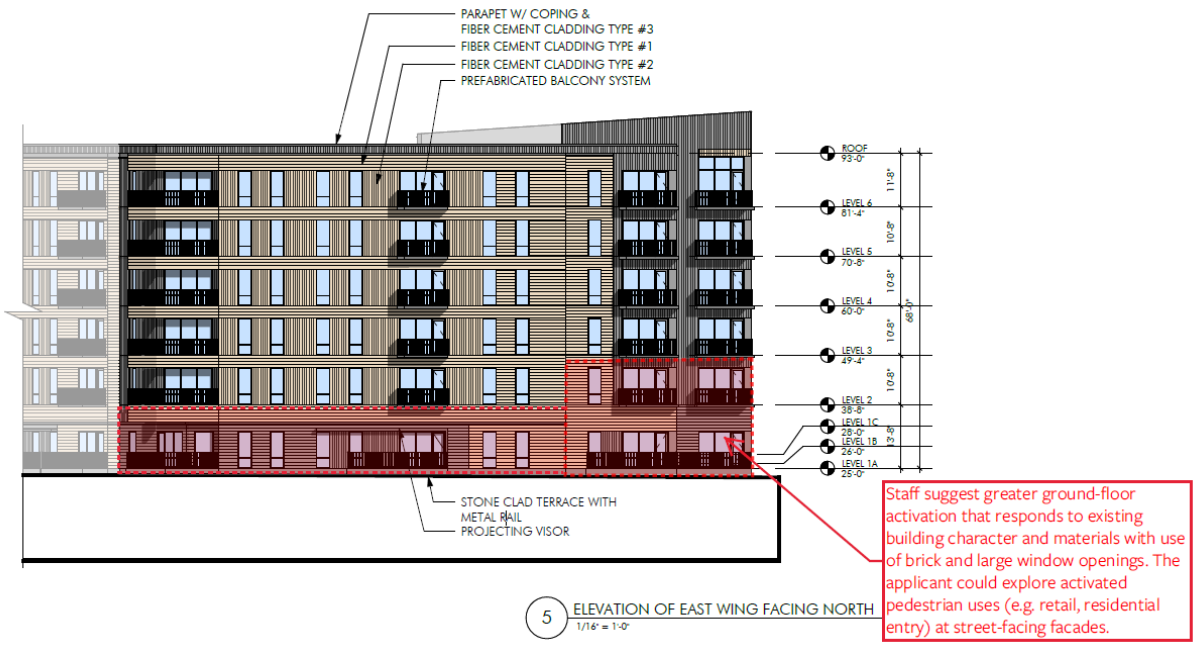


Figure 2: Staff diagram for street-facing facades at Northeast elevation



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Standard (1) d. Parking lots shall be located to the maximum extent practicable toward the rear of the property and shall be located along property lines where joint use or combined parking areas with abutting properties are proposed or anticipated.

Staff comments - The proposed development includes structured parking along the north building façade that is accessed via a two-way drive. Staff finds that the structured parking will be visible from abutting properties at the north and recommends that the applicant provide additional screening as appropriate (eg. architectural perforation, vertical landscaping or other façade-fixed material).

In addition, Staff finds the head-in parking spaces after the garage entrance to be unnecessary and recommends this driveway extension function for emergency access only with either a change of surface material (eg. grasscrete) or narrowing of drive aisle with mountable curb. Narrowing the drive aisle may allow for additional screening adjacent to the parking garage façade to reduce the visual impact to abutting properties with views towards Thompson Point.

Section (i) Multiple-family.

1. *The exterior design of the proposed structures, including architectural style, façade materials, roof pitch, building form and height, window pattern and spacing, porches and entryways, cornerboard and trim details, and facade variation in projecting or recessed building elements, shall be designed to complement and enhance the nearest residential neighborhood. The design of exterior facades shall provide positive visual interest by incorporating appropriate architectural elements;*

   Staff comment: The proposed multiple-family residential development is composed of several building wings and a structure parking garage that occupies a single building footprint. The proposed building design includes architectural detailing with varying exterior façade arrangements of fibercement and window detailing that is anomalous to any surrounding context due to the site location. Staff observes

building form variation with roof line expression at several building wings and suggest that the applicant explore additional building height that increases building massing height towards the center of the proposed building footprint.

2. *The proposed development shall respect the existing relationship of buildings to public streets. New development shall be integrated with the existing city fabric and streetscape including building placement, landscaping, lawn areas, porch and entrance areas, fencing, and other streetscape elements;*

   Staff comment: The proposed multiple-family residential development does not respond to any prevailing pattern within the city fabric or streetscape in regards to the building placement due to the isolated site location. Staff suggest that the applicant consider greater pedestrian activation at the transition space between the sidewalk and building façade fronting the street that includes an articulated building entry for residents, in addition to potential outdoor space programming (eg. retail use component, outdoor plaza and pedestrian amenities within close proximity to the street).

3. *Open space on the site for all two-family, special needs independent living unit, bed and breakfast and multiple-family development shall be integrated into the development site. Such open space in a special needs independent living unit or a multiple-family development shall be designed to complement and enhance the building form and development proposed on the site. Open space functions may include but are not limited to buffers and screening from streets and neighboring properties, yard space for residents, play areas, and planting strips along the perimeter of proposed buildings;*

   Staff comment: The proposed multiple-family residential development includes open space function with shared courtyards, outdoor amenities spaces, landscape buffering at the property and private balconies that Staff finds meets this design standard. Staff recommends a pathway connection directly from the Thompson Point roadway to the existing Portland Trail shoreline path.

4. *The design of proposed dwellings shall provide ample windows to enhance opportunities for sunlight and air in each dwelling in principal living areas and shall also provide sufficient storage areas;*

   Staff comment: Staff finds that the proposed multiple-family residential development provides ample windows and sufficient storage for all residential units.

5. *The scale and surface area of parking, driveways and paved areas are arranged and landscaped to properly screen vehicles from adjacent properties and streets;*

   Staff comment: Staff finds that all surface parking, driveways and paved areas are sufficiently screened from adjacent properties and streets.

6. *Two-family or multi-family dwellings shall not be converted to lodging houses unless all units in the building have been vacant for at least one (1) year prior to the date conversion is sought or unless the individual multiple-family units are less than one thousand (1,000) square feet in size. In no event shall any single-family dwelling in the R-5 or R-6 zone be converted in whole or in part to a lodging house.*

   Staff comment: Not applicable as the proposed multiple-family development does not include a lodging house conversion.

Design Review
Planning and Urban Development Department

City of portland

Subject:	125 Thompson's Point Road
Zone:	B5
Date of Review:	Monday, October 28, 2024
Reviewer(s):	Land Use Code Chapter 14.6.4.l Design standards Natasha Kypfer (Senior Planner); Zachary Powell (Senior Planner); Sean King (Urban Designer); Kevin Kraft (Director)
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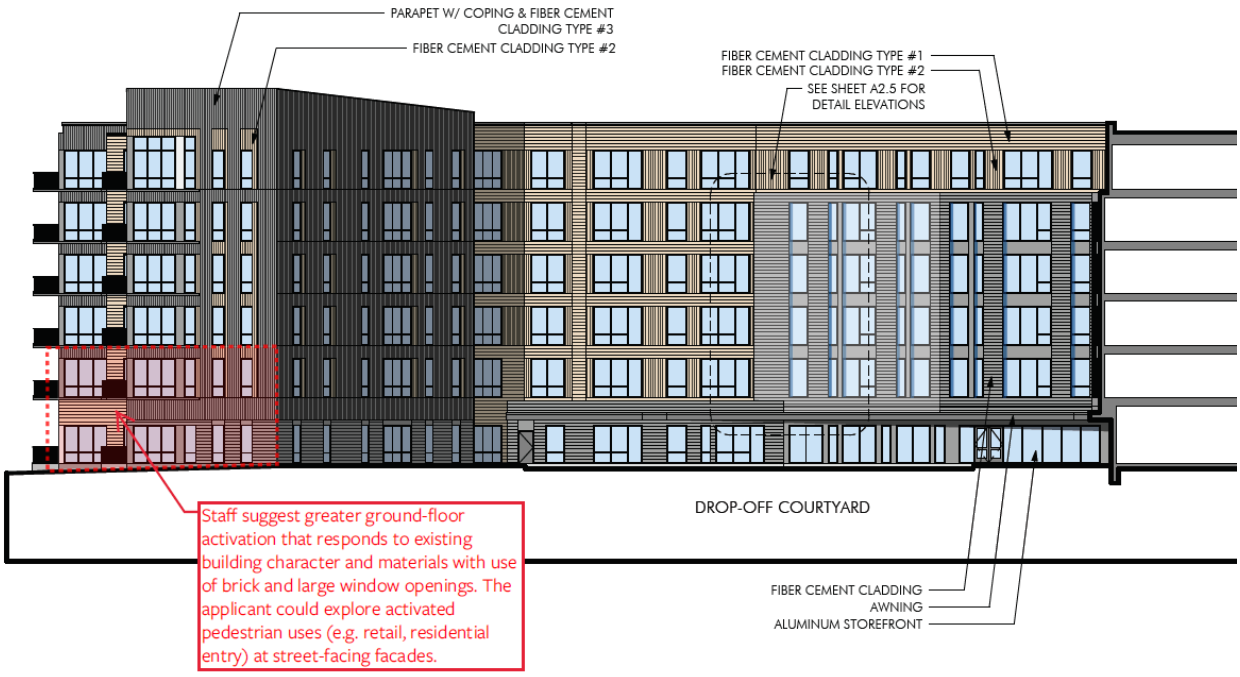

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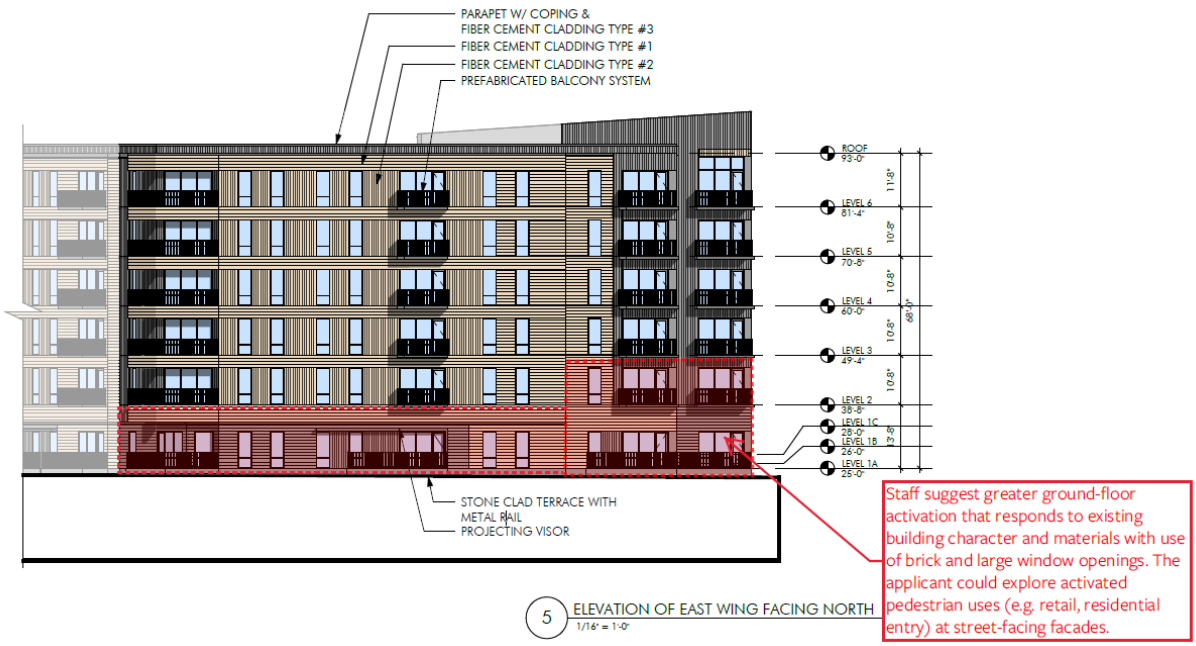

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Staff comments - The proposed development includes structured parking along the north building façade that is accessed via a two-way drive. Staff finds that the structured parking will be visible from abutting properties at the north and recommends that the applicant provide additional screening as appropriate (eg. architectural perforation, vertical landscaping or other façade-fixed material).

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   Staff comment: The proposed multiple-family residential development is composed of several building wings and a structure parking garage that occupies a single building footprint. The proposed building design includes architectural detailing with varying exterior façade arrangements of fibercement and window detailing that is anomalous to any surrounding context due to the site location. Staff observes

building form variation with roof line expression at several building wings and suggest that the applicant explore additional building height that increases building massing height towards the center of the proposed building footprint.

2. *The proposed development shall respect the existing relationship of buildings to public streets. New development shall be integrated with the existing city fabric and streetscape including building placement, landscaping, lawn areas, porch and entrance areas, fencing, and other streetscape elements;*

   Staff comment: The proposed multiple-family residential development does not respond to any prevailing pattern within the city fabric or streetscape in regards to the building placement due to the isolated site location. Staff suggest that the applicant consider greater pedestrian activation at the transition space between the sidewalk and building façade fronting the street that includes an articulated building entry for residents, in addition to potential outdoor space programming (eg. retail use component, outdoor plaza and pedestrian amenities within close proximity to the street).

3. *Open space on the site for all two-family, special needs independent living unit, bed and breakfast and multiple-family development shall be integrated into the development site. Such open space in a special needs independent living unit or a multiple-family development shall be designed to complement and enhance the building form and development proposed on the site. Open space functions may include but are not limited to buffers and screening from streets and neighboring properties, yard space for residents, play areas, and planting strips along the perimeter of proposed buildings;*

   Staff comment: The proposed multiple-family residential development includes open space function with shared courtyards, outdoor amenities spaces, landscape buffering at the property and private balconies that Staff finds meets this design standard. Staff recommends a pathway connection directly from the Thompson Point roadway to the existing Portland Trail shoreline path.

4. *The design of proposed dwellings shall provide ample windows to enhance opportunities for sunlight and air in each dwelling in principal living areas and shall also provide sufficient storage areas;*

   Staff comment: Staff finds that the proposed multiple-family residential development provides ample windows and sufficient storage for all residential units.

5. *The scale and surface area of parking, driveways and paved areas are arranged and landscaped to properly screen vehicles from adjacent properties and streets;*

   Staff comment: Staff finds that all surface parking, driveways and paved areas are sufficiently screened from adjacent properties and streets.

6. *Two-family or multi-family dwellings shall not be converted to lodging houses unless all units in the building have been vacant for at least one (1) year prior to the date conversion is sought or unless the individual multiple-family units are less than one thousand (1,000) square feet in size. In no event shall any single-family dwelling in the R-5 or R-6 zone be converted in whole or in part to a lodging house.*

   Staff comment: Not applicable as the proposed multiple-family development does not include a lodging house conversion.

Order 119-13/14
Passage: 9-0 on 12/16/2013 **Effective 1/15/2014**

MICHAEL F. BRENNAN (MAYOR)
KEVIN J. DONOGHUE (1)
DAVID A. MARSHALL (2)
EDWARD J. SUSLOVIC (3)
CHERYL A. LEEMAN (4)

CITY OF PORTLAND
IN THE CITY COUNCIL

JOHN R. COYNE (5)
JILL C. DUSON(A/L)
JON HINCK (A/L)
NICHOLAS M. MAVODONES (A/L)

AMENDMENT TO PORTLAND CITY CODE
CHAPTER 14. LAND USE
ARTICLE III. Zoning,
DIVISION 12.6. Urban Commercial Mixed Use Zone,
Section 14-230.4

I. BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF PORTLAND, MAINE IN CITY COUNCIL ASSEMBLED AS FOLLOWS:

1. *That Chapter 14, Article III, Division* 12.6. *Urban Commercial Mixed Use Zone, Section 14-230.4 of the Portland City Code is hereby amended to read as follows:*

Sec. 14-230.4. Dimensional requirements.

In addition to the provisions of article III, division 25 of this Code, lots in the B-5 and B-5b urban commercial mixed use zones shall meet the following requirements:

...

(e) ~~*Maximum residential density:* Sixty (60) dwelling units per acre.~~

~~(f)~~ *Maximum building height:* Sixty-five (65) feet; except as follows:

1. ~~for~~ For parcels of land ~~I ntch~~in the B-5b located along West Commercial Street south of Danforth Street, maximum building heights shall be as follows:

~~———~~West of the projection of the centerline of the Fletcher Street right-of-way, the maximum building height shall be forty-five (45) feet; and, east of the projection of the centerline of the Fletcher Street right-of-way and west of the projection of the centerline of the Emery Stree~~e~~t right-of-way, the maximum building height shall be fifty-five (55) feet.

———For purposes of this section, a projection of the centerline of a street is defined by extending the centerline of the referenced street right of way along its most southerly block to the centerline of West Commercial Street.

———Furthermore, notwithstanding the exception of roof top structures from building height regulations in Section 14-430(a), no rooftop structure located between the projections of the centerlines of Emery Street and Fletcher Street, as described above, shall exceed a height of sixty-two (62) feet as measured from the average grade of the building at its foundation.

2. For parcels of land located on Thompson's Point and also subject to an approved Master Plan Development: one hundred twenty (120) feet. Thompson's Point is defined as the contiguous parcels of upland occupying the peninsula bounded on the east by Route 295, on the north by the Mountain Division Rail Right of way, and on the south and west by the Fore River and its associated wetlands. Nearby lands that are accessed from Hobart and Osgood Streets are, for the purposes of this provision, not considered part of Thompson's Point.

(~~g~~f) *Minimum building height:*

1. In the B-5 zoning district between Forest Avenue and Franklin Street, within thirty-five (35) feet of any public street, no new construction of any building shall have less than three (3) floors of occupiable or habitable space above the average adjacent grade. This provision shall not apply to:

   a. Accessory building components such as truck loading docks, mechanical equipment enclosures, refrigeration units;

   b. Information kiosks and ticketing booths;

   c. Parking garages;

   d. Public transportation facilities;

e. Additions to buildings existing as of March 9, 2005 provided that the cumulative additions since March 9, 2005 does not exceed 25% of the building footprint on March 9, 2005 except that such restriction shall not apply to those portions of the building addition that are constructed closer to the street line than the building footprint existing as of March 9, 2005;

f. Utility substations, including sewage collection and pumping stations, water pumping stations, transformer stations, telephone electronic enclosures and other similar structures; and

g. Additions to and relocations of designated historic structures or structures determined by the Historic Preservation Committee to be eligible for such designation.

Chapter 14 LAND USE*

***Cross reference(s)--**Buildings and building regulations, Ch. 6; parks, recreation and public buildings, Ch. 18; sewers, Ch. 24; streets, sidewalks and other public places, Ch. 25; vegetation, Ch. 29.

State law reference(s)--Planning, zoning and development, 30 M.R.S.A. Sec. 4501 et seq.

Art. I. In General, § 14-1--14-15
Art. II. Planning Board, § 14-16--14-45
Art. III. Zoning, § 14-46--14-490
Div. 1. Generally, § 14-46--14-59
Div. 1.5 Conditional or Contract Zoning, § 14-60--14-65
Div. 2. R-1 Residential Zone, § 14-66--14-75
Div. 3. R-2 Residential Zone, § 14-76--14-85
Div. 4. R-3 Residential Zone, § 14-86--14-93
Div. 4.5. FH Flexible Housing Zone, § 14-94--14-100
Div. 5. R-4 Residential Zone, § 14-101--14-115
Div. 6. R-5 Residential Zone., § 14-116--14-125
Div. 6.5. R-5A Residential Zone, §14-126--14-134
Div. 7. R-6 Residential Zone, § 14-135—-14-140
Div. 7.01 R-7 Compact Urban Residential Overlay Zone, § 14-141--14-144
Div. 7.1. IR-1 Island Residential Zone, § 14-145.1—-14-145.6
Div. 7.2. IR-2 Island Residential Zone, § 14-145.7—-14-145.12
Div. 7.3. IR-3 Island Residential Zone, § 14-145.13—-14-145.19
Div. 7.5. Island Transfer Station Overlay Zone, § 14-145.20—-14-145.22
Div. 8. R-P Residence-Professional Zone, § 14-146—-14-152
Div. 8.1 USM University of Southern Maine Overlay Zone 14-152--14-152.9
Div. 8.5. R-OS Recreation and Open Space Zone, § 14-153—-14-160
Div. 9. B-1 and B-1b Neighborhood Business Zones, § 14-161—-14-180
Div. 10. B-2 and B-2b Community Business Zone, § 14-181—14-195
Div. 11. A-B Airport Business Zone, § 14-196—-14-215
Div. 12. B-3, B-3b and B-3c Downtown Business Zones, § 14-216—-14-221.1

Div. 12.1. I-B Island Business Zone, § 14-222—14-229.9
Div. 12.5. B-4 Commercial Corridor Zone, § 14-229.10--14-229.30
Div. 12.6. B-5 Urban Commercial Mixed Use Zone, § 14-230—14-230.9
Div. 12.7. O-P Office Park Zone, § 14-230.10-—14-230.16
Div. 13. I-L and I-Lb Industrial Zones, §14-231—-14-245
Div. 14. I-M, I-Ma and I-Mb Industrial Zones, § 14-246-—14-260
Div. 15. I-H and I-Hb Industrial Zones, § 14-261—-14-267
Div. 15.1. B-6 Eastern Waterfront Mixed Zone § 14-268—14-275
Div. 16. Waynflete School Overlay Zone, § 14-276—-14-276.10
Div. 17. B-7 Mixed Development District Zone, § 14-294—14-304
Div. 17.5. Eastern Waterfront Port Zone, §14-300—-14-304
Div. 18. Waterfront Central Zone, § 14-305—-14-317
Div. 18.5 Waterfront Port Development Zone, § 14-318—-14-320.4
Div. 18.7 Waterfront Special Use Zone, § 14-320.5—-14-320.10
Div. 19. R-P Resource Protection Zone, § 14-321—-14-324
Div. 19.5 Helistop Overlay Zone, § 14-325—14-330
Div. 19.7 Reserved, § 14-330.1—14-330.5
Div. 19.8 Downtown Entertainment Overlay Zone, § 14-330.11—14-330.17
Div. 20. Off-Street Parking, § 14-331—-14-350
Div. 21. Off-Street Loading, § 14-351--14-365
Div. 22. Signs, § 14-366--14-372.5
Div. 22.5 Adult Business Establishments, § 14-373—-14-380
Div. 23. Nonconforming Use and Nonconforming Buildings, § 14-381—-14-400
Div. 24. Use Regulations and Exceptions, § 14-401—14-420
Div. 25. Space and Bulk Regulations and Exceptions, § 14-421—-14-445
Div. 26. Shoreland Regulations, § 14-446—14-450
Div. 26.5. Flood Plain Management Regulations, § 14-450.1—14-450.30
Div. 26.7. S-P Stream Protection Zone, § 14-451—14-460
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Div. 28. Jurisdiction of Board of Appeals, § 14-471—14-482
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14-483
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Div. 31. Housing Trust Fund, § 14-489
Art. IV. Subdivisions, § 14-491—-14-520
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Art. VII. Condominium Conversion, § 14-565—-14-582
Art.VIII. Regulations of Explosives, § 14-583—14-600
Art. IX. Historic Preservation, § 14-601—-14-750
Div. 1. Generally, § 14-601, 14-602
Div. 2. Historic Preservation Board, § 14-603—-14-609
Div. 3. Categories and Criteria for Designation, § 14-610—-14-613
Div.4. Nomination, Consideration and Designation, § 14-614—-14-629
Div. 5. Interim Protection for Nominations, §14-630-633
Div. 6. Certificates of Appropriateness and Nonapplicability, § 14-634—-14-649
Div. 7. Standards for Review of Application for Certificate of Appropriateness, § 14-650—-14-659
Div. 8. Certificate of Economic Hardship, § 14-660—14-674
Div. 9. Administration, § 14-675—-14-689
Div. 10. Maintenance, § 14-690—-14-694
Div. 11. Penalties, etc., §14-695-—14-700
Div. 12. Landmarks, § 14-701—-14-750
Art. X. Alternative Energy, § 14-751—-14-849
Div. 1. Wind Energy Generation, § 14-753 – 14-770
Art. XI. Public Arts Program, § 14-850--14-854
Reserved, §14-855-—14-860
Art. XII. Relocation of Displaced Tenants, § 14-861--14-899
Art. XIII Reserved, § 14-900, 14-901
Art. XIV. Moratorium on Demolition of Housing Units, § 14-902--14-904
Art. XV. Waterfront Capital Improvement and Economic Redevelopment Zone and Ordinance, § 14-905—14-909
Art. XVI Citizen Advisory Committee, § 14-1000—14-1003

ARTICLE I. IN GENERAL

Sec. 14-1. Reserved.
Sec. 14-2. Reserved.
Sec. 14-3. Reserved.

Sec. 14-4. Reserved.
Sec. 14-5. Reserved.
Sec. 14-6. Reserved.
Sec. 14-7. – 14-15 Reserved.

ARTICLE II. PLANNING BOARD*

***Cross reference(s)--**Administration, Ch. 2; boards generally, § 2-31 et seq.; limitation on term of service on boards, commissions, § 2-32 et seq.

Sec. 14-16. Created.

There is hereby created a planning board.
(Code 1968, § 601.1; Ord. No. 158-68, 5-6-68; Ord. No. 671-75, 12-15-75; Ord. No. 242-76, 5-17-76; Ord. No. 149-79, § 1, 8-6-79)

Sec. 14-17. Composition.

There shall be a planning board of seven (7) members. Members of the planning board shall be residents of the city and shall not be officers or employees of the city or any other agencies or department.
(Code 1968, § 601.1; Ord. No. 158-68, 5-6-68; Ord. No. 671-75, 12-15-75; Ord. No. 242-76, 5-17-76; Ord. No. 149-79, § 1, 8-6-79)

Sec. 14-18. Appointment; terms.

The members of the planning board shall be appointed by the city council for terms of three (3) years. Such members shall serve until their successors are duly elected and qualified. Such terms shall be staggered so that the terms of not more than three (3) members shall expire in any calendar year; providing, however, such service shall not extend to over one hundred twenty (120) days after expiration of their term.
(Code 1968, § 601.1; Ord. No. 158-68, 5-6-68; Ord. No. 671-75, 12-15-75; Ord. No. 242-76, 5-17-76; Ord. No. 149-79, § 1, 8-6-79; Ord. No. 277-83, 11-7-83)

Sec. 14-19. Vacancies.

Permanent vacancies on the planning board shall be filled by

the city council, in the same manner as other appointments hereunder, for the unexpired term of the former member.
(Code 1968, § 601.1; Ord. No. 158-68, 5-6-68; Ord. No. 671-75, 12-15-75; Ord. No. 242-76, 5-17-76; Ord. No. 149-79, § 1, 8-6-79)

Sec. 14-20. Removal of members.

Any member of the planning board may be removed for cause by the city council at any time; provided, however, that before any such removal, such member shall be given an opportunity to be heard in his or her own defense at a public hearing.
(Code 1968, § 601.1; Ord. No. 158-68, 5-6-68; Ord. No. 671-75, 12-15-75; Ord. No. 242-76, 5-17-76; Ord. No. 149-79, § 1, 8-6-79)

Sec. 14-21. Compensation.

Members of the planning board shall serve without compensation.
(Code 1968, § 601.1; Ord. No. 158-68, 5-6-68; Ord. No. 671-75, 12-15-75; Ord. No. 242-76, 5-17-76; Ord. No. 149-79, § 1, 8-6-79)

Sec. 14-22. Chair and vice-chair.

(a) The members of the planning board shall annually elect one (1) of their number as chair to preside at all meetings and hearings and to fulfill the customary functions of that office, and another of their number as vice-chair. The chair may administer oaths. The chair shall have the right, upon request, to designate any person or organization as a specially interested party for purposes of offering evidence and conducting cross-examination at hearings.

(b) In the absence of the chair, the vice-chair shall act as chair and shall have all the powers of the chair. The vice-chair shall have such other powers and duties as may from time to time be provided by the rules of the planning board.
(Code 1968, § 601.2; Ord. No. 158-68, 5-6-68; Ord. No. 671-75, 12-15-75)

Sec. 14-23. Staff secretary; minutes, public records.

The planning director shall designate a member of his or her staff who shall serve as staff secretary of the planning board and attend all of its proceedings. The staff secretary shall provide for the keeping of minutes of the proceedings of the board, showing the vote of each member on every question, or his or her absence or

failure to vote, and shall maintain the permanent records and decisions of all board meetings, hearings and proceedings and all correspondence of the board, as required by statute. Such records shall be public records open to inspection during working hours upon reasonable notice.

(Code 1968, § 601.3; Ord. No. 158-68, 5-6-68; Ord. No. 671-75, 12-15-75)

Sec. 14-24. Quorum and necessary vote.

As to any matter requiring a hearing, no business shall be transacted by the planning board without a quorum, consisting of four (4) members, being present. The concurring vote of at least four (4) members shall be necessary to authorize any action by the board. If less than a quorum is present, the hearing may be adjourned from time to time for a period not exceeding three (3) weeks at any one time. The staff secretary shall notify in writing all members of the date of the adjourned hearing and shall notify such other interested parties as may be directed in the vote of adjournment.

(Code 1968, § 601.4; Ord. No. 158-68, 5-6-68; Ord. No. 671-75, 12-15-75; Ord. No. 242-76, 5-17-76)

Sec. 14-25. Meetings, hearings and procedures.

(a) Regular meetings of the planning board shall be held at the call of the chair or as provided by rule of the board. Special meetings may be called by the chair or any four (4) members of the board or at the request of the city council. Except as otherwise provided in section 14-26, all meetings, hearings and deliberations of the planning board and its committees shall be open to the public in accordance with Title 1, M.R.S.A., Section 401 et seq. Testimony at any hearing may be required by the planning board to be given under oath.

(b) The planning board shall adopt its own rules for the conduct of its business not inconsistent with the statutes of the state and this article. Such rules shall be filed with the staff secretary of the board and with the city clerk. Any and all rule changes shall be placed on a city council public agenda as a communication requiring a public hearing. Any rule may be vetoed, in whole or in part, by order of the council within forty-five (45) days of the date of filing with the city clerk. No rules change shall take effect until that time period has elapsed. If a part of a rule is vetoed, the remainder shall continue in effect. Any rule so adopted, which is not required by the statutes of the state or

by this article, may be waived by the chair upon good cause being shown.

(Code 1968, § 601.5; Ord. No. 158-68, 5-6-68; Ord. No. 671-75, 12-15-75, 12-15-75; Ord. No. 242-76, 5-17-76; Ord. No. 78-89, 8-7-89)

Sec. 14-26. Workshop or informational meetings.

Informal meetings or workshops of the planning board or any of its committees may be held at the call of the board or committee chairperson, as the case may be, for the presentation of information by the planning director, his or her staff, the applicant or others. These meetings will be open for public comment according to the Rules of the Portland planning board. Such meetings, unless open to the public as provided in Title 1, M.R.S.A., Section 401 et seq. (Freedom of Access Act), shall be informational only and shall not be deliberative in nature; shall not be used by the board or committee for the weighing of positions or reasons for or against a proposition; and shall not be used by the board or committee for the formulation of tentative or final decisions on any matter.

(Code 1968, § 601.6; Ord. No. 158-68, 5-6-68; Ord. No. 671-75, 12-15-75; Ord. No. 227-01, 4-2-01)

Sec. 14-27. Record and decisions.

(a) The minutes of the staff secretary, and the transcript if one (1) is made, and all exhibits, papers, applications and requests filed in any proceeding before the planning board and the decision of the board shall constitute the record.

(b) Every final decision of the planning board and every recommendation of the planning board to the city council shall include written findings of fact, and shall specify the reason or reasons for such decision or recommendation.

(c) The staff secretary shall mail notice of any decision of the planning board to the applicant and any designated interested parties within five (5) business days of such decision.

(Code 1968, § 601.7; Ord. No. 158-68, 5-6-68; Ord. No. 671-75, 12-15-75)

Sec. 14-28. Conflicts.

No member of the planning board shall participate in the hearing or disposition of any matter in which he or she has an interest. Any question of whether a member has a conflict of interest sufficient to disqualify the member shall be decided by a

majority vote of the members present, except the member whose possible conflict is being examined; where such vote results in a tie, the subject member shall be disqualified.

(Code 1968, § 601.8; Ord. No. 158-68, 5-6-68; Ord. No. 671-75, 12-15-75)

Sec. 14-29. Appeals.

An appeal from any final decision of the planning board as to any matter over which it has final authority may be taken by any party or by any authorized officer or agent of the city to the superior court in accordance with Rule 80B of the Maine Rules of Civil Procedure. No appeal shall lie concerning any matter as to which the power of the board is limited to the making of a recommendation.

(Code 1968, § 601.9; Ord. No. 158-68, 5-6-68; Ord. No. 671-75, 12-15-75)

Sec. 14-30. Jurisdiction and authority.

In addition to the jurisdiction conferred on it by other provisions of state law and the ordinances of the city and in accordance therewith, the planning board shall have the following jurisdiction and authority:

(a) To prepare and recommend a comprehensive plan to the city council, which plan, upon its adoption by the city council, shall be known as the "Land Development Plan of the City of Portland";

(b) To prepare and recommend to the city council changes in and amendments to the land development plan;

(c) To aid and assist the city council and departments and agencies of the city in implementing general plans and in planning, developing and completing specific projects;

(d) To hear, review and approve, conditionally approve or disapprove level III site plans, subdivisions and conditional use applications;

(e) To hear, review and approve or deny applications for subdivision approval;

(f) To hear, review and offer its recommendations to the city council on applications for zoning changes and amendments to, or revisions of, the zoning ordinance, and to

initiate recommendations for zoning changes and amendments to, or revisions of, the zoning ordinance;

(g) To review and offer its recommendations to the city council on public projects;

(h) To review and approve, conditionally approve, or disapprove site plans for regulated projects in shoreland areas;

(i) To prepare and offer its recommendations to the city council with regard to the city's annual capital improvements program;

(j) To review and approve, conditionally approve, or disapprove urban renewal plans;

(k) Upon reasonable request, to make its special knowledge and expertise available to any official, department, board or agency of the city, county, state or federal governments to aid them in the performance of their respective duties relating to the planning and development of the city and its region, including request from the City Council to review proposed developments in which the developer does not have the right, title or interest in all the property necessary for the proposed development because some or all of that property is owned by the City;

(l) To make such investigations, maps and reports, and recommendations in connection therewith, relating to the planning and development of the city as seem desirable;

(m) To employ or contract with such experts and other assistants as may be necessary or convenient to carry out its duties hereunder and to pay for their services and for such other expenses as may be necessary and proper; provided, however, that such expenditures shall not exceed such funds as may be appropriated for such purposes from time to time by the city council;

(n) To hear, review and offer its recommendations to the city council on petitions for street vacations and discontinuances.

(o) To hear, review and decide appeals where it is alleged there is an error in any decision, requirement, or determination made by the planning authority.

(Code 1968, § 601.10; Ord. No. 158-68, 5-6-68; Ord. No. 671-75, 12-15-75; Ord. No. 86-88, 7-19-88; Ord. No. 137-03/04, 1-21-04; Ord. No. 278-09/10, 7/19/10)

***Editor's Note--**Ord. No. 86-88, adopted July 19, 1988, amended this section by adding subsection (14) to read as herein set out. See also the editor's note to Art. III of this chapter for additional provisions relative to Ord. No. 86-88.

Sec. 14-31. Committees.

The chair of the planning board shall from time to time assign the members of the board to such regular and special committees as may be established by the board. Such committees shall have no final authority but shall assist the board in the conduct of its business by making recommendations to it concerning such specific items as may be assigned to them for study and report. The board shall adopt such rules as it shall deem appropriate to govern the organization and operation of its committees. Committee meetings deliberative in nature shall be open to the public in accordance with Title 1, M.R.S.A., Section 401 et seq.

(Code 1968, § 601.11; Ord. No. 158-68, 5-6-68; Ord. No. 671-75, 12-15-75)

Sec. 14-32. Notice.

(a) Applications:

1. ***Level I, level II and level III site plans.*** All public notices will be sent according to the section 14-525 of article V (site plan) of this chapter.

2. ***Subdivision, Zoning Map Amendments.*** When an application for subdivision or a request for a zoning map amendment is received or generated by the planning authority, it shall give a dated receipt to the applicant and shall notify, by mail, the following, where applicable.

   a. All property owners within five hundred (500) feet of the proposed subdivision and the clerk and the reviewing authority of municipalities that abut or include any portion of the subdivision. In addition, the planning authority shall notify a

public drinking water supplier if the subdivision is within its source water protection area;

b. All property owners within five hundred (500) feet of the proposed subdivision or proposed zone change site, except that for subdivisions within industrial zones or proposed map amendments for a site within an industrial zone the notice range shall be one thousand (1000) feet;

c. All property owners within the limits of the proposed zoning map amendment and all property owners five hundred (500) feet beyond said area, except that for map amendments to a site located within industrial zone designations the notice range shall be one thousand (1000) feet.

The notice hereunder shall include a brief description of the application, the address or location of the property involved and a telephone number at the City where additional information may be obtained. The cost of said notice shall be charged to the applicant.

(b) Workshops and hearings:

Except for notice of public hearings concerning conditional or contract zoning (which notice is governed by section 14-61), the planning authority shall give notice of public workshops and hearings in the form and manner and to the persons herein specified. The notice shall include the time and place of such workshop or hearing, a brief description of the application and the address or location of the property involved. Where notice by mail is required, such notice shall be mailed at least ten (10) calendar days in advance of the workshop or hearing date by regular United States mail. The cost of said noticing shall be charged to the applicant.

1. Subdivision:

a. ***To the general public.*** In the case of workshops and public hearings, notice as described above shall be given to the general public by publication in a newspaper of general circulation in the City of Portland at least two (2) times, the date of the first publication to be at least ten (10) calendar

days prior to the hearing.

b. ***To the applicant and the owners of the subject property, and other property owners;*** In the case of workshops and public hearings, notice shall be sent by regular United States mail to the applicant, to the owner(s) of the subject property and to all owners of property located within five hundred (500) feet of the subject property, except that for subdivisions within industrial zones the notice range shall be one thousand (1000) feet.

2. Zoning Map Amendment:

a. ***To the general public:*** Except for notice of public hearings concerning conditional or contract zoning (which notice is governed by section 14-61), the notice of public hearing for zoning map amendments must be posted in the municipal office at least 13 days before the public hearing on such application. In addition, notice of said public hearing must be published at least two times in a newspaper of general circulation in the City of Portland. The date of the first publication must be at least twelve days prior to any public hearing and the date of the second publication must be at least seven days prior to the public hearing.

b. ***To property owners within the proposed area proposed for rezoning:*** Except for notice of public hearings concerning conditional or contract zoning (which notice is governed by section 14-61), in the case of workshops and public hearings on zoning map amendments, notice shall be sent by regular United States mail to all property owners within the aarea proposed for rezoning and all property owners five hundred (500) feet beyond said area, except that rezoning to industrial zone designations the notice range shall be one thousand (1000) feet.

3. Zoning Text Amendment.

a. ***To the general public:*** Notice of any zoning text amendment shall be published in a newspaper of general circulation in the City of Portland at

least seven days prior to the public hearing on the proposed amendment.

(c) Required Neighborhood Meeting

An applicant for (a) the subdivision of five or more units or lots or (b) for level III site plan review or (c) a private applicant for rezoning that would permit a Level III development as defined in Section 14-523 (required approvals and applicability), shall conduct a neighborhood meeting according to section 14-524 of article V (site plan) of this chapter.
(Code 1968, § 601.12; Ord. No. 158-68, 5-6-68; Ord. No. 671-75, 12-15-75; Ord. No. 79-89, 8-7-89; Ord. No. 00-51, §1, 8-7-00; Ord. No. 227-01, 4-2-01; Ord. No. 278-09/10, 7-19-10; Ord. No.25 11/12, 8-15-11)

Sec. 14-33. Public hearings.

Public hearings shall be held as required by the various statutes, codes and ordinances pursuant to which matters are brought before the planning board and shall be conducted in accordance with relevant state law, this code and the rules of the board.
Code 1968, § 601.13; Ord. No. 671-75, 12-15-75)

Sec. 14-34. - 14-45. Reserved.

ARTICLE III. ZONING*

***Editor's note--**Ord. No. 109-88, adopted July 19, 1988, provided that Ord. No. 79-88 through Ord. No. 99-88, all adopted July 19, 1988, which amended various sections within this chapter, "shall take effect immediately as an emergency, pursuant to Article II, § 8 of the Portland City Charter, to avoid a gap between the expiration of the moratorium ordinance previously controlling residential development and the implementation of the new development standards and map as adopted" and further provided that "notwithstanding the provisions of 1 M.R.S.A. § 302, this amendment and items 79 through 99 shall be applicable to applications for permits filed on or after July 19, 1988." Ord. No. 99-88 has not been set out herein but is on file in appropriate city offices. The specific amendments effected by Ord. No. 79-88 through Ord. No. 98-88 are too extensive to enumerate herein; for the specific disposition of such ordinances, see the Comparative Table following this Code.

It should be noted that the zoning ordinance, as set out in this article, does not include the text of conditional rezonings enacted as amendments to the zoning map adopted in § 14-49 herein.

Cross reference(s)--Ordinances pertaining to rezoning saved from repeal, § 1-4(13).

State law reference(s)--Zoning ordinances, 30 M.R.S.A. § 4962.

DIVISION 1. GENERALLY

Sec. 14-46. Purpose.

This article, made in accordance with a comprehensive plan, is enacted for the purpose of decreasing congestion in streets; securing safety from fire, panic and other dangers; providing adequate light and air; preventing the over-crowding of land; avoiding undue concentration of population; facilitating the adequate provision of transportation, sewerage, schools, parks and other community facilities and utilities; thus promoting the health, safety, convenience and general welfare of the citizens of the city. This article is made with reasonable consideration, among other things, to the character of each zone and its peculiar suitability for particular uses and with a view to conserving and stabilizing the value of property and encouraging the most appropriate use of land throughout the community.
(Code 1968, § 602.1.A)

Sec. 14-47. Definitions.

The following words shall be defined as set forth below for use in this article. Definitions set forth in the building code of the city shall apply to words not herein defined:

Accessory uses: Uses which are customarily incidental and subordinate to the location, function and operation of permitted uses.

Adult day care facility: A facility which provides a regular program of care and protection for persons over the age of sixteen (16), for consideration, for any part of the day.

Apartment: See "dwelling unit."

Apartment house: See "multifamily dwelling."

Arcade: A covered passageway, generally occurring at the street level of a building, running parallel and adjacent to the street or as a through-block pedestrian connection, which is intended to provide sheltered access to directly adjoining commercial or other uses. Arcades are provided physical definition

by the regular placement of structural elements throughout their length which support enclosed building uses above.

Assembly: A joining together of completely fabricated parts to create a finished product.

Back office use: An office-related use providing support services to a primary or headquarter use, with minimal public visitation and no direct in-person sales or services to the general public. Back office uses may include data processing, or other clerical uses relying heavily on a telecommunications infrastructure and may also include support services to educational institutions or social service agencies as long as no direct in-person services to the general public are provided.

Bed and breakfast: A building in which more than two (2) but not more than nine (9) guest rooms are used to provide or offer overnight accommodations for transient guests. An owner, manager, or operator shall live in the building as a permanent resident. No cooking facilities shall be permitted in any of the guest rooms. The only meal which may be offered is breakfast, which shall be offered only to overnight guests. No owner, operator, director, employee, shareholder, partner, corporate officer or agent of a bed and breakfast facility, hostel, hotel, inn, lodging house, motel, or tourist home (as defined in this code) may, for direct or indirect economic remuneration, arrange for or provide any housing accommodations including but not limited to long term, short term or overnight accommodations for an actual or potential guest, customer, or patron of the business at any off-premises site in the City, unless such a facility is authorized, under the applicable provisions of Portland's Land Use Code, to offer such accommodations as a bed and breakfast, hotel, inn, lodging house, motel or tourist home.

Billboard: A structure, either freestanding or attached to a building, the surface of which is available for hire for advertising purposes.

Biotechnology: The use of biological processes, particularly cellular and molecular to solve problems and/or make useful products for applications in medicine, agriculture and environmental management.

Building, height of: The vertical measurement from grade, or the predevelopment grade on the islands, to the highest point of

the roof beams in flat roofs; to the highest point of the roof beams or the highest point on the deck of mansard roofs; to a level midway between the level of the eaves and highest point of pitched roofs or hip roofs; or to a level two-thirds of the distance from the level of the eaves to the highest point of gambrel roofs. For this purpose the level of the eaves shall be taken to mean the highest level where the plane of the roof intersects the plane of the outside wall on a side containing the eaves.

Business service: Establishments primarily engaged in rendering services to other business establishments on a fee or contract basis such as advertising, mailing services, building maintenance services, employment services, management and consulting services, protective services, personnel services and similar businesses.

Chemical-free night club: An alcohol-free commercial establishment that offers live entertainment, amplified music, and/or dancing, where the primary source of income for such alcohol-free commercial establishment is derived from the entertainment and/or any admission or cover charge.

Clinics: Any establishment where patients are admitted for examination and treatment by one (1) or more professionals such as, but not limited to, physicians, dentists, psychologists or social workers.

Coastal wetland: All tidal and subtidal lands; all lands with vegetation present that is tolerant of salt water and that occurs primarily in a salt water or estuarine habitat; and/or any swamp, marsh, bog, beach, flat or other contiguous low land that is subject to tidal action during the highest tide level for the year in which an activity is proposed as identified in tide tables published by the National Ocean Service. Coastal wetlands may include portions of coastal sand dunes.

Collector or arterial road: A roadway which is classified as a collector or minor, principal or other arterial by the federal functional road classification for Portland, Maine, a map of which is on file with the department of planning and urban development.

Commercial vessel: Any watercraft used principally in a business or trade, including common carriers of passenger or freight, whether for governmental, nonprofit or emergency purposes; but not including pleasure craft used principally for recreational

purposes.

Common areas: Portions of a lodging house which are available for use by all residents of the lodging house. Common areas shall include, but are not limited to, one (1) or more of the following: kitchens, living rooms, recreation rooms, improved basements, and finished porches. Bathrooms, stairways, hallways and storage areas shall not be counted as common areas.

Community Hall: A building or portion of an existing building built for institutional or other non-residential uses and used for social, recreational, artistic, civic, or educational community functions. Such a facility would be open to the public for such functions, which, for example, could include but not be limited to performances, dance, exhibitions, cultural exchange, training programs and workshops, neighborhood meetings or gatherings. As part of these functions and activities, it shall be permissible to serve food, subject to other applicable codes and ordinances. In the R-6 residential zone only, the building can also be used for a farmer's market pursuant to chapter 21 of this code and the requirements set forth therein.

Community living arrangements: A state approved, authorized, certified or licensed group home for eight (8) or fewer mentally handicapped or developmentally disabled persons.

Congregate care facility: A planned residential unit development which provides individual living units with support services which provide assistance to residents. Services to be provided shall include:

(a) Transportation for essential support activities. This service shall be included in the base rent;

(b) Provision of at least one (1) meal per day;

(c) Programmed social activities which are facilitated by staff. This service shall be included in the base rent;

(d) Provision of personal care services including, but not limited to, housekeeping, laundry, and minimal health monitoring; and

(e) Installation of emergency call buttons or systems in each congregate care living unit.

The population of a congregate care facility shall consist of persons fifty-five (55) years of age or older and their spouses and/or disabled persons and their spouses.

Day care facility: A facility which provides a regular program of care and protection for children under the age of sixteen (16), for consideration, for any part of the day.

Drinking establishment: Means and includes any establishment required to be licensed to sell alcoholic beverages for on-premises consumption, which is not regularly used for the purpose of providing full-course meals, as defined in Title 28-A of the Maine Revised Statutes, on the premises.

Drive-through facility: A commercial facility which provides a service directly to a motor vehicle occupant and where the customer drives a motor vehicle onto the premises and to a window or mechanical device through or by which the customer is served with or without exiting the vehicle. Drive-throughs do not include major or minor auto service stations.

Drive-through features: Features associated with drive-throughs including but not limited to designated travel or stacking lanes, intercom systems, menu boards, service windows, kiosks, mechanical devices, etc.

Dwelling: A building or portion thereof used exclusively for residential occupancy, including single-family, two-family and multifamily dwellings, but not including hotels, lodging houses, sheltered care group homes or tourist homes.

Dwelling, one-family: A detached building used exclusively for occupancy by one (1) family.

Dwelling, two-family: A single building containing two dwelling units used exclusively for occupancy by two (2) families living independently of each other.

Dwelling, multifamily: A building or portion thereof containing three (3) or more dwelling units.

Dwelling unit: One (1) or more rooms with private bath and kitchen facilities comprising an independent self-contained dwelling unit.

Earth moving activity means any removal or placement, excavation, filling, stockpiling or grading of soil, earth, loam, sand, gravel, rock and other mineral deposits.

Emergency operations: Emergency operations shall include operations conducted for the public health, safety or general welfare, such as protection of resources from immediate destruction or loss, law enforcement, and operations to rescue human beings and livestock from the threat of destruction or injury.

Emergency shelter: A facility providing temporary overnight shelter to homeless individuals in a dormitory-style or per-bed arrangement.

Essential services: The construction, alteration or maintenance of gas, electrical or communication facilities; steam, fuel, electric power or water transmission or distribution lines, towers and related equipment; telephone cables or lines, poles and related equipment; gas, oil, water, slurry or other similar pipelines; municipal sewage lines, collection or supply systems; and associated storage tanks. Such systems may include towers, poles, wires, mains, drains, pipes, conduits, cables, fire alarms and police call boxes, traffic signals, hydrants and similar accessories, but shall not include service drops or buildings which are necessary for the furnishing of such services.

Fabrication: Manufacturing, excluding the refining or other initial processing of basic raw materials such as metal ores, lumber or rubber. Fabrication relates to stamping, cutting, or otherwise shaping the processed materials into useful objects.

Family: Not more than sixteen (16) individuals living together in a dwelling unit as a single nonprofit housekeeping unit. A group occupying a hotel, fraternity house or sorority house shall not be considered as a family. The family may include necessary servants.

Family amusement centers: Any structure, open to the public, which may contain coin-operated games and similar entertainment and amusement devices.

Fill. Soil, earth, loam, sand, gravel, rock and other mineral deposits.

Filling. The placement of soil, earth, loam, sand, gravel, rock and other mineral deposits. Filling shall include stockpiling

as defined herein.

Floor area: A floor space enclosed by exterior or standard fire walls, exclusive of vent shafts and courts.

Floor area ratio: The proportion of total floor area in a development to the total land area. The ratio is calculated as follows:

$$\frac{\text{8,000 square feet (total floor area)}}{\text{20,000 square feet (total land area)}} = .040 \text{ floor area ratio}$$

Foundation: The supporting substructure of a building or other structure, excluding wooden sills and post supports, but including basements, slabs, frost walls, or other base consisting of concrete, block, brick or similar material.

Freshwater wetland: Freshwater swamps, marshes, bogs and/or similar areas which are:

(a) Of ten (10) or more contiguous acres or of less than ten (10) contiguous acres and adjacent to a surface water body except for any river, stream or brook such that, in a natural state, the combined surface area is in excess of ten (10) acres or of less than ten (10) acres that is depicted on the Shoreland Zoning Map; and

(b) Inundated or saturated by surface or ground water at a frequency and for a duration sufficient to support, and which under normal circumstances do support, a prevalence of wetland vegetation typically adapted for life in saturated soils.

Freshwater wetlands may contain small stream channels or inclusions of land that do not conform to the criteria of this definition.

Gross area: Square footage of land area excluding areas of special flood hazard as defined in section 14-450.5 of this chapter.

Handicapped family unit: A dwelling which provides living facilities for handicapped persons. A handicapped family unit may

also provide counseling and support services. Staff members may also be included in the population.

Handicapped person: A person with a physical or mental impairment which substantially limits one (1) or more of such person's major life activities, a person with a record of having such an impairment, or a person who is regarded as having such an impairment. This term does not include current, illegal use of or addiction to a controlled substance as defined in 21 U.S.C. ' 802.

Health care practitioner: A professional providing medical, therapeutic or other services relating to the diagnosis, treatment or prevention of physical or psychological disabilities.

High impact industrial uses: Industrial activity involving the manufacturing, packaging, assembly, or distribution of finished products from either raw materials or previously prepared material which are generally incompatible with residential, commercial and lower impact industrial uses and sensitive natural areas due to their high generation of traffic, noise levels, emissions, lighting and odors.

Home occupation: A home occupation is a secondary and incidental use of a dwelling unit, conducted entirely within the dwelling unit by one (1) or more persons residing in the dwelling unit.

Hospital: An institution providing health services, primarily for in-patients, and medical or surgical care of the sick or injured, including as an integral part of the institution, such related facilities as laboratories, out-patient departments, training facilities, central service facilities and staff offices.

Hostel: An overnight lodging facility for transient guests that provides sleeping rooms and common areas for cooking. A hostel shall not be used as an emergency shelter. No owner operator, director, employee, shareholder, partner, corporate officer or agent of a bed and breakfast facility, hostel, hotel, inn, lodging house, motel, or tourist home (as defined by this code) may, for direct or indirect economic remuneration, arrange for or provide any housing accommodations including but not limited to long term, short term or overnight accommodations for an actual or potential guest, customer or patron of the business at any off-premises site in the City, unless such a facility is authorized, under the applicable provisions of Portland’s Land

Use Code, to offer such accommodations as a bed and breakfast, hostel, hostel, inn, lodging house, motel or tourist home.

Hotel: A building used for more or less temporary occupancy of individuals who are lodged with or without meals, having ten (10) or more guest rooms. No owner, operator, employee, shareholder, partner, corporate officer or agent of a bed and breakfast facility, hostel, hotel, inn, lodging house, motel, or tourist home (as defined in this code) may, for direct or indirect economic remuneration, arrange for or provide any housing accommodations including but not limited to long term, short term or overnight accommodations for an actual or potential guest, customer, or patron of the business at any off-premises site in the City, unless such a facility is authorized under the applicable provisions of Portland's Land Use Code, to offer such accommodations as a bed and breakfast, hotel, inn, lodging house, motel or tourist home.

Impervious surface: Means any surface which does not absorb rain and includes all buildings, roads, sidewalks, parking areas, and any area paved with bricks, concrete or asphalt.

Impervious surface ratio: The proportion of a site covered by impervious surfaces. Landscaping islands of strips of two hundred (200) square feet or less shall be included in the calculations as impervious surfaces. The ratio is calculated as follows:

$$\frac{\text{5,000 square feet (impervious surfaces)}}{\text{10,000 square feet (gross land area)}} = \text{0.50 impervious surface ratio}$$

Inaccessible area:

(a) Land which is separated from the main portion of the development parcel by means of one (1) or more of the following:

1. Existing easements, rights-of-way or dedicated areas which preclude use in conjunction with the proposed development;

2. Gullies, drainage swales or watercourses, where the land which is separated thereby from the main development parcel is not to be used for the building of units or is not available for active or

passive recreation areas; or

3. Areas which are located more than three hundred (300) feet from the nearest proposed dwelling unit.

(b) Areas which are not to be used for building purposes and are connected to the main portion of the development parcel only by a strip of land which is less than fifty (50) feet wide shall also be deducted as inaccessible areas.

Indoor amusement and recreation centers: Facilities which limit admission either to members or to persons paying an entrance fee and which offer one (1) or more of the following activities: indoor athletics, including exercise and practice facilities, or games of skill or games of chance licensed either by the city or by the State of Maine.

Inn: A building used for more or less temporary occupancy of individuals, who are lodged with or without meals, having ten (10) but no more than fifty (50) rooms. Guest rooms shall not contain separate kitchen facilities. No owner, operator, director, employee, shareholder, partner, corporate officer or agent of a bed and breakfast facility, hostel, hotel, inn, lodging house, motel, or tourist home (as defined in this code) may, for direct or indirect economic remuneration, arrange for or provide any housing accommodations including but not limited to long term, short term or overnight accommodations for an actual or potential guest, customer, or patron of the business at any off-premises site in the City, unless such a facility is authorized, under the applicable provisions of Portland's Land Use Code, to offer such accommodations as a bed and breakfast, hotel, inn, lodging house, motel or tourist home.

Intermediate care facility: A facility which provides, on a regular basis, health-related care and services to individuals who do not require the degree of care and treatment which a hospital or extended care facility is designed to provide but who, because of their mental or physical condition, require such care and services above the level of room and board. Said facility must be licensed as a board care facility pursuant to the regulations promulgated by the State of Maine Department of Human Services.

Kitchen facilities: Facilities used for the preparation of meals, including refrigerators and devices used for the cooking and

preparation of food.

Light manufacturing use: The fully enclosed assembly or fabrication of materials but excluding basic processes such as smelting, refining, distilling, forging, brewing, and similar processes involving converting raw materials to a finished or semifinished product.

Lodging house: A house, building or portion thereof containing two (2) or more rooming units and providing such units, with or without meals, to individuals on not less than a weekly or monthly basis for compensation. A lodging house, except for lodging houses located in the IR-2, IR-3 and I-B zones, shall contain common areas for use by all residents, including a kitchen. A kitchen need not be available as part of the common areas where all meals are provided on a daily basis. No owner, operator, director, employee, shareholder, partner, corporate officer or agent of a bed and breakfast facility, hostel, hotel, inn, lodging house, motel, or tourist home (as defined in this code) may, for direct or indirect economic remuneration, arrange for or provide any housing accommodations including but not limited to long term, short term or overnight accommodations for an actual or potential guest, customer, or patron of the business at any off-premises site in the City, unless such a facility is authorized, under the applicable provisions of Portland's Land Use Code, to offer such accommodations as a bed and breakfast, hotel, inn, lodging house, motel or tourist home.

Long term or extended care facility: An institution or a distinct part of an institution that is licensed or approved to provide full-time convalescent or chronic care, or health care under medical supervision for twenty-four (24) or more consecutive hours, to nine (9) or more individuals who, by reason of advanced age, illness, or infirmity are unable to care for themselves, and who are not related to the governing authority by marriage, blood, or adoption.

Lot: Except when reference is made herein to a lot of record, a lot is a single tract of land located within a single block which at the time of filing for a building permit or certificate of occupancy is designated by its owner or developer as a tract to be used, developed, or built upon as a unit under single ownership or control.

Lot area: The area of land enclosed within the boundary lines

of a lot.

Lot width: The distance parallel to the front of the building measured between side lot lines through that part of the principal building where the lot is narrowest.

Low impact industrial uses: Industrial activity involving the manufacturing, packaging, assembly, or distribution of finished products from previously prepared material, including but not limited to the following: bakeries, breweries, bottling, printing and publishing, pharmaceuticals, machine shops, precision instruments, watchmakers, musical instruments, toys and sporting goods, pottery and ceramics using only previously pulverized clay, wood products, jewelry, assembly of electrical components, canteen services, tool and die shops, and the packaging of foods. Low impact industrial uses do not include the processing of raw materials or salvaging operations. Low impact industrial uses are compatible, due to their size and nature of impact, with residential, commercial and other low impact industrial uses because of the level of traffic generated, emissions levels, lighting and odors generated.

Major auto service station: A business selling gasoline, diesel or propane fuel, with more than two (2) pump islands or with a capacity to fuel more than eight (8) vehicles simultaneously or providing repair services including, but not limited to, tune-ups, engine repair, brake work, muffler replacement, tire repair or similar activities.

Minor auto service stations: A business selling gasoline, diesel or propane fuel with not more than two (2) pump islands, provided that no more than a total of eight (8) vehicles may be fueled simultaneously. Repair services including but not limited to tune-ups, engine repair, brake work, muffler replacement, tire repair or similar activities shall be permitted provided that there shall be no more than two (2) service bays. Such businesses shall not include car washes or vacuums.

Manufactured housing: A structural unit or units designed for residential occupancy, and constructed in a manufacturing facility and then transported by the use of its own chassis or placement on an independent chassis to a building site. The term includes any type of building which is constructed at a manufacturing facility and then transported to a building site where it is utilized for housing and may be purchased or sold by a dealer in the interim.

For purposes of this article, two (2) types of manufactured housing are included. They are:

(a) Those units constructed after June 15, 1976, which the manufacturer certifies are constructed in compliance with the standards required by the United States Government Department of Housing and Urban Development, as such standards are from time to time revised or amended, meaning structures, transportable in one (1) or more sections, which in the traveling mode are fourteen (14) body feet or more in width and are seven hundred fifty (750) or more square feet, and which are built on a permanent chassis and designed to be used as dwellings, with or without permanent foundations, when connected to the required utilities, including the plumbing, heating, air-conditioning and electrical systems contained therein. This term also includes any structure which meets all the requirements of this subparagraph except the size requirements and with respect to which the manufacturer voluntarily files a certification required by the Secretary of the United States Department of Housing and Urban Development and complies with the standards established under the National Manufactured Housing Construction and Safety Standards Act of 1974, United States Code, Title 42, Section 5401 et seq.; and

(b) Those units constructed after June 15, 1976, which the manufacturer certifies are constructed in compliance with the state's Manufactured Housing Act and regulations, meaning structures, transportable in one (1) or more sections, which are not constructed on a permanent chassis and are designed to be used as dwellings on foundations when connected to required utilities, including the plumbing, heating, air-conditioning or electrical systems contained therein.

Any unit which does not fall within the definitions of this section and which is legally sited within the city on December 18, 1989, may be relocated to any location in the city in which manufactured housing is allowed.

Manufactured housing park: A parcel of land under unified ownership approved by the Planning Board under 30-A M.R.S.A. Section 4358 for the placement of single-component manufactured housing.

Manufactured housing park unit space: The area of land on which an individual home is situated within a manufactured housing park and which is reserved for use by the occupants of that home.

Manufactured housing subdivision or development: A parcel of land approved by the Planning Board under 30-A M.R.S.A. Section 4358 for the placement of single-component manufactured housing on individual owned lots.

Marina: Commercial operation providing floats, slips and piers intended primarily for berthing of noncommercial vessels and the provision of related services such as supplies, fuel, equipment and repairs, which may be provided both to tenants and non-tenants.

Military personnel berthing: A building, or portion thereof, which is primarily used as, and intended for, temporary living quarters for military personnel.

Minor business: A business with not more than two (2) pump islands, provided that no more than a total of eight (8) vehicles may be fueled simultaneously. Such businesses shall not include car washes or vacuums. Repair services shall be permitted, provided that there shall be no more than two (2) service bays.

Motel: A building or group of attached or detached buildings containing guest rooms or dwelling units most of which have separate outside entrances and parking space hereby intended to be used principally by automobile transients for compensation. Motels include tourist courts, motor lodges or cabins. No owner, operator, director, employee, shareholder, partner, corporate officer or agent of a bed and breakfast facility, hostel, hotel, inn, lodging house, motel, or tourist home (as defined in this code) may, for direct or indirect economic remuneration, arrange for or provide any housing accommodations including but not limited to long term, short term or overnight accommodations for an actual or potential guest, customer, or patron of the business at any off-premises site in the City, unless such a facility is authorized, under the applicable provisions of Portland's Land Use Code, to offer such accommodations as a bed and breakfast, hotel, inn, lodging house, motel or tourist home.

Multiple-component manufactured housing: Manufactured housing which is constructed and transported in two (2) or more sections of substantially similar size that must be mated to form a habitable

dwelling. For purposes of planned residential unit development and multiplex development, multiple-component manufactured housing shall be considered a dwelling unit.

Nanotechnology: The creation of functional materials, devices and systems through control of matter on the nanometer scale.

Neighborhood Center: A building or portion of a building used for recreational, artistic, social, educational, health, culture, or similar activities and services, usually owend and operated by a public or nonprofit group or agency. A neighborhood center is 10,000 square feet or less.

Net land area: Net land area, as set forth in sections 14-90, 14-120 and 14-130 of this article, shall be calculated by subtracting from gross area the square footage of the following:

(a) 1. Stormwater retention areas;

2. Stormwater detention areas, unless improved for passive or active recreational use;

(b) Existing watercourses, as defined in this section, measured by the area between the top of the banks at the normal high water mark, as defined in this section.

(c) Inaccessible areas, as defined in this section;

(d) Wetlands, as defined in this section;

(e) Areas encumbered by existing easements, dedications or similar restrictions, which limit or preclude the construction of permanent structures or which are for any reason unavailable for use in connection with the proposed development.

(f) Slopes of twenty-five (25) percent or greater. Where a slope of twenty-five (25) percent or greater was altered to less than twenty-five (25) percent within the two (2) years immediately preceding the submission of the application for development, such slope shall also be subtracted from the gross area;

(g) Twenty (20) percent of the area remaining after the deductions of factors (1) through (6) of this definition.

Noncommercial vessel berthing: The use of berthing space for berthing of watercraft other than commercial vessels. Berthing space used in the following manner shall not be counted in computing the number of linear feet under this use category:

(a) Space used principally for sale or repair of vessels;

(b) Commercial vessel tenant space used by a noncommercial vessel for a period not exceeding ten (10) consecutive days while the primary commercial vessel tenant is conducting its business or trade.

Normal high water line (non-tidal waters): That line which is apparent from visible markings, changes in the character of soils due to prolonged action of the water or changes in vegetation, and which distinguishes between predominantly aquatic and predominantly terrestrial land. Areas contiguous with rivers that support non-forested wetland vegetation and hydric soils and that are at the same or lower elevation as the water level of the river during the period of normal high-water are considered part of the river.

Normal high water mark of coastal waters: That line on the shore of tidal waters reached by the shoreward limit of the rise of the medium tides between the spring and the neap.

Normal high water mark of inland waters: That line on the shores and banks of non-tidal waters which is apparent because of the contiguous different character of the soil or the vegetation due to the prolonged action of the water. Relative to vegetation, it is that line where the vegetation changes from predominantly aquatic to predominantly terrestrial (by way of illustration, aquatic vegetation includes but is not limited to the following plants and plant groups--water lily, pond lily, pickerelweed, cattail, wild rice, sedges, rushes, and marsh grasses; and terrestrial vegetation includes but is not limited to the following plants and plant groups--upland grasses, aster, lady slipper, wintergreen, partridge berry, sarsaparilla, pines, cedars, oaks, ashes, alders, elms and maples). In places where the shore or bank is of such character that the high water mark cannot be easily determined (rockslides, ledges, rapidly eroding or sloping banks), the normal high water mark shall be estimated, from places where it can be determined by the above method.

Office complex: Separate office buildings planned, constructed

or managed on an integrated coordinated basis.

On-peninsula: Includes all land located south of I-295.

Off-peninsula: Includes all land located north of I-295.

Personal service: Establishments engaged in providing services involving the care of the person or his apparel, such as laundries, dry cleaning establishments, photographic studios, beauty and barber shops but not including commercial or industrial laundries.

Piers, docks, wharves, bridges and other structures and uses extending over or beyond the normal high water line or within a wetland:

(a) *Temporary:* Structures which remain in or over the water for less than seven (7) months in any period of twelve (12) consecutive months.

(b) *Permanent:* Structures which remain in or over the water for seven (7) months or more in any period of twelve (12) consecutive months.

Place of assembly: A building or portion of a building used as a community hall, neighborhood center, private and fraternal organization or place of religious assembly. This definition shall not include buildings or portions of buildings used as a community hall, neighborhood center, private and fraternal organization or place of religious assembly where fifteen (15) or fewer people, not including the permanent residents of a single family dwelling, assemble.

Place of religious assembly: A building or portion of a building used for religious worship or instruction including, but not limited to, churches, synagogues, masjids, mosques and other places of worship.

Pre-development grade. Pre-development grade is defined as average grade, existing on October 1, 2000, at the corners of the foundation of the proposed structure.

Principal building: The building occupied by the chief or principal use on the premises. When a garage is attached to the principal building in a substantial manner as by a roof or common wall, it shall be considered as a part of the principal building.

Private club or nonprofit social and recreational facility: A private club, or nonprofit social and recreational facility, is open exclusively to members and to their bona fide guests accompanying them, in order to promote fellowship, social living, proper recreation, civic responsibility, neighborhood responsibility, community welfare or other endeavors. It shall be permissible to serve food and meals on such premises provided adequate dining room space and kitchen facility are available and are provided within all regulations of this article and other applicable codes and ordinances.

Processing: Any operation changing the nature of material or materials such as chemical composition or physical qualities. Does not include operations described as fabrication.

Professional office: The office of a doctor, dentist, optometrist, psychologist, accountant, lawyer, architect, engineer or similar professional.

Recent flood plain soils: Recent flood plain soils include the following soil series as described and identified by the National Cooperative Soil Survey:

Alluvial	Medomak
Charles	Ondawa
Cornish	Podunk
Fryeburg	Rumney
Hadley	Saco
Limerick	Suncook
Lovewell	Winooski

Recreation facilities: Any establishment designed or equipped for the conduct of sports or indoor leisure-time recreational

activities.

Registered medical marijuana dispensary: "Registered medical marijuana dispensary" or "dispensary" means a not-for-profit entity registered under 22 M.R.S.A. section 2428 that acqueris, possesses, cultivates, manufactures, delivers, transfers, transports, sells, supplies or dispenses marijuana or related supplies and educational materials to registered patients who have designated the dispensary to cultivate marijuana for their medical use, and the registered primary caregivers of those patients.

Registered medical marijuana cultivation facility: "Registered medical marijuana cultivation facility" means a facility registred under 22 M.R.S.A. section 2428 that cultivates and manufactures marijuana or related supplies for a "registered medical marijuana dispensary" under common management and operating under the same state and local license(s).

Restaurant: Any food service establishment, as defined by section 11-16 of this Code, with indoor seating capacity for ten (10) or more patrons.

Retail: Sale to the ultimate consumer for direct consumption and not for resale; however, retail, combined with gasoline, diesel or propane fuel sales shall be considered a single use for zoning purposes and shall constitute a major or minor auto service station.

Retail establishment: Means (1) any food service establishment as defined by section 11-16 of this Code, with indoor seating capacity for nine (9) or fewer patrons; or (2) any shop or store offering goods or merchandise to the general public for direct consumption and not for resale, but does not include temporary freestanding stands in either case; however, retail establishments combined with gasoline, diesel or propane fuel sales shall be considered a single use for zoning purposes and shall constitute a major or minor auto service station.

Rooming unit: A room or suite of rooms in a house, building or portion thereof rented as living and sleeping quarters, but without full kitchens or bathrooms. In a suite of rooms, each room which provides sleeping accommodations shall be counted as one (1) rooming unit for the purpose of this article. Each rooming unit in a lodging house shall have kitchen privileges unless all meals are provided on a daily basis. There shall be no more than two (2)

persons residing in each rooming unit.

Self-storage facility: Fully enclosed buildings with individual, secured units (accessed with or without supervision) used for the exclusive purpose of storage of non-hazardous business or personal materials.

Setback: The required distance and the land resulting therefrom between a street line and the closest possible line of conforming structure.

Sheltered care group home: A facility which, in addition to providing food and shelter to a defined population, provides guidance or counseling services. Such services are a primary function of the facility.

Shore frontage: The length of a lot bordering on a water body or wetland measured in a straight line between the intersections of the lot lines with the shoreline.

Shoreland zone: The land area located within two hundred fifty (250) feet, horizontal distance, of the normal high water line of any river; within two hundred fifty (250) feet, horizontal distance, of the upland edge of a coastal wetland, including all areas affected by tidal action; within 250 feet of the upland edge of freshwater wetland; or within seventy-five (75) feet, horizontal distance, of the normal high water line of a stream.

Sign: Signs shall be as defined in section 14-367.

Single-component manufactured housing: Manufactured housing which is constructed and transported in one (1) section that is a habitable dwelling unit. For purposes of planned residential unit development and multiplex development, single-component manufactured housing shall not be considered a dwelling unit, except in the FH Flexible Housing Zone.

Special needs independent living unit: A dwelling unit developed and managed by a nonprofit organization for habitation by persons with special social, physical or mental needs beyond strictly economic needs. Such persons shall be provided required levels of supervision, care and/or counseling services appropriate to their special needs, and the services shall be provided by either the sponsoring nonprofit agency or through another entity with which the agency has entered into a contractual arrangement.

Sports complex: One or more facilities located on the same parcel of land where athletic events are held and with a combined seating capacity of at least six thousand (6,000) seats.

Stockpiling. Any placement or creation of piles or loads of soil, loam, sand, gravel, rock or other mineral deposits upon a site for the purpose of storage, warehousing or reserving for future use. Stockpiles shall be considered structures for purposes of dimensional requirements under the Land Use Code.

Stormwater detention area: A storage area for the temporary storage of stormwater runoff which does not contain water during non-storm conditions.

Storm water retention area: A pond or basin used for the permanent storage of stormwater runoff.

Story: That portion of a building included between the surface of any floor and the surface of the floor, or the roof, next above. A half story is a story situated under a sloping roof, the area which at a height four (4) feet above the floor does not exceed two-thirds of the floor area of the story immediately below it and which does not contain an independent apartment or dwelling unit. A story which exceeds eighteen (18) feet in height shall be counted as two (2) stories. A basement shall be counted as a story for the purpose of height measurement where more than one-half of its height is above the average level of the adjoining ground.

Stream: A free-flowing body of water from the outlet of the confluence of two (2) perennial streams as depicted on the most recent edition of a United States Geological Survey 7.5-minute series topographic map, or if not available, a 15-minute series topographic map, to the point where the body of water becomes a river or flows to another water body or wetland within a shoreland area, or any stream designated within a Stream Protection Zone.

Street: A public way established by or maintained under public authority, or a way dedicated to the use of the public and appearing on the official map of the city.

Street line: The line of demarcation between a street and the abutting land.

Structure: Anything constructed or erected of more than one

(1) member which requires a fixed location on the ground or attached to something having a fixed location on the ground.

Studios for artists and craftspeople: A facility for the production of arts and crafts products such as paintings, sculpture or other arts, or the practice of arts such as music or dance, or the production of custom handcrafted, or limited production of products such as furniture, wood, clay and metal products, publications and similar low impact arts and crafts activities.

Temporary wind anemometer tower: A temporary structure which may be installed for no more than two (2) years for data collection purposes and which supports devices for measuring wind speed, direction and other characteristics to assess wind energy potential and design issues for any permanent wind energy installation; often termed "meteorological towers" or "met towers".

Theaters: Any establishment devoted to showing motion pictures, or for dramatic, musical or live performances.

Tourist home: A building in which more than one (1) but not more than nine (9) guest rooms are used to provide or offer overnight accommodations for transient guests. No owner, operator, director, employee, shareholder, partner, corporate officer or agent of a bed and breakfast facility, hostel, hotel, inn, lodging house, motel, or tourist home (as defined in this code) may, for direct or indirect economic remuneration, arrange for or provide any housing accommodations including but not limited to long term, short term or overnight accommodations for an actual or potential guest, customer, or patron of the business at any off-premises site in the City, unless such a facility is authorized, under the applicable provisions of Portland's Land Use code, to offer such accommodations as a bed and breakfast, hotel, inn, lodging house, motel or tourist home.

Transient guest: A person who occupies a facility offering accommodations on an overnight basis for compensation and whose actual occupancy is limited to no more than fifteen (15) days out of any sixty-day period.

Tributary stream: means a channel between defined banks created by the action of surface water, which is characterized by the lack of terrestrial vegetation or by the presence of a bed, devoid of topsoil, containing waterborne deposits or exposed soil, parent material or bedrock; and which is connected hydrologically

with other water bodies. "Tributary stream" does not include rills or gullies forming because of accelerated erosion in disturbed soils where the natural vegetation cover has been removed by human activity.

Truck terminal: A building and premises devoted to handling and temporary warehousing of goods, which may include facilities for the maintenance and repair (except body repairs, frame straightening and painting), fueling and storage of trucks or tractor-trailer combinations.

Upland edge of a wetland: the boundary between upland and wetland. For purposes of a coastal wetland, this boundary is the line formed by the landward limits of the salt tolerant vegetation and/or the maximum spring tide level, including all areas affected by tidal action. For purposes of a freshwater wetland, the upland edge is formed where the soils are not saturated for a duration sufficient to support wetland vegetation; or where the soils support the growth of wetland vegetation but such vegetation is dominated by woody stems that are six (6) meters approximately.

Use: The purpose for which land or structures thereon is designed, arranged or intended to be occupied or used, or for which it is occupied, maintained, rented or leased.

Utility substation: Any sewage or water pumping station, electric power substation, transformer station, telephone equipment enclosures, or other similar structures owned or operated by a public utility.

Vegetation: All live trees, shrubs, ground cover, and other plants including, without limitation, trees both over and under four (4) inches in diameter, measured at four and one-half (4 1/2) feet above ground level.

Warehousing: The storage of goods, wares and merchandise in a warehouse.

Water body: Any river or stream.

Watercourse: Any natural or artificial stream, river, creek, ditch, channel, swale, canal, conduit, culvert, drain, waterway, gully, ravine or wash in which water flows in a definite direction or course, either continuously or intermittently, or which has a definite channel, bed and banks, and includes any area adjacent

thereto subject to inundation by reason of overflow or floodwater.

Water-dependent uses: Those uses that require, for their primary purpose, location on submerged lands or that require direct access to, or location in, coastal or inland waters and which cannot be located away from these waters.

Wetlands associated with shoreland zones: a freshwater or coastal wetland.

Wetlands: Those areas which have two (2) or more of the following:

(a) A water table at or near the surface during the growing season;

(b) Very poorly drained soils, including Sebago mucky peat; or

(c) Obligate wetland vegetation.

For purposes of this definition, "very poorly drained soils" and "obligate wetland vegetation" shall be as defined and illustrated in the United States Department of Interior, Fish and Wildlife Service publication of Wetland Plants of the State of Maine (1986), a copy of which is on file with the planning authority.

Wholesale: Sale for resale, not for direct consumption.

Yard: A space on a lot which is required by this article to be maintained open, unoccupied and unobstructed between lot lines and any structure, except as permitted in this article. In determining the front, rear or side of any accessory building, the orientation of the principal building shall be controlling. In measuring a yard, the building line shall be deemed to mean a line parallel to the lot line drawn through the point of a building or the point of a group of buildings nearest to such lot line. This measurement shall be taken at right angles from the building to the nearest lot line.

Yard, front: A yard adjoining the front lot line, extending between side lot lines, the depth of which shall be the shortest horizontal distance between the front lot line and any structure.

Yard, rear: A yard adjoining the rear lot line, extending

between side lot lines, the depth of which shall be the shortest horizontal distance between the rear lot line and any structure.

Yard, side: A yard adjoining a side lot line extending from the front yard to the rear yard, the width of which shall be the shortest horizontal distance between the side lot line and any structure.

(Code 1968, § 602.27; Ord. No. 625-70, 12-21-70; Ord. No. 499-74, § 11, 8-19-74; Ord. No. 276-77, 5-16-77; Ord. No. 431-82, §§ 3, 4, 2-22-82; Ord. No. 610-82, § 3, 7-7-82; Ord. No. 94-83, 8-3-83; Ord. No. 540-84, 5-7-84; Ord. No. 259-84, § 1, 12-17-84; Ord. No. 548A-85, § 1, 5-6-85; Ord. No. 33-85, §§ 1--3, 7-15-85; Ord. No. 385-87, 4-6-87; Ord. No. 363-88, 5-4-88; Ord. No. 300-88, 5-31-88; Ord. No. 87-88, § 1, 7-19-88; Ord. No. 129-88, 9-7-88; Ord. No. 311-89, 1-30-89; Ord. No. 164-89, 12-11-89; Ord. No. 199-89, 12-18-89; Ord. No. 33-90, § 1, 1-23-91; Ord. No. 33A-91, § 1, 4-17-91; Ord. No. 15-92, § 1, 6-15-92; Ord. No. 168-93, § 1, 1-4-93; Ord. No. 252-94, § 1, 4-4-94; Ord. No. 39-96, § 1, 10-7-96; Ord. No. 164-97, § 1, 1-6-97; Ord. No. 125-97, § 1, 3-3-97; Ord. No. 46-97, § 1, 8-4-97; Ord. No. 164-97, § 1, 12-1-97; Ord. No. 232-99, §1, 3-15-99; Ord. No. 81-99, §2, 10-18-99; Ord No. 94-99, 11-15-99; Ord. No. (Substitute)189-00, §1, 4-24-00; Ord. No. 295-01, § 1, 6-4-01; Ord. No. 187-01/02, § 1, 4-17-02; Ord. No. 77, § 3, 10-21-02; Ord. No. 96-04/05, 11-29-04; Ord. No. 144-05/06, 1-4-06 emerg. Passage; Ord. No. 149-05/06, 1-18-06; Ord. No. 300-05/06, 7-17-06; Ord. No. 296-08/09, 6-15-09; Ord. No. 29-09/10, 8-3-09 emergency passage; Ord. No. 127-09/10, 1-4-10 emergency passage; Ord. No. 283, 09/10, 7-19-10 emergency passage; Ord. No. 278-09/10, 7-19-10; Ord. No. 77-10/11, 12-6-10, emergency passage; Ord. No. 149-10/11, 3-7-11; Ord. No. 279-09/10, 6-6-11)

***Editor's note--**Ord. No. 87-88, adopted July 19, 1988, amended the definitions for gross area, intermediate care facility and principal building to read as herein set out and added definitions for net land area, stormwater detention area and stormwater retention area. The definition of net land area was subsequently amended by Ord. No. 129-88, adopted Sept. 7, 1988, to read as herein set out. See the editor's note to Art. III of this chapter for additional provisions relative to Ord. No. 87-88.

The amendments passed in Order 144-05/06, 1-4-06 applies retroactively to yard measurements made under the Portland Land Use Code at any time after June 5, 1957, and applies notwithstanding any adverse order or decree.

Cross reference(s)--Definitions and rules of construction generally, § 1-2.

Sec. 14-48. Establishment of zones.

In order to carry out the provisions of this article, the city is hereby divided into the following classes of zones:

(a) R-1 Residential zone

(b) R-2 Residential zone

(c) R-3 Residential zone

(d) FH Flexible housing zone

(e) R-4 Residential zone

(f) R-5 Residential zone

(g) R-5A Residential zone

(h) R-6 Residential zone

(i) R-7 Residential zone

(j) IR-1 Island residential zone

(k) IR-2 Island residential zone

(l) IR-3 Island residential zone

(m) Island transfer station overlay zone

(n) R-P Residence-professional zone

(o) R-OS Recreation and open space zone

(p) B-1 and B-1b Neighborhood business zones

(q) B-2 and B-2b Community business zone

(r) A-B Airport business zone

(s) B-3, B-3b and B-3c downtown business zones

(t) I-B Island business zone

(u) B-4 Commercial corridor zone

(u-1) B-5 Urban commercial mixed use zone

(v) O-P Office park zone

(w) I-L and I-Lb Industrial zones

(x) I-M, I-Ma and I-Mb Industrial zones

(y) I-H and I-Hb Industrial zones

(z) B-6 Eastern Waterfront Mixed Zone

(aa) Reserved

(bb) Waterfront central zone

(cc) Waterfront port development zone

(dd) Waterfront special use zone

(ee) R-P Resource protection zone

(ff) Helistop overlay zone

(gg) Shoreland zone

(hh) Flood plain

(ii) S-P Stream protection zone.

(Code 1968, § 602.1.B; Ord. No. 499-74, § 1, 8-19-74; Ord. No. 536-74, § 1, 8-19-74; Ord. No. 334-76, § 1, 7-7-76; Ord. No. 15-92, § 2, 6-15-92; Ord. No. 101-93, 9-20-93; Ord. No. 164-97, § 2, 1-6-97; Ord. No. 156-01, §1, 1-17-01)

***Editor's note--**Although not expressly amended by the ordinances enacted subsequent to 1976 which created the several classes of zones, § 14-48 has been expanded to encompass all zoning classifications in the city at the discretion of the editor in consultation with the corporation counsel.

Sec. 14-49. Zoning maps.

The zones in section 14-48 are shown upon a map entitled "City of Portland, Maine, Zoning, dated December 2000 and produced by the City of Portland's Department of Planning and Urban Development and the GIS Workgroup" and filed in the office of the Director of Planning and Urban Development, City of Portland, Maine. Such zoning map, with amendments, is hereby adopted as the official zoning map of the City of Portland and as part of this article and incorporated in and made a part of this article.

(Code 1968, § 602.1.C; Ord. No. 213-84, 10-1-84; Ord. No. 15-92, § 3, 6-15-92; Ord. No. 156-01, §2, 1-17-01)

Sec. 14-50. Zone boundaries when uncertain.

Where uncertainty exists with respect to the boundaries of the various zones, as shown on the zoning maps, the following rules shall apply:

(a) Unless otherwise indicated, zone boundary lines are the center lines of streets, alleys, parkways, waterways or rights-of-way of public utilities and railroads or such lines extended. Unless otherwise shown, lines within blocks less than two hundred (200) feet wide are median lines between their sides, and lines within blocks two hundred (200) feet or more wide are one hundred (100) feet distant from the less restricted side of the block.

(b) The depictions of the shoreland zoning districts and stream protection districts on the Shoreland Zoning Maps are illustrative of the general location of such zones. The actual boundaries of these zones shall be determined by measurement of the distance indicated on the maps from the normal high water line of the water body or the upland edge of wetland vegetation. Where such measurement is not the same as the location of the boundary on the Shoreland Zoning Maps, the measurement shall control, unless the Shoreland Zoning Map indicates that the zone boundary shall follow an existing property line.

(Code 1968, § 602.20.A; Ord. No. 15-92, § 4, 6-15-92)

Sec. 14-51. Extension of zone lines.

Where a zone boundary line divides a lot in single or joint ownership of record at the time such line is established, the provisions of this article for the less restricted portion of such lot shall extend not more than thirty (30) feet into the more restricted portion, provided that the lot has at least twenty (20) feet of street frontage in the less restricted zone when taken together with adjacent premises which are under the same or equivalent ownership or control. If such boundary line divides a business or industrial zone from a residence zone, no frontage on a street other than the principal business street in the less restricted zone may be taken into consideration in connection with the right herein granted. This section shall not apply to differing dimensional requirements, including height, within a zoning district.

(Code 1968, § 602.20.B; Ord. No. 35-89, 6-28-89)

Sec. 14-52. Conformity required.

No building or structure shall be erected, altered, enlarged, rebuilt, moved or used, and no premises shall be used unless in conformity with the provisions of this article.
(Code 1968, § 602.1.D)

Sec. 14-53. Minimum requirements established.

In interpreting and applying the provisions of this article, they shall be held to be minimum requirements for the promotion of health, safety, convenience and welfare of the citizens of the city; for reducing the danger from fires; and for improving the city.
(Code 1968, § 602.1.E)

Sec. 14-54. Zone change/zone map fees.

(a) One or more of the following fees will be charged by the city for applications for changes of zone according to the following major zoning classifications and pertinent data relating to the specific zone change:

(1) Zoning Map Amendments: $2,000.00

(2) Zoning Text Amendments: $2,000.00

(3) Combination Zoning Map and Text Amendments: $3,000

(4) Conditional Rezoning: $3,000.00

(5) Applicant shall pay afee to cover the professional and administrative costs for review and analysis associated with the zoning amendment, including but not limited to planning, legal, engineering or other services. The fee shall be based on the hours of review and processing time and prevailing hourly rate for reimbursement of city costs. The city shall periodically invoice the applicant for such costs incurred by the city, which invoice shall be paid promptly by the applicant.

(6) Applicant shall assume payment of cost of all notices, including newspaper publication.

All ordinances that would cost more than the maximum to publish should be printed in separate pamphlet form and advertised only by reference.

(7) ***Waiver of fees:*** The fee for zone change applications may be waived or reduced by the Planning Authority in the case of an application submitted by any governmental body or where an applicant can establish financial hardship.

(8) ***Withdrawal of application:*** If a zone change application is withdrawn by an applicant prior to the submission of the advertisement copy to the newspaper to announce the public hearing, a refund of one-half of the amount of the application fee will be made to the applicant by the city provided that all costs incurred by the city have been paid in full by the applicant.

(b) The following schedule of fees will be charged by the City for zone maps:

Paper maps:	Large $20.00 per sheet	Small (11X17) $5.00 per sheet
Digital Zone Map	$20.00	

(Code 1968, § 602.1.F; Ord. No. 589-75, § 1, 10-20-75; Ord. No. 590-75, § 1, 11-19-75; Ord. No. 693-81, 5-18-81; Ord. No. 523-87, 5-18-87; Ord. No. 327-98, § 2, 5-18-98; Ord. No. 328-98, § 1, 5-18-98; Ord. No. 227-00, §1, 5-15-00; Ord. No. 119-01/02, § 2, 12-3-01; Ord. No.222-09/10, 5-17-10)

Sec. 14-55. Relation to other ordinances.

This article shall not repeal the provisions of any other ordinance relating to the use of buildings or premises; provided, however, that where this article imposes greater restrictions, it shall control.
(Code 1968, § 602.26.A)

Sec. 14-56. Enforcement.

The building authority is authorized to institute or cause to be instituted by the corporation counsel in the name of the city any and all actions, legal or equitable, that may be appropriate or necessary for the enforcement of this article; provided, however, that this section shall not prevent any person entitled to equitable relief from enjoining any act contrary to the provisions of this article.
(Code 1968, § 602.26.C)

Sec. 14-57. Violations.

Any person being the owner or occupant of, having control of or the use of any building or premises or part thereof, who violates any of the provisions of this article, shall be guilty of an offense.
(Code 1968, § 602.26.D; Ord. No. 157-76, 4-21-76)

Sec. 14-58. Reserved.
Sec. 14-59. Reserved.

DIVISION 1.5. CONDITIONAL OR CONTRACT ZONING

Sec. 14-60. Authority and purpose.

Pursuant to 30-A M.R.S.A. Section 4503(9), conditional or contract zoning is hereby authorized for rezoning of property where, for reasons such as the unusual nature or unique location of the development proposed, the city council finds it necessary or appropriate to impose, by agreement with the property owner or otherwise, certain conditions or restrictions in order to ensure that the rezoning is consistent with the city's comprehensive plan. Conditional or contract zoning shall be limited to where a rezoning is requested by the owner of the property to be rezoned. Nothing in this division shall authorize either an agreement to change or retain a zone or a rezoning which is inconsistent with the city's comprehensive plan.
(Ord. No. 31-85, 7-15-85; Ord. No. 88-88, 7-19-88; Ord. No. 62-89, 7-17-89)

Sec. 14-61. Notice and hearing.

The Planning Board shall conduct a public hearing prior to any property being rezoned under this division. Notice of this hearing shall be posted in the city clerk's office at least fourteen (14) days prior to the public hearing and shall be published in a newspaper of general circulation within the city at least two (2) times, the date of the first publication to be at least seven (7) days prior to the hearing. Notice shall also be sent to the owners of all property abutting the property to be rezoned at their last known address. This notice shall contain a copy of the proposed conditions and restrictions, with a map indicating the property to be rezoned.
(Ord. No. 31-85, 7-15-85)

Sec. 14-62. Conditions and restrictions.

Conditions and restrictions imposed under the authority of this division shall relate only to the physical development and operation of the property and may include, by way of example:

(a) Limitations on the number and types of uses permitted;

(b) Restrictions on the scale and density of development;

(c) Specifications for the design and layout of buildings and other improvements;

(d) Schedules for commencement and completion of construction;

(e) Performance guarantees securing completion and maintenance of improvements, and guarantees against defects;

(f) Preservation of open space and buffers, and protection of natural areas and historic sites;

(g) Contributions toward the provision of municipal services required by the development; and

(h) Provisions for enforcement and remedies for breach of any condition or restriction.

(Ord. No. 31-85, 7-15-85)

Sec. 14-63. Amendments.

Except as expressly modified in any contract or conditional rezoning agreement, the use and occupancy of any property within the City of Portland used or occupied pursuant to a contract or conditional rezoning agreement otherwise shall be governed by and comply with the provisions of the Land Use Code of the City of Portland and any applicable amendments thereto or replacement thereof.

(Ord. No. 96-04/05, 11-29-04)

Sec. 14-64. Reserved.

Sec. 14-65. Enforcement.

Notwithstanding language in any contract or conditional zoning to the contrary, any violation of a conditional or contract zone shall be enforced pursuant to 30-A M.R.S.A. §4452, as may be amended from time to time, or in any other manner available by law. No alleged violation of a contract or conditional rezoning may be prosecuted until the City has delivered written notice of the alleged violation(s) to the owner or operator of the property that is subject to the contract or conditional rezoning and given the owner or operator an opportunity to cure the violation(s) within thirty (30) days of receipt of the notice.

In addition, if such an enforcement action should result in a finding that the terms of the conditional or contract zone have been violated, then the City may act to modify or rescind the conditional or contract zone and to rezone the property.
(Ord. No. 96-04/05, 11-29-04)

DIVISION 2. R-1 RESIDENTIAL ZONE*

***Editor's note--**Ord. No. 532-84, adopted May 7, 1984, repealed Div. 2, s;§ 14-66--14-69, and enacted a new Div. 2, §§ 14-66--14-71. The division was formerly derived from Code 1968, § 602-2.2A--D; Ord. No. 499-74, § 2, adopted Aug. 19, 1974; Ord. No. 610-82, § 1, adopted July 7, 1982; and Ord. No. 88-83, §§ 1, 2, adopted Aug. 3, 1983.

Sec. 14-66. Purpose.

The purpose of the R-1 residential zone is:

> To provide for lower density residential development characterized by single-family homes on individual lots in outlying areas of the city and along traffic corridors with limited additional traffic capacity.

(Ord. No. 532-84, 5-7-84)

Sec. 14-67. Permitted uses.

The following uses are permitted in the R-1 residential zone:

(a) *Residential:*

1. Single-family detached dwellings.

2. Handicapped family unit, as defined in section

14-47 (definitions) of this article, for handicapped persons plus staff.

3. Single-family, multiple-component manufactured housing, as defined in section 14-47 (definitions) of this article, except in a National Register Historic District.

4. Single-family, single-component manufactured housing, as defined in section 14-47 (definitions) of this article, on individual lots under separate and distinct ownership, except in a National Register Historic District and until May 1, 1985, on the islands, provided that each unit meets the performance standards listed below:

   a. More than half of the roof area of each unit shall be a double pitched Class C rated shingled roof with a minimum pitch of 3/12.

   b. Each unit shall be installed on a full foundation or a concrete frost wall in accordance with all applicable codes and regulations. Any hitch or tow bar shall be removed from the unit after it is placed on its foundation or frost wall. In the case of a frost wall, vermin proof skirting shall be installed on all sides of the unit. The skirting may consist of either (a) concrete or masonry block or (b) manufactured skirting. If concrete or masonry block skirting is installed, either the exterior siding of the unit shall extend within one (1) foot of grade or decorative masonry siding shall be applied. If manufactured skirting material is installed, the color shall be identical to or compatible with the exterior siding of the unit.

   c. Each unit shall have exterior siding that is residential in appearance, including but not limited to natural materials such as wood clapboards or shakes, or exterior materials which simulate wood. Clapboards or simulated clapboards shall have less then eight (8)

inches of exposure and sheet metal type siding shall not be permitted.

d. Each unit shall have the long side of the unit parallel to the street line where the required street frontage is met.

e. Each unit shall be provided with at least two (2) trees meeting the city's arboricultural specifications and which are clearly visible from the street line and are located so as to visually widen the narrow dimension or proportion of the unit.

f. Each unit shall have all fuel oil supply systems constructed and installed within the foundation wall or underground in accordance with all applicable codes and regulations.

g. No unit shall be horizontally or vertically attached to any other unit or other structure, provided, however, that this provision shall not be deemed to prohibit additions such as porches, garages, room additions or solar greenhouses.

(b) *Other:*

1. Agriculture, including nurseries, greenhouses, and truck gardens, provided that there is no sale of products not produced on the premises; a single stand with no more than two hundred (200) square feet in floor area, for the sale of agricultural products produced on the premises shall be permitted;

2. Parking and storage of agricultural equipment used on the premises, but not within any front yard;

3. Reserved;

4. Parks and other active and passive noncommercial recreation spaces;

5. Accessory uses customarily incidental and

subordinate to the location, function and operation of principal uses, subject to the provisions of section 14-404 (accessory use) of this article;

6. Home occupations subject to the provisions of section 14-410 (home occupation) of this article;

7. Municipal uses, excluding those specifically set forth in section 14-68 of this division.

8. Wind energy systems, as defined and allowed in Article X, Alternative Energy.

(Ord. No. 532-84, 5-7-84; Ord. No. 260-84, § 1, 12-17-84; Ord. No. 34-85, § 1, 7-15-85; Ord. No. 79-88, § 1, 7-19-88; Ord. No. 86A-89, § 1, 8-21-89; Ord. No. 33-91, § 2, 1-23-91; Ord. No.33-11/12, 1-18-12)

***Editor's note--**Ord. No. 79-88, adopted July 19, 1988, amended this section by adding subsection 14-67(2)g. See also the editor's note to Art. III of this chapter for additional provisions relative to Ord. No. 79-88.

Sec. 14-68. Conditional uses.

The following uses are permitted only upon the issuance of a conditional use permit, subject to the provisions of section 14-474 (conditional uses) of this article and any special provisions, standards or requirements specified below:

(a) *Residential:*

1. Sheltered care group homes, as defined in section 14-47 of this article, for up to twelve (12) individuals, plus staff, and serving a primary population which is not handicapped persons, parolees, persons involved in correctional prerelease programs, or current illegal drug users, provided that:

   a. A sheltered care group home shall not be located within five hundred (500) feet of another, as measured along street lines to the respective property lines;

   b. There shall be no open outside stairways or fire escapes above the ground floor;

c. The facility shall make provision for adequate on-site staffing in accordance with applicable state licensing requirements. If a facility is not licensed by the state, there shall be a minimum of one (1) staff person for every ten (10) residents or fraction thereof.

The board of appeals may impose conditions upon a conditional use permit concerning the creation or operation of a sheltered care group home including but not limited to the following: site and building maintenance; lighting, fencing, and other appropriate security measures; screening and buffering of parking areas; compatibility of any additions or alterations with the existing residential structure; compatibility of new structures with the architectural character of the surrounding area; and limitation on the duration of a sheltered care group home permit.

2. Alteration or construction of a single-family detached dwelling to accommodate an accessory dwelling unit within the building and clearly subordinate to the principal dwelling for the benefit of homeowners or tenants provided that:

a. The accessory unit shall be no more than thirty (30) percent of the gross floor area of the principal building and shall have a minimum floor area of four hundred (400) square feet; gross floor area shall exclude any floor area that has less than two-thirds of its floor-to-ceiling height above the average adjoining ground level; gross floor area may include attic space if such space shall be included as habitable space within either dwelling unit;

b. Lot area shall be ten thousand (10,000) square feet for single-family dwellings in existence as of May 1, 1984, and lot area shall be fifteen thousand (15,000) square feet for single-family dwellings constructed after May 1, 1984;

c. There shall be no open, outside stairways or fire escapes above the ground floor;

d. Any additions or exterior alterations such as facade materials, building form, roof pitch, and exterior doors shall be designed to be compatible with the architectural style of the building and preserve the single-family appearance of the building;

e. The project shall be subject to article V (site plan) of this chapter for site plan review and approval and the following additional standards:

i. Any additions or exterior alterations, such as façade materials, building form and roof pitch shall be designed to be compatible with the architectural style of the building and preserve the single-family appearance of the building.

ii. The scale and surface area of parking, driveways and paved areas shall be arranged and landscaped to properly screen vehicles from adjacent properties and streets.

f. Either the accessory unit or the principal dwelling shall be occupied by the owner of the lot on which the principal building is located, except for bona fide temporary absences; and

g. Parking shall be provided as required division 20 of this article.

(b) ***Institutional:*** Any of the following conditional uses provided that, notwithstanding section 14-474(a) (conditional uses) of this article or any other provision of this Code, the Planning Board shall be substituted for the board of appeals as the reviewing authority:

1. Elementary, middle, and secondary school;

2. a. Long-term and extended care facilities;

b. Intermediate care facility for thirteen (13) or more persons;

3. Places of assembly;

Such uses shall be subject to the following conditions and standards in addition to the provisions of section 14-474:

a. In the case of expansion of existing such uses onto land other than the lot on which the principal use is located, it shall be demonstrated that the proposed use cannot reasonably be accommodated on the existing site through more efficient utilization of land or buildings, and will not cause significant physical encroachment into established residential areas; and

b. The proposed use will not cause significant displacement or conversion of residential uses existing as of June 1, 1983, or thereafter; and

c. In the case of a use or use expansion which constitutes a combination of the above-listed uses with capacity for concurrent operations, the applicable minimum lot sizes shall be cumulative; and

d. Article V (site plan) sections 14-522 and 14-523 notwithstanding, in the case of places of assembly the proposed use shall be subject to the requirements of article V (site plan) of this chapter; and

e. In the case of community halls:

i. The structure was in existence as of January 4,2010;

ii. The structure was built for institutional

or other non-residential uses;

iii. The structure is operated by, or operated subject to the control of, a not-for-profit entity in accordance with its not-for-profit purposes; and

iv. A parking management plan is submitted for review and approval by the planning board; and

f. In the case of private club or fraternal organizations: any such establishment serving alcoholic beverages or in possession of a license for serving alcoholic beverages shall be located on a large lot, as specified in the minimum lot size provisions of this division.

(c) *Other:*

1. Utility substations, including sewage and water pumping stations and standpipes, electric power substations, transformer stations, telephone electronic equipment enclosures, and other similar structures, provided that such uses are suitably screened and landscaped so as to ensure compatibility with the surrounding neighborhood;

2. Cemeteries;

3. Raising of domestic animals, excluding pigs and reptiles, for noncommercial purposes with no animals kept on any lot less than three (3) acres or closer than one hundred (100) feet to any street or lot line, except domesticated chickens as regulated in Chapter 5, and provided that:

a. The housing, feeding, exercise, and waste disposal areas of the animals will not create undue odor, noise, nuisance, health, or safety hazards to neighboring properties.

4. Day care facilities or home babysitting services not permitted as a home occupation under section 14-410, and nursery schools and kindergartens,

subject to the following conditions:

a. The facility shall be located in a structure in which there is one (1) or more occupied residential units or in an existing accessory structure, unless the facility is located in a principal structure that has not been used as a residence in whole or in part within the five (5) years immediately preceding the application for a day care or home babysitting use, a nursery school or a kindergarten, or in a nonresidential structure accessory to the principal nonresidential use.

b. The maximum capacity shall be twelve (12) children for facilities located in residential or existing structures accessory thereto, unless the additional standards in subsection v. are met. There shall be no maximum limit on the number of children in a facility located in a principal structure that has not been used as a residence in whole or in part within the five (5) years immediately preceding the application for a day care or home babysitting use, a nursery school or a kindergarten, or in a nonresidential structure accessory thereto, provided that any such structure that serves more than twelve (12) children shall be subject to review under article V of this chapter.

c. Outdoor play areas shall be screened and buffered from surrounding residences with landscaping and/or fencing to minimize visual and noise impacts.

d. Solid waste shall be stored in covered containers. Such containers shall be screened on all four (4) sides.

e. Day care facilities, nursery schools and kindergartens located either in structures that have been in residential use within the past five (5) years or in existing accessory structures and that serve between thirteen

(13) and twenty-four (24) children shall meet the following additional standards:

i. The facility shall provide a minimum of seventy-five (75) square feet of outdoor play area per child;

ii. The play area shall be located in the side and rear yards only and shall not be located in front yards;

iii. Outside play areas shall be separated from abutting properties by a fence at least forty-eight (48) inches in height;

iv. A ten-foot wide landscaped buffer shall be required outside of the fenced play area, and shall be established in accordance with the landscaping standards of the City's Technical Standards and Guidelines;

v. The minimum lot size for a day care facility, home babysitting service, nursery school or kindergarten located in a residential or existing accessory structure and serving more than twelve (12) children shall be twenty thousand (20,000) square feet;

vi. ***Off-street parking:*** Off street parking is required as provided in division 20 (off-street parking) of this article.

vii. The maximum number of children in a day care facility located in a residential or existing accessory structure shall be twenty-four (24); and

viii. Any additions or exterior alterations such as facade materials, building form, roof pitch, and exterior doors shall be designed to be compatible with the architectural style of the building and preserve the residential appearance of

the building.

5. Temporary wind anemometer towers, as defined in sec. 14-47, are permitted provided the following standards are met in addition to sec. 14-430:

   a. Towers may be installed for the purpose of wind data collection for no more than two (2) years after the issuance of a certificate of occupancy for the tower. At the conclusion of the aforementioned two (2) years, the tower must be dismantled and removed from the site within sixty (60) days; and

   b. Towers shall be constructed according to plans and specifications stamped by a licensed professional engineer, which shall be provided to the Board of Appeals with the application; and

   c. Towers shall be set back from habitable buildings by a distance equal to 1.1 times the tower height; and

   d. The applicant shall provide a safety report prepared and stamped by a licensed professional engineer to the Board of Appeals with their application for conditional use, which demonstrates how the proposed temporary wind anemometer tower is safe in terms of strength, stability, security, grounding, icing impacts and maintenance; and

   e. The applicant shall provide evidence of commercial general liability insurance, such insurance to be satisfactory to Corporation Counsel and cover damage or injury resulting from construction, operation or dismantling of any part of the temporary wind anemometer tower; and

   f. Towers and associated guy wires shall be sited to minimize their prominence from and impacts on public ways (including

pedestrian ways); and

g. Towers shall be used for installing anemometers and similar devices at a range of heights from the ground to measure wind characteristics (speed, direction, frequency) and related meteorological data, but shall not be used for any other purpose; and

h. A performance guarantee shall be required for the cost of removal of the tower, guy wires and anchors. This requirement may be satisfied by surety bond, letter of credit, escrow account or by evidence, acceptable to the City, of the financial and technical ability and commitment of the applicant or its agents to remove the facility at the end of the use period.

6. Wind energy systems, as defined and allowed in Article X, Alternative Energy.

(Ord. No. 534-84, 5-7-84; Ord. No. 260-84, § 2, 12-17-84; Ord. No. 76-85, § 2, 7-1-85; Ord. No. 79-88, § 2, 7-19-88; Ord. No. 235-91, § 1, 2-4-91; Ord. No. 118-93, § 1, 10-18-93; Ord. No. 133-96, § 1, 11-18-96; Ord. No. 154-96, § 1, 12-16-96; Ord. No. 222-99, §1, 3-01-99; Ord. No. 199-04/05, 4-4-05; Ord. 153-08/09, 2-18-09; Ord. No. 29-09/10, 8-3-09 emergency passage; Ord. No. 127-09/10, 1-4-10 emergency passage; Ord. No. 240 09/10, 6-21-10; Ord. No. 9 10/11, 8-2-10; Ord. No. 149-10/11, 3-7-11; Ord. No. 33-11/12, 1-18-12)

Sec. 14-69. Prohibited uses.

Uses that are not expressly enumerated herein as either permitted uses or conditional uses are prohibited.

(Ord. No. 532-84, 5-7-84)

Sec. 14-70. Dimensional requirements.

In addition to the provisions of division 25 (space and bulk regulations and exceptions) of this article, lots in the R-1 zone shall meet or exceed the following minimum requirements:

(a) *Minimum lot size:*

1. Residential: Fifteen thousand (15,000) square feet except as provided for lots of record in section

14-433 (lots of record and accessory structure setbacks for existing buildings) of this article. A lot in an unsewered residential district shall meet the provisions of the state Minimum Lot Size Law, 12 M.R.S.A. Section 4807, or the applicable zoning lot size, whichever is larger.

2. Long-term, extended, or intermediate care facility: Three (3) acres.

3. School: Two (2) acres.

4. Places of assembly:

Large	Two (2) acres
Medium	One (1) acre
Small	Half (1/2) acre

5. Municipal use: Fifteen thousand (15,000) square feet.

6. Animal raising: Three (3) acres.

7. All other uses: Fifteen thousand (15,000) square feet.

Provided that for uses specified in section 14-70(a)2 through 6 above, no minimum lot area shall be required in the following cases:

a. Uses existing as of June 1, 1983;

b. Expansion onto land abutting the lot on which the principal use is located;

c. Expansion onto land other than the lot on which the principal use is located to the extent that such expansion consists of the reuse of surface parking area or nonresidential structures existing and in nonresidential use as of June 1, 1983, provided that such reuse is contained within the lot of record of such structure or parking area as of June 1, 1983;

d. Expansion onto land other than the lot on which the principal use is located of no more than fifteen (15) percent of the total contiguous land area of the existing use, or one (1) acre, whichever is less, within any five-year period.

(b) *Minimum lot area per dwelling unit:* Fifteen thousand (15,000) square feet.

(c) *Minimum street frontage:* Seventy-five (75) feet.

(d) *Minimum yard dimensions:*

(Yard dimensions include setbacks of structures from property lines and setbacks of structures from one another. No structure shall occupy the minimum yard of another structure.)

1. *Front yard:*

Principal or accessory structures: Twenty-five (25) feet.

2. *Rear yard:*

a. Principal or accessory structures with ground coverage greater than one hundred (100) square feet: Twenty-five (25) feet.

b. Accessory detached structures with a ground coverage of one hundred and forty-four (144) square feet or less: Five (5) feet.

Setbacks for swimming pools shall be as provided for in section 14-432 (swimming pools) of this article.

3. *Side yard:*

a. Principal or accessory structures with ground coverage greater than one hundred (100) feet:

Height of Structure *Required Side Yard*

1 story . . . . . 12 feet

1 1/2 stories . . . . . 12 feet

2 stories . . . . . 14 feet

2 1/2 stories . . . . . 16 feet

The width of one (1) side yard may be reduced one (1) foot for every foot that the other side yard is correspondingly increased, but no side yard shall be less than twelve (12) feet. In the case of a lot of record existing as of June 5, 1957, and held under separate and distinct ownership from adjacent lots, the required side yard may be reduced in order to provide a buildable width of up to twenty-four (24) feet, but in no case shall the resulting side yards be less than twelve (12) feet.

b. Accessory detached structure with ground coverage of one hundred and forty-four (144) square feet or less: Five (5) feet.

4. *Side yard on side streets:*

a. Principal or accessory structures: Twenty (20) feet.

(e) *Maximum lot coverage:* Twenty (20) percent of lot area.

(f) *Minimum lot width:* One hundred (100) feet.

(g) *Maximum structure height:*

1. Principal or accessory attached structure: Thirty-five (35) feet.

2. Accessory detached structure: Eighteen (18) feet.

(h) *Maximum floor area for places of assembly on a collector or arterial road:*

Large	Not limited
Medium	9,000 sq. ft.
Small	5,000 sq. ft.

(i) *Maximum floor area for places of assembly not on a collector or arterial road:*

Large	9,000 sq. ft.
Medium	4,500 sq. ft.
Small	2,500 sq. ft.

(Ord. No. 532-84, 5-7-84; Ord. No. 79-88, § 3, 7-19-88; Ord. No. 235-91, § 2, 2-4-91; Ord. No. 118-93, § 2, 10-18-93; Ord. No. 154-96, § 2, 12-16-96; Ord. No.131-08/09, 12-15-08; Ord. No. 127-09/10, 1-4-10 emergency passage)

***Editor's note--**Ord. No. 79-88, § 3, adopted July 19, 1988, amended this section to read as herein set out. See also the editor's note to Art. III of this chapter for additional provisions relative to Ord. No. 79-88.

Sec. 14-71. Other requirements.

Other requirements are as follows:

(a) *Off street parking:* Off-street parking is required as provided in division 20 (off-street parking) of this article.

(b) *Shoreland and flood plain management regulations:* Any lot or portion of a lot located in a shoreland zone as identified on the city shoreland zoning map or in a flood hazard zone shall be subject to the requirements of division 26 and/or division 26.5.

(c) *Storage of vehicles:* Only one (1) unregistered motor vehicle may be stored outside on the premises for a period not exceeding thirty (30) days.

(Ord. No. 532-84, 5-7-84; Ord. No. 15-92, § 5, 6-15-92)

Sec. 14-72 - 14-75. Reserved.

DIVISION 3. R-2 RESIDENTIAL ZONE*

***Editor's note--**Ord. No. 533-54, adopted May 7, 1984, repealed Div. 3, §§ 14-76--14-79, and enacted a new Div. 3, §§ 14-76--14-81. The division was formerly derived from Code 1968, § 602.3.A--D; Ord. No. 499-74, § 2, adopted Aug. 19, 1974; Ord. No. 610-82, § 1, adopted July 7, 1982; and Ord. No. 89-83, §§ 1, 2, adopted Aug. 3, 1983.

Sec. 14-76. Purpose.

The purpose of the R-2 residential zone is:

To provide for low-density residential development characterized by single-family homes on individual lots in outlying areas of the city and along traffic corridors with limited additional traffic capacity.

(Ord. No. 533-84, 5-7-84)

Sec. 14-77. Permitted uses.

The following uses are permitted in the R-2 residential zone:

(a) *Residential:*

1. Single-family detached dwellings.

2. Handicapped family unit, as defined in section 14-47 (definitions) of this article for handicapped persons plus staff.

3. Single-family, multiple-component manufactured housing, as defined in section 14-47 (definitions) of this article, except in a National Register Historic District.

4. Single-family, single-component manufactured housing, as defined in section 14-47 (definitions) of this article, on individual lots under separate and distinct ownership, except in a National Register Historic District and until May 1, 1985, on the islands, provided that each unit meets the performance standards listed below:

   a. More than half of the roof area of each unit shall be a double pitched Class C rated shingled roof with a minimum pitch of 3/12.

   b. Each unit shall be installed on a full foundation or a concrete frost wall in accordance with all applicable codes and regulations. Any hitch or tow bar shall be removed from the unit after it is placed on its foundation or frost wall. In the case of a frost wall, vermin proof skirting shall be installed on all sides of the unit. The skirting

may consist of either (a) concrete or masonry block or (b) manufactured skirting. If concrete or masonry block skirting is installed, either the exterior siding of the unit shall extend within one (1) foot of grade or decorative masonry siding shall be applied. If manufactured skirting material is installed, the color shall be identical to or compatible with the exterior siding of the unit.

c. Each unit shall have exterior siding that is residential in appearance, including but not limited to natural materials such as wood clapboards or shakes, or exterior materials which simulate wood. Clapboards or simulated clapboards shall have less than eight (8) inches of exposure and sheet metal type siding shall not be permitted.

d. Each unit shall have the long side of the unit parallel to the street line where the required street frontage is met.

e. Each unit shall be provided with at least two (2) trees meeting the city's arboricultural specifications and which are clearly visible from the street line and are located so as to visually widen the narrow dimension or proportion of the unit.

f. Each unit shall have all fuel oil supply systems constructed and installed within the foundation wall or underground in accordance with all applicable codes and regulations.

g. No unit shall be horizontally or vertically attached to any other unit or other structure, provided however, that this provision shall not be deemed to prohibit building additions, such as porches, garages, room additions or solar greenhouses.

(b) *Other:*

1. Reserved;

2. Parks and other active and passive noncommercial

recreation spaces;

3. Agriculture, including nurseries, greenhouses, and truck gardens, providing that there is no sale of products not produced on the premises; a single stand with no more than two hundred (200) square feet in floor area, for the sale of agricultural products produced on the premises shall be permitted;

4. Accessory uses customarily incidental and subordinate to the location, function, and operation of principal uses, subject to the provisions of section 14-404 (accessory uses) of this article;

5. Home occupations, subject to the provisions of section 14-410 (home occupation) of this article;

6. Municipal uses, excluding those specifically set forth in section 14-78 of this division.

7. Wind energy systems, as defined and allowed in Article X, Alternative Energy.

(Ord. No. 533-84, 5-7-84; Ord. No. 261-84, § 1, 12-17-84; Ord. No. 35-85, § 1, 7-15-85; Ord. No. 80-88, § 1, 7-19-88; Ord. No. 86A-89, § 2, 8-21-89; Ord. No. 33-91, § 3, 1-23-91; Ord. No. 33-11/12, 1-18-12)

***Editor's note--**Ord. No. 80-88, § 1, adopted July 19, 1988, amended this section by adding subsection 14-77(b)6. See also the editor's note to Art. III of this chapter for additional provisions relative to Ord. No. 80-88.

Sec. 14-78. Conditional use.

The following uses shall be permitted only upon the issuance of a conditional use permit, subject to the provisions of section 14-474 (conditional uses) of this article and any special provisions, standards or requirements specified below:

(a) *Residential:*

1. Sheltered care group home, as defined in section 14-47 of this article, for up to twelve (12) individuals, plus staff, and serving a primary population which is not handicapped persons, parolees, persons involved in correctional prerelease programs, or current illegal drug

users, provided that:

a. A sheltered care group home shall not be located within five hundred (500) feet of another, as measured along street lines to the respective property lines;

b. There shall be no open outside stairways or fire escapes above the ground floor;

c. The facility shall make provision for adequate on-site staffing in accordance with applicable state licensing requirements. If a facility is not licensed by the state, there shall be a minimum of one (1) staff person for every ten (10) residents or fraction thereof.

The board of appeals may impose conditions upon a conditional use permit concerning the creation or operation of a sheltered care group home including but not limited to the following: site and building maintenance; lighting, fencing, and other appropriate security measures; screening and buffering of parking areas; compatibility of any additions or alterations with the existing residential structure; compatibility of new structures with the architectural character of the surrounding area; and limitation on the duration of a sheltered care group home permit.

2. Alteration or construction of a single-family detached dwelling to accommodate an accessory dwelling unit within the building and clearly subordinate to the principal dwelling for the benefit of homeowners or tenants provided that:

a. The accessory unit shall be no more than thirty (30) percent of the gross floor area of the principal building and shall have a minimum floor area of four hundred (400) square feet; gross floor area shall exclude any floor area that has less than two-thirds of its floor-to-ceiling height above the average adjoining ground level; gross floor area may include attic space if such space shall be included as habitable space within either

dwelling unit;

b. Lot area shall be eight thousand (8,000) square feet for single-family dwellings in existence as of May 1, 1984, and lot area shall be ten thousand (10,000) square feet for single-family dwellings constructed after May 1, 1984;

c. There shall be no open, outside stairways or fire escapes above the ground floor;

d. Any additions or exterior alterations such as facade materials, building form, roof pitch, and exterior doors shall be designed to be compatible with the architectural style of the building and preserve the single-family appearance of the building;

e. The project shall be subject to article V (site plan) of this chapter for site plan review and approval and the following additional standards:

i. Any additions or exterior alterations, such as façade materials, building form and roof pitch shall be designed to be compatible with the architectural style of the building and preserve the single-family appearance of the building.

ii. The scale and surface area of parking, driveways and paved areas shall be arranged and landscaped to properly screen vehicles from adjacent properties and streets.

f. Either the accessory unit or the principal dwelling shall be occupied by the owner of the lot on which the principal building is located, except for bona fide temporary absences; and

g. Parking shall be provided as required by division 20 of this article.

(b) ***Institutional:*** Any of the following conditional uses provided that, notwithstanding section 14-474 (conditional uses) of this article or any other

provisions of this Code, the Planning Board shall be substituted for the board of appeals as the reviewing authority:

1. Elementary, middle, and secondary school;

2. a. Long-term and extended care facilities;

   b. Intermediate care facility for thirteen (13) or more persons;

3. Places of assembly;

4. College, university, trade school;

Such uses shall be subject to the following conditions and standards in addition to the provisions of section 14-474:

a. Any new institutional use shall demonstrate that it has a lot size of sufficient area to accommodate all proposed and foreseeable future activities and programs, including parking, and to absorb the impacts and growth needs of the institution. Such new use established after April 19, 2012 shall not be eligible for expansion under the provisions of paragraph b below;

b. In the case of expansion of existing such uses onto land other than the lot on which the principal use is located, it shall be demonstrated that the proposed use cannot reasonably be accommodated on the existing site through more efficient utilization of land or buildings, and will not cause significant physical encroachment into established residential area; and

c. The proposed use will not cause significant displacement or conversion of residential uses existing as of June 1, 1983, or thereafter; and

d. In the case of a use or use expansion which constitutes a combination of the above-listed uses with capacity for concurrent operations, the applicable minimum lot sizes shall be cumulative;

and

e. Article V (site plan) sections 14-522 and 14-523 notwithstanding, in the case of places of assembly (including places of religious assembly, community halls and private club or fraternal organizations) and college, university, trade school, the proposed use shall be subject to the requirements of article V (site plan) of this chapter; and

f. In the case of community halls:

i. The structure was in existence as of January 4, 2010.

ii. The structure was built for institutional or other non-residential uses;

iii. The structure is operated by, or operated subject to the control of, a not-for-profit entity in accordance with its not-for-profit purposes; and

iv. A parking management plan is submitted for review and approval by the planning board; and

g. In the case of private club or fraternal organizations: any such establishment serving alcoholic beverages or in possession of a license for serving alcoholic beverages shall be located on a large lot, as specified in the minimum lot size provisions of this section.

(c) *Other:*

1. Utility substations, including sewage and water pumping stations and standpipes, electric power substations, transformer stations, telephone electronic equipment enclosures, and other similar structures, provided that such uses are suitably screened and landscaped so as to ensure compatibility with the surrounding neighborhood;

2. Cemeteries.

3. Day care facilities or home babysitting services not

permitted as a home occupation under section 14-410, and nursery schools and kindergartens, subject to the following conditions:

a. The facility shall be located in a structure in which there is one (1) or more occupied residential units or in an existing accessory structure, unless the facility is located in a principal structure that has not been used as a residence in whole or in part within the five (5) years immediately preceding the application for a day care or home babysitting use or in a nonresidential structure accessory to the principal nonresidential use.

b. The maximum capacity shall be twelve (12) children for facilities located in residential or existing structures accessory thereto, unless the additional standards in subsection v. are met. There shall be no maximum limit on the number of children in a facility located in a principal structure that has not been used as a residence in whole or in part within the five (5) years immediately preceding the application for a day care use or home babysitting use, nursery school or kindergarten, or in a nonresidential structure accessory thereto, provided that any such structure that serves more than twelve (12) children shall be subject to review under article V of this chapter.

c. Outdoor play areas shall be screened and buffered from surrounding residences with landscaping and/or fencing to minimize visual and noise impacts.

d. Solid waste shall be stored in covered containers. Such containers shall be screened on all four (4) sides.

e. Day care facilities, home babysitting uses, nursery schools or kindergartens located either in structures that have been in residential use within the past five (5) years or in existing accessory structures and that serve between thirteen (13) and twenty-four (24) children shall meet the following additional standards:

i. The facility shall provide a minimum of seventy-five (75) square feet of outdoor play area per child;

ii. The play area shall be located in the side and rear yards only and shall not be located in front yards;

iii. Outside play areas shall be separated from abutting properties by a fence at least forty-eight (48) inches in height;

iv. A ten-foot wide landscaped buffer shall be required outside of the fenced play area, and shall be established in accordance with the landscaping standards of the City's Technical Standards and Guidelines;

v. The minimum lot size for a day care facility, home babysitting use, nursery school or kindergarten located in a residential or existing accessory structure and serving more than twelve (12) children shall be twenty thousand (20,000) square feet;

vi. ***Off-street parking:*** Off-street parking is required as provided in division 20 (off-street parking) of this article.

vii. The maximum number of children in a day care facility, home babysitting service, nursery school or kindergarten located in a residential or existing accessory structure shall be twenty-four (24); and

viii. Any additions or exterior alterations such as facade materials, building form, roof pitch, and exterior doors shall be designed to be compatible with the architectural style of the building and preserve the residential appearance of the building.

4. Temporary wind anemometer towers, as defined in Sec 14-47, are permitted provided the following standards are met in addition to Sec 14-430:

a. Towers may be installed for the purpose of wind data collection for no more than two (2) years after the issuance of a Certificate of Occupancy for the tower. At the conclusion of the aforementioned two (2) years, the tower must be dismantled and removed from the site within sixty (60) days; and

b. Towers shall be constructed according to plans and specifications stamped by a licensed professional engineer, which shall be provided to the Board of Appeals with the application; and

c. Towers shall be set back from habitable buildings by a distance equal to 1.1 times the tower height; and

d. The applicant shall provide a safety report prepared and stamped by a licensed professional engineer to the Board of Appeals with their application for conditional use, which demonstrates how the proposed temporary wind anemometer tower is safe in terms of strength, stability, security, grounding, icing impacts and maintenance; and

e. The applicant shall provide evidence of commercial general liability insurance, such insurance to be satisfactory to Corporation Counsel and cover damage or injury resulting from construction, operation or dismantling of any part of the temporary wind anemometer tower; and

f. Towers and associated guy wires shall be sited to minimize their prominence from and impacts on public ways (including pedestrian ways); and

g. Towers shall be used for installing anemometers and similar devices at a range of heights from the ground to measure wind characteristics (speed, direction, frequency)

and related meteorological data, but shall not be used for any other purpose; and

h. A performance guarantee shall be required for the cost of removal of the tower, guy wires and anchors. This requirement may be satisfied by surety bond, letter of credit, escrow account or by evidence, acceptable to the City, of the financial and technical ability and commitment of the applicant or its agents to remove the facility at the end of the use period.

5. Wind energy systems, as defined and allowed in Article X, Alternative Energy.

(Ord. No. 533-84, 5-7-84; Ord. No. 261-84, § 2, 12-17-84; Ord. No. 76-85, § 3, 7-1-85; Ord. No. 80-88, § 2, 7-19-88; Ord. No. 235-91, § 3, 2-4-91; Ord. No. 118-93, § 3, 10-18-93; Ord. No. 133-96, § 2, 11-18-96; Ord. No. 154-96, § 3, 12-16-96; Ord. No. 222-99 §2, 3-01-99; Ord. No. 199-04/05, 4-4-05; Ord. No. 29-09/10, 8-3-09, emergency passage; Ord. No. 127-09/10, 1-4-10 emergency passage; Ord. No. 240-09/10, 6-21-10; Ord. No. 9 10/11, 8-2-10; Ord. No. 149-10/11, 3-7-11; Ord. No. 33-11/12, 1-18-12; Ord. No. 131-11/12, 3-19-12)

Sec. 14-79. Prohibited uses.

Uses that are not expressly enumerated herein as either permitted uses or conditional uses are prohibited.

(Ord. No. 533-84, 5-7-84)

Sec. 14-80. Dimensional requirements.

In addition to the provisions of division 25 (space and bulk regulations) of this article, lots in the R-2 zone shall meet or exceed the following minimum requirements:

(a) *Minimum lot size:*

1. Residential: Ten thousand (10,000) square feet except as provided for lots of record in section 14-433 (lots of record and accessory structure setbacks for existing buildings) of this article. A lot in an unsewered residential district shall meet the provisions of the state Minimum Lot Size Law, 12 M.R.S.A. Section 4807, or the applicable zoning lot size, whichever is the larger.

2. Long-term, extended, or intermediate care facility: Three (3) acres.

3. School: Two (2) acres.

4. Places of assembly:

Large	Two (2) acres
Medium	One (1) acre
Small	Half (1/2) acre

5. Municipal use: Ten thousand (10,000) square feet.

6. College, university, trade school: Two (2) acres.

7. All other uses: Ten Thousand (10,000) square feet.

Provided that for uses specified in section 14-80(a)2 through 7 above, no minimum lot area shall be required in the following cases:

a. Uses existing as of June 1, 1983;

b. Expansion of uses onto land abutting the lot on which the principal use is located;

c. Expansion onto land other than the lot on which the principal use is located to the extent that such expansion consists of the reuse of surface parking area or nonresidential structures existing and in nonresidential use as of June 1, 1983, provided that such reuse is contained within the lot of record of such structure or parking area as of June 1, 1983;

d. Expansion onto land other than the lot on which the principal use is located of no more than fifteen (15) percent of the total contiguous land area of the existing use, or one (1) acre, whichever is less, within any five-year period.

(b) ***Minimum area per dwelling unit:*** Ten thousand (10,000)

square feet.

(c) *Minimum street frontage:* Fifty (50) feet.

(d) *Minimum yard dimensions:*

(Yard dimensions include setbacks of structures from property lines and setbacks of structures from one another. No structure shall occupy the minimum yard of another structure.)

1. *Front yard:*

Principal or accessory structures: Twenty-five (25) feet.

2. *Rear yard:*

a. Principal or accessory structures with ground coverage greater than one hundred (100) square feet: Twenty-five (25) feet.

b. Accessory detached structures with a ground coverage of one hundred and forty-four (144) square feet or less: Five (5) feet.

Setbacks for swimming pools shall be as provided for in section 14-432 (swimming pools) of this article.

3. *Side yard:*

a. Principal or accessory structures with ground coverage greater than one hundred (100) square feet:

Height of Structure	*Required Side Yard*
1 story	12 feet
1 1/2 stories	12 feet
2 stories	14 feet
2 1/2 stories	16 feet

The width of one (1) side yard may be reduced one (1) foot for every foot that the other side yard is correspondingly increased, but no side yard shall be less than twelve (12) feet. In the case of a lot of record existing as of June 5, 1957, and held under separate and distinct ownership from adjacent lots, the required side yard may be reduced in order to provide a buildable width of up to twenty-four (24) feet, but in no case shall the resulting side yards be less than twelve (12) feet.

b. Accessory detached structures with ground coverage of one hundred and forty-four (144) square feet or less: Five (5) feet.

4. *Side yard on side streets:*

Principal or accessory structures: Twenty (20) feet.

(e) *Maximum lot coverage:* Twenty (20) percent of lot area.

(f) *Minimum lot width:* Eighty (80) feet.

(g) *Maximum structure height:*

1. Principal or accessory attached structure: Thirty-five (35) feet.

2. Accessory detached structure: Eighteen (18) feet.

(h) *Maximum floor area on a collector or arterial road:*

1. Places of public assembly:

Large	Not limited
Medium	9,000 sq. ft.
Small	5,000 sq. ft.

2. College, university, trade school:

Lot area of 6 acres or larger: 24,000 sq. ft.
Lot area of 4 acres to 5.99 acres: 18,000 sq. ft.

Lot area of 2 acres to 3.99 acres: 12,000 sq. ft.

(i) *Maximum floor area not on a collector or arterial road:*

1. Places of public assembly:

Large	9,000 sq. ft.
Medium	4,500 sq. ft.
Small	2,500 sq. ft.

2. College university, trade school:

Not a permitted use.

(Ord. No. 533-84, 5-7-84; Ord. No. 80-88, § 3, 7-19-88; Ord. No. 235-91, § 4, 2-4-91; Ord. No. 118-93, § 4, 10-18-93; Ord. No. 154-96, § 3, 12-16-96; Ord. No. 131-08/09, 12-15-08; Ord. No. 127-09/10, 1-4-10 emergency passage; Ord. No. 131-11/12, 3-19-12)

***Editor's note--**Ord. No. 80-88, § 3, adopted July 19, 1988, amended this section to read as herein set out. See also the editor's note to Art. III of this chapter for additional provisions relative to Ord. No. 80-88.

Sec. 14-81. Other requirements.

Other requirements are as follows:

(a) *Off-street parking:* Off-street parking is required as provided in division 20 (off-street parking) of this article.

(b) *Shoreland and flood plain management regulations:* Any lot or portion of a lot located in a shoreland zone as identified on the city shoreland zoning map or in a flood hazard zone shall be subject to the requirements of division 26 and/or division 26.5.

(c) *Storage of vehicles:* Only one (1) unregistered motor vehicle may be stored outside on the premises for a period not exceeding thirty (30) days.

(Ord. No. 533-84, 5-7-84; Ord. No. 15-92, § 6, 6-15-92)

Sec. 14-82 – 14-85. Reserved.

DIVISION 4. R-3 RESIDENTIAL ZONE*

***Editor's note--**Ord. No. 534-84, adopted May 7, 1984, repealed Div. 4, §§ 14-87--14-90, and enacted a new Div. 4, §§ 14-86--14-91. Formerly, Div. 4 was derived from Code 1968, § 602.4.A--D, and the following ordinances: Ord. No. 49-74, 372-75, 406-75, 34-76, 145-79, 145-81, 303-81, 90-83, and 499-74.

Sec. 14-86. Purpose.

The purpose of the R-3 residential zone is:

> To provide for medium-density residential development characterized by single-family homes on individual lots and also to provide for planned residential unit developments on substantially sized parcels. Such development shall respond to the physical qualities of a site and complement the scale, character and style of the surrounding neighborhood.

(Ord. No. 534-84, 5-7-84; Ord. No. 81-88, § 1, 7-19-88)

***Editor's note--**Ord. No. 81-88, § 1, adopted July 19, 1988, amended § 14-86 to read as herein set out. See also the editor's note to Art. III of this chapter for additional provisions relative to Ord. No. 81-88.

Sec. 14-87. Permitted uses.

The following uses are permitted in the R-3 residential zone:

(a) *Residential:*

1. Single-family detached dwellings.

2. Planned residential unit development (PRUD) consisting of horizontally attached dwelling units or a series of such dwelling units. No dimensional requirements contained in section 14-90 shall apply with respect to such development, except for those requirements specifically denoted for PRUD. There shall be no open outside stairways or fire escapes above the ground floor. All land shall be owned and used in common and shall be governed and maintained as set forth in section 14-498(i)(3) of article IV (subdivisions) of this chapter. Such development shall be subject to review and approval by the Planning Board with respect to the

requirements of article V (site plan) and article IV (subdivisions) of this chapter, whether or not such development is a subdivision within the meaning of article IV of this chapter, as now enacted or as hereafter amended.

3. Handicapped family unit, as defined in section 14-47 (definitions) of this article, for handicapped persons plus staff.

4. Single-family, multiple-component manufactured housing, as defined in section 14-47 (definitions) of this article, except in a National Register Historic District.

5. Single-family, single-component manufactured housing, as defined in section 14-47 (definitions) of this article, on individual lots under separate and distinct ownership, except in a National Register Historic District and until May 1, 1985, on the islands, provided that each unit meets the performance standards listed below.

   a. More than half of the roofed area of each unit shall be a double pitched Class C rated shingled roof with a minimum pitch of 3/12.

   b. Each unit shall be installed on a full foundation or a concrete frost wall in accordance with all applicable codes and regulations. Any hitch or tow bar shall be removed from the unit after it is placed on its foundation or frost wall. In the case of a frost wall, vermin proof skirting shall be installed on all sides of the unit. The skirting may consist of either (a) concrete or masonry block or (b) manufactured skirting. If concrete or masonry block skirting is installed, either the exterior siding of the unit shall extend within one (1) foot of grade or decorative masonry siding shall be applied. If manufactured skirting material is installed, the color shall be identical to or compatible with the exterior siding of the unit.

   c. Each unit shall have exterior siding that is residential in appearance, including but not limited to natural materials such as wood clapboards or shakes, or exterior materials which

simulate wood. Clapboards or simulated clapboard shall have less than eight (8) inches of exposure and sheet metal type siding shall not be permitted.

d. Each unit shall have the long side of the unit parallel to the street line where the required street frontage is met.

e. Each unit shall be provided with at least two (2) trees meeting the city's arboricultural specifications and which are clearly visible from the street line and are located so as to visually widen the narrow dimension or proportion of the unit.

f. Each unit shall have all fuel oil supply systems constructed and installed within the foundation wall or underground in accordance with all applicable codes and regulations.

g. No unit shall be horizontally or vertically attached to any other unit or other structure, provided however, that this provision shall not be deemed to prohibit building additions, such as porches, garages, room additions or solar greenhouses.

(b) *Other:*

1. Reserved;

2. Parks, and other active and passive noncommercial recreation spaces;

3. Accessory uses customarily incidental and subordinate to the location, function, and operation of principal uses, subject to the provisions of section 14-404 (accessory uses) of this article;

4. Home occupation, subject to the provisions of section 14-410 (home occupation) of this article;

5. Municipal uses, excluding those specifically set forth in section 14-88 of this division.

6. Wind energy systems, as defined and allowed in Article X, Alternative Energy.

(Ord. No. 534-84, 5-7-84; Ord. No. 262-84, § 1, 12-17-84; Ord. No. 36-85, § 1, 7-15-85; Ord. No. 81-88, §§ 2, 3, 7-19-88; Ord. No. 86A-89, § 3, 8-21-89; Ord. No. 33-91, § 4, 1-23-91; Ord. No. 165-97, § 1, 12-1-97; Ord. No. 33-11/12, 1-18-12)

***Editor's note--**Ord. No. 81-88, §§ 2 and 3, adopted July 19, 1988, amended subsections 14-87(a)2 and (b)5 to read as herein set out. See also the editor's note to Art. III of this chapter for additional provisions relative to Ord. No. 81-88.

Sec. 14-88. Conditional uses.

The following uses shall be permitted only upon the issuance of a conditional use permit, subject to the provisions of section 14-474 (conditional uses) and any special provisions, standards or requirements specified below:

(a) *Residential:*

1. Sheltered care group homes, as defined in section 14-47 of this article, for up to twelve (12) individuals, plus staff, and serving a primary population which is not handicapped persons, parolees, persons involved in correctional prerelease programs, or current illegal drug users, provided that:

   a. A sheltered care group home shall not be located within five hundred (500) feet of another, as measured alone street lines to the respective property lines;

   b. There shall be no open outside stairways or fire escapes above the ground floor;

   c. The facility shall make provision for adequate on-site staffing in accordance with applicable state licensing requirements. If a facility is not licensed by the state, there shall be a minimum of one (1) staff person for every ten (10) residents or fraction thereof.

The board of appeals may impose conditions upon a conditional use permit concerning the creation or operation of a sheltered care group home including but not limited to the following: site and building maintenance; lighting, fencing, and other appropriate security measures; screening and buffering of parking areas; compatibility of any additions or alterations with the existing residential structure; compatibility of new structures with the architectural character of the surrounding area; and limitation on the duration of a sheltered care group home permit.

2. Alteration or construction of a detached single-family dwelling to accommodate one (1) additional dwelling unit for the benefit of homeowners or tenants, provided that:

   a. The accessory unit shall be no more than thirty (30) percent of the gross floor area of principal building and shall have a minimum floor area four hundred (400) square feet; gross floor area shall exclude any floor area that has less than two-thirds of its floor-to-ceiling height above the average adjoining ground level; gross floor area may include attic space if such space shall be included as habitable space within either dwelling unit;

   b. There shall be no open outside stairways or fire escapes above the ground floor;

   c. Any building additions or exterior alterations such as facade materials, building form, or roof pitch shall be designed to be compatible with the architectural style and to maintain the single-family appearance of the dwelling;

   d. A minimum lot size of six thousand five hundred (6,500) square feet of land area shall be required;

   g. No dwelling unit shall be reduced in size to less than one thousand (1,000) square feet of floor area, exclusive of common areas and

storage in basement or attic;

h. Parking shall be provided as required by division 20 of this article;

i. The project shall be subject to article V (site plan) of this chapter for site plan review and approval and the following additional standards:

i. Any additions or exterior alterations such as facade materials, building form and roof pitch shall be designed to be compatible with the architectural style of the building;

ii. The scale and surface area of parking, driveways and paved areas shall be arranged and landscaped to properly screen vehicles from adjacent properties and streets.

j. Either the accessory unit or principal unit shall be occupied by the lot owner, except for bona fide temporary absences.

(b) *Commercial:*

1. Reserved.

(c) *Institutional:* Any of the following conditional uses provided that, notwithstanding section 14-474(a) (conditional uses) of this article or any other provision of this Code, the Planning Board shall be substituted for the board of appeals as the reviewing authority:

1. Elementary, middle, and secondary school;

2. a. Long-term and extended care facilities;

b. Intermediate care facility for thirteen (13) or more persons;

3. Places of assembly;

4. Hospital.

Such uses shall be subject to the following conditions and standards in addition to the provisions of section 14-474:

a. In the case of expansion of existing such uses onto land other than the lot on which the principal use is located, it shall be demonstrated that the proposed use cannot reasonably be accommodated on the existing site through more efficient utilization of land or buildings, and will not cause significant physical encroachment into established residential areas; and

b. The proposed use will not cause significant displacement or conversion of residential uses existing as of June 1, 1983, or thereafter; and

c. In the case of a use or use expansion which constitutes a combination of the above-listed uses with capacity for concurrent operations, the applicable minimum lot sizes shall be cumulative; and

d. Article V (site plan) sections 14-522 and 14-523 notwithstanding, in the case of places of assembly the proposed use shall be subject to the requirements of article V (site plan) of this chapter; and

e. In the case of community halls:

i. The structure was in existence as of January 4, 2010.

ii. The structure was built for institutional or other non-residential uses;

iii. The structure is operated by, or operated subject to the control of, a not-for-profit entity in accordance with its not-for-profit purposes; and

iv. A parking management plan is submitted for review and approval by the planning board; and

f. In the case of private club or fraternal organizations: any such establishment serving alcoholic beverages or in possession of a license for serving alcoholic beverages shall be located on a large lot, as specified in the minimum lot size provisions of this section.

(d) *Other:*

1. Off-street parking of passenger cars as provided in section 14-344 (board of appeals may authorize parking in certain residence zones) of this article;

2. Utility substations, including sewage treatment plants, sewage and water pumping stations and standpipes, electric power substations, transformer stations, and telephone electronic equipment enclosures and other similar structures, provided that such uses are suitably screened and landscaped so as to ensure compatibility with the surrounding neighborhood;

3. Day care facilities or home babysitting services not permitted as a home occupation under section 14-410, and nursery schools and kindergartens subject to the following conditions:

a. The facility shall be located in a structure in which there is one (1) or more occupied residential units or in an existing accessory structure, unless the facility is located in a principal structure that has not been used as a residence in whole or in part within the five (5) years immediately preceding the application for a day care use, home babysitting use, nursery school or kindergarten, or in a nonresidential structure accessory to the principal nonresidential use.

b. The maximum capacity shall be twelve (12) children for facilities located in residential or existing structures accessory thereto, unless the additional standards in subsection v. are met. There shall be no maximum limit on the number of children in a facility located in a principal structure that has not been used as a residence in whole or in part within the five (5) years immediately preceding the application for a day care or home babysitting use, or in a nonresidential structure accessory thereto, provided that any such structure that serves more than twelve (12) children shall be subject to review under article V of this chapter.

c. Outdoor play areas shall be screened and buffered from surrounding residences with landscaping and/or fencing to minimize visual and noise impacts.

d. Solid waste shall be stored in covered containers. Such containers shall be screened on all four (4) sides.

e. Day care facilities, home babysitting uses, nursery schools and kindergartens located either in structures that have been in residential use within the past five (5) years or in existing accessory structures and that serve between thirteen (13) and twenty-four (24) children shall meet the following additional standards:

i. The facility shall provide a minimum of seventy-five (75) square feet of outdoor play area per child;

ii. The play area shall be located in the side and rear yards only and shall not be located in front yards;

iii. Outside play areas shall be separated from abutting properties by a fence at least forty-eight (48) inches in height;

iv. A ten-foot wide landscaped buffer shall be required outside of the fenced play area, and shall be established in accordance with the landscaping standards of the City's Technical Standards and Guidelines;

v. The minimum lot size for a day care facility, home babysitting services, nursery school, or kindergarten located in a residential or existing accessory structure and serving more than twelve (12) children shall be twenty thousand (20,000) square feet;

vi. ***Off-street parking:*** Off-street parking is required as provided in division 20 (off-street parking) of this article.

vii. The maximum number of children in a day care facility, home babysitting service, nursery school or kindergarten located in a residential or existing accessory structure shall be twenty-four (24); and

viii. Any additions or exterior alterations such as facade materials, building form, roof pitch, and exterior doors shall be designed to be compatible with the architectural style of the building and preserve the residential appearance of the building.

4. Temporary wind anemometer towers, as defined in Sec 14-47, are permitted provided the following standards are met in addition to Sec 14-430:

a. Towers may be installed for the purpose of wind data collection for no more than two (2) years after the issuance of a Certificate of Occupancy for the tower. At the conclusion of the aforementioned two (2) years, the tower must be

dismantled and removed from the site within sixty (60) days; and

b. Towers shall be constructed according to plans and specifications stamped by a licensed professional engineer, which shall be provided to the Board of Appeals with the application; and

c. Towers shall be set back from habitable buildings by a distance equal to 1.1 times the tower height; and

d. The applicant shall provide a safety report prepared and stamped by a licensed professional engineer to the Board of Appeals with their application for conditional use, which demonstrates how the proposed temporary wind anemometer tower is safe in terms of strength, stability, security, grounding, icing impacts and maintenance; and

e. The applicant shall provide evidence of commercial general liability insurance, such insurance to be satisfactory to Corporation Counsel and cover damage or injury resulting from construction, operation or dismantling of any part of the temporary wind anemometer tower; and

f. Towers and associated guy wires shall be sited to minimize their prominence from and impacts on public ways (including pedestrian ways); and

g. Towers shall be used for installing anemometers and similar devices at a range of heights from the ground to measure wind characteristics (speed, direction, frequency) and related meteorological data, but shall not be used for any other purpose; and

h. A performance guarantee shall be required

for the cost of removal of the tower, guy wires and anchors. This requirement may be satisfied by surety bond, letter of credit, escrow account or by evidence, acceptable to the City, or the financial and technical ability and commitment of the applicant or its agents to remove the facility at the end of the use period.

5. Wind energy systems, as defined and allowed in Article X, Altenrative Energy.

(Ord. No. 534-84, 5-7-84; Ord. No. 262-84, § 2, 12-17-84; Ord. No. 76-85, § 4, 7-1-85; Ord. No. 36-85, § 2, 7-15-85; Ord. No. 67-87, § 1, 11-2-87; Ord. No. 81-88, § 4, 7-19-88; Ord. No. 235-91, § 5, 2-4-91; Ord. No. 118-93, § 5, 10-18-93; Ord. No. 133-96, § 3, 11-18-96; Ord. No. 154-96, § 5, 12-16-96; Ord. No. 222-99, §3, 3-01-99; Ord. No. 199-04/05, 4-4-05; Ord. No. 29-09/10, 8-3-09 emergency passage; Ord. No. 127-09/10, 1-4-10 emergency passage; Ord. No. 240-09/10, 6-21-10; Ord. No. 9 10/11, 8-2-10; Ord. No. 149-10/11, 3-7-11; Ord. No. 33-11/12, 1-18-12)

Sec. 14-89. Prohibited uses.

Uses that are not expressly enumerated herein as either permitted uses or conditional uses are prohibited.

(Ord. No. 534-84, 5-7-84)

Sec. 14-90. Dimensional requirements.

In addition to the provisions of division 25 (space and bulk regulations and exceptions) of this article, lots in the R-3 zone shall meet the following minimum requirements:

(a) *Minimum lot size:*

1. Residential: Sixty-five hundred (6,500) square feet except as provided for lots of record is section 14-433 (lots of record and accessory structure setbacks for existing buildings) of this article. A lot in an unsewered residential district shall meet the provisions of the state Minimum Lot Size Law, 12 M.R.S.A. Section 4807 et seq., or the applicable zoning lot size, whichever is larger.

2. Alteration of a detached single-family dwelling to a two-family dwelling: Ten thousand (10,000) square feet.

3. Long-term, extended, or intermediate care facilities: Two (2) acres.

4. School: Two (2) acres.

5. Places of assembly:

Large	Two (2) acres
Medium	One (1) acre
Small	Half (1/2) acre

6. Municipal use: Sixty-five hundred (6,500) square feet.

7. Hospital: Ten (10) acres.

8. Planned residential unit development (PRUD): Three (3) acres gross area, as defined in section 14-47 (definitions) of this article, of continuous land.

9. All other uses: Sixty-five hundred (6,500) square feet.

Provided that for uses specified in section 14-90(a)3 through 8 above, no minimum lot area shall be required in the following cases:

a. Uses existing as of June 1, 1983;

b. Expansion onto land abutting the lot on which the principal use is located;

c. Expansion onto land other than the lot on which the principal use is located to the extent that such expansion consists of the reuse of surface parking area or nonresidential structures existing and in nonresidential use as of June 1, 1983, provided that such reuse is contained within the lot of record of such structure or parking area as of June 1, 1983;

d. Expansion onto land other than the lot on which the principal use is located of no more

than fifteen (15) percent of the total contiguous land area of the existing use, or one (1) acre, whichever is less, within any five-year period.

(b) *Minimum lot area per dwelling unit:*

PRUD: Sixty-five hundred (6,500) square feet of net land area as defined in section 14-47 (definitions) of this article. As part of a site plan and subdivision application, the applicant shall provide a calculation of those factors deducted to determine net land area. In addition, such net area factors shall be delineated on a site plan.

Other uses: Sixty-five hundred (6,500) square feet.

(c) ***Minimum street frontage:*** Fifty (50) feet, except that lots located in a subdivision approved after the effective date of Ord. No. 165-97 pursuant to section 14-497.5 shall meet the street frontage requirements approved as part of the subdivision plan under the terms of that section.

(d) *Minimum yard dimensions:*

(Yard dimensions include setbacks of structures from property lines and setbacks of structures from one another. No structure shall occupy the minimum yard of another structure.)

1. *Front yard:*

Principal or accessory structures: Twenty-five (25) feet.

A front yard need not exceed the average depth of front yards on either side of the lot. A lot of record existing as of June 5, 1957, and less than one hundred (100) feet deep need not be deeper than twenty (20%) percent of the depth of the lot.

2. *Rear yard:*

a. Principal or accessory structures with ground

coverage greater than one hundred (100) square feet: Twenty-five (25) feet.

b. Accessory detached structures with ground coverage of one hundred and forty-four (144) square feet or less: Five (5) feet.

Setbacks for swimming pools shall be as provided for in section 14-432 (swimming pools) of this article.

3. *Side yard:*

a. Principal or accessory structures with ground coverage greater than one hundred (100) square feet:

Height of Structure	*Required Side Yard*
1 story	8 feet
1 1/2 stories	8 feet
2 stories	14 feet
2 1/2 stories	16 feet

The width of one (1) side yard may be reduced one (1) foot for every foot that the other side yard is correspondingly increased, but no side yard shall be less than eight (8) feet in width. In the case of a lot of record existing as of June 5, 1957, and held under separate and distinct ownership from adjacent lots, the required side yard may be reduced in order to provide a buildable width of up to twenty-four (24) feet, but in no case shall the resulting side yards be less than eight (8) feet.

b. Accessory detached structures with ground coverage of one hundred and forty-four (144) square feet or less: Five (5) feet.

4. *Side yard on side street:*

a. Principal or accessory structures: Twenty (20)

feet.

(e) ***Maximum lot coverage:*** Thirty-five (35) percent of lot area.

(f) ***Minimum lot width:*** Sixty-five (65) feet.

(g) ***Maximum structure height:*** Principal or accessory attached structure: Thirty-five (35) feet.

Accessory detached structure: Eighteen (18) feet.

(h) 1. ***Maximum number of units in a building (PRUD of five (5) acres of more):*** Six (6) units.

2. ***Maximum number of units in a building (PRUD of less than five (5) acres):*** Two (2) units.

(i) ***Maximum average number of units in a building (PRUD of five (5) acres of more):*** Five (5) units.

(j) ***Maximum length of building (PRUD):*** One hundred (100) feet for buildings without garages; one hundred forty (140) feet for buildings with integral garages.

(k) ***Minimum building setback from external subdivision property lines (PRUD):***

1. Three (3) or fewer dwelling units in building: Twenty-five (25) feet.

2. Four (4) or more dwelling units in building: Thirty-five (35) feet.

(l) ***Minimum distance between detached PRUD dwelling unit:*** Sixteen (16) feet.

(m) ***Reserved.***

(n) ***Minimum recreation open space area (PRUD):*** Three hundred (300) square feet per dwelling unit of common area designated on the site for recreation purposes. Such recreation areas shall be level graded, dry, accessible and properly drained. At a minimum, a contiguous area of six thousand (6,000) square feet with a minimum dimension

of fifty (50) feet shall be provided and shall include one (1) or more of the uses set forth in section 14-526 (d) 9. and the planned residential unit development standards in the City of Portland Design Manual but shall at least provide usable recreation space. Such recreation areas shall be located at least twenty-five (25) feet from dwelling units.

(o) No habitable space in a PRUD shall be below grade, except basements that are a part of and below ground units.

(p) *Maximum floor area for places of assembly on a collector or arterial road:*

Large	Not limited
Medium	9,000 sq. ft.
Small	5,000 sq. ft.

(q) *Maximum floor area for places of assembly not on a collector or arterial road:*

Large	9,000 sq. ft.
Medium	4,500 sq. ft.
Small	2,500 sq. ft.

(Ord. No. 534-84, 5-7-84; Ord. No. 81-88, § 5, 7-19-88; Ord. No. 385-89, §§ 1, 2, 4-3-89; Ord. No. 235-91, § 6, 2-4-91; Ord. No. 118-93, § 6, 10-18-93; Ord. No. 154-96, § 6, 12-16-96; Ord. No. 165-97, § 2, 12-1-97; Ord. No. 95-04/05, 11-15-04; Ord. No. 131-08/09, 12-15-08; Ord. No. 127-09/10, 1-4-10 emergency passage; Ord. No. 40-12/13, 9-5-12)

***Editor's note--**Ord. No. 81-88, § 5, adopted July 19, 1988, amended § 14-90 to read as herein set out. See also the editor's note to Art. III of this chapter for additional provisions relative to Ord. No. 81-88.

Sec. 14-91. Other requirement.

Other requirements are as follows:

(a) *Off-street parking:* Off-street parking is required as provided in division 20 (off-street parking) of this article.

(b) *Shoreland and flood plain management regulations:* Any lot or portion of a lot located in a shoreland zone as identified on the city shoreland zoning map or in a flood

hazard zone shall be subject to the requirements of division 26 and/or division 26.5.

(c) *Storage of vehicles:* Only one (1) unregistered motor vehicle may be stored outside on the premises for a period not exceeding thirty (30) days.

(Ord. No. 534-84, 5-7-84; Ord. No. 15-92, § 7, 6-15-92)

Secs. 14-92. Reserved.
Secs. 14-93. Reserved.

DIVISION 4.5. FH FLEXIBLE HOUSING ZONE

Sec. 14-94. Purpose.

The intention of this division is to establish an overlay zone in which manufactured housing development is permitted in addition to those uses permitted in the underlying residential zone. The purpose of this division is to accommodate additional housing types in appropriate areas of the city, while protecting the value and integrity of established residential neighborhoods and ensuring a balanced and orderly pattern of residential development.

(Ord. No. 610-82, § 2, 7-7-82; Ord. No. 130-82, § 1, 9-20-82; Ord. No. 200-89, § 1, 12-18-89)

Sec. 14-95. Manufactured housing park or subdivision.

Notwithstanding any other provision of this article, no manufactured housing park or subdivision shall be permitted in any zone except as provided in this section.

(a) Manufactured housing park or subdivision, as defined in section 14-47, shall be permitted in the flexible housing zone, the Planning Board shall be the reviewing authority. Such development shall be in accordance with the space and bulk and other requirements applicable to similar uses permitted in the underlying zone, except those standards set forth in section 14-96, and shall also meet the following additional requirement:

1. Reserved.

2. Such development shall be subject to approval by the Planning Board with respect to each and every requirement of article VI of this chapter,

including the special requirements of section 14-499.5, whether or not such development is a subdivision within the meaning of article IV of this chapter, as now enacted or as hereafter amended and shall also be subject to article V of this chapter.

3. Whether or not the underlying zone permits planned residential unit development, a manufactured housing park shall be a planned residential unit development, subject to the provisions of this section, section 14-499.5 and section 14-526 9. All land, including but not limited to private streets, private driveways, utility location areas, common parking areas and common recreation open space, shall be owned and used in common. Manufactured housing parks shall not be subject to the net land area calculations set forth in section 14-47.

4. Single-component manufactured housing shall be prohibited from being horizontally or vertically attached to any other unit or structure. (Provided, however, that this provision shall not be deemed to prohibit building additions, such as porches, garages, room additions or solar greenhouses.)

(Ord. No. 610-82, § 2, 7-7-82; Ord. No. 130-82, § 1, 9-20-82; Ord. No. 263-84, § 1, 12-17-84; Ord. No. 200-89, § 2, 12-18-89; Ord. No. 278-09/10, 7-19-10)

Sec. 14-96. Additional dimensional requirements and performance standards for manufactured housing parks.

Notwithstanding the provisions of section 14-95 and the dimensional requirements for underlying zones, the following dimensional requirements shall apply to manufactured housing parks:

(a) Minimum manufactured housing park unit space size: Four thousand five hundred (4,500) square feet. A manufactured housing park unit space in an unsewered residential district shall meet the provisions of 12 M.R.S.A. 4807 et seq., or the applicable zoning lot size, whichever is larger.

(b) Maximum manufactured housing park unit space coverage: Fifty (50) percent.

(c) Minimum street frontage for manufactured housing park: Fifty (50) feet.

(d) Minimum open space requirement: Ten (10) percent of the combined area of the individual unit spaces within the manufactured housing park.

(e) Minimum yard dimensions:

(Yard dimensions include setbacks from unit space boundaries and setbacks of structures from one another. No structure shall occupy the yard of another structure.):

1. Front yard: Principal or accessory structures: Twenty (20) feet.

2. Rear yard:

   a. Principal or accessory structures with ground coverage greater than one hundred (100) square feet: Twenty (20) feet.
   b. Accessory detached structures with ground coverage of one hundred (100) square feet or less: Five (5) feet.

3. Side yard: Principal or accessory structures: Ten (10) feet.

4. Unit spaces located within a shoreland zone shall meet the lot area and lot width requirements for the underlying zone and shall also meet all applicable shoreland zoning standards.

(f) All manufactured housing park unit spaces within a manufactured housing park shall be shown on a manufactured housing plan showing unit space boundaries, unit space sizes, and unit space dimensions. Such unit spaces shall be under unified ownership with all other unit spaces within the manufactured housing park. The manufactured housing park plan shall also contain a note that city services shall not be provided on private streets within the manufactured housing park. Individual leases for unit spaces shall disclose that city services shall not be provided on private streets within the

manufactured housing park.

(g) All single-family single-component manufactured housing units in a manufactured housing park shall meet the following performance standards:

1. More than half of the roof area of each unit shall be a double-pitched Class C rated shingled roof with a minimum pitch of 3/12.

2. Each unit shall be installed on a full foundation, a concrete frost wall, or a reinforced floating concrete pad which shall be certified by an engineer if it is to be placed on soil with high frost susceptibility, in accordance with all applicable codes and regulations. Any hitch or tow bar shall be removed from the unit after it is placed on its foundation or frost wall. In the case of a frost wall, vermin-proof skirting shall be installed on all sides of the unit. The skirting may consist of either (a) concrete or masonry block or (b) manufactured skirting. If concrete or masonry block skirting is installed, either the exterior siding of the unit shall extend within one (1) foot of grade or decorative masonry siding shall be applied. If manufactured skirting material is installed, the color shall be identical to or compatible with the exterior siding of the unit.

3. Each unit shall have exterior siding that is residential in appearance, including but not limited to natural materials such as wood clapboards or shakes, or exterior materials which simulate wood. Clapboard or simulated clapboards shall have less than eight (8) inches of exposure, and sheet metal type siding shall not be permitted.

4. Each unit shall be provided with at least two (2) trees meeting the city's arboricultural specifications and which are clearly visible from the street line and are located so as to visually widen the narrow dimension or proportion of the unit.

5. Each unit shall have all fuel oil supply systems

constructed and installed within the foundation wall or underground in accordance with all applicable codes and regulations.

6. No unit shall be horizontally or vertically attached to any other unit or other structure, provided, however, that this provision shall not be deemed to prohibit building additions, such as porches, garages, room additions or solar greenhouses.

(Ord. No. 200-89, § 3, 12-18-89)

Sec. 14-97 - 14-100. Reserved.

DIVISION 5. R-4 RESIDENTIAL ZONE*

***Editor's note--**Ord. No. 535-84, adopted May 7, 1984, repealed former Div. 5, §§ 14-101--14-104, and enacted a new Div. 6, §§ 14-101--14-106. The result of this action was that this Art. III contained no division designated 5. The editor has, therefore, in agreement with the city, retained the division designation 5. Formerly §§ 14-101--14-104 were derived from Code 1968, § 602.5.A--D; Ord. No. 499-74, § 2, adopted Aug. 19, 1974; and Ord. No. 91-83, §§ 1, 2, adopted Aug. 3, 1983.

Sec. 14-101. Purpose.

The purpose of the R-4 residential zone is:

(a) To preserve the unique character of the Western Promenade area of the city by controlling residential conversions and by allowing the continued mix of single-family, two-family, and low-rise multifamily dwellings and other compatible development at medium densities.

(Ord. No. 535-84, 5-7-84)

Sec. 14-102. Permitted uses.

The following uses are permitted in the R-4 residential zone:

(a) *Residential:*

1. Single-family detached dwellings;

2. New construction of two-family dwellings;

3. Reserved;

4. Handicapped family unit, as defined in section 14-47 (definitions) of this article, for handicapped persons plus staff;

5. Single-family, multiple-component manufactured housing, as defined in section 14-47 (definitions) of this article, except in a National Register Historic District;

6. Single-family, single-component manufactured housing, as defined in section 14-47 (definitions) of this article, on individual lots under separate and distinct ownership, except in a National Register Historic District, provided that each unit meets the performance standards listed below:

   a. More than half of the roof area of each unit shall be double pitched Class C rated shingled roof with a minimum pitch of 3/12.

   b. Each unit shall be installed on a full foundation or a concrete frost wall in accordance with all applicable codes and regulations. Any hitch or tow bar shall be removed from the unit after it is placed on its foundation or frost wall. In the case of a frost wall, vermin proof skirting shall be installed on all sides of the unit. The skirting may consist of either (a) concrete or masonry block or (b) manufactured skirting. If concrete or masonry block skirting is installed, either the exterior siding of the unit shall extend within one (1) foot of grade or decorative masonry siding shall be applied. If manufactured skirting material is installed, the color shall be identical to or compatible with the exterior siding of the unit.

   c. Each unit shall have exterior siding that is residential in appearance, including but not limited to natural materials such as wood clapboards or shakes, or exterior materials

which simulate wood. Clapboards or simulated clapboards shall have less than eight (8) inches of exposure and sheet metal type siding shall not be permitted.

d. Each unit shall have the long side of the unit parallel to the street line where the required street frontage is met.

e. Each unit shall be provided with at least two (2) trees meeting the city's arboricultural specifications and which are clearly visible from the street line and are located so as to visually widen the narrow dimension or proportion of the unit.

f. Each unit shall have all fuel oil supply systems constructed and installed within the foundation wall or underground in accordance with all applicable codes and regulations.

g. No unit shall be horizontally or vertically attached to any other unit or other structure, provided however, that this provision shall not be deemed to prohibit building additions, such as porches, garages, room additions or solar greenhouses.

(b) *Other:*

1. Cemeteries;

2. Parks, and other active and passive noncommercial recreation spaces;

3. Accessory uses customarily incidental and subordinate to the location, function, and operation of principal uses, subject to the provisions of section 14-404 (accessory use) of this article;

4. Home occupations subject to the provisions of section 14-410 (home occupation) of this article;

5. Municipal uses, excluding those specifically set

forth in section 14-103 of this division.

6. Special needs independent living units, provided that a building housing special needs independent living units shall not house other types of residential or other permitted uses. The owner of a special needs independent living unit building shall file in the Cumberland County Registry of Deeds a statement under oath that the building is a special needs independent living unit building and that any future change of use to a permitted residential use shall require a change in use review by the City of Portland and a decrease in the number of units in the building in accordance with the Portland City Code, chapter 14. The owner shall file proof of such recording with the building inspections division prior to the issuance of any certificates of occupancy for the new uses.

7. Wind energy systems, as defined and allowed in Article X, Alternative Energy.

(Ord. No. 535-84, 5-7-84; Ord. No. 264-84, § 1, 12-17-84; Ord. No. 67-87, § 2, 11-2-87; Ord. No. 82-88, § 1, 7-19-88; Ord. No. 86A-89, § 4, 8-21-89; Ord. No. 33-91, § 5, 1-23-91; Ord. No. 33A-91, § 2, 4-17-91)

***Editor's note--**Ord. No. 82-88, § 1, adopted July 19, 1988, amended § 14-102 by adding subsection (b)5 to read as herein set out. See also the editor's note to Art. III of this chapter for additional provisions relative to Ord. No. 82-88.

Sec. 14-103. Conditional uses.

The following uses shall be permitted only upon the issuance of a conditional use permit, subject to the provisions of section 14-474 (conditional uses) of this article and any special provisions, standards or requirements specified below:

(a) *Residential:*

1. Sheltered care group homes, as defined in section 14-47 of this article, for up to twelve (12) individuals, plus staff, and serving a primary population which is not handicapped persons, parolees, persons involved in correctional

prerelease programs, or current illegal drug users, provided that:

a. A sheltered care group home shall not be located within five hundred (500) feet of another, as measured along street lines to the respective property lines;

b. There shall be no open outside stairways or fire escapes above the ground floor;

c. The facility shall make provision for adequate on-site staffing in accordance with applicable state licensing requirements. If a facility is not licensed by the state, there shall be a minimum of one (1) staff person for every ten (10) residents or fraction thereof.

The board of appeals may impose conditions upon a conditional use permit concerning the creation or operation of a sheltered care group home including but not limited to the following: site and building maintenance; lighting, fencing, and other appropriate security measures; screening and buffering of parking areas; compatibility of any additions or alterations with the existing residential structure; compatibility of new structures with the architectural character of the surrounding area; and limitation on the duration of a sheltered care group home permit.

2. Alteration of an existing structure to accommodate one (1) or more dwelling units provided that:

a. No additional dwelling unit shall have less than six hundred (600) square feet of floor area, exclusive of common hallways and storage in basement and attic;

b. No open outside stairways or fire escapes above the ground floor shall be or have been constructed in the immediately preceding five (5) years;

c. The alteration will not result in a total

cubic volume increase of more than ten (10) percent within the immediately preceding five (5) years;

d. A lower level dwelling unit shall have a minimum of one-half of its floor-to-ceiling height above the average adjoining ground level;

e. No existing dwelling unit shall be decreased to less than one thousand (1,000) square feet of floor area;

f. Three thousand (3,000) square feet of land area per dwelling unit shall be required;

g. The project shall be subject to article V (site plan) of this chapter for site plan review and approval.

h. Parking shall be provided as required in division 20 of this article.

3. Multiplex development with three (3) or more horizontally or vertically attached, or a series of such attached dwelling units and the construction of at least one (1) building, provided that:

a. No open outside stairways or fire escapes above the ground floor shall be constructed;

b. No habitable space in a dwelling unit shall be below grade, except basements that are a part of and below aboveground units.

c. Three thousand (3,000) square feet of land area per dwelling unit shall be required for the first three (3) dwelling units with a requirement of six thousand (6,000) square feet of land area per dwelling unit for additional dwelling units;

d. No dwelling unit shall have less than six hundred (600) square feet of floor area, exclusive of common hallways and storage in

basement and attic;

The project shall be subject to article V (site plan) of this chapter for Planning Board site plan review and approval.

(b) ***Institutional:*** Any of the following conditional uses provided that, notwithstanding section 14-474(a) (conditional uses) of this article or any other provision of this Code, the Planning Board shall be substituted for the board of appeals as the reviewing authority:

1. Elementary, middle, and secondary school (except as otherwise provided in section 14-276.10);

2. Places of assembly;

Such uses shall be subject to the following conditions and standards in addition to the provisions of section 14-474:

a. In the case of expansion of existing such uses onto land other than the lot on which the principal use is located, it shall be demonstrated that the proposed use cannot reasonably be accommodated on the existing site through more efficient utilization of land or buildings, and will not cause significant physical encroachment into established residential areas: and

b. The proposed use will not cause significant displacement or conversion of residential uses existing as of June 1, 1983, or thereafter; and

c. In the case of a use or use expansion which constitutes a combination of the above-listed uses with capacity for concurrent operations, the applicable minimum lot sizes shall be cumulative; and

d. Article V (site plan) sections 14-522 and 14-523 notwithstanding, in the case of places of assembly the proposed use shall be subject to

the requirements of article V (site plan) of this chapter; and

e. Community halls:

i. The structure was in existence as of January 4, 2010;

ii. The structure was built for institutional or other non-residential uses;

iii. The structure is operated by, or operated subject to the control of, a not-for-profit entity in accordance with its not-for-profit purposes; and

iv. A parking management plan is submitted for review and approval by the planning board; and

f. Private club or fraternal organizations: any such establishment serving alcoholic beverages or in possession of a license for serving alcoholic beverages shall be located on a large lot, as specified in the minimum lot size provisions of this section.

(c) *Other:*

1. Off-street parking of passenger cars as provided in section 14-344 (board of appeals may authorize parking in certain residential zones) of this article;

2. Utility substations, including sewage and water pumping stations and standpipes, electric power substations, transformer stations, and telephone electronic equipment enclosures and other similar structures, provided that such uses are suitably screened and landscaped so as to ensure compatibility with the surrounding neighborhood;

3. Day care facilities or home babysitting services not permitted as a home occupation under section 14-410, and nursery schools and kindergartens,

subject to the following conditions:

a. The facility shall be located in a structure in which there is one (1) or more occupied residential units or in an existing accessory structure, unless the facility is located in a principal structure that has not been used as a residence in whole or in part within the five (5) years immediately preceding the application for a day care or home babysitting use or in a nonresidential structure accessory to the principal nonresidential use.

b. The maximum capacity shall be twelve (12) children for facilities located in residential or existing structures accessory thereto, unless the additional standards in subsection v. are met. There shall be no maximum limit on the number of children in a facility located in a principal structure that has not been used as a residence in whole or in part within the five (5) years immediately preceding the application for a day care use, home babysitting use, nursery school, or kindergarten or in a nonresidential structure accessory thereto, provided that any such structure that serves more than twelve (12) children shall be subject to review under article V of this chapter.

c. Outdoor play areas shall be screened and buffered from surrounding residences with landscaping and/or fencing to minimize visual and noise impacts.

d. Solid waste shall be stored in covered containers. Such containers shall be screened on all four (4) sides.

e. Day care facilities, nursery schools and kindergartens located either in structures that have been in residential use within the past five (5) years or in existing accessory structures and that serve between thirteen (13) and twenty-four (24) children shall meet

the following additional standards:

i. The facility shall provide a minimum of seventy-five (75) square feet of outdoor play area per child;

ii. The play area shall be located in the side and rear yards only and shall not be located in front yards;

iii. Outside play areas shall be separated from abutting properties by a fence at least forty-eight (48) inches in height;

iv. A ten-foot wide landscaped buffer shall be required outside of the fenced play area, and shall be established in accordance with the landscaping standards of the City's Technical Standards and Guidelines;

v. The minimum lot size for a day care facility, home babysitting service, nursery school, or kindergarten located in a residential or existing accessory structure and serving more than twelve (12) children shall be twenty thousand (20,000) square feet;

vi. ***Off-street parking:*** Off-street parking is required as provided in division 20 (off-street parking) of this article.

vii. The maximum number of children in a day care facility, home babysitting service, nursery school, or kindergarten located in a residential or existing accessory structure shall be twenty-four (24); and

viii. Any additions or exterior alterations such as facade materials, building form, roof pitch, and exterior doors shall be designed to be compatible with the architectural style of the building and preserve the residential appearance of

the building.

4. Temporary wind anemometer towers, as defined in Sec 14-47, are permitted provided the following standards are met in addition to Sec 14-430:

   a. Towers may be installed for the purpose of wind data collection for no more than two (2) years after the issuance of a Certificate of Occupancy for the tower. At the conclusion of the aforementioned two (2) years, the tower must be dismantled and removed from the site within sixty (60) days; and

   b. Towers shall be constructed according to plans and specifications stamped by a licensed professional engineer, which shall be provided to the Board of Appeals with the application; and

   c. Towers shall be set back from habitable buildings by a distance equal to 1.1 times the tower height; and

   d. The applicant shall provide a safety report prepared and stamped by a licensed professional engineer to the Board of Appeals with their application for conditional use, which demonstrates how the proposed temporary wind anemometer tower is safe in terms of strength, stability, security, grounding, icing impacts and maintenance; and

   e. The applicant shall provide evidence of commercial general liability insurance, such insurance to be satisfactory to Corporation Counsel and cover damage or injury resulting from construction, operation or dismantling of any part of the temporary wind anemometer tower; and

   f. Towers and associated guy wires shall be

sited to minimize their prominence from and impacts on public ways (including pedestrian ways); and

g. Towers shall be used for installing anemometers and similar devices at a range of heights from the ground to measure wind characteristics (speed, direction, frequency) and related meteorological data, but shall not be used for any other purpose; and

h. A performance guarantee shall be required for the cost of removal of the tower, guy wires and anchors. This requirement may be satisfied by surety bond, letter of credit, escrow account or by evidence, acceptable to the City, or the financial and technical ability and commitment of the applicant or its agents to remove the facility at the end of the use period.

5. Wind energy systems, as defined and allowed in Article X, Alternative Energy.

(Ord. No. 535-84, 5-7-84; Ord. No. 264-84, § 2, 12-17-84; Ord. No. 76-85, § 5, 7-1-85; Ord. No. 67-87, § 3, 11-2-87; Ord. No. 82-88, §§ 2, 3, 7-19-88; Ord. No. 235-91, § 7, 2-4-91; Ord. No. 118-93, § 7, 10-18-93; Ord. No. 133-96, § 4, 11-18-96; Ord. No. 154-96, § 7, 12-16-96; Ord. No. 222-99, §4, 3-01-99; Ord. No. 29-09/10, 8-3-09 emergency passage; Ord. No. 127-09/10, 1-4-10 emergency passage; Ord. No. 240-09/10, 6-21-10; Ord. No. 9 10/11, 8-2-10; Ord. No. 138-09/10, 1-20-10; Ord. No. 149-10/11, 3-7-11; Ord. No. 33-11/12, 1-18-12)

***Editor's note--**Ord. No. 82-88, §§ 2, 3, adopted July 19, 1988, amended this section by amending subsection 14-103(a) and by deleting subsection (b)3, municipal use. See also the editor's note to Art. III of this chapter for additional provisions relative to Ord. No. 82-88.

Sec. 14-104. Prohibited uses.

Uses that are not expressly enumerated herein as either permitted uses or conditional uses are prohibited.

(Ord. No. 535-84, 5-7-84)

Sec. 14-105. Dimensional requirements.

In addition to the provisions of division 25 of this article (space and bulk regulations and exceptions), lots in the R-4 zone shall meet the following requirements:

(a) *Minimum lot size:*

1. Residential: Six thousand (6,000) square feet except as provided for lots of record in section 14-433 (lots of record and accessory structure setbacks for existing buildings) of this article.

2. Multiplex: Nine thousand (9,000) square feet.

3. School: Thirty thousand (30,000) square feet.

4. Places of assembly:

Large	30,000 sq. ft.
Medium	15,000 sq. ft.
Small	7,500 sq. ft.

5. Municipal use: Six thousand (6,000) square feet.

6. All other uses: Six thousand (6,000) square feet.

Provided that for uses specified in section 14-105(a)3 through 5 above, no minimum lot area shall be required in the following cases:

a. Uses existing on June 1, 1983;

b. Expansion onto land abutting the lot on which the principal use is located;

c. Expansion onto land other than the lot on which the principal use is located to the extent that such expansion consists of the reuse of surface parking area or nonresidential structures existing and in nonresidential use as of June 1, 1983, provided that such reuse is contained within the lot of record of such structure or parking area as of June 1, 1983;

7. Expansion onto land other than the lot on which the

principal use is located of no more than fifteen (15) percent of the total contiguous land area of the existing use, or one (1) acre, whichever is less, within any five-year period.

(b) *Minimum lot area per dwelling unit:* Three thousand (3,000) square feet, except as provided for a multiplex. This requirement may be reduced by up to twenty (20) percent for a special needs independent living unit.

(c) *Minimum street frontage:* Fifty (50) feet.

(d) *Minimum yard dimensions:*

(Yard dimensions include setbacks of structures from property lines and setbacks of structures from one another. No structure shall occupy the minimum yard of another structure.)

1. *Front yard:*

Principal or accessory structures: Twenty-five (25) feet.

A front yard need not exceed the average depth of front yards on either side of the lot. A lot of record existing as of June 5, 1957, and less than one hundred (100) feet deep need not be deeper than twenty (20) percent of the depth of the lot.

2. *Rear yard:*

a. Principal or accessory structures with ground coverage greater than one hundred (100) square feet: Twenty-five (25) feet.

b. Accessory detached structures with a ground coverage of one hundred and forty-four (144) square feet or less: Five (5) feet.

Setbacks for swimming pools shall be as provided for in section 14-432 (swimming pools) of this article.

3. *Side yard:*

a. Principal or accessory structures with ground coverage greater than one hundred (100) square feet:

Height of Structure	*Required Side Yard*
1 story	10 feet
1 1/2 stories	10 feet
2 stories	14 feet
2 1/2 stories	16 feet

The width of one (1) side yard may be reduced one (1) foot for every foot that the other side yard is correspondingly increased, but no side yard shall be less than ten (10) feet. In the case of a lot of record existing as of June 5, 1957, and held under separate and distinct ownership from adjacent lots, the required side yard may be reduced in order to provide a buildable width of up to twenty-four (24) feet, but in no case shall the resulting side yards be less than ten (10) feet.

b. Accessory detached structures with ground coverage of one hundred and forty-four (144) square feet or less: Five (5) feet.

4. *Side yard on side streets:*

Principal or accessory structures: Twenty (20) feet.

A side yard on a side street need not exceed the average depth of front setback directly abutting the lot.

(e) *Maximum lot coverage:* Thirty (30) percent of lot area.

(f) *Minimum width of lot:* Sixty (60) feet.

(g) *Maximum structure height:*

1. Principal structure: Thirty-five (35) feet.

2. Accessory detached structure: Eighteen (18) feet.

(h) *Maximum floor area for places of assembly on a collector or arterial road:*

Large	Not limited
Medium	4,500 sq. ft.
Small	2,250 sq. ft.

(i) *Maximum floor area for places of assembly not on a collector or arterial road:*

Large	4,500 sq. ft.
Medium	2,250 sq. ft.
Small	1,125 sq. ft.

(Ord. No. 535-84, 5-7-84; Ord. No. 82-88, § 4, 7-19-88; Ord. No. 235-91, § 9, 2-4-91; Ord. No. 33A-91, § 3, 4-17-91; Ord. No. 118-93, § 8, 10-18-93; Ord. No. 154-96, § 8, 12-16-96; Ord. No. 131-08/09, 12-15-08; Ord. No. 127-09/10, 1-4-10 emergency passage)

***Editor's note--**Ord. No. 82-88, § 4, adopted July 19, 1988, amended § 14-105 to read as herein set out. See also the editor's note to Art. III of this chapter for additional provisions relative to Ord. No. 82-88.

Sec. 14-106. Other requirements.

[Other requirements are as follows:]

(a) *Off-street parking:* Off-street parking is required as provided in division 20 (off-street parking) of this article.

(b) *Shoreland and flood plain management regulations:* Any lot or portion of a lot located in a shoreland zone as identified on the city shoreland zoning map or in a flood hazard zone shall be subject to the requirements of division 26 and/or division 26.5.

(c) *Storage of vehicles:* Only one (1) unregistered motor vehicle may be stored outside on the premises for a period not exceeding thirty (30) days.

Sec. 14-107 – 14-115. Reserved.

DIVISION 6. R-5 RESIDENTIAL ZONE*

***Editor's note--**Ord. No. 536-84, adopted May 7, 1984, repealed former Div. 6, §§ 14-116--14-119, and enacted in lieu thereof a new Div. 7, §§ 14-116--14-121. However, in order to avoid duplication of subsequent division numbers and in consultation with the city, the provisions have been retained as Div. 6. Sections 14-116--14-119 were formerly derived from Code 1968, § 602.5.A--D, and Ord. Nos. 207-72, 499-74, 193-82, 92-83, 422-83.

Sec. 14-116. Purpose.

The purpose of the R-5 residential zone is:

To provide appropriate areas of the city for medium-density residential development characterized by single-family and low-intensity multifamily dwellings on individual lots; to ensure the stability of established medium-density neighborhoods by controlling residential conversions; and to provide for planned residential unit development on substantially sized parcels. Such PRUD development shall respond to the physical qualities of a site and complement the scale, character and style of the surrounding neighborhood.

(Ord. No. 536-84, 5-7-84; Ord. No. 83-88, § 1, 7-19-88)

***Editor's note--**Ord. No. 83-88, § 1, adopted July 19, 1988, amended § 14-116 to read as herein set out. See also the editor's note to Art. III of this chapter for additional provisions relative to Ord. No. 83-88.

Sec. 14-117. Permitted uses.

The following uses are permitted in the R-5 residential zone:

(a) *Residential:*

1. Single- and two-family dwellings; except that development of two (2) or more two-family dwellings on contiguous lots within any two-year period shall be subject to review as specified under the provisions of 14-117(a)2e if such lots were under

single ownership at any time within the two-year period immediately prior to development of the first such lot. No building reviewed as a two-family dwelling in accordance with article V (site plan) of this chapter or not reviewed under article V shall be altered or enlarged to include any additional dwelling unit within five (5) years from the date of issuance of the building permit. Any building reviewed as a two-family dwelling in accordance with article V (site plan) which is altered or enlarged to include any additional dwelling unit after this five-year period shall be reviewed as a level I site plan pursuant to article V of this chapter.

2. Multiplex development with three (3) or more horizontally or vertically attached dwelling units or a series of such attached dwelling units and the construction of at least one (1) building on a parcel of less than two (2) acres, provided that:

   a. The land area requirement for a multiplex shall be six thousand (6,000) square feet of land area per dwelling unit; except that a multiplex with two hundred fifty (250) feet or more of street frontage needs only forty-five hundred (4,500) square feet of land area per dwelling unit;

   b. No dwelling unit shall have less than six hundred (600) square feet of floor area, exclusive of common hallways and storage in basement and attic;

   c. No open outside stairways or fire escapes above the ground floor shall be constructed;

   d. No habitable space in a dwelling unit shall be below grade, except basements that are a part of and below aboveground units;

   e. Such development shall be subject to article V (site plan) of this chapter for site plan review approval and shall conform to the R-5 Design Standards.

3. Planned residential unit development (PRUD) consisting of horizontally or vertically attached dwelling units, or a series of such dwelling units. No dimensional requirements contained in section 14-120 shall apply with respect to such development, except for those requirements specifically denoted for PRUD. There shall be no open outside stairways or fire escapes above the ground floor. All land shall be owned and used in common and shall be governed and maintained as set forth in section 14-498(i)(3) of this chapter. Such development shall be subject to review and approval by the Planning Board with respect to the requirements of article V (site plan) and article IV (subdivisions) of this chapter, whether or not such development is a subdivision within the meaning of article IV of this chapter, as now enacted or as hereafter amended.

4. Handicapped family unit, as defined in section 14-47 (definitions) of this article, for handicapped persons plus staff.

5. Single-family, multiple-component manufactured housing, as defined in section 14-47 (definitions) of this article, except in a National Register Historic District.

6. Single-family, single-component manufactured housing, as defined in section 14-47 (definitions) of this article, on individual lots under separate and distinct ownership, except in a National Register Historic District, provided that each unit meets the performance standards listed below:

   a. More than half of the roof area of each unit shall be a double pitched Class C rated shingled roof with a minimum pitch of 3/12.

   b. Each unit shall be installed on a full foundation or a concrete frost wall in accordance with all applicable codes and regulations. Any hitch or tow bar shall be removed from the unit after it is placed on

its foundation or frost wall. In the case of a frost wall, vermin proof skirting shall be installed on all sides of the unit. The skirting may consist of either (a) concrete or masonry block or (b) manufactured skirting. If concrete or masonry block skirting is installed, either the exterior siding of the unit shall extend within one (1) foot of grade or decorative masonry siding shall be applied. If manufactured skirting material is installed, the color shall be identical to or compatible with the exterior siding of the unit.

c. Each unit shall have exterior siding that is residential in appearance, including but not limited to natural materials such as wood clapboards or shakes, or exterior materials which simulate wood. Clapboards or simulated clapboards shall have less than eight (8) inches of exposure and sheet metal type siding shall not be permitted.

d. Each unit shall have the long side of the unit parallel to the street line where the required street frontage is met.

e. Each unit shall be provided with at least two (2) trees meeting the city's arboricultural specifications and which are clearly visible from the street line and are located so as to visually widen the narrow dimension or proportion of the unit.

f. Each unit shall have all fuel oil supply systems constructed and installed within the foundation wall or underground in accordance with all applicable codes and regulations.

g. No unit shall be horizontally or vertically attached to any other unit or other structure, provided however, that this provision shall not be deemed to prohibit building additions, such as porches, garages, room additions or solar greenhouses.

(b) *Other:*

1. Parks, and other active and passive noncommercial recreation spaces;

2. Accessory uses customarily incidental and subordinate to the location, function, and operation of principal uses, subject to the provisions of section 14-404 (accessory use) of this article;

3. Home occupation, subject to the provisions of section 14-410 (home occupation) of this article;

4. Municipal uses, excluding those specifically set forth in section 14-118 of this division.

5. Special needs independent living units on lots of less than two (2) acres, provided that a building housing special needs independent living units shall not house other types of residential or other permitted uses. The owner of a special needs independent living unit building shall file in the Cumberland County Registry of Deeds a statement under oath that the building is a special needs independent living unit building and that any future change of use to a permitted residential use shall require a change in use review by the City of Portland and a decrease in the number of units in the building in accordance with the Portland City Code, chapter 14. The owner shall file proof of such recording with the building inspections division prior to the issuance of any certificates of occupancy for the new uses.

6. Wind energy systems, as defined and allowed in Article X, Alternative Energy.

(Ord. No. 536-84, 5-7-84; Ord. No. 265-84, § 1, 12-17-84; Ord. No. 98-86, § 1, 10-6-86; Ord. No. 83-88, §§ 2, 3, 7-19-88; Ord. No. 387-89, 4-3-89; Ord. No. 86A-89, § 5, 8-21-89; Ord. No. 95-89, § 1, 9-6-89; Ord. No. 279-90, § 1, 3-10-90; Ord. No. 33-91, § 6, 1-23-91; Ord. No. 33A-91, § 4, 4-17-91; Ord. No. 220-95, 4-3-95; Ord. No. 165-97, § 3, 12-1-97; Ord. No. 56-08/09, 9-3-08; Ord. No. 278-09/10, 7-19-10; Ord. No. 33-11/12, 1-18-12)

***Editor's note--**Ord. No. 83-88, §§ 2, 3, adopted July 19, 1988, amended

subsections 14-117(a) and (b)4 to read as herein set out. See also the editor's note to Art. III of this chapter for additional provisions relative to Ord. No. 83-88. Ord. No. 95-89, § 1, adopted Sept. 6, 1989, amended subsection (a)1 of § 14-117 to read as set out and, as amended, further ordained "that the prohibition upon unit additions contained in this ordinance shall not apply where a building permit has been issued. Additions proposed to such buildings shall require major site plan review and all other reviews required by this chapter."

Sec. 14-118. Conditional uses.

The following uses shall be permitted only upon the issuance of a conditional use permit, subject to the provisions of section 14-474 (conditional uses) and any special provisions, standards or requirements specified below:

(a) *Residential:*

1. Reserved.

2. Sheltered care group homes, as defined in section 14-47 of this article, for up to twelve (12) individuals, plus staff, and serving a primary population which is not handicapped persons, parolees, persons involved in correctional prerelease programs, or current illegal drug users, provided that:

   a. A sheltered care group home shall not be located within five hundred (500) feet of another, as measured along street lines to the respective property lines;

   b. There shall be no open outside stairways or fire escapes above the ground floor;

   c. The facility shall make provision for adequate on-site staffing and supervision of residents in accordance with applicable state licensing requirements. If a facility is not licensed by the state, there shall be a minimum of one (1) staff person for every ten (10) residents or fraction thereof.

   The board of appeals may impose conditions upon a conditional use permit concerning the creation or

operation of a sheltered care group home including but not limited to the following: site and building maintenance; lighting, fencing, and other appropriate security measures; screening and buffering of parking areas; compatibility of any additions or alterations with the existing residential structure; compatibility of new structures with the architectural character of the surrounding area; and limitation on the duration of the sheltered care group home permit.

3. Alteration of a structure existing and not in residential use as of January 1, 1984, to three (3) or more dwelling units, provided that:

   a. No dwelling unit shall have less than six hundred (600) square feet of floor area, exclusive of common hallways and storage in basement and attic;

   b. No open outside stairways or fire escapes above the ground floor shall be constructed or have been constructed in the immediately preceding five (5) years;

   c. A lower level dwelling unit shall have a minimum of one-half of its floor-to-ceiling height above the average adjoining ground level;

   d. Three thousand (3,000) square feet of land area per dwelling unit shall be required;

   e. On-site parking shall be required as specified in division 20 (off-street parking) of this article, for the combined uses of the site;

   f. The project shall be subject to article V (site plan) of this chapter for site plan review and approval and the following additional standards:

      1. Any addition or exterior alterations such as facade materials, building form, and roof pitch shall be designed to be

compatible with the architectural style of the structure;

2. The scale and surface area of parking, driveways, and paved areas shall be arranged and landscaped to be compatible in size and scale with neighboring properties in the area and to properly screen vehicles from adjacent properties and streets.

4. Conversions of existing two-family or multiplex structures into lodging houses, provided that a lodging house shall not be located within five hundred (500) feet of another as measured along street lines to the respective property lines.

5. Alteration of a single-family dwelling existing as of September 3, 2008 on a nonconforming lot to accommodate an accessory dwelling unit within and clearly subordinate the principal structure provided that:

a. The accessory unit shall have a minimum floor area of four hundred (400) square feet that represents no more than thirty (30) percent of the gross floor area of the principal dwelling unit Gross floor area shall exclude any floor area that has less than two-thirds of its floor-to-ceiling height above the average adjoining ground level and may include the attic if such space is habitable.

b. The principal dwelling unit shall be located on a lot of no less than four thousand (4,000) square feet and no more than six thousand (6,000) square feet;

c. Either the accessory or principal dwelling unit shall be occupied by the owner of the lot, except for bona fide absences of a temporary nature;

d. Parking shall be provided as required by Division 20 of this article.

e. There shall be no open, outside stairways or fire escapes above the ground floor; and

f. The project shall be subject to Article V for site plan review and approval and the following additional standards:

i. Any additions or exterior alterations such as façade materials, building form, roof pitch, and exterior doors shall be designed to be compatible with the architectural style of the building and preserve the single family appearance of the building; and

ii. The scale and surface area of parking, driveways and paved areas shall be arranged and landscaped properly to screen vehicles from adjacent properties and streets.

(b) ***Institutional:*** Any of the following conditional uses provided that, notwithstanding section 14-474(a) (conditional uses) of this article, or any other provision of this Code, the Planning Board shall be substituted for the board of appeals as the reviewing authority:

1. Elementary, middle, and secondary school;

2. a. Long-term and extended care facilities;

b. Intermediate care facility for thirteen (13) or more persons;

3. Places of assembly;

4. Reserved;

5. Hospital;

6. College, university, trade school.

Such uses shall be subject to the following conditions

and standards in addition to the provisions of section 14-474:

a. In the case of expansion of existing such uses onto land other than the lot on which the principal use is located, it shall be demonstrated that the proposed use cannot reasonably be accommodated on the existing site through more efficient utilization of land or buildings, and will not cause significant physical encroachment into established residential areas; and

b. The proposed use will not cause significant displacement or conversion of residential uses existing as of June 1, 1983, or thereafter; and

c. In the case of a use or use expansion which constitutes a combination of the above-listed uses with capacity for concurrent operations, the applicable minimum lot sizes shall be cumulative; and

d. Article V (site plan) sections 14-522 and 14-523 notwithstanding, in the case of places of assembly the proposed use shall be subject to the requirements of article V (site plan) of this chapter; and

e. In the case of community halls:

i. The structure was in existence as of January 4, 2010;

ii. The structure was built for institutional or other non-residential uses;

iii. The structure is operated by, or operated subject to the control of, a not-for-profit entity in accordance with its not-for-profit purposes; and

iv. A parking management plan is submitted

for review and approval by the planning board; and

f. In the case of private club or fraternal organizations: any such establishment serving alcoholic beverages or in possession of a license for serving alcoholic beverages shall be located on a large lot, as specified in the minimum lot size provisions of this section.

d. A college, university or trade school may build principal structures to a height of fifty-five (55) feet, not including the USM overlay zone, if the following standards can be met:

(i) Lot size: 10 acres which may include adjacent land owned by the institution on both sides of a public street.

(ii) Minimum setback between buildings on-site: 20 feet.

(iii) Minimum setback from external property boundary: 30 feet, except that parking garages over 35 feet in height must be located 50 feet from external property boundaries when adjacent to an adjoining residential use.

(iv) The area between the structure and adjoining residential uses must be adequately screened with appropriate landscaping or other features to buffer the building and effects thereof (i.e. noise, light, etc) from abutting properties.

(c) *Other:*

1. Off-street parking of passenger cars as provided in section 14-344 (board of appeals may authorize parking in certain residential zones) of this article;

2. Utility substations such as water and sewage pumping stations and standpipes, electric power substations, transformer stations, and telephone electronic equipment enclosures and other similar structures, provided that such uses are suitably screened and landscaped so as to ensure compatibility with the surrounding neighborhood;

3. Day care facilities or home babysitting services not permitted as a home occupation under section 14-410, and nursery schools and kindergartens subject to the following conditions:

   a. The facility shall be located in a structure in which there is one (1) or more occupied residential units or in an existing accessory structure, unless the facility is located in a principal structure that has not been used as a residence in whole or in part within the five (5) years immediately preceding the application for a day care or home babysitting use or in a nonresidential structure accessory to the principal nonresidential use.

   b. The maximum capacity shall be twelve (12)children for facilities located in residential or existing structures accessory thereto, unless the additional standards in subsection v. are met. There shall be no maximum limit on the number of children in a facility located in a principal structure that has not been used as a residence in whole or in part within the five (5) years immediately preceding the application for a day care use, home babysitting use, nursery school, or kindergarten, or in a nonresidential structure accessory thereto, provided that any such structure that serves more than twelve (12) children shall be subject to review under article V of this chapter.

   c. Outdoor play areas shall be screened and buffered from surrounding residences with landscaping and/or fencing to minimize visual

and noise impacts.

d. Solid waste shall be stored in covered containers. Such containers shall be screened on all four (4) sides.

e. Day care facilities, nursery schools and kindergartens located either in structures that have been in residential use within the past five (5) years or in existing accessory structures and that serve between thirteen (13) and twenty-four (24) children shall meet the following additional standards:

i. The facility shall provide a minimum of seventy-five (75) square feet of outdoor play area per child;

ii. The play area shall be located in the side and rear yards only and shall not be located in front yards;

iii. Outside play areas shall be separated from abutting properties by a fence at least forty-eight (48) inches in height;

iv. A ten-foot wide landscaped buffer shall be required outside of the fenced play area, and shall be established in accordance with the landscaping standards of the City's Technical Standards and Guidelines;

v. The minimum lot size for a day care facility, home babysitting service, nursery school, or kindergarten located in a residential or existing accessory structure and serving more than twelve (12) children shall be twenty thousand (20,000) square feet;

vi. ***Off-street parking:*** Off-street parking is required as provided in division 20 (off-street parking) of this article.

vii. The maximum number of children in a day care facility, home babysitting service, nursery school or kindergarten located in a residential or existing accessory structure shall be twenty-four (24); and

viii. Any additions or exterior alterations such as facade materials, building form, roof pitch, and exterior doors shall be designed to be compatible with the architectural style of the building and preserve the residential appearance of the building.

4. Temporary wind anemometer towers, as defined in Sec 14-47, are permitted provided the following standards are met in addition to Sec 14-430:

a. Towers may be installed for the purpose of wind data collection for no more than two (2) years after the issuance of a Certificate of Occupancy for the tower. At the conclusion of the aforementioned two (2) years, the tower must be dismantled and removed from the site within sixty (60) days; and

b. Towers shall be constructed according to plans and specifications stamped by a licensed professional engineer, which shall be provided to the Board of Appeals with the application; and

c. Towers shall be set back from habitable buildings by a distance equal to 1.1 times the tower height; and

d. The applicant shall provide a safety report prepared and stamped by a licensed professional engineer to the Board of Appeals with their application for conditional use, which demonstrates how the proposed temporary wind anemometer tower is safe in terms of strength,

stability, security, grounding, icing impacts and maintenance; and

e. The applicant shall provide evidence of commercial general liability insurance, such insurance to be satisfactory to Corporation Counsel and cover damage or injury resulting from construction, operation or dismantling of any part of the temporary wind anemometer tower; and

f. Towers and associated guy wires shall be sited to minimize their prominence from and impacts on public ways (including pedestrian ways); and

g. Towers shall be used for installing anemometers and similar devices at a range of heights from the ground to measure wind characteristics (speed, direction, frequency) and related meteorological data, but shall not be used for any other purpose; and

h. A performance guarantee shall be required for the cost of removal of the tower, guy wires and anchors. This requirement may be satisfied by surety bond, letter of credit, escrow account or by evidence, acceptable to the City, or the financial and technical ability and commitment of the applicant or its agents to remove the facility at the end of the use period.

5. Wind energy systems, as defined and allowed in Article X, Alternative Energy.

(Ord. No. 536-84, 6-7-84; Ord. No. 265-84, § 2, 12-17-84; Ord. No. 76-85, § 6, 7-1-85; Ord. No. 83-88, § 4, 7-19-88; Ord. No. 235-91, § 10, 2-4-91; Ord. No. 118-93, § 9, 10-18-93; Ord. No. 133-96, § 5, 11-18-96; Ord. No. 154-96, § 9, 12-16-96; Ord. No. 222-99, §5, 3-01-99; Ord. No. 94-07/08, 11-5-07; Ord. No. 56/08/09, 9-3-08; Ord. No. 29-09/10, 8-3-09 emergency passage; Ord. No. 127-09/10, 1-4-10 emergency passage; Ord. No. 240-09/10, 6-21-10; Ord. No. 9 10/11, 8-2-10; Ord. No. 149-10/11, 3-7-11; Ord. No. 33-11/12, 1-18-12)

***Editor's note--**Ord. No. 83-88, § 4, adopted July 19, 1988, amended § 14-118 by deleting subsection (b)5. See also the editor's note to Art. III of

this chapter for additional provisions relative to Ord. No. 83-88.

Sec. 14-119. Prohibited uses.

Uses that are not expressly enumerated herein as either permitted uses or conditional uses are prohibited.
(Ord. No. 536-84, 5-7-84)

Sec. 14-120. Dimensional requirements.

(a) In addition to the provisions of division 25 (space and bulk regulations and exceptions) of this article, lots in the R-5 zone shall meet the following minimum requirements:

1. *Minimum lot size:*

   a. Residential: Six thousand (6,000) square feet except as provided for lots of record in section 14-433 (lots of record and accessory structure setbacks for existing buildings) of this article. A lot in an unsewered residential district shall meet the provisions of the state Minimum Lot Size Law, 12 M.R.S.A. section 4807, or the applicable zoning lot size, whichever is larger.

   b. Reserved.

   c. Long-term, extended, or intermediate care facility: Two (2) acres.

   d. School: Thirty thousand (30,000) square feet.

   e. Places of assembly:

Large	43,560 sq. ft.
Medium	21,780 sq. ft.
Small	10,890 sq. ft.

   f. Municipal use: Six thousand (6,000) square feet.

   g. Hospital: Five (5) acres.

   h. College, university, trade school: Two (2) acres.

i. Multiplex: Nine thousand (9,000) square feet.

j. Planned residential unit development (PRUD): Two (2) acres gross area, as defined in section 14-47 (definitions) of this article, of contiguous land.

k. All other uses: Six thousand (6,000) square feet.

l. Lodging houses: Nine thousand (9,000) square feet.

Provided that for uses specified in section 14-120 (1)(c) through (i) above, no minimum lot area shall be required in the following cases:

i. Uses existing as of June 1, 1983;

ii. Expansion of uses onto land abutting the lot on which the principal use is located;

iii. Expansion onto land other than the lot on which the principal use is located to the extent that such expansion consists of the reuse of surface parking area or nonresidential structures existing and in nonresidential use as of June 1, 1983, provided that such reuse is contained within the lot of record of such structure or parking area as of June 1, 1983;

iv. Expansion onto land other than the lot on which the principal use is located of no more than fifteen (15) percent of the total contiguous land area of the existing use, or one (1) acre, whichever is less, within any five-year period.

2. *Minimum lot area per dwelling unit:*

PRUD: Three thousand (3,000) square feet of net land area as defined in section 14-47 (definitions) of this article. As part of a site plan and subdivision application, the applicant shall provide a calculation of those factors deducted to determine net land area. In addition, such net area factors shall be delineated on a site plan.

Special needs independent living units: Four thousand eight hundred (4,800) square feet; except that special needs independent living units with two hundred fifty (250) feet or more of frontage shall require three thousand six hundred (3,600) square feet.

Other uses: Three thousand (3,000) square feet, except as provided for a multiplex.

3. *Minimum street frontage:* Fifty (50) feet.

4. *Minimum yard dimension:*

(Yard dimensions include setbacks of structures from property lines and setbacks of structures from one another. No structure shall occupy the minimum yard of another structure.)

a. *Front yard:*

Principal or accessory structures: Twenty (20) feet.

A front yard need not exceed the average depth of front yards on either side of the lot. A lot of record existing as of June 5, 1957, and less than one hundred (100) feet deep need not be deeper than twenty (20) percent of the depth of the lot.

b. *Rear yard:*

i. Principal or attached accessory structures with ground coverage greater than one hundred (100) square feet: Twenty (20) feet.

ii. Accessory detached structures with ground coverage of one hundred and forty-four(144) square feet or less: Five (5) feet.

Setbacks from swimming pools shall be as provided in section 14-432 (swimming pools) of this article.

c. *Side yard:*

i. Principal or accessory structures with ground coverage greater than one hundred (100) square feet:

Height of Structure	*Required Side Yard*
1 story	8 feet
1 1/2 stories	8 feet
2 stories	12 feet
2 1/2 stories	14 feet

The width of one (1) side yard may be reduced one (1) foot for every foot that the other side yard is correspondingly increased, but no side yard shall be less than eight (8) feet in width. In the case of a lot of record existing as of June 5, 1957, and held under separate and distinct ownership from adjacent lots, the required side yard may be reduced in order to provide a buildable width of up to twenty-four (24) feet, but in no case shall the resulting side yards be less than eight (8) feet.

ii. Accessory detached structures with ground coverage of one hundred and forty-four(144) square feet or less: Five (5) feet.

d. *Side yard on side street:*

Principal or accessory structures: Fifteen (15) feet.

5. *Maximum lot coverage:* Forty (40) percent of lot area.

6. *Minimum lot width:*

Multiplex: Ninety (90) feet.

Other uses: Sixty (60) feet.

7. *Maximum structure height:*

Principal or attached accessory structure: Thirty-five

(35) feet.

Accessory detached structure: Eighteen (18) feet.

Principal and accessory attached structure (PRUD): Thirty-five (35) feet.

8. a. *Maximum number of units in a building (PRUD):* Twelve (12) units

   b. *Maximum number of units in a multiplex building:* Six (6) units.

9. *Maximum length of building (PRUD):* One hundred forty (140) feet.

10. *Maximum length of accessory garage structure (PRUD):* Sixty (60) feet.

11. *Minimum building setback from external subdivision property lines (PRUD):*

   a. *Building length of one hundred (100) feet or less:* Twenty-five (25) feet.

   b. *Building length greater than one hundred (100) feet:* Thirty-five (35) feet.

12. *Minimum recreation open space area (PRUD):* Three hundred (300) square feet per dwelling unit of common area designated for recreation purposes. Such recreation areas shall be level graded, dry, accessible and properly drained. At a minimum, a contiguous area of six thousand (6,000) square feet, with a minimum dimension of fifty (50) feet, shall be provided and shall include one (1) or more of the uses set forth in section 14-526(d) 9. and the planned residential unit development standards in the City of Portland Design Manual, but shall at least be usable as a multipurpose game field. Such recreation areas shall be located at least twenty-five (25) feet from dwelling units.

13. No habitable space in a PRUD shall be below grade, except basements that are part of and below aboveground units.

14. a. ***Minimum rooming unit area for lodging houses:*** Two hundred (200) square feet of combined rooming unit and common area per rooming unit. Each individual rooming unit shall be a minimum of eighty (80) square feet.

b. ***Minimum land area per lodging house rooming unit:*** One thousand (1,000) square feet.

15. ***Maximum floor area for places of assembly on a collector or arterial road:***

Large	Not limited
Medium	4,500 sq. ft.
Small	2,250 sq. ft.

16. ***Maximum floor area for places of assembly not on a collector or arterial road:***

Large	4,500 sq. ft.
Medium	2,250 sq. ft.
Small	1,125 sq. ft.

(b) ***Small residential lot development:*** Single family homes may be built on small lots located in the R-5 and may use the dimensional requirements below if one of the following conditions is met:

The lot is:

Vacant as of (date of enactment); or used exclusively for parking; or contains structure(s) not used for residential purposes; or created from a single lot division of a developed lot and results in a lot meeting the dimensional requirements of § 14-120(b) with the remaining developed portion meeting the dimensional requirements of §14-120(a)(1)-(14) except as expressly provided in Section 14-120(b).

1. ***Minimum lot size***: Five thousand (5,000) square feet.

2. ***Maximum lot size:***

a. Lots that are vacant as of September 3, 2008, used

exclusively for parking, or contain structure(s) not used for residential purposes: Six thousand (6,000) square feet.

b. Original developed lot prior to the single lot division that results in a lot meeting the dimensional requirements of §14-120(b) with the remaining developed portion meeting the dimensional requirements of §14-120(a)(1)-(14): Thirteen thousand (13,000) square feet.

3. *Yard dimensions:*

a. *Side yard:*

i. Principal or attached accessory structures with ground coverage greater than one hundred (100) square feet: Seven (7) feet.

The width of one (1) side yard may be reduced one (1) foot for every foot that the other side yard is correspondingly increased, but no side yard shall be less than four (4) feet in width.

ii. Side yard on side street: Ten (10) feet.

4. *Minimum lot width:* Forty (40).

5. *Minimum street frontage:* Forty (40).

6. *Maximum lot coverage: Fifty (50) percent.*

(Ord. No. 536-84, 5-7-84; Ord. No. 98-86, § 2, 10-6-86; Ord. No. 83-88, § 5, 7-19-88; Ord. No. 386-89, §§ 1, 2, 4-3-89; Ord. No. 235-91, § 11, 2-4-91; Ord. No. 33A-91, § 5, 4-17-91; Ord. No. 118-93, § 10, 10-18-93; Ord. No. 154-96, § 10, 12-16-96; Ord. No. 165-97, § 4, 12-1-97; ORd. No. 56-08/09, 9-3-08; Ord. No. 131-08/09, 12-15-08; Ord. No. 127-09/10, 1-4-10 emergency passage; Ord. No. 278-09/10, 7-19-10; Ord. No. 275-10/11, 10-18-10)

***Editor's note--**Ord. No. 83-88, § 5, adopted July 19, 1988, amended § 14-120 to read as herein set out. See also the editor's note to Art. III of this chapter for additional provisions relative to Ord. No. 83-88.

Sec. 14-121. Other requirements.

(a) ***Off-street parking:*** Off-street parking is required as provided in division 20 (off-street parking) of this article.

(b) ***Shoreland and flood plain management regulations:*** Any lot or portion of a lot located in a shoreland zone as identified on the city shoreland zoning map or in a flood hazard zone shall be subject to the requirements of division 26 and/or division 26.5.

(c) ***Storage of vehicles:*** Only one (1) unregistered motor vehicle may be stored outside on the premises for a period not exceeding thirty (30) days.

(d) ***Small residential lot development*** shall conform to the site plan standards of § 14-526.

(Ord. No. 536-84, 5-7-84; Ord. No. 15-92, § 9, 6-15-92; Ord. No. 56-08/09, 9-3-08)

Sec. 14-122 - 14-125. Reserved.

DIVISION 6.5. R-5A RESIDENTIAL ZONE*

***Editor's note--**Ord. No. 537-84, adopted May 7, 1984, repealed a nonexistent Div. 6.5 and enacted a new Div. 8. However, in order to avoid duplication of division numbers and in consultation with the city, the provisions have been included as a new Div. 6.5, §§ 14-126--14-131.

Sec. 14-126. Purpose.

The purpose of the R-5A residential zone is:

(a) To provide for moderate-density residential development in off-peninsula sections that can provide a unique residential living experience with a high degree of natural site amenities; and to provide areas of the city in the general proximity of the peninsula that have the capability for adequate municipal services, including traffic corridors with adequate traffic capacity, that can appropriately accommodate a more intensive use of land than other lower-density zoned land and be compatible with surrounding neighborhoods; and to increase affordable housing opportunities in off-peninsula locations by providing a moderate-density

zone.

(Ord. No. 537-84, 5-7-84; Ord. No. 84-88, § 1, 7-19-88)

***Editor's note--**Ord. No. 84-88, § 1, adopted July 19, 1988, amended § 14-126 to read as herein set out. See also the editor's note to Art. III of this chapter for additional provisions relative to Ord. No. 84-88.

Sec. 14-127. Permitted uses.

The following uses are permitted in the R-5A residential zone:

(a) *Residential:*

1. Single-, two-and three-family dwellings.

2. Planned residential unit development (PRUD) consisting of horizontally or vertically attached dwelling units or a series of such dwelling units. No dimensional requirements contained in section 14-130 shall apply with respect to such developments except for those requirements specifically denoted for PRUD. There shall be no open outside stairways or fire escapes above the ground floor. The planned residential unit development shall be implemented through conditional or contract zoning, as described in division 1.5, for specific sites and proposed development meeting the overall requirements specified herein. All land shall be owned and used in common and shall be governed and maintained as set forth in section 14-498(i)(3) of article IV (subdivisions). Such development shall be subject to review and approval by the Planning Board with respect to the requirements of article V (site plan) and article IV (subdivisions) of this chapter, whether or not such development is a subdivision within the meaning of article IV of this chapter, as now enacted or as hereafter amended.

3. Handicapped family unit, as defined in section 14-47 (definitions) of this article, for handicapped persons plus staff.

4. Single-family, multiple-component manufactured housing, as defined in section 14-47 (definitions) of this article, except in a National Register Historic District.

5. Single-family, single-component manufactured housing, as defined in section 14-47 (definitions) of this article, on individual lots under separate and distinct ownership, except in a National Register Historic District, provided that each unit meets the performance standards listed below:

   a. More than half of the roof area of each unit shall be a double pitched Class C rated shingled roof with a minimum pitch of 3/12.

   b. Each unit shall be installed on a full foundation or a concrete frost wall in accordance with all applicable codes and regulations. Any hitch or tow bar shall be removed from the unit after it is placed on its foundation or frost wall. In the case of a frost wall, vermin proof skirting shall be installed on all sides of the unit. The skirting may consist of either (a) concrete or masonry block or (b) manufactured skirting. If concrete or masonry block skirting is installed, either the exterior siding of the unit shall extend within one (1) foot of grade or decorative masonry siding shall be applied. If manufactured skirting material is installed, the color shall be identical to or compatible with the exterior siding of the unit.

   c. Each unit shall have exterior siding that is residential in appearance, including but not limited to natural materials such as wood clapboards or shakes, or exterior materials which simulate wood. Clapboards or simulated clapboards shall have less than eight (8) inches of exposure and sheet metal type siding shall not be permitted.

   d. Each unit shall have the long side of the unit

parallel to the street line where the required street frontage is met.

e. Each unit shall be provided with at least two (2) trees meeting the city's arboricultural specifications and which are clearly visible from the street line and are located so as to visually widen the narrow dimension or proportion of the unit.

f. Each unit shall have all fuel oil supply systems constructed and installed within the foundation wall or underground in accordance with all applicable codes and regulations.

g. No unit shall be horizontally or vertically attached to any other unit or other structure, provided however, that this provision shall not be deemed to prohibit building additions, such as porches, garages, room additions or solar greenhouses.

(b) *Other:*

1. Parks and other active and passive noncommercial recreation spaces;

2. Accessory uses customarily incidental and subordinate to the location, function, and operation of principal uses, subject to the provisions of section 14-404 (accessory use) of this article;

3. Home occupation, subject to the provisions of section 14-410 (home occupation) of this article;

4. Municipal use;

5. Intermediate, extended and long-term care facilities.

6. Wind energy systems, as defined and allowed in Article X, ALtenrative Energy.

(Ord. No. 537-84, 5-7-84; Ord. No 266-84, § 1, 12-17-84; Ord. No. 84-88, §§ 2, 3, 7-19-88; Ord. No. 86A-89, § 6, 8-21-89; Ord. No. 33-91, § 7, 1-23-91; Ord. No.

***Editor's note--**Ord. No. 84-88, §§ 2, 3, adopted July 19, 1988, amended § 14-127 to read as herein set out. See also the editor's note to Art. III of this chapter for additional provisions relative to Ord. No. 84-88.

Sec. 14-128. Conditional use.

The following uses shall be permitted only upon the issuance of a conditional use permit, subject to the provisions of section 14-474 (conditional uses) of this article and any special provisions, standards or requirements specified below:

(a) *Residential:*

1. Sheltered care group homes, as defined in section 14-47 of this article, for up to twelve (12) individuals, plus staff, and serving a primary population which is not handicapped persons, parolees, persons involved in correctional prerelease programs, or current illegal drug users, provided that:

   a. A sheltered care group home shall not be located within five hundred (500) feet of another, as measured along street lines to the respective property lines.

   b. There shall be no open outside stairways or fire escapes above the ground floor.

   c. The facility shall make provision for adequate on-site staffing in accordance with applicable state licensing requirements. If a facility is not licensed by the state, there shall be a minimum of one (1) staff person for every ten (10) residents or fraction thereof.

   The board of appeals may impose conditions upon a conditional use permit concerning the creation or operation of a sheltered care group home including but not limited to the following: site and building maintenance; lighting, fencing, and other appropriate security measures; screening and

buffering of parking areas; compatibility of any additions or alterations with the existing residential structure; compatibility of new structures with the architectural character of the surrounding area; and limitation on the duration of the sheltered care group home permit.

(b) *Other:*

1. Utility substations, including water and sewage pumping stations and standpipes, electric power substations, transformer stations and telephone electronic equipment enclosures, and other similar structures, provided that such uses are suitably screened and landscaped so as to ensure compatibility with the surrounding neighborhood.

2. Nursery schools and kindergartens.

3. Day care facilities or home babysitting services not permitted as a home occupation under section 14-410, subject to the following conditions:

   a. The facility shall be located in a structure in which there is one (1) or more occupied residential units or in an existing accessory structure, unless the facility is located in a principal structure that has not been used as a residence in whole or in part within the five (5) years immediately preceding the application for a day care or home babysitting use or in a nonresidential structure accessory to the principal nonresidential use.

   b. The maximum capacity shall be twelve (12) children for facilities located in residential or existing structures accessory thereto, unless the additional standards in subsection v. are met. There shall be no maximum limit on the number of children in a facility located in a principal structure that has not been used as a residence in whole or in part within the five (5) years immediately preceding the application for a day care or home babysitting use, or in a nonresidential structure

accessory thereto, provided that any such structure that serves more than twelve (12) children shall be subject to review under article V of this chapter.

c. Outdoor play areas shall be screened and buffered from surrounding residences with landscaping and/or fencing to minimize visual and noise impacts.

d. Solid waste shall be stored in covered containers. Such containers shall be screened on all four (4) sides.

e. Day care facilities, nursery schools and kindergartens located either in structures that have been in residential use within the past five (5) years or in existing accessory structures and that serve between thirteen (13) and twenty-four (24) children shall meet the following additional standards:

i. The facility shall provide a minimum of seventy-five (75) square feet of outdoor play area per child;

ii. The play area shall be located in the side and rear yards only and shall not be located in front yards;

iii. Outside play areas shall be separated from abutting properties by a fence at least forty-eight (48) inches in height;

iv. A ten-foot wide landscaped buffer shall be required outside of the fenced play area, and shall be established in accordance with the landscaping standards of the City's Technical Standards and Guidelines;

v. The minimum lot size for a day care facility located in a residential or existing accessory structure and serving more than twelve (12) children shall be

twenty thousand (20,000) square feet;

vi. ***Off-street parking***: Off-street parking is required as provided in division 20 (off-street parking) of this article.

vii. The maximum number of children in a day care facility located in a residential or existing accessory structure shall be twenty-four (24); and

viii. Any additions or exterior alterations such as facade materials, building form, roof pitch, and exterior doors shall be designed to be compatible with the architectural style of the building and preserve the residential appearance of the building.

4. Temporary wind anemometer towers, as defined in Sec 14-47, are permitted provided the following standards are met in addition to Sec 14-430:

a. Towers may be installed for the purpose of wind data collection for no more than two (2) years after the issuance of a Certificate of Occupancy for the tower. At the conclusion of the aforementioned two (2) years, the tower must be dismantled and removed from the site within sixty (60) days; and

b. Towers shall be constructed according to plans and specifications stamped by a licensed professional engineer, which shall be provided to the Board of Appeals with the application; and

c. Towers shall be set back from habitable buildings by a distance equal to 1.1 times the tower height; and

d. The applicant shall provide a safety report prepared and stamped by a licensed

professional engineer to the Board of Appeals with their application for conditional use, which demonstrates how the proposed temporary wind anemometer tower is safe in terms of strength, stability, security, grounding, icing impacts and maintenance; and

e. The applicant shall provide evidence of commercial general liability insurance, such insurance to be satisfactory to Corporation Counsel and cover damage or injury resulting from construction, operation or dismantling of any part of the temporary wind anemometer tower; and

f. Towers and associated guy wires shall be sited to minimize their prominence from and impacts on public ways (including pedestrian ways); and

g. Towers shall be used for installing anemometers and similar devices at a range of heights from the ground to measure wind characteristics (speed, direction, frequency) and related meteorological data, but shall not be used for any other purpose; and

h. A performance guarantee shall be required for the cost of removal of the tower, guy wires and anchors. This requirement may be satisfied by surety bond, letter of credit, escrow account or by evidence, acceptable to the City, or the financial and technical ability and commitment of the applicant or its agents to remove the facility at the end of the use period.

5. Wind energy systems, as defined and allowed in Article X, Alternative Energy.

(Ord. No. 537-84, 5-7-84; Ord. No. 266-84, § 2, 12-17-84; Ord. No. 76-85, § 7, 7-1-85; Ord. No. 235-91, § 12, 2-4-91; Ord. No. 133-96, § 6, 11-18-96; Ord. No. 29-09/10, 8-3-09 emergency passage; Ord. No. 240-09/10, 6-21-10; Ord. No. 33-11/12, 1-18-12)

Sec. 14-129. Prohibited uses.

Uses that are not expressly enumerated herein as either permitted uses or conditional uses are prohibited.
(Ord. No. 537-84, 5-7-84)

Sec. 14-130. Dimensional requirements.

In addition to the provisions of division 25 (space and bulk regulations and exceptions) of this article, lots in the R-5A zone shall meet or exceed the following requirements:

(a) *Minimum lot size:*

Residential: Six thousand (6,000) square feet except as provided for lots of record in section 14-433 (lots of record and accessory structure setbacks for existing buildings) of this article. A lot in an unsewered residential district shall meet the provisions of the state Minimum Lot Size Law, 12 M.R.S.A. Section 4807-A, or the applicable zoning lot size, whichever is the largest.

Planned residential unit development (PRUD): Three (3) acres gross area, as defined in section 14-47 (definitions) of this article, of contiguous land.
Intermediate, extended or long-term care facilities: One and one-half (1 1/2) acres.

(b) *Minimum lot area per dwelling unit:* Sixteen hundred (1,600) square feet.

Planned residential unit development (PRUD): Sixteen hundred (1,600) square feet of net land area as defined in section 14-47 (definitions) of this article. As part of a site plan and subdivision application, the applicant shall provide a calculation of those factors deducted to determine net land area. In addition, such net area factors shall be delineated on a site plan.

(c) *Minimum street frontage:* Fifty (50) feet. PRUD development: Fifty (50) feet.

(d) *Minimum yard dimensions:*

(Yard dimensions include setbacks of structures from property lines and setbacks of structures from one another. No structure shall occupy the minimum yard of another structure.)

1. *Front yard:*

Principal or accessory structures: Twenty-five (25) feet.

2. *Rear yard:*

a. Principal or accessory structures with ground coverage greater than one hundred (100) square feet: Twenty-five (25) feet.

b. Accessory detached structures with a ground coverage of one hundred and forty-four(144) square feet or less: Five (5) feet.

Setbacks for swimming pools shall be as provided for in section 14-432 (swimming pools) of this article.

3. *Side yard:*

a. Principal or accessory structures with ground coverage greater than one hundred (100) square feet:

Height of Structure	*Required Side Yard*
1 story	10 feet
1 1/2 stories	10 feet
2 stories	14 feet
2 1/2 stories	16 feet

The width of one (1) side yard may be reduced one (1) foot for every foot that the other side yard is correspondingly increased, but no side yard shall be less than ten (10) feet. In the case of a lot of

record existing as of June 5, 1957, and held under separate and distinct ownership from adjacent lots, the required side yard may be reduced in order to provide a buildable width of up to twenty-four (24) feet, but in no case shall the resulting side yards be less than ten (10) feet.

b. Accessory detached structures with ground coverage of one hundred and forty-four(144) square feet or less: Five (5) feet.

4. *Side setback on side streets:*

Principal or accessory structures: Twenty (20) feet.

(e) *Maximum lot coverage:* Thirty (30) percent of lot area.

(f) *Minimum lot width:* Sixty (60) feet.

Minimum building setback from external subdivision property lines (PRUD):

a. Building length of one hundred (100) feet or less: Twenty-five (25) feet.

b. Building length of greater than one hundred (100) feet: Thirty-five (35) feet.

(g) Minimum recreation open space area (PRUD): Two hundred (200) square feet per dwelling unit of common area designated on the site for recreation purposes. Such recreation areas shall be level graded, dry, accessible and properly drained. At a minimum, a contiguous area of six thousand (6,000) square feet, with a minimum dimension of fifty (50) feet, shall be provided and shall include one (1) or more of the uses set forth in section 14-526 (d) 9. and the planned residential unit development standards in the City of Portland Design Manual, but shall at least be usable as a multipurpose game field. Such recreation areas shall be located at least twenty-five (25) feet from dwelling units.

(Ord. No. 537-84, 5-7-84; Ord. No. 84-88, § 4, 7-19-88; Ord. No. 58-97, § 2, 8-18-97; Ord. No. 165-97, § 5, 12-1-97; Ord. No. 131-08/09, 12-15-08; Ord. No. 278-09/10, 7-19-10)

***Editor's note--**Ord. No. 84-88, § 4, adopted July 19, 1988, amended § 14-130 to read as herein set out. See also the editor's note to Art. III of this chapter for additional provisions relative to Ord. No. 84-88.

Sec. 14-131. Other requirements.

[Other requirements are as follows:]

(a) ***Off-street parking:*** Off-street parking is required as provided in division 20 (off-street parking) of this article.

(b) ***Shoreland and flood plain management regulations:*** Any lot or portion of a lot located in a shoreland zone as identified on the city shoreland zoning map or in a flood hazard zone shall be subject to the requirements of division 26 and/or division 26.5.

(c) ***Storage of vehicles:*** Only one (1) unregistered motor vehicle may be stored outside on the premises for a period not exceeding thirty (30) days.

(Ord. No. 537-84, 5-7-84; Ord. No. 15-92, § 10, 6-15-92)

Sec. 14-132. Reserved.
Sec. 14-133. Reserved.
Sec. 14-134. Reserved.

DIVISION 7. R-6 RESIDENTIAL ZONE*

***Editor's note--**Ord. No. 538-84, adopted May 7, 1984, repealed Div. 7, §§ 14-131--14-134, and enacted a new Div. 9, §§ 14-135--14-139, 14-145. However, in order to avoid duplication of division numbers and in consultation with the city, the provision has been included as Div. 7.

Sec. 14-135. Purpose.

The purpose of the R-6 residential zone is:

(a) To set aside areas on the peninsula for housing characterized primarily by multifamily dwellings at a high density providing a wide range of housing for differing types of households; and to conserve the existing housing stock and

residential character of neighborhoods by controlling the scale and external impacts of professional offices and other nonresidential uses.

(b) In cases of qualifying small, vacant, underutilized lots located in the urban residential and business zone, to encourage new housing development consistent with the compact lot development pattern typically found on the peninsula.

(Ord. No. 538-84, 5-7-84; Ord. No. 78-03/04, 10-20-03)

Sec. 14-136. Permitted uses.

The following uses are permitted in the R-6 residential zone:

(a) *Residential:*

1. Single- and two-family dwellings. No building reviewed as a two-family dwelling in accordance with section article V (site plan) of this chapter shall be altered to include any additional dwelling unit within five (5) years from the date of issuance of the building permit. Any building reviewed as a two-family dwelling in accordance with article V (site plan) of this chapter or not reviewed under article V, which is altered or enlarged to include any additional dwelling unit after this five-year period, shall be reviewed as a pursuant to article V of this chapter.

2. Multifamily dwellings, provided that any alteration of a structure in residential use on December 2, 1987:

   a. Shall not result in the creation of any additional dwelling unit of less than six hundred (600) square feet of floor area, exclusive of common hallways and storage in basement and attic; and

   b. Shall not result in any existing dwelling unit being reduced in size to less than one thousand (1,000) square feet of floor area, exclusive of common areas and storage in basement and attic;

c. Parking shall be provided as required by division 20 of this article;

d. No open outside stairways or fire escapes above the ground floor shall be constructed;

e. A below-grade dwelling unit shall be permitted only if access is provided directly to the outside of the building;

f. Such development shall be subject to article V (site plan) of this chapter for site plan review and approval.

3. Handicapped family unit, as defined in section 14-47 (definitions) of this article, for handicapped persons plus staff.

4. Single-family, multiple-component manufactured housing, as defined in section 14-47 (definitions) of this article, except in a National Register Historic District.

5. Single-family, single-component manufactured housing, as defined in section 14-47 (definitions) of this article, on individual lots under separate and distinct ownership, except in a National Register Historic District, provided that each unit meets the performance standards listed below:

a. More than half of the roof area of each unit shall be a double pitched Class C rated shingled roof with a minimum pitch of 3/12.

b. Each unit shall be installed on a full foundation or a concrete frost wail in accordance with all applicable codes and regulations. Any hitch or tow bar shall be removed from the unit after it is placed on its foundation or frost wall. In the case of a frost wall, vermin proof skirting shall be installed on all sides of the unit. The skirting may consist of either (a) concrete or masonry block or (b) manufactured skirting. If concrete or masonry block skirting is

installed, either the exterior siding of the unit shall extend within one (1) foot of grade or decorative masonry siding shall be applied. If manufactured skirting material is installed, the color shall be identical to or compatible with the exterior siding of the unit.

c. Each unit shall have exterior siding that is residential in appearance, including but not limited to natural materials such as wood clapboards or shakes, or exterior materials which simulate wood. Clapboards or simulated clapboards shall have less than eight (8) inches of exposure and sheet metal type siding shall not be permitted.

d. Each unit shall have the long side of the unit parallel to the street line where the required street frontage is met.

e. Each unit shall be provided with at least two (2) trees meeting the city's arboricultural specifications and which are clearly visible from the street line and are located so as to visually widen the narrow dimension or proportion of the unit.

f. Each unit shall have all fuel oil supply systems constructed and installed within the foundation wall or underground in accordance with all applicable codes and regulations.

g. No unit shall be horizontally or vertically attached to any other unit or other structure, provided however, that this provision shall not be deemed to prohibit building additions, such as porches, garages, room additions or solar greenhouses.

(b) *Other:*

1. Lodging house;

2. Cemeteries;

3. Parks, and other active and passive noncommercial recreation spaces;

4. Accessory uses customarily incidental and subordinate to the location, function, and operation of principal uses, subject to the provisions of section 14-404 (accessory use) of this article;

5. Home occupation subject to the provisions of section 14-410 (home occupation) of this article;

6. Municipal uses, excluding those specifically set forth in section 14-137 of this division;

7. Special needs independent living units, provided that a building housing special needs independent living units shall not house other types of residential or other permitted uses. The owner of a special needs independent living unit building shall file in the Cumberland County Registry of Deeds a statement under oath that the building is a special needs independent living unit building and that any future change of use to a permitted residential use shall require a change in use review by the City of Portland and a decrease in the number of units in the building in accordance with the Portland City Code, chapter 14. The owner shall file proof of such recording with the building inspections division prior to the issuance of any certificates of occupancy for the new uses.

8. Conversion of a structure existing on March 3, 1997, into a bed and breakfast with up to four (4) guest rooms, subject to the standards of article V (site plan).

9. Hostels, provided the applicant submits a site plan and operations plan demonstrating compliance with the following conditions:

   a. No more than ten (10) overnight transient guests shall be permitted in the facility at any one time.

b. All applicable provisions of Article V of this chapter shall be met.

c. Parking shall be provided in compliance with Division 20 of this Article.

d. No unaccompanied minors under the age of eighteen (18) shall be permitted in the facility.

e. The length of stay for transient guests shall not exceed fifteen (15) days out of any sixty-day period.

f. An owner, manager or operator shall live in the building as a permanent resident.

g. The building shall meet the applicable occupant load requirements as defined by the International Building Code and the NFPA Life Safety Code, as such codes are amended or adopted by the city.

10. Wind energy systems, as defined and allowed in Article X, Alternative Energy.

(Ord. No. 538-84, 5-7-84; Ord. No. 267-84, § 1, 12-17-84; Ord. No. 67-87, § 4, 11-2-87; Ord. No. 85-88, §§ 1, 2, 7-19-88; Ord. No. 86A-89, § 7, 8-21-89; Ord. No. 95-89, § 2, 9-6-89; Ord. No. 279-90, § 2, 3-19-90; Ord. No. 33-91, § 8, 1-23-91; Ord. No. 33A-91, § 6, 4-17-91; Ord. No. 125-97, § 2, 3-3-97; Ord. No. 278-09/10, 7-19-10; Ord. No. 279-09/10, 6-6-11; Ord. No. 33-11/12, 1-18-12)

***Editor's note--**Ord. No. 85-88, §§ 1, 2, adopted July 19, 1988, amended § 14-136 to read as herein set out. See also the editor's note to Art. III of this chapter for additional provisions relative to Ord. No. 85-88. Ord. No. 95-89, § 2, adopted Sept. 6, 1989, amended subsection (1)a of § 14-136 to read as set out and, as amended, further ordained "that the prohibition upon unit additions contained in this ordinance shall not apply where a building permit has been issued. Additions proposed to such buildings shall require major site plan review and all other reviews required by this chapter."

Sec. 14-137. Conditional uses.

The following uses shall be permitted only upon the issuance of a conditional use permit, subject to the provisions of section 14-474 (conditional uses) of this article and any special

provisions, standards or requirements specified below:

(a) ***Residential:***

1. Reserved.

2. Sheltered care group homes, as defined in section 14-47 of this article, for up to twelve (12) individuals, plus staff, and serving a primary population which is not handicapped persons, parolees, persons involved in correctional prerelease programs, or current illegal drug users, provided that:

   a. A sheltered care group home shall not be located within five hundred (500) feet of another, as measured along street lines to the respective property lines.

   b. There shall be no open outside stairways or fire escapes above the ground floor.

   c. The facility shall make provision for adequate on-site staffing and supervision of residents in accordance with applicable state licensing requirements. If a facility is not licensed by the state, there shall be a minimum of one (1) staff person for every ten (10) residents or fraction thereof.

   The board of appeals may impose conditions upon a conditional use permit concerning the creation or operation of a sheltered care group home including but not limited to the following: site and building maintenance; lighting, fencing, and other appropriate security measures; screening and buffering of parking areas; compatibility of any additions or alterations with the existing residential structure; compatibility of new structures with the architectural character of the surrounding area; and limitation on the duration of the sheltered care group home permit.

3. Conversion of a structure existing on March 3, 1997, into a bed and breakfast with five (5) to

nine (9) guest rooms.

(b) ***Institutional:*** Any of the following conditional uses provided that, notwithstanding section 14-474(a) (conditional uses) of this article or any other provision of this Code, the Planning Board shall be substituted for the board of appeals as the reviewing authority:

1. Elementary, middle, and secondary school except as otherwise provided in section 14-276.10;

2. a. Long-term and extended care facilities;

   b. Intermediate care facility for thirteen (13) or more persons;

3. Intermediate care facility;

4. Places of assembly;

5. Hospital;

6. College, university, trade school.

Such uses shall be subject to the following conditions and standards in addition to the provisions of section 14-474:

a. In the case of expansion onto land of existing such uses other than the lot on which the principal use is located, it shall be demonstrated that the proposed use cannot reasonably be accommodated on the existing site through more efficient utilization of land or buildings, and will not cause significant physical encroachment into established residential areas; and

b. The proposed use will not cause significant displacement or conversion of residential uses existing as of June 1, 1983, or thereafter; and

c. In the case of a use or use expansion which constitutes a combination of the above-listed

uses with capacity for concurrent operations, the applicable minimum lot sizes shall be cumulative; and

d. Article V (site plan) sections 14-522 and 14-523 notwithstanding, in the case of places of assembly the proposed use shall be subject to the requirements of article V (site plan) of this chapter; and

e. In the case of community halls:

i. The structure was in existence as of January 4, 2010.

ii. The structure was built for institutional or other non-residential uses;

iii. The structure is operated by, or operated subject to the control of, a not-for-profit entity in accordance with its not-for-profit purposes; and

iv. A parking management plan is submitted for review and approval by the planning board; and

f. In the case of private club or fraternal organizations: any such establishment serving alcoholic beverages or in possession of a license for serving alcoholic beverages shall be located on a large lot, as specified in the minimum lot size provisions of this section.

(c) *Other:*

1. Utility substations, such as water and sewage pumping stations and standpipes, electric power substations, transformer stations, and telephone electronic equipment enclosures and other similar structures, provided that such uses are suitably screened and landscaped so as to ensure compatibility with the surrounding neighborhood;

2. Professional offices of a member of a recognized profession maintained for the conduct of that profession. Professional office uses exclude personal services, retail services, and veterinarians.

The illustrative examples that follow indicate the type of professional offices permitted: health care practitioner, attorney, social worker, engineer, architect, accountant, real estate agent, insurance agent.

Professional office uses shall meet the following standards in addition to provisions of section 14-474, except that subsections a., b., c. and d. of this section 14-137(c)2 shall not apply to the use of any building not designed or constructed for residential use, which was not in actual use as a residence on April 18, 1984, or thereafter.

a. A professional office shall not be located within five hundred (500) feet of another as measured along the street line to the respective property lines.

b. A building with one (1) or more professional offices shall have at least fifty (50) percent of the total floor area of the building devoted to residential uses.

c. The total number of individuals working in a building of professional offices shall not exceed the equivalent of four (4) full-time employees.

d. Any additions or exterior alterations shall be compatible with the architecture of the building and maintain the residential appearance of the building. Construction of a new building shall be compatible with the architectural character of the surrounding area.

e. The scale and surface area of parking, driveways, and paved areas shall be arranged

and landscaped to be compatible in size and scale with neighboring properties in the area and to properly screen vehicles from adjacent properties and streets.

f. Off-street parking is required as provided in division 20 (off-street parking) of this article.

3. Chancellery.

4. Nursery school and kindergarten.

5. Off-street parking for passenger cars for uses permitted in the R-6 zone.

6. Day care facilities or home babysitting services not permitted as a home occupation under section 14-410, subject to the following conditions:

a. The facility shall be located in a structure in which there is one (1) or more occupied residential units or in an existing accessory structure, unless the facility is located in a principal structure that has not been used as a residence in whole or in part within the five (5) years immediately preceding the application for a day care or home babysitting use or in a nonresidential structure accessory to the principal nonresidential use.

b. The maximum capacity shall be twelve (12) children for facilities located in residential or existing structures accessory thereto, unless the additional standards in subsection v. are met. There shall be no maximum limit on the number of children in a facility located in a principal structure that has not been used as a residence in whole or in part within the five (5) years immediately preceding the application for a day care or home babysitting use, or in a nonresidential structure accessory thereto, provided that any such structure that serves more than twelve (12) children shall be subject to review under

article V of this chapter.

c. Outdoor play areas shall be screened and buffered from surrounding residences with landscaping and/or fencing to minimize visual and noise impacts.

d. Solid waste shall be stored in covered containers. Such containers shall be screened on all four (4) sides.

e. Day care facilities, nursery schools and kindergartens located either in structures that have been in residential use within the past five (5) years or in existing accessory structures and that serve between thirteen (13) and twenty-four (24) children shall meet the following additional standards:

i. The facility shall provide a minimum of seventy-five (75) square feet of outdoor play area per child;

ii. The play area shall be located in the side and rear yards only and shall not be located in front yards;

iii. Outside play areas shall be separated from abutting properties by a fence at least forty-eight (48) inches in height;

iv. A ten-foot wide landscaped buffer shall be required outside of the fenced play area, and shall be established in accordance with the landscaping standards of the City's Technical Standards and Guidelines;

v. The minimum lot size for a day care facility located in a residential or existing accessory structure and serving more than twelve (12) children shall be twenty thousand (20,000) square feet;

vi. ***Off-street parking:*** Off-street parking is

required as provided in division 20 (off-street parking) of this article.

vii. The maximum number of children in a day care facility located in a residential or existing accessory structure shall be twenty-four (24); and

viii. Any additions or exterior alterations such as facade materials, building form, roof pitch, and exterior doors shall be designed to be compatible with the architectural style of the building and preserve the residential appearance of the building.

7. Temporary wind anemometer towers, as defined in Sec 14-47, are permitted provided the following standards are met in addition to Sec 14-430:

a. Towers may be installed for the purpose of wind data collection for no more than two (2) years after the issuance of a Certificate of Occupancy for the tower. At the conclusion of the aforementioned two (2) years, the tower must be dismantled and removed from the site within sixty (60) days; and

b. Towers shall be constructed according to plans and specifications stamped by a licensed professional engineer, which shall be provided to the Board of Appeals with the application; and

c. Towers shall be set back from habitable buildings by a distance equal to 1.1 times the tower height; and

d. The applicant shall provide a safety report prepared and stamped by a licensed professional engineer to the Board of Appeals with their application for conditional use, which demonstrates how

the proposed temporary wind anemometer tower is safe in terms of strength, stability, security, grounding, icing impacts and maintenance; and

e. The applicant shall provide evidence of commercial general liability insurance, such insurance to be satisfactory to Corporation Counsel and cover damage or injury resulting from construction, operation or dismantling of any part of the temporary wind anemometer tower; and

f. Towers and associated guy wires shall be sited to minimize their prominence from and impacts on public ways (including pedestrian ways); and

g. Towers shall be used for installing anemometers and similar devices at a range of heights from the ground to measure wind characteristics (speed, direction, frequency) and related meteorological data, but shall not be used for any other purpose; and

h. A performance guarantee shall be required for the cost of removal of the tower, guy wires and anchors. This requirement may be satisfied by surety bond, letter of credit, escrow account or by evidence, acceptable to the City, or the financial and technical ability and commitment of the applicant or its agents to remove the facility at the end of the use period.

8. Hostels, provided the applicant submits a site plan and operations plan demonstrating compliance with the following conditions:

a. No more than twenty (20) overnight transient guests shall be permitted in the facility at any one time.

b. All applicable provisions of Article V of this

chapter shall be met.

c. Parking shall be provided in compliance with Division 20 of this Article.

d. No unaccompanied minors under the age of eighteen (18) shall be permitted in the facility.

e. The length of stay for transient guests shall not exceed fifteen (15) days out of any sixty-day period.

f. An owner, manager or operator shall live in the building as a permanent resident.

g. The building shall meet the applicable occupant load requirements as defined by the International Building Code and the NFPA Life Safety Code, as such codes are amended or adopted by the city.

9. Wind energy systems, as defined and allowed in Article X, Alternative Energy.

(Ord. No. 538-84, 5-7-84; Ord. No. 267-84, § 2, 12-17-84; Ord. No. 76-85, § 8, 7-1-85; Ord. No. 85-88, § 3, 7-19-88; Ord. No. 235-91, § 13, 2-4-91; Ord. No. 118-93, § 11, 10-18-93; Ord. No. 133-96, § 7, 11-18-96; ; Ord. No. 154-96, § 11, 12-16-96; Ord. No. 125-97, § 3, 3-3-97; Ord. No. 232-99, §2, 3-15-99; Ord. No. 77-02/03, § 2, 10-21-02; Ord. No. 29-09/10, 8-3-09 emergency passage; Ord. No. 127-09/10, 1-4-10 emergency passage; Ord. No. 138-09/10, 1-20-10; Ord. No. 240-09/10, 6-21-10; Ord. No. 9 10/11, 8-2-10; Ord. No. 149-10/11, 3-7-11; Ord. No. 279-09/10, 6-6-11; Ord. No. 33-11/12, 1-18-12)

Sec. 14-138. Prohibited uses.

Uses that are not expressly enumerated herein as either permitted uses or conditional uses are prohibited.
(Ord. No. 538-84, 5-7-84)

Sec. 14-139. Dimensional requirements.

(a) In addition to the provisions of division 25 (space and bulk regulations and exceptions) of this article, lots in the R-6 zone shall meet or exceed the following minimum requirements:

1. *Minimum lot size:*

a. Residential: Forty-five hundred (4,500) square feet, except as provided for lots of record in section 14-433 (lots of record and accessory structure setbacks for existing buildings) of this article.

b. Reserved.

c. Long-term and extended care facilities: Ten thousand (10,000) square feet for the first nine (9) residents plus seven hundred fifty (750) square feet for each additional resident, up to a total of two (2) acres.

d. Intermediate care facility: One (1) acre.

e. School: Thirty thousand (30,000) square feet.

f. Places of assembly;

Large	30,000 sq. ft.
Medium	15,000 sq. ft.
Small	7,500 sq. ft.

g. Municipal use: Forty-five hundred (4,500) square feet.

h. Hospital: Two (2) acres.

i. All other uses: Forty-five hundred (4,500) square feet.

j. Lodging house: Four thousand five hundred (4,500) square feet.

2. a. ***Minimum area per dwelling unit:*** One thousand (1,000) square feet per dwelling unit; and in the case of building additions and new construction, one thousand two hundred (1,200) square feet for each dwelling unit after the first three (3) units. This requirement may be reduced by up to twenty (20) percent for a special needs independent living unit.

b. ***Minimum rooming unit areas for lodging houses:*** Two hundred (200) square feet of combined rooming unit and common area for each rooming unit. Each individual rooming unit shall be a minimum of eighty (80) square feet.

c. ***Minimum land area per lodging house rooming unit:*** Two hundred fifty (250) square feet.

d. ***Minimum land area per intermediate care facility resident:*** Eight thousand (8,000) square feet for the first thirty-five (35) residents, plus three hundred fifty (350) square feet for each additional resident.

3. ***Minimum street frontage:*** Forty (40) feet.

4. ***Minimum yard dimensions:*** (Yard dimensions include setbacks of structures from property lines and setbacks of structures from one another. No structure shall occupy the minimum yard of another structure.)

a. ***Front yard:***

Principal or accessory structures: Ten (10) feet.

A front yard need not exceed the average depth of front yards on either side of the lot. A lot of record existing as of June 5, 1957, and less than one hundred (100) feet deep need not be deeper than twenty (20) percent of the depth of the lot.

b. ***Rear yard:***

i. Principal and attached accessory structures with ground coverage greater than one hundred (100) square feet: Twenty (20) feet.

ii. Detached accessory structures with a ground coverage of one hundred and forty-four(144) square feet or less: Five (5) feet.

iii. Setbacks for swimming pools shall be as provided for in section 14-432 (swimming pools) of this article.

c. *Side yard:*

i. Principal and attached accessory structures with ground coverage greater than one hundred (100) square feet:

Height of Structure	*Required Side Yard*
1 story	10 feet
2 stories	10 feet
3 stories	10 feet
4 stories	12 feet
5 stories	15 feet

The width of one (1) side yard may be reduced one (1) foot for every foot that the other side yard is correspondingly increased, but no side yard shall be less than ten (10) feet. In the case of a lot of record existing as of June 5, 1957, and held under separate and distinct ownership from adjacent lots, the required side yard may be reduced in order to provide a buildable width of up to twenty-four (24) feet, but in no case shall the resulting side yards be less than ten (10) feet.

ii. Detached accessory structures with ground coverage of one hundred and forty-four(144) square feet or less: Five (5) feet.

iii. Setbacks for swimming pools shall be as provided for in section 14-432 (swimming pools) of this article.

d. *Side yard on side streets:*

i. Principal or accessory structures: Ten (10) feet.

5. ***Maximum lot coverage:*** Forty (40) percent of lot area for lots which contain twenty (20) or more dwelling units;

fifty (50) percent for lots which contain fewer than twenty (20) dwelling units.

6. *Minimum lot width:* Forty (40) feet.

7. *Maximum structure height:*

Principal and attached accessory structure: Forty-five (45) feet.

Accessory detached structure: Eighteen (18) feet.

8. *Open space ratio:*

a. *Uses other than bed and breakfast.* Twenty (20) percent for those lots which contain fewer than twenty (20) dwelling units; thirty (30) percent for those lots which contain twenty (20) or more dwelling units. This area shall not include parking areas or other impervious surfaces as defined in section 14-47.

b. *Bed and breakfasts.* A bed and breakfast that is located on a lot that has at least twenty (20) percent open space on the date of filing of the application for site plan shall not reduce the open space on the lot below twenty (20) percent of the lot area. A bed and breakfast located on a lot that does not have at least twenty (20) percent open space on the date of filing of the application for site plan review, and that is legally nonconforming as to the open space requirement of this section, shall not reduce the open space on the lot below the level in existence on the date of the application for site plan review. Open space areas shall not include parking areas or other impervious surface areas as defined in section 14-47.

9. A below-grade dwelling unit shall be permitted only if the primary access for the dwelling unit is provided directly to the outside of the building.

10. *Minimum gross floor area for bed and breakfasts:* Two thousand (2,000) square feet of gross floor area for the first three (3) guest rooms and five hundred (500) square

feet of floor area for each additional guest room.

11. *Maximum floor area for places of assembly on a collector or arterial road:*

Large	Not limited
Medium	4,500 sq. ft.
Small	2,250 sq. ft.

12. *Maximum floor area for places of assembly not on a collector or arterial road:*

Large	4,500 sq. ft.
Medium	2,250 sq. ft.
Small	1,125 sq. ft.

(b) *Small residential lot development:* Residential uses on small, vacant lots located in the R-6 are subject to site plan review and may use the dimensional requirements below if all of the following conditions are met:

The lot is:

Vacant or is used exclusively for parking or contains structure not used for residential purposes as of January 1, 2005; and the lot existed as of January 1, 2005.

1. *Minimum lot size*: None

2. *Maximum lot size:* Ten thousand (10,000) square feet.

3. *Yard dimensions:*

a. *Front yard:*

No more than ten (10) feet.

b. *Rear yard:*

None, except that rear yards between two (2) buildings on the same or different lots shall maintain a minimum ten (10) foot setback between

buildings or the sum of the heights of the abutting buildings and proposed buildings divided by five (5), whichever is greater; and that either the rear yard or one of the side yards shall be at least fifteen (15) feet; provided, however, detached accessory structures with a ground floor area of one hundred (100) square feet or less need not have a setback more than five (5) feet from the property line. Not withstanding the foregoing, no structure shall be closer than four (4) feet to side property line.

c. *Side yard:*

None, except that side yards between two (2) buildings on the same or different lots shall maintain a minimum ten (10) foot setback between buildings or the sum of the heights of the existing buildings and proposed buildings divided by five (5), whichever is greater and that either the rear yard or one of the side yards shall be at least fifteen (15) feet; Provided, however, detached accessory structures with a ground floor area of one hundred (100) square feet or less need not have a setback more than five (5) feet from the property line. Notwithstanding the foregoing, no structure shall be closer than four (4) feet to side property line. On a corner lot no side yard is required on that side of the lot which abuts any street. A principal structure on a corner lot shall not be more than ten (10) feet from the street.

4. ***Minimum principal structure height:*** Two (2) stories of living space above the grade of the adjacent street frontage, except for porches, entryways, attached garages and accessory detached structures.

5. ***Maximum principal structure height:*** Forty five (45) feet.

6. ***Open space requirement:*** All lots used for residential purposes shall provide an attached exterior deck, porch, patio or balcony for each dwelling unit, except where a designated open space equal to ten (10) percent or more of the lot area is located on site and maintained as open

space, then the number of exterior decks, porches, patios or balconies may be reduced by up to fifty (50) percent. The designated open space, if provided, shall have a minimum width and length of at least fifteen (15) feet, a slope of no greater than ten (10) percent and shall be used exclusively as recreational open space i.e. it shall not be used for vehicular circulation, parking, etc.. All required decks, porches, patios or balconies shall meet the requirements of the Planning and Development Design Manual.

7. *Minimum lot width:* None.

8. *Minimum land area per dwelling:* Seven hundred and twenty-five (725) square feet.

(Ord. No. 538-84, 5-7-84; Ord. No. 634-86, § 1, 7-7-86; Ord. No. 264-87, § 1, 3-16-87; Ord. No. 85-88, § 4, 7-19-88; Ord. No. 230-90, § 1, 3-5-90; Ord. No. 33-91, § 9, 1-23-91; Ord. No. 235-91, § 14, 2-4-91; Ord. No. 33A-91, 4-17-91; Ord. No. 118-93, § 12, 10-18-93; Ord. No. 154-96, § 12, 12-16-96; Ord. No. 125-97, § 4, 3-3-97; Ord. No. 245-97, §§ 1, 2, 4-9-97; Ord. No. 232-99; §3, 3-15-99; Ord. No. 78-03/04, 10-20-03; Ord. No. 21-04/05, 8-2-04, Ord. No. 145-04/05, 2-23-05; Ord. No. 254-05/06, 6-5-06; Ord. No. 131-08/09, 12-15-08; Ord. No. 127-09/10, 1-4-10 emergency passage; Ord. No. 65-10/11, 10-18-10)

***Editor's note--**Ord. No. 85-88, § 4, adopted July 19, 1988, amended § 14-139 to read as herein set out. See also the editor's note to Art. III of this chapter for additional provisions relative to Ord. No. 85-88.

Sec. 14-140. Other requirements.

(a) *Off-street parking:* Off-street parking is required as provided in division 20 (off-street parking) of this article.

(b) *Storage of vehicles:* Only one (1) unregistered motor vehicle may be stored outside on the premises for a period not exceeding thirty (30) days.

(c) *Shoreland and flood plain management regulations:* Any lot or portion of a lot located in a shoreland zone as identified on the city shoreland zoning map or in a flood hazard zone shall be subject to the requirements of division 26 and/or division 26.5.

(d) *Small residential lot development* shall conform to the site plan standards of §14-526.

(Ord. No. 538-84, 5-7-84; Ord. No. 85-88, § 5, 7-19-88; Ord. No. 15-92, § 11,

6-15-92; Ord. No. 37-98, § 1, 5-4-98; formerly §14-145--renumbered per Ord. No. 122, 12-20-99; Ord. No. 78-03/04, 10-20-03; Ord. No. 254-05/06, 6-5-06; Ord. No. 240-09/10, 6-21-10)

***Editor's note--**Ord. No. 85-88, § 5, adopted July 19, 1988, amended § 14-145(a) to read as herein set out. See also the editor's note to Art. III of this chapter for additional provisions relative to Ord. No. 85-88.

DIVISION 7.01. R-7 COMPACT URBAN RESIDENTIAL OVERLAY ZONE

Section 14-141. Purpose.

The purpose of the R-7 Compact Urban Residential Overlay Zone is to encourage and accommodate compact residential development on appropriate locations on the Portland peninsula, pursuant to the New Vision for Bayside element of the comprehensive plan and housing plans of the City of Portland. Sites suitable for in-city living should be within walking distance of downtown or other work places, shopping and community facilities and have access to public or private off-site parking or transit service. The intent of this zone is to foster increased opportunities for compact in-city living for owners and renters representing a variety of income levels and household types.

Locations for siting the R-7 Zone are intended to be located on the peninsula of Portland, in the area encompassed in the Bayside plan, and other peninsula R-6 locations characterized by moderate to high density multi-family housing in a form and density exceeding that allowed in the R-6 Zone and where infill development opportunities exist; and areas on the peninsula with mixed business and residential zoning and uses which can accommodate higher density infill residential development without negatively impacting the existing neighborhood or adjacent properties. It may be appropriate in some cases to rezone to R-7 overlay through conditional or contract zoning to ensure that the new development is architecturally appropriate and compatible with the surrounding neighborhood.
(Ord. No. 122, 12-20-99)

Sec. 14-142. Permitted Uses.

Permitted uses in the R-7 Compact Urban Residential Overlay Zone, shall be the uses permitted in the R-6 Zone, except that:

(a) Residential uses shall comply with the following dimensional requirements:

1. Minimum Lot Size: None

2. Minimum Frontage: None

3. Minimum Yard Dimensions:

   a. Front yard: None

   b. Rear and side yard: Five (5) feet.

   c. Side yard on side street: None

4. Maximum Lot Coverage: 100%

5. Maximum Residential Density: Four hundred thirty five (435) square feet of land area per dwelling unit is required.

6. Maximum Building Height: Fifty (50) Feet

(b) Off-street parking is required as provided in division 20 (off-street parking) of this article;

(c) Residential development in the R-7 Zone shall be reviewed by the Planning Board for compliance with Article IV, Subdivisions, and Article V, Site Plan;

(d) Any new dwelling unit constructed in the R-7 Zone shall contain a minimum of 400 square feet of habitable floor area;

(e) All other uses in the R-7 Zone shall observe the requirements of the R-6 Zone.

(Ord. No. 122, 12-20-99; Ord. No. 84-08/09, 10-20-08; Ord. No. 240-09/10, 6-21-10)

Sec. 14-143. Design Standards.

Residential development in the R-7 Zone shall be reviewed by the Planning Board under Article V, Site Plan. Such development shall also comply with the following development standards. The general intent of these development standards is to achieve an attractive and comfortable city neighborhood environment. Varied

and human-scaled building facades are key to making a place "pedestrian-oriented." Building designs should provide a high level of visual interest, without creating a chaotic image. Residences should include design elements that enhance the streetscape and address the street.

(a) Porches and bays should face the street.

(b) Primary ground floor residential entries to multi-family buildings must orient to street, not to interior blocks or parking lots. Secondary and upper-floor entries from the interior of a block are acceptable. The front door to single-family homes, duplexes, and townhouses must be visible from the street.

(c) The design approach shall provide an architecture that will be a visible and permanent expression of the character of the neighborhood;

(d) The facade shall be varied and articulated to provide visual interest to pedestrians;

(e) Reinforce the public realm of the public open space, sidewalks and streets through appropriately scaled entries, porches, fenestration, landscaping, and architectural details;

(f) Provide visual and acoustical privacy between units;

(g) Maximize natural light and ventilation within units.

(Ord. No. 122, 12-20-99)

Sec. 14-144. Reserved.

Sec. 14-145. Reserved.

(Ord. No. 122, 12-20-99)

DIVISION 7.1. IR-1 ISLAND RESIDENTIAL ZONE

Sec. 14-145.1. Purpose.

The purpose of the IR-1 island residential zone is to provide for low intensity residential, recreational, and rural uses in the less developed areas of the islands in order to preserve the rustic character of the islands, to protect groundwater resources and natural and scenic areas, and to permit only appropriate low

intensity development in areas lacking adequate public facilities and services.
(Ord. No. 27-85, § 1, 7-15-85)

Sec. 14-145.2. Permitted uses.

The following uses are permitted in the IR-1 island residential zone:

(a) Single-family detached dwellings.

(b) Planned residential unit development with a minimum gross area, as defined in section 14-47 (definitions) of this article, of at least five, (5) acres of contiguous land, consisting of detached dwellings. Minimum yard dimensions (section 14-145.5(c)), street frontage (section 14-145.5(b)), and lot width (section 14-145.5(e)) shall be reduced up to fifty (50) percent of what would otherwise be required. Minimum lot area (section 14-145.5(a)) shall be reduced up to fifty (50) percent provided there is an equivalent corresponding increase in common or public open space that is usable for passive or active recreational opportunities or that serves as a buffer between buildings or between the development and the surrounding neighborhood.

All area in such a development which is to be owned or used in common shall be governed and maintained as set forth in section 14-498(i)(3), article IV (subdivisions) of this chapter.

The density for a planned residential unit development shall not exceed one (1) dwelling unit per forty thousand (40,000) square feet of net area. Net area shall be determined by subtracting from the gross area of the site the area of street rights-of-way, slopes of fifteen (15) percent or greater, wetland.

Such development shall be subject to review and approval by the Planning Board with respect to the requirements of article V (site plan) and article IV (subdivisions) of this chapter, whether or not such development is a subdivision within the meaning of article IV of this chapter as now enacted or as hereafter amended.

(c) Agriculture.

(d) Boat houses and store houses for fishing equipment.

(e) Parking and storage of equipment related to agriculture or commercial fishing.

(f) Accessory uses customarily incidental and subordinate to the location, function, and operation of principal uses, subject to the provisions of section 14-404 (accessory use) of this article, including but not limited to (a) home occupations, (b) temporary private tenting with one (1) tent accessory to a principal residential use provided that adequate water supplies and sanitation facilities are available in connection with the principal residential use, and (c) road side stands less than two hundred (200) square feet in floor area for the sale of agricultural products produced on the premises and the sale of fish and shellfish caught by the occupant of the dwelling or principal structure.

(g) Handicapped family unit, as defined in section 14-47, for handicapped persons, plus staff.

(h) Wind energy systems, as defined and allowed in Article X, Alternative Energy.

(Ord. No. 27-85, § 1, 7-15-85; Ord. No. 160-89, § 1, 12-11-89; Ord. No. 33-91, § 10, 1-23-91; Ord. No. 33-11/12, 1-18-12)

Sec. 14-145.3. Conditional uses.

The following uses are permitted only upon the issuance of a conditional use permit, subject to the provisions of section 14-474 (conditional uses) of this article and any special provisions, standards or requirements specified below:

(a) *Residential:*

1. Accessory dwelling unit within and clearly subordinate to a principal single-family detached dwelling, provided that:

   a. The accessory unit shall be no more than thirty-five (35) percent of the gross habitable floor area of the building and shall

have a minimum floor area of four hundred (400) square feet;

b. Lot area shall be seventy thousand (70,000) square feet;

c. There shall be no open outside stairways or fire escapes above the ground floor;

d. Any additions or exterior alterations such as facade materials, building form, roof pitch and exterior doors shall be designed to be compatible with the architectural style of the building and preserve the single-family appearance of the building. The exterior design of new construction including facade materials, building form, roof pitch and exterior doors shall have a single-family appearance;

e. A lower level dwelling unit shall have a minimum two-thirds of its floor-to-ceiling height above the average adjoining ground level;

f. Either the accessory unit or the principal dwelling shall be occupied by the owner of the lot on which the principal building is located, except for bonafide temporary absences; and

g. All sanitary waste shall be disposed of by a public sewer, subsurface sewerage system or other method in compliance with state and local regulations.

(b) ***Institutional:*** Any of the following uses provided that, notwithstanding section 14-474(a) (conditional uses) of this article or any other provision of this Code, the Planning Board shall be substituted for the board of appeals as the reviewing authority:

1. Schools and other educational facilities including seasonal camps other than campgrounds;

2. Places of assembly, excluding yacht clubs and marinas;

3. Municipal uses, provided that outside storage and parking areas are suitably screened and landscaped to ensure compatibility with the surrounding neighborhood;

Such uses shall be subject to the following standards if the total land area is two (2) acres or more:

a. In the case of expansion of existing such uses onto land other than the lot on which the principal use is located, it shall be demonstrated that the proposed use cannot reasonably be accommodated on the existing site through more efficient utilization of land or buildings, and will not cause significant physical encroachment into established residential area;

b. The proposed use will not cause significant displacement or conversion of residential uses existing as of July 15, 1985, or thereafter; and

c. In the case of a use or use expansion which constitutes a combination of the above listed uses with capacity for concurrent operations, the applicable minimum lot sizes shall be cumulative.

d. Article V (site plan) sections 14-522 and 14-523 notwithstanding, in the case of places of assembly the proposed use shall be subject to the requirements of article V (site plan) of this chapter; and

e. In the case of community halls:

i. The structure was in existence as of January 4, 2010.

ii. The structure was built for

institutional or other non-residential uses;

iii. The structure is operated by, or operated subject to the control of, a not-for-profit entity in accordance with its not-for-profit purposes; and

iv. A parking management plan is submitted for review and approval by the planning board; and

f. In the case of private club or fraternal organizations: any such establishment serving alcoholic beverages or in possession of a license for serving alcoholic beverages shall be located on a large lot, as specified in the minimum lot size provisions of this section.

(c) *Other:*

1. Utility substations including sewage and water pumping stations and standpipes, electric power substations, transformer stations, telephone electronic equipment enclosures, and other similar structures, provided that such uses are suitably screened and landscaped so as to ensure compatibility with the surrounding neighborhood;

2. Nursery schools and kindergarten;

3. Cemeteries;

4. Raising of domesticated animals, excluding pigs and reptiles, with no animals kept on any lot less than three (3) acres or closer than one hundred (100) feet to any street or lot line, except domesticated chickens as regulated in chapter 5, and provided that such use will not create any odor, noise, health or safety hazards, or other nuisance to neighboring properties;

5. Wharves, piers, docks, or landing ramps;

6. Campgrounds, excluding recreational vehicles,

licensed by the State of Maine Department of Human Services provided that:

a. No tent shall be located within seventy-five (75) feet of the perimeter of site;

b. The land area of the park shall not be less than the equivalent of five thousand (5,000) square feet of land area per tent site exclusive of the roadway network;

c. Site plan review and approval by the Planning Board shall be required.

7. Day care facilities or home babysitting services not permitted as a home occupation under section 14-410, subject to the following conditions:

a. The facility shall be located in a structure in which there is one (1) or more occupied residential units or in an existing accessory structure, unless the facility is located in a principal structure that has not been used as a residence in whole or in part within the five (5) years immediately preceding the application for a day care or home babysitting use or in a nonresidential structure accessory to the principal nonresidential use.

b. The maximum capacity shall be twelve (12) children for facilities located in residential or existing structures accessory thereto, unless the additional standards in subsection v. are met. There shall be no maximum limit on the number of children in a facility located in a principal structure that has not been used as a residence in whole or in part within the five (5) years immediately preceding the application for a day care or home babysitting use, or in a nonresidential structure accessory thereto, provided that any such structure that serves more than twelve (12) children shall be subject to review under article V of this chapter.

c. Outdoor play areas shall be screened and buffered from surrounding residences with landscaping and/or fencing to minimize visual and noise impacts.

d. Solid waste shall be stored in covered containers. Such containers shall be screened on all four (4) sides.

e. Day care facilities, nursery schools and kindergartens located either in structures that have been in residential use within the past five (5) years or in existing accessory structures and that serve between thirteen (13) and twenty-four (24) children shall meet the following additional standards:

i. The facility shall provide a minimum of seventy-five (75) square feet of outdoor play area per child;

ii. The play area shall be located in the side and rear yards only and shall not be located in front yards;

iii. Outside play areas shall be separated from abutting properties by a fence at least forty-eight (48) inches in height;

iv. A ten-foot wide landscaped buffer shall be required outside of the fenced play area, and shall be established in accordance with the landscaping standards of the City's Technical Standards and Guidelines;

v. The minimum lot size for a day care facility located in a residential or existing accessory structure and serving more than twelve (12) children shall be twenty thousand (20,000) square feet;

vi. ***Off-street parking:*** Off-street parking is required as provided in division 20 (off-street parking) of this article.

vii. The maximum number of children in a day care facility located in a residential or existing accessory structure shall be twenty-four (24); and

viii. Any additions or exterior alterations such as facade materials, building form, roof pitch, and exterior doors shall be designed to be compatible with the architectural style of the building and preserve the residential appearance of the building.

8. Temporary wind anemometer towers, as defined in Sec 14-47, are permitted provided the following standards are met in addition to Sec 14-430:

a. Towers may be installed for the purpose of wind data collection for no more than two (2) years after the issuance of a Certificate of Occupancy for the tower. At the conclusion of the aforementioned two (2) years, the tower must be dismantled and removed from the site within sixty (60) days; and

b. Towers shall be constructed according to plans and specifications stamped by a licensed professional engineer, which shall be provided to the Board of Appeals with the application; and

c. Towers shall be set back from habitable buildings by a distance equal to 1.1 times the tower height; and

d. The applicant shall provide a safety report prepared and stamped by a licensed professional engineer to the Board of Appeals with their application for conditional use, which demonstrates how the proposed temporary wind anemometer tower is safe in terms of strength,

stability, security, grounding, icing impacts and maintenance; and

e. The applicant shall provide evidence of commercial general liability insurance, such insurance to be satisfactory to Corporation Counsel and cover damage or injury resulting from construction, operation or dismantling of any part of the temporary wind anemometer tower; and

f. Towers and associated guy wires shall be sited to minimize their prominence from and impacts on public ways (including pedestrian ways); and

g. Towers shall be used for installing anemometers and similar devices at a range of heights from the ground to measure wind characteristics (speed, direction, frequency) and related meteorological data, but shall not be used for any other purpose; and

h. A performance guarantee shall be required for the cost of removal of the tower, guy wires and anchors. This requirement may be satisfied by surety bond, letter of credit, escrow account or by evidence, acceptable to the City, or the financial and technical ability and commitment of the applicant or its agents to remove the facility at the end of the use period.

9. Wind energy systems, as defined and allowed in Article X, Alternative Energy.

(Ord. No. 27-85, § 1, 7-15-85; Ord. No. 160-89, § 2, 12-11-89; Ord. No. 133-96, § 8, 11-18-96; Ord. No. 153-08/09; Ord. No. 29-09/10, 8-3-09 emergency passage; Ord. No. 127-09/10, 1-4-10 emergency passage; Ord. 240-09/10, 6-21-10; Ord. No. 9 10/11, 8-2-10; Ord. No. 33-11/12, 1-18-12)

Sec. 14-145.4. Prohibited uses.

Uses that are not expressly enumerated herein as either permitted uses or conditional uses are prohibited.

(Ord. No. 27-85, § 1, 7-15-85)

Sec. 14-145.5. Dimensional requirements.

In addition to the provisions of division 25 (space and bulk regulations and exceptions) of this article, lots in the IR-1 zone shall meet the following minimum requirements:

(a) *Minimum lot size*

1. Residential: Forty thousand (40,000) square feet for lots with public water; sixty thousand (60,000) square feet for lots without public water; except as provided in section 14-433 (lots of record and accessory structure setbacks for existing buildings) and section 14-145.3(a)1 of this article.

2. Schools and other educational facilities: Forty thousand (40,000) square feet.

3. Places of assembly:

Large	30,000 sq. ft.
Medium	15,000 sq. ft.
Small	7,500 sq. ft.

4. Seasonal camps and campgrounds: Ten (10) acres.

5. Animal raising: Three (3) acres.

6. In issuing any permit for new development, the building or planning authority shall require that any lot located in the IR-1 zone shall be at least forty thousand (40,000) square feet in area when the lot is to be serviced by a subsurface wastewater disposal system, except those lots which are located in a subdivision approved by the Planning Board after June 8, 1968, and excluding Peaks Island.

7. Excluding Peaks Island from this subsection h., any property owner whose lot does not meet the minimum lot size requirements outlined in subsection g. of this section may, for purposes of this section only, merge two (2) or more separate lots on the

same island in order to meet these requirements. Where the lots so merged are not contiguous, the property owner shall grant to the city as holder a conservation easement upon the lot or lots which will not contain the principal structure. The conservation easement shall contain both an existing legal description and a city assessor's chart, block and lot description. The building authority shall be authorized to accept such conservation easements on behalf of the city. Said easement shall be recorded by the applicant in the registry of deeds. A copy of the recorded easement and copies of the deeds for both lots shall be submitted to the building authority prior to issuance of a building permit. The property over which the conservation easement has been granted shall be used for passive recreational and conservation purposes only, and shall be subject to the following restrictions:

a. No structure shall be permitted on this property.

b. No parking or storage of vehicles or machinery shall be permitted on this property at any time.

c. No area of this property shall be paved.

d. No exterior storage for commercial use shall be permitted on this property.

e. The easement deed shall reference the lot which is benefited by this conservation easement. No conservation easement shall be used to benefit more than one (1) lot.

Conservation easements shall only be granted over lots which conform either to the provisions of section 14-433 or to the minimum lot sizes set forth in (a)1 of this section. Conservation easements shall not be granted over any lot which is encumbered by any other easement which prohibits all construction on that lot. A conservation easement may also name as a holder or grant a

third-party right of enforcement to a nonprofit corporation or charitable trust, the purposes or powers of which include retaining or protecting the natural, scenic or open space values of real property; assuring the availability of real property for agricultural, forest, recreational or open space use; protecting natural resources; or maintaining or enhancing air or water quality of real property.

Nothing in this section shall be construed to allow an owner of a currently existing and developed lot to convey or permit a portion of that lot to be used to fulfill the requirements of this section if such conveyance would render the existing lot nonconforming under the terms of this chapter. The lot upon which a building is to be constructed shall meet the minimum lot size requirements of section 14-433.

8. Where an existing subsurface wastewater disposal system serving an existing structure requires replacement, the replacement system shall meet the applicable requirements of CMR 241 Section 2-E. The land area requirements in subsection g. of this section shall not apply to such a replacement system.

For purposes of this subsection, the mean high tide mark shall be considered to be the shoreline lot line.

(b) *Minimum street frontage:*

One hundred (100) feet, except that a lot of record as described in section 14-433 (lots of record and accessory structure setbacks for existing buildings) and lots created after July 15, 1985, which are not part of a subdivision need not provide street frontage if access is available by means of a permanent easement or right-of-way which existed as of July 15, 1985. Such easement or right-of-way shall have a minimum width of sixteen (16) feet and a minimum travel width of eight (8) feet except that an easement or right-of-way providing access for three (3) or more lots or providing the only means of access to a parcel or parcels of three (3) acres

or more, shall conform to the requirements contained within the City of Portland Technical Manual and meet the construction requirements of article III of chapter 25 (street acceptances) of this Code. Such easement or right-of-way shall be sufficient to permit municipal service delivery.

(c) *Minimum yard dimensions:*

Yard dimensions shall include setbacks of structures from property lines and setbacks of structures from one another. No structure shall occupy the minimum yard of another structure.

1. *Front yard:* Principal or accessory structures: Thirty (30) feet.

2. *Rear yard:* Principal or accessory structures with ground coverage greater than one hundred (100) square feet: Thirty (30) feet.

   Accessory detached structures with ground coverage of one hundred and forty-four (144) square feet or less: Ten (10) feet.

3. *Side yard:* Principal or accessory structures with ground coverage greater than one hundred (100) square feet: Twenty (20) feet.

   Accessory detached structures with ground coverage of one hundred and forty-four (144) square feet or less: Fifteen (15) feet, except that the minimum distance from a principal structure may be five (5) feet.

4. *Side yard on side streets:* Principal or accessory structures: Twenty (20) feet.

(d) *Maximum lot coverage:* Twenty (20) percent of lot area.

(e) *Minimum lot width:* One hundred (100) feet.

(f) *Maximum structure height:*

1. Principal or accessory attached structure:

Thirty-five (35) feet.

2. Accessory detached structure: Eighteen (18) feet.

(g) *Maximum floor area for places of assembly on a collector or arterial road:*

Large	Not limited
Medium	4,500 sq. ft.
Small	2,250 sq. ft.

(h) *Maximum floor area for places of assembly not on a collector or arterial road:*

Large	4,500 sq. ft.
Medium	2,250 sq. ft.
Small	1,125 sq. ft.

(Ord. No. 27-85, § 1, 7-15-85; Ord. No. 160-89, § 3, 12-11-89; Ord. No. 218-04/05, 5-2-05; Ord. No. 131-08/09, 12-15-08; Ord. No. 127-09/10, 1-4-10 emergency passage; Ord. No. 278-09/10, 7-19-10)

Sec. 14-145.6. Other requirements

Other requirements include the following:

(a) Off-street parking shall be required as provided in division 20 (off-street parking) of this article.

(b) *Shoreland and flood plain management regulations:* Any lot or portion of a lot located in a shoreland zone as identified on the city shoreland zoning map or in a flood hazard zone shall be subject to the requirements of division 26 and/or division 26.5.

(c) *Storage of vehicles:* Only one (1) unregistered motor vehicle may be stored outside on the premises and not for a period exceeding thirty (30) days.

(Ord. No. 27-85, § 1, 7-15-85; Ord. No. 15-92, § 12, 6-15-92)

DIVISION 7.2. IR-2 ISLAND RESIDENTIAL ZONE

Sec. 14-145.7. Purpose.

The purpose of the IR-2 island residential zone is to protect

the character of existing developed residential neighborhoods on the islands and to allow infill where there are adequate public services available. Expansion or extension of an existing IR-2 zone should be strictly limited, generally focused toward areas adjacent to existing village IR-2 areas, and restricted by such factors as adequacy of access, whether adequate water will be available for private use and for fire protection, and whether soils in the area are adequate for subsurface water disposal or whether public sewers are available. IR-2 rezoning on substantially sized parcels should not be considered for those sites that should be more appropriately zoned I or IR-3.
(Ord. No. 28-85, § 1. 7.15-85)

Sec. 14-145.8. Permitted use.

The following uses are permitted in the IR-2 island residential zone:

(a) Single-family detached dwellings.

(b) Planned residential unit development with a minimum gross area, as defined in section 14-47 (definitions) of this article, of at least five (5) acres of contiguous land, consisting of detached dwellings. Minimum yard dimensions (section 14-145.11(c)), street frontage (section 14-145.11(b)), and lot width (section 14-145.11(e)) shall be reduced up to fifty (50) percent of what would otherwise be required. Minimum lot area (section 14-145.11(a)) shall be reduced up to fifty (50) percent, provided there is an equivalent corresponding increase in common or public open space that is usable for passive or active recreational opportunities or that serves as buffer between the buildings or between the development and the surrounding neighborhood.

All area in such a development which is to be owned or used in common shall be governed and maintained as set forth in section 14-498(i)(3), article IV (subdivisions) of this chapter.

The density for a planned residential unit development shall not exceed one (1) dwelling unit per twenty thousand (20,000) square feet of net area. Net area shall be determined by subtracting from the gross area of the site the area of street rights-of-way, slopes of fifteen

(15) percent or greater, wetlands.

Such development shall be subject to review and approval by the Planning Board with respect to requirements of article V (site plan) and article IV (subdivisions) of this chapter, whether or not such development is a subdivision within the meaning of article IV of this chapter as now enacted or as hereafter amended.

(c) Boathouses and storehouses for fishing equipment.

(d) Parking and storage of equipment related to commercial fishing.

(e) Accessory uses customarily incidental and subordinate to the location, function and operation of principal uses, subject to the provisions of section 14-404 (accessory use) of this article including but not limited to (a) home occupations, (b) private temporary tenting with one (1) tent accessory to a principal residential use, provided that adequate water supplies and sanitation facilities are available in connection with the principal residential use, and (c) roadside stands less than two hundred (200) square feet in floor area for the sale of agricultural products produced on the premises, and the sale of fish and shellfish caught by the occupant of the dwelling or principal structure.

(f) Handicapped family unit, as defined in section 14-47, for handicapped persons plus staffs.

(g) Wind energy systems, as defined and allowed in Article X, Alternative Energy.

(Ord. No. 28-85, § 1, 7-15-85; Ord. No. 161-89, § 1, 12-11-89; Ord. No. 33-91, § 11, 1-23-91; Ord. No. 33-11/12, 1-18-12)

Sec. 14-145.9. Conditional uses.

The following uses are permitted only upon the issuance of a conditional use permit, subject to the provisions of section 14-474 (conditional uses) of this article and any special provisions, standards or requirements specified below:

(a) *Residential:*

1. Accessory dwelling unit within and clearly subordinate to a principal single-family detached dwelling provided that:

   a. The accessory unit shall be no more than thirty-five (35) percent of the gross floor area of the principal building and shall have a minimum floor area of four hundred (400) square feet;

   b. Lot area shall be thirty thousand (30,000) square feet;

   c. There shall be no open outside stairways or fire escapes above the ground floor;

   d. Any additions or exterior alterations such as facade materials, building form, roof pitch, and exterior doors shall be designed to be compatible with the architectural style of the building and preserve the single-family appearance of the building. The exterior design of new construction including facade materials, building form, roof pitch and exterior doors shall have a single-family appearance;

   e. A lower level dwelling unit shall have a minimum two-thirds of its floor-to-ceiling height above the average adjoining ground level;

   f. Either the accessory unit or the principal dwelling shall be occupied by the owner of the lot on which the principal building is located, except for bona fide temporary absences; and

   g. All sanitary waste shall be disposed of by a public sewer, subsurface sewerage system or other method in compliance with state and local regulations.

(b) ***Institutional:*** Any of the following uses provided that, notwithstanding section 14-474(a) (conditional uses) of this

article or any other provision of this Code, the Planning Board shall be substituted for the board of appeals as the reviewing authority:

1. Schools and other educational facilities;

2. Places of assembly, excluding yacht clubs and marinas;

3. Municipal uses, provided that outside storage and parking areas are suitably screened and landscaped to ensure compatibility with the surrounding neighborhood;

   Such uses shall be subject to the following standards if the total land area of the use is two (2) acres or more:

   a. In the case of expansion of existing such uses onto land other than the lot on which the principal use is located, it shall be demonstrated that the proposed use cannot reasonably be accommodated on the existing site through more efficient utilization of land or buildings, and will not cause significant physical encroachment into established residential area;

   b. The proposed use will not cause significant displacement or conversion of residential uses existing as of July 15, 1985, or thereafter; and

   c. In the case of a use or use expansion which constitutes a combination of the above-listed uses with capacity for concurrent operations, the applicable minimum lot sizes shall be cumulative; and

   d. Article V (site plan) sections 14-522 and 14-523 notwithstanding, in the case of places of assembly the proposed use shall be subject to the requirements of article V (site plan) of this chapter; and

e. In the case of community halls:

i. The structure was in existence as of January 4, 2010.

ii. The structure was built for institutional or other non-residential uses;

iii. The structure is operated by, or operated subject to the control of, a not-for-profit entity in accordance with its not-for-profit purposes; and

iv. A parking management plan is submitted for review and approval by the planning board; and

f. In the case of private club or fraternal organizations: any such establishment serving alcoholic beverages or in possession of a license for serving alcoholic beverages shall be located on a large lot, as specified in the minimum lot size provisions of this section.

(c) *Other:*

1. Utility substations including sewage and water pumping stations and standpipes, electric power substations, transformer stations, telephone electronic equipment enclosures, and other similar structures, provided that such uses are suitably screened and landscaped so as to ensure compatibility with the surrounding neighborhood;

2. Nursery schools and kindergartens;

3. Cemeteries;

4. Wharves, piers, docks, or landing ramps;

5. Lodging houses, with more than two (2) but not more than nine (9) lodging rooms.

6. Day care facilities or home babysitting services not permitted as a home occupation under section 14-410, subject to the following conditions:

a. The facility shall be located in a structure in which there is one (1) or more occupied residential units or in an existing accessory structure, unless the facility is located in a principal structure that has not been used as a residence in whole or in part within the five (5) years immediately preceding the application for a day care or home babysitting use or in a nonresidential structure accessory to the principal nonresidential use.

b. The maximum capacity shall be twelve (12) children for facilities located in residential or existing structures accessory thereto, unless the additional standards in subsection v. are met. There shall be no maximum limit on the number of children in a facility located in a principal structure that has not been used as a residence in whole or in part within the five (5) years immediately preceding the application for a day care or home babysitting use, or in a nonresidential structure accessory thereto, provided that any such structure that serves more than twelve (12) children shall be subject to review under article V of this chapter.

c. Outdoor play areas shall be screened and buffered from surrounding residences with landscaping and/or fencing to minimize visual and noise impacts.

d. Solid waste shall be stored in covered containers. Such containers shall be screened on all four (4) sides.

e. Day care facilities, nursery schools and kindergartens located either in structures that have been in residential use within the past five (5) years or in existing accessory structures and that serve between thirteen

(13) and twenty-four (24) children shall meet the following additional standards:

i. The facility shall provide a minimum of seventy-five (75) square feet of outdoor play area per child;

ii. The play area shall be located in the side and rear yards only and shall not be located in front yards;

iii. Outside play areas shall be separated from abutting properties by a fence at least forty-eight (48) inches in height;

iv. A ten-foot wide landscaped buffer shall be required outside of the fenced play area, and shall be established in accordance with the landscaping standards of the City's Technical Standards and Guidelines;

v. The minimum lot size for a day care facility located in a residential or existing accessory structure and serving more than twelve (12) children shall be twenty thousand (20,000) square feet;

vi. ***Off-street parking:*** Off-street parking is required as provided in division 20 (off-street parking) of this article.

vii. The maximum number of children in a day care facility located in a residential or existing accessory structure shall be twenty-four (24); and

viii. Any additions or exterior alterations such as facade materials, building form, roof pitch, and exterior doors shall be designed to be compatible with the architectural style of the building and preserve the residential appearance of the building.

7. Temporary wind anemometer towers, as defined in Sec 14-47, are permitted provided the following standards are met in addition to Sec 14-430:

   a. Towers may be installed for the purpose of wind data collection for no more than two (2) years after the issuance of a Certificate of Occupancy for the tower. At the conclusion of the aforementioned two (2) years, the tower must be dismantled and removed from the site within sixty (60) days; and

   b. Towers shall be constructed according to plans and specifications stamped by a licensed professional engineer, which shall be provided to the Board of Appeals with the application; and

   c. Towers shall be set back from habitable buildings by a distance equal to 1.1 times the tower height; and

   d. The applicant shall provide a safety report prepared and stamped by a licensed professional engineer to the Board of Appeals with their application for conditional use, which demonstrates how the proposed temporary wind anemometer tower is safe in terms of strength, stability, security, grounding, icing impacts and maintenance; and

   e. The applicant shall provide evidence of commercial general liability insurance, such insurance to be satisfactory to Corporation Counsel and cover damage or injury resulting from construction, operation or dismantling of any part of the temporary wind anemometer tower; and

   f. Towers and associated guy wires shall be sited to minimize their prominence from and impacts on public ways (including

pedestrian ways); and

g. Towers shall be used for installing anemometers and similar devices at a range of heights from the ground to measure wind characteristics (speed, direction, frequency) and related meteorological data, but shall not be used for any other purpose; and

h. A performance guarantee shall be required for the cost of removal of the tower, guy wires and anchors. This requirement may be satisfied by surety bond, letter of credit, escrow account or by evidence, acceptable to the City, or the financial and technical ability and commitment of the applicant or its agents to remove the facility at the end of the use period.

8. Wind energy systems, as defined and allowed in Article X, Alternative Energy.

(Ord. No. 28-85, § 1, 7-15-85; Ord. No. 161-89, § 2, 12-11-89; Ord. No. 235-91, § 15, 2-4-91; Ord. No. 133-96, § 9, 11-18-96; Ord. No. 29-09/10, 8-3-09 emergency passage; Ord. No. 127-09/10, 1-4-10 emergency passage; Ord. No. 240-09/10, 6-21-10; Ord. No. 9 10/11, 8-2-10; Ord. No. 149-10/11 3-7-11; Ord. No. 33-11/12, 1-18-12)

Sec. 14-145.10. Prohibited uses.

Uses that are not expressly enumerated herein as either permitted uses or conditional uses are prohibited.

(Ord. No. 28-85, § 1, 7-15-85)

Sec. 14-145.11. Dimensional requirements.

In addition to the provisions of division 25 (space and bulk regulations and exceptions) of this article, lots in an IR-2 zone shall meet the following minimum requirements:

(a) *Minimum lot size:*

1. Residential: Twenty thousand (20,000) square feet, except as provided in section 14-433 (lots of record and accessory structure setbacks for existing buildings) and section 14-145.9(a)1 of

this article.

2. Schools and other educational facilities: Twenty thousand (20,000) square feet.

3. Places of assembly:

Large	30,000 sq. ft.
Medium	15,000 sq. ft.
Small	7,500 sq. ft.

4. Lodging houses: Thirty thousand (30,000) square feet for three (3) lodging rooms, plus ten thousand (10,000) square feet for each additional lodging room in excess of three (3).

5. In issuing any permit for new development, the building or planning authority shall require that any lot located in an IR-2 zone shall be at least twenty thousand (20,000) square feet in area when the lot is to be serviced by a subsurface wastewater disposal system, except those lots which are located in a subdivision approved by the Planning Board after June 8, 1968, [and excluding Peaks Island].

6. [Excluding Peaks Island from this subsection 7.,] any property owner whose lot does not meet the minimum lot size requirements outlined in subsection f. of this section may, for purposes of this section only, merge two (2) or more separate lots on the same island in order to meet these requirements. Where the lots so merged are not contiguous, the property owner shall grant to the city as holder a conservation easement upon the lot or lots which will not contain the principal structure. The conservation easement shall contain both an existing legal description and a city assessor's chart, block and lot description. The building authority shall be authorized to accept such conservation easements on behalf of the city. Said easement shall be recorded by the applicant in the registry of deeds. A copy of the recorded easement and copies of the deeds for both lots shall be submitted to the building authority prior

to issuance of a building permit. The property over which the conservation easement has been granted shall be used for passive recreational and conservation purposes only, and shall be subject to the following restrictions:

a. No structure shall be permitted on this property.

b. No parking or storage of vehicles or machinery shall be permitted on this property at any time.

c. No area of this property shall be paved.

d. No exterior storage for commercial use shall be permitted on this property.

e. The easement deed shall reference the lot which is benefited by this conservation easement. No conservation easement shall be used to benefit more than one (1) lot.

Conservation easements shall only be granted over lots which conform either to the provisions of section 14-433 or to the minimum lot sizes set forth in (a)1 of this section. Conservation easements shall not be granted over any lot which is encumbered by any other easement which prohibits all construction on that lot.

A conservation easement may also name as a holder or grant a third-party right of enforcement to a nonprofit corporation or charitable trust, the purposes or powers of which include retaining or protecting the natural, scenic or open space values of real property; assuring the availability of real property for agricultural, forest, recreational or open space use; protecting natural resources; or maintaining or enhancing air or water quality of real property.

Nothing in this section shall be construed to allow an owner of a currently existing and developed lot to convey or permit a portion of that lot to be

used to fulfill the requirements of this section if such conveyance would render the existing lot nonconforming under the terms of this chapter. The lot upon which a building is to be constructed shall meet the minimum lot size requirements of section 14-433.

7. Where an existing subsurface wastewater disposal system serving an existing structure requires replacement, the replacement system shall meet the requirements of CMR 241 Section 2-E. The land area requirements in subsection f. of this section shall not apply to such a replacement system.

   For purposes of this subsection, the mean high tide mark shall be considered to be the shoreline lot line.

(b) *Minimum street frontage:*

Seventy (70) feet, except that a lot of record as described in section 14-433 (lots of record and accessory structure setbacks for existing buildings) and lots created after July 15, 1985, which are not part of a subdivision need not provide street frontage if access is available by means of a permanent easement or right-of-way which existed as of July 15, 1985. Such easement or right-of-way shall have a minimum width of sixteen (16) feet and a minimum travel width of eight (8) feet except that an easement or right-of-way providing access for three (3) or more lots or providing the only means of access to a parcel or parcels of three (3) acres or more, shall be a minimum thirty-two (32) feet wide and meet the construction requirements of article III of chapter 25 (street acceptances) of this Code. Such easement or right-of-way shall permit municipal service delivery.

(c) *Minimum yard dimensions:*

(Yard dimensions shall include setbacks of structures from property lines and setbacks of structures from one another. No structure shall occupy the minimum yard of another structure.)

1. ***Front yard:*** Principal or accessory structures: Twenty-five (25) feet except that a front yard need not exceed the average depth of front yards on either side of the lot.

2. ***Rear yard:*** Principal or accessory structures with ground coverage greater than one hundred (100) square feet: Twenty-five (25) feet.

   Accessory detached structures with ground coverage of one hundred and forty-four(144) square feet or less: Ten (10) feet.

3. ***Side yard:*** Principal or accessory structures with ground coverage greater than one hundred (100) square feet: Twenty (20) feet.

   Accessory detached structures with ground coverage of one hundred and forty-four (144) square feet or less: fifteen (15) feet, except that the minimum distance from a principal structure may be five (5) feet.

4. ***Side yard on side streets:*** Principal or accessory structures: Twenty (20) feet.

5. Not withstanding the foregoing, the width of one side-yard may be reduced to not less than ten feet in the case of a lot of record, existing as of June 5, 1957, and which contained a structure in use at that time and at all times subsequent thereto as a year-round, single-family residence, and which is served by public sewer and water, at the time of any expansion permitted by this section, where the reduction is necessary either to bring the use into compliance with health and safety codes or to improve a condition which the Board of Appeals determines constitutes a health or safety problem. Any alteration or expansion authorized by this section may only be situated in the rear yard and shall not encroach into the required setback more than the existing building does prior to the construction of such alteration or expansion. Any such alteration or expansion will be subject to the maximum lot coverage requirements applicable to

this zone; and, cumulatively, during the lifetime of the structure, may not exceed forty percent (40%) of the combined floor area of the habitable rooms existing at the time of the first expansion permitted by this section. For the purposes of this section "floor area" and "habitable room" shall have the same meaning ascribed to them in Portland Municipal Code, §6-106, et seq., Housing Code, as it may be amended from time to time.

(d) ***Maximum lot coverage:*** Twenty (20) percent of lot area.

(e) ***Minimum lot width:*** Eighty (80) feet.

(f) ***Maximum structure height:***

1. Principal or accessory attached structure: Thirty-five (35) feet. For Little Diamond Island only: Twenty (27) feet.

2. Accessory detached structure: Eighteen (18) feet.

(g) ***Maximum floor area for places of assembly on a collector or arterial road:***

Large	Not limited
Medium	4,500 sq. ft.
Small	2,250 sq. ft.

(h) ***Maximum floor area for places of assembly not on a collector or arterial road:***

Large	4,500 sq. ft.
Medium	2,250 sq. ft.
Small	1,125 sq. ft.

(Ord. No. 28-85, § 1, 7-15-85; Ord. No. 161-89, § 3, 12-11-89; Ord. No. 215-02, 4-17-02; Ord. No. 76-03/04, 10-20-03; Ord. No. 131-08/09, 12-15-08; Ord. No. 127-09/10, 1-4-10 emergency passage)

Sec. 14-145.12. Other requirements.

Other requirements include the following:

(a) ***Off-street parking:*** Off-street parking shall be required as provided in division 20 (off-street parking) of this article.

(b) ***Shoreland and flood plain management regulations:*** Any lot or portion of a lot located in a shoreland zone as identified on the city shoreland zoning map or in a flood hazard zone shall be subject to the requirements of division 26 and/or division 26.5.

(c) ***Storage of vehicles:*** Only one (1) unregistered motor vehicle may be stored outside on the premises and not for a period exceeding thirty (30) days.
(Ord. No. 28-85, § 1, 7-15-85; Ord. No. 15-92, § 13, 6-15-92)

DIVISION 7.3. IR-3 ISLAND RESIDENTIAL ZONE

Sec. 14-145.13. Purpose.

The purpose of the IR-3 island residential zone is to allow for a planned unit development in a manner compatible with both the natural and built environment, which provides for adequate circulation and waterfront access, adequate water supply for private use and fire protection, and safe and clean disposal of solid and septic wastes. The following guidelines shall be considered, among others, in establishing an IR-3 zone:

(a) An IR-3 zone should have a minimum land area of twenty (20) acres;

(b) A site for an IR-3 zone should be able to accommodate a higher density of development by providing buffers from surrounding areas on a substantially sized parcel for which natural amenities are capable of being conserved in a development plan for the site;

(c) IR-3 zones should not be established unless issues of municipal services, including infrastructure, education, and police and fire services and other municipal services can be appropriately and adequately addressed;

(d) The differences in scale and intensity of uses between existing development and the IR-3 zone, and the cumulative impact on the overall density of the island, should be mitigated by appropriate open space and buffer areas; and

(e) The development plan should have the capability of meeting the development review standards of section

14-145.16.
(Ord. No. 29-85, § 1, 7-15-85)

Sec. 14-145.14. Permitted uses.

The following uses are permitted in the IR-3 island residential zone:

(a) Planned unit development, including:

1. Single-family detached dwellings;

2. Single-family attached dwellings provided that new construction shall be limited to no more than six (6) attached dwellings per building;

3. Lodging houses, with more than two (2) but not more than nine (9) lodging rooms;

4. Inns, provided that the total number of rooms does not exceed fifty (50);

5. Restaurants;

6. Retail businesses or services;

7. Campgrounds, excluding recreation vehicles, licensed by the State of Maine Department of Human Services provided that:

   a. No tent shall be located within seventy-five (75) feet of the perimeter of the site;

   b. The land area of the site shall not be less than the equivalent of five thousand (5,000) square feet of land area per tent site, exclusive of the roadway network;

8. Recreation facilities excluding amusement park;

9. Wharves, docks, piers, landing ramps, boat houses, store houses for fishing equipment, marinas, and yacht clubs;

10. Municipal uses, provided that outside storage and

parking areas are suitably screened and landscaped so as to ensure compatibility with surrounding neighborhood;

11. Private clubs, fraternal organizations;

12. Utility substations including sewage and water pumping stations and standpipes, electric power substations, transformer stations, telephone electronic equipment enclosures, and other similar structures, provided that such uses are suitably screened and landscaped so as to ensure compatibility with the surrounding neighborhood;

13. Nursery schools, kindergartens, and day care facilities for seven (7) or more children;

14. Schools;

15. Churches or other places of worship;

16. Accessory uses customarily incidental and subordinate to the location, function, and operation of principal uses, subject to the provisions of section 14-404 (accessory use) of this article including but not limited to home occupations; and

17. Handicapped family unit, as defined in section 14-47, for handicapped persons plus staff.

Such development shall have a minimum gross area, as defined in section 14-47 (definitions) of this article, of at least twenty (20) acres of contiguous land. No dimensional requirements shall apply with respect to such development except for the following:

a. Density requirements;

b. Height requirements;

c. Minimum front, rear and side yards adjoining any external property boundary;

d. Minimum street frontage except where the Planning Board finds that the development has an adequate street network sufficient to permit access for pedestrians and emergency and service vehicles.

All area in such a development which is to be owned, used in common, or is proposed for open space shall be governed and maintained as set forth in section 14-498(i)(3), article IV (subdivisions) of this chapter.

The maximum density for a planned unit development shall be based on the applicable minimum lot size for each use as measured in terms of net area. Net area shall be determined by subtracting from gross area the area of street rights-of-way, slopes of fifteen (15) percent or greater, wetland, and otherwise undevelopable area, unless such areas, excluding street rights-of-way, are dedicated to public recreational use or public pedestrian access and are usable as such. For purposes of calculating density, if separately described lots exceed the applicable minimum lot size, the excess area shall not be credited toward the minimum lot size for any other use.

Such development shall be subject to review and approval by the Planning Board with respect to the requirements of article V (site plan) and article IV (subdivisions) of this chapter, whether or not such development is a subdivision within the meaning of article IV of this chapter as now enacted or as hereafter amended. A planned unit development shall be approved by the Planning Board if, in addition to the above standards, it also finds that the development meets the following standards:

(i) ***Design relationship to site.*** The development demonstrates a reasonably unified response to the design possibilities of the site, by virtue of

such elements as the design and layout of buildings and lots, circulation plan, open space, drainage, and orientation to achieve energy conservation or solar access, to form a functionally integrated whole.

(ii) ***Design relationship to surrounding neighborhood.*** The design and layout of the development and buildings are reasonably compatible with the surrounding neighborhood by virtue of such features as architectural style, exterior finish, scale, circulation, open space, landscaping and preservation of natural site amenities.

(iii) ***Open space.*** All open spaces on the site are functionally integrated into the development plan by virtue of such features as accessibility to residents, recreation, conserving existing public rights of access to shoreland areas and scenic natural areas, orientation to achieve energy conservation or solar access, preservation of natural site amenities, and use as a buffer between the development and the surrounding neighborhood.

18. Wind energy ystems, as defined and allowed in Article X, Alternative Energy.

(Ord. No. 29-85, § 1, 7-15-85; Ord. No. 33-91, § 12, 1-23-91; Ord. No. 33-11/12)

Sec. 14-145.14.1. Conditional uses.

The following uses shall be permitted only upon the issuance of a conditional use permit, subject to the provisions of section 14-474 (conditional uses) and any special provisions, standards or requirements specified below:

(a) Temporary wind anemometer towers, as defined in Sec 14-47, are permitted provided the following standards are met in addition to Sec 14-430:

1. Towers may be installed for the purpose of wind data collection for no more than two (2) years after the issuance of a Certificate of Occupancy for the tower. At the conclusion of the aforementioned two (2) years, the tower must be dismantled and removed from the site within sixty (60) days; and

2. Towers shall be constructed according to plans and specifications stamped by a licensed professional engineer, which shall be provided to the Board of Appeals with the application; and

3. Towers shall be set back from habitable buildings by a distance equal to 1.1 times the tower height; and

4. The applicant shall provide a safety report prepared and stamped by a licensed professional engineer to the Board of Appeals with their application for conditional use, which demonstrates how the proposed temporary wind anemometer tower is safe in terms of strength, stability, security, grounding, icing impacts and maintenance; and

5. The applicant shall provide evidence of commercial general liability insurance, such insurance to be satisfactory to Corporation Counsel and cover damage or injury resulting from construction, operation or dismantling of any part of the temporary wind anemometer tower; and

6. Towers and associated guy wires shall be sited to minimize their prominence from and impacts on public ways (including pedestrian ways); and

7. Towers shall be used for installing anemometers and similar devices at a range of heights from the ground to measure wind characteristics (speed, direction, frequency) and related meteorological data, but shall not

be used for any other purpose; and

8. A performance guarantee shall be required for the cost of removal of the tower, guy wires and anchors. This requirement may be satisfied by surety bond, letter of credit, escrow account or by evidence, acceptable to the City, or the financial and technical ability and commitment of the applicant or its agents to remove the facility at the end of the use period.

(b) Wind energy systems, as defined and allowed in Article X, Alternative Energy.

(Ord. No. 29-09/10, 8-3-09, emergency passage; Ord. No. 33-11/12, 1-18-12)

Sec. 14-145.15. Prohibited uses.

Uses that are not expressly enumerated herein as either permitted uses or conditional uses are prohibited.

(Ord. No. 29-85, § 1, 7-15-85)

Sec. 14-145.16. Development review.

In addition to other applicable requirements, no development shall occur nor shall any new use be established unless the Planning Board finds that the final development plan for the site is in compliance with the following development standards:

(a) *Transportation:* The development shall be designed primarily with a pedestrian orientation to minimize the use of and dependency on private motor vehicles. Appropriate areas on the site shall be designated, as necessary, for parking of common service vehicles, golf carts or bicycles to serve the transportation needs of residents and visitors. The internal circulation plan shall also be coordinated with the existing island street network to ensure adequate access for emergency and service vehicles.

A project construction plan shall be developed indicating the anticipated number and types of vehicles such as construction equipment, supply-delivery and service vehicles needed for undertaking the construction of the project. Documentation shall be provided as to the

proposed transportation route such as roads, piers, beaches, sand bars and the impact of construction related activities on the routes.

The development shall not have a substantial adverse impact on the capacity of existing island docking facilities. The developer shall demonstrate that an adequate water transportation system, including docking facilities, exists or will be provided.

(b) ***Solid waste:*** Adequate provision for off-island solid waste disposal shall be demonstrated such that the impact on municipal solid waste disposal is minimized. A development shall incorporate methods such as the following to reduce the amount of solid waste generated by the project: compaction and reduction in waste volume, recycling, incineration or baler system, and private collection and transfer to an off-island location. It shall be demonstrated that there will be no significant environmental impacts from the solid waste disposal system.

(c) ***Sanitary waste:*** All sanitary waste from the development shall be disposed of by a public sewer, private community sewer system providing at least secondary treatment, or subsurface sewerage system, in compliance with federal, state and local regulations. The developer shall demonstrate that the project will comply with all applicable federal, state and local water quality and groundwater standards.

(d) ***Water:*** The proposed development shall have sufficient water for the reasonably foreseeable needs of the development and shall not cause an unreasonable burden on existing water supply nor adversely affect groundwater resources. Unless the development is to be served entirely by public water and secondary treatment sewer systems, the determination of compliance with this provision shall be based upon one (1) or more comprehensive groundwater analyses and reports prepared by qualified professionals and including assessment of current groundwater aquifer conditions, the impact of the proposed development on the groundwater aquifer, and recommendations for mitigation of potential impacts caused by the development.

(e) ***Shoreland areas:*** The development shall preserve the natural features of the shoreland area by minimizing the disturbance of existing vegetation and slopes, avoiding development in areas subject to erosion and sedimentation, and conserving scenic views and vistas to and from the site.

(f) ***Environmentally sensitive areas:*** The development plan shall preserve significant resources of the site by integrating open space into the development plan and by conserving such features as scenic vistas, historic man-made or natural features, existing vegetation, wetland areas, shoreland areas, ground water, natural wildlife habitat, and recommended or registered State of Maine Critical Land Areas, as well as other environmentally sensitive areas.

(g) ***Recreation and open space:*** All open spaces on the site shall be functionally integrated into the development plan by virtue of such features as passive and active recreational opportunities, accessibility to residents, preservation of natural site amenities and resources, orientation to achieve energy conservation or solar access, use as a buffer between housing clusters and to screen the development from surrounding areas.

(h) ***Financial and technical capability:*** The applicant shall demonstrate sufficient financial and technical capability for undertaking the proposed project. Financial capability shall include a cost estimate of the proposed improvements, proposed construction and permanent financing, and terms of sale or lease of dwellings and commercial space. Technical capacity shall include the experience and expertise of the developer in implementing projects of similar scope.

(i) ***Environmental impact analysis:*** The applicant shall develop an environmental impact analysis including an inventory of existing environmental conditions at the project site and in the surrounding area with an assessment of the development's probable impact upon the environment. The inventory shall include such resources as air, water quality, water supply, surface water and shoreline, geology, soils, topography, wildlife,

botanical and aquatic, including rare and endangered species, historic, archeological and aesthetic. The analysis shall include the direct and cumulative adverse impacts of the project on these resources. The analysis shall also include what steps the applicant proposes to take to identify and minimize adverse environmental impacts during construction, management and use of the property and whether there are alternatives for the project which would decrease the impact of the development.

(j) *Development phasing:* If the project is to be completed in phases, the applicant shall indicate the schedule for completing and implementing infrastructure improvements as well as other improvements, agreements or services required for compliance with the development standards of this section, planned unit development standards, and site plan and subdivision review requirements.

(k) *Emergency services:* The development shall not place an unreasonable burden on the ability of the city to provide police, fire and other emergency services.

(Ord. No. 29-85, § 1, 7-15-85)

Sec. 14-145.17. Dimensional requirements.

In addition to the provisions of division 25 (space and bulk regulations and exceptions) of this article, lots in the IR-3 zone shall meet the following minimum requirements:

(a) *Minimum lot size:*

1. Residential: Forty-two thousand five hundred (42,500) square feet per dwelling unit, except that the minimum lot size per dwelling unit shall be reduced by the amounts specified below, to a minimum lot size of thirty-five thousand (35,000) square feet per dwelling unit, provided that the Planning Board finds that the development meets the following criteria:

   a. The minimum lot size per dwelling unit shall be reduced by five thousand (5,000) square feet if a public off-island water source provides seventy-five (75) percent of the

water needs of the development.

b. The minimum lot size per dwelling unit shall be reduced by two thousand five hundred (2,500) square feet if the development provides appropriate permanent restrictions or other agreements precluding the use, maintenance and parking of all private motor vehicles exclusive of construction and common service vehicles.

2. Inn: Ten thousand (10,000) square feet for each lodging room.

3. Restaurant: Thirty-five thousand (35,000) square feet.

4. Campground: Five thousand (5,000) square feet per campsite, but not less than ten (10) acres.

5. Private clubs, fraternal organizations, or seasonal camp: Thirty-five thousand (35,000) square feet.

6. Lodging houses: Thirty thousand (30,000) square feet for three (3) lodging rooms, plus ten thousand (10,000) square feet for each additional lodging room in excess of three (3).

7. Other uses: Thirty-five thousand (35,000) square feet.

8. In issuing any permit for new development, the building or planning authority shall require that any lot located in an IR-3 zone shall be at least twenty thousand (20,000) square feet in area when the lot is to be serviced by a subsurface wastewater disposal system, except those lots which are located in a subdivision approved by the Planning Board after June 8, 1968, [and excluding Peaks Island].

9. [Excluding Peaks Island from this subsection i.,] any property owner whose lot does not meet the minimum lot size requirements outlined in subsection h. of this section may, for purposes of

this section only, merge two (2) or more separate lots on the same island in order to meet these requirements. Where the lots so merged are not contiguous, the property owner shall grant to the city as holder a conservation easement upon the lot or lots which will not contain the principal structure. The conservation easement shall contain both an existing legal description and a city assessor's chart, block and lot description. The building authority shall be authorized to accept such conservation easements on behalf of the city. Said easement shall be recorded by the applicant in the registry of deeds. A copy of the recorded easement and copies of the deeds for both lots shall be submitted to the building authority prior to issuance of a building permit. The property over which the conservation easement has been granted shall be used for passive recreational and conservation purposes only, and shall be subject to the following restrictions:

a. No structure shall be permitted on this property.

b. No parking or storage of vehicles or machinery shall be permitted on this property at any time.

c. No area of this property shall be paved.

d. No exterior storage for commercial use shall be permitted on this property.

e. The easement deed shall reference the lot which is benefited by this conservation easement. No conservation easement shall be used to benefit more than one (1) lot.

Conservation easements shall only be granted over lots which conform either to the provisions of section 14-433 or to the minimum lot sizes set forth in (a)1 of this section. Conservation easements shall not be granted over any lot which is encumbered by any other easement which prohibits all construction on that lot.

A conservation easement may also name as a holder or grant a third-party right of enforcement to a nonprofit corporation or charitable trust, the purposes or powers of which include retaining or protecting the natural, scenic or open space values of real property; assuring the availability of real property for agricultural, forest, recreational or open space use; protecting natural resources; or maintaining or enhancing air or water quality of real property.

Nothing in this section shall be construed to allow an owner of a currently existing and developed lot to convey or permit a portion of that lot to be used to fulfill the requirements of this section if such conveyance would render the existing lot nonconforming under the terms of this chapter. The lot upon which a building is to be constructed shall meet the minimum lot size requirements of section 14-433.

10. Where an existing system subsurface wastewater disposal serving an existing structure requires replacement, the replacement system shall meet the requirements of CMR 241 Section 2-E. The land area requirements in subsection h. of this section shall not apply to such a replacement system.

    For purposes of this subsection, the mean high tide mark shall be considered to be the shoreline lot line.

    The minimum lot size for buildings containing both residential and nonresidential uses shall be cumulative. Where there are two (2) or more residential uses contained in a building, the minimum lot size shall be the larger of the applicable minimum lot sizes.

(b) ***Minimum street frontage:*** Seventy (70) feet.

(c) ***Minimum yard dimensions:***

(Yard dimensions shall include setbacks of structures

from property lines and setbacks of structures from one another. No structure shall occupy the minimum yard of another structure.)

1. ***Front yard:*** Principal or accessory structures: Twenty-five (25) feet.

2. ***Rear yard:*** Principal or accessory structures with ground coverage greater than one hundred (100) square feet: Twenty-five (25) feet.

   Accessory detached structures with ground coverage of one hundred and forty-four (144) square feet or less: Ten (10) feet.

3. ***Sideyard:*** Principal or accessory structures with ground coverage greater than one hundred (100) square feet: Twenty (20) feet.

   Accessory detached structures with ground coverage of one hundred and forty-four (144) square feet or less: Fifteen (15) feet.

4. ***Side yard on side street:*** Principal or accessory structures: Twenty (20) feet.

(d) ***Maximum lot coverage:*** Twenty (20) percent of lot area.

(e) ***Minimum lot width:*** Eighty (80) feet.

(f) ***Maximum structure height:*** Principal or accessory attached structure: Thirty-five (35) feet.

Accessory detached structure: Eighteen (18) feet.

(Ord. No. 29-85, § 1, 7-15-85; Ord. No. 162-89, 12-11-89; Ord. No. 131-08/09, 12-15-08)

Sec. 14-145.18. Other requirements.

[Other requirements include the following:]

(a) ***Shoreland and flood plain management regulations:*** Any lot or portion of a lot located in a shoreland zone as identified on the city shoreland zoning map or in a flood hazard zone shall be subject to the requirements of division 26 and/or division 26.5.

(b) ***Off-street parking:*** Off-street parking is required as provided in division 20 (off-street parking) of this article.
(Ord. No. 29-85, § 1, 7-15-85; Ord. No. 15-92, § 14, 6-15-92; Ord. No. 240-09/10, 6-21-10)

Sec. 14-145.19. Reserved.

DIVISION 7.5. ISLAND TRANSFER STATION OVERLAY ZONE

Sec. 14-145.20. Purpose.

The purpose of the Island Transfer Station Overlay Zone is to establish an appropriate location for a transfer station for municipal solid waste and municipal public works activities. This zone shall be established through a conditional rezoning process in order to ensure the imposition of appropriate conditions for the protection of neighboring properties.
(Ord. No. 50-98, 7-20-98)

Sec. 14-145.21.1 Permitted uses.

The following uses shall be permitted in the Island Transfer Overlay Zone:

(a) Municipal solid waste facilities, including compactors and storage bins, provided that the compactor shall be located within a fully enclosed structure.

(b) Recycling facilities, provided that all recycling areas shall be buffered and screened from neighboring properties.

(c) Municipal garages, material storage, and parking for vehicles.

(d) Maintenance of municipal vehicles and equipment.

(e) Wind energy systems, as defined and allowed in Article X, Alternative Energy.
(Ord. No. 50-98, 7-20-98; Ord. No. 33-11/12, 1-18-12)

Sec. 14-145.21.2. Conditional uses.

The following use is permitted only upon the issuance of a

conditional use permit, subject to the provisions of section n14-474 (conditional uses) of this article and any special provisions, standards or requiremetns specified below:

(a) Temporary wind anemometer towers, as defined in sec. 14-47, are permitted provided the following standards are met in addition to sec. 14-430.

1. Towers may be installed for the purpose of wind data collection for no more than two (2) years after the issuance of a certificate of occupancy for the tower. At the conclusion of the aforementioned two (2) years, the tower must be dismantled and removed from the site within sixty (60) days; and

2. Towers shall be constructed according to plans and specifications stamped by a licensed professional engineer, which shall be provided to the board of appeals with the application; and

3. Towers shall be set back from habitable buildings by a distance equal to 1.1 times the tower height; and

4. The applicant shall provide a safety report prepared and stamped by a licensed professional engineer to the board of appeals with their application for conditional use, which demonstrates how the proposed temporary wind anemometer tower is safe in temrs of strength, stability, security, grounding, icing impacts and maintenance; and

5. The applicant shall provide evidence of commercial general liability insurance, such insurance to be satisfactory to corporation counsel and cover damage or injury resulting from construction, operation or dismantling of any part of the temporary wind anemometer tower; and

6. Towers and associated guy wires shall be sited to minimize their prominence from and impacts on public ways (including pedestrian ways); and

7. Towers shall be used for installing anemometers and

similar devices at a range of heights from the ground to measure wind characteristics (speed, direction, frequency) and related meterorological data, but shall not be used for any other purpose; and

8. A performance guarantee shall be required for the cost of removal of the tower, guy wires and anchors. This requirement may be satisfied by surety bond, letter of credit, escrow account or by evidence, acceptable to the City, of the financial and technical ability and commitment of the applicant or its agents to remove the facility at the end of the use period.

(b) Wind energy systems, as defined and allowed in Article X, Alternative Energy.

(Ord. No. 33-11/12, 1-18-12)

Sec. 14-145.22. Conditional rezoning.

Requirements for setbacks and any operational limitations shall be established as part of the conditional rezoning process.

(Ord. No. 50-98, 7-20-98)

DIVISION 8. R-P RESIDENCE-PROFESSIONAL ZONE*

***Editor's note--**Ord. No. 291-88, adopted Apr. 4, 1988, with an effective date of July 1, 1988, repealed §§ 14-146--14-151 of Div. 8, R-P Residence-Professional Zone, of this article and enacted similar new provisions in lieu thereof as set out in §§ 14-146--14-151. Formerly, such sections derived from §§ 602.7A, 602.7A.A and 602.7A.B of the city's 1968 Code and from Ord. No. 49-73, adopted Jan. 3, 1973; Ord. No. 499-74, § 3, adopted Aug. 19, 1974; and Ord. No. 312-85, §§ 1--3, adopted Dec. 2, 1985.

Sec. 14-146. Purposes.

The purposes of the R-P residence-professional zone are:

(a) To provide appropriate location for the development and operation of low-intensity business uses, including professional offices on or near major arterials, that are compatible in scale, density and use with surrounding and adjacent residential neighborhoods; or

(b) To serve as a transition or buffer zone between residential and more intensive nonresidential zones.
(Ord. No. 291-88, 4-4-88)

Sec. 14-147. Permitted uses.

The following uses are permitted in the R-P district:

(a) *Residential:* Any residential use is permitted in the residential zone abutting the lot. If there is no abutting residential zone, the nearest residential zone to the lot. In the case of two (2) or more abutting residential zones, the most restrictive such zone.

(b) *Business:*

1. Professional offices, including the offices and facilities of health care and related laboratory and pharmacy services and health care administration, but excluding personal services, retail establishments and veterinarians.

2. Business services, as defined in section 14-47, except copy services.

3. Adult day care services.

4. Mortuaries or funeral homes.

(c) *Other:*

1. Utility substations, as defined in section 14-47, subject to the requirements of article V (site plan), sections 14-522 and 14-523 notwithstanding.

2. Accessory uses as provided in section 14-404.

3. Wind energy systems, as defined and allowed in Article X, Alternative Energy.

(Ord. No. 291-88, 4-4-88: Ord. No. 149-05/06, 2-18-06; Ord. No. 166-08/09, 3-3-09; Ord. No. 10 10/11, 8-2-10; Ord. No. 33-11/12, 1-18-12)

Sec. 14-147.5. Conditional uses.

The following uses are permitted as provided in section 14-474 (conditional uses) if they meet the following requirements:

(a) Such other offices which have characteristics similar to but no more objectionable than those generally associated with professional offices. In determining appropriateness, the zoning board shall consider the quality of building design and materials, signage, and landscaping, and their general compatibility with the surrounding residential development. Such uses shall also be shown to have vehicular patterns, including parking and storage of motor vehicles, similar to those associated with professional offices. Noise levels and hours of operation shall also be considered. An approval granted under this section shall be issued to a specific user and shall not run with the land to subsequent users. A new conditional use approval shall be required when the user changes. A new conditional use approval may be issued by the zoning authority if it determines that the new user will maintain the same use as the original user and that such use will not have substantially different external effects, including, but not limited to, parking, vehicular traffic on and off the site, noise levels, hours of operation, and visual characteristics such as signage or changes to building design.

(b) With the exception of daycare facilities below, any conditional use that is allowed as a conditional use in any residential zone abutting the lot. If there is no abutting residential zone, any conditional use that is allowed as a conditional use in the nearest residential zone to the lot. Any such conditional use shall be subject to all conditions required in the residential zone.

(c) Temporary wind anemometer towers, as defined in Sec 14-47, are permitted provided the following standards are met in addition to Sec 14-430:

1. Towers may be installed for the purpose of wind data collection for no more than two (2) years after the issuance of a Certificate of Occupancy for the tower. At the conclusion of the aforementioned two (2) years, the tower must be dismantled and removed from the site

within sixty (60) days; and

2. Towers shall be constructed according to plans and specifications stamped by a licensed professional engineer, which shall be provided to the Board of Appeals with the application; and

3. Towers shall be set back from habitable buildings by a distance equal to 1.1 times the tower height; and

4. The applicant shall provide a safety report prepared and stamped by a licensed professional engineer to the Board of Appeals with their application for conditional use, which demonstrates how the proposed temporary wind anemometer tower is safe in terms of strength, stability, security, grounding, icing impacts and maintenance; and

5. The applicant shall provide evidence of commercial general liability insurance, such insurance to be satisfactory to Corporation Counsel and cover damage or injury resulting from construction, operation or dismantling of any part of the temporary wind anemometer tower; and

6. Towers and associated guy wires shall be sited to minimize their prominence from and impacts on public ways (including pedestrian ways); and

7. Towers shall be used for installing anemometers and similar devices at a range of heights from the ground to measure wind characteristics (speed, direction, frequency) and related meteorological data, but shall not be used for any other purpose; and

8. A performance guarantee shall be required for the cost of removal of the tower, guy wires and anchors. This requirement may be satisfied by surety bond, letter of credit, escrow

account or by evidence, acceptable to the City, or the financial and technical ability and commitment of the applicant or its agents to remove the facility at the end of the use period.

(d) Daycare facilities or home babysitting services not otherwise permitted as a home occupation under section 14-410, and nursery schools and kindergartens for up to twelve (12) children shall be allowed as a conditional use:

1. Proof of licensing with the Maine Department of Human Services is submitted to the city prior to issuance of a certificate of occupancy.

2. Outdoor play areas shall be screened and buffered from surrounding residences with landscaping and/or fencing to minimize visual and noise impacts.

3. Solid waste shall be stored in covered containers. Such containers shall be screened on all four (4) sides.

(e) Daycare facilities, home babysitting services, nursery schools and kindergartens that serve more than 12 children shall meet the following additional standards:

1. Proof of licensing with the Maine Department of Human Services is submitted to the city prior to issuance of a certificate of occupancy.

2. The facility shall provide a minimum of seventy-five (75) square feet of outdoor play area per child.

3. The play area shall be located in the side and rear yards only and shall not be located in front yards.

4. Outside play areas shall be separated from

abutting properties by a fence at least forty-eight (48) inches in height.

5. A ten-foot (10') wide landscaped buffer shall be required outside of the fenced play area, and shall be established in accordance with the landscaping standards of the city's Technical Standards and Guidelines.

6. The minimum lot size for a daycare facility, home babysitting service, nursery school or kindergarten serving more than twelve (12) children shall be six thousand (6,000) square feet.

7. ***Off-street parking***: Off-street parking is required as provided in division 20 (off-street parking) of this article.

8. Any additions or exterior alternations such as façade materials, building form, roof pitch, and exterior doors shall be designed to be compatible with the architectural style of the building or preserve the residential appearance of the building.

(f) Wind energy systems, as defined and allowed in Article X, Alternative Energy.

(Ord. No. 201-92, § 1, 1-6-92; Ord. No. 133-96, § 10, 11-18-96; Ord. No. 29-09/10, 8-3-09 emergency passage; Ord. No. 312-08/09, 7-20-09; Ord. No. 33-11/12, 1-18-12)

Sec. 14-148. Prohibited uses.

Uses not enumerated in section 14-147 as permitted uses or in section 14-147.5 as conditional uses are prohibited.

(Ord. No. 291-88, 4-4-88; Ord. No. 201-92, § 2, 1-6-92)

Sec. 14-149. Dimensional requirements.

In addition to the provisions of division 25 (space and bulk regulations and exceptions) of this article, the following requirements shall apply. Residential uses permitted under section 14-147(a) shall meet the requirements of such abutting or nearest residential zone. Nonresidential uses in the R-P zone shall meet

the following minimum requirements:

(a) ***Minimum lot size:*** Six thousand (6,000) square feet.

(b) ***Minimum street frontage:*** Sixty (60) feet.

(c) ***Minimum yard dimensions:***

1. ***Front yard:***

a. Principal or accessory structures: Twenty (20) feet, except that:

i. The front yard need not exceed the average depth of immediately abutting front yards; and

ii. The front yard of a lot existing as of April 4, 1988, which lot is less than one hundred (100) feet deep, need not be deeper than ten (10) percent of the depth of the lot.

2. ***Rear yard:***

a. Principal structures: Twenty (20) feet.

b. Accessory structures (detached): Seven (7) feet.

3. ***Side yard:***

a. Principal structures:

Number of Stories	*Required Side Yard*
1 story	10 feet
2 stories	12 feet
3 or more stories . .	14 feet

The width of one (1) side yard may be reduced one (1) foot for each foot that the other side yard is correspondingly increased, provided,

however, no side yard shall be reduced to less than seven (7) feet in width.

b. Accessory structures (detached): Seven (7) feet.

c. Side yards on side streets (corner lot): For both principal or accessory structures:

i. One (1) or two (2) stories: Fifteen (15) feet; and

ii. Three (3) or more stories: Eighteen (18) feet.

(d) ***Minimum lot width:*** Sixty (60) feet.

(e) ***Maximum structure height:*** Forty-five (45) feet. Where the lot abuts an R-6 residential zone, the maximum permitted height shall be the maximum permitted height of the R-6 zone. If there is a difference in height between abutting R-6 zones, the least restrictive height limitation shall apply.

(f) ***Maximum impervious surface ratio:*** The maximum impervious surface ratio is established according to the abutting residential zone. If there is no abutting residential zone to the lot in question, the nearest residential zone to the lot. In the case of two (2) or more abutting residential zones, the least restrictive such zone. The ratios are as follows:

Maximum Impervious

Residential Zone	Surface Ratio
R-1/R-2	0.60
R-3	0.70
R-4/R-5/R-5A/R-6	0.80

(g) ***Floor area ratio (F.A.R.):*** The maximum floor area ratio is established according to the abutting residential zone. If there is no abutting residential zone to the lot

in question, the nearest residential zone to the lot. In the case of two (2) or more abutting residential zones, the least restrictive such zone. The ratios are as follows:

Residential	*Floor Area Ratio*
R-1/R-2	0.45
R-3	0.55
R-4/R-5/R-5A/R-6	0.65

(Ord. No., 291-88, 4-4-88; Ord. No. 149-05/06, 1-18-06)

Sec. 14-150. Other requirements.

All nonresidential uses in the R-P zone shall meet the requirements of division 25 (space and bulk regulations and exceptions) of this article in addition to the following requirements:

(a) ***Landscaping and screening:*** The site shall be suitably landscaped for parking, surrounding uses and accessory site elements, including storage and solid waste receptacles where required by article IV (subdivisions) and article V (site plan).

(b) ***Curbs and sidewalks:*** Curbs and sidewalks as specified in article VI of chapter 25.

(c) ***Off-street parking and loading:*** Off-street parking and loading are as required by division 20 and division 21 of this article.

(d) ***Front yard parking:*** There shall be no parking in the front yard between the street line and the required minimum setback line. A maximum of ten (10) percent of the total parking provided on the site may be located between the principal structure and the front yard, provided that for a lot of three (3) acres or more this limitation does not apply.

(e) ***Signs:*** Signs shall be subject to the provisions of division 22 of this article.

(f) ***Exterior storage:*** There shall be no exterior storage with the exception of receptacles for solid waste disposal. Such receptacles shall be shown on the approved site plan.

(g) ***Storage of vehicles:*** Storage of vehicles is subject to the provisions of section 14-335.

(h) ***Shoreland and flood plain management regulations:*** If the lot is located in a shoreland zone or in a flood hazard zone, the requirements of division 26 and/or division 26.5 apply.

(Ord. No. 291-88, 4-4-88; Ord. No. 149-05/06, 1-18-06)

Sec. 14-151. External effects.

Every use in a R-P zone shall be subject to the following requirements:

(a) ***Enclosed structure:*** The use shall be operated within a completely enclosed structure, except for those customarily operated in the open air.

(b) ***Noise:*** The volume of sound, measured by a sound level meter with frequency weighting network (manufactured according to standards prescribed by the American Standards Association), generated shall not exceed fifty-five (55) decibels on the A scale, on impulse (less than one (1) second), at lot boundaries, excepting air raid sirens and similar warning devices.

(c) ***Vibration and heat:*** Vibration inherently and recurrently generated and heat shall be imperceptible without instruments at lot boundaries.

(d) ***Glare, radiation or fumes:*** Glare, radiation or fumes shall not be emitted to an obnoxious or dangerous degree beyond lot boundaries.

(e) ***Smoke:*** Smoke shall not be emitted at a density in excess of twenty (20) percent opacity level, as classified in Method 9 (Visible Emissions) of the Opacity Evaluation System of the U.S. Environmental Protection Agency.

(f) ***Materials or wastes:*** No materials or wastes shall be

deposited on any lot in such form or manner that they may be transferred beyond the lot boundaries by natural causes or forces. All material which might cause fumes or dust, or constitute a fire hazard if stored out-of-doors, shall be only in closed containers. Areas attracting large numbers of birds, rodents or insects are prohibited.

(g) The hours of operation of funeral homes (including processions) may be restricted and/or traffic management measures may be required, in order to avoid impacts to the public street system, if so recommended by the city traffic engineer or comparable professional.

(Ord. No. 291-88, 4-4-88; Ord. No. 166-08/09, 3-3-09)

DIVISION 8.1 USM, UNIVERSITY OF SOUTHERN MAINE OVERLAY ZONE

Sec. 14-152. Purpose.

The intention of this division is to establish an overlay zone in which an existing university campus can be continued and reasonably expanded within defined boundaries, in addition to those uses permitted in the underlying zone or zones. The purpose of this division is to recognize the unique qualities of a university campus while at the same time protecting the value and integrity of established neighborhoods.

(Ord. No. 171-05/06, 3-20-06)

Sec. 14-152.1. Location and applicability of University of Southern Maine overlay zone.

The University of Southern Maine overlay district, as shown on the zoning map is intended to encompass and define the University of Southern Maine campus westerly of Forest Avenue. Properties in the University of Southern Maine overlay zone shall continue to be governed by the regulations applicable to the underlying zoning districts except as specifically modified by this division.

(Ord. No. 171-05/06, 3-20-06)

Sec. 14-152.2. Permitted uses.

In addition to the permitted uses allowed in the underlying zoning districts and notwithstanding anything to the contrary in the use regulations for the underlying zoning districts, the following uses are permitted uses in the University of Southern

University uses including, but not limited to, the following:

1. Classrooms;

2. Laboratory facilities;

3. Research facilities;

4. Student unions;

5. Dining halls;

6. Bookstores;

7. Auditoriums;

8. Concert halls;

9. Lecture halls;

10. Gymnasiums;

11. Libraries;

12. Outdoor use areas, such as "quads", greens, parks, gardens, art installations, and other active and passive noncommercial recreation spaces;

13. Faculty housing;

14. Student housing;

15. Parking lots;

16. Parking garages;

17. Community meeting spaces;

18. Administrative offices;

19. Faculty offices;

20. Transportation facilities;

21. Maintenance facilities;

22. Utility buildings;

23. Student health services;

24. Daycare facilities, nursery schools and kindergartens operated in conjunction with university programs or serving students, faculty or employees of the university and their families, with associated outside play areas;

25. Other buildings, structures and uses customarily incidental to a university.

Except that, on lots fronting on Chamberlain Avenue and Exeter Street, university uses shall be limited to faculty housing, graduate student housing, faculty offices and administrative offices, and buildings containing such uses shall be designed and maintained so as to complement the residential character of the street as required in §14-152.7.

No change of use permit under section 14-463 shall be required for any of the above uses in actual existence as of the date of enactment of the University of Southern Maine overlay zone.
(Ord. NO. 171-05/06, 3-20-06)

Sec. 14-152.2.1. Conditional uses.

The following uses are permitted as provided in section 14-474 (conditional uses) if they meet the following requirements:

(a) Wind energy systems, as defined and allowed in Article X, Alternative Energy.

(Ord. No. 33-11/12, 1-18-12)

Sec. 14-152.3 Dimensional requirements.

University buildings and structures shall be subject to the applicable dimensional requirements of the underlying zoning districts, except as follows:

(a) ***Minimum yard dimensions*** shall be the same as in the underlying zone, except as shown on the university campus overlay setback map, incorporated herein by reference. Side and rear yards shall not be required between

buildings on contiguous lots owned by the university on the condition that such contiguous lots shall be considered merged and shall not be separately conveyed unless required yard dimensions in the underlying zones are provided.

(b) ***Maximum building height*** shall be the same as in the underlying zone, except as shown on the university campus overlay height map, incorporated herein by reference, depicting the following height zones:

1. Height zone A, maximum building height 45 feet.

2. Height zone B, maximum building height 75 feet.

3. Height zone C, maximum building height 85 feet.

(c) ***Minimum building height.*** All new freestanding buildings in height zone B and height zone C must be built to a height of at least 35 feet or designed and constructed so that they can be expanded to 35 feet or higher. As used in this paragraph, the term "new freestanding building" means any building which is not an addition to or expansion of a building which existed on the date of enactment of the University of Southern Maine overlay zone.

(d) ***Maximum impervious surface ratio*** shall be 66% of the total land area within the University o Southern Maine overlay zone exclusive of public streets.

(e) ***Maximum coverage by buildings*** shall be 40% of the total land area within the University of Southern Maine overlay zone exclusive of public streets.

(Ord. No. 171-05/06, 3-20-06)

Sec. 14-152.4. Parking.

Off-street parking: Off-street parking is required as provided in division 20 (off-street parking) of this article.
(Ord. No. 171-05/06, 3-20-06; Ord. No. 240-09/10, 6-21-10)

Sec. 14-152.5. Loading.

The requirements of section 14-351 shall not apply to

university buildings. Instead, the amount of loading area required for any university building shall be determined by the planning board during site plan review, based on a campus-wide analysis, treating all contiguous lots owned by the university as one lot. In determining the amount of loading space required for any university building, the planning board may take into account such factors as:

(a) The use of centrally located on-campus loading facilities so situated that vehicles making deliveries can load and unload in the central facilities, provided no single location is overburdened with loading facilities.

(b) Shared use of a single loading facility by two or more buildings.

(c) Impacts of the loading area on adjacent uses outside the University of Southern Maine overlay zone.

(Ord. No. 171-05/06, 3-20-06)

Sec. 14-152.6. Signage.

Signs comply with the requirements of Division 22, except as those regulations are modified or augmented below:

(a) Signs shall be designed in accordance with signage standards promulgated by the university, providing for a unified, apparent and ADA-compliant campus-wide system for identification, orientation and regulatory signage.

(b) Banners are allowed as follows:

1. Generic banners containing the logo and colors of the university, used for decorative purposes.

2. Banners used for advertising university events, which can be displayed for a maximum of four weeks prior to and one week following the event.

(Ord. No. 171-05/06, 3-20-06)

Sec. 14-152.7. University overlay zone design principles and standards.

All minor and major development in the University of Southern Maine overlay zone conform to the requirements of chapter 14,

article V (site plan review) and the requirements contained within the planning and development design manual, which is incorporated therein by reference.
(Ord. No. 171-05/06, 3-20-06)

Sec. 14-152.8. Campus housing.

For any development requiring level III site plan review, the university shall submit to the planning board a campus housing analysis. The analysis shall include a description of housing demand and supply at the time of the application, a projection of housing demand expected to arise from the proposed development and/or as a result of program changes anticipated to occur concurrently with the proposed development, and a description of how the university intends to meet any increased housing demand through on-campus housing, off-campus housing developed by the university, and/or off-campus housing developed by others.
(Ord. No. 171-05/06, 3-20-06; Ord. No. 278-09/10, 7-19-10)

Sec. 14-152.9. Required review for change of use, additions and renovations.

In the case of properties fronting Chamberlain Avenue, Exeter Street and the northerly side of Bedford Street from Surrender Street to Deering Avenue, level II site plan review shall be required of: (1) all changes of use; and (2) all building additions and renovations affecting an area equivalent to 25% or more of the existing floor area of a structure, unless level III site plan review is otherwise required under chapter 14, article V.
(Ord. NO. 171-05/06, 3-20-06)

DIVISION 8.5. R-OS RECREATION AND OPEN SPACE ZONE

Sec. 14-153. Purpose.

(a) The purpose of this division is:

1. To preserve and protect open space as a limited and valuable resource;

2. To permit the reasonable use of open space, while simultaneously preserving and protecting its inherent open space characteristics to assure its continued availability for public use as scenic, recreation, and conservation or natural resource area, and for the

containment and structuring of urban development;

3. To coordinate with and carry out federal, state, regional, and city recreation and open space plans; and

4. To provide a suitable location for large-scale regional sports and athletic facilities.

(b) The recreation open space zone may include major parcels (over two (2) acres) of public property, and private property legally restricted from intensive use or development through deed, covenant, or otherwise.

(Ord. No. 232-81, § 602.7B.1, 11-16-81; Ord. No. 187-01/02, § 2, 4-17-02)

Sec. 14-154. Permitted uses.

The following uses are permitted uses within the recreation and open space zone, subject to the development standards contained herein:

(a) Municipal parks, public open spaces, picnic areas, playgrounds and play lots;

(b) Cemeteries;

(c) Arboretums;

(d) Golf courses, excluding miniature golf;

(e) Boat landings, beaches, and marinas for public uses;

(f) Outdoor ballfields and public athletic fields;

(g) Swimming pools and tennis courts;

(h) Picnic groves and areas;

(i) Natural parks and scenic overlooks;

(j) Hiking, walking, bicycling or cross-country ski trails;

(k) Community gardens for cultivation by and for city residents;

(l) Sewage pumping stations and sewage treatment facilities;

(m) Sports complexes;

(n) Accessory uses, including structures or buildings of less than two thousand five hundred (2,500) square feet of floor area.

(o) Wind energy systems, as defined and allowed in Article X, Alternative Energy.

(p) Street vendors licensed pursuant to Chapter 19 as a result of a competitive bid process conducted pursuant to Chapter 2 of the City Code.

(Ord. No. 232-81, § 602.7B.2, 11-16-81; Ord. No. 60-91, § 1, 8-5-91; Ord. No. 187-01/02, § 3, 4-17-02; Ord. No. 33-11/12, 1-18-12; Ord.No. 10-12/13, 7-16-12)

Sec. 14-155. Conditional uses.

The following uses are conditional uses in the recreation and open space zone, subject to approval by the board of appeals.

(a) Accessory uses with structures or buildings of two thousand five hundred (2,500) square feet or more of floor area;

(b) Other recreational facilities and uses that are open to the public;

(c) Water pumping stations.

(d) Temporary wind anemometer towers, as defined in Sec 14-47, are permitted provided the following standards are met in addition to Sec 14-430:

1. Towers may be installed for the purpose of wind data collection for no more than two (2) years after the issuance of a Certificate of Occupancy for the tower. At the conclusion of the aforementioned two (2) years, the tower must be dismantled and removed from the site within sixty (60) days; and

2. Towers shall be constructed according to plans and specifications stamped by a licensed professional engineer, which shall be provided

to the Board of Appeals with the application; and

3. Towers shall be set back from habitable buildings by a distance equal to 1.1 times the tower height; and

4. The applicant shall provide a safety report prepared and stamped by a licensed professional engineer to the Board of Appeals with their application for conditional use, which demonstrates how the proposed temporary wind anemometer tower is safe in terms of strength, stability, security, grounding, icing impacts and maintenance; and

5. The applicant shall provide evidence of commercial general liability insurance, such insurance to be satisfactory to Corporation Counsel and cover damage or injury resulting from construction, operation or dismantling of any part of the temporary wind anemometer tower; and

6. Towers and associated guy wires shall be sited to minimize their prominence from and impacts on public ways (including pedestrian ways); and

7. Towers shall be used for installing anemometers and similar devices at a range of heights from the ground to measure wind characteristics (speed, direction, frequency) and related meteorological data, but shall not be used for any other purpose; and

8. A performance guarantee shall be required for the cost of removal of the tower, guy wires and anchors. This requirement may be satisfied by surety bond, letter of credit, escrow account or by evidence, acceptable to the City, or the financial and technical ability and commitment of the applicant or its agents to remove the facility at the end of the use period.

(e) Wind energy systems, as defined and allowed in Article X, Alternative Energy.

(Ord. No. 232-81, § 602.7B.3, 11-16-81; Ord. No. 67-89, § 1, 8-7-89; Ord. No. 60-91, § 2, 8-5-91; Ord. No. 29-09/10, 8-3-09, emergency passage; Ord. No. 33-11/12, 1-18-12)

Sec. 14-156. Standards for conditional uses.

In addition to the criteria listed in section 14-474(c), the board of appeals shall consider the following criteria when reviewing conditional uses specified in section 14-155(a), (b) and (c):

(a) The use shall be in conformity with or satisfy a deficiency identified in a federal, state, regional, or city recreation and open space plan, including but not limited to the state comprehensive outdoor recreation plan, as such plans may from time to time be created or revised.

(b) Buildings and structures shall not obstruct significant scenic views presently enjoyed by nearby residents, passersby, or users of the site.

(c) Indoor recreation or nonrecreational uses shall serve a significant public purpose that cannot reasonably be accommodated outside of the recreation and open space zone.

(Ord. No. 232-81, § 602.7B.4, 11-16-81; Ord. No. 29-09/10, 8-3-09, emergency passage)

Sec. 14-157. Space and bulk requirements.

No building or structure of a permanent nature shall be erected, altered, enlarged, rebuilt, or used unless it meets the following requirements:

(a) *Minimum front yard:*

1. Principal buildings or structures: Twenty-five (25) feet.

2. Accessory buildings or structures: Twenty-five (25) feet.

(b) *Minimum rear yard:*

1. Principal buildings or structures: Twenty-five (25) feet.

2. Accessory buildings or structures: Twenty-five (25) feet.

(c) *Minimum side yard:*

1. Principal buildings or structures: Twelve (12) feet.

2. Accessory buildings or structures: Twelve (12) feet.

(d) *Minimum lot size:* Two (2) acres, except that sewage treatment facilities are not required to meet this standard.

(e) *Maximum building height:* Thirty-five (35) feet, unless more than one thousand (1,000) feet from a shoreland zone. The maximum building height for buildings located more than one thousand (1,000) feet from a shoreland zone shall be forty-five (45) feet.

(f) *Maximum coverage of lot* by buildings, structures and other impervious site improvements such as paved sidewalks, drives and parking lots:

1. Sewage treatment facilities: No limit on maximum coverage.

2. Sports complexes: Seventy-five (75) percent of lot area.

3. All other uses: Twenty-five (25) percent of lot area.

(g) *Maximum floor area ratio:* Five-tenths (0.5).

(Ord. No. 232-81, § 602.7B.5, 11-16-81; Ord. No. 67-89, § 2, 8-7-89; Ord. No. 205-93, 2-2-93; Ord. No. 187-01/02, § 4, 4-17-02)

Sec. 14-158. Development standards for recreation and open space zone.

All development in the recreation and open space zone shall

comply with the following development standards, which shall be reviewed by the Planning Board in conjunction with the site plan review:

(a) All ground areas not used for parking, loading, vehicular or pedestrian areas and not left in their natural state shall be suitably landscaped.

(b) Natural features, such as mature trees and natural surface drainageways, shall be preserved to the greatest possible extent consistent with the uses of the property.

(c) Loading areas shall be screened and parking areas shall be screened and landscaped so as to avoid a large continuous expanse of paved area.

(d) Buildings and structures shall be sited to avoid obstructing significant scenic views presently enjoyed by nearby residents, passersby, and users of the site.

(e) Storage of commodities and equipment shall be completely enclosed within buildings or provided with screening by a fence, wall, or landscaping.

(f) The outer perimeter of playfields, play lots, and other active recreational areas shall be screened, or shall be located a reasonable distance from any residential use.

(g) ***Off-street parking***: Off-street parking is required as provided indivisio n20 (off-street parking) of this article.

(Ord. No. 232-81, § 602.7B.6, 11-16-81; Ord. No. 240-09/10, 6-21-10)

Sec. 14-159. Shoreland and flood plain management regulations.

Any lot or portion of a lot located in a shoreland zone as identified on the city shoreland zoning map or in a flood hazard zone shall be subject to the requirements of division 26 and/or division 26.5.

(Ord. No. 232-81, § 602.7B.7, 11-16-81; Ord. No. 15-92, § 15, 6-15-92)

Sec. 14-160. Reserved.

DIVISION 9. B-1 AND B-1b NEIGHBORHOOD BUSINESS ZONES*

***Editor's note--**Ord. No. 292-88, adopted Apr. 4, 1988, with an effective date of July 1, 1988, repealed §§ 14-161--14-167 of Div. 9, B-1 Business Zone, of this article and enacted in lieu thereof similar new provisions as set out in §§ 14-161--14-167. Formerly, such sections derived from §§ 602.8.A--602.8.G of the city's 1968 Code and from Ord. No. 74-72, adopted Mar. 6, 1972, and Ord. No. 499-74, § 4, adopted Aug. 19, 1974.

Sec. 14-161. Purpose.

(a) *B-1 Neighborhood Business Zone*

The purpose of the B-1 neighborhood business zone is to provide limited areas for the location of small-scale commercial establishments intended to serve a local market. As a result, uses shall be complimentary, quiet and generally do not disturb the comfort and enjoyment of the adjoining neighborhood environment. Uses shall be designed for the pedestrian scale and will provide convenient access for nearby residents and workers to walk in to purchase goods and services. Buildings and uses shall be designed with attractive storefronts or similar features, with windows and doors convenient to a public sidewalk. Building additions are encouraged but not required to meet the maximum setbacks of 14-165(c)(3). This zone shall encourage mixed use buildings such as commercial first floor with residential uses above or combined retail/office uses in a multistory structure. The zone also provides the opportunity for mixed useand high residential density in on-peninsula locations.

Suitable locations for this zone may include street intersections and arterial streets with existing or proposed traditional neighborhood retail and service uses.

(b) *B-1b Neighborhood Business Zone*

The purpose of the B-1b neighborhood business zone is to provide appropriate opportunities for the establishment of small-scale ground floor commercial uses in existing buildings, serving a local market, while preserving residential uses and character above the ground floor of structures. The zone also provides the opportunity for mixed use and high residential density in on-peninsula locations. Building additions are encouraged but not required to meet the maximum setbacks of 14-165(c)(3).

Suitable locations for this zone may include street

intersections, arterial streets, and sites with existing or traditional neighborhood retail and service uses.

(Ord. No. 292-88, 4-4-88; Ord. No. 133-93, § 1, 11-15-93; Ord. No. 94-99, 11-15-99; Ord. No. 281-10/11, 7-18-11)

Sec. 14-162. Permitted uses.

(a) The following uses are permitted in the B-1 zone and on the ground floor level of buildings in the B-1b zone. For permitted uses in the upper stories of buildings in the B-1b zone, refer to subsection (5) below: in existence on November 15, 1993:

1. *Residential*

   a. Any residential use permitted in the residential zone abutting the lot is permitted. If there is no abutting residential zone, any residential use permitted in the nearest residential zone to the lot is permitted. In the case of two (2) or more abutting residential zones, any residential use permitted in the most restrictive such zone is permitted.

   b. In any structure with commercial use on the first floor, multifamily dwellings are permitted above the first floor.

2. *Business:* Business uses listed below are permitted, provided that such use which generates in excess of a ratio of 100 peak hour vehicle trips per 2000 sq.ft. of space, and generates in excess of 100 peak hour vehicle trips is prohibited. As set forth in the City of Portland Technical Manual, section I, the city traffic engineer shall require a traffic study when it calculates the proposed use will generate in excess of a total of 50 peak hour vehicle trips.

   a. Professional offices, as defined in section 14-47, but excluding veterinarians.

   b. Business services, as defined in section 14-47, but excluding beverage container redemption centers.

   c. Personal services, as defined in section 14-47.

d. Offices of building tradesmen, provided there is no exterior storage of building materials.

e. Retail establishments, provided such do not include drive-through sales or services and do not operate between the hours of eleven (11) p.m. and six (6) a.m. and do not accept deliveries or services between the hours of ten (10) p.m. to seven (7) a.m.

f. Beverage dealers (as defined in 32 M.R.S.A. 1862) provided they meet the following requirements:

i. Maximum total floor area for beverage container redemptions, including the storage of spent beverage containers, shall be no greater than five hundred (500) sq. ft. or ten (10) percent of the total floor area of the facility, whichever is less;

ii. Beverage container redemption is an accessory use to a principal retail use that includes beverage sales. Local beverage container redemption centers as defined in 32 M.R.S.A. 1867, as may be amended, are not allowed as a principal use.

iii. Storage of all beverage containers shall be contained entirely within the building providing retail sales.

g. Studios for artists, photographers and craftspeople including but not limited to, painters, sculptors, dancers, graphic artists and musicians.

3. *Institutional*:

a. Places of religious assembly;

b. Municipal offices;

c. Elementary, middle and secondary schools;

d. Nursery schools and kindergarten;

e. Clinics of less than three thousand (3,000) square feet of total floor space.

4. *Other*:

a. Lodging houses;

b. Utility substations, as defined in section 14-47, subject to the standards of article V (site plan), sections 14-522 and 14-523 notwithstanding;

c. Day care facilities or babysitting services;

d. Accessory uses as provided in section 14-404;

e. Bed and breakfast, subject to the standards of article V (site plan), sections 14-522 and 14-523 notwithstanding.

f. Hostels, provided the applicant submits a site plan and operations plan demonstrating compliance with the following conditions:

i. No more than twenty (20) overnight transient guests shall be permitted in the facility at any one time.

ii. All applicable provisions of Article V of this chapter shall be met.

iii. Parking shall be provided in compliance with Division 20 of this Article.

iv. No unaccompanied minors under the age of eighteen (18) shall be permitted in the facility.

v. The length of stay for transient guests shall not exceed fifteen (15) days out of any sixty-day period.

vi. The building shall meet the applicable occupant load requirements as defined by the International Building Code and the NFPA Life Safety Code, as such codes are amended or

adopted by the city.

g. Neighborhood center.

5. Uses permitted above the ground floor level of buildings in the B-1b zone:

a. Any residential use set forth in section 14-162(a);

b. Bed and breakfast, subject to the standards of article V (site plan), sections 14-522 and 14-523 notwithstanding.

c. Hostels, provided the applicant submits a site plan and operations plan demonstrating compliance with the following conditions:

i. No more than twenty (20) overnight transient guests shall be permitted in the facility at any one time.

ii. All applicable provisions of Article V of this chapter shall be met.

iii. Parking shall be provided in compliance with Division 20 of this Article.

iv. No unaccompanied minors under the age of eighteen (18) shall be permitted in the facility.

v. The length of stay for transient guests shall not exceed fifteen (15) days out of any sixty-day period.

vi. The building shall meet the applicable occupant load requirements as defined by the International Building Code and the NFPA Life Safety Code, as such codes are amended or adopted by the city.

6. Wind energy systems, as defined and allowed in Article X, Alternative Energy.

(Ord. No. 292-88, 4-4-88; Ord. No. 133-93, § 2, 11-15-93; Ord. No. 125-97, § 5, 3-3-97; Ord. No. 94-99, 11-15-99; Ord. No.74-06/07, 12-4-06; Ord. No. 127-09/10, 1-4-10 emergency passage; Ord. No. 278-09/10, 7-19-10, Ord. 10 10/11, 8-2-10;

Ord. No. 279-09/10, 6-6-11; Ord. No. 33-11/12, 1-18-12; Ord. No. 162-12/13, 4-1-13)

***Editor's Note-** Pursuant to Ord. No. 74-06/07, enacted on 12-4-06 changes made in (2) *Business* are effective October 16, 2006.

Sec. 14-163. Conditional uses.

(a) The following uses are permitted in the B-1 zone and on the ground floor level of buildings in the B-1b zone, as provided in section 14-474 (conditional uses), if they meet the following requirements provided that such use which generates in excess of a ratio of 100 peak hour vehicle trips per 2000 sq. ft. of space, and generates in excess of 100 peak hour vehicle trips is prohibited. As set forth in the City of Portland Technical Manual, section I, the city traffic engineer shall require a traffic study when it calculates the proposed use will generate in excess of a total of 50 peak hour vehicle trips:

1. Restaurants, provided they meet the following requirements:

    a. Maximum total floor area for use of the public shall be one thousand (1,000) square feet;

    b. The hours of operation shall be limited to between 6:00 a.m. and 11:00 p.m. each day;

    c. Food service and consumption are the primary function of the restaurant; and

    d. There shall be no drive-through service.

(b) The following use shall be permitted only upon the issuance of a conditional use permit, subject to the provisions of section 14-474 (conditional uses) and any special provisions, standards or requirements specified below:

1. Temporary wind anemometer towers, as defined in sec. 14-47, are permitted provided the following standards are met in addition to sec. 14-430:

    a. Towers may be installed for the purpose of wind data collection for no more than two (2) years after the issuance of a certificate of occupancy

for the tower. At the conclusion of the aforementioned two (2) years, the tower must be dismantled and removed from the site within sixty (60) days; and

b. Towers shall be constructed according to plans and specifications stamped by a licensed professional engineer, which shall be provided to the board of appeals with the application; and

c. Towers shall be set back from habitable buildings by a distance equal to 1.1 times the tower height; and

d. The applicant shall provide a safety report prepared and stamped by a licensed professional engineer to the Board of Appeals with their application for conditional use, which demonstrates how the proposed temporary wind anemometer tower is safe in terms of strength, stability, security, grounding, icing impacts and maintenance; and

e. The applicant shall provide evidence of commercial general liability insurance, such insurance to be satisfactory to Corporation Counsel and cover damage or injury resulting from construction, operation or dismantling of any part of the temporary wind anemometer tower; and

f. Towers and associated guy wires shall be sited to minimize their prominence from and impacts on public ways (including pedestrian ways); and

g. Towers shall be used for installing anemometers and similar devices at a range of heights from the ground to measure wind characteristics (speed, direction, frequency) and related meteorological data, but shall not be used for any other purpose; and

h. A performance guarantee shall be required for the cost of removal of the tower, guy wires

and anchors. This requirement may be satisfied by surety bond, letter of credit, escrow account or by evidence, acceptable to the City, or the financial and technical ability and commitment of the applicant or its agents to remove the facility at the end of the use period.

2. Wind energy systems, as defined and allowed in Article X, Alternative Energy.

(Ord. No. 292-88, 4-4-88; Ord. No. 133-93, § 3, 11-15-93; Ord. No. 94-99, 11-15-99; Ord. No. 74-06/07, 12-4-06; Ord. No. 29-09/10, 8-3-09, emergency passage; Ord. No. 278-09/10, 7-19-10; Ord. No. 33-11/12, 1-18-12)

***Editor's Note-** Pursuant to Ord. No. 74-06/07, enacted on 12-4-06 changes made in (2) *Business* are effective October 16, 2006.

Sec. 14-164. Prohibited uses.

Uses not enumerated in sections 14-162 and 14-163 as either permitted or conditional uses are prohibited.

(Ord. No. 292-88, 4-4-88)

Sec. 14-165. Dimensional requirements.

In addition to the provisions of division 25 (space and bulk regulations and exceptions) of this article, residential uses permitted under section 14-162(a) shall meet the requirements of such abutting or nearest residential zone except as noted in Sec. 14-165(h) (minimum lot area per dwelling unit). Residential uses in on-peninsula locations, as defined in Section 14-47, and nonresidential uses in the B-1 and B1-b zone shall meet the following minimum requirements:

(a) *Minimum lot size*:

1. School: Twenty thousand (20,000) square feet.
2. Places of religious assembly: Ten thousand (10,000) square feet.
3. All other nonresidential uses: None.
4. Residential uses: None.

(b) *Minimum street frontage*: Fifty (50) feet, except that if the average street frontages of all lots within two hundred (200) feet of the boundaries of the lot in

question on the same side of the street and within the B-1 or B-1b zone is less than fifty (50) feet, then the minimum street frontage for the lot in question may be reduced to the average frontage of such lots.

(c) *Yard dimensions*: (Yard dimensions are required setbacks for structures from property lines and setbacks of structures from one another. No structure shall occupy the minimum yard of another structure.)

1. Maximum *front yard*:

Principal or accessory structure: The maximum front yard setback shall either be: (i) ten feet; or (ii) in cases where the average depth of the front yards of the nearest developed lots on either side of the lot in question is less than ten feet, the front yard setback of the lot in question shall not exceed such average depth. A "developed lot" means a lot on which a principal structure has been erected.

Building additions are not required to meet this maximum setback.

2. *Rear yard*:

a. Principal structures: None, except where a rear yard abuts a residential zone or first floor residential use, a minimum of twenty (20) feet is required.

b. Accessory structures (detached): None, except where the rear yard abuts a residential zone or first floor residential use, a minimum of five (5) feet is required.

3. *Side yard*:

a. Principal and accessory structures: None, except that where a side yard abuts a residential zone or a first floor residential use, a minimum of ten (10) feet is required.

b. Accessory structures (detached): None, except

that where the side yard abuts a residential zone or a first floor residential use, a minimum of five (5) feet is required.

c. Side yards on side streets (corner lot): Principal or accessory structures: Ten (10) feet maximum setback, except that for any new construction on a lot abutting more than two streets, the maximum setback shall not apply beyond the two most major streets. (For purposes of this section, "major street" shall mean that street with the highest traffic volume and the greatest street width in comparison with the remaining streets). This maximum setback shall not apply to building additions.

(d) *Minimum lot width*: None.

(e) *Maximum structure height*:

1. Off-peninsula locations, as defined in Section 14-47: Thirty-five (35) feet. Where the lot abuts an R-6 residential zone, the maximum height shall be the maximum permitted height in the R-6 residential zone.

2. On-peninsula locations, as defined in Section 14-47: Forty-five (45) feet.

(f) *Maximum impervious surface ratio*: Ninety (90) percent.

(g) *Floor area*:

1. The maximum first floor area of a single tenant building shall be no greater than five thousand (5,000) square feet.

2. The maximum first floor area of a multi-tenant building shall be no greater than ten thousand (10,000) square feet.

(h) *Minimum lot area per dwelling unit:*

1. On-peninsula locations, as defined in Section 14-

47: Four hundred and thirty-five (435) square feet of land area per dwelling unit.

2. Off-peninsula locations, as defined in Section 14-47: Minimum lot area per dwelling unit requirements of the abutting or nearest residential zone shall apply. In the case of multi-family dwellings above the first floor: 1,000 square feet of land area per dwelling unit.

(Ord. No. 292-88, 4-4-88; Ord. No. 52-96, § 1, 7-15-96; Ord. No. 94-99, 11-15-99; Ord. No. 281-10/11, 7-18-11)

Sec. 14-166. Other requirements.

All nonresidential uses in B-1 and B-1b zones shall meet the requirements of division 25(space and bulk regulations and exceptions) of this article in addition to the following requirements:

(a) ***Landscaping and screening:*** The site shall be suitably landscaped for parking, surrounding uses and accessory site elements, including storage and solid waste receptacles where required by article IV (subdivisions) and article V (site plan).

(b) ***Curbs and sidewalks***: Curbs and sidewalks as specified in article VI of chapter 25.

(c) ***Off-street parking and loading***: Off-street parking and loading are required as provided in division 20 and division 21 of this article.

(d) ***Front yard parking***: There shall be no off street parking in the front yard between the street line and the required maximum setback line. Where an existing building setback exceeds the maximum front yard setback, a maximum of ten (10) percent of the total parking provided on the site may be located between the principal structure and the street.

(e) ***Signs***: Signs shall be subject to the provisions of division 22 of this article.

(f) ***Exterior storage***: There shall be no exterior storage with the exception of fully enclosed containers or receptacles

for solid waste disposal. Such containers or receptacles shall be shown on the approved site plan. In no event shall vehicles, or truck trailers with or without wheels, be used for on-site storage. Truck load sales shall not be considered outside storage provided that such activity does not extend beyond three (3) consecutive days nor occur more frequently than three (3) times a calendar year.

(g) ***Storage of vehicles***: Storage of vehicles is subject to the provisions of section 14-335.

(h) ***Shoreland and flood plain management regulations***: If the lot is located in a shoreland zone or in a flood hazard zone, then the requirements of division 26 and/or division 26.5 apply.

(Ord. No. 292.88, 4-4-88; Ord. No. 94-99, 11-15-99)

Sec. 14-167. External effects.

Every use in a B-1 or B-1b zone shall be subject to the following requirements:

(a) ***Enclosed structure***: The use shall be operated within a completely enclosed structure, except for those specific open air activities licensed by the City, including but not limited to outdoor seating, sidewalk sales, etc.

(b) ***Noise:*** The volume of sound, measured by a sound level meter with frequency weighting network (manufactured according to standards prescribed by the American Standards Association), generated shall not exceed fifty-five (55) decibels on the A scale, on impulse (less than one (1) second), at lot boundaries, excepting air raid sirens and similar warning devices.

(c) ***Vibration and heat***: Vibration inherently and recurrently generated and heat shall be imperceptible without instruments at lot boundaries.

(d) ***Glare, radiation or fumes***: Glare, radiation or fumes shall not be emitted to an obnoxious or dangerous degree beyond lot boundaries.

(e) ***Smoke***: Smoke shall not be emitted at a density in excess

of twenty (20) percent opacity level as classified in Method 9 (Visible Emissions) of the Opacity Evaluation System of the U.S. Environmental Protection Agency.

(f) *Materials or wastes*: No materials or wastes shall be deposited on any lot in such form or manner that they are clearly visible from neighbors' properties or may be transferred beyond the lot boundaries by natural causes or forces. All solid waste disposal, including materials which might cause fumes or dust, or constitute a fire hazard if stored out-of-doors, shall be only in fully enclosed containers or receptacles. Areas attracting large numbers of birds, rodents or insects are prohibited.

(Ord. No. 292-88, 4-4-88; Ord. No. 94-99, 11-15-99)

Sec. 14-168 – Sec. 14-180 Reserved.

DIVISION 10. B-2 AND B-2b COMMUNITY BUSINESS ZONES*

***Editor's note—**Ord. No. 293-88, adopted Apr. 4, 1988, with an effective date of July 1, 1988, repealed §§ 14-181—14-187 of Div. 10, B-2 Business Zone, of this article and enacted in lieu thereof similar new provisions as set out in §§ 14-181—14-187. Formerly, such sections derived from §§ 602.9.A—602.9.G of the city's 1968 Code and from Ord. No. 74-72, adopted Mar. 6, 1972; Ord. No. 499-74, § 4, adopted Aug. 19, 1974; Ord. No. 334-76, § 6, adopted July 7, 1976; and Ord. No. 274-77, adopted May 16, 1977.

Sec. 14-181. Purpose.

(a) B-2 Community Business Zone

The purpose of the B-2 community business zone is:

1. To provide appropriate locations for the development and operation of community centers offering a mixture of commercial uses, housing and services serving the adjoining neighborhoods and the larger community.

2. The variety, sites and intensity of the permitted commercial uses in the B-2 zone are intended to be greater than those permitted in the B-1 neighborhood business zone.

3. The B-2 zone will provide a broad range of goods

and services and general businesses with a mixture of large and small buildings such as grocery stores, shops and services located in major shopping centers and along arterial streets. Such establishments should be readily accessible by automobile, by pedestrians and by bicycle. Development in the B-2 zone should relate to the surrounding neighborhoods by design, orientation, and circulation patterns.

4. The B-2 and B-2b will provide locations for moderate to high density housing in urban neighborhoods along arterials.

(b) B-2b Community Business Zone

The B-2b zone is intended to provide neighborhood and community retail, business and service establishments that are oriented to and built close to the street. The B-2b zone is appropriate in areas where a more compact urban development pattern exists such as on-peninsula or in areas off-peninsula where a neighborhood compatible commercial district is established which exhibits a pedestrian scale and character. Such locations may include the peninsula and other arterials and intersections with an existing urban or neighborhood oriented building pattern.

(c) B-2c Community Business Zone

To protect and enhance the quiet enjoyment of adjoining residential neighborhoods from the impacts of businesses that serve liquor and from other uses that are incompatible with adjoining neighborhoods due to noise.

(Ord. No. 293-88, 4-4-88; Ord. No. 25, 7-07-99: emergency enactment of 120-day moratorium, effective 7/07/99 thru 11/04/99; Ord. No. 94A, 11-01-99: emergency enactment of 44-day extension of moratorium enacted on 7-07-99, effective date 11/01/99 thru 12/15/99; Ord. No. 94-99, 11-15-99; Substitute Ord. No. 189-00, §2, 4-24-00; Ord. No. 151-03/04, 02/23/04; Ord. No. 244-09/10, 6-21-10)

***Editor's Note**: Order No. 25, adopted 7-07-99, enacted an emergency 120-day moratorium on drive-through facilities on lots in B-2 Zone adjacent to lots with residential uses effective 7-07-99 through 11-1-99; Ord. No. 94A, adopted 11-01-99 extended the moratorium on said drive-through facilities through December 15, 1999.

Sec. 14-182. Permitted uses.

The following uses are permitted in the B-2, B-2b and B-2c zones except that any use involving a drive-through is prohibited in these zones unless otherwise provided in section 14-183:

(a) *Residential*:

1. Attached single-family and two-family dwellings;

2. Multi-family dwellings are permitted when the nearest residential zone is R-4, R-5, R-6 or R-7. Multi-family dwellings are permitted in any structure with commercial uses in the first floor regardless of the nearest residential zone;

3. Handicapped family units;

4. Combined living/working spaces including, but not limited to, artist residences with studio space; and

(b) *Business*:

1. General, business and professional offices, as defined in section 14-47;

2. Personal services, as defined in section 14-47;

3. Offices of building tradesmen;

4. Retail establishments;

5. Restaurants, except that restaurants shall close for all purposes including the service of alcohol no later than 11:00 p.m.;

6. Drinking establishments, except that drinking establishment as defined in section 14-47, and bars as defined in section 14-217.5 (a)(1), shall not be permitted in the B-2c zone;

7. Billiard parlors;

8. Mortuaries or funeral homes;

9. Miscellaneous repair services, excluding motor

vehicle repair services;

10. Communication studios or broadcast and receiving facilities;

11. Health clubs and gymnasiums;

12. Veterinary hospitals, but excluding outdoor kennels;

13. Theaters and performance halls;

14. Hotels or motels of less than one hundred fifty (150) rooms;

15. Dairies in existence as of November 15, 1999;

16. Bakeries in existence as of November 15, 1999;

17. Bakeries established after November 15, 1999, provided the bakeries include retail sales within the principal structures. Bakeries in the B-2b zone shall be no greater than seven thousand (7,000) square feet in size;

18. Drive-throughs associated with a permitted use in the B-2 zone provided that such do not include drive-throughs on any lot adjacent to any residential use or zone. For purposes of this section, only, "adjacent to" shall include uses across a street if within 100 feet of the subject lot boundary;

19. Drive-throughs associated with a permitted use in the B-2b zone, when accessory to a principal use located on the same lot, provided that such do not include drive-throughs on any lot adjacent to any residential use or zone. For purposes of this section, only, "adjacent to" shall include uses across a street if within 100 feet of the subject lot boundary.

20. Registered medical marijuana dispensaries.

(c) *Institutional*:

1. Long term, extended and intermediate care facility;

2. Clinics, as defined in section 14-47;

3. Places of assembly;

4. Kindergarten, elementary, middle and secondary schools;

5. College, university, trade schools; and

6. Municipal buildings and uses.

(d) *Other*:

1. Lodging houses;

2. Day care facilities or babysitting services;

3. Utility substations, as defined in section 14-47, subject to the requirements of article V (site plan), sections 14-522 and 14-523 notwithstanding;

4. Accessory uses, as provided in section 14-404;

5. Bed and breakfast, subject to the standards of article V (site plan), sections 14-522 and 14-523 notwithstanding. A bed and breakfast may include a meeting facility if the facility meets the following standards:

   a. The meeting facility shall be limited to the following types of uses:

      i. Private parties.
      ii. Business meetings.
      iii. Weddings.
      iv. Receptions.
      v. Seminars.
      vi. Business and educational conferences.

   b. The building in which the bed and breakfast and the meeting facility will be located was

in existence on March 3, 1997, and was greater than four thousand (4,000) square feet in floor area on that date.

6. Studios for artists and craftspeople, provided that the area of such studios does not exceed four thousand (4000) square feet for each studio space.

7. Hostels, provided the applicant submits a site plan and operations plan demonstrating compliance with the following conditions:

   a. All applicable provisions of Article V of this chapter shall be met.

   b. Parking shall be provided in compliance with Division 20 of this Article.

   c. No unaccompanied minors under the age of eighteen (18) shall be permitted in the facility.

   d. The length of stay for transient guests shall not exceed fifteen (15) days out of any sixty-day period.

   e. The building shall meet the applicable occupant load requirements as defined by the International Building Code and the NFPA Life Safety Code, as such codes are amended or adopted by the city.

8. Wind energy systems, as defined and allowed in Article X, Alternative Energy.

(Ord. No. 293-88, 4-4-88; Ord. No. 39-96, § 2, 10-7-96; Ord. No. 125-97, § 6, 3-3-97; Ord. No. 164-97, § 2, 12-1-97; Ord. No. 25, 7-07-99: emergency enactment of 120-day moratorium, effective 7/07/99 thru 11/04/99; Ord. No. 94A, 11-01-99: emergency enactment of 44-day extension of moratorium enacted on 7-07-99, effective date 11/01/99 thru 12/15/99; Ord. No. 94-99, 11-15-99; Ord. No. 118-00, 11-20-00; Ord. No. 151-03/04, 02/23/04; Ord. No. 127-09/10, 1-4-10 emergency passage; Ord. No. 244-09/10, 6-21-10; Ord. No. 283-09/10, 7-19-10 emergency passage; Ord. 10 10/11, 8-2-10; Ord. No. 279-09/10, 6-6-11; Ord. No. 33-11/12, 1-18-12; Ord. No. 113-11/12, 2-22-12; Ord. No. 41-12/13, 9-5-12)

Sec. 14-183. Conditional uses.

The following uses are permitted in the B-2,B-2b and B-2c

zone, as provided in section 14-474 (conditional uses), if they meet the following requirements:

(a) ***Business.*** Any of the following conditional uses, provided that, notwithstanding section 14-474(a)of this article or any other provision of this code, the Planning Board shall be substituted for the board of appeals as the reviewing authority over conditional business uses:

1. Major and minor auto service stations in the B-2 zone, only;

2. Major or minor auto service stations in the B-2b zone in existence as of November 15, 1999;

3. Car washes;

4. Drive-throughs in the B-2 or B-2b zones which are adjacent to any residential use or zone, provided that, in the B-2b drive-throughs must be accessory to a principal use located on the same site;

5. Automobile dealerships.

In addition to approval by the Planning Board with respect to the requirements of article V (site plan), sections 14-522 and 14-523 notwithstanding, these uses shall comply with the following conditions and standards in addition to the provisions of section 14-474:

a. Signs: Signs shall not adversely affect visibility at intersections or access drives. Such signs shall be constructed, installed and maintained so as to ensure the safety of the public. Such signs shall advertise only services or goods available on the premises.

b. Circulation: No ingress and egress driveways shall be located within thirty (30) feet from an intersection. No entrance or exit for vehicles shall be in such proximity to a playground, school, church, other places of public assembly, or any residential zone that the nearness poses a threat or potential danger to the safety of the public.

6. Drive-throughs, where permitted, shall also specifically comply with the following conditions:

   a. Location of Drive-throughs: Features, such as windows, vacuum cleaners and menu/order boards, stacking lanes, must be placed, where practicable, to the side and rear of the principal building except where such placement will be detrimental to an adjacent residential zone or use, and shall be located no nearer than forty (40) feet from any adjoining property located in a residential zone. This distance shall be measured from the outermost edge of the outside drive-through feature to such property line. In addition, drive-through features shall not extend nearer than twenty-five (25) feet to the street line. The site must have adequate stacking capacity for vehicles waiting to use these service features without impeding vehicular circulation or creating hazards to vehicular circulation on adjoining streets.

   b. Noise: Any speakers, intercom systems, or other audible means of communication shall not play prerecorded messages. Any speakers, intercom systems, audible signals, computer prompts, or other noises generated by the drive-through services or fixtures shall not exceed 55 dB or shall be undetectable above the ambient noise level as measured by a noise meter at the property line, whichever is greater.

   c. Lighting: Drive-through facilities shall be designed so that site and vehicular light sources shall not unreasonably spill over or be directed onto adjacent residential properties and shall otherwise conform to the lighting standards set forth in 14-526.

   d. Screening and Enclosure: Where automobiles may queue, waiting for drive-through services, their impacts must be substantially mitigated

to protect adjacent residential properties from headlight glare, exhaust fumes, noise, etc. As deemed necessary by the reviewing authority, mitigation measures shall consist of installation of solid fencing with landscaping along any residential property line which is exposed to the drive-through or the enclosure of the drive-through fixtures and lanes so as to buffer abutting residential properties and to further contain all associated impacts; and

e. Pedestrian access: Drive-through lanes shall be designed and placed to minimize crossing principal pedestrian access-ways or otherwise impeding pedestrian access.

f. Hours of Operation: The Board, as part of its review, may take into consideration the impact hours of operation may have on adjoining uses.

g. Conditions specific to major or minor auto service stations, car washes and automobile dealerships:

i. A landscaped buffer, no less than five (5) feet wide, shall be located along street frontages (excluding driveways). The buffer shall consist of a variety of plantings in accordance with the City of Portland Technical Manual;

ii. Car washes shall be designed to avoid the tracking of residual waters into the street.

(b) *Other*:

1. Printing and publishing establishments except as provided in subsection b. below;

2. Printing and publishing establishments in continuous operation at their current location since April 4, 1988, or earlier and which exceeded ten thousand (10,000) square feet of aggregate

gross floor area at that time;

3. Wholesale distribution establishments; and

4. Research and development and related production establishments.

Uses listed in this paragraph (b) (other) 1, 3 and 4 shall be limited to ten thousand (10,000) square feet of aggregate gross floor area, and uses listed in this paragraph (b) (other) 1, 2, 3 and 4 shall be subject to the following conditions and standards in addition to the provision of section 14-474:

a. Traffic circulation: The site shall have an adequate traffic circulation pattern designed to avoid hazards to vehicular circulation on adjoining streets. All stacking of motor vehicles shall be on site, and loading facilities shall be located to the rear of the building and shall not be visible from the street.

b. Building and site design: The exterior design of the structures, including architectural style, facade materials, roof pitch, building form, established setbacks and height, shall be of a commercial rather than industrial character. The site shall contain screening and landscaping which shall meet the requirements of section 14-526 for screening between land uses and the City of Portland Technical Manual.

5. Temporary wind anemometer towers, as defined in Sec 14-47, are permitted provided the following standards are met in addition to Sec 14-430:

a. Towers may be installed for the purpose of wind data collection for no more than two (2) years after the issuance of a Certificate of Occupancy for the tower. At the conclusion of the aforementioned

two (2) years, the tower must be dismantled and removed from the site within sixty (60) days; and

b. Towers shall be constructed according to plans and specifications stamped by a licensed professional engineer, which shall be provided to the Board of Appeals with the application; and

c. Towers shall be set back from habitable buildings by a distance equal to 1.1 times the tower height; and

d. The applicant shall provide a safety report prepared and stamped by a licensed professional engineer to the Board of Appeals with their application for conditional use, which demonstrates how the proposed temporary wind anemometer tower is safe in terms of strength, stability, security, grounding, icing impacts and maintenance; and

e. The applicant shall provide evidence of commercial general liability insurance, such insurance to be satisfactory to Corporation Counsel and cover damage or injury resulting from construction, operation or dismantling of any part of the temporary wind anemometer tower; and

f. Towers and associated guy wires shall be sited to minimize their prominence from and impacts on public ways (including pedestrian ways); and

g. Towers shall be used for installing anemometers and similar devices at a range of heights from the ground to measure wind characteristics (speed, direction, frequency) and related meteorological data, but shall not be used for any other purpose; and

h. A performance guarantee shall be required for the cost of removal of the tower, guy wires and anchors. This requirement may be satisfied by surety bond, letter of credit, escrow account or by evidence, acceptable to the City, or the financial and technical ability and commitment of the applicant or its agents to remove the facility at the end of the use period.

6. Wind energy systems, as defined and allowed in Article X, Alternative Energy.

(Ord. No. 293-88, 4-4-88; Ord. No. 16-92, 6-15-92; Ord. No. 39-96, § 3, 10-7-96; Ord. No. 25, 7-07-99: emergency enactment of 120-day moratorium, effective 7/07/99 thru 11/04/99; Ord. No. 94A, 11-01-99: emergency enactment of 44-day extension of moratorium enacted on 7-07-99, effective date 11/01/99 thru 12/15/99; Ord. No. 94-99, 11-15-99; Ord. No. 151-03/04, 02-23-04; Ord. No. 29-09/10, 8-3-09, emergency passage; Ord. No. 276 -09/10, 7-19-10; Ord. No. 278-09/10, 7-19-10; Ord. No. 10 10/11, 8-2-10; Ord. No. 33-11/12, 1-18-12)

Sec. 14-184. Prohibited uses.

Uses not enumerated in sections 14-182 and 14-183 as either permitted uses or conditional uses are prohibited.
(Ord. No. 293-88, 4-4-88)

Sec. 14-185. Dimensional requirements.

In addition to the provisions of division 25 (space and bulk regulations and exceptions) of this article, residential uses as permitted under sections 14-182(a) and (b) and newly constructed buildings with residential and non-residential uses shall meet the following requirements:

(a) *Residential uses:*

1. *Minimum lot size:* None.

2. *Minimum street frontage:* None.

3. *Minimum yard dimensions:*

a. *Front yard:* None.

b. *Rear yard:* Ten (10) feet, except where the lot abuts a residential zone, where twenty (20)

feet is required.

i. Accessory structures: Five (5) feet.

ii. In cases where the height of a new building exceeds forty-five (45) feet adjacent to a residential zone, the portion of the building exceeding forty-five (45) feet shall have a minimum stepback of fifteen (15) feet or an additional minimum setback of fifteen (15) feet.

c. ***Side yard:*** Five (5) feet, except where the lot abuts a residential zone, where ten (10) feet is required.

i. Accessory structures: Five (5) feet.

ii. In cases where the height of a new building exceeds forty-five (45) feet adjacent to a residential zone, the portion of the building exceeding forty-five (45) feet shall have a minimum stepback of fifteen (15) feet or an additional setback of fifteen (15) feet; provided however that this provision does not apply to buildings located within sixty-five (65) feet of Franklin Street.

d. ***Side yard or rear yard on a street:*** None.

e. ***Maximum front yard:*** In the B-2, B-2b and B-2c zones; as provided for in section 14-185(b)(3)(a), except that the maximum front yard setback need not apply in the case of a development meeting one (1) or more of the following standards:

i. The lot has less than forty (40) feet of continuous frontage and the lot has a depth of more than one hundred (100) feet from the nearest street; or

ii. The structures on the lot meet the maximum front yard or are within twenty (20) feet of the street and the remainder of the lot has less than forty (40) feet of continuous street frontage.

f. ***Pavement setback:*** For lots adjacent to a residential zone, pavement shall be set back a minimum of ten (10) feet from the side and rear property lines adjacent to the residential zone.

4. ***Maximum impervious surface ratio:*** 90%.

5. ***Maximum residential density:***

a. ***On-peninsula locations, as defined in section 14-47:*** Four hundred and thirty-five (435) square feet of land area per dwelling unit.

b. ***Off-peninsula locations, as defined in section 14-47:***

i. Residential density requirements of the nearest adjacent residential zone shall apply except for multi-family dwellings above the first floor of commercial uses as provided in (ii) below.

ii. ***Multi-family dwellings above first floor commercial uses:*** One thousand (1,000) square feet of land area per dwelling unit is required.

6. ***Maximum structure height:***

a. ***B-2 and B-2c zones:*** Forty-five (45) feet.

b. ***B-2b zone:*** Forty-five (45) feet, except in the case of a building with a commercial first floor and residential upper floors, where fifty (50) feet is allowed, and except for the portion of a building located within sixty-five (65) feet of Franklin Street, where

sixty-five (65) feet is allowed.

(b) *Business and other non-residential uses:*

1. *Minimum lot size:*

a. *Intermediate, long-term and extended care facilities:* Ten thousand (10,000) square feet.

b. *Other non-residential uses where permitted:*

i. *B-2 zone:* Ten thousand (10,000) square feet.

ii. *B-2b zone:* None.

iii. *B-2c zone:* Ten thousand (10,000) square feet.

c. Where multiple uses are on one (1) lot, the highest applicable minimum lot size must be met.

2. *Minimum street frontage:* Fifty (50) feet.

3. *Yard dimensions:* (Yard dimensions include setbacks of structures from property lines and setbacks of structures from one another. No structure shall occupy the minimum or maximum yard of another structure.)

Except as provided in subsection (5) below, the following setbacks are required:

a. *Front yard:*

i. *Minimum front yard in B-2, B-2b and B-2c zones:* None.

ii. *Maximum front yard in the B-2 and B-2c zones:* The maximum front yard setback shall not exceed the average depth of the front yard of the closet developed lots on either side of the lot in question unless the planning board or planning

authority approves a modified setback pursuant to section 14-526(a)(27)(j). For purposes of this section a developed lot means a lot on which a principal structure has been erected.

iii. ***Maximum front yard in B-2b zone (on-peninsula):*** The maximum front yard setback shall either be: (1) ten feet; or (2) in cases where the average depth of the front yard of the nearest developed lots on either side of the lot in question is less than ten (10) feet, the front yard setback of the lot in question shall not exceed such average depth. A "developed lot" means a lot on which a principal structure has been erected.

In the B-2b zone the front yard shall be the yard adjoining the major street as determined by the highest traffic volume.

iv. ***Maximum front yard in B-2b zone (off-peninsula):*** None, except that the front yard setback shall not exceed the average depth of the front yards of the closes t developed lots on either side of the lot. A developed lot means a lot on which a principal structure has been erected. In the B-2b zone the front yard shall be the yard adjoining the major street as determined by the highest traffic volume.

Where the front yard setback exceeds ten (10) feet, however, a continuous, attractive, and pedestrian scaled edge treatment shall be constructed along the street(s) consisting of street trees spaced at not more than fifteen (15) feet on center, (which otherwise meet the requirements of city arborist) and a combination of the following:

i. Landscaping of no less than four (4) feet in depth; and

ii. Ornamental brick or stone walls; and/or

iii. Ornamental fencing.

The site shall otherwise meet the requirements of article V (Site Plan).

b. *Rear yard*:

i. *Principal structures*: Ten (10) feet. Where a rear yard abuts a residence zone or first floor residential use, twenty (20) feet is required.

ii. *Accessory structures*: Five (5) feet.

c. *Side yard*:

i. Principal and accessory structures: None, except that where a side yard abuts a residential zone or a first floor residential use, ten (10) feet is equired.

ii. *Accessory structures*: Five (5) feet.

iii. *Side yards on side streets (corner lot)*: In the B-2 and B-2c zone, a minimum of ten (10) feet. In the B-2b zone, a maximum of ten (10) feet except that for any newly constructed building on a lot abutting two (2) or more streets, the maximum side yard shall apply to one street or to the side street that forms a corner with a major street as provided for in the maximum front yard provisions of this section.

(4) *Minimum lot width*: None.

(5) *Maximum structure height*:

a. *B-2 and B-2c zones:* Forty-five (45) feet, except that on lots in excess of five (5)

acres, sixty-five (65) feet is permitted; provided each of the minimum setbacks required under subsection (3) above are increased by one (1) foot in distance for each foot of height above forty-five (45) feet.

b. ***B-2b zone:*** Fifty (50) feet.

(6) ***Maximum impervious surface ratio***: Eighty (80) percent in the B-2 and B-2c; Ninety (90%) percent in the B-2b.

(c) ***Building additions:*** Building additions for residential and non-residential uses are not required to meet the maximum front yard setback for the maximum side yard on side street setback contained in this section.

(Ord. No. 293-88, 4-4-88; Ord. No. 52-96, § 2, 7-15-96; Ord. No. 94-99, 11-15-99; Ord. No. (Substitute)189-00, §3, 4-24-00; Ord. No. 151-03/04, 02/23/04; Ord. No. 244-09/10, 6-21-10; Ord. No. 41-12/13, 9-5-12)

Sec. 14-186. Other requirements.

All nonresidential uses in the B-2 and B-2b zone shall meet the requirements of division 25 (space and bulk regulations and exceptions) of this article in addition to the following requirements:

(a) ***Landscaping and screening:*** The site shall be suitably landscaped for parking, surrounding uses and accessory site elements, including storage and solid waste receptacles where required by article IV (subdivisions) and article V (site plan).

(b) ***Curbs and sidewalks***: Curbs and sidewalks as specified in article VI of chapter 25.

(c) O***ff-street parking and loading:*** Off-street parking and loading are required by division 20 and division 21 of this article;

(d) ***Front yard parking***:

1. B-2 and B-2c zone: There shall be no off-street parking in the front yard between the street line and the required minimum setback line in the B-2

and B-2c. Where existing buildings exceed the minimum front yard setback, a maximum of ten (10) percent of the total parking provided on the site may be located between the principal structure and the street.

2. B-2b zone (On-peninsula): There shall be no parking in the front yard between the street line and the required maximum setback line in the B-2b. Where existing buildings exceed the maximum front yard setback, a maximum of ten (10) percent of the total parking provided on the site may be located between the principal structure and the street.

3. B-2b zone (Off-peninsula): Parking in the front yard between the street line and the required maximum setback line in the B-2b is discouraged. However, where parking in the front yard is permitted pursuant to §14-185I(1)I, a maximum of fifty percent (50%) of the total parking on the site may be located between the principal structure and the street.

(e) ***Signs***: Signs shall be subject to the provisions of division 22 of this article.

(f) ***Exterior storage***: There shall be no exterior storage with the exception of fully enclosed containers or receptacles for solid waste disposal. Such containers or receptacles shall be shown on the approved site plan. Vehicles or truck trailers with or without wheels shall not be used for on-site storage (1) except where such storage is located in a designated loading zone identified on an approved site plan; or (2) such storage is not visible from the street or adjacent residences during winter months and such storage area is identified on an approved site plan. Truck load sales shall not be considered outside storage provided that such activity does not extend beyond three (3) consecutive days nor occurs more frequently than three (3) times a calendar year.

(g) ***Storage of vehicles***: Storage of vehicles is subject to the provisions of section 14-335.

(h) ***Shoreland and flood plain management regulations***: If the

lot is located in a shoreland zone or in a flood hazard zone, then the requirements of division 26 and/or division 26.5 apply.

(Ord. No. 293-88, 4-4-88; Ord. No. 51-96, 7-15-96; Ord. No. 94-99, 11-15-99; Substitute Ord. No. 189-00, §4, 4-24-00; Ord. No. 151-03/04, 02/23/04)

Sec. 14-187. External effects.

Every use in a B-2, B-2b and B-2c zone shall be subject to the following requirements:

(a) *Enclosed structure*: The use shall be operated within a completely enclosed structure except for those specific open air activities licensed by the City, including but not limited to outdoor seating, sidewalk sales, etc.

(b) Noise: Except as provided in 14-183(1)(iii)(2) (relating to Drive-throughs), the volume of sound, measured by a sound level meter with frequency weighting network (manufactured according to standards prescribed by the American Standards Association), generated shall not exceed sixty (60) decibels on the A scale between 7:00 a.m. and 9:00 p.m. and fifty-five (55) decibels on the A scale between 9:00 p.m. and 7:00 a.m., on impulse (less than one (1) second), at lot boundaries, excepting air raid sirens and similar warning devices.

(c) Vibration and heat: Vibration inherently and recurrently generated and heat shall be imperceptible without instruments at lot boundaries.

(d) Glare, radiation or fumes: Glare, radiation or fumes shall not be emitted to an obnoxious or dangerous degree beyond lot boundaries.

(e) Smoke: Smoke shall not be emitted at a density in excess of twenty (20) percent opacity level as classified in Method 9 (Visible Emissions) of the Opacity Evaluation System of the U.S. Environmental Protection Agency.

(f) Materials or wastes: No materials or wastes shall be deposited on any lot in such form or manner that they may be transferred beyond the lot boundaries by natural causes or forces. All material which might cause fumes or dust, or constitute a fire hazard if stored out-of-doors,

shall be only in closed containers. Areas attracting large numbers of birds, rodents or insects are prohibited.

(Ord. No. 293-88, 4-4-88; Ord. No. 94-99, 11-15-99; Ord. No. 03/04, 02/23/04)

Sec. 14-188 – Sec. 14-195. Reserved.

DIVISION 11. A-B AIRPORT BUSINESS ZONE*

***Editor's note**—Ord. No. 295-88, adopted Apr. 4, 1988, repealed §§ 14-196—14-202 of Div. 11, A-B Business Zone, of this article and enacted in lieu thereof similar new provisions as set out in §§ 14-196—14-202. Formerly, such sections derived from §§ 62.9A.A—602.9A.G of the city's 1968 Code and from Ord. No. 348-71, § 2, adopted Aug. 2, 1971; Ord. No. 499-74, § 4, adopted Aug. 19, 1974; Ord. No. 334-76, § 6, adopted July 7, 1976; and Ord. No. 275-77, adopted May 16, 1977.

Sec. 14-196. Purpose.

The purpose of the A-B airport business zone is:

To provide an area for the development of airport-related enterprises. Appropriate uses permitted in this district are those customarily associated with the operation of the airport terminal and individual airlines and accessory uses to provide for the comfort and convenience of the airport's patrons and employees.

(Ord. No. 295-88, 5-23-88)

Sec. 14-197.1. Permitted uses.

The following uses are permitted in the A-B zone:

(a) Administration;

(b) Airline terminal including, but not limited to:

1. Administration;

2. Concessions including, but not limited to, newsstands, florists, pharmacies and sundries, parcel storage, insurance sales, vending machines and video games;

3. Reservations and ticket sales;

4. Air freight operations;

5. Travel agency;

6. Physical plant service, repair and storage;

7. Cocktail lounges; and

8. Public waiting area.

(c) Charter flight service;

(d) Airport carrier operations, including ground support and fueling;

(e) Aircraft and aircraft accessory sales and services;

(f) Flying school;

(g) Ground transportation;

(h) Car rental operations, including vehicle storage;

(i) Hotel or motel;

(j) Restaurant, coffee shop;

(k) Bank;

(l) Parking lots and garages; and

(m) Accessory buildings and uses, including use of temporary structures within the boundaries of the Portland International Jetport for not longer than five (5) years, provided the owner demonstrates to the planning authority the intention and ability to discontinue or replace the temporary use with a permanent structure within five (5) years.

(n) Wind energy systems, as defined and allowed in Article X, Alternative Energy.

(Ord. No. 295-88, 5-23-88; Ord. No. 33-11/12, 1-18-12)

Sec. 14-197.2. Conditional uses.

The following use is permitted only upon the issuance of a conditional use permit, subject to the provisions of section 14-474 (conditional uses) of this article and any special provisions, standards or requiremetns specified below:

(a) Temporary wind anemometer towers, as defined in section 14-47, are permitted provided the following standards are met in addition to section 14-430:

1. Towers may be installed for the purpose of wind data collection for no more than two (2) years after the issuance of a certificate of occupancy for the tower. At the conclusion of the aforementioned two (2) years, the tower must be dismantled and removed from the site within sixty (60) days; and

2. Towers shall be constructed according to plans and specifications stamped by a licensed professional engineer, which shall be provided to the board of appeals with the application; and

3. Towers shall be set back from habitable buildings by a distance equal to 1.1 times the tower height; and

4. The applicant shall provide a safety report prepared and stamped bya licensed professional engineer to the board of appeals with their application for conditional use, which demonstrates how the proposed temporasry wind anemometer tower is safe in terms of strength, stability, security, grounding, icing impacts and maintenance; and

5. The applicant shall provide evidence of commercial general liability insurance, such insurance to be satisfactory to corporation counsel and cover damage or injury resulting from construction, operation or dismantling of any part of the temporary wind anemometer tower; and

6. Towers and associated guy wires shall be sited to minimize their prominence from and impacts on

public ways (including pedestrian ways); and

7. Towers shall be used for installing anemometers and similar devices at a range of heights from the ground to measure wind characteristics (speed, direction, frequency) and related meteorological data, but shall not be used for any other purpose; and

8. A performance guarantee shall be required for the cost of removal of the tower, guy wires and anchors. This requirement may be satisfied by surety bond, letter of credit, escrow account or by evidence, acceptable to the city, of the financial and technical ability and commitment of the applicant or its agents to remove the facility at the end of the use period.

(b) Wind energy systems, as defined and allowed in Article X, Alternative Energy.

(Ord. No. 33-11/12, 1-18-12)

Sec. 14-198. Prohibited uses.

Uses not expressly enumerated in section 14-197 as permitted uses are prohibited.

(Ord. No. 295-88, 5-23-88)

Sec. 14-199. Dimensional requirements.

In addition to the provisions of division 25 (space and bulk regulations and exceptions) of this article, uses in the A-B zone shall meet the following:

(a) *Minimum lot size:* Twenty thousand (20,000) square feet.

(b) *Minimum street frontage:* Fifty (50) feet, except as described in section 14-201(b).

(c) *Minimum yard dimensions:*

(Yard dimensions include setbacks of structures from property lines and setbacks of structures from one another. No structure shall occupy the minimum yard of another structure.)

1. *Front yard:*

Principal or accessory structures: None, except that every property having frontage on Westbrook Street shall have a minimum front yard of twenty (20) feet.

2. *Rear yard:*

a. Principal or accessory structures: None, except where a rear yard abuts a residence zone or use, in which case it must be fifty (50) feet. No structure may extend beyond the building line established for any runway or taxiway. If provided, rear yards must not be less than five (5) feet in width.

3. *Side yard:*

Principal or accessory structures: None, except where a side yard abuts a residential zone or use, in which case it must be twenty-five (25) feet in width. If provided, side yards must not be less than five (5) feet in width.

(d) *Minimum lot width:* Fifty (50) feet.

(e) *Maximum structure height:* Seventy-five (75) feet, except within one hundred (100) feet of the private property line on Westbrook Street or within one hundred (100) feet of the boundary of the A-B airport business zone in which the height limit shall be forty-five (45) feet. No structure or tree, however, shall be erected, altered, allowed to grow or maintained to a height in excess of that allowed by applicable Federal Aviation Administration (FAA) regulation.

(f) *Maximum impervious surface ratio:* Seventy (70) percent.
(Ord. No. 295-88, 5-23-88)

Sec. 14-200. Other requirements.

In addition to the above, the following requirements are applicable to all uses in the A-B zone:

(a) ***Landscaping and screening:*** The site shall be suitably landscaped for parking, surrounding uses and accessory site elements, including storage and solid waste receptacles where required by article IV (subdivisions) and article V (site plan).

(b) ***Curbs and sidewalks:*** Curbs and sidewalks as specified in article VI of chapter 25.

(c) ***Off-street parking and loading:*** Off-street parking and loading are required as provided in division 20 and division 21 of this article.

(d) ***Signs:*** Signs shall be subject to the provisions of division 22 of this article. Temporary freestanding advertising signs are not permitted.

(e) ***Exterior storage:*** There shall be no exterior storage within the district, with the exception of receptacles for solid waste disposal. Such receptacles shall be shown on the approved site plan.

(f) ***Storage of vehicles:*** Storage of vehicles is permitted as provided in section 14-335.

(g) ***Shoreland and flood plain management regulations:*** If the lot is located in a shoreland zone or a flood plain zone, the requirements of division 26 and/or division 26.5 apply.

(Ord. No. 295-88, 5-23-88)

Sec. 14-201. Special provisions as to restricted access areas.

(a) Runways, taxiways and other areas of the jetport accessible to aircraft, whether access is restricted by the Federal Aviation Administration or not, shall be known as "restricted access areas" and must be subject to the special provisions of this section.

(b) Lots in restricted access areas shall not be subject to the provisions of section 14-199(b) and (f) as to frontage and maximum impervious surface ratio; and shall not be subject to the provision of section 14-200(a) landscaping or the requirements of section 14-202.

(c) Use of lots in restricted access areas shall be limited to uses which do not require or encourage access or visits by the public and which provide technical administrative or other support to airport operations.
(Ord. No. 295-88, 5-23-88)

Sec. 14-202. External effects.

(a) *Reserved.*

(b) *Enclosed structure:* The use shall be operated within a completely enclosed structure, except for those customarily operated in the open air.

(c) *Noise:* The volume of sound, measured by a sound level meter with frequency weighting network (manufactured according to standards prescribed by the American Standards Association), generated shall not exceed sixty (60) decibels on the A scale, on impulse (less than one (1) second at lot boundaries), excepting air raid sirens and similar warning devices.

(d) *Vibration and heat:* Vibration inherently and recurrently generated and heat shall be imperceptible without instruments at lot boundaries.

(e) *Glare, radiation or fumes:* Glare, radiation or fumes shall not be emitted to an obnoxious or dangerous degree beyond lot boundaries.

(f) *Smoke:* Smoke shall not be emitted at a density in excess of forty (40) percent opacity level as classified in Method 9 (Visible Emissions) of the Opacity Evaluation System of the U.S. Environmental Protection Agency.

(g) *Materials or wastes:* No materials or wastes shall be deposited on any lot in such form or manner that they may be transferred beyond the lot boundaries by natural causes or forces. All materials which might cause fumes or dust, or constitute a fire hazard if stored out-of-doors, shall be only in closed containers. Areas attracting large numbers of birds, rodents or insects are prohibited.
(Ord. No. 295-88, 5-23-88)

Sec. 14-203 – Sec. 14-215. Reserved.

DIVISION 12. B-3, B-3b AND B-3c DOWNTOWN BUSINESS ZONES*

***Editor's note—**Ord. No. 241-91, adopted Mar. 11, 1991, repealed former Div. 12 of this article, §§ 14-216—14-221, relative to B-3 and B-3b Business Zones, and enacted new provisions in lieu thereof as Div. 12, §§ 14-216—14-221.1. Formerly, Div. 12 derived from §§ 602.10.A—602.10.F of the city's 1968 Code as amended by the following legislation:

Ord. No.	Section	Date	Ord. No.	Section	Date
452-72	2	7-17-72	364-88		5- 4-88
499-74	5	8-19-74	294-88		5-23-88
344-76	6	7- 7-76	34-89		6-28-89
429-83	1	4-25-83	153-89	2—7	11-20-89
173-87	1	3- 4-87	235-91	16	2- 4-91

Cross reference(s)—Public arts program, § 14-851 et seq.; relocation of displaced tenants, § 14-861 et seq.

Sec. 14-216. Purpose.

(a) The purposes of the B-3 and B-3b downtown business zones are to:

(1) Maintain and enhance the role of the downtown as the business and commercial center of the region;

(2) Enhance and promote the orderly expansion of retail and service businesses downtown, satisfying the related needs of the city's resident, working and visitor populations;

(3) Encourage increased housing opportunity downtown for a diverse residential population;

(4) Enhance the pedestrian environment through the

encouragement of intensive mixed-use activities, through the enhancement and maintenance of public and private open space, and through the enlivenment and increased attractiveness of the street environment;

(5) Encourage excellence in urban design;

(6) Preserve and capitalize on the unique character and historic fabric of the downtown through the encouragement of reuse of significant existing structures;

(7) Provide opportunity for an enhanced presence and integration of the arts and cultural activities downtown;

(8) Reinforce the role of the downtown as a meeting place for community residents and visitors alike from all walks of life and all socio-economic groups;

(9) Provide adequate parking and transportation facilities which promote accessibility, enhance and encourage development opportunity, and enhance and protect the pedestrian environment;

(10) In the pedestrian activities district (PAD) overlay zone, create continuity of pedestrian-oriented uses along streets where such uses predominate and along streets which, over time, will establish and maintain a strong retail and pedestrian-oriented use pattern; and

(11) Provide for the relocation of residents who are displaced by development.

(b) The B-3c downtown business zone recognizes that the business uses appropriate in this zone are constrained by the proximity of multi-unit elderly housing. In addition to the purposes of the B-3 and B-3b zones, the purpose of the B-3c zone is to promote the safety, quiet enjoyment, and general welfare of citizens residing in a dense urban neighborhood by decreasing the conflicts between residential uses and loud, uncontrolled late night activities.

(Ord. No. 241-91, 3-11-91; Ord. No. 46-97, § 2, 8-4-97)

Sec. 14-217. Permitted uses.

(a) The following uses are permitted in the B-3 and B-3b

zones:

1. *Residential:*

   a. Attached single-family, two-family and multifamily dwellings;

   b. Handicapped family units;

   c. Lodging houses;

   d. Combined living/working spaces including, but not limited to, artist residences with studio space.

2. *Business:*

   a. General and business offices;

   b. Professional offices;

   c. Personal services;

   d. Offices of building tradesmen;

   e. Retail establishments, excluding gasoline sales, wholesale and bulk purchase lumber and construction supply sales;

   f. Restaurants, excluding drive-through or drive-in restaurants;

   g. Drinking establishments, except that drinking establishments and chemical-free night clubs, as defined in section 14-47, shall not be permitted in any location in the B-3c zone, including but not limited to the PAD overlay area;

   h. Billiard parlors;

   i. Miscellaneous repair services, excluding motor vehicle repair services;

   j. Communication studios or broadcast and receiving facilities;

k. Health clubs and gymnasiums;

l. Theaters and performance and exhibition halls;

m. Convention and meeting facilities;

n. Hotels;

o. Business services;

p. Parking garages;

q. Galleries;

r. Registered medical marijuana dispensaries.

3. *Institutions*

a. Museums;

b. Public or private schools of any type;

c. Clinics;

d. Places of assembly;

e. College, university, trade school;

f. Nursery schools, kindergartens, and day care facilities or home babysitting services.

g. Governmental offices. As used in this section, governmental office means a place of business of a federal, state, count or municipal governmental entity when professional or clerical duties are performed, including but not limited to back office uses as defined in Section 14-47 and judicial functions.

4. *Other:*

a. County and municipal uses;

b. Studios for artists and craftspeople including, but not limited to, carpenters, cabinetmakers and silk

screeners;

c. Printing, publishing and related manufacture of cardboard or paper boxes, provided that these activities are conducted wholly within a building.

d. Bed and breakfast, subject to the standards of article V (site plan), sections 14-522a nd 14-523 not withstanding. A bed and breakfast may include a meeting facility if the facility meets the following standards:

i. The meeting facility shall be limited to the following types of uses:

(a) Private parties.

(b) Business meetings.

(c) Weddings.

(d) Receptions.

(e) Seminars.

(f) Business and educational conferences.

ii. The building in which the bed and breakfast and the meeting facility will be located was in existence on March 3, 1997, and was greater than four thousand (4,000) square feet in floor area on that date.

e. Hostels, provided the applicant submits a site plan and operations plan demonstrating compliance with the following conditions:

i. All applicable provisions of Article V of this chapter shall be met.

ii. Parking shall be provided in compliance with Division 20 of this Article.

iii. No unaccompanied minors under the age of eighteen (18) shall be permitted in the

facility.

iv. The length of stay for transient guests shall not exceed fifteen (15) days out of any sixty-day period.

v. The building shall meet the applicable occupant load requirements as defined by the International Building Code and the NFPA Life Safety Code, as such codes are amended or adopted by the city.

f. Wind energy systems, as defined and allowed in Article X, Alternative Energy.

(b) The following additional restrictions shall apply in the PAD overlay zone, which shall be located on the streets listed below and as further delineated on the PAD overlay zone map, a copy of which is on file in the office of planning and urban development:

Center Street, from Fore Street to Commercial Street.

Commercial Street, north side, from Foundry Lane to Pearl Street.

Commercial Street, south side, from Carroll Block to Thomas Block, inclusive.

Congress Street, from Longfellow Square to Monument Square.

Dana Street.

Exchange Street, from Federal Street to Fore Street.

Fore Street, north side, from one hundred ten (110) feet west of Center Street to two hundred seventy-five (275) feet west of Pearl Street.

Fore Street, south side, from Center Street to Pearl Street.

Free Street, north side, from Congress Square to Temple Street.

Free Street, south side, from Congress Square to four hundred twenty-three (423) feet east of Oak Street and from Center Street to Temple Street.

Middle Street, north side, from Monument Square to sixty (60) feet east of Garden Lane.

Middle Street, south side, from Monument Square to two hundred fifty (250) feet east of Pearl Street.

Milk Street, from Exchange Street to Pearl Street.

Moulton Street.

Pearl Street, from Middle Street to Fore Street.

Wharf Street.

York Street, south side, from Center Street to Dunphy's Lane.

Frontages of the following areas: Longfellow, Congress, and Monument Squares; Tommy's and Post Office Parks.

1. ***Ground floor uses***:

   a. Subject to the following limited uses, at least seventy-five (75) percent of the street level frontage of a building on a street located within the PAD overlay zone must be utilized, and, at minimum, the floor area to be occupied shall be seventy-five percent (75%) of the street level frontage multiplied by a twenty (20) foot depth:

      i. Retail establishments as permitted in 14-217(a)(2)e;

      ii. Personal services;

      iii. Hotels;

      iv. Copying centers;

      v. Restaurants as permitted in 14-217(a)(2)f;

      vi. Drinking establishments;

vii. Theaters, provided that only ticket and refreshment sales, lobbies, lounges and entrances shall be located within this area;

viii. Travel agencies;

ix. Real estate sales;

x. Visitor information services;

xi. Museums;

xii. Libraries;

xiii. Banks, financial and other business services, provided that only tellers and spaces primarily used for customer services shall be located in this area;

xiv. Municipal or county uses;

xv. Galleries and studios for artists and craftspeople including, but not limited to, carpenters, cabinetmakers and silk screeners;

xvi. Performing arts studios which attract and allow for public, pedestrian observation from the adjacent sidewalks (including dance studios, music conservatories, and the like);

xvii. Other uses where the applicant can demonstrate to the zoning administrator that the proposed use will not differ substantially from a required ground floor retail use in its effect on the continuity of pedestrian-oriented use and that the proposal establishes a ground floor use that generates pedestrian interest and activity.

For those buildings which have frontage on more than one (1) street located within the PAD overlay zone, the street level area of each such frontage shall meet

the above requirements.

b. For those buildings which have forty (40) feet or less of frontage on a street within the PAD overlay zone, the above restrictions shall be reduced to fifty (50) percent of the frontage where required to accommodate a service entrance. For buildings which have frontage on more than one (1) street located within a PAD overlay zone, only one (1) such frontage shall be permitted to reduce the required retail area to fifty (50) percent of the frontage.

c. In no event shall any required retail frontage area be used for any of the following:

i. Storage;

ii. Service entrances, including loading docks, dumpsters and compactors, except as provided in subsection b; or

iii. Food preparation areas, unless such preparation areas are visually oriented toward pedestrians on streets located within a PAD overlay zone.

(Ord. No. 241-91, 3-11-91; Ord. No. 200-95, § 1, 3-20-95; Ord. No. 126-97, § 7, 3-3-97; Ord. No. 46-97, § 3, 8-4-97; Ord. No. 226-98, §§ 1, 2, 3-2-98; Ord. No. 51-00, §2, 8-7-00; Ord. No. 205-06/07, 6-4-07; Ord. No. 226-07/08, 5-19-08; Ord. No. 127-09/10, 1-4-10 emergency passage; Ord. No. 283-09/10 emergency passage; Ord. No. 10-10/11, 8-2-10; Ord. No. 279-09/10, 6-6-11; Ord. No. 33-11/12, 1-18-12; Ord. No. 113-11/12, 2-22-12)

***Editor's Note:** Pursuant to Order 164-06/07 passed on April 4, 2007 Section 14-217.5 (*Old Port Overlay Zone)* was repealed in its entirety and Division 19.8 (*Downtown Entertainment Overlay Zone)* was enacted.

***Editor's Note:** Pursuant to Order No. 48-06/07 passed on September 18, 2006 Section 14-217.6 (*Moratorium on Formula Restaurants in Old Port Historic District and Arts District)* expired on November 19, 2006.

Sec. 14-218. Conditional uses.

(a) The following use is permitted as provided in section 14-474 (conditional uses), provided that, notwithstanding section 14-474(a) or any other provision of this Code, the planning authority shall be substituted for the board of appeals as the reviewing authority:

1. Ground floor uses in the mandated pedestrian-oriented use area of the PAD overlay zone: Any use permitted in the B-3 and B-3b zone, provided that such uses shall meet the following conditions and standards:

   a. The applicant can prove by competent evidence (including but not limited to reliable documentation of advertising, real estate brokerage efforts, and other sales mechanisms)that the space has been actively marketed for permitted uses in the PAD overlay zone for a period of six (6) months and that it has been unable to market the space for a permitted use in accordance with section 14-217(b)(1); and

      i. For existing structures, evidence that the space has been actively marketed for permitted uses for a period of six (6) months and, in the case of new construction, evidence that the space has been actively marketed and available for use for a period of six (6) months; and

      ii. Evidence of market, advertising, or real estate brokerage efforts to attract permitted uses.

   b. The approval of any conditional use under this section shall be for the specific tenant proposed for the conditional use approval and shall not run with the space to subsequent tenants. A conditional use approval shall expire at the end of each tenant's use, and a new approval shall be required for new tenants. However, where a conditional use has been approved under this subsection and the term of the effected tenancy is five (5) years or less, the tenant may sublet the area for the approved conditional use which approval may run with said lease but may not be extended without

review by the planning authority; and

c. The planning authority may impose reasonable conditions concerning the design, appearance, use and extent of use of the space along the street frontage to ensure maximum pedestrian compatibility and interest; and

d. Notwithstanding the above, the Planning Board zoning board of appeals may authorize a reduction in the percentage of required ground floor pedestrian-oriented uses where the physical limitations of an existing building so require. Any such reduction shall be the least necessary to provide relief and shall include mitigating design factors.

The Planning Board shall adopt rules and regulations governing the planning authority's review of an applicant's marketing efforts under this subsection.

An appeal to the Planning Board shall be had from the planning authority's written decision under this subsection. Such appeal shall be filed no later than thirty (30) days from the planning authority's decision.

(b) The following uses are permitted as provided in section 14-474 (conditional uses), provided that, notwithstanding section 14-474(a) or any other provision of this Code, the Planning Board shall be substituted for the board of appeals as the reviewing authority:

1. Utility substations, such as water and sewage pumping stations and standpipes, electric power substation transformer stations, and telephone electronic equipment enclosures and other similar structures, provided that such uses are suitably located, screened and landscaped so as to ensure compatibility with the surrounding neighborhood.

2. Drive-up banking services, provided that drive-up features, such as automated teller machines and service windows, shall not extend nearer than twenty-five (25)

feet to the street line. The site must have adequate stacking capacity for vehicles waiting to use these service features without impeding vehicular or pedestrian circulation or creating hazards to vehicular or pedestrian circulation on adjoining streets. Such uses shall also be in compliance with the applicable standards contained in the Downtown Urban Design Guidelines, a copy of which is on file in the department of planning and urban development. No other type of drive-up use shall be permitted.

3. Light industrial uses, subject to the following requirements:

   a. The use shall not include any use prohibited in the I-L zone;

   b. Glare, radiation, fumes or smoke shall not be emitted to an obnoxious or dangerous degree beyond lot boundaries;

   c. The floor area devoted to industrial use shall not exceed ten thousand (10,000) square feet; for a building in existence on March 11, 1991, the floor area shall not exceed ten thousand (10,000) square feet or fifty (50) percent of the total floor area, whichever is greater;

   d. The use shall be operated within a completely enclosed structure;

   e. No materials or wastes shall be deposited on any lot in such form or manner that they may be transferred beyond the lot boundaries by natural causes or forces. All materials which might cause fumes or dust or constitute a fire hazard if stored out-of-doors shall be stored only in closed containers. Areas attracting large numbers of birds, rodents or insects are prohibited;

   f. All truck parking and loading shall be accommodated off-street;

   g. The associated vehicular loading, unloading, parking, circulation and traffic volumes on the

site and on adjacent public streets will not have a more intensive impact than any use on the site within the last five (5) years;

h. Any buildings located in a PAD overlay zone shall be subject to the requirements of that zone in addition to the requirements of this section.

The following additional requirements shall apply to buildings that either were not in existence on March 11, 1991, or were in existence on that date but were either in use for any use set forth in section 14-217(a) subsections (1), (2) or (3) or were designed or constructed for any such use:

i. No tractor-trailer trucks or longer vehicles shall be associated with the proposal;

ii. The proposal shall exclude warehousing and storage as a principal use;

iii. The use shall not generate more than six (6) delivery or service trips per day between 7:00 a.m. and 7:00 p.m.

4. Emergency shelters, subject to the following conditions, in addition to the provisions of section 14-474:

a. The facility shall be in compliance with the city's current Comprehensive Housing Assistance Plan, a copy of which is on file in the department of planning and urban development, or, if there is no current edition of the Comprehensive Housing Assistance Plan, with a determination of need by the director of the department of health and human services.

b. The facility shall be registered with the City of Portland Department of Health and Human Services.

5. Surface parking provided that:

a. In the case of lot undergoing level I or level II site plan review, no new surface parking spaces, parking aisles, or vehicle lanes shall be allowed

within thirty-five (35) feet of any street, except for driveway(s) located perpendicular to the street and providing access to the site;

b. In the case of a lot undergoing level III site plan review, no new or existing surface parking spaces, parking aisles, or vehicle lanes shall be allowed within thirty-five (35) feet of any street, except for driveway(s) located perpendicular to the street and providing access to the site; and

c. No surface parking spaces shall be encumbered by lease or other use commitment exceeding twenty-four (24) month term.

(c) The following use shall be permitted only upon the issuance of a conditional use permit, subject to the provisions of section 14-474 (conditional uses), and any special provisions, standards or requirements specified below:

1. Temporary wind anemometer towers, as defined in Sec 14-47, are permitted provided the following standards are met in addition to Sec 14-430:

a. Towers may be installed for the purpose of wind data collection for no more than two (2) years after the issuance of a Certificate of Occupancy for the tower. At the conclusion of the aforementioned two (2) years, the tower must be dismantled and removed from the site within sixty (60) days; and

b. Towers shall be constructed according to plans and specifications stamped by a licensed professional engineer, which shall be provided to the Board of Appeals with the application; and

c. Towers shall be set back from habitable buildings by a distance equal to 1.1 times the tower height; and

d. The applicant shall provide a safety report prepared and stamped by a licensed professional engineer to the Board of Appeals

with their application for conditional use, which demonstrates how the proposed temporary wind anemometer tower is safe in terms of strength, stability, security, grounding, icing impacts and maintenance; and

e. The applicant shall provide evidence of commercial general liability insurance, such insurance to be satisfactory to Corporation Counsel and cover damage or injury resulting from construction, operation or dismantling of any part of the temporary wind anemometer tower; and

f. Towers and associated guy wires shall be sited to minimize their prominence from and impacts on public ways (including pedestrian ways); and

g. Towers shall be used for installing anemometers and similar devices at a range of heights from the ground to measure wind characteristics (speed, direction, frequency) and related meteorological data, but shall not be used for any other purpose; and

h. A performance guarantee shall be required for the cost of removal of the tower, guy wires and anchors. This requirement may be satisfied by surety bond, letter of credit, escrow account or by evidence, acceptable to the City, or the financial and technical ability and commitment of the applicant or its agents to remove the facility at the end of the use period.

(Ord. No. 241-91, 3-11-91; Ord. No. 36-93, 7-7-93; Ord. No. 46-97, § 4, 8-4-97; Ord. No. 51-00, §3, 8-7-00; Ord. No.205-06/07, 6-4-07; Ord. No. 29-09/10, 8-3-09, emergency passage; Ord. No. 278-09/10, 7-19-10)

***Editors Note:** Section 14-218(b)(5), subparagraphs a-c shall apply to all applications filed on or after February 13, 2007

Sec. 14-219. Prohibited uses.

Uses not enumerated in sections 14-217 and 14-218 as either permitted uses or conditional uses are prohibited.
(Ord. No. 241-91, 3-11-91)

Sec. 14-220. Dimensional requirements.

In addition to the provisions of division 25 (space and bulk regulations and exceptions) of this article, lots in the B-3, B-3b and B-3c zones shall meet the following requirements:

(a) ***Minimum lot size:*** None.

(b) ***Minimum street frontage:*** Fifteen (15) feet.

(c) ***Street wall build-to line:*** All buildings or structures shall be located within five (5) feet of the property line along street frontages, unless the Planning Board requires or approves an additional distance to comply with the requirements of section 14-526 (d)9 and the City of Porltand Design Manual.

(d) ***Minimum yard dimensions:*** None required.

(e) ***Minimum lot width:*** None required.

(f) ***Maximum length of undifferentiated blank wall along a public street or publicly accessible pedestrian way:***

1. PAD overlay zone: Fifteen (15) feet.

2. All other areas: Thirty (30) feet.

(g) ***Maximum lot coverage:*** One hundred (100) percent.

(h) ***Minimum building height:*** No new construction of any building shall be less than thirty-five (35) feet in height within fifty (50) feet of any street frontage, except that this provision shall not apply to:

1. Accessory building components and structures such as truck loading docks covered parking, mechanical equipment enclosures and refrigeration units.

2. Information kiosks and ticketing booths.

3. Public transportation facilities of less than 10,000 square feet, or additions of less than 5000 square feet to existing public transportation facilities provided that the cumulative additions as of June 4, 2007 do not exceed 10,000 square feet.

4. Additions to buildings existing as of June 4, 2007 provided that the cumulative additions since June 4, 2007 do not exceed ten percent (10%) of the building footprint on June 4, 2007, except building additions on those portions of the lot located closer to the street line than the building footprint existing as of June 4, 2007 shall not be included in this 10% limitation.

5. Utility substations, including sewage collection and pumping stations, water pumping stations, transformer stations, telephone electronic equipment enclosures and other similar structures.

6. Additions to and/or relocation of designated historic structures or structures determined by the historic preservation committee to be eligible for such designation.

7. Parking attendant booths or bank remote teller facilities.

8. Structures accessory to parks and plazas.

9. Buildings or building additions of less than 2,500 square feet footprint, on lots or available building sites of less than 3,000 square feet.

(i) *Maximum height of structures:*

1. The overall maximum permitted height of structures shall be as depicted on the downtown height overlay map, a copy of which is on file in the department of planning and urban development.

2. Maximum height along street frontages and minimum step-back dimensions shall be as depicted on the

downtown maximum street wall height and minimum step-back map, a copy of which is on file in the department of planning and urban development.

3. Where the downtown height overlay map depicts a height plus forty (40) feet, the building form may extend up to forty (40) feet above the designated height limit for the purpose of providing a distinctive graduated design for an architectural building top and to enclose rooftop appurtenances as required by section 14-526(d) 9 of article V (site plan) and the City of Portland Design Manual. No habitable floor area shall be developed within the building envelope permitted by the additional forty (40) feet, unless at least fifty (50) percent of such habitable floor area is devoted exclusively to one (1) or more publicly accessible uses, such as eating or drinking establishments, an observatory, community meeting rooms or halls available to the public or such other uses that make reasonable accommodation for public use at reasonable times, on a nonmembership basis at no cost or at a cost that will not exclude use by the general public, and provided that such floor area is incidental to the primary design intent of the space to achieve the standards of this section. Notice of such public use and how it may be accessed by the general public must be given on the first floor of the building in a manner reasonably located to inform the general public of the availability of the public use.

(j) *Maximum building area and floor area for buildings which exceed one hundred twenty-five (125) feet in height:*

1. For portions of structures which exceed one hundred twenty-five (125) feet in height, the maximum horizontal building coverage at one hundred twenty-five (125) feet or higher shall not exceed twenty-five (25) percent of the site area, except that no floor area shall be required to be less than ten thousand (10,000) square feet.

2. The maximum gross floor area for each floor located above one hundred twenty-five (125) feet in height

shall not exceed fifteen thousand (15,000) square feet.

(k) [*Uses in PAD overlay zone*:] All uses established in the PAD overlay zone shall meet the requirements of section 14-526(a)(16).

(Ord. No. 241-91, 3-11-91; Ord. No. 46-97, § 5, 8-4-97; Ord. No. 205-06/07, 6-4-07; Ord. No. 278-09/10, 7-19-10)

Sec. 14-221. Other requirements and standards.

(a) *Downtown urban design guidelines:* All development as defined in article V, all building and site alterations, and all provision of landscaping or other pedestrian amenities shall be consistent with the Downtown Urban Design Guidelines. Amendments to the Downtown Urban Design Guidelines may be made by the Planning Board and shall be filed with the city clerk. Such amendments shall become effective forty-five (45) days after the date of filing with the city clerk, unless vetoed in whole or in part by the city council within that time.

(b) *Off-street parking and loading:* Off-street parking and loading are required as provided in division 20 and division 21 of this article.

(c) *Signs:* Signs shall be subject to the provisions of division 22 of this article. In addition, signs within the pedestrian activities district (PAD) overlay zone or in areas designated as PAD encouragement areas, as shown on the pedestrian activities district map, a copy of which is on file in the department of planning and urban development, shall be consistent with the Downtown Urban Design Guidelines.

(d) *Exterior storage:* There shall be no exterior storage, with the exception of receptacles for solid waste disposal which are not visible from a public street. Such receptacles shall be shown on the approved site plan.

(e) *Storage of vehicles:* No more than one (1) unregistered vehicle shall be stored outside for a period in excess of thirty (30) days.

(f) *Shoreland and flood plain management regulations:* If the lot is located in a shoreland zone or in a flood hazard zone, then the requirements of division 26 and/or division 26.5 shall apply.

(g) ***Downtown arts program:*** All new development subject to section 14-851 shall make provision for participation in the public arts program.

(h) ***Relocation of displaced residents:*** Any development which results in the displacement of residents of dwelling units currently located on the development site shall meet the requirements of sections 14-861 through 14-864.

(i) ***Historic resources:*** The exterior design of proposed or renovated structures located within historic districts shall be subject to the provisions of article IX (historic preservation) of this chapter. The exterior design of proposed or renovated structures located adjacent to historic districts or historic resources shall be subject to section 14-526(d) 5, b.
(Ord. No. 241-91, 3-11-91; Ord. No. 240-09/10, 6-21-10; Ord. No. 278-09/10, 7-19-10)

Sec. 14-221.1. External effects.

Every use in the B-3, B-3b and B-3c zones shall be subject to the following requirements:

(a) ***Enclosed structure:*** The use shall be operated within a completely enclosed structure, except for those uses customarily operated in the open air.

(b) ***Noise:*** The level of sound, measured by a sound level meter with frequency weighting network (manufactured according to standards prescribed by the American National Standards Institute, Inc.), inherently and recurrently within the B-3 and B-3b zones shall not exceed fifty-five (55) decibels on the A scale between the hours of 9:00 p.m. and 7:00 a.m., and sixty (60) decibels on the A scale between 7:00 a.m. and 9:00 p.m. at the boundaries of any lot nor within publicly accessible pedestrian open space, except for sound from construction activities, sound from traffic on public streets, sound from temporary activities such as festivals, and sound created as a result of, or relating to, an emergency, including sound from emergency warning signal devices. In measuring sound levels under this section, sounds with a continuous duration of less than sixty (60) seconds shall be measured by the maximum

reading on a sound level meter set to the A weighted scale and the fast meter response (L maxfast). Sounds with a continuous duration of sixty (60) seconds or more shall be measured on the basis of the energy average sound level over a period of sixty (60) seconds (LEQ_1).

(c) ***Vibration:*** Vibration inherently and recurrently generated shall be imperceptible without instruments at lot boundaries.

(d) ***Heat:*** Heat shall be imperceptible without instruments at lot boundaries. Heating elements which are intended to melt snow and ice shall be placed within sidewalk paving only when approved by the department of parks and public works.

(e) ***Glare, radiation or fumes:*** Glare, radiation or fumes shall be imperceptible without instruments at lot boundaries.

(f) ***Smoke:*** Smoke shall not be emitted at a density in excess of twenty (20) percent opacity level as classified in Method 9 (Visible Emissions) of the Opacity Evaluation System of the U.S. Environmental Protection Agency.

(g) ***Materials or wastes:*** No materials or wastes shall be deposited on any lot in such form or manner that they may be transferred beyond the lot boundaries by natural causes or forces. All material which might cause fumes or dust, or constitute a fire hazard if stored out-of-doors, shall be only in closed containers and in accordance with section 14-221(d). Areas attracting large numbers of birds, rodents or insects are prohibited.

(Ord. No. 241-91, 3-11-91; Ord. No. 46-97, § 6, 8-4-97)

DIVISION 12.1. I-B ISLAND BUSINESS ZONE

Sec. 14-222. Purpose.

The purpose of the I-B island business zone is to provide limited areas on the islands for retail and service establishments that serve primarily the needs of the local island market area.

(Ord. No. 30-85, § 1, 7-15-85)

Sec. 14-223. Permitted uses.

The following uses are permitted in the I-B island business zone:

(a) Single-family detached dwellings;

(b) Retail or service establishments, excluding those listed below:

1. Automobile service stations;

2. Inns;

(c) Marinas and yacht clubs;

(d) Lodging houses, with more than two (2) but not more than nine (9) lodging rooms;

(e) Wharves, piers, docks, or landing ramps;

(f) Off-street parking;

(g) Accessory uses customarily incidental and subordinate to the location, function, and operation of principal uses, subject to the provisions of section 14-404 (accessory use) of this article including but not limited to home occupations;

(h) Handicapped family unit, as defined in section 14-47, for handicapped persons plus staff.

(i) Peaks Island only: Bed and breakfast, subject to the standards of article V (site plan), sections 14-522 and 14-523 notwithstanding.

(j) Studios for artists and craftspeople, provided that the area of such studios does not exceed one thousand (1,000) square feet for each studio space.

(k) Wind energy systems, as defined and allowed in Article X, Alternative Energy.

(Ord. No. 30-85, § 1, 7-15-85; Ord. No. 33-91, § 13, 1-23-91; Ord. No. 125-97, § 8, 3-3-97; Ord. No. 164-97, § 3, 12-1-97; Ord. No. 10-10/11, 8-2-10; Ord. No. 33-11/12, 1-18-12)

Sec. 14-224. Conditional uses.

The following uses are permitted only upon the issuance of a conditional use permit, subject to the provisions of section 14-474 (conditional uses) of this article and any special provisions, standards or requirements specified below:

(a) Two-, three- or four-family dwelling, provided that:

1. No open outside stairways or fire escapes above ground floor shall be constructed or have been constructed in the immediately preceding five (5) years;

2. A below-grade dwelling unit shall be permitted only if access is provided directly to the outside of the building;

3. Density shall be determined by the most restrictive abutting residential zone, except for those lots which are served by public water and sewer, where density shall be determined by the least restrictive abutting residential zone. If no residential zone is abutting, density shall be determined by the nearest residential zone. Residential uses shall meet the requirements of such abutting or nearest residential zone;

4. Any additions or exterior alterations shall be compatible with the original architecture of the building. The exterior design of new construction, including the architectural style, facade materials, roof pitch, building form, and height shall be compatible with neighboring properties;

5. No existing dwelling unit shall be decreased to less than one thousand (1,000) square feet of floor area;

6. No additional dwelling unit shall have less than six hundred (600) square feet of floor area, exclusive of common hallways and storage in basement and attic;

7. All sanitary waste shall be disposed of by a public sewer, subsurface sewerage system or other method in compliance with all applicable federal, state and local regulations;

8. The proposed conversion has sufficient water for the needs of the dwellings and will not cause an unreasonable burden on an existing water supply nor adversely affect groundwater resources;

(b) Automobile service stations;

(c) Inns;

(d) Schools;

(e) Nursery schools, kindergartens and day care centers for seven (7) or more children;

(f) Municipal uses, provided outside storage and parking area uses are suitably screened and landscaped so as to ensure compatibility with the surrounding neighborhood.

(g) Places of religious assembly;

(h) Private clubs, fraternal organizations.

(i) Temporary wind anemometer towers, as defined in section 1-47, are permitted provided the following standards are met in addition to section 14-430:

1. Towers may be installed for the purpose of wind data collection for no more than two (2) years after the issuance of a certificate of occupancy for the tower. At the conclusion of the aforementioned two (2) years, the tower must be dismantled and removed from the site within sixty (60) days; and

2. Towers shall be constructed according to plans and specifications stamped by a licensed professional engineer, which shall be provided to the board of appeals with the application; and

3. Towers shall be set back from habitable buildings

by a distance equal to 1.1 times the tower height; and

4. The applicant shall provide a safety report prepared and stamped bya licensed professional engineer to the board of appeals with their application for conditional use, which demonstrates how the proposed temporary wind anemometer tower is safe in terms of strength, stability, security, grounding, icing impacts and maintenance; and

5. The applicant shall provide evicence of commercial general liability insurance, such insurance to be satisfactory to corporation counsel and cover damage or injury resulting from construction, operation or dismantling of any part of the temporary wind anemometer tower; and

6. Towers and associated guy wires shall be sited to minimize their prominence from and impacts on public ways (including pedestrian ways); and

7. Towers shall be used for installing anemometers and similar devices at a range of heights from the ground to measure wind characteristics (speed, direction, frequency) and related meteorological data, but shall not be used for any otherp upose; and

8. A performance guarantee shall be required for the cost of removal of the tower, guy wires and anchors. This requirement may be satisfied by surety bond, letter of credit, escrow account or by evidence, acceptable to the city, of the financial and technical ability and commitment of the applicant or its agents to remove the facility at the end of the use period.

(j) Wind energy systems, as defined and allowed in Article X, Alternative energy.

(Ord. No. 30-85, § 1, 7-15-85; Ord. No. 435-89, 5-15-89; Ord. No. 163-89, § 1, 12-11-89; Ord. No. 127-09/10, 1-4-10 emergency passage; Ord. No. 33-11/12, 1-18-12)

Sec. 14-225. Prohibited uses.

Uses that are not expressly enumerated herein as either permitted uses or conditional uses are prohibited.
(Ord. No. 30-85, § 1, 7-15-85)

Sec. 14-226. Dimensional requirements.

In addition to the provisions of division 25 (space and bulk regulation and exceptions) of this article, lots in the I-B zone shall meet the following minimum requirements:

(a) *Minimum lot size:*

1. Residential: Lot size shall be determined by the most restrictive abutting residential zone, except for those lots which are served by public water and sewer, where lot size shall be determined by the least restrictive abutting residential zone. If no residential zone is abutting, density shall be determined by the nearest residential zone. Residential uses shall meet the requirements of such abutting or nearest residential zone.

2. Retail or service establishments: Twenty thousand (20,000) square feet, except that no minimum lot size shall be required if served by public water and sewer.

3. Restaurants and drinking establishments: Twenty thousand (20,000) square feet, except that ten thousand (10,000) square feet shall be required if served by public water and sewer.

4. Schools and other educational facilities: Twenty thousand (20,000) square feet.

5. Churches and other places of worship: Twenty thousand (20,000) square feet.

6. Private clubs, fraternal organizations: Twenty thousand (20,000) square feet.

7. Lodging houses: Thirty thousand (30,000) square feet for three (3) lodging rooms, plus ten thousand (10,000) square feet for each additional lodging

room in excess of three (3), unless served by public water and public sewer. Five thousand (5,000) square feet for three (3) lodging rooms, plus five thousand (5,000) square feet for each additional lodging room in excess of three (3) if served by public water and public sewer.

8. Inns or bed and breakfasts: Ten thousand (10,000) square feet for each guest room, unless served by public water and public sewer. Five thousand (5,000) square feet for three (3) guest rooms, plus five thousand (5,000) square feet for each additional guest room in excess of three (3) if served by public water and public sewer.

9. Municipal uses: Twenty thousand (20,000) square feet.

10. Automobile service station: Twenty thousand (20,000) square feet.

11. In issuing any permit for new development, the building or planning authority shall require that any lot located in an I-B zone shall be at least twenty thousand (20,000) square feet in area when the lot is to be serviced by a subsurface wastewater disposal system, [excluding Peaks Island].

12. [Excluding Peaks Island from this subsection 12,] any property owner whose lot does not meet the minimum lot size requirements outlined in subsection 11 of this section may, for purposes of this section only, merge two (2) or more separate lots on the same island in order to meet these requirements. Where the lots so merged are not contiguous, the property owner shall grant to the city as holder a conservation easement upon the lot or lots which will not contain the principal structure. The conservation easement shall contain both an existing legal description and a city assessor’s chart, block and lot description. The building authority shall be authorized to accept such conservation easements on behalf of the city. Said easement shall be recorded by the applicant in

the registry of deeds. A copy of the recorded easement and copies of the deeds for both lots shall be submitted to the building authority prior to issuance of a building permit. The property over which the conservation easement has been granted shall be used for passive recreational and conservation purposes only, and shall be subject to the following restrictions:

a. No structure shall be permitted on this property.

b. No parking or storage of vehicles or machinery shall be permitted on this property at any time.

c. No area of this property shall be paved.

d. No exterior storage for commercial use shall be permitted on this property.

e. The easement deed shall reference the lot which is benefited by this conservation easement. No conservation easement shall be used to benefit more than one (1) lot.

Conservation easements shall only be granted over lots which conform either to the provisions of section 14-433 or to the minimum lot size provisions set forth in (a)1 of this section. Conservation easements shall not be granted over any lot which is encumbered by any other easement which prohibits all construction on that lot.

A conservation easement may also name as a holder or grant a third-party right of enforcement to a nonprofit corporation or charitable trust, the purposes or powers of which include retaining or protecting the natural, scenic or open space values of real property; assuring the availability of real property for agricultural, forest, recreational or open space use; protecting natural resources; or maintaining or enhancing air or water quality of real property.

Nothing in this section shall be construed to allow an owner of a currently existing and developed lot to convey or permit a portion of that lot to be used to fulfill the requirements of this section if such conveyance would render the existing lot nonconforming under the terms of this chapter. The lot upon which a building is to be constructed shall meet the minimum lot size requirements of section 14-433.

13. Where an existing subsurface disposal system serving an existing structure requires replacement, the replacement system shall meet the requirements of CMR 241 Section 2-E. The land area requirements in subsection 11 of this section shall not apply to such a replacement system.

    For purposes of this subsection the mean high tide mark shall be considered to be the shoreline lot line.

(b) *Minimum street frontage:* Forty (40) feet.

(c) *Minimum yard dimensions:*

(Yard dimensions include setbacks of structures from property lines and setbacks of structures from one another. No structure shall occupy the minimum yard of another structure.)

1. *Front yard:*

   Principal or accessory structures: Twenty (20) feet, except that a front yard need not exceed the average depth of front yards on either side of the lot.

2. *Rear yard:*

   Principal or accessory structures: Ten (10) feet.

3. *Side yard:*

   Principal structures: Ten (10) feet.
   Accessory structures: Ten (10) feet except that the

minimum distance from a principal structure may be five (5) feet.

4. *Side yard on side streets:*

Principal or accessory structures: Ten (10) feet.

(d) *Maximum lot coverage:* Fifty (50) percent of lot area.

(e) *Minimum lot width:* Forty (40) feet.

(f) *Maximum structure height:*

Principal or accessory attached structure: Thirty-five (35) feet.

Accessory detached structure: Eighteen (18) feet.

(Ord. No. 30-85, § 1, 7-15-85; Ord. No. 163-89, § 2, 12-11-89; Ord. No. 125-97, § 9, 3-3-97)

Sec. 14-227. Other requirements.

Every use in a I-B zone shall be subject to the following requirements:

(a) *Off-street parking:* Off-street parking is required as provided in division 20 (off-street parking) of this article.

(b) *Shoreland and flood plain management regulations:* Any lot or portion of a lot located in a shoreland zone as identified on the city shoreland zoning map or in a flood hazard zone shall be subject to the requirements of division 26 and/or division 26.5.

(c) *Storage of vehicles:* Only one (1) unregistered motor vehicle may be stored outside on the premises and not for a period exceeding thirty (30) days.

(d) *Noise:* The volume of sound, measured by a sound level meter with frequency weighting network (manufactured according to standards prescribed by the American Standards Association), generated shall not exceed sixty (60) decibels on the A scale between 7:00 a.m. and 9:00 p.m. and fifty-five (55) decibels on the A scale between

9:00 p.m. and 7:00 a.m., on impulse (less than one (1) second), at lot boundaries, excepting air raid sirens and similar warning devices.

(Ord. No. 30-85, § 1, 7-15-85; Ord. No. 15-92, § 16, 6-15-92; Ord. No. 15-04/05, 8-2-04; Ord. No. 240-09/10, 6-21-10)

Sec. 14-228 – Sec. 14-229.9. Reserved.

DIVISION 12.5. B-4 COMMERCIAL CORRIDOR ZONE

Sec. 14-229.10. Purpose.

The purpose of the B-4 commercial corridor zone is:

(a) To provide appropriate locations in the city for the development and operation of businesses catering primarily to highway-oriented trade along major arterials. (Uses which have market areas which are primarily dependent on the regional highway network or serve a regional or larger market); or

(b) To provide appropriate locations for large-scale commercial uses and commercial uses that require larger land areas to accommodate their operations.

(Ord. No. 296-88, 5-23-88)

Sec. 14-229.11. Permitted uses.

The following uses are permitted in the B-4 zone:

(a) *Business:*

1. General, business and professional offices, as defined in section 14-47;

2. Personal services, as defined in section 14-47;

3. Offices of building tradesmen;

4. Retail establishments;

5. Restaurants;

6. Drinking establishments;

7. Billiard parlors;

8. Major and minor gasoline service stations, as defined in section 14-47;

9. Mortuaries or funeral homes;

10. Miscellaneous repair services;

11. Health clubs and gymnasiums;

12. Hotels and motels;

13. New and used car dealerships;

14. Facilities for the maintenance and repair of automobiles, provided all repairs are performed in a fully enclosed structure;

15. Car washes;

16. Lumber and building materials dealers;

17. Communications studios and broadcast receiving facilities;

18. Veterinary hospitals but excluding outdoor kennels;

19. Auto body repair and paint shops provided all repairs are performed in fully enclosed structures;

20. Boat, trailer or recreational vehicle sales and service;

21. Theaters, entertainment and recreation services;

22. Self-storage facility;

23. Registered medical marijuana cultivation facilities.

(b) *Institutional:*

1. Governmental buildings and uses.

2. Colleges, universities and trade schools.

3. Places of assembly.

4. Correctional prerelease facilities for up to twelve (12) persons, plus staff, serving a primary clientele of parolees or persons in correctional prerelease programs, provided that:

   a. No correctional prerelease facility shall be located within one thousand (1,000) feet of another, as measured in a radius from the center of the lot;

   b. If a facility requires state or federal licensing, staffing of the facility shall be as required by such license. If a facility does not require state or federal licenses, there shall be a minimum of one (1) staff person for every ten (10) residents or fraction thereof; and

   c. The facility shall provide twenty-four-hour supervision of program participants.

(c) *Other:*

1. Lodging houses;

2. Wholesale warehousing and distribution establishments;

3. Commercial bakeries and dairies;

4. Light manufacturing uses with not more than twenty-five thousand (25,000) square feet or less of gross floor area. Exterior assembly of materials or products is prohibited. Activity defined as a high hazard by chapter 6 of this Code (building code) is also prohibited;

5. Printing and publishing establishments;

6. Research and development and related production

establishments;

7. Utility substations, as defined in section 14-47, subject to the requirements of article V (site plan), sections 14-522 and 14-523 notwithstanding; and

8. Day care facilities;

9. Studios for artists and craftspeople;

10. Accessory uses, as provided in section 14-404; and

11. Storage lots for towed or impounded vehicles, provided that such lots are located at least 300 feet from any residential zone or existing conforming residential use. For the purposes of this section, "existing conforming residential use" does not include a legally nonconforming residential use as described in division 23 of this chapter.

12. Wind energy systems, as defined and allowed in Article X, Alternative Energy.

(Ord. No. 296-88, 5-23-88; Ord. No. 285-95, 6-7-95; Ord. No. 154-96, § 13, 12-16-96; Ord. No. 164-97, § 3, 1-6-97; Ord. No. 164-97, § 4, 12-1-97; Ord. No. 81-99, § 1, 10-18-99; Ord. No. 97-06/07, 11-20-06; Ord. No. 127-09/10, 1-4-10 emergency passage; Ord. No. 283-09/10 7-19-10, emergency passage; Ord. No. 10-10/11, 8-2-10; Ord. No. 90-11/12, 1-4-12; Ord. No. 33-11/12, 1-18-12)

Sec. 14-229.11.1. Conditional uses.

The following use shall be permitted only upon the issuance of a conditional use permit, subject to the provisions of section 14-474 (conditional uses), and any special provisions, standards or requirements specified below:

(a) Temporary wind anemometer towers, as defined in Sec 14-47, are permitted provided the following standards are met in addition to Sec 14-430:

1. Towers may be installed for the purpose of wind data collection for no more than two (2) years after the issuance of a Certificate of Occupancy for the tower. At the conclusion of the aforementioned two (2) years, the tower

must be dismantled and removed from the site within sixty (60) days; and

2. Towers shall be constructed according to plans and specifications stamped by a licensed professional engineer, which shall be provided to the Board of Appeals with the application; and

3. Towers shall be set back from habitable buildings by a distance equal to 1.1 times the tower height; and

4. The applicant shall provide a safety report prepared and stamped by a licensed professional engineer to the Board of Appeals with their application for conditional use, which demonstrates how the proposed temporary wind anemometer tower is safe in terms of strength, stability, security, grounding, icing impacts and maintenance; and

5. The applicant shall provide evidence of commercial general liability insurance, such insurance to be satisfactory to Corporation Counsel and cover damage or injury resulting from construction, operation or dismantling of any part of the temporary wind anemometer tower; and

6. Towers and associated guy wires shall be sited to minimize their prominence from and impacts on public ways (including pedestrian ways); and

7. Towers shall be used for installing anemometers and similar devices at a range of heights from the ground to measure wind characteristics (speed, direction, frequency) and related meteorological data, but shall not be used for any other purpose; and

8. A performance guarantee shall be required for the cost of removal of the tower, guy wires and anchors. This requirement may be satisfied

by surety bond, letter of credit, escrow account or by evidence, acceptable to the City, or the financial and technical ability and commitment of the applicant or its agents to remove the facility at the end of the use period.

(b) Wind energy systems, as defined and allowed in Article X, Alternative Energy.

(Ord. No. 29-09/10, 8-3-09, emergency passage; Ord. No. 33-11/12, 1-18-12)

Sec. 14-229.12. Prohibited uses.

Uses not expressly enumerated in section 14-229.11 as permitted uses are prohibited.

(Ord. No. 296-88, 5-23-88)

Sec. 14-229.13. Dimensional requirements.

In addition to the provisions of division 25 (space and bulk regulations and exceptions) of this article, uses other than utility substations in the B-4 zone shall meet the following minimum requirements:

(a) *Minimum lot size:* Ten thousand (10,000) square feet.

(b) *Minimum street frontage:* Sixty (60) feet.

(c) *Minimum yard dimensions:*

(Yard dimensions include setbacks of structures from property lines and setbacks of structures from one another. No structure shall occupy the minimum yard of another structure.)

Except as provided in subsection (5) below, the following setbacks shall be required:

1. *Front yard:*

a. Principal or accessory structures: Twenty (20) feet, except that a front yard need not exceed the average depth of front yards on either side of the lot.

b. The front yard of a lot existing as of May 23, 1988, and less than one hundred (100) feet deep need not be deeper than twenty (20) percent of the depth of the lot.

2. *Rear yard:*

a. Principal structures: Twenty (20) feet.

b. Accessory structures (detached) with a total floor area of one hundred (100) square feet or less: Seven (7) feet.

3. *Side yard:*

a. Principal structures:

Number of Stories	*Required Side Yard*
1 or 2 stories	10 feet
3 or more stories	12 feet

b. Accessory structures (detached) with a total floor area of one hundred (100) square feet or less: Five (5) feet.

c. Side yards on side streets (corner lot):

Principal or accessory structures:

i. One (1) or two (2) stories: Ten (10) feet.

ii. Three (3) or more stories: Twelve (12) feet.

(d) ***Minimum lot width:*** Sixty (60) feet.

(e) ***Maximum height:*** Sixty-five (65) feet; except that on lots in excess of five (5) acres, ninety (90) feet is permitted if each of the setbacks required under subsection (3) above is increased by one (1) foot in distance for each foot of height above sixty-five (65)

feet.

(f) ***Maximum impervious surface ratio:*** Eighty (80) percent.

(g) ***Maximum Floor Area Ratio (F.A.R.):*** The maximum floor area ratio is established according to the abutting residential zone. If there is no abutting residential zone to the lot in question, the F.A.R may be a maximum of 0.65. In the case of two (2) or more abutting residential zones, the F.A.R. shall be the F.A.R. of the least restrictive such zone. The ratios are as follows:

Residential	*Floor Area Ratio*
R-1/R-2	0.45
R-3	0.55
R-4/R-5/R-5A/R-6	0.65

(Ord. No. 296-88, 5-23-88)

Sec. 14-229.14. Other requirements.

In addition to the above, the following requirements are applicable to all uses in the B-4 zone:

(a) ***Landscaping and screening:*** The site shall be suitably landscaped for parking, surrounding uses and accessory site elements including storage and solid waste receptacles where required by article IV (subdivisions) and article V (site plan).

(b) ***Curbs and sidewalks:*** Curbs and sidewalks as specified in article VI of chapter 25.

(c) ***Off-street parking and loading:*** Off-street parking and loading are as required by division 20 and division 21 of this article.

(d) ***Signs:*** Signs shall be subject to the provisions of division 22 of this article.

(e) ***Exterior storage:***

1. Any storage of new materials, finished products, or

related equipment must be suitably screened from the public way and from abutting properties by a solid fence at least five (5) feet in height, or by a solid evergreen planting strip.

2. All waste shall be stored in covered containers that do not leak or otherwise permit liquids or solids to escape from the container.

3. Outdoor storage of refuse, debris, or material awaiting reuse shall be in an appropriate container or located within a designated, screened area.

4. Any permitted outdoor storage of materials shall be done in such a manner as to prevent the breeding and harboring of insects or vermin, to prevent the transfer of such materials from the site by natural causes or forces and to contain fumes, dust, or other materials which constitute a fire hazard. This storage shall be accomplished within enclosed containers or by one (1) or more of the following methods: raising materials above ground, separating materials, preventing stagnant water, or by some other means. No outdoor storage shall be permitted in the required yard between the front of any building on the site and the street, except for storage for plant and tree nurseries.

(f) ***Storage of vehicles:*** Storage of vehicles is subject to the provisions of section 14-335.

(g) ***Shoreland and flood plain management regulations:*** If the lot is located in a shoreland zone or in a flood plain zone, the requirements of division 26 and/or division 26.5 apply.

(Ord. No. 296-88, 5-23-88; Ord. No. 164-97, § 4, 1-6-97)

Sec. 14-229.15. External effects.

Every use in a B-4 zone shall be subject to the following requirements:

(a) ***Enclosed structure:*** The use shall be operated within a completely enclosed structure, except for those customarily operated in the open air.

(b) ***Noise:*** The volume of sound, measured by a sound level meter with frequency weighting network (manufactured according to standards prescribed by the American Standards Association), generated shall not exceed sixty-five (65) decibels on the A scale between 7:00 a.m. and 9:00 p.m. and sixty (60) decibels on the A scale between 9:00 p.m. and 7:00 a.m., on impulse (less than one (1) second), off premises at source of complaint, excepting air raid sirens and similar warning devices.

(c) ***Vibration and heat:*** Vibration inherently and recurrently generated and heat shall be imperceptible without instruments at lot boundaries.

(d) ***Glare, radiation or fumes:*** Glare, radiation or fumes shall not be emitted to an obnoxious or dangerous degree beyond lot boundaries.

(e) ***Smoke:*** Smoke shall not be emitted at a density in excess of thirty (30) percent opacity level as classified in Method 9 (Visible Emissions) of the Opacity Evaluation System of the U.S. Environmental Protection Agency.

(Ord. No. 296-88, 5-23-88; Ord. No. 164-97, § 5, 1-6-97)

Sec. 14-229.16. - Sec. 14-229.30. Reserved.

DIVISION 12.6. B-5 URBAN COMMERCIAL MIXED USE ZONE

Sec. 14-230. Purpose.

The purpose of the B-5 and B-5b zones is to provide zones in areas of the peninsula near the central business district where a mixture of uses, including marine, industrial, commercial, and residential, is encouraged. The B-5 and B-5b zones are characterized by larger underdeveloped lots with great potential for denser, clustered, urban mixed use development and more efficient reuse of existing land and buildings.

It is anticipated that such denser, mixed uses would rely on a shared infrastructure system, including service alleys, parking lots, public transportation facilities, stormwater management, and driveways.

(Ord. No. 168-93, § 3, 1-4-93; Substitute Ord. No. 164-97, § 1, 5-19-97)

***Editor's Note:** The text changes adopted in Ord. No. 215-04/05 Section 14-230.1 (a)8 and 13 and (g) 3 shall remain in effect for six (6) months from the effective date (6-2-05) of the changes. By Council Order No. 94-05/06 passed on 11/7/05 the effective date of the amendments were extended through and including March 2, 2006. By Council Order No. 170-05/06 passed as an emergency on 2/22/06 the effective date of the amendments were extended through and including September 30, 2006 and thereafter shall cease to exist unless the Portland City Council takes action to extend the applicability of such changes.

Sec. 14-230.1. Permitted uses.

The following uses are permitted in the B-5 and B-5b urban commercial mixed use zones:

(a) *Commercial:*

1. Professional, business and general offices;
2. Restaurants and other eating and drinking establishments;
3. Meeting and convention halls;
4. Hotels and motels;
5. Craft and specialty shops, including the on-premises production of handcrafted goods;
6. Retail and service establishments except convenience stores with gas pumps;
7. Theaters and places of public assembly;
8. Banking services, except that any drive-up banking service shall be a conditional use;
9. Laundry and dry cleaning services;
10. Cabinet and carpentry shops;
11. Indoor recreation and family amusement establishments;
12. Intermodal transportation facilities;

13. Off-street parking lots and garages except in the B-5 zoning district between Forest Avenue and Franklin Street surface parking lots shall be considered a conditional use;

14. Cold storage facilities;

15. Lumber and building materials dealers (in existence on date of passage);

16. Major and minor gasoline service stations, as defined in section 14-47. Major and minor gasoline service stations shall be located at least two thousand (2,000) feet from each other;

17. Personal services;

18. Business services;

19. Billiard parlors;

20. Offices of business tradespeople;

21. Miscellaneous repair services;

22. Communication studios, broadcast and receiving facilities;

23. Theaters;

24. Exhibition halls;

25. Indoor amusement and recreation centers.

26. Hostels, provided the applicant submits a site plan and operations plan demonstrating compliance with the following conditions:

    a. All applicable provisions of Article V of this chapter shall be met.

    b. Parking shall be provided in compliance with Division 20 of this Article.

c. No unaccompanied minors under the age of eighteen (18) shall be permitted in the facility.

d. The length of stay for transient guests shall not exceed fifteen (15) days out of any sixty-day period.

e. The building shall meet the applicable occupant load requirements as defined by the International Building Code and the NFPA Life Safety Code, as such codes are amended or adopted by the city.

(b) *Industrial:*

1. Warehousing and wholesaling;

2. Low impact industrial uses with total floor area of less than ten thousand (10,000) square feet and which meet the performance standards of the I-L zone;

3. Breweries, including associated bottling activities.

(c) *Marine:*

1. Marine products wholesaling and retailing;

2. Marine repair services and machine shops;

3. Harbor and marine supplies and services and ship supply;

4. Reserved;

5. Shipbuilding and facilities for construction, maintenance and repair of vessels;

6. Marine museums and aquariums;

7. Reserved;

8. Boat repair yards;

9. Boat storage facilities;

10. Seafood processing for human consumption;

11. Seafood packing and packaging;

12. Seafood distribution;

(d) *Residential:*

1. Attached single-family, two-family and multifamily dwellings;

2. Handicapped family units;

3. Lodging houses;

4. Combined living/working spaces, including but not limited to artist residences with studio space.

(e) *Public:*

1. Utility substations, including sewage collection and pumping stations, water pumping stations, transformer stations, telephone electronic equipment enclosures and other similar structures;

2. Museums and art galleries;

3. Landscaped pedestrian parks, plazas and other similar outdoor pedestrian spaces.

(f) *Institutional:*

1. Public or private schools of any type;

2. Clinics;

3. Places of assembly;

4. Colleges, universities or trade schools;

5. Governmental buildings and uses;

6. Nursery schools, kindergartens, and day care facilities or home babysitting services.

(g) *Other:*

1. Studios for artists and craftspeople including but not limited to, carpenters, cabinetmakers, and silk screeners;

2. Printing and publishing establishments;

3. Accessory uses customarily incidental and subordinate to the location, function and operation of permitted uses, excluding in the B-5b all drive-up services for retail, banking, or automotive repair uses. In the B-5 zoning district between Forest Avenue and Franklin Street, all drive-up services for all retail or drive-up automotive repair uses are prohibited. In the B-5 zone between Forest Avenue and Franklin Street, surface parking lots shall be considered a conditional use subject to the conditional use section of the B-5 zone.

4. Wind energy systems, as defined and allowed in Article X, Alternative Energy.

(Ord. No. 168-93, § 3, 1-4-93; Ord. No. 39-96, § 4, 10-7-96; Substitute Ord. No. 164-97, § 2, 5-19-97; Ord. No. 164-97, § 5, 12-1-97; Ord. No. 80, 12-8-04; Ord. No. 215-04/05, 5-2-05; Ord. No. 127-09/10, 1-4-10 emergency passage; Ord. No. 279-09/10, 6-6-11; Ord. No. 33-11/12, 1-18-12; Ord. No. 113-11/12, 2-22-12)

***Editor's Note:** The text changes adopted in Ord. No. 215-04/05 Section 14-230.1 (a)8 and 13 and (g) 3 shall remain in effect for six (6) months from the effective date (6-2-05) of the changes. By Council Order No. 94-05/06 passed on 11/7/05 the effective date of the amendments were extended through and including March 2, 2006. By Council Order No. 170-05/06 passed as an emergency on 2/22/06 the effective date of the amendments were extended through and including September 30, 2006 and thereafter shall cease to exist unless the Portland City Council takes action to extend the applicability of such changes.

Sec. 14-230.2. Conditional uses.

(a) The following uses shall be permitted as conditional uses in the B-5 and B-5b urban commercial mixed use zones, provided

that, notwithstanding section 14-471(c), section 14-474(a), or any other provision of this Code, the Planning Board shall be substituted for the board of appeals as the reviewing authority, and further provided that, in addition to the provisions of section 14-474(c)(2), they shall also meet the requirements set forth below:

1. *Commercial:*

   a. Reserved.

2. *Industrial:*

   a. Low impact industrial uses over ten thousand (10,000) square feet provided that they meet the following requirements:

      i. Truck loading and access and vehicle parking shall be located in the rear or side yard of the site where possible.

      ii. Street frontage shall be designed for pedestrian scale or interest.

      iii. Shared infrastructure to the extent practicable, including, but not limited to, service alleys, parking areas, stormwater treatment, public transportation facilities and driveways, shall be utilized.

3. *Surface Parking:*

   a. In the B-5 zoning district located between Forest Avenue and Franklin Street, surface parking lot provided the following requirements are met.

      i. No new surface parking lot shall be developed within thirty-five (35) feet of any street except in the case of a property in which eighty percent (80%) of the property frontage has a building within ten (10) feet of the street.

      ii. No surface parking lot shall be encumbered by lease or other use commitment to an off-site

use exceeding a twenty-four month term.

iii. For surface parking lots of 20,000 sq. ft or greater in area, lease or other use agreements for surface parking shall not preclude the relocation of such parking for more than a twenty-four (24) month term.

iv. Any such parking shall in its lease stipulate that developer/owner reserves the right to relocate said parking or convert surface parking to structured parking as long as the relocated parking is located within a reasonable distance from the use.

v. Surface parking shall be laid out in a manner conducive to development of future buildings and/or structured parking.

4. *Drive Up Banking Services:*

a. In the B-5 zoning district located between Forest Avenue and Franklin Street, drive up banking services provided the following requirements are met:

i. The drive up banking services are attached to a building which houses banking services other than, or in addition to, automated banking machines; and

ii. The drive up banking services are attached to a building with a minimum floor area of 20,000 square feet; and

iii. Any service window or automated teller machine shall not extend nearer than twenty-five (25) feet to the street; and the site must have adequate stacking capacity for vehicles waiting to use these service features without impeding vehicular or pedestrian circulation or creating hazards to vehicles or pedestrians on adjoining streets; and

iv. There shall be no more than a total of two (2)

vehicle lanes for both the service window and automated teller machine.

(b) The following use shall be permitted only upon the issuance of a conditional use permit by the Board of Appeals, subject to the provisions of section 14-474 (conditional uses), and any special provisions, standards or requirements specified below:

1. Temporary wind anemometer towers, as defined n sec. 14-47, are permitted provided the following standards are met in addition to sec. 14-430:

   a. Towers may be installed for the purpose of wind data collection for no more than two (2) years after the issuance of a Certificate of Occupancy for the tower. At the conclusion of the aforementioned two (2) years, the tower must be dismantled and removed from the site within sixty (60) days; and

   b. Towers shall be constructed according to plans and specifications stamped by a licensed professional engineer, which shall be provided to the Board of Appeals with the application; and

   c. Towers shall be set back from habitable buildings by a distance equal to 1.1 times the tower height; and

   d. The applicant shall provide a safety report prepared and stamped by a licensed professional engineer to the Board of Appeals with their application for conditional use, which demonstrates how the proposed temporary wind anemometer tower is safe in terms of strength, stability, security, grounding, icing impacts and maintenance; and

   e. The applicant shall provide evidence of commercial general liability insurance, such insurance to be satisfactory to Corporation Counsel and cover damage or injury resulting from construction, operation or dismantling of any part of the temporary wind anemometer

tower; and

f. Towers and associated guy wires shall be sited to minimize their prominence from and impacts on public ways (including pedestrian ways); and

g. Towers shall be used for installing anemometers and similar devices at a range of heights from the ground to measure wind characteristics (speed, direction, frequency) and related meteorological data, but shall not be used for any other purpose; and

h. A performance guarantee shall be required for the cost of removal of the tower, guy wires and anchors. This requirement may be satisfied by surety bond, letter of credit, escrow account or by evidence, acceptable to the City, or the financial and technical ability and commitment of the applicant or its agents to remove the facility at the end of the use period.

2. Wind energy systems, as defined and allowed in Article X, Alternative Energy.

(Ord. No. 168-93, § 3, 1-4-93; Ord. No. 39-96, § 5, 10-7-96; Substitute Ord. No. 164-97, § 3, 5-19-97; Ord. No. 215-04/05, 5-2-05; Ord. No. 29-09/10, 8-3-09, emergency passage; Ord. 33-11/12, 1-18-12)

***Editor's Note:** The text changes adopted in Ord. 215-04/05 Section 14-230.2 (c) and (d) shall remain in effect for six (6) months from the effective date (6-2-05) of the changes. By Council Order No. 94-05/06 passed on 11/7/05 the effective date of the amendments were extended through and including March 2, 2006. By Council Order No. 170-05/06 passed as an emergency on 2/22/06 the effective date of the amendments were extended through and including September 30, 2006 and thereafter shall cease to exist unless the Portland City Council takes action to extend the applicability of such changes.

Sec. 14-230.3. Prohibited uses.

Uses which are not enumerated in either section 14-230.1 as permitted uses or in section 14-230.2 as conditional uses are prohibited.

(Ord. No. 168-93, § 3, 1-4-93)

***Editor's Note:** The text changes adopted in Ord. 215-04/05 Section 14-230.2 (c) and (d) shall remain in effect for six (6) months from the effective date (6-2-05) of the changes. By Council Order No. 94-05/06 passed on 11/7/05 the effective date of the amendments were extended through and including March 2, 2006. By Council Order No. 170-05/06 passed as an emergency on 2/22/06 the effective date of the amendments were extended through and including September 30, 2006 and thereafter shall cease to exist unless the Portland City Council takes action to extend the applicability of such changes.

Sec. 14-230.4. Dimensional requirements.

In addition to the provisions of article III, division 25 of this Code, lots in the B-5 and B-5b urban commercial mixed use zones shall meet the following requirements:

(a) *Minimum lot size:* None.

(b) *Minimum frontage:* None.

(c) *Yard dimensions:*

1. Minimum yards in the B-5 and B-5b zones:

   Front setback: None required.

   Side setback: None required.

   Rear setback: None required.

2. Maximum front yard setback in the B-5b zone: Ten (10) feet.

3. Maximum street setback: In the B-5 zoning district located between Forest Avenue and Franklin Street the following street setbacks shall apply:

   a. Ten (10) feet except for parking structures, public transportation facilities and secondary building components such as truck loading docks, mechanical equipment enclosures and refrigeration units. The setback can be increased more than ten (10) feet if all of the conditions are met below:

i. Seventy-five (75) percent of the total building wall length facing the abutting streets shall be setback no greater than ten (10) feet.

ii. The increased setback area includes a functional public pedestrian entrance into the building that faces the street.

iii. The increased setback is not used for surface parking.

b. For any new construction on a lot abutting three (3)or more streets, the maximum setback shall apply only to two (2) streets.

c. Lots having frontage on streets in which the curve of the street frontage precludes a rectangular shaped building along the street line, for purposes of calculating the setback, the average setback of the building from the street line may be used, but in no event shall the average setback along the length of the building edge exceed an average setback of fifteen (15) feet nor shall the maximum setback exceed twenty (20) feet. The increased setback shall not be used for surface parking, vehicular loading or vehicular circulation.

d. Additions to and relocations of designated historic structures or structures determined to be eligible by the Historic Preservation Committee shall be exempt from this provision.

(d) ***Maximum lot coverage:*** One hundred (100) percent.

(e) ***Maximum residential density:*** Sixty (60) dwelling units per acre.

(f) ***Maximum building height:*** Sixty-five (65) feet; except for parcels of land I nteh B-5b located along West Commercial Street south of Danforth Street, maximum building heights shall be as follows:

West of the projection of the centerline of the Fletcher Street right-of-way, the maximum building height shall be forty-five (45) feet; and, east of the projection of the centerline of the Fletcher Street right-of-way and west of the projection of the centerline of the Emery Stret right-of-way, the maximum building height shall be fifty-five (55) feet.

For purposes of this section, a projection of the centerline of a street is defined by extending the centerline of the referenced street right of way along its most southerly block to the centerline of West Commercial Street.

Furthermore, notwithstanding the exception of roof top structures from building height regulations in Section 14-430(a), no rooftop structure located between the projections of the centerlines of Emery Street and Fletcher Street, as described above, shall exceed a height of sixty-two (62) feet as measured from the average grade of the building at its foundation.

(g) *Minimum building height:*

1. In the B-5 zoning district between Forest Avenue and Franklin Street, within thirty-five (35) feet of any public street, no new construction of any building shall have less than three (3) floors of occupiable or habitable space above the average adjacent grade. This provision shall not apply to:

   a. Accessory building components such as truck loading docks, mechanical equipment enclosures, refrigeration units;

   b. Information kiosks and ticketing booths;

   c. Parking garages;

   d. Public transportation facilities;

   e. Additions to buildings existing as of March 9, 2005 provided that the cumulative

additions since March 9, 2005 does not exceed 25% of the building footprint on March 9, 2005 except that such restriction shall not apply to those portions of the building addition that are constructed closer to the street line than the building footprint existing as of March 9, 2005;

f. Utility substations, including sewage collection and pumping stations, water pumping stations, transformer stations, telephone electronic enclosures and other similar structures; and

g. Additions to and relocations of designated historic structures or structures determined by the Historic Preservation Committee to be eligible for such designation.

(Ord. No. 168-93, § 3, 1-4-93; Substitute Ord. No. 164-97, § 4, 5-19-97; Ord. No. 215-04/05, 5-2-05; Ord. No.112-11/12, 2-22-12)

***Editor's Note:** The text changes adopted in Order 215-04/05 Section 14-230.4 I3 and (g) shall remain in effect for six (6) months from the effective date (6-2-05) of the changes. By Council Order No. 94-05/06 passed on 11/7/05 the effective date of the amendments were extended through and including March 2, 2006. By Council Order No. 170-05/06 passed as an emergency on 2/22/06 the effective date of the amendments were extended through and including September 30, 2006 and thereafter shall cease to exist unless the Portland City Council takes action to extend the applicability of such changes.

Sec. 14-230.5. Performance standards.

All uses shall comply with the following standards:

(a) *Storage:* Any storage of new materials, finished products, or related equipment must be suitably screened from the public way and from abutting properties by a solid fence at least five (5) feet in height, or by a solid evergreen planting strip. All waste shall be stored in covered containers that do not leak or otherwise permit liquids or solids to escape from the container. All food processing waste shall be stored within a completely enclosed structure and if not refrigerated shall be removed from the site in an enclosed container within forty-eight (48) hours of its generation. All enclosed

and exterior areas shall be cleaned and sanitized on a regular basis. Outdoor storage of refuse or debris shall be in an appropriate container or located within a designated, screened area.

(b) ***Noise:***

1. ***Definitions:***

   a. Tonal sounds are defined as sound waves usually perceived as a hum or whine because their instantaneous sound pressure varies essentially as a simple sinusoidal function of time.

   b. Impulse sounds are defined as sound events characterized by brief excursions of sound pressure, each with a duration of less than one (1) second.

2. ***Measurement:*** Sound levels shall be measured with a sound level meter with a frequency weighting network manufactured according to standards prescribed by the American National Standards Institute (ANSI) or its successor body. Measurements shall be made at all major lot lines of the site, at a height of at least four (4) feet above the ground surface. In measuring sound levels under this section, sounds with a continuous duration of less than sixty (60) seconds shall be measured by the maximum reading on a sound level meter set to the A weighted scale and the fast meter response (L maxfast). Sounds with a continuous duration of sixty (60) seconds or more shall be measured on the basis of the energy average sound level over a period of sixty (60) seconds (LEQ_1).

3. ***Maximum permissible sound levels:*** The maximum permissible sound level of any continuous, regular or frequent source of sound produced by an activity shall be as follows:

   a. Sixty (60) dBA between the hours of 7:00 a.m. and 10:00 p.m.

b. Fifty (50) dBA between the hours of 10:00 p.m. and 7:00 a.m., as measured at or within the boundaries of any residential zone.

In addition to the sound level standards established above, all uses located within this zone shall employ best practicable sound abatement techniques to prevent tonal sounds and impulse sounds or, if such tonal and impulse sounds cannot be prevented, to minimize the impact of such sounds in residential zones.

4. *Exemptions:*

a. Noises created by construction and maintenance activities between 7:00 a.m. and 10:00 p.m. are exempt from the maximum permissible sound levels set forth in subsection (a)3 of this section. Construction activities on a site abutting any residential use between the hours of 10:00 p.m. of one (1) day and 7:00 a.m. of the following day shall not exceed fifty (50) dBA.

b. The following uses and activities shall also be exempt from the requirements of subsection (a)3 of this section:

i. The noises of safety signals, warning devices, emergency pressure relief valves, and any other emergency devices.

ii. Traffic noise on public roads or noise created by airplanes and railroads.

iii. Noise created by refuse and solid waste collection, provided that the activity is conducted between 6:00 a.m. and 7:00 p.m.

iv. Emergency construction or repair work by public utilities, at any hour.

v. Noise created by any recreational activities which are permitted by law and

for which a license or permit has been granted by the city, including but not limited to parades, sporting events, and fireworks displays.

(c) ***Vibration:*** Vibration inherently and recurrently generated shall be imperceptible without instruments at lot boundaries.

(d) ***Federal and state environmental regulations:*** All uses shall comply with federal and state environmental statutes and regulations regarding emissions into the air, except where provisions of this Code are more stringent.

(e) ***Storage of vehicles:*** Storage of any unregistered automotive vehicle on the premises for more than sixty (60) days, and outdoor storage of any used automotive tires on the premises shall not be permitted.

(f) ***Off-street parking and loading: O***ff-street parking and loading are required as provided in division 20 and division 21 of this article.

(g) ***Shoreland and flood plain management regulations:*** Any lot or portion of a lot located in a shoreland zone as identified on the city shoreland zoning map or in a flood hazard zone shall be subject to the requirements of division 26 and/or division 26.5.

(h) ***Glare, radiation or fumes:*** Glare, radiation or fumes shall not be emitted to an obnoxious or dangerous degree beyond lot boundaries.

(i) ***Enclosure of uses:*** All uses shall be operated within a fully enclosed structure, except for those customarily operated in open air.

(j) ***Materials or wastes:*** Any permitted outdoor storage of materials shall be done in such a manner as to prevent the breeding and harboring of insects or vermin, to prevent the transfer of such materials from the site by natural causes or forces and to contain fumes, dust, or other materials which constitute a fire hazard. This storage shall be accomplished within enclosed containers

or by one (1) or more of the following methods: raising materials above ground, separating materials, preventing stagnant water, or by some other means. Any areas used for permitted outdoor storage of materials shall be screened from view of any adjoining properties and public rights-of-way. No outdoor storage shall be permitted in the required yard between the front of any building on the site and the street.

(k) ***Odor:*** It shall be a violation of this chapter to create an odor nuisance.

1. ***Determination of odor nuisance:*** An odor nuisance shall be considered to exist when ten (10) confirmed complaints occur in an area within two (2) separate twenty-four-hour periods. The ten (10) confirmed complaints must originate from ten (10) different households in an area zoned residential or from ten (10) different individuals in a commercial or industrial facility. The building authority shall only respond to a complainant who confirms that the odor is detectable at the time of the actual complaint. In order to confirm a complaint, the building authority or its designee shall first determine that an odor is detectable in the area of the complaint. The building authority or its designee shall interview the complainant to verify that the detectable odor is in fact the odor that resulted in the complaint. If the complainant verifies the odor as the source of the complaint, then the building authority shall notify the owner or operator of the alleged odor source either in person or by telephone within one (1) working day, with a written confirmation within seven (7) working days of the complaint. In the event that the building authority is unable to contact the owner or operator of the alleged odor source in person or by telephone within one (1) working day, then the building authority shall send written notice to the operator within seven (7) working days of the complaint.

   In the event that ten (10) complaints are confirmed as set forth in subsection 1. in two (2) separate twenty-four-hour periods within a ninety-day

period, the building authority shall cause a certified odor inspector to investigate any odor complaints received in the next thirty (30) days following the receipt of the tenth confirmed complaint from the second twenty-four-hour period. If the odors remain under the ambient intensity standard as established in this subsection for the next thirty (30) days, then a new odor nuisance must be established after that time in accordance with the requirements of this section. The certified odor inspector shall do the following in response to a complaint under this section:

a. Verify that an odor is detectable in the area of the complaint and confirm that it is the odor that resulted in the complaint;

b. Quantify the intensity of the odor on the eight-point n-butanol intensity scale as defined in regulations promulgated by the director of the planning authority to establish training and technical standards to support this section; and

c. Track the odor to its source.

When the certified odor inspector determines that a violation has occurred because an odor has exceeded the maximum ambient odor levels set forth in this section, the building authority shall notify the owner or operator either by telephone or in person of the violation within one (1) working day of the violation. The building authority shall confirm this notification in writing within seven (7) working days of this initial notice. In the event that the building authority is unable to contact the owner or operator by telephone or in person within the required time period, then it will send written notification within seven (7) working days of the violation.

Upon receipt of the written notice of violation, the owner or operator of the odor source shall do the following:

a. Implement odor reduction procedures immediately upon notification by the building authority that the facility has violated this section wherever odor reduction can be achieved by operational or procedural changes at the facility;

b. Submit to the building authority, within thirty (30) days of the written notice of violation, an odor reduction plan which is designed to reduce ambient odors attributable to emissions from that source to the maximum allowable intensity for that zone. The plan shall include a detailed summary of the measures that the owner or operator will take to mitigate the community annoyance and estimated dates for completion of those measures. In the event that it will take longer than thirty (30) days to develop the odor reduction plan, the owner or operator of the facility shall submit within the thirty-day time period a schedule for the development of the odor reduction plan. The building authority shall review this plan to determine whether it will be adequate to resolve the odor nuisance in a reasonable time period; and

c. Implement the plan in accordance with the schedule approved by the building authority.

2. ***Ambient odor limits:*** The maximum ambient intensity standard for odors generated by uses located in the I-L zone shall not exceed the following levels when the odor is measured in the zone indicated:

4.0 in any industrial or business zone for odors resulting from any use in the B-5 zone.

3.0 in any residential zone for odors resulting from any use in the B-5 zone.

(l) ***Smoke:*** Discharges of smoke shall not exceed opacity percentage of forty (40) percent or number 2 on the Ringelman chart.

(m) ***Discharge into sewers:*** No discharge shall be permitted at any point into any private sewage disposal system, or stream, or into the ground, of any materials in such a way or of such nature or temperature as to contaminate any water supply, or otherwise cause the emission of dangerous or objectionable elements, except in accordance with standards approved by the health authority or by the public works authority.

(n) ***Lighting:*** All lighting shall be designed and installed with cut-off fixtures to direct illumination onto the site and to prevent illumination from such fixtures on neighboring properties.

(Ord. No. 168-93, § 3, 1-4-93; Substitute Ord. No. 164-97, § 5, 5-19-97; Ord. No. 240-09/10, 6-21-10)

***Editor's Note:** The text changes adopted in Order 215-04/05 Section 14-230.4 I3 and (g) shall remain in effect for six (6) months from the effective date (6-2-05) of the changes. By Council Order No. 94-05/06 passed on 11/7/05 the effective date of the amendments were extended through and including March 2, 2006. By Council Order No. 170-05/06 passed as an emergency on 2/22/06 the effective date of the amendments were extended through and including September 30, 2006 and thereafter shall cease to exist unless the Portland City Council takes action to extend the applicability of such changes.

Sec. 14-230.6. thru 14-230.9 Reserved.

DIVISION 12.7. O-P OFFICE PARK ZONE

Sec. 14-230.10. Purpose.

The purpose of the O-P zone is to provide substantial areas for integrated development of professional offices in a park- or campus-like setting which are of the highest quality, are well designed and maintained and are compatible with their natural surroundings.

(Ord. No. 297-88, 5-23-88)

Sec. 14-230.11. Permitted uses.

The following uses are permitted in the O-P zone:

Office park (O-P) with a minimum gross area, as defined in

section 14-47 (definitions) of this article, of at least three (3) acres of contiguous land, consisting of either an Office Park Planned Unit Development (OPPUD) on one (1) lot with one (1) or more buildings and with driveways and open areas to be owned and maintained in common, or a subdivision (OPS) on one (1) parcel with two (2) or more lots intended for separate ownership, and including any of the following uses:

(a) Professional offices and office complexes;

(b) Research and development establishments;

(c) Printing and publishing establishments;

(d) Reserved;

(e) Day care facilities;

(f) Uses incidental and subordinate to the office park as a whole, which may include sales and services for employees and visitors; including, but not limited to; parking structures, health clubs, gymnasiums and recreational facilities, day care centers and cafeterias.

An Office Park Planned Unit Development (OPPUD) shall be subject to review and approval by the Planning Board with respect to the requirements of article V (site plan) and article IV (subdivisions) and the development standards of this chapter, article V sections 14-522 and 14-523 notwithstanding, and whether or not such development is a subdivision within the meaning of article IV of this chapter as now enacted or as hereafter amended. An Office Park Subdivision (OPS) shall be subject to review and approval by the Planning Board with respect to the requirements of article IV (subdivision) and article V (site plan), sections 14-522 and 14-523 notwithstanding, as each subdivided lot is developed. All areas in such a development that are to be owned or used in common shall be governed and maintained as set forth in section 14-498(i)(3) of article VI (subdivisions) of this chapter.

(g) Wind energy systems, as defined and allowed in Article X, Alternative Energy.

(Ord. No. 297-88, 5-23-88; Ord. No. 10-10/11, 8-2-10; Ord. No. 33-11/12, 1-18-12)

Sec. 14-230.11.1. Conditional uses.

The following uses are permitted only upon the issuance of a conditional use permit, subject to the provisions of section 14-474 (conditional uses) of this article and any special provisions, standards or requirements specified below:

(a) High technology manufacturing of biotechnology, pharmaceutical, and nanotechnology products provided that:

1. Manufacturing, including the warehousing therewith, shall occupy a gross floor area no greater than 20,000 square feet.

2. A minimum of one-third of the total square footage devoted to manufacturing is conducted in a laboratory environment, i.e. in a controlled environment with specialized air handling systems that exceed levels for pressurization and filtration found in office environments and traditional manufacturing facilities.

3. Truck traffic serving a single manufacturing business or institution shall not exceed, on a regular basis, more than two (2) tractor-trailer truck deliveries per week and provided that no deliveries are accepted between 7:00 p.m. and 7:00 a.m.

4. Rooftop equipment shall be integrated into the overall building design and shall be screened as necessary.

(b) Temporary wind anemometer towers, as defined in Sec 14-47, are permitted provided the following standards are met in addition to Sec 14-430:

1. Towers may be installed for the purpose of wind data collection for no more than two (2) years after the issuance of a Certificate of Occupancy for the tower. At the conclusion of the aforementioned two (2) years, the tower must be dismantled and removed from the site

within sixty (60) days; and

2. Towers shall be constructed according to plans and specifications stamped by a licensed professional engineer, which shall be provided to the Board of Appeals with the application; and

3. Towers shall be set back from habitable buildings by a distance equal to 1.1 times the tower height; and

4. The applicant shall provide a safety report prepared and stamped by a licensed professional engineer to the Board of Appeals with their application for conditional use, which demonstrates how the proposed temporary wind anemometer tower is safe in terms of strength, stability, security, grounding, icing impacts and maintenance; and

5. The applicant shall provide evidence of commercial general liability insurance, such insurance to be satisfactory to Corporation Counsel and cover damage or injury resulting from construction, operation or dismantling of any part of the temporary wind anemometer tower; and

6. Towers and associated guy wires shall be sited to minimize their prominence from and impacts on public ways (including pedestrian ways); and

7. Towers shall be used for installing anemometers and similar devices at a range of heights from the ground to measure wind characteristics (speed, direction, frequency) and related meteorological data, but shall not be used for any other purpose; and

8. A performance guarantee shall be required for the cost of removal of the tower, guy wires and anchors. This requirement may be satisfied by surety bond, letter of credit, escrow

account or by evidence, acceptable to the City, or the financial and technical ability and commitment of the applicant or its agents to remove the facility at the end of the use period.

(c) Wind energy systems, as defined and allowed in Article X, Alternative Energy.

(Ord. No. 300-05/06, 7-17-06; Ord. No. 29-09/10, 8-3-09, emergency passage; Ord. No. 33-11/12, 1-18-12)

Sec. 14-230.12. Prohibited uses.

Uses not enumerated in section 14-230.11 as permitted uses are prohibited.

(Ord. No. 297-88, 5-23-88)

Sec. 14-230.13. Development standards.

An office park (O-P) shall be approved by the Planning Board only if, in addition to the dimensional and other requirements of this article and the applicable provisions of article IV (subdivisions) and article V (site plan), the development meets the following development standards:

(a) *Master plan:* Development proposals shall include a master plan of the office park. The master plan shall include the following:

1. For an OPPUD proposal: The location of the building(s) on the site; infrastructure of the site; identification of common areas; traffic circulation, architectural character and treatment of the building(s); proposed building envelopes; phasing and timing of the development; private development restrictions; and such other information necessary and sufficient to ensure compliance with the standards in this section; and

2. For an OPS proposal: Delineation of the subdivision of land; infrastructure of the site; identification of common areas, if any; traffic circulation; desired architectural character, including private development restrictions to ensure compatibility of architectural character of future buildings with

each other; phasing and timing of the development; private development restrictions; and such other information as necessary and sufficient to ensure compliance with the standards in this section.

(b) ***Design relationship to site:*** Development proposals shall demonstrate a reasonably unified design of the site, including the architecture, the layout of the buildings, pedestrian and vehicular circulation plan, open space, drainage, and the topography, soil conditions, vegetation and other natural features of the site. Integration of open spaces and natural features shall be achieved by incorporation of outdoor amenities for the benefit of users of the site, such as jogging and walking trails, gardens and benches.

(c) ***Landscaping:*** Development proposals shall include a landscape program. All land areas not covered by structures, parking areas or circulation facilities shall be landscaped and maintained. In order to soften the visual impact of large expanses of pavement in parking lots, vegetation shall be planted or retained in islands or planting strips where required by article IV (subdivisions) and article V (site plan).

(d) ***Impervious surface ratio:*** Development proposals may have an impervious surface ratio of up to sixty (60) percent and shall meet the following criteria:

1. No pavement may be located closer than fifteen (15) feet from the property line and from a public street right-of-way, excepting approved entrance drives;

2. Parking may not be located in the required front yard setback. If parking is provided in the area between the building and minimum setback line, the parking area must be adequately screened with landscaping materials and permanently maintained.

(e) ***Sidewalks:*** Development proposals shall include internal sidewalks, illustrating the manner in which the developer will provide this amenity to take advantage of the topography and natural features of the site.

(f) ***Buffers and screens:*** Development proposals shall include buffering yard areas abutting a residential zone or residential use and to screen parking lots and driveways from public view, identifying the location, composition and maintenance of the buffer. The buffer and screening shall be of a dense and continuous nature and shall incorporate trees, shrubs, fencing, berms and related elements deemed necessary.

(g) ***Preservation of natural features:*** Development proposals shall identify the extent to which the developer shall preserve natural features including, but not limited to, existing vegetation, flood plains, rock outcroppings, surface water bodies, drainage swales and courses, and wetlands; provided any such program shall consider and be sensitive to the need to preserve such natural features.

(h) ***Traffic:*** Development proposals shall identify all proposed traffic controls, parking areas, interior traffic circulation, and demonstrate that additional traffic generated by the project itself can be reasonably accommodated on existing public streets.

(i) ***Architectural design:*** All buildings shall be designed or approved by a registered architect in the State of Maine and shall be in conformance with the proposed master plan. The scale, texture, color and massing of the buildings shall be coordinated. The full range of high-quality, permanent, and traditional or contemporary building materials and technology may be incorporated in a manner so that the development as a whole embodies distinguishing attributes that achieve the developer's desired degree of excellence and are in conformance with the architectural guidelines provided in the private development restrictions. Particular emphasis shall be placed on the appearance of building facades from public streets, from driveway and parking areas, and from other nearby buildings. Building elevation drawings shall be submitted which indicate architectural style, exterior finishes and color, building height and scale, and location and scale of window and door openings. Samples of exterior building materials shall also be submitted.

(j) ***Lighting:*** Development proposals shall identify the location and style of lighting to be used in the

development. All light fixtures shall be hooded or shielded so that the light shines downward.

(k) ***Signs:*** Development proposals shall identify all proposed signage. Signs shall be designed in proportion and character with the building facades. All signs shall be constructed of permanent materials and shall be coordinated with the building and landscaping design through the use of appropriate materials and finishes.

(Ord. No. 297-88, 5-23-88)

Sec. 14-230.14. Dimensional requirements.

In addition to the provisions of division 25 (space and bulk regulations and exceptions) of this article, lots in the O-P zone shall meet the following minimum requirements:

(a) ***Minimum lot size:*** One and one-half (1.5) acres.

(b) ***Minimum street frontage:*** One hundred (100) feet.

(c) ***Minimum lot width:*** One hundred fifty (150) feet.

(d) *Minimum yard dimensions:*

1. Front yard: Fifty (50) feet.

2. Rear yard: Fifty (50) feet.

3. Side yards: Twenty-five (25) feet, except where a side yard abuts a residential zone or use, in which case it shall be forty (40) feet.

The Planning Board can reduce by up to fifty (50) percent the minimum yard setback if another yard within the lot is correspondingly increased so that the combined minimum setbacks on all four (4) sides equal one hundred fifty (150) feet. If two (2) or more buildings are located on one (1) lot, only the requirements of the front, rear or side yards that adjoin any external property boundary must be met, provided a sufficient fire line is provided.

(e) ***Maximum structure height:*** Fifty-five (55) feet, except that on lots or within office-park subdivisions which are composed of over fifty (50) acres in total land area,

seventy-five (75) feet is permitted, including roof appurtenances, if each of the required minimum yard dimensions is increased by one (1) foot in distance for each one (1) foot of height above fifty-five (55) feet.

(Ord. No. 297-88, 5-23-88; Ord. No. 223-92, 1-22-92)

Sec. 14-230.15. Other requirements.

[In addition to the above, the following requirements are applicable to all uses in the O-P zone:]

(a) ***Off-street parking and loading:*** Off-street parking and loading are required as provided in division 20 (off-street parking) and division 21 (off-street loading).

(b) ***Signs:*** Signs shall be subject to the provisions of division 22 of this article. Temporary freestanding advertising signs are not permitted.

(c) ***Curbs and sidewalks:*** Curbs and sidewalks as specified in article VI of chapter 25.

(d) ***Shoreland and flood plain management regulations:*** If the lot is located in a shoreland zone or in a flood hazard zone, the requirements of division 26 and/or division 26.5 apply.

(Ord. No. 297-88, 5-23-88)

Sec. 14-230.16. External effects.

Every use in a O-P zone, unless expressly exempted, shall be subject to the following limitations:

(a) ***Enclosed structure:*** The use shall be operated within a completely enclosed structure, except for those customarily operated in the open air.

(b) ***Noise:*** The volume of sound, measured by a sound level meter with frequency weighting network (manufactured according to standards prescribed by the American Standards Association), generated shall not exceed sixty (60) decibels on the A scale, on impulse (less than one (1) second), at lot boundaries, excepting air raid sirens and similar warning devices.

(c) ***Vibration:*** Vibration inherently and recurrently generated shall be imperceptible without instruments at lot boundaries.

(d) ***Heat, glare, radiation or fumes:*** Heat, glare, radiation or fumes shall not be emitted to an obnoxious or dangerous degree beyond lot boundaries.

(e) ***Smoke:*** Smoke shall not be emitted at a density in excess of twenty (20) percent opacity level as classified in Method 9 (Visible Emissions) of the Opacity Evaluation System of the U.S. Environmental Protection Agency.

(f) ***Materials or wastes:*** No materials or wastes shall be deposited on any lot in such form or manner that they may be transferred beyond the lot boundaries by natural causes or forces. All material which might cause fumes or dust, or constitute a fire hazard if stored out-of-doors, shall be only in enclosed containers. Areas attracting large numbers of birds, rodents or insects are prohibited.

(Ord. No. 297-88, 5-23-88)

DIVISION 13. I-L AND I-Lb INDUSTRIAL ZONES*

***Editor's note—**Ord. No. 164-97, § 6, passed Jan. 6, 1997, repealed div. 13, §§ 14-231—14-236 of this article and enacted new provisions as herein set out. Formerly, such division pertained to the I-1 industrial zone and derived from §§ 602.11.A—602.11.F of the 1968 Code as amended by the following legislation:

Ord. No.	Sec.	Date	Ord. No.	Sec.	Date
570-71	--	11-16-71	330-90	1	5-7-90
327-71	--	7- 7-71	17-90	--	6-18-90
499-74	5	8-19-74	112-90	--	10- 1-90
334-76	6	7- 7-76	15-92	17	6-15-92
430-85	--	3- 4-85	193A-93	1	2-17-93

633-86	1	6- 2-86	89A-94	--	9-19-94
578-87	1	6-15-87	154-96	14	12-16-96

Sec. 14-231. Purpose.

The low impact industrial zone is intended to provide areas in which low impact industrial uses and limited other uses serving employees and residents of the surrounding neighborhood will be compatible with adjacent residential uses, will provide a buffer between residential neighborhoods and the I-M or I-H industrial zones, or will stand alone as a smaller scale industrial district.

The I-L zone is located adjacent to residential neighborhoods, business uses and other industrial uses where the low intensity nature of the uses, as well as their strict performance standards, will ensure the compatibility of the uses with other adjacent industrial and nonindustrial uses.

Performance standards for uses in the I-L zone are designed to maintain compatibility between low impact industrial uses and neighboring nonindustrial and industrial uses. Performance standards include full enclosure of uses and requirements for buffers and screening from adjacent properties.
(Ord. No. 164-97, § 6, 1-6-97; Ord. No. 149-10/11, 3-7-11)

Sec. 14-232. Permitted uses.

The following uses are permitted whether provided by private or public entities in the low impact industrial zone and the I-Lb zone:

(a) Low impact industrial uses, including, but not limited to, bakeries, breweries, bottling, printing and publishing, pharmaceuticals, machine shops, musical instruments, precision instruments, watchmakers, toys and sporting goods, wood products, jewelry, assembly of electrical components, tool and die shops and the packaging of food.

(b) Research and development.

(c) Indoor amusement and recreation centers.

(d) Plant and tree nurseries, including associated recycling activities.

(e) Lumber yards.

(f) Commercial kitchens or other food preparation, provided that the food is not prepared for service on the premises.

(g) Building contractors and outside storage of related construction equipment, provided that there shall be no outside storage of materials and supplies.

(h) Repair services, including all types of automotive repair.

(i) Day care facilities, provided that:

1. Proof of licensing with the Maine Department of Human Services is submitted to the city prior to issuance of a certificate of occupancy;

2. ***Off-street parking:*** off-street parking is required as provided in division 20 of this article;

3. Off-street loading shall be located in a safe location;

4. There shall be an on-site outdoor play area with seventy-five (75) feet of land area per child; and

5. The outdoor play area shall be fenced and screened with a landscaped buffer.

(j) Dairies.

(k) Dog training services, including but not limited to obedience, guide, and service training, but not including boarding or kennel services.

(l) Intermodal transportation facilities.

(m) Utility substations.

(n) Marinas.

(o) Distribution centers, warehouses and wholesale businesses under ten thousand (10,000) square feet in total building area, with no outside storage permitted.

(p) Back office uses.

(q) Accessory uses.

1. Incidental accessory uses.

2. In the Ilb zone, the following additional accessory uses shall also be permitted:

a. Makers' markets, including periodic, seasonal, or temporary sales of handcrafted and limited production products for final consumption, which may include prepared or raw foods, provided that:

i. Such slaes are located within a lawfully conforming principal permitted use;

ii. Such sales occupy an area no larger than 45% of the floor area devoted to the principal use;

iii. Such sales by any single vendor or group of vendors shall occur for no more than a total of 28 hours a week collectively;

iv. Such products are produced or permitted to be produced in the IL zone; and

v. Such products are sold by the producer of the product or their designee.

Such sales shall be subject to any other applicable city ordinances. Food trucks are exempt from the limitations contained in this provision, but are subject to Chapter 19 of the City Code and any regulations promulgated

pursuant thereto.

b. Temporary events associated with a principal use, such as concerts, lectures, exhibitions of the local production of handcrafted and limited production products, fundraisers, and other similar gatherings, provided that they occur no more than a total of 16 hours a week, subject to the performance standards of this zone and any other applicable city ordinances.

(r) Registered medical marijuana cultivation facilities.

(s) Neighborhood centers.

(t) Places of religious assembly, limited to facilities of 10,000 square feet or less.

(u) Wind energy systems, as defined and allowed in Article X, Alternative Energy.

(v) Street vendors licensed pursuant to Chapter 19.

(w) Studios for artists, photographers, and craftspeople, including but not limited to painters, sculptors, dancers, graphic artists, and musicians.

(Ord. No. 164-97, § 6, 1-6-97; Ord. No. 22-97, § 1, 7-7-97; Ord. No. 137-97, § 1, 11-3-97; Ord. No. 106-04/05,12-8-04 enacted as an emergency; Ord. No. 240-09/10, 6-21-10; Ord. No. 283-09/10, 7-19-10 emergency passage; Ord. No. 149-10/11, 3-7-11; Ord. No. 33-11/12, 1-18-12; Ord. No. 10-12/13, 7-16-12; Ord. No. 265-12/13, 7-15-13)

Sec. 14-232.1. Conditional uses.

The following use shall be permitted only upon the issuance of a conditional use permit, subject to the provisions of section 14-474 (conditional uses), and any special provisions, standards or requirements specified below:

(a) Temporary wind anemometer towers, as defined in Sec 14-47, are permitted provided the following standards are met in addition to Sec 14-430:

1. Towers may be installed for the purpose of wind data collection for no more than two (2) years after the issuance of a Certificate of

Occupancy for the tower. At the conclusion of the aforementioned two (2) years, the tower must be dismantled and removed from the site within sixty (60) days; and

2. Towers shall be constructed according to plans and specifications stamped by a licensed professional engineer, which shall be provided to the Board of Appeals with the application; and

3. Towers shall be set back from habitable buildings by a distance equal to 1.1 times the tower height; and

4. The applicant shall provide a safety report prepared and stamped by a licensed professional engineer to the Board of Appeals with their application for conditional use, which demonstrates how the proposed temporary wind anemometer tower is safe in terms of strength, stability, security, grounding, icing impacts and maintenance; and

5. The applicant shall provide evidence of commercial general liability insurance, such insurance to be satisfactory to Corporation Counsel and cover damage or injury resulting from construction, operation or dismantling of any part of the temporary wind anemometer tower; and

6. Towers and associated guy wires shall be sited to minimize their prominence from and impacts on public ways (including pedestrian ways); and

7. Towers shall be used for installing anemometers and similar devices at a range of heights from the ground to measure wind characteristics (speed, direction, frequency) and related meteorological data, but shall not be used for any other purpose; and

8. A performance guarantee shall be required for

the cost of removal of the tower, guy wires and anchors. This requirement may be satisfied by surety bond, letter of credit, escrow account or by evidence, acceptable to the City, or the financial and technical ability and commitment of the applicant or its agents to remove the facility at the end of the use period.

(Ord. No. 29-09/10, 8-3-09, emergency passage)

Sec. 14-233. Prohibited uses.

Uses that are not expressly enumerated herein as permitted uses are prohibited. Those uses that are prohibited shall include, but are not limited to, the following:

(a) Residential uses.

(b) Retail trade and restaurants that are not accessory to a permitted use.

(c) Junk yards and scrap metal reprocessing and recycling.

(d) Amusement parks.

(e) Crematoriums.

(f) Mining and drilling operations.

(g) Refining of petroleum or its products, including tar distillation.

(h) Commercial petroleum storage yards.

(i) Commercial excavation of building or construction materials other than in the normal course of building or construction or site preparation.

(j) Distillation of bones; fat rendering; glue, soap, or fertilizer manufacture.

(k) Dumping, disposal, incineration, or reduction of garbage, sewage, offal, dead animals, or refuse.

(l) Stockyard or slaughtering of animals.

(m) Smelting of iron, copper, tin, zinc, or any other ore.

(n) Manufacture of primary chemicals.

(o) Manufacture of cement, lime, gypsum, or plaster of paris.

(p) Manufacture of bleaching powder, matches, paper, or rubber.

(q) Manufacture and storage of explosives or fireworks.

(r) Tanning, curing or storage of raw hides or skins.

(s) Coal distillation or coke ovens.

(t) Foundries.

(u) Creosote treatment.

(v) Drop forging.

(w) Steel mills or furnaces.

(x) Coal- or coke-fired kilns.

(y) Used tire storage.

(z) Outdoor sales or outdoor display.

(aa) Extraction of raw materials.

(bb) Concert halls or dance halls.

(cc) Banquet facilities.

(dd) Office uses other than back offices or offices that are accessory to a permitted use.

(Ord. No. 164-97, § 6, 1-6-97; Ord. No. 137-97, § 2, 11-3-97)

Sec. 14-234. Dimensional requirements.

(a) *Minimum lot size:* None.

(b) *Maximum impervious surface ratio:* I-L zone: Sixty-five

(65) percent. I-Lb zone: One hundred (100) percent.

(c) ***Maximum building height:*** Forty-five (45) feet.

(d) ***Minimum side yards:*** Principal and accessory structures in the I-L zone: Twenty-five (25) feet, except that the minimum side yard shall be forty (40) feet when the side property line abuts a residential zone. Principal and accessory structures in the I-Lb zone: None, except that the minimum side yard shall be twenty-five (25) feet when the side property line abuts a residential zone.

(e) ***Minimum rear yards:*** Principal and accessory structures in the I-L zone: Twenty-five (25) feet, except that the minimum rear yard shall be forty (40) feet when the rear property line abuts a residential zone. Principal and accessory structures in the I-Lb zone: None, except that the minimum rear yard shall be twenty-five (25) feet when the rear property line abuts a residential zone.

(f) ***Minimum front yard:*** Principal and accessory structures in the I-L zone: Twenty-five (25) feet. Principal and accessory structures in the I-Lb zone: None.

(g) ***Minimum street frontage:*** Sixty (60) feet.

(h) ***Pavement setback from lot boundary:*** Driveways, parking lots and other paved circulation areas: Fifteen (15) feet.
(Ord. No. 164-97, § 6, 1-6-97)

Sec. 14-235. Other requirements.

(a) Off-street parking shall meet the requirements of division 20 of this article.

(b) Off-street loading shall meet the requirements of division 21 of this article.

(c) Signs shall be subject to the provisions of division 22 of this article.

(d) ***Shoreland and floodplain management regulations:*** Any lot or portion of a lot located in a shoreland zone as identified on the city shoreland zoning map or in a flood hazard zone shall be subject to the requirements of division 26 and/or division 26.5 of this article.

(e) All uses shall be operated within a fully enclosed structure, except for those customarily operated in open air.

(f) Any storage of new materials, finished products, or related equipment must be suitably screened from the public way and from abutting properties by a solid fence at least five (5) feet in height, or by a solid evergreen planting strip.

(g) All waste shall be stored in covered containers that do not leak or otherwise permit liquids or solids to escape from the container.

(h) All food processing waste shall be stored within a completely enclosed structure and if not refrigerated shall be removed from the site in an enclosed container within forty-eight (48) hours of its generation. All enclosed and exterior food processing waste storage areas shall be cleaned and sanitized on a regular basis.

(i) Outdoor storage of refuse, debris, or material awaiting reuse shall be in an appropriate container or located within a designated, screened area.

(j) Any permitted outdoor storage of materials shall be done in such a manner as to prevent the breeding and harboring of insects or vermin, to prevent the transfer of such materials from the site by natural causes or forces and to contain fumes, dust, or other materials which constitute a fire hazard. This storage shall be accomplished within enclosed containers or by one (1) or more of the following methods: raising materials above ground, separating materials, preventing stagnant water, or by some other means. No outdoor storage shall be permitted in the required yard between the front of any building on the site and the street, except for storage for plant and tree nurseries.
(Ord. No. 164-97, § 6, 1-6-97)

Sec. 14-236. Performance standards.

Uses in the I-L and I-Lb zones shall comply with the following standards:

(a) *Noise:*

1. *Definitions:*

a. Tonal sounds are defined as sound waves usually perceived as a hum or whine because their instantaneous sound pressure varies essentially as a simple sinusoidal function of time.

b. Impulse sounds are defined as sound events characterized by brief excursions of sound pressure, each with a duration of less than one (1) second.

2. ***Measurement:*** Sound levels shall be measured with a sound level meter with a frequency weighting network manufactured according to standards prescribed by the American National Standards Institute (ANSI) or its successor body. Measurements shall be made at all major lot lines of the site, at a height of at least four (4) feet above the ground surface. In measuring sound levels under this section, sounds with a continuous duration of less than sixty (60) seconds shall be measured by the maximum reading on a sound level meter set to the A weighted scale and the fast meter response (L maxfast). Sounds with a continuous duration of sixty (60) seconds or more shall be measured on the basis of the energy average sound level over a period of sixty (60) seconds (LEQ_1).

3. ***Maximum permissible sound levels:*** The maximum permissible sound level of any continuous, regular or frequent source of sound produced by an activity shall be as follows:

a. Sixty (60) dBA between the hours of 7:00 a.m. and 10:00 p.m.

b. Fifty (50) dBA between the hours of 10:00 p.m. and 7:00 a.m., as measured at or within the boundaries of any residential zone.

In addition to the sound level standards established above, all uses located within this zone shall employ best practicable sound abatement techniques to prevent tonal sounds and impulse

sounds or, if such tonal and impulse sounds cannot be prevented, to minimize the impact of such sounds in residential zones.

4. *Exemptions:*

a. Noises created by construction and maintenance activities between 7:00 a.m. and 10:00 p.m. are exempt from the maximum permissible sound levels set forth in subsection (a)3 of this section. Construction activities on a site abutting any residential use between the hours of 10:00 p.m. of one (1) day and 7:00 a.m. of the following day shall not exceed fifty (50) dBA.

b. The following uses and activities shall also be exempt from the requirements of subsection (a)3 of this section:

i. The noises of safety signals, warning devices, emergency pressure relief valves, and any other emergency devices.

ii. Traffic noise on public roads or noise created by airplanes and railroads.

iii. Noise created by refuse and solid waste collection, provided that the activity is conducted between 6:00 a.m. and 7:00 p.m.

iv. Emergency construction or repair work by public utilities, at any hour.

v. Noise created by any recreational activities which are permitted by law and for which a license or permit has been granted by the city, including but not limited to parades, sporting events, and fireworks displays.

(b) *Electromagnetic interference:* There shall be no electromagnetic interference that adversely affects the operation of any equipment other than that belonging to the creator of such interference, or that does not

conform to the regulations of the Federal Communications Commission.

(c) ***Vibrations:*** Vibrations inherently and recurrently generated shall be imperceptible without instruments at lot boundaries.

(d) ***Glare, heat:*** Any use shall be in an enclosed structure in such a manner that glare and heat shall be imperceptible from neighboring properties.

(e) ***Discharge of toxic or noxious matter:*** All discharges of toxic or noxious matter shall be made in accordance with all applicable state and federal regulations.

(f) ***Odor:*** It shall be a violation of this chapter to create an odor nuisance.

1. ***Determination of odor nuisance:*** An odor nuisance shall be considered to exist when ten (10) confirmed complaints occur in an area within two (2) separate twenty-four-hour periods. The ten (10) confirmed complaints must originate from ten (10) different households in an area zoned residential or from ten (10) different individuals in a commercial or industrial facility. The building authority shall only respond to a complainant who confirms that the odor is detectable at the time of the actual complaint. In order to confirm a complaint, the building authority or its designee shall first determine that an odor is detectable in the area of the complaint. The building authority or its designee shall interview the complainant to verify that the detectable odor is in fact the odor that resulted in the complaint. If the complainant verifies the odor as the source of the complaint, then the building authority shall notify the owner or operator of the alleged odor source either in person or by telephone within one (1) working day, with a written confirmation within seven (7) working days of the complaint. In the event that the building authority is unable to contact the owner or operator of the alleged odor source in person or by telephone within one (1) working day, then the building authority shall send written

notice to the operator within seven (7) working days of the complaint.

In the event that ten (10) complaints are confirmed as set forth in subsection (1) in two (2) separate twenty-four-hour periods within a ninety-day period, the building authority shall cause a certified odor inspector to investigate any odor complaints received in the next thirty (30) days following the receipt of the tenth confirmed complaint from the second twenty-four-hour period. If the odors remain under the ambient intensity standard as established in this subsection for the next thirty (30) days, then a new odor nuisance must be established after that time in accordance with the requirements of this section. The certified odor inspector shall do the following in response to a complaint under this section:

a. Verify that an odor is detectable in the area of the complaint and confirm that it is the odor that resulted in the complaint;

b. Quantify the intensity of the odor on the eight-point n-butanol intensity scale as defined in regulations promulgated by the director of the planning authority to establish training and technical standards to support this section; and

c. Track the odor to its source.

When the certified odor inspector determines that a violation has occurred because an odor has exceeded the maximum ambient odor levels set forth in this section, the building authority shall notify the owner or operator either by telephone or in person of the violation within one (1) working day of the violation. The building authority shall confirm this notification in writing within seven (7) working days of this initial notice. In the event that the building authority is unable to contact the owner or operator by telephone or in person within the required time period, then it will send written notification within seven (7) working days

of the violation.

Upon receipt of the written notice of violation, the owner or operator of the odor source shall do the following:

a. Implement odor reduction procedures immediately upon notification by the building authority that the facility has violated this section wherever odor reduction can be achieved by operational or procedural changes at the facility;

b. Submit to the building authority, within thirty (30) days of the written notice of violation, an odor reduction plan which is designed to reduce ambient odors attributable to emissions from that source to the maximum allowable intensity for that zone. The plan shall include a detailed summary of the measures that the owner or operator will take to mitigate the community annoyance and estimated dates for completion of those measures. In the event that it will take longer than thirty (30) days to develop the odor reduction plan, the owner or operator of the facility shall submit within the thirty-day time period a schedule for the development of the odor reduction plan. The building authority shall review this plan to determine whether it will be adequate to resolve the odor nuisance in a reasonable time period; and

c. Implement the plan in accordance with the schedule approved by the building authority.

2. ***Ambient odor limits:*** The maximum ambient intensity standard for odors generated by uses located in the I-L zone shall not exceed the following levels when the odor is measured in the zone indicated:

4.0 in any industrial or business zone for odors resulting from any industrial use.

3.0 in any residential zone for odors resulting from any industrial use.

(g) ***Smoke:*** Discharges of smoke shall not exceed opacity percentage of forty (40) percent or number 2 on the Ringelmann chart.

(h) ***Emissions:*** All emissions shall be made in accordance with all applicable state and federal regulations.

(i) ***Radiation:*** Radiation at a site shall comply with all applicable state and federal regulations.

(j) ***Discharge into sewers:*** No discharge shall be permitted at any point into any private sewage disposal system, or stream, or into the ground of any materials in such a way or of such nature or temperature as to contaminate any water supply, or otherwise cause the emission of dangerous or objectionable elements, except in accordance with standards approved by the health authority or by the public works authority.

(k) ***Lighting:*** All lighting shall be designed and installed with cut-off fixtures to direct illumination onto the site and to prevent illumination from such fixtures on neighboring properties.

(Ord. No. 164-97, § 6, 1-6-97)

Sec. 14-237. thru 14-245. Reserved.

DIVISION 14. I-M, I-Ma AND I-Mb INDUSTRIAL ZONES*

***Editor's note—**Ord. No. 164-97, § 7, passed Jan. 6, 1997, repealed div. 14, §§ 14-246—14-251 of this article and enacted new provisions as herein set out. Formerly, such provisions pertained to the I-2 and I-2b industrial zones and derived from §§ 602.12.A—602.12.F of the 1968 Code as amended by Ord. No. 499-74, § 5, adopted Aug. 19, 1974; Ord. No. 334-76, §§ 2, 3, adopted Jul. 7, 1976; Ord. No. 234-88, adopted Feb. 1, 1988; Ord. No. 330-90, § 2, adopted May 7, 1990; Ord. No. 15-92, § 18, adopted Jun. 15, 1992; Ord. No. 193A-93, § 2, adopted Feb. 17, 1993; and Ord. No. 154-96, § 15, 12-16-96.

Sec. 14-246. Purpose.

The moderate impact industrial zones are intended to provide zones in areas of the city in which light and moderate impact industries and transportation-related uses will coexist.

The moderate impact industrial (I-M and I-Ma) zones are located on arterials or collectors. The I-Mb zones are similarly located on the peninsula. These locations provide for direct access onto arterials, thereby protecting residential neighborhoods from drive-through traffic.

The I-M, I-Ma and I-Mb industrial zones are intended to provide for larger industrial buildings and for the limited or controlled use of areas outside of structures for storage of materials and machinery. These facilities often require large volumes of imported materials and products which result in large volumes of shipping and receiving. Often uses may be highway-oriented and transportation-related, thus relying on citywide and regional transportation infrastructure.

Industrial uses in the moderate impact industrial zones may require separation from higher impact uses, which should be directed to the high impact industrial zone.
(Ord. No. 164-97, § 7, 1-6-97)

Sec. 14-247. Permitted uses.

The following uses are permitted whether provided by private or public entities in the I-M moderate impact industrial zone, the I-Ma and the I-Mb zone:

(a) Low impact industrial uses, including but not limited to bakeries, breweries, bottling, printing and publishing, pharmaceuticals, machine shops, musical instruments, precision instruments, watchmakers, toys and sporting goods, wood products, jewelry, assembly of electrical components, tool and die shops and the packaging of food.

(b) Research and development and back office uses.

(c) Building contractors and construction and engineering services.

(d) Wholesale trade.

(e) Warehousing and distribution facilities, including

outdoor storage.

(f) Intermodal transportation facilities and transportation terminals.

(g) Repair services, including all types of automotive repair services.

(h) Indoor amusement or recreational centers.

(i) Plant and tree nurseries, including associated recycling activities.

(j) Lumber yards.

(k) Commercial kitchens or other food preparation, provided that the food is not prepared for service on the premises.

(l) Recycling facilities, provided that all storage and recycling operations occur within a fully enclosed structure.

(m) Food and seafood processing for human consumption.

(n) Municipal or regional solid waste disposal facilities, provided that all disposal activities are carried out within an enclosed structure.

(o) Day care facilities, provided that:

1. Proof of licensing with the Maine Department of Human Services is submitted to the city prior to issuance of a certificate of occupancy;

2. ***Off-street parking***: Off-street parking is requird as provided in division 20 (off-street parking) of this article;

3. Off-street loading shall be located in a safe location;

4. There shall be an on-site outdoor play area with seventy-five (75) feet of land area per child; and

5. The outdoor play area shall be fenced and screened with a landscaped buffer.

(p) Dairies.

(q) Utility substations.

(r) Correctional prerelease facilities for up to twelve (12) persons, plus staff, serving a primary clientele of parolees or persons in correctional prerelease programs, provided that:

1. No correctional prerelease facility shall be located within one thousand (1,000) feet of another, as measured in a radius from the center of the lot;

2. Such facilities shall not be permitted in the I-Ma or I-Mb zones;

3. If a facility requires state or federal licensing, staffing of the facility shall be as required by such license. If a facility does not require state or federal licenses, there shall be a minimum of one (1) staff person for every ten (10) residents or fraction thereof; and

4. The facility shall provide twenty-four-hour supervision of program participants.

(s) Incidental accessory uses.

(t) General, business and professional offices.

(u) Storage lots for towed or impounded vehicles, provided that such lots are located at least 300 feet from any residential zone or existing conforming residential use. For the purposes of this section, "existing conforming residential use" does not include a legally nonconforming residential use as described in division 23 of this chapter.

(v) Registered medical marijuana cultivation facilities.

(w) Wind energy systems, as defined and allowed in Article X,

Alternative Energy.

(x) Street vendors licensed pursuant to Chapter 19.

(Ord. No. 164-97, § 7, 1-6-97; Ord. No. 137-97, § 3, 11-3-97; Substitute Ord. No. 72-01/02, § 1, 10-1-01; Ord. No. 97-06/07, 11-20-06; Ord. No. 240-09/10, 6-21-10; Ord. No. 283-09/10, 7-19-10 emergency passage; Ord. No. 33-11/12, 1-18-12; Ord. No. 10-12/13, 7-16-12)

Sec. 14-248. Performance based uses.

Uses not expressly permitted as provided in section 14-247 or expressly prohibited in section 14-249 may be permitted if they meet the following conditions and standards:

(a) The proposed development is consistent with the purposes of this zone.

(b) The proposed development is designed and operated so that it will prevent undue adverse environmental impacts, substantial diminution of the value or utility of neighboring structures, or significant hazards to the health or safety of neighboring residents by controlling noise levels, emissions, traffic, lighting, odor, and any other potential negative impacts of the proposal.

(Ord. No. 164-97, § 7, 1-6-97)

Sec. 14-248.1. Conditional uses.

The following use shall be permitted only upon the issuance of a conditional use permit, subject to the provisions of section 14-474 (conditional uses), and any special provisions, standards or requirements specified below:

(a) Temporary wind anemometer towers, as defined in Sec 14-47, are permitted provided the following standards are met in addition to Sec 14-430:

1. Towers may be installed for the purpose of wind data collection for no more than two (2) years after the issuance of a Certificate of Occupancy for the tower. At the conclusion of the aforementioned two (2) years, the tower must be dismantled and removed from the site within sixty (60) days; and

2. Towers shall be constructed according to plans

and specifications stamped by a licensed professional engineer, which shall be provided to the Board of Appeals with the application; and

3. Towers shall be set back from habitable buildings by a distance equal to 1.1 times the tower height; and

4. The applicant shall provide a safety report prepared and stamped by a licensed professional engineer to the Board of Appeals with their application for conditional use, which demonstrates how the proposed temporary wind anemometer tower is safe in terms of strength, stability, security, grounding, icing impacts and maintenance; and

5. The applicant shall provide evidence of commercial general liability insurance, such insurance to be satisfactory to Corporation Counsel and cover damage or injury resulting from construction, operation or dismantling of any part of the temporary wind anemometer tower; and

6. Towers and associated guy wires shall be sited to minimize their prominence from and impacts on public ways (including pedestrian ways); and

7. Towers shall be used for installing anemometers and similar devices at a range of heights from the ground to measure wind characteristics (speed, direction, frequency) and related meteorological data, but shall not be used for any other purpose; and

8. A performance guarantee shall be required for the cost of removal of the tower, guy wires and anchors. This requirement may be satisfied by surety bond, letter of credit, escrow account or by evidence, acceptable to the City, or the financial and technical ability and commitment of the applicant or its agents

to remove the facility at the end of the use period.

(b) Wind energy systems, as defined and allowed in Article X, Alternative Energy.

(Ord. No. 29-09/10, 8-3-09, emergency passage; Ord. No. 33-11/12, 1-18-12)

Sec. 14-249. Prohibited uses.

Uses that are not expressly enumerated herein as permitted uses are prohibited. Those uses that are prohibited shall include, but are not limited to, the following:

(a) Residential uses.

(b) Retail trade that is not ancillary to a permitted use.

(c) Restaurant uses.

(d) Junk yards.

(e) Amusement parks.

(f) Crematoriums.

(g) Mining and drilling operations.

(h) Refining of petroleum or its products, including tar distillation.

(i) Petroleum tank farms.

(j) Commercial excavation of building or construction materials other than in the normal course of building or construction or site preparation.

(k) Distillation of bones; fat rendering; glue, soap, or fertilizer manufacture.

(l) Dumping, disposal, incineration, or reduction of garbage, sewage, offal, dead animals, or refuse.

(m) Stockyard or slaughtering of animals.

(n) Smelting of iron, copper, tin, zinc, or any other ore.

(o) Manufacture of primary chemicals.

(p) Manufacture of cement, lime, gypsum, or plaster of paris.

(q) Manufacture of bleaching powder, matches, paper, or rubber.

(r) Manufacture of explosives or fireworks. Bulk storage of explosives or fireworks is also prohibited unless such storage is done as an accessory use to a permitted use located on the same site and all required state and local permits have been acquired.

(s) Tanning, curing or storage of raw hides or skins.

(t) Coal distillation or coke ovens.

(u) Creosote treatment.

(v) Drop forging.

(w) Steel mills or furnaces.

(x) Coal- or coke-fired kilns.

(y) Used tire storage.

(z) Extraction of raw materials.

(aa) Concert halls or dance halls.

(bb) Banquet facilities.

(Ord. No. 164-97, § 7, 1-6-97; Ord. No. 137-97, § 4, 11-3-97; Substitute Ord. No. 72-01/02, § 2, 10-1-01)

Sec. 14-250. Dimensional requirements.

(a) *Minimum lot size:*

1. Correctional prerelease facilities: Ten thousand (10,000) square feet.

2. Other uses: None.

(b) *Maximum impervious surface ratio:* I-M and I-Ma zone: Seventy-five (75) percent. I-Mb zone: One hundred (100) percent.

(c) *Maximum building height:* I-M and I-Mb zones: Seventy-five (75) feet. I-Ma zone: Forty-five (45) feet.

(d) *Minimum side yards:* Principal and accessory structures in the I-M and the I-Ma zone: Each structure shall be set back one (1) foot from each side property line for each one (1) foot of building height, up to twenty-five (25) feet, except that the minimum side yard shall be thirty-five (35) feet when the side property line abuts a residential zone.

Principal and accessory structures in the I-Mb zone: None, except that the minimum side yard shall be twenty-five (25) feet when the side property line abuts a residential zone.

(e) *Minimum rear yards:* Principal and accessory structures in the I-M and I-Ma zone: Each structure shall be set back one (1) foot from the rear property line for each one (1) foot of building height, up to twenty-five (25) feet, except that the minimum rear yard shall be thirty-five (35) feet when the rear property line abuts a residential zone.

Principal and accessory structures in the I-Mb zone: None, except that the minimum rear yard shall be twenty-five (25) feet when the rear property line abuts a residential zone.

(f) *Minimum front yard:* Principal and accessory structures in the I-M and I-Ma zone: Each structure shall be set back one (1) foot from the front property line for each one (1) foot of building height.

Principal and accessory structures in the I-Mb zone: None.

(g) *Minimum street frontage:* Sixty (60) feet.

(h) *Pavement setback from lot boundaries:* Ten (10) feet.
(Ord. No. 164-97, § 7, 1-6-97)

Sec. 14-251. Other requirements.

(a) Off-street parking shall meet the requirements of division 20 of this article.

(b) Off-street loading shall meet the requirements of division 21 of this article.

(c) Signs shall be subject to the provisions of division 22 of this article.

(d) ***Shoreland and floodplain management regulations:*** Any lot or portion of a lot located in a shoreland zone as identified on the city shoreland zoning map or in a flood hazard zone shall be subject to the requirements of division 26 and/or division 26.5 of this article.

(e) All uses shall be operated within a fully enclosed structure, except for those customarily operated in open air.

(f) Any storage of new materials, finished products, or related equipment must be suitably screened from the public way and from abutting properties by a solid fence at least five (5) feet in height, or by a solid evergreen planting strip.

(g) All waste shall be stored in covered containers that do not leak or otherwise permit liquids or solids to escape from the container.

(h) All food processing waste shall be stored within a completely enclosed structure and if not refrigerated shall be removed from the site in an enclosed container within forty-eight (48) hours of its generation. All enclosed and exterior food processing waste storage areas shall be cleaned and sanitized on a regular basis.

(i) Outdoor storage of refuse, debris or previously used materials awaiting reuse shall be either in an appropriate container or located within a designated, screened area.

(j) Any permitted outdoor storage of materials shall be done in such a manner as to prevent the breeding and harboring of insects or vermin, to prevent the transfer of such materials from the site by natural causes or forces and to contain fumes, dust, or other materials which constitute a fire hazard. This storage shall be accomplished within enclosed containers or by one (1) or more of the following methods: raising materials above ground, separating materials, preventing stagnant water, or by some other means. No outdoor storage shall be permitted between the front of any building on the site and the street, except for storage for plant

and tree nurseries or lumber yards.
(Ord. No. 164-97, § 7, 1-6-97)

Sec. 14-252. Performance standards.

Uses in the I-M, I-Ma, and I-Mb zones shall meet the following standards:

(a) *Noise:*

1. *Definitions:*

a. Tonal sounds are defined as sound waves usually perceived as a hum or whine because their instantaneous sound pressure varies essentially as a simple sinusoidal function of time.

b. Impulse sounds are defined as sound events characterized by brief excursions of sound pressure, each with a duration of less than one (1) second.

2. *Measurement:* Sound levels shall be measured with a sound level meter with a frequency weighting network manufactured according to standards prescribed by the American National Standards Institute (ANSI) or its successor body. Measurements shall be made at all major lot lines of the site, at a height of at least four (4) feet above the ground surface. In measuring sound levels under this section, sounds with a continuous duration of less than sixty (60) seconds shall be measured by the maximum reading on a sound level meter set to the A weighted scale and the fast meter response (L maxfast). Sounds with a continuous duration of sixty (60) seconds or more shall be measured on the basis of the energy average sound level over a period of sixty (60) seconds (LEQ_1).

3. *Maximum permissible sound levels:* The maximum permissible sound level of any continuous, regular or frequent source of sound produced by an activity shall be as follows:

a. Seventy (70) dBA between the hours of 7:00 a.m. and 10:00 p.m.

b. Fifty-five (55) dBA between the hours of 10:00 p.m. and 7:00 a.m., as measured at or within the boundaries of any residential zone.

In addition to the sound level standards established above, all uses located within this zone shall employ best practicable sound abatement techniques to prevent tonal sounds and impulse sounds or, if such tonal and impulse sounds cannot be prevented, to minimize the impact of such sounds in residential zones.

4. *Exemptions:*

a. Noises created by construction and maintenance activities between 7:00 a.m. and 10:00 p.m. are exempt from the maximum permissible sound levels set forth in subsection (d)3 of this section. Construction activities on a site abutting any residential use between the hours of 10:00 p.m. of one (1) day and 7:00 a.m. of the following day shall not exceed fifty (50) dBA.

b. The following uses and activities shall also be exempt from the requirements of subsection (d)3 of this section:

i. The noises of safety signals, warning devices, emergency pressure relief valves, and any other emergency devices.

ii. Traffic noise on public roads or noise created by airplanes and railroads.

iii. Noise created by refuse and solid waste collection, provided that the activity is conducted between 6:00 a.m. and 7:00 p.m.

iv. Emergency construction or repair work by public utilities, at any hour.

v. Noise created by any recreational activities which are permitted by law and for which a license or permit has been granted by the city, including but not limited to parades, sporting events, and fireworks displays.

(b) ***Electromagnetic interference:*** There shall be no electromagnetic interference that adversely affects the operation of any equipment other than that belonging to the creator of such interference, or that does not conform to the regulations of the Federal Communications Commission.

(c) ***Vibrations:*** Any use creating earthshaking vibrations shall be controlled in such a manner as to prevent transmission beyond lot lines of vibrations causing a displacement of .003 or greater on one (1) inch, as measured by a vibrograph or similar instrument at the property boundaries.

(d) ***Glare, heat:*** Any use shall be in an enclosed structure in such a manner that glare and heat shall be imperceptible from neighboring properties.

(e) ***Discharge of toxic or noxious matter:*** All discharges of toxic or noxious matter shall be made in accordance with all applicable state and federal regulations.

(f) ***Odor:*** It shall be a violation of this chapter to create an odor nuisance.

1. ***Determination of odor nuisance:*** An odor nuisance shall be considered to exist when ten (10) confirmed complaints occur in an area within two (2) separate twenty-four-hour periods. The ten (10) confirmed complaints must originate from ten (10) different households in an area zoned residential or from ten (10) different individuals in a commercial or industrial facility. The building authority shall only respond to a complainant who confirms that the odor is detectable at the time of the actual complaint. In order to confirm a complaint, the building authority or its designee

shall first determine that an odor is detectable in the area of the complaint. The building authority or its designee shall interview the complainant to verify that the detectable odor is in fact the odor that resulted in the complaint. If the complainant verifies the odor as the source of the complaint, then the building authority shall notify the owner or operator of the alleged odor source either in person or by telephone within one (1) working day, with a written confirmation within seven (7) working days of the complaint. In the event that the building authority is unable to contact the owner or operator of the alleged odor source in person or by telephone within one (1) working day, then the building authority shall send written notice to the operator within seven (7) working days of the complaint.

In the event that ten (10) complaints are confirmed as set forth in subsection (1) in two (2) separate twenty-four-hour periods within a ninety-day period, the building authority shall cause a certified odor inspector to investigate any odor complaints received in the next thirty (30) days following the receipt of the tenth confirmed complaint from the second twenty-four-hour period. If the odors remain under the ambient intensity standard as established in this subsection for the next thirty (30) days, then a new odor nuisance must be established after that time in accordance with the requirements of this section. The certified odor inspector shall do the following in response to a complaint under this section:

a. Verify that an odor is detectable in the area of the complaint and confirm that it is the odor that resulted in the complaint;

b. Quantify the intensity of the odor on the eight-point n-butanol intensity scale as defined in regulations promulgated by the director of the planning authority to establish training and technical standards to support this section; and

c. Track the odor to its source.

When the certified odor inspector determines that a violation has occurred because an odor has exceeded the maximum ambient odor levels set forth in this section, the building authority shall notify the owner or operator either by telephone or in person of the violation within one (1) working day of the violation. The building authority shall confirm this notification in writing within seven (7) working days of this initial notice. In the event that the building authority is unable to contact the owner or operator by telephone or in person within the required time period, then it will send written notification within seven (7) working days of the violation.

Upon receipt of the written notice of violation, the owner or operator of the odor source shall do the following:

a. Implement odor reduction procedures immediately upon notification by the building authority that the facility has violated this section wherever odor reduction can be achieved by operational or procedural changes at the facility;

b. Submit to the building authority, within thirty (30) days of the written notice of violation, an odor reduction plan which is designed to reduce ambient odors attributable to emissions from that source to the maximum allowable intensity for that zone. The plan shall include a detailed summary of the measures that the owner or operator will take to mitigate the community annoyance and estimated dates for completion of those measures. In the event that it will take longer than thirty (30) days to develop the odor reduction plan, the owner or operator of the facility shall submit within the thirty-day time period a schedule for the development of the odor reduction plan. The building authority shall review this plan to

determine whether it will be adequate to resolve the odor nuisance in a reasonable time period; and

c. Implement the plan in accordance with the schedule approved by the building authority.

2. ***Ambient odor limits:*** The maximum ambient intensity standard for odors generated by uses located in the I-M zones shall not exceed the following levels when the odor is measured in the zone indicated:

4.0 in any industrial or business zone for odors resulting from any industrial use.

3.0 in any residential zone for odors resulting from any industrial use.

(g) ***Smoke:*** Discharges of smoke shall not exceed opacity percentage of forty (40) percent or number 2 on the Ringelmann chart.

(h) ***Emissions:*** All emissions shall be made in accordance with all applicable state and federal regulations.

(i) ***Radiation:*** Radiation at a site shall comply with all applicable state and federal regulations.

(j) ***Discharge into sewers:*** No discharge shall be permitted at any point into any private sewage disposal system, or stream, or into the ground of any materials in such a way or of such nature or temperature as to contaminate any water supply, or otherwise cause the emission of dangerous or objectionable elements, except in accordance with standards approved by the health authority or by the public works authority.

(k) ***Lighting:*** All lighting shall be designed and installed with cut-off fixtures to direct illumination onto the site and to prevent illumination from such fixtures on neighboring properties.

(l) ***Traffic:*** Development in the I-M, I-Ma and I-Mb zones shall utilize to the greatest extent possible arterial streets as delineated on the Maine Department of

Transportation Map, a copy of which is on file in the Department of Planning and Urban Development.

(Ord. No. 164-97, § 7, 1-6-97)

Sec. 14-253 – Sec. 14-260. Reserved.

DIVISION 15. I-H AND I-Hb INDUSTRIAL ZONES*

***Editor's note—**Ord. No. 164-97, § 8, passed Jan. 6, 1997, repealed div. 15, §§ 14-261—14-266 of this article and enacted new provisions as herein set out. Formerly, such provisions pertained to the I-3 and I-3b industrial zones and derived from §§ 602.13.A—602.13.F of the 1968 Code as amended by Ord. No. 499-74, § 5, adopted Aug. 19, 1974; Ord. No. 334-76, §§ 4—6, adopted Jul. 7, 1976; Ord. No. 198-88, adopted Nov. 21, 1988; Ord. No. 201-88, adopted Nov. 21, 1988; Ord. No. 330-90, § 3, adopted May 7, 1990; Ord. No. 15-92, § 19, adopted Jun. 15, 1992; and Ord. No. 193A-93, §§ 3, 4, adopted Feb. 17, 1993.

Sec. 14-261. Purpose.

The high impact industrial zones are intended to provide areas suitable for higher impact industrial uses than are permitted in other industrial zones and other uses including hospital campuses that are capable of demonstrating, through design, layout and topography, their compatibility with, or non-intrusion on, existing or future higher impact industrial uses on adjacent or neighboring I-H zoned properties.

Due to the intensity of use, the I-H zones are intended for uses which may require extensive outdoor storage and usage and may utilize heavy equipment. Processes may require separation from residential or sensitive environmental areas. The I-H zones are separated from other nonindustrial uses as well as natural or constructed features.

High impact industrial uses will be of a higher intensity, with a greater lot coverage, than the other zones. Due to the intensity of uses, the performance standards will allow for the higher intensity of use.

(Ord. No. 164-97, § 8, 1-6-97; Ord. No. 106-01/02, § 1, 12-3-01)

Sec. 14-262. Permitted uses.

The following uses are permitted whether provided by private or public entities in the high impact industrial zone and the I-Hb

zone:

(a) Low impact industrial uses, including but not limited to bakeries, breweries, bottling, printing and publishing, pharmaceuticals, machine shops, musical instruments, precision instruments, watchmakers, toys and sporting goods, wood products, jewelry, assembly of electrical components, tool and die shops and the packaging of food.

(b) Research and development.

(c) Wholesale trade.

(d) Warehousing and distribution facilities.

(e) Intermodal transportation facilities and transportation terminals.

(f) Repair services, including all types of automotive repair services.

(g) High impact industrial uses.

(h) Building contractors and construction services.

(i) Plant and tree nurseries, including associated recycling activities.

(j) Lumber yards.

(k) Fish waste processing facility, provided that it has received all required licenses and is in compliance with all applicable licensing requirements.

(l) Commercial kitchens or other food preparation, provided that the food is not prepared for service on the premises.

(m) Recycling facilities.

(n) Food and seafood processing.

(o) Dairies.

(p) Municipal or regional solid waste disposal facilities,

provided that all disposal activities are carried out within an enclosed structure.

(q) Utility substations.

(r) Correctional prerelease facilities for up to twelve (12) persons, plus staff, serving a primary clientele of parolees or persons in correctional prerelease programs, provided that:

1. No correctional prerelease facility shall be located within one thousand (1,000) feet of another, as measured in a radius from the center of the lot;

2. Such facilities shall not be permitted in the I-Hb zone;

3. If a facility requires a state or federal license, staffing of the facility shall be as required by such license. If a facility does not require state or federal licenses, there shall be a minimum of one (1) staff person for every ten (10) residents or fraction thereof; and

4. The facility shall provide twenty-four-hour supervision of program participants.

(s) Storage lots for towed or impounded vehicles.

(t) Registered medical marijuana cultivation facilities.

(u) wind energy systems, as defined and allowed in Article X, Alternative Energy.

(v) Street vendors licensed pursuant to Chapter 19.

(Ord. No. 164-97, § 8, 1-6-97; Ord. No. 137-97, § 5, 11-3-97; Ord. No. 97-06/07, 11-20-06; Ord. No. 283-09/10, 7-19-10 emergency passage; Ord. No. 33-11/12, 1-18-12; Ord.No. 10-12/13, 7-16-12)

Sec. 14-262.1. Conditional uses.

The following use shall be permitted only upon the issuance of a conditional use permit, subject to the provisions of section 14-474 (conditional uses), and any special provisions, standards or

requirements specified below:

(a) Temporary wind anemometer towers, as defined in Sec 14-47, are permitted provided the following standards are met in addition to Sec 14-430:

1. Towers may be installed for the purpose of wind data collection for no more than two (2) years after the issuance of a Certificate of Occupancy for the tower. At the conclusion of the aforementioned two (2) years, the tower must be dismantled and removed from the site within sixty (60) days; and

2. Towers shall be constructed according to plans and specifications stamped by a licensed professional engineer, which shall be provided to the Board of Appeals with the application; and

3. Towers shall be set back from habitable buildings by a distance equal to 1.1 times the tower height; and

4. The applicant shall provide a safety report prepared and stamped by a licensed professional engineer to the Board of Appeals with their application for conditional use, which demonstrates how the proposed temporary wind anemometer tower is safe in terms of strength, stability, security, grounding, icing impacts and maintenance; and

5. The applicant shall provide evidence of commercial general liability insurance, such insurance to be satisfactory to Corporation Counsel and cover damage or injury resulting from construction, operation or dismantling of any part of the temporary wind anemometer tower; and

6. Towers and associated guy wires shall be sited to minimize their prominence from and impacts on public ways (including pedestrian ways); and

7. Towers shall be used for installing anemometers and similar devices at a range of heights from the ground to measure wind characteristics (speed, direction, frequency) and related meteorological data, but shall not be used for any other purpose; and

8. A performance guarantee shall be required for the cost of removal of the tower, guy wires and anchors. This requirement may be satisfied by surety bond, letter of credit, escrow account or by evidence, acceptable to the City, or the financial and technical ability and commitment of the applicant or its agents to remove the facility at the end of the use period.

(b) Wind energy systems, as defined and allowed in Article X, Alternative Energy.

(Ord. No. 29-09/10, 8-3-09, emergency passage)

Sec. 14-263. Prohibited uses.

Uses that are not expressly enumerated herein as permitted uses are prohibited. Those uses that are prohibited shall include, but are not limited to, the following:

(a) Junk yards.

(b) Amusement parks.

(c) Refining of petroleum or its products, including tar distillation.

(d) Distillation of bones; fat rendering; glue, soap, or fertilizer manufacture, except that fish waste processing may be permitted as set forth in section 14-262.

(e) Dumping, disposal, incineration, or reduction of garbage, sewage, offal, dead animals, or refuse.

(f) Stockyard or slaughtering of animals.

(g) Smelting of iron, copper, tin, zinc, or any other ore.

(h) Manufacture of explosives or fireworks.

(i) Coal distillation or coke ovens.

(j) Creosote treatment.

(k) Drop forging.

(l) Steel mills or furnaces.

(m) Coal- or coke-fired kilns.

(n) Used tire storage.

(o) Extraction of raw materials.

(p) Concert halls or dance halls.

(q) Banquet facilities.

(Ord. No. 164-97, § 8, 1-6-97; Ord. No. 137-97, § 6, 11-3-97; Ord. No. 106-01/02, § 2, 12-3-01)

Sec. 14-264. Contract or conditional zoning.

A conditional or contract rezoning shall only be approved if, after public hearing and opportunity for public comment, the reviewing body finds that the applicant has carried the burden of proof to show that the proposed development meets the following standards:

(a) The proposed development is consistent with the comprehensive plan.

(b) The proposed development is consistent with the purposes of this zone.

(c) The proposed development is designed and operated so that it will prevent undue adverse environmental impacts, substantial diminution of the value or utility of neighboring structures, or significant hazards to the health or safety of neighboring residents by controlling noise levels, emissions, traffic, lighting, odors, and any other potential negative impacts of the proposal.

(d) All plans must include complete information of processes, materials or methods of storage to be used by the development and shall specify how hazardous impacts to neighboring properties will be prevented.

(Ord. No. 164-97, § 8, 1-6-97)

Sec. 14-265. Dimensional requirements.

(a) *Minimum lot size:*

1. Correctional prerelease facilities: Ten thousand (10,000) square feet.

2. Other uses: None.

(b) *Maximum impervious surface ratio:* I-H zone: Eighty-five (85) percent. I-Hb zone: One hundred (100) percent.

(c) *Maximum building height:* Seventy-five (75) feet.

(d) *Minimum side yards:* Principal and accessory structures in the I-H zone: Thirty-five (35) feet. Principal and accessory structures in the I-Hb zone: None.

(e) *Minimum rear yards:* Principal and accessory structures in the I-H zone: Thirty-five (35) feet. Principal and accessory structures in the I-Hb zone: None.

(f) *Minimum front yard:* Principal and accessory structures in the I-H zone: Twenty-five (25) feet. Principal and accessory structures in the I-Hb zone: None.

(g) *Minimum street frontage:* Sixty (60) feet.

(h) *Pavement setback from lot boundaries:* Ten (10) feet.

(Ord. No. 164-97, § 8, 1-6-97)

Sec. 14-266. Other requirements.

(a) Off-street parking shall meet the requirements of division 20 of this article.

(b) Off-street loading shall meet the requirements of division 21 of this article.

(c) Signs shall be subject to the provisions of division 22 of this article.

(d) ***Shoreland and floodplain management regulations:*** Any lot or portion of a lot located in a shoreland zone as identified on the city shoreland zoning map or in a flood hazard zone shall be subject to the requirements of division 26 and/or division 26.5 of this article.

(e) All uses shall be operated within a fully enclosed structure, except for those customarily operated in open air.

(f) Any storage of new materials, finished products, or related equipment must be suitably screened from the public way and from abutting nonindustrial use properties by a solid fence at least five (5) feet in height, or by a solid evergreen planting strip.

(g) All waste shall be stored in covered containers that do not leak or otherwise permit liquids or solids to escape from the container.

(h) All food processing waste shall be stored within a completely enclosed structure and if not refrigerated shall be removed from the site in an enclosed container within forty-eight (48) hours of its generation. All enclosed and exterior food processing waste storage areas shall be cleaned and sanitized on a regular basis.

(i) Outdoor storage of refuse, debris or material awaiting reuse shall be in an appropriate container or located within a designated, screened area.

(j) Any permitted outdoor storage of materials shall be done in such a manner as to prevent the breeding and harboring of insects or vermin, to prevent the transfer of such materials from the site by natural causes or forces and to contain fumes, dust, or other materials which constitute a fire hazard. This storage shall be accomplished within enclosed containers or by one (1) or more of the following methods: raising materials above ground, separating materials, preventing stagnant water, or by some other means. No outdoor storage shall be permitted between the front of any building on the site and the street, except for storage for plant and tree nurseries or lumber yards.

(Ord. No. 164-97, § 8, 1-6-97)

Sec. 14-267. Performance standards.

Uses in the I-H and I-Hb zones shall meet the following standards:

(a) ***Required landscaping:*** Where a front yard abuts an arterial or a major collector street, it shall be landscaped. Rear yards, side yards and the perimeter of any parking area for greater than fifteen (15) vehicles shall be landscaped if visible from a street, public open space or residential zone.

(b) ***Noise:***

1. ***Definitions:***

a. Tonal sounds are defined as sound waves usually perceived as a hum or whine because their instantaneous sound pressure varies essentially as a simple sinusoidal function of time.

b. Impulse sounds are defined as sound events characterized by brief excursions of sound pressure, each with a duration of less than one (1) second.

2. ***Measurement:*** Sound levels shall be measured with a sound level meter with a frequency weighting network manufactured according to standards prescribed by the American National Standards Institute (ANSI) or its successor body. Measurements shall be made at all major lot lines of the site, at a height of at least four (4) feet above the ground surface. In measuring sound levels under this section, sounds with a continuous duration of less than sixty (60) seconds shall be measured by the maximum reading on a sound level meter set to the A weighted scale and the fast meter response (L maxfast). Sounds with a continuous duration of sixty (60) seconds or more shall be measured on the basis of the energy average sound level over a period of sixty (60) seconds (LEQ_1).

3. *Maximum permissible sound levels:* The maximum permissible sound level of any continuous, regular or frequent source of sound produced by an activity shall be as follows:

   a. Seventy-five (75) dBA between the hours of 7:00 a.m. and 10:00 p.m.

   b. Fifty-five (55) dBA between the hours of 10:00 p.m. and 7:00 a.m., as measured at or within the boundaries of any residential zone.

   In addition to the sound level standards established above, all uses located within this zone shall employ best practicable sound abatement techniques to prevent tonal sounds and impulse sounds or, if such tonal and impulse sounds cannot be prevented, to minimize the impact of such sounds in residential zones.

4. *Exemptions:*

   a. Noises created by construction and maintenance activities between 7:00 a.m. and 10:00 p.m. are exempt from the maximum permissible sound levels set forth in subsection (a)3 of this section. Construction activities on a site abutting any residential use between the hours of 10:00 p.m. of one (1) day and 7:00 a.m. of the following day shall not exceed fifty (50) dBA.

   b. The following uses and activities shall also be exempt from the requirements of subsection (a)3 of this section:

      i. The noises of safety signals, warning devices, emergency pressure relief valves, and any other emergency devices.

      ii. Traffic noise on public roads or noise created by airplanes and railroads.

      iii. Noise created by refuse and solid waste

collection, provided that the activity is conducted between 6:00 a.m. and 7:00 p.m.

iv. Emergency construction or repair work by public utilities, at any hour.

v. Noise created by any recreational activities which are permitted by law and for which a license or permit has been granted by the city, including but not limited to parades, sporting events, and fireworks displays.

(b) ***Electromagnetic interference:*** There shall be no electromagnetic interference that adversely affects the operation of any equipment other than that belonging to the creator of such interference, or that does not conform to the regulations of the Federal Communications Commission.

(c) ***Vibrations:*** Any use creating earthshaking vibrations shall be controlled in such a manner as to prevent transmission beyond lot lines of vibrations causing a displacement of .003 or greater on one (1) inch, as measured by a vibrograph or similar instrument at the property boundaries.

(d) ***Glare, heat:*** Any use shall be in an enclosed structure in such a manner that glare and heat shall be imperceptible from neighboring properties.

(e) ***Discharge of toxic or noxious matter:*** All discharges of toxic or noxious matter shall be made in accordance with all applicable state and federal regulations.

(f) ***Odor:*** It shall be a violation of this chapter to create an odor nuisance.

1. ***Determination of odor nuisance:*** An odor nuisance shall be considered to exist when ten (10) confirmed complaints occur in an area within two (2) separate twenty-four-hour periods. The ten (10) confirmed complaints must originate from ten (10) different households in an area zoned residential or from ten (10) different individuals in a

commercial or industrial facility. The building authority shall only respond to a complainant who confirms that the odor is detectable at the time of the actual complaint. In order to confirm a complaint, the building authority or its designee shall first determine that an odor is detectable in the area of the complaint. The building authority or its designee shall interview the complainant to verify that the detectable odor is in fact the odor that resulted in the complaint. If the complainant verifies the odor as the source of the complaint, then the building authority shall notify the owner or operator of the alleged odor source either in person or by telephone within one (1) working day, with a written confirmation within seven (7) working days of the complaint. In the event that the building authority is unable to contact the owner or operator of the alleged odor source in person or by telephone within one (1) working day, then the building authority shall send written notice to the operator within seven (7) working days of the complaint.

In the event that ten (10) complaints are confirmed as set forth in subsection (a) in two (2) separate twenty-four-hour periods within a ninety-day period, the building authority shall cause a certified odor inspector to investigate any odor complaints received in the next thirty (30) days following the receipt of the tenth confirmed complaint from the second twenty-four-hour period. If the odors remain under the ambient intensity standard as established in this subsection for the next thirty (30) days, then a new odor nuisance must be established after that time in accordance with the requirements of this section. The certified odor inspector shall do the following in response to a complaint under this section:

a. Verify that an odor is detectable in the area of the complaint and confirm that it is the odor that resulted in the complaint;

b. Quantify the intensity of the odor on the eight-point n-butanol intensity scale as

defined in regulations promulgated by the director of the planning authority to establish training and technical standards to support this section; and

c. Track the odor to its source.

When the certified odor inspector determines that a violation has occurred because an odor has exceeded the maximum ambient odor levels set forth in this section, the building authority shall notify the owner or operator either by telephone or in person of the violation within one (1) working day of the violation. The building authority shall confirm this notification in writing within seven (7) working days of this initial notice. In the event that the building authority is unable to contact the owner or operator by telephone or in person within the required time period, then it will send written notification within seven (7) working days of the violation.

Upon receipt of the written notice of violation, the owner or operator of the odor source shall do the following:

a. Implement odor reduction procedures immediately upon notification by the building authority that the facility has violated this section wherever odor reduction can be achieved by operational or procedural changes at the facility;

b. Submit to the building authority, within thirty (30) days of the written notice of violation, an odor reduction plan which is designed to reduce ambient odors attributable to emissions from that source to the maximum allowable intensity for that zone. The plan shall include a detailed summary of the measures that the owner or operator will take to mitigate the community annoyance and estimated dates for completion of those measures. In the event that it will take longer than thirty (30) days to develop the

odor reduction plan, the owner or operator of the facility shall submit within the thirty-day time period a schedule for the development of the odor reduction plan. The building authority shall review this plan to determine whether it will be adequate to resolve the odor nuisance in a reasonable time period; and

c. Implement the plan in accordance with the schedule approved by the building authority.

2. ***Ambient odor limits:*** The maximum ambient intensity standard for odors generated by uses located in the I-H zones shall not exceed the following levels when the odor is measured in the zone indicated:

4.0 in any industrial or business zone for odors resulting from any industrial use.

3.0 in any residential zone for odors resulting from any industrial use.

(g) ***Smoke:*** Discharges of smoke shall not exceed opacity percentage of forty (40) percent or number 2 on the Ringelmann chart.

(h) ***Emissions:*** All emissions shall be made in accordance with all applicable state and federal regulations.

(i) ***Radiation:*** Radiation at a site shall comply with all applicable state and federal regulations.

(j) ***Discharge into sewers:*** No discharge shall be permitted at any point into any private sewage disposal system, or stream, or into the ground of any materials in such a way or of such nature or temperature as to contaminate any water supply, or otherwise cause the emission of dangerous or objectionable elements, except in accordance with standards approved by the health authority or by the public works authority.

(k) ***Lighting:*** All lighting shall be designed and installed with cut-off fixtures to direct illumination onto the site and to prevent illumination from such fixtures on

neighboring properties.
(Ord. No. 164-97, § 8, 1-6-97)

DIVISION 15.1. B-6 EASTERN WATERFRONT MIXED ZONE

Sec. 14-268. Purpose.

The purpose of the B-6, eastern waterfront mixed zone is to establish a zoning district for the upland portion of the eastern waterfront area. The B-6 zone encourages this district to acquire a distinctly urban from through development that emphasizes a quality pedestrian experience, promotes public transit, and demonstrates exemplary urban design. The zone promotes a range of uses to achieve twenty-four urban vitality and shared use of parking infrastructure as recommended in the eastern waterfront master plan for redevelopment.

The zone language established herein provides regulatory framework to promote the mixed-use development pattern envisioned for urban land on Portland's peninsula. Specific development criteria, including building height overlays and design standards, may be established for this district to supplement the provisions of this section. District-specific design standards and overlay maps can be found at the city planning and development office.
(Ord No. 80-04/05, 12-8-04)

Sec. 14-269. Permitted uses.

The following uses are permitted in the B-6 zone:

(a) *Commercial:*

1. Professional, business and general offices;

2. Restaurants and other eating and drinking establishments;

3. Hotels and inns limited to no more than 150 rooms;

4. Craft and specialty shops, including the on-premises production of handcrafted goods;

5. Retail and retail service establishments, excluding those with gas pumps;

6. Theatres;

7. Banking services, excluding vehicular drive-up services;

Editor's Note: Drive-up banking facilities located in the interior of parking structures are allowed as a conditional use subject to the criteria outlined below in the conditional use provisions of this section.

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8. Cabinet and carpentry shops;

9. Personal services;

10. Business services;

11. Offices of business trades people;

12. Miscellaneous repair services, excluding all types of automotive repair except for automobile repair and service establishments;

13. Telecommunication and broadcast and receiving facilities, except as prohibited in section 14-271 (prohibited uses);

    In addition, building mounted telecommunications antennas, discs, transmitting and receiving equipment and the like shall adhere to the following criteria. Such roof-mounted equipment shall be:

    a. No taller than 15 feet above the highest structural steel of the building roof; and

    b. Set back no less than 15 feet from the building perimeter; and

    c. Integrated into the architecture of the building in placement, form, color, and material so as to screen or camouflage such equipment from public view.

14. Brew pubs and microbreweries without associated bottling facilities; and brewpubs and microbreweries with associated bottling facilities limited to 5,000 bottles per year output.

15. Electronic data storage;

16. Marine products wholesaling and retailing;

17. Harbor and marine supplies and services, chandlery and ship supply;

18. Bakeries, coffee roasters, and commercial kitchens with building footprints limited to fifteen thousand (15,000) square feet of contiguous building space.

19. Printing establishments.

(b) *Residential:*

1. Attached dwellings including row houses, two-family and multifamily dwellings;

2. Handicapped family units;

3. Combined living/working spaces, including but not limited to artist residences with studio space;

4. Mixed use residential and commercial structures.

(c) *Public:*

1. Utility substations, including sewage collection and pumping stations, water pumping stations, transformer stations, telephone electronic equipment enclosures and other similar structures;

2. Landscaped pedestrian parks, plazas and other similar outdoor pedestrian spaces;

3. Pedestrian and multi-use trails;

(d) *Other:*

1. Studios for artists, photographers and craftspeople including but not limited to, painters, sculptors, dancers, graphic artists and musicians;

2. Accessory uses customarily incidental and subordinate to the location, function and operation of permitted uses, except that parking lots shall not be considered a permitted accessory use and such parking is subject to the conditional use section of the B-6 zone.

3. Health clubs, martial arts and mediation facilities.

4. Intermodal transportation facilities.

5. Nursery schools, kindergartens, and daycare facilities or home babysitting services.

(e) Wind energy systems, as defined and allowed in Article X, Altenrative Energy.

(Ord. No. 33-11/12, 1-18-12)

Sec. 14-270. Conditional uses.

(a) The following uses shall be permitted as conditional uses in the B-6 zone as provided in 14-474 (conditional uses), provided that, notwithstanding section 14-474(a) or any other provision of this code, the planning board shall be substituted for the board of appeals as the reviewing authority:

(1) *Commercial:*

a. Meeting and exhibition facilities limited to a total of 20,000 gross square feet of interior floor area.

b. Wholesaling, providing the wholesale operation is associated with an onsite retail establishment and that the wholesaling component of the facility occupies a building footprint of less

than 15,000 square feet.

c. Drive-up banking facilities located in the interior of parking structures, subject to the following criteria:

i. All drive-up features, such as automated teller machines and service windows, shall not extend nearer than twenty-five (25) feet to the street line;

ii. The site must have adequate stacking capacity for vehicles waiting to use these service features without impeding vehicular or pedestrian circulation or creating hazards to vehicular or pedestrian circulation on adjoining streets;

iii. Drive-up vehicle circulation shall not create an impediment for retail or mixed-use development for the first floor of the subject garages along any adjacent public streets.

d. Research and development and related production facilities, including but not limited to biotechnology, subject to the following conditions:

i. Associated manufacturing and warehousing uses combined are not to exceed 15,000 square feet.

ii. Biotechnology facilities must demonstrate approvals by all applicable regulatory authorities prior to commencement of operations.

(2) *Parking:*

a. All surface parking lots shall meet the applicable conditions outlined below.

Editor's note: These conditions promote parking development in a manner that creates an urban street form with streetscapes dominated by

buildings, not surface parking. This code recognizes that many parcels will develop incrementally over time and a phased approach may be needed to fully achieve the goals of this provision.
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i. No surface parking lot shall be encumbered by lease or other use commitment exceeding a twenty-four month term.

ii. Any such parking shall in its lease stipulate that developer/owner reserves the right to relocate said parking (to a parking structure) or convert surface parking to structured parking as long as the replacement parking is located a reasonable distance from the associated use.

iii. Surface lots shall be laid out in a manner conducive to development of future buildings, and/or structured parking.

b. All structured parking, including multi-level parking garages shall meet the applicable conditions outlined below.

i. Parking garages shall incorporate first floor retail space or other mixed use (an active use other than parking) along all street frontages unless the applicant requests from the planning board a waiver of this provision subject to the following criteria:

ii. Waivers: the planning board may waive the requirement for first floor mixed use upon demonstration that the project meets one or more of the criteria listed under provisions a, b, and c below.

Where the board allows a waiver of first floor mixed use, garages shall display architecture that enhances the pedestrian experience and disguises the parking use to the extent possible.

Editor's note: Use of traditional storefront design concepts and

traditional building materials is encouraged. Developers should look to the eastern waterfront design guidelines for additional direction in meeting these standards.

Standards for waiving first floor mixed use:

a. That the applicant demonstrates that steepness of grade or the character of the adjacent street will not support retail or first-floor mixed use in the foreseeable future.

b. That the first floor of the garage is set back a minimum of ***35 feet*** from the street right of way and its design does not provide an impediment for development of such space for mixed use in the future. Such space (between the garage and the street) shall, in the interim, not be used for surface parking.

c. Where the applicant can demonstrate to the satisfaction of the Planning Board that a market for first floor mixed uses currently does not exist, the Planning Board may grant a waiver of this condition, provided that the structure of the garage is designed to accommodate retail and or mixed uses in the future.

The Planning Board will need to find that on the street level deck of a proposed parking garage a minimum of twenty (20) feet horizontal distance of depth from the street and nine (9) feet finished floor to finished ceiling clearance could in future house retail and or mixed use. The applicant will further need to demonstrate that the garage design anticipates the future development of utilities and circulation necessary for non-parking uses.

Where a parking garage fronts on more than one public street and where there is a existing change in grade elevation of over 5% across the footprint of the garage, the nine foot floor to ceiling requirement of this section only applies to the primary (higher traffic volume) street.

(b) The following use shall be permitted only upon the issuance of a conditional use permit subject to the provisions of section 14-474 (conditional uses), and any special provisions, standards or requirements specified below:

(1) Temporary wind anemometer towers, as defined in Sec 14-47, are permitted provided the following standards are met in addition to Sec 14-430:

a. Towers may be installed for the purpose of wind data collection for no more than two (2) years after the issuance of a Certificate of Occupancy for the tower. At the conclusion of the aforementioned two (2) years, the tower must be dismantled and removed from the site within sixty (60) days; and

b. Towers shall be constructed according to plans and specifications stamped by a licensed professional engineer, which shall be provided to the Board of Appeals with the application; and

c. Towers shall be set back from habitable buildings by a distance equal to 1.1 times the tower height; and

d. The applicant shall provide a safety report prepared and stamped by a licensed professional engineer to the Board of Appeals with their application for conditional use, which demonstrates how the proposed temporary wind anemometer tower is safe in terms of strength, stability, security, grounding, icing impacts and maintenance; and

e. The applicant shall provide evidence of commercial general liability insurance, such insurance to be satisfactory to Corporation Counsel and cover damage or injury resulting from construction, operation or dismantling of any part of the temporary wind anemometer tower; and

f. Towers and associated guy wires shall be sited to minimize their prominence from and impacts on public ways (including pedestrian ways); and

g. Towers shall be used for installing anemometers and similar devices at a range of heights from the ground to measure wind characteristics (speed, direction, frequency) and related meteorological data, but shall not be used for any other purpose; and

h. A performance guarantee shall be required for the cost of removal of the tower, guy wires and anchors. This requirement may be satisfied by surety bond, letter of credit, escrow account or by evidence, acceptable to the City, or the financial and technical ability and commitment of the applicant or its agents to remove the facility at the end of the use period.

(Ord. No. 80-04/05, 12-8-04; Ord No.200-04/05, 4-4-05; Ord. No. 29-09/10, 8-3-09, emergency passage)

Sec. 14-271. Prohibited uses.

Uses, which are not enumerated as permitted or conditional uses in the B-6 zone are prohibited. Those uses that are prohibited shall include, without limitation:

(a) Ground-mounted telecommunication towers, antennas, discs, transmitting and receiving equipment and the like;

(b) Waste, scrap, and/or byproduct storage and processing facilities;

(c) Major or minor auto service stations including all types of automotive repair;

(d) Drive-up facilities, except banking drive-up services in the interior parking structures, as allowed in the conditional use section 14-270.

Sec. 14-272. Dimensional requirements.

In addition to the provisions of article III, division 25 of this Code, lots in the B-6 Eastern Waterfront Business Zone shall meet the following requirements:

(a) *Minimum lot size:* None.

(b) *Minimum frontage:* None.

(c) *Yard dimensions:*

1. Minimum yards in the B-6 zone:

Front setback: None required except as provided in 3. below:

Side setback: None required.

Rear setback: None required.

2. Maximum building setback from street line except for parking garages, public transportation facilities and provided in 3. below: 10 feet.

a. For lots fronting on more than one street, the setback can be increased more than ten (10) feet if all of the following conditions are met:

i. The increased setback occurs at the intersection of the streets;

ii. The increased setback area is the primary pedestrian entrance to the building;

iii. Seventy-five (75) percent of the total building wall length facing the abutting

streets shall be setback no greater than ten (10) feet; and

iv. All building wall segments, which make up the increased setback shall be included in the calculation of the total building wall length noted in subsection iii above.

In addition, for any new construction on a lot abutting three or more streets, the maximum setback shall apply only to the two most major streets. (For purposes of this section, major street shall mean that street with the highest traffic volume or the greatest street width in comparison with the remaining streets).

3. View Corridors and Key Street Wall Development

Not withstanding sections 1. and 2. above, new structures located in the blocks located south of Fore Street and north of Commercial Street and its extension, shall build to the key building envelops shown on the ***Eastern Waterfront Building Height Overlay Map***. Parking structures and the buildings for public transportation facilities may, however, set back beyond the key building envelopes (toward the interior of blocks), but may not occupy the land between the key building envelope and the street right of way.

(d) ***Minimum length of building wall required to be located along street frontage of lot.***

i. 70% of lot street frontage; or

ii. 25% of building perimeter,

iii. For buildings fronting on two or more streets, the minimum building wall on one street may be decreased so long as the frontage is proportionally increased on other streets in so far that the building wall on the secondary street is not reduced to less than 25 feet.

(e) ***Maximum lot coverage:*** One hundred (100) percent.

(f) ***Maximum building height***: 65 feet, or as otherwise governed by a Building Height Overlay map (for example, in the Eastern Waterfront). Building Height Overlay maps are found in the Planning and Development Department Office.

(g) Minimum building height: No new construction of any building shall have less than three (3) floors of habitable space above the average adjacent grade within twenty five (25) feet of any public street.

This provision shall not apply to:

i. Parking attendant booths,

ii. Information kiosks and ticketing booths,

iii. Parking garages,

iv. Public transportation facilities,

v. Additions to buildings existing as of December 8, 2004 provided that the cumulative additions since December 8, 2004 does not exceed 25% of the building footprint on December 8, 2004 except that such restriction shall not apply to those portions of the building addition that are constructed closer to the street line than the building footprint existing as of December 8, 2004,

vi. Buildings or building additions of less than 2,000 square feet footprint, on lots or available building sites of less than 2,000 square feet,

vii. Utility substations, including sewage collection and pumping stations, water pumping stations, transformer stations, telephone electronic equipment enclosures and other similar structures, and

viii. Additions to and/or relocations of designated

historic structures.

Sec. 14-273. Performance standards.

All new development in the B-6 Eastern Waterfront Business Zone shall comply with the following standards:

(a) *Storage:* Any storage of new materials, finished products, or related equipment must be suitably screened from the public way and from abutting properties by a solid fence at least five (6) feet in height. All waste shall be stored in covered containers that do not leak or otherwise permit liquids or solids to escape from the container. All food processing waste shall be stored within a completely enclosed structure and if not refrigerated shall be removed from the site in an enclosed container within forty-eight (48) hours of its generation. All enclosed and exterior areas shall be cleaned and sanitized on a regular basis. Outdoor storage of refuse or debris shall be in an appropriate container or located within a designated, screened area.

(b) *Noise:*

1. *Definitions:*

a. Tonal sounds are defined as sound waves usually perceived as a hum or whine because their instantaneous sound pressure varies essentially as a simple sinusoidal function of time.

b. Impulse sounds are defined as sound events characterized by brief excursions of sound pressure, each with duration of less than one (1) second.

2. *Measurement:* Sound levels shall be measured with a sound level meter with a frequency weighting network manufactured according to standards prescribed by the American National Standards Institute (ANSI) or its successor body. Measurements shall be made at all major lot lines of the site, at a height of at least four (4) feet above the ground surface. In measuring sound levels

under this section, sounds with a continuous duration of less than sixty (60) seconds shall be measured by the maximum reading on a sound level meter set to the A weighted scale and the fast meter response (L maxfast). Sounds with a continuous duration of sixty (60) seconds or more shall be measured on the basis of the energy average sound level over a period of sixty (60) seconds (LEQ_1).

3. *Maximum permissible sound levels:* The maximum permissible sound level of any continuous, regular or frequent source of sound produced by an activity shall be as follows:

   a. Sixty (60) dBA between the hours of 7:00 a.m. and 10:00 p.m.

   b. Fifty (50) dBA between the hours of 10:00 p.m. and 7:00 a.m., as measured at or within the boundaries of any residential zone.

   In addition to the sound level standards established above, all uses located within this zone shall employ best practicable sound abatement techniques to prevent tonal sounds and impulse sounds or, if such tonal and impulse sounds cannot be prevented, to minimize the impact of such sounds in residential zones.

4. *Exemptions:*

   a. Noises created by construction and maintenance activities between 7:00 a.m. and 10:00 p.m. are exempt from the maximum permissible sound levels set forth in subsection (a)3 of this section. Construction activities on a site abutting any residential use between the hours of 10:00 p.m. of one (1) day and 7:00 a.m. of the following day shall not exceed fifty (50) dBA.

   b. The following uses and activities shall also be exempt from the requirements of subsection (a)3 of this section:

i. The noises of safety signals, warning devices, emergency pressure relief valves, and any other emergency devices.

ii. Traffic noise on public roads or noise created by airplanes and railroads.

iii. Noise created by refuse and solid waste collection, provided that the activity is conducted between 6:00 a.m. and 7:00 p.m.

iv. Emergency construction or repair work by public utilities, at any hour.

v. Noise created by any recreational activities which are permitted by law and for which a license or permit has been granted by the city, including but not limited to parades, sporting events, and fireworks displays.

(c) ***Vibration:*** Vibration inherently and recurrently generated shall be imperceptible without instruments at lot boundaries.

(d) ***Federal and state environmental regulations:*** All uses shall comply with federal and state environmental statutes and regulations regarding emissions into the air, except where provisions of this Code are more stringent.

(e) ***Storage of vehicles:*** Outdoor storage of any unregistered automotive vehicle on the premises for more than ten (10) days, and outdoor storage of any used automotive tires on the premises shall not be permitted.

(f) ***Off-street parking and loading:*** Off street parking is required as provided in division 20 (off-street parking) of this article. Division 21 (off-street loading) of this article shall not apply.

(g) ***Shoreland and flood plain management regulations:*** Any lot or portion of a lot located in a shoreland zone as identified on the city shoreland zoning map or in a flood hazard zone shall be subject to the requirements of

division 26 and/or division 26.5.

(h) ***Glare, radiation or fumes:*** Glare, radiation or fumes shall not be emitted to an obnoxious or dangerous degree beyond lot boundaries.

(i) ***Enclosure of uses:*** All uses shall be operated within a fully enclosed structure, except for those customarily operated in open air.

(j) ***Materials or wastes:*** Any permitted outdoor storage of materials shall be done in such a manner as to prevent the breeding and harboring of insects or vermin, to prevent the transfer of such materials from the site by natural causes or forces and to contain fumes, dust, or other materials which constitute a fire hazard. This storage shall be accomplished within enclosed containers or by one (1) or more of the following methods: raising materials above ground, separating materials, preventing stagnant water, or by some other means. Any areas used for permitted outdoor storage of materials shall be screened from view of any adjoining properties and public rights-of-way. No outdoor storage shall be permitted between the front of any building on the site and the street.

(k) ***Odor:*** Uses in the B-6 zone shall adhere to the odor regulations of the IL zone.

(l) ***Smoke:*** Discharges of smoke shall not exceed opacity percentage of forty (40) percent or number 2 on the ringelman chart.

(m) ***Discharge into sewers:*** No discharge shall be permitted at any point into any private sewage disposal system, or surface drain, or into the ground, of any materials in such a way or of such nature or temperature as to contaminate any water supply, or the harbor, or otherwise cause the emission of dangerous or objectionable elements, except in accordance with standards approved by the health authority or by the public works authority.

(n) ***Lighting:*** All lighting shall be designed and installed with cut-off fixtures to direct illumination onto the site and to prevent illumination from such fixtures on

neighboring properties and as otherwise governed by the site lighting standards of the City of Portland Techncial Manual.

(Ord. No. 80-04/05, 12-8-04; Ord. NO. 240-09/10, 6-21-10; ORd. No. 278-09/10, 7-19-10)

Sec. 14-274. Reserved.

Sec. 14-275. Reserved.

DIVISIONS 16. WAYNFLETE SCHOOL OVERLAY ZONE*

Editor's note—Ord. No. 164-97, § 9, passed Jan. 6, 1997, repealed divs. 16 and 17 of this article, which pertained to the I-4 industrial zone and the I-P industrial park zone, respectively. Formerly, such divisions consisted of substantive §§ 14-276—14-282, 14-291—14-297 and derived from 602.13B.A—602.13B.F, 602.13B.H, 602.10A.A—602.10A.E and 602.10A.H of the 1968 Code as amended by Ord. No. 536-74, § 2, adopted Aug. 19, 1974; Ord. No. 334-76, §§ 6, 7, adopted Jul. 7, 1976; Ord. No. 159-87, adopted Nov. 2, 1987; Ord. No. 235-88, adopted Feb. 1, 1988; Ord. No. 330-90, §§ 4, 5, adopted May 7, 1990; Ord. No. 15-92, §§ 20, 21, adopted Jun. 15, 1992; and Ord. No. 193A-93, § 5, adopted Feb. 17, 1993; pursuant to Order 138-09/10 passed on 1/20/10 Division 16 (Waynflete School Overlay Zone) was adopted in its entirety.

Sec. 14-276. Purpose.

The intention of this division is to establish an overlay zone which protects the value and integrity of established residential neighborhoods, establishes clearly defined boundaries beyond which residential conversions cannot occur and results in no net loss of dwelling units, while allowing Waynflete School, an existing private day school, to continue and reasonably augment its existing uses and programs, thereby maintaining compatible development at medium densities appropriate to the existing neighborhood patterns. As used in this division, the term "Waynflete School" includes any successor institution that operates as a private day school.

(Ord. No. 138 – 09/10, 1-20-10)

Sec. 14-276.1. Location and applicability of Waynfete School Overlay Zone.

The Waynflete School Overlay Zone, as shown on the zoning map, is intended to encompass and define Waynflete School's principal campus on the Portland peninsula. Properties in the Waynflete School Overlay Zone shall continue to be governed by the regulations applicable to the underlying zoning districts except as specifically modified by this division.

(Ord. No. 138-09/10, 1-20-10)

Sec. 14-276.2. Overlay Zone sub-districts.

The Waynflete School Overlay Zone consists of two sub-districts, as shown on the Waynflete School Overlay Zone sub-district map, incorporated herein by reference, as follows:

(a) The Campus Core sub-district defines the interior core of the campus and is intended to allow compact development of school uses, with specific space and bulk regualtions designed to accommodate school uses.

(b) The Campus Edge sub-district is intended to preserve residential character along the streets bordering the campus, by limiting the amount of residential space which can be converted to school uses, by maintaining a nmber of dwelling units within the sub-district which equals the number of dwelling units existing in the sub-district at the time of enactment of this Overlay Zone and by encouraging mixed use building s along the street frontages. The space and bulk regulations of the R-4 district continue to apply within the Campus Edge sub-district.

Except where otherwise specified in this division, all provisions of this Waynflete School Overlay Zone apply in both sub-districts.
(Ord. No. 138-09/10, 1-20-10)

Sec. 14-276.3. Permitted uses.

In addition to the permitted uses allowed in the underlying zoning districts and notwithstanding anything to the contrary I nthe use regulations for the underlying zoning districts, the following uses are permitted uses in the Waynflete School Overlay Zone.

(a) *School uses.* Elementary, middle and secondary school uses including, but not limited to, the following:

1. Classrooms;

2. Laboratory facilities;

3. Dining halls;

4. Auditoriums;

5. Concert halls;

6. Lecture halls;

7. Gymnasiums;

8. Libraries;

9. Outdoor use areas, such as "quads", greens, parks, gardens, art installations, and other active and passive recreation spaces;

10. Parking lots;

11. Parking structures;

12. Community meeting spaces;

13. Administrative offices;

14. Faculty offices;

15. Transporation facilities;

16. Maintenance facilities;

17. Utility buildings;

18. Student health services;

19. Bookstores;

20. Accessory uses which are customarily incidental and subordinate to the location, function and operation of a private day school.

(b) *Residential uses.*

1. Faculty or staff housing, which shall be considered a residential use, and not a school use, for all purposes under this overlay zone.

(Ord. No. 138-09/10, 1-20-10)

Sec. 14-276.4. Prohibited uses.

(a) Boarding schools;

(b) Dormitories.

(Ord. No. 138-09/10, 1-20-10)

Sec. 14-276.5. Residential conversions prohibited.

(a) Conversions of existing residential buildings within the Waynflete School Overlay zone shall be prohibited.

(b) The existing houses at 11 Fletcher Street, 3 Storer Street, 305 Danforth Street and 299 Danforth Street shall not be relocated from their locations existing as of January 20, 2010. This provision shall not apply to garages.

(c) At no time shall the number of dwelling units within the Waynflete School Overlay Zone be reduced below the four (the number existing at the time of enactment of this Overlay Zone).

(Ord. No. 138-09/10, 1-20-10)

Sec. 14-276.6. Dimenional requirements.

Buildings and structures in the Waynflete School Overlay zone shall be subject to the applicable dimensional requirements of the underlying zoning districts, except as follows:

(a) *Minimum yard dimensions* shall be the same as in the underlying zone, except that side and rear yards shall not be required between buildings on contiguous lots owned or occupied by Waynflete School on the condition that such contiguous lots shall be considered merged and shall not be separately conveyed unless required yard dimensions in the underlying zones are provided.

(b) *Minimum street frontage* shall be the same as in the underlying zone, except that all the land within the Waynflete School Overlay Zone owned or occupied by Waynflete School shall be considered a single lot for the purpose of complying with minimum street frontage.

(c) *Maximum coverage by buildings* shall be the same as I nteh underlying zone, except that in the Campus Core sub-district the maximum coverage by buildings shall be 40% and al lthe land within the Campus Core sub-district

owned or occupied by Waynflete School shall be considered a single lot for the purpose of calculating maximum coverage by buildings.

(Ord. No. 138-09/10, 1-20-10)

Sec. 14-276.7. Parking.

The amount of parking required for an ychange of use, new building or building addition within the zone shall be determined during site plan reviewe, based on an analysis of school-wide demand and supply, pursuant to a comprehensive school-wide Transportation Demand Management Plan (TDM), and treating all land owned by Waynflete School within the Waynflete School Overlay Zone as one lot. An yexisting parking management or TDM plan approved as part of a previous approval shall remain in effect until revised or updated pursuant to this section. In determining the amount of parking required for any building within the Waynflete School Overlay Zone, the Planning Authority or the Planning Board may take into account such factors as:

(a) The use of centrally located on-campus parking facilities so situated that students, faculty, staff and visitors arriving on campus can reasonably be expected to park in the central facilities and walk to their various on-campus destinations during th course of a school day.

(b) Shared use of a single parking facility by two or more buildings when the peak parking demand periods for such buildings do not overlap.

(c) Development and implementation of a parking management plan which discourages on-stsreet parking.

(d) Development and implementation of a TDM plan subject to the review and approval of the planning authority or the planning board. The TDM plan shall employe elements such as public transit initiatives, parking cash-out, car sharing, car and van pooling incentives, provision of bicycle and pedestrian commuting accommodations, guaranteed ride home programs, employee surveys, newsletters and alternative transportation information sharing and other such strategies that reduce signle occupancy vehicle trips to and from Waynflete school. Waynflete School shall follow the standards and guidelines for developing a TDM plan found in the TDM

section of the City of Portlnad Technical and Design Standards and Guidelines.

(Ord. No. 138-09/10, 1-20-10)

14-276.8. Loading.

The requiremetns of section 14-351 shall not apply to buildings within the Waynflete School Overlay one. Instead, the amount of locading area required for any building within the zone shall be determined by the planning board during site plan review, based on a campus-wide analysis, treating all land owned by Waynflete School within the Waynflete School Overlay Zone as one lot. In determining the amount of loading space required for any building within the Waynflete School Overlay zone, the planning board may take into account such factors as:

(a) The use of centrally located on-campus loading facilities so situated that vehicles making deliveries can load and unload in central facilities, provided no single location is overburdened with loading facilities.

(b) Shared use of a single loading facility by two or more buildings.

(c) Impacts of the loading area on adjacent uses outside the Waynflete School Overlay Zone.

(Ord. No. 138-09/10, 1-20-10)

Sec. 14-276.9. Signage.

Signs shall comply with the requirements of Division 22.

(Ord. No. 138-09/10, 1-20-10)

Sec. 14-276.10. Restrictions outside the Waynflete School Overlay Zone.

Notwithstanding the provisions of section 14-103(b)(1) or section 14-137(b)(1), Waynflete School cannot locate a school use listed in section 14-276.3(a) on any lot in the R-4 or R-6 Districgts outside the boundaries of the Waynflete School Overlay Zone that was occupied by a residential use or structure on or after January 20, 2010. This restriction does not prevent Waynflete School from seeking a conditional use permit for a school use, where otherwise allowed by the zoning district regulations, on lots outside the Waynflete School Overlay Zone that were not occupied by a residential use or structure on or after January 20,

2010.
(Ord. No. 138-09/10, 1-20-10)

Sec. 14-277. Reserved.
Sec. 14-278. Reserved.
Sec. 14-279. Reserved.
Sec. 14-280. Reserved.
Sec. 14-281. Reserved.
Sec. 14-282. Reserved.
Sec. 14-283. Reserved.
Sec. 14-284. Reserved.
Sec. 14-285. Reserved.
Sec. 14-286. Reserved.
Sec. 14-287. Reserved.
Sec. 14-288. Reserved.
Sec. 14-289. Reserved.
Sec. 14-290. Reserved.
Sec. 14-291. Reserved.
Sec. 14-292. Reserved.
Sec. 14-293. Reserved.

DIVISION 17. B-7 MIXED DEVELOPMENT DISTRICT ZONE

Sec. 14-294. Purpose.

The purpose of the B-7, mixed development district zone is to establish a zoning district for urban areas in which the city has adopted master plans for redevelopment. Certain districts, including but not limited to bayside, lie at the perimeter of the established downtown and contain significant redevelopment opportunities. The B-7 zone encourages these districts to acquire a distinctly urban form through dense development featuring a mix of uses such as housing, retail, offices, research and development, and artisan studios and that emphasizes a quality pedestrian experience, promotes public transit, and demonstrates exemplary urban design. Utilization of transportation, other than the automobile is strongly encouraged and is advanced by the installation of bicycle amenities, such as bicycle racks and storage areas. The zone promotes a wide range of uses in high quality structures and public open spaces to achieve twenty-four (24) hour urban vitality and shared parking infrastructure.

The following regulatory framework is intended to promote the mixed-use development pattern envisioned on Portland's peninsula. District-specific design standards and overlay maps

can be found at the city planning and development office.
(Ord. No. 201-05/06, 4-19-06)

Sec. 14-295. Permitted uses.

The following uses are permitted in the B-7 zone:

(a) *Commercial:*

1. Professional, business, and general offices:

2. Restaurants and other eating and drinking establishments;

3. Hotels, inns, and bed and breakfasts;

4. Craft and specialty shops, including the on-premises production of handcrafted goods;

5. Retail and retail service establishments, excluding those with fuel pumps;

6. Theaters, concert halls, dance halls,meeting facilities, and exhibition halls;

7. Banking services, excluding vehicular drive-up services (see also conditional use section, [c][3];

8. Cabinetry and carpentry and mill working shops;

9. Indoor amusement and recreation centers;

10. Personal services;

11. Business services;

12. Billiard parlors;

13. Offices of business trades-people;

14. Miscellaneous repair services, excluding all types of automotive repair.

15. Telecommunication and broadcast and receiving facilities, except as prohibited in section 14-297

(prohibited uses);

In addition, building mounted telecommunications antennae, discs, transmitting and receiving equipment and the like shall adhere to the following criteria. Such roof-mounted equipment shall be:

a. No taller than fifteen (15) feet above the highest structural steel of the building roof; and

b. Set back no less than fifteen (15) feet from the building perimeter; and

c. Integrated into the architecture of the building as described in the City of Portland Design Manual.

16. Brew pubs and microbreweries without associated bottling facilities, and brewpubs and microbreweries with associated bottling facilities limited to five-thousand (5,000) bottles per year output;

17. Studios for performance or training in dance, music, or similar pursuits;

18. Electronic data storage;

19. Research and development including laboratories;

20. Studios for artists, photographers and craftspeople including but not limited to, painters, sculptors, cabinet makers, dancers, graphic artists, and silk screeners and musicians;

21. Health clubs, martial arts personal health and wellness facilities;

22. Registered medical marijuana dispensaries.

23. Hostels, provided the applicant submits a site plan and operations plan demonstrating compliance with the following conditions:

a. All applicable provisions of Article V of this chapter shall be met.

b. Parking shall be provided in compliance with Division 20 of this Article.

c. No unaccompanied minors under the age of eighteen (18) shall be permitted in the facility.

d. The length of stay for transient guests shall not exceed fifteen (15) days out of any sixty-day period.

e. The building shall meet the applicable occupant load requirements as defined by the International Building Code and the NFPA Life Safety Code, as such codes are amended or adopted by the city.

24. Surface parking existing as of March 9, 2005 and in continuous existence thereafter, including the reorganization of parking spaces and maneuvering aisles. This section shall apply to surface parking accessory to a principle use and a parking lot as a principal use. Existing surface parking that does not comply with the standards of sec. 14-299 (f) may continue, provided that any modifications to the site layout, development constituting a site plan, or building renovations exceeding a value of thirty (30) percent of the assessed value of the building on file at the City of Portland Assessor's Office, shall require the parking to be upgraded to meet the standards of sec. 14-299 (f) to the extent practicable.

25. Surface parking created after March 9, 2005, provided that the spaces (and newly created maneuvering aisles) are thirty-five (35) feet or greater from a street and further that the standards below (a to c) are also met. This section shall apply to surface parking accessory to a principal use or a parking lot as principle use. The thirty-five (35) foot setback need not apply

in the case of a property in which eighty (80%) of the property frontage has a building within ten (10) feet of the property frontage and or a driveway located perpendicular to the site. The parking area shall meet the standards of sec. 14-299 (f).

a. No surface parking shall be encumbered by lease or other use commitment to an off-site use exceeding twenty-four month term; and

b. For surface parking areas of twenty- thousand (20,000) square feet or greater in area, lease or other use agreements for surface parking shall not preclude the relocation of such parking for more than twenty-four (24) month terms; and

c. Any such parking shall in its lease stipulate that developer/owner reserves the right to relocate said parking or convert surface parking to structured parking as long as the replacement parking is located a reasonable distance from the associated use.

(b) *Residential:*

1. Attached housing including row houses, condominiums, two-family and multifamily dwellings but not planned residential unit developments;

2. Handicapped family units;

3. Lodging houses;

4. Combined living/working spaces, including but not limited to artist residences with studio space;

(c) *Public:*

1. Utility substations, including wastewater collection and pumping stations, transformer stations, telephone electronic equipment enclosures, electric transmission and distribution substations and other similar structures, provided

such facilities occupies up to one-hundred (100) square feet (see also conditional use section);

2. Museums, art galleries, and educational exhibition space;

3. Landscaped pedestrian parks, plazas and other similar outdoor pedestrian spaces;

4. Pedestrian and multi-use trails;

5. Emergency or safety facilities;

6. Municipal offices;

7. Active recreation parks and facilities, including but not limited to ball fields, skateboard parks, and basketball courts.

(d) *Institutional:*

1. Public or private schools;

2. Medical and mental health clinics but not methadone or other controlled substance addiction treatment centers;

3. Places of assembly;

4. Colleges, universities, or trade schools;

5. Governmental buildings and uses;

6. Nursery and pre-schools, kindergartens, and child day care facilities or home babysitting services;

7. Educational, research, and laboratory facilities;

8. Adult day care center.

(e) *Other:*

1. Accessory uses customarily incidental and subordinate to the location, function and operation of permitted uses. All drive-up services for all

retail or drive-up repair facilities are prohibited except that bank drive-up services, where permitted, area conditional use.

2. Intermodal transportation facilities.

3. Wind energy systems, as defined and allowed in Article X, Alternative Energy.

(Ord. No. 201-05/06, 4-19-06; Ord. No. 283-09/10, 7-19-10 emergency passage; Ord. No. 278-09/10, 7-19-10; Ord. No. 149-10/11, 3-7-11; Ord. No. 240-10/11, 6-6-11; Ord. No. 279-09/10, 6-6-11; Ord. No. 33-11/12, 1-18-12; Ord. No. 113-11/12, 2-22-12)

Sec. 14-296. Conditional uses.

(a) The following uses shall be permitted as conditional uses in the B-7 zone as provided in section 14-474 (conditional uses), provided that, notwithstanding section 14-474 (a) or any other provision of this code, the planning board shall be substituted for the board of appeals as the reviewing authority:

1. *Commercial use:*

a. Meeting, convention and exhibition halls limited to a total of twenty-five thousand (25,000) gross square feet of interior floor area.

b. Wholesaling, providing that the wholesale operation is associated with an onsite retail establishment and that the wholesaling component of the facility occupies a building gross floor area of less than fifteen thousand (15,000) square feet.

c. Drive-up banking provided that:

i. The drive-up is accessory to a banking service occupying a minimum floor area of four thousand (4,000) square feet; and

ii. The drive-up is attached to or included within a building with a minimum floor area of twenty thousand (20,000) square feet; and

iii. All drive-up features, such as automated teller machines and service windows, shall not extend nearer than twenty-five (25) feet to

the street right-of-way line; and

iv. The site must have adequate stacking capacity for vehicles waiting to use these service features without impeding vehicular or pedestrian circulation or creating hazards to vehicular or pedestrian circulation on adjoining streets; and

v. Drive-up vehicle circulation shall not be located between the building and any adjacent public streets; and

vi. The drive-up shall be limited to two vehicle drive-up lanes; and

vii. The location of any drive-up shall be limited to the geographic area between Somerset Street/I-295/Franklin Arterial/Forest Avenue.

d. The expansion of automotive repair facilities existing as of March 9, 2005, but in no case shall such expansion over the life of the building exceed fifty percent (50%) of the gross floor area existing on March 9, 2005.

2. *Industrial uses:*

a. High technology manufacturing of biotechnology, pharmaceutical, and nanotechnology products, including accessory warehousing, provided that:

i. A minimum of one-third of the total square footage devoted to manufacturing is conducted in a laboratory environment, in a controlled environment with specialized air handling systems that exceed levels for pressurization and filtration found in office environments and traditional manufacturing facilities; and

ii. Rooftop equipment shall be integrated into the overall building design and shall be screened as necessary; and

iii. Where warehousing cannot be located on the

same lot because the land area is too small to accommodate the warehousing on the same lot, one remote warehouse may be located within six-hundred (600) feet of the principle use referenced above.

b. Breweries including associated bottling activities;

c. Bakeries, coffee roasters, and commercial kitchens having no retail sales within the principal structure;

d. Printing and publishing establishments having no retail sales within the principal structure;

e. Machine and tool and die shops;

All industrial uses listed above must also conform to the following additional requirements. Where redundant or contradictory performance standards exist, the more restrictive standard applies:

a. Glare, radiation, fumes, noise or smoke shall not be emitted to an obnoxious or dangerous degree beyond lot boundaries; and

b. The building footprint devoted to industrial use shall not exceed fifteen thousand (15,000) square feet of contiguous building space except for uses contained in 14-296(2)(a); and

c. The use shall be operated within a completely enclosed structure; and

d. No materials or wastes shall be stored outside; and

e. Truck loading and access shall be located in the rear or side yard where possible; and

f. Industrial uses shall conform to the performance standards of the I-L zone; and

g. Industrial uses shall conform to the B-7 mixed development district design standards.

3. *Structured parking provided that:*

a. Parking structures located in the B-7 zone shall adhere to the following conditions:

i. The first floor of any parking structure shall contain one or more permitted uses (not conditional uses) found in §14-295 along all primary street frontages (excluding frontage dedicated to entrances, lobbies, and stair towers). Such first floor space shall be provided with a minimum of nine (9) foot floor to ceiling clearance height and a minimum twenty-five (25) foot depth (measured from the exterior building wall); or

ii. The parking structures shall be set back at least thirty-five (35) feet from the primary street right-of-way. The land located between the parking structure and the street right-of-way may not be occupied by surface parking, and shall be designated for future use development. Such land between the garage and the street shall not by lease or other prohibition be encumbered against future development. The land shall be provided with all stubbed utilities and other provisions needed to accommodate further development; or

iii. The parking structures shall be designed with a façade (to a height of the first two floors) that enhances the pedestrian experience as described in the City of Portland B-7 bayside design standards.

4. *Utility substations including wastewater collection and pumping stations, water pumping stations, transfer stations, telephone electronic equipment enclosures, electrical transmission and distribution substations and similar structures larger than one-hundred (100) square feet of floor area are permitted provided the following standards are met:*

a. Notwithstanding sec. 14-298 (maximum setback) utility substations shall be setback no less than

thirty-five (35) feet from the street right-of-way except in the case of a lot having frontage on Marginal Way and I-295 provided the minimum thirty-five (35) foot setback is met along Marginal Way; and

b. The applicant demonstrates that the structure is as small in size as practicable; and

c. The remainder of the lot not consumed by the utility substation and its related access; and shall be designed and designated for future development; and

d. The substation equipment is fully enclosed within a structure.

5. *Buildings in the bayside gateway urban height district A greater than one-hundred twenty-five (125) feet but no more than one-hundred sixty-five (165) feet in height provided that:*

a. Such buildings shall be sited to minimize encroachment into designated view corridors and visual landmarks to and from the downtown or that do not substantially further obstruct such corridors blocked by existing development as referenced in the Bayside Height Study Map and the B-7 design standards; and

b. Portions of such buildings higher than one hundred twenty-five (125) feet shall be stepped back at upper levels to provide light and air to adjacent streets, trails, and open spaces, with a ratio of no less than at least to the extent that the ratio of building height to width of adjacent streets, trails and open spaces is equivalent to 1.5 to 1 except that the Planning Board may modify this requirement as provided for in Section 14-526(d)(9)(viii); and

c. Such buildings provide publicly accessible and usable open space, meeting the B-7 urban design standards, of at least ten (10) percent of the building lot area; and

d. If located on lots including or adjacent to planned or proposed street or pedestrian way connections, land dedication to such street or connection shall be credited toward the ten (10) percent open space requirement. Buildings over one hundred and twenty-five (125) feet in height that are being reviewed as separate phases of a Master Development plan shall be entitled to meet the ten (10%) percent open space requirement of Section 14-296(a)(5)(c) in aggregate for all such buildings over one hundred and twnty-five (125) feet in height, provided that the open space shall not fall below ten (10%) percent at any built phase or combination of built phases; and

e. Such development shall comply with all other zoning requirement and B-7 urban design standards as required by this article.

(b) The following use shall be permitted only upon the issuance of a conditional use permit subject to the provisions of section 14-474 (conditional uses), and any special provisions, standards or requirements specified below:

1. Temporary wind anemometer towers, as defined in Sec 14-47, are permitted provided the following standards are met in addition to Sec 14-430:

a. Towers may be installed for the purpose of wind data collection for no more than two (2) years after the issuance of a Certificate of Occupancy for the tower. At the conclusion of the aforementioned two (2) years, the tower must be dismantled and removed from the site within sixty (60) days; and

b. Towers shall be constructed according to plans and specifications stamped by a licensed professional engineer, which shall be provided to the Board of Appeals with the application; and

c. Towers shall be set back from habitable buildings by a distance equal to 1.1 times

the tower height; and

d. The applicant shall provide a safety report prepared and stamped by a licensed professional engineer to the Board of Appeals with their application for conditional use, which demonstrates how the proposed temporary wind anemometer tower is safe in terms of strength, stability, security, grounding, icing impacts and maintenance; and

e. The applicant shall provide evidence of commercial general liability insurance, such insurance to be satisfactory to Corporation Counsel and cover damage or injury resulting from construction, operation or dismantling of any part of the temporary wind anemometer tower; and

f. Towers and associated guy wires shall be sited to minimize their prominence from and impacts on public ways (including pedestrian ways); and

g. Towers shall be used for installing anemometers and similar devices at a range of heights from the ground to measure wind characteristics (speed, direction, frequency) and related meteorological data, but shall not be used for any other purpose; and

h. A performance guarantee shall be required for the cost of removal of the tower, guy wires and anchors. This requirement may be satisfied by surety bond, letter of credit, escrow account or by evidence, acceptable to the City, or the financial and technical ability and commitment of the applicant or its agents to remove the facility at the end of the use period.

2. Wind energy systems, as defined and allowed in Article X, Alternative Energy.

(Ord. No. 201-05/06, 4-19-06; Ord. 29-09/10, 8-3-09, emergency passage; Ord. No. 240-10/11, 6-6-11; Ord. No. 33-11/12, 1-18-12; Ord. No. 175-12/13, 4-22-

Sec. 14-297. Prohibited uses.

Uses which are not enumerated as permitted or conditional uses in the B-7 zone are prohibited. Prohibited uses include, without limitation:

(a) Ground-mounted telecommunication towers, antennas, discs, transmitting and receiving equipment and the like;

(b) Waste, scrap, and/or byproduct storage and processing facilities;

(c) Major or minor auto service stations including all types of automotive repair except that automotive repair facilities existing as of March 9, 2005 are permitted;

(d) Drive-up facilities, except banking drive-up services, as allowed in the conditional use section 14-296.

(e) Major telecommunication substations over five-thousand (5000) square feet.

(Ord. No. 201-05/06, 4-19-06)

Sec. 14-298. Dimensional requirements.

In addition to the provisions of article III, division 25 of this code, lots in the B-7 mixed use urban district zone shall meet the following requirements:

(a) *Minimum lot size:* None.

(b) *Minimum frontage:* None.

(c) *Yard dimensions:*

1. Minimum yards in the B-7 zone:

Front setback: None required except as provided in 2 below.

Side setback: Non required.

Rear setback: None required.

2. *Maximum street setback:* Parking structures, public transportation facilities, utility substations, secondary building components such as truck loading docks, mechanical equipment enclosures and refrigeration units are not subject to the maximum setbacks contained herein. The following maximum street setbacks shall otherwise apply in the B-7 zone:

   a. Ten (10) feet. The setback can be increased more than ten (10) feet if all of the conditions below are met:

      i. Seventy-five (75) percent of the total building wall length of an individual building facing the abutting streets is setback no greater than ten (10) feet; and

      ii. The increased setback area shall include a functional and accessible public pedestrian entrance into the building that faces the street unless a public pedestrian entrance already exists along the same street; and

      iii. The increased setback is not used for surface parking.

   b. For a corner lot having frontage on two (2) streets, the maximum setback shall apply to both streets. In the case of a lot having frontage on two or more street corners, newly constructed buildings shall be sited at street corners and meet the maximum setback requirement prior to other free-standing buildings being constructed on the lot which shall also meet the maximum street setback. In the case of a corner lot having frontage on a third street (but not a corner) the maximum setback need not apply to the third street.

c. In the case of a lot having frontage on two (2) streets but not on a corner, the maximum setback shall apply to all streets but in the case of a lot having frontage on three (3) streets but not on a corner, the maximum setback shall apply to only two streets. For purposes of this subsection, only, the first building on a lot shall meet the maximum setback on at least one street with future buildings required to meet the maximum setback on the remaining street(s).

d. In the case of a lot in which a minimum seventy-five (75) percent of the total lot frontage has a building within ten (10) feet of the street, other buildings may be located on the lot more than ten feet from the street. In the case of a lot having frontage on Marginal Way and I-295, the property edge along I-295 shall not be considered street frontage.

e. The maximum building setback shall not apply to vertical building expansions in the following cases:

i. The upper floors of a building in which the lower floors meet the maximum setback and the minimum height requirement.

ii. The building existed as of March 9, 2005 and meets the minimum height requirement.

iii. A building not meeting the maximum street setback and the minimum height requirement may vertically expand a total of one floor from March 9, 2005.

iv. In the case of a building in which at least fifty (50%) of the building wall(s) abutting street(s) is within 20 feet of the street.

v. Additions to parking garages existing as of March 9, 2005.

f. Additions to buildings existing as of March 9, 2005 that re nonconforming as to the maximum setback need not conform to the maximum street setback provided the cumulative building footprint since March 9, 2005 does not exceed fifty percent (50%) of the existing building footprint. Such restriction shall not apply to those portions of the building addition that are constructed closer to the street line than the building footprint existing as of March 9, 2005 and to vertical expansions as provided for in Sec. 14-298(c)(2)(e).

g. Lots having frontage on streets in which the curve of the street frontage precludes a rectangular shaped building along the street line, for purposes of calculating the setback, the average setback of the building from the street line may be used, but in no event shall the average setback along the length of the building edge exceed an average setback of fifteen (15) feet nor shall the maximum setback exceed twenty (20) feet. The increased setback shall not be used for surface parking, vehicular loading or vehicular circulation.

h. Additions to and relocations of designated historic structures or structures determined to be eligible by the historic preservation committee shall be exempt from the maximum setback requirement.

(d) Minimum length of building wall required to be located long street frontage of lot except that additions to and relocations of designated historic structures or structures determined to be eligible by the historic preservation committee shall be exempt from this subsection.

1. Minimum seventy-five percent (75%) of lot street frontage within ten (10) feet of the street; or

2. Minimum twenty-five percent (25%) of building perimeter within ten (10) feet of the street.

(e) ***Maximum building lot coverage:*** One-hundred percent(100%).

(f) ***Maximum residential density:*** None

(g) ***Maximum building height:*** As detailed on the bayside height overlay map on file in the planning and development department office.

(h) ***Minimum building height:*** Newly constructed buildings shall have the required minimum of floors as provided by the bayside height overlay map within fifty (50) feet of any street frontage. Such floors shall be occupiable or habitable and above the average grade of the abutting street.

This minimum floor provision shall not apply to:

1. Accessory building components such as truck loading docks, mechanical equipment enclosures and refrigeration units.

2. Information kiosks and ticketing booths.

3. Parking garages.

4. Public transportation facilities.

5. Additions to buildings existing as of (March 9, 2005) provided that the cumulative additions since (March 9, 2005) does not exceed fifty percent (50%) of the ground floor building footprint on (March 9, 2005) except that such restriction shall not apply to those portions of the building addition(s) that are constructed closer to the street line than the building footprint existing as of (March 9, 2005).

6. Utility substations, including sewage collection

and pumping stations, water pumping stations, transformer stations, telephone electronic equipment enclosures and other similar structures.

7. Additions to and/or relocation of designated historic structures or structures determined by the historic preservation committee to be eligible for such designation.

8. Portions of buildings more thanfifty (50) feet from the street line.

(Ord No. 201-05/06, 4-19-06; Ord. No. 240-10/11, 6-6-11)

Sec. 14-299. Performance standards.

All uses in the B-7 mixed development district zone shall comply with the following standards. Standards 14-299(a),(f),(j),(m),(n) and (o) below shall be reviewed by the Planning Authority.

(a) *Storage:* Any storage of new materials, finished products, or related equipment must be suitably screened from the public way and from abutting properties by a solid fence at least six feet in height. All waste shall be stored in covered containers that do not leak or otherwise permit liquids or solids to escape from the container. All food processing waste shall be stored within a completely enclosed structure and if not refrigerated shall be removed from the site in an enclosed container within forty-eight (48) hours of its generation. All enclosed and exterior areas shall be cleaned and sanitized on a regular basis. Outdoor storage of refuse or debris shall be in an appropriate container or located within a designated, screened area. All dumpsters shall be screened on all four (4) sides by a minimum six (6) foot high solid fence or shall otherwise be fully enclosed as approved by the planning board or the planning department.

(b) *Noise*:

1. *Definitions:*

a. Tonal sounds are defined as sound waves usually perceived as a hum or whine because their instantaneous sound pressure varies essentially as a simple sinusoidal function of time.

b. Impulse sounds are defined as sound events characterized by brief excursions of sound pressure, each with duration of less than one (1) second.

2. *Measurement:* Sound levels shall be measured with a sound level meter with a frequency weighting network manufactured according to standards prescribed by the American National Standards Institute (ANSI) or its successor body. Measurements shall be made at all major lot lines of the site, at a height of at least four (4) feet above the ground surface. In measuring sound levels under this section, sounds with a continuous duration of less than sixty (60) seconds shall be measured by the maximum reading on a sound level meter set to the A weighted scale and the fast meter response (L maxfast). Sounds with a continuous duration of sixty (60) seconds or more shall be measured on the basis of the energy average sound level over a period of sixty (60) seconds (LEQ_1).

3. *Maximum permissible sound levels:* The maximum permissible sound level of any continuous, regular or frequent source of sound produced by an activity shall be as follows:

a. Sixty (60) dBA between the hours of 7:00 a.m. and 10:00 p.m.

b. Fifty (50) dBA between the hours of 10:00 p.m. and 7:00 a.m., as measured at or within the boundaries of any residential zone.

In addition to the sound level standards established above, all uses located within this zone shall employ best practicable sound abatement techniques to prevent tonal sounds and

impulse sounds or, if such tonal and impulse sound cannot be prevented, to minimize the impact of such sounds in residential zones.

4. *Exemptions:*

a. Noises created by construction and maintenance activities between 7:00 a.m. and 10:00 p.m. are exempt from the maximum permissible sound levels set forth in subsection (a)3 of this section. Construction activities on a site abutting any residential use between the hours of 10:00 p.m. of one (1) day and 7:00 a.m. of the following day shall not exceed fifty (50) dBA.

b. The following uses and activities shall also be exempt from the requirements of subsection (a)3 of this section:

i. The noises of safety signals, warning devices, emergency pressure relief valves, and any other emergency devices.

ii. Traffic noise on public roads or noise created by airplanes and railroads.

iii. Noise created by refuse and solid waste collection, provided that the activity is conducted between 6:00 a.m. and 7:00 p.m.

iv. Emergency construction or repair work by public utilities , at any hour.

v. Noise created by any recreational activities which are permitted by law and for which a license or permit has been granted by the city, including but not limited to parades, sporting events, and fireworks displays.

(c) ***Vibration:*** Vibration inherently and recurrently generated shall be imperceptible without instruments

at lot boundaries.

(d) ***Federal and state environmental regulations:*** All uses shall comply with federal and state environmental statutes and regulations regarding emissions into the air, except where provisions of this code are more stringent.

(e) ***Storage of vehicles:*** Outdoor storage of any unregistered automotive vehicles on the premises for more than ten (10) days, and outdoor storage of any used automotive tires on the premises shall not be permitted.

(f) ***Off-street parking and loading:*** Off-street parking is required as provided in division 20 (off-street parking) of this article. Division 21 (off-street loading) of this article shall not apply. Surface parking shall meet the following standards:

1. None of the spaces shall occupy all or a portion of a sidewalk within a street right-of-way.

2. Driveway entrances shall meet the City of Portland Technical Manual standards.

3. The parking area shall meet the landscape and buffer standards of the City of Portland Technical and Design Manuals.

(g) ***Shoreland and flood plain management regulations***: Any lot or portion of a lot located in a shoreland zone as identified on the city shoreland zoning map or in a flood hazard zone shall be subject to the requirements of division 26 and/or division 26.5

(h) ***Glare, radiation or fumes:*** Glare, radiation or fumes shall not be emitted to an obnoxious or dangerous degree beyond lot boundaries.

(i) ***Enclosure of uses:*** All uses shall be operated within a fully enclosed structure, except for those customarily operated in open air.

(j) ***Materials or wastes:*** Any permitted outdoor storage of

materials shall be done in such a manner as to prevent the breeding and harboring of insects or vermin, to prevent the transfer of such materials from the site by natural causes or forces and to contain fumes, dust, or other materials which constitute a fire hazard. This storage shall be accomplished within enclosed containers or by one (1) or more of the following methods: raising materials above ground, separating materials, preventing stagnant water, or by some other means. Any areas used for permitted outdoor storage of materials shall be screened from view of any adjoining properties and public rights-of-way. NO outdoor storage shall be permitted between the front of any building on the site and the street.

(k) ***Odor***: Uses in the B-7 zone shall adhere to the odor regulations of the IL zone.

(l) ***Smoke:*** Discharges of smoke shall not exceed opacity percentage of forty percent (40%) or number two (2) on the ringelman chart.

(m) ***Discharge into sewers:*** No discharge shall be permitted at any point into any private sewage disposal system, or surface drain, or into the ground, of any materials in such a way or of such nature or temperature as to contaminate any water supply, or the harbor, or otherwise cause the emission of dangerous or objectionable elements, except in accordance with standards approved by the health authority or by the public works authority.

(n) ***Lighting:*** All lighting shall be designed and installed with cut-off fixtures to direct illumination onto the site and to prevent illumination from such fixtures on neighboring properties and as otherwise governed by the site lighting standards of the City of Portland Technical Manual.

(o) ***Building entrances:*** All buildings shall have a minimum of one (1) public pedestrian entrance facing the street frontage of the lot. Such building entrances shall also be reviewed under the B-7 bayside design standards.

(Ord. No. 201-05/06, 4-19-06; Ord. No. 240-09/10, 6-21-10; Ord. No. 278-

DIVISION 17.5. EASTERN WATERFRONT PORT ZONE*

***Editor's Note-** Order No. 297-05/06 adopted on September 18, 2006, implemented a new Eastern Waterfront Port Zone for the Maine State Pier and Portland Ocean Terminal. The proposed changes for the Portland Ocean Terminal and the Maine State Pier would allow for a wider range of uses for the piers and properties of the Portland Ocean Terminal.

Sec. 14-300. Purpose.

The Eastern Waterfront Port Zone is created to nurture deepwater dependent activity within the context of the established waterfront. The transport of goods and passengers by water is an important component of both the local and regional economies and this transport and other forms of marine industry are dependent upon land and piers with direct access to Portland Harbor. Given the existing pier infrastructure, proximity to deep water, and urban context, Portland's Eastern Waterfront is uniquely situated to support a wide range of water-dependent industry and commerce through a variety of marine activities.

The support and expansion of Portland's marine industry requires piers, uplands, and circulation consistent with the transportation purpose and use of marine facilities. The growth of Portland's marine passenger industry also requires supporting services and activities to provide a safe, convenient, and enjoyable travel experience for users of marine passenger facilities. Non-marine uses that complement the marine passenger industry, are compatible with existing and future water-dependent uses, and provide opportunities for residents and visitors alike to enjoy the Eastern Waterfront throughout the year, are encouraged.

The primary use of the deep-water resources must be for the berthing and support of large vessels. Non-marine uses that complement and support the deepwater infrastructure and do not conflict or compete for limited space with existing or anticipated deepwater-dependent uses are encouraged. Existing and future pier infrastructure and upland support areas should be designed and maintained to support a variety of marine uses and be responsive to future technologies and trends in the marine industry.

Given the need to nurture and support deepwater-dependent uses and the need for non-deepwater dependent uses to complement the marine passenger industry and to support the maintenance and repair of pier infrastructure, the Eastern Waterfront Port Zone recognizes the following hierarchy of uses:

(a) The first priority of this zone is to protect and nurture existing and potential deepwater dependent uses (those uses requiring a minimum of 15 feet of water depth);

(b) The second priority is to allow shallow water-dependent and other permitted marine uses, so long as they do not interfere with deepwater dependent uses, either directly by displacement or indirectly by placing incompatible demands on the zone's infrastructure; and

(c) Other uses specified herein are allowed only if they do not interfere with and are not incompatible with higher priority uses.

(Ord. No. 297-05/06, 9-18-06)

Sec. 14-300.1. No adverse impact on marine uses.

No use shall be permitted, approved or established in this zone if it will have an impermissible adverse impact on future marine development opportunities. A proposed non-water dependent component of a development will have an impermissible adverse impact if it will result in any one (1) or more of the following:

(a) The proposed use will displace an existing water-dependent use;

(b) The proposed use will reduce existing commercial vessel berthing space;

(c) The proposed use, structure or activities, including but not limited to access, circulation, parking, dumpsters, exterior storage or loading facilities, and other structures, will unreasonably interfere with the activities and operation of existing water-dependent uses or significantly impede access to vessel berthing

or other access to the water by water-dependent uses; or

(d) The siting of a proposed use will substantially reduce or inhibit existing public access to marine or tidal waters.

(Ord. No. 297-05/06, 9-18-06)

Sec.14-301. Permitted uses.

Subject to a determination that the proposed use meets the standards of section 14-300.1. (no adverse impact on marine uses), the following uses are permitted in the Eastern Waterfront Port Zone:

(a) *Marine passenger:*

1. Intermodal marine passenger facilities;

2. Cruise ship home port and port of call berthing and support;

3. International and domestic ferries.

(b) *Marine commercial:*

1. Transient and long-term commercial berthing;

2. Marine-related warehousing;

3. Marine related construction, manufacturing, fabrication, salvage and repair;

4. Storage and repair of fishing equipment;

5. Ship and other marine vessel construction, building, servicing, and repair;

6. Boat and marine equipment storage;

7. Marine fuel storage and dispensing provided that on-site fuel storage structures shall be used solely for the purpose of fueling vessels and shall be limited, cumulatively, to 20,000 gallons

of storage capacity within the zone;

8. Public, non-profit, or commercial marine transportation and excursion services, including captained charter services, sport fishing and water taxis;

9. Ship and off-shore support services, including but not limited to tug boats, pilot boats, and chandleries;

10. Facilities for marine pollution control, oil spill cleanup, and servicing of marine sanitation devices.

(c) *Commercial:*

1. Professional, business, government, and general office located in upper floors of structures existing as of September 18, 2006.

***Editor's Note—**On-site parking for non-marine commercial uses are permitted as conditional uses subject to the provisions of section 14-301.1. (conditional uses, parking) below.

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2. Temporary events, except festivals as otherwise governed under section 14-301I3 below.

Buildings, piers and lands within the EWPZ may be used for temporary public and private events including but not limited to exhibitions, conferences, meetings, and trade shows under the following conditions:

a. Temporary events occupying more than 10,000 square feet of building or outdoor space shall not exceed a combined total of sixty (60) days between May 1st to October 31st;

b. No temporary event may continue for more than 14 days of continuous operation;

c. Any temporary event that anticipates more than 5,000 people in attendance on any

single day must provide and be subject to a parking management plan. The parking management plan must be submitted for the review and approval of the public works authority at least 60 days prior to the first day of the event.

3. Festivals subject to City license.

(d) *Public:*

1. Fire, police and emergency services;

2. Governmental agency emergency operations/crisis centers; 3. Research, military and visiting attraction vessel berthing;

4. Landscaped pedestrian parks, plazas and other similar outdoor pedestrian spaces, including without limitation pedestrian and/or bicycle trails.

(e) *Other:*

1. Wind energy systems, as defined and allowed in Article X, Alternative Energy.

(Ord. No. 297-05/06, 9-18-06; Ord. No. 33-11/12, 1-18-12)

Sec. 14-301.1. Conditional uses.

(a) The following uses shall be permitted as conditional uses in the Eastern Waterfront Port Zone, provided that, notwithstanding section 14-471(c), section 14-474(a), or any other provision of this code, the planning board shall be substituted for the board of appeals as the reviewing authority, and provided further that in addition to the provision of section 14-474(c)(2) such uses will not impede or preclude existing or potential water-dependent development within the zone, will allow for adequate right-of-way access to the water, are compatible with marine uses, and meet all additional standards set forth below:

1. Conditional use standard:

a. *Marine compatibility:* The proposed use shall be

compatible with existing and potential marine uses in the vicinity, as required by section 14-304(n) and (o) (compatibility of non-marine uses with marine uses and functional utility of piers and access to the water's edge); and

b. *Parking and traffic circulation:*

i. Parking and traffic circulation plan: All applications for conditional use in the EWPZ shall submit a parking and circulation plan for review and approval by the planning board. The parking and circulation plan shall show the location of all existing and proposed structures, travel ways and parking under the common ownership and/or control of the subject pier or property. The plan shall demonstrate that the parking and circulation of the conditional use does not interfere with the functional marine utility of the property and otherwise meets the standards and conditions of the EWPZ.

2. Conditional uses:

a. *Marine:*

i. Marine products, wholesaling and retailing;

ii. Ice-making services;

iii. Marine freight facilities providing service for, and/or intermodal transfer of, container and breakbulk freight;

iv. Marine educational facilities;

v. Seafood retailing, wholesaling, packaging and shipping;

vi. Seafood processing for human consumption, subject to the performance standards of the IL zone set forth in section 14-236 in addition to the performance standards of section 14-304;

vii. Commercial marinas serving commercial and recreation boats, provided that such facilities are located in areas that do not conflict with the navigation and handling of deepwater dependent vessels accessing existing or potential deepwater berthing;

viii. Fish byproducts processing, provided that:

a. Any fish byproducts processing facility has a valid rendering facility license under chapter 12 of the Portland city code; and

b. Any fish byproducts facility shall employ current and appropriate odor control technology to eliminate or minimize detectable odors from such a process, and in no case shall odors exceed the odor limitation performance standards of the IM zone (section 14-252); and

c. The processing other material wastes or byproducts shall not be deemed a lawful accessory use Permitted herein.

b. *Commercial:*

a. Structured parking available to the general public;

b. Professional, business, government and general offices uses in upper floors of structures constructed after September 18, 2006;

c. Passenger support services supporting a marine passenger use listed under 14-301(a)(marine passenger). The total ground floor area occupied by any combination of the following uses (regardless of ownership) shall not exceed 35% of the gross floor are of the principle associated marine passenger

use and no more than 35,000 square feet cumulative within the EWPZ:

i. Retail;

ii. Restaurants/food service;

iii. Retail service;

iv. Passenger information services.

c. ***Industrial:*** The following industrial uses are permitted provided that such uses shall conform to the IM zone performance standards set forth in section 14-252 in addition to the performance standards of 14-304. Where redundant or contradictory performance standards exist, the more restrictive standard applies.

i. Non-marine related warehousing in structures existing as of September 18, 2006;

ii. Facilities for combined marine and general construction;

iii. Low impact industrial uses as permitted in the IL zone in structures existing as of September 18, 2006, excluding all auto repair service facilities.

d. ***Public:***

i. ***Utility substations:*** Public utility substations, including but not limited to electrical transformers, sewage and stormwater pumps and telecommunication switching stations, are permitted under the following conditions:

a. The facility is located more than 100 feet from the water's edge;

b. The facility occupies no more than 50 square feet of structure above ground;

c. The facility provides no dedicated on-site parking and all subsurface elements of the facility are installed and operated such that land occupied by the facility is otherwise useable and made available for marine related uses, including but not limited to parking, travel ways, and/or storage; and

d. The facility shall be sized, sited and screened to minimize visual impact and prominence from public ways.

ii. Maritime museums, limited to 5,000 square feet of ground floor footprint.

***Editor's Note—**On-site parking for non-marine commercial and industrial uses are permitted as conditional uses subject to the provisions of section 14-301.1. (conditional uses, parking) below.

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e. *Parking for non-marine uses:* Notwithstanding sections 14-304(h), 14-331, 14-334 (regarding off-street parking requirements) and article V (site plan) of this chapter, no parking shall be allowed in this zone for non-marine uses unless the applicant can demonstrate that the number of parking spaces on-site exceeds the number of parking spaces needed to accommodate the demand for marine and water-dependent uses that are permitted by section 14-301 (permitted marine uses) and 14-301.1. (conditional marine uses) which are or may be located on the subject property (see editor's note below). The remainder of parking Required, if any, for such non-marine uses shall be provided off-site.

***Editor's Note—**Vacant ground floor space should be considered to have a parking demand similar to other space housing an existing water-dependent use elsewhere on the subject property or on a comparable property.

(b) The following use shall be permitted only upon the issuance of a conditional use permit subject to the provisions of section 14-474 (conditional uses), and any special provisions, standards or requirements specified below:

1. Temporary wind anemometer towers, as defined in Sec 14-47, are permitted provided the following standards are met in addition to Sec 14-430:

   a. Towers may be installed for the purpose of wind data collection for no more than two (2) years after the issuance of a Certificate of Occupancy for the tower. At the conclusion of the aforementioned two (2) years, the tower must be dismantled and removed from the site within sixty (60) days; and

   b. Towers shall be constructed according to plans and specifications stamped by a licensed professional engineer, which shall be provided to the Board of Appeals with the application; and

   c. Towers shall be set back from habitable buildings by a distance equal to 1.1 times the tower height; and

   d. The applicant shall provide a safety report prepared and stamped by a licensed professional engineer to the Board of Appeals with their application for conditional use, which demonstrates how the proposed temporary wind anemometer tower is safe in terms of strength, stability, security, grounding, icing impacts and maintenance; and

   e. The applicant shall provide evidence of commercial general liability insurance, such insurance to be satisfactory to Corporation Counsel and cover damage or injury resulting from construction, operation or dismantling of any part of the temporary wind anemometer tower; and

   f. Towers and associated guy wires shall be sited to minimize their prominence from and impacts on public ways (including pedestrian ways); and

g. Towers shall be used for installing anemometers and similar devices at a range of heights from the ground to measure wind characteristics (speed, direction, frequency) and related meteorological data, but shall not be used for any other purpose; and

h. A performance guarantee shall be required for the cost of removal of the tower, guy wires and anchors. This requirement may be satisfied by surety bond, letter of credit, escrow account or by evidence, acceptable to the City, or the financial and technical ability and commitment of the applicant or its agents to remove the facility at the end of the use period.

2. Wind energy systems, as defined and allowed in Article X, Alternative Energy.

(Ord. No. 297-05/06, 9-18-06; Ord. No. 29-09/10, 8-3-09, emergency passage; Ord. No. 33-11/12, 1-18-12)

Sec.14-301.2. Prohibited uses.

Uses, whether floating or fixed to land, which are not enumerated in either section 14-301 or 14-301.1. as permitted or conditional uses are prohibited. Those uses that are specifically prohibited shall include, without limitation:

(a) Residential uses;

(b) Amusement/theme parks;

(c) Bulk freight facilities;

(d) On-site gambling casinos not accessory to and located aboard either a ferry or inter-port cruise ship.

(Ord. No. 297-05/06, 9-18-06)

Sec. 14-302. Contract or conditional rezoning.

In addition to those marine and non-marine uses authorized in section 14-301 (permitted uses) and 14-301.1(conditional uses) an applicant may apply to locate a non-marine use not otherwise permitted, if the reviewing body finds the applicant has met the standards of section 14-300.1 (no adverse impact),

the performance standards of 14-304(a-o), and the applicable standards of contract/conditional rezoning contained in sections 14-60 to 14-63 and conforms to the following requirements:

(a) *Standards for contract or conditional rezoning:*

1. All non-marine uses are either permitted or conditionally permitted in the B-5 zone, and are not specifically prohibited in section 14-301.2 (prohibited uses) above. Any hotel, inn, or other similar transient lodging establishment proposed must be located landward of the spring tide line and westerly of the extension of the India Street right-of-way; and

2. The aggregate ground floor area of any development permitted hereunder located within 100 feet of the pier edge or working edge of the hardened shoreline shall be occupied by at least 50% of one or more marine uses set forth in section 14-301 (permitted, marine uses) and 14-301.1 (conditional marine uses). **Note: the circulation areas and areas occupied for accessory parking serving marine uses shall not be used as the basis for calculating the 50% provision above; and**

3. The development is consistent with the comprehensive plan and without the non-marine use component authorized herein, the site could not otherwise support an economically viable water-dependent use; and

4. The project's public benefits outweigh its potential negative impacts, provided that such public benefits include one or more of the following: protection of existing water-dependent uses, preservation of future water-dependent use development opportunities, contribution to the development of and/or on-going maintenance of the marine infrastructure for commercial vessels, and visual and physical access to the waterfront for the general public; and

5. The non-marine portion of the development will

not significantly restrict air or light for marine uses located in the immediate vicinity; will not create significant adverse local climatic effects on marine uses such as an undue increase of winds or shadowing; and will not adversely affect the efficient operation of marine uses, such as by producing less efficient traffic, parking or circulation patterns; and

6. The rezoning contains adequate provisions and/or conditions to ensure that on-site water-dependent infrastructure remains occupied by commercial marine use(s) listed in section 14-301 (permitted uses) and 14-301.1 (conditional uses) and that said use is not abandoned after the project is developed; and

7. Notwithstanding section 14-304(h) (performance standard *"Parking")* and section 14-526 (a) 4.a.(i), all on-site parking constructed or used for non-marine uses allowed only by contract or conditional rezoning shall be subject to the conditional use provisions section 14-301.1 (e) (*parking for non-marine uses)*.

   Additionally, the total amount of parking shall be established by the city council in the conditional or contract rezoning agreement after consideration of the planning board's recommendation on the same.

(Ord. No. 297-05/06, 9-18-06; Ord. No. 278-09/10, 7-19-10)

Sec. 14-303. Dimensional requirements.

In addition to the provisions of article III, division 25 of this code, lots in the EWPZ shall be subject to the following requirements:

(a) *Minimum lot size:* None.

(b) *Minimum frontage:* None.

(c) *Minimum yard dimensions:*

1. Front setback: None.

2. Side setback: None.

3. Rear setback: None.

4. Setback from pier line: Notwithstanding the above requirements, a minimum setback of twenty-five(25) feet from the edge of any pier, wharf or working edge of the hardened shoreline shall be required for any structure. The setback area may be utilized for water-dependent uses and public uses and activities, subject to the provisions of sections 14-300.1 (no adverse impact) and 14-301.1 (conditional use provisions), and shall not be utilized for restaurant, drinking, or other non water-dependent uses or for off-street parking. The edge of any pier, wharf or bulkhead shall include any attached apron(s).

(d) ***Maximum impervious surface:*** One hundred (100%) percent.

(e) ***Maximum building height:*** Forty-five (45) feet, except as follows:

1. For purposes of this section only, moveable elements such as cranes and gantries, connection devices such as conveyors or bridges, and floating vessels shall not be subject to the space and bulk requirements, but shall be subject to a determination by the Federal Aviation Administration that the location of such equipment will not create a hazard to air traffic.

2. Rooftop appurtenances may exceed the maximum height limits of forty-five (45) feet providing that their design and placement is either fully screened or integrated into the architecture of the structure on which they sit.

3. The applicant must provide a determination from the Federal Aviation Administration that structures and equipment in excess of forty-five (45) feet will not exceed the applicable height

guidelines for the runway approach and will not create a conclusive evidence that the proposed development will not create a hazard.

(Ord. No. 297-05/06, 9-18-06; Ord. No. 27-11/12, 8-15-11)

Sec. 14-304. Performance standards.

Development in the Eastern Waterfront Port Zone shall comply with the following standards:

(a) *Outdoor storage of materials:* Outdoor storage of commodities and materials accessory to normal conduct of business shall be entirely contained, including runoff contaminants and residual material, within a designated area.

(b) *Noise:*

1. The level of sound, measured by a sound level meter with frequency weighting network (manufactured according to standards prescribed by the American National Standards Institute, Inc.), inherently and recurrently generated within the EWPZ between the hours of 7:00 p.m. and 7:00 a.m. from facilities or operations commenced on or after July 1, 1988, shall not exceed fifty-five (55) decibels on the A scale at or within the boundaries of any residential zone, except for sound from construction activities, sound from traffic on public streets, sound from temporary activities such as festivals, sound created as a result of, or relating to, an emergency, including sound from emergency warning signal devices, and maritime navigation signals.

2. In measuring sound levels under this section, sounds with a continuous duration of less than sixty (60) seconds shall be measured by the maximum reading on a sound level meter set to the A weighted scale and the fast meter response (L maxfast). Sounds with a continuous duration of sixty (60) seconds or more shall be measured on the basis of the energy average sound level over a period of sixty (60) seconds (LEQ1).

3. In addition to the sound level standards otherwise established, facilities or operations established or built in the EWPZ on or after July 1, 1988, shall employ best practicable sound abatement techniques to prevent tonal sounds and impulse sounds or, if such tonal and impulse sounds cannot be prevented, to minimize the impact of such sounds in residential zones. Tonal sound is defined as a sound wave usually perceived as a hum or which because its instantaneous sound pressure varies essentially as a simple sinusoidal function of time. Impulse sounds are defined as sound events characterized by brief excursions of sound pressure, each with a duration of less than one (1) second.

(c) ***Vibration:*** Vibration inherently and recurrently generated shall be imperceptible without instruments at lot boundaries. This shall not apply to vibration resulting from activities aboard a vessel or from railroad vehicle activities, or from activities on a pile-supported pier.

(d) ***Federal and state environmental regulations:*** All uses shall comply with federal and state environmental statutes and regulations regarding emissions into the air, except where provisions of this code are more stringent.

(e) ***Discharges into harbor areas:*** No discharge into harbor water areas shall be permitted, unless permitted by the Maine Department of Environmental Protection under a waste discharge license and as approved by the department of public works in accordance with chapter 24, article III of this code. All private sewage disposal or private wastewater treatment facilities shall comply with the provisions of chapter 24, article II of this code and federal and state environmental statutes and regulations regarding wastewater discharges.

(f) ***Storage of vehicles:*** Storage of any unregistered automotive vehicle on the premises for more than ten (10) days shall not be permitted.

(g) ***Landfill of docking and berthing areas:*** Landfill of docking and berthing areas shall be governed by 38 M.R.S.A. § 471-478, and permitted only if the landfill does not reduce the amount of linear berthing areas or space, or berthing capacity. If approved, construction shall be undertaken using methods approved by the department of public works and shall be accomplished in accordance with the provisions of division 25 of this article and in a manner so as to ensure that a stable and impermeable wall of acceptable materials will completely contain the fill material and will not permit any fill material to leach into docking areas or navigable waters.

(h) ***Off-street parking:*** Off-street parking is required as provided in division 20 (off-street parking) of this article.

(i) ***Off-street loading:*** Off-street loading is required as provided in division 21 of this article.

(j) ***Shoreland and flood plain management regulations:*** Any lot or a portion of a lot located in a shoreland zone as identified on the city shoreland zoning map or in a flood hazard zone shall be subject to the requirements of division 26 and/or division 26.5.

(k) ***Lighting:*** All lighting on the site shall be shielded such that direct light sources shall not interfere with vessels transiting the harbor, nor have an unreasonable adverse impact on adjacent residential zones, and shall be complaint with the Site Lighting Standards of the City of Protland Technical Manual.

(l) ***Signs:*** Signs shall be permitted as set forth in division 22 of this article.

(m) ***Storage of pollutants and oily wastes:*** On-premises storage of pollutants and oily wastes shall not be permitted for more than forty-five (45) days.

(n) ***Compatibility of non-marine uses with marine uses:*** Non-marine uses, structures and activities, including but not limited to access, circulation, parking, dumpsters, exterior storage and loading facilities or

other structures shall neither unreasonably interfere with the existence or operation of marine uses nor significantly impede access to vessel berthing or other access to the water by existing or potential marine uses.

(o) ***Functional utility of piers and access to the water's edge:*** All development, whether for marine or non-marine uses, must anticipate current and future needs of water-dependent uses to functionally access the water's edge for the transfer of goods, materials, and passengers between berthed vessels and land bound vehicles. Provisions for the storage and movement of goods, materials, and passengers must be designed into all waterside development and internal circulation routes must be maintained or otherwise provided as an element of any development.

(Ord. No. 297-05/06, 9-18-06; Ord. No. 240-09/10, 6-21-10; Ord. No. 278-09/10, 7-19-10)

DIVISION 18. WATERFRONT CENTRAL ZONE*

***Editor's note—**Ord. No. 168-93, § 2, adopted Jan. 4, 1993, repealed former Divs. 18, 18.5 and 18.7, §§ 14-306—14-320.2, which pertained to waterfront zones, and enacted new provisions as Divs. 18, 18.5 and 18.7 to read as herein set out. Formerly, such provisions derived from Ord. No. 426-83, § 1, adopted Apr. 25, 1983; Ord. No. 427-83, § 1, adopted Apr. 25, 1983; Ord. No. 355-85, § 1, adopted Jan. 7, 1985; Ord. No. 438-86, § 1, adopted Apr. 7, 1986; Ord. No. 189-87, § 3, adopted Feb. 7, 1987; Ord. No. 174-87, 's; 1, 2, adopted Mar. 4, 1987; Ref. of May 5, 1987; Ord. No. 385-87, adopted Apr. 6, 1987; Ord. No. 36-89, §§ 1, 2, adopted June 28, 1989; and Ord. No. 15-92, §§ 22, 23, adopted June 15, 1992.

Sec. 14-305. Purpose.

The waterfront central zone was created to protect and nurture water-dependent and marine-related support uses so that they may grow and prosper in an environment and area dedicated to this purpose. The following priority of uses is recognized:

(a) The first priority of this zone is to protect and nurture existing and potential water-dependent uses in a setting that enforcestheir continued economic viability;

(b) The second priority is to encourage other marine and marine-related support uses so long as they do not

interfere with water-dependent uses, either directly by displacement or indirectly by placing incompatible demands on the zone's infrastructure;

(c) Non-marine uses are encouraged provided that they do not interfere with and are not incompatible with first and second priority uses. Non-marine uses are beneficial to the waterfront economy because they provide the financial return to property owners necessary for the maintenance and improvement of the marine infrastructure.

Water-dependent and marine-related support uses by their nature have activities and operational needs that are unique to this area and are not shared by other commercial and industrial uses in the city. These first and second priority uses and related activities may result in noise, odor, dust, hourso f operation, parking and traffic patterns and traffic control needs that are necessary for the convenient and successful conduct of such uses. Other uses may not be compatible with these types of effects. Other specified uses are permitted in the waterfront central zone, provided that they do not significantly interfere with the activities and operation of water-dependent and marine-related support uses. Such uses must be, and are assumed to be, aware of the impacts associated with marine uses and therefore must accept and be tolerant of them. Other specified uses in thezone shall accommodate to those patterns and needs of the higher priority uses so long as those higher priority uses are not detrimental to public health and safety and the higher priority activities are conducted in accordance with sound practices or practices customary in the trade.

Commercial Street is recognized as an important economic center for the city and region. Marine compatible uses are encouraged to locate and grow along Commercial Street while higher priority marine uses are protected on the waterfront.

(Ord. No. 168-93, § 2, 1-4-93; Ord. No. 193-05/06, 4-19-06; Ord.No. 103-10/11, 12-20-10)

Editor's Note—**Pursuant to Council Order 103-10/11 passed on 12/20/10 Section 14-306 ***No adverse impact on marine uses was repealed in it's entirety and remaining sections were re-numbered accordingly.

Sec. 14-306. Definitions.

For the purposes of the waterfront central zone only the following terms shall have the following definitions:

Common circulation drives: private driveways, roadways and circulation areas accessible to all on-site tenants and/or occupants of a lot within the waterfront central zone providing access from/to the public street network.

Lot: any abutting property under common ownership.

Non-marine use overlay zone (NMUOZ): The non-marine use overlay zone (NMUOZ) is a portion of the waterfront central zone, as described below, where new and existing development may be occupied with 100% non-marine use tenants listed under 14-307(b), subject to the standards and use limitations provided in section 14-311(b).

The geographic limits of the NUMUOZ are defined by parcels of land and piers within the waterfront central zone located on the landward side of a line established one hundred fifty (150) feet southerly from the southerly sideline of Commercial Street and modified as follows: the seaward limit of the NMUOZ extends to a line 500 feet southerly from the southerly sideline of Commercial Street in the area between the easterly sideline of Long Wharf to the westerly sideline of Union Wharf. Additionally, all areas subject to this provision are set back landward at least twenty-five (25) feet from the average high tide line of Portland Harbor and associated coastal wetlands. All offset distances are measured horizontally.

All applicants for development within the NUMUOZ are responsible for demonstrating their location within NMUOZ according to the findings of a site specific land survey conducted by a professional land surveyor licensed by the State of Maine. The limits of the NMUOZ shallbe shown on all site plans and subdivision plats for proposed development within the NMUOZ. A map showing the presumed boundaries of the NMUOZ is on file with the Departmetn of Planning and Urban Development. Said map is for illustrative purposes only and shall not be relied upon in determining whether a proposed development is located within the NMUOZ.

On-Site shall mean that portion of any lot included within or directly impacted by a proposed development.
(Ord. No. 193-05/06, 4-19-06; Ord. No. 103-10/11, 12-20-10)

Sec. 14-307. Permitted uses.

Subject to a determination that the proposed use meets the standards of section 14-311, as applicable, the following uses are permitted in the waterfront central zone:

(a) *Marine:*

1. Marine products, wholesaling, distribution and retailing;

2. Marine repair services and machine shops;

3. Tugboat, fireboat, pilot boat and similar services;

4. Harbor and marine supplies and services, chandleries, and ship supply such as fueling and bunkering of vessels;

5. Marine industrial welding and fabricating;

6. Shipbuilding and facilities for construction, maintenance and repair of vessels;

7. Commercial marine transport and excursion services, including ferries, captained charter services, sport fishing and water taxis;

8. Cargo handling facilities, including docking, loading and related storage;

9. Boat repair yards;

10. Boat storage facilities, excluding rack storage facilities; (Boat rack storage facilities are included in conditional use, section 14-308(b)(3) below);

11. Seafood processing;

12. Seafood packing and packaging;

13. Seafood loading and seafood distribution;

14. Fabrication, storage and repair of fishing

equipment;

15. Ice-making services;

16. Facilities for marine construction and salvage;

17. Facilities for marine pollution control, oil spill cleanup, and servicing of marine sanitation devices;

18. Fabrication of marine-related goods;

19. Fishing and commercial vessel berthing;

20. Non-commercial berthing of a maximum of fifty (50) linear feet per pier. A non-commercial berth may not displace a commercial berth.

    Parking for any non-commercial berthing is subject to the provisions of section 14-311(d)8.

21. Marine office, including but not limited to offices of owners of wharves or their agents, and naval architects, and seafood brokers;

22. Public landings;

23. Marine research, education, and laboratory facilities;

24. Bait sales and processing;

25. Harbor security and emergency response services including but not limited to Harbor Master, Marine Patrol and Coast Guard.

(b) ***Non-marine commercial and industrial uses:*** Non-marine uses permitted by this section are subject to the standards listed in section 14-311.

1. Professional, business, government, and general offices;

2. Retail and service establishments, including craft and specialty shops. Convenience stores with gas

pumps shall not be permitted under this section;

3. Restaurants provided that full course meal food service and consumption shall be the primary function of the restaurant, and full course meal service shall be continued up until the hours of closing;

4. Banking services without drive-up services;

5. Laundry and dry cleaning services;

6. Cabinet and carpentry shops, studios for artists and crafts people;

7. Intermodal transportation facilities;

8. Cold storage facilities;

9. Museums and art galleries; and

10. Outside accessory activities.

(c) *Public:*

1. Landscaped pedestrian parks, plazas and other similar outdoor pedestrian spaces, including without limitation pedestrian and/or bicycle trails;

(d) *Other:*

1. Accessory uses:

a. Interior accessory uses customarily incidental and subordinate to the location, function and operation of permitted uses. Food service establishments, newsstands and other similar retail and service support uses shall only be permitted as accessory uses if they are part of and located within the lot lines of a use set forth in section 14-307(a)(1), (a)(7), or (a)(22); that such uses do not exceed two-thousand (2,000) square feet in total floor area of the building, or twenty-five percent

(25%) of the total floor area of the building, whichever is less, and that each individual use does not exceed one-thousand (1,000) square feet in total floor area of the building; and further provided that such accessory uses provide goods or services that are supportive of the principal use and its clientele. Exterior accessory usesshall be otherwise subject to the provision of 14-311(a); and

b. Interior meeting or classroom space accessory to uses permitted in section 14-307(a)(23) (marine research, education, and laboratory facilities) may be rented out for meeting use by marine-related or non-marine related groups or organizations, or the general public, and such accessory uses shall not be subject to the limitations contained in paragraph b, but shall onlybe permitted as accessory uses if the total of all support uses, including interior meeting or classroom space, does not exceed three-thousand (3,000) square feet in total floor area per building, or fifteen percent (15%) of the total floor area per building, whichever is less.

2. Street vendors licensed pursuant to chapter 19.

3. Wind energy systems, as defined and allowed in Article X, Alternative Energy.

(Ord. No. 168-93, § 2, 1-4-93; Ord. No. 131-01/02, § 1, 1-23-02; Ord. No. 309-01/02, § 1, 7-15-02; Ord. No. 38-02/03, § 1, 9-4-02;Ord. No. 193-05/06, 4-19-06; Ord. No. 103-10/11, 12-20-10; Ord. No. 33-11/12, 1-18-12)

Sec. 14-308. Conditional use.

The uses listed herein shall be permitted as conditional uses in the waterfront central zone, provided that, notwithstanding section 14-471 and section 14-474(a), or any other provision of this code, the planning board shall be substituted for the board of appeals as the reviewing authority, and further provided that in addition to the provisions of section 14-474(c)(2), they shall also meet the applicable waterfront central zone development standards in section 14-311:

(a) Commercial marine conditional uses:

1. ***Fish by-products processing,*** provided that:

a. Any fish by-products processing facility has a valid rendering facility license under chapter 12;

b. Any existing fish by-products facility shall employ current and appropriate odor control technology (and any new fish by-product use shall employ current, available odor control technology) to eliminate or minimize detectable odors from such a process, and in no case shall odors exceed the odor limitation performance standards of the I-M zone; and

c. The processing of other material wastes or by-products shall not be deemed a lawful accessory use under any other provision of this article.

2. ***Boat rack storage facilities,*** provided that:

a. Parking shall be provided for one-hundred percent (100%) of the demand generated by the use (nothwithstanding 14-311(d)8, performance standard for parking), and such parking shall be provided off-site, in another zone permitting such use.

b. Boat rack structures shall not exceed ten thousand (10,000) square feet of building footprint.

(b) ***Residential:*** The primary owner of a marine business listed under section 14-307(a) located on the same site may occupy upper floor space with a residential use, provided the following conditions are met:

1. The applicant demonstrates a compelling business related need for living on-site that cannot otherwise be accomplished;

2. The residential living space shall not exceed one thousand (1,000) square feet, inclusive of all exterior porches and decks;

3. The occupancy of said space shall be limited to the primary owner of the marine related business. The residential use is not transferable to friends, family or anyone other than the primary business owner. No such residential space shall be leased out by or allowed to be used for occupancy by other than the primary owner of the marine related business;

4. The residential use shall be limited to one unit per wharf;

5. The residential use shall be year round use only, and shall not be used on a seasonal basis; and

6. Upon the vacancy in excess of three (3) months of the residential living space by the primary owner of the marine related business, the residential use shall automatically terminate and shall not be continued without new conditional use approval under this subsection.

For purposes of this subsection, "primary owner of the marine related business" shall mean a person who legally owns fifty percent (50%) or more of the marine business listed under section 14-307(a), permitted marine uses.

(c) ***Utility substations:*** Public utility substations, including but not limited to electrical transformers, sewage and stormwater pumps, and telecommunication switching stations, are permitted under the following conditions:

1. The facility is located more than one-hundred (100) feet from the water's edge;

2. The facility occupies no more than fifty (50) square feet of structure above ground;

3. The facility provides no dedicated on-site parking

and all subsurface elements of the facility are installed and operated such that land occupied by the facility is otherwise usable and made available for marine uses, including but not limited to parking, travel ways, and/or storage; and

4. The facility shall be sized, sited and screened to minimize visual impact and prominence from public ways.

(d) Temporary wind anemometer towers, as defined in Sec 14-47, are permitted provided the following standards are met in addition to Sec 14-430:

1. Towers may be installed for the purpose of wind data collection for no more than two (2) years after the issuance of a Certificate of Occupancy for the tower. At the conclusion of the aforementioned two (2) years, the tower must be dismantled and removed from the site within sixty (60) days; and

2. Towers shall be constructed according to plans and specifications stamped by a licensed professional engineer, which shall be provided to the Board of Appeals with the application; and

3. Towers shall be set back from habitable buildings by a distance equal to 1.1 times the tower height; and

4. The applicant shall provide a safety report prepared and stamped by a licensed professional engineer to the Board of Appeals with their application for conditional use, which demonstrates how the proposed temporary wind anemometer tower is safe in terms of strength, stability, security, grounding, icing impacts and maintenance; and

5. The applicant shall provide evidence of commercial general liability insurance, such insurance to be satisfactory to Corporation Counsel and cover damage or injury resulting

from construction, operation or dismantling of any part of the temporary wind anemometer tower; and

6. Towers and associated guy wires shall be sited to minimize their prominence from and impacts on public ways (including pedestrian ways); and

7. Towers shall be used for installing anemometers and similar devices at a range of heights from the ground to measure wind characteristics (speed, direction, frequency) and related meteorological data, but shall not be used for any other purpose; and

8. A performance guarantee shall be required for the cost of removal of the tower, guy wires and anchors. This requirement may be satisfied by surety bond, letter of credit, escrow account or by evidence, acceptable to the City, or the financial and technical ability and commitment of the applicant or its agents to remove the facility at the end of the use period.

(e) Wind energy systems, as defined and allowed in Article X, Alternative Energy.

(Ord. No. 168-93, § 2, 1-4-93; Substitute Ord. No. 00-42, 8-7-00; Ord. No. 73-01/02, § 1, 10-15-01, Ord. No. 131-01/02, § 2, 1-23-02; Ord. No. 193-05/06, 4-19-06; Ord. No. 29-09/10, 8-3-09, emergency passage; Ord. No. 240-09/10, 6-21-10; Ord. No. 278-09/10, 7-19-10; Ord. No. 103-10/11, 12-20-10; Ord. No. 33-11/12, 1-18-12)

Section 14-309. Prohibited uses.

Uses which are not enumerated in either section 14-307 or 14-308 as permitted or conditional uses are prohibited. Those uses that are prohibited shall include, without limitation:

(a) Except as provided in section 14-308, residential uses (not in existence on May 5, 1987);

(b) Hotels, motels or boatels;

(c) Auditoriums, civic centers, convention centers or other

meeting facilities;

(d) Drinking establishments;

(e) Ground mounted telecommunication towers, antennas, and/or disks; and

(f) Drive-up services for any use other than a permitted use listed under 14-307(a) or 14-308(a)(1).

(Ord. No. 168-93, § 2, 1-4-93; Ord. No. 73-01/02 § 2, 10-15-01; Ord. No. 193-05/06, 4-19-06; Ord. No. 103-10/11, 12-20-10)

Sec. 14-310. Dimensional requirements.

In addition to the provisions of division 25 of this article, lots in the waterfront central zone shall be subject to the following requirements:

(a) *Minimum lot size:* None.

(b) *Minimum frontage along Commercial Street:* Seventy-five (75) feet.

(c) *Minimum lot width within the NMUOZ:* Fifty (50) feet measured parallel with Commercial Street and such lot width shall be continuous for the full depth of the lot located within the NUMUOZ.

(d) *Minimum yard dimensions:*

1. Front setback: None.

2. Side setback: None

3. Rear setback: None.

4. Setback from pier edge: Notwithstanding the above requirements, a minimum setback of five (5) feet from the edge of any pier, wharf or bulkhead shall be required for any structure. The edge of any pier, wharf or bulkhead shall include any attached apron(s).

(e) *Maximum lot coverage:* One-hundred (100) percent.

(f) ***Maximum building height:*** Fifty (50) feet. Except as provided in (h) below, a structure in the waterfront central zone shall provide no more than three habitable floors; however, typical rooftop appurtenances and/or enclosed or open mechanical installations shall be allowed over the third floor.

(g) ***Minimum ground floor clearance:*** Any new building proposed to be larger than three-hundred (300) square feet, and located more than 35 feet from the southerly sideline of Commercial Street, shall provide no less than fifteen (15) feet of first floor to ceiling vertical clearance to promote marine industrial use potential. New buildings less than three-hundred (300) square feet or additions to existing multistory buildings are exempt from this provision but shall provide the maximum ground floor clearance practicable.

(h) ***New non-marine use building exception for usable floors and minimum ground floor clearance:*** Notwithstanding provisions (f) and (g) above, for new non-marine use buildings permitted within the NMUOZ, four (4) usable floors are allowed and ground floor clearance minimums do not apply.

(Ord. No. 168-93, §2, 1-4-93; Ord. No. 309-01/02, § 2, 7-15-02; Ord. No. 193-05/06, 4-19-06, Ord. No. 103-10/11, 12-20-10)

Sec. 14-311. Development standards.

(a) ***Standards for non-marine uses located outside of the NMUOZ:*** Non-marine uses listed above in Sec. 14-307(b) and 14-308(b) that are located outside of the NMUOZ shall be subject to the performance standards listed in 14-311(d) as well as the following standards:

1. ***55% marine use required on ground floors:*** At least 55% of the ground floor of all of the buildings on the lot (defined in 14-306 above), when calculated using the aggregate of all such ground floors, shall be occupied by marine uses, as listed under 14-307(a) or 14-308(a)(1).

2. ***55% marine use required for all open areas:*** After subtracting areas used for common circulation drives (defined in 14-306 above), at least 55% of un-built

area (meaning area not occupied by a building) on the lot, when calculated using the aggregate of all such un-built areas, shall be occupied by marine uses, as listed under 14-307(a) or 14-308 (a)1.

3. ***Ground floor vacancies and change of occupancy offered to water dependent/marine uses:*** Ground floor vacant space and areas proposed for a change of occupant outside of the NMUOZ shall not be filled with any non-marine use without adequate opportunity for marine uses to occupy the space.

   a. ***Ground floor vacancy and change of occupant outside of the NMUOZ advertised to marine users:*** In any lot or portion of lot outside of the NMUOZ, each time a ground floor occupant departs or gives notice to depart from the lot, the space must be made available to new marine occupants.

      Prior to renting to a non-marine user the property owner shall advertise for a new marine occupant for not less than a (60) day period in targeted media and by other means reasonably calculated to reach marine users. Should one or more marine users apply, the property owner shall make the space available to a marine occupant, in accordance with terms and rates generally consistent with comparable space in the 55% marine use portion of the zone (outside of the NMUOZ.) The property owner may stop advertising sooner than the end of the 60 day period if a lease is signed with a marine user. Should no marine user apply by the end of the 60 day period, the owner may fill the space with a non-marine user provided that the new non-marine occupant will not cause the lot to exceed the non-marine use occupancy maximum of 45% of the ground floor area or open area.

   b. ***Uses inventoried:*** To demonstrate adherence to the 55% marine use requirement, the applicant shall submit to the planning authority, upon request, an inventory which lists each occupant (tenant or otherwise), as well as a map which depicts the location of each occupant. The map

shall show all ground level space, including buildings, parking, open areas and submerged lands associated with the subject lot. For each occupant, the property woner must indicate the square footage of area occupied and whther the occupant is a marine use as defined herein. For vacant space, the last previous occupant shall be listed, along with the date of departure.

c. Applicants for site plan review or a change of use permit outside of the NMUOZ shall provide the planning authority with proof of compliance with the requirements of this section nas a condition of approval.

d. The city planning authority shall compile and report inventories of ground level uses, as reported under (b) above, into an annual report of ground level uses and investment in the Central Waterfront. The report shall include an aggregated assessment of ground floor marine and non-marine use ossupancy and a catalogue of marine infrastructyure investment for the reporting period. The report shall be submitted to the City Council as a communication not less than once every calendar year.

4. Pier or bulkhead edge reserved for marine uses: Notwithstanding anything in contained in 14-311(c) (Contract or conditional rezoning) or any other provision of this ordinance to the contrary, excepting only the portion of any pier which might be used for non-commercial berthing pursuant to 14-307(a)(20), all berthing and/or dockage space and associated floats plus the entire linear edge of that portion of every pier or bulkhead which is adjacent to greater than zero feet of water depth at mean low water, to a minimum setback line of at least five feet from the edge of the pier, builkhead, or engineered shoreline may only be used or occupied by one or more marine uses as defined in 14-307(a)) or 14-308(b). Said edge shall be the seaward extent of any engineered shoreline or working deck of any pier or wharf.

(b) ***NMUOZ standards:*** Non-marine uses listed under 14-

307(b) and 14-308 located within the NMUOZ, as defined in 14-306, shall be subject to the performance standards listed in 14-311(d) as well as the following standards:

1. ***Vessel access:*** Non-marine uses allwed under this provision shall not disrupt or block access to vessel berthing and shall otherwise adhere to the performance standards of this zone described in Sec. 14-311(d).

2. ***Maximum setback for new development on lots with seventy-five (75) or more feet of Commercial Street frontage:*** Any new non-marine development constructed subject to this provision which is located on a lot with seventy-five (75) or more feet of frontage along the Commercial Street right of way shall be located with its front façade no further than thirty-five feet (35) from the southerly sideline of the Commercial Street right of way. Furthermore, any such development shall orient its front façade and its primary pedestrian entrance toward Commercial Street and no vehicular circulation or parking may occupy the land or pier area between the front façade of the building and Commercial Street.

   Non-marine development subject to this provision on lots with fewr than seventy-five (75) feet of frontage along the Commercial Street right-of-way, changes of use within existing buildings, and/or building additions of less than 5,000 square feet of new development to existing buildings are exempt from the maximum setback provisions established herein.

3. ***Investment in marine infrastructure:*** All applicants for site plan review or a change of use permit for non-marine development in the NMUOZ are required to invest in marine infrastructure as a condition of development, provided that the total project costs exceed $250,000. The value of the investment shall be not less than five percent (5%) of total project costs over $250,000 for constructing non-marine space and associated site improvements in the NMUOZ.

   Required investment may occur by one or both the following methods:

a. Direct investment in marine infrastructure located on the same lot: Investment shall be for the benefit of marine uses listed in 14-307(a) within the same lot as the proposed non-marine development. Investment may include dredging, pile replacement, new or replaced structural decking (but not pavement resurfacing), new or replaced fendering systems, new or replaced floats, pier expansions, permanent conversions of recreational berthing to commercial berthing, bulkhead or seawall repair or improvements, or any combinationof similar improvements. Plans for the marine infrastructure investment shall be submitted to the planning authority with the application for site plan review or change of use permit and shall include details and a commitment as to how the marine infrastructure will be utilized by marine users. The marine infrastructure improvements shall be completed prior to the issuance of a certificate of occupancy for the non-marine development project.

b. Financial contribution: If direct investment in marine infrastructure is not made, the developer shall make a financial contributionto the ***city's waterfront loan and investment fund.***

(c) ***Contract or conditional rezoning standards:*** Applications for proposals deviating from any dimensional requirements under section 14-310 and/or including uses not listed under sections 14-307 and 14-308 may only be considered if the reviewing body finds the applicant has met the performance standards listed under 14-311(d) and the following standards:

1. ***Conditional or contract rezoning located outside of the NMUOZ:*** The ground level floor area of any building, existing or proposed, on the subject lot and the un-built area of the subject lot and the un-built area of the subject lot shall be subject to and meet the requirements of section 14-311(a) of this code.

2. ***Conditional or contract rezoning located within the NMUOZ:*** Conditional or contract rezoning applications located within the NMUOZ are subject to the provisions

of 14-311(b)(3) (*Investment in marine infrastructure).*

3. Residential dwellings are prohibited.

4. The development is consistent with the comprehensive plan and without the development the site could not otherwise support an economically viable water-dependent use.

5. Any physical or legal impediments which preclude or impede functional access from the site of the development to any portion of the water's edge are not the result of action taken by the current owner, the applicant for rezoning, or any prior owner after January 4, 1993.

6. The project's public benefits outweigh its potential negative impacts, taking into consideration as public benefits: protection of existing water-dependent uses, preservation of future water-dependent use development opportunities, contribution to the development of and/or on-going maintenance of the marine infrastructure for commercial vessels, and visual and physical access to the waterfront for the general public.

7. The development responds to any unique physical conditions and development opportunities along the shoreline in a manner that is consistent with section 14-305 (purpose).

8. The non-marine portion of the proposed development will not adversely affect the efficient operation of marine uses, such as producing less efficient traffic, parking or circulation patterns. Parking for the non-marine portion of the proposed development shall be subject to review under section 14-311(d)(8).

9. The rezoning contains adequate provisions and/or conditions to ensure that any associated water-dependent infrastructure remains occupied by any commercial marine use as listed in 14-307(a) and that said use is not abandoned after the project is developed.

(d) ***Performance standards***: All uses in the waterfront central zone shall comply with the following standards. Standards 8, 10, 13, 14, 15, 16, and 17 below shall be reviewed by the planning authority:

1. ***Outdoor storage of materials:*** Outdoor storage of commodities and materials accessory to normal conduct of business, except pilings and/or cranes, shall be permitted to a maximum height of forty-five (45) feet, and such materials shall be entirely contained, including runoff contaminants and residual material, within a designated area within the lot boundaries.

2. ***Noise:*** The level of sound, measured by a sound level meter with frequency weighting network (manufactured according to standards prescribed by the American National Standards Institute, Inc.), inherently and recurrently generated within the waterfront central zone shall not exceed seventy-five (75) decibels on the A scale at the boundaries of any lot, except for sound from construction activities, sound from traffic on public streets, sound from temporary activities such as festivals, and sound created as a result of, or relating to, an emergency, including sound from emergency warning signal devices. In measuring sound levels under this section, sounds with a continuous duration of less than sixty (60) seconds shall be measured by the maximum reading on a sound level meter set to the A weighted scale and the fast meter response (L maxfast). Sounds with a continuous duration of sixty (60) seconds or more shall be measured on the basis of the energy average sound level over a period of sixty (60) seconds (LEQ_1).

3. ***Vibration:*** Vibration inherently and recurrently generated shall be imperceptible without instruments at lot boundaries. This shall not apply to vibration resulting from activities aboard a vessel or from railroad vehicle activities, or from activities on a pile supported pier.

4. ***Federal and state environmental regulations:*** All uses shall comply with federal and state environmental statutes and regulations regarding emissions into the air, except where provisions of this Code are more stringent.

5. ***Discharges into harbor areas:*** No discharge into harbor water areas shall be permitted, unless permitted by the Maine Department of Environmental Protection under a waste discharge license and as approved by the department of public services in accordance with chapter 24, article III of this code. All private sewage disposal or private wastewater treatment facilities shall comply with the provisions of chapter 24, article II of this code and federal and state environmental statutes and regulations regarding wastewater discharges.

6. ***Storage of vehicles:*** Storage of any unregistered automotive vehicle on the premises for more than sixty (60) days shall not be permitted.

7. ***Landfill of docking and berthing areas:*** Landfill of docking and berthing areas shall be governed by 38 M.R.S.A. sections 480-A through480-HH, and permitted only if the landfill does not reduce the amount of linear berthing areas or space, or berthing capacity. If approved, construction shall be undertaken using methods approved by the department of public services and shall be accomplished in accordance with the provisions of division 25 of this article and in a manner so as to ensure that a stable and impermeable wall of acceptable materials will completely contain the fill material and will not permit any fill material to leach into docking areas or navigable waters.

8. ***Off-street parking and loading:*** Division 20 (off-street parking) and division 21 (off-street loading) of this article shall not apply.

The planning authority shall review applications for non-marine use parking against the following standards:

a. Applicants for non-marine parking in the waterfront central zone shall submit a parking and traffic circulation plan showing the location of all existing and proposed structures, travel ways and parking on the subject lot.

b. Outside of the NMUOZ, non-marine use parking is subject to the limitations described in 14-311(a)

("55% rule").

c. Non-marine use parking shall only be located on a lot where, based on the parking and traffic circulation plan and a parking analysis to be submitted for planning authority review, the marine use parking supply is reasonably sufficient to serve marine use space located on the subject lot.

d. Water-dependent use parking spaces shall be located as close as reasonably possible to associated vessels and/or ground floor lease areas.

9. ***Shoreland and flood plain management regulations:*** Any lot or portion of a lot located in a shoreland zone as identified on the city shoreland zoning map or in a flood hazard zone shall be subject to the requirements of division 26 and/or division 26.5 of this article.

10. ***Lighting:*** All lighting on the site shall be shielded such that direct light sources shall not unreasonably interfere with vessels transiting the harbor nor have an unreasonable adverse impact on adjacent residential zones.

11. ***Signs:*** Signs shall be permitted as set forth in division 22 of this article.

12. ***Storage of pollutants and oily wastes:*** On-premises storage of pollutants and oily wastes shall not be permitted for more than forty-five (45) days.

13. ***Urban design:*** Construction of new structures located within thirty-five (35) feet of the southerly edge of Commercial Street between Maine Wharf and the easterly property line of the city fish pier shall conform to the guidelines set forth in the downtown urban design guidelines, unless such structures are also located within one-hundred (100) feet of the water. Such structures that are also located within one-hundred (100) feet of the water shall conform to the extent practicable to the downtown urban design guidelines.

14. ***Pier and wharf expansions:*** In addition to meeting Harbor Commission and Coast Guard requirements for navigation,

any expansion or extension of a pier and or wharf in the waterfront central zone shall demonstrate its compatibility with fixed route ferry service and emergency vessel operations.

15. ***Compatibility of non-marine uses with marine uses:*** Non-marine uses, structures and activities, including but not limited to access, circulation, parking, dumpsters, exterior storage and loading facilities or other structures shall neither interfere with the existence or operation of marine uses nor impede access to vessel berthing or other access to the water by existing or potential marine uses. Siting of a use not set forth in section 14-307(a) shall not substantially reduce or inhibit existing public access to marine or tidal waters.

16. ***Functional utility of piers and access to the water's edge:*** All new development, whether for marine or non-marine uses, should anticipate current and future functional and operational needs of water-dependent pier tenants to access the water's edge for the transfer of goods and materials between berthed vessels and land bound vehicles, and shall demonstrate adherence to the following provisions:

a. Provisions for the storage and movement of goods and materials must be designed into all waterside development and internal circulation routes must be maintained or otherwise provided as an element of any development. The siting, design, and circulation of non-marine uses, particularly those allowed on first floors, shall adjust if needed to accommodate reasonable access for pedestrians, vehicles, and freight transfer to and from berthed vessels.

b. Any development that proposes to site a building within ten (10) feet of a pier edge (thus precluding vehicle use of the pier edge) should provide openings and circulation through or around the building to allow the transfer of goods and materials to trucks and circulation routes within the interior of the pier.

c. With the exception of non-commercial berthing allowed under section 14-307(a)(20), there is to be no other non-commercial berthing.

d. Except for common circulation drives as defined in 14-306, access ways, parking and loading areas designated for marine uses shall be exclusively for marine uses and shall not be shared with non-marine uses.

17. ***Public view protection:*** Any new development in the waterfront central zone shall perform a public view impact analysis for review and approval by the planning board or planning authority as a condition of site plan approval. The analysis shall: (a) demonstrate the project's adherence to the ***Portland View Corridor Protection Plan*** (City of Portland Comprehensive Plan, 2002)to the extent practicable; and (b) promote the public's visual access to the water through sensitive building placement.

The planning board or planning authority shall find at a minimum that the proposed development (a) retains street corridor views as extended across Commercial Street from the Portland peninsula; (b) retains panoramic views of the water from Commercial Street to the extent practicable; and (c) where loss of existing public views to the water is shown to be necessary for the reasonable development of the site, the developer provides alternative public views to the water through newly established view corridors or publicly accessible pedestrian ways. Such pedestrian ways shall not interfere with existing or potential water-dependent uses, nor shall they endanger the public through uncontrolled proximity to industrial activity.

(Ord. No. 103-10/11, 12-20-10)

Sec. 14-312 thru Sec. 14-317. Reserved.

DIVISION 18.5. WATERFRONT PORT DEVELOPMENT ZONE*

***Editor's Note—**See the editor's note to division 18 of this article.

Sec. 14-318. Purpose.

Transport of goods by water to and from Portland is an important component of both the local and regional economy. This commerce is dependent upon land with direct access to the dredged deep water channel of the Fore River.

Waterfront land with direct deep water access shall be restricted to uses which contribute to port activity. This zone exists, therefore, to ensure the continued viability of the Port of Portland. Uses in the port development zone, while governed by the same performance standards as other industrial zones, are limited to those uses which are dependent upon deep water and which contribute to port activity.

Nonmarine industrial activity may be allowed only on a temporary basis and only to the extent it will not preclude or impede any future water-dependent development.
(Ord. No. 168-93, § 2, 1-4-93)

Sec. 14-318.5. No adverse impact on marine uses.

No use shall be permitted, approved or established in this zone if it will have an impermissible adverse impact on future marine development opportunities. A proposed development will have an impermissible adverse impact if it will result in any one (1) or more of the following:

(a) The proposed nonwater-dependent use will displace an existing water-dependent use;

(b) The proposed use will reduce existing commercial vessel berthing space;

(c) The proposed nonwater-dependent use, structure or activities, including but not limited to access, circulation, parking, dumpsters, exterior storage or loading facilities, and other structures, will unreasonably interfere with the activities and operation of existing water-dependent uses or significantly impede access to vessel berthing or other access to the water by water-dependent uses; or

(d) The siting of a proposed nonwater-dependent use will substantially reduce or inhibit existing public access to marine or tidal waters.

(Ord. No. 168-93, § 2, 1-4-93)

Sec. 14-319. Permitted uses.

Subject to a determination that the proposed use meets the standards of section 14-318.5 (no adverse impact on marine uses), the following uses are permitted in the waterfront port development zone:

(a) *Marine:*

1. Marine repair services and machine shops;

2. Tugboat, fireboat, pilot boat and similar services;

3. Harbor and marine supplies and services and ship supply such as fueling and bunkering of vessels;

4. Shipbuilding and facilities for construction, maintenance and repair of vessels;

5. Marine cargo handling facilities, including docking, loading and related storage;

6. Boat repair yards;

7. Facilities for marine construction and salvage;

8. Facilities for marine pollution control, oil spill cleanup, and servicing of marine sanitation devices.

(b) *Commercial:*

1. Intermodal transportation facilities principally for vessels with regularly scheduled destination service or for railroad transportation service;

2. Warehousing and storage of goods which are awaiting shipment via cargo carriers;

3. Marine cargo container and chassis maintenance and

repair.

(c) *Public:*

Public uses including pedestrian and bicycle trails.

(d) *Other:*

1. Accessory uses customarily incidental and subordinate to the location, function and operation of permitted uses. Food service establishments, newsstands and other similar retail and service support uses shall only be permitted as accessory uses if they are part of and located within the lot lines of a use set forth in section 14-319(a)3, 6, or (b)1, if all such uses do not exceed two thousand (2,000) square feet in total floor area of the building or twenty-five (25) percent of the total floor area of the building, whichever is less, and if each individual use does not exceed one thousand (1,000) square feet in total floor area of the building; and further provided that such accessory uses provide goods or services that are supportive of the principal use and its clientele.

2. Street vendors licensed pursuant to Chapter 19 are a permitted use, but only in the following area of the waterfront port development zone: on Commercial Street from the intersection of India Street to the westerly side of the Maine State Pier.

3. Wind energy systems, as defined and allowed in Article X, Alternative Energy.

(Ord. No. 168-93, § 2, 1-4-93; Ord. No. 38-02/03, § 2, 9-4-02; Ord. No. 33-11/12, 1-18-12)

Sec. 14-320. Conditional uses.

(a) The following uses shall be permitted as conditional uses in the waterfront port development zone, provided that, notwithstanding section 14-471(c), section 14-474(a), or any other provision of this Code, the Planning Board shall be substituted for the board of appeals as the reviewing authority, and provided further that in addition to the provisions of section 14-474(c)(2)

such uses will not impede or preclude existing or potential water-dependent development on other lots, will allow for adequate right-of-way access to the water, are compatible with marine uses, and are physically adaptable or relocatable to make way for future development for water-dependent uses, and meet any additional standards set forth below:

1. *Marine:*

    a. Marine products, wholesaling and retailing;

    b. Boat storage facilities, excluding rack storage;

    c. Seafood processing;

    d. Seafood packing and packaging;

    e. Fabrication, storage and repair of fishing equipment;

    f. Ice-making services;

    g. Fabrication of marine-related goods;

    h. Fish by-products processing, provided that:

        i. Any fish by-product processing facility has a valid rendering facility license under chapter 12; and

        ii. The processing of other material wastes or by-products shall not be deemed a lawful accessory use under any other provision of this article.

2. *Commercial:*

    Off-street parking lots, excluding parking structures.

3. *Industrial:*

    a. Storage of goods in existing structures;

    b. Facilities for combined marine and general construction;

c. Low impact industrial uses, including but not limited to bakeries, breweries, bottling, printing and publishing, pharmaceuticals, machine shops, manufacture of products, assembly of electrical components, tool and die shops, and the packaging of food, provided that such uses shall be subject to the performance standards set forth in §14-252.

4. *Public:*

Utility substations, including sewage collection and pumping stations, water pumping stations, transformer stations, telephone electronic equipment enclosures and other similar structures, provided that such structures are located more than one hundred (100) feet from the water.

(b) The following use shall be permitted only upon the issuance of a conditional use permit subject to the provisions of section 14-474 (conditional uses), and any special provisions, standards or requirements specified below:

1. Temporary wind anemometer towers, as defined in Sec 14-47, are permitted provided the following standards are met in addition to Sec 14-430:

a. Towers may be installed for the purpose of wind data collection for no more than two (2) years after the issuance of a Certificate of Occupancy for the tower. At the conclusion of the aforementioned two (2) years, the tower must be dismantled and removed from the site within sixty (60) days; and

b. Towers shall be constructed according to plans and specifications stamped by a licensed professional engineer, which shall be provided to the Board of Appeals with the application; and

c. Towers shall be set back from habitable buildings by a distance equal to 1.1 times the tower height; and

d. The applicant shall provide a safety report prepared and stamped by a licensed professional engineer to the Board of Appeals with their application for conditional use, which demonstrates how the proposed temporary wind anemometer tower is safe in terms of strength, stability, security, grounding, icing impacts and maintenance; and

e. The applicant shall provide evidence of commercial general liability insurance, such insurance to be satisfactory to Corporation Counsel and cover damage or injury resulting from construction, operation or dismantling of any part of the temporary wind anemometer tower; and

f. Towers and associated guy wires shall be sited to minimize their prominence from and impacts on public ways (including pedestrian ways); and

g. Towers shall be used for installing anemometers and similar devices at a range of heights from the ground to measure wind characteristics (speed, direction, frequency) and related meteorological data, but shall not be used for any other purpose; and

h. A performance guarantee shall be required for the cost of removal of the tower, guy wires and anchors. This requirement may be satisfied by surety bond, letter of credit, escrow account or by evidence, acceptable to the City, or the financial and technical ability and commitment of the applicant or its agents to remove the facility at the end of the use period.

2. Wind energy systems, as defined and allowed in Article X, Alternative Energy.

(Ord. No. 168-93, § 2, 1-4-93; Ord. No. 149-01/02, 2-4-02; Ord. No. 29-09/10, 8-3-09, emergency passage; Ord. No. 33-11/12, 1-18-12)

Sec. 14-320.1. Prohibited uses.

Uses which are not enumerated in either section 14-319 or 14-320 as permitted or conditional uses are prohibited. Those uses that are prohibited shall include, without limitation:

a. Residential uses (not in existence on May 5, 1987).

b. Hotels, motels or boatels.

c. Auditoriums, civic centers, convention centers or other meeting facilities.

d. Restaurants and drinking establishments.

(Ord. No. 168-93, § 2, 1-4-93)

Sec. 14-320.2. Dimensional requirements.

In addition to the provisions of article III, division 25 of this Code, lots in the waterfront port development zone shall be subject to the following requirements:

(a) *Minimum lot size:* None.

(b) *Minimum frontage:* None.

(c) *Minimum yard dimensions:*

Front setback: None.

Side setback: None.

Rear setback: None.

Setback from pier line: Notwithstanding the above requirements, a minimum setback of five (5) feet from the edge of any pier, wharf or bulkhead shall be required for any structure. The setback area may be utilized for activities related to the principal uses carried on in the structure, subject to the provisions of sections 14-319 and 14-320, but shall not be utilized for off-street parking. The edge of any pier, wharf or bulkhead shall include any attached apron(s).

(d) *Maximum lot coverage:* One hundred (100) percent.

(e) ***Maximum building height:*** Forty-five (45) feet, except as follows:

1. In the areas bounded as described below, facilities for bulk storage of materials delivered to a site by waterborne transportation or awaiting transportation from the site by means of waterborne transportation may be erected up to the maximum heights indicated (above mean sea level):

   a. In the area that lies between Danforth Street and the Veterans Memorial Bridge: One hundred forty-five (145) feet.

   b. In the area between Danforth Street and the projection of the centerline of Vaughn Street between its intersections with Orchard Street and Danforth Street: Seventy (70) feet.

   c. In the area between the projection of the centerline of Vaughn Street between its intersections with Orchard Street and Danforth Street and the projection of the centerline of Fletcher Street between its intersections with Orchard Street and Danforth Street: Seventy-five (75) feet.

   d. In the area formed by the projection of the centerline of Fletcher Street between its intersections with Orchard Street and Danforth Street easterly to the projection of the centerline of Emery Street between its intersections with Taylor Street and Danforth Street: Seventy-five (75) feet.

   e. In those areas where the maximum height may not exceed forty-five (45) feet above grade, no structure may exceed sixty-five (65) feet in height above mean sea level.

   For purposes of this section, a projection of the centerline of a street shall consist of an extension of the centerline of the street to the water side boundary of the waterfront port development zone.

2. Additional bulk, height and location standards for structures exceeding forty-five (45) feet in height above grade within the waterfront port development zone:

a. The maximum horizontal diagonal measurement of portions of a structure, cluster of structures or equipment exceeding forty-five (45) feet in height above grade shall not exceed one hundred (100) feet, except that for each foot that the structure, cluster of structures, or equipment is lowered from the maximum permitted height, the maximum horizontal measurement may increase by one (1) foot.

b. In addition to any other setback requirements, portions of structures or clusters of structures exceeding forty-five (45) feet in height above grade shall be set back a minimum of one (1) foot from the exterior property line of the owner of the underlying fee interest for each foot that the structure or cluster of structures exceeds forty-five (45) feet in height above grade.

c. No structure or cluster of structures exceeding forty-five (45) feet in height above grade may be located closer than one hundred fifty (150) feet from any other such structure or cluster of structures.

d. The cumulative width of the portion of structures exceeding forty-five (45) feet in height above grade shall not exceed more than thirty (30) percent of the average width of the lot as measured by a line drawn parallel to the water.

e. No structure shall exceed forty-five (45) feet in height above grade within the view corridors established by the projection of the street right-of-way lines of Vaughn Street or Emery Street.

f. For purposes of this section only, moveable elements such as cranes and gantries, and connection devices such as conveyors or bridges shall not be subject to the space and bulk requirements, but shall be subject to a determination by the Federal Aviation Administration that the location of such equipment will not create a hazard to navigation. Other rooftop appurtenances shall not exceed the maximum height limits set forth in this section.

g. The applicant must provide a determination from the Federal Aviation Administration that structures and equipment will not exceed the applicable height guidelines for the runway approach and will not create a hazard to navigable airspace. Such a determination shall be accepted as conclusive evidence that the proposed development will not create a hazard.

h. Accessory uses in structures which exceed forty-five (45) feet in height above grade shall not be located higher than forty-five (45) feet within the structure.

(Ord. No. 168-93, § 2, 1-4-93)

Sec. 14-320.3. Performance standards.

All uses in the waterfront port development zone shall comply with the following standards:

(a) ***Outdoor storage of materials:*** Outdoor storage of commodities and materials accessory to normal conduct of business, except pilings and/or cranes, shall be permitted to a maximum height of forty-five (45) feet, and such materials shall be entirely contained, including runoff contaminants and residual material, within a designated area within the lot boundaries.

(b) ***Noise:***

1. The level of sound, measured by a sound level meter with frequency weighting network (manufactured according to standards prescribed by the American

National Standards Institute, Inc.), inherently and recurrently generated within the waterfront port development zone between the hours of 7:00 p.m. and 7:00 a.m. from industrial facilities or operation commenced on or after July 1, 1988, shall not exceed fifty-five (55) decibels on the A scale at or within the boundaries of any residential zone, except for sound from construction activities, sound from traffic on public streets, sound from temporary activities such as festivals, and sound created as a result of, or relating to, an emergency, including sound from emergency warning signal devices.

2. In measuring sound levels under this section, sounds with a continuous duration of less than sixty (60) seconds shall be measured by the maximum reading on a sound level meter set to the A weighted scale and the fast meter response (L maxfast). Sounds with a continuous duration of sixty (60) seconds or more shall be measured on the basis of the energy average sound level over a period of sixty (60) seconds (LEQ_1).

3. In addition to the sound level standards otherwise established, facilities or operations established or built in the waterfront port development zone on or after July 1, 1988, shall employ best practicable sound abatement techniques to prevent tonal sounds and impulse sounds or, if such tonal and impulse sounds cannot be prevented, to minimize the impact of such sounds in residential zones. Tonal sound is defined as a sound wave usually perceived as a hum or which because its instantaneous sound pressure varies essentially as a simple sinusoidal function of time. Impulse sounds are defined as sound events characterized by brief excursions of sound pressure, each with a duration of less than one (1) second.

(c) ***Vibration:*** Vibration inherently and recurrently generated shall be imperceptible without instruments at lot boundaries. This shall not apply to vibration resulting from activities aboard a vessel or from railroad vehicle activities, or from activities on a pile supported pier.

(d) ***Federal and state environmental regulations:*** All uses shall comply with federal and state environmental statutes and regulations regarding emissions into the air, except where provisions of this Code are more stringent.

(e) ***Discharges into harbor areas:*** No discharge into harbor water areas shall be permitted, unless permitted by the Maine Department of Environmental Protection under a waste discharge license and as approved by the department of parks and public works in accordance with chapter 24, article III of this Code. All private sewage disposal or private wastewater treatment facilities shall comply with the provisions of chapter 24, article II of this Code and federal and state environmental statutes and regulations regarding wastewater discharges.

(f) ***Storage of vehicles:*** Storage of any unregistered automotive vehicle on the premises for more than sixty (60) days shall not be permitted.

(g) ***Landfill of docking and berthing areas:*** Landfill of docking and berthing areas shall be governed by 38 M.R.S.A. Sections 471 through 478, and permitted only if the landfill does not reduce the amount of linear berthing areas or space, or berthing capacity. If approved, construction shall be undertaken using methods approved by the department of parks and public works and shall be accomplished in accordance with the provisions of division 25 of this article and in a manner so as to ensure that a stable and impermeable wall of acceptable materials will completely contain the fill material and will not permit any fill material to leach into docking areas or navigable waters.

(h) ***Off-street parking:*** Off-street parking is required as provided in division 20 (off-street parking) of this article.

(i) ***Off-street loading:*** Off-street loading is required as provided in division 21 of this article.

(j) ***Shoreland and flood plain management regulations:*** Any lot or portion of a lot located in a shoreland zone as

identified on the city shoreland zoning map or in a flood hazard zone shall be subject to the requirements of division 26 and/or division 26.5.

(k) ***Lighting:*** All lighting on the site shall be shielded such that direct light sources shall not unreasonably interfere with vessels transiting the harbor nor have an unreasonable adverse impact on adjacent residential zones.

(l) ***Signs:*** Signs shall be permitted as set forth in division 22 of this article.

(m) ***Storage of pollutants and oily wastes:*** On-premises storage of pollutants and oily wastes shall not be permitted for more than forty-five (45) days.

(n) ***Compatibility of nonmarine uses with marine uses:*** Nonmarine uses, structures and activities, including but not limited to access, circulation, parking, dumpsters, exterior storage and loading facilities or other structures shall neither unreasonably interfere with the existence or operation of marine uses nor significantly impede access to vessel berthing or other access to the water by existing or potential marine uses.

(Ord. No. 168-93, § 2, 1-4-93; Ord. No. 240-09/10, 6-21-10)

DIVISION 18.7. WATERFRONT SPECIAL USE ZONE*

***Editor's Note—**See the editor's note to division 18 of this article.

Sec. 14-320.5. Purpose.

The waterfront special use zone recognizes that the uses appropriate in this zone are constrained by its proximity to heavy industrial use on the western end, a high-density residential neighborhood on the north, and park and R-OS land to the east. Uses to be located in this zone must be compatible with these existing neighborhood uses.

At a minimum, parcels in this zone generally enjoy visual access to the port. It is further recognized that this area has historically been used for marine uses and that some of the parcels

have the capacity to accommodate active water-dependent uses. While physical access to the water may not currently be legally available to all parcels in this zone, it is anticipated that developments in this zone may be able to negotiate easements for access. At a minimum, development in this zone should not be incompatible with marine and water-dependent uses. Uses which contribute to the maintenance and improvement of the infrastructure along the water's edge as a condition of use are strongly encouraged.
(Ord. No. 168-93, § 2, 1-4-93)

Sec. 14-320.5.5. No adverse impact on marine uses.

No use shall be permitted, approved or established in this zone if it will have an impermissible adverse impact on future marine development opportunities. A proposed development will have an impermissible adverse impact if it will result in any one (1) or more of the following:

(a) The proposed nonwater-dependent use will displace an existing water-dependent use;

(b) The proposed use will reduce existing commercial vessel berthing space;

(c) The proposed nonwater-dependent use, structure or activities, including but not limited to access, circulation, parking, dumpsters, exterior storage or loading facilities, and other structures, will unreasonably interfere with the activities and operation of existing water-dependent uses or significantly impede access to vessel berthing or other access to the water by water-dependent uses; or

(d) The siting of a proposed nonwater-dependent use will substantially reduce or inhibit existing public access to marine or tidal waters.

(Ord. No. 168-93, § 2, 1-4-93)

Sec. 14-320.6. Permitted uses.

Subject to a determination that the proposed use meets the standards of section 14-320.5.5 (no adverse impact on marine uses):

(a) The following uses are permitted in the waterfront special use zone on both the north and south sides of the

railroad line indicated on the City of Portland Zoning Map:

1. *Marine:*

   a. Marine products, wholesaling, distribution and retailing;

   b. Marine repair services and machine shops;

   c. Tugboat, fireboat, pilot boat and similar services;

   d. Harbor and marine supplies and services, chandleries, and ship supply such as fueling and bunkering of vessels;

   e. Marine industrial welding and fabricating;

   f. Shipbuilding and facilities for construction, maintenance and repair of vessels;

   g. Commercial marine transport and excursion services, including ferries, captained charter services, sport fishing and water taxis;

   h. Cargo handling facilities, including docking, loading and related storage;

   i. Boat repair yards;

   j. Boat storage facilities, including rack storage facilities;

   k. Seafood processing;

   l. Seafood packing and packaging;

   m. Seafood loading and seafood distribution;

   n. Fabrication, storage and repair of fishing equipment;

   o. Ice-making services;

p. Facilities for marine construction and salvage;

q. Facilities for marine pollution control, oil spill cleanup, and servicing of marine sanitation devices;

r. Fabrication of marine-related goods;

s. Fishing and commercial vessel berthing;

t. Noncommercial berthing;

u. Marine office, including but not limited to offices of owners of wharves or their agents, and naval architects, and seafood brokers;

v. Public landings;

w. Marinas;

x. Intermodal transportation facilities.

2. *Industrial uses:*

Industrial uses which meet the performance standards of the I-2 zone.

3. *Public:*

Pedestrian and bicycle trails.

The following uses are permitted in the waterfront special use zone only on the north side of the railroad tracks indicated on the City of Portland Zoning Map only in (a) buildings in existence on January 4, 1993, or (b) one (1) new structure per parcel (as defined in 30-A M.R.S.A. Section 4401(6)), which parcel was in existence on January 4, 1993, of up to five thousand (5,000) square feet in total floor area. No construction of a new structure of more than five thousand (5,000) square feet in total floor area or in excess of one (1) per parcel for uses other than those specified in subsections (1) through (3) above is allowed without approval of a conditional use pursuant to section 14-320.6.5 or conditional or contract rezoning pursuant to division 1.5 of this article:

4. *Commercial uses:*

a. Professional, business, and general offices;

b. Business service establishments;

c. Restaurants, provided that food service and consumption shall be the primary function of the restaurant;

d. Cabinet and carpentry shops;

e. Cold storage facilities;

f. Museums and art galleries.

5. *Other:*

a. Accessory uses customarily incidental and subordinate to the location, function and operation of permitted uses or temporary exhibition uses, provided that all such exhibition uses on a lot do not exceed a combined total of sixty (60) days per year and that the total floor area utilized for such uses does not exceed seventy thousand (70,000) square feet at any one (1) time;

b. Parking: Parking shall be permitted as long as it does not impede access to water by existing or potential marine uses.

c. Institutional uses including marine research, education and laboratory facilities. Such uses shall not include any type of overnight accommodations.

d. Wind energy systems, as defined and allowed in Article X, Alternative Energy.

6. *Public:*

a. Utility substations, including sewage collection and pumping stations, water pumping stations, transformer stations, telephone

electronic equipment enclosures and other similar structures, provided that such structures are located more than one hundred (100) feet from the water;

b. Municipal uses;

c. Landscaped pedestrian parks, plazas and similar outdoor pedestrian spaces, including without limitation pedestrian and bicycle trails.

7. *Industrial uses:*

Warehousing and wholesaling.

(Ord. No. 168-93, § 2, 1-4-93; Ord No. 187-99, 1-4-99; Ord. No. 33-11/12, 1-18-12)

Sec. 14-320.6.5. Conditional uses.

(a) The following uses shall be permitted only upon the issuance of a conditional use permit, subject to the provisions of sections 14-320.5.5, 14-474 and any special provisions, standards or requirements specified below, and further provided that, notwithstanding section 14-474(a) or any other provision of this Code, the Planning Board shall be substituted for the board of appeals as the reviewing authority:

1. Any use permitted in section 14-320.6(d)2, 4, 5 or 6, (e), (f) or (g), in one (1) new structure of more than five thousand (5,000) square feet, but not more than ten thousand (10,000) square feet in total floor area per parcel.

(b) The following use shall be permitted only upon the issuance of a conditional use permit subject to the provisions of section 14-474 (conditional uses), and any special provisions, standards or requirements specified below:

1. Temporary wind anemometer towers, as defined in Sec 14-47, are permitted provided the following standards are met in addition to Sec 14-430:

a. Towers may be installed for the purpose of wind data collection for no more than two (2)

years after the issuance of a Certificate of Occupancy for the tower. At the conclusion of the aforementioned two (2) years, the tower must be dismantled and removed from the site within sixty (60) days; and

b. Towers shall be constructed according to plans and specifications stamped by a licensed professional engineer, which shall be provided to the Board of Appeals with the application; and

c. Towers shall be set back from habitable buildings by a distance equal to 1.1 times the tower height; and

d. The applicant shall provide a safety report prepared and stamped by a licensed professional engineer to the Board of Appeals with their application for conditional use, which demonstrates how the proposed temporary wind anemometer tower is safe in terms of strength, stability, security, grounding, icing impacts and maintenance; and

e. The applicant shall provide evidence of commercial general liability insurance, such insurance to be satisfactory to Corporation Counsel and cover damage or injury resulting from construction, operation or dismantling of any part of the temporary wind anemometer tower; and

f. Towers and associated guy wires shall be sited to minimize their prominence from and impacts on public ways (including pedestrian ways); and

g. Towers shall be used for installing anemometers and similar devices at a range of heights from the ground to measure wind characteristics (speed, direction, frequency) and related meteorological data, but shall not be used for any other purpose; and

h. A performance guarantee shall be required for the cost of removal of the tower, guy wires and anchors. This requirement may be satisfied by surety bond, letter of credit, escrow account or by evidence, acceptable to the City, or the financial and technical ability and commitment of the applicant or its agents to remove the facility at the end of the use period.

2. Wind energy systems, as defined and allowed in Article X, Alternative Energy.

(Ord. No. 168-93, § 2, 1-4-93; Ord. No. 29-09/10, 8-3-09, emergency passage; Ord. No. 33-11/12, 1-18-12)

Sec. 14-320.7. Contract or conditional zoning.

An applicant may only construct a new structure of either more than five thousand (5,000) square feet in total floor area for occupancy by uses enumerated in section 14-320.6(d)1, or ten thousand (10,000) square feet in total floor area for occupancy by uses enumerated in section 14-320.6(d)2, 4, 5 or 6, (e), (f) or (g) or in excess of one (1) per parcel for occupancy by those same uses if a rezoning is approved pursuant to division 1.5 of this article. A conditional or contract rezoning shall only be approved if, after public hearing and opportunity for public comment, the reviewing body finds that the applicant has carried the burden of proof to show that the proposed development meets the standards of section 14-320.55 and all of the following standards:

(a) The proposed development is consistent with the comprehensive plan.

(b) The project's public benefits outweigh its potential negative impacts, taking into consideration as public benefits protection of existing water-dependent uses, preservation of future water-dependent use development opportunities, contribution to the development of and/or on-going maintenance of the marine infrastructure for commercial vessels (either on- or off-site), and visual and physical access to the waterfront for the general public.

(c) The proposed development responds to any unique physical conditions and development opportunities along the

shoreline.

(d) The proposed development is sensitive to design opportunities and local environmental conditions, makes use of creative design solutions, does not significantly restrict air, light or water views of other structures located in the vicinity and does not create significant adverse local climatic effects such as increased winds, shadowing, or less efficient traffic, parking or circulation patterns.

(e) The proposed development is consistent with the Portland Waterfront Public Access Design Guidelines, a copy of which is on file in the department of planning and urban development.

(f) The proposed rezoning contains adequate provisions and/or conditions to ensure that the water-dependent use is not abandoned after the project is developed.

(Ord. No. 168-93, § 2, 1-4-93)

Sec. 14-320.8. Prohibited uses.

Uses which are not enumerated in section 14-320.6 as permitted or in section 14-320.6.5 as conditional uses are prohibited.

(Ord. No. 168-93, § 2, 1-4-93)

Sec. 14-320.9. Dimensional requirements.

In addition to the provisions of article III, division 25 of this Code, lots in the waterfront special use zone shall be subject to the following requirements:

(a) *Minimum lot size:* None.

(b) *Minimum frontage:* None.

(c) *Minimum yard dimensions:*

Front setback: None.

Side setback: None required unless adjacent to a residential zone; if adjacent to a residential zone, twenty-five (25) feet.

Rear setback: None required unless adjacent to a

residential zone; if adjacent to a residential zone, twenty-five (25) feet.

Setback from pier line: Notwithstanding the above requirements, a minimum setback of five (5) feet from the edge of any pier, wharf or bulkhead shall be required for any structure. The setback area may be utilized for activities related to the principal uses carried on in the structure, subject to the provisions of sections 14-313 and 14-314, but shall not be utilized for off-street parking. The edge of any pier, wharf or bulkhead shall include any attached apron(s).

(d) ***Maximum lot coverage:*** One hundred (100) percent.

(e) 1. ***Maximum building height:*** Forty-five (45) feet, except in the area formed by the projection of the centerline of Atlantic Street between its intersections with Wilson Street and the Eastern Promenade easterly to the easternmost boundary of the waterfront special use zone, where facilities for bulk storage of materials delivered to a site by waterborne transportation or awaiting transportation from the site by means of waterborne transportation may be erected to heights that shall not exceed sixty-five (65) feet above mean sea level. In those areas where the maximum height may not exceed forty-five (45) feet above grade, no structure may exceed sixty-five (65) feet in height above mean sea level. For purposes of this section, a projection of the centerline of a street shall consist of an extension of the centerline of the street to the water side boundary of the waterfront special use zone.

2. ***Additional bulk, height and location standards for structures exceeding forty-five (45) feet in height above grade within the waterfront special use zone:***

a. The maximum horizontal diagonal measurement of portions of a structure, cluster of structures or equipment exceeding forty-five (45) feet in height above grade shall not exceed one hundred (100) feet, except that for each foot that the structure, cluster of structures, or

equipment is lowered from the maximum permitted height, the maximum horizontal measurement may increase by one (1) foot.

b. In addition to any other setback requirements, portions of structures or clusters of structures exceeding forty-five (45) feet in height above grade shall be set back a minimum of one (1) foot from the exterior property line of the owner of the underlying fee interest for each foot that the structure or cluster of structures exceeds forty-five (45) feet in height above grade.

c. No structure or cluster of structures exceeding forty-five (45) feet in height above grade may be located closer than one hundred fifty (150) feet from any other such structure or cluster of structures.

d. The cumulative width of the portion of structures exceeding forty-five (45) feet in height above grade shall not exceed more than thirty (30) percent of the average width of the lot as measured by a line drawn parallel to the water.

e. No structure shall exceed forty-five (45) feet in height above grade within the view corridors established by the projection of the street right-of-way lines for Atlantic Street, Vesper Street or for O'Brion Street.

f. For purposes of this section only, moveable elements such as cranes and gantries, and connection devices such as conveyors or bridges shall not be subject to the space and bulk requirements, but shall be subject to a determination by the Federal Aviation Administration that the location of such equipment will not create a hazard to navigation. Other rooftop appurtenances shall not exceed the maximum height limits set forth in this section.

g. The applicant must provide a determination from the Federal Aviation Administration that structures and equipment will not exceed the applicable height guidelines for the runway approach and will not create a hazard to navigable airspace. Such a determination shall be accepted as conclusive evidence that the proposed development will not create a hazard.

h. Accessory uses in structures which exceed forty-five (45) feet in height above grade shall not be located higher than forty-five (45) feet within the structure.

(Ord. No. 168-93, § 2, 1-4-93)

Sec. 14-320.10. Performance standards.

All uses in the waterfront special use zone shall comply with the following standards:

(a) *Outdoor storage of materials:* Outdoor storage of commodities and materials accessory to normal conduct of business, except pilings and/or cranes, shall be permitted to a maximum height of forty-five (45) feet, and such materials shall be entirely contained, including runoff contaminants and residual material, within a designated area within the lot boundaries.

(b) *Noise:*

1. The level of sound, measured by a sound level meter with frequency weighting network (manufactured according to standards prescribed by the American National Standards Institute, Inc.), inherently and recurrently generated within the waterfront special use zone between the hours of 7:00 p.m. and 7:00 a.m. from industrial facilities or operations commenced on or after July 1, 1988, shall not exceed fifty-five (55) decibels on the A scale at or within the boundaries of any residential zone, except for sound from construction activities, sound from traffic on public streets, sound from temporary activities such as festivals, and sound created as a result of, or relating to, an emergency, including sound from emergency warning

signal devices.

2. In measuring sound levels under this section, sounds with a continuous duration of less than sixty (60) seconds shall be measured by the maximum reading on a sound level meter set to the A weighted scale and the fast meter response (L maxfast). Sounds with a continuous duration of sixty (60) seconds or more shall be measured on the basis of the energy average sound level over a period of sixty (60) seconds (LEQ_1).

3. In addition to the sound level standards otherwise established, facilities or operations established or built in the waterfront special use zone on or after July 1, 1988, shall employ best practicable sound abatement techniques to prevent tonal sounds and impulse sounds or, if such tonal and impulse sounds cannot be prevented, to minimize the impact of such sounds in residential zones. Tonal sound is defined as a sound wave usually perceived as a hum or which because its instantaneous sound pressure varies essentially as a simple sinusoidal function of time. Impulse sounds are defined as sound events characterized by brief excursions of sound pressure, each with a duration of less than one (1) second.

(c) ***Vibration:*** Vibration inherently and recurrently generated shall be imperceptible without instruments at lot boundaries. This shall not apply to vibration resulting from activities aboard a vessel or from railroad vehicle activities, or from activities on a pile supported pier.

(d) ***Federal and state environmental regulations:*** All uses shall comply with federal and state environmental statutes and regulations regarding emissions into the air, except where provisions of this Code are more stringent.

(e) ***Discharges into harbor areas:*** No discharge into harbor water areas shall be permitted, unless permitted by the Maine Department of Environmental Protection under a waste discharge license and as approved by the department of parks and public works in accordance with chapter 24,

article III of this Code. All private sewage disposal or private wastewater treatment facilities shall comply with the provisions of chapter 24, article II of this Code and federal and state environmental statutes and regulations regarding wastewater discharges.

(f) ***Storage of vehicles:*** Storage of any unregistered automotive vehicle on the premises for more than sixty (60) days shall not be permitted.

(g) ***Landfill of docking and berthing areas:*** Landfill of docking and berthing areas shall be governed by 38 M.R.S.A. Sections 471 through 478, and permitted only if the landfill does not reduce the amount of linear berthing areas or space, or berthing capacity. If approved, construction shall be undertaken using methods approved by the department of parks and public works and shall be accomplished in accordance with the provisions of division 25 of this article and in a manner so as to ensure that a stable and impermeable wall of acceptable materials will completely contain the fill material and will not permit any fill material to leach into docking areas or navigable waters.

(h) ***Off-street parking:*** Off-street parking is required as provided in division 20 (off-street parking) of this article.

(i) ***Off-street loading:*** Off-street loading is required as provided in division 21 of this article.

(j) ***Shoreland and flood plain management regulations:*** Any lot or portion of a lot located in a shoreland zone as identified on the city shoreland zoning map or in a flood hazard zone shall be subject to the requirements of division 26 and/or division 26.5.

(k) ***Lighting:*** All lighting on the site shall be shielded such that direct light sources shall not unreasonably interfere with vessels transiting the harbor nor have an unreasonable adverse impact on adjacent residential zones.

(l) ***Signs:*** Signs shall be permitted as set forth in division 22 of this article.

(m) ***Storage of pollutants and oily wastes:*** On-premises storage of pollutants and oily wastes shall not be permitted for more than forty-five (45) days.

(n) ***Compatibility of nonmarine uses with marine uses:*** Nonmarine uses, structures and activities, including but not limited to access, circulation, parking, dumpsters, exterior storage and loading facilities or other structures shall neither unreasonably interfere with the existence or operation of marine uses nor significantly impede access to vessel berthing or other access to the water by existing or potential marine uses.

(Ord. No. 168-93, § 2, 1-4-93; Ord. No. 240-09/10, 6-21-10)

DIVISION 19. R-P RESOURCE PROTECTION ZONE

Sec. 14-321. Use.

No building shall be erected, altered, enlarged, rebuilt or used, and no premises shall be used, in a R-P resource protection zone except for the following uses:

(a) Nonintensive recreational uses not requiring structures, such as fishing and hiking;

(b) Motorized and nonmotorized vehicular traffic on existing roads, trails and rails, as appropriate;

(b2) Bikeways, pedestrian trails and walkways;

(c) Fire prevention activities;

(d) Wildlife management activities;

(e) Soil and water conservation activities;

(f) Surveying and natural resource analysis;

(g) Emergency operations as defined in section 14-47;

(h) Harvesting of wild crops;

(i) Nonresidential structures for educational, scientific or nature interpretation purposes, containing a maximum

floor area of not more than ten thousand (10,000) square feet;

(j) Public and private parks and recreational areas, including one (1) or more structures containing a total maximum floor area of not more than ten thousand (10,000) square feet;

(k) Permanent and temporary piers, docks, wharves, bridges and uses projecting into water bodies, as allowed in section 14-449(b);

(l) Reserved;

(m) Storehouses for fishermen's gear;

(n) Reserved;

(o) Essential services as defined in section 14-47 accessory to the uses permitted herein;

(p) Signs, as allowed in division 22 of this article;

(q) Road construction, in accordance with the provisions of section 14-449;

(r) Parking facilities for uses permitted under this section;

(s) Reserved;

(t) Landfill and other earth-moving activity, as allowed in section 14-449(d).

(u) The following uses are permitted in the R-P zone only upon the issuance of a conditional use permit, subject to the provisions of section 14-474 (conditional uses) of this article and any special provisions, standards or requirements specified below.

1. Temporary wind anemometer towers, as defined in section 14-47, are permitted provided the following standards are met in addition to section 14-430:

a. Towers may be installed for the purpose of wind data collection for no more than two (2)

years after the issuance of a certificate of occupancy for the tower. At the conclusion of the aforementioned two (2) years, the tower must be dismantled and removed from the site within sixty (60) days; and

b. Towers shall be constructed according to plans and specifications stamped by a licensed professional engineer, which shall be provided to the board of appeals with the application; and

c. Towers shall be set back from habitable buildings by a distance equal to 1.1 times the tower height; and

d. The applicant shall provide a safety report prepared and stamped by a licensed professional engineer to the board of appeals with their application for conditional use, which demonstrates how the proposed temporary wind anemometer tower is safe in temrs of strength, stability, security, grounding, icing impacts and maintenance; and

e. The applicant shall provide evidence of commercial general liability insurance, such insurance to be satisfactory to corporation counsel and cover damage or injury resulting from construction, operation or dismantling of any part of the temporary wind anemometer tower; and

f. Towers and associated guy wires shall be sited to minimize their prominence from and impacts on public ways (including pedestrian ways); and

g. Towers shall be used for installing anemometers and similar devices at a range of heights from the ground to measure wind characteristics (speed, direction, frequency) and related meterorological data, but shall not be used for any other purpose; and

h. A performance guarantee shall be required for the cost of removal of the tower, guy wires and anchors. This requirement may be satisfied by surety bond, letter of credit, escrow account or by evidence, acceptable to the City, of the financial and technical ability and commitment of the applicant or its agents to remove the facility at the end of the use period.

2. Wind energy systems, as defined and allowed in Article X, Alternative Energy.

(Code 1968, § 602.13A.A; Ord. No. 499-74, § 6, 8-19-74; Ord. No. 15-92, § 24, 6-15-92; Ord. No. 33-11/12, 1-18-12)

Sec. 14-322. Space and bulk.

No building or structure shall be erected, altered, enlarged, rebuilt, or used in a R-P resource protection zone which does not comply with the following requirements:

(a) *Minimum rear yards:* Principal building or structure, other than a boathouse or storehouse for fishermen's gear: Seventy-five (75) feet.

(b) *Minimum side yards:*

1. Principal building or structure: Fifteen (15) feet.

2. Accessory building or structure: Five (5) feet.

(c) *Minimum side yard on side streets:*

1. Principal building or structure: Twenty (20) feet.

2. Accessory building or structure: Twenty (20) feet.

(d) *Minimum front yards:*

1. Principal building or structure: Twenty-five (25) feet.

2. Accessory building or structure: Twenty-five (25) feet.

(e) *Maximum height:*

1. Principal building or structure: Two (2) stories or twenty-five (25) feet.

2. Accessory building or structure: One (1) story or fifteen (15) feet.

(f) *Maximum building area:* Principal building or group of buildings: Ten (10) percent of lot area.

(g) *Minimum lot area:* Twenty thousand (20,000) square feet.

(h) *Minimum width of lot:* One hundred (100) feet.

(i) *Minimum lot frontage on street or shoreline:* One hundred (100) feet.

(j) *Minimum shoreline setback:* All principal structures other than permitted piers, docks, wharves, breakwaters, causeways, bridges, boathouses and storehouses for fishermen's gear: Seventy-five (75) feet.

(Code 1968, § 602.13A.B; Ord. No. 499-74, § 6, 8-19-74)

Sec. 14-323. Off-street parking.

Any off-street parking in a R-P resource protection zone is required as provided in division 20 of this article.

(Code 1968, § 602.13A.B; Ord. No. 499-74, § 6, 8-19-74)

Sec. 14-324. Shoreland and flood plain management regulations.

Any lot or portion of a lot located in a shoreland zone as identified on the city shoreland zoning map or in a flood hazard zone shall be subject to the requirements of division 26 and/or division 26.5.

(Ord. No. 15-92, § 25, 6-15-92)

DIVISION 19.5. HELISTOP OVERLAY ZONE

Sec. 14-325. Purpose.

The intent of this zone is to create an overlay zone in which helicopter landing areas are permitted on individual sites in addition to those uses permitted in the underlying zone. The

purpose of this zone is to protect the public health and safety by allowing helicopters serving medical needs to land in certain areas, while protecting surrounding areas from any negative effects associated with such a use.
(Ord. No. 48-93, 7-19-93)

Sec. 14-326. Helistop defined.

A helistop, for purposes of this division, shall be defined as an area used for the landing of helicopters at any location other than an airport. Such area shall include a landing area or pad, and may include parking required for access to the landing area or pad, a loading and unloading area for emergency vehicles, and other related facilities other than maintenance and repair facilities.
(Ord. No. 48-93, 7-19-93)

Sec. 14-327. Regulations for helistops.

(a) *Helistops which have more than five landings per month:*

(1) All such helistops must comply with all applicable Federal Aviation Association regulations, including those for marking of landing areas.

(2) All take-off, landing and parking areas at such a helistop site shall be surfaced with grass or with a dust-proof material.

(3) Each landing pad shall be set back at least two hundred (200) feet from any residence, school or church. Each landing pad shall be set back at least fifty (50) feet from any commercial or industrial structure. All setbacks shall be measured from the edge of the landing pad.

(4) The area in which a landing pad is located shall be enclosed by a fence or other barrier of not less than three (3) feet in height or shall be secured by a locked gate, as approved by the fire department.

(5) All such helistops shall be subject to review under article V of this chapter.

(b) *Helistops which have five or fewer landings per month:*

(1) All such helistops must comply with all applicable

Federal Aviation Association regulations.

(2) All such helistops shall be subject to approval by the zoning administrator and the fire department.

(3) Such helistops shall not be subject to review under article V of this chapter.

(Ord. No. 48-93, 7-19-93)

Sec. 14-328 – Sec. 14-330. Reserved.

DIVISION 19.7. RESERVED.

Sec. 14-330.1. – Sec. 14-330.5 Reserved.

***Editor's Note-** Pursuant to Order 142-06/07 passed on 2/21/07 repealed Division 19.7.(Formula Businesses) Sections 14-330.1.-14-330.5. in its entirety and established a task force on business diversity to develop a strategy for preserving and enhancing the economic health of Portland's downtown business district related to its unique character, business diversity, economic vitality, and quality of life. As part of its charge, the Task Force shall undertake the following actions:

1. Study and report on the strengths and challenges of various regulatory tools
used in other municipalities to maintain business diversity, including community impact review; formula business restrictions; local purchasing preferences; site plan review standards; Tax Increment Financing; and District Improvement Financing.

2. Consider the legality of the various regulatory tools noted in paragraph 1.

3. Consider the potential economic impact of the various regulatory tools noted in paragraph 1 on the downtown business district, including but not limited to consideration of measured impacts of the Formula Business Ordinance adopted in November of 2006; development patterns in and surrounding the downtown business district; review of lease rates and real estate values within the downtown business zone; and a review of openings and closings of establishments within the zone in the recent past.

4. Upon completion of its review, the Task Force will prepare a report summarizing its research and findings, including any recommendations needed to maintain the economic health of Portland's downtown business district. Such report shall be submitted to the Council and Planning Board for review and consideration.

The Task Force shall consist of 15 individuals appointed by the Mayor representing the following groups:

Portland City Council: Two City Councilors who shall be Co-chairs.
One representative nominated by the Maine Real Estate and Developers Association.
One representative nominated by the Portland Community Chamber of Commerce.
One representative nominated by Portland Buy Local.
One representative nominated by the Bayside Community Development Corporation.
One representative nominated by the Portland Downtown District.
One District One resident.
One District Two resident.
One District Three resident.
One District Four resident.
One District Five resident.
One representative of formula businesses.
One representative of small independent businesses.
One representative of downtown Portland property owners.

DIVISION 19.8. DOWNTOWN ENTERTAINMENT OVERLAY ZONE

Sec. 14-330.11. Purpose.

The purpose and intent of this section is to regulate the location of businesses with entertainment licenses in order to maintain and improve public safety and the quality of life of Portland residents by preventing an over concentration of businesses with entertainment licenses, particularly those which also have liquor licenses, and the public safety problems that have and will be experienced when too many of these businesses are located too close to each other. These problems include large late-night crowds within which fights and assaults, disorderly conduct and other breaches of the peace occur and that are difficult to effectively police and that expose not only innocent bystanders but also police officers to danger and personal injury.
(Ord. No. 164-06/07, 4-4-07)

Sec. 14-330.12. Definitions.

(a) *After-hours entertainment license.* For the purpose of the after-hours entertainment prohibition in section 14-330.15, "after-hours entertainment license" means any of the music, dancing and special entertainment licenses required or authorized by article III, chapter 4 of this Code.

(b) *Downtown entertainment overlay zone.* For the purposes of this section, the "downtown entertainment overlay zone"

includes and is defined by the boundaries of the following zones as shown on the attached downtown entertainment overlay zone map: B-3, B-3(c) and WCZ zones, a copy of which is on file in the department of planning and urban development.

Any property that lies partly within the overlay zone and partly outside it shall be subject to this ordinance.
(Ord. No. 164-06/07, 4-4-07)

Sec. 14-330.13. Dispersal requirement for facilities with entertainment license in downtown entertainment overlay zone.

A business with an entertainment license as required or authorized by section 4-51(a) of this code located within the downtown entertainment overlay zone may not be located within 100 feet of another business with an entertainment license, as measured along or across public ways from the main entrance or entrances of each.
(Ord. No. 164-06/07, 4-4-07)

Sec. 14-330.14. Exemption.

(a) A business with an entertainment license located in the downtown entertainment overlay zone on or before January 3, 2006 shall not have to comply with the requirements of this section and if located within 100 feet of another licensee shall be considered a non-conforming use controlled by chapter 14, division 23 of this code. Such a business is considered an entertainment business for the purpose of calculating dispersion requirements under section 14.330.13 for a new or relocating entertainment business in the downtown entertainment overlay zone.

(b) A business with an entertainment license that does not allow amplified entertainment shall not have to comply with the dispersal requirement of section 14-330.13.
(Ord. No. 164-06/07, 4-4-07; Ord. No. 68-09/10, 10-19-09)

Sec. 14-330.15. Separate business entities.

Where two or more entertainment businesses operate on one site, and where each business entity requires or has a separate business license, or displays in a manner visible from public property separate business trademarks, logos, service marks or other mutually identifying names or symbols, each business entity shall be counted as a separate entertainment business for

the purpose of this section.
(Ord. No. 164-06/07, 4-4-07)

Sec. 14-330.16. Conditions on after-hours food service in the downtown entertainment overlay zone.

(a) Following a hearing held pursuant to chapter 15, section 15-10, the clerk may impose conditions to maintain or improve public safety on the food service license of any business in the downtown entertainment overlay zone that operates between 1:00 a.m. and 4:00 a.m., following a written recommendation from the Portland police department that such conditions are necessary.

(b) The clerk's decision may be appealed to the city manager pursuant to section 15-9 of this code.

(c) Nothing in this section shall be construed to limit the clerk's authority in chapter 15 to deny, suspend or revoke any license pursuant to the standards and process in that chapter.
(Ord. No. 164-06/07, 4-4-07)

DIVISION 20. OFF-STREET PARKING

Sec. 14-331. Defined.

Off-street parking, either by means of open-air spaces or by garage spaces which meet the standards set forth in the City of Portland Technical Manual, as hereafter amended, in addition to being a permitted use in certain zones, shall be considered as an accessory use when required or provided to serve conforming uses in any zone.
(Code 1968, § 602.14.A; Ord. No. 272-77, 5-16-77; Ord. No. 389-89, § 1, 4-3-89; Ord. No. 278-09/10, 7-19-10)

Cross reference(s)—Definitions and rules of construction generally, § 1-2.

Sec. 14-332. Uses requiring off-street parking.

Except as provided in Section 14-332.1, 14-332.2 (exceptions) and 14-345 (fee in-lieu of parking) of this division, for the uses listed below the following minimum off-street parking requirements shall be provided and maintained in the case of new construction, alterations which increase the number of units, and changes of use:

(a) *Residential structures:*

1. For new construction, two, (2) parking spaces for each dwelling unit, plus one (1) additional parking space for every six (6) units or fraction thereof.

2. For alterations or changes of use in existing structures, which create new or additional dwelling units in such structures, and for accessory units pursuant to §§14-68,78,88, one (1) additional parking spaces for each such unit. Existing parking spaces shall not be used to meet the parking requirements of this paragraph, unless the existing parking spaces exceed one (1) space for each dwelling unit.

3. For residential development on the peninsula (area defined as southerly of I-295).

   a. One (1) space per unit;

   b. The required parking for multi-unit residential buildings may be partially met through provision of shared-use vehicles, which are vehicles owned and maintained by the owner/manager of the building and available for use on a fee basis to the residents of the building. One shared use vehicle shall be deemed to satisfy eight (8) required car spaces, but in no case shall more than 50% of the parking requirement be satisfied by shared vehicle use.

   c. The planning board may establish a parking requirement that is less than the normally required number of spaces upon a finding of unique conditions that result in a lesser parking demand, such as housing for persons who cannot drive, housing that participates in a travel demand management program, availability of transit, or housing which includes permanent restrictions on automobile usage, and which is permanently restricted from utilizing resident on-street parking stickers.

4. For residential development in the B-2, B-2b, B-2c zones:

a. One (1) parking space per dwelling unit.

(b) ***Motel:*** One (1) parking space for each sleeping room.

(c) ***Hotels:*** One (1) parking space for each four (4) guest rooms.

(d) ***Schools providing instruction for students up to and including those fifteen (15) years of age:*** One (1) parking space for each room used for purposes of instruction.

(e) ***Schools providing instruction for students sixteen (16) years of age and over:*** One (1) parking space for each ten (10) seats or major fraction thereof, used for purposes of instruction; if no fixed seats, one (1) parking space for each one hundred (100) square feet or major fraction thereof used for purposes of instruction.

(f) ***Hospitals:*** One (1) parking space for each five hundred (500) square feet or major fraction thereof, of floor area, exclusive of cellar.

(g) ***Auditoriums, theaters, assembly halls, funeral homes:*** One (1) parking space for each five (5) seats or for each one hundred (100) square feet, or major fraction thereof, of assemblage space if no fixed seats.

(h) ***Retail stores:*** One (1) parking space for each two hundred (200) square feet of first floor area in excess of two thousand (2,000) square feet not used for bulk storage and one (1) parking space for each seven hundred (700) square feet, or major fraction thereof, for each floor above the first floor not used for bulk storage.

(i) ***Restaurants or establishments constructed and intended for the dispensing of food and drink as the principal activity:*** One (1) parking space for each one hundred fifty (150) square feet, or major fraction thereof, of floor area not used for bulk storage or food preparation.

(j) ***Offices; professional and public buildings:*** One (1) parking space for each four hundred (400) square feet, or major fraction thereof, of floor area exclusive of cellar not used for bulk storage.

(k) ***Places of assembly (which includes private club and fraternal halls, places of religious assembly, and community halls):*** One (1) parking space for reach one hundred and twenty five (125) square feet, or major fraction thereof, of floor area used for assembly area not including bathrooms, bulk storage, stairways, closets or other non-assembly areas.

(l) ***For that part of every business, manufacturing, and industrial building not catering to retail trade and with floor area over three thousand (3,000) square feet:*** One (1) parking space for each one thousand (1,000) square feet of floor area, or major fraction thereof.

(m) ***Hostels:*** One (1) parking space for each eight (8) beds, or major fraction thereof. This requirement may be reduced to one (1) parking space for each twelve (12) beds if the site is within one quarter (1/4) mile of a public transit stop.

(n) ***Long-term, extended care and intermediate care facilities:*** One (1) parking space for each five (5) beds, or major fraction thereof, plus one (1) parking space per each employee normally present during one (1) weekday morning shift.

(o) ***Lodging houses:*** One (1) parking space for each five (5) rooming units, except in the R-5 zone; in the R-5 zone, one (1) parking space for every two (2) rooming units.

(p) ***Sheltered care group homes and emergency shelters:*** One (1) parking space for every two (2) employees.

(q) ***Congregate care facilities:*** One (1) parking space for every three (3) living units.

(r) ***Special needs independent living units:*** One (1) parking space per every four (4) living units, plus one (1) parking space for each staff member, if any, normally present at any one time.

(s) *Bed and breakfast:*

1. *Except in the I-B zone:* One (1) parking space for each two (2) guest rooms or fraction thereof for the first four (4) guest rooms; one (1) parking space for each additional guest room in excess of four (4).

2. *In the I-B zone:* No off-street parking required.

(t) *Day care facilities*: Off-street parking shall be provided on the site for all staff of the facility. Parking for the facility shall not interfere with access to or use of play areas. In residential zones parking spaces may be stacked or placed side by side in order to less their impact on the residential character of the lots and the neighborhood, and shall not be located closer than five (5) feet from the property line of any abutting residential use or residentially zoned site.

(u) *Private clubs:* One (1) parking space for each one hundred fifty (150) square feet, or major fraction thereof, of floor area.

(v) *Neighborhood Centers:* One (1) parking space for each 150 square feet, or major fraction thereof, of floor area, except for neighborhood centers which serve primarily clientele from the surrounding neighborhood, the parking requirement shall be one (1) parking space per 1,000 square feet, or major fraction thereof, of floor area.

(Code 1968, § 602.14.B; Ord. No. 268-77, 5-16-77; Ord. No. 431-82, § 2, 2-22-82; Ord. No. 575-86, §§ 1, 2, 5-19-86; Ord. No. 65-87, 11-2-87; Ord. No. 230-90, § 2, 3-5-90; Ord. No. 33-91, § 14, 1-23-91; Ord. No. 243-91, § 1, 3-11-91; Ord. No. 33A-91, § 8, 4-17-91; Ord. No. 125-97, § 10, 3-3-97; Ord. No. 232, §4, 3-15-99; Ord. No. 94-99, 11-15-99; Ord. No. 77-02/03, § 1, 10-21-02; Ord. No. 199-04/05, 4-4-05; Ord. No. 84-08/09, 10-20-08; Ord. No.36-09/10, 8-17-09; Ord. No. 127-09/10, 1-4-10 emergency passage; Ord. No. 240-09/10, 6-21-10; Ord. No. 241-09/10, 11-15-10; Ord. No. 149-10/11, 3-7-11; Ord. No. 279-09/10, 6-6-11)

Sec. 14-332.1. Zone specific off-street parking exceptions and modifications.

The off-street parking requirements established for uses, established above in section 14-332 of this division, are hereby modified for the following zones a according to the provisions

described below.

(a) ***IR-3, Island Residential Zone, Off-street parking:*** Off-street parking shall not be required irrespective of the requirements of division 20 (off-street parking) of this article.

(b) ***USM Overlay Zone, parking:*** The parking requirements of section 14-332 (division 2) shall not apply to university buildings. Instead, the amount of parking required for any university building or building addition shall be determined by the planning board during site plan review, based on an analysis of campus-wide parking demand and supply, pursuant to a comprehensive university parking management plan, and treating all contiguous land (including land on opposite sides of the street) owned by the university as one lot. In determining the amount of parking required for any university building, the planning board may take into account such factors as:

1. The availability of off-campus parking and shuttle transportation to and from such off-campus facilities.

2. The ratio of commuter students to resident students.

3. The use of centrally located on-campus parking facilities so situated that students, faculty, staff and visitors arriving on campus can reasonably be expected to park in the central facilities and walk to their various on-campus destinations during the course of a school day.

4. Shared use of a single parking facility by two or more buildings when the peak parking demand period for such buildings do not overlap.

5. Development and implementation of a parking management plan which discourages on-street parking. On-street parking shall not be used to satisfy the university's parking demand.

6. Development and implementation of programs designed to reduce the number of automobiles

parking on campus, such as ride share programs and incentives for use of bicycles and public transportation.

(c) ***Recreation open space zone:*** Off-street parking adequate to serve projected employee and visitor needs shall be provided. Parking needs projections provided by the applicant or the planning department should be considered in the review.

(d) *Change of use in the B-2b zone:*

1. A change of use of 10,000 sq. ft. or less of floor area of a building or a portion of a building need not provide parking for non-residential uses, provided that if the number of existing parking spaces serving the site is less than the requirements of this division, that number of parking spaces may not be reduced lower than the required amount prior to the change of use except:

   a. To the extent necessary to meet the requirements of the Americans with Disability Act; or

   b. To the extent it is a requirement or a condition of site plan review; or

   c. To the extent the change of use requires less parking than the previous use and the total number of parking spaces serving the site exceeds the parking requirements of this division for all uses on the site including the change of use.

2. A newly constructed building, a building addition or a change of the use of a building exceeding 10,000 sq. ft. of floor area, shall provide the parking required by this division.

(e) ***B-3 Zone***: No off-street parking is required for changes of use.

(f) ***I-R1, Island Business Zone:*** Off-street parking shall be required at twenty-five (25%) percent of the

required number of parking spaces for specified uses as provided in division 20 (off-street parking) of this article, except that residential uses shall meet the full parking requirement.

(g) *B-5 Zone:* No off-street parking shall be required.

(h) *B-6 Eastern Waterfront Mixed Use Zone:* Off-street parking for all projects regardless of size shall be governed by 14-332.2(c) of this article.

(i) *B-7, Mixed Development District Zone:* Off-street parking for all projects regardless of size, shall be governed by 14-332.2(c) of this article.

(j) *Waterfront Zone parking requirements; Eastern Waterfront Port Zone; Waterfront Central Zone; Waterfront Port Development Zone; Waterfront Special Use Zone*: Off-street parking is required at fifty (50%) percent of the required number of parking spaces for specifi8ed uses as otherwise provided in division 20 of this article.

(Ord. No. 240-09/10, 6-21-10)

Sec. 14-332.2. Categorical exceptions and modifications to off-street parking requirements.

Regardless of which zone a project of use is located, the following exceptions to the off-street parking requirements listed above in section 14-332 are additionally hereby established.

(a) *Home occupations, Section 14-410:* Any need for parking generated by the conduct of a home occupation allowed under section 14-410 of this article shall be met off the street and other than in a required front yard.

(b) *Incentives for affordable housing- parking reductions:* For each affordable housing unit for rent or sale within an eligible project under the Affordable Housing Ordinance established in 14-488(b) of this article, no more than one (1) parking space shall be required. The planning board may establish a parking requirement for affordable housing units for rent or sale within an eligible project that is less than one (1) parking

space per affordable housing unit, regardless of the size of the structure.

(c) *Site plans over 50,000 square feet and projects in the B-6, B-7, and USM Overlay Zones:* Where construction is proposed of new structures having a total floor area in excess of fifty thousand (50,000) square feet, the planning board shall establish the parking requirement for such structures. The parking requirement shall be determined based upon a parking analysis submitted by the applicant and upon the recommendation of the city transportation engineer.

(d) *Exception for historic structures:* No parking in excess of that existing on or servicing the lot as of March 15, 1999 shall be required for any structure under Article IX of this chapter, as a contributing structure in a local or National Register historical district, or as a locally designated or National Register landmark building; however, parking may not be decreased from that existing on or servicing the lot on March 15, 1999 except to the extent necessary to meet the requirements of the Americans with Disabilities Act.

(Ord. No. 240-09/10, 6-21-10)

Sec. 14-332.3. Uses requiring off-street bicycle parking.

In all zones where off-street motor vehicle parking is required, minimum off-street bicycle parking requirements shall be provided and maintained in the case of new construction, alterations and changes of use as specified in Section 14-526(a)(2) (Site Plan Standards).

(Ord. NO. 134-07/08, 2-4-08)

Sec. 14-333. To be located on lot with principal use in residential zones; exceptions.

Required off-street parking in all residential zones and accessory off-street parking in R-1 through R-5 zones shall be located on the same lot with the principal building or use, except that the Board of Appeals may permit such off-street parking to be located at a distance of not more than three hundred (300) feet from the principal building or use, measured along lines of public access where it cannot reasonably be provided on the same lot if the premises to be used for parking are held under the same

ownership or lease as the building or use served and if said premises are located in the same or a less restricted zone as the building or use served. Evidence of such control, either deed or lease, shall be required. The Planning Board may be substituted for the Board of Appeals only where an applicant is otherwise before the Planning Board for site plan approval.

Whenever any exception to the parking requirements under this section has been finally denied on its merits by either the Zoning Board of Appeals or the Planning Board, a second request for an exception seeking essentially the same relief, whether or not in the same form or on the same theory, shall not be brought before either body within one (1) year of such denial unless, in the opinion of the board before which it was initially brought, substantial new evidence is available or a mistake of law or fact significantly affected the prior denial.
(Code 1968, § 602.14.C; Ord. No. 94-99, 11-15-99)

Sec. 14-334. To be located on lot with principal use in nonresidential zones; exceptions.

Required off-street parking in all nonresidential zones shall be located on the same lot with the principal building or use, or within one hundred (100) feet measured along lines of public access, except the Board of Appeals, or Planning Board when applicable, may permit off-street parking located further than one hundred (100) feet from the principal building or use upon finding that such off-street parking meets the following standards:

(a) *Distance from principal building or use site:* Off-street parking shall be located no more than 1500 ft. from the principal building or use site measured along lines of public access.

(b) *Control by ownership or lease:* The premises to be used for parking shall be held under the same ownership as the principal building or use or by lease with a term of not less than five (5) years with an option to renew. Evidence of such control, shall be required by showing for review and approval by City Corporation Counsel, at a minimum, a signed letter of intent, purchase and sale agreement, or option for sale or lease at the time of approval, and an executed deed or lease prior to issuance of any certificate of occupancy.

The Planning Board may be substituted for the Board of Appeals only where an applicant is otherwise before the Planning Board for site plan approval.

Whenever any exception to the parking requirements under this section has been finally denied on its merits by either the Zoning Board of Appeals or the Planning Board, a second request for an exception seeking essentially the same relief, whether or not in the same form or on the same theory, shall not be brought before either body within one (1) year of such denial unless, in the opinion of the board before which it was initially brought, substantial new evidence is available or a mistake of law or fact significantly affected the prior denial.

(Code 1968, § 602.14.D; Ord. No. 430-83, § 1, 4-25-83; Ord. No. 94-99, 11-15-99; Ord. No. 241-10/11, 11-15-10)

Sec. 14-335. Off-street parking restricted.

Off-street parking shall not include:

(a) More than one (1) commercial motor vehicle in any residence zone, the R-P zone or any B-1 zone;

(b) More than six (6) commercial motor vehicles in any B-2 zone;

(c) Loading, sales, dead storage, repair, or servicing of any kind, except when customarily incidental or accessory to a conforming principal building or use when located in an I-2, I-2b, I-3 zone and I-3b zone;

(d) Except in the case of a car dealer, more than one (1) unregistered motor vehicle stored outside for a period in excess of thirty (30) days in any residence zone, the R-P zone or any business zone;

(e) Notwithstanding (1) above, any truck body, commercial trailer or similar commercial vehicles in any residence zone or the R-P zone.

(Code 1968, § 602.14.E; Ord. No. 298-88, 5-31-88)

Sec. 14-336. Location in residence zones for six or fewer vehicles.

(a) Where off-street parking for six (6) or fewer vehicles is required or provided in any residence zone, it shall not be located closer than fifty (50) feet to any street line if less than five

(5) feet from any lot line and shall not be closer to any street line than the required depth of the front yard for the same lot, except on a corner lot where the minimum depth from the line of the side street shall be the minimum width of the side yard on the side street. Lots in the R-6 zone shall not be required to provide the five-foot setback required by this section, but parking in the R-6 zone shall meet the front yard setbacks set forth in this section.

(b) Parking shall be prohibited in the front yard of lots containing two (2) or more dwelling units, except within one (1) driveway on the lot. "Driveway," as used in this paragraph, shall not include any turnaround area.

(Code 1968, § 602.14.F; Ord. No. 231-90, § 1, 3-5-90; Ord. No. 310-98, § 2, 5-4-98)

Sec. 14-337. Location in residence zones for more than six vehicles.

Where off-street parking for more than six (6) vehicles is required or provided for nonresidential uses in residence zones, it shall not be located closer than twenty-five (25) feet to any residential structure on an adjoining lot.

(Code 1968, § 602.14.G)

Sec. 14-338. When located within required open yard areas in residence zones.

(a) Where off-street parking for more than six (6) vehicles is required or provided on a lot in a residence zone and vehicles are to be or may be parked within the area otherwise required to be kept open and unoccupied for front, side and rear yards in the zone in which such parking is located, the following requirements shall be met:

(1) A continuous curb guard, rectangular in cross-section, at least six (6) inches in height and permanently anchored, shall be provided and maintained at least five (5) feet from the street or lot line between such off-street parking and that part of the street or lot line involved; or a continuous bumper guard of adequate strength, the top of which shall be at least twenty (20) inches in height, shall be provided and maintained between such off-street parking and that part of the street or lot line involved so that bumpers of vehicles cannot project beyond its face toward the street or lot line involved,

either above or below the impact surface.

(2) Where such off-street parking shall abut a lot in residential use or an unoccupied lot which is located in a residence zone, a chain link, picket or sapling fence, not less than forty-eight (48) inches in height, shall be provided and maintained between such off-street parking and that part of the lot line involved.

(b) Notwithstanding the provisions of subsection (a) of this section, parking shall be prohibited in the front yard of lots containing two (2) or more dwelling units, except within one (1) driveway on the lot. "Driveway," as used in this paragraph, shall not include any turnaround area.

(Code 1968, § 602.14.H; Ord. No. 231-90, § 2, 3-5-90)

Sec. 14-339. When located adjacent to a street or a residential use.

Where off-street parking for more than six (6) vehicles is required or provided on a lot in any business zone, the following requirements shall be met:

(a) Where vehicles are to be or may be parked within ten (10) feet of any street line, a continuous curb guard, rectangular in cross-section, at least six (6) inches in height and permanently anchored, shall be provided and maintained at least five (5) feet from the street line between such off-street parking and that part of the street line involved; or a continuous bumper guard of adequate strength, the top of which shall be at least twenty (20) inches in height, shall be provided and maintained between such off-street parking and that part of the street line involved so that bumpers of vehicles cannot project beyond its face toward the street line involved either above or below the impact surface.

(b) Where such off-street parking shall abut a lot in a residence zone or a lot in residential use, a chain link, picket or sapling fence, not less than forty-eight (48) inches in height, shall be provided and maintained between such off-street parking and that part of the lot line involved.

(Code 1968, § 602.14.1)

Sec. 14-340. Construction requirements when more than six vehicles parked.

Where off-street parking for more than six (6) vehicles is required or provided, the following construction requirements shall apply:

(a) Appropriate driveways from streets or alleys, as well as maneuvering areas, shall be provided. Location and width of approaches over public sidewalks shall be approved by the traffic engineer.

(b) The surface of driveways, maneuvering areas and parking areas shall be uniformly graded with a subgrade consisting of gravel or equivalent materials at least six (6) inches in depth, well compacted, and with a wearing surface equivalent in quantities of compaction and durability to fine gravel.

(c) A system of surface drainage shall be provided in such a way that the waste run-off shall not run over or across any public sidewalk or street.

(d) Where artificial lighting is provided, it shall be shaded or screened so that no light source shall be visible from outside the area and its access driveways.

(Code 1968, § 602.14.J; Ord. No. 96-88, § 1, 7-19-88)

***Editor's note**—Ord. No. 96-88, § 1, adopted July 19, 1988, amended subsection (a) of this section to read as herein set out. See also the editor's note to Art. III of this chapter for additional provisions relative to Ord. No. 96-88.

Sec. 14-341. Aisles required for six or more spaces.

In parking facilities containing six (6) or more parking spaces, there shall be provided vehicular access by one (1) or more aisles. Aisle widths shall be in conformance with the standards set forth in the City of Portland Technical Manual, as hereafter amended.

(Code 1968, § 602.14.A; Ord. No. 272-77, 5-16-77; Ord. No. 389-89, § 2, 4-3-89; Ord. No. 278-09/10, 7-19-10)

Sec. 14-342. Reserved.

***Editor's note**—Section 1 of Ord. No. 354-85, adopted Jan. 7, 1985, repealed § 14-342, relative to a reduction of requirements by the board of appeals, which derived from Code 1965, § 602.14.K.

Sec. 14-343. Either the Board of Appeals or the Planning Board may approve joint use.

(a) Except as provided in subsection (b) below, the Board of Appeals may approve the joint use of a parking facility by two (2) or more principal buildings or uses where it is clearly demonstrated that the parking facility will substantially meet the intent of the requirements by reason of variation in the probable time of maximum use by patrons or employees among such establishments. This section shall apply to residential uses in the B-1, B-1b, B-2, B-2c and B-3 zone which propose joint use of a parking facility with another principal use in the B-1, B-1b, B-2 and B-3 zone. The Planning Board may be substituted for the Board of Appeals only where an applicant is otherwise before the Planning Board for site plan approval.

Whenever any exception to the parking requirements under this section has been finally denied on its merits by either the Zoning Board of Appeals or the Planning Board, a second request for an exception seeking essentially the same relief, whether or not in the same form or on the same theory, shall not be brought before either body within one (1) year of such denial unless, in the opinion of the board before which it was initially brought, substantial new evidence is available or a mistake of law or fact significantly affected the prior denial.

(b) Requests for joint use of parking in the B-2b zone shall be reviewed and approved by the Zoning Administrator only in the following circumstances:

1. Residential uses above the first (1st) floor in buildings in the B-2b zone shall be permitted to share parking spaces with commercial uses located in the same building; and

2. It is clearly demonstrated that the joint parking arrangement will substantially meet the intent of the parking requirements by reason of a variation in the probable time of maximum use by patrons or employees of the commercial establishment and tenants of the

residential dwelling units; and

3. Parties involved in the joint use of parking shall provide evidence of a binding agreement for the joint use of parking. Any subsequent modifications to the structure or change in the tenant occupancy of the commercial use(s) shall require review by the Zoning Administrator for conformance with this section.

Any decision by the Zoning Administrator on shared parking requests may be appealed to the Zoning Board of Appeals as an interpretive appeal pursuant to 14-471(a).

(Code 1968, § 602.14.L; Ord. No. 243-91, § 2, 3-11-91; Ord. No. 94-99, 11-15-99; Ord. No. 36-09/10, 8-17-09)

Sec. 14-344. Either the Board of appeals or the Planning Board may authorize parking in certain residence zones.

In R-3 through R-5 zones, the Board of Appeals may permit off-street parking for passenger cars only accessory to a use located in and conforming with the provisions of a nearby business or industrial zone (except B-1 zones) if the lot on which the use is proposed is located wholly within three hundred (300) feet, measured along lines of public access, of the principal building of the use to which the proposed use would be accessory and provided further that:

(a) The lot where the parking use is proposed shall be under the control of the owner of the use to which the parking use would be accessory. Evidence of such control by deed or lease shall be required before the certificate of occupancy is issued. If such control should be abrogated, the parking use thus allowed shall automatically revert to a nonconforming use in violation of this article and shall be terminated forthwith.

(b) The Board of Appeals may impose such conditions as deemed necessary to insure development compatible with that of the immediate neighborhood notwithstanding the provisions of any other section of this article and may at its discretion limit the period of such use.

(c) The Planning Board may be substituted for the Board of Appeals only where an applicant is otherwise before the Planning Board for site plan approval.

Whenever any exception to the parking requirements under this section has been finally denied on its merits by either the Zoning Board of Appeals or the Planning Board, a second request for an exception seeking essentially the same relief, whether or not in the same form or on the same theory, shall not be brought before either body within one (1) year of such denial unless, in the opinion of the board before which it was initially brought, substantial new evidence is available or a mistake of law or fact significantly affected the prior denial.
(Code 1968, § 602.14.M; Ord. No. 541-84, 5-7-84; Ord. No. 94-99, 11-15-99)

Sec. 14-345. Peninsula fee-in-lieu of parking.

Any major or minor development subject to site plan review located in a non-residential zone on the Portland Peninsula shall either provide the required parking or pay a fee according to the provisions of (a) and (b) below.

(a) Provide the number of off-street parking spaces according to the provisions of section 14-332 (uses requiring off-street parking) and section 14-334 (off-site parking) of this division; or,

(b) Pay a fee-in-lieu of parking of not less than $5,000.00 as adjusted annually per (c) below, per space not provided. Fees shall be deposited into the Sustainable Transportation Fund, as established in section 14-346 of this division.

(c) The value of the fee shall be adjusted annually according to the Engineer's News Record construction index as published on January 1st of the current calendar year. The fee adjustment shall be calculated by taking the index amount published on January 1st, of the current year, divided by the index amount published on January 1, 2010 (8660), multiplied by (the fee amount from (b) above). The base fee, the adjustment index, or the calculation method may be otherwise amended by action of the city council from time to time.

(d) The fee shall be paid on or before the date upon which a certificate of occupancy is issued. Payment shall be secured by a bond at the time the amount of the fee is

set.
(Ord. No. 241-09/10, 11-15-10)

Sec. 14-346. Sutainable transportation fund established.

By act of the Portland City Council, the Sustainable Transportation Fund is hereby established.
(Ord. No. 241-09/10, 11-15-10)

Sec. 14-346.1 Sustainable transportation fund purpose.

The purpose of the fund is to implement those provisions of the Peninsula Transit Study Report, and Action Plan, as adopted by the Portland City Council on August 3, 2009 as a component of the city's Comprehensive Plan, which recommended creation of a Sustainable Transportation Fund. The Peninsuala Transit Study Report and Action Plan establish a goal to reduce the number and impact of single occupancy vehicle trips to and from the Portland Peninsula. Achieving this goal requires transportation choice for residents, businesses, and visitors to the Portland Peninsula. This ordinance establishes a funding source for broadening transportation choice and facilitating development with lower traffic impacts and reduced parking requirements.

The mechanism and protocol for collecting fees and spending funds are consistent with state requirements for utilizing transportation related impact fees.
(Ord. No. 241-09/10, 11-15-10)

Sec. 14-346.2. Deposits and expenditures for the Sustainable Transportation Fund.

(a) *Deposits*

1. The city shall establish a Sustainable Transportation Fund to be set up as a seprate account within the city. Deposits into the fund shall include:

   a. 100% of the revenue generated by the fee in-lieu of parking program, as established in section n14-345 of the city Land Use Code;

   b. Funds appropriated for deposite into the fund by vote of the city council;

c. Voluntary contributions of money or other liquid assets to the fund; and,

d. Any federal, state or private grant or loan funds provided to the fund.

2. ***Accounting of deposits by project and sub-district:*** Funds from the fee in-lieu of parking program, as established in section 14-345 above, shall be individually collected and accounted for by project and the geographic ***fee in-lieu of parking sub-district*** in which it is located, as shown on the Portland Peninsula fee in-lieu of parking sub-district map on file with the Department of Planning and Urban Development.

3. ***Funds to be used within 10 years of deposit:*** Funds collected under the fee in-lieu of parking ordinance shall be spent on eligible infrastructure and/or capital improvements or expenses, as outlined in (b) and (c) below, within 10 years of the date of collection. Any funds which are not so utilized and which exceed the City's actual costs of implementing the infrastructure improvement or improvements for which such fees were collected shall be refunded. Refunds shall be paid to the owner of records of the property for which the funds were collected, determined as of the date the refund is made.

4. ***Use of funds by sub-district:*** Funds collected under the fee in-lieu of parking ordinance shallbe spent on permitted expenditures of the fund, as outlined in (b) below, within the same geographic fee in-lieu of parking sub-district as the contributing project as depicted on the Portland Peninsula Fee In-Lieu of Parking Sub-district Map on file with the Department of Planning and Urban Development. However, for projects located within two hundred fifty (250) feet of an abutting sub-district, contributed fees can be used for eligible infrastructure projects in either abutting sub-district.

(b) ***Permitted expenditures of the fund***.

The Sustainable Transportation Fund may only be expended on the activities as described below:

1. Funds collected as fees in-lieu of parking shall be expended toward capital transportation improvements on the Portland Peninsula. Such capital improvements shall include but are not limited to the following:

    a. Parking Infrastructure

        i. Shared-use, publicly accessible parking facilities;

        ii. Publicly accessible bicycle racks and bicycle parking shelters;

    b. Transit Capital Improvements and Expenses

        i. Bus shelters, bus turnouts, transit signage and other transit amenities;

        ii. Buses andtransit vehicles;

        iii. Transit and transportation information systems;

        iv. Fixed guide way and/or rail transit systems;

    c. Pedestrian and Bicycle Infrastructure

        i. Multi-use trails, and non-vehicular transportation corridors;

        ii. Pedestrian infrastructure and amenities located on publicly accessible rightsof way including, but not limited to cross walks, signalization, landscaping, street furniture, wayfinding signage, traffic calming, and lighting;

        iii. New publicsidealksa nd new bicycle lanes along publicly accessible rights of way

or corridors where such facilities are not previously provided;

d. Other such improvements intended to enhance transportation choice and promote transit and non-automotive transport on the Portland Peninsula.

2. Funds collected or appropriated by means other than from a fee in-lieu of parking may be used for any of the capital transportation improvements listed above in (b)(1), and for any of the following uses:

a. Transportation Demand Management Program administration;

b. On or off-peninsula transit and/or non-automotive transportation capital or operating expenses;

c. Transit and/or non-automotive transportation promotion and education material; and

d. Other such programs or improvements intended to enhance transportation choice and promote transit and non-automotive transport for the City of Portland.

(c) *Annual Sustainable Transportation Plan and Appropriations Schedule:*

Annually, the city manager shall submit to the city council a recommended sustainable transportation plan and appropriations schedule, utilizing the revenues of the Sustainable Transportation Fund. The Transportation Committee of the city council or such other committee as the council shall designate shall recommend and refer the plan and appropriations schedule to the city council for action.

(Ord. No. 241-09/10, 11-15-10)

***Editor's Note—**The effect of Section 14-346.2(a)(iv) above is to establish the western boundary of the central sub-district as State Street, no High Street.

Sec. 14-347. - Sec. 14-350 Reserved.

DIVISION 21. OFF-STREET LOADING

Sec. 14-351. Minimum loading bays or loading berths.

In those zones where off-street loading is required, the following minimum off-street loading bays or loading berths shall be provided and maintained in the case of new construction, alterations and change of use:

(a) Office buildings and hotels with a gross floor area of more than one hundred thousand (100,000) square feet: One (1) bay.

(b) Retail, wholesale and industrial operations with a gross floor area of more than five thousand (5,000) square feet:

1. 5,000 to 40,000: 1 bay;

2. 40,001 to 100,000: 2 bays;

3. 100,001 to 160,000: 3 bays;

4. 160,001 to 240,000: 4 bays;

5. 240,001 to 320,000: 5 bays;

6. 320,001 to 400,000: 6 bays;

7. Each 90,000 over 460,000 square feet: 1 additional bay.

(c) Hospitals and nursing and convalescent homes: Two (2) off-street loading areas shall be provided whereby one (1) service area for ambulance and other emergency vehicles shall be separate from one (1) service area accommodating supply vehicles, and whereby both off-street loading areas shall be separate from parking and entrance locations.

(Code 1968, § 602.15.A; Ord. No. 49-74, 1-7-74)

Sec. 14-352. Dimensions.

Each loading bay shall have minimum dimensions of fifty (50) feet by fourteen (14) feet and may be located either within a building or outside and adjoining an opening in the building, except that in the cue of hospitals and nursing homes and convalescent homes, the off-street loading area provided for ambulance and other emergency vehicles shall be exempt from the minimum dimension requirement but shall be of sufficient width and depth to permit expeditious access and egress from the loading area. Every part of such loading bay shall be located completely off the street. In case trucks, trailers, or other motor vehicles larger than the dimensions of the minimum loading bay habitually serve the building in question, additional space shall be provided so that such vehicle shall park or stand completely off the street. (Code 1968, 602.15.B; Ord. No. 49-74, 1-7-74)

Sec. 14-353. Requirements to be met for additional bays and for alterations or modifications.

Any additional loading bays which are provided in excess of the requirements of this article or any loading bays otherwise established shall meet the requirements of section 14-352, and no alterations or modifications shall be made in an existing building or structure whereby loading openings or platforms are constructed or established unless the provisions of section 14-352 are met. (Code 1968, § 602.15.C)

Sec. 14-354. Reserved.

***Editor's note—**Section 2 of Ord. No. 354-85, adopted Jan. 7, 1985, repealed § 14-354, relative to variance prohibited, exception, which derived from Code 1968, § 602.15.D.

Sec. 14-355. - Sec. 14-365. Reserved.

DIVISION 22. SIGNS*

***Editor's note—**Ord. No. 252-94, § 2, passed Apr. 4, 1994, repealed Div. 22 of this article, §§ 14-366—14-368, relative to signs and billboards, and added new provisions relative to signs as set forth in §§ 14-366—14-372.5. Formerly, such provisions derived from §§ 602.10A.G, 602.13B and 602.16.A—602.16.C of the 1968 Code as amended by the following legislation:

Ord. No.	Section	Date	Ord. No.	Section	Date
499-74	7	8-19-74	538-81	1	2-18-81
536-74	2	8-19-74	39-85	1	7-15-85
334-76	7	7- 7-76	284-88		12-12-88
269-77		5-16-77	371-91	1	6- 5-91
270-77		5-16-77			

Cross reference(s)—Signs prohibited in cemeteries, § 7-137.

Sec. 14-366. Purpose.

The purpose of this division is to balance the need for adequate identification, communication and advertising for all land uses with the need to protect the public safety and welfare and to maintain and enhance the aesthetic environment of the City of Portland. The following policies shall apply in regulating signs:

(a) To allow for the orderly advertisement and identification of goods and services by public and private establishments in the city;

(b) To enhance public awareness of and access to goods, services and attractions by promoting visual order and clarity on city streets;

(c) To promote traffic safety by controlling the location, design and placement of signs on city streets; and

(d) To protect property values by ensuring the appropriate location, size, number and use of signs in neighborhoods and business districts.

(Ord. No. 252-94, § 2, 4-4-94)

Sec. 14-366.5. Applicability.

A sign may be erected, placed, established, painted, created or maintained in the city only in conformance with the standards,

procedures, exemptions and other requirements of this division.

All signage of a commercial nature, whether or not exempt from the receipt of a permit hereunder, shall be removed within thirty (30) days from the earlier of: vacancy of the advertised space by the applicable owner and/or tenant, or the cessation of the commercial enterprise so advertised. This subsection shall not apply to signs which have acquired historic significance, such as painted wall signs, as so determined by the Historic Preservation Program Manager. The owner of the building and/or any tenant advertising through the use of such signage each shall be responsible for adhering to this requirement.
(Ord. No. 252-94, § 2, 4-4-94; Ord. No. 187-02/03, 4-7-03)

Sec. 14-367. Definitions.

For the purposes of this division, the following definitions shall apply, in addition to the provisions of section 14-47:

Animated sign: Any sign that uses movement or change of lighting to depict action or create a special effect or scene.

Awning sign: Any sign that is a part of or attached to an awning, canopy or other fabric, plastic or structural protecting cover over a door, entrance, window, storefront or outdoor service area or any internally illuminated awning sign. A marquee shall not be considered an awning.

Banner: Any sign of lightweight fabric or similar material that is permanently mounted to a pole or a building by a permanent frame at one (1) or more edges. National, state and municipal flags or the official flag of any institution or business shall not be considered banners.

Beacon: Any light with one (1) or more beams directed into the atmosphere or directed at one (1) or more points not on the same lot as the light source or any light with one (1) or more beams that rotate or move.

Building marker: Any sign indicating the name of a building, date of construction, or other incidental information about its construction and/or history.

Building sign: Any wall sign, projecting sign, suspended sign, or any sign attached to any exterior part of a building. Interior

window signs shall not be considered building signs and shall not be included in the calculation of maximum cumulative sign area or maximum number of permitted signs.

Bus shelter signs: as specified in 23 M.R.S.A. § 1908-A, a bus shelter sign is any outdoor sign visible to the traveling public from a public way that is affixed to a publicly owned bus shelter where a public transport bus stops for the purpose of sallowing passengers to board and/or leave the bus.

Changeable copy sign: A sign or portion thereof with characters, letters or illustrations that can be changed or rearranged without altering the face or the surface of the sign. A sign on which the message changes more than eight (8) times per day shall be considered an animated sign and not a changeable copy sign for the purposes of this division. A sign on which the only copy that changes is an electronic or mechanical indication of time or temperature shall be considered a time and temperature portion of a sign and not a changeable copy sign for purposes of this division.

Commercial message: Any sign wording, logo or other representation that, directly or indirectly, names, advertises or calls attention to a business, product, service or other commercial activity.

Community/cultural banner: Banners located in the public right-of-way intended to serve a community purpose or convey information of community-wide interest.

Department: The department of planning and urban development.

Directory sign: A sign located at or near the entrance of a multi-tenant building, lot or park, the sole purpose of which is to provide a listing of names of individual tenants located thereon.

Flag: Any fabric, banner or bunting containing distinctive colors, patterns or symbols, used as a symbol of a government, political subdivision or other entity.

Freestanding sign: Any sign supported by structures or supports that are placed on or anchored in the ground and that are independent from any building or other structure.

Incidental sign: A sign, generally informational, that has a purpose secondary to the use of the lot on which it is located,

such as "no parking," "entrance," "loading only," "telephone," and other similar directives. Directional signs indicating the location of a building, tenant or entrance shall also be considered incidental signs. No sign with a commercial message legible from a position off the lot on which the sign is located shall be considered incidental.

Internally illuminated awning sign: An awning that is translucent and lighted from within and which either incorporates any commercial message, trademark or symbol or is readily concurrently visible with another internally illuminated awning sign that incorporates a commercial message, trademark or symbol.

Landmark sign: An existing sign determined by the department to have attained a high degree of community, cultural, aesthetic or historic significance.

Marquee: Any permanent roof-like structure projecting beyond a building or extending along and projecting beyond the wall of the building, generally designed and constructed to provide protection from the weather.

Marquee sign: Any sign attached to in any manner, or made part of, a marquee.

Multi-tenant lot: Any lot with more than one (1) business or more than one (1) use with exterior signs.

Nonconforming sign: Any sign that does not comply with the requirements of this division.

Pennant: Any lightweight plastic, fabric or other material, whether or not containing a message of any kind, suspended from a rope, wire or string, usually in a series, designed to move in the wind.

Portable sign: Any sign not permanently attached to the ground or some type of permanent structure, or a sign designed to be transported including, but not limited to, signs designed to be transported by means of wheels; signs converted to or located on A- or T-frames; menu and sandwich board signs; inflatable signs or large-scale tethered balloons; and/or signs attached to or painted on vehicles parked and visible from the public right-of-way, unless said vehicle is used in the normal day-to-day operations of the business.

Principal facade: Any facade or facades that constitute the primary visual and functional orientation of the building or tenant space, characterized by a combination of such features as principal entry, storefront and visibility from streets or parking areas.

Projecting sign: Any sign affixed to a building or wall in such a manner that its leading edge extends more than twelve (12) inches beyond the surface of the building or wall. A projecting sign may be either perpendicular or parallel to a wall and may have a message on more than one (1) face.

Readily concurrently visible signs: Any combination of signs that can be clearly and simultaneously viewed by an individual from any publicly accessible vantage point.

Residential sign: Any sign located in a district zoned for residential uses that contains no commercial message except advertising for goods and services offered on the premises where the sign is located, provided that offering such goods or services conforms with all requirements of this article.

Roof sign: Any sign erected and constructed wholly on and over the roof of a building, including attachment to a rooftop mechanical parapet supported by the roof structure, and extending vertically above the highest portion of the roof.

Roof sign, integral: Any sign incorporated as an integral or essentially integral part of a normal roof structure of any design, including attachment to a rooftop mechanical parapet, where no part of the sign extends vertically above the highest portion of the roof and such that no part of the sign is separated from the rest of the roof by a space of more than six (6) inches.

Security sign: Any sign that is placed upon a lot or a building to inform of the location of a security or other alarm system located upon the lot or within the building.

Sign: Any device, fixture, placard or structure that uses any color, form, graphic, illumination, symbol or writing to advertise, announce the purpose of, or identify the purpose of a person or entity, or to communicate information of any kind to the public.

Street frontage: The distance for which a lot line of a lot adjoins a public street, from one (1) lot line intersecting said

street to the furthest distant lot line intersecting the same street.

Suspended sign: A sign that is suspended from the underside of a horizontal plane surface and is supported by that surface.

Temporary sign: Any sign, except for a window sign, that is used for a period of not more than thirty (30) days and that is not permanently mounted.

Wall area: The area of a wall within a single plane.

Wall sign: Any sign parallel and attached to a wall, painted on the wall surface of, or erected and confined within the limits of an outside wall of any building or structure, which is supported by such wall or building, and which displays only one (1) sign surface.

Window sign: Any sign, pictures, symbol or combination thereof, designed to communicate information about an activity, business, commodity, event, sale or service, that is placed inside a window or upon the interior face of window panes or glass, and is visible from the exterior of the window.
(Ord. No. 252-94, § 2, 4-4-94; Ord. No. 37 06/07, 9-6-06; Ord. No. 91-11/12, 5-21-12)

Sec. 14-368. Regulations.

(a) ***Signs allowed on private property with and without permits.*** Signs shall be allowed on private property in the city in accordance with, and only in accordance with, Table 1 of section 14-369.5. If the notation "A" appears for a sign type in a column, such sign is allowed without prior approval as provided in this division in the zoning district(s) represented by that column. If the notation "B" appears for a sign type in a column, such sign is allowed only with prior permit approval in the zoning district(s) represented by that column. Special conditions may apply in some cases. If the notation "D" appears for a sign type in a column, such a sign is not allowed in the zoning district(s) represented by that column under any circumstances.

Although permitted under the previous paragraph, a sign designated by an "A" or "B" in Table 1 of section 14-369.5 shall be allowed only if:

1. The sum of the area of all building and freestanding signs on the lot conforms with the maximum permitted sign areas for such as determined by the formula for the zoning district in which the lot is located as specified in Table 2 of section 14-369.5; and

2. The size, location and number of signs on the lot conform with the requirements of Table 2 of section 14-369.5, which establish permitted sign dimensions by sign type, and with any additional limitations listed therein.

(b) ***Permits required.*** If a sign requiring a permit under the provisions of this division is to be placed, constructed, erected or modified on a lot, the owner of the lot shall secure a sign construction permit prior to the construction, placement, erection or modification of such a sign in accordance with the requirements of section 14-368.5. In addition, the property owner shall maintain in force at all times a sign construction permit for such sign in accordance with section 14-368.5.

No signs shall be erected in the public right-of-way except in accordance with subsection (e) of this section and the permit requirements of section 14-368.5.

No sign permit of any kind shall be issued for an existing or proposed sign unless such sign is in compliance with the requirements of this division, including those protecting existing signs.

(c) ***Design, construction and maintenance.*** All signs shall be designed, constructed and maintained in accordance with the following standards:

1. All signs shall comply with applicable provisions of the building code and the electrical code of the city at all times;

2. Except for banners, flags, temporary signs, portable signs and window signs conforming in all respects with the requirements of this division, all signs shall be constructed of permanent materials and shall be permanently attached to the ground, a building or another structure by direct attachment to a rigid wall, frame or structure; and

3. All signs shall be maintained in good structural condition, in compliance with all building and electrical codes, and in conformance with this Code, at all times;

4. Signs located in or adjacent to residential zones shall not cause light spillover or glare into properties within the residential zone.

(d) ***Signage plan.*** No permit shall be issued for an individual sign requiring a sign construction permit unless and until a signage plan for the lot on which the sign will be erected has been submitted to the department.

For any lot on which the owner proposes to erect one (1) or more signs requiring a permit, the owner shall submit to the department a signage plan containing the following:

1. A sketch plan of the lot. The sketch plan should indicate the location of buildings and driveways on the lot, as well as any abutting streets. Length of building frontages and street frontage(s) should also be noted;

2. An indication on the sketch plan of the proposed location of each existing and proposed sign of any type, except that incidental, portable, temporary and window signs need not be shown. For building signs, a sketch or a photograph of each building wall shall be provided indicating wall and sign dimensions; and

3. Computations of the following:

   a. A listing of each building sign (existing and proposed), identifying the location of each such sign and its sign area;

   b. A listing of each freestanding sign (existing and proposed), indicating the area, height and setback of each such sign; and

4. A sketch of proposed signs, indicating dimensions, materials, source of illumination and construction method.

For purposes of this section, a sketch plan shall not require a stamp by a licensed professional such as an engineer or an

architect. Measurements may be estimated. For multi-tenant lots or buildings, individual tenants shall be required to submit only those measurements applicable to their individual frontage or as otherwise required to review their application. Once a sketch plan has been filed for a property, the department shall keep a record of such plan so that a new sketch plan shall not be required for later changes to signage on a site for which a sketch plan has been previously submitted.

(e) ***Signs in the public right-of-way.*** No signs shall be allowed in the public right-of-way, except for the following:

1. Permanent signs, limited to the following: Public signs erected by or on behalf of a governmental body to post legal notices, identify public property, convey public information, and direct or regulate pedestrian or vehicular traffic, including parking regulatory signs; bus stop signs erected by a public transit company; informational signs of a public utility regarding its poles, lines, pipes or facilities.

2. Signage meeting the requirements of section 14-370.

3. Emergency warning signs erected by a governmental agency, a public utility company or a contractor doing authorized or permitted work within the public right-of-way.

4. Community/cultural banners.

5. Permanent directional signs retail/accessory retail in residential zones. A lawfully existing retail business, existing as of March 1, 2008 and located in a residential zone, qualifies for an off-premise sign if it meets the following requirements: 1) the establishment is not a home occupation; 2) the establishment is not located within 500 feet of a major or minor arterial; 3) the sign would be no larger than 12 inches x 48 inches and would otherwise adhere to the requirements set out by MDOT/MUTCD in their standard sign manual. Such establishment may qualify for one, two-sided, or two one-sided, off-premise signs to be located on a major or minor arterial in a location determined safe by the city traffic engineer and upon the payment of an initial fee of $300.00, with an annual renewal fee of $30.00. In the event the sign is damaged or destroyed, the replacement

of any sign shall be the sole responsibility of the permittee. The permittee shall be required to obtain a permit for said sign from the building inspections department, after securing $400,000 insurance for said sign, naming the City of Portland as an additional insured.

6. Bus shelter signs as provided for in section 14-371 (k).

(f) ***Signs in historic districts, in historic landscape districts, or on individual landmark properties.*** Signs in historic districts, in historic landscape districts, or on individual landmark properties shall also be subject to the provisions of article IX of this chapter. Where the regulations of article IX are either more or less stringent than those set forth in this division, the more stringent standard shall apply.

(g) ***Signs in Pedestrian Activities District (PAD) overlay zone and PAD encouragement areas.*** Signs in PAD overlay zone and PAD encouragement areas of the B-3 zone shall also be subject to the standards set forth in the Downtown Urban Design Guidelines. Where those standards are either more or less stringent than the regulations set forth in this division, the more stringent standard shall apply.

(Ord. No. 252-94, § 2, 4-4-94; Ord. No. 143-07/08, 5-19-08; Ord. No. 91-11/12, 5-21-12)

Sec. 14-368.5. Permits.

The procedures set forth below shall govern the application for, and issuance of, all sign permits under this division, unless a sign is also subject to review under any other division or section of this chapter or any other chapter of this Code, including site plan and historic preservation ordinances. Where a sign requires such other review, the time periods set forth in the ordinance for that review process shall control.

(a) ***Applications.*** All applications for sign permits of any kind shall be submitted to the department on an application form or in accordance with application specifications published by the department.

(b) ***Fees.*** Each application for a sign permit shall be accompanied by the applicable fees, which shall be established by the council order.

(c) ***Action on sign permit application.*** Within ten (10) working days of receipt of a complete application, the department shall either:

1. Issue the sign permit, if the sign that is the subject of the application conforms in every respect with the requirements of this division; or

2. Deny the sign permit if the sign that is the subject of the application fails in any way to conform with the requirements of this division. In the event of a denial, the department shall set forth in writing the reasons for the denial.

(d) ***Permits to construct or modify signs.*** Signs identified with the notation "B" on Table 1 shall be erected, installed or created only in accordance with a duly issued and valid sign construction permit issued by the department. Such permits shall be issued only in accordance with the requirements and procedures of subsection (f) of this section.

(e) ***Application for new sign or for sign modification.*** An application for construction, creation or installation of a new sign or for modification of an existing sign shall be accompanied by drawings to show the dimensions, design, source of illumination, construction method and location of each particular sign. One (1) application and construction permit may include more than one (1) sign on the same lot.

(f) ***Assignability of sign permits.*** A current and valid sign permit issued under this division shall be freely assignable to a successor as owner of the property or operator of the premises. The assignment shall not require approval by the department. This provision shall also apply to signs lawfully in existence on April 4, 1994, which are further subject to the provisions of section 14-372.

(g) ***Issuance pursuant to level II site plan review.*** An applicant for a permit or other approval under this division whose application has been denied for failure to meet the regulations contained in section 14-369.5 may

apply to the planning authority for review of the denied signage pursuant to the standards set forth in section 14-526(d)8, provided, however, that no site plan fee shall be required for this review and no site plan submission materials shall be required beyond those necessary to allow review under this section.

(Ord. No. 252-94, § 2, 4-4-94; Ord. No. 278-09/10, 7-19-10)

Sec. 14-369. Computations.

Sign area, sign height and number of signs shall be computed in accordance with the following principals:

(a) *Computation of area of individual signs:* For all signs other than awning signs, the area of a sign face shall be computed by means of the smallest square, circle, rectangle, triangle or simple polygon that will encompass the extreme limits of the writing, representation, emblem or other display, together with any material or color forming an integral part of the background of the display, but not any supporting framework, bracing or decorative fence or wall when such fence is clearly incidental to the display itself.

(b) *Computation of area of multifaced signs:* The sign area for a sign with more than one (1) face shall be computed by adding together the area of all sign faces visible from any one (1) point. When two (2) identical sign faces are placed back to back so that both faces cannot be viewed from any point at the same time and when such sign faces are part of the same sign structure and are not more than forty-two (42) inches apart, the sign shall be computed by the measurement of one (1) of the faces.

(c) *Computation of area of awning signs:*

1. For opaque awnings, only those sections which incorporate writing, symbols, emblems or other types of graphics used for the purposes of identification or advertisement shall be included in computing sign area. The methods set forth in subsection (1) of this section shall be utilized in measuring sign area on opaque awnings. Street names and numbers on opaque awnings shall not be considered to be signs for purposes of this

section, unless a business located within the building has the street name and/or the street number as its name.

2. For awnings that are translucent and internally illuminated and that incorporate any commercial message, trademark or symbol, the sign area shall be computed as the two-dimensional projection of the awning onto the face of the building on which the awning is to be installed. Such awnings which wrap around building corner(s) shall be treated as separate awnings on each respective building face and shall be considered as signs if they include any message, trademark or symbol. Internally illuminated bands shall be permitted across the building face without being included in the calculations under this subsection, provided that such bands do not include any message, trademark or symbol and that the bands do not exceed three (3) feet in height.

3. Where only a portion of the awning is translucent and internally illuminated, only the area of the translucent illuminated portion shall be included in computing sign area, unless commercial message content appears on other opaque portion(s) of the awning. Opaque portions of these types of awnings shall be computed in accordance with subsection a. above.

(d) ***Computation of height:*** The height of a sign shall be computed as the distance from the base of the sign at normal grade to the top of the highest attached component of the sign. Normal grade shall be considered the lower of either existing grade prior to construction or the newly established grade after construction excluding any filling, berming, mounding or excavating accomplished solely for the purpose of locating the sign. In cases where the normal grade cannot reasonably be determined, sign height shall be computed based upon the assumption that the elevation of the normal grade at the base of the sign is equal to the elevation of the nearest point of the crown of a public street or the grade of the land at the principal entrance to the principal structure on the lot, whichever is lower.

(e) *Computation of number of signs:* For purposes of computing the number of signs, a single sign shall be considered either enclosed within a single frame or composed of modular parts with identical frame elements designed to be joined together to form a single composite sign.

(Ord. No. 252-94, § 2, 4-4-94)

Sec. 14-369.5. Tables.

(a) *Table 1. Permitted sign types by zone.*
Note: The following legend applies for Table 1 below:

A. Allowed, no permit required;
B. Allowed, permit required;
C. Allowed, subject to licensing and permit required;
D. Prohibited;
E. Not Applicable

Parenthetical letters, i.e. (a), refer to the notes provided at the end of Table 1.

	R-1/R-6 IR-1/IR-3 Residential	*Institutional Uses in Residential Zones (a)*	*RP Residence Zones*	*ROS/RPZ Open Space*	*B-1 Neighborhood Business*	*B-2 Regional Business*
Freestanding	D	B	B	B	B	B
In general(b)						
ResidentialI	A	A	A	E	A	A
Residential(d)	D	A	A	A	A	A
Temporary/ Portable (b)	D	D	D	D	D	B
Building	D	D	D	B	B	B
Commercial Banner						
Building Marker(f)	A	A	A	A	A	A
Awning	D	D	D	B	B	B
Identification(e)	A	A	A	A	A	A
Incidental(d)	A	A	A	A	A	A
Marquee(g)	D	D	D	D	D	B
Projecting	A	D	D	B	B	B
Residential(b)	A	D	A	E	A	A
Roof	D	D	D	D	D	D
Roof Integral	D	D	D	D	D	D
Suspended(g)	A	D	D	B	B	B
Temporary(h)	D	D	D	B	B	B
Wall	A	B	D	B	B	B
Window(I)	D	D	A	A	A	A

Miscellaneous	D	A	A	A	A	A
Community, Cultural Banner						
Directory(j)	D	A	A	D	A	A
Flag(k)	A	A	A	A	A	A
Pennant	D	D	D	D	D	D
Portable-in City right-of-way (A-frame)	D	D	D	D	C	C

	AB Airport Business	***Mixed-use Urban B-6/B-7*** *Downtown Business(B-3) & Urban Commercial(B-5)*	*I-B Island Business*	*B-4 Commercial Corridor*	*O-P Office Park*	*I-L,I-Lb Industrial*
Freestanding	B	B	D	B	B	B
In general(b)						
ResidentialI	A	A	A	A	E	A
Residential(d)	A	A	A	A	A	A
Temporary/ Portable (b)	D	D	D	B	D	D
Building	B	B	B	B	D	B
Commercial Banner						
Building Marker(f)	A	A	A	A	A	A
Awning	B	B	B	B	B	B
Identification(e)	A	A	A	A	A	A
Incidental(d)	A	A	A	A	A	A
Marquee(g)	B	B	D	B	B	B
Projecting	B	B	B	B	B	B
Residential(b)	A	A	A	A	E	A
Roof	D	D	D	D	D	D
Roof Integral	D	D	D	D	D	D
Suspended(g)	B	B	B	B	B	B
Temporary(h)	B	B	B	B	D	B
Wall	B	B	B	B	B	B
Window(I)	A	A	A	A	A	A
Miscellaneous	A	A	A	A	A	A
Community, Cultural Banner						
Directory(j)	A	A	A	A	A	A
Flag(k)	A	A	A	A	A	A
Pennant	D	D	D	D	D	D
Portable-in City right-of-way (A-frame)	C	C	C	C	D	D

I-M,I-Ma,	*Eastern Waterfront Port Waterfront Central*	*Waterfront*

	I-Mb Industrial	*I-H,I-Hb Industrial*	*Waterfront Special Use*	*Port Development*
Freestanding	B	B	B	B
In general(b)				
ResidentialI	A	A	A	A
Residential(d)	A	A	A	A
Temporary/	D/D	B/D	D	D
Portable (b)				
Building	B	B	B	B
Commercial				
Banner				
Building	A	A	A	A
Marker(f)				
Awning	B	B	B	B
Identification(e)	A	A	A	A
Incidental(d)	A	A	A	A
Marquee(g)	B	B	B	B
Projecting	B	B	B	B
Residential(b)	A	A	A	A
Roof	D	D	D	D
Roof Integral	D	D	D	D
Suspended(g)	B	B	B	B
Temporary(h)	B	B	B	B
Wall	B	B	B	B
Window(I)	A	A	A	A
Miscellaneous	A	A	A	A
Community,				
Cultural Banner				
Directory(j)	A	A	A	A
Flag(k)	A	A	A	A
Pennant	D	D	D	D
Portable-in				
City right-of-way				
(A-frame)	D	D	C	D

Notes for Table 1 (Permitted Sign Types by Zone).

(a) This column does not represent a zoning district. It applies to institutional uses permitted under the zoning ordinance in residential zoning districts. Such uses may include, but are not necessarily limited to, churches, schools and hospitals.

(b) The following limiting provision shall apply to freestanding signs in the B-1, B-2 and B-3 zones on the Portland Peninsula (except for the B-2 zone in the vicinity of St. John Street): Such signs shall be allowed only if the front facade of the building (or individual tenant's/tenants' frontage in the case of a multi-tenant

building) is set back a distance of at least twenty (20) feet from either of the front facades of the abutting buildings (or other tenants' frontage in the same multi-tenant building). Notwithstanding the limitations of this section, freestanding signs shall be permitted for gas stations provided that all signage for such gas stations conform to the requirements of this division.

(c) No commercial message allowed on sign, except for a commercial message drawing attention to an activity legally offered on premises.

(d) No commercial message of any kind allowed on a sign if such message is legible from any location off the zone lot on which the sign is located.

(e) Only address and name of occupant allowed on sign.

(f) May include only building name, date of construction, or historical data on historical site.

(g) If such a sign is suspended or projects above a public right-of-way, the issuance and continuation of a sign permit shall be conditioned on the sign owner obtaining and maintaining in force liability insurance for such a sign.

(h) The provisions governing portable/temporary signs shall apply. See section 14-370.

(i) Window signs shall be allowed without a permit and shall not be included when calculating cumulative sign area. However, in no event shall more than fifty (50) percent of window area be obscured.

(j) Directory signs, freestanding or on buildings, shall be allowed without a permit and shall not be included when calculating cumulative sign area, provided the sign area for each tenant does not exceed one and one-half (1.5) square feet.

(k) Flags used as a symbol of a government, political subdivision or other entity. Any flag not meeting this description shall be considered a banner sign or pennant and shall be subject to regulation as such.

(b) ***Table 2. Sign regulations by zone.*** Table 2 is comprised of fourteen (14) individual charts outlining sign regulations for each zone in the city. Regulations are for permanent freestanding and building signs and shall not apply to portable/temporary signs, special sign types, incidental signs, directory signs or exempt signs. See applicable sections of this division for regulations governing such signs.

Other applicable regulations:

* Signs in historic districts, in historic landscape districts, or on individual landmark properties shall also be subject to the provisions of article IX of this chapter. Where the regulations of article IX are more stringent than those set forth in this division, the more stringent standard shall apply.

* Signs associated with projects otherwise subject to site plan review shall also be subject to the provisions of article V of this chapter.

* Signs located in the Pedestrian Activities District (PAD) overlay zone and in PAD Encouragement Areas within the B-3 zone shall also be subject to the standards set forth in the Downtown Urban Design Guidelines.

Contents of Table 2:

2.1 Sign Regulations for R-1—R-7, IR-1—IR-3 Residential Zones

2.2 Sign Regulations for Institutional Uses in Residential Zones

2.3 Sign Regulations for RP Residence-Professional Zone

2.4 Sign Regulations for ROS/RPZ Open Space Zones & Signs in all Municipal Parks

2.5 Sign Regulations for B-1 Neighborhood Business Zone — Single Tenant Lots

2.6 Sign Regulations for B-2 Regional Business Zone — Single Tenant Lots

2.7 Sign Regulations for AB Airport Business Zone — Single Tenant Lots

2.8 Sign Regulations for B-3 Downtown Business, B-5 Urban Commercial, B-6 and B-7 Mixed Use Urban, WC Waterfront Central, WSU Waterfront Special Use, and EWP, Eastern Waterfront Port Zones

2.9 Sign Regulations for IB Island Business Zone — Single Tenant Lots

2.10 Sign Regulations for B-4 Commercial Corridor Zone — Single Tenant Lots

2.11 Sign Regulations for OP Office Park Zones

2.12 Sign Regulations for I-L, I-Lb, I-M, I-Ma, I-Mb, I-H, I-Hb Industrial and WPD Waterfront Port Development Zones

2.13 Sign Regulations for B-1, B-2, AB, IB, and B-4 Business Zones — Multi-Tenant Lots

2.14 Sign Regulations for Gas Stations — All Zones Where Permitted

TABLE 2.1 R1 — R6, IR1 — IR3: RESIDENTIAL AND ISLAND RESIDENTIAL ZONES

Freestanding Signs

	Single-Family Lots	*PRUDs, Single-Family Subdivisions & Multifamily Developments — Development Identification*

		Signs
Area	2 sq. ft.	15 sq. ft.
Height	5 feet	5 feet
Setback	5 feet	5 feet
Number freestanding signs per lot	1(a)	1 per major entrance

(a) A maximum of one (1) sign is allowed per lot. Such sign may be either a freestanding or a building sign.

Building Signs

	Single-Family Lots	*PRUDs, Single-Family Subdivisions & Multifamily Developments — Development Identification Signs*
Maximum permitted sign area	2 sq. ft.	10 sq. ft.
Number building signs permitted per lot	1(a)	1(b)

(a) A maximum of one (1) sign is allowed per lot. Such sign may be either a freestanding or a building sign.

(b) One (1) allowed per street frontage, provided there are no freestanding signs on the lot or development.

TABLE 2.2 INSTITUTIONAL USES IN RESIDENTIAL ZONES

(Regulations apply to institutions permitted as conditional uses in residential zoning districts. Such uses may include, but are not necessarily limited to, churches, schools, private clubs, fraternal organizations and hospitals.)

Freestanding Signs

	Street Frontage < 100'	*Street Frontage 100' to 250'*	*Street Frontage > 250'*
Area	15 sq. ft.	25 sq. ft.	50 sq. ft.
Height	6 feet	8 feet	8 feet
Setback	5 feet	5 feet	5 feet
Number freestanding signs per lot	1/st. frontage(a)(b)	1/st. frontage(a)(b)	1/st. frontage(a)(b)

(a) Lots fronting on two (2) or more streets are allowed one (1) freestanding sign for each frontage. However, the area of each sign shall correspond to the length of the applicable frontage. Freestanding signs shall be positioned such that they are not readily concurrently visible.

(b) Where one (1) lot contains more than one (1) affiliated use, each use shall be allowed one (1) sign per street frontage.

Note: Pertinent directional information shall, to the extent possible, be included on the principal freestanding sign. Additional directional signs shall be allowed only in the event that necessary information cannot fit reasonably within the permitted sign area. The size of additional signs shall be the minimum necessary to achieve the informational objective.

Building Signs (a)

Maximum permitted sign area	na
Percent of wall area on which sign is to be placed	5%
Number building signs permitted per lot	1/building face(b)

(a) Building signs shall be reviewed for compliance with sign standard(s) included in site plan ordinance and shall under no circumstances be internally illuminated.

(b) One (1) sign is allowed per building face, provided such signs are not readily concurrently visible.

TABLE 2.3 RESIDENCE-PROFESSIONAL (R-P) ZONE

Freestanding Signs

Area	30 sq. ft.
Height	8 feet
Setback	5 feet
Number permitted per lot	1(a)

(a) Lots fronting on two (2) or more streets are allowed one (1) freestanding sign of equivalent size for each street frontage with vehicular entry, provided such signs are not readily concurrently visible.

Building Signs

None allowed, other than incidental and/or directory signs.

TABLE 2.4 ROS & RPZ OPEN SPACE ZONES AND SIGNS IN ALL MUNICIPAL PARKS

These regulations shall not apply to municipal stadiums with a seating capacity of greater than six thousand (6,000) seats.

See also section 14-370.7 (special sign types) for regulation of signs associated with seasonal sales/markets, special events, fairs/festivals, etc. Signs in designated historic landscape districts shall also be subject to the provisions of article IX of this chapter.

Freestanding Signs(a)

	General Park Identification Sign	*Concession/Facility Signs(b)*
Area	20 sq. ft.	16 sq. ft.
Height	5 feet	8 feet
Setback	5 feet	5 feet
Number freestanding signs per lot	1 per major vehicular entry	1 per concession or facilityI

(a) All signs shall be integrated with existing landscape features or shall be visually related to existing architecture in terms of materials, color, scale, etc., as determined by the planning authority.

(b) Product trademarks shall be limited to not more than five (5) percent of the total sign area.

(c) Concession stands or other facilities located within an RPZ or ROS zone shall be allowed one (1) freestanding sign or building sign, not both.

Building Signs(a)

	Concession/Facility Signs
Maximum permitted sign area	20 sq. ft.
Square feet per linear foot of building facade on which sign will be placed	1 sq. ft.
Number building signs permitted per lot	1 per concession or facility(b)

(a) Building signs shall be visually related to the building on which they are located in terms of materials, color, scale, etc., as determined by the planning authority. Product trademarks shall be limited to not more than five (5) percent of the total sign area.

(b) Concession stands or other facilities located within an RPZ or ROS zone shall be allowed one (1) freestanding sign or building sign, not both.

Scoreboards

Scoreboard size shall correspond to the size and type of facility in which it is to be located, as determined by the recreation director. Commercial sign content shall not exceed fifteen (15) percent of surface area of scoreboard.

Ballfield Booster or Sponsor Signs

Such signs shall be exempt from regulation, provided they remain in place only for the applicable season and do not exceed thirty-two (32) square feet in area each.

TABLE 2.5 NEIGHBORHOOD BUSINESS (B-1) ZONE—SINGLE TENANT LOTS

Freestanding Signs

Area	32 sq. ft.
Height	16 feet
Setback	5 feet
Number freestanding signs permitted per lot	1

Building Signs

	As of Right
Maximum cumulative area of all building signs	100 sq. ft.
Square feet per linear foot of building facade on which sign will be placed	1 1/2 feet
Number building signs permitted per lot	1 per building facade facing on abutting st. + 1 additional

TABLE 2.6 REGIONAL BUSINESS (B-2) ZONE — SINGLE TENANT LOTS

Freestanding Signs

	Facing Street Frontage < 200'	*Facing Street Frontage > 200'*
Area	65 sq. ft.	100 sq. ft.
Height	18 feet	18 feet
Setback	5 feet	5 feet

Number permitted per lot	1(a)	1(a)

(a) If lot fronts on more than one (1) street, one (1) freestanding sign is permitted for each additional frontage, but at one-half the maximum allowable area for the original, except in those instances where the freestanding signs are not concurrently visible. In such an instance, additional freestanding signs shall be permitted the full area allowance.

Building Signs

	Building Face < 150 Linear Feet	*Building Face > 150 Linear Feet*
Maximum cumulative area of all building signs (b)	150 square feet (a)	225 (a)
Square feet per linear foot of building facade on which sign will be placed	2 feet	Same
Number of building signs permitted per lot	1 per building facade facing an abutting street + 1 additional	Same

(a) If any one (1) building face on which a sign is to be placed exceeds one hundred fifty (150) linear feet, then the maximum allowable sign area for the building as a whole is increased to two hundred twenty-five (225) square feet. However, the limit of two (2) square feet per linear foot of building frontage still applies for purposes of calculating maximum sign area for each building face.

(b) Where a building features two (2) principal entry facades

facing parallel streets, each such entry facade shall be eligible for the full amount of signage relative to its frontage, notwithstanding the maximum cumulative sign area.

TABLE 2.7 AIRPORT BUSINESS (AB) ZONE

Freestanding Signs

	Facing Street Frontage < 200'	*Facing Street Frontage > 200'*
Area	32	65
Height	16	16
Setback	5	5
Number permitted per lot	1(a)	1(a)

(a) If lot fronts on more than one (1) street, one (1) freestanding sign is permitted for each additional frontage, provided such signs are not readily concurrently visible.

Building Signs

Maximum cumulative area of all building signs	na
Square feet per linear foot of building facade on which sign will be placed — or -	2 sq. ft.; or
Maximum percent of wall area on which sign(s) is(are) to be placed	6%

Number building signs permitted per lot	1 per building facade facing an abutting street + 1 additional

TABLE 2.8 SIGN REGULATIONS BY ZONE

Downtown Business (B-3), Urban Commercial (B-5), Waterfront Central (WC), and Waterfront Special Use (WSU) Zones

* Signs located on individual landmark properties or within historic districts, PAD overlay districts or PAD encouragement areas shall, in addition to the provisions herein, be subject to article IX of this Code or the Downtown Urban Design Guidelines, as applicable. Where the design guidelines are more restrictive than these regulations, the design guidelines shall supersede the otherwise applicable dimensional standards.

(o) Freestanding signs shall be allowed only if the front facade of the building (or individual tenant's/tenants' frontage in the case of a multi-tenant building) is set back a distance of at least twenty (20) feet from either of the front facades of the abutting buildings (or other tenants' frontage in the same multi-tenant building).

Freestanding Signs

	Single & Multi-Tenant Buildings
Area	16 sq. ft.
Height	6 ft.
Minimum setback	5 ft.
Number of freestanding signs	1 per abutting street

per lot	

Building Signs

		Multi-Tenant Buildings	
	Single Tenant Buildings	*Building ID Sign and/or Upper Floor Tenant Signs*	*Ind. Ground Floor Tenant Signs*
Maximum cumulative permitted area of all building signs	Na	*Na*	*na*
Square feet per linear feet of building facade on which sign will be placed	2 sq. ft.	na	2 sq. ft. per ft. of tenant's building frontage
Maximum percent of wall area on which sign(s) is(are) to be placed	Na	5%	na
Number of building signs permitted per lot	1 per facade + 1	1 per facade + 1 per tenant	1 per tenant (a)

(a) If individual tenant fronts on more than one (1) street, one (1) additional building sign is permitted for each additional frontage.

TABLE 2.9 ISLAND BUSINESS (IB) ZONE

Freestanding: None allowed, except for marine-related uses serving vessel traffic. Such signs shall not exceed twenty (20) square feet in area and ten (10) feet in height. One (1) such sign is allowed per use.

Building

Maximum permitted sign area	40 sq. ft.
Square feet per linear feet of building facade on which sign will be placed	1 sq. ft.
Number of building signs permitted per lot	1 per building facade facing an abutting street + 1 additional

TABLE 2.10 COMMERCIAL CORRIDOR (B-4) ZONE — SINGLE TENANT LOTS

Freestanding Signs

	Facing Street Frontage < 200'	*Facing Street Frontage > 200'*
Area	65 sq. ft.	100 sq. ft.
Height	25 ft.	35 ft.
Setback	5 ft.	Same
Number permitted per lot	1 (a)	Same

(a) If lot fronts on more than one (1) street, one (1)

freestanding sign is permitted for each additional frontage, provided such signs are not readily concurrently visible.

Building Signs

	Building Face < 150 Linear Feet
Maximum cumulative area of all building signs	na
Square feet per linear feet of building facade on which sign will be placed —or-	2 sq. ft. —or-
Maximum percent of wall area on which sign(s) is(are) to be placed	6%
Number of building signs permitted per lot	1 per bldg. facade facing an abutting street and 1 additional

TABLE 2.11 OFFICE PARK (O-P) ZONE

Freestanding Signs

	Joint Identification Sign (a)	*Individual Tenant Signs (a)*
Maximum permitted area	50 sq. ft.	15 sq. ft.
Height	8 ft.	5 ft.
Setback	5 ft.	5 ft.

Number of freestanding signs per lot	1 per major vehicular entry	1 per tenant

(a) In the case of multi-tenant office parks, individual tenants may be identified on joint identification sign at park entranceway, on directory signs within the office park development, and/or on individual signs located immediately in front of individual business establishment, but shall not be allowed additional freestanding signs at the principal entryway(s) into the development.

Building Signs

	Single Tenant Buildings	*Multi-Tenant Buildings*
Maximum permitted sign area	na	na
Maximum percent of wall area on which sign(s) is(are) to be placed	6%	8%
Number of building signs permitted per lot	1	1 per tenant

TABLE 2.12 INDUSTRIAL I-L, I-Lb, I-M, I-Ma, I-Mb, I-H, I-Hb AND WATERFRONT PORT DEVELOPMENT ZONES

Freestanding Signs

	Single Tenant Buildings	*Multi-Tenant Buildings*
Maximum permitted area	35 sq. ft.	70 sq. ft.

Height	10 ft.	15 ft.
Setback	5 ft.	5 ft.
Number of freestanding signs per lot	1 (a)	1 (a)

(a) If lot fronts on more than one (1) street, one (1) freestanding sign of equivalent permitted sign area is allowed for each additional frontage, provided such signs are not readily concurrently visible.

Building Signs

	Single Tenant Buildings	*Multi-Tenant Buildings*	
Maximum permitted sign area	Na	na	
Maximum percent of wall area on which sign(s) is(are) to be placed	6%	Principal facade(s) 8%	All other facade(s) 2%
Number of building signs permitted per lot	2/building face	1/tenant plus 1 additional per building face (a)	

(Editor's note: "TABLE 2.12 (CONTINUED) SPECIAL PROVISION FOR ZONES WITHIN 800 FEET OF I-295" repealed by Ord. No. 15-00, 6-7-00, retroactive to 6/01/00)

TABLE 2.13 MULTI-TENANT LOTS — B-1, B-2, AB, B-4, AND IB ZONES

Freestanding Signs (a)

	B-1, B-2, AB, B-4, IB Zones		
	Land Area		
	< 1 acre	1—2.5 acres	☎☐◑2.5 acres
Area	Same as single	100	140
Height	Tenant	Same as for single tenant lots in applicable zones	
Number permitted per lot (b)	lots	1	1

(a) Freestanding signs shall be for purposes of joint identification. Individual tenants shall not be permitted their own freestanding sign. Such sign may identify name of center and may also include names of individual tenants.

(b) Lots fronting on two (2) or more streets are allowed an additional freestanding sign of one-half the area of the first for each frontage which includes a vehicular entry point, provided signs are not readily concurrently visible. Such signage cannot be accumulated and used on one (1) street in excess of that allowed for lots with only one (1) street frontage.

Building Signs

a. *Joint identification sign (a):*

	B-1, IB	*B-2, AB, B-4 I*
Maximum area	na	250 sq. ft. I

Number permitted per lot (b)	not allowed	1 (b)

(a) Sign identifying name of building or shopping center only. Unused sign area cannot be applied to area allowances for other freestanding or individual tenant signs. Where name of shopping center is the same as or incorporates name of one (1) or more of the businesses located within the center, such business(es) shall elect between a joint identification sign and an individual business sign and shall not be allowed both.

(b) See (a) above.

(c) Allowed only on shopping centers featuring four (4) or more tenants and occupying a land area in excess of two and one-half (2.5) acres.

TABLE 2.13, CONTINUED

b. *Individual business signs:*

Alternative 1

	B-1, B-2, AB, B-4, IB Zones	
	Tenant's Frontage < 150 linear ft.	*Tenant's Frontage 150 linear ft.*
Maximum area	150 sq. ft.	Na
Square feet per linear feet of building front	1.5 sq. ft.	na
Maximum percent of wall area on which sign(s) is(are) to be placed	na	5%
Number permitted per business (a)	1	1

(a) If individual tenant fronts on more than one (1) street, one (1) additional building sign is permitted for each additional frontage, but at one-half the maximum allowable area of the first.

Alternative 2

Note: Alternative 2 is available as an option to proprietors of multi-tenant lots needing greater flexibility in allocating signs to tenants. This option requires the submission of a signage plan as described in section 14-368(d) as evidence that all building signs on the subject lot comply with the provisions of this division, including the size and number limits of this table. All nonconforming building signs must be brought into compliance to be eligible for the Alternative 2 option.

Maximum permitted sign area	na	
Maximum percent of wall area on which signs are to be placed	Principal facade(s) 5%	All other facade(s) 2%
Number of building signs permitted per lot	1 per tenant plus 1 additional per building face	

TABLE 2.14 GAS STATIONS — ALL ZONES WHERE PERMITTED

Freestanding Signs

	B-1, IB	*B-4*	*All Other Zones*
Area	32 sq. ft./10 sq. ft./20 sq.	60 sq. ft./20 sq. ft./30 sq.	40 sq. ft./15 sq. ft./24 sq.

	ft. (a)	ft. (a)	ft. (a)
Height	16 feet	35 feet	18 feet
Setback	5 feet	5 feet	5 feet
Number permitted per lot	1/major principal and auxiliary use + 1 price sign (a)(b)	Same	Same

(a) Area limits are broken down according to sign types, as follows: Sign area for principal use/sign areas for additional major auxiliary use(s) on site (for example, car wash, repair garage, convenience store)/sign area for gas prices. In the B-1 and IB zones, for example, the maximum permitted sign area for the principal use is twenty-five (25) square feet. The maximum permitted sign area for each auxiliary use is ten (10) square feet and the maximum permitted area for the gas price sign is twenty (20) square feet.

(b) All signs shall be mounted on the same base.

Building/Canopy Signs

	All Zones
Maximum permitted area	30 sq. ft. for principal building sign/10 sq. ft. for each additional major activity/20 sq. ft. for canopy sign
Square feet per linear foot of building facade on which sign will be placed	Na

Maximum vertical dimension	2 feet
Number permitted per lot	1 building sign for each major activity/2 canopy signs (a)

(a) Maximum two (2) signs allowed on large canopy; one (1) each on opposite facing planes.

Miscellaneous Signs

Signs placed on individual pumps shall be considered incidental signs and shall not be calculated in total allowable sign area. Incidental signs shall not be limited in number. However, no individual sign shall exceed one (1) square foot.
(Ord. No. 252-94, § 2, 4-4-94; Ord. No. 164-97, § 10, 1-6-97; Ord. No. 37-06/07, 9-6-06)

Sec. 14-369.6. Signs prohibited under this division.

All signs not expressly permitted under this division or exempt from regulation hereunder in accordance with section 14-371 are prohibited.
(Ord. No. 252-94, § 2, 4-4-94)

Sec. 14-370. Portable/temporary signs.

(a) *On private property.* Portable and temporary signs shall meet, in addition to the other requirements of this division, the following requirements:

1. *Number of signs.* There shall be no more than one (1) portable or one (1) temporary sign on any lot.

2. *Term.* A portable or temporary sign permit shall allow the use of a portable or temporary sign for a specified thirty-day period.

3. *Number of permits.* No more than two (2) portable or temporary sign permits shall be issued to each business on the same lot in any calendar year. In no event shall any lot have a portable or temporary sign for more than sixty (60) days in one (1) calendar year.

4. ***Other conditions.*** A portable or a temporary sign shall be allowed only in those districts indicated on Table 1 of section 14-369.5.

5. ***Permit sticker.*** Each portable sign and each temporary sign shall display a permit sticker issued by the building authority. The sticker shall contain the expiration date of the permit.

(b) ***Additional requirements for freestanding portable or temporary signs.*** In addition to the requirements of subsection (a) of this section, freestanding portable or temporary signs on private property shall meet the following requirements:

1. No portable or temporary sign shall interfere with the sight distance of traffic passing the site. The determination of sight distance shall be made by the traffic engineer.

2. Portable and temporary signs shall be set back a minimum of five (5) feet from the side line of the city right-of-way and a minimum of five (5) feet from any property line.

3. No portable or temporary sign shall exceed four (4) feet by eight (8) feet in size.

(c) ***Portable signs in the city right-of-way.*** Portable signs to be located in the city right-of-way shall receive a license from the building authority and shall be subject to the regulations promulgated by the building authority.

(d) ***Calculations.*** Portable and temporary signs shall not be included in calculations for other types of signage permitted by this division.
(Ord. No. 252-94, § 2, 4-4-94)

Sec. 14-370.7. Special sign types.

(a) ***Window signs.*** Window signs shall be permitted without a permit and shall not be included when calculating cumulative sign area. In no event, however, shall window signs cover more than fifty (50) percent of the area of any window.

(b) ***Real estate/construction/for sale or lease signs.*** Such signs shall be permitted without a permit, provided that in residential zones there shall be no more than one (1) such sign for each residential unit offered for sale or lease and such sign shall not exceed fifteen (15) square feet in area. In commercial and industrial zones, there shall be no more than one (1) such sign per unit offered for sale or lease for each street frontage of the property and the area of such signs shall not exceed sixty-four (64) square feet in the aggregate for each frontage.

(c) ***Works of art containing signage.*** Decorative murals, outdoor paintings, sculpture or other bona fide works of art that contain any commercial message, trademark or symbol are permitted in all zones except residential zones, provided that such commercial message, trademark or symbol does not comprise more than ten (10) percent of the total area of the artwork. Works of art containing a commercial message, trademark or symbol shall be permitted in residential zones only where such signage is ornamental in nature and does not serve any type of advertising function for the site upon which it is located or for any other site owned or controlled by the residential property owner or tenant.

(d) ***Building marker.*** Building markers shall be permitted without a permit.

(e) ***Seasonal sales/special activities signs.*** Signs associated with special events or activities that are licensed or authorized by the city council or its designee, such as seasonal sales or markets, special events, fairs and festivals, shall be permitted subject to applicable conditions or limitations that are imposed as part of the licensing or authorization process.

(f) ***Directory signs.*** Except where prohibited by section 14-369.5, directory signs, freestanding or attached to buildings, shall be allowed without a permit and shall not be included when calculating cumulative sign area, provided that the sign area for each tenant does not exceed one and one-half (1.5) square feet.
(Ord. No. 252-94, § 2, 4-4-94)

Sec. 14-371. Exemptions.

The following signs shall be exempt from regulation under this division and shall not be included when calculating cumulative sign area:

(a) Any public notice or warning required by a valid and applicable federal, state or local law, regulation or ordinance;

(b) Any sign inside a building that is not attached to a window or door;

(c) Works of art that do not include a commercial message;

(d) Holiday lights and decorations with no commercial message;

(e) Traffic control signs on private property, such as stop, yield and similar signs, the face of which meets department of transportation standards and which contains no commercial message of any sort;

(f) Public signs erected by or on behalf of a governmental body to post legal notices, convey public information, and direct or regulate pedestrian or vehicular traffic, including parking regulatory signs; bus stop signs erected by a public transit company; informational signs of a public utility regarding its poles, lines, pipes or facilities;

(g) Political signs, subject to the provisions of 23 M.R.S.A. § 1913;

(h) Signs inside office park developments with a single tenant, where such signs are not visible from any public street or public open space;

(i) Landmark signs; and

(j) Security signs, except that no commercial message of any kind shall be allowed on a sign if such message is legible from any location off the lot on which the sign is located.

(k) Bus shelter signs, as defined in section 14-367, subject to the provisions of Section 1 of the Technical Manual concerning the placement and permitted dimensions of bus shelter signs.

(Ord. No. 252-94, § 2, 4-4-94; Ord. No. 91-11/12, 5-21-12)

Sec. 14-372. Nonconforming signs.

(a) All signs lawfully existing on April 4, 1994, that do not conform to the terms of this division may be continued, subject to subsection (b) of this section.

(b) Notwithstanding subsection (a) of this section, lawfully nonconforming signs shall be made to conform or shall be removed if any of the following occurs, unless such improvements are required to achieve compliance with applicable federal, state or local regulations, other than the provisions of this division, and such improvements do not require replacement of the nonconforming sign:

1. Level III site plan review is sought for any new structures or building additions on the site, except as provided in subsection (5).

2. A building permit is sought for a rehabilitation of a building where the value of the rehabilitation exceeds fifty (50) percent of the assessed value of the building, or one hundred thousand dollars ($100,00.00), whichever is less, provided that where rehabilitation is of a multi-tenant building, only the tenant or tenants whose building or area is being rehabilitated shall be required to come into conformance with this division.

3. An application is filed for a new sign permit, except as provided in subsection (5), in accordance with the following:

    a. When an application is filed for a new building sign, all building signs on the lot shall be required to come into compliance with all requirements of this division for building signs.

    b. When an application is filed for a new freestanding sign, all freestanding signs on the lot shall be required to come into compliance with all requirements of this division for freestanding signs.

4. A sign is modified in any way, except for routine maintenance or repair of sudden and accidental damage, or for a change in the message panel only, unless otherwise

required to conform under this section. Repair of sudden and accidental damage shall not include replacement of the entire sign, which shall be treated as a modification under this subsection. Letters on nonconforming signs designed for changeable messages may be changed without triggering the terms of this subsection as long as no other change is made to the sign. Replacement of an awning covering with substantially the same material and text shall also not be considered a modification.

5. In the case of nonconforming freestanding joint identification signs for multi-tenant properties, signs may be added or modified to reflect a change in individual tenants without triggering the terms of this subsection, provided that the degree of nonconformity is not increased. In the case of building signs on multi-tenant properties, this subsection shall apply only to the individual business tenant that is adding or modifying a sign or seeking level III site plan review and shall not trigger the conformance requirement for other tenants' building signs, unless the building owner(s) elects to proceed under alternative 2 of Table 2.13- of section 14-369.5. In that case, all building signs on the subject lot shall be made to conform to the provisions of this division or shall be removed.

6. In no event shall the degree of nonconformity of any sign or type of signage on any lot be increased.

(Ord. No. 252-94, § 2, 4-4-94; Ord. No. 278-09/10, 7-19-10)

Sec. 14-372.5. Violations and enforcement.

Failure to perform any act required by this division or by any permit issued hereunder or performance of any act prohibited by this division shall constitute a violation and shall be subject to penalties as set forth in 30-A M.R.S.A. § 4452. Each day on which a violation exists shall constitute a separate violation for purposes of this section. The building authority shall be responsible for enforcement of this division.

(Ord. No. 252-94, § 2, 4-4-94)

DIVISION 22.5. ADULT BUSINESS ESTABLISHMENTS*

***Cross reference(s)—**Amusements, Ch. 4.

Sec. 14-373. Findings and purpose.

The council hereby finds that, because of their unique and potentially offensive nature, adult business establishments can have a blighting influence on the surrounding neighborhood if permitted at all in certain zones, or if allowed to concentrate in certain other zones, within the city. Moreover, such establishments are incompatible with uses characterized by family and youth-related activities. The purpose of this division is, therefore, to prevent such deleterious effects and, thus, protect the public health, safety, and general welfare by regulating the location and certain other aspects of adult business establishments.

(Ord. No. 187-81, § 602.16A(1), 9-21-81; Ord. No. 356-82, 1-18-82)

Sec. 14-374. Definitions.

Except as provided herein or in section 14-47, all words used in this division shall have their common meanings unless the context clearly implies otherwise.

Adult business establishment means and includes any retail business, including but not limited to any bookstore, newsstand, novelty store, nightclub, bar, cabaret, amusement arcade, or theater, which:

(a) Keeps for public patronage or permits or allows the operation of any adult amusement device as defined in section 4-16; or

(b) Customarily exhibits motion pictures or displays any other visual representation described or advertised as being "X-rated" or "for adults only," or which customarily excludes persons from any portion of the premises by reason of immaturity of age by the use of such, or similar, phrases; or

(c) Is adjudged to be in violation of 17 M.R.S.A. §§ 2911, 2912.

Customarily means more often than an average of one (1) calendar week during any calendar month of operation.

Sexually explicit means the display or depiction of sex organs

during actual or simulated sexual intercourse or sexual acts as defined in 17-A M.R.S.A. § 251.

(Ord. No. 187-81, § 602.16A(2), 9-21-81; Ord. No. 356-82, 1-18-82)

Cross reference(s)—Definitions and rules of construction generally, § 1-2.

Sec. 14-375. Adult business establishments permitted; special requirements.

(a) Notwithstanding any other provision of this article, adult business establishments shall be permitted only in the B-2 and B-3 zones, provided that such establishments, but for this division, would otherwise be permitted therein, and subject to the following special requirements:

1. Such establishment shall be at least one thousand (1,000) feet from any other adult business establishment, and at least five hundred (500) feet from any residential zone, as measured in a straight line, without regard to intervening structures or objects;

2. No sexually explicit materials, entertainment, or activity shall be visible from the exterior of the premises.

(b) Except as expressly provided herein, nothing in this division shall be construed to waive or otherwise affect any other provision of this article.

(Ord. No. 187-81, § 602.16A(3), 9-21-81; Ord. No. 356-82, 1-18-82; Ord. No. 54-85, 6-17-85; Ord. No. 164-97, § 11, 1-6-97)

Sec. 14-376. – Sec. 14-380. Reserved.

DIVISION 23. NONCONFORMING USE AND NONCONFORMING BUILDINGS

Sec. 14-381. Continuation.

Any lawful use of buildings, structures, premises or parts thereof, existing on June 5, 1957, and made nonconforming by the provisions of this article or any amendment thereto may be continued although such use does not conform with the provisions of this article or amendment thereto.

(Code 1968, § 602.17.A)

Sec. 14-382. Increase in nonconforming use of structure or alterations to nonconforming structures limited.

(a) A lawful nonconforming non-residential structure may be maintained, repaired, or reconstructed in kind within a one (1) year period or within a two (2) year period for a nonconforming residential structure, but no alterations, modifications or additions shall be made to it, except as provided in this division.

(b) A building whose use is wholly nonconforming shall not be altered so as to increase the cubical content or the degree of nonconformity.

(c) No alterations, modifications or additions shall be made so as to increase the cubical content or the degree of nonconforming use, nor shall a nonconforming use be extended to any other part of such building, unless such part was clearly arranged and designed for such nonconforming use prior to June 5, 1957, or such extension of a nonconforming use is solely for the purpose of bringing the use into compliance with health or safety codes, or to correct a condition that may not technically be in violation but which is determined by the board of appeals to constitute a health or safety problem. In either case, the expansion shall be limited to the minimum necessary to accomplish that purpose.

(d) Alteration, modification or addition may be made to a building which is lawfully nonconforming as to space and bulk or any dimensional requirement where the proposed changes in existing exterior walls and/or roofs would be within the space occupied by the existing shell of the building, and would not create any new nonconformity nor increase any existing nonconformity. This subsection shall not apply to buildings located within shoreland zones and existing on June 15, 1992, which are nonconforming only as to setbacks from wetlands, tributary streams or other water bodies, which shall be regulated in accordance with subsection (f) of this section.

(e) Except as expressly provided herein, any alteration, modification or addition permitted under this section shall be in compliance with all other applicable sections of this chapter. Nothing within this section shall be construed to permit an increase in the number of nonconforming units in a building which is nonconforming as to the number of dwelling units or will become nonconforming as a result of such alteration, modification or addition.

(f) ***Expansions.*** A non-conforming structure may be added to

or expanded after obtaining a permit from the same permitting authority as that for a new structure, if such addition or expansion does not increase the non-conformity of the structure and is in accordance with the sections below.

1. After January 1, 1989, if any portion of a structure is less than the required setback from the normal high water line of a water body or tributary stream or the upland edge of a wetland that portion of the structure shall not be expanded, as measured in floor area or volume, by thirty (30%) percent or more, during the lifetime of the structure. If a replacement structure conforms with the requirements of section 14-382, and is less than the required setback from a water body, tributary stream or wetland, the replacement structure may not be expanded if the original structure existing on January 1, 1989 had been expanded by thirty (30%) percent in floor area and volume since that date.

2. Whenever a new, enlarged, or replacement foundation is constructed under a non-conforming structure, the structure and new foundation must be placed such that the setback requirement is met to the greatest practical extent as determined by building authority, basing its decision the criteria specified in subsection (3) below. If the completed foundation does not extend beyond the exterior dimensions of the structure, except for expansion in conformity with section (f) above, and the foundation does not cause the structure to be elevated by more than three (3) additional feet as measured from the uphill side of the structure (from original ground level to the bottom of the first floor sill), it shall not be considered to be an expansion of the structure.

3. A nonconforming structure may be relocated within the boundaries of the parcel on which the structure is located, provided that the site of the relocation conforms to all setback requirements to the greatest practical extent as determined by the building authority, and provided that the applicant demonstrates that the present subsurface sewage disposal system meets the requirements of state law, the State of Maine Subsurface Wastewater Disposal Rules (Rules), or that a new system can be installed in compliance with state law, such rules, and all applicable sections of this Code. In no

event shall a structure be relocated in a manner that causes the structure to be more nonconforming. In determining whether the building relocation meets the setback requirements to the greatest practical extent, the building authority shall consider the size of the lot, the slope of the land, the potential for soil erosion, the location of other structures on the property and on adjacent properties, the location of septic system and other on-site soils suitable for septic systems, the type and amount of vegetation to be removed to accomplish the relocation. When it is necessary to remove vegetation within the water or wetland setback are in order to relocate a structure, the building authority shall require replanting of native vegetation to compensate for the destroyed vegetation. In addition, the area from which the relocated structure was removed must be replanted with vegetation. Replanting shall be required as follows:

a. Trees removed in order to relocate a structure must be replanted with at least one native tree, three (3) feet in height, for every tree removed. If more than five trees are planted, no one species of tree shall make up more than fifty (50%) percent of the number of trees planted. Replaced trees must be planted no further from the water or wetland than the trees that were removed.

   Other woody and herbaceous vegetation, and ground cover, that are removed or destroyed in order to relocate a structure must be re-established within the setback area. The vegetation and/or ground cover must consist of similar native vegetation and/or ground cover that was disturbed, destroyed or removed.

b. Where feasible, when a structure is relocated on a parcel the original location of the structure shall be replanted with vegetation which may consist of grasses, shrubs, trees, or a combination thereof.

4. Buildings in existence on January 1, 1989, and located in shoreland zones may be expanded once during the lifetime of the structure up to twenty-five (25) feet toward a freshwater wetland or tributary stream, provided that a

minimum setback of forty (40) feet is maintained and that the existing floor area or volume is not increased by more than thirty (30%) percent, and shall not create any undue environmental impact or flood prone condition.

(Code 1968, § 602.17.B; Ord. No. 271-89, 2-22-89; Ord. No. 96-89, § 2, 9-18-89; Ord. No. 15-92, § 26, 6-15-92; Ord. No. 284-99, §1, 5-17-99, enacted as an emergency; Ord. No. 296-08/09, 6-15-09; Ord. No. 139-12/13, 2-4-13)

Sec. 14-383. Extension of nonconforming use of land prohibited.

A lawful nonconforming use existing on premises outside of a building shall not be extended to or allowed to occupy any part or parts of such premises outside of the building.

(Code 1968, § 602.17.C; Ord. No. 354-85, § 3, 1-7-85)

Sec. 14-384. Change of nonconforming use.

A lawful nonconforming use in a structure designed for a use permitted in the zone in which it is located shall not be changed to any use other than a use permitted in the zone in which the structure is located. When a nonconforming use in such a structure has been changed to a permitted use, it shall not thereafter be changed back to any non-permitted use. For purposes of this section, a use shall be deemed to have been so changed when an existing nonconforming use shall have been terminated and a permitted use shall have commenced and continued for a period of seven (7) days. Any change of use in violation of this division shall be deemed to be an abandonment of the lawfully existing nonconforming use. A lawful nonconforming use in a structure not designed for a use permitted in the zone in which it is located shall not be changed to any use other than a use permitted in the zone in which the use is located or to any use other than a nonconforming use of a more restricted zone, as set forth in the following schedule, provided that in no such case shall any structural alterations be made in any building except those required by law, ordinance or other regulations:

(a) In a business zone, from any use permitted in an industrial zone to any use permitted in a business zone.

(b) In a B-1 zone, from any use permitted in a B-3 zone to any use permitted in a B-2 zone.

(c) In a residence zone, from any use permitted in a B-2 zone to any use permitted in a B-1 zone.

(d) In a residence zone, from any use permitted in any other residence zone to any use permitted in a more restricted residence zone. For the purpose of this subsection, an R-6 zone shall be deemed the least restricted and an R-2 zone shall be deemed the most restricted, with the intervening zones restricted in order of zone number.

(Code 1968, § 602.17.D; Ord. No. 499-74, § 8, 8-19-74)

Sec. 14-385. Restoration or reconstruction within an existing footprint of damaged nonconforming structure.

A nonconforming structure damaged by fire, explosion, flood, riot, act of the public enemy, accident of any kind, decay or otherwise may be restored or rebuilt only where:

(a) The restoration or reconstruction is of a building which is nonconforming only as to land area, setbacks or any other dimensional requirements; and

(b) Where the restoration or reconstruction will occur entirely within the existing footprint and previous shell of the building and will not create a new nonconformity; and

(c) Restoration or reconstruction occurs within one (1) year for a nonconforming non-residential structure, or two (2) years for a nonconforming residential structure, of the initial damage where such damage is sudden and accidental. Note that for buildings in SHoreland zones, stte regulations may also govern and provide for a shorter period for restoration or reconstruction of non-conforming structures; and

(d) Restoration or reconstruction necessitated by decay must be completed within one (1) year of the demolition of the building or the commencement of the restoration or reconstruction, whichever occurs first; and

(e) Any reconstruction, under this provision, in the residential R-6 zone on a lot with 10,000 square feet or less, other than the exact restoration of a previously existing building on the site, shall comply with the applicable standards contained within the Planning and Development Design Manual; and

(f) A nonconforming building located in the R-6 which is destroyed by fire, explosion, flood, riot, act of the enemy, or accident may be rebuilt under the small residential lot development provisions of the R-6 zone as if the lot were vacant as of January 1, 2005 and such reconstruction shall meet the setback requirements contained therein to the extent practicable; otherwise the building shall be reconstructed within the footprint of the previously existing building such that any nonconformity will not be enlarged.

For the purpose of this section, the footprint of a building is the perimeter of the foundation supporting a structure.
(Code 1968, § 602.17.E; Ord. No. 89-88, 7-19-88; Ord. No. 284-99, §2, 5-17-99, enacted as an emergency; Ord. No.254-05/06, 6-5-06; Ord. No. 61-07/08, 10-1-07; Ord. No. 240-09/10, 6-21-10; Ord. No. 139-12/13, 2-4-13)

***Editor's note—**Ord. No. 89-88, adopted July 19, 1988, amended this section to read as herein set out. See also the editor's note to Art. III of this chapter for additional provisions relative to Ord. No. 89-88.

Sec. 14-386. Discontinuance of use of land for ninety days.

A nonconforming use of land where no buildings or only incidental or accessory buildings are employed together with such use shall not be changed to any other nonconforming use, and if such use is discontinued for a period of ninety (90) days, it shall not be reestablished.
(Code 1968, § 602.17.G)

Sec. 14-387. Discontinuance of use of property.

If a legally nonconforming non-residential use is discontinued for a period of twelve (12) months or if a legally nonconforming residential use is discontinued for a period of twenty-four (24) months, such discontinuance shall constitute an abandonment of the use and the property shall not thereafter be occupied or used except in conformity with the provisions of this article. In cases of foreclosure or similar situations involving a legally nonconforming residential structure, the Planning Authority shall be authorized to extend the aforementioned period up to an additional five (5) years provided that the extension is for good cause and the minimum length considered necessary to resume the

legally nonconforming use of the structure. A nonconforming use of land which is incidental or accessory to such nonconforming structure shall be considered as being discontinued at the same time as the nonconforming use of the structure. Note that for buildings in SHoreland zones, state regulations may also govern and provide for a shorter period of time for nonconforming properties.
(Code 1968, § 602.17.F; Ord. No. 499-74, § 9, 8-19-74; Ord. No. 139-12/13, 2-4-13)

Sec. 14-388. Reserved.

***Editor's Note—**Per Council Order 125-09/10 passed on January 4, 2010 Section 14-388 (Nonconformity as to the area of dwelling) was repealed in its entirety.

Sec. 14-389. Nonconformity as to off-street parking.

A building or structure which is nonconforming as to the requirements for off-street parking shall not be enlarged or altered to create additional dwelling units, or seats as in the case of places of public assembly, or floor area as in the case of industrial, business, manufacturing, institutional or recreational buildings, or accommodations as in the case of hotels, tourist homes and tourist courts, unless required off-street parking is provided for such addition or enlargement.
(Code 1968, § 602.17.I)

Sec. 14-390. Nonconformity as to off-street loading.

A building which is nonconforming as to the requirements for off-street loading shall not be enlarged or added to, unless off-street loading is provided sufficient to satisfy the requirements of this article for both the addition or enlargement and the original building or structure.
(Code 1968, § 602.17.J)

Sec. 14-391. Nonconformity as to number of dwelling units.

(a) Purpose. The purpose of this provision is to establish a process whereby certain dwellings which contain more dwelling units than the number permitted by the applicable provisions of the Land Use Code may be recognized as legal, nonconforming uses. This provision shall not apply to rooming units.

(b) Approval by Zoning Administrator.

1. Application. Application for validation of such non-conforming dwelling units shall be on a form provided by the Division of Housing and Neighborhood Services, Inspection Services Office. The application fee will be $300.00 for each dwelling unit which is the subject of the application, and will be accompanied by: (i) a plan, drawn to scale, which shows the location of the building(s) on the lot, parking, easements, dumpsters, fencing, public ways and any other significant feature and (ii) a floor plan for each unit in the dwelling, whether or not it is the subject of the application.

(c) Eligibility. In order for a nonconforming dwelling unit to be validated by administrative action of the Zoning Administrator as authorized herein, the Zoning Administrator must find, based on competent evidence, supported by public records, that:

1. The nonconforming dwelling units were either in existence April 1, 1995, or the structure in which they are located was originally designed to accommodate more than the number of such units presently in use.

2. The applicant neither constructed nor established the non-conforming dwelling units.

3. The nonconforming dwelling units comply with or can be made to comply with current standards of the National Fire Protection Association Life Safety Code (§16-1)and the National Fire Protection Association 1: Fire Prevention Code (§10-16), as amended.

4. Each of the nonconforming dwelling units complies with provisions of the City's Housing Code or can be made to conform with, as amended, including, but not limited to, the requirements of §6-110, Minimum Standards for Space and Occupancy and §6-111, Minimum Plumbing Standards, and §6-112 Minimum Ventilation Standards.

5. The structure containing the nonconforming dwelling units is located in the R-3, R-4, R-5, R-6 or R-7 Zones; or the B-1, B-1(b), B-2, B-2(b) or B-3 Zones.

6. In the absence of legally competent evidence, supported

by records, (such as, but not limited to, Assessor's records, purchase and sale agreements, affidavits, deeds, mortgages, as well as reliable secondary sources, such as the Portland Director), that the conditions of subsections c(1), C(2), c(3), c(4), or c(5) can be met, the Zoning Administrator may not approve the application, but shall advise the applicant that the matter may be appealed to the Board of Appeals.

(d) Notice to Abutters. Upon receipt of a completed application, the Zoning Administrator will provide both the owners of abutting properties as well as the owners of property situated within 300 feet of the structure of the essential information contained in the application, along with a notice that they may object to the Zoning Administrator's acting on the application and require the applicant to appeal to the Board of Appeals. The notice shall be in conspicuous type and advise the abutters and owners of property within 300 feet that any objection must be submitted in writing to the Zoning Administrator within ten (10) days of the date of the notice sent to them.

The failure of any property owner to receive the notice described above shall not invalidate any action by the Zoning Administrator. The Zoning Administrator shall promptly notify the applicant of receipt of the objection, that the Zoning Administrator is without authority to proceed and advise the applicant that, within 30 days from receipt of the letter, an application may be filed to have the matter reviewed by the Board of Appeals as a conditional use.

(e) Approval of Application.

1. The Zoning Administrator may approve the application, provided: (i) the evidence presented satisfies all of the requirements of this section; (ii) the Office of Inspection Services and Fire Prevention Bureau have certified that the nonconforming units conform with or can be made to conform with the applicable codes; and (iii) no abutter nor person entitled to notice has requested that the application be referred to the Board of Appeals, instead of the Zoning Administrator.

2. Upon approval of the application and receipt of an additional fee in the amount of $75.00 for each

nonconforming dwelling unit which has been recognized as a lawful, nonconforming use, the Zoning Administrator will issue a certificate of occupancy.

(f) Disapproval of Application. In the event the application is not approved by the Zoning Administrator or in the event of a timely objection filed by a person qualified herein to file such an objection, the applicant, within (30) days from the decision of the Zoning Administrator or objection, may appeal the matter to the Board of Appeals as a conditional use.

(g) Action by Board of Appeals. The Board of Appeals shall treat applications filed under this section as an application for a conditional use (§14-474) applying the standards applicable to conditional uses as well as the requirements of this section.

(h) Dimensional and Parking Requirements. In marking decisions under this section neither the Zoning Administrator nor the Board of Appeals shall apply the dimensional or parking requirements which would otherwise apply in the zones where the nonconforming dwelling units are situated.

(i) Exclusions.

1. The provisions of this section shall not apply to rooming units (§14-47), but shall apply to efficiency apartments (§6-110(b)).

2. The Board of Appeals is without jurisdiction to grant any relief (including, but not limited to, variances) which would recognize the particular dwelling units which are the subject of this section as legal, nonconforming uses, except in strict compliance with each requirement of this section.

(j) Prior Judicial and Administrative Action. Decisions of any court or administrative body, including but not limited to, the Zoning Administrator, the Planning Board or the Board of Appeals made prior to the effective date of this section and which addressed the number of nonconforming dwelling units in a particular structure, will not bar relief under this section.

(Ord. No. 153-03/04, 02/23/04)

***Editor's note—**Section 4 of Ord. No. 354-85, adopted Jan. 7, 1985, repealed the pre-2004 version of § 14-391, relative to the Board of Appeals permitting temporary nonconforming uses, which derived from Code 1968, § 602.17.K.

Sec. 14-392. - Sec. 14-400. Reserved.

DIVISION 24. USE REGULATIONS AND EXCEPTIONS

Sec. 14-401. Generally.

The requirements of this article shall be subject to the use regulations and exceptions of this division.
(Code 1968, § 602.18)

Sec. 14-402. Relationship of buildings to lots.

Every building hereafter erected shall be located on a lot as defined in section 14-47.
(Code 1968, § 602.18.A)

Sec. 14-403. Street access.

(a) *In general.* No building intended for use as a habitation shall be erected on a lot which has its only street frontage on a street less than thirty-five (35) feet wide. No building shall be erected on a lot, except on the islands in Casco Bay, which does not abut a street meeting the minimum requirements for street improvements set forth in this section. For purposes of this section, street shall be as defined in section 14-47, except that a dedicated street which may no longer be accepted due to lapse of time and an accepted street which may have been discontinued by abandonment shall also be deemed to be streets, provided that an applicant for a building permit respecting any lot abutting such street shall, without compensation or claim for damages, and at his own cost and expense, first submit to the building authority (a) a deed from the owner of such lot conveying to the city all his right, title and interest in and to such street or any portion thereof; and (b) an agreement by such owner forever releasing the city from any and all claims for damages for the laying out and taking of such street and indemnifying the city against any and all other such claims, both such instruments to be executed and in recordable form acceptable to the corporation counsel and to encumber and run with the land.

(b) ***Minimum requirements for street improvements on unimproved and improved but unpaved streets.*** For a lot abutting any portion of a street which is unimproved or improved but not permanently paved, that portion which abuts the lot, and any like portion between such portion and the nearest permanently paved street or portion which is the principal access to such lot, shall be improved, including sewers, storm drains, pavements, curbs and, if located on a designated school walking route, sidewalks, in accordance with the minimum technical standards promulgated by the public works authority pursuant to section 14-498(a) of article IV of this chapter. Where the nearest permanently paved street does not have granite curbing, the public works authority may waive the requirement of curbing under this section, if it determines that an acceptable alternative drainage plan will be provided. Prior to the issuance of a building permit for erection of a building on a lot abutting any portion of a street which is unimproved or improved but not permanently paved, the following shall occur: (1) A plan of the street improvements required by this section shall be submitted to the public works authority; and (2) upon determination by the public works authority that the plan meets the street improvement requirements established by this subsection, a performance guarantee and inspection fee for said improvements shall be submitted to the city as set forth in section 14-501. Also as set forth in section 14-501, a one-year defect bond shall be tendered to the city prior to release of the performance guarantee required hereby. The provisions of this subsection (b) shall not apply to the erection of any single-family dwelling on any lot where the owner of the lot establishes that he or she was the owner of that same lot on November 19, 1984, and at all times thereafter, and states his or her intention under oath to make the structure his or her personal residence.

I ***Exceptions.*** The requirements of this section shall not apply to the following city streets upon their construction by the public works authority to such standards as are determined by the authority to be the most feasible:

1. Dingley Court;

2. Morgan Court.

(Code 1968, § 602.18.B; Ord. No. 193-84, § 1, 11-19-84; Ord. No. 178-87, 11-2-87; Ord. No. 372-89, 3-20-89; Ord. No. 273-90, 3-19-90)

Sec. 14-404. Accessory use.

The term "accessory use" shall include only the following:

(a) A subordinate use of land or building which is customarily incidental to the main building or to the principal use of the land and which is located on the same lot with the principal building or use. No "garage sale," "lawn sale," "attic sale," "rummage sale," or other similar casual sale of tangible personal property which is advertised by any means whatsoever whereby the public at large is or can be made aware of such sale, shall be deemed to be "customarily incidental" if such sale occurs after sales have been conducted on the same premises for six (6) or more days previously during the calendar year.

Except where the principal use consists of the sale of alcoholic beverages for consumption on premises or where the principal structure is an airline terminal, pinball machines or amusement devices shall not be considered to be accessory uses whenever there are more than a total of two (2) such machines or devices on the premises.

(b) Off-street parking when serving conforming uses located in any zone.

(c) Home occupations as defined in section 14-47 and section 14-410.

(d) Signs as defined in division 22 of this article.

(e) The letting of rooms within an existing dwelling unit in any residential zone, provided that:

1. There shall be no more than two (2) persons occupying such room or rooms;

2. There shall be not more than two (2) rooms per dwelling unit occupied for such use; and

3. There shall be no increase in the bathroom and/or kitchen facilities in the dwelling, and no such facility shall have been constructed in the immediately preceding two (2) years.

(Code 1968, § 602.18.C; Ord. No. 574-81, 4-6-81; Ord. No. 66-87, § 1, 11-2-87; Ord. No. 240-09/10, 6-21-10)

Sec. 14-405. Business entrances.

In any business zone which abuts a residence zone in such a manner that the dividing line between the zones is one hundred (100) feet or less from the main business street of such business zone, no building of nonconforming use in such residence zone shall be built and no such existing building shall be altered so as to have its front or any entrance door or any part thereof used for a nonconforming use in such residence zone facing upon any other street than the main business street unless such entrance is at a distance greater than sixty (60) feet from the nearest residence zone.
(Code 1968, § 602.18.D)

Sec. 14-406. Garages.

No building in any zone shall be erected, altered or used as a garage for the storage of more than three (3) motor vehicles or for the business of repairing motor vehicles, if any part of either old or new building when completed would be closer than five (5) feet to any part of any church, public or private hospital or school; or if any part of either old or new building when completed would be less than fifteen (15) feet from the boundary line of any lot upon which any part of any church, public or private hospital or school is located. No existing garage used for the storage of more than three (3) motor vehicles or for the business of repairing motor vehicles shall be deemed to become a nonconforming use through the subsequent erection of such church, hospital or school closer than the aforesaid distance to such a garage.
(Code 1968, § 602.18.E)

Sec. 14-407. Temporary stands.

(a) No premises shall be used for business purposes consisting of temporary stands, booths, platforms or vehicles intended for the sale of merchandise or other mercantile purposes, if any part of such stand, booth, platform or vehicle is proposed to be located nearer than one hundred twenty-five (125) feet to any residence zone, except that stands for the sale of agricultural products shall be permitted as specified in division 2 of this article.

(b) A single produce stand shall be permitted on the premises of a community garden for the sale of flowers, vegetables, herbs or

fruit produced on the premises; provided that the stand is no more than one hundred (100) square feet in floor area or open table area and is located a minimum of five feet from any property line; and that sales are limited to two days per week between the hours of 9:00 a.m. and 6:30 p.m. during the growing season from May 25 through October 31 and that the stand has received all necessary permits. The use of produce stands shall be seasonal and temporary. Any properly permitted structure may remain on the premises year round. If the community garden is owned or operated by a non-profit organization, sales of flowers, vegetables, herbs or fruit produced in other gardens or farms in Maine owned or operated by said organization shall be permitted within the same limitations listed above. For purposes of this section, community garden means a parcel of open land used for the cultivation of flowers, vegetables, herbs, or fruit by a group of city residents either jointly as a single plot or through individual garden plots or beds.

(c) A single produce stand shall be permitted on the premises of a non-profit organization with the permission of the owner and and on the premise of public schools with the permission of the school department; provided that the stand is for the sale of local fruit, vegetables, flowers, seedlings and plants produced by the seller; that the stand is no more than one hundred (100) square feet in floor area or open table area and is located a minimum of five feet from any property line; that sales on the premises are limited to two days per week between the hours of 9:00 a.m. and 6:30 p.m. during the growing season from May 25 through October 31; and that the stand has received all necessary permits. The use of produce stands shall be seasonal and temporary. Any properly permitted structure may remain on the premises year round.

(d) For purposes of this Section, non-profit organization shall mean a non-profit organization incorporated pursuant to the laws of the State of Maine.

(Code 1968, § 602.18.F; Ord. No. 75-10/11, 11-15-10;Ord. No. 59-12/13, 9-19-12)

Sec. 14-408. Exceptions to performance standards.

The operation on public streets, airports and railroad rights-of-way of motor vehicles and other vehicles for the transportation of goods or persons shall be excepted from the limitations of the sections entitled “external effects.”

(Code 1968, § 602.18.G)

Sec. 14-409. Heliports.

Heliports shall meet the following minimum specifications, subject to regulations of the Civil Aeronautics Administration when such regulations are greater:

(a) *Roof heliport:*

1. Take-off area: Two hundred (200) feet by two hundred fifty (250) feet minimum.

2. Parking area: Thirty (30) feet by ninety (90) feet minimum.

(b) *Ground heliport:*

1. Take-off area: Three hundred (300) feet by seven hundred (700) feet minimum.

2. Parking area and station building shall be located out of flight area.

(c) *Maximum elevation of operational area above street:* One hundred (100) feet.

(d) *Minimum clearance from lateral obstruction*: One hundred (100) feet.

(e) *Minimum width of approach and departure path*: Five hundred (500) feet at landing area, tapering outward fifteen (15) degrees on each side to a width of one thousand (1,000) feet.

(f) *Slope:* With emergency landing areas: One (1) to eight (8): Without emergency landing areas: One (1) to twenty (20).

(g) *Curved approach:* Minimum radius to turn, six hundred fifty (650) feet.

(h) *Approach zone transition area:* Slope, one (1) in two (2).

(Code 1968, § 602.18.H)

Sec. 14-410. Home occupation.

Purpose. The purpose of home occupations is to allow the secondary and incidental use of a residence for the conduct of appropriate occupations whose external activity levels and impacts are so limited as to be compatible with the residential character of the neighborhood.

(a) In connection with the operation of a home occupation, within a dwelling unit, the following requirements shall be met:

1. A home occupation shall not occupy more than five hundred (500) square feet of floor area or more than twenty-five (25) percent of the total floor area of such a dwelling unit, whichever is less, or in the case of licensed family day care homes, or home babysitting services, to accommodate not more than six (6) children plus two (2) children after school and having no nonresidential employees;

2. There shall be no outside storage of goods and materials nor shall there be exterior displays, or display of goods visible from the outside;

3. Storage of materials related to the home occupation shall count as a part of the occupancy limitations in subsection (a)1 above, but shall not constitute a dominant part of such occupancy provided, however, storage of such materials or products in garages or other accessory structures is prohibited;

4. Exterior signs shall be limited to one (1) nonilluminated sign not exceeding a total area of two (2) square feet, affixed to the building and not projecting more than one (1) foot beyond the building;

5. Any exterior alterations to the residence shall be compatible with the architecture of the building and maintain the residential appearance by virtue of exterior materials, lighting, and signs;

6. ***Off-street parking:*** Off-street parking is required as provided in division 20 (off-street parking) of this article;

7. The home occupation shall not produce offensive noise, vibration, smoke, dust or other particulate matter, odorous matter, heat, humidity, glare or other objectionable effects;

8. There shall be no more than one (1) nonresident employed in the home occupation, provided, however, family day care or home babysitting services shall have no nonresident employees;

9. No traffic shall be generated by the home occupation in greater volumes than would normally be expected in a residential neighborhood;

10. No motor vehicle exceeding a gross vehicle weight of six thousand (6,000) pounds shall be stored on the property in connection with the home occupation.

(b) No residence shall be occupied, altered or used for any home occupation except the following:

1. Accountants and auditors;

2. Answering services (telephone);

3. Architects;

4. Artists and sculptors;

5. Authors and composers;

6. Computer programming;

7. Custodial services;

8. Custom furniture repair and upholstering;

9. Dentists, doctors, therapists, and health care practitioners;

10. Direct mail services;

11. Dressmakers, seamstresses and tailors;

12. Engineers;

13. Family planning services;

14. Hairdressers (limited to no more than two (2) hair dryers);

15. Home crafts, such as model making, rug weaving, lapidary work, cabinet making, weaving, ceramics;

16. Interior decorators;

17. Lawyers, justices of the peace and notary publics;

18. Licensed family day care home or babysitting services;

19. Musicians or music teachers, including group instruction not to exceed six (6) students at any time but not including performances or band rehearsals, which shall meet the following requirements in addition to those set forth in subsection (a) of this section:

    a. Electronic amplification is prohibited;

    b. The applicant shall demonstrate that noise attenuation is provided which minimizes perception of sound at property lines at all times during the use. Noise attenuation measures may include, but are not limited to, insulation, double-pane windows, air conditioners or any combination of these or similar noise attenuation measures;

    c. Hours of operation shall be limited to 8:30 a.m. to 9:30 p.m.

20. Office facility of a minister, rabbi, or priest;

21. Photographic studios;

22. Professional counseling and consulting services;

23. Professional research services;

24. Sales persons provided that no retail or wholesale transactions are made on the premises;

25. Small appliance repair;

26. Snow plowing provided that only one (1) snow plow vehicle is stored on or generated from the site;

27. Special tutoring or instruction (not to exceed three (3) pupils at any given time);

28. Stenographic and other clerical services.

(c) A home occupation that is not listed in paragraph (b) of this section but is similar to and no more objectionable than those home occupations listed in that paragraph, shall be permitted as a conditional use subject to the requirements of paragraph (a) of this section and section 14-474 (conditional use) of this article. This provision shall not include veterinarians, kennels, animal raising, funeral homes, retail uses including antique shops, restaurants, dancing studios, towing services, repair and painting of automobiles as home occupations.

(Code 1968, § 602.18.I; Ord. No. 277-77, 11-7-77; Ord. No. 548-85, § 1, 5-6-85; Ord. No. 76-85, § 1, 7-1-85; Ord. No. 66-87, § 2, 11-2-87; Ord. No. 329-90, 5-7-90; Ord. No. 240-09/10, 6-21-10)

Sec. 14-411. - Sec. 14-420. Reserved.

DIVISION 25. SPACE AND BULK REGULATIONS AND EXCEPTIONS

Sec. 14-421. Generally.

The requirements of this article shall be subject to the space and bulk regulations and exceptions of this division.

(Code 1968, § 602.19.A)

Sec. 14-422. Reduction of lot area prohibited.

No lot shall be so reduced that yards, lot width, lot

frontage, lot area, area per dwelling unit, and space for off-street parking and/or off-street loading shall be less than the minimum required under this article.
(Code 1968, § 602.19.A)

Sec. 14-423.Reserved.

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*__Editor's Note:__ Pursuant to Council Order No. 240-09/10, passed on June 21, 2010, Section 14-423 (Joint occupancy) was repealed in it's entirety.

Sec. 14-424. Required open space.

No part of a yard or other open space required about any building under this article shall be included as a part of a yard or other open space required for another building.
(Code 1968, § 602.19.C)

Sec. 14-425. Projections in required yard areas.

Any yard may be occupied by a one-story entrance porch not enclosed, with or without a roof, if the area of the porch does not exceed fifty (50) square feet nor the projection from the building exceed six (6) feet. A basement bulkhead of similar size, but not more than twenty four (24) inches in height, is also permitted. A cornice eave, sill, canopy, chimney, or other similar architectural feature, but not including a bay window, may project into any required yard a distance of not more than two (2) feet.
(Code 1968, § 602.19.D; Ord. No. 78-03/04, 10-20-03)

Sec. 14-426. Fences.

In residence zones no wall or fence along a street line or within twenty-five (25) feet of a street line shall be more than four (4) feet in height unless said fence is located in the side or rear yard and is reviewed by the public works authority and found not to be a traffic or public safety hazard, subject to the provisions of section 14-434.
(Code 1968, § 602.19.E; Ord. No. 247-97, 4-9-97)

Sec. 14-427. Enclosure of porches.

Any open porch existing with a roof over the same on June 5, 1957, and encroaching upon any yard required by this article may be enclosed if the major portion of the enclosure is of glass.

Sec. 14-428. Corner lots.

In case a dwelling house has its front yard upon the long side of a corner lot, the rear yard may be reduced to a depth not less than the width required for a side yard on the lot, provided the aggregate of the widths of both sides and depths of front and rear yards is not less than the similar aggregate of required dimensions of all yards required if the front yard were faced on the short side of the lot.
(Code 1968, § 602.19.G)

Sec. 14-429. Lot surrounded by streets or alleys.

Where a lot containing ten thousand (10,000) square feet or less is completely surrounded by streets or alleys, the building area may be increased twenty (20) percent.
(Code 1968, § 602.19.H)

Sec. 14-430. Height limits.

(a) ***Roof structure.*** Roof structures for the housing of elevators, stairways, tanks, fans, or other building operating equipment not intended for human occupancy, skylights, steeples, roof signs, flag poles, chimneys, smokestacks, radio or television masts, water tanks, or silos may be erected above the height limitation herein prescribed for buildings. Roof-mounted wind energy systems shall not be considered to be roof sturctures for the purposes of Article X, Alternative Energy.

(b) ***Public art.*** Except in residential zones, public art that has been individually accepted by the city council for inclusion within the public art collection, pursuant to Article XI, Public Art Program of the Land Use Code, (Section 14-852(c)), shall not be subject to the height limitations for buildings within the underlying zone.

(c) ***Temporary wind anemometer towers.*** Temporary wind anemometer towers may be erected above the height limitation for buildings within the underlying zone, subject to receiving Board of Appeals approval and FAA approval, if necessary.

(d) ***Wind energy systems.*** Wind energy systems may be erected above the height limitation for principal buildings

within the underlying zone, pursuant to Article X, Alternative Energy.
(Code 1968, § 602.19.I; Ord. No. 428-83, § 1, 4-25-83; Ord. No. 36-89, § 3, 6-28-89; Ord. No. 96-08/09, 11-17-08; Ord. No. 29-09/10, 8-3-09 emergency passage; Ord. No. 33-11/12, 1-18-12)

Sec. 14-431. Yards.

The height in stories or feet of that part of the principal building adjoining a yard shall be used in determining the required width or depth of that yard, but in no case shall any higher part of the building be closer to the property line than width or depth of yard required for that height. In case an addition is to be made to a building which existed on June 5, 1957, the side yard spaces of which complied with the ordinance in effect on that date, the aggregate side yards may be the same as required on that date, provided the yard on the side where the addition is intended would comply with the minimum width required by the present ordinance. Yards as prescribed for residential uses shall be required for an apartment house or hotel erected above the ground floor of a building where the ground floor is designed exclusively for business purposes.
(Code 1968, § 602.19.J)

Sec. 14-432. Swimming pools.

Outdoor swimming pools accessory to dwellings, apartment houses, hotels or motels shall be permitted on lots, provided the following conditions are met:

(a) No swimming pool shall be sited in the front yard.

(b) No part of any swimming pool shall be located closer than ten (10) feet from the principal structure, nor closer than ten (10) feet from the side or rear lot lines.

(Code 1968, § 602.19.K; Ord. No. 271-77, 5-16-77; Ord. No. 90-88, 7-19-88)

***Editor's note—**Ord. No. 90-88, adopted July 19, 1988, amended § 14-432 to read as herein set out. See also the editor's note to Art. III of this chapter for additional provisions relative to Ord. No. 90-88.

Sec. 14-433. Lots of record and accessory structure setbacks for existing buildings.

Any lot of record as of June 5, 1957, and held under separate

and distinct ownership from adjacent lots and having a street frontage of forty (40) feet, or to which a means of access has been previously approved by the city council as provided elsewhere in this article, may be considered a buildable lot in any residential zone except as provided below for island residential zones, with a minimum lot size of five thousand (5,000) square feet, except that a lot in the R-6 zone may have a minimum lot size of three thousand (3,000) square feet, provided that the applicable yard dimensions can be met.

A lot in the R-1, R-2, R-3, R-4, R-5, R-5A or R-6 zones that was described in a subdivision plat approved by the Planning Board after June 5, 1981, or a lot of record that conformed to the applicable lot size requirement, lot width and street frontage as of June 5, 1984, shall be considered a buildable lot, provided that the applicable yard dimensions can be met.

Where such a lot has a principal structure which existed as of July 19, 1988, an accessory structure or building addition may be located within the following side and rear yards, provided that the normal applicable yard requirements cannot be met provided, however, that less restrictive zoning requirements which meet the requirements contained within 14-139(b) for residential small lot development shall apply:

a. *R-1, R-2:*

Rear yard: Ten (10) feet.

Side yard: Five (5) feet.

b. *R-3, R-4, R-5, R-5A, R-6:*

Rear yard: Five (5) feet.

Side yard: Five (5) feet.

Any detached or accessory structure in the R-4 or R-6 zones, with a ground coverage exceeding two hundred fifty (250) square feet and which was in existence on January 1, 1940, may be converted to dwelling uses without meeting front, side or rear year set backs, provided there is no enlargement of any nonconforming portion of the existing building footprint and provided the conversion will conform to the minimum land area per dwelling unit.

Any lot of record as of July 15, 1985, and held under separate and distinct ownership from adjacent lots and meeting the applicable street frontage requirements of that time may be considered a buildable lot in the IR-1 and IR-2 zones, provided that the applicable yard dimensions can be met and provided further that a lot in the IR-1 zone shall have a minimum area of ten thousand (10,000) square feet and a lot of the IR-2 zone shall have a minimum area of six thousand five hundred (6,500) square feet unless it is served by both public sewer and public water, in which case it shall have a minimum area of five thousand (5,000) square feet.

A lot in the IR-1, IR-2 and I-B zones that was described in a subdivision plat approved by the Planning Board after July 15, 1982, shall be considered a buildable lot, provided that the applicable yard dimensions can be met.

(Code 1968, § 602.19.L; Ord. No. 539-84, 5-7-84; Ord. No. 32-85, § 1, 7-15-85; Ord. No. 91-88, 7-19-88; Ord. No. 310-89, 1-30-89; Ord. No. 166-89, 12-11-89)

***Editor's note—**Ord. No. 91-88, adopted July 19, 1988, amended § 14-433 to read as herein set out. See also the editor's note to Art. III of this chapter for additional provisions relative to Ord. No. 91-88. Subsequently, § 14-433 was amended by Ord. No. 310-89, adopted Jan. 30, 1989, to read as set out, which ordinance further provided that it be applicable to all pending proceedings and be enacted as an emergency.

Sec. 14-434. Corner clearance.

No obstruction higher than three and one-half (3 1/2) feet above the lowest elevation at the curbline shall be permitted on a corner lot within the area of a triangle formed by a line intersecting the street lines of the intersecting streets at points twenty-five (25) feet from the corner, unless said obstruction is located in the side or rear yard and is reviewed by the public works authority and found not to be a traffic or public safety hazard. For the purpose of this section, the word "obstruction" shall mean any shrub, wall, fence, temporary building, sign, a pile of material, but shall not include permanent buildings or structures where permitted elsewhere in this article.

(Code 1968, § 602.19.M; Ord. No. 247-97, 4-9-97; Ord. No. 56-08/09)

Sec. 14-435. Unsewered residential district.

Where a lot in a residence zone is not served by public sewers and septic tank disposal systems are required, the minimum lot area

required shall be determined from the following table, except that on the islands in Casco Bay, such variation as shall be approved by the health officer may be permitted in the minimum required lot areas:

Standard Percolation Test Rate of Percolation (minutes)	*Lot Area Required (square feet)*
2	7,800
3	8,400
4	8,800
5	9,100
10	10,500
15....	11,800
30	13,800
45	15,500

(Code 1968, § 602.19.N)

Sec. 14-436. Building extensions.

Existing non-residential and residential principal structures which are nonconforming as to any area and/or yard requirements may be enlarged within the existing footprint subject to the following provisions:

(a) *For principal structures lawfully nonconforming as to land area per dwelling unit as of July 19, 1988*: The floor area of the expansion shall be limited to no more than fifty (50) percent of the first floor footprint.

The additional floor area shall be created in the uppermost floor by the use of dormers, turrets or similar structures needed to provide the minimum height required for habitable space while preserving the existing roof configuration to the maximum extent possible.

(b) *For residential principal structures conforming as to land area per dwelling unit as of July 19, 1988, but lawfully nonconforming as to any yard setback or nonresidential principal structures that are lawfully nonconforming as to any yard setback*: The floor area of the expansion shall be limited to no more than eighty (80) percent of the first floor footprint. The additional floor area shall be created by raising the existing roof configuration the minimum amount required to create an additional story of habitable space, or by the use of dormers, turrets or similar structures.

Building expansions under this section may occur only once during the lifetime of an existing structure.

(Ord. No. 61-97, 8-18-97; Ord. No. 284-99, §3, 5-17-99, enacted as an emergency to take effect immediately pursuant to Article II, Sec. 8 of the Portland City Charter)

***Editor's note—**Ord. No. 61-97, adopted Aug. 18, 1997, repealed former § 14-436 and enacted similar new provisions as herein set out. Formerly, such section derived from § 602.19.O of the 1968 Code as amended by Ord. No. 92-88, adopted July 19, 1988.

Sec. 14-437. Setback reductions.

(a) *Authority.* The zoning administrator may grant setback reductions to the extent provided by this section.

(b) *Procedure.* Application for a setback reduction shall be submitted to the building inspections division. A payment of a nonrefundable application fee, as established from time to time by order of the city council to cover administrative costs, shall accompany each application. The application shall be in such form as prescribed by the zoning administrator and shall contain at least the following information and documentation:

1. The name and address of the applicant and his or her interest in the subject property;

2. The name and address of the owner, if different from the applicant;

3. The address or location and the city assessor's chart, block and lot number of the subject property;

4. The present use and zoning classification of the subject property;

5. Plot plan showing sufficient information to indicate the location of all structures existing and proposed in relation to the lot lines. Such a plan must be prepared by a state registered land surveyor. If, in the opinion of the surveyor, sufficient monumentation is not available, then a standard boundary survey will be necessary to meet the requirements of this section.

(c) *Purpose.* The purpose of setback reductions is to validate the sites of mislocated single-family, owner-occupied residential structures and those structures accessory thereto, which are not otherwise legally sited and which were in existence on November 15, 1993.

(d) Conditions for setback reductions. Setback reductions which may be granted by the zoning administrator are subject to the following conditions:

1. The sole use of the property is (and, if the application should be granted, will remain) as a single-family detached dwelling.

2. The property is located in R-1, R-2, R-3, R-4, R-5, R-6, IR-1, IR-2, IR-3 or RP zones.

3. The reduction sought cannot be reduced by more than the following:

IR-1, IR-2, IR-3, R-3, RP, R-1, R-2, R-4 and R-5 zones:

Front yard: Ten (10) feet

Rear yard: Ten (10) feet

Side yard: Five (5) feet

R-6 zone:

Front yard: Five (5) feet

Rear yard: Ten (10) feet

Side yard: Five (5) feet

4. No relief may be granted under this section in cases where the building authority determines that the setback violation was the result of a willful act by either the applicant or a prior owner.

5. This section shall only apply to the inadvertent misplacement of a structure.

6. Recording of setback reduction: The zoning administrator shall provide a signed instrument in recordable form, indicating any setback reduction granted under the terms of this section. The applicant for such reduction shall be responsible for recording this instrument in the Cumberland County Registry of Deeds.

(Ord. No. 138-93, 11-15-93)

Sec. 14-438. Setback reductions for porches and other similar uses.

(a) Porches, decks and sheds which are accessory to single-family dwellings built five (5) years prior to the date of application will be eligible for setback reductions as provided in this section. Such structures are not subject to the limitations in section 14-437, must be set back two (2) feet from the rear and side property lines, and must comply with the front yard setback required for the applicable zone. A reduced setback may be permitted only when the applicant can show that there will be no development within the setback required by the zoning ordinance on adjacent property which abuts the area for which a reduced setback is sought. The applicant will demonstrate compliance with the above requirement by providing an affidavit from the abutting property owner stating that the area in question will never be developed. Reduced setbacks will not be permitted when the area proposed for such setbacks abuts either city or state owned property. No setback reduction may be granted which would permit any structure on the lot which is the subject of the application to be within fifteen

(15) feet of any existing residential structure on an adjacent lot.

(b) Recording of setback reduction. The zoning administrator shall provide a signed instrument in recordable form, indicating any setback reduction granted under the terms of this section. The applicant for such reduction shall be responsible for recording this instrument in the Cumberland County Registry of Deeds. The abutter's affidavit will also be recorded.
(Ord. No. 139-93, 11-15-93)

Sec. 14-439. Setback reductions in the industrial zones.

Where a setback is required in an industrial zone the Planning Board may grant a reduction of such setback upon the submission of a site plan meeting the requirements of article V of this chapter and as set forth below if at least one (1) of the following conditions exists:

(a) The property is encumbered by an easement or right-of-way that substantially impedes or prohibits development;

(b) The yard for which the setback reduction is sought abuts an easement or right-of-way area that prohibits buildings within the area of such easement or right-of-way; or

(c) The yard for which the setback reduction is sought abuts an area whose natural features, such as slopes or drainage areas, prohibit development in such area.

The Planning Board may reduce the required setback to the extent necessary for development, but in no event shall any side or rear setback be reduced to less than ten (10) feet or any front setback be reduced to less than five (5) feet. The Planning Board may require increased buffering to mitigate the impacts of a setback reduction under this section. This section shall not apply to reductions of setbacks required by division 26 of this chapter.

The planning authority shall be responsible for providing to the applicant for setback reduction an instrument signed by the chair or vice-chair of the Planning Board, indicating any setback reduction granted under the terms of this section. The applicant for such setback reduction shall be responsible for recording this instrument in the Cumberland County Registry of Deeds within sixty (60) days of the Planning Board's grant of the reduction. Failure to record such instrument within the required time period shall

render the reduction null and void.
(Ord. No. 227-97, 3-17-97)

Sec. 14-440. Exterior egress.

Notwithstanding any other provision of this Code, the building authority may permit the installation of an exterior egress stair or an upgrade of an existing exterior fire escape for a conforming or lawfully nonconforming dwelling unit existing as of January 5, 1998, if such egress is required to meet current fire or other life safety codes, provided that the owner demonstrates to the building authority that:

(a) There is no practical and economically reasonable way to provide such egress within the interior of the building, as demonstrated by the submission of detailed floor plans showing the projected cost of and the impact on the existing dwelling from an interior stair;

(b) The stairway and associated landings and other building fixtures are designed and will be constructed to have a minimal visual impact upon the building, especially as viewed from any public way or public open space, as demonstrated by photographs of the front and any other affected facades of the building and plans or drawings of the proposed egress stairs;

(c) Reductions to setbacks granted under this section shall be the least amount required to meet life safety code requirements; and

(d) Exterior stairways on buildings subject to regulation under article IX of this chapter shall require review and approval under the provisions of that article.

(Ord. No. 181-98, 1-5-98)

Sec. 14-441. - Sec. 445. Reserved.

DIVISION 26. SHORELAND REGULATIONS

Sec. 14-446. Purposes.

The purposes of this division are to further the maintenance of safe and healthful conditions; prevent and control water pollution; protect fish spawning grounds, aquatic life, bird and

other wildlife habitat; protect buildings and lands from flooding and accelerated erosion; protect archaeological and historic resources; protect commercial fishing and maritime industries; protect freshwater and coastal wetlands; control building sites, placement of structures and land uses; conserve shore cover, visual as well as actual points of access to inland and coastal waters and natural beauty, as appropriate in an urbanized environment; and to anticipate and respond to the impact of development in shoreland areas.

(Code 1968, § 602.19A.A; Ord. No. 499-74, § 10, 8-19-74; Ord. No. 15-92, § 27, 6-15-92)

Sec. 14-447. Applicability.

This division applies to all land areas, uses, structures and land use activities within two hundred fifty (250) feet, horizontal distance, of the normal high water line of any river; within two hundred fifty (250) feet, horizontal distance, of the upland edge of a coastal wetland, including all areas affected by tidal actions within two hundred fifty (250) feet, horizontal distances, of the upland edge of a freshwater wetland; and within seventy-five (75) feet, horizontal distance, of the normal high water line of a stream. This division also applies to any structure built on, over or abutting a dock, wharf or pier, or other structure extending beyond the normal high water line of a water body or within a wetland.

(Code 1968, § 602.19A.B; Ord. No. 499-74, § 10, 8-19-74; Ord. No. 15-92, § 28, 6-15-92; Ord. No. 296-08/09, 6-15-09)

Sec. 14-448. Zoning districts and shoreland regulations.

The regulations and controls of this division apply to all land areas, uses, structures and land use activities cited in section 14-447, in all zones of the city.

(Code 1968, § 602.19A.C; Ord. No. 499-74, § 10, 8-19-74)

Sec. 14-449. Land use standards.

All land uses and land use activities subject to this division shall conform to the following standards and regulations, as applicable:

(a) *Principal and accessory structures:*

1. All principal and accessory structures shall be set back at least seventy-five (75) feet horizontal

distance, from the normal high water line of water bodies, the upland edge of a wetland or associated tributary streams within a shoreland zone, except that in the following zones the setback shall be as indicated below:

a. B-3, B-5, B-5b, I-L (south and east of I-295), and I-M (south and east of I-295): Twenty-five (25) feet.

b. W-C, W-PD, W-SU, I-B, EWP: No setback required. Pier edge setbacks apply in EWP (Sec. 14-303(c)(4), W-C (Sec. 14-310(d)(4), W-PD (Sec. 320.2(c)), and W-SU (Sec. 320.9(c)).

For the principle structures, setback measurements shall be taken from the top of a costal bluff that has been identified on Coastal Bluff maps as being "highly unstable" or "unstable" by the Maine Geological Survey pursuant "Classification of Coastal Bluffs", and published in the most recent Coastal Bluff Map as further referenced on the Zoning Map.

Notwithstanding this requirement, when a lot is a lot of record as defined in section 14-433 or cannot otherwise meet the setback requirement of this section due to physical limitations of the site, the Planning Board may approve a reduction of the setback requirement for a principal structure to the least amount necessary to achieve a building dimension of twenty-eight (28) feet, provided that the setback is not reduced to less than forty (40) feet. Structures in existence on June 15, 1992, may be expanded once during the lifetime of the structure up to twenty-five (25) feet toward a freshwater wetland, stream or tributary stream, provided that the setback is not reduced to less than forty (40) feet and the floor area or volume is not increased by more than thirty (30) percent. In no event shall the setback from a coastal wetland be reduced to less than seventy-five (75) feet, except in the B-3, B-5, B-5b, EWP, W-C, W-PD, W-SU,I-B, I-L and I-M zones, where setbacks shall be as set forth above in this subsection.

In all cases, accessory detached structures of less than one hundred (100) square feet of floor area shall be permitted with no setback, provided that such structures shall be used only for the storage of fish, bait, and related equipment. No setback shall be required for piers, docks, retaining walls, or any other structures which require direct access to the water as an operational necessity.

2. Development activities within the shoreland zone are reviewed by the Zoning Administrator for compliance with required setbacks of this Division. Submission of plans for such development activity shall be prepared by competent professionals, based upon a boundary survey.

3. The lowest floor elevation or openings of all buildings and structures including basements shall be elevated at least one (1) foot above the elevation of the one hundred (100) year flood, the flood of record, or in the absence of these, the flood as defined by soil types identified as recent flood plain soils.

4. Notwithstanding the requirements of this section, stairways or similar structures may be allowed with a permit from the building authority to provide shoreline access in areas of steep slopes or unstable soils, provided that:

   a. The structure is limited to a maximum of four (4) feet in width;

   b. The structure does not extend below or over the normal high water line of a water body or upland edge of a wetland, unless permitted by the department of environmental protection pursuant to 38 M.R.S.A. Section 480-C; and

   c. The applicant demonstrates that no reasonable access alternative exists on the property.

(b) ***Piers, docks, wharves, bridges and other structures and uses extending over or below the normal high water line***

of a water body or within a wetland:

1. Access from shore shall be developed on soils appropriate for such use and constructed so as to control erosion;

2. The location shall not interfere with existing developed or natural beach areas;

3. The facility shall be located so as to minimize adverse effects on fisheries;

4. The facility shall be no larger in dimension than necessary to carry on the activity and shall be consistent with surrounding character and uses;

5. New permanent structures, and expansions thereof, projecting into or over water bodies shall require a permit from the Department of Environmental Protection pursuant to the national Resources Protection Act, 38 M.R.S.A. § 480-C. Permits may also be required from the Army Corps of Engineers if located in navigable waters.

6. Except in the W-C, EWP, W-PD, W-SU, and I-B zones, no new structure shall be built on, over or abutting a pier, wharf, dock or other structure extending beyond the normal high water line of a water body or within a wetland unless the structure requires direct access to the water as an operational necessity;

7. No existing structures built on, over or abutting a pier, dock, wharf or other structure extending beyond the normal high water line of a water body or within a wetland shall be converted to residential dwelling units in any zone.

(c) *Clearing or removal of vegetation:*

1. In all shoreland areas in resource protection zones, the cutting or removal of vegetation shall be limited to that which is necessary for uses expressly authorized in that zone.

2. The clearing or removal of vegetation standards of this section shall not apply to the following zones: EWP, WCZ, WPD, WSU, B-3, B-5, B-5b, B-6, B-7, I-L (south and east of I-295) and I-M zones (south and east of I-295).

3. Other than cutting or removal of vegetation as provided for in this section, timber harvesting shall not be permitted. For purposes of this section, timber harvesting is defined as the cutting and removal of timber for the primary purpose of selling or processing forest products. The cutting or removal of trees in the shoreland zone on a lot that has less than (2) acres within the shoreland zone shall not be considered timber harvesting. Cutting or removal of such trees shall be regulated pursuant to this section.

4. For purposes of this section, vegetation is defined as all live trees, shrubs and other plants including without limitation, trees both over and under 4 inches in diameter, measured at 4 ½ feet above ground level.

   a. In all areas other than resource protection zones, a buffer strip of vegetation shall be preserved, except where clearance is required for development of permitted uses, within a strip of land extending seventy-five (75) feet, horizontal distance, from the normal high-water or upland edge of a coastal wetland, river, stream or tributary stream within a shoreland zone, in accordance with the following:

      i. There shall be no cleared opening greater than two hundred fifty (250) square feet in the forest canopy or other existing vegetation if a forested canopy is not presented as measured from the outer limits of the tree or shrub crown. Notwithstanding this limitation, a footpath not to exceed six (6) feet in width as measured between tree trunks and/or shrub stems is allowed provided

that a cleared line of sight to the water through the buffer strip is not created.

ii. Selective cutting of trees within the buffer strip is allowed provided that a well-distributed stand of trees and other vegetation is maintained. For the purposes of this section, a "well-distributed stand of trees" adjacent to a water body, tributary stream or wetland shall be defined as maintaining a minimum rating score of sixteen (16) or more in any twenty-five-foot by fifty-foot rectangle area as determined by the following rating system:

Diameter of tree at four and one-half (4 ½) feet above ground level

(Inches)	*Points*
2 ≤ 4	1
4 ≤ 8	2
8 — 12	4
12 in. or greater	8

The following shall govern in applying this point system:

a. The 25-foot by 50-foot rectangular plots must be established where the landowner or lessee proposes clearing within the required buffer;

b. Each successive plot must be adjacent to, but not overlap a previous plot;

c. Any plot not containing the required points must have no vegetation removed except as otherwise allowed

by this ordinance;

d. Any plot containing the required points may have vegetation removed down to the minimum points required or as otherwise allowed by this ordinance;

e. Where conditions permit, no more than 50% of the points on any 25-foot by 50-foot rectangular area may consist of trees greater than 12 inches in diameter.

For the purposes of this section, "other natural vegetation" is defined as retaining existing vegetation under three (3) feet in height and other ground cover and retaining at least five (5) saplings less than two (2) inches in diameter at four and one-half (4 ½) feet above ground level for each 25-foot by 50-foot rectangular area. If five samplings do not exist, no woody stems less than two (2) inches in diameter can be removed until 5 samplings have been recruited into the plot.

Notwithstanding the above provisions, no more than forty (40%) percent of the total volume of trees four (4) inches or more in diameter, measured at four and one-half (4 ½) feet above ground level may be removed in any ten-year period.

iii. In order to protect water quality and wildlife habitat, existing vegetation under three (3) feet in height and other groundcover, including leaf litter and the forest duff layer, shall not be cut, covered, or removed, except to provide a footpath or other permitted uses as described in this section.

iv. Pruning of tree branches on the bottom one-third of the tree is allowed.

v. In order to maintain a buffer strip of vegetation when the removal of storm-damaged, diseased, unsafe or dead trees results in the creation of cleared openings, these openings shall be replanted with native tree species unless existing new tree growth is present.

The provisions contained in subsection b. of this section shall not apply to those portions of public recreational facilities adjacent to public swimming areas. Cleared areas in these locations shall be limited to the minimum amount necessary.

2. Selective cutting of not more than forty (40%) percent of the volume of trees four (4) inches or more in diameter, measured four and one-half (4 1/2) feet above ground level, shall be allowed within any ten-year period at distances greater than seventy-five (75) feet, horizontal distance, from the normal high water line of any other water body, tributary stream, or the upland edge of a wetland, except to allow for the development of permitted uses. Tree removal in conjunction with the development of permitted uses shall be included in the forty (40) percent calculation. For the purposes of these standards, volume may be considered to be equivalent to basal area. In no event shall cleared openings for any purpose, including but not limited to, principal and accessory structures, driveways, lawns and sewage disposal areas, exceed in the aggregate twenty-five (25%) percent of the lot area within the shoreland zone, including land previously cleared.

3. Legally existing nonconforming cleared openings may be maintained but shall not be enlarged, except as allowed by this division.

4. Fields and other cleared openings which have reverted to primarily shrubs, trees, or other woody vegetation shall be regulated under the provisions of this section.

(d) *Erosion and sedimentation control:*

1. All activities which involve filling, grading, excavation or other similar activities which result in unstabilized soil conditions and which require a permit shall require a written soil erosion and sedimentation control plan in accordance with Maine Erosion and Sediment Control Handbook for Construction: Best Management Practices, published by the Cumberland County Soil and Water Conservation District and the Maine Department of Environmental Protection and the City of Portland Technical Manual. The plan shall be submitted to the permitting authority for approval and shall include, where applicable, provisions for:

   a. Mulching and revegetation of disturbed soil.

   b. Temporary runoff control features such as hay bales, silt fencing or diversion ditches.

   c. Permanent stabilization structures such as retaining walls or riprap.

2. In order to create the least potential for erosion, development shall be designed to fit with the topography and soils of the site. Areas of steep slopes where high cuts and fills may be required shall be avoided wherever possible, and natural contours shall be followed as closely as possible.

3. Erosion and sedimentation control measures shall apply to all aspects of the proposed project involving land disturbance, and shall be in operation during all stages of the activity. The amount of exposed ground area at every phase of construction shall be minimized to reduce the potential for erosion.

4. Any exposed ground area shall be temporarily or permanently stabilized within one (1) week from the time it was last actively worked, by use of riprap, sod, seed, and mulch, or other effective measures. In all cases, permanent stabilization shall occur within nine (9) months of initial exposure. The following standards shall also be met:

a. Where mulch is used, it shall be applied at a rate of at least one (1) bale per five hundred (500) square feet and shall be maintained until a catch of vegetation is established.

b. Anchoring the mulch with netting, peg and twine or other suitable method may be required to maintain the mulch cover.

c. Additional measures shall be taken where necessary in order to avoid siltation into the water. Such measures may include the use of staked hay bales and/or silt fences.

5. Natural and man-made drainage ways and drainage outlets shall be protected from erosion from water flowing through them. Drainage ways shall be designed and constructed in accordance with the City of Portland Technical Manual.

(e) ***Soils:*** All land uses shall be located on soils in or upon which the proposed uses or structures can be established or maintained without causing adverse environmental impacts, including severe erosion, mass soil movement, improper drainage, and water pollution, either during or after construction. Proposed uses requiring subsurface wastewater disposal and commercial or industrial development or other similar intensive land uses shall require a soils report based on an on-site investigation and prepared by state-certified professionals. Certified persons may include Maine Certified Soil Scientists, Maine Registered Professional Engineers, Maine State Certified Geologists and other persons who have training and experience in the recognition and evaluation of soil properties. The report shall be based upon the analysis of the characteristics of the soil and surrounding land and water areas, maximum ground water elevation, presence of ledge, drainage conditions, and other pertinent data which the evaluator deems appropriate. The soils report shall include recommendations for a proposed use to counteract soil limitations where they exist.

(f) ***Water quality:*** No activity shall deposit on or into the ground or discharge to the waters of the state any

pollutant that by itself or in combination with other activities or substances will impair designated uses or the water classification of the water body, tributary stream or wetland.

(g) ***Archaeological sites:*** Any proposed land use activity involving structural development or soil disturbance on or adjacent to sites listed on, or eligible to be listed on, the National Register of Historic Places, as determined by the department of planning and urban development, shall be submitted by the applicant to the Maine Historic Preservation Commission for review and comment at least twenty (20) days prior to action being taken by the building authority. The building authority shall consider comments received from the commission prior to rendering a decision on the application. Such sites shall also comply with all applicable provisions of article IX of this chapter.

(h) ***Installation of public utility service:*** No public utility of any kind shall install services to any new structure located in the shoreland zone unless written authorization attesting to the validity and currency of all local permits required under this Code has been issued by the appropriate municipal authorities. Following installation of service, the public utility shall forward the written authorization to the appropriate municipal authorities, indicating that installation has been completed.

(i) ***Essential services:***

1. Where feasible, the installation of essential services shall be limited to existing public ways and existing service corridors.

2. The installation of essential services, other than road-side distribution lines and within existing service corridors, is not allowed in a Resource Protection or Stream Protection District, except where the applicant demonstrates that no reasonable alternative exists.

3. Damaged or destroyed public utility transmission and distribution lines, towers and related

equipment may be replaced or reconstructed without a permit.

(j) *Roads and driveways:*

1. Roads and driveways shall be setback a minimum of seventy-five (75) feet from the normal high-water or upland edge of a coastal wetland, freshwater wetland, river or tributary stream within a shoreland zone, except:

   a. In the EWP, WC, WPD, WSU, B-3, B-5, B-5b, I-L (south and east of I-295) and I-M (south and east of I-295) roads and driveways shall be setback as established for structures in those zones; as specified in Sec. 14-449(a)1.

   b. Where the planning board determines that no other reasonable alternative exists. If no other reasonable alternative exists, the planning board may reduce the road and/or driveway setback requirement to no less than fifty (50) feet, horizontal distance, upon clear showing by the applicant that appropriate techniques will be used to prevent sedimentation of the water body, tributary stream or wetland. Such techniques may include, but are not limited to, the installation of settling basins, and/or effective use of additional ditch relief culverts and turnouts place so as to avoid sedimentation of the water body, tributary stream or wetland.

2. Existing public roads may be expanded within the legal road right of way regardless of their setback from a waterbody, tributary stream or wetland.

3. New roads and driveways are prohibited in a Resource Protection Zone except that the planning board may grant a permit to construct a road or driveway to provide access to permitted uses within the district. A road or driveway may also be approved by the planning board in a Resource Protection Zone, upon a finding that no reasonable

alternative route or location is available outside the district. When a roadway or driveway is permitted in a Resource Protection District the road and/or driveway shall be setback as far as practicable from the normal high-water line of a water body, tributary stream, or upland edge of wetland.

4. Road and driveways banks shall be no steeper than slope of two (2) horizontal to one (1) vertical, and shall be graded and stabilized in accordance with the provisions for erosion and sedimentation control contained in sec. 14-449(d).

5. Road and driveway grades shall be no grater than ten (10%) percent except segments of less than two hundred (200) feet.

6. In order to prevent road and driveway surface drainage from directly entering water bodies, tributary streams or wetlands, roads and driveways shall be designed, constructed, and maintained to empty onto an unscarified buffer strip at least (50) feet plus two times the average slope, in width between the outflow point of the ditch or culver and the normal high-water line of a water body, tributary stream or upland edge of a wetland. Surface drainage which is directed to an unscarified buffer strip shall be diffused or spread out to promote infiltration of the runoff and to minimize channelized flow of the drainage through the buffer strip.

7. Ditch relief (cross drainage) culverts, drainage dips and water turnout shall be installed in a manner effective in directing drainage onto unscarified buffer strips before the flow gains sufficient volume or head to erode the road, driveway, or ditch. To accomplish this, the following shall apply:

   a. Ditch relief culverts, drainage dips and associated water turnouts shall be spaced along the road, or driveway at intervals no greater than indicated in the following

table:

Grade (percent)	Spacing (feet)
0-2	250
3-5	200-135
6-10	100-80
11-15	80-60
16-20	60-45
21+	40

b. Drainage dips may be used in place of ditch relief culverts only where the grade is ten (10%) percent or less.

c. On sections having slopes greater than ten (10%) percent, ditch relief culverts shall be placed at approximately a thirty (30) degree angle downslope from a line perpendicular to the centerline of the road or driveway.

d. Ditch relief culverts shall be sufficiently sized and properly installed in order to allow for effective functioning, and their inlet and outlet ends shall be stabilized with appropriate materials.

8. Ditches, culverts, bridges, dips, water turnouts and other storm water runoff control installations associated with roads and driveways shall be maintained on a regular basis to assure effective functioning.

(k) ***Parking areas:*** Parking areas shall be set back a minimum of seventy-five (75) feet from the normal high-water or upland edge of a coastal wetland, freshwater wetland, river or tributary stream within a shoreland zone except:

1. In the EWP, WC, WPD WSU, B-3, B-5, B-5b, I-L and I-M zones, parking setbacks shall be as established for structures in those zones; as specified in Sec. 14-449(a)1.

2. Parking setbacks in the S-P (stream protection)

zones are as established in Division 26.7.

3. Where the Planning Board finds that no other reasonable alternative exists further from the shoreline or tributary stream, the board may reduce the parking setback requirement to no less than fifty (50) feet in the R-OS, and I-B zones to the least amount necessary for construction, provided that the applicant proves by a preponderance of the evidence that appropriate techniques will be used to prevent sedimentation of the water body.

(l) *Septic waste disposal:*

All subsurface sewage disposal system shall be installed in conformance with the State of Maine Subsurface Wastewater Disposal Rules and the following:

a. Clearing or removal of woody vegetation necessary to site a new system and any associated fill extensions, shall not extend closer than seventy-five (75) feet, horizontal distance, from the normal high-water line of a water body or the upland edge of a wetland;

b. A holding tank is not allowed for a first-time residential use in the shoreland zone.

(m) *Stormwater runoff:*

1. All new construction and development shall be designed to be in compliance with the City of Portland Technical Manual to minimize stormwater runoff from the site in excess of the natural predevelopment conditions. Where possible, existing natural runoff control features, such as berms, swales, terraces and wooded areas shall be retained in order to reduce runoff and encourage infiltration of stormwater.

2. Stormwater runoff control systems shall be maintained as necessary to ensure proper functioning.

(n) *Agriculture:*

1. All spreading or disposal of manure shall be accomplished in conformance with the ***Manure Utilization Guidelines*** published by the Maine Department of Agriculture on November 1, 2001, and the Nutrient Management Law (7 M.R.S.A. §§ 4201-4209).

2. Manure shall not be stored or stockpiled within seventy-five (75) feet, horizontal distance, of water bodies, tributary streams, or wetlands. All manure storage areas within the shoreland zone must be constructed or modified such that the facility produces no discharge of effluent or contaminated stormwater.

3. Agricultural activities involving tillage of soil greater than forty thousand (40,000) square feet in surface area within the shoreland zone shall require a conservation plan to be filed with the building authority.

4. There shall be no new tilling of soil within seventy-five (75) feet, horizontal distance, from water bodies and coastal wetlands or within twenty-five (25) feet, horizontal distance, of tributary streams and freshwater wetlands when such new tilling, by itself or combined with all other contiguous tillage, shall exceed forty thousand (40,000) square feet in surface area. Operations in existence on the effective date of this section and not in conformance with these provisions may be maintained but shall not be expanded. When the new tilling, by itself or combined with all other contiguous tillage, shall total forty thousand (40,000) square feet or less, the tillage shall be set back a minimum of twenty-five (25) feet from all water bodies, tributary streams or wetlands.

5. Newly established livestock grazing areas shall not be permitted within seventy-five (75) feet, horizontal distance, of water bodies and coastal wetlands or within twenty-five (25) feet, horizontal distance, of tributary streams and wetlands. Livestock grazing associated with ongoing

farm activities and which are not in conformance with the above setback provisions may continue, provided such grazing is conducted in accordance with a soil and water conservation plan filed with the building authority.

(o) ***General site plan features:*** The Planning Board or planning authority shall approve a site plan located within a shoreland zone if it finds that the following standards, in addition to the standards set forth in section 14-526, are met:

1. The proposal will maintain safe and healthful conditions;

2. The proposal will not result in water pollution, erosion, or sedimentation to surface waters;

3. The proposal will adequately provide for the disposal of all wastewater;

4. The proposal will not have an adverse impact on spawning grounds, fish, aquatic life, bird or other wildlife habitat;

5. The proposal will conserve shore cover and visual, as well as actual, points of access to inland and coastal waters;

6. The proposal will protect archaeological and historic resources;

7. The proposal will not adversely affect existing commercial fishing or maritime activities;

8. The proposal will avoid problems associated with flood plain development and use; and

9. The proposal is in conformance with the standards set forth in this section.

(Code 1968, § 602.19A.D; Ord. No. 499-74, § 10, 8-19-74; Ord. No. 38-85, § 1, 7-15-85; Ord. No. 15-92, § 29, 6-15-92; Ord. No. 164-97, § 12, 1-6-97; Ord. No. 296-08/09, 6-15-09; Ord. No. 278-09/10, 7-19-10; Ord. No. 27-11/12, 8-15-11)

Sec. 14-450. Reserved.

DIVISION 26.5. FLOOD PLAIN MANAGEMENT REGULATIONS*

***Editor's note**—Ord. No. 660-86, adopted July 7, 1986, amended Ch. 14, Art. III, by the addition of Div. 26A, §§ 14-450.1—14-450.8, which provisions have been included herein as Div. 26.5 at the discretion of the editor in order to conform with the existing numbering of divisions contained in this article.

Sec. 14-450.1. Establishment.

The City of Portland, Maine, elects to comply with the 42 USC Section 4001 et seq. requirements of the National Flood Insurance Act of 1968, as amended from time to time. The National Flood Insurance Program, established in the aforesaid act, provides that areas of the city having a special flood hazard be identified by the Federal Emergency Management Agency and that flood plain management measures be applied in such flood hazard areas. This division establishes a flood hazard development permit system and review procedure for development activities in the designated flood hazard areas of the city.

(Ord. No. 660-86, 7-7-86; Ord. No. 579-87, 6-15-87; Ord. No. 156-98, 11-16-98)

Sec. 14-450.2. Purposes.

The purposes of this division are to reduce future flood risks and losses, protect against financial and human loss resulting from flood disasters, and to control the placement of structures, construction materials, and methods used to minimize potential property damage due to flooding.

(Ord. No. 660-86, 7-7-86; Ord. No. 579-87, 6-15-87; Ord. No. 156-98, 11-16-98)

Sec. 14-450.3. Applicability.

This division applies to all land areas, uses, structures, and land use activities lying in the special flood hazard areas as identified by the Federal Emergency Management Agency in a report entitled "Flood Insurance Study — City of Portland, Maine, County of Cumberland," with accompanying "flood insurance rate map" and "flood boundary and floodway map," dated July 17, 1986. This Flood Insurance Study with accompanying maps, and any subsequent amendments thereto, is hereby adopted by reference and declared to be a part of this Code.

(Ord. No. 660-86, 7-7-86; Ord. No. 579-87, 6-15-87; Ord. No. 135-97, 11-3-97; Ord. No. 156-98, 11-16-98)

Sec. 14-450.4. Zoning districts and flood plain management regulations.

The regulations and controls of this division apply to all land areas, uses, structures, and land use activities cited in section 14-450.3, in all zones of the city.
(Ord. No. 660-86, 7-7-86; Ord. No. 579-87, 6-15-87; Ord. No. 156-98, 11-16-98)

Sec. 14-450.5. Definitions.

For the purpose of this division, the following terms and words shall have the meanings given herein:

Area of special flood hazard: The land in the flood plain having a one (1) percent or greater chance of flooding in any given year as specifically identified in the Flood Insurance Study cited in section 14-450.3.

Base flood: The flood having a one (1) percent chance of being hereof or exceeded in any given year (i.e., a one-hundred-year storm).

Building authority: The division of inspection services within the department of planning and urban development.

Coastal high hazard area: The area subject to high velocity waters, including but not limited to, hurricane wave wash or tsunamis. The area is designated on the flood insurance rate map as zone V1-30.

Development: Any man-made change to improved or unimproved real estate, including but not limited to, the construction of, alteration or addition to, any buildings or other structures, mining, dredging, filling, grading, paving, excavation, drilling operations, or storage of equipment or materials.

Floodproofing: Any combination of structural or nonstructural additions, changes or adjustments to structures which reduce or eliminate flood damage to real estate or improved real estate, to water and sanitary facilities, structures and their contents.

Floodway: The channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface

elevation more than one (1) foot as designated on the flood boundary and floodway map. When not designated on the flood boundary and floodway map, it is considered to be the channel of a river or other watercourse and the adjacent land areas to a distance of one-half (1/2) the width of the flood plain, as measured from the normal high water mark to the upland limit of the flood plain.

Flood boundary and floodway map: The official map issued by the Federal Emergency Management Agency (FEMA) on which the boundaries of the flood have been designated. (This may alternatively be referred to as a flood hazard boundary map.)

Flood insurance rate map: The official map (FIRM) on which the Federal Emergency Management Agency (FEMA) has delineated both the areas of special flood hazard and the risk premium zones applicable to the city.

Lowest floor: The lowest floor of the lowest enclosed area (including basement). An unfinished or flood-resistant enclosure, usable solely for parking of vehicles, building access or storage, in an area other than a basement area, is not considered a building's lowest floor, provided that such enclosure is not built so as to render the structure in violation of the applicable nonelevation design requirements of this division.

Manufactured home or housing: As defined in section 14-47 (definitions) of this Code.

Mean high tide: The mean height of tidal high waters at a particular point or station over a period of time to such length that increasing its length does not appreciably change this mean. For tidal waters, the cycle of change covers a period of nineteen (19) years, and mean high tide is defined as the average of the high waters over a nineteen-year period.

Mean sea level: For purposes of the National Flood Insurance Program, the National Geodetic Vertical Datum (NGVD) of 1929 or other datum, to which base flood elevations shown on the city's FIRM are referenced.

Structure: A walled and roofed building, including a gas or liquid storage tank, that is principally above ground, or manufactured housing. "Principally above ground," as used above, means either that at least two-thirds (2/3) of its floor-to-ceiling height is above the average adjoining ground level, or at least

fifty-one (51) percent of the actual cash value of the structure, less land value, is above ground.

Substantial improvement: Any repair, reconstruction, addition to or other improvement of a structure, the cost of which equals or exceeds fifty (50) percent of the market value of the structure either before the improvement or repair is started or, if the structure has been damaged and is being restored, before the damage occurred. For purposes of this definition "substantial improvement" is considered to occur when the first alteration of any wall, ceiling, floor, or structural part of the building commences, whether or not that alteration affects the external dimensions of the structure. The term does not, however, include any project for improvement of a structure to comply with existing state or local health, sanitary, or safety code specifications which are solely necessary to assure safe living conditions or for any alteration of a structure listed on the National Register of Historic Places or a state inventory of historic places.
(Ord. No. 660-86, 7-7-86; Ord. No. 579-87, 6-15-87; Ord. No. 156-98, 11-16-98)

Sec. 14-450.6. Application for permit—Filing.

(a) *Permit required.* Before any development begins within any areas of special flood hazard, a flood hazard area development permit shall be obtained from the building authority. This permit shall be required prior to issuance of a building permit, if one is required, and shall be in addition to any other permits, and site plan and subdivision review, which may be required pursuant to the Codes and ordinances of the city.

(b) *Submission.* The application for a flood hazard area development permit shall be submitted in writing to the building authority and shall include the following:

1. A final site plan, where applicable, showing information as required in section 14-527 (final site plan) for either a level I, II or III site plan as defined in section 14-523 (required approvals and applicability);

2. A final subdivision plat, where applicable, providing information as required in section 14-496 (plat requirements);

3. For any development which does not meet the minimum threshold as a development requiring site plan review as

authorized by section 14-523 (required approvals and applicability), the following information shall be provided:

a. The name, address and phone number of the applicant, owner and contractor;

b. A map with address indicating the location of the development site;

c. A site plan showing the location of existing and proposed development, including but not limited to, specific dimensions of existing and proposed structure(s), wastewater disposal facilities, water supply facilities, areas to be developed and the dimensions of the lot;

d. A statement of the intended use of any structure and/or other development;

e. A statement of the cost of the development including all materials and labor; and

f. A statement of the type of wastewater disposal system proposed.

4. In addition to the foregoing, all applications for a permit shall include the following information:

a. The elevation in relation to the National Geodetic Vertical Datum (NGVD), (or to a locally established datum for Zone A only) of the:

i. Base flood at the proposed site of all new or substantially improved structures, which is determined:

a. In Zones A1-30, AE, AO, AH, V1-30, and VE from data contained in the "Flood Insurance Study — City of Portland, Maine," as described in section 14-450.3; or

b. In Zone A, to be the elevation of the ground at the intersection of the flood plain boundary and a line perpendicular to the

shoreline which passes along the ground through the site of the proposed building;

ii. Highest and lowest grades at the site adjacent to the walls of the proposed building;

iii. Lowest floor, including basement; and whether or not such structures contain a basement; and

iv. Level, in the case of nonresidential structures only, to which the structure will be floodproofed;

b. A description of an elevation reference point established on the site of all new or substantially improved structures;

c. Either an elevation certificate (FEMA Form 81-31, 03/97, as amended) completed by a professional land surveyor, registered professional engineer or architect; or, for nonresidential structures to be floodproofed, a floodproofing certificate (FEMA Form 81-65, 05/93, as amended) completed by a registered professional engineer or architect. These certificates verify that the elevations shown on the application are accurate;

d. Certifications by a registered professional engineer or architect that:

i. Nonresidential structures will meet the floodproofing criteria of section 14-450.6(a)4a.; section 14-450.8(g); and other applicable standards in section 14-450.8;

ii. Construction in coastal high hazard areas, Zones V1-30 and VE, will meet the criteria of section 14-450.8(p); and other applicable standards in section 14-450.8;

iii. Engineered hydraulic openings in foundation walls will meet the standards of section 14-450.8(l)2;

iv. Bridges will meet the standards of section 14-450.8(m);

v. Containment walls will meet the standards of section 14-450.8(n);

e. A description of the extent to which any watercourse will be altered or relocated as a result of the proposed development; and

f. A statement of construction plans describing in detail how each applicable development standard in section 14-450.8 will be met.

g. Cross section(s) of the site acceptable to the public works authority.

(Ord.No. 660-86, 7-7-86; Ord. No. 579-87, 6-15-87; Ord. No. 156-98, 11-16-98; Ord. No. 278-09/10, 7-19-10)

Sec. 14-450.7. Same—Review.

(a) Upon determination by the building authority that an application is complete, the building authority shall transmit the application to the planning authority for review for compliance with this division. The planning authority shall coordinate review of the application by the city. No permit shall be issued by the building authority until the planning authority, or the Planning Board in the case of an application requiring subdivision or site plan review by said board, finds that the development proposal is in compliance with the standards of this division. Compliance with the provisions of this division shall be required prior to beginning any development as defined herein.

(b) The planning authority, and Planning Board when applicable, shall, when reviewing subdivisions and other proposed developments that require review under federal law, state law or local ordinances or regulations and all projects on five (5) or more acres, or in the case of manufactured home parks divided into two (2) or more lots, assure that:

1. All such proposals are consistent with the need to minimize flood damage.

2. All public utilities and facilities, such as sewer, gas, electrical and water systems are located and constructed

to minimize or eliminate flood damages.

3. Adequate drainage is provided so as to reduce exposure to flood hazards.

4. All proposals include base flood elevations, flood boundaries and, in a ravine flood plain, floodway data. These determinations shall be based on engineering practices recognized by the Federal Emergency Management Agency.

5. Any proposed development plan must include a condition of plan approval requiring that structures on lots in the development be constructed in accordance with section 14-450.8 of this division. The condition shall clearly articulate that the municipality may enforce any violation of the construction requirement. The construction requirement shall also be clearly stated on any map, plat, or plan to be signed by the Planning Board or planning authority as part of the approval process.

(c) In the review of all flood hazard development permit applications for compliance with the standards herein:

1. The planning authority, or Planning Board as appropriate, shall utilize the base flood data contained in the Flood Insurance Study, Portland, Maine, Cumberland County, as described in section 14-450.3. In special flood hazard areas where base flood elevation data are not provided in the above-cited study, the planning authority, or Planning Board as appropriate, shall obtain, review and reasonably utilize any base flood elevation data available from federal, state or other reasonably reliable sources in order to administer this section;

2. The public works authority shall make interpretations of the location of boundaries of special flood hazard areas shown on the maps described in section 14-450.3 herein;

3. Prior to approval of issuance of the flood hazard area development permit, the planning authority, or Planning Board as appropriate, shall determine that all necessary permits have been obtained from those federal, state and local authorities, from which prior approval is required by federal or state law, including but not limited to

Section 404 of the Federal Water Pollution Control Act Amendments of 1972 (33 U.S.C. 1334 as may be amended from time to time); provided, however, that conditional approval may be granted pending proof of receipt of any required permits, but no flood hazard area development permit shall be finally issued until proof of issuance of all such other permits is received by the building authority; and

4. The building authority shall notify adjacent municipalities, the Maine Department of Environmental Protection and the Maine Flood Plain Management Program in the State Planning Office, prior to any alteration or relocation of a watercourse, and submit copies of such notifications to the Federal Emergency Management Agency.

5. The building authority shall maintain, as a permanent record, copies of all flood hazard development permit applications, corresponding permits issued, and data relevant thereto, including reports of the board of appeals on variances granted under the provisions of section 14-450.12 of this division, and copies of elevation certificates, floodproofing certificates, certificates of compliance and certifications of design standards required under the provisions of sections 14-450.6, 14-450.8, and 14-450.10.

(Ord.No. 660-86, 7-7-86; Ord. No. 579-87, 6-15-87; Ord. No. 156-98, 11-16-98; ORd. No. 278-09/10, 7-19-10)

Sec. 14-450.8. Standards.

When reviewing flood hazard area development permit applications hereunder, the planning authority or Planning Board, where applicable, shall approve the plans under this division only if the following standards are met:

(a) *All development:* All development shall:

1. Be designed or modified and adequately anchored to prevent flotation (excluding piers and docks), collapse or lateral movement of the structure resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy;

2. Use construction materials that are resistant to

flood damage;

3. Use construction methods and practices that will minimize flood damage; and

4. Use electrical, heating, ventilation, plumbing, and air conditioning equipment, and other service facilities that are designed and/or located so as to prevent water from entering or accumulating within the components during flooding conditions.

(b) ***Water supply:*** All new and replacement water supply systems shall be designed to minimize or eliminate infiltration of flood waters into the systems.

(c) ***Sanitary sewage systems:*** All new and replacement sanitary sewage systems shall be designed and located to minimize or eliminate infiltration of flood waters into the system and discharges from the system into flood waters.

(d) ***On-site waste disposal systems:*** On-site waste disposal systems shall be located and constructed to avoid impairment to them or contamination from them during floods.

(e) ***Watercourse carrying capacity:*** All development associated with altered or relocated portions of a watercourse shall be constructed and maintained in such a manner that no reduction occurs in the flood carrying capacity of the watercourse.

(f) ***Residential:*** New construction or substantial improvement of any residential structure located within:

1. Zones A1-30, AE, and AH shall have the lowest floor (including basement) elevated to at least two (2) feet above the base flood elevation.

2. Zones AO and AH shall have adequate drainage paths around structures on slopes, to guide flood water away from the proposed structures.

3. Zone AO shall have the lowest floor (including basement) elevated above the highest adjacent grade:

a. At least two (2) feet higher than the depth specified in feet on the community's Flood Insurance Rate Map; or

b. At least three (3) feet if no depth number is specified.

4. Zone A shall have the lowest floor (including basement) elevated to at least two (2) feet above the base flood elevation utilizing information obtained pursuant to section 14-450.6(b)4.a.ii.; section 14-450.7(b)4; or section 14-450.7(c)1.

5. Zones V1-30 and VE shall meet the requirements of section 14-450.8(p).

(f) ***Nonresidential:*** New construction or substantial improvement of any nonresidential structure located within:

1. Zones A1-30, AE, and AH shall have the lowest floor (including basement) elevated to at least two (2) feet above the base flood elevation, or together with attendant utility and sanitary facilities shall:

a. Be floodproofed to at least two (2) feet above the base flood elevation so that below that elevation the structure is watertight with walls substantially impermeable to the passage of water;

b. Have structural components capable of resisting hydrostatic and hydrodynamic loads and the effects of buoyancy; and

c. Be certified by a registered professional engineer or architect that the design and methods of construction are in accordance with accepted standards of practice for meeting the provisions of this section. Such certification shall be provided with the application for a flood hazard development permit, as required by section 14-450.6(b)4d and shall include a

record of the elevation above mean sea level to which the structure is floodproofed.

2. Zones AO and AH shall have adequate drainage paths around structures on slopes, to guide flood water away from the proposed structures.

3. Zone AO shall have the lowest floor (including basement) elevated above the highest adjacent grade:

   a. At least two (2) feet higher than the depth specified in feet on the community's Flood Insurance Rate Map; or

   b. At least three (3) feet if no depth number is specified; or

   c. Together with attendant utility and sanitary facilities be floodproofed to meet the elevation requirements of this section and floodproofing standards of section 14-450.8(g).

4. Zone A shall have the lowest floor (including basement) elevated to at least two (2) feet above the base flood elevation utilizing information obtained pursuant to section 14-450.6(b)4.a.ii.; section 14-450.7(b)4; section 14-450.7(c)1; or

5. Zones V1-30 and VE shall meet the requirements of section 14-450.8(p).

(h) ***Manufactured homes:*** New or substantially improved manufactured homes located within:

1. Zones A1-30, AE, and AH shall:

   a. Be elevated on a permanent foundation such that the lowest floor is at least two (2) feet above the base flood elevation; and

   b. Be securely anchored to an adequately anchored foundation system to resist flotation, collapse, or lateral movement. Methods of

anchoring may include, but are not limited to:

i. Over-the-top ties anchored to the ground at the four (4) corners of the manufactured home, plus two (2) additional ties per side at intermediate points (manufactured homes less than fifty (50) feet long require one (1) additional tie per side); or by

ii. Frame ties at each corner of the home, plus five (5) additional ties along each side at intermediate points (manufactured homes less than fifty (50) feet long require four (4) additional ties per side).

iii. All components of the anchoring system described in section 14-450.8(h)1.b.i. and ii. Shall be capable of carrying a force of four thousand eight hundred (4,800) pounds.

2. Zones AO and AH shall have adequate drainage paths around structures on slopes, to guide flood water away from the proposed structures.

3. Zone AO shall have the lowest floor (including basement) elevated above the highest adjacent grade:

a. At least two (2) feet higher than the depth specified in feet on the community's Flood Insurance Rate Map; or

b. At least three (3) feet if no depth number is specified; and

c. Meet the requirements of section 14-450.8(h)1.b.

4. Zone A shall:

a. Be elevated on a permanent foundation such that the lowest floor is at least two (2) feet

above the base flood elevation utilizing information obtained pursuant to section 14-450.6(b)4.a.ii; section 14-450.7(b)4; section 14-450.7(c)1; and

b. Meet the requirements of section 14-450.7(2)b.

5. Zones V1-30 and VE shall meet the requirements of article VI.P.

(i) ***Recreational vehicles:*** Recreational vehicles located within:

1. Zones A1-30, AH and AE shall either:

a. Be on the site for fewer than one hundred eighty (180) consecutive days;

b. Be fully licensed and ready for highway use. A recreational vehicle is ready for highway use if it is on its wheels or jacking system, is attached to the site only be quick disconnect type utilities and security devices, and has no permanently attached additions; or

c. Be permitted in accordance with the elevation and anchoring requirements for "manufactured homes" in section 14-450.8(h)1a and b.

2. Zones V1-30 and VE shall meet the requirements of either section 14-450.8(i)1.a. or b. or section 14-450.8(p).

(j) ***Accessory structures:*** Accessory structures located within Zones A1-30, AE, AO, AH and A, shall be exempt from the elevation criteria required in section 14-450.8(f) and (g) above, if all other requirements of section 14-450.8 and all the following requirements are met. Accessory structures shall:

1. Be five hundred (500) square feet or less and have a value less than three thousand dollars ($3,000.00);

2. Have unfinished interiors and not be used for human

habitation;

3. Have hydraulic openings, as specified in section 14-450.8(l), in at least two (2) different walls of the accessory structure;

4. Be located outside the floodway;

5. When possible be constructed and placed on the building site so as to offer the minimum resistance to the flow of flood waters and be placed further from the source of flooding than is the primary structure; and

6. Have only ground fault interrupt electrical outlets. The electric service disconnect shall be located above the base flood elevation and when possible outside the special flood hazard area.

(k) *Floodways:*

1. In Zones A1-30 and AE, encroachments, including fill, new construction, substantial improvement, and other development shall not be permitted in ravine areas, for which a regulatory floodway is designated on the community's Flood Insurance Rate Map or Flood Boundary and Floodway Map, unless a technical evaluation certified by a registered professional engineer is provided demonstrating that such encroachments will not result in any increase in flood levels within the community during the occurrence of the base flood discharge.

2. In Zones A1-30 and AE riverine areas, for which no regulatory floodway is designated, encroachments, including fill, new construction, substantial improvement, and other development shall not be permitted in the floodway as determined in section 14-450.8(11)3. unless a technical evaluation certified by a registered professional engineer is provided demonstrating that the cumulative effect of the proposed development, when combined with all other existing development and anticipated development:

a. Will not increase the water surface elevation of the base flood more than one (1) foot at any point within the community; and

b. Is consistent with the technical criteria contained in chapter 5 entitled "Hydraulic Analyses," *Flood Insurance Study – Guidelines and Specifications for Study Contractors, (FEMA 37/January 1995, as amended).*

3. In Zones A1-30, AE, and A riverine areas for which no regulatory floodway is designated, the regulatory floodway is determined to be the channel of the river or other watercourse and the adjacent land areas to a distance of one-half (1/2) the width of the flood plain as measured from the normal high water mark to the upland limit of the flood plain. Encroachments, including fill, new construction, substantial improvement, and other development shall not be permitted unless a technical evaluation certified by a registered professional engineer is provided meeting the requirements of section 14-450.8(k)2.a. and b.

(l) *Enclosed areas below the lowest floor:* New construction or substantial improvement of any structure in Zones A1-30, AE, AO, AH and A that meets the development standards of article VI, including the elevation requirements of section 14-450.8, paragraphs (f), (g) or (h) and is elevated on posts, columns, piers, piles, "stilts," or crawl spaces may be enclosed below the base flood elevation requirements provided all the following criteria are met or exceeded:

1. Enclosed areas are not basements;

2. Enclosed areas shall be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of flood water. Designs for meeting this requirement must either:

a. Be engineered and certified by a registered professional engineer or architect; or

b. Meet or exceed the following minimum criteria:

(a) A minimum of two (2) openings having a total net area of not less than one (1) square inch for every square foot of the enclosed area;

(b) The bottom of all openings shall be no higher than one (1) foot above the lowest grade; and

I Openings may be equipped with screens, louvers, valves, or other coverings or devices provided that they permit the entry and exit of flood waters automatically without any external influence or control such as human intervention, including the use of electrical and other non-automatic mechanical means;

3. The enclosed area shall not be used for human habitation; and

4. The enclosed areas are usable solely for building access, parking vehicles, or storing of articles and equipment used for maintenance of the building.

(m) ***Bridges:*** New construction or substantial improvement of any bridge in Zones A1-30, AE, AO, AH, A, V1-30 and VE shall be designed such that:

1. When possible, the lowest horizontal member (excluding the pilings, or columns) is elevated to at least two (2) feet above the base flood elevation; and

2. A registered professional engineer shall certify that:

a. The structural design and methods of construction shall meet the elevation requirements of this section and the floodway standards of section 14-450.8(k); and

b. The foundation and superstructure attached

thereto is anchored to resist flotation, collapse and lateral movement due to the effects of wind and water loads acting simultaneously on all structural components. Water loading values used shall be those associated with the base flood.

(n) ***Containment walls:*** New construction or substantial improvement of any containment wall located within:

1. Zones A1-30, AE, AH, V1-30 and VE shall:

   a. Have the containment wall elevated to at least two (2) feet above the base flood elevation;

   b. Have structural components capable of resisting hydrostatic and hydrodynamic loads and the effects of buoyancy; and

   c. Be certified by a registered professional engineer or architect that the design and methods of construction are in accordance with accepted standards of practice for meeting the provisions of this section. Such certification shall be provided with the application for a flood hazard development permit, as required by section 14-450.6(b)d.4.

2. Zones AO and AH shall have adequate drainage paths around containment walls on slopes, to guide flood water away from the proposed walls.

3. Zone AO shall have the top of the containment wall elevated above the highest adjacent grade:

   a. At least two (2) feet higher than the depth specified in feet on the community's Flood Insurance Rate Map; or

   b. At least three (3) feet if no depth number is specified.

4. Zone A shall have the containment wall elevated to at least two (2) feet above the base flood elevation utilizing information obtained pursuant

to section 14-450.6(b)4.a.ii.; section 14-450.7(a)4; or section 14-450.7(c)1.

(o) ***Wharves, piers and docks:*** New construction or substantial improvement of wharves, piers, and docks are permitted in Zones A, A1-30, AE, AO, AH, V1-30, and VE, in and over water and seaward of the mean high tide if the following requirements are met:

1. Wharves, piers, and docks shall comply with all applicable local, state and federal regulations; and

2. Commercial wharves, piers, and docks involving fill shall adhere to the design and construction standards contained in the U.S. Army Corps of Engineers' ***Shore Protection Manual.***

(p) ***Coastal flood plains:***

1. All new construction located within Zones A1-30, AE, A, V1-30 and VE shall comply with all applicable local, state and federal regulations.

2. New construction or substantial improvement of any structure located within Zones V1-30 or VE shall:

   a. Be elevated on posts or columns such that:

      i. The bottom of the lowest horizontal structural member of the lowest floor (excluding the pilings or columns) is elevated to two (2) feet above the base flood elevation;

      ii. The pile or column foundation and the elevated portion of the structure attached thereto is anchored to resist flotation, collapse, and lateral movement due to the effects of wind and water loads acting simultaneously on all building components; and

      iii. Water loading values used shall be those associated with the base flood. Wind

loading values used shall be those required by applicable state and local building standards.

b. Have the space below the lowest floor:

i. Free of obstructions; or

ii. Constructed with open wood lattice-work, or insect screening intended to collapse under wind and water without causing collapse, displacement, or other structural damage to the elevated portion of the building or supporting piles or columns; or

iii. Constructed with nonsupporting breakaway walls which have a design safe loading resistance of not less than ten (10) or more than twenty (20) pounds per square foot.

3. A registered professional engineer or architect shall:

a. Develop or review the structural design, specifications, and plans for the construction, which must meet or exceed the technical criteria contained in the ***Coastal Construction Manual, (FEMA-55/February, 1986);*** and

b. Certify that the design and methods of construction to be used are in accordance with accepted standards of practice for meeting the criteria of section 14-450.8(p)2.

4. The use of fill for structural support in Zones V1-30 and VE is prohibited.

5. Human alteration of sand dunes within Zones V1-30 and VE is prohibited unless it can be demonstrated that such alterations will not increase potential flood damage.

6. The enclosed areas may be used solely for parking vehicles, building access, and storage.

7. Lobster sheds and fishing sheds located seaward of mean high tide shall be exempt from the elevation requirement in section 14-450.8(g) only upon review and approval by the planning authority or Planning Board and if all the following requirements of section 14-450.8(a), (k) and (l) are met:

   a. The conditional use shall be limited to low value structures such as metal or wood sheds two hundred (200) square feet or less and shall not exceed more than one (1) story.

   b. The structure shall be securely anchored to the wharf or pier to resist flotation, collapse and lateral movement due to the effect of wind and water loads acting simultaneously on all building components.

   c. The structure will not adversely increase wave or debris impact forces affecting nearby buildings.

   d. The structure shall have unfinished interiors and shall not be used for human habitation.

   e. Any mechanical, utility equipment and fuel storage tanks must be anchored and either elevated or floodproofed to two (2) feet above the base flood elevation.

      All electrical outlets shall be ground fault interrupt type. The electrical service disconnect shall be located on shore above the base flood elevation and when possible outside the special flood hazard area.

      <u>If a flood hazard permit application is granted, the applicant shall be notified in writing that flood insurance is not available for structures located entirely over water or seaward of mean high tide.</u>

(Ord. No. 660-86, 7-7-86; Ord. No. 579-87, 6-15-87; Ord. No. 156-98, 11-16-98;

Sec. 14-450.9. Permit.

Upon determination that the development or substantial improvement plan is in compliance with this division, the building authority shall issue one (1) of the following Flood Hazard Area Development Permits based on the type of development:

(a) Issue a two-part flood hazard development permit for elevated structures. Part I shall authorize the applicant to build a structure to and including the first horizontal floor only above the base flood level. At that time the applicant shall provide the code enforcement officer with a second elevation certificate completed by a professional land surveyor, registered professional engineer or architect based on the Part I permit construction, "as built," for verifying compliance with the elevation requirements of section 14-450.8(f), (g), (h) or (p). Following review of the elevation certificate data, which shall take place within seventy-two (72) hours of receipt of the application, or as soon as practicable thereafter, the code enforcement officer shall issue Part II of the Flood Hazard Development Permit. Part II shall authorize the applicant to complete the construction project; or

(b) Issue a Flood Hazard Development Permit for Floodproofing of Nonresidential Structures that are new construction or substantially improved nonresidential structures that are not being elevated but that meet the floodproofing standards of section 14-450.8(g)1.a.—c. The application for this permit shall include a floodproofing certificate signed by a registered professional engineer or architect; or

(c) Issue a Flood Hazard Development Permit for all level I and level II site plans that are not new construction or a substantial improvement, such as repairs, maintenance, renovations, or additions, whose value is less than fifty (50) percent of the market value of the structure. Level I and level II site plans also include, but are not limited to: accessory structures as provided for in section 14-450.8(j), mining, dredging, filling, grading, paving, excavation, drilling operations, storage of

equipment or materials, deposition or extraction of materials, public or private sewage disposal systems or water supply facilities that do not involve structures; and nonstructural projects such as bridges, dams, towers, fencing, pipelines, wharves, and piers.

(Ord. No. 660-86, 7-7-86; Ord. No. 579-87, 6-15-87; Ord. No. 156-98, 11-16-98; Ord. No. 278-09/10, 7-19-10)

Sec. 14-450.10. Certificate of compliance.

No land in an area of special flood hazard shall be occupied or used in violation of this division, and no structure in such an area which is developed or substantially improved shall be occupied until a Certificate of Compliance is issued by the building authority. Said Certificate of Compliance shall be issued only after an applicant files the following certifications of the "as-built" development with the building authority:

(a) For new construction or substantial improvement of any structure the applicant shall submit to the building authority:

1. An elevation certificate completed by a professional land surveyor, registered professional engineer, or architect, for compliance with applicable provisions of section 14-450.8; and

2. For structures in Zones V1-30 and VE, certification by a registered professional engineer or architect that the design and methods of construction to be used are in compliance with applicable provisions of section 14-450.8(p)3.

(b) The applicant shall submit written notification to the building authority that the development is complete and complies with the provisions of this division.

(c) Within thirty (30) working days, the building authority shall:

1. Review the elevation certificate and the applicant's written notification; and

2. Upon determination that the development conforms with the provisions of this division, shall issue a

certificate of compliance.

(Ord. No. 660-86, 7-7-86; Ord. No. 579-87, 6-15-87; Ord. No. 156-98, 11-16-98)

Sec. 14-450.11. Fee.

A nonrefundable flood hazard area development permit fee of fifty dollars ($50.00) shall be paid to the building authority, and a copy of a receipt for the same shall accompany the application.

(Ord. No. 660-86, 7-7-86; Ord. No. 579-87, 6-15-87; Ord. No. 156-98, 11-16-98)

Sec. 14-450.12. Appeals and variance processes.

(a) The board of appeals shall hear and decide appeals from and review orders, decisions, determinations or interpretations or the failure to act of the building authority as authorized in section 14-472 (appeals).

(b) The board of appeals may authorize variances from the provisions of this division as authorized in section 14-473 (variances), except:

1. As otherwise expressly provided in section 14-473I(3); or

2. Variances shall not be granted within any designated regulatory floodway if any increase in flood levels during the base flood discharge would result.

(c) Section 14-473 notwithstanding, variances from the requirements of this division shall be granted only upon:

1. A showing of good and sufficient cause; and

2. A determination that should a flood comparable to the base flood occur, the granting of a variance will not result in increased flood heights, additional threats to public safety, public expense, or create nuisances, cause fraud or victimization of the public or conflict with existing local laws or ordinances; and

3. A showing that the issuance of the variance will not conflict with other state, federal or local laws or ordinances; and

4. A determination that failure to grant the variance would result in "undue hardship," which in this subsection

means:

a. That the land in question cannot yield a reasonable return unless a variance is granted; and

b. That the need for a variance is due to the unique circumstances of the property and not to the general conditions in the neighborhood; and

c. That the granting of a variance will not alter the essential character of the locality; and

d. That the hardship is not the result of action taken by the applicant or a prior owner.

(d) Variances shall only be issued upon a determination that the variance is the minimum necessary, considering the flood hazard, to afford relief.

(e) Variances may be issued for the repair, reconstruction, rehabilitation, or restoration of historic structures upon the determination that:

1. The development meets the criteria of section 14-450.12(a) through (d); and

2. The proposed repair, reconstruction, rehabilitation, or restoration will not preclude the structure's continued designation as a historic structure and the variance is the minimum necessary to preserve the historic character and design of the structure.

(f) Variances may be issued for new construction, substantial improvements, or other development for the conduct of a functionally dependent use provided that:

1. The criteria of this section and section 14-450.8 are met; and

2. The structure or other development is protected by methods that minimize flood damages during the base flood and create no additional threats to public safety.

(g) Any applicant who meets the criteria of this section shall be notified by the board of appeals in writing over the

signature of the chairman of the board of appeals that:

1. The issuance of a variance to construct a structure below the base flood level will result in greatly increased premium rates for flood insurance up to amounts as high as twenty-five dollars ($25.00) per one hundred dollars ($100.00) of insurance coverage;

2. Such construction below the base flood level increases risks to life and property; and

3. The applicant agrees in writing that the applicant is fully aware of all the risks inherent in the use of land subject to flooding, assumes those risks and agrees to indemnify and defend the municipality against any claims filed against it that are related to the applicant's decision to use land located in a flood plain and that the applicant individually releases the municipality from any claims the applicant may have against the municipality that are related to the use of land located in a flood plain.

(h) The above paragraph(s) shall be included with or on all applications for a variance hereunder, as well as the following statements:

1. The applicant understands and is fully aware of all of the risks inherent in the use of land subject to flooding and understands and agrees that he/she is fully assuming any potential or actual liability resulting therefrom. Applicant agrees to indemnify and defend the municipality against any claims filed against it that are related to the applicant's decision to use the land located in a flood plain and that the applicant individually releases the municipality from any claims the applicant may have against the municipality that are related to the use of land located in a flood plain. Applicant further understands and agrees that the city has no responsibility therefore, and in the event a variance is granted to applicant, applicant agrees to inform any purchaser, assignee or other transferee of applicant of the existence of said variance and of this agreement.

2. Applicant shall signify in writing that he/she has read, understands and agrees to all of the stipulations in this

subsection and subsection (7) immediately above.

(i) The board of appeals shall submit to the building authority a report of all variance actions, including justification for the granting of the variance and an authorization for the building authority to issue a flood hazard development permit, which includes any conditions to be attached to said permit.
(Ord. No. 660-86, 7-7-86; Ord. No. 579-87, 6-15-87; Ord. No. 156-98, 11-16-98)

Sec. 14-450.13. Records; reports.

(a) The director of planning and urban development shall maintain, as a permanent record, copies of all flood hazard area development permits issued, certificates of compliance and data relevant thereto, including reports of the board of appeals on variances granted hereunder.

(b) The director of planning and urban development shall be responsible for filing such annual reports regarding participation in the National Flood Insurance Program as may be required by FEMA. Said annual reports shall include, but not be limited to, a report on implementation of this division and on any variances granted hereunder. A copy of such annual reports shall also be sent to the state planning office.
(Ord. No. 660-86, 7-7-86; Ord. No. 579-87, 6-15-87; Ord. No. 156-98, 11-16-98)

Sec. 14-450.14. Enforcement and penalties.

It shall be the duty of the building authority to enforce the provisions of this ordinance pursuant to Title 30-A M.R.S.A. § 4452. The penalties contained in Title 30-A M.R.S.A. § 4452 shall apply to any violation of this ordinance.

In addition to any other actions, the building authority, upon determination that a violation exists, shall submit a declaration to the Administrator of the Federal Insurance Administration requesting a denial of flood insurance. The valid declaration shall consist of:

(a) The name of the property owner and address or legal description of the property sufficient to confirm its identity and location;

(b) A declaration that the property is in violation of a cited state or local law, regulation, or ordinance;

(c) A clear statement that the public body making the declaration has authority to do so and a citation to that authority;

(d) Evidence that the property owner has been provided notice of the violation and the prospective denial of insurance; and

(e) A clear statement that the declaration is being submitted pursuant to Section 1316 of the National Flood Insurance Act of 1968, as amended.

(Ord. No. 156-98, 11-16-98)

Sec. 14-450.15. Conflict with other ordinances.

This division shall not repeal, annul or in any way impair or remove the necessity of compliance with any other rules, regulations, permits or provisions of law. Where one (1) section of this Code imposes a greater restriction upon the use of land, buildings or structures than another section, the provisions of the stricter section shall control.

(Ord. No. 660-86, 7-7-86; Ord. No. 579-87, 6-15-87; Ord. No. 156-98, 11-16-98)

Sec. 14-450.16. Validity and severability.

If any section or provision of this division is declared by the courts to be invalid, such decision shall not invalidate any other section or provision of this division.

(Ord. No. 156-98, 11-16-98)

Sec. 14-450.17.- 14-450.30. Reserved.

DIVISION 26.7. S-P STREAM PROTECTION ZONE

Sec. 14-451. Purposes.

The purposes of the S-P stream protection zone are to preserve and protect significant streams as defined in 38 M.R.S.A. Section 438-A(1) by providing a buffer from land development activities in order to conserve stream channel capacity and to minimize siltation and stream bank erosion.

(Ord. No. 15-92, § 30, 6-15-92)

Sec. 14-452. Applicability.

The S-P stream protection zone includes all land areas within seventy-five (75) feet, horizontal distance, of the normal high water line of a stream as shown on the City of Portland Zoning Map. The regulations set forth in this division shall not apply to a stream and its associated shoreland area when they are also located in an area designated as a shoreland zone. Streams located within shoreland zones shall be subject to the provisions of division 26.
(Ord. No. 15-92, § 30, 6-15-92)

Sec. 14-453. Development standards.

(a) *Minimum building setback from normal high water line of stream:* Seventy-five (75) feet. Notwithstanding this requirement, when a lot is a lot of record as defined in section 14-433 or cannot otherwise meet the setback requirement of this section due to physical limitations of the site, the Planning Board may approve a reduction of the setback requirement for a principal structure to the least amount necessary to achieve a building dimension of twenty-eight (28) feet, provided that the setback is not reduced to less than forty (40) feet. Structures in existence on June 15, 1992, may be expanded once during the lifetime of the structure up to twenty-five (25) feet toward a stream or tributary stream, provided that the setback is not reduced to less than forty (40) feet and the floor area or volume is not increased by more than thirty (30) percent.

(b) *Filling of material within a stream protection zone:* Filling of material within a stream protection zone shall require site plan review in accordance with article V of this chapter.

(c) *Minimum parking setback from normal high water line of stream:* Seventy-five (75) feet. Notwithstanding this requirement, the Planning Board may reduce the parking setback where the required setback cannot be met to the least extent necessary, provided that such setback shall not be less than the setback of the principal structure from the stream.
(Ord. No. 15-92, § 30, 6-15-92; Ord. No. 278-09/10, 7-19-10)

Sec. 14-454. - Sec. 14-460. Reserved.

DIVISION 27. ADMINISTRATION AND ENFORCEMENT*

***Cross reference(s)—**Administration, Ch.2.

Sec. 14-461. Building authority to enforce article.

It shall be the duty of the building authority to enforce the provisions of this article. No permit or certificate of occupancy shall be issued for the construction, alteration, enlargement, moving, use or change of use of any building, structure, or part thereof, or for the use or change of use of any premises, unless the plans and intended use indicate that the building, structure or premises is to conform in all respects with the provisions of this article.

(Code 1968, § 602.22.A)

Sec. 14-462. Change to nonconforming use.

The use of any part of any building or structure for a one-family dwelling house, two-family dwelling house, lodging house, hotel, tenement or apartment house, dormitory, educational use, club, church, farm use, hospital, sanitarium, institution, aviation facility, office or bank, place of amusement or assembly, retail business or service other than a filling station or garage, wholesale business, manufacturing or storage facility, warehouse, filling station, stable, minor garage for not more than one (1) commercial motor vehicle, minor garage for more than one (1) commercial motor vehicle, public garage, any use prohibited in an industrial zone, or for any other distinctive use shall not be changed to any other use in this list of uses or to any other distinctive use, whether alterations in the building or structure are involved or not, until a permit and certificate authorizing such change of use has first been secured from the building authority, unless the proposed use conforms with the requirements of this article for the zone in which the building or structure or part thereof is located. Failure to secure such a permit before such a change is made shall be a violation of this article.

(Code 1968, § 602.22.B)

Sec. 14-463. Certificate of occupancy required.

No building or part thereof shall be constructed, altered, enlarged or moved unless a permit for such action has been issued by the building authority. Applications for building permits and certificates of occupancy required by the building code shall also serve as applications for permits required by this article. After

the building, structure or part thereof has been completed, altered, enlarged or moved, a certificate of occupancy shall be obtained for the proposed use before the same may be occupied or used. A certificate of occupancy shall be required for any of the following:

(a) Any increase in the number of dwelling units in a building;

(b) Establishment of any home occupation;

(c) Change in the use of a nonconforming use, whether of land or buildings;

(d) Occupancy and use, or change of use, of vacant land, except for the raising of crops;

(e) Change in the use of an existing building, whether or not alterations are involved, from any use in the following list to any of the other uses on the list:

1. Manufacturing or processing;

2. Residential;

3. Retail;

4. Storage or warehouse;

5. Transportation;

6. Other industrial;

7. Institutional;

8. office;

9. Other commercial;

10. Water-dependent use;

11. Marine use.

(Code 1968, § 602.22.C; Ord. No. 293-84, § 1, 11-19-84; Ord. No. 168-93, § 4, 1-4-93)

Sec. 14-464. Plans to be submitted.

A site plan showing the dimensions of the lot and of all buildings, yards and parking spaces, existing or proposed, shall accompany each application to the building authority for a building permit or certificate of occupancy. Site plans of all off-street loading and off-street parking, whether or not such parking is located on the same lot with the building for which it is required or which it is to serve, shall be provided.
(Code 1968, § 602.22.D)

Sec. 14-465. Zoning Determination Fee.

Upon request of any person and payment of a $150.00 fee, the building authority shall issue a written decision, determination or interpretation regarding the zoning code. The fee shall not apply to any such decision, determination or interpretation made in regard to a single-family residence which is owned and occupied by the person making the request.
(Ord. No. 224-00, 5-15-00; Ord. No. 119-01/02, § 3, 12-3-01)

Sec. 14-466. - Sec. 14-470. Reserved.

DIVISION 28. JURISDICTION OF BOARD OF APPEALS*

***Cross reference(s)—**Administration, Ch. 2; boards generally, § 2-31 et seq.; board of appeals, § 14-541 et seq.

Sec. 14-471. Jurisdiction and authority.

The board of appeals shall have the following jurisdiction and authority:

(a) Subject to the provisions of section 14-472, to hear and decide appeals from, and review orders, decisions, determinations or interpretations made by the building authority;

(b) Subject to the provisions of section 14-473, to hear and grant or deny applications for variances from the terms of this article;

(c) Subject to the provisions of section 14-474, to hear and grant or deny applications for conditional uses, as

specified in this article;

(d) To initiate changes and amendments to this article.

(Code 1968, § 602.24.A; Ord. No. 437-74, 7-1-74; Ord. No. 354-85, § 5, 1-7-85)

Sec. 14-472. Appeals.

(a) ***Authority.*** The board of appeals shall hear and decide appeals from and review orders, decisions, determinations or interpretations or the failure to act of the building authority.

(b) ***Procedure:***

1. ***Notice of appeal.*** An appeal may be taken to the board of appeals by any person affected by a decision of the building authority. Such appeal shall be taken within thirty (30) days of the action complained of by filing with the building authority a notice of appeal specifying the grounds thereof. A payment of a nonrefundable filing fee, as established from time to time by the city council to cover administrative costs and costs of hearing, shall accompany notice of appeal. The building authority shall forthwith transmit to the board of appeals all of the papers constituting the record upon which the action appealed from was taken.

2. ***Public hearing.*** A public hearing shall be set, advertised and conducted by the board of appeals in accordance with article VI of this chapter.

3. ***Action by the board of appeals.*** Within thirty (30) days following the close of the public hearing, the board of appeals shall render a decision on the appeal in the manner and form specified in article VI of this chapter. The failure of the board to act within thirty (30) days shall be deemed an approval of the appeal unless mutually extended in writing by the appellant and the board. Within five (5) days of such decision or failure to act notice thereof shall be mailed by the secretary to each party.

4. ***Right to grant variance in deciding appeals.*** In any case where the notice is accompanied by an application for variance in accordance with section 14-473(b)(1), the board of appeals shall have the authority to grant, as

part of the relief, a variance, but only in strict compliance with each provision of section 14-473 hereof.

5. *Conditions and limitations on rights granted by appeal.* Any right granted by the board of appeals on appeal shall be subject to the same conditions and limitations as if secured without the necessity of an appeal.

(Code 1968, § 602.24.B; Ord. No. 437-74, 7-1-74)

Sec. 14-473. Variances.

(a) *Authority.* Except as otherwise expressly provided in subsection (c)(3) and (c)(4), the board of appeals may authorize variances from the provisions of this article as meet the requirements of this division including but not limited to use variance, dwelling unit conversion, space and bulk such as lot size, density and side yard, parking, loading and signs.

(b) *Procedure:*

1. *Application.* Application for a variance shall be submitted to the building authority. A payment of a nonrefundable application fee, as established from time to time by the city council to cover administrative costs and costs of a hearing, shall accompany each application. The application shall be in such form as prescribed by the building authority and contain at least the following information and documentation:

   a. The name and address of the applicant and his or her interest in the subject property;

   b. The name and address of the owner, if different from the applicant;

   c. The address or location of the subject property;

   d. The present use and zoning classification of the subject property;

   e. Where the site plan approval is required by article V of this chapter, a preliminary or final site plan as defined by article V of this chapter;

   f. The relief sought from the board of appeals.

2. ***Public hearing.*** A public hearing shall be set, advertised and conducted by the board of appeals in accordance with article VI of this chapter.

   A copy of each variance request pertaining to division 26 (shoreland regulations) including the application and all supporting information supplied by the applicant, shall be forwarded by the municipal officials to the Commission of the Department of Environmental Protection at least twenty (20) days prior to action by the board. Any comments received from the Commissioner prior to action by the board shall be made part of the record and shall be taken into consideration by the board.

3. ***Action by board of appeals.*** Within thirty (30) days following the close of the public hearing, the board of appeals shall render its decision granting or denying the variance, in the manner and form specified by article VI of this chapter. The failure of the board to act within thirty (30) days shall be deemed an approval of the variance unless mutually extended in writing by the applicant and the board. Within seven (7) days of such decision or the expiration of such period, the secretary shall mail notice of such decision or failure to act to the applicant.

(c) ***Conditions for variances:***

1. ***Undue hardship required; defined.*** Except as provided in subsection (2) below, a variance may be granted by the board only where strict application of the ordinance, or a provision thereof, to the petitioner and his property would cause undue hardship. The words "undue hardship" as used in this subsection mean:

   a. That the land in question cannot yield a reasonable return unless a variance is granted;

   b. That the need for a variance is due to the unique circumstances of the property and not to the general conditions in the neighborhood;

   c. That the granting of a variance will not alter the

essential character of the locality; and

d. That the hardship is not the result of action taken by the applicant or a prior owner.

2. ***Disability variance:*** Notwithstanding the provisions of subsection (c)(1) of this section, the board may grant a variance to an owner of a residential dwelling for the purpose of making that dwelling accessible to a person with a disability who resides in or regularly uses the dwelling. The board shall restrict any variance granted under this subsection solely to the installation of equipment or the construction of structures necessary for access to or egress from the dwelling by the person with the disability. The board may impose conditions on the variance, including limiting the variance to the duration of the disability or to the time that the person with the disability lives in the dwelling. The term "structures necessary for access to or egress from the dwelling" shall include railing, wall or roof systems necessary for the safety or effectiveness of the structure. For the purpose of this subsection, a disability has the same meaning as a physical or mental handicap under 5 M.R.S.A. Section 4553.

3. *Practical difficulty variance:*

a. Notwithstanding the provisions of subsections 14-473(c)(1) and (2) of this section, the board of appeals may grant a variance from the dimensional standards of this article when strict application of the provisions of the ordinance would create a practical difficulty, as defined herein, and when all the following conditions are found to exist:

1. The need for a variance is due to the unique circumstances of the property, and not to the general conditions in the neighborhood;

2. The granting of the variance will not produce an undesirable change in the character of the neighborhood and will not have an unreasonably detrimental effect on either the use or fair market value of abutting properties;

3. The practical difficulty is not the result of action taken by the applicant or a prior owner;

4. No other feasible alternative is available to the applicant, except a variance;

5. The granting of a variance will not have an unreasonably adverse effect on the natural environment; and

6. The property is not located, in whole or in part, within a shoreland area, as defined in 38 M.R.S.A. § 435, nor within a shoreland zone or flood hazard zone, as defined in this article.

b. The following words have the meanings set forth below:

1. ***Dimensional standards:*** Those provisions of this article which relate to lot area, lot coverage, frontage, and setback requirements.

2. ***Practical difficulty:*** A case where strict application of the dimensional standards of the ordinance to the property for which a variance is sought would both preclude a use of the property which is permitted in the zone in which it is located and also would result in significant economic injury to the applicant.

3. ***Significant economic injury:*** The value of the property if the variance were denied would be substantially lower than its value if the variance were granted. To satisfy this standard, the applicant need not prove that denial of the variance would mean the practical loss of all beneficial use of the land.

c. Except as modified above, the other provisions of section 14-473 will apply to practical difficulty

variances, including, but not limited to, the provisions of section 14-473(b)(2) (public hearing), and section 14-473(d) (specified variances prohibited).

d. A practical difficulty variance may not be used to grant relief from the provisions of section 14-449 (land use standards), to increase either volume or floor area, nor to permit the location of a structure, including, but not limited to, single-component manufactured homes, to be situated on a lot in a way which is contrary to the provisions of this article.

4. *Specified variances prohibited:*

a. No use permitted in medium- and high-density residential districts shall be permitted in low-density residential districts. No use permitted in business districts shall be permitted in any residential district. No use permitted in industrial districts shall be permitted in any business or residential district. No use permitted in residential districts shall be permitted in any industrial district. The general use categories are listed below:

1. Low-density residential: IR-1, IR-2, IR-3, R-1, R-2, R-3.

2. Medium- and high-density residential: R-4, R-5, R-6.

3. Business: R-P, B-1, B-2, B-3, A-B, B-4, B-5, I-B.

4. Industrial: I-L, I-Lb, I-M, I-Ma, I-Mb, I-H, I-Hb.

b. No variance shall be granted which would permit the creation of a lot or parcel that cannot be developed in compliance with the zoning, subdivision and other regulations applicable thereto.

c. No variance shall be granted which would result in a use or development of the lot or parcel in question which would not be in harmony with the general purpose and intent of this article or the land development plan of the city; which would be materially detrimental to the public welfare or materially injurious to the enjoyment, use or development of property or improvement permitted in the vicinity; or which would materially impair an adequate supply of light and air to properties and improvements in the vicinity, substantially increase congestion in the public streets, increase the danger of flood or fire, or endanger the public safety.

d. No variance shall be granted which would be greater than the minimum variance necessary to relieve the undue hardship or the hardship of the applicant.

e. Except for appeals concerning nonconforming dwelling units in existence and use prior to April 18, 1984, no variance shall be granted which would permit the alteration of a structure to accommodate any additional dwelling unit as a conditional use without meeting the requirements which would otherwise be a condition precedent to such conditional use treatment.

f. No variance shall be granted which would permit the alteration of an existing residential structure in an R-4 or an R-5 zone to accommodate more than three (3) dwelling units. No such variance shall be granted unless:

1. No additional unit shall have less than six hundred (600) square feet of floor area, exclusive of common hallways and storage in basement and attic;

2. No open outside stairways or fire escapes above the ground floor shall be or have been constructed in the immediately preceding five (5) years;

3. A lower level dwelling unit shall have a

minimum of one-half of its floor-to-ceiling height above the average adjoining ground level;

4. No existing dwelling unit shall be decreased to less than one thousand (1,000) square feet of floor area;

5. The building shall have been in existence prior to January 1, 1984;

6. A minimum of nine thousand (9,000) square feet of land area shall be required;

7. A minimum of four (4) on-site parking spaces shall be required;

8. A minimum of seventy-five (75) feet of street frontage shall be required; provided, further, before a building permit may be issued, site plan approval under article V of this chapter shall be required with the following additional review standards:

   (i) Any addition or exterior alterations such as facade materials, building form and roof pitch shall be designed to be compatible with the architectural style of the structure;

   (ii) The scale and surface area of parking, driveways, and paved areas shall be arranged and landscaped to be compatible in size and scale with neighboring properties in the area and to properly screen vehicles from adjacent properties and streets;

provided, further, that no variance shall be granted with respect to any of the preceding additional requirements.

g. No variance shall be granted from the minimum lot sizes set forth in section 14-433 for lots in the IR-1, IR-2 and I-B zones.

h. No variance shall be granted from the requirements in Section 14-403.

(d) ***Conditions on variances; variances less than requested.*** Reasonable conditions and safeguards relating to construction, character, location, landscaping, screening and other matters may be imposed upon the premises benefited by a variance as considered necessary to prevent injurious effects upon other property and improvements in the vicinity or upon public facilities and services. Such conditions shall be expressly set forth in the resolution granting the variance and in the notice informing the applicant thereof. Violation of such conditions and safeguards shall be a violation of this article. A variance less than or different from that requested may be granted when the record supports the applicant's right to some relief but not to the relief requested.

(e) ***Limitations on variances.*** No variance permitting the erection or alteration of a building shall be valid for a period longer than six (6) months, or such other time as may be fixed at the time granted not to exceed two (2) years, unless a building permit for such erection or alteration is issued and construction is actually begun within that period and is thereafter diligently pursued to completion. One (1) or more extensions of said expiration dates may be granted if the facts constituting the basis of the decision have not materially changed and the two-year period is not exceeded thereby. No variance relating to the establishment or maintenance of a use not involving a building or structure shall be valid for a period longer than six (6) months, or such other time as may be fixed at the time granted not to exceed two (2) years, unless an occupancy permit is issued and a use commenced within such period; provided, however, that one (1) or more extensions of said time may be granted if the facts constituting the basis of the decision have not materially changed, and the two-year period is not exceeded thereby.

(f) ***Recording of variances.*** No variance shall be valid unless, within thirty (30) days of final approval of the variance, a certificate describing the variance has been recorded by the applicant for the variance in the registry of deeds as required by 30 M.R.S.A. Section 4963.

(Code 1968, § 602.24.C; Ord. No. 437-74, 7-1-74; Ord. No. 467-83, § 1, 4-20-83; Ord. No. 563-84, 5-7-84; Ord. No. 357-84, § 1, 12-17-84; Ord. No. 354-85, § 6, 1-7-85; Ord. No. 40-85, § 1, 7-15-85; Ord. No. 67-87, § 5, 11-2-87; Ord. No.

93-88, 7-19-88; Ord. No. 167-89, 12-11-89; Ord. No. 324-92, 4-22-92; Ord. No. 164-97, § 13, 1-6-97; Ord. No. 208-98, §§ 1, 2, 2-2-98; Ord. No. 253-05/06, 7-17-06; Ord. No. 296-08/09, 6-15-09; Ord. No. 60-12/13, 11-19-12)

***Editor's note—**Ord. No. 93-88, adopted July 19, 1988, amended § 14-473 by adding subsection (f) to read as herein set out. See also the editor's note to Art. III of this chapter for additional provisions relative to Ord. No. 93-88.

Sec. 14-474. Conditional uses.

(a) *Authority.* The board of appeals may, subject to the procedures, standards and limitations set out in this section, approve the issuance of a conditional use permit authorizing development of conditional uses listed in this article.

(b) *Procedure:*

1. *Application.* Applications for conditional use permits shall be submitted to the building authority. A nonrefundable application fee, as established from time to time by the city council to cover administrative costs and costs of a hearing, shall accompany each application. The application shall be in such form and shall contain such information and documentation as shall be prescribed from time to time by the building authority but shall in all instances contain at least the following information and documentation:

    a. The applicant's name and address and his or her interest in the subject property;

    b. The owner's name and address if different than the applicant;

    c. The address, or chart, block and lot number as shown in the records of the office of the assessor of the subject property;

    d. The zoning classification and present use of the subject property;

    e. The particular provision of this article authorizing the proposed conditional use;

f. A general description of the proposed conditional use;

g. Where site plan approval is required by article V of this chapter, a preliminary or final site plan as defined by article V of this chapter.

2. ***Public hearing.*** A public hearing shall be set, advertised and conducted by the board of appeals in accordance with article VI of this chapter.

3. ***Action by the board of appeals.*** Within thirty (30) days following the close of the public hearing, the board of appeals shall render its decision, in a manner and form specified by article VI of this chapter, granting the application for a conditional use permit, granting it subject to conditions as specified in subsection (d), or denying it. The failure of the board to act within thirty (30) days shall be deemed an approval of the conditional use permit, unless such time period is mutually extended in writing by the applicant and the board. Within five (5) days of such decision or the expiration of such period, the secretary shall mail notice of such decision or failure to act to the applicant and, if a permit is authorized, shall issue such permit, listing therein any and all conditions imposed by the board of appeals.

(c) ***Conditions for conditional uses:***

1. ***Authorized uses.*** A conditional use permit may be issued for any use denominated as a conditional use in the regulations applicable to the zone in which it is proposed to be located.

2. ***Standards.*** Upon a showing that a proposed use is a conditional use under this article, a conditional use permit shall be granted unless the board determines that:

a. There are unique or distinctive characteristics or effects associated with the proposed conditional use;

b. There will be an adverse impact upon the health, safety, or welfare of the public or the surrounding area; and

c. Such impact differs substantially from the impact which would normally occur from such a use in that zone.

(d) ***Conditions on conditional use permits.*** The board of appeals may impose such reasonable conditions upon the premises benefited by a conditional use as may be necessary to prevent or minimize adverse effects therefrom upon other property in the neighborhood. Such conditions shall be expressly set forth in the resolution authorizing the conditional use permit and in the permit. Violation of such conditions shall be a violation of this article.

(e) ***Effect of issuance of a conditional use permit.*** The issuance of a conditional use permit shall not authorize the establishment or extension of any use nor the development, construction, reconstruction, alteration or moving of any building or structure, but shall merely authorize the preparation, filing and processing of applications for any permits or approvals which may be required by the codes and ordinances of the city, including but not limited to a building permit, a certificate of occupancy, subdivision approval and site plan approval.

(f) ***Limitations on conditional use permits.*** No conditional use permit shall be valid for a period longer than six (6) months from the date of issue, or such other time as may be fixed at the time granted not to exceed two (2) years, unless the conditional use has been commenced or is issued and construction is actually begun within that period and is thereafter diligently pursued to completion; provided, however, that one (1) or more extensions of said time may be granted if the facts constituting the basis of the decision have not materially changed, and the two-year period is not exceeded thereby. A conditional use permit shall be deemed to authorize only the particular use for which it was issued and such permit shall automatically expire and cease to be of any force or effect if such use shall for any reason be discontinued for a period of twelve (12) consecutive months or more.

(g) ***Appeals from board decisions.*** Appeals from any decision of the board of appeals or, where applicable, the Planning Board respecting a conditional use permit shall be to superior court.
(Code 1968, § 602.24.D; Ord. No. 437-74, 7-1-74; Ord. No. 407-83, 2-2-83; Ord. No. 467-83, § 2, 4-20-83; Ord. No. 237-83, 10-17-83)

Sec. 14-475. Reserved.

***Editor's note—**Section 7 of Ord. No. 354-85, adopted Jan. 7, 1985, repealed § 14-475, relative to nonconforming uses, which derived from Code 1968, § 602.24.E, and Ord. No. 437-74, adopted July 1, 1974.

Sec. 14-476. Successive applications.

Whenever any application, appeal or other request filed pursuant to this article has been finally denied on its merits, a second application, appeal or other request seeking essentially the same relief, whether or not in the same form or on the same theory, shall not be brought within one (1) year of such denial unless, in the opinion of the officer or board before which it is brought, substantial new evidence is available or a mistake of law or fact significantly affected the prior denial.

(Code 1968, § 602.24.F; Ord. No. 437-74, 7-1-74)

Sec. 14-477. Violations.

In addition to any other remedies available, the board of appeals after notice and hearing may revoke any variance or other relief granted under this article when the provisions of this article or the conditions under which the relief was granted have not been complied with.

(Code 1968, § 602.24.G; Ord. No. 437-74, 7-1-74)

Sec. 14-478. - 14-482. Reserved.

***Editor's Note—**Pursuant to Council Order 280-09/10 passed on 7/19/10 Division 29 (Preservation and Replacement of Housing Units) was repealed in its entirety and replaced with a new Division 29 (Housing Preservation and Replacement).

DIVISION 29. HOUSING PRESERVATION AND REPLACEMENT

Sec. 14-483. Housing preservation and replacement.

(a) *Purpose.* The purpose of these regulations is:

1. To promote and facilitate an adequate supply of housing, particularly affordable housing for all economic groups;

2. To limit the net loss of housing units in the city;

3. To preserve housing in zones where housing is permitted for in the city for all residents in order to promote the health, safety and welfare of its citizens.

(b) ***Definitions.***

Dwelling unit. A dwelling unit is one (1) or more rooms with private bath and kitchen facilities comprising an independent self-contained dwelling unit. For purposes of this section only it also includes single family, two-family and multi-family dwellings and any dwelling units in those dwellings, or dwelling units, or rooms that people rent or sleep in within lodging houses, dormitories, shelters and sheltered care group homes.

Loss of dwelling or dwelling unit for purposes of this section means the elimination or conversion to nonresidential use of a dwelling or dwelling units; elimination includes dwelling units lost due to demolition unless the demolition resulted from accidents outside of the owner's control, fire, natural disasters, or acts of war.

Original site means the location where the demolition or conversion to non-residential use of dwellings and dwelling units will take place.

(c) ***Applicability.*** Except as otherwise provided in this section, this section shall apply to the loss of three or more dwelling units in a five year period, provided that such dwelling units were a legally registered residential use as of July 1, 2002.

Except as otherwise provided in this section, this section shall also apply to proposals that (a) result in the loss of fewer than three (3) dwelling units which were legally registered residential use as of July 1, 2002, and (b) creates surface parking.

Determination of number of the dwelling units within a strtucture or structures and the number of units lost will be based

on records in the Department of Planning and Urban Development indicating the legal, registered use of the property since July 1, 2002 through the time of application. The actual use of the preopety for purposes of applicability of this section may be rebutted by the owner by proof of documentary evidence including but not limited to photographs, letters, and swron affidavits. The Planning Authority may conduct its own investigation of the actual use and shall determine the applicability of this section based on the totality of the evidence.

(d) *Exemptions.*

This section does not apply to:

1. Consolidation, elimination or reconfiguration of one (1) or more dwelling units within an existing structure, as long as all the resulting units remain as dwelling units after such consolidation, elimination or reconfiguration, except as provided by subsection 5 below. Conversion of a dwelling unit to a hotel or motel room shall not qualify for the exemption provided by the paragraph.

   The amendments to paragraph (d)(1) approved by the City Council on June 6, 2011 shall have an effective date of April 25, 2011 but not apply to any final determination regarding the applicability of this section made by the Planning Authority prior to April 25, 2011.

2. Proposals that result in a number of units equal to or greater than the number of units lost as determined by the Planning Authority; or

3. Grandfathered dwelling units existing in zones which no longer permit residential uses.

4. Property which has been ordered demolished by the City, pursuant to 17 M.R.S.A. §2851, et seq., as amended, except where it is determined by the Building Authority that the deterioration was caused by neglect or lack of maintenance.

5. Subparagraph 1, above notwithstanding, the conversion to a non-residential use of any dwelling units located on

the ground floor of a building within a business zone.

(e) ***Site plan administrative authorization or approval required.*** Notwithstanding any other provision of this section, a person who proposes to demolish or to convert to a nonresidential use three or more dwellings or dwelling units in the City, in a zone where such use is otherwise permitted, must first obtain administrative authorization or site plan approval from the City's Planning Authority or Planning Board pursuant to Sec. 14-521, et. seq.

In addition the requirements of 14-521, et. seq., where this section is applicable, the applicant must also submit a statement certifying the number of dwelling units to be demolished or converted to nonresidential use, as well as a description of the characteristics of each of those units.

(f) ***Tenant Notification Requirements.*** Prior to elimination as a result of demolition or conversion to non-residential use, the owner shall:

1. Provide the Planning Authority a list containing the name of each tenant currently residing in the dwelling units to be demolished or converted to non-residential use, as well as verification of compliance with tenant notice requirements of this section.

2. Deliver to each tenant who occupies such a dwelling unit a written notice to vacate the unit. The notice shall either be sent by certified mail, return receipt requested, or served in-hand. The notice will grant the tenant not less than ninety (90) days from the date of receipt of the notice to vacate the unit; and

3. File proof of service of the notice with the Planning Authority.

(g) ***Housing Replacement Requirements.*** In addition to the requirements of 14-521, et. seq, the Planning Authority shall require, as a condition of approval, that an owner shall replace any dwelling units that are demolished or converted to non residential use.

This section may be satisfied in any one of the following ways:

1. Construction of Units. The construction of housing units within a new structure or a new addition either on site or off-site;

2. Residential Conversion. The conversion of a nonresidential building to residential use; or

The applicant may use either of the two methods or a combination of the two to fulfill their replacement requirement.

(h) ***Replacement Unit Requirement.*** In addition to the foregoing, all replacement units built pursuant to sub-section (g)(1) or (2) above shall:

1. Be located within the City of Portland.

2. Not previously have been on the market as of the date of application.

3. Be situated within a development which has not been a candidate for site plan approval as of the date of the application.

4. Be comparable in size to the units replaced; for the purpose of this section, "comparable in size" means that the aggregate size of the replacement units will be no less than 80% of the size of the aggregate of the original units.

(i) ***Contribution to the Housing Trust Fund.***

1. The applicant may meet the requirements of this section by depositing $50,000 for each dwelling unit into the City's Housing Trust Fund in section 14-489.

2. Beginning on January 1, 2004 and annually thereafter, the amount of the contribution shall be adjusted by multiplying this amount originally deposited for each unit by a fraction, the denominator of which shall be the "Consumer Price Index for Urban Wage Earners and Clerical Workers ("CPI-W")," U.S. City Average, "All Items Index," as published by the United States Bureau of Labor Statistics ("the Index") for January 1, 2003 Year, and the numerator of which shall

be the Index for the same month in each subsequent year. In the event that the Index is not then in existence, the parties shall use such equivalent price index as is published by any successor governmental agency then in existence; or, if none, then by such nongovernmental agency as may then be publishing an equivalent price index, in lieu of and adjusted to the Index. If the Index shall cease to use 1982-84 equals 100 as the basis of calculation, or if a substantial change is made in the terms or number of items contained in the Index, the Base Index shall be adjusted to conform to such change, using such computation thereof, if available, as shall be employed by the United States Department of Labor in computing same. Notwithstanding anything herein to the contrary, contributions made after January 1, 2004 shall not be less than the amount originally required to be deposited pursuant to sub-section (i)(1) for each rooming or dwelling unit.

(j) ***Performance Guaranty/Letter of Credit.*** Owners or affiliates must post a performance guaranty in the form of a letter of credit, or other security acceptable to the city attorney in amount equivalent to the amount the applicant would have been required to contribute to the City's Housing Trust Fund if the applicant had chosen that option pursuant to sub-section g.

(k) ***Partial waiver of replacement requirements.*** Any owner who has applied for site plan review for elimination or conversion to non-residential use of dwelling units may apply to the Zoning Board of Appeals for a partial waiver from the housing replacement requirements of this section. Such waiver may be a downward adjustment of up to fifty percent (50%) of the owner's housing replacement obligation if the owner establishes to the board's satisfaction that:

1. The proposed development is consistent with the comprehensive plan;

2. The proposed development provides significant value and benefit to the immediate and surrounding neighborhood, including, but not limited to, community enhancement, social benefits or job creation;

3. The applicant demonstrates with objective evidence that

the imposition of the requirements of this section would impose such an economic burden upon the project relative to its scope that it renders the project impossible to develop; and

4. The requested relief does not constitute a grant of a special privilege inconsistent with the limitations upon similar properties.

The Zoning Board of Appeals must make positive findings on each of the four (4) criteria above in order for any such adjustment to be valid. An applicant aggrieved of a decision of the Zoning Board of Appeals may appeal a decision under this sub-section pursuant to Sec. 14-553 of the City Code.

(l) *Effect of Other City Ordinances*.

1. *Historic Preservation*. Nothing in this division shall permit the demolition or conversion to non-residential use, of dwelling units in residential property protected by the Historic Preservation Ordinance (Sections 14-601, et seq.), except as permitted by that ordinance.

2. *Conditional Zone*. A conditional zone may not be used to circumvent the application of this section. The terms of this section shall apply to any conditional zone which involves dwelling units affected by this section. Notwithstanding the foregoing, nothing herein shall be deemed to prevent the City and the applicant from agreeing to terms which exceed those imposed by this section by means of a conditional zone.

(m) *Appeals*. Any applicant aggrieved by a decision of the Planning Authority under this section may appeal to the Zoning Board of Appeals within 30 days of that decision.
(Ord. No. 27-02/03, 10-7-02; Ord. No. 280-09/10, 7-19-10; Ord. No. 241-10/11, 6-6-11)

DIVISION 30. INCENTIVES FOR AFFORDABLE HOUSING

Sec.14-484. Purpose.

The city believes that it is in the public interest to promote an adequate supply of affordable housing for its residents. The purpose of this division therefore is to offer

incentives to developers to include units of affordable housing within development projects, thereby mitigating the impact of market rate housing construction on the limited supply of available land for suitable housing, and helping to meet the housing needs of all economic groups within the city. The city believes that this division will assist in meeting the city's comprehensive goals for affordable housing, in the prevention of overcrowding and deterioration of the limited supply of affordable housing, and by doing so promote the health, safety and welfare of its citizens.
(Ord. No. 98-06/07, 12-4-06)

Sec. 14-485. Definitions.

Affordable housing unit for rent means a dwelling unit for which:

(a) The rent is affordable to a household earning 80% or less of the U.S. Department of Housing and Urban Development moderate-income figure for metropolitan Cumberland county Maine for a household of that size; and

(b) Annual rent increases for that unit are limited in perpetuity by deed restriction or other legally binding agreement to the percentage increase in the U.S. Department of Housing and Urban Development moderate-income figure for metropolitan Cumberland county Maine for a household of that size.

Affordable housing unit for sale means a dwelling unit for which:

(a) The sale price is affordable to a household earning 120% or less of the U.S. Department of Hou7sing and Urban Development moderate-income figure for metropolitan Cumberland county Maine for a household of that size; and

(b) The resale price is limited by deed restriction or other legally binding agreement for all future sales of the unit to an amount that is affordable to a household earning 120% of the U.S. Department of Housing and Urban Development moderate-income figure for metropolitan Cumberland county Maine for a

household of that size, as calculated for the year in which the sale takes place.

Development fees means:

(a) The following fees, as described in this chapter: site plan review and inspection fees; subdivision review and inspection fees; and administrative fees; and

(b) Construction and permit fees as described in chapter 6. "Development fees" does not include any fees charged for reviews conducted by a party other than the city.

Dwelling unit has the same meaning as that term is defined in section 14-47.

Eligible project means a development project:

(a) That is permissible under the provisions of this chapter in the zone in which it is proposed;

(b) That will be a multi-family dwelling ,as defined in section 14-47, and will not be located in an R-1 or R-2 zone;

(c) Reserve; and

(d) That creates new dwelling units, among which is at least one affordable housing unit for rent or sale, through new construction, substantial rehabilitation of existing structures, adaptive reuse or conversion of a non-residential use to residential use, or any combination of these elements. Affordable housing units for sale or rent may not differ in exterior design from other units within an eligible project.

(Ord. No. 98-06/07, 12-4-06; Ord. No. 84-08/09, 10-20-08)

Sec. 14-486. Reduction of fees.

Notwithstanding any other provision of this chapter or chapter 6 to the contrary, development fees shall be reduced by the city for an eligible project in the manner described in the following table:

Percentage of new units that	**Percentage discount of**

are affordable units	development fees
5% up to but not including 10%	5% reduction
10% up to but not including 15%	10% reduction
15% up to but not including 20%	15% reduction
20% up to but not including 25%	20% reduction
25% or more	25% reduction

(Ord. No. 98-06/07, 12-4-06)

Sec. 14-487. Priority review.

The planning division shall perform its review of an eligible project in as expedited a manner as is practical, without impairing the scope or thoroughness of the review. The planning division may adopt administrative procedures to prioritize review of eligible projects and facilitate this expedited review.

The planning board shall make its best efforts to give priority in scheduling workshops and public hearings related to any plans or applications required for an eligible project that are within the planning board's jurisdiction, without impairing the scope or thoroughness of its review. At the conclusion of these public meetings, the planning board shall promptly issue a decision on all such plans and applications before it for consideration.

(Ord. No. 98-06/07, 12-4-06)

Sec. 14-488. Density, parking and dimensional bonuses and reductions.

Notwithstanding any other provision of this chapter to the contrary:

(a) *Density bonuses.* The maximum number of units that would otherwise be allowed under this chapter shall be increased for an eligible project in the manner described in the following table:

Percentage of new units that are affordable units	Percentage increase in maximum number of units allowed

5% up to but not including 10%	5% increase
10% up to but not including 15%	10% increase
15% up to but not including 20%	15% increase
20% up to but not including 25%	20% increase
25% or more	25% increase

(b) Off-street p*arking.* Off-street parking is required as provided in Division 20 (off-street parking) of this article.

(c) *Building height bonus.* The maximum structure height for an eligible project building:

1. That is located in a B-2 or B-2b community business zone;

2. That contains five (5) or more dwelling units; and

3. Of which 20% or more of new dwelling units created are affordable units for rent or sale, is an additional ten feet above the maximum structure height that would otherwise apply to the building pursuant to this chapter.

The total height of the eligible project, including any bonus received pursuant to this subsection, may not exceed the maximum height recommended for the location of the project pursuant to a height study that has been adopted as part of the city's comprehensive plan.

(Ord. No. 98-06/07, 12-4-06; Ord No. 240-09/10, 6-21-10)

DIVISION 31. HOUSING TRUST FUND

Sec. 14-489. Housing trust fund.

(a) *Purpose.* The purpose of enacting this section is:

1. To establish a City of Portland housing trust fund for the promotion, retention and cration of an adequate

supply of housing, particularly affordable housing, for all economic groups and to limit the net loss of housing units in the City.

2. To serve as a vehicle for addressing very low, low, and median income housing needs through a combination of funds as set out in section 14-483 of this chapter.

(b) ***Definitions.***

Very low income household. A household having an income not exceeding fifty (50%) percent of median income for area of residence as set forth in regulations promulgaged from time to time by the United States Department of Housing and Urban Development pursuant to 42 U.S.C. section 1437 et seq.

Low income household. A household having an income not exceeding eighty (80%) percent of median income for area of residence as set forth in regulations promulgated from time to time by the United States Department of Housing and Urban Development pursuant to 42 U.S.C. sections 1437 et seq.

Moderate income household. A household having an income not exceeding one hundred twenty (120%) percent of median income for area of residence as set forth in regulations promulgated from time to time by the United Sates Department of Housing and Urban Development pursuant to 42 U.S.C. sections 1437 et seq.

(c) ***Establishment of the housing trust fund.*** The city council shall establish a special revenue account under the name "City of Portland Housing Trust Fund." Deposits into the fund shall include:

1. Contributions from the city's housing replacement ordinance under 14-483(i);

2. Funds appropriated to be deposited into the fund by vote of the city council;

3. Voluntary contributions of money or other liquid assets to the fund;

4. Any federal, state or private grant or loan funds provided to the fund:

5. Interest from fund deposits and investments; and

6. Repayments of loans made from the fund.

(d) ***Management of the trust fund.*** The city manager, or his or her designee, shall serve as the manager of the housing trust fund. The responsibilities of the manager, subject to the orders of the city council, shall include:

1. Maintaining the financial and other records of the housing trust fund;

2. Disbursing and collecting housing trust fund monies in accordance with the housing trust fund annual plan; and

3. Monitoring the use of monies distributed to successful applicants for housing trust fund support to assure on-going compliance with the purposes of the fund and the conditions under which these monies were granted or loaned.

(e) ***Housing trust fund annual plan.*** Each fiscal year, the city council shall adopt a housing trust fund annual plan. The city manager shall submit to the city council a recommended housing trust fund annual plan, utilizing the revenues of the housing trust fund as well as any other funds the manager may propose as appropriate. The housing committee of the city council or such other committee as the council shall designate shall conduct public hearings on the recommended plan and refer the matter to the council for action.

The housing trust fund annual plan shall include:

1. A description of all programs to be funded in part or in full by the housing trust fund;

2. A description of how funds from the housing trust fund will be distributed among very-low-income, low-income and moderate income households; and

3. The amount of funds budgeted for programs funded in part or in full from the housing trust fund.

Priority for the expenditure of funds collected pursuant to the housing replacement ordinance (see Sec. 14-483) shall be

given to the creation of new housing stock, through either new construction or conversion of non-residential buildings to residential use.

(f) *Distribution and use of the housing trust fund's assets.*

1. All distribution of principal, interest or other assets of the housing trust fund shall be made in furtherance of the public purposes set out in section 14-483.

2. During each year, the housing trust fund shall disburse as grants or loans so much of the housing trust fund's assets as the city council in its discretion has approved in the housing trust fund annual plan.

3. Funds shall not be used for city administrative expenses.

4. Funds shall not be used for property operating expenses or supporting services.

5. No grants or loans shall be awarded by the housing trust fund to corporations, partnerships or individuals who are delinquent, at the time of application in the payment of property taxes or other fees to the city of Portland, who Have been convicted of arson, who have been convicted of discrimination in the sale or lease of housing under the fair housing laws of the State of Maine, or who have pending violations of current city electrical, plumbing building or housing codes or zoning ordinances.

(g) *Term of affordability.*

1. Whenever funds from the housing trust fund are used for the acquisition, construction or substantial rehabilitation of an affordable rental or cooperative unit, the City of Portland shall impose enforceable requirements on the owner of the housing unit that the unit remain affordable for the remaining life of the housing unit, assuming good faith efforts by the owner to maintain the housing unit and rehabilitate it as

necessary. The remaining life of the housing unit shall be presumed to be a minimum of thirty (30) years.

2. Whenever funs from the housing trust fund are used for the acquisition, construction or substantial rehabilitation of ownership housing, the city of Portland shall impose enforceable resale restrictions on the owner to keep the housing unit affordable for the longest feasible time, while maintaining and equitable balance between the interests of the owner and the interests of the city of Portland.

3. The affordability restriction requirements described in this section shall run with the land and the city of Portland shall develop appropriate procedures and documentation to enforce these requirements and shall record such documentation in the Cumberland County Registry of Deeds.

(Ord. No. 281-09/10, 7-19-10)

Sec. 14-490. Reserved.

ARTICLE IV. SUBDIVISIONS*

***Cross reference(s)--**Ordinances dedicating or accepting any plat or subdivision in the city saved from repeal, § 1-4(h).

State law reference(s)--Land subdivisions, 30-A M.R.S.A. § 4403.

Sec. 14-491. Authority and purpose.

This article is adopted pursuant to the terms and provisions of 30-A M.R.S.A. Sections 3001 and 4403, as amended. The purpose of this article is to provide for the harmonious and economic development of the city; for the orderly subdivision of land and its development; for the orderly development of the general area surrounding such subdivision; for the coordination of streets within the general area; for adequate provisions for drainage, flood control, light, air and other public purposes; for the adequate and proper installation of streets, drainage, sanitary sewers, water and other utilities and facilities; for the dedication to the city of land for streets, alleys or other public

purposes or the transfer to the city of easements or other rights or privileges; for the reservation for the city of land to be acquired for public facilities; and to protect public safety.
(Code 1968, § 603.1; Ord. No. 158-68, § 10, 5-6-68; Ord. No. 149-79, 6-6-79; Ord. No. 155-89, § 1, 11-20-89)

Sec. 14-492. Jurisdiction.

This article shall govern each and every subdivision of land within the limits of the city unless specifically exempted in section 14-508. When application is made for the resubdividing of a previously recorded subdivision under the provisions of these regulations, it shall be treated as a new subdivision provided the applicant is the owner of rights in the recorded subdivision.
(Code 1968, § 603.3; Ord. No. 158-68, § 10, 5-6-68; Ord. No. 149-79, 6-6-79)

Sec. 14-493. Definitions.

The following words and phrases, when used in this article, shall have the meanings respectively ascribed to them:

Alley shall mean any way designed primarily for vehicular or utility access to the back or side of premises otherwise abutting on a street, except driveways unless officially designated otherwise.

Easement shall mean a right, privilege or liberty which one has in land owned by another for some special and definite purpose.

Engineer shall mean a registered professional engineer in good standing with the state board of registration for engineers.

Esplanade shall mean that portion of a street right-of-way which is located between the curbline and the edge of the sidewalk closest to the street.

Freshwater wetland shall mean freshwater swamps, marshes, bogs and similar areas which are:

(a) Inundated or saturated by surface or groundwater at a frequency and for a duration sufficient to support, and which under normal circumstances do support, a prevalence of wetland vegetation typically adapted for life in saturated soils; and

(b) Not considered part of a great pond, coastal wetland, river, stream or brook.

These areas may contain small stream channels or inclusions of land that do not conform to the criteria of this subsection.

Land development plan shall mean any part or element of the land development plan for the city as adopted by city council resolution No. 540 of 1974, as amended.

Lot shall mean a parcel or portion of land in a subdivision or plat of land, separated from other parcels or portions by description as on a subdivision of record or survey map or by metes and bounds, for the purpose of sale or lease to another.

Nonresidential subdivision shall mean a subdivision which is not intended for human habitation, such as a commercial or industrial subdivision.

Performance guarantee shall mean a letter of credit or escrow account in an amount and form meeting the requirements of section 14-501.

Planned unit development shall mean a residential subdivision consisting of attached dwellings or a series of attached dwellings intended for separate ownership, with open spaces, recreational areas, access ways and buildings which are designed, built and controlled in accordance with a unified development plan.

Recording plat shall mean the completed subdivision plat in form for approval and recording.

Roadway shall mean that portion of a street between the regularly established curblines, or that part of a street or alley devoted to vehicular traffic.

Sidewalk shall mean that portion of a street not included in the roadway, and devoted in whole or part to pedestrian traffic.

Sketch plan shall mean a very simple layout to show the location of the subdivision to gain informal comments of city staff.

Street shall mean a public way for vehicular and pedestrian traffic, whether designated as a street, highway, thoroughfare,

parkway, throughway, road, avenue, boulevard, land, place or however otherwise designated, excepting, however, an alley.

(a) ***Arterial street*** shall mean a heavily traveled street of considerable continuity used primarily as a traffic artery among large areas.

(b) ***Collector street*** shall mean a nonarterial street which carries traffic from a minor street to arterial streets, including the principal entrance to streets of a residential development and streets for circulation within such a development.

(c) ***Marginal access street*** shall mean a minor street which is adjacent to and substantially parallel with an arterial street and which provides access to abutting properties and protection from through traffic.

(d) ***Minor street*** shall mean a street which services one (1) or more minor streets used primarily for access to abutting properties.

(e) ***Cul-de-sac or dead-end street*** shall mean with only one (1) outlet.

Subdivider or applicant shall mean any individual, firm, association, syndicate, partnership, corporation, trust or any other legal entity commencing proceedings under these regulations to effect a subdivision of land hereunder for himself or for another.

Subdivision shall mean the division of a lot, tract or parcel of land into three (3) or more lots, including lots of forty (40) acres or more, within any five-year period whether accomplished by sale, lease, development, buildings or otherwise and as further defined in 30-A M.R.S.A. Section 4401. The term subdivision shall also include the division of a new structure or structures on a tract or parcel of land into three (3) or more dwelling units within a five-year period and the division of an existing structure or structures previously used for commercial or industrial use into three (3) or more dwelling units within a five-year period. The area included in the expansion of an existing structure is deemed to be a new structure for the purposes of this paragraph. A dwelling unit shall include any part of a structure which, through sale or lease, is intended for human habitation, including

single-family and multifamily housing condominiums, time-share units and apartments.

Subdivision plat shall mean a plan of the proposed subdivision for presentation to the Planning Board and the public.

Surveyor shall mean a qualified registered surveyor of good standing with the state board of registration.

Tract (or parcel) of land shall mean all contiguous land in the same ownership, provided that lands located on opposite sides of a public or private road shall be considered each a separate tract or parcel of land unless such road was established by the owner of land on both sides thereof.

Vicinity sketch shall mean a sketch of the proposed subdivision location, not necessarily drawn to scale, showing the proximity of the subdivision to surrounding streets and highways.
(Code 1968, § 603.5; Ord. No. 158-68, § 10, 5-6-68; Ord. No. 149-79, 6-6-79; Ord. No. 127-87, § 1, 2-18-87; Ord. No. 247-88, 11-28-88; Ord. No. 155-89, § 2, 11-20-89; Ord. No. 25-11/12, 8-15-11)

Cross reference(s)--Definitions and rules of construction generally, § 1-2.

Sec. 14-494. Guidance to subdivider.

The purpose of the preapplication procedure is to afford the subdivider an opportunity to avail himself of the advice and assistance of the Planning Board, and to consult early and informally with the board staff before preparation of the subdivision plat and before formal application for its approval, to insure the development of a subdivision plan with mutual benefits for the subdivider and the city.
(Code 1968, § 603.2; Ord. No. 158-68, § 10, 5-6-68; Ord. No. 149-79, 6-6-79)

Sec. 14-495. Procedure for approval of a subdivision.

(a) *Application for approval:*

1. To obtain approval of a proposed subdivision the subdivider or applicant shall prepare for the Planning Board a subdivision plat, a vicinity sketch, and a recording plat in accordance with the requirements and standards established by this article.

2. The sketch plan may be prepared for staff and Planning

Board review if desired by the applicant prior to formal submission of the subdivision plat.

3. The subdivider shall supply and submit five (5) copies of the complete subdivision plat and the vicinity sketch to the office of the planning authority at least fifteen (15) days prior to a regularly scheduled meeting of the Planning Board, to be in order for consideration by the board at the meeting.

4. The planning authority shall forward a copy of the subdivision plat and vicinity sketch to the public works authority, parks authority, fire department and building authority, all of which shall submit recommendations to the planning authority by the time of the initial hearing on the subdivision plat.

5. Prior to the date upon which the planning authority meets to consider the subdivision plat the applicant shall pay all costs incurred in providing public notice. The planning authority shall determine the amount of this fee based on the actual costs incurred in newspaper advertising and postage, and shall also be responsible for collecting and accounting for such fee. Public notice in the form of newspaper advertisement shall be provided as required under 14-32.

6. Notice shall be provided in accordance with section 14-32. Notice shall also be sent to the clerk and the reviewing authority of municipalities that abut or include any portion of a proposed subdivision.

7. The city council may from time to time establish by order reasonable application fees to defray the costs of reviewing subdivisions.

(b) ***Timing of subdivision review:*** A public hearing shall be commenced within thirty (30) days following the receipt of a complete subdivision application. The staff shall notify the applicant in writing either that the application is complete or, if it is determined to be incomplete, the specific additional materials needed to make it a complete application. The Planning Board shall render its decision on any application submitted to it within sixty (60) days following receipt of a complete application, or such other time as may be mutually agreed to by the Planning

Board and the applicant.

(c) ***Engineering requirements:***

1. The applicant shall furnish the public works authority with all engineering data and plans necessary for the completion of the required improvements, as enumerated in section 14-496(b). Such plans may be furnished apart from but at the same time as the subdivision plat and vicinity sketch and shall be certified by a registered professional engineer.

2. The public works authority shall review the plans submitted as required in subsection (c)(1) above and shall approve, approve conditionally, or disapprove same within ten (10) days of submission as to whether such plans are in conformance with the standards set forth in this article.

(d) ***Subdivision plat approval:*** The Planning Board shall approve, approve conditionally or disapprove such subdivision plat at a public meeting. If approved conditionally, the conditions and reasons shall be stated and given in writing to the subdivider and, if necessary, the Planning Board may require the subdivider to submit a revised subdivision plat. If the Planning Board should disapprove the subdivision plat, the reasons for such action shall be stated and given in writing to the subdivider, and the board may state the conditions under which the proposed subdivision would be approved. One (1) copy of the subdivision plat as acted upon by the Planning Board shall be retained in its office, one (1) copy forwarded to the public works authority and one (1) copy returned to the subdivider.

(e) ***Effect of subdivision plat approval:*** Receipt of the approved copy of the subdivision plat of the subdivider is not authorization that he may proceed with the construction of any improvements. No construction will proceed until the recording plat has been approved by the Planning Board and has been properly recorded as required hereinafter in subsection (g).

(f) ***Recording plat approval:***

1. The applicant shall submit the recording plat and five (5) copies thereof to the planning authority at least fifteen (15) days prior to the date of the meeting of the

Planning Board at which it is intended to be considered, which copies shall be distributed as hereinafter provided.

2. Consideration of the recording plat, however, shall not take place until approvals required in subsections (c) and (d) are obtained.

(g) ***Recording:***

1. When the recording plat is approved, the subdivider shall pay the actual cost of recording and reproducing five (5) copies of the plat, one (1) of which shall be on mylar for the public works authority records.

2. The recording plat shall be recorded in the office of the county registry of deeds by the subdivider.

3. The registry book and page numbers will then be recorded on the five (5) copies of the plan, of which one (1) shall be kept at the office of the Planning Board, one (1) sent to the building authority, one (1) copy on mylar sent to the public works authority, one (1) to the assessor's office and one (1) to the subdivider.

4. Unless the subdivider shall record his or her approved recording plat within three (3) years after the Planning Board has approved the subdivision plat, the recording plat approval shall become null and void. The preceding sentence notwithstanding, if the Planning Board's initial approval of a subdivision is based in part upon the granting of a variance from any of the applicable subdivision approval standards, no such variance shall be valid unless that fact shall be expressly noted on the face of the recording plat and shall be noted in a certificate, each of which shall conform to 30-A M.R.S.A. Section 4406, and such recording plat or such certificate or both of them are recorded in the Cumberland County Registry of Deeds within ninety (90) days of final subdivision approval.

(h) ***Sectional recordings:*** Following subdivision plat approval, the Planning Board may permit the subdivision to be divided into two (2) or more sections for recording purposes subject to any conditions that the board deems necessary in order

to insure the orderly development of the plan. The applicant may seek approval of and record a sectional recording plat with the county registry of deeds only if the section constitutes at least twenty (20) percent of the total number of lots contained in the approval plat and, in addition, shows the entire tract or parcel. In these circumstances, if the first section of the plat has been recorded within three (3) years after Planning Board approval, subdivision plat approval of the remaining sections of the plat shall remain in effect for five (5) years after Planning Board approval.

(Code 1968, § 603.6; Ord. No. 158-68, § 10, 5-6-68; Ord. No. 149-79, 6-6-79; Ord. No. 692-81, 5-18-81; Ord. No. 123-85, 10-7-85; Ord. No. 127-87, §§ 2--4, 2-18-87; Ord. No. 94-88, 7-19-88; Ord. No. 155-89, §§ 3, 4, 11-20-89; Ord. No. 227-01, 4-2-01)

***Editor's note--**Ord. No. 94-88, adopted July 19, 1988, amended § 14-495(g)(4) to read as herein set out. See also the editors note to Art. III of this chapter for additional provisions relative to Ord. No. 94-88.

Sec. 14-496. Plat requirements.

Each and every modification of the information required to be shown on the plat in this section shall be applied for in writing by the subdivider. The decision of the Planning Board on such request shall be final.

(a) *Information on subdivision plat.* The following information shall be shown on one (1) subdivision plat unless otherwise indicated:

1. Date, north point, title and graphic scale. Scale shall not be more than sixty (60) feet to the inch unless lots are more than an acre, but in no event more than one hundred (100) feet to the inch;

2. Based on a recent survey by the subdivider, existing contours at two (2) feet intervals or as otherwise required by the public works authority. Existing structures which are to remain will be delineated;

3. Names of proposed streets, width of rights-of-way, and typical cross section reservation, and depth of construction materials;

4. Locations, widths and purposes of other rights-of-way or easements to be recorded;

5. All appropriate street curve information, including point of curvature, point of tangency, tangent distance, radii and interior angle, in standard engineering format;

6. Location of those utilities existing on or adjacent to the tract to be subdivided, including size and elevation of buried or underground utilities (may be shown on separate plan);

7. Tract boundary lines and property lines of lots, with accurate dimensions and either bearings or deflection angles. All lots shall be numbered;

8. Names of adjacent property owners with parcels over twenty-five thousand (25,000) square feet or names of adjacent subdivision;

9. Designation of flood hazard areas, as defined by the National Flood Insurance Program and shown on the city flood hazard boundary map, as well as any other areas in the subdivision subject to inundation by storm water or storm sewer overflow;

10. Existing historic sites and structures which either appear on the National Register or are nominated to the National Register by the state historic preservation officer;

11. Proposed private and public utility system including water, gas, telephone, fire hydrants, and any other services which shall supply the area (may be shown on separate plan);

12. Sanitary sewer and storm drain plans and profiles showing size, kind and slope of pipe, proposed manhole rim and invert elevations and catch basin locations and drains (may be shown on separate plan);

13. Lighting plan showing the location, design, height

and spacing from each other of the support poles, in accordance with standards and specifications established by the public works authority (may be shown on separate plan);

14. Tree plan showing groups of existing, sizeable trees which the subdivider intends to preserve (may be shown on separate plan);

15. A detailed plan of the entire subdivision and the immediate vicinity showing all existing and proposed drainage both on and off-site including drainage swales, ditches, etc., with directional flow arrows and approximate slope grades, and showing proposed finished "spot elevations" around the perimeter of the subdivision. Proposed drainage shall be shown as it may affect or restrict development on individual lots and with reference to improvements for which a performance guarantee is required under this article. Where deemed feasible by the public works authority, proposed finished contours at intervals of two (2) feet shall be provided on the drainage plan upon request (may be shown on separate plat):

16. Location and designation of any zoning district boundaries affecting the subdivision:;

17. All future phases and sections of the subdivision proposed by the subdivider (may be shown on separate plat);

18. Proposed parks and school sites, or other public open space that the developer proposes to convey to the city;

19. Names and addresses of registered professional engineer, subdivider and owner:

20. At the option of the subdivider, any other information that may be necessary for the full and proper consideration of the subdivision shall be submitted in writing;

21. Streets and right-of-way monuments and property

line markers;

22. Vicinity sketch, as defined in section 14-493 (may be shown on separate plan);

23. Total site data, including total area of the subdivision, total area in streets, total area in recreation or open space and number of house lots;

24. Additional submission items if required by the Planning Board and insofar as feasible (may be shown on separate sheets or by other appropriate method):

    a. When private sewage systems are used, the results and supporting data of a soil test of each lot in the subdivision conducted by a soil evaluator licensed in the state;

    b. When the adequacy of the subdivision's load bearing capacity is in question, the results and supporting data of test borings conducted by a professional engineer registered in the state;

    c. When conditions warrant, a program which shall be implemented by the subdivider to control dust, erosion and sedimentation and/or vehicular traffic during construction;

    d. Evidence of the applicant's financial capability to carry out all phases of the proposed development;

    e. Evidence of state and federal approvals, licenses or permits required by law, or the status of applications therefor;

    f. Price range of houses that will be built in the subdivision;

    g. Traffic impact analysis;

    h. High intensity soil survey, if required by the planning authority;

i. Evidence of technical capacity to undertake the development;

j. Types and estimated quantities of solid waste to be generated by the development;

k. Construction plan outlining the anticipated sequence of construction of the major features of the project including without limitation roads, retention basins, sewer lines, seeding and other erosion and sedimentation control measures, and pollution abatement measures and also setting forth the approximate dates for commencement and completion of the project;

l. A narrative and a plan showing all proposed buffer strips, their dimensions, and maintenance plans and responsibilities; and

m. A description of any wetlands, wildlife and fisheries habitats, archaeological sites or unusual natural areas located on or near the project site and a description of the methods that will be used to protect such areas.

n. Where submission drawings are available in electronic form, the applicant shall submit any available electronic CADD.DXF files with final plans.

(b) ***Recording plat.*** The recording plat shall be an original ink drawing on linen or mylar, or as necessary to be acceptable to the registry of deeds, and shall be tied to an accepted street or to a proposed street under construction and bonded to insure construction. This plat also shall show the following:

1. Title, date, graphic scale, north arrow, name, signature and registration number or seal of a registered land surveyor licensed in the state, name and address of developer and owner;

2. Tract boundary lines and property lines of lots, with accurate dimensions and either bearings or

deflection angles. All lots shall be numbered;

3. All appropriate street curve information, including point of tangency, tangent distance, radii and interior angles, in standard engineering form;

4. Street names, width of street rights-of-way and typical cross section showing only surface dimensions of roadway pavement, esplanade and sidewalk reservation;

5. Street and right-of way monuments and property markers. Iron pipes shall be designated by a small circle at the point of installation;

6. Locations, dimensions and purposes of any easement or right-of-way;

7. Purpose for which sites, other than residential lots, are dedicated or reserved; it being understood that any reservations of areas shall be subject to the proper zoning thereof;

8. Reference to recorded subdivision plats of adjoining platted land by book and page number;

9. Space for the signatures of the Planning Board and date of approval;

10. Where required by 30-A M.R.S.A. Section 4406, the fact that initial approval or subsequent amendment of a subdivision is based in part upon the granting of a variance from any of the applicable subdivision approval standards.

(c) ***Alterations to an approved plot.*** The planning authority may approve alterations to an approved recording plat when all of the following conditions are met; otherwise, a new subdivision plat must be submitted to the Planning Board:

1. The rearrangement of lot lines does not increase the number of lots within a block or other subdivision unit or area;

2. The alteration will not affect any street, alley, utility easement or drainage easement;

3. The alteration meets all of the minimum requirements of this article, article III of this chapter on zoning and other applicable state and local codes:

4. The alteration is approved by the public works authority and the fire department.

Such approved alterations shall be properly recorded in the registry within thirty (30) days thereof or they shall be null and void. Recording of approved alterations also shall be in accordance with the requirements of 30-A M.R.S.A. Section 4406.

(d) ***Vacation of plats.*** Any such plat recorded, or any portion thereof, may be vacated with the consent of the city council as follows:

1. At any time before the sale of any lot therein, by written instrument, signed by the city and the owners of such subdivision, declaring the same to be vacated and describing therein the part or portion to be so vacated.

2. At any time after the sale of any lot therein and by written instrument, signed by the city and all owners of record of lots shown on the plat, declaring the same to be vacated and describing therein the part or portion to be so vacated.

Any instrument so executed vacating all or a portion of any plat shall be duly filed and recorded in the county registry of deeds. The execution and recording of the instrument described in subsection (d)2 above shall vest fee simple title to the centerline of the street, alley or easement for public passage so vacated in the owners of abutting properties. Title to property located within the vacated streets, alleys or easements for public passage shall pass to abutting property owners free and clear of any rights of the public or other owners of lots shown in the plan, but subject to the rights of the owners of any public utility installations which have

been previously erected therein.

(Code 1968, § 603.7; Ord. No. 158-68, § 10, 5-6-68; Ord. No. 149-79, 6-6-79; Ord. No. 127-87, §§ 5, [12], 2-18-87; Ord. No. 95-88, §§ 1, 2, 7-19-88; Ord. No. 155-89, § 5, 11-20-89; Ord. No. 177-93, §§ 1, 2, 1-4-93; Ord. No. 165-97, 1-6-97)

***Editor's note--**Ord. No. 95-88, adopted July 19, 1988, amended subsections (b) and (c) of this section to read as herein set out. See also the editor's note to Art. III of this chapter for additional provisions relative to Ord. No. 95-88.

Sec. 14-497. General requirements.

(a) ***Review criteria.*** When reviewing any subdivision for approval, the Planning Board shall consider, among others, the following review criteria and before granting approval shall determine that the proposed subdivision:

1. Will not result in undue water or air pollution. In making this determination it shall at least consider the elevation of land above sea level and its relation to the flood plains, the nature of soils and subsoils and their ability to adequately support waste disposal; the slope of the land and its effect on effluents; the availability of streams for disposal of effluents; the conformity to the applicable state and local health and water resources regulations;

2. Has sufficient water available for the reasonably foreseeable needs of the subdivision;

3. Will not cause unreasonable burden on an existing water supply;

4. Will not cause unreasonable soil erosion or reduction in the capacity of the land to hold water so that a dangerous or unhealthy condition may result;

5. Will not cause unreasonable highway or public road congestion or unsafe conditions with respect to use of the highway or public roads existing or proposed;

6. Will provide for adequate sanitary waste and storm water disposal and will not cause an unreasonable burden on municipal services if they are utilized;

7. Will not cause an unreasonable burden on the ability of the city to dispose of solid waste and sewage if municipal services are to be utilized;

8. Will not have an undue adverse effect on the scenic or natural beauty of the area, aesthetics, historic sites, significant wildlife habitat identified by the department of inland fisheries and wildlife or by the city, or rare and irreplaceable natural areas or any public rights for physical or visual access to the shoreline. For subdivisions within historic districts designated pursuant to article IX of this chapter, the Planning Board shall apply the standards of section 14-651(c) of article IX. The Planning Board may request that the historic preservation committee prepare an evaluation of the proposed subdivision based upon the standards of section 14-651(c);

9. Is in conformance with the land development plan or its successor;

10. The subdivider has adequate financial and technical capacity to meet the standards of this section;

11. Whenever situated, in whole or in part, within the watershed of any pond or lake or within two hundred fifty (250) feet of any wetland, great pond or river as defined in Title 38, chapter 3, subchapter I, article 2-B, will not adversely affect the quality of such body of water or unreasonably affect the shoreline of such body of water;

12. Will not, alone or in conjunction with existing activities, adversely affect the quality or quantity of groundwater;

13. Is or is not in a flood-prone area, based on the Federal Emergency Management Agency's Flood Boundary and Floodway Maps and Flood Insurance Rate Maps, and information presented by the applicant. If the subdivision, or any part of it, is in such an area, the subdivider shall determine the 100-year flood elevation and flood hazard boundaries within the subdivision. The proposed subdivision plan must include a condition of plan approval requiring that principal structures in the subdivision will be constructed with their lowest floor,

including the basement, at least one (1) foot above the 100-year flood elevation;

14. All potential wetlands within the proposed subdivision shall be identified on any maps submitted as part of the application, regardless of the size of those wetlands. Any mapping of wetlands may be done with the help of the local soil and water conservation district; and

15. Any river, stream or brook within or abutting the proposed subdivision shall be identified on any maps submitted as part of the application. For purposes of this section, "river, stream or brook" has the same meaning as in Title 38 M.R.S.A. Section 480-B, subsection 9.

(b) ***Burden of proof.*** In all instances the burden of proof shall rest upon the person proposing the subdivision.

(c) ***Conformity with Code.*** Any proposed subdivision shall be in conformity with all relevant provisions of this Code.

(d) ***Reserved.***

(e) ***Construction records and inspection.***

1. The project engineer and city engineer shall have the right to enter and inspect the construction site during all phases of the project to ensure compliance with this article.

2. After approval of the subdivision plat and prior to the construction of any of the subdivision's public improvements, the subdivider shall supply the city engineer with a complete set of engineering drawings on mylar or linen showing all streets, sanitary sewers and surface water drains and all appurtenant work within the subdivision.

3. The subdivider shall provide the project engineer with a complete and accurate list of any changes from the engineering drawings as approved by the Planning Board prior to the release of the performance bond.

(Code 1968, § 603.8; Ord. No. 158-68, § 10, 5-6-68; Ord. No. 149-79, 6-6-79; Ord. No. 127-87, §§ 6, [13], 2-18-87; Ord. No. 155-89, § 6, 11-20-89; Ord. No. 15-92,

Sec. 14-497.5. Adjustment of dimensional requirements for subdivisions in the R-3 zone.

Notwithstanding section 14-90 and any other section of this chapter, up to twenty-five (25) percent of the lots in a subdivision located in the R-3 zone may have reduced street frontage and/or lot widths, provided that the Planning Board finds as part of subdivision approval that the following standards are met:

(a) The subdivision is approved for the first time on or after December 1, 1997;

(b) The subdivision has a minimum land area of three (3) acres;

(c) The fire department determines that the reduced street frontage is adequate to provide access required to provide emergency services to each lot; and

(d) A lot with reduced lot width shall meet all required setbacks.

(Ord. No. 165-97, § 6, 12-1-97)

Sec. 14-498. Technical and design standards.

(a) *Adoption and amendment of standards:* The public services authority and the planning authority may promulgate technical and design standards for subdivisions and site plans. Such technical and design standards or any amendments thereto shall become effective only upon approval of the Planning Board following a public hearing before the Planning Board. In approving the technical and design standards, the Planning Board may direct staff to make changes with respect to format and text but, to the extent that standards are based upon sound engineering practice, shall not direct changes in the standards themselves. Such standards shall be additional to and consistent with the provisions of this article and shall be necessary and reasonable and shall be in accord with sound engineering practice. The public services authority and planning authority shall maintain for public inspection current copies of the effective standards.

(b) *Street plan:*

1. All streets shall be platted along contour elevations which result in minimum grades and greatest visibility whenever practicable, with consideration given for anticipated use of the land.

2. The proposed street layout shall be coordinated with the street system of the surrounding areas. All streets must provide for the continuation or appropriate projection of streets in surrounding areas and provide means of ingress and egress for surrounding acreage tracts.

   When connecting streets within residential neighborhoods, new streets shall contribute to a neighborhood street system characterized by a network of interconnected streets, which minimizes through-traffic in residential neighborhoods. The layout of subdivision lots, streets, and pedestrian ways shall promote multiple paths of travel to get to destinations within and between neighborhoods by foot and bicycle, as well as auto.

   The interconnection of new and existing streets is further subject to the following provisions to minimize and mitigate through-traffic in residential neighborhoods:

   a. Where a determination is made that a proposed street connection will result in substantial increases in traffic volume and speed on the effected public streets, the planning board may require appropriate traffic calming solutions as set forth in the traffic calming ordinance. (Section 28-250) The department of public services (DPS) may by regulation and amendment to the ***Technical Manual*** establish standards for determining what is a "substantial increase in traffic volume and speed"; and

   b. In any circumstances where a street connection is allowed, the planning board may condition subdivision approval to require the developer to monitor future traffic patterns to determine whether, using existing traffic calming standards, new or additional traffic calming measures should be employed. The extent and design of traffic

calming shall be determined by the DPW to mitigate the post development impact of connecting new and existing streets.

In cases where post development monitoring shows that increased traffic volume and speed is such that further traffic calming would be insufficient to mitigate traffic negative impacts of through-traffic, the DPW may require that the connection be modified to exclude regular vehicular traffic, while retaining bicycle, pedestrian, and where needed, emergency vehicle connections. The DPW shall develop typical standards and specifications for bicycle, pedestrian, and emergency vehicle connections and/or turnarounds.

c. Where a determination is made by the DPW that a proposed street connection will result in substantial increases in traffic volume and speed on the affected public streets, the planning board may disallow a proposed street connection for vehicular purposes in favor of a connection for non-vehicular purposes in situations where a proposed residential street connection meets all of the following criteria:

   i. the new street would result in the connection of two arterials; and

   ii. the street would be located in a neighborhood where there is no existing public through-street network connecting the same arterials; and

   iii. there is no likelihood that other public street connections will be developed in the future that would connect the arterials, whether because of topography limitations, existing development patterns, or other similar reason.

In circumstances where vehicular connections are disallowed per section (c) above, the planning board shall require that adequate right-of-way is reserved to permit the extension of the street for

pedestrian, bicycle, emergency use, and potential vehicle connections as may develop in the future.

3. Reserve strips or spite strips for unspecified or unacceptable purposes are prohibited.

4. Street right-of-way widths shall not be less than:

   a. Fifty (50) feet for marginal access street;

   b. Fifty (50) feet for minor street;

   c. Sixty (60) feet for collector street.

Proposed subdivisions along existing, or dedicated, or platted streets where rights-of-way are inadequate shall provide additional land to meet the minimum standards.

5. Streets shall not occupy more land than needed to provide access nor create unnecessary fragmentation of the subdivision into small blocks. Streets will be designed to discourage outside traffic from traversing the development.

6. All dead-end streets shall provide for a cul-de-sac or, in the case of a dead-end street which will be extended, a temporary turn-around at the end of the street, subject to the approval of the public works authority.

7. The minimum roadway width including esplanades and sidewalks shall be:

   a. Fifty (50) foot right-of-way, street pavement width, curbing, sidewalk width and esplanade width to conform to the requirements contained within the City of Portland Technical Manual.

   b. Sixty (60) foot right-of-way, street pavement width, curbing, sidewalk width and esplanade width to conform to the requirements contained within the City of Portland technical and design standards and guidelines manual.

   c. Street right-of-way on the islands in Casco Bay shall comply with article III of chapter 25.

8. Sidewalks and curbs:

   a. Sidewalks shall be constructed on each side of each street in accordance with article III of chapter 25. Sidewalks to be used by pedestrians are to be so located as to minimize contacts with normal automotive traffic, with preference given to interior walks away from streets in common open space in block interiors.

   b. Curbs shall be constructed on each side of each street. The curbing shall be constructed as provided in article VI of chapter 25.

(c) *Street design:*

1. Profiles of each street or way in the subdivision shall be shown on the subdivision plat. They shall be drawn to a longitudinal scale of forty (40) feet to one (1) foot and a vertical scale of four (4) feet to one (1) inch. Such profiles shall include separate profiles of each side line and center line of the street or way. Any buildings abutting on the street shall be shown in standard engineering format as requested by the public works authority.

2. Street grades in all proposed subdivisions shall be subject to the approval of the public works authority.

3. The public works authority shall establish the sequence in which work is to be accomplished. Where it is determined by the public works authority that work has been completed prior to the receipt of all approvals required by this article or which is out of sequence or is not in compliance with the standards of this section and of chapter 25, the director of parks and public works or an inspector from the public works authority may issue a stop work order. Work shall recommence only after the stop work order has been lifted by the director of parks and public works or an inspector from the public works authority. Violation of the stop work order shall be considered an offense.

(d) *Street and subdivision names:*

1. Street names for all subdivisions shall appear on the subdivision plat and be subject to approval by the Planning Board.

2. Subdivision names for plats shall be subject to approval by the Planning Board and not duplicate the name of any plat already recorded.

(e) ***Exception for private streets within PRUD's and manufactured housing parks.*** Private streets within PRUD's and manufactured housing parks shall be exempt from the street right-of-way and roadway width requirements set forth above, provided that no such street shall be accepted by the city unless it is first improved to the standards set forth above at the expense of those persons requesting the street acceptance. Private streets within a PRUD or a manufactured housing park shall meet specifications established by the public works department. All private streets shall be designed by a professional engineer and shall be built according to accepted engineering standards.

(f) ***Sewers and storm drains:***

1. The design of all sewers and storm drains shall be subject to approval by the public works authority.

2. All subdivisions shall be provided with adequate storm drain systems within the subdivision separate from any sanitary sewer system required in article III of chapter 25.

3. Any natural or manmade areas, systems or facilities designated for stormwater control purposes and intended for city maintenance shall, except for detention or retention ponds or basins and regularly free-flowing watercourses, be structurally enclosed in accordance with the standards of the public works authority, and shall be dedicated with sufficient land for maintenance purposes. Warranty deeds to such areas shall be submitted for acceptance by the city council at the same time as the acceptance of streets. All such areas as are not intended for city maintenance shall be permanently protected and maintained by private agreement, deed covenant or restriction, as appropriate, in form approved by the corporation counsel.

4. The approval of the plumbing inspector is required for all subdivisions involving the use of septic tanks and drainage fields for sewage disposal.

5. The subdivider shall be responsible for the construction of all sewers and storm drains including manholes, catch basins and any other appurtenances as may be deemed necessary by the public works authority. All work shall be in accordance with public works specifications.

6. The public works authority shall establish the sequence in which work is to be accomplished. Where it is determined by the public works authority that work has been completed prior to the receipt of all approvals required by this article or which is out of sequence or is not in compliance with the standards of this section and of chapter 24, the director of parks and public works or an inspector from the public works authority may issue a stop work order. Work shall recommence only after the stop work order has been lifted by the director of parks and public works or an inspector from the public works authority. Violation of the stop work order shall be considered an offense.

(g) *Blocks:*

1. A maximum block length of eight hundred (800) feet, measured from the nearest street lines of intersecting streets, shall be observed except where, in the opinion of the Planning Board, conditions justify a departure from this standard. In general, block size should be the maximum consistent with the use and shape of the site and the convenience and safety of the occupants.

2. In blocks exceeding eight hundred (800) feet in length, measured from the nearest street lines of intersecting streets, the Planning Board may require where feasible the reservation of a twenty (20) foot wide easement to the city through the block to provide for the crossing of underground utilities and pedestrian traffic where needed or desirable and may further specify, at its discretion, that a four (4) foot wide paved foot path be included.

3. The length, width and shape of blocks shall be determined

on the basis of:

a. Provision of adequate building sites suitable to the special needs of the type of use contemplated;

b. Zoning requirements as to lot sizes, setbacks and dimensions;

c. Needs for convenient access, circulation, control and safety of street traffic;

d. Limitations and opportunities of topography.

4. Blocks with lots having double frontage on streets shall be avoided.

5. The foregoing dimensions may be adjusted by the Planning Board where type of use or topography requires such modification.

(h) *Lots:*

1. Lot sizes shall conform to the zoning ordinance in article III of this chapter and the city health code.

2. Where easements for public utilities, storm or sanitary sewers are contemplated, the lot lines shall be located in such a manner as to facilitate construction of such facilities and the maintenance thereof.

3. Lots which are reserved or laid out for business, commercial or industrial purposes shall have sufficient width and depth to accommodate the off-street parking and loading facilities required for the type of use and development contemplated, as established in article III of this chapter.

4. Where feasible, side lot lines shall be at right angles to street lines (or radial to curving street lines).

(i) *Public open space:*

1. In all subdivisions open space may be provided for parks, recreational and other public areas. Where no public open space or recreational areas exist in close proximity to

the subdivision, or where a lack of such areas in the subdivision would require its disapproval under section 14-497(a), general requirements, the Planning Board may require provision of land for park or recreational purposes. Such lands may be designated for public or private ownership in accordance with the conditions stated in this section, subject to the approval of the Planning Board.

2. If a tract or parcel is intended for public ownership and is so designated on the subdivision plat, the acceptance of such land shall be first recommended by the various departments and the Planning Board and sent to the city council for final determination.

3. If a tract or parcel is designed or intended to be owned and used in common for recreational or other public or semipublic purposes and such intent is so designated on the subdivision plat, appropriate documents in form approved by the corporation counsel shall be submitted to the Planning Board. Such documents shall clearly:

   a. Set forth the nature of the permanent organization under which common ownership is to be established, including its purpose; how it shall be governed and administered; the provisions made for permanent care and maintenance of the common property for its share of the cost of administering and maintaining such common property;

   b. Set forth the extent of common interest held by the owner of each individual parcel in the tract held in common with others.

(j) *Access to shoreline:*

1. In all subdivisions having shore frontage on the island of Casco Bay, existing legal rights of public access to the shoreline shall be preserved. The proposed street layout and circulation plan shall be suitably integrated with such existing public access in a manner that reasonably promotes the public use of such access. The proposed street layout and circulation plan shall also be designed to preserve any legal rights to any significant water views and scenic vistas from such rights-of-way.

2. In all subdivisions having any lots within the shoreland zone, legal rights of private access to waters shall, to the extent reasonably feasible, be established for the benefit of all lots within the subdivision not otherwise having such access.

(Code 1968, 603.9; Ord. No. 158-68, § 10, 5-6-68; Ord. No. 149-79, 6-6-79: Ord. No. 41-84, § 1, 6-18-84; Ord. No. 98-85, § 1, 7-15-85; Ord. No. 127-87, §§ 7, 8, 2-18-87; Ord. No. 104-87, 10-19-87; Ord. No. 66-88, 7-18-88; Ord. No. 201-89, § 1, 12-18-89; Ord. No. 218-04/05, 5-2-05; Ord. No. 86-05/06, 10-17-05; Ord. No. 278-09/10, 7-19-10)

***Editor's note--**Ord. No. 66-88, adopted July 18, 1988, amended § 14-498 by adding subsections (c)(3) and (f)(6). The ordinance further provided as follows:

Be it further ordained and determined by the city council that the above amendments are necessary in order to prevent further work being done which is not in accordance with City technical standards. Therefore, this enactment shall take effect immediately as an emergency pursuant to Article II, Section 8 of the Charter and shall further apply to all pending proceedings, applications, petitions and to all projects which have work that remains to be completed at the date of enactment of these amendments.

Sec. 14-499. Required improvements.

Prior to the release of the approved recording plat the subdivider shall file a guarantee as hereinafter provided, and prior to release of such guarantee the subdivider shall have completed all improvements as follows:

(a) All streets shall be graded in conformity with the requirements set out in section 14-498 and in accordance with article III of chapter 25.

(b) On all streets, side streets, and alleys, a suitable hard surfaced permanent pavement shall be installed meeting the requirements set forth in article III of chapter 25.

(c) Water, gas and sanitary sewer mains and storm drains shall be constructed prior to the installation of paving with all mains being extended from all lots having sufficient stub outs to avoid subsequent breaking of pavement.

(d) Sidewalks and curbs shall be constructed as required in section 14-498.

(e) Adequate storm drains shall be constructed subject to the provisions of section 14-496 and in accordance with the department of public works specifications.

(f) A total of two (2) trees per lot, which shall be street trees, shall be planted near the street line in full public view on private property, as directed by the city arborist pursuant to "Standards for Landscaping and Landscape Preservation" contained in the City of Portland Technical Manual. Existing healthy trees may be credited toward this requirement, subject to the approval of the city arborist.

(g) Permanent markers will be set as prescribed by the public works authority.

(h) All utility lines shall be placed underground unless otherwise approved by the Planning Board.

(i) Street lighting shall be installed in accordance with the standards of the public works authority.

(j) A public water supply shall be installed subject to the approval of the Portland Water District.

(k) Erosion control measures shall be taken both during and after construction in accordance with the standards of the public works authority.

(Code 1968, § 603.10; Ord. No. 158-68, § 10, 5-6-68; Ord. No. 149-79, 6-6-79; Ord. No. 127-87, § 9, 2-18-87; Ord. No. 105-87, § 1, 10-19-87; Ord. No. 278-09/10, 7-19-10)

Sec. 14-499.5. Additional requirements for manufactured housing parks.

All manufactured housing parks and subdivisions as defined in section 14-47 shall meet the requirements for residential subdivisions established by this article, the site plan and the zoning ordinance, in addition to the following requirements for manufactured housing parks:

(a) The entire development shall be properly screened from abutting neighborhoods and uses. Such screen shall consist of plantings, or a combination of earth berm and

plantings, not less than three (3) feet in width and six (6) feet in height at the time of initial occupancy of such development, and shall be set back on corner lots so as to comply with section 14-434. Individual shrubs or trees, as approved by the city arborist, shall be planted so as to establish a dense visual screen year round. At least fifty (50) percent of the plantings shall consist of evergreens. Such screen shall thereafter be permanently maintained in a condition meeting the specifications and intent of this subsection. In cases where such screen areas are to be separately owned, the deed of conveyance shall contain a requirement that the grantee shall likewise maintain the screen area. Such requirement shall be in a form acceptable to the corporation counsel. Any area intended to be owned and used in common shall thereafter be maintained by a permanent organization as set forth in section 14-498(i)(3). Existing vegetation may substitute for new plantings if it forms an acceptable dense visual screen consistent with the intent of this subsection.

(b) All manufactured housing units and any accessory structure within such development shall be located at least fifty (50) feet from any external property boundary of the development where the proposed park density is two (2) or more times greater than the density of residential development on adjacent parcels or the maximum permitted density of adjacent vacant parcels.

(c) All units within such development shall be set back from any existing collector or arterial street, as defined in section 14-493, in accordance with the setback provisions for the underlying zone.

(d) All fuel oil supply systems shall be constructed and installed within the foundation wall or underground in accordance with all applicable codes and regulations.

(e) All trash containers, bottled gas tanks, storage sheds, utility meters, or other similar items or accessory structures except parking garages, shall be located and suitably screened by plantings or fencing so as not to be clearly visible from the street or abutting properties.

(f) All manufactured housing units shall be placed either on

a foundation which forms a complete enclosure under exterior walls, or on suitable blocks on a foundation pad, in which case the unit shall be boxed or skirted with suitable material designed for such use.

(g) All manufactured housing units shall be properly installed, blocked and leveled or affixed to a foundation wall, so as to rest on the wheels used to transport the unit. Any hitch or tow bar shall be removed from the unit after it is placed on its foundation.

(h) Notwithstanding the provisions of sections 14-498 and 14-499, private roads within a manufactured housing park shall be a minimum of twenty-three (23) feet wide, with a minimum pavement width of twenty (20) feet.

(Ord. No. 611-82, § 1, 7-7-82; Ord. No. 358-84, § 1, 12-17-84; Ord. No. 201-89, § 2, 12-18-89)

Sec. 14-500. Additional requirements for nonresidential subdivisions.

All nonresidential subdivisions must meet the requirements for residential subdivisions established by this article, the site plan in article V of this chapter and the zoning ordinance in article III of this chapter, in addition to the following considerations, except as waived by the Planning Board due to the commercial or industrial nature of the development:

(a) Proposed industrial parcels shall be suitable in area and dimensions to the commercial or industrial development anticipated.

(b) Street rights-of-way and pavement shall be adequate to accommodate the type, weight and volume of traffic anticipated to be generated.

(c) The design and installation of public utilities including water, sewers and storm water drainage, shall be adequate to accommodate the anticipated usage.;

(d) Streets carrying truck traffic shall not normally be extended to the boundaries of adjacent existing or potential residential areas.

(Code 1968, § 603.11; Ord. No. 158-68, § 10, 5-6-68; Ord. No. 149-79, 6-6-79)

Sec. 14-501. Performance and defect guarantees; engineering review, inspection fees and administrative fees.

(a) The performance guarantee shall be a letter of credit or escrow account with a responsible financial institution or the deposit, with the finance department of the city, of a sum required for the guarantee. (The city shall hold such funds in a noninterest bearing account until the completion of all of the improvements.) The performance guarantee shall be in the name of the city and shall be approved by the finance director as to financial sufficiency and the corporation counsel as to proper form and legal sufficiency.

(b) Performance guarantees shall be required to ensure the fulfillment of all improvements as required by section 14-499, as well as the requirement in article III of chapter 25 that the subdivider shall give to the city, prior to the release of the performance guarantee a warranty deed (with metes and bounds description) to the property within each street within the subdivision, as well as delivery to the city of the warranty deeds to all other improvements intended for city maintenance. Such guarantee shall specify the completion date of the improvements required in the subdivision and the delivery date to the city of such deed or deeds prior to the expiration of the performance guarantee. The performance guarantee shall be for a term not less than one (1) year. Furthermore, the performance guarantee shall be released only upon the completion, to the satisfaction of the city, of the public improvements and the tendering of a defect guarantee as required in subsections (e) and (f).

(c) The guarantee shall be equal in value to one hundred (100) percent of the estimated cost of the improvements as determined by the public works authority and the planning authority. The guarantor shall not be released from the guarantee except by a release in writing from the public works authority and the planning authority.

(d) Performance guarantees may be reduced periodically by the public works authority and the planning authority in the manner provided herein. Upon request, but in no event more than three (3) times in any calendar year, the developer shall be eligible to receive reductions in the performance guarantee equal to the estimated cost of the completed improvements. In no case, however, shall any performance guarantee be reduced (1) by less than one hundred thousand dollars ($100,000.00) or fifty (50) percent of the

initial amount of the performance guarantee, whichever is less, at any one (1) time; or (2) in any line item where improvements remain to be completed: or (3) to a value which is less than the estimated cost of completing all remaining prescribed improvements for which a performance guarantee is required by section 14-530 as determined by the public services authority. Notwithstanding any other provision of this section, no performance guarantee shall be reduced to less than the amount of the defect guarantee to be posted upon completion of the improvements.

(e) Upon the satisfactory completion of the subdivision's prescribed improvements, excepting tree planting and other landscaping if in the opinion of the city arborist the installation of such plantings is not feasible due to weather conditions, and following the city's receipt of the warranty deeds referred to in (b) above, the subdivider shall file a defect guarantee with the city. The defect guarantee shall ensure the workmanship and the durability of all materials used in the construction of the roadways, curbing, esplanades, sidewalks, sanitary sewerage systems (including manholes and house drain laterals), storm drainage systems (including manholes, catch basins and catch basin drains), street lighting, tree planting, other appropriate landscaping and all other public improvements which may become defective within one (1) year period, all as determined by the public works authority. The defect guarantee shall also ensure the proper installation of any required tree plantings or landscaping which were not installed prior to the filing of the defect guarantee during the next appropriate planting season, as determined by the city arborist. The defect guarantee shall be filed prior to the release of the performance guarantee and it shall not expire between October 30 and April 15 of the following year.

(f) The defect guarantee shall be a letter of credit or escrow account with a responsible financial institution or the deposit, with the finance department of the city, of a sum required for the guarantee (the city shall hold such funds in a noninterest bearing account until the completion of all of the improvements), equal in value to ten (10) percent of the estimated cost of public improvements. It shall be in the name of the city and shall be approved by the finance director as to financial sufficiency and the corporation counsel as to proper form and legal sufficiency. A guarantee which contains appropriate terms and conditions to cover both the performance and defect guarantee provisions as specified in subsections (a)--(e) above is an acceptable form of guarantee.

(g) A performance guarantee and defect guarantee shall also be required to ensure the completion of all improvements as required by section 14-499.5, as well as all improvements for the circulation, recreation, landscaping, light, air, drainage and service needs of a planned unit development which are not subject to section 14-501(b). For purposes of this subsection, sections 14-501(c) and (d) shall also apply. The planning authority may waive all or any portion of this requirement if it determines that the developer has a proven record of satisfactory performance and sufficient financial capability.

(h) At the same time that the developer posts a performance guarantee, the developer shall also pay to the city the subdivision inspection fee equal to two (2) percent of the estimated costs of improvements required by this article, with actual inspection costs in excess of two (2) percent invoiced by the city at the completion of the project or as deemed necessary by the city. If a performance guarantee is extended beyond its original expiration date, then an additional inspection fee in an amount to be determined by the city shall be required.

(i) The developer shall also pay a fee to cover the engineering review costs and administrative costs to be incurred by the city. The fee shall be based upon the actual hours of review time and prevailing hourly rate for reimbursement of city costs, and shall be invoiced periodically by the city.

No land use permits or applications of any kind shall be processed, reviewed or issued, no signed subdivision plats shall released or recorded, and no building permits of any kind shall be issued, for any project whose permit fee is governed by this ordinance unless all charges due under this ordinance have been paid and the developer is otherwise in compliance with the city code. No performance guarantee shall be released until all fees generated by the project are paid to the city, including but not limited to engineering, inspection and administrative fees as provided in section 14-530.

(Code 1968, § 603.12;.Ord. No. 158-68, § 10, 5-6-68; Ord. No. 149-79, 6-6-79; Ord. No. 611-82, §§ 2, 3, 7-7-82; Ord. No. 127-87, § 10, 2-18-87; Ord. No. 524-87, §§ 1, 2, 5-18-87; Ord. No. 122-91, § 1, 9-16-91; Ord. No. 262-96, §§ 1, 2, 5-20-96; Ord. No. 227-00, §2, 5-15-00; Ord. No. 278-09/10, 7-19-10)

Sec. 14-502. Extension of the guarantee period.

When the subdivider constructs improvements for which a

performance guarantee is required and the public works authority has reasonable doubt concerning the stability or proper construction of such improvements, the subdivider shall be required to do such further work on the improvements as the public works authority shall order before the improvements will be accepted by the city. If the subdivider's current performance guarantee shall expire before the extent or necessity for such further work can be determined, the subdivider shall be required to extend his or her guarantee covering such improvements, or secure a new guarantee, for such further period and in such amount as the public works authority shall deem necessary.

(Code 1968, § 603.13; Ord. No. 158-68, § 10, 5-6-68; Ord. No. 149-79, 6-6-79; Ord. No. 127-87, § 11, 2-18-87)

Sec. 14-503. Sale of partially completed subdivisions.

The purchasing party or other succeeding owner of a subdivision for which a recording plat has received prior approval shall assume full responsibility for completion of the subdivision's improvements until acceptance of such improvements by the city. The purchaser or other succeeding owner of an unaccepted subdivision shall be required to comply with all the provisions of this article as if he were the original subdivider, and shall become responsible for completing such improvements in the same manner as the original subdivider.

(Code 1968, § 603.14; Ord. No. 158-68, § 10, 5-6-68; Ord. No. 149-79, 6-6-79)

Sec. 14-504. Enforcement, conveyance, markers and recording.

(a) No person may sell, lease, develop or build upon or convey for consideration, offer or agree to sell, lease, develop or build upon or convey for consideration any land in a subdivision unless the subdivision has been approved by the Planning Board, and unless a recording plat showing permanent marker locations at all lot corners has been recorded in the county registry of deeds.

(b) The term permanent marker is limited to the following: A granite monument for street monumentation and an iron pin or drill hole in ledge for property delineation, or as otherwise approved by the public works authority. No subdivision plan shall be recorded by the registry of deeds which has not been approved as required by this article. Approval for the purpose of recording shall appear in writing on the recording plat. No public utility, water district, sanitary district or any utility company of any kind shall install services to any lot in a subdivision which has not received

(c) Any person who sells, leases, develops or builds upon or conveys for consideration any land in a subdivision which has not been approved as required by this article shall be punished by a fine of not more than five hundred dollars ($500.00) for each such occurrence. The city may institute proceedings to enjoin any violation of this section.

(d) Notwithstanding the foregoing, alterations may be made to a site with a pending subdivision application if:

(1) At minimum, a performance guarantee for the proposed site alterations has been posted and final site plans have been submitted to the planning authority; and

(2) Written permission has been received from the director of planning and urban development or his designee that such site alterations may proceed pending subdivision approval. Such permission is solely within the discretion of the director of planning and urban development and shall be granted only after submission of a written request setting forth the work proposed to be done on the site. All such work shall be done in compliance with information provided with the subdivision application. An erosion control plan shall also be submitted when deemed necessary by the planning authority. Such written permission shall not be required when the only work proposed is the digging of test pits.

(Code 1968, § 603.15; Ord. No. 158-68, § 10, 5-6-68; Ord. No. 149-79, 6-6-79; Ord. No. 95-01/02, 11-5-01)

Sec. 14-505. Appeals.

An appeal from any final decision of the Planning Board regarding subdivision approval may be taken by the applicant or his authorized agent to superior court in accordance with Rule 80B of the Maine Rules of Civil Procedure.

(Code 1968, § 603.16; Ord. No. 158-68, § 10, 5-6-68; Ord. No. 149-79, 6-6-79)

Sec. 14-506. Modifications.

(a) Except for the requirements set forth in sections 14-498 and 14-499 pertaining to the provision and construction of curbs and sidewalks, the Planning Board if it finds that extraordinary

conditions exist or that undue hardship may result from strict compliance with these regulations may vary the regulations so that substantial justice may be done and the public interest secured; provided that such variation will not have the effect of nullifying the intent and purpose of the land development plan and the regulations of this article.

(b) Where the Planning Board or planning authority finds that, for each of the requirements listed below, two or more of the conditions exist with respect to compliance with the requirements set forth in sections 14-498 and 14-499 pertaining to the provision and construction of curbs and/or sidewalks, it may waive, in whole or in part, the regulations so that substantial justice may be done and the public interest secured:

Sidewalks-

1. There is no reasonable expectation for pedestrian usage coming from, going to and traversing the site.

2. There is no sidewalk in existence or expected within 1000 feet and the construction of sidewalks does not contribute to the development of a pedestrian oriented infrastructure.

3. A safe alternative-walking route is reasonably and safely available, for example, by way of a sidewalk on the other side of the street that is lightly traveled.

4. The reconstruction of the street is specifically identified and approved in the first or second year of the current Capital Improvement Program or has been funded through an earlier CIP or through other sources.

5. The street has been constructed or reconstructed without sidewalks within the last 24 months.

6. Strict adherence to the sidewalk requirement would result in the loss of significant site features related to landscaping or topography that are deemed to be of a greater public value.

Curbing-

1. The cost to construct the curbing, including any

applicable street opening fees, is in excess of 5% of the overall project cost.

2. The reconstruction of the street is specifically identified and approved in the first or second year of the current Capital Improvement Program or has been funded through an earlier CIP or through other sources.

3. The street has been rehabilitated without curbing in the last 60 months.

4. Strict adherence to the curb requirement would result in the loss of significant site features related to landscaping or topography that are deemed to be of a greater public value.

5. Runoff from the development site or within the street does not require curbing for stormwater management.

In no event shall the waiver have the effect of creating potentially hazardous vehicle and pedestrian conflict or nullifying the intent and purpose and policies of the land development plan relating to transportation and pedestrian infrastructure and the regulations of this article.

At its discretion, the planning authority may refer any petition for a waiver from the curb and sidewalk requirement to the Planning Board for decision.

(c) The standards and requirements of this article may be modified by the Planning Board in the case of a plan and program for a planned unit development which in the judgment of the Planning Board provides adequate public spaces and improvements for the circulation, recreation, light, air and service needs of the tract when fully developed and populated, and which also provides such covenants or other legal provisions as will assure conformity to and achievement of the land development plan.

(d) If at any time before or during the construction of the required improvements the subdivider demonstrates to the satisfaction of the project engineer and the public works authority that unforeseen conditions make it necessary or preferable to modify the design of the required improvements, the public works authority may authorize modifications provided that the modifications do not amount to a waiver or substantial alteration

of the function of any improvements required by the Planning Board.
(Code 1968, § 603.17; Ord. No. 158-68, § 10, 5-6-68; Ord. No. 149-79, 6-6-79; Ord. No. 41-84, §§ 2, 3, 6-18-84; Ord. No. 204-02/03, 5-29-03)

Sec. 14-507. Conditions.

In granting variances and modifications, the Planning Board and city council may require such conditions as will, in their judgment, secure substantially the objectives of the standards or requirement so varied or modified.
(Code 1968, § 603.18; Ord. No. 158-68, § 10, 5-6-68; Ord. No. 149-79, 6-6-79)

Sec. 14-508. Exemptions.

(a) This article does not apply to subdivisions approved prior to June 6, 1979, nor to subdivisions in existence prior to June 6, 1979, nor to subdivisions which have been legally recorded in the registry of deeds prior to June 6, 1979.

(b) A division accomplished by devise, condemnation, order of court, gift to a person related to the donor by blood, marriage or adoption, unless the intent of such gift is to avoid the objectives of this article, or by transfer of any interest in land to the owner abutting thereon shall not be considered to create a lot or lots for purposes of this article.
(Code 1968, § 603.19; Ord. No. 158-68, § 10, 5-6-68; Ord. No. 149-79, 6-6-79)

Sec. 14-509. – Sec. 14-520. Reserved.

ARTICLE V. SITE PLAN*

***Editor's note--**Ord. No. 355-89, adopted July 17, 1989, amended Art. V, site plan, in its entirety, in effect repealing former §§ 14-521--14-530 and enacting similar new provisions in lieu thereof as §§ 14-521--14-528. The ordinance was enacted as an emergency in order for the Planning Board to have the necessary tools to protect the health, safety and welfare of the citizens and further provided that such amendments would be applicable to any alterations, modifications, revisions, amendments or filed changes to any previously approved site plan as provided in the article but would not be construed to invalidate any prior approval. Formerly, Art. V derived from §§ 604.1--604.6, 604.7.B, 604.8 and 604.9 of the city's 1968 Code, as amended by the following:

Ord. No.	Section	Date	Ord. No.	Section	Date

348-74		5-20-74	316-87	1	3- 4-87
442-78		8- 7-78	524-87	3—5	5-18-87
691-81		5-19-81	365-88		5- 4-88
88-84	2--6	7-16-84	301-88		5-31-88
292-84	1	11-19-84	67-88		7-18-88
294-84	1	11-19-84	96-88	2	7-19-88
359-84	1	12-17-84	97-88		7-19-88
370-85	1--3	1-21-85	98-88		7-19-88
128-87	1	2-18-87			

***Editor's Note—**Pursuant to Council Order 277-09/10, passed on 7-19-10 Article V, Site Plan was repealed in its entirety and replaced with a new Article V, Site Plan.

Sec. 14-521. Purposes.

Pursuant to Portland's Comprehensive Plan, the Site Plan Ordinance advances the vision for a sustainable City with shared goals for the environment, community and economy. The Site Plan Ordinance complements the regulations of the Zoning Ordinance in Article III of this chapter and the Subdivision Ordinance in Article IV of this chapter.

(Ord. No. 277-09/10, 7-19-10)

Sec. 14-522. Definitions.

For the purposes of this article all terms and words shall have their ordinary meanings, except as defined herein.

Approval by any board or department under this article shall include any approval with conditions.

Building addition: Any attached structure which increases the

total floor area of the structure.

Building Authority: The Director of the Department of Planning and Urban Development or his/her designee.

Change of use: Any change in use of an existing building, whether or not alterations are involved, from any use in the following list to any other uses on the list:

1. Manufacturing or processing, storage and warehouse, and other industrial;

2. Residential

3. Transportation

4. Institutional

5. Retail and Commercial

6. Water-dependent use and marine use

7. Office

Development: Any construction, site alteration or change of use which is identified in Section 14-523, Required Approvals and Applicability.

Dwelling, two-family: A single building containing two dwelling units used exclusively for occupancy by two (2) families living independently of each other.

Final Plan: A site plan meeting the requirements of Section 14-527.

Master development plan: A Master Development Plan is a regulatory option for sites with one acre or more in cumulative lot area that's designed as a cohesive and integral development program consisting of multiple buildings and associated site improvements built in phases over an extended timeframe. This option shall not apply in residential zones except for institutional uses.

Multiple-family development; The construction or creation of three (3) or more dwelling units on any parcel of land or the addition of two (2) or more dwelling units cumulatively within a

three-year period.

Owner: Any person that has any interest, legal or beneficial, in any parcel proposed for development.

Planning Authority: The Director of the Department of Planning and Urban Development or his/her designee.

Preliminary Plan: A site plan that provides an existing site inventory and analysis along with the potential design layout for a proposed development that meets the criteria of Section 15-527.

Public Services Authority: The Director of the Department of Public Services or his/her designee.

Site: *A*ll contiguous land under the same ownership or control, whether proposed for development or not, except where development is limited to a lot or lots within a subdivision.

Temporary parking: The parking of vehicles permitted by a temporary certificate of occupancy for a limited period of time not to exceed one (1) year in anticipation of future development.
(Ord. No. 277-09/10, 7-19-10; Ord. No. 176-12/13, 4-22-13)

Sec. 14-523. Required Approvals and Applicability.

(a) ***Required Approval.*** An application for site plan approval shall be reviewed by the Planning Board or Planning Authority as specified below. The Planning Board or Planning Authority shall approve, approve with conditions or deny an application pursuant to the standards, procedures, technical criteria and design criteria contained in this article, as demonstrated by the applicant.

1. The Planning Authority shall administratively authorize developments that meet all of the requirements of Section 14 – 523 (c).

2. Level I Site Plan Review shall require the approval of the Planning Authority.

3. Level II Site Plan Review shall require the approval of the Planning Authority only, except as otherwise expressly provided by this article.

4. Level III Site Plan Review shall require the approval of the Planning Board, except as otherwise expressly provided by this article.

5. Master Development Plan Review shall require the Master Development Plan approval of the Planning Board as provided in Section 14-524(d)(9).

(b) ***Applicability.*** No person shall undertake development identified in Section 14-523 without obtaining a site plan improvement permit under this article.

(c) ***Administrative Authorization.*** Administrative Authorization means the Planning Authority may grant administrative authorization to exempt a development proposal from complete or partial site plan review that meet the standards below, as demonstrated by the applicant.

1. The proposed development will be located within existing structures, and there will be no new buildings, external demolitions, or building additions other than those permitted by subsection 2 of this subsection;

2. Any building addition shall have a new building footprint expansion of less than five hundred (50**0)** square feet;

3. The proposed site plan does not add any new curb cuts, driveways, or parking areas; the existing site has no more than one (1) curb cut and will not disrupt the circulation flows and parking on-site; and there will be no drive-through services provided;

4. The curbs and sidewalks adjacent to the lot are complete and in sound condition, as determined by the Public Services Authority, with granite curb with at least four-inch reveal, and sidewalks are in good repair with uniform material and level surface and meet accessibility requirements of the Americans with Disabilities Act;

5. The use does not require additional or reduce existing parking, either on or off the site, and the project does not significantly increase traffic generation;

6. There are no known stormwater impacts from the proposed use or any existing deficient conditions of stormwater management on the site;

7. There are no evident deficiencies in existing screening from adjoining properties;

8. Existing utility connections are adequate to serve the proposed development and there will be no disturbance to or improvements within the proposed right-of-way;

9. There are no current zoning violations;

10. Any emergency generators are to be located to minimize noise impacts to adjoining properties and documentation that routine testing of the generators occur on weekdays between the hours of 9 a.m. to 5 p.m. Documentation pertaining to the noise impacts of the emergency generator shall be submitted; and

11. There are no anticipated noise, vibration, glare, fumes or other foreseeable impacts associated with the project.

(d) ***Level I Site Plan Review.*** Minor residential development and site alterations meeting the criteria below will undergo Level 1 Site Plan Review as follows.

1. Level I: Minor Residential Development:

   a. With respect to development of a single-family or a two-family building, excluding building additions, decks, or accessory structures, such development shall be deemed minor residential development for purposes of this article regardless of its size.

   b. The addition of one or two dwelling units to a two-family dwelling or multifamily structure shall be deemed a Level I minor residential development for purposes of this article, if the additional dwelling unit or units does not require subdivision review under Maine State Statutes and Portland's Subdivision Ordinance.

2. Level I: Site Alteration:

a. Alteration of a watercourse or wetland as defined in Section 14-47 of the City Code.

b. Alteration of a site. The disturbance of land areas of less than one (1) acre that are stripped, graded, grubbed, filled or excavated. The Planning Authority shall exempt from review the loam and seeding of lawns and the cumulative placement of less than fifteen (15) cubic yards of fill on any lot provided such loaming or placement does not alter a drainage course, swale, wetland or redirect water onto adjoining property and does not violate any other provision of the Portland City Code or state or federal law. "Disturbed area" does not include routine maintenance, but does include re-development and new impervious areas.

c. The construction of any temporary or permanent parking area, paving of existing unpaved surface parking areas between 1,000 and 7,500 square feet, or creation of other impervious surface areas between 1,000 and 7,500 square feet.

d. The rehabilitation or reconstruction, but not new construction, of piers, docks, wharves, bridges, retaining walls, and other structures located within the shoreland zone.

e. A site alteration in which vehicle access is proposed from more than one (1) street;

(e) ***Level II Site Plan Review.*** Development meeting the criteria listed below will undergo Level II Site Plan Review as follows:

1. The construction of any new structures having a total floor area of less than ten thousand (10,000) square feet in all zones except in the Industrial zones. In any Industrial zone, the construction of new structures having a total floor area of less than twenty thousand (20,000) square feet;

2. The construction of any new temporary or permanent parking area, paving of existing unpaved surface parking areas in excess of 7,500 square feet and serving less than 75 vehicles, or creation of other impervious surface area greater than 7,500 square feet;

3. The construction of any building addition(s) having a total floor area of less than ten thousand (10,000) square feet cumulatively within a three-year period in all zones except in the Industrial zones. In any Industrial Zone, the construction of building addition(s) having a total floor area of less than twenty thousand (20,000) square feet.

4. Park improvements consisting of new structures or buildings of less than 10,000 square feet and/or facilities encompassing an area of greater than 7,500 square feet and less than 20,000 square, excluding the rehabilitation or replacement in kind of existing facilities.

5. The new construction of piers, docks, wharves, bridges, retaining walls, and other structures located within the shoreland zone.

6. The disturbance of land areas of between one and three acres that are stripped, graded, grubbed, filled or excavated.

7. A change in the use of a total floor area of between ten thousand (10,000) and twenty thousand (20,000) square feet in any existing building cumulatively within any three-year period in all zones.

8. Lodging houses and bed and breakfast facilities;

9. Emergency shelters

10. Special needs independent living units;

11. Construction or installation of any signage for which approval is sought pursuant to section 14-526(d)8.a.(iv).

12. The construction of any new major or minor auto

service station with a structure of less than ten thousand (10,000) square feet of building area in any permitted zone other than the B-2, or B-5 zones;

13. The creation of day care facilities or home babysitting services in a residential zone not permitted as a home occupation under section 14-410 in any principal structure that has not been used as a residence in whole or in part within the five (5) years immediately preceding the application for a day care or home babysitting use, where such facilities serve more than twelve (12) children;

14. Any drive-through facility that is not otherwise reviewed as a conditional use under Article III.

(f) ***Level III Site Plan Review.*** Development meeting the criteria listed below will undergo Level III Site Plan Review as follows:

1. The construction of any new structures having a total floor area of ten thousand (10,000) square feet or more in all zones except the Industrial zones. In any Industrial zone, the construction of new structures having a total floor area of twenty thousand (20,000) square feet or more;

2. The construction of any new temporary or permanent surface parking area(s) or paving of existing unpaved surface areas for more than seventy-five (75) vehicles except in the case of temporary parking;

3. The construction of any building addition(s), cumulatively having either a total floor area of ten thousand (10,000) square feet or more within any three-year period in all zones except in the Industrial zones for the construction of building addition(s) having a total floor area of twenty thousand (20,000) square feet or more;

4. A change in the use of a total floor area of twenty thousand (20,000) square feet or more in any existing building cumulatively within any three-year period in all zones,

5. Multiple-family development;

6. The addition of one or two dwelling units to a building, if the additional dwelling unit or units requires subdivision review under Maine State Statutes and Portland's Subdivision Ordinance;

7. The construction of any new major or minor auto business in the B-2 or B-5 zone, or the construction of any new major or minor auto business with a structure greater than ten thousand (10,000) square feet of building area in any other permitted zone; or

8. Correctional prerelease facilities.

9. Park improvements consisting of new structures greater than 10,000 square feet and/or facilities encompassing an area of 20,000 square feet or greater, excluding the rehabilitation or replacement of existing facilities. Any park improvements including the provision of new nighttime outdoor lighting or sports, athletic or recreation facilities not previously illuminated.

10. The disturbance of land areas of three (3) acres or more that are stripped, graded, grubbed, filled or excavated.

(g) *Master development plan:* A Master Development Plan meeting the criteria listed below will undergo a master development plan review as follows:

1. A Master Development Plan for a site with one acre or larger in a cumulative lot area that is designed as a cohesive and integral development program consisting of multiple buildings and associated site improvements proposed to be built in phases.

2. The Master Development Plan option shall not apply in residential zones, except for institutional uses.

(Ord. No. 277-09/10, 7-19-10; Ord. No. 25-11/12, 8-15-11; Ord. No. 176-12/13, 4-22-13)

Sec. 14-524. Site plan review processes.

(a) The site plan review process for reach applicable development review type is listed below.

1. *Administrative Authorization*:

a. ***Filing the Application.*** An applicant seeking an administrative authorization under this subsection shall submit an administrative authorization application for review, detailing the site plan with dimensions of proposed improvements and distances from all property lines, and stating that the proposal meets all of the provisions in standards a-k of Section 14-423 (b)1.

b. ***Review.*** Upon receipt of such a complete application, the Planning Authority will process it and render a written decision of approval, approval with conditions or denial, with all associated findings.

c. ***Decision.*** If a full administrative authorization is granted, the application shall be approved without further review under this article, and no performance guarantee shall be required. In the event that the Planning Authority determines that standards 1 and 2 of section 14-523 (c) and at least four (4) of the remaining standards have been met, the Planning Authority shall review the site plan according to all applicable review standards of Section 14-526 that are affected by the standards in this subsection that have not been met. If an exemption or partial exemption from site plan review is not granted, the applicant must submit a site plan application that will undergo a full review by the Planning Board or Planning Authority according to the standards of section 14-526.

2. ***Level I site plan review:***

a. ***Filing the application.***

(i) Every application submitted to the building authority or planning authority for a level I minor residential development or site alteration shall include a digital set of the plans and documents that shall be uploaded to the City's designated web site for an electronic review of the material.

b. *Public notices.*

(i) When an application for a level I: minor residential development is submitted, all public notices will be sent according to the section 14-525.b of the site plan ordinance.

(ii) When an application for a level I: site alteration is submitted, all public notices will be sent according to the section 14-525.b of the site plan ordinance.

c. *Review.*

(i) The planning authority shall approve, approve with conditions or deny the level I: minor residential development plan and shall advise the building authority in writing of its action. Such decision shall be made part of the building authority's review.

(ii) The planning authority shall approve, approve with conditions or deny the level I: site alteration plan with all associated findings and shall advise the applicant in writing of its action.

d. *Standards of review.*

(i) Level I: Minor residential site plans shall only be subject to the following site plan standards, as applicable, as contained in Section 14-526:

(a) Transportation Standards
- 2.a. Site Access and Circulation: (i) and (ii)
- 2.c. Sidewalks: if site plan is a two-family or multi-family building only.
- 4.a. Location and rquried number of vehicle parking spaces:(i)and (iv)

(b) Environmental Quality Standards

- 1. Preservation of significant natural features.
- 2.a. Landscaping and landscape preservation.
- 2.b. Site landscaping: (iii) Street trees.
- 3. Water quality, stormwater management and erosion control: a.,d. e. and f.

(c) Public Infrastructure and Community Safety Standards

- 1. Consistency with city master plans.
- 2. Public safety and fire prevention.
- 3. Availability and adequate capacity of public utilities: a.,c.,d., and e.

(d) Site Design Standards

- 5. Historic resources and 9. Zoning related design standards.

Except as provided in article III, or to conditions imposed under section 14-526(e) only, or to those submission requirements set forth in section 14-527 as relate solely thereto.

(ii) Level I: Site alteration plans shall only be subject to the following site plan standards, as applicable, as contained in section 14-526:

(a) Transportation standards

- 1. Impact on surrounding street systems, 2. Access and circulation, and 4 Parking.

(b) Environmental quality standards

- 1. Preservation of significant natural features, 2. Landscaping and landscape preservation, and 3. Water quality, stormwater management and erosion control.

(c) Public infrastructure and community safety standards.

- 1. Consistency with city master plans.

(d) Site design standards

- 5. Historic resources, 6. Exterior lightning, 8. Signage and wayfinding and 9. Zoning related design standards.

Except as provided in article III, or to conditions imposed under section 14-526(e) only, or to those submission requirements set forth in section 14-527 as relate solely thereto.

e. *Decisions.*

(i) The planning authority shall approve, approve with conditions or deny a level I site plan application based upon the applicable review standards. All improvements are subject to the applicable standards of the Technical Manual and the Design Manual, incorporated herein by reference. In apply said standards, the planning authority, as applicable, may vary or modify them as provided in section 14-506.

f. *Performance Guarantees.*

(i) Performance Guarantees for Level I: Site Alteration plans work shall be required subject to the provisions of Section 14-530 (b)4.d.

(ii) Level 1: Minor residential development shall be subject to an inspection fee, but shall be exempt from the performance guarantee provisions set forth in section 14-525, except as provided by section 14-403 and 14-530 (c)4 as provided herein, such development shall otherwise be fully subject to the provisions of this article.

3. *Level II and level III site plan review:*

a. *Pre-application Conference.*

(i) Applicants for site plan review for a Level II, Level III, or Master Development Plan applications are encouraged to schedule a pre-application conference with the Planning Authority or designated staff to introduce the development concept. The purpose of this meeting is to familiarize the applicant with the review procedures, application submission requirements and applicable review standards. A pre-application conference shall not cause the plan to be a pending application or proceeding under Title 1 MRSA 302. No decisions relative to the plan shall be made. Nor shall any advice or information provided by the city be construed as a decision.

b. *Preliminary Plan.*

(i) ***Application Process***: Applicants for Level II or Level III site plan reviews may submit an application for preliminary plan review prior to the submission of a final site plan. A preliminary plan must contain a preliminary site assessment for potential development.

(ii) ***Filing the Application***: Every application submitted to the Planning Authority for preliminary site plan review shall include a digital set of the plans and documents that shall be uploaded to the City's designated web site for an electronic review of the material. Any proposed revisions to that site plan and

any amended statement(s) shall be filed in the same way as the original submission.

(iii) ***Public Notices***: All public notices will be sent according to the Section 14-525 of the Site Plan Ordinance.

(iv) ***Complete Application***: The Planning Authority shall determine whether the application contains all of the items required in (Sec 14-527) and the Zoning Administrator will conduct a preliminary zoning review for compliance with article III of this chapter. If the application is deemed incomplete or not in compliance with Chapter III, the applicant will be contacted in writing of the finding and the additional material required to complete the submission. A review of the application will not be conducted until the application is complete. These steps shall be repeated until the application is found to be complete.

(v**)** ***Staff Review***: When the application meets the submittal requirements, the preliminary plan will be distributed to the City departments for review and comments.

(vi) ***Written review***: Written comments from the reviewers shall be provided to the applicant, which will include a planning staff recommendation to submit a revised preliminary plan or to submit an application for a final site plan.

c. *Master Development Plan Review.*

(i) ***Application process:*** Applicants for Level III site plan reviews may submit a Master Development Plan for a large, multi-phase development program consisting of multiple buildings and associated site improvements on a site of one (1) acre or more of total land area, which is designed as a cohesive and

integral development program. The purpose of a Master Development Plan is to provide for a mix of land development responsive to the assets of a site. A Master Development Plan is a well-integrated development in terms of land uses, functional activities, and major design elements such as buildings, roads, utilities, drainage systems and open space. The Master Development Plan is deemed appropriate to large scale mixed use projects that are intended to be developed in phases. The Master Development Plan shall be reviewed by the Planning Board and may be reviewed independently or concurrently with review as a site plan for a phased development. A Master Development Plan must address the submission requirements of Section 14-527.

(ii) The site plan review process for a Master Development Plan shall proceed in the same manner as a Preliminary Site Plan, as detailed in Sec. 14-524 (3)(b) (ii)-(vi).

(iii) ***Standards of Review.*** A Master Development Plan shall adhere to the following general requirements and features, and shall meet the Master Development Plan Site Plan Standards of 14-526 (d) (9):

a. A designated tract of land consisting of a parcel or parcels of contiguous land or land on both sides of a public street, totaling one (1) acre or more;

b. Developed in a comprehensive, design-integrated manner, according to an overall master development plan;

c. Consistent with the objectives of this ordinance;

d. Consistent with the City's Comprehensive Plan and consistent with City Council approved master plans and facility plans for off-premise infrastructure, including

but not limited to, trails, pedestrian and bicycle network, view corridors, environmental management, sewer and stormwater, streets, or other facilities (see Section 15 of the Technical Manual);

e. Developed so as to locate buildings and improvements in a manner that provides usable open space, preserves significant natural features, as defined by the site plan ordinance standards, and preserves existing trees to the maximum extent possible;

f. Developed so as to be in conformance with Portland's Historic Preservation Ordinance standards for designated landmarks or for properties within designated historic districts or designated historic landscapes,if applicable. When proposed adjacent to or within one hundred (100) feet of designated landmarks, historic districts or historic landscapes, the Master Plan shall be developed so as to be generally compatible with the major character-defining elements of the landmark or portion of the district in the immediate vicinity of the proposed development;

g. An efficient use of land which properly considers topography and protects significant natural features including, but not limited to, waterways, wetlands, floodplains and wildlife;

h. An efficient use of land demonstrating full coordination of its own site development and surrounding context including, but not limited to, the land uses and functions contemplated, architecture, open space and pedestrian networks, vehicular access and circulation, and all other infrastructure;

i. Linked and coordinated with surrounding land uses, infrastructure and off-site public facilities, including but not limited to the public school system, where appropriate, in a manner that is safe, efficient, non-injurious to the public, and an improvement or benefit to the public where possible;

j. Designed with sizing of street and other infrastructure systems to accommodate the overall service demand of the Master Plan;

k. Designed to create a street grid pattern that reflects average city block sizes of the neighborhood for street connectivity;

l. Designed as to create a cohesive identity through building scale, massing, and articulation; use of quality exterior materials, architectural detailing at pedestrian scale; consistency of design and materials for streetscape and pedestrian amenities; framing of outdoor open space and linkages; a clear conveyance of the function and significance of various buildings, entrances, and features; and to generally comply with design and development standards of the zone in which it is located;

m. Inclusive of provisions for the ownership and maintenance of usable open space as appropriate; and

n. For areas proposed as future development phase(s), the proposed interim conditions shall be managed and maintained to ensure stable, safe and attractive site conditions.

(iv) ***Phasing.*** One or more phases of the Master

Development Plan may be reviewed as a final level III site plan concurrently with the review and approval of the Master Development Plan.

d. *Neighborhood Meetings for Level III Site Plans and Master Development Plan Applications.*

(i) *Neighborhood Meeting for Level III Site Plans*:

Timing and location of meeting. An applicant for a subdivision of five or more units or lots and all other Level III site plan review categories shall conduct at least one neighborhood meeting within thirty (30) calendar days of filing a preliminary site plan, if applicable, or within twenty-one calendar days of filing a final site plan and the neighborhood meeting will be held on a date no less than seven (7) calendar days before a public hearing, if no preliminary plan is submitted. The meeting shall be held at a convenient location within the City of Portland neighborhood surrounding the proposed site. All costs associated with the neighborhood meeting shall be borne by the applicant.

(ii) *Neighborhood Meeting Required for Master Development Plan:* An applicant for a Master Development Plan shall conduct at least one (1) neighborhood meeting within thirty (30) calendar days of filing a Master Development Plan application. The meeting(s) will be held on a date no less than seven (7) calendar days from a public workshop or public hearing. The neighborhood meeting for a Master Development Plan shall not be combined with any required neighborhood meeting for the Level III applications associated with the overall phased development. The meeting shall be held at a convenient location within the City of Portland neighborhood surrounding the proposed site. All costs associated with the neighborhood meeting shall be borne by the

applicant. The workshop shall meet all other provisions of section 14-524 (d)(i).

(iii) ***Procedures for the meeting.*** The following procedures shall be followed in noticing and conducting the neighborhood meeting. At least ten (10) calendar days prior to the neighborhood meeting, the applicant shall do the following:

a. ***Mail notice.*** Mailed notice of said meeting to all property owners within five hundred (500) feet of the subject property lines, except that the notice range for subdivisions within industrial zones shall be one thousand (1000) feet, and to all others, including neighborhood organizations, as may be required by the Planning Authority.

b. ***Digital Copy.*** Provide the Planning Authority with a digital copy of the neighborhood notice, which the City shall forward by e-mail to the City's list of interested citizens.

c. ***Notice Description.*** Such notice shall contain a brief description of the application and the date, time and place of the neighborhood meeting.

d. ***Attendance Sheet.*** At the neighborhood meeting the applicant shall circulate a sign-in sheet for those in attendance who choose to sign. Such sheet shall be submitted to the Planning Authority and shall become part of the Planning Authority report submitted to the Planning Board.

e. ***Minutes.*** The applicant shall keep minutes of the meeting to be submitted to the Planning Authority and shall become part of the Planning Authority

report submitted to the Planning Board. Any other individual or entity also may submit comments on the neighborhood meeting to the Planning Authority and said comments shall become part of the Planning Authority report submitted to the Planning Board.

f. ***Presentation***. At the neighborhood meeting the applicant shall explain the pending proposal and provide an opportunity for public questions and comment.

e. *Planning Board Workshops.*

(i) ***Request a Workshop***: The applicant may request a workshop(s) with the Planning Board for a Level III site plan. The workshop will be scheduled on a date that follows the scheduled date of the neighborhood meeting, if applicable. The proposal will be scheduled for the next available Planning Board meeting that meets all public noticing requirements contained in Section 14-525.

(ii) ***Required Workshop for Master Development Plan:*** A workshop with the Planning Board is required for a Master Development Plan application. The workshop will be scheduled on a date that follows the scheduled date of the required neighborhood meeting. The proposal will be scheduled for the next available Planning Board meeting that meets all public noticing requirements contained in section 14-524.

(iii) ***Workshop Procedures***: The Planning Board workshop shall be informational and shall not result in any formal approval or disapproval of the project. The Board shall review the submission to determine if the information provides a clear understanding of the site and identifies opportunities and constraints of the site and proposed development, air public comments questions and issues, and provide

direction to the applicant regarding issues to be addressed during the final review process.

f. *Planning Board Master Development Plan Decisions.*

(i) ***Review and approval:*** An applicant proposing a Master Development Plan is seeking approval for an overall concept of development that may be brought for Final Plan approval in two or more phases and in a phase sequence that extends beyond the timeframes allowed above for Final Plan expiration of approvals. Master Development Plan approval may be sought separately or currently with the Phase I Final Level III site plan approval, and shall have an initial approval period of six (6) years, with potential extension periods as provided for in section 14-532(d).

(ii) ***Review process.*** The site plan review process for a Master Development Plan shall proceed in the same manner as a Preliminary Site Plan as detailed above, Sec. 14-524 (3)(b)(i)-(vi) and as a Master Development Plan as detailed above, Sec. 14-524 (3)(c)(i)-(iii).

(iii) ***Public hearing.*** The Planning Board shall consider a Master Development Plan at a public hearing that meets all public noticing requirements contained in Section 14-32 and the Site Plan ordinance.

(iv) ***Decisions.*** The Planning Board shall approve, approve with conditions, or deny a Master Development Plan application based upon the applicable review standards. The Planning Board may waive site plan or technical standards related to the Master Development Plan application based upon the applicable review standards. An approval, including an approval of waivers, establishes the general parameters to be adhered to for the development, including the supporting documentation for floor area ratio and/or residential density, general types of uses,

building coverage, generalized open space plans and infrastructure systems.

A Master Development Plan approval shall not be construed as final authorization of the development. Approval shall confer pending proceeding status upon the development with the effect of maintaining the applicability of regulations in effect at the time of approval for as long as the master Development Plan approval remains valid, including permissible extensions if granted.

All Level III site plans for each phase shall be in general conformance with the Master Development Plan.

g. *Final Plan*.

(i) ***Application Process***: All applications for Level II or Level III site plans shall submit a final plan for review by the Planning Authority or the Planning Board.

(ii) ***Filing Application***: Every application submitted to the Planning Authority for site plan approval shall be submitted as required under Section 14-**527**. Any proposed revisions to that site plan and any amended statement(s) shall be filed in the same way as any original submission.

(iii) Phased Development: A phased development plan may be proposed for a Level III site plan. The Planning Board may permit the Level III site plan to be divided into up to three (3) sections for phased development purposes and subject to any conditions that the board deems necessary in order to insure the orderly development of the plan. The applicant may seek approval of a phased development only if the section constitutes at least twenty (20) percent of the total development and in addition, shows the entire tract or parcel. Each phase of such project shall conform to

all standards of this article in the event that subsequent phases do not go forward. The Planning Board may extend the site plan approval for all phases up to three years from the date of approval.

(iv) Public Notices: All public notices will be sent according to the Section 14-525 of the Site Plan Ordinance.

(v) Development Review Process for Final Plan:

(a) ***Complete Application.*** The Planning Authority shall determine whether the application contains all of the items required in (Sec 527) and the Zoning Administrator will conduct a zoning review for compliance with article III of this chapter. If the application is deemed incomplete or not in compliance with Chapter III, the applicant will be contacted in writing of the finding and the additional material required to complete the submission. A review of the application will not be conducted until the application is complete. These steps shall be repeated until the application is found to be complete.

(b) ***Plan Distribution.*** When the application is complete, the final plan will be distributed to the departments for review and comments.

(c) ***Review.*** Written comments from the reviewers shall be provided to the applicant, which will include a planning staff recommendation to submit a revised final plan or to proceed to a public hearing with the Planning Board if it is a Level III site plan. The applicant may request that the Level III final site plan be submitted for a public hearing rather than submit a revised set of plans.

(d) ***One Revised Plan Set.*** Only one set of revised plans may be submitted for review at the final plan stage. The revised plans undergo the same review steps as the original submittal.

(e) ***Staff Recommendation.*** At the completion of the staff review of the final plans, the planning staff will make a recommendation to the Planning Authority or the Planning Board to approve, approve with conditions or deny the final site plan.

(f) ***Referral of plans to Planning Board.*** If at any time before approval or disapproval of a site plan for Level II development by the Planning Authority, the applicant may request a referral to the Planning Board review and a decision. The application will be scheduled for the next available planning board meeting where all public noticing requirements contained in Section 14-32 and the site plan ordinance can be met.

(g) ***Public Hearing.*** When a final site plan for a Level III development is ready to proceed to a Planning Board public hearing, it will be scheduled for the next available Planning Board meeting that meets all public noticing requirements contained in Section 14-32

and site plan ordinance.

(h) ***Decisions.*** The Planning Authority or the Planning Board shall approve, approve with conditions or deny a final site plan application based upon the applicable review standards. All improvements are subject to applicable standards of the Technical Manual and Design Manual, incorporated herein by reference. In applying said standards, the Planning Board or authority, as applicable, may vary or modify them as provided in section 14-506.

1. ***Level II Site Plan.*** The Planning Authority shall not approve a Level II Site Plan until at least ten (10) days after the required public notice has been mailed. The Planning Authority shall render a written decision to approve, approve with conditions, or deny, with all associated findings, after receipt and review of a complete final site plan and accompanying statements for Level II development.

2. ***Level III Site Plan***: When a site plan requires approval by the Planning Board, a public hearing shall be scheduled. The Planning Board shall notify the applicant in writing of its approval or disapproval of the project with all associated findings after the board's final vote to approve or disapprove the project.

4. *Expiration of Application:*

A site plan application must be diligently pursued from the date of submission. Notwithstanding the submission of a complete application, any applicant

shall delineate on the plan or supply such other information, studies or reports from qualified professionals when determined by the Planning Board or the Planning Authority to be reasonably necessary to make any of the determinations required by this article. Failure to submit required information within one hundred twenty (120) days of the date upon which the written request was made shall cause the application to expire and be deemed null and void.

(Ord. No. 277-09/10, 7-19-10; Ord. No. 25-11/12, 8-15-11; Ord. No. 176-12/13, 4-22-13)

Sec. 14-525. Public notices.

(a) *Administrative authorization.* Administrative authorization applications are exempt from noticing requirements for section 14-525.

(b) *Level I site plan: minor residential development:*

1. *Receipt of Application.* When an application for Level I: Minor Residential Site Plan is submitted for review, the Planning Authority shall notify by mail the owners of all property abutting the proposed site and any property owners directly across the street from the site.

2. *Site Plans:* Level I Site Alteration, Level II, Level III and Master Development Plan.

a. *Receipt of Application.* When an application for Level I Site Alteration Level II or Level III development is submitted for site plan review, the Planning Authority shall notify, by mail the following, where applicable:

(i) *Notice for Level I*: Site Alteration and Level II Site Plans shall be sent to all property owners within five hundred (500)feet of the subject property lines and to all others, including neighborhood organizations, as may be required by the Planning Authority.

(ii) Notice for Level III Site Plans and Master Development Plan applications shall be sent to

all property owners within five hundred (500) feet of the subject property lines or within one thousand (1,000) feet if it is a subdivision within an industrial zone, unless the Planning Authority, in its discretion, chooses to notice a larger area and incur the additional expense for the expanded notification and notices shall be sent to all others, including neighborhood organizations, as may be required by the Planning Authority.

b. *Planning Board Workshop or Public Hearing.*

(i) In the case of workshops and public hearings, notice as described above shall be given to the general public by publication in a newspaper of general circulation in the City of Portland at least two (2) times, the date of the first publication to be at least seven (7) days prior to the hearing. The legal notice shall appear on the City's web site.

(ii) In the case of workshops and public hearings, notice shall be sent by regular United States mail to the applicant, to the owner(s) of the subject property and to all owners of property located within five hundred (500) feet of the subject property lines or within one thousand (1,000) feet if it is a subdivision within an industrial zone unless the Planning Authority, in its discretion, chooses to notice a larger area and incur the additional expense for the expanded notification and notices shall be sent to all others, including neighborhood organizations, as may be required by the Planning Authority.

c. *Content of the Public Notice*

(i) The public notice shall contain a brief description of the proposed development the address or location of the property involved, and contact information for the City where additional information may be obtained. The cost of said notice shall be charged to the

applicant.

(Ord. No. 277-09/10, 7-19-10; Ord. No. 25, 11-12, 8-15-11; Ord. No. 176-12/13, 4-22-13)

Sec. 14-526. Site plan standards.

Requirements for approval. The Planning Board or Planning Authority shall not approve a site plan application unless the development proposal meets the following criteria:

(a) *Transportation Standards*

1. *Impact on Surrounding Street Systems:*

The provisions for vehicular loading and unloading and parking and for vehicular and pedestrian circulation on the site and onto adjacent public streets and ways; and the incremental volume of traffic will not create or aggravate any significant hazard to safety at or to and including intersections in any direction where traffic could be expected to be impacted; and will not cause traffic congestion on any street which reduces the level of service below Level "D" as described in the 1985 Highway Capacity Manual published by the Transportation Research Board of the National Research Council, a copy of which manual is on file with the public works authority, or substantially increase congestion on any street which is already at a level of service below Level "D";

2. *Access and Circulation*:

a. Site Access and Circulation.

(i) The development shall provide safe and reasonable access and internal circulation for the entire site for all users of the site and shall comply with the standards set forth in Sections 1 of the Technical Manual.

(ii) Points of access and egress shall be located to avoid conflicts with existing turning movements and traffic flows.

(iii) Where drive up features such as gasoline pumps, vacuum cleaners and menu/order boards are permitted, they shall not extend nearer than twenty five (25) feet to the street line. The site must have stacking capacity for vehicles waiting to use these service features without impeding on-site vehicular circulation or creating hazards to vehicular circulation on adjoining streets.

b. Loading and Servicing.

(i) All developments served by delivery or other service vehicles shall provide a clear route and travel way geometric design that permits safe turning and backing for the maximum vehicle length that would service the development and does not impede site access, vehicle circulation, pedestrian movements or parking.

c. Sidewalks.

(i) All proposed developments shall provide sidewalks along all frontages in accordance with Sections 14-498 and 14-499 of the City Code, installed to City specifications as described in Section 1 of the Technical Manual. An applicant may request a waiver from curb and sidewalk installation requirements if they meet applicable waiver criteria listed in Section 14-506 (b) of the City Code.

(ii) Where sidewalks already exist but are in substandard condition, they shall be repaired or replaced in conformance with Chapter 25 of the City Code and Section 1 of the Technical Manual.

(iii) Continuous internal walkways shall be provided between existing or planned

public sidewalks adjacent to the site, transit stops and street crossings and primary building entrances on the site.

3. *Public Transit Access:*

a. For any residential development consisting of twenty (20) or more dwelling units or commercial or institutional development of at least 20,000 square feet gross floor area, a transit facility shall be constructed where the following criteria are met:

(i) The development is proposed along an existing public transit route on a local principal or minor arterial roadway, as shown in the Federal Street Classification Map provided in Section 1 of the Technical Manual.

(ii) The nearest existing transit shelter and/or bus pullout on the route is ¼ mile(1,320 feet) or more away from the closest primary building on the site, 1measured along rights-of-way.

b. Transit facilities shall consist of a transit shelter and a transit pullout bay.

c. Transit facilities shall be connected to the public sidewalk system.

d. Waiver: All or some of this standard may be waived if the Reviewing Authority determines one or more of the following:

(i) That some or all of the required improvements cannot reasonably be made due to site constraints and/or insufficient right of way width; or

(ii) That the development is not anticipated to generate public transit usage due to particular characteristics or proposed use of the development.

4. *Parking:*

a. Location and Required Number of Vehicle Parking Spaces:

(i) Off-street parking shall meet the applicable zoning requirements, except the Planning Board shall determine the parking requirement, based upon the applicant's parking study and a recommendation from the City Transportation Engineer, for new structures, building additions and changes of use with a total floor area of 50,000 sf or more and for projects, regardless of size, in the B-6, B-7 and USM Overlay zone.

(ii) Where a parking study is required, the City encourages Transportation Demand Management (TDM) strategies to be employed.

(iii) Developments proposing to exceed minimum parking requirements by 10% or more must demonstrate through a parking analysis that the amount of parking is appropriate for the proposed use of the site.

(iv) Parking spaces and aisles shall meet applicable dimensional standards as detailed in Section 1 of the Technical Manual.

(v) Parking lots, except for temporary lots to be used for less than one year, shall be constructed of a permanent and durable hard surface that is not subject to ponding or erosion.

b. Location and Required Number of Bicycle Parking Spaces:

(i) The site plan shall provide secure

bicycle parking in conformance with Section 1 of the Technical Manual and shall meet the following requirements:

(a) ***Residential structures.*** Two (2) bicycle parking spaces for every five (5) dwelling units shall be required.

(b) ***Non-residential structures.*** Two (2) bicycle parking spaces for every ten (10) vehicle parking spaces for the first one hundred (100) required vehicle parking spaces, plus one (1) bicycle parking space for every twenty (20) required motor vehicle parking space over one hundred (100) required vehicle parking spaces.

(c) Development with zero (0) to ten (10) required vehicle parking spaces shall provide at least two (2) bicycle parking spaces.

(ii) ***Waiver:*** The reviewing authority may reduce the required number of bicycle parking spaces if it is determined, based on evidence submitted by the applicant, that the proposed development is expected to generate reduced demand for bicycle parking due to characteristics or uses such as elderly or disabled persons housing or industrial uses located in outlying areas.

c. *Motorcycle and Scooter Parking.*

(i) The site plan shall accommodate access and parking for two-wheeled motorized vehicles such as motorcycles and scooters.

d. *Snow Storage.*

(i) The site plan shall include areas for snow storage or shall include an acceptable snow removal plan.

(ii) Snow storage areas may not encroach on areas designated to meet minimum parking requirements or on pedestrian walkways and shall not be located where they would adversely impact the functionality of bioretention or other stormwater management systems. Landscaping in designated snow storage areas shall be such that it can withstand the snow pile.

5. *Transportation Demand Management (TDM):*

a. The following types of development shall design and implement a Transportation Demand Management (TDM) plan:

(i) All Level III development in the B7 zone;

(ii) All commercial or institutional uses of 50,000 sf or more total floor area;

(iii) All commercial or institutional uses designed to accommodate 100 or more employees and, for educational institutions, 100 or more students.

b. The TDM Plan shall establish trip reduction targets and shall employ a combination of the following elements to achieve these targets:

(i) Public transit incentives;

(ii) Parking cash-out;

(iii) Car sharing;

(iv) Car and van pooling incentives;

(v) Guaranteed ride home programs;

(vi) Other such strategies that reduce single

occupancy vehicle trips to and from the development.

c. The development shall comply with the City of Portland TDM standards as described in Section 1 of the Technical Manual.

(b) *Environmental Quality Standards*

1. *Preservation of Significant Natural Features:*

a. The site plan shall preserve and protect significant natural features by incorporating them into site design. Significant natural features shall be defined as:

(i) Populations of trees and plants listed on the Official List of Endangered and Threatened Plants in Maine, published by the Maine Natural Areas Program.

(ii) Habitat for species appearing on the official state of federal list of endangered or threatened animal species;

(iii) High and moderate value waterfowl and wading bird habitat including nesting and feeding areas, as defined by the Department of Inland Fisheries and Wildlife;

(iv) Aquifers on islands in Casco Bay, as identified in the City of Portland Island Groundwater Management Study and/or by the Maine Geological Survey;

(v) Waterbodies including wetlands, watercourses, significant vernal pools and floodplains. These features may also be regulated by Division 26, Shoreland Regulations, Division 26.5, Flood Plain Management Regulations and Division 26.7, Stream Protection Ordinance of the City Code, along with Sections 5 and 8 of the Technical Manual or other State

regulations.

b. Where areas set aside for preservation are part of a larger existing habitat block extending beyond the boundaries of the site, the contiguity of these features shall be preserved, where possible.

c. Waiver: Where complete preservation of significant natural features substantially compromises development of the site otherwise permitted by zoning, the Reviewing Authority may reduce the requirement to accommodate development provided that the applicant demonstrates compliance with applicable state and federal regulations and implements preservation measures to the extent practicable.

2. *Landscaping and Landscape Preservation:*

a. *Landscape Preservation.*

(i) Site development shall be designed to incorporate, and limit disturbance to or removal of existing trees, as specified below. Preserved trees may be counted towards site landscaping requirements.

(ii) All development subject to zoning setbacks shall preserve a minimum of 30% of existing trees ten (10) inches DBH or greater within the required setback area unless trees are non-native invasive species, as identified in Section 4 of the Technical Manual, or are deemed unsalvageable by the Portland City Arborist or their designee.

(iii) Protection during Construction: The site plan shall include adequate measures to protect vegetation to be preserved from construction impacts, in accordance with the tree preservation standards listed in Section 4 of the Technical Manual.

(iv) Waiver: Where the applicant can demonstrate that preservation of existing vegetation would compromise development of the site, the Reviewing Authority may permit the substitution of replacement landscaping in other areas of the site, and/or a financial contribution to the City of Portland Tree Fund for an amount proportionate to the cost of trees removed, as described below:

(a) For each tree required to be preserved that is removed and is greater than 16" in caliper DBH, two (2) replacement trees of a species identified on the City of Portland Recommended Tree List shall be planted on the site as detailed in Section 4 of the Technical Manual).

(b) For each tree required to be preserved that is removed and is between ten (10) and sixteen (16) inch DBH, one (1) replacement tree of a species identified on the City of Portland Recommended Tree List shall be planted on the site as detailed in Section 4 of the Technical Manual).

(c) Where the planting of replacement trees on the site is not feasible, the applicant shall contribute an amount proportionate to the cost of required replacement trees to the City of Portland Tree Fund, as detailed in Section 4 of the Technical Manual.

(v) In addition to the provisions of this section, all development within the Shoreland Zone shall meet the requirements of Division 26, Shoreland

Regulations.

b. *Site Landscaping.*

(i) Landscaped Buffers:

(a) ***Screening.*** Loading and servicing areas, dumpsters, storage areas and utility structures, except for renewable energy systems, shall be screened from view from public sidewalks, streets and adjacent properties by dense evergreen landscaping, fencing, masonry wall building walls, or a combination thereof.

(b) ***Understory Plantings.*** All development subject to required zoning setbacks shall include a minimum of six (6) shrubs per forty five (45) linear feet of all frontages as measured along the property line. A shrub shall be defined as one shrub, one ornamental grass, and/or 3 perennials. Required shrubs may be installed anywhere on the site, including a green roof, if proposed, and may be planted in any arrangement. Existing vegetation to be preserved on the site may be counted towards this requirement as detailed in Section 4 of the Technical Manual.

(c) ***Industrial and Commercial Zones.*** For non-residential development proposed in an industrial or commercial zone subject to required zoning setbacks and abutting a residential zone, an evergreen, densely landscaped buffer of not less than ten (10) ft wide and six (6) ft tall is required along the side abutting the

residential zone. Where site constraints prevent such a buffer from being established, the width of the landscaped buffer may be reduced but shall include architectural quality fencing of not less than six (6) ft tall and a mix of evergreen and deciduous trees spaced no further than twenty (20) ft apart along the abutting the residential zone.

(d) *Buffer from Surrounding Development.* All residential development shall provide and/or preserve evergreen vegetated buffers where necessary to buffer the development from detrimental impacts of existing surrounding development.

(ii) *Parking Lot Landscaping:*

(a) Developments with five (5) or more parking spaces shall include at least two (2) trees (or one (1) tree and three (3) shrubs) per five (5) parking spaces planted in landscaped islands to screen shade and break up parking. Trees and shrubs in parking lots may be in informal groups, straight rows, or concentrated in clusters as detailed in Section 4 of the Technical Manual.

(b) Landscaped islands shall be distributed so that uninterrupted pavement does not exceed forty (40) parking spaces.

(c) Landscaped islands shall be curbed and a minimum of eight (8) feet in width, not including curbing. The incorporation of bioretention into landscaped islands is strongly

encouraged.

(d) Vehicle display lots shall be subject to the parking lot landscaping standards of **this section.**

(e) Waiver: Where site constraints prevent implementation of all or a portion of required parking lot landscaping, as determined by the Reviewing Authority, the requirements may be all or partially waived and the applicant shall contribute an amount proportionate to the cost of required parking lot trees to the City of Portland Tree Fund.

(iii) *Street Trees:*

(a) All development shall include street trees in numbers and locations as specified in Section 4 of the Technical Manual. Street trees shall be planted in the right of way, as specified in Section 4 of the Technical Manual. Street trees shall be of a species identified on the City of Portland Recommended Tree List, unless otherwise approved by the Portland City Arborist or his/her designee.

(b) Waiver. Where the applicant can demonstrate that site constraints prevent the planting of required street trees in the City right of way, the Reviewing Authority may permit the planting of street trees in the front yard, within ten feet of the property line. Existing preserved healthy trees that are six (6) inches or more in caliper and are on the site within ten (10) feet

of the property line may be counted towards this requirement. If planting street trees is neither feasible in the City right of way nor within the site, the applicant shall contribute to the City of Portland Tree Fund an amount proportionate to the cost of required street trees.

3. *Water Quality, Stormwater Management and Erosion Control:*

a. All development must demonstrate that the proposed site improvements are designed to minimize the amount of stormwater leaving the site. This must include consideration of the design and location of improvements to minimize the total area of impervious surface on the site and stormwater management techniques to minimize both the volume and rate of runoff from the lot. The stormwater management plan must demonstrate the following:

(i) Any stormwater draining onto or across the lot in its pre-improvement state will not be impeded or re-directed so as to create ponding on, or flooding of, adjacent lots;

(ii) Any increase in volume or rate of stormwater draining from the lot onto an adjacent lot following the improvement can be handled on the adjacent lot without creating ponding, flooding or other drainage problems and that the owner of the lot being improved has the legal right to increase the flow of stormwater onto the adjacent lot;

(iii) Any increase in volume or rate of stormwater draining from the lot onto City property following the improvement can be handled without creating ponding,

flooding or other drainage problems and that the owner of the lot being improved has the legal right to increase the flow of stormwater onto the City's property; and

(iv) Any increase in volume or rate of stormwater draining from the lot into the City's separate storm sewer system can be accommodated in the system without creating downstream problems or exceeding the capacity of the storm sewer system.

b. All development, except Level I minor residential development, shall comply with the standards of Section 5 of the Technical Manual including basic, general and flooding standards, as applicable, to prevent and control the release of pollutants to waterbodies, watercourses, wetlands and groundwater, and reduce adverse impacts associated with increases or changes in flow, soil erosion and sedimentation.

c. All development, except Level I minor residential development, that are located within the watershed of an Urban Impaired Stream shall comply with the Urban Impaired Stream standards pursuant to Maine DEP Chapter 500 Stormwater Management Rules, as described in Section 5 of the Technical Manual.

d. Level I: minor residential development shall comply with basic erosion control standards, as described in Section 6 of the City of Portland Technical Manual.

e. Development shall not pose a risk of groundwater contamination either during or post-construction, as described in Sections 5 and 9 of the Technical Manual.

f. Development shall provide for adequate and sanitary disposal of sewage as described in Section 2 of the Technical Manual.

(c) *Public Infrastructure and Community Safety Standards.*

1. *Consistency with City Master Plans:*

a. All developments shall be designed so as to be consistent with City Council approved master plans and facilities plans and with off-premises infrastructure, including but not limited to sewer and stormwater, streets, trails, pedestrian and bicycle network, environmental management or other public facilities (see Section 15 of the Technical Manual).

b. The site plan shall include suitable easements, rights and improvements to connect or continue off-premises public infrastructure as may be required by the reviewing authority.

2. *Public Safety and Fire Prevention:*

a. The development shall incorporate the following public safety principles for Crime Prevention through Environmental Design (CPTED) into site design to enhance the security of public and private spaces and to reduce the potential for crime:

(i) Natural surveillance that promotes visibility of public spaces and areas.

(ii) Access control that promotes authorized and/or appropriate access to the site.

(iii) Territorial reinforcement that promotes a sense of ownership and responsibility through environmental design.

b. Provide adequate emergency vehicle access to the site in accordance with City standards for

street widths and turning radii, as described in Section 1 of the Technical Manual.

c. Be consistent with City public safety standards, Section 3 of the City of Portland Technical Manual, including but not limited to availability and adequacy of water supply and proximity of fire hydrants to structures.

3. *Availability and Adequate Capacity of Public Utilities:*

a. The development shall not overburden sanitary sewers and storm drains, water lines, or other public infrastructure and utilities. Development shall provide adequate utility capacity and distribution network on-site and in connection to surrounding locations and facilities.

b. Electrical service shall be underground unless otherwise specified for industrial uses, or if it is determined to be unfeasible due to extreme cost, the need to retrofit properties not owned by the applicant or complexity of revising existing overhead facilities.

c. Installation of new or upgrades to existing sanitary sewers, storm drains, water lines or other utilities shall meet the provisions outlined in Section 2 and Section 9 of the Technical Manual.

d. All development within 200 feet of a public sanitary collection and treatment system shall connect sanitary sewer lines into the nearest available public sewer. If a public sanitary collection and treatment system is not available, a private wastewater system may be used according to the requirements of Chapter 24 of the City Code and Section 2 of the Technical Manual.

e. All sanitary sewer and stormwater utilities proposed as part of the development shall be

designed to City standards as specified in Section 2 and Section 4, Chapter 500 Stormwater Management Standards, of the Technical Manual.

f. All residential development of 20 units or more, commercial development and industrial development shall provide for the temporary storage and timely removal of all trash and recyclable materials including, at a minimum, paper, corrugated cardboard, plastics and metals. Storage containers for recyclable materials shall be separated from trash containers. All exterior storage of trash and recyclables shall be screened from view from public sidewalks, streets and adjacent properties.

4. Reserved.

(d) *Site Design Standards*

1. *Massing, Ventilation and Wind Impact:*

a. The bulk, location or height of proposed buildings and structures shall not result in health or safety problems from a reduction in ventilation to abutting structures or changes to the existing wind climate that would result in unsafe wind conditions for users of the site and/or adjacent public spaces.

b. The bulk, location or height of proposed buildings and structure shall minimize, to the extent feasible, any substantial diminution in the value or utility to neighboring structures under different ownership and not subject to a legal servitude in favor of the site being developed.

c. Development shall locate all HVAC venting mechanisms to direct exhaust away from public spaces and residential properties directly adjacent to the site.

2. *Shadows:*

a. All development outside the B3, B5, B6 and B7 zones shall be designed to avoid and/or mitigate the adverse impacts of shadows cast by new structures or building additions from falling on publicly accessible open space where such shadowing would adversely affects the viability of its use and/or the viability of existing vegetation. Examples of publicly accessible open spaces that may require direct sunlight for a portion of the day to maintain the viability of existing vegetation and/or use(s) include but shall not be limited to sitting or sunning areas, community gardens, grass sports fields, landscaped areas, children's play areas). For submittal requirements and additional information, please refer to Section 11 of the Technical Manual.

3. *Snow and Ice Loading:*

a. The development shall be designed to prevent significant amounts of accumulated snow and ice from loading or falling onto adjacent properties or public ways.

4. *View corridors:*

a. The massing, location and height of development shall not substantially obstruct public views corridors identified in the Downtown Vision View Corridor Protection Plan, as provided in the City of Portland Design Manual, Appendix 1.

5. *Historic Resources:*

a. Developments affecting designated landmarks or within designated historic districts or historic landscape districts: Any proposed development required to obtain a certificate of appropriateness under article IX (historic

preservation) of the land use code shall be exempt from the following design standards, as described in the Design Manual:

(i) Section (b) of the Design Manual (development in B-3 zone), except for (b) (1) e.2. (increasing setback beyond street build-to line), (b) (1)f. (shadow impact on open space), (b)(1)h. (wind impacts), and (b)(1)g. (setbacks from existing structures);

(ii) Section (c) of the Design Manual (development in B-5 and B-5b zones), except for (c)a. (shared infrastructure) and (c)d. (parking lot location);

(iii) Section (k) of the Design Manual (small residential lot development in R-6 zone);

(iv) Section (e) of the Design Manual (University of Southern Maine);

(v) Section (f) of the Design Manual (development in B-7 zone), except for (f)(1)a. (transportation demand management);

(vi) Section (g) of the Design Manual (development in Eastern Waterfront zone).

b. Development adjacent to designated landmarks, historic districts or historic landscape districts: when any part of a proposed development is within one hundred (100) feet of any designated landmark, historic district or historic landscape district, such development shall be generally compatible with the major character-defining elements of the landmark or portion of the district in the immediate vicinity of the proposed development. Character-defining elements of landmarks and historic districts are identified in the historic resources inventory and respective historic district designation reports For the purposes of this provision,

"compatible" design shall be defined as design which respects the established building patterns and visual characteristics that exist in a given setting and, at the same time, is a distinct product of its own time. To aid the planning board in its deliberations, historic preservation staff shall provide a written analysis of the proposed development's immediate context, identifying the major character-defining elements and any established building patterns that characterize the context.

c. Preservation and/or Documentation of Archaeological Resources. Where a state or local archaeological resource is known to exist or is discovered on the site, the developer shall inform the City and State and shall protect and/or document such resources.

(i) Protection shall include leaving archaeological resources untouched beneath a new development through adaptation of foundation design or architectural layout.

(ii) Where the applicant can demonstrate that complete protection is not feasible, the applicant shall excavate and document archeological resources. Such measures shall be conducted in consultation with the City Historic Preservation Program and Maine Historic Preservation Commission. For resources of state significance, excavation and documentation shall be conducted by a qualified professional, in coordination with Maine Historic Preservation Commission. Local archeological resources may or may not be recognized by the Maine Historic Preservation Commission as significant and shall include the following:

(a) Original seawall structure located

landward of Commercial Street.

(b) Inactive historic family cemetery plots.

(c) Historic railroad beds including but not limited to the Portland-Lewiston interurban railroad.

(d) Original structure and/or landforms associated with the Cumberland and Oxford Canal.

(e) Buried portions of colonial and post-colonial period structures or built features located on the Portland Peninsula predating the Great Fire of 1866.

(f) Pre-colonial occupation sites identified by shell middens or other evidence.

(g) Sites listed or eligible for listing on the National Register of Historic Places.

(iii) Waiver Criteria: In order to preserve archeological resources, the Planning Authority may wave standards listed in the City of Portland Technical Manual where necessary if it is determined that such a waiver would not jeopardize the health, safety or welfare of the development's occupants, the public, or the natural environment.

6. *Exterior Lighting:*

a. *Site Lighting.*

(i) All exterior site lighting, including lighting of building entrances, shall be full cutoff with no light emitted above the horizontal plane or spilled onto adjacent properties and streets.

Illumination levels shall be adequate but not excessive for the safety, comfort and convenience of occupants and users of the site, and shall confirm to applicable standards of Section 12 of the Technical Manual.

(ii) For major or minor site plans within or abutting a residential use or zone where light from the proposed development may adversely impact adjacent residential properties, exterior lighting shall employ house-side shielding.

b. *Architectural and Specialty Lighting.*

(i) Architectural and specialty lighting, but not up-lighting, of such features as architectural details, monuments, public art or other site features shall be designed to illuminate specific details or attributes only and shall meet the standards of Section 12 of the Technical Manual.

(ii) Up-lighting by any method is prohibited except for public buildings and parklands, clock towers and steeples, landscape features, designated historic landmarks, flags of state, federal or national jurisdictions, and public art. Such light fixtures, brackets, conduits and all other components shall be designed by a lighting professional and shall be scaled and placed to minimize their visibility and installed in accordance with the standards contained in Section 12 of the Technical Manual.

c. *Street Lighting.*

(i) Municipal street lighting shall be adequate for the safety and comfort of pedestrians and motorists and, where applicable, shall conform to specific

lighting district requirements, as specified in Section 10 of the Technical Manual.

7. *Noise and Vibration:*

Projected noise levels for all developments shall meet applicable zoning requirements.

a. *HVAC and Mechanical Equipment.*

(i) All heating, ventilation and air conditioning equipment (HVAC), air handling units (AHU), emergency generators, and similar equipment shall meet applicable state and federal emissions requirements and shall comply with the following:

(a) Be located to the interior of the site, away from abutting residential properties;

(b) Be screened from view from any public street and from adjacent sites by structure walls, evergreen landscaping, fencing, masonry wall or a combination thereof.

(ii) In addition to the requirements listed above, emergency generators shall not be activated for more than one hour per week for routine maintenance and testing. Noise levels shall not exceed City standards except in designated emergencies or for emergency generator testing. Emergency generator testing is permitted only between the hours of 9:00 a.m. and 5:00 p.m., Monday through Friday.

8. *Signage and Wayfinding:*

a. All signage shall meet applicable requirements

of Division 22 of the City Code, in addition to provisions listed below:

(i) Historic Preservation: Any new sign or change in appearance of an existing sign located on a designated Historic Landmark or in a Historic District or Historic Landscape District shall be subject to the standards of Article IX and shall require a Certificate of Appropriateness. If there is a conflict between the standards of Article IX and of Division 22 or other provisions of the City Code, the stricter standards shall apply.

(ii) Commercial Signage and Directional Traffic Signage: The size, scale, proportions, design, materials, placement and source and intensity of illumination of all permanent or freestanding building signs shall be designed to complement the subject building and its immediate context, as follows:

(a) Signage shall not conceal architectural features such as window sills, lintels or cornices from view.

(b) Signs shall be designed and sized to fit the scale and proportions of the building and the feature or area of the building to which it is affixed.

(c) Freestanding signs shall not adversely affect visibility at intersections or access drives.

(d) Sign lighting shall be downwardly directed, internally illuminated and/or shielded to avoid glare and light spillover towards the sky.

(e) Signs shall not be affixed to rooftop mechanicals, mechanical

penthouses or other rooftop appurtenances unless those appurtenances have been screened and integrated into the architecture of the development.

(iii) On-site directional traffic signage may be provided to enable users to safely and easily navigate into, around and out of the site. Directional signage shall not adversely affect visibility at intersections on or off the site.

(iv) Waiver Criteria: An applicant for site plan review that was either denied for failure to comply with the requirements of or is seeking a waiver as part of their site plan application from Section 14-369.5 shall meet the following standards for approval:

(a) Signs shall meet the requirements of Section 14-526 (e) 2. - Signage and Wayfinding;

(b) The size, scale, proportions, design, materials, placement, quantity and source and intensity of illumination of any approved signage shall be designed to complement and enhance the architectural attributes of the building(s) to which they are attached or to which they are visually related. In addition, such signs shall be appropriate to the scale and character of the neighborhood in which it is located and shall be designed to suit the conditions from which it will be viewed, especially in relation to the distance, travel speed, and mode of travel of the viewing public;

(c) The signage shall either be of special design merit or shall

respond to unique circumstances or characteristics associated with the subject property;

(d) The provisions of this subsection shall be limited to commercial uses in business or industrial zones, industrial uses or institutional uses.

9. *Zoning Related Design Standards:*

a. Development of certain types and/or proposed in certain zones, as specified below, are subject to design standards in addition to the provisions of Section 14-526 (a) in order to ensure designs that contribute to and enhance the goals and policies for specific districts of the City. The City of Portland Design Standards is listed in the City of Portland Design Manual, which is included by reference. If the development is located in a historic district or associated with a historic landmark, City of Portland Historic Preservation standards shall supersede:

(i) B3, B5, B5-b, B7 Zones, and B6 and EWPZ Waterfront Zones: Development in the B3, B5, B5-b, B7 business zones and in the EWPZ waterfront zone shall be designed to support the development of dense, mixed-use neighborhoods with attractive, safe and convenient street level pedestrian environments as demonstrated by compliance with all applicable design standards listed in the Design Manual.

(ii) RP Zone: Development in the RP Residential Professional zone where there is a discernable architectural style or character to existing structures in the immediate vicinity in which the development is proposed shall not be incongruous to that established style or character as demonstrated by compliance

with all applicable design standards listed in the Design Manual.

(iii) B1, B1-b, B2, B2-b Zones: Development in the B1, B1-b, B2 and B2-b business zones shall provide an established street wall with entrances and public portions of the building oriented to and directly accessible from the public sidewalk and shall be designed and scaled to be compatible with surrounding residential and commercial development as demonstrated by compliance with all applicable design standards listed in the Design Manual.

(iv) USM Overlay Zone: Development in the University of Southern Maine (USM) Overlay Zone shall be designed to support a cohesive campus environment while integrating with and respecting the residential character of surrounding neighborhoods as demonstrated by compliance with all applicable design standards listed in the Design Manual.

(v) Residential Developments: Residential developments, as listed below, shall integrate with and respect the character of surrounding residential development in terms of architectural form, landscaping and open space, façade materials, roof pitch, massing and height as demonstrated by compliance with all applicable design standards as listed in the Design Manual.

(vi) Residential Development in the following districts:

(a) Planned Residential Unit Developments (PRUDS) in the R3, R5 and R5a residential zones;

(b) Multiple family and multiplex developments in the R5 zone;

(c) Small residential lot development of single family homes in the R5 zone;

(d) Multiple family and multiplex development in the R6 zone on lots of 10,000 square feet or less.

(vii) Residential Development of the following types:

(a) Manufactured housing parks;

(b) Two-family and multiple family housing not already specified in (a) above;

(c) Special needs independent living units;

(d) Lodging houses;

(e) Bed and breakfasts;

(f) Emergency shelters.

(viii) ***B-7 Design Standards for Additional Height in District A:*** In the B-7 zone, the Planning Board, when conducting review of a Master Development Plan or a Level III Site Plan, as applicable, may modify the stepback provisions of Section 14-296(a)(5)(b), relating to buildings allowed as a conditional use to exceed one hundred and twenty-five (125) feet up to one hundred and sixty-five (165) feet in height, provided the following conditions are met:

(a) Each building exceeding one-hundred and twenty-five (125) feet shall contain at least 20 dwelling units per building.

(b) Building wall stepback requirements

along public street frontage:

i. Building with frontage on one street: minimum ten (10) foot stepback between third and fifth stories and a minimum ten (10) foot stepback between the one hundred twenty-five (125) and one hundred forty-five (145) foot level.

ii. ***Building with frontage on multiple streets:*** Above paragraph (i) requirement along longest building façade street wall, and of the remaining street walls the same requirement as paragraph (i) or a 15 foot wide streetscape improvements area containing a public sidewalk, landscaping and other streetscape improvements within the abutting street right-of-way and/or private property along the remaining street frontage. A building with frontage on four streets shall meet the above requirement except that two of the streets shall have the stepback requirement.

iii. The Planning Board shall have the authority to waive one or more of the required stepbacks provided the following is met:

1. The depth of the building lot precludes a building having an average minimum lot depth dimension of one hundred seventy (170) feet; or

2. The proposed building has an architecturally significant design that is articulated to avoid a monolithic appearance

and emphasizes slender, vertically-oriented proportions while employing a variety of scales, materials, fenestration, and massing to assure a rich visually interesting experience as viewed within the context of the downtown skyline and provide visual interest and human scale at the pedestrian level;

3. In the event such a waiver is granted the Planning Board may require the applicant to mitigate the impacts of the waiver by requiring the following:

   a. Along all public street frontages and public open spaces, all buildings (regardless of height) shall meet the B-7 Design Standard E-4 Articulation to maintain a pedestrian scale through the use of building elements at the street level as listed in this standard along no less than 60% of the building's horizontal length.

   b. Along all public street frontages and public open space for the building(s) over one hundred twenty-five (125) feet, a canopy, awning or similar permanent architectural feature to provide pedestrian protection and wind mitigation shall be provided within the first thirty-five

(35) feet of height.

c. In order to preserve view corridors and to maintain a varied skyline, all buildings above one hundred twenty-five (125) feet within a single development site should be separated to avoid the appearance of a tall, solid block massing. In accordance with this policy, development sites of 500 feet or greater as measured parallel to Marginal Way, the aggregate building façade widths above 85 feet shall not exceed fifty percent (50% of the total development site distance parallel to Marginal Way. Buildings over one hundred twenty-five (125) feet in height that are being reviewed as separate phases of a Master Development Plan shall be entitled to meet the fifty percent (50%) building requirement in aggregate for all such buildings over one hundred twenty-five (125) feet in height in the Master Development Plan, provided that view corridors are retained as each phase is built.

d. The applicant shall demonstrate building design elements and location will reasonably mitigate downdraft effects of the proposed building or buildings.

b. ***Master Development Plan Design Standards***: A Master Plan shall comply with the design and development standards of the zone in which it is located, and shall achieve a cohesive land development consistent with the assets of the site, land uses, functional activities, and major design elements, such as buildings, roads, utilities, drainage systems and open space as well as with the Master Development Plan Standards of Review contained in Section 14-524.

10. ***Reserved.***

(e) ***Conditions***

1. Notwithstanding the provisions of subsections (a)through (d) of this section, the Planning Authority or Planning Board may impose any condition upon its approval of any site plan: (1) to minimize or abate any adverse impact of the proposed development on the value or utility of other private property, or on public property or facilities, to the extent feasible; or (2) to bring the development into compliance with the requirements of subsections (a) through (d); or (3) to minimize any other adverse environmental effects of the proposed development. Such conditions may include, but are not limited to, enclosing of equipment or operations, imposing limitations upon the hours of operation, or requiring the employment of specific design technologies, modes of operation, or traffic patterns, and may also include the construction of, or financial contribution to the construction of, on- or off-premises public facilities including, without limitation, streets and sewers impacted by the development. All such conditions shall be consistent with the purposes set forth in section 14-521.

(f) ***General Waiver***

1. Except for the requirements set forth in Section

14-526 (a)-(d) for which individual waiver criteria are provided, the Reviewing Authority if it finds that extraordinary conditions exist or that undue hardship may result from strict compliance with these regulations may vary the regulations so that substainal justice may be done and the public interest secured; provided that such variation will not have the effect of nullifying the intent and purpose of the land development plan and the regulations of this article.

(Ord. No. 277-09/10, 7-19-10; Ord. No. 175-12/13, 4-22-13; Ord. No. 176-12/13, 4-22-13)

Sec. 14-527. Content of site plan applications.

(a) ***Level I General Submissions.*** The applicant shall submit for review a packet of materials and submissions in a form and content as specified by the Department of Planning and Urban Development. Such submissions shall contain, at a minimum, the following elements:

1. Application Form;

2. Applicable Fees;

3. Project Description;

4. Evidence of Right, Title and Interest;

5. Evidence of State and/or Federal Approvals, if applicable;

6. Written assessment of project compliance with applicable zoning requirements;

7. Summary of existing and/or proposed easements, covenants, public or private rights-of-way, or other burdens on the site;

8. Written requests for waivers from the City's Site Plan or Technical Standards, if applicable;

9. Boundary survey stamped by a professional surveyor licensed to practice in the State of Maine, drawn to

scale and tied into the State Plane Coordinates, NAD 1983, Maine West Zone, as specified in Section 13 of the Technical Manual.

(b) ***Level I Site Plan Submissions.*** Site plans submitted as part of a Level I site plan application for a minor residential or site alteration proposal shall include a site plan based upon the boundary survey showing the following information:

1. Existing and proposed structures, as applicable, and distance from property lines;

2. Existing and proposed paved areas, if applicable;

3. For minor residential only, proposed ground floor area and finish floor or sill elevation;

4. For minor residential only, exterior building elevation drawings (all sides);

5. Location of proposed utilities;

6. Identification and proposed protection measures for any significant natural features, as defined in Section 14-526 (b);

7. Identification and proposed protection for alterations of watercourses, if applicable;

8. Identification and, if applicable, proposed impacts and protection measures for wetlands;

9. For Level I minor residential projects only, soil type;

10. Existing and proposed grades and contours;

11. Location, dimensions and ownership of easements, public or private rights of way, both existing and proposed;

12. Proposed stormwater management control;

13. Soil erosion control plan;

14. Existing vegetation to be preserved, proposed site landscaping, screening and proposed street trees, if

applicable;

15. Existing and proposed curb and sidewalk;

16. Location, area, and limits of the proposed site disturbance or alteration;

17. Proposed Pier, Dock, Wharf, Pier, or Slope Stabilization reconstruction in the Shoreland Zone, if applicable.

(c) ***Level II, III, and Master Development Plan General Submissions.*** The applicant shall submit for review a packet of materials and submissions in a form and content as specified by the department of planning and urban development. Such submissions shall contain, at a minimum, the following elements.

1. Application form;

2. Applicable fees;

3. Project description;

4. Evidence of right, title and interest;

5. Evidence of state and/or federal approvals, if applicable;

6. Written assessment of project compliance with applicable zoning requirements;

7. Summary of existing and/or proposed easements, covenants, public or private rights-of-way, or other burdens on the site;

8. Written requests for waivers from the city's site plan or technical standards, if applicable;

9. Evidence of financial and technical capacity;

10. Boundary survey stamped by a professional survey or licensed to practice in the State of Maine, drawn to scale and tied into the State Plane Coordinates, NAD 1983, Maine West Zone, as specified in section 13 of the Technical Manual. A boundary survey of the site, may be waived by the Planning Authority for a review of Master

Development Plan, where an existing conditions plan is available. The Boundary Survey requirement shall be met for each phase of development.

(d) ***Level II and Level III Preliminary Site Plan Submissions.*** A preliminary site plan is an optional submittal as part of the Level II and III site plan application review process. If the applicant elects to submit a preliminary site plan for review, it shall include the following information:

1. Proposed grading and contours;

2. Existing structures with distances from property lines;

3. Proposed site layout and dimensions for all proposed structures, paved areas, and pedestrian and vehicle access ways;

4. Preliminary design of proposed stormwater management system in accordance with Section 5 of the Technical Manual;

5. Preliminary infrastructure improvements;

6. Preliminary Landscape Plan in accordance with Section 4 of the Technical Manual;

7. Location of significant natural features located on the site as defined in Section 14-526 (b)(1);

8. Proposed buffers and preservation measures for significant natural features, as defined in Section 14-526(b)(1);

9. Location, dimensions and ownership of easements, public or private rights of way, both existing and proposed.

10. Exterior building elevations.

(e) ***Master Development Plan.*** A Master Development Plan is an optional submittal as part of the Level III site plan application review process. If the applicant elects to submit a Master Development Plan for review, it shall include the following information in addition to the general submission requirements of Sec. 14-527 (c)(d):

1. A neighborhood context map, at a scale not less than one (1) inch equals one hundred (100) feet, providing a graphic description of the neighborhood in which the tract lies, including roads, utilities and other public facilities, major existing buildings and structures. There shall also be a statement and/or plan as to the general impact of the proposed Master Development Plan upon the area, indicating how the Master Development Plan relates to surrounding properties and what measures will be taken to create appropriate transitions and access from the subject property to abutting public properties (i.e. parks, waterfront, etc.) or other neighboring tracts (if applicable).

2. A conceptual site plan drawn to a scale of not less than one (1) inch equaling fifty (50) feet, or series of drawings at the same scale, and any necessary supporting information, showing:

   (i) The approximate boundary lines of existing and proposed lots within and immediately adjacent to the Master Development Plan, with approximate areas and dimensions. With respect to residential areas, the proposed density, lot configuration, circulation and a typical plot plan shall be included in the application.

   (ii) An analysis of the natural features of the site, including existing and/or adjacent natural waterways, wetlands, floodplains, topography, soil conditions and other natural features requested or required by the Planning Authority.

   (iii) An analysis of the designated view corridors, historic resources, and archeological resource associated with the site.

   (iv) Existing/proposed buildings and other significant structures, building groupings, exterior building elevations and entrances, parking areas, and other significant physical features of the site.

   (v) Context drawings, perspective renderings, photographic montages, or computer generated

graphics depicting the proposed development within the surrounding building and environmental context. Building elevation drawings shall include the following:

a. Illustrations of all sides of the structures;

b. Views of major entries or prominent building features;

c. Illustration of building articulation and elements;

d. Building finish composition; and

e. Pedestrian and streetscape elements of the Master Development Plan.

The submission shall include a digital three-dimensional model tied to a specific location that is submitted as a KML, KMZ, DXF, or DWG file on a CD or DVD or such format as approved by the Planning Authority. It is the applicant's responsibility that the model is complete and represents the proposed development accurately using best practice modeling techniques and layering standards.

(vi) Major circulation patterns surrounding and serving the site, the existing and proposed lines of streets (including the street width), ways, easements and any public areas within or next to the site.

(vii) Major landscaping elements, features, open space, and plans for preservation of natural features.

(viii) An analysis of the public safety services needed to support the master plan.

(ix) An analysis of the anticipated impacts on the public school system to support the Master Development Plan.

(x) A generalized drainage plan for the site, indicating drainage ways, flow, points of outfall, and indicating impacts of development on affected drainage basins. The plan shall include contour information at not less than two-foot (2') contour intervals and document anticipated quantities of run-off characteristics. General statements concerning storm water management techniques shall also be submitted with the application.

(xi) The plan shall clearly show Master Development Plan boundaries, north arrow, date, scale, legend, the title "Master Development Plan Concept Site Plan" followed by the formal project name, and the name(s) of applicant(s), engineer(s), designer(s) and/or agent(s).

(xii) A traffic analysis and recommendations prepared by a registered professional engineer qualified to conduct such studies, including current traffic counts for streets surrounding the project, analysis of the existing capacity of those streets, projections of the amount of traffic that will be generated by the proposed development, and the ability of the street system to absorb the increased traffic without decreasing the level of service below an acceptable level – said level to be determined by the Planning Authority in concert with the Department of Public Services. In cases where the Master Development Plan is subject to a Traffic Movement Permit (TMP) for all phases, the TMP submissions and review shall supersede these requirements.

(xiii) A utilities analysis and recommendations prepared by a registred professional engineer qualified to conduct such studies. Said analysis shall contain an inventory of existing utilities including, but not limited to, storm sewers and drains, sanitary sewers, electrical lines, fire alarm boxes and lines, gas lines/mains, water mains, lighting, curb and gutter, etc. Said inventory shall

illustrate utility locations, sizes, diameters, carrying capacity and present load on the system. The engineer's report shall state if the current system is capable of adequately serving the proposed development. If the current utility system is found to be inadequate for the proposed development, the report shall confirm the deficiencies and make recommendation(s) as to the infrastructure improvements necessary to properly service the proposed development and maintain the existing service. The report shall also present a formal plan for infrastructure improvements, documenting timing, funding mechanisms and coordination with the City; and

(xiv) Any other supportive information the applicant feels may be beneficial in the evaluation of the request.

(xv) The Planning Authority or Planning Board may reduce the level of information required at the Master Development Plan review stage, provided more detailed supportive documentation is provided at final Level III Site Plan Review of the Master Development Plan or phases thereof.

(f) ***Level II and III Final Site Plans.*** A final site plan for a Level II or III site plan application shall be based upon a standard stamped boundary survey meeting City of Portland standards, be stamped by a professional engineer licensed to practice in the State of Maine, shall be submitted with all required written submittals and shall include the following information:

1. Existing and proposed structures, as applicable, and distance from property lines;

2. Approximate location of structures on parcels abutting the site;

3. All streets and intersections adjacent to the site and any proposed geometric modifications to those streets or intersections;

4. Location, dimensions and materials of all existing and proposed driveways, vehicle and pedestrian access ways, and bicycle access ways, with corresponding curb lines;

5. Engineered construction specifications and cross-sectional drawings for all proposed driveways, paved areas, sidewalks;

6. Location and dimensions of all proposed loading areas including turning templates for applicable design delivery vehicles;

7. Existing and proposed public transit infrastructure with applicable dimensions and engineering specifications;

8. Location of existing and proposed vehicle and bicycle parking spaces with applicable dimensional and engineering information;

9. Location of all snow storage areas and/or a snow removal plan;

10. A traffic control plan as detailed in Section 1 of the Technical Manual;

11. Proposed buffers and preservation measures for significant natural features, where applicable, as defined in Section 14-526(b)(1);

12. Location and proposed alteration to any watercourse;

13. A delineation of wetlands boundaries prepared by a qualified professional as detailed in Section 8 of the Technical Manual;

14. Proposed buffers and preservation measures for wetlands;

15. Existing soil conditions and location of test pits and test borings;

16. Existing vegetation to be preserved, proposed site landscaping, screening and proposed street trees, as applicable;

17. A stormwater management and drainage plan, in accordance with Section 5 of the Technical Manual;

18. Grading plan;

19. Ground water protection measures;

20. Existing and proposed sewer mains and connections;

21. Location of all existing and proposed fire hydrants and a life safety plan in accordance with Section 3 of the Technical Manual;

22. Location, sizing, and directional flows of all existing and proposed utilities within the project site and on all abutting streets;

23. Location and dimensions of off-premises public or publicly accessible infrastructure immediately adjacent to the site;

24. Location and size of all on-site solid waste receptacles, including on-site storage containers for recyclable materials for any commercial or industrial property;

25. Plans showing the location, ground floor area, floor plans and grade elevations for all buildings;

26. A shadow analysis as described in Section 11 of the Technical Manual, if applicable;

27. A note on the plan identifying the Historic Preservation designation and a copy of the Application for Certificate of Appropriateness, if applicable, as specified in Section Article IX, the Historic Preservation Ordinance;

28. Location and dimensions of all existing and proposed HVAC and mechanical equipment and all proposed screening, where applicable;

29. An exterior lighting plan in accordance with Section 12 of the Technical Manual;

30. Signage: A signage plan showing the location, dimensions, height and setback of all existing and

proposed signs;

31. Location, dimensions and ownership of easements, public or private rights of way, both existing and proposed.

(g) *Level II and III Final Written Materials*

1. Construction Management Plan;

2. A traffic study and other applicable transportation plans in accordance with Section 1 of the Technical Manual, where applicable;

3. A narrative describing any significant natural features, wildlife and fisheries habitats or archaeological sites subject to the provisions of Section 14-526(a) that are located on or near the project site and a description of the methods that will be used to protect such areas or sites during and post construction;

4. A narrative describing site layout, on and off-site watershed hydrology, new and existing buildings and facilities, total impervious area, disturbed area and developed area created by the project;

5. Stormwater runoff calculations as described in Section 5 of the Technical Manual;

6. A narrative describing the development's consistency with applicable City Master Plans;

7. Evidence of Utility Capacity to Serve;

8. Estimated types and quantities of solid waste to be generated by the development. For new commercial and industrial development, a description of the estimated amount and type of recyclable material to be generated;

9. A code summary referencing NFPA 1 and all Fire Department technical standards;

10. Where applicable, an assessment of the development's consistency with any applicable design standards contained in Section 14-526(a) and/or in the City of Portland Design Manual;

11. Manufacturer's verification that all proposed HVAC and manufacturing equipment meets applicable state and federal emissions requirements.

(Ord. No. 277-09/10, 7-19-10; Ord. No. 25-11/12, 8-15-11; Ord. No. 176-12/13, 4-22-13)

Sec. 14-528. Reserved.

Sec. 14-529. Appeals.

(a) When the planning authority has approved, approved with conditions, or denied a site plan, or has approved a request to extend the expiration date of a Master Development Plan, any person aggrieved may appeal the decision to the planning board within thirty (30) calendar days of the date of the written decision of the planning authority. Upon the taking of such an appeal, the application or request for an extension shall be reviewed as a new application or request.

(b) When the planning board has finally approved, approved with conditions, or disapproved a site plan, any person aggrieved or the City may appeal the decision to the superior court, pursuant to Rule 80B of the Maine Rules of Civil Procedure within thirty (30) days of the vote on the original decision by the planning board.

(Ord. No. 277-09/10, 7-19-10; Ord. No. 25-11/12, 8-15-11; Ord. No. 176-12/13, 4-22-13)

Sec. 14-530. Development review fees and post approval requirements.

(a) *Development Review Fees.*

1. Payment of fees and costs: Prior to the issuance of permits of any kind or the release of a signed subdivision plat for recording for any project whose permit fee is governed by this ordinance, all current charges due under this ordinance shall be paid and the developer must otherwise be in compliance with the provisions of the City Code.

2. Development Review and administrative fees:

a. Review Fees. The developer shall pay the

development review fees to cover the third-party review costs for engineers or other professional reviews and administrative costs for all Levels of review unless otherwise noted below, including but not limited to staff review, legal ads, plan duplication, and mailed public notices, incurred by the City. The fee shall be based upon the hours of review time and prevailing hourly rate for reimbursement of City costs. The City shall periodically invoice the developer for the development review and administrative costs incurred by the City, which invoice shall be paid promptly by the developer. Prior to the issuance of permits of any kind or the release of a signed subdivision plat for recording for any project whose permit fee is governed by this ordinance, all current charges due under this ordinance shall be paid The balance of any remaining engineering and administrative costs invoiced or incurred after a permit has been issued shall be paid promptly in full by the developer prior to the issuance of any temporary or permanent certificate of occupancy.

3. The City Council, shall, from time to time, establish by order, reasonable application and administrative fees to defray the costs of administering this article.

4. *Site Plan Review Expenses.*

a.	Level I: Minor Residential	$300(flat fee)
b.	Level I: Site Alteration	$200
c.	Level II: Site Plan	$400
d.	Level III: Site Plan	
	i. Under 50,000 sf	$500
	ii. 50,000-100,000 sf	$1,000
	iii. 100,000-200,00 sf	$2,000
	iv. 200,000-300,000 sf	$3,000

v. Over 300,000 sf $5,000

vi. Parking lots over 100 spaces $1,000

e. Master Development Plan $1,000

f. After the Fact Review $1,000 plus application fee

g. Amendment to Site Plans

i. Planning Board Review $500

ii. Administrative Review $250

h. Other Site Plan Reviews

i. Administrative Authorization $50

ii. Special Exception Sign Review $75

iii. Section 14-403 Street Extensions $400 plus $25 per lot

i. Fee for Development Review Services

i. Planning fee per hour $40

ii. Legal fee per hour $75

iii. Third-party Review Fees assessed by the Third Party Professional

j. State Delegated Review Fees

i. Site Location of Development $3,000, except for residential projects which will be $200 per lot.

ii. Traffic Movement Permit $1,000

iii. Stormwater Quality Permit $250

k. Performance Guarantee

1. As required in Section 14-530 (b)(4).

l. Inspection Fees, as required in Section 14-530 (b)(5)

i. Level I: Site Alteration, Level II and Level III: 2% of the performance guarantee or as assessed by Planning or Public Works Engineer at $45 an hours with minimum inspection fee of $300 Level I: Minor Residential Inspection Fee $100 (flat fee).

m. Street vacation $2,000

(b) *Post-approval submissions.*

1. ***Final Plans.*** Following final site plan approval and prior to issuance of any building permit, the developer shall submit final plans meeting all the conditions of the site plan approval, including without limitation all streets, sewers, drainage structures and landscaping. Thereafter, limited and minor departures from the approved site plan shall be approved by the Public Services Authority as field changes pursuant to Section 14-532 below. Amendments or revisions to the approved site plan shall be reviewed by the Planning Authority pursuant to 14-532.

2. ***As-built plans.*** Upon completion of a Level II or Level III development, the applicant shall submit the as-built plans as specified in the Technical Manual.

3. *Performance Guarantee and Defect Guarantee*:

a. ***Performance Guarantee Required.*** Following approval of Level I, II and III site plan applications and prior to the issuance of a building permit, the developer shall post with the City a performance guarantee in the form and amount specified in section 14-501 specifying the completion of the required site plan improvements within two (2) years from the origination date of such guarantee. In no case shall the term of such guarantee be for a period of less than one (1) year, nor shall any

performance guarantee expire between October 30 and April 15 of the following year.

b. ***Required site improvements.*** Development improvements include, but are not limited to, sanitary sewers, storm drains, drainage systems, erosion control, catch basins, manholes, other improvements constructed chiefly below grade, slope stabilization, curbing, paving, sidewalks, lighting, landscaping and buffers.

c. ***Phased Project.*** A project may be reviewed and approved for up to thee (3) phases. A performance guarantee shall be posted for each phase. Each phase of such project shall be independent of subsequent phases and shall conform to all standards of this article in the event that subsequent phases do not go forward.

d. ***Exemptions.***

i. Level I minor residential development is exempt from performance guarantee requirements except for those projects that complete construction in the winter and the site work is incomplete due to weather conditions. A performance guarantee will be required that is sufficient to complete the remaining site work as approved on the site plan. The performance guarantee must be reviewed and approved by the Planning Authority prior to the release of a temporary certificate.

e. ***Abandoned site.*** In the event that a development is abandoned or the site improvements do not meet City standards as approved in the site plan, the performance guarantee may be utilized to stabilize, secure, complete and/or restore the site as may be necessary, including, but not limited to, revegetation of areas, grading and fencing.

f. ***Performance Guarantee Reductions.*** The developer shall be eligible to receive up to three reductions in the performance guarantee in a calendar year equal to the estimated cost of the completed

improvements. The developer shall submit a written request for a reduction that reports what work has been done and what is left to complete along with the associated costs to complete that work. In no case, however, shall any performance guarantee be reduced:

i. In any line item where improvements remain to be completed; or

ii. To a value which is less than the estimated cost of completing all remaining prescribed improvements for which a performance guarantee is required by section 14-530(b)4.b.

g. Notwithstanding any other provision of this section, no performance guarantee shall be reduced to less than the amount of the defect guarantee to be posted upon completion of the improvements.

h. ***Required One Year Defect Guarantee.*** Prior to the release of the performance guarantee, the developer shall provide an one-year defect guarantee, which shall not expire between October 30 and the following April 15. The amount of the defect guarantee shall be ten (10) percent of the initial amount of the performance guarantee.

4. *Inspection fee*:

a. ***Inspection fees and costs.*** At the same time that the developer posts a performance guarantee, the developer shall also initially pay to the City a site plan improvement inspection fee equal to two (2) percent of the estimated costs of required site improvements for which a performance guarantee is to be posted. At the conclusion of the project, and before a temporary or permanent certificate of occupancy is issued, the developer shall pay to the City the balance of any inspection fees actually incurred by the City in its review of the project.

b. The required inspection fee for all Level I Minor

Residential Development plans minimum—shall be one hundred dollars ($100.00) and for all other development the minimum inspection fee shall be three hundred dollars ($300.00).

5. *Certificates of Occupancy:*

a. *Temporary Certificates of Occupancy.*

i. Notwithstanding sections 14-463, 14-524(b) or any other provision of this Code, a certificate of occupancy may be issued for a development or portion of a development which has otherwise been completed in accordance with final site plan approval and all applicable provisions of this Code where the applicant submits a written request therefore to the Planning Authority stating those improvements which remain to be completed, the reasons why such improvements have not been completed, and the cost and time to complete the remaining work. In no event shall any temporary or permanent certificate of occupancy be issued where:

(a) Conditions exist which would justify denial of a certificate of occupancy under chapter 6; or

(b) Required improvements to the City right-of-way remain to be completed by the developer; or

(c) All access roads and any other roads and driveways required for the building or building(s) for which the certificate(s) are requested have not been improved to a passable condition; or

(d) A remaining balance for fees incurred by the City exists; or

(e) The developer otherwise is in violation of the City Code.

ii. Where a temporary certificate of occupancy is sought for a portion of any development prior to the completion of the entire development, the following standards shall be met, in addition to all applicable requirements set forth above, prior to the issuance of any certificate of occupancy:

(a) Those parking areas required for the portion of the development for which a certificate of occupancy is sought shall be available for use. Alternative arrangements must be made on-site for parking for any periods during which such parking areas will not be available for use.

(b) All foundation plantings and other landscaping required for the portion of a development for which a certificate of occupancy is sought shall be installed prior to the issuance of a certificate of occupancy. This requirement may only be waived where, in the opinion of the public works authority, landscaping improvements cannot practically be completed due to seasonal weather conditions.

(c) A performance guarantee shall be in place and in an amount sufficient to cover all remaining required improvements and not less than 10% of the initial performance guarantee amount.

iii. No temporary or permanent certificate of occupancy shall be issued to any portion of development where, in the opinion of the reviewing authority, the site conditions or work required to complete the development will endanger the health or safety of persons visiting or inhabiting the completed portion.

b. *Final Certificate of Occupancy.*

i. *Final Certificate.*

(a) All improvements which are not completed prior to the issuance of any temporary certificate of occupancy must be completed prior to the completion date specified in the performance guarantee required by section 14-525(j) or by the temporary certificate of occupancy, whichever occurs first, in order for a final certificate of occupancy to be issued by the City.

c. *Non-compliance.*

i. Non-compliance with temporary certificate of occupancy. Where any person accepts a temporary certificate of occupancy and does not complete the improvements as specified in the certificate, the City is authorized to enter upon such property itself or through its agents or contractors to complete such improvements with no liability therefore and may recover the costs thereof through the mechanic's lien procedure for the improvement of real property to the extent that the performance guarantee may be inadequate.

(Ord. No. 277-09/10, 7-19-10; Ord. No. 25-11/12, 8-15-11; Ord. No. 176-12/13, 4-22-13)

Sec. 14-531. Reserved.

Sec. 14-532. General requirements and enforcement.

(a) *Approved site plans and required permits.*

1. An approved site plan is a prerequisite to issuance of building, street opening or certificate of occupancy permits for development subject to the provisions of this ordinance, except the Planning Authority may grant written authorization for the release of a demolition or

interior building permit upon written request of the applicant describing the extent of proposed work. Any exterior demolition requires a performance guarantee for site stabilization.

2. Neither the acceptance of any application nor any determination or approval hereunder shall authorize the issuance of a permit under Chapter 6 (Building Code) for any use which would violate the provisions of Article III of this chapter.

3. No building permit, certificate of occupancy or street opening permit shall be issued until a final site plan, or applicable components thereof, has been approved under this article and such permit is determined to be consistent with the plan and any conditions of approval. In the event of any inconsistency between the approved site plan and any permit issued, the approved site plan shall control; provided, however, site plan approval shall not excuse failure to meet any independent requirement of any other law or ordinance.

4. The site shall be developed and maintained as depicted in the site plan and the written submission of the applicant. Modification of any approved site plan or alteration of a parcel which was the subject of site plan approval after May 20, 1974, shall require the prior approval of a revised site plan by the Planning Board or the Planning Authority pursuant to the terms of this article. Any such parcel lawfully altered prior to the enactment date of these revisions shall not be further altered without approval as provided herein. Modification or alteration shall mean and include any deviations from the approved site plan including, but not limited to, topography, vegetation and impervious surfaces shown on the site plan.

(b) *Revisions and amendments to Master Plans and approved site plans.*

1. *Amendments to a Master Development Plan.*

a. *Minor amendments.* A minor amendment to a Master Development Plan shall be defined as a change which is generally consistent with the approved

Master Developmetn Plan layout of buildings, circulation infrastructure, and open spaces, and:

(i) Does not propose any new general type of use beyond those approved initially;

(ii) Does not increase the building ground coverage, floor area ratio or residential density of the Master Development Plan;

(iii) Does not decrease any specified area regulations or enumerated parking ratios; and

(iv) Does not substantially change access, circulation, or infrastructure on or adjacent to the site.

The Planning Authority shall be authorized to approve such minor amendments to a Master Development Plan upon written application and explanation of the change(s) by the owner (or its agent) of the property. No further public hearings shall be required.

2. ***Approved site plan:*** If at any time before or during development the applicant requests minor amendments to an approved plan for Level III development, the Planning Authority may approve such minor amendments under the procedures for minor development, provided that they do not amount to a waiver or substantial alteration of the site plan, and do not affect any condition or requirement of the Planning Board. The applicant shall supply an application and written statement of the proposed amendment(s) and proposed amended plans to the Planning Authority, whose decision as to whether the amendment is minor shall be final. The Planning Authority shall determine if a notice of amendment shall be required and the extent of such notice based on the extent and nature of the proposed amendment to plan and the demonstrated public interest related thereto.

3. ***Limited In-Field Changes***: approved by the Public Services Authority must be in writing and submitted to the Planning Authority and are specifically limited to minor

variation necessary to deal with unforeseen difficulties that arise during the course of construction involving such technical detail as utility location and substitution of equivalent plantings and shall not include any substantial alteration of the approved plan or change any condition imposed by the Planning Board or Planning Authority.

(c) *Expiration of site plan approval.*

1. A site plan approved under this article shall expire twelve (12) months from the date of approval unless:

   a. Development has been undertaken in accordance with the approved plan and site work or building construction is ongoing. Any lapse in construction for a period in excess of twelve (12) months shall result in an expiration of the site plan; or

   b. Prior to the expiration of the site plan, such other time period is agreed upon, in writing, by the Planning Authority and the applicant, not to exceed three (3) years from the date of approval;

   Provided that such extensions may not be granted if changes to the City's zoning ordinance would render the development nonconforming in any respect or if changes in the subdivision or site plan ordinance or in the Public Services Technical Standards Manual or Planning and Development Design Standards would otherwise significantly impact the approved site plan as determined by the Director of Planning and Urban Development.

2. Where the approval or any related land use approval granted to the same applicant by any agency of the City with respect to the same development is appealed to any court by an opponent of the development, the applicant shall be granted further extensions, beyond the expiration of said period, where the applicant has exercised due diligence with respect to defending such appeal, which extensions shall not last beyond one (1) year from entry of final judgment.

(d) *Expiration of Master Development Plan:*

1. A Master Development Plan approved under this article shall expire six (6) years from the date of approval unless:

   a. Prior to the expiration nof the Master Development Plan, an applicant may submit a written request to the Planning Authority for an extension of a Master Development Plan approval and associated waivers. Only two (2) such extensions may be granted by the Planning Authority, and each such extension shall be limited to two (2) years from the date of expiration of the Master Development Plan. Provided there have not been substantial changes to the underlying zoning or site plan standards since the date of the Master Development Plan approval that would have a substantial impact on the Master Development approval, the Planning Authority may grant an extension. The Planning Authority may condition the extension on an amendment of the Master Development Plan to comply with such applicable ordinance or site plan standard changes provided that the Planning Authority may not require changes in the uses approved on the Master Development Plan or changes that would reduce the gross floor area of the buildings described or shown on the approved Master Development Plan. For the purposes of this provision, gross floor area includes the sum of the gross horizontal areas of each floor of each building or structure from the exterior face of exterior walls, or from the centerline of a wall separating two buildings, but excluding any space where the floor to ceiling height is less than six (6) feet. Any decision by the Planning Authority regarding the granting of an extension may be appealed to the Planning Board as provided for in Section 14-529;

   b. Approved major or minor amendments to a Master Development Plan do not alter the expiration date for the Master Plan that is based upon the original date of approval.

(e) *Enforcement.*

1. All construction or alterations to the site performed under authorization of building permits or certificates of occupancy issued for development within the scope of the article shall be in conformance with the approved final site plan or an amendment thereto under section 14-532. The Department of Planning and Urban Development shall institute or cause to be instituted any and all actions, legal or equitable, that may be appropriate or necessary for the enforcement of this article. Where work is required pursuant to the terms of chapters 24 or 25 as part of an approval granted under this article, such work shall be accomplished in the sequence established by the Public Services Authority. Where the Public Services Authority determines that work has been completed prior to the receipt of all approvals required by this article or which is out of sequence or is not in compliance with the standards of chapters 24 and 25, the Public Services Authority or an inspector from the Department of Planning and Urban Development may issue a stop work order. Work shall recommence only after such order has been lifted by the Department of Public Services or the Building Authority on the basis of an approved mitigation plan or action by the developer.

2. No alterations shall be made to a site with a pending or approved site plan application until:

   a. The performance guarantee has been posted and final site plans have been submitted to the Planning Authority.

   b. Written permission has been received from the Director of Planning and Urban Development or his/her designee. Such permission shall be granted only after submission of a written request describing the proposed scope of work to be conducted on the site and the planning authority concludes that the request is reasonable, time is imperative and the work will not compromise any aspect of the ensuing review process. All such work shall be done in compliance with information provided with the site plan application including, but not limited to, an erosion control plan. Such written permission shall not be required if the only work

proposed is the digging of test pits.

3. Where construction, alteration or modification to a site is performed without a valid site plan improvement permit, an after-the-fact permit shall be obtained from the Planning Board or Planning Authority, as applicable. The cost of an after-the-fact permit shall be as provided in section 6-18 of this code, plus the cost of engineering and administrative costs associated with the review and processing of the after-the-fact permit.

(Ord. No. 277-09/10, 7-19-10; Ord. No. 176-12/13, 4-22-13)

Sec. 14-533. Reserved.
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Sec. 14-539. Reserved.

Sec. 14-540. Evaluation of article V.

Within five years from adoption of the site plan ordinance, the planning board will evaluate the effectiveness of the ordinance in advancing Portland's vision for a sustainable City and report their findings to the City Council along with any recommendations for site plan ordinance amendments.

(Ord. No. 277-09/10, 7-19-10)

ARTICLE VI. BOARD OF APPEALS*

***Cross reference(s)--**Administration, Ch. 2; boards generally, § 2-31 et seq.; jurisdiction of board of appeals for zoning, § 14-471 et seq.

Sec. 14-541. Creation; composition.

There shall be a board of appeals of seven (7) members. Members of the board shall be residents of the city and shall not be officers or employees of the city or any of its agencies or departments.

(Code 1968, § 605.1; Ord. No. 438-74, 7-1-74; Ord. No. 107-76, § 1, 3-1-76; Ord. No. 545-76, § 1, 10-6-76; Ord. No. 147-79, § 1, 8-6-79)

Sec. 14-542. Appointment; terms.

The members of the board of appeals shall be appointed by the city council for terms of three (3) years. Terms shall be staggered so that the terms of no more than three (3) members shall expire in any calendar year. Such members shall serve until their successors are duly elected and qualified provided, however, that such service shall not extend to over one hundred twenty (120) days after expiration of their term.
(Code 1968, § 605.1; Ord. No. 438-74, 7-1-74; Ord. No. 107-76, § 1, 3-1-76; Ord. No. 545-76, § 1, 10-6-76; Ord. No. 148-79, § 1, , 8-6-79; Ord. No. 278-83, 11-7-83; Ord. No. 122-85, 8-19-85)

Sec. 14-543. Compensation.

Members of the board of appeals shall serve without compensation.
(Code 1968, § 605.1; Ord. No. 438-74, 7-1-74; Ord. No. 107-76, § 1, 3-1-76; Ord. No. 545-76, § 1, 10-6-76; Ord. No. 148-79, § 1, 8-6-79)

Sec. 14-544. Vacancies.

Permanent vacancies on the board of appeals shall be filled by the city council, in the same manner as other appointments under this article, for the unexpired term of a former member whose place has become vacant.
(Code 1968, § 605.1; Ord. No. 438-74, 7-1-74; Ord. No. 107-76, § 1, 3-1-76; Ord. No. 545-76, § 1, 10-6-76; Ord. No. 148-79, § 1, 8-6-79)

Sec. 14-545. Removal of members.

Any member of the board of appeals may be removed for cause by the city council at any time; provided, however, that before any such removal, such member shall be given an opportunity to be heard in his own defense at a public hearing.
(Code 1968, § 605.1; Ord. No. 438-74, 7-1-74; Ord. No. 107-76, § 1, 3-1-76; Ord. No. 545-76, § 1, 10-6-76; Ord. No. 148-79, § 1, 8-6-79)

Sec. 14-546. Chair.

The members of the board of appeals shall annually elect one (1) of their number as chair to preside at all meetings and hearings and to fulfill the customary functions of that office. In the absence of the chair, the secretary shall act as chair and shall have all the powers of the chair.
(Code 1968, § 605.2)

Sec. 14-547. Secretary.

The members of the board of appeals shall annually elect one (1) of their number as secretary. The secretary shall act as chair in the absence of the chair and shall fulfill the duties provided by statute and this article and have such other duties as may from time to time be provided by the rules of the board.
(Code 1968, § 605.3)

Sec. 14-548. Quorum and necessary vote.

No business shall be transacted by the board of appeals without a quorum, consisting of four (4) members, being present. The concurring vote of at least four (4) members of the board shall be necessary to grant any request or application or to sustain any appeal. Any matter that receives fewer than four (4) votes shall be deemed to have been denied.
(Code 1968, § 605.4; Ord. No. 545-76, § 2, 10-6-76; Ord. No. 106-07/08, 12-17-07)

Sec. 14-549. Meetings, hearing, and procedures.

(a) Regular meetings of the board of appeals shall be held at the call of the chair or as provided by the rules of the board. Special meetings shall be called by the chair at the request of any two (2) members of the board or at the request of the city council. All meetings and hearings of the board shall be open to the public.

(b) The board of appeals shall adopt its own rules of procedure for the conduct of its business not inconsistent with the statutes of the state and this article. Such rules shall be filed with the secretary and with the city clerk. Any rule so adopted which relates solely to the conduct of hearings, and which is not required by the statutes of the state or by this article, may be waived by the board upon good cause being shown.
(Code 1968, § 605.5)

Sec. 14-550. Public hearings.

(a) *Setting hearing.* For all matters properly brought before the board of appeals, the board shall select a reasonable time and place for a public hearing following the submission of the subject application.

(b) *Notice.* The secretary shall give notice of such public hearings in the form and manner and to the persons herein

specified. The notice shall include the time and place of such hearing, a description of the contents of the matter to be heard and the address or location of the property involved. Where notice by mail is required, it shall be mailed at least seven (7) days in advance of the hearing date by regular United States mail. Notices shall be given to each of the following as specified:

1. In all cases, to all residents of the city by publication in a newspaper of general circulation in the city at least once, not more than thirty (30) nor less than five (5) days before the date of the hearing, and by mail to each of the following persons, each of whom shall be made a party of record in each case: The applicant, the city council and the Planning Board;

2. In the case of hearings related to a use variance, nonconforming use, or a conditional use involving a particular parcel or tract of land, by mail to the owners of all the property within five hundred (500) feet of such parcel or tract;

3. In the case of hearings related to variances or appeals other than use variances, by mail to the owners of property directly abutting, and directly across a street or alley from the subject property;

4. For purpose of this section, the owners of property shall be considered to be the parties listed by the assessor's department as those against whom taxes are assessed. Failure of any property owner to receive a notice of public hearing shall not necessitate another hearing and shall not invalidate any action of the board.

(c) ***Conduct of hearings:***

1. ***Rights of all persons.*** Any person may appear and testify at a public hearing, either in person or by a duly authorized agent or attorney, and may submit documentary evidence, provided, however, that the board shall exclude irrelevant, immaterial and unduly repetitious evidence.

2. ***Rights of parties.*** The applicant and any interested party shall in addition have the following rights:

   a. To present witnesses on their own behalf and offer

rebuttal evidence;

b. To cross-examine all witnesses testifying in opposition to their position through the chair; and

c. To examine and introduce any documents produced at the hearing.

3. *Board rules to govern.* All other matters pertaining to the conduct of hearings shall be governed by the provisions of the relevant state statutes, this article, and the rules promulgated by the board of appeals.

(Code 1968, § 605.6; Ord. No. 349-78, 6-26-78)

Sec. 14-551. Records and decisions.

(a) The transcript of testimony, if any, together with the minutes of the secretary and all exhibits, papers, applications and requests filed in any proceeding before the board of appeals and the decision of the board shall constitute the record.

(b) Every decision of the board of appeals shall include findings of the fact, shall refer to the evidence in the record and the exhibits, plans or specifications upon which such decision is based, shall specify the reason or reasons for such decision, and shall contain a conclusion or statement separate from the findings of fact setting forth the specific relief granted or denying relief.

(c) The secretary shall cause notice of any decision of the board to be delivered or mailed to the applicant, city council and Planning Board within five (5) days of such decision.

(Code 1968, § 605.7)

Sec. 14-552. Conflicts.

No member of the board of appeals shall participate in the hearing or disposition of any matter in which he has an interest. Any question of whether a member has a conflict of interest sufficient to disqualify him shall be decided by a majority vote of the members, except the member who is being challenged; where such a vote results in a tie, the challenged member shall be deemed disqualified.

(Code 1968, § 605.8)

Sec. 14-553. Appeals.

An appeal from any final decision of the board of appeals may be taken by any aggrieved party to the superior court in accordance with Rule 80B of the Maine Rules of Civil Procedure.
(Code 1968, § 605.9)

Sec. 14-554. Reserved.
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ARTICLE VII. CONDOMINIUM CONVERSION

Sec. 14-565. Purpose.

The purpose of this article is to regulate the conversion of rental housing to condominiums; to minimize the potential adverse impacts of such conversion on tenants; to ensure that converted such housing is safe and decent; and to maintain a reasonable balance of housing alternatives within the city for persons of all incomes. To these ends, this article shall be liberally construed.
(Ord. No. 213-81, § 608.1, 11-16-81)

Sec. 14-566. Applicability.

This article shall apply to the conversion of any rental unit to a condominium unit.
(Ord. No. 213-81, § 608.2, 11-16-81)

Sec. 14-567. Definitions.

For the purpose of this article, the following terms shall be defined as follows, unless otherwise clearly implied:

Condominium means any interest in real estate created pursuant to the Unit Ownership Act, 33 M.R.S.A. § 560 et seq., or its equivalent, as it may from time to time be amended.

Developer means and includes any person or other legal entity, but not including an established lending institution unless it is an active participant in a common promotional scheme, who, whether acting as principal or agent, records a declaration of condominium that includes real estate, any portion of which was previously a rental unit.

Tenant means and includes any occupant in lawful possession of a rental unit, whether by lease, sublease, or otherwise.

Unit means any building, or portion thereof, used or intended to be used primarily as a separate dwelling.
(Ord. No. 213-81, § 608.3, 11-16-81)

Cross reference(s)--Definitions and rules of construction generally, § 1-2.

Sec. 14-568. Protection of tenants.

(a) *Notice of intent to convert.* A developer shall give to each tenant written notice of intent to convert at least one hundred twenty (120) days before the tenant is required by the developer to vacate. If a tenant has been in possession of any unit within the same building for more than four (4) consecutive years, the notice period shall be increased by thirty (30) additional days for each additional year, or fraction thereof, to a maximum of two hundred forty (240) additional days. The notice shall set forth specifically the rights of tenants under subsections (a) and (b) of this section and section 14-569, and shall contain the following statement:

If you do not buy your apartment, the developer of this project is required by law to assist you in finding another place to live and in determining your eligibility for relocation payments. If you have questions about your rights under the law, or complaints about the way you have been treated by the developer, you may contact the Building Inspection Division, Department of Planning and Urban Development, City of Portland, 389 Congress Street, Portland, Maine 04101 (telephone: 874-8703).

If the notice specifies a date by which the tenant is required to vacate, the notice may also serve as a notice of termination under the applicable law of forcible entry and detainer, if it meets the requirements thereof. The notice shall be hand-delivered to the tenant or mailed, by certified mail, return receipt

requested, postage prepaid, to the tenant at the address of the unit or such other address as the tenant may provide. The notice shall be effective when actually received. No tenant may be required by a developer to vacate without having been given notice as required herein, except for the reasons specified in the applicable law of forcible entry and detainer, and in accordance with the procedures thereof. The terms of a tenancy, including rent, may not be altered during the notice period, except as expressly provided in a preexisting written lease. If, within one hundred twenty (120) days after a tenant is required by a developer to vacate, the developer records a declaration of condominium without having given notice as required herein, the developer shall be presumed to have converted in violation of this article.

(b) ***Option to purchase.*** For a sixty-day period following the giving of notice as required in subsection (a), the developer shall grant to the tenant an exclusive and irrevocable option to purchase the unit of which the tenant is then possessed, which option may not be assigned. If the tenant does not purchase or contract to purchase the unit during the sixty-day period, the developer may not convey or offer to convey the unit to any other person during the following one hundred eighty (180) days at a price or on terms more favorable than the price or terms previously offered to the tenant, unless the more favorable price or terms are first offered exclusively and irrevocably to the tenant for an additional sixty-day period. This subsection shall not apply to any rental unit that, when converted, will be restricted exclusively to nonresidential use. If, within two (2) years after a developer records a declaration of condominium, the use of any such unit is changed such that but for the preceding sentence, this subsection would have applied, the developer shall be presumed to have converted in violation of this article.

(Ord. No. 213-81, § 608.4, 11-16-81)

Sec. 14-569. Relocation payments.

If the tenant does not purchase the unit, the developer shall, before the tenant is required by the developer to vacate, make a cash payment to the tenant in an amount equal to the amount of rent paid by the tenant for the immediately preceding two (2) months; provided that this requirement shall not apply to any tenant whose gross income exceeds eighty (80) percent of the median income of the Portland SMSA, adjusted for family size, as determined by the U.S. Department of Housing and Urban Development at the time notice is given as required in section 14-568(a). Additionally, the

developer shall, upon demand, provide assistance to the tenant in the form of referrals to other reasonable accommodations and in determining the tenant's eligibility for relocation payments as provided herein.
(Ord. No. 213-81, § 608.5, 11-16-81)

Sec. 14-570. Conversion permit.

Before conveying or offering to convey a converted unit, the developer shall obtain a conversion permit from the building inspection division of the department of planning and urban development. The permit shall issue only upon receipt of a completed application therefor in a form to be devised for that purpose, payment of a fee of one hundred and fifty dollars ($150.00) per unit, and a finding, upon inspection, that each unit, together with any common areas and facilities appurtenant thereto, is in full compliance with all applicable provisions of article II of chapter 6 (building code), article III of chapter 6 (electrical installations), article V of chapter 6 (minimum standards for dwellings) and article II of chapter 10 (fire prevention code) of this Code, and the Life Safety Code as adopted by the state. The developer shall post a copy of the permit in a conspicuous place in each unit, and shall make copies available to prospective purchasers upon request.
(Ord. No. 213-81, § 608.6, 11-16-81)

Sec. 14-571. Variation by agreement.

No provision of, or right conferred by, this article may be waived by a tenant, by agreement or otherwise, and any such waiver shall be void. Any attempt to require, encourage, or induce a tenant to waive any provision hereof, or right conferred hereby, shall be a violation of this article. Nothing herein shall be construed to void any term of a lease which offers greater rights than those conferred hereby.
(Ord. No. 213-81, § 608.7, 11-16-81)

Sec. 14-572. – 14-582. Reserved.

ARTICLE VIII. REGULATION OF EXPLOSIVES*

***Editor's note--**Ord. No. 125-98, adopted Oct. 19, 1998, repealed Art. VIII, §§ 14-583--14-585, relative to moratorium on residential developments.

Formerly, such provisions derived from Ord. No. 152-81, §§ 607.1--607.3, adopted Aug. 17, 1981, and Ord. No. 180-87, adopted Nov. 2, 1987. The new Article VIII, regarding regulation of explosives, was passed on March 17, 2003.

Sec. 14-583. Purpose.

The purpose of this ordinance is to protect the public's health, safety and general welfare by regulating and controlling blasting operations within the City.
(Ord. No. 177-02/03, 3-17-03)

Sec. 14-584. Applicability.

This ordinance shall apply to all blasting operations related to construction and development of real estate within the City. The City of Portland Technical Manual is incorporated into this section by reference. Standards listed in the Technical Manual shall be additional to the provisions of this article.
(Ord. No. 177-02/03, 3-17-03; Ord. No. 74-10/11, 11-15-10)

Sec. 14-585. Definitions.

For the purposes of this Article, the following words and phrases shall have the respective meanings ascribed to them:

Blasting plan means the detailed plan for conduct of any blasting operations, and any amendments thereto where over three hundred (300) cubic yards of material shall be removed, which plan has been reviewed by the Planning and Urban Development Department in accordance with the provisions of this ordinance.

Blasting operations means the use of explosives for purposes of breaking up and removing soil, rock and ledge, related to construction and development of real estate within the City.

Blasting permit means a permit issued by the City Fire Department in accordance with the provisions of this ordinance to allow blasting operations within the City.

Blasting submittal means the plan for conduct of any blasting operation where between fifty (50) and three hundred (300) cubic yards of material shall be removed, which plan has been submitted to the Planningand Urban Development Department in accordance with

the provisions of this ordinance.

Explosives means any material or container containing a chemical compound or mixture that is commonly used or intended for the purpose of producing an explosion and that contains any oxidizing and combustible materials or other ingredients in such proportions, quantities, or packaging that an ignition by fire, by friction, by compound or mixture may cause such a sudden generation of highly heated gasses that the resultant gaseous pressures are capable of producing destructive effects on contiguous objects, but shall not mean the components for handloading rifle, pistol and shotgun ammunition, or fireworks.
(Ord. No. 177-02/03, 3-17-03; Ord. No. 74-10/11, 11-15-10)

Sec. 14-586. Administration.

(a) This ordinance shall be administered by thePlanning and Urban Development Department and the Fire Department, which departments shall have the ability to promulgate amendments to the standards listed in the City of Portalnd Technical Manual that implement this ordinance.

(b) City Council shall enact the initial Rules required for implementing this Article.

(c) The procedure for amendment of rules shall be as follows:

1. Department staff shall draft proposed rule amendments to the technical standards for presentation to the Planning Board.

2. The Planning Board shall hold a public hearing on the proposed rule amendments and provide interested parties an opportunity for comment, both written and oral, on the proposed rule amendments.

3. The department shall review comments made by the Planning Board and interested parties and make changes to the proposed rule amendments at its discretion. The amendments to the rules shall go into effect within thirty (30) days of the public hearing held by the Planning Board.

(Ord. No. 177-02/03, 3-17-03; Ord. No. 74-10/11, 11-15-10)

Sec. 14-587. Permit Required.

No person may conduct blasting operations within the City without first obtaining a permit from the Fire Department, as required by the National Fire Protection Association 1 Fire Prevention Code, as adopted and amended in section 10-16 et seq. Of this Code. Fees for this permit shall be as established by Order of the City Council.
(Ord. No. 177-02/03, 3-17-03)

Sec. 14-588. Application Requirements.

Prior to the issuance of a permit pursuant to section 14-587 the following information shall be submitted to the City:

(a) A blasting plan shall be submitted by the applicant to the Planning and Urban Development Department for all projects where more than three hundred (300) cubic yards of material shall be removed. The blasting plan shall conform to the provisions of this section and of Section 3 of the City of Portland Technical Manual.

(b) A blasting submittal shall be submitted to the Planning and Urban Development Department where between fifty (50) and three hundred (300) cubic yards of material shall be removed. The blasting submittal shall conform to the provisions of this section and of Section 3 of the City of Portland Technical Mannual.

(c) A blasting application shall be submitted to the Planning and Urban Development Department where less than fifty (50) cubic yards of material shall be removed, or where utility trench work in the accepted public right of way, including City or Portland Water District infrastructure is proposed. Small blasts where less than fifty (50) cubic yards of material shall be removed, are not required to submit either a blasting plan or blasting submittal. Such projects must conform to the National Fire Protection Association Fire Prevention Code and applicants shall submit a monitoring report upon request. Information provided in the blasting application shall confirm that the proposed small blast conforms to all applicable provisions of this ordinance and of Section 3 of the City of Portland Technical Manual.

(d) A blasting plan or blasting submittal may be required for

any blasting operation at the discretion of the Planning and Urban Development Department when it determines that conditions at or near the site of the blasting operations warrant the provision of a plan.

(Ord. No. 177-02/03, 3-17-03; Ord. No. 74-10/11, 11-15-10)

Sec. 14-589. Storage and handling.

All explosives shall be stored and handled in accordance with the provisions of this code, the laws of the State of Maine and the National Fire Protection Association 1 Fire Prevention Code.

(Ord. No. 177-02/03, 3-17-03)

Sec. 14-590. Enforcement.

(a) This ordinance shall be enforced by the Planning and Urban Development Department and the Fire Department. Either department shall have the authority to issue a written stop work order in the event of a violation of this ordinance or a failure to follow the approved blasting plan.

(b) The issuance of a stop work order may be appealed to the Director of Planning and Urban Development within two (2) business days of its issuance. The decision of the Director of Planning and Urban Development on the appeal shall be final.

(Ord. No. 177-02/03, 3-17-03; Ord. No. 74-10/11, 11-15-10)

Sec. 14-591. Penalties.

(a) In addition to the stop work order which may be issued pursuant to section 14-590, the Permittee shall be subject to the following penalties:

1st offence	$500.00
2nd offence	$1,000.00
Subsequent offences	$1,000.00.

(b) In the event that there are more than three documented violations of the blasting plan, blasting submittal, or blasting permit, the Planning and Urban Development Department and/or Fire Department shall have the right to issue a stop work order on all construction or development related to the permitted operation. The Permittee shall then be required to submit a revised blasting plan to the Planning and Urban Development Department for review and approval. Work shall not be allowed to continue until the revised

blasting plan is approved.
(Ord. No. 177-02/03, 3-17-03; Ord. No. 74-10/11, 11-15-10)

Sec. 14-592. Notice requirements.

(a) At least ten (10) days prior to the start of any blasting operation, notice shall be published in a newspaper of local publication and shall be mailed by first class mail to all property owners within the distance specified below of the perimeter of the blasting site:

> ***Small blast*** (trench blast or under fifty (50) cubic yards of rock removed): All property owners within two hundred and fifty (250) feet of the perimeter of the blasting site.
>
> ***Medium blast*** (removal of 50-300 cubic yards of rock material): All property owners within five hundred (500) feet of the perimeter of the blasting site.
>
> ***Large blast*** (removal of over 300 cubic yards of rock material): All property owners within six hundred (600) feet of the perimeter of the blasting site.

(b) Notice shall conform to the model notice contained in Section 3 of the City of Portalnd Technical Manual and shall include a description of the proposed blasting operations, estimated schedule and duration of blasting operations, description of the blasting signals to be used during operations, the complaint protocol and the complete address, telephone numbers and email contact for the blasting contractor, Planning andUrban Development Departmetn and Fire Departmetn where neighbors and property owners may request further information and notification.

(c) For medium blasts where 50-300 cubic yards of rock material is to be removed, and large blasts where over 300 cubic yards of rock material is to be removed, additional notification requirements shall apply during construction, as detailed in Section 3 of the City of Portland Technical Manual.

(d) If blasting operations are to occur within two hundred and fifty (250) feet of any structure, additional notification requriemetns shall apply, as detailed in Section 3 of the City of Portland Technical Manual, in order to prevent adverse public health and safety impacts due to blasting-related carbon monoxide

migration.
(Ord. No. 74-10/11, 11-15-10)

Sec. 14-593. Hours of blasting.

Blasting shall occur Monday through Friday, between the hours of 9am and 4pm, unless otherwise approved by the Planning and Urban Development Department. Requests for extension of hoursof blasting must be submitted by the applicant in writing.
(Ord. No. 74-10/11, 11-15-10)

Sec. 14-594. Waiver provision.

Upon written request by the applicant, the Planning and Urban Development Department, based on a positive recommendation by the Fire Department, may waive all or a portion of the blasting provisions of Section 3 of the City of Portland Technical Manual, provided thall all waivers are consistent with the purposes set forth in Section 14-583.
(Ord. No. 74-10/11, 11-15-10)

Sec. 14-595. Suspension of blasting operations.

If it is determined that blasting operations pose any risk to public health, safety or general welfare, the Director of Planning and Urban Development or the Fire Chief or their designee shall have the authority to suspend the blasting permit at any time until theydeem it safe for blasting operations to continue.
(Ord. No. 74-10/11, 11-15-10)

Sec. 14-596. – Sec. 14-600. Reserved.

ARTICLE IX. HISTORIC PRESERVATION

DIVISION 1. GENERALLY

Sec. 14-601. Purpose.

The purpose of this article is to promote the educational, cultural, economic and general welfare of the City of Portland by:

(a) Creating a mechanism to identify, preserve and enhance distinctive areas, sites, structures and objects that have historic, cultural, architectural and archeological

significance;

(b) Providing a resource of information and expertise to help those interested in rehabilitation or new construction in a district or restoring a landmark;

(c) Applying design standards in a reasonable and flexible manner to prevent the unnecessary loss of the community's historical features and to ensure compatible new construction and rehabilitation in historic districts while not stifling change and development or forcing modern recreations of historic styles;

(d) Fostering civic pride in the city's history and development patterns as represented in such distinctive areas, sites, structures and objects;

(e) Protecting and enhancing neighborhood character;

(f) Stabilizing and improving the values of designated properties and areas;

(g) Protecting and enhancing the attractiveness of the city to its home buyers, home owners, residents, tourists, visitors, businesses and shoppers;

(h) Fostering and encouraging preservation, restoration and rehabilitation that respects the historic, cultural, architectural and archeological significance of distinctive areas, sites, structures and objects.

(Ord. No. 235-90, 2-26-90; Ord. No. 165-08/09, 3-16-09)

Sec. 14-602. Definitions.

Alteration: Any act or process requiring a building permit and any other act or process not requiring a building permit but specifically listed in this article as a reviewable action, including without limitation the repair, reconstruction, demolition or relocation of any structure or object, or any part of a structure or object.

Applicant: A person who submits an application for issuance of a certificate of appropriateness.

Application: A form submitted for approval of alteration,

construction, demolition or removal that requires issuance of a certificate of appropriateness.

Business day: A day on which the department is open for business.

Certificate of appropriateness: A certificate issued by the department evidencing approval of specific plans for alteration of a structure or new construction on a site in accordance with this article.

Certificate of economic hardship: A certificate issued by the department evidencing a hardship variance approved by the board of appeals in accordance with division 8 of this article.

Certificate of non-applicability: A certificate issued by the department evidencing a determination that specific plans for alteration of a structure or new construction on a site do not require approval under this article.

Contributing: A classification applied to a site, structure or object within a historic district signifying that it contributes generally to the qualities that give the historic district cultural, historic, architectural or archeological significance as embodied in the criteria for designating an historic district, but without being itself a landmark.

Council: The city council.

Demolition: Any act or process that partially or totally destroys a structure or object.

Department: The department of planning and urban development.

Design guideline: Any design standard specified for alteration or new construction which is unique to a particular landmark, historic district or historic landscape district.

Design manual: The historic resources design manual described in section 14-675.

District: An historic district or historic landscape district.

Historic district: An area designated as an "historic district" by the council.

Historic landscape district: An area designated as an "historic landscape district" by the council.

Landmark: A property, site, structure or object designated as a "landmark" by the council as having a high degree of historical, cultural and/or architectural significance.

Level I site plan: As defined in article V of this chapter.

Level II site plan: As defined in article V of this chapter.

Level III site plan: As defined in article V of this chapter.

New construction: The adding to a structure by an addition; the erection or placement of any new structure on a lot or property; or the comprehensive redesign/renovation of an existing structure.

Noncontributing: A classification applied to a site, structure, object, or portion thereof, within a historic district signifying that 1) it does not contribute generally to the qualities that give the historic district cultural, historic, architectural or archaeological significance as embodied in the criteria for designating a historic district; 2) was built within 50 years of the date of district designation unless otherwise designated in the historic resources inventory; or 3) where the location, design, setting, materials, workmanship and association have been so altered or have so deteriorated that the overall integrity of the site, structure or object has been irretrievably lost. A portion of an otherwise contributing or landmark structure may be determined by the historic preservation board to be non-contributing if it meets one or more of the above conditions.

Object: Anything constructed, fabricated or created, the use of which does not require permanent or semi-permanent location on or in the ground.

Open space: Any park and any other area outside of a building open to the public.

Ordinary maintenance: Acts of maintenance or repair which do not include a change in the design, material or outer appearance of a structure, including without limitation repainting, replacement of materials or windows of the same scale, texture and color, and

landscaping other than within an historic landscape district.

Owner: The person or persons holding record title to the building, site or property; provided, however, the last previous tax roll in the records of the city assessor's office may be relied upon as showing record ownership in the absence of substantial evidence to the contrary.

Property: Land and improvements identified as a separate lot for purposes of subdivision, site plan, or zoning regulation.

Relocation: Any removal or relocation of a structure on its site or to another site.

Restoration: Any act which returns a structure or a feature of a structure to a prior state of historic significance.

Sign: As defined in section 14-47.

Site: The location of an event, activity, structure or object.

Street: The entire width between boundary lines of every way publicly owned and maintained or which way is open to the use of the public for purposes of vehicular or pedestrian traffic.

Structure: Anything constructed or erected, having a permanent or semi-permanent location on another structure or in the ground, including without limitation buildings, garages, fences, gazebos, advertising signs, billboards, antennas, satellite sending or receiving dishes, and swimming pools.
(Ord. No. 235-90, 2-26-90; Ord. No. 220-93, § 1, 5-17-93; Ord. No. 165-08/09, 3-16-09; Ord. No. 278-09/10, 7-19-10)

DIVISION 2. HISTORIC PRESERVATION BOARD

Sec. 14-603. Composition.

The historic preservation board shall consist of seven (7) voting members who shall serve without compensation. Members shall have demonstrated interest, knowledge, ability, experience or expertise in restoration, rehabilitation, or neighborhood conservation or revitalization and shall be residents of the city.
(Ord. No. 235-90, 2-26-90)

Sec. 14-604. Appointment and terms.

(a) Members shall be appointed by the council for terms of three (3) years. Appointments shall be staggered so that the terms of not more than three (3) members expire in any calendar year.

(b) Vacancies on the historic preservation board shall be filled within sixty(60) days. However, every member shall continue in office after expiration of the term until a successor has been appointed. Vacancies on the historic preservation board shall be filled for the unexpired term of the former member.
(Ord. No. 235-90, 2-26-90; Ord. No. 197-03/04, 9-8-04)

Sec. 14-605. Removal of historic preservation board member.

Members may be removed for cause by the council. Cause shall include, but is not limited to, the failure to attend meetings without good cause. Any member proposed to be removed shall be given written notice and an opportunity to be heard prior to final action.
(Ord. No. 235-90, 2-26-90)

Sec. 14-606. Officers.

(a) Officers of the historic preservation board shall consist of a chair and vice-chair.

(b) Officers shall be elected by the historic preservation board and shall serve a term of one (1) year and shall be eligible for re-election. No person shall serve as chair for more than two (2) consecutive years.

(c) The chair shall preside at all meetings and hearings and fulfill the customary functions of that office.

(d) In the absence of the chair, the vice-chair shall act as chair and shall have all the powers of the chair. The vice-chair shall have such other powers and duties as may from time to time be provided by the rules of the historic preservation board.

(e) The director of the department or his or her designated representative shall serve as staff secretary to the historic preservation board and shall attend all its meetings. The secretary shall provide for the keeping of tape recordings or minutes of the proceedings of the historic preservation board, showing the vote of

each member on every question or his or her absence or failure to vote, and shall maintain the records and decisions of all meetings, hearings and proceedings and all correspondence of the historic preservation board. Copies of permanent records shall be filed with the city clerk. The secretary shall publish and distribute copies of the minutes, reports and decisions of the historic preservation board to historic preservation board members and to others upon approval of the historic preservation board. The department shall assign necessary staff to assist the historic preservation board and the planning board in carrying out their responsibilities under this article.
(Ord. No. 235-90, 2-26-90)

Sec. 14-607. Meetings, hearing, procedures and decisions.

(a) Regular meetings of the historic preservation board shall be held no less frequently than monthly. Special meetings may be called by the chair or any four (4) members or at the request of the chair of the planning board.

(b) The historic preservation board may adopt procedural rules for the conduct of its business not inconsistent with this article, including the creation of a subcommittee structure to enhance efficiency in consideration of historic preservation board business. Such rules shall be filed with the secretary and with the city clerk. All such rules shall be subject to veto, in whole or in part, by the council within forty-five (45) days of such filing. The initial rules shall take effect when filed, subject to veto as provided above. Amendments to the rules shall take effect upon expiration of said veto period. Any rule may be waived by the chair upon good cause being shown.

(c) No final action shall be taken by the historic preservation board which could in any manner deprive or restrict the owner of a property in its use, alteration, maintenance, disposition or demolition, until such owner either has knowledge of the proceeding or is sent notice offering opportunity to be heard. This paragraph shall not affect the interim protection provisions of division 5.

(d) Every recommendation or recommended decision shall include written findings of fact and shall specify the reason or reasons for such action.

(e) The secretary shall mail notice of any final action of

the historic preservation board to the applicant and any designated interested parties and send a copy thereof to the planning board within five (5) business days following such action.
(Ord. No. 235-90, 2-26-90)

Sec. 14-608. Conflicts of interest.

No member of the historic preservation board shall participate in the hearing or disposition of any matter in which he or she has a pecuniary interest.
(Ord. No. 235-90, 2-26-90)

Sec. 14-609. Responsibilities.

The historic preservation board shall have the following responsibilities:

(a) To conduct or administer an ongoing survey to identify historically, culturally, architecturally and archaeologically significant areas, sites, structures and objects.

(b) To review all areas, sites, structures and objects listed in the National Register of Historic Places, including the boundaries of areas so listed, and make recommendations to the planning board and council for the adoption of ordinances designating those areas, sites, structures and objects as landmarks or districts.

(c) To investigate and recommend to the planning board the adoption of ordinances designating areas, sites, structures and objects not listed in the National Register of Historic Places as landmarks and districts and to make recommendations to the planning board concerning sites, structures and objects that have contributing significance or are intrusions within nominated or designated districts.

(d) To keep a register of all areas, sites, structures and objects that have been designated as landmarks or districts, including all information required as part of each designation.

(e) To create an appropriate system of plaques for identification of individual landmarks and make

recommendations for the design and implementation of specific marking of streets and routes leading from one (1) landmark or district to another.

(f) Upon request, to advise and assist owners of landmarks and property, sites, structures or objects within districts on physical and financial aspects of preservation, renovation, rehabilitation and reuse and for procedures for inclusion on other registers of significant areas, sites, structures and objects, including the National Register of Historic Places.

(g) To recommend to the planning board the nomination of areas, sites, structures and objects to the National Register of Historic Places or to any State of Maine Register of Historic Places that may be established.

(h) At the direction of the council, to prepare application for, and participate in, the "certified local government" program of the National Historic Preservation Act Amendments of 1980 and the Main Historic Preservation Commission; and carry out any responsibilities delegated to it under that program, including review and comment on any National Register nominations submitted to the historic preservation board; upon request of the council, participate in any review of federal actions or undertakings pursuant to Section 106 of the National Historic Preservation Act; attend informational and educational programs sponsored by the Maine Historic Preservation Commission; and prepare an annual report of the activities of the historic preservation board.

(i) To inform and educate the citizens of Portland concerning the cultural, historic, architectural and archeological heritage of the city by publishing appropriate maps, newsletters, brochures and pamphlets and by sponsoring programs and seminars.

(j) To hold meetings and public hearings to review applications for certificates of appropriateness affecting proposed or designated landmarks and districts; to recommend approval or disapproval of certificates of appropriateness.

(k) To provide testimony to the board of appeals in

connection with any application for a certificate of economic hardship.

(l) To develop design guidelines affecting landmarks or districts for review and approval by the planning board.

(m) To advise the planning board as to recommendations on any preservation or conservation easements that the City of Portland may have or be offered as a gift or otherwise.

(n) To advise the planning board as to the administration of such gifts, grants and money as may be appropriated for the purposes of this article upon authorization and approval by the council.

(o) To provide comment, as appropriate, to the planning board and/or city council on matters pertaining to historic preservation in Portland.

(p) To confer recognition upon the owners of landmarks or properties, sites, structures or objects within districts by means of certificates, plaques or markers.

(q) To assist the planning board in the development of a preservation component in the comprehensive plan of the City of Portland.

(r) To periodically review this Code and to make recommendations to the planning board concerning any amendments appropriate for the protection and continued use of landmarks or properties, sites, structures or objects within districts.

(s) To annually report to the council with respect to the following matters:

1. Survey work in progress or completed;

2. The number of projects reviewed (by type);

3. How many certificates of each type were issued.

(Ord. No. 235-90, 2-26-90; Ord. No. 165-08/09, 3-16-09)

DIVISION 3. CATEGORIES AND CRITERIA FOR DESIGNATION

Sec. 14-610. Minimum criteria for designation.

(a) The historic preservation board shall limit its consideration to the following criteria in making a determination on a proposed nomination of an area, site, structure or object for designation by ordinance as a landmark or district:

1. Its value as a significant example of the cultural, historic, architectural, archeological or related aspect of the heritage of the City of Portland, State of Maine, New England region, or the United States;

2. Its location as a site of a significant historic or prehistoric event or activity which may have taken place within or which involved the use of any existing structure on the property;

3. Its identification with a person or persons who significantly contributed to the cultural, historic, architectural, archeological or related aspect of the development of the City of Portland, State of Maine, New England region, or the United States;

4. Its exemplification of a significant architectural type, style or design distinguished by innovation, rarity, uniqueness or overall quality of design, detail, materials or craftsmanship;

5. Its identification as the work of an architect, designer, engineer or builder whose individual work is significant in the history or development of the City of Portland, the State of Maine, the New England region, or the United States; or

6. Its representation of a significant cultural, historic, architectural, archeological or related theme expressed through distinctive areas, sites, structures or objects that may or may not be contiguous.

(b) In the case of a nominated historic district, the historic preservation board shall also determine whether a substantial number of the properties, sites, structures or objects have a high degree of cultural, historic, architectural or archeological significance and integrity, many of which may qualify

as landmarks, and which may also have within its boundaries other properties, sites, structures or objects which, while not of such cultural, historic, architectural or archeological significance to qualify as landmarks, nevertheless contribute to the overall visual characteristics of the significant properties, sites, structures or objects located within it.

(c) In the case of a nominated historic landscape district, the historic preservation board shall also consider its significance as a geologic, natural or man-made landscape feature associated with the development, heritage or culture of the City of Portland, State of Maine, New England region, or the United States.

(d) The planning board and council shall apply the criteria of subsections (a), (b) and (c) but shall also consider the effect of such designation on other aspects of the comprehensive plan of the city.
(Ord. No. 235-90, 2-26-90)

Sec. 14-611. Integrity of landmarks and historic districts.

Any area, structure or object that meets the criteria in section 14-610 must also have sufficient integrity of location, design, condition, materials and workmanship to make it worthy of preservation or restoration.
(Ord. No. 235-90, 2-26-90)

Sec. 14-612. Designation of historic landscape districts.

An historic landscape district may be nominated and considered for designation only if the entire area of the district is owned by a unit of federal, state or local government, or any combination of such ownership.
(Ord. No. 235-90, 2-26-90; Ord. No. 220-93, § 2, 5-17-93)

Sec. 14-613. Reserved.

DIVISION 4. NOMINATION, CONSIDERATION AND DESIGNATION

Sec. 14-614. Procedure.

The provisions of this division shall govern the nomination, consideration and designation of landmarks and districts.
(Ord. No. 235-90, 2-26-90)

Sec. 14-615. Initiation of nomination.

(a) Nomination of an area, site, structure or object for consideration of designation as a landmark, historic district or historic landscape district shall be submitted to the department, on a form provided by the department, by the following:

1. Any two (2) members of the historic preservation board on their own initiative, by written notice to the department; or

2. By written petition of any owner, in the case of a landmark; or

3. By written petition of one (1) or more owners of affected property in the case of a district; provided two (2) members of the historic preservation board must sponsor the petition.

(b) A nomination shall be completed and filed with the department with all required signatures and any fees specified therefor for the nomination to be pending.

(c) Upon nomination, the department shall notify the owner or owners of the nomination and shall transmit the nomination to the historic preservation board for its consideration at its next scheduled meeting, which in no event shall be held later than thirty (30) days following nomination.

(d) At any time after a complete nomination is filed for an historic district, the owner of a structure who seeks a permit for demolition may apply to the historic preservation board for a determination that the structure to be demolished is noncontributing and eligible for a demolition permit. The determination of the historic preservation board that the structure is eligible for a permit shall be conclusive.
(Ord. No. 235-90, 2-26-90; Ord. No. 165-08/09, 3-16-09)

Sec. 14-616. Notification of nomination and public hearing.

(a) A public hearing on the nomination shall be held by the historic preservation board within thirty (30) days following the first scheduled meeting referred to in section 14-615(c), but in no event later than sixty (60) days following receipt of the completed

nomination form by the department. Notice of the nomination and of the public hearing shall be in accordance with the procedures for public hearings before the planning board for site plan approval.

(b) The hearing shall be conducted in accordance with procedures adopted by the historic preservation board. The historic preservation board shall consider all testimony or evidence relating to the designation criteria in division 3 from any person who makes written submissions or appears at the public hearing. Historic preservation board members may also present testimony or make submissions. The owner of a nominated landmark or of property within a nominated district shall be allowed reasonable opportunity to present testimony or evidence concerning the applicability of the designation criteria in division 3.
(Ord. No. 235-90, 2-26-90)

Sec. 14-617. Recommendation by historic preservation board.

Within thirty (30) days following the close of the public hearing, the historic preservation board shall make recommendation to the council in the case of a landmark, or to the planning board in the case of a district, upon the evidence as to whether the nominated landmark or district meets the criteria for designation in division 3. Such recommendation shall be approved by at least four (4) members of the historic preservation board and shall be accompanied by a report to the council or planning board containing the following information:

(a) Explanation of the significance or lack of significance of the nominated landmark or district as it relates to the criteria for designation.

(b) Explanation of the integrity or lack of integrity of a nominated landmark or historic district.

(c) Proposed design guidelines for review of alteration or construction. The specific design guidelines may provide explanation by text and/or schematic examples of visual compatibility for purposes of division 7.

(d) Relationship of the nominated landmark or district to the ongoing effort by the committee to identify and nominate all potential areas, sites, structures and objects that meet the criteria for designation.

(e) A map showing the location of the nominated landmark and the boundaries of the nominated district.

(f) A list, including the address, of every site, structure and object in each nominated historic district indicating their degree of cultural, historic, architectural or archeological significance by classification as of a landmark or contributing significance.

Where a motion either in favor of a recommendation or in opposition to a recommendation results in a vote of fewer than four (4) members, the item shall automatically be tabled to the next regularly scheduled meeting.
(Ord. No. 235-90, 2-26-90; Ord. No. 220-93, § 3, 5-17-93)

Sec. 14-618. Reserved.

Sec. 14-619. Notification of historic preservation board recommendation.

(a) The recommendation of the historic preservation board, including a copy of the report, shall be transmitted to the city council in the case of a landmark and to the planning board in the case of a district. Notice of the recommendation shall be sent by mail to the owner of a nominated landmark and to all owners within a nominated district within ten (10) business days following adoption of the recommendation and report.

(b) If the recommendation of the historic preservation board is that the property or district not be designated, the nomination process shall terminate and no new nomination shall be submitted for the identical property or area for a period of one (1) year from the date of termination, except upon a showing of substantial and material newly discovered information.
(Ord. No. 235-90, 2-26-90)

Sec. 14-620. Determination by planning board.

(a) The planning board, upon receipt of a recommendation and a report from the historic preservation board concerning nomination of a district, may hold a workshop meeting pursuant to the provisions of section 14-26. After review of the historic preservation board recommendation and report, the planning board shall hold a public hearing.

(b) All meetings, hearings and deliberations of the planning board to consider the recommendation and report of the historic preservation board shall be held in conformity with sections 14-24 through 14-28.

(c) The planning board may request the chair of the historic preservation board, or a member designated by the chair, to appear at any meeting, hearing or deliberation to explain any recommendation or report.

(d) The planning board shall make its final determination including written findings as to whether the nominated district meets the criteria for designation in division 3 within forty-five (45) days following receipt of the recommendation and report from the historic preservation board. A copy of the determination of the planning board shall be sent by regular mail to all owners within a nominated district within ten (10) business days following the determination.
(Ord. No. 235-90, 2-26-90)

Sec. 14-621. Planning board recommendation to city council.

The recommendation of the planning board regarding a nominated district shall be filed with the city clerk within ten (10) business days. It shall be accompanied by a copy of the report and recommendation of the historic preservation board and, in the case of a recommendation that the council designate a draft of a proposed designation ordinance, including any proposed design guidelines for review of alteration, construction, removal or demolition. The recommendation of the planning board may include proposed changes in other city ordinances, policies, infrastructure, or recommendations with respect to the comprehensive plan of the city relating to the proposed designation.
(Ord. No. 235-90, 2-26-90)

Sec. 14-622. Action by city council.

(a) Within sixty (60) days after the filing of a recommendation on the nomination with the city clerk pursuant to section 14-620, the council shall designate the landmark or district or reject designation. Any designation ordinance may include design guidelines for the designated landmark or district.

(b) Designation of a district shall be accompanied by a list,

including the address, of every site, structure and object in the district which is determined to be a landmark or considered to be contributing or noncontributing, indicating their degree of cultural, historic, architectural or archeological significance. This list may be amended thereafter by the council upon recommendation from the planning board under the same procedures as set forth above. Where there are no express findings by the council in the designation ordinance, there shall be a presumption that the council found that all requirements of sections 14-610 and 14-611 were met.

(c) Notice of the proposed action of the council shall be provided by mail to the nominator and the owner of the nominated landmark and/or of all properties adjacent thereto prior to council action. The notice shall include a copy of the resolution or designation ordinance and design guidelines.

(d) Notice of council action to the same persons shall be sent within ten business days following the council action. A copy of each designation ordinance and design guidelines shall be sent to the planning board, the historic preservation board and the department. A complete schedule of all landmarks and districts, including design guidelines and a listing of landmark and contributing structures, shall be maintained by the department as part of the design manual and shall be available for public inspection and copying during ordinary business hours.
(Ord. No. 235-90, 2-26-90; Ord. No. 165-08/09, 3-16-09)

Sec. 14-623. Amendment and rescission of designation.

Amendment and rescission of any designation shall be upon the request of a person or persons authorized to nominate the property or properties affected, or upon request of the council, and shall follow the procedure set forth in division 4 for designation. The council may rescind or amend a designation only after all of these procedures have been followed. The standards for rescission or amendment applied by the committee, planning board and council shall be limited to those provided in section 14-610(a) and section 14-611. Amendments may include refinement or correction of design guidelines, maps, and other parts of any designation ordinance.
(Ord. No. 235-90, 2-26-90)

Sec. 14-624.- Sec. 14-627. Reserved.

***Editor's note –** Order No. 197-03/04 adopted 9/8/04, repealed §14-625 Projects of Special Merit in its entirety.

Sec. 14-628. Time limits.

(a) Any time limit specified for any step in the process for nomination or designation of a landmark may be extended with the consent of the property owner.

(b) Any time limit specified for any step in the process for nomination or designation of a district may be extended where at least ten (10) percent of the owners of property within the boundaries of the proposed district have given written consent to the extension.

(c) Failure to comply with any time limit in the nomination and designation process as provided in divisions 3 or 4 shall not affect the validity of any designation nor the interim protection provided by division 5.

(Ord. No. 235-90, 2-26-90)

Sec. 14-629. Reserved.

DIVISION 5. INTERIM PROTECTION FOR NOMINATIONS

Sec. 14-630. Nominated landmarks and districts.

(a) From the time of nomination until the historic preservation board acts upon such nomination, a site, structure, object or area nominated but not yet designated as a landmark or district shall be subject to all of the provisions of divisions 8 and 10 governing demolition and minimum maintenance, to the same extent as if designated. Upon final action of the historic preservation board recommending designation, the site, structure, object or area nominated shall be subject to all of the protection of this article until a final decision on designation by the council becomes effective. If the council rejects designation or fails to designate a property, that property shall no longer be subject to the provisions of divisions 8 and 10 of this article.

(b) Alteration or new construction commenced pursuant to a building permit issued prior to nomination shall not require a certificate of appropriateness, unless such permit has expired,

been canceled or revoked. No project for which any application is pending, and which has received substantive review by the planning board prior to nomination, shall be affected by nomination. Substantive review, as used in this paragraph, shall include workshop review of any completed application under articles IV or V of this chapter.

(Ord. No. 235-90, 2-26-90; Ord. No. 220-93, § 4, 5-17-93; Ord. No. 165-08/09, 3-16-09)

Sec. 14-631. National Register of Historic Places.

(a) Every property, landmark or district listed in the National Register of Historic Places prior to adoption of this article, as shown in the design manual, is hereby designated as a landmark or district and shall be subject to all of the protection of this article, until such time as such designation is amended or rescinded as provided by section 14-623. Listed properties which would qualify for designation as historic landscape districts shall be subject to the applicable provisions of this article. If there is any inconsistency between the boundaries of any landmark or district as shown in the designation ordinance, if any, the design manual and/or the National Register, such inconsistency shall be resolved in favor of such ordinance and the design manual in that order. A certificate of appropriateness shall be obtained for every alteration or new construction affecting said listed properties and districts.

(b) Upon notice to the city that a property or area has been listed in the National Register after the adoption of this article, a nomination shall be deemed submitted to the historic preservation board for designation of such property or area as a landmark, historic district or historic landscape district under this article, and the procedures of this division shall be applicable thereto.

(Ord. No. 235-90, 2-26-90; Ord. No. 165-08/09, 3-16-09)

Sec. 14-632. Properties eligible for listing on National Register or for local designation.

A certificate of economic hardship shall be obtained prior to demolition of any structure which has not been designated in accordance with this article but which is eligible for listing on the National Register of Historic Places under the criteria established by 16 U.S.C. Section 470(a) or its successor statute and/or regulations made thereunder or which is eligible for local

listing under the criteria for designation of this article. The determination of eligibility for listing shall be made by the department, which may refer such a determination to the historic preservation board, and by the board of appeals if an appeal is taken. Upon determination of eligibility, the structure so determined shall also be subject to the provisions of division 10 until a final decision by the council on designation becomes effective. If the council rejects designation or fails to designate a structure which has been determined to be eligible under the terms of this section, that structure shall no longer be subject to the provisions of divisions 8 and 10 of this article.
(Ord. No. 235-90, 2-26-90; Ord. No. 220-93, § 5, 5-17-93)

Sec. 14-633. Reserved.

DIVISION 6. CERTIFICATES OF APPROPRIATENESS AND NONAPPLICABILITY

Sec. 14-634. Certificate of appropriateness required.

(a) Except as provided in sections 14-635 and 14-636, a certificate of appropriateness shall be required before the following actions affecting any landmark, contributing or noncontributing structures, objects, sites or property in a district may be undertaken and shall be a condition precedent to the issuance of any permit authorizing such work:

1. Any exterior alteration or new construction requiring a building permit from the City of Portland, including, but not limited to the following:

    a. Removal and replacement of architectural detailing including, but not limited to, porch spindles and columns, railings, window moldings and cornices;

    b. Moving of structures or objects on the same site or to another site;

    c. Construction of rooftop additions or decks;

    d. Alteration of accessory structures such as garages;

    e. Porch replacement or new construction of porches;

    f. Installation of exterior access stairs;

g. Window or door replacement requiring enlargement of openings;

h. Installation of antennas and satellite receiving dishes;

i. Installation of solar collectors.

2. Any exterior alteration that does not require a building permit but which involves any one (1) of the following activities:

a. Installation or replacement of either roofing or gutters where the roofing or gutters are a significant and integral feature of the structure including, but not limited to, mansard roofs, cupola roofs, ornamental slate roof features, and built-in gutter systems and the installation or replacement of siding;

b. Window and door replacement whether or not it requires enlargement of openings;

c. Masonry work including, without limitation, tuckpointing, sandblasting, chemical cleaning;

d. Site features other than vegetation including, without limitation, fencing, walls, paving and grading. However, required review for alterations to cemeteries designated under this article shall not include review of alterations to headstones made for the purpose of recognition of additional decedents or installation of grave markers and/or tombs;

e. Landscaping within an historic landscape district;

f. Exterior lighting where proposed in conjunction with commercial and institutional signage or awnings, where placed on street-fronting facades of designated structures;

g. Exterior utilities including mechanical, plumbing and electrical, where placed on street-fronting

facades.

3. Installation or alteration of any exterior sign.

4. Any relocation of a landmark or contributing structure within a district.

(b) There shall be a rebuttable presumption that any structure within a district shall be noncontributing unless the design manual expressly identifies it as such. Where the department or the owner believes that the identification is erroneous, the historic preservation board shall determine whether the structure is noncontributing.

(Ord. No. 235-90, 2-26-90; Ord. No. 220-93, § 6, 5-17-93; Ord. No. 62-93, 8-2-93; Ord. No. 165-08/09, 3-16-09)

Sec. 14-635. Exceptions to requirement of certificate of appropriateness.

A certificate of appropriateness is not required:

(a) Where a certificate of non-applicability has been issued within the previous twelve (12) months;

(b) Where the work consists solely of ordinary maintenance and/or restoration, provided that there is no substitution of materials or alteration of architectural details;

(c) Where the work consists solely of emergency repair of a temporary nature;

(d) Where a certificate of economic hardship has been issued and remains valid;

(e) In the case of either alteration of a structure (other than a landmark) or of new construction within a district, a certificate of appropriateness shall not be required where the department determines that the proposed exterior changes to a structure are not readily visible at pedestrian heights, when viewed at any height between four (4) and six (6) feet from any open space or street. Where a certificate of appropriateness is required for such changes, it shall be limited to those portions of the structure or structures so visible.

(Ord. No. 235-90, 2-26-90; Ord. No. 197-03/04, 9-8-04; Ord. No. 165-08/09, 3-16-09)

Sec. 14-636. Exterior work within historic landscape districts.

A certificate of appropriateness shall be obtained before any alteration or new construction within an historic landscape district may be undertaken, except where a certificate of non-applicability has been issued or where construction or alteration is pursuant to a master plan approved by a prior certificate of appropriateness within five (5) years of commencement.
(Ord. No. 235-90, 2-26-90; Ord. No. 165-08/09, 3-16-09)

Sec. 14-637. Applications for certificate of appropriateness.

(a) Application for a certificate of appropriateness shall be made on a form prepared by the city and shall be submitted to the department along with the applicable fee. Upon receipt of a complete application, the item shall be scheduled for the next available historic preservation board meeting, provided that the notice requirements of this article can be met prior to that meeting. The department shall transmit a copy of the complete application to the Planning Board and the historic preservation board, as applicable, at least four (4) days prior to their next scheduled meeting. The department shall not issue or act upon the application until the historic preservation board and the planning board, as applicable, have completed their review and approval process.

(b) An application for a certificate of appropriateness shall be treated as an application for a certificate of economic hardship under division 8, whenever the historic preservation board or the Planning Board, as applicable, determines that the proposed alteration includes any demolition which would:

1. Have the effect of causing the structure to no longer meet the criteria for designation of division 3; or

2. Materially impair the significance and integrity of the structure.

(c) Where a determination under paragraph (b) is made by the historic preservation board, the planning board shall review that decision as a preliminary matter, whether the historic preservation board has taken final action with respect to the application or

not. Upon any final determination that an application for a certificate of appropriateness is required to be treated as an application for a certificate of economic hardship, no further action shall be taken with respect to the application until that certificate is applied for and is granted.

(d) Where the applicant has done work or caused work to be done on a structure or a property for which a certificate of appropriateness is sought and such work is either not done in compliance with an approval received under this article or was performed without the approvals required under this article, no application for such structure or property shall be considered by the department or by the historic preservation board until such work is brought into compliance with the requirements of this article. The historic preservation board may waive this requirement if the historic preservation board determines that the work does not alter the essential character of the structure or district and one (1) or more of the following standards are also met:

1. The work was needed to bring a building into conformance with any building or safety code;

2. The applicant can demonstrate a good faith belief that necessary approvals had been received for the work at issue prior to the commencement of the work; or

3. The applicant can demonstrate a good faith belief that the work done was not subject to review under this article.

Review of any application by the department or by the historic preservation board shall not constitute waiver of any future claims by the city concerning violations and shall not stop the city from prosecuting any violation.

(e) Once a completed application has been submitted, it shall be diligently pursued. Failure of an applicant to attend two (2) or more historic preservation board meetings at which an application is scheduled for review shall cause the application to expire and to be deemed null and void, unless the department determines that good cause is shown for the failure to attend. Where good cause is shown for a failure to attend, the historic preservation board shall table an application to a date mutually agreed upon in writing.

(Ord. No. 235-90, 2-26-90; Ord. No. 220-93, § 7, 5-17-93)

Sec. 14-638. Review process for certificate of appropriateness, except as provided elsewhere in this division.

(a) The process for review of an application for a certificate of appropriateness shall be as follows, except to the extent specifically provided elsewhere in this division:

1. The department shall review the application and make a recommendation to the historic preservation board based upon the standards in division 7, except as provided in subsection (b) for historic plaques or markers. The recommendation of the department shall be made within (30) days of receipt of a complete application.

2. Whenever the recommendation of the department is that the application shall be approved, the application shall be placed upon the next consent agenda of the historic preservation board, except as provided in subsection (b). Any member of the historic preservation board may remove an application from the consent agenda for the purpose of giving it a public hearing.

3. Whenever the recommendation of the department is that the application not be approved or there is no timely recommendation, the application shall be scheduled for a public hearing at the next meeting of the historic preservation board which allows for adequate notice.

4. The historic preservation board shall either conduct a public hearing or make a decision on the application within thirty (30) days following receipt of the application from the department. The historic preservation board shall review the application and any negative recommendation of the department. If an item is scheduled for historic preservation board review, the historic preservation board shall cause notice of the application to be given to all property owners within one hundred (100) feet of the property at least seven (7) days prior to the date of the hearing.

5. The historic preservation board shall enter findings of fact concerning the relationship between the application and the applicable standards of division 7 immediately following a denial or conditional approval of any

certificate of appropriateness.

6. Written notice of the determination of the historic preservation board on the application, including a copy of the findings of fact, shall be sent by regular mail to the applicant and to the planning board within ten (10) business days following its determination.

7. The applicant and any owner of abutting property or of property located within the same district aggrieved by the decision may object to the proposed decision by filing a notice of objection with the department within thirty (30) days following the mailing of the notice of determination of the historic preservation board; provided, however, only the applicant may object where no building permit or site plan review is required for the work which requires the issuance of the certificate of appropriateness, and a proposed decision approving any such application shall be deemed final upon being reduced to writing and provided to the applicant. In the absence of filing of such objection, upon expiration of said thirty (30) days the proposed decision shall become final. If a timely objection is received, the application shall be placed on the planning board agenda and shall be disposed of in accordance with section 14-639. The planning board shall deny the appeal unless it finds that the action of the historic preservation board was arbitrary or capricious or was not based on substantial evidence. Review by the planning board under this section is intended to be appellate in nature. Except where the planning board determines that injustice would result, the planning board shall determine the appeal without considering any facts or arguments which were not presented to the historic preservation board. Where the planning board finds it necessary to consider such new evidence in order to do substantial justice, it shall remand the matter to the historic preservation board for further consideration, unless it determines that the resulting delay is likely to result in undue hardship to the applicant.

(Ord. No. 235-90, 2-26-90; Ord. No. 371-91, § 2, 6-5-91; Ord. No. 220-93, § 8, 5-17-93; Ord. No. 197-03/04, 9-8-04)

Sec. 14-639. Review process involving level III site plans.

The process for review of an application for alteration or new construction that is also a level III site plan as defined in Article V of this chapter shall be as follows:

(a) Site plan review by the planning board and historic preservation review by the historic preservation board shall, to the extent feasible, proceed concurrently. Any proposed level III site plan required to obtain a certificate of appropriateness under this article shall be exempt from the design standards included in article V as provided for in Sec. 14-526 (d)5a. of the site plan ordinance.

(b) Upon receipt of the application for a certificate of appropriateness, the department shall review the application and schedule a workshop for preliminary review by the historic preservation board. The historic preservation board shall conduct a workshop on the application within thirty (30) days following receipt of the application from the department. The department shall prepare an analysis of the application based upon the standards in division 7 for consideration at the workshop. The historic preservation board shall cause notice of the workshop to be given to all property owners within five hundred (500) feet of the property at least seven (7) days prior to the date of the meeting.

Additional workshops may be scheduled by the historic preservation board with the consent of the applicant.

(c) Following preliminary workshop(s) and upon determination by the historic preservation board that the application is complete, the historic preservation board shall conduct a public hearing and make a final decision on the application. The historic preservation board shall cause notice of the public hearing to be given consistent with the procedures outlined in (b) above.

(d) If the historic preservation board finds that the application meets the applicable standards of division 7, it shall issue a certificate of appropriateness, with or without conditions. If the action by the historic preservation board is a denial or conditional approval, the historic preservation board shall make findings of fact concerning the relationship between the application

and the applicable standards of division 7.

(e) Written notice of the determination of the historic preservation board on the application, including a copy of the findings of fact, if any, shall be sent by regular mail to the applicant within ten (10) business days following its determination.

(f) The applicant and any owner of abutting property or of property located within the same district aggrieved by the decision may object to the proposed decision as provided in Section 14-638(7).

(Ord. No. 235-90, 2-26-90: Ord. No. 63-97, 8-18-97; Ord. No. 197-03/04, 9-8-04; Ord. No. 165-08/09, 3-16-09; Ord. No. 278-09/10, 7-19-10)

Sec. 14-640. Review process involving installation or alteration of any exterior sign; minor alterations; and temporary alterations, construction or improvements.

(a) An application for a certificate of appropriateness for installation or alteration of any exterior sign; minor alterations; and temporary alterations, construction or improvements shall be reviewed by the department for compliance with the standards of division 7 and the design manual. Where the department determines that such an application meets these requirements, the certificate of appropriateness shall be issued by the department without presentation to the historic preservation board for approval. The department shall provide the historic preservation board with written notice of such action at the next historic preservation board meeting.

(b) If the department approves an application with conditions, the applicant may request review by the historic preservation board. The application shall then be subject to review by the historic preservation board pursuant to section 14-638.

(c) If the department determines that the application does not meet the requirements of division 7 and the design manual, the application shall be scheduled for review by the historic preservation board pursuant to section 14-638, unless the applicant withdraws the application.

(d) For purposes of this section only, temporary is defined as either a one-time occurrence that does not exceed fourteen (14) days or as an annual occurrence that does not exceed one (1)

fourteen-day period each year. Minor alterations are defined as incidental changes or additions to a building, site features or exterior utilities which require building permits but will neither result in substantial changes to any significant historic features nor obscure such features. In no event shall any change be deemed minor when, in the opinion of the department, such change shall alter the historic character of the building or site.
(Ord. No. 220-93, § 9, 5-17-93)

Sec. 14-641. Action by planning board.

Upon any appeal from the historic preservation board determination pursuant to section 14-638, the planning board shall review the appeal and the decision of the historic preservation board and shall take final action appeal within sixty (60) days following receipt of appeal; provided, however, whenever the planning board also is considering a site plan for development of the site, it shall proceed in accordance with the time frames applicable to site plan review. The planning board shall notify the applicant by regular mail within ten (10) business days following its decision on appeal.
(Ord. No. 235-90, 2-26-90; Ord. No. 197-03/04, 9-8-04)

Sec. 14-642. Issuance of certificate of appropriateness.

(a) The department shall issue the certificate of appropriateness within ten (10) business days following a proposed affirmative decision by the historic preservation board becoming final.

(b) Unless work authorized by a certificate of appropriateness shall be commenced within six (6) months of the date of issuance of the certificate of appropriateness, the certificate of appropriateness shall expire and shall become null and void. The department may approve additional extensions of this six-month period, not to exceed a total of two (2) years, provided that a written request for extension is received prior to the expiration date of the certificate of appropriateness. In the event of litigation arising out of the granting of a certificate of appropriateness, the certificate shall remain valid until one (1) year after the entry of final judgment in the litigation or until the end of the two-year period, whichever is later.
(Ord. No. 235-90, 2-26-90; Ord. No. 220-93, § 10, 5-17-93;Ord. No. 197-03/04, 9-8-04)

Sec. 14-643. Certificate of non-applicability.

(a) The department shall issue a certificate of non-applicability as to property subject to this article when requested to do so when:

1. The department determines that none of the proposed work requires a certificate of appropriateness;

2. The department determines that all of the proposed work is ordinary maintenance, restoration, or a combination thereof;

3. In the case of the alteration of a structure other than a landmark or of new construction within a district, where the department determines that the proposed exterior changes to a structure are not readily visible at pedestrian heights from any open space or street when viewed from any height between four (4) and six (6) feet above such space or street. Where a certificate of appropriateness is required for such changes, a certificate of non-applicability shall be issued upon request for those portions of the structure or structures not visible at such heights; provided, however, this paragraph shall not apply to alteration of a landmark or to any demolition; or

4. After any appeal where the historic preservation board, planning board or any court determines that paragraphs (1), (2) or (3) of this subsection are applicable.

(b) The department shall act upon any application for a certificate of non-applicability within five (5) business days of receiving a complete written description of all work to be undertaken.

(Ord. No. 235-90, 2-26-90)

Sec. 14-644. Amendments to approved certificates of appropriateness.

If at any time before or during work approved under the procedures set forth in this division the applicant requests minor amendments to approved work, the department may approve such minor amendments under the procedures set forth in section 14-638(b), provided that such amendments will not result in a waiver or

substantial alteration of the approval or any condition attached to the approval. The applicant shall supply a written statement of the proposed amendment and amended plans or drawings to the department. The decision of the department as to whether an amendment may be reviewed under this section shall be final.
(Ord. No. 220-93, § 11, 5-17-93)

Sec. 14-645. Review process for demolition of landmarks or structures within a district.

(a) Any applicant seeking demolition of a landmark or contributing structure must apply for a certificate of economic hardship to the board of appeals in accordance with division 8 of this article. Said application must be approved by the board of appeals before a demolition permit can be issued.

(b) Any applicant seeking demolition of a noncontributing building as defined in this article may apply directly for a demolition permit without receiving approval from the historic preservation board or a certificate of economic hardship from the board of appeals.

(c) Any applicant seeking demolition of a portion of a contributing or landmark structure may request that the historic preservation board make a determination as to whether such portion of the structure is non-contributing based on the definition of that classification contained in Sec. 14-602 of the ordinance. IF the board determines the portion to be noncontributing, the applicant may apply directly for a demolition permit.
(Ord. No. 165-08/09, 3-16-09)

Sec. 14-646. - Sec. 14-649. Reserved.

DIVISION 7. STANDARDS FOR REVIEW OF APPLICATION FOR CERTIFICATE OF APPROPRIATENESS

Sec. 14-650. Standards for review of alteration.

In considering an application for a certificate of appropriateness involving alteration, the historic preservation board and the Planning Board shall apply the following general standards, as further described in the design manual and any design guidelines in the ordinance designating the landmark or district:

(a) Every reasonable effort shall be made to provide a compatible use for a property which requires minimal alteration to the character-defining features of the structure, object or site and its environment or to use a property for its originally intended purpose.

(b) The distinguishing original qualities or character of a structure, object or site and its environment shall not be destroyed. The removal or alteration of any historic material or distinctive architectural features should be avoided when possible.

(c) All sites, structures and objects shall be recognized as products of their own time, place and use. Alterations that have no historical basis or create a false sense of historical development, such as adding conjectural features or elements from other properties, shall be discouraged.

(d) Changes which may have taken place in the course of time are evidence of the history and development of a structure, object or site and its environment. Changes that have acquired significance in their own right shall not be destroyed.

(e) Distinctive features, finishes and construction techniques or examples of skilled craftsmanship which characterize a structure, object or site shall be treated with sensitivity.

(f) Deteriorated historic features shall be repaired rather than replaced wherever feasible. Where the severity of deterioration requires replacement of a distinctive feature, the new feature should match the feature being replaced in composition, design, texture and other visual qualities and, where possible, materials. Repair or replacement of missing historic features should be based on accurate duplications of features, substantiated by documentary, physical or pictorial evidence rather than on conjectural designs or the availability of different architectural elements from other structures or objects.

(g) The surface cleaning of structures and objects, if appropriate, shall be undertaken with the gentlest means possible. Chemical or physical treatments, such as

sandblasting, that cause damage to historic materials shall not be undertaken.

(h) Every reasonable effort shall be made to protect and preserve significant archeological resources affected by or adjacent to any project. If resources must be disturbed, mitigation measures shall be undertaken.

(i) Contemporary design for alterations and additions to existing properties shall not be discouraged when such alterations and additions do not destroy significant cultural, historical, architectural or archeological materials that characterize the property. The new work shall be differentiated from the old and shall be compatible with the size, scale, color, material and character of the property, neighborhood or environment.

(j) Wherever possible, new additions or alterations to structures and objects shall be undertaken in such a manner that, if such additions or alterations were to be removed in the future, the essential form and integrity of the historic property would be unimpaired.

(Ord. No. 235-90, 2-26-90; Ord. No. 220-93, § 12, 5-17-93)

Sec. 14-651. Standards for review of new construction.

In considering an application for a certificate of appropriateness involving new construction, the historic preservation board and the planning board shall apply the following general standards as may be applicable to the context of the proposed construction. The intent and application of the following standards are further described in the historic resources design manual and shall guide the board in its review.

(a) *Scale and form:*

1. ***Height.*** In addition to the applicable requirements of articles III, IV and V of this chapter, the proposed height shall be visibly compatible with surrounding structures when viewed from any street or open space and in compliance with any design guidelines.

2. ***Width.*** The width of a building shall be visually compatible with surrounding structures when viewed

from any street or open space and in compliance with any design guidelines.

3. ***Proportion of principal facades.*** The relationship of the width to the height of the principal elevations shall be visually compatible with structures, public ways and open spaces to which it is visually related.

4. ***Roof shapes.*** The roof shape of a structure shall be visually compatible with the structures to which it is visually related.

5. ***Scale of a structure.*** The size and mass of structures in relation to open spaces, windows, door openings, porches and balconies shall be visually compatible with the structures, public ways and places to which they are visually related.

6. ***Applicability to Congress Street historic district.*** In the Congress Street historic district, for new construction within the B3 zone, the historic preservation board shall not impose conditions more restrictive than the dimensional requirements (Sec 14-220) of the B3 zone.

(b) ***Composition of principal facades:***

1. ***Proportion of openings.*** The relationship of the width to height of windows and doors shall be visually compatible with structures, public ways and places to which the building is visually related.

2. ***Rhythm of solids to voids in facades.*** The relationship of solids to voids in the facade of a structure shall be visually compatible with structures, public ways and places to which it is visually related.

3. ***Rhythm of entrance porch and other projections.*** The relationship of entrances and other projections to sidewalks shall be visually compatible with the structures, public ways and places to which they are visually related.

4. ***Relationship of materials.*** The relationship of the color and texture of materials (other than paint color) of the facade shall be visually compatible with the predominant materials used in the structures to which they are visually related.

5. ***Signs.*** Any new sign, and any change in the appearance of an existing sign located on a landmark within an historic district or within an historic landscape district, which is readily visible from any street or open space shall not be incongruous to the historic character of the landmark or district and shall comply with the criteria and guidelines specified in the design manual.

(c) ***Relationship to street:***

1. ***Walls of continuity.*** Facades and site structures, such as masonry walls, fences and landscape masses, shall, when it is a characteristic of the area, form cohesive walls of enclosure along a street to ensure visual compatibility with the structures, public ways and places to which such elements are visually related.

2. ***Rhythm of spacing and structures on streets.*** The relationship of a structure or object to the open space between it and adjoining structures or objects shall be visually compatible with the structures, objects, public ways and places to which it is visually related.

3. ***Directional expression of principal elevation.*** A structure shall be visually compatible with the structures, public ways and places to which it is visually related in its directional character, whether this be vertical character, horizontal character or nondirectional character.

4. ***Streetscape, pedestrian improvements.*** Streetscape and pedestrian improvements and any change in the appearance thereof located adjacent to, or on a landmark, within an historic district or within an

historic landscape district which is readily visible from any street or open space shall not be incongruous to the historic character of the landmark or district and shall comply with the criteria and guidelines specified in the design manual.

(d) *Other standards:*

1. ***Compatible uses.*** Every reasonable effort shall be made to provide a compatible use for a property which requires minimal alteration to the character-defining features of the structure, object or site and its environment or to use a property for its originally intended purpose.

2. ***Distinguishing original character.*** The distinguishing original qualities or character of a structure, object or site and its environment shall not be destroyed. The alteration of any historic material or distinctive architectural features should be avoided when possible.

3. ***Archeological resources.*** Every reasonable effort shall be made to protect and preserve significant archeological resources affected by or adjacent to any project. If resources must be disturbed, mitigation measures shall be undertaken.

4. ***Contemporary design.*** Contemporary design for additions to existing properties shall not be discouraged when such alterations and additions do not destroy significant cultural, historical, architectural or archeological materials that characterize the property. The new work shall be differentiated from the old and shall be compatible with the size, scale, material and character of the property, neighborhood and environment.

5. ***Additions.*** Wherever possible, new additions to structures and objects shall be undertaken in such a manner that, if such additions were to be removed in the future, the essential form and integrity of the structure would be unimpaired.

(Ord. No. 235-90, 2-26-90; Ord. No. 220-93, § 13, 5-17-93; Ord. No. 165-08/09, 3-

Sec. 14-651.5. Standards for review of alternations to or redesign of noncontributing structures.

(a) In considering an application for a certificate of appropriateness involving alteration(s) to a noncontributing structure the standards for review of alterations set forth in section 14-650 shall apply as applicable. The intent of the review shall be to ensure no further erosion of any existing architectural character of the subject structure determined to be significant by the historic preservation board and, where practicable, to guide projects toward a more compatible relationship with the surrounding context.

(b) In considering an application for a certificate of appropriateness involving comprehensive redesign of a noncontributing structure, the standards for review of construction set forth in section 14-651 shall apply.
(Ord. No. 165-08/09, 3-16-09)

Sec. 14-652. Standards for review of relocation.

In acting upon an application for a certificate of appropriateness involving relocation, the historic preservation board and the planning board shall apply the following general standards and any design guidelines in the ordinance designating the landmark or district:

(a) Whether the historic or urban design character and aesthetic interest of the structure or object contribute to its present setting.

(b) If located within a district, whether there are definite plans for the area to be vacated and what the effect of those plans is on the character of the surrounding area. In such cases, consideration of additional design guidelines for construction to be imposed as a condition of approval is appropriate.

(c) Whether the relocation of the structure or object can be accomplished without significant damage to its physical integrity.

(d) Whether the proposed relocation area is compatible with

the cultural, historical or architectural character of the structure or object.

(Ord. No. 235-90, 2-26-90)

Sec. 14-652.5. Standards for review of signage.

In considering an application for a certificate of appropriateness involving the installation or modification of sign(s), including awning(s) which incorporate signage, the following standard shall apply:

(a) Signs shall be compatible with the subject building and its surrounding context as detailed in the signage design guidelines included in the historic resources design manual. If there is a conflict between this standard and the requirements of Article III, Division 22. Signs, the stricter standard shall apply.

(Ord. No. 165-08/09, 3-16-09)

Sec. 14-653. Qualification of applicant.

Prior to issuance of any certificate of appropriateness, any applicant shall demonstrate sufficient right, title or interest in the property, technical capacity and financial capacity to complete any change proposed to be undertaken under the certificate of appropriateness, upon reasonable request of the department. If the department determines that the applicant has failed or refused to demonstrate an ability to complete the proposed activity, it shall refer the issuance to the Planning Board, which shall make a final determination as to whether the applicant has demonstrated a sufficient capability to complete the proposed activity. Notwithstanding any other provision of this article, the historic preservation board or Planning Board may include reasonable conditions, including the provision of adequate financial security, to ensure that actions taken under a certificate of appropriateness will be successfully prosecuted to completion, as approved, in a timely and workmanlike manner.

(Ord. No. 235-90, 2-26-90)

Sec. 14-654. - Sec. 14-659. Reserved.

DIVISION 8. CERTIFICATE OF ECONOMIC HARDSHIP

Sec. 14-660. Applicability.

(a) Any applicant denied a certificate of appropriateness by the planning board within thirty (30) days thereafter and any applicant seeking demolition of a landmark or a contributing structure within a district may make application for a certificate of economic hardship from the board of appeals. The application shall be submitted to the department, together with the applicable fee.

(b) The department shall transmit a copy of the application to the board of appeals, with copies to the Planning Board and the historic preservation board, within ten (10) business days following receipt of a properly completed application.
(Ord. No. 235-90, 2-26-90)

Sec. 14-661. Standard to be applied.

(a) The board of appeals shall approve an application for a certificate of economic hardship only upon a determination that the denial of approval of the proposed activity or of the proposed demolition will result in the loss of all reasonable use of the structure as required by sections 14-664 and 14-666.

(b) In applying this standard, the board of appeals shall consider among other things any evidence presented concerning the following:

1. Any opinions from a licensed engineer or architect with experience in renovation, restoration or rehabilitation as to the structural soundness of the structure and its suitability for continued use, renovation, restoration or rehabilitation.

2. Any estimates of the cost of the proposed alteration, construction, demolition or removal and an estimate of any additional cost that would be incurred to comply with the recommendations of the planning board for changes necessary for it to be approved.

3. Any estimates of the market value of the property in its current condition; after completion of the proposed alteration, construction, demolition or removal; after any expenditures necessary to comply with the recommendations of the planning board for changes

necessary for it to approve a certificate of appropriateness; and in the case of a proposed demolition, after renovation of the existing structure for continued use.

4. In the case of a proposed demolition, any estimates from architects, developers, real estate consultants, appraisers or other real estate professionals experienced in rehabilitation as to the economic feasibility of restoration, renovation or rehabilitation of any existing structures or objects.

(Ord. No. 235-90, 2-26-90)

Sec. 14-662. Information to be supplied by applicant.

(a) The applicant shall submit by affidavit the following information for an application to be considered to be complete:

1. The assessed value of the property and/or the structure in the case of a demolition for the two (2) most recent assessments.

2. Real property taxes paid for the previous two (2) years.

3. The amount paid for the property by the owner, the date of purchase and the party from whom purchased, including a description of the relationship, if any, between the owner and the person from whom the property was purchased.

4. The current balance of any mortgages or any other financing secured by the property and the annual debt service, if any, for the previous two (2) years.

5. All appraisals obtained within the previous two (2) years by the owner or applicant in connection with purchase, offerings for sale, financing or ownership of the property, or state that none were obtained.

6. All listings of the property for sale or rent, price asked and offers received, if any, within the previous four (4) years, or state that none were obtained.

7. All studies commissioned by the owner as to profitable renovation, rehabilitation or utilization of any

structures or objects on the property for alternative use, or a statement that none were obtained.

8. For income-producing property, itemized income and expense statements from the property for the previous two (2) years.

9. Estimate of the cost of the proposed alteration, construction, demolition or removal and an estimate of any additional cost that would be incurred to comply with the recommendations of the planning board for changes necessary for it to approve a certificate of appropriateness.

10. Form of ownership or operation of the property, whether sole proprietorship, for-profit or not-for-profit corporation, limited partnership, joint venture or other.

(b) In the event that the information required to be submitted by the applicant is not reasonably available, the applicant shall file with the affidavit a statement of the information that cannot be obtained and shall describe the reasons why such information is unavailable.

(c) Notwithstanding the submission of the above information, the board of appeals may require additional evidence as provided in section 14-680.

(Ord. No. 235-90, 2-26-90)

Sec. 14-663. Public hearing.

(a) The board of appeals shall hold a public hearing on the application within thirty (30) days following receipt of the completed application form. Where the application requests the demolition of a landmark or a contributing structure within a district, the public hearing shall not be held less than ninety (90) days following receipt of the completed application, unless the applicant makes a clear showing that the delay will result in undue hardship of a unique or exceptional character which could not reasonably be or have been avoided. Upon such a showing, the department may waive all or any part of the ninety-day period and schedule the hearing before the board. Undue hardship shall not include mere inconvenience or incidental financial loss. No such waiver shall be granted without the department giving best practical notice to all persons entitled to notice of the hearing.

(b) Notice of the application and of the public hearing, and conduct of the hearing, shall be in accordance with the provisions of section 14-550. Where the application requests the demolition of a landmark or a contributing structure within a district, the department shall promptly notify any persons interested in historic preservation, who have registered in writing with him or her, give notice by mail to all owners of property within five hundred (500) feet of the structure, and shall require that the applicant immediately place a notice, to be supplied by the building official, in a prominent place on the structure and to maintain it there at all times during the pendency of the demolition application. The notice shall be substantially in the following form:

"This structure has been proposed to be demolished by its owner. For further information, contact Inspection Services of the City of Portland. 874-8300"

(c) The failure to give any notice required hereunder shall not affect the validity of any action taken by the department or the board of appeals.

(d) The Planning Board may provide a report or any other information, documentation or evidence or request the historic preservation board to assist the board of appeals in considering the extent of variance necessary, an appropriate incentive plan, or reasonable condition to be imposed.

(e) The board of appeals may continue a proceeding for such additional time as it reasonably takes an applicant, any other interested person, the historic preservation board or the planning board to comply with a request for additional information or evidence. The applicant shall be afforded the right to present rebuttal evidence.
(Ord. No. 235-90, 2-26-90)

Sec. 14-664. Determination by the board of appeals.

(a) The determination by the board of appeals shall be made within forty-five (45) days following close of the public hearing and submission of all information, documentation or evidence requested by the board. The determination shall be accompanied by findings of fact.

(b) The board of appeals shall not grant approval of an application involving demolition, unless the board determines, upon clear and convincing evidence, that one (1) or more of the following circumstances apply:

1. The structure is not subject to this article; or

2. Denial of a demolition permit would result in a hardship to the property owner so great that it would effectively deprive the owner of all reasonable use of the structure. The extent of any demolition permitted shall be limited to the amount necessary to allow reasonable use of the structure. Where the condition of the structure is claimed to prevent any reasonable use, the applicant shall establish that such condition is not the result of the acts or neglect of the owner or his predecessors in title occurring in whole or in part after August 1, 1988.

(Ord. No. 235-90, 2-26-90)

Sec. 14-665. Disapproval by board of appeals.

If the determination of the board of appeals is to disapprove the application for a certificate of economic hardship, the applicant shall be notified within five (5) business days. The notice shall include a copy of the findings of fact and report.
(Ord. No. 235-90, 2-26-90)

Sec. 14-666. Determination of no reasonable use.

(a) If the determination of the board of appeals is that the denial of the certificate of appropriateness has resulted in the denial of all reasonable use of the structure, or the entire property in the case of new construction, then the certificate of economic hardship shall be issued by the department ninety (90) days following the determination unless during that time the council approves an incentive plan pursuant to section 14-667.

(b) A copy of the determination of the board of appeals, together with the findings of fact, shall be mailed to the applicant and filed with the city clerk, the planning board and the historic preservation board within five (5) business days following the determination of economic hardship.
(Ord. No. 235-90, 2-26-90; Ord. No. 165-08/09, 3-16-09)

Sec. 14-667. Incentive plan.

The purpose of an incentive plan is to provide a mechanism to allow a reasonable use without the demolition of the complete structure or important architectural elements. The Planning Board, in cooperation with the historic preservation board and the owner, may prepare a report and recommend to the board of appeals an incentive plan to assure reasonable use of the structure. This incentive plan may include, but is not limited to, loans or grants from the City of Portland or other public or private sources, acquisition by purchase or eminent domain, building and safety code modifications to reduce cost of maintenance, restoration, rehabilitation or renovation, changes in applicable zoning regulations, including a transfer of development rights, or relaxation of the provisions of this article sufficient to allow reasonable use of the structure.
(Ord. No. 235-90, 2-26-90)

Sec. 14-668. City council consideration of incentive plan.

(a) Upon receipt of a report from the board of appeals recommending an incentive plan to assure reasonable use of the property, the council shall give prompt consideration to the determination of economic hardship and the report of the board, including the recommended incentive plan. The council shall approve or disapprove the incentive plan determined by the board of appeals to allow reasonable use of the structure within ninety (90) days following the determination by the board of appeals.

(b) A copy of the ordinance enacted by the council, together with the incentive plan, if any, shall be mailed to the applicant and transmitted to the board of appeals, the planning board and the historic preservation board within five (5) business days following the enactment of the ordinance.
(Ord. No. 235-90, 2-26-90)

Sec. 14-669. Issuance of certificate of economic hardship.

(a) Upon receipt by the board of appeals of a copy of council action disapproving an incentive plan, or upon failure of the council to act to either approve or disapprove an incentive plan within the time specified, the board of appeals shall approve a certificate of economic hardship to the applicant within thirty (30) days. The certificate may be subject to conditions including design guidelines for subsequent new construction not inconsistent with the standards set forth in this article and the design manual.

The certificate of economic hardship shall be valid for a period of one hundred twenty (120) days from approval by the board of appeals, except as provided in section 14-666 where an incentive plan has been proposed. Certificates of economic hardship shall not be transferable from the applicant to another subsequent owner of the same property.

(b) Upon presentation by the applicant of a valid certificate of economic hardship to the department, the certificate of appropriateness shall be issued to the applicant within five (5) business days.
(Ord. No. 235-90, 2-26-90; Ord. No. 165-08/09, 3-16-09)

Sec. 14-670. - Sec. 14-674 Reserved.

DIVISION 9. ADMINISTRATION

Sec. 14-675. Historic resources design manual.

(a) The historic preservation board may provide further guidance on how to meet the standards of this article in the historic resources design manual, which shall supplement this article, which may include but need not be limited to maps and descriptions of landmarks and districts, a listing of properties which have been determined to be eligible for listing on the National Register or for local designation, a glossary of terms and architectural styles, descriptions, and illustrations of how the standards of this article will be interpreted, and all designation ordinances, reports and design guidelines. All provisions of the design manual shall be consistent with the standards of this article and any designation ordinance adopted hereunder.

(b) Amendments to the design manual shall be forwarded to the council as a communication and shall become effective forty-five (45) days from the date on which said amendments are sent to the council, unless the council takes official action disapproving the amendments, in whole or in part, prior to the expiration of the 45-day period.

(c) The design manual shall be maintained by the department and available for inspection and copying during regular business hours.
(Ord. No. 235-90, 2-26-90; Ord. No. 220-93, § 14, 5-17-93; Ord. No. 165-08/09, 3-16-09)

Sec. 14-676. Reserved.

Sec. 14-677. Costs.

Any project may be subject to one or more of the following fees:

(a) Project Review.

1. Administrative review, $50.00.

2. Historic Preservation board review: $100.00

3. Historic preservation board review for projects involving new construction or building additions exceeding 1000 square feet or comprehensive rehabilitation or redesign of existing structures: $750.00

4. After-the-fact review $1,000.00 plus applicable application fee.

5. Historic preservation sign review $75.00

6. Applicant shall also pay a fee to cover the professional and administrative costs for review and analysis associated with project review, including but not limited to planning, legal, or other services. The fee shall be based on the hours of review and processing time and prevailing hourly rate for reimbursement of city costs. The city shall periodically invoice the applicant for such costs incrred by the city, which invoice shall be paid promptly by the applicant. No certificate of appropriateness, building, demolition, or other permit shall issue until all current charges due under this ordinance have been paid. The balance of any remaining review and administrative costs invoiced or incurred after a permit has been issued shall be paid in full by the developer prior the issuance of any temporary or permanent certificate of occupancy.

(b) Advertising expenses.

Every applicant shall bear the entire expense of giving notice by mail and publication in accordance with this article.

(Ord. No. 235-90, 2-26-90; Ord. No. 220-93, § 15, 5-17-93; Ord. No. 119-01/02, § 5, 12-3-01; Ord. No. 165-08/09, 3-16-09; Ord. No. 223-09/10, 5-17-10)

Sec. 14-678. Notices and public comment.

(a) Except as provided in sections 14-638 and 14-639, notice of proceedings upon any application for a certificate of appropriateness shall be given only when the proposed activity otherwise constitutes level III site plan. Notice of such proceedings also shall be furnished to any persons interested in historic preservation who have registered with the department, and to the historic preservation board and/or the planning board when the proceeding is pending before a different body. The failure to give any notice required by this article shall not affect the validity of any action taken.

(b) The historic preservation board, the planning board, the board of appeals and the council shall each invite public comment at a public meeting in accordance with their respective rules, prior to any final action being taken under this article.

(c) The department shall advise the historic preservation board and the planning board of any demolition permit application received by the department as to structures or objects that are noncontributing within nominated or designated districts, but there shall be no historic preservation board review of such permit applications.
(Ord. No. 235-90, 2-26-90; Ord. No. 278-09/10, 7-19-10)

Sec. 14-679. Expiration of approval.

An approval shall expire and become null and void upon the expiration of the authorization for the work, or for the development, under the applicable provisions of chapter 6 or of articles IV or V of this chapter.
(Ord. No. 235-90, 2-26-90)

Sec. 14-680. Applicant to supply necessary evidence.

In determining the existence of the circumstances specified in this article, the historic preservation board, planning board or board of appeals may require such additional documentation or evidence as they may respectively determine to be necessary, including plans, drawings and elevations, and notwithstanding any time limit for action or decision specified in this article, it may

continue a proceeding for such additional time as it reasonably takes an applicant or any other party to comply with the request for additional relevant documentation or evidence and may draw a negative inference with regard to the content of any material evidence not produced upon reasonable request.
(Ord. No. 235-90, 2-26-90)

Sec. 14-681. Appeals.

(a) The applicant, or any person who has participated in opposition to the application and demonstrates a particularized harm caused by the approval of the application, may appeal to superior court in accordance with Rule 80B of the Maine Rules of Civil Procedure from:

1. Any final action of the planning board, provided, however, only the applicant may appeal where no building permit or site plan review is required for the work which requires the issuance of the certificate of appropriateness; or

2. Any final decision of the board of appeals. If the decision of the board of appeals is subject to an incentive plan, the decision shall not be considered final until final action on the incentive plan by the council becomes final.

(Ord. No. 235-90, 2-26-90; Ord. No. 197-03/04, 9-8-04)

Sec. 14-682. Reserved.
Sec. 14-683. Reserved.
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Sec. 14-688. Reserved.
Sec. 14-689. Reserved.

DIVISION 10. MAINTENANCE

Sec. 14-690. Preservation of protected structures.

(a) Minimum maintenance requirement. All landmarks, and all contributing structures located in an historic district, shall be preserved against decay and deterioration by being kept free from the following structural defects by the owner and any

other person or persons who may have legal custody and control thereof:

1. Deteriorated or inadequate foundation which jeopardizes its structural integrity;

2. Defective or deteriorated floor supports or any structural members of insufficient size to carry imposed loads with safety which jeopardize its structural integrity;

3. Members of walls, partitions or other vertical supports that split, lean, list or buckle due to defective material or deterioration which jeopardize its structural integrity;

4. Structural members of ceilings and roofs, or other horizontal structural members, which sag, split or buckle due to defective materials or deterioration or are of insufficient size to carry imposed loads with safety which jeopardize its structural integrity;

5. Fireplaces or chimneys which list, bulge or settle due to defective material or deterioration or are of insufficient size or strength to carry imposed loads with safety which jeopardize its structural integrity;

6. Lack of weather protection which jeopardizes the structural integrity of the walls, roofs or foundation.

(b) The owner or such other person shall repair such building, object or structure within a specified period of receipt of a written order to correct defects or repairs to any structure as provided by subsection (a) above, so that such structure shall be preserved and protected in accordance with the purposes of this article.

(c) Any such order shall be in writing, shall state the actions to be taken with reasonable particularity and shall specify dates for compliance, which may be extended by the department for reasonable periods to allow the owner to secure financing, labor or materials. Any such order may be appealed to the board of appeals within thirty (30) days. The board shall reverse such an order only if it finds that the department had no substantial justification for requiring action to be taken, that the measures required or

time periods specified were not reasonable under all of the circumstances. The taking of an appeal to the board or to court shall not operate to stay any order requiring structures to be secured or requiring temporary support, unless the board or court expressly stays such order. The court of competent jurisdiction to enforce any order.
(Ord. No. 235-90, 2-26-90)

Sec. 14-691. Reserved.
Sec. 14-692. Reserved.
Sec. 14-693. Reserved.
Sec. 14-694. Reserved.

DIVISION 11. PENALTIES, ETC.

Sec. 14-695. Fines for violation.

Failure to perform any act required by this article or performance of any act prohibited by this article or of any conditions or any certificate issued hereunder shall constitute a violation and be subject to a fine as provided in 30-A M.R.S.A. Section 4452. Each day on which there is failure to perform a required act or on which a violation exists shall constitute a separate violation for purposes of this section.
(Ord. No. 235-90, 2-26-90)

Sec. 14-696. Additional penalties for willful violation or gross negligence.

(a) In addition to the penalties authorized by section 14-695, a violation which is intentional, or occurs through gross negligence, shall be subject to the following provisions:

1. No permit shall be issued under chapter 6 of this Code for any alteration or new construction affecting such property for a period of five (5) years following the last date of the violation, other than permits necessary to correct the violation. However, upon presentation of evidence satisfactory to the planning board that the violation has been corrected, any remaining portion of the five-year prohibition on issuance of a permit may be waived.

2. For a period of twenty-five (25) years, any alteration or new construction on the property shall be subject to this

article, whether or not any remaining structure or object on the property continues to have the cultural, historical, architectural or archeological character and integrity that caused it to be nominated or designated as a landmark or part of a district.

3. As a condition for any new land use approval, the owner may be required to rebuild, reconstruct, restore or replicate the structure or object on the property.

(b) Paragraphs (1) and (2) of subsection (a) shall not apply to violations which are limited to noncontributing structures.
(Ord. No. 235-90, 2-26-90; Ord. No. 165-08/09, 3-16-09)

Sec. 14-697. Other remedies.

Notwithstanding the provisions of sections 14-695 and 14-696, the city may institute appropriate proceedings in law and equity to prevent or remedy any violation of this article.
(Ord. No. 235-90, 2-26-90)

Sec. 14-698. Liberal construction of article.

This article shall be liberally applied and construed to effectuate the purpose of preservation set forth in section 14-601.
(Ord. No. 235-90, 2-26-90)

Sec. 14-699. Exception for dangerous buildings.

This article shall not apply to any structure which has been ordered demolished by the municipal officers or a court, in accordance with 17 M.R.S.A. Section 2851 et seq., its equivalent, as it may be amended from time to time, or to any structure which has been partially destroyed and is determined by the department to represent an immediate hazard to the public health or safety, which hazard cannot be abated by reasonable measures specified by the department, including without limitation securing apertures and/or erecting fencing.
(Ord. No. 235-90, 2-26-90)

Sec. 14-700. Severability; effective date.

The provisions of section 1-14 shall apply to this chapter.

The provisions of this article shall be effective August 1,

DIVISION 12. LANDMARKS

Sec. 14-701. Structures designated as landmarks.

In addition to those structures designated as landmarks pursuant to section 14-631, the structures which are depicted as landmark buildings on the Map of Historic Districts with landmarks and historic landscape districts as adopted by the council and as amended from time to time shall be so designated.
(Ord. No. 42-91, 9-4-91; Ord. No. 165-08/09, 3-16-09)

Sec. 14-702. Historic landscape districts.

In addition to those areas designated as historic landscape districts pursuant to section 14-631, the areas which are depicted as historic landscape districts on the Map of Historic Districts with landmarks and historic landscape districts as adopted by the council and as amended from time to time shall be so designated.
(Ord. No. 61-93, 8-2-93; Ord. No. 165-08/09, 3-16-09)

Sec. 14-703. Historic districts.

In addition to those areas designated as historic districts pursuant to section 14-631, the following areas are depicted as historic districts on the Map of Historic Districts with landmarks and historic landscape districts as adopted by the council and as amended from time to time shall be so designated.
(Ord. No. 59-93, 8-2-93; Ord. No. 165-08/09, 3-16-09)

Sec. 14-704. Historic landmark sites.

In addition to those areas designated as historic landmark sites pursuant to section 14-631, the areas which are depicted as historic landmark sites on the Map of Historic Districts with landmarks and historic landscape districts as adopted by the council and as amended from time to time shall be so designated.
(Ord. No. 60-93, 8-2-93; Ord. No. 165-08/09, 3-16-09)

Sec. 14-705. Reserved.
Sec. 14-706. Reserved.
Sec. 14-707. Reserved.
Sec. 14-708. Reserved.
Sec. 14-709. Reserved.
Sec. 14-710. Reserved.

Sec. 14-711. Reserved.
Sec. 14-712. Reserved.
Sec. 14-713. Reserved.
Sec. 14-714. Reserved.
Sec. 14-715. Reserved.
Sec. 14-716. Reserved.
Sec. 14-717. Reserved.
Sec. 14-718. Reserved.
Sec. 14-719. Reserved.
Sec. 14-720. Reserved.
Sec. 14-721. Reserved.
Sec. 14-722. Reserved.
Sec. 14-723. Reserved.
Sec. 14-724. Reserved.
Sec. 14-725. Reserved.
Sec. 14-726. Reserved.
Sec. 14-727. Reserved.
Sec. 14-728. Reserved.
Sec. 14-729. Reserved.
Sec. 14-730. Reserved.
Sec. 14-731. Reserved.
Sec. 14-732. Reserved.
Sec. 14-733. Reserved.
Sec. 14-734. Reserved.
Sec. 14-735. Reserved.
Sec. 14-736. Reserved.
Sec. 14-737. Reserved.
Sec. 14-738. Reserved.
Sec. 14-739. Reserved.
Sec. 14-740. Reserved.
Sec. 14-741. Reserved.
Sec. 14-742. Reserved.
Sec. 14-743. Reserved.
Sec. 14-744. Reserved.
Sec. 14-745. Reserved.
Sec. 14-746. Reserved.
Sec. 14-747. Reserved.
Sec. 14-748. Reserved.
Sec. 14-749. Reserved.
Sec. 14-750. Reserved.

ARTICLE X. ALTERNATIVE ENERGY.

Sec. 14-751. Purpose.

The intent of this article is to allow the reasonable use of locally generated alternative sources of energy supply that help reduce greenhouse gas emissions consistent with the Sustainable Portland Report which was adopted on June 7, 2010. Alternative energy systems include but are not limited to wind, solar and geothermal energy generation.
(Ord. No. 33-11/12, 1-18-12)

Sec. 14-752. Reserved.

DIVISION 1. WIND ENERGY GENERATION.

Sec. 14-753. Purpose.

The purpose of this division is to allow for the construction and operation of public or private wind energy generation systems to produce energy for use on site or off site, by establishing appropriate locations and standards to ensure safe, effective and efficient use of wind energy systems compatible with surrounding uses.
(Ord. No. 33-11/12, 1-18-12)

Sec. 14-754. Applicability.

(a) No wind energy system, expansion of any existing wind energy system, or installation of any associated facilities, shall be installed unless it has been approved under this ordinance and has obtained a building permit and any other necessary state or local approvals prior to its installation. Wind energy generation systems determined to be permitted uses shall be reviewed and approved by the Zoning Administrator; wind energy systems determined to be conditional uses shall be reviewed and approved by the Zoning Board of Appeals (ZBA).

(b) Any physical modification to an existing and permitted wind energy system which alters the total rated capacity, the size or type of the system or its associated equipment shall require approval under this ordinance. Like-kind replacements or non-structural maintenance and repair shall not require approval under this ordinance but shall require a building permit.
(Ord. No. 33-11/12, 1-18-12)

Sec. 14-755. Definitions.

For the purposes of this division, the following words and phrases shall have the following meanings:

Abandonment: The date at which a wind energy system has been out

of service for a continuous period of 6 months.

***DEP certification*:** Certification issued by the Maine Department of Environmental Protection (Maine DEP) pursuant to Title 35-A M.R.S.A. § 3456 for a wind energy development.

Horizontal wind energy system: A wind energy system that utilizes a generator shaft that is parallel to the ground and usually mounted on a tower.

Lattice tower: A tower constructed of vertical metal struts and cross braces forming a square or triangular structure in horizontal cross-section, which may or may not be supported by external guy wires and anchors.

Monitoring and maintenance plan: For permitted systems this would constitute the owner's manual requirements. For systems that may be allowed as a conditional use, this would constitute a more detailed and customized document.

Monopole tower: A tower constructed of a single, self-supporting metal tube, anchored to the foundation without guy wires.

Public industrial or utility facility: A facility operated by the City of Portland or Portland Water District that contains a major industrial or utility operation, such as a treatment plant, solid waste facility, materials storage yard or similar operation.

Residential building: A residence, nursing home/assisted living facility, or other building that is in use as an overnight residence but excluding hotels.

Total height of wind energy system: The vertical distance as measured from the average elevation of the finished grade adjacent to the fixed base of the support structure, to the tip of the wind generator blade or any other part of the system at its highest point. Where located on roof tops, the height shall be the total of the building and the wind energy system taken together.

Total rated capacity: The maximum rated output of electric power generation by the system in kilowatts (kW) ad identified by the manufacturer.

Useful life of the wind energy system: The period for which the system has been designed by the manufacturer to operate in a safe manner, including the period during which new parts and refurbishment

allow it to continue operating safely.

Vertical wind energy system: A wind energy system that utilizes a generator shaft that is positioned perpendicular to the ground.

Wind energy system: A wind energy generator and all associated facilities.

Wind energy system associated facilities: All elements of a wind energy system, other than its generating facilities, that are necessary for the proper operation and maintenance of the system, including but not limited to guy wires, remote electronic enclosures and fixtures, transformers, inverter, batteries, substations and similar equipment.

Wind energy generator: The device that converts kinetic wind energy into rotational energy that generates electricity, which may include components such as a base, blade, nacelle, rotor, tower, turbine, or vane.
(Ord. No. 33-11/12, 1-18-12)

Sec. 14-756. Reserved.

Sec. 14-757. Permitted uses.

(a) Freestanding wind energy systems that are accessory to the lawful principal use of the lot, primarily for the generation of energy for on-site consumption, and at or below 25 feet in total height, may be allowed as permitted uses in all residential, B1, I-B and residence-professional zones subject to the standards listed below in Section 14-761 (General Standards), 14-763 (Maintenance and Removal), and 14-765 (Submittal Requirements).

(b) Freestanding wind energy systems that are accessory to the lawful principal use of the lot, primarily for the generation of energy for on-site consumption, and meet the applicable height standards of the zone in which they are located and are no higher than 45 feet, may be allowed as permitted uses in all business zones except B1 and I-B, and in the office park, industrial zones, airport business zone, subject to the standards listed below in section 14-761 (General Standards), 14-763 (Maintenance and Removal), and 14-765 (Submittal Requirements).

(c) Roof mounted wind energy systems that are accessory to the lawful principal use of the lot, primarily for the generation of energy for on-site consumption, meet the applicable height standards of the zone in which they are located and are less than 10 feet above the highest part of the roof, may be allowed as permitted uses

in all zones except stream protection zone and recreation open space zone, subject to the standards listed below in section 14-761 (General Standards), 14-763 (Maintenance and Removal), and 14-765 (Submittal Requirements).
(Ord. No.33-11/12, 1-18-12)

Sec. 14-758. Conditional uses.

(a) Wind energy systems that do not meet the requirements for a permitted system may be allowed as conditional uses in all zones (including overlay zones but excluding stream protection and resource protection zones), subject to the provisions of section 14-430 (height and bulk exceptions/use exceptions); section 14-474 (conditional uses); and to the requirements and performance standards listed below in section 14-761(general standards), 14-763 (maintenance and removal), and 14-765 (submittal requirements). For the purposes of this provision, wind energy may be an accessory use in all zones or a principal use in all zones except residential zones, B1 zone, I-B zone, residence-professional zone and resource protection zone.

(b) Wind energy systems within recreation open space zones (including the island transfer station overlay zone) are allowed as a conditional use where they are co-located with public industrial or utility facilities as defined in section 14-755.
(Ord. No. 33-11/12, 1-18-12)

Sec. 14-759. Prohibited uses.

(a) Wind energy systems of any kind are prohibited in the stream protection and historic landscape districts [excepting the sewage treatment plan corner of Eastern Prom] and historic cemeteries.

(b) Wind energy systems are prohibited where they exceed the height limitations set out in Table 1 (below) and described in provision 14-761(c)(3).

Table 1: Summary Table of Permitting

Type and scale of wind energy system	***Stream Protection, Historic Landscape Districts & Historic Cemeteries***	***Resource Protection Zone***	***All Residential Zones, and Residential Professional Zone; B1 Zone; I-B Zone***	***Historic Districts*, and within 1000 ft of specified landmarks (see**)***	***Water-front Zones and B6***	***Business Zones B2 & B5 Indus-trial Zones I-L, I-Lb and I-Ma***	***Business Zones B3 and B7***	***B4 Zone, Office -Park Zone***	***Recreation Open Space (ROS) Zone where Co-located with public industrial or utility facilities as per 14-758(b)***	***Industrial Zones I-M, I-Mb, I-H; Airport Bus. (w/FAA approval)***
Roof mounted, accessory, <10 ft above roof) & below permitted height of zone	X	P	P	P	P	P	P	P	C	P
Freestanding; accessory; up to 25 ft	X	X	P	P	P	P	P	P	C	P
Freestanding or roof mounted: accessory; at or below permitted height of zone AND no higher than 45 ft	X	X	X if<.5 acre except C if .5 acre or larger	P	P	P	P	P	C	P
Freestanding or roof mounted; at or above permitted height of zone AND no higher than 45 ft	X	X	X Except C only where accessory & on institutional sites over 5 acres	C	C	C	C	C	C	C
Roof mounted or free-standing; at or below permitted height for that zone AND no higher than 65 ft	X	X	X Except C only in USM Overlay Area & for college, university or trade schools in the R5 zone	X Except C in B3 part Congress St. Historic District	C	C	C	C	C	C
Roof mounted or free-standing; above permitted height for that zone AND no higher than 65 ft	X	X	X	X Except C in B3 part Congress St. Historic District	C	C	C	C	C	C
Roof mounted; at or below permitted height for that zone AND no higher than 85 ft	X	X	X	X Except C in B3 part Congress St. Historic District	X	X	C	C	C	C
Freestanding;at or below permitted height for that zone AND no higher than 85ft	X	X	X	X Except C in B3 part Congress St. Historic District	X	X	X	C	C	C
Freestanding; above permitted height for that zone AND no higher than 85 ft	X	X	X	X	X	X	X	X	C	C
Roof mounted or freestanding; above 85 ft and no higher than 160 ft	X	X	X	X	X	X	X	X	C with increased setbacks (see 14-761(d)(6))	C with increased setbacks (see 14-761(d)(6))+

P= Permitted Use; needs Zoning Administrator approval plus building permit; if within 100 feet of a designated landmark, historic district or historic landscape district, also needs planning authority (HP) approval;

C=Conditional Use; needs ZBA approval plus building permit; if within 100 feet of a designated landmark, historic district or historic landscape district, also needs planning authority (HP) approval;
X=Prohibited

*Historic districts only (wind systems are prohibited in historic landscape districts and historic cemeteries); in historic districts if the maximum allowed height in this section is different from the allowable height associated with the underlying zone, the lower of the two height limits would apply regarding wind energy systems. Within the B3 part of the Congress Street Historic District, the height limits in this ordinance for the B3 zone shall apply.
**Specified landmarks are: Portland Observatory; Cathedral of Immaculate Conception; St Dominic's Cathedral; St Luke's Cathedral; State Street Church; and City Hall

Sec. 14-760. Reserved.

Sec. 14-761. General standards.

(a) *General*

1. *Application requirements:* All applications for approval under this ordinance shall address the submittal requirements set out in section 14-765 submittal requirements.

2. *Approvals:* All applicable state and local approvals shall be obtained prior to installation of any wind energy system, including FAA approval and MDEP certification for all systems 100kW and above in total rated capacity.

3. *Conditions:* The zoning administrator or zoning board of appeals (ZBA) may impose conditions to ensure compliance with the standards and purposes set out in this ordinance, including but not limited to post-construction certification of compliance by a licensed professional engineer or authorized factory representative.

(b) *Historic Resource*

1. Where any part of the proposed wind energy system (including associated facilities) is within an historic district, such development shall be reviewed and approved by the planning authority (historic preservation) in accordance with article IX historic preservation prior to a review under this ordinance by the zoning board of appeals.

2. Where any part of the proposed wind energy system (including tower base and associated facilities) is within one hundred (100) feet of any designated

landmark, historic district or historic landscape district, such development shall be determined by the planning authority (historic preservation)to be generally compatible with the major character-defining elements of the landmark or portion of the district in the immediate vicinity of the proposed system; such determination shall be made prior to a review under this ordinance by the zoning board of appeals. Character-defining elements of landmarks and historic districts are identified in the historic resources inventory and respective historic district designation reports. An appeal of the planning authority (historic preservation) determination may be made in accordance with section 14-767 (appeals).

(c) *Siting*

1. ***Location on site:*** In residential zones, B1 zone, I-b zone and residence-professional zone where the lot is less than .5 acre, any vertical element of the wind energy system (tower/pole) shall be located in the rear yard or on the rear half of the existing building. Wind energy systems and associated facilities shall be sited to maximize existing vegetative or other screening from nearby residential buildings and public ways. The location shall minimize changes to existing topography and existing natural vegetation which would result from construction or maintenance of the system.

2. ***Number per lot***: In residential zones, I-B zone and residence-professional zone and all business zones excluding B3, B4 and B7, a maximum of one (1) wind energy system shall be permitted per lot.

3. ***Overall height:*** The total height (including the supporting structure or building and the rotors or blades of the generator) of the wind energy system when operating shall be at or below the following maximum height limits.

   These limits do not apply within historic districts (except the Congress Street historic district)or

within 1000 feet of Portland Observatory; Cathedral of the Immaculate Conception; St Dominic's Cathedral; St Luke's Cathedral; State Street Church; and City Hall where the overall height of wind energy systems may be no higher than 45 feet. Within the Congress Street historic district, the overall height of wind energy systems may be no higher than 45 feet in those areas outside of the B3 zone and within the B3 zone the height limits below shall apply.

In addition, the actual height of any roof mounted wind energy system, as measured above the roof from the point of attachment, where allowed as a conditional use shall not exceed 35% of the height of the building on which it is mounted.

a. *Maximum of 45 feet*:

i. Roof mounted in R-6 zone if 10 feet or less above highest part of the roof and permitted by that zone.

ii. Residential zones, B1 zone, I-B zone and residence-professional zone if lot is .5 acre or larger and height permitted by that zone.

iii. Institutional uses in residential zones, B1 zone, I-B zone and residence-professional zone where lot is over 5 acres.

iv. Resource protection zone (roof mounted and up to height permitted by zone).

b. *Maximum of 55 feet:* College, university or trade school in R5 zone where conditional use requirements of the zone are met (14-118(b)(6)(g)).

c. *Maximum of 65 feet:*

i. Waterfront zones.

ii. Business zones B2, B5 and B6.

iii. Industrial zones I-L, IL-b and I-Ma

iv. Freestanding in business zones B3 and B7.

v. USM overlay zone if allowed by overlay heights.

d. *Maximum of 85 feet:*

i. Roof mounted in B3 and B7 if height permitted by overlay heights.

ii. Business zone B4 if height permitted by that zone.

iii. Office-park zone up to 75 feet where requirements of the zone are met (14-230.14(e)).

e. *Maximum of 160 feet (Increased setbacks if over 85 feet):*

i. Industrial zones I-M and IMb and I-H.

ii. Airport business zone.

iii. Recreation open space zones where allowed by 14-758(b).

(d) *Safety*

1. ***Generation equipment:*** All wind energy generation equipment shall be approved under a certification program certified by the US Department of Energy such as the Underwriters Laboratories, Germanishcer Lloyd Wind Energies, or other similar certifying organizations. Experimental, homebuilt, and prototype models shall not be permitted.

2. ***Design safety:*** Wind energy systems and associated facilities, including foundations and support structures, electrical connections and control equipment, associated site improvements and

construction techniques, shall be designed, engineered and installed to comply with all applicable local, state and federal construction and electrical codes/regulations and Federal Aviation Administration regulations and requirements.

3. ***Setbacks:*** Wind energy systems and associated facilities shall meet all setbacks for principal structures for the zone in which the wind energy system is located; where setbacks vary the largest setback shall apply. All parts of the wind energy system, including associated facilities and guy wires, shall be at least 10 feet from the property line (except where connecting to the grid), any utility line (in any direction) or other easement/ROW. The setback from utility lines, easements and ROW lines may be reduced where the owner/benefitted party provides written permission.

4. ***Safety setbacks (roof mounted systems):*** All roof mounted wind energy systems shall be set back from property boundaries and street right of way lines by a distance equal to or greater than 4 times the height of the system as measured from the roof surface at the point of attachment (including attachment structure to roof). For systems in and adjacent to waterfront zones, business zones (except B-1 and I-B), office park zone, industrial zones, island transfer station zone, and ROS zone, the setback from property boundaries and street right of way lines may be reduced to a minimum distance of 1.0 times the height of the system as measured from the roof surface at the point of attachment (including attachment structure to roof) where the system is incorporated into the architecture of the building and a certified engineer confirms that it would not present any public safety risk. The setback distance shall be measured to the center of the wind generator base.

5. ***Safety setbacks (freestanding systems no higher than 85 feet high):*** All freestanding wind energy systems with a total height of 85 feet or less shall be set back from property boundaries and

street right of way lines by a distance equal to or greater than 1.1 times the total height of the system, and from residential buildings and hospitals on other properties by a distance equal to or greater than 2 times the total height of the system. The setback distance shall be measured to the center of the wind generator base.

6. ***Safety setbacks (freestanding systems above 85 feet high):*** All freestanding wind energy systems with a total height above 85 feet shall be set back from property boundaries and street right of way lines by a distance equal to or greater than 2 times the total height of the system, and from residential buildings and hospitals on other properties by a distance equal to or greater than 4 times the total height of the system. For systems in and adjacent to waterfront zones, business zones (except B-1 and I-B), office park zone, industrial zones, island transfer station zone, and ROS zone, the setback from property boundaries and street right of way lines may be reduced to a minimum distance of 1.0 times the total height of the system where the Board determines it will be contrary to the public interest. The setback distance shall be measured to the center of the wind generator base.

7. ***Control of systems:*** Wind energy generators shall have automatic braking, governing or feathering systems to ensure rotational speeds remain within the design parameters of the proposed generator and its support structure and components and do not create intermittent high noise levels.

8. ***Security:*** The support structure (e.g. tower, pole) for freestanding wind generating systems shall not be climbable (no step bolts, ladder, or unshielded lattice structure readily accessible to the public) for a minimum height of twelve (12) feet above the surrounding ground level or accessible surface. All ground mounted electrical and control equipment shall be labeled and secured to prevent unauthorized access.

9. ***Clearances:*** All moving components of a wind energy

system shall be a minimum of twelve (12) feet from ground level or accessible surface.

10. ***Wiring:*** All on-site electrical wiring associated with the proposed wind energy system shall be located within the tower/pole/supporting structure and underground; above ground on-site connections near substations or to the electric grid shall be allowed.

11. ***Guy wires:*** The use of guy wires is discouraged; if required they shall be located away from pedestrian routes/access points and marked with visible, reflective, colored objects, such as flags, reflectors, or tape which shall be placed on the anchor points of guy wires and along the guy wires up to a height of ten feet from the ground.

(e) ***Impacts***

1. ***Sound impacts:*** The audible sound levels generated by the wind energy system* shall comply with the requirements of the underlying zone, except that the method of measurement shall be in accordance with this provision and with technical standards set out in the City of Portland Technical Manual. In addition:

   a. Where the underlying zone is residential and does not specify sound requirements, or where the system will be within 100 feet of a residential building, the audible sound levels generated by the wind energy system* shall not exceed forty-five (45) decibels on the A scale between the hours of 9:00 p.m. and 7:00 a.m., and fifty (50) decibels on the A scale between 7:00 a.m. and 9:00 p.m., as measured at the nearest property line in accordance with this provision and technical standards set out in the City of Portland Technical Manual.

   b. For any system over 45 feet in total height not in the recreation open space, resource protection or island transfer station zones, the maximum sound levels allowed by this

ordinance shall not be exceeded at the nearest property boundary and at the nearest point vertically above the property line that coincides with the maximum building height allowed in the abutting zone.

c. Any system located within the recreation open space, resource protection or island transfer station zones and more than 100 feet from a residential building shall not exceed fifty-five 955) decibels on the A scale as measured 50 feet from the base of the tower.

*The audible sound levels of the wind energy system shall include sounds generated in all conditions including low and high winds (furling, yawing, and flutter) and power outages (free wheeling).

If after installation the system is determined to be operating at levels above these limits (as measured at the property lines in accordance with this provision and technical standards set out in the City of Portland Technical Manual) the owner shall take (at the owners cost) remedial action to ensure compliance with these limits. Required action may include relocation nor removal of the system.

2. ***Significant wildlife:*** The proposed wind energy system shall not be located within 250 feet of any significant wildlife habitat, as defined by MDEP/MDIFW under provisions of the Natural Resources Protection Act (Title 38, M.R.S.A. § 480, et seq.) including wildlife habitat for species appearing on the official state and federal list of endangered or threatened animal species.

3. ***MDIFW comments:*** For all wind energy systems over 45 feet in height above the ground (however supported) or over 100kW the applicant shall provide evidence that the environmental coordinator of the Maine Department of Inland Fisheries and Wildlife, and the Maine Natural Area Program, have been notified of the location, height and design of the proposed wind energy system at least 3 weeks

prior to any final determination under this provision. Any comments received therefrom shall be addressed to the satisfaction of these state authorities prior to any final determination under this provision.

4. ***Signal interference:*** Wind energy systems shall be designed to avoid electromagnetic interference with the transmission or reception of radio, telephone, television, microwave, navigational or similar signals to neighboring areas.

5. ***Appearance:*** The wind energy system and associated facilities shall use non-reflective materials and neutral colors and textures that blend in with the surrounding environment. Ground-mounted systems and associated facilities shall be landscaped to integrate the proposed wind energy system into the existing landscape/streetscape. In the case of conditional uses the system shall be screened with a vegetated buffer from public areas and residential buildings.

6. ***Lighting:*** No part of the system may be illuminated, except as required (in writing) by the Federal Aviation Administration (FAA) or other authorities for safety and security purposes. Where lighting is required, it shall be at the lowest intensity allowable with fixtures shielded and directed to minimize glare and visibility from the ground.

7. ***Signs and advertising:*** There shall be no signs, advertisements, flags or decorative items on a wind energy system or any associated facilities, except for the manufacturer's/installer's/owner's identification (not exceeding 1 sq foot in size), appropriate warning signs, or lights if required by the FAA.

8. ***Impact of construction:*** The applicant shall avoid adverse impacts resulting from construction and maintenance of the wind energy system and obtain site plan approval (Article V, Site Plan) where applicable.

Sec. 14-762. Reserved.

Sec. 14-763. Maintenance and removal.

(a) A satisfactory monitoring and maintenance plan shall be required to ensure that all aspects of operation remain safe and in accordance with the approved design, engineering and installation details. All buildings, structures, fences, and property used in connection with a wind energy system shall be regularly inspected and maintained, through the life of the system, so that they remain: in good condition; in compliance with the standards set out in this ordinance (e.g., meeting sound limits); in safe working order; and so that paint and other external materials remain as approved and free from corrosion.

(b) The owner and operator shall, at their expense, complete the removal of the wind energy system within 6 months of the end of the useful life of the wind energy system or within 6 months of the date of abandonment.

(c) The City shall revoke any approvals and/or pursue removal of the wind energy system at the owner and operator's expense in the following circumstances:

1. The wind energy system is not installed and functioning within 12-months from the date of the approval under this ordinance; or

2. The wind energy system is at any time left in an unsafe condition in respect to federal, state and local safety standards (as determined by the City); or

3. The wind energy system has not been brought back to a safe condition/operation or removed from the site within required timeframe; or

4. The wind energy system is defective or abandoned and not been removed from the site within required timeframe.

(Ord. No. 33-11/12, 1-18-12)

Sec. 14-764. Reserved.

Sec. 14-765. Submittal requirements.

(a) The following information shall be submitted with an application for a review of a wind energy system and associated facilities under this ordinance.

1. A narrative describing the proposed wind energy system, including an overview of the project; the project location; the generating capacity of the wind energy system; dimensions and respective manufacturers, the sound levels generated by the wind energy system; and a description of associated facilities and how the system and associated facilities comply with the standards of this ordinance (including a plan or other graphics that demonstrate compliance with the required setbacks). Calculations of sound attenuation and anticipated sound levels shall be in accordance with technical standards set out in the City of Portland Technical Manual.

2. An accurate scaled site plan of the subject property showing the planned location of the proposed wind energy system and all associated facilities; property lines, adjoining streets and access; topographic contour lines; existing and proposed buildings, fencing, structures, substations, vegetation, driveways, parking, and curb cuts on the subject property; and specifications for all proposed electrical cabling/transmission lines, accessory equipment, and landscaping. The site plan shall show any proposed off-site modifications to access the installation and/or to maintain the proposed wind energy system. [Note: separate site plan applications may be required for some or all of the associated modifications; see Article V Site Plan]

3. A boundary survey where the location and dimensions of the wind energy system are determined to be uncertain by the Zoning Administrator.

4. Names and addresses of the owners of abutting properties and the location, dimensions, and types of all existing structures and uses within 100 feet of the property line.

5. A scaled elevation drawing showing the proposed wind energy system and all proposed structures, foundations, supports, fencing, vegetation and landscaping, indicating the height, color and materials of the system.

6. The wind energy system specifications, including manufacturer, model, dimensions of all components, height, tower/support type, total rated capacity and information on any connections to the grid including a copy of the application for interconnection with the electric utility provider where to be connected to the grid.

7. Documentation that the wind generation equipment has been approved under a recognized certification program as set out in paragraph 14-761(d)1 of this ordinance and that the system complies with all applicable local, state and federal codes/regulations and with the standards regarding signal interference. Electrical component and connection information shall be in sufficient detail to allow for a determination that it meets Maine electrical codes.

8. Engineered drawings of the structure, its foundations and associated facilities (stamped by a PE). In the case of conditional uses, the applicant shall provide a Safety Report prepared and stamped by a licensed professional engineer with their application that certifies that the proposed wind energy system design is safe and appropriate in terms of strength, stability, security, grounding, icing impacts, and maintenance, given local soil and climate conditions.

9. Evidence of compliance or non-applicability with FAA requirements, MDEP Certification pursuant to 35-A M.R.S.A. § 3456 for wind energy development (applies to systems over 100kW) and other federal and state regulations regarding potential impacts on wetlands, wildlife and other resources.

10. For any wind energy system that will exceed the height limit for buildings on the subject property, the following shall be submitted:

a. A scaled vicinity map showing the subject property and the proposed wind energy system and fencing in the context of all property located within a distance from the wind energy system equal to three (3) times the height of the wind energy system (in the case of a system 85 feet or higher, ten (10) times the height), showing within this area: all streets and existing buildings; significant structures: uses of any buildings; and topographic contours at five foot intervals.

b. Color photographs showing the current view of the wind energy system site from any adjoining public street or any other street within 200 feet of the proposed wind energy system and from the closest groupings of residential buildings located within an area from the proposed wind energy system equal to three (3) times the height of the proposed structure (ten (10) times the height for systems 85 feet), plus a second set of color photographs showing the same views with the proposed wind energy system superimposed onto the photographs.

11. Where lighting of the wind energy system is proposed (due to FAA requirements), a lighting plan for the proposed win energy system, indicating the location, color and intensity of the lighting, both as it will appear in daylight and at night, and indicating any mechanisms to prevent glare on adjacent properties and streets and to shield the lighting from residences.

12. Where the wind energy system manufacturer's sound level analysis does not clearly meet the sound standard of this ordinance, a statement by a professional engineer licensed in the State of Maine certifying that the proposed wind energy system will meet the sound standard of this ordinance. The technical standards set out in the City of Portland Technical Manual outline further information which may apply in this case.

13. A monitoring and maintenance plan in accordance with

section 14-763(a).

14. The following information shall be submitted with an application for a wind energy system proposed to be attached to the roof of a building or onto another structure:

a. Elevation drawings and details of the building or structure to which the proposed wind energy system will be attached, showing the placement of the wind system and its supports, indicating the location of any enclosures in relation to the surface to which it will be attached, and showing projection of the wind generator from the structure, marked with all necessary dimensions.

b. Design and engineering information for roof-mounted systems shall demonstrate that the structure on which it will be mounted has the structural integrity to carry the weight and wind loads of the system with minimal vibration impacts on the structure.

(Ord. No. 33-11/12, 1-18-12)

Sec. 14-766. Reserved.

Sec. 14-767. Appeals.

(a) Any aggrieved party may appeal a decision by the zoning administrator under the provisions of this ordinance by requesting in writing that it be referred to the zoning board of appeals within thirty (30) days of the decision being rendered. The date of the decision shall be the date of the letter from the zoning administrator documenting the decision.

(b) Any aggrieved party may appeal a decision of the planning authority determination under provision 14-761(b)(2) of this ordinance (compatibility if within 100 feet of a designated landmark, historic district or historic landscape district)by requesting in writing that it be referred to the historic preservation board within thirty (30) days of the determination. The date of the determination shall be the date of the letter from the planning authority documenting the decision. Appeals shall be considered by the historic preservation board as a de-novo review of the determination of compatibility.

(c) Any aggrieved party may appeal the final decision of the zoning board of appeals or the historic preservation board to the superior court in accordance with Rule 80B of the Maine Rules of Civil Procedure. The date of the final decision shall be the date of the board hearing or other board meeting at which a final decision was taken.
(Ord. No. 33-11/12, 1-18-12)

Sec. 14-768. Reserved.
Sec. 14-769. Reserved.
Sec. 14-770. Reserved.
Sec. 14-771. Reserved.
Sec. 14-772. Reserved.
Sec. 14-773. Reserved.
Sec. 14-774. Reserved.
Sec. 14-775. Reserved.
Sec. 14-776. Reserved.
Sec. 14-777. Reserved.
Sec. 14-778. Reserved.
Sec. 14-779. Reserved.
Sec. 14-780. Reserved.
Sec. 14-781. Reserved.
Sec. 14-782. Reserved.
Sec. 14-783. Reserved.
Sec. 14-784. Reserved.
Sec. 14-785. Reserved.
Sec. 14-786. Reserved.
Sec. 14-787. Reserved.
Sec. 14-788. Reserved.
Sec. 14-789. Reserved.
Sec. 14-790. Reserved.
Sec. 14-791. Reserved.
Sec. 14-792. Reserved.
Sec. 14-793. Reserved.
Sec. 14-794. Reserved.
Sec. 14-795. Reserved.
Sec. 14-796. Reserved.
Sec. 14-797. Reserved.
Sec. 14-798. Reserved.
Sec. 14-799. Reserved.
Sec. 14-800. Reserved.
Sec. 14-801. Reserved.
Sec. 14-802. Reserved.
Sec. 14-803. Reserved.

Sec. 14-804. Reserved.
Sec. 14-805. Reserved.
Sec. 14-806. Reserved.
Sec. 14-807. Reserved.
Sec. 14-808. Reserved.
Sec. 14-809. Reserved.
Sec. 14-810. Reserved.
Sec. 14-811. Reserved.
Sec. 14-812. Reserved.
Sec. 14-813. Reserved.
Sec. 14-814. Reserved.
Sec. 14-815. Reserved.
Sec. 14-816. Reserved.
Sec. 14-817. Reserved.
Sec. 14-818. Reserved.
Sec. 14-819. Reserved.
Sec. 14-820. Reserved.
Sec. 14-821. Reserved.
Sec. 14-822. Reserved.
Sec. 14-823. Reserved.
Sec. 14-824. Reserved
Sec. 14-825. Reserved.
Sec. 14-826. Reserved.
Sec. 14-827. Reserved.
Sec. 14-828. Reserved.
Sec. 14-829. Reserved.
Sec. 14-830. Reserved.
Sec. 14-831. Reserved.
Sec. 14-832. Reserved.
Sec. 14-833. Reserved.
Sec. 14-834. Reserved.
Sec. 14-835. Reserved.
Sec. 14-836. Reserved.
Sec. 14-837. Reserved.
Sec. 14-838. Reserved.
Sec. 14-839. Reserved.
Sec. 14-840. Reserved.
Sec. 14-841 Reserved.
Sec. 14-842. Reserved.
Sec. 14-843. Reserved
Sec. 14-844. Reserved.
Sec. 14-845. Reserved.
Sec. 14-846. Reserved.
Sec. 14-847. Reserved.
Sec. 14-848. Reserved.

Sec. 14-849. Reserved.

ARTICLE XI. PUBLIC ART PROGRAM

------ *__Editor's note—__Ord. No. 174-00, passed 4-24-00, repealed §§14-851-14-860 of this article and enacted new provisions as herein set out. ------

Sec. 14-850. Preamble.

It shall henceforth be the policy of the City to provide on an annual basis regular funding for the preservation, restoration and enhancement of its public art collection. This ordinance and the funding contemplated are in recognition of the fact that only by instituting a steady stream of funding for this effort and standing by that commitment, will the City over time be able to fulfill its role as steward of its public art collection and help nurture and enrich thereby the quality of life in this City.
(Ord. No. 174-00, 4-24-00)

Sec. 14-851. Purpose.

The purpose of the public art ordinance is to promote the educational, cultural, economic and general welfare of the City of Portland by providing the means to fund the acquisition and care of art works by the City of Portland, which shall be the city's public art collection. The public art program seeks to:

(a) Care for and maintain the public art collection of the City of Portland by documenting, preserving and restoring and repairing the collection;

(b) Commission or acquire works of public art, and to seek donations of art work for the city's public art collection;

(c) Provide curatorial expertise and project management for the care of Portland's public art collection;

(d) Enhance and enrich the lives of the city's residents, visitors and employees by incorporating the visual arts into public spaces;

(e) Contribute to the city's civic pride and sense of identity;

(f) Increase access to works of art for residents and visitors to the area;

(g) Enhance Portland's growing reputation as a city which celebrates the arts;

(h) Celebrate the multi-cultural and diverse character of Portland's communities with place specific art; and

(i) Encourage collaboration between artists, landscape architects, urban planners, architects, engineers and other designers.

(Ord. No. 246-91, 3-11-91; Ord. No. 174-00, 4-24-00; Ord. No. 140-08/09, 1-21-09)

Sec. 14-852. Definitions.

(a) For the purposes of this section, ***art work*** shall include:

1. Sculpture, statues or monuments in any material or combination of materials;

2. Painting;

3. Graphic arts, printmaking and drawing;

4. Photography;

5. Crafts in clay, fiber and textiles, wood, metal, plastics, glass and other materials; and

6. Mixed media, any combination of forms or media, including collage.

(7) Functional art such as street furniture, as defined on page two of the Portland public art committee guidelines.

(8) Environmental art consisting of landforms and artistic landscape composition.

(b) For the purposes of this ordinance ***public art*** shall not include:

1. Reproductions by mechanical or other means of original works of art, except for limited editions, controlled by the artist, of original prints, cast sculptures,

photographs or other works of art.

2. Decorative, ornamental, or functional elements which are designed by the building architect or consultants engaged by the architect which are a traditional and typical element of architectural design.

3. Those elements generally considered to be conventional components of a landscape architectural design including, but not limited to, plant materials, pools, paths, benches, receptacles, fixtures and planters except as allowed in subsection (a), paragraphs 7 and 8 above.

4. "Art objects" which are mass produced or of a standard design, such as playground sculpture or fountains, except pieces of historical significance to the city.

5. Directional or other functional elements, such as supergraphics, signage, color coding and maps, except where sculptural pieces are used to define gateways in the city.

6. Electrical, water or mechanical service for activation of the work.

7. Exhibitions and educational programs related to the work.

8. Performing Arts.

9. Art that displays slogans, logos, mascots or commercial advertising.

(c) ***Public art collection***: Art objects that are owned by the City of Portland which are permanently installed in public, accessible locations. Permanent public art must be located in a public place with public visibility and impact, and shall have a permanence at least comparable to associated capital projects.

(d) ***Public art guidelines***: The regulations adopted by the committee and approved by the city council which establish procedures to carry out the purpose of this ordinance. The guidelines shall include but not be limited to criteria for selection of artists and art works, maintenance of a file of interested artists, procedures for artistic competitions, and

requirements for the maintenance of works of art.
(Ord. No. 246-91, 3-11-91; Ord. No. 174-00, 4-24-00; Ord. No. 140-08/09, 1-21-09)

Sec. 14-853. Funding.

(a) Establishment of Public Art Fund

1. The city shall establish a special revenue fund designated as the "public art fund" in the city treasury from which expenditures may be made in accordance with this ordinance. The public art fund shall contain a capital account to fund permanent public improvements in the form of the purchase, acquisition or commission of new public art, or major restorations, and an operations and maintenance account. Authorized expenditures include, but are not limited to, associated site installation costs such as lighting and landscaping, and costs associated with the commission engineering, contract administration, unveiling and dedication activities. Also authorized are expenditures associated with preservation, conservation and repair of existing public art. Capital funds may come from any source, including the sale of general obligation bonds. The city’s capital improvement program shall contain an annual appropriation for the public art fund calculated in accordance with paragraph (b) below. Funds for the operation and maintenance account may come from any source except bonds.

(b) City Funded Projects.

1. A percentage of the city's capital improvement program (CIP) shall be calculated and appropriated annually to the Portland public art fund. The annual appropriation shall be .5% of the total annual CIP.

2. Nothing contained herein shall preclude funding the acquisition of art for municipal property in other ways.

(Ord. No. 246-91, 3-11-91; Ord. No. 174-00, 4-24-00; Ord. No. 140-08/09, 1-21-09)

Sec. 14-854. Administration.

(a) The city public art program shall be administered by the public art committee whose members shall be appointed by the city council, and shall have the following responsibilities:

1. Develop an annual art plan for Portland which shall be presented to the city council for approval.

2. Establish such guidelines as are necessary to carry out the purpose of the ordinance. The guidelines shall include but not be limited to criteria for selection of artists and art work, maintenance of a file of interested artists, review criteria for proposed gifts of art work to the city, procedures for artistic competitions, and requirements for the maintenance of art work. Any and all guidelines or changes to guidelines shall be placed on a city council agenda as a communication. The guideline shall take effect forty-five (45) days after the date of placement on the council agenda, unless the city council takes official action disapproving the guidelines, in whole or in part, prior to the expiration of the 45-day period. If a part of a guideline is vetoed, the remainder shall continue in effect. Any guideline adopted, which is not required by the statutes of the state or by this article, may be waived by the chair upon good cause being shown.

3. Recommend to the city council the expenditure of funds for the acquisition or commissioning of public art, for maintenance of public art and for administration of this program.

4. Seek private donations of funds and/or works of art for the purposes of expanding the public art collection, or the maintenance of the collection.

5. Oversee the maintenance, care and repair of the public art collection.

6. Review the appropriateness of proposed public art which is intended to fulfill all or part of the contribution required by this article.

7. Review potential gifts of art to the city on city property, and assist in the development process of such gifts, in accordance with the ***Guidelines for the City of Portland Public Art Committee.***

8. Recommend appropriate locations and accessibility to the

public for permanent art, with suggestion as to the type of art which is appropriate.

9. Solicit advice from arts professionals, the business community, and from local residents on the appropriateness of proposed art.

10. Recommend revisions to policies and guidelines for the improved implementation of this program.

11. Develop an annual art plan for Portland.

12. Ensure that the use of funds collected under this program will increase the amount of art in the city that is available to the public.

(b) Public art committee - structure.

1. The public art committee shall be composed of eleven voting members who are appointed by the city council. The city council shall appoint one of its members, the city manager shall recommend a member, and the Portland arts and cultural alliance shall recommend one of its members to serve on the public art committee. The city council shall appoint the remaining six members who shall be volunteers and have interest and/or expertise in public art. Such experience may include, but shall not be limited to, education and experience as an architect, a landscape architect, a professional curator, a professional artist and/or an art educator. Persons appointed to the public art committee must live or work in Portland and shall be appointed through the city's annual appointment process.

2. Each public art committee member shall serve for a period of three years. The appointments shall be staggered so that three appointments terminate each year.

3. Whenever a vacancy shall occur, the vacancy shall be filled by the city council.

4. The public art committee shall adopt its own rules for the conduct of its business not inconsistent with the statutes of the state and this article. Any and all rules or changes to rules shall be placed on a city

council agenda as a communication. The rule or rules shall take effect forty-five (45) days after the date of placement on the council agenda, unless the city council takes official action disapproving the rules, in whole or in part, prior to the expiration of the 45-day period

5. The members of the public art committee shall annually elect one (1) of their members as a chair to preside at all meetings and hearings and to fulfill the customary functions of that office, and another of their members as vice-chair.

(Ord. No. 246-91, 3-11-91; Ord. No. 174-00, 4-24-00; Ord. No. 14-08/09, 1-21-09)

Sec. 14-855. Reserved.
Sec. 14-856. Reserved.
Sec. 14-857. Reserved.
Sec. 14-858. Reserved.
Sec. 14-859. Reserved.
Sec. 14-860. Reserved.

ARTICLE XII. RELOCATION OF DISPLACED TENANTS

Sec. 14-861. Purpose.

The purpose of this article is to encourage the retention of a diverse housing supply throughout the downtown and in areas readily accessible to the downtown; to ensure that persons displaced as the result of redevelopment of residential units to nonresidential uses within the B-3 downtown business zone are treated fairly and consistently; and to ensure that persons so displaced will be relocated at the reasonable expense of the developer to comparable housing at a location providing comparable access to services and amenities.

(Ord. No. 246-91, 3-11-91)

Sec. 14-862. Notice and eligibility for relocation assistance.

When a proposed development will result in the displacement of residents of an existing structure, the developer of the property shall give all tenants written notice as set forth below and shall provide relocation assistance as set forth below for any tenant whose gross income is eighty (80) percent or less of the median income of the Portland SMSA, adjusted for family size, as

determined by the U.S. Department of Housing and Urban Development at the time the developer gives the tenant written notice of intent to cause removal of the residential unit. Such written notice shall be given to the tenant at least one hundred twenty (120) days before the tenant shall be required to vacate the premises and shall contain the following statement:

> The developer of this project is required by law to assist you in finding another place to live and in determining your eligibility for relocation payments. If you have questions about your rights under the law, or complaints about the way you have been treated by the developer, you may contact the Department of Planning and Urban Development, City of Portland, 389 Congress Street, Portland, Maine 04101 (telephone 874-8300).

(Ord. No. 246-91, 3-11-91)

Sec. 14-863. Relocation assistance for all tenants.

The developer shall provide, upon demand, assistance to all tenants who will be displaced by the development in the form of referrals to other reasonable accommodations and in determining the tenants' eligibility for relocation payments as provided herein.

(Ord. No. 246-91, 3-11-91)

Sec. 14-864. Relocation payments for eligible tenants.

The developer shall make relocation payments to eligible tenants in accordance with the schedule adopted by the city council.

(Ord. No. 246-91, 3-11-91)

***Editor's Note:** By separate order (Order 126-04/05, 6-6-05)the City Council passed the adoption of relocation payments for qualifying displaced tenants in the B-3 zone as follows:

WHEREAS, the Portland City Code §14-864 (adopted in 1991) requires a developer to provide financial and other assistance to relocate qualifying residential tenants in the B-3 zone, where such tenants are displaced due to the conversion of residential property to nonresidential property; and

WHEREAS, the Portland City Council was charged with adopting a schedule of relocation payments to be utilized in such circumstances; and

WHEREAS, the schedule, if any, adopted at that time cannot be located;

WHEREAS, the Housing Committee recommends the adoption of a payment

schedule equal to two months rent paid by a qualifying tenant.

NOW THEREFORE, it is hereby ordered that the City Council hereby adopts the following schedule pursuant to §14-864 of the Portland City Code:

SCHEDULE OF RELOCATION PAYMENTS FOR ELIGIBLE TENANTS

The developer shall, before the tenant is required by the developer to vacate, make a cash payment to the tenant in an amount equal to the amount of rent paid by the tenant for the immediately preceding two (2) months.

Sec. 14-865. Reserved.
Sec. 14-866. Reserved.
Sec. 14-867. Reserved.
Sec. 14-868. Reserved.
Sec. 14-869. Reserved.
Sec. 14-870. Reserved.
Sec. 14-871. Reserved.
Sec. 14-872. Reserved.
Sec. 14-873. Reserved.
Sec. 14-874. Reserved.
Sec. 14-875. Reserved.
Sec. 14-876. Reserved.
Sec. 14-877. Reserved.
Sec. 14-878. Reserved.
Sec. 14-879. Reserved.
Sec. 14-880. Reserved.
Sec. 14-881. Reserved.
Sec. 14-882. Reserved.
Sec. 14-883. Reserved.
Sec. 14-884. Reserved.
Sec. 14-885. Reserved.
Sec. 14-886. Reserved.
Sec. 14-887. Reserved.
Sec. 14-888. Reserved.
Sec. 14-889. Reserved.
Sec. 14-890. Reserved.
Sec. 14-891. Reserved.
Sec. 14-892. Reserved.
Sec. 14-893. Reserved.
Sec. 14-894. Reserved.
Sec. 14-895. Reserved.
Sec. 14-896. Reserved.
Sec. 14-897. Reserved.
Sec. 14-898. Reserved.

Sec. 14-899. Reserved.

ARTICLE XIII. RESERVED*

***Editor's note--**Ord. No. 127-98, adopted Oct. 19, 1998, repealed Art. XIII, §§ 14-900, 14-901, relative to moratorium on correctional prerelease facilities, which derived from Ord. No. 26-96, adopted June 17, 1996.

Sec. 14-900. Reserved.

Sec. 14-901. Reserved.

ARTICLE XIV. MORATORIUM ON DEMOLITION OF HOUSING UNITS

***Editor's Note**: Order No. 221-99 adopted February 1, 1999 enacted a moratorium on the demolition of buildings in the area of Bayside. The moratorium was in effect January 1, 1999 through May 1, 1999.

Sec. 14-902. Findings and declaration of emergency.

The city council hereby finds and declares:

(a) The strong economy has increased the demand for housing beyond the supply available in the city and the surrounding area;

(b) The rental vacancy rate in the city has been extremely tight (0 to 2%) for the last 3 years, well below the vacancy rate which is considered healthy for a community, allowing choice and maintaining moderate prices;

(c) The lack of supply has pushed rent levels beyond the level which low and moderate income families and individuals can afford;

(d) Due to high cost of construction and the lack of land, very few new affordable multifamily units are being built in the city;

(e) The lack of supply of affordable housing and high rents hurt the vulnerable populations the most, e.g. those with disabilities, the working poor and the elderly;

(f) Several pending developments in the City contemplate the demolition of residential property or its conversion to nonresidential use;

(g) Housing, because of its scarcity and high costs, is an extremely valuable resource in the City of Portland. Once lost, it is very difficult to replace; and

(h) The City currently has under consideration methods to preserve and expand existing housing as well as proposals to require the replacement of housing which is either demolished or converted to nonresidential use:

Now, therefore, in order to permit the development and implementation of methods which will preserve Portland's existing housing stock as well as to require replacement of dwelling units which are demolished or converted to nonresidential use, it is found and declared that a temporary moratorium is necessary to allow the City to accomplish those goals.
(Ord. No. 26-02/03, 8-5-02)

Sec. 14-903. Moratorium on demolition of housing units.

Notwithstanding any other provisions of this Code, including, but not limited to, the provisions of Chapters 6 and 14, no permit shall be issued or granted and no new applications shall be accepted by the Building Authority or the Planning Authority from and after August 5, 2002 up to and including Monday, October 7, 2002, for the demolition of any dwelling or dwelling units, including single-family, two-family, and multi-family dwellings, lodging houses, sheltered care group homes, and rooming units anywhere within the City of Portland.

It is further found and determined that it is necessary that this article take effect immediately as an emergency, pursuant to article II, section 8 of the City Charter.
(Ord. No. 26-02/03, 8-5-02)

Sec. 14-904. Exceptions.

(a) The moratorium hereunder shall not apply to any building found to be a dangerous building pursuant to 17 M.R.S.A. Secs. 2851 et seq.

(b) The moratorium hereunder shall not apply to property

which, although designed and intended for residential use, is, at the time of adoption of this section, a legally grandfathered non-residential use.

(c) Any demolition or conversion approved by the Portland Planning Board under the Site Plan Review and Conditional Use Standards of Chapter 14 of the Portland Code prior to July 1, 2002, so long as such approval is valid and in effect on the date of this ordinance.
(Ord. No. 26-02/03, 8-5-02)

ARTICLE XV. WATERFRONT CAPITAL IMPROVEMENT AND ECONOMIC REDEVELOPMENT ZONE AND ORDINANCE

Sec. 14-905. Title.

This ordinance shall be known as the Waterfront Capital Improvement and Economic Redevelopment Ordinance.
(Ord. No. 249-01, 6-4-01)

Sec. 14-906. Purposes.

The purpose of this ordinance is to implement those provisions of the Waterfront Economic Development Task Force Report, (Waterfront II) entitled "Investing in Our Working Waterfront: Final Report of the Mayor's Waterfront Task Force on Economic Development," dated September 2000, as adopted by the Portland City Council on June 4, 2001 which create a capital improvement plan for redevelopment on the Portland Waterfront. That plan includes funding the loan fund described in that report, the financing and installation of infrastructure to support the economy of that area of the City of Portland, such as parking facilities, utilities, traffic and congestion management installations, operating facilities for the cargo, fishing and other water-dependent, marine related industries, environmental protection and improvement, including the management and abatement of combined sewer overflows, appropriate assistance in the permitting and completion of dredging of siltation at piers, wharfs and weirs, and such other matters as the City Council shall approve from time to time. These activities shall be collectively known as the redevelopment program.
(Ord. No. 249-01, 6-4-01)

Sec. 14-907. Creation of the Waterfront Redevelopment Economic Zone (WREZ).

The Waterfront Redevelopment Economic Zone is hereby created.

Beginning at a point on the southerly side of the Eastern Promenade at the intersection of the Westerly side of the Portland House Condominium and the Easterly sideline of land now or formerly of Dan Haley.

Thence Southwesterly along the Southerly side of Eastern Promenade to Fore Street.

Thence Westerly along the Southerly side of Fore Street to the intersection of Fore Street and Mountfort Street.

Thence Northerly along Mountfort Street to the Southeast corner of the lot referenced as 20-C-2 on City of Portland Tax maps as of April first, 2001.

Thence Westerly along lot 20-C-2 about 72 feet.

Thence Northerly along 20-C-2 to 20-C-5.

Thence Westerly along 20-C-5 to the south corner of 20-C-5.

Thence Northwesterly along 20-C-5 to Newbury Street.

Thence Southwesterly along Newbury Street to Hancock Street.

Thence Southeasterly along Hancock Street to Middle Street.

Thence Southwesterly along Middle Street to 20-C-27.

Thence Southeasterly along the Northeast sideline of 20-C-27 about 99.99 feet.

Thence Southwesterly along the Southeast sideline of 20-C-27 to India Street.

Thence South along India Street to the Northern corner of 29-N-26.

Thence Westerly along the Northern side of lot 26 to lot 24.

Thence Westerly, Northerly, Westerly, and Southerly along 29-N-24 to Bradbury Court.

Thence Westerly along Bradbury Court to the Franklin Street Arterial.

Thence Northerly along Franklin Street Arterial to Fore Street.

Thence Westerly along Fore Street to Pearl Street.

Thence Southerly along Pearl Street to Gold Street.

Thence Westerly along Gold Street to Silver Street.

Thence Northerly along Silver Street to Fore Street.

Thence Westerly along Fore Street to Market Street.

Thence Southerly along Market to the dividing line between 32-S-3 and 32-S-4 & 5.

Thence Northerly along Moulton Street to Wharf Street.

Thence Westerly along Wharf Street to a passage between Assessor's map 32 blocks "T" and "U" leading to Commercial Street.

Thence Southerly along said passage about 28 feet to the dividing line between lots 32-U-3 and 32-U-5.

Thence Westerly, Southerly, and Westerly along the Southerly line of lot 5 to Dana Street.

Thence Westerly across Dana Street and following the Northern boundary of lots 32-V-2, 4, 5, 8, and 12 to Union Street.

Thence Northerly on Union Street to Fore Street.

Thence Westerly on Fore Street to parcel 38-F-8.

Thence Southerly along the Easterly sideline of 38-F-8.

Thence Westerly along the Southerly sideline of 38-F-8 to Cross Street.

Thence Northerly to Fore Street

Thence Westerly along Fore Street to 38-G-7.

Thence Southerly along the Easterly sideline of 38-G-7.

Thence Westerly along the Southerly sideline of 38-G-7 to the Easterly sideline of Center Street.

Thence Northerly along Center Street to the Southerly sideline of 40-F-11.

Thence Southwesterly along the Southerly sideline of 40-F-11 and 40-E-1.

Thence Westerly along the South side of 42-A-8.

Thence Northerly along the Westerly line of 42-A-7 to York Street.

Thence Westerly along the Southerly side of York Street to High Street.

Thence Southerly along High Street 44 feet ± to Southern sideline of 42-B-7.

Thence Westerly along the Southerly sideline of 44-B-2 to Park Street.

Thence Westerly across Park Street to the Southerly sideline of 43-C-7.

Thence Westerly along the Southern sideline of 43-C-7 to the edge of proposed State Street.

Thence Westerly across proposed State Street to the Southerly sideline of 43-E-8.

Thence Westerly along the Southerly sideline of 43-E-8 to the Casco Bay Bridge.

Thence Southeasterly along the Casco Bay Bridge to the Harbor Commissioner's Line.

Thence Northeasterly along the Harbor Commissioner's line to a point which is the intersection of the Harbor Commissioner's line and a line which is the extension of the lot line between the Southeasterly line of land now or formerly of Dan Haley and the Southwesterly line of the Portland House Condominium.

Thence Northwesterly along said line to the Southerly side of the Eastern Promenade at the point of beginning.

All as shown on a map dated April 13, 2001 entitled "Proposed Waterfront Redevelopment Area" on file in the Planning Office.

Any inconsistencies between this description and the map shall be controlled by the map.
(Ord. No. 249-01, 6-4-01)

Sec. 14-908. Financing Activities.

The following financing activities are authorized for the creation of funds to be used for the activities approved for funding by this ordinance:

(a) Tax Increment Financing Districts Revenues.

1. Within the Waterfront Redevelopment Economic Zone (WREZ) all activity except minor changes as defined below, which results in an increase in assessed value due to new construction, development or redevelopment, renovation, refitting or other physical change to structures or uses, including acquisition of equipment, shall be subject to designation as a Tax Increment Finance (TIF) District to support redevelopment activities within the WREZ pursuant to 30-A M.R.S.A. §§ 251-526, as amended.

   Minor changes shall mean those physical changes, minimal in scope or purpose, which when accumulated with previous and anticipated other changes, over a period of two years, increase the assessed value of the affected property by a cumulative total of $400,000 or less.

2. Affected properties shall mean those properties within the zone which undertake activity, except minor changes as defined above, which results in a change in assessed value due to new construction, development or redevelopment, renovation, refitting or other physical change to structures or uses, including acquisition of equipment.

Affected properties within the WREZ shall be designated for inclusion in this redevelopment program as a TIF District, and the tax increment from the captured assessed value shall be applied to the redevelopment program purposes, subject to approval by the City Council on a TIF-by-TIF basis.

A property is an affected property if it otherwise so qualifies, and the total aggregate amount of captured assessment in the TIF Districts devoted to this redevelopment program does not exceed 1.25% (.0125) of the total taxable valuation of the City of Portland, when adjusted as necessary to reflect 100% valuation, as determined by the City Assessor.

3. Paragraphs (1) and (2) notwithstanding, the Council may by Council order determine that the increases in assessed value that would otherwise be designated for the first time as TIF districts under (1) and (2) above for the next succeeding fiscal year shall not be so designated.

4. The redevelopment program shall be that series of investments, expenditures, guarantees and supports which are planned for project fund expenditures.

(b) Program Income and Other Revenues.

The City Manager will budget the program activities, including the program income and expense, of the redevelopment program annually for approval and implementation by the City Council. The redevelopment program is authorized to receive program income, grants, participations, joint ventures, investments and other revenues for the purposes of the redevelopment program as approved by the City of Portland from time to time.

(c) Updates to development plan.

Periodically, the city manager shall evaluate and propose updates to the Development Plan, and identify properties developed in the redevelopment zone which qualify as TIF District properties. The city manager shall report to the council on conditions and changes in conditions addressing the economic circumstances of the waterfront

economy, and shall include in said report detail on at least the following issues:

1. The utilization, adequacy and capital and operating position of the enterprise loan fund designed to assist water-dependant, marine-related properties and businesses;

2. The state of the fishing industry, the adequacy and demand for berthing space and operating facilities, financing, local markets and opportunities, and the operations of public operations pertaining to the fishing industry;

3. The status of other water dependant industries and operations along the Portland waterfront, including opportunities to develop or promote water dependent and marine resource dependant economic opportunities;

4. The status of dredge operations and needs at public and private piers, the nature of impediments to maintaining full depths at all working Portland piers;

5. The status of cargo operations in the Port of Portland, including analysis of surface transportation capacities serving the Port cargo operations, whether public or private;

6. The status of parking availability, public access to the waterfront and to water dependent recreational activities and pursuits;

7. The status of environmental concerns, programs and issues along the Portland waterfront, and particularly in the inner harbor; and

8. Such other information, data or findings concerning conditions as affects the economic and environmental health of the waterfront area, or recommendations concerning the operations of the loan fund or the capital improvement program.

(d) Recommendations.

As often as he or she deems prudent, the city manager shall submit to the city council a recommended capital improvement plan, utilizing the revenues of the WREZ. The finance committee of the city council or such other committee as the Council shall designate shall conduct public hearings on the recommended plan and refer the matter to the council for action.

(e) Adoption.

The City Council shall adopt amendments to the WREZ, designate TIF Districts and authorize expenditures and take such other actions as are necessary each year to implement this redevelopment plan and administer its revenues and expenses.

(Ord. No. 249-01, 6-4-01; Ord. No. 151-02/03, 2-3-03; Ord. No. 116-08/09, 12-1-08)

Editor's Note:** Sec. 14-909 ***Waterfront economic development advisory committee was repealed in its entirety per council order no. 116-08/09 and passed on 12/1/08.

Sec. 14-909. Reserved.
Sec. 14-910. Reserved.
Sec. 14-911. Reserved.
Sec. 14-912. Reserved.
Sec. 14-913. Reserved.
Sec. 14-914. Reserved.
Sec. 14-915. Reserved.
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Sec. 14-999. Reserved.

ARTICLE XVI. CITIZEN ADVISORY COMMITTEE

Sec. 14-1000. Purpose.

Pressures of growth in the community strain the relationship between neighborhoods and business and therefore a challenge exists to improve communication with, and timely participation by, Portland residents in the planning and development review process. There exists within Portland strong common ground and a desire to address the planning development challenges by constructively working and communicating with the public. The City desires a committee to meet on a quarterly basis that will 1) comment upon the integration and consistency of neighborhood plans with the Comprehensive Plan, 2) facilitate the exchange of information between existing and future planning task forces, 3) collate proposed, revised or amended components of the Comprehensive Plan to ensure internal consistency, 4) submit comments upon updates of

and additions to the Comprehensive Plan to the Planning Board for further review, and 5) respond to other undertakings as directed by the City Council.
(Sub. Ord. 222-01, 4-2-01; Ord. No. 93-03/04, 11-03)

Sec. 14-1001. Created.

There is hereby created a citizen advisory committee.
(Sub. Ord. 222-01, 4-2-01)

Sec. 14-1002. Composition.

The Citizen Advisory Committee shall be comprised of one (1) representative appointed by each City Councilor, as well as an individual representative of the Islands who shall be appointed by the Mayor.

Fourteen (14) additional members of the Citizen Advisory Committee, appointed by the mayor subject to Council approval, shall represent each of the following areas:

Housing	Business and Industry
Social Services	Youth
Parks and Recreation	Historic Preservation
Transportation	Education
Public Safety	Arts
Development	Waterfront
Open Space, Water Quality, and Trails	Residential Renter

All members of the Citizen Advisory Committee shall be Portland residents and all appointments shall be approved by the Council with the staggered terms of membership set by Council order.
(Sub. Ord. 222-01, 4-2-01; Ord. No. 93-03/04, 11-03-03)

Sec. 14-1003. Chair

The committee shall be chaired by a City Councilor and one (1) member of the Planning Board.
(Sub. Ord. 222-01, 4-2-01)

PLACEMAKER PARTNERS, LLC
18 Van Aken Way
Portland, ME 04102
(207) 747-5288

September 6, 2024

Mr. Matthew Grooms
Development Review Services Manager
Planning and Development Department
389 Congress Street
Portland, Maine 04101-3509

Subject: The Forefront at Thompson's Point
Major Site Plan Application - New Multi-Family Residential Building (G)

Dear Matthew:

On behalf of CPI Management, LLC (Cathartes) and Forefront Partners I, LP (Forefront), Placemaker Partners, LLC is pleased to provide the accompanying package of Major Site Plan submission materials representing the proposed development at 125 Thompson's Point Road, Portland, ME. The proposed Multi-Family Residential Building (labeled "G" on the attached Master Development Plan) with structured parking and outdoor living amenities will be located in the northwestern most portion of The Forefront at Thompson's Point Subdivision lots 17 thru 19, an area anecdotally referred to as the "panhandle". Cathartes, a prominent developer in the northeast with a driven focus on quality of life, has entered into an agreement with Forefront Partners I, LP to bring a vibrant and transformative residential development to Thompson's Point as contemplated in the approved Master Development Plan.

Cathartes is proposing to construct a six story 255-Unit market rate apartment building with a mix of units ranging in size from studios to 3-bedroom apartments. The building includes a variety of amenities and boasts a modern cohesion with the adjacent natural landscape, industrial history, and strong sense of community which Forefront has prioritized on Thompson's Point since the inception of its redevelopment efforts. The living units take full advantage of spectacular views down the Fore River estuary and a doorstep connection to well established multi-modal transportation including the local public trail system and METRO bus routes as well as regional connections on the Concord Trailway Bus and Amtrak railroad transportation center. An attached six (6) story 463 car parking structure, complete with bike storage room and EV charging, dedicated for residents and Thompson's Point managed parking supply, buffers much of the building from the adjacent railroad lines along the north side of the property.

The development proposal is a permitted use within the B-5 Mixed Use Zone and comprises of a portion of the 344 residential units approved under the Thompson's Point Master Development Plan. The multi-family development will be constructed on Lots formally shown as 17, 18, and 19 on the approved Forefront at Thompson's Point Sectional 4 Subdivision Recording Plat (dated May 2018 and last revised March 19, 2020). The Sectional 4 Recording Plat will be the last section to be recorded in the Cumberland County Registry of Deeds (CCRD) and, together with the previously recorded Sectional 1 through 3 Recording Plats, will complete the overall Forefront at Thompson's Point Subdivision. Simultaneously and combined with this Site Plan Application, Forefront is pursuing an amendment to Sectional 2 and 4 Subdivision Plats for review by the Planning Authority. Proposed alterations on the Sectional 4 Plat consolidate Lots 17 through 19 into a single development lot (the revised Lot 17). Lot 8 as described on Sectional 2 Recording Plat (CCRD Plan Book 223 Page 190) will be split into two development lots (the revised Lots 8 and 18). As a result, the amended overall 19 lot subdivision will be reduced to 18 total lots; however, the effective development area, common areas, and infrastructure remains the same.

The proposed development requires a Major Site Plan Submission Pursuant to Table 14-A: Site Plan Classifications in Section 14.3 – Project Classification of the Land Use Code. The applicant is proposing the following applicable development:

1. Construction of a new structure having a total floor area greater than 10,000 Sq. ft. (50,208 sq. ft.+/) and more than 3 (residential) units (255 units)
2. Stripping & grading work greater than 3 AC (4.51 AC)
3. Construction of Impervious Area greater than 1 AC (2.94 AC)
4. Construction of off-street vehicle parking spaces (498 Spaces)
5. Construction of Structures in the Shoreland Zone (Stormwater Outfalls)

This submission package is intended to demonstrate compliance with all documentation required by the Major Site Plan Checklist. The project meets all the requirements as outlined in the Site Plan Review Standards detailed in Section 14.6 of the Land Use Code of Ordinances. This includes but not limited to the following documents which have been uploaded to the City's CSS Portal:

- Application
- Project Plan Drawings – Site Plans, Architectural Drawings, Landscape Architect Drawings, and Photometric Plan
- Attachment A – Major Site Plan Checklist
- Attachment B – Major Site Plan Submission Supporting Narrative
- Attachment C – Evidence of Right, Title, and Interest
- Attachment D – Local, State, Federal, FAA, Historic Permits
- Attachment E – Zoning Analysis Table
- Attachment F – Conformity with Applicable Site and Zoning Standards
- Attachment G – Evidence of Financial and Technical Capacity
- Attachment H – General Construction Management Plan
- Attachment I – Traffic and Parking Generation Summary
- Attachment J – Supplemental Stormwater Management Memorandum
- Attachment K – Utility Correspondence and Wastewater application
- Attachment L – Fire Code Checklist

- Attachment M –Summit Geotechnical Data Report and local Soils information
- Attachment N – Agent Letter
- Attachment O – Summary of Easements
- Attachment P – Transportation Demand Management (TDM)
- Attachment Q – Lighting Specifications
- Attachment R – Site Photos

The Forefront at Thompson's Point development team appreciates your continued assistance on the development of this project. We are very excited to proceed with the residential component of the Thompson's Point neighborhood and look forward to continuing to work with the City of Portland to bring this project to fruition.

If you have any questions regarding these materials, please contact this office.

Sincerely,

PLACEMAKER PARTNERS, LLC



Bo Kennedy, P.E.
Project Manager/Engineer/Partner

List of Attachments: See Above

c: Rob Simmons, Cathartes
Chris Thompson, Forefront Partners I, LP
Jed Troubh, Forefront Partners, I, LP

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CITY OF PORTLAND
Planning & Urban Development Department

MAJOR SITE PLAN
GENERAL DOCUMENT AND DRAWINGS CHECKLIST
Please submit each document as a separate PDF file.
Please confirm by electronically checking the boxes in the left-hand column.

**** PLEASE FILL OUT AND UPLOAD THE ZONING ASSESSMENT TABLE AND WAIVER TABLE SEPARATELY AS NOTED BELOW ****

At the time of application submission, please contact the Department of Public Works regarding E-911 addressing for your project.

GENERAL APPLICATION DOCUMENTS		
Yes	**NA**	**Project Description** Attachment A & B • Cover letter with detailed project description
Yes	**NA**	**Completed Checklist** (this document)
Yes	**NA**	**Evidence of Right, Title, and Interest** Attachment C • Deeds, leases, or purchase and sales agreements
Yes	**NA**	**Evidence of State or Federal Approvals** Attachment D • Permits or letters of non-jurisdiction, if applicable
Yes	**NA**	**Zoning Assessment** (see Zoning Assessment Table) Attachment E Summary of compliance with use and dimensional standards of the land use code
Yes	**NA**	**Site Plan Standards Assessment** (see Section 14.6 of the land use c Attachment F • Summary of project compliance with site plan standards of the land use code
Yes	**NA**	**Summary of Existing and/or Proposed Easements or Covenants, applicable.** • Evidence of existing easements and any proposed easements, covenants, public or private rights-of-way Attachment O
Yes	**NA**	**Waiver Requests** (see Waiver Table) • Written request for waiver describing request and compliance with applicable waiver standards
Yes	**NA**	**Financial Capability** Attachment G • Letter or evidence from a financial institution or third party verifying financial capacity to undertake project
Yes	**NA**	**Technical Capability** Attachment G • Evidence of technical capability of applicant and consultants – resumes and/or examples of past projects

MAJOR SITE PLAN
STANDARDS AND SUBMISSION CHECKLIST

Provide assessment of compliance with standards and include supplemental documentation, as applicable.
Please submit each document as a separate PDF file.

TRANSPORTATION	
Yes **NA**	**Impact on Surrounding Street Systems (14-14.6.1(A))** **Attachment I** ● Describe incremental volume of traffic impacts and mitigation measures. If needed
Yes **NA**	**Access and Circulation (14-14.6.1(B))** **Attachments F & Site Plan Drawing** Identify and describe the following: ● Site access and internal circulation, including ADA access ● Drive-up features, if applicable ● Loading and servicing needs, routes, and geometry, providing turning templates for delivery vehicles, if applicable ● Sidewalks and condition along street frontages and internal walkways ● Engineered details for ADA ramps and public sidewalks, meeting sidewalk material policy and construction requirements (Technical Manual, Section 1)
Yes **NA**	**Public Transit (14-14.6.1(C)), if applicable** **Attachments F** Identify and describe the following: ● Existing available transit service and proposed transit improvements, including design details, such as easement, pad base, and shelter
Yes **NA**	**Off-Street Parking (14-14.6.1(D)), if applicable** **Attachments F** Identify and describe the following: ● Proposed vehicular and bicycle parking supply (including ADA-compliant parking) in relation to applicable parking requirements in Article 19 of the land use code ● Curb cut separation and parking layout (Technical Manual, Section 1) ● Construction details for bicycle racks ● Management plan for snow storage and removal
Yes **NA**	**Transportation Demand Management (TDM) (14-14.6.1(E)), if applicable** ● Provide TDM plan drafted in accordance with Technical Manual Section 1 requirements **Attachment P**

ENVIRONMENTAL	
Yes NA	**Preservation of Significant Natural Features (14-14.6.2(A)), if applicable** Attachment F Identify and describe the following: ● High and moderate value waterfowl and wading habitat ● Aquifers (for Casco Bay Islands) ● Waterbodies (including wetlands, watercourses, significant vernal pools and floodplains) ● Proposed preservation areas and protection measures ● Documentation from environmental compliance consultants and determinations from applicable state and federal agencies
Yes NA	**Landscape Preservation (14-14.6.2(B))** Attachment F Identify and describe the following: ● Measures to preserve trees, including within required zoning setbacks (Technical Manual, Section 4) ● Measures to protect existing vegetation during construction
Yes NA	**Site Landscaping and Buffers (14-14.6.2(C))** Attachment F Identify and describe the following: ● Overall landscaping approach and consistency with standards ● The use of screening and buffering of service areas and between non-residential and residential uses ● Existing Heritage or Feature Trees on site and measures to preserve ● Compliance with street tree requirements
Yes NA	**Water Quality, Stormwater Management, and Erosion Control (14-14.6.2(D))** Attachment J Identify and describe the following: ● Erosion and sedimentation control plan and measures ● Evidence of compliance with Urban Impaired Stream Standards pursuant to DEP Chapter 500 stormwater law, as applicable ● Subsurface sanitary sewage disposal and groundwater protection measures

PUBLIC INFRASTRUCTURE AND COMMUNITY SAFETY	
Yes **NA**	**Consistency with City Master Plans (14-14.6.3(A))** Attachment F ● Describe proposed easements, rights and improvements to connect or continue off-premises public infrastructure, as applicable
Yes **NA**	**Public Safety and Fire Prevention (14-14.6.3(B))** Attachment L Identify and describe the following: ● Compliance with Crime Prevention through Environmental Design (CPTED) requirements (Technical Manual, Section 3) ● Emergency vehicle access ● Consistency with public safety standards (Technical Manual, Section 3)
Yes **NA**	**Availability and Adequacy of Public Utilities (14-14.6.3(C)) (Technical Manual, Sections 2 & 9)** Attachment K Identify and describe the following: ● Electrical services, including providing underground services ● Existing and proposed connections for public utilities and required public utility upgrades ● Sewer line connections
SITE DESIGN	
Yes **NA**	**Massing, Ventilations and Wind Impact (14-14.6.4(A))** Identify and describe the following: ● Wind and ventilation impacts on adjoining structures and/or adjacent public spaces, including wind study, if applicable ● Bulk, location, or height impacts on adjoining structures
Yes **NA**	**Shadows (14-14.6.4(B)), if applicable** ● Provide shadow analysis of impacts on publicly accessible open space (Technical Manual, Section 11)
Yes **NA**	**Snow and Ice Loading (14-14.6.4(C))** ● Describe building design measures to prevent snow and ice from loading or falling onto adjacent properties or public ways
Yes **NA**	**View Corridors (14-14.6.4(D)), if applicable** ● Describe any protection of designated view corridors (Portland Design Manual, Appendix. 1)
Yes **NA**	**Historic Resources (14-14.6.4(E)), if applicable** Identify and describe the following: ● The site's status as a designated landmark, within a historic district or historic landscape district, or within 100 feet of any designated landmark, historic district, or historic landscape district ● Compliance with standards for preservation and documentation of archaeological resources

Yes	NA	**Exterior Lighting (14-14.6.4(F))** Attachment F & Q ● Describe how the proposed site lighting will adhere to photometrics requirements as it relates to light trespass and full cutoff fixture design, pursuant to Technical Manual Section 12
Yes	NA	**Noise and Vibration (14-14.6.4(G))** Attachment F ● Provide data on noise levels for HVAC and other mechanical equipment, such as design specifications, to demonstrate consistency with state and federal noise emissions requirements as well as City code
Yes	NA	**Signage and Wayfinding (14-14.6.4(H)), if applicable** Attachment F ● Provide signage plan showing the location, dimensions, height and setback of all existing and proposed signs ● Provide drawings of all commercial and directional signage on site
Yes	NA	**Zone-Related Design Standards (14-14.6.4(I))** Attachment F & E ● Address any applicable design review standards by zone, including compliance with Design Manual

MAJOR SITE PLAN
DRAWINGS CHECKLIST

Please upload the following DRAWINGS with the listed details into e-Plan as separate pdfs.

All DRAWINGS ARE ON 30" X 42" SHEET SIZE FOR CONSISTENCY WITH PREVIOUS PLAN SETS

All drawings must be submitted in a 24 x 36 sheet size.

BOUNDARY SURVEY (stamped by a Maine Licensed Surveyor and drawn as per Technical Manual Sec. 13)

SITE PLAN(s) (stamped by a Maine Licensed Professional Engineer) including:

All sheets – Include a title block with project title and the following information:

- Project street address
- Name and address of property owner & applicant
- Licensed design professional, incl firm that produced plans
- North arrow
- Date of preparation and revision history block
- Tax parcel (chart, block, and lot) number

Existing Conditions Plan with the following:

- Existing structures, with distance from primary building façade(s) to the property line
- Approximate location of structures on abutting properties
- All streets and intersections adjacent to the site
- Existing driveways, pedestrian ways, and bicycle infrastructure, including dimensions and materials
- Existing public transit infrastructure
- Existing vehicle & bicycle parking areas
- Existing utilities on site and within adjacent rights-of-way
- Existing grades (two-foot contours preferred)
- Location of water courses, wetlands, and vegetation, or other significant natural features
- Existing soil conditions and location of test pits and borings
- Zoning boundary lines, including overlays
- Location of all existing easements and rights-of-way

Proposed Site Plan with the following:

- Proposed structures, including distance from primary building façade(s) to property lines
- Ground floor area, and finished floor elevations for all buildings
- Any proposed geometric modifications to streets and intersections adjacent to site
- Location, dimensions and materials of all proposed driveways, vehicle, bicycle, & pedestrian access ways with corresponding curb lines
- Engineered specifications/ cross-sections for proposed driveways, sidewalks & paved areas
- Location and dimensions of proposed loading areas, including turning templates
- Proposed transit infrastructure with dimensions/ engineering specifications
- Location of vehicle and bicycle parking with dimensions and engineering specifications
- Location of all snow storage areas
- Exterior lighting (please see Technical Manual Sec. 12 for photometrics requirements)

- Location of fire hydrants
- Location of solid waste management receptacles
- Location of all proposed HVAC and mechanical equipment, including proposed screening, where applicable
- Location of proposed easements and rights-of-way, including dimensions
- Please utilize color-coding and/or hatches and shading to delineate changes between the pre and post development condition as needed

UTILITY PLAN including:

- Proposed electrical infrastructure
- Location, sizing and directional flows of all proposed sewer and stormwater infrastructure
- Location and dimensions of off-premises public or publicly accessible infrastructure adjacent to site
- Electric utility infrastructure

GRADING AND DRAINAGE PLAN including:

- Proposed grades
- Proposed stormwater management measures meeting Technical Manual (Section 5) standards
- Any proposed alteration of a watercourse or wetlands
- Any groundwater protection measures
- Proposed buffers and preservation measures for wetlands or significant natural features

LANDSCAPE PLAN including:

- Existing vegetation to be preserved and preservation measures
- Proposed landscaping, screening, and street trees, including caliper widths for trees
- Planting schedule, including street trees

ARCHITECTURAL PLANS AND RENDERINGS including:

- Exterior building elevations, color renderings, illustrations of all sides
- Axonometric and street-level views for structures greater than three stories in height
- Provide context drawings, if applicable (Design Manual, page 1)
- Floor plans

CONSTRUCTION MANAGEMENT PLAN including:

- Specifics on traffic control, sidewalk sheds, and pedestrian rerouting
- Include a drawing and written narrative

OTHER

- Details and cross-sections, as necessary

MAJOR SITE PLAN SUBMISSION SUPPORTING NARRATIVE

In accordance with Section 16.1, City of Portland Technical Manual, Section 14.6., Land Use Code Chapter 14, and General Written Submission Checklist, we offer the following narrative describing the information supporting the Major Site Plan submission as Attachment B.

Section 16.1.A General Submissions Requirements

1. Application Form – Submitted on Portland's CSS Portal
2. Application Fees – Paid online as applicable
3. Project Description:
   See Cover Letter

4. Evidence of Right, Title, and Interest

   Copies for proof of land ownership and agreements are on file with the city and available upon request. A letter from Forefront Partners I, LP (current owners) stating the legitimacy of agreement to develop and authorization to seek entitlements is included in Attachment C.

5. Evidence of State and/or Federal Approvals; if applicable

   The Applicant has provided copies of the State and Federal Permits issued for the project including the Traffic Movement Permit, U.S. ACOE Permit, and MaineDEP NRPA Permit in Attachment D.

6. Written Assessment of Proposed Project's Compliance with Applicable Zoning Requirements

   A written summary is contained in Attachment E to this submission.

7. Written Assessment of Project's Compliance with Site Plan Standards

   A written summary is contained in Attachment F to this submission

8. Summary of existing and/or proposed easements, covenants, public or private rights-of-way, or other burdens on the site

   A summary of existing and proposed easements is included in Attachment O

9. Written requests for waivers from the city's site plan or technical standards, if applicable;

   No waivers are requested from technical standards.

10. Evidence of Financial and Technical Capacity

    The Applicant has enclosed a letter in Attachment G from M&T Bank affirming Cathartes has the financial capacity and technical expertise to complete the proposed project.

11. The Boundary and Topographic Survey Plans prepared by Sebago Technics and submitted as part of the original 2013 Level III approval documents, subsequent 2014 Master Plan approval, and 2016 Subdivision approval documents remain valid and are the basis of this Major Site Plan submission. The approved amended Sectional 4 Subdivision Recording Plat dated 03.19.2020, Sheet C-2.0 – Existing Conditions Plan, and C-2.1 Demolition and Removals Plan are included with the site plan drawing set.

Section 16.1B – Written Materials for Site Plan Applications

1. The construction management plan is enclosed in Attachment H of the site plan submission package.

2. A Traffic Study was completed as part of the approved MaineDOT Traffic Movement Permit for the previously reviewed and approved with the previously approved Master Development Plan, Overall Subdivision Plan, and Level III/Major site plan applications. The work proposed as part of this application is consistent with these approvals. The proposed scope of work has been estimated for trip generations as shown in the enclosed memorandum prepared by Gorrill Palmer Associates dated 2024.09.04 in Attachment I. The enclosed Memorandum states that the proposed project forecasted trip generation is well below the permitted number of trips.

3. Thompson's Point has some vegetation on the far westerly end of the panhandle where some mature trees have established, and which require protection under the Shoreland protection requirements. This phase of the project will not clear this vegetation. The residential project will fill a small coastal wetland area of significance to install a stormwater outfall plunge pool. Furthermore, the Fore River tidal flats, river, and protected shoreland bird habitat surround the perimeter of the peninsula. The proposed lot 17 site development area is not adjacent to migratory shore bird habitat and the Shoreland zone established during state agencies during the Master Development Plan and Subdivision Plan entitlement process. The future proposed activities on other lots with-in the subdivision adjacent to these zones have been previously reviewed and approved as part of the Master Development Plan, Subdivision Plan, and Level III Site Plan approval, by the MaineDEP under a Natural Resources Protection Act (NRPA) review and Army Corp of Engineering (ACOE).

   The proposed construction includes installation of two stormwater outfalls and landscaping in the shoreland zone. Temporary and permanent erosion and sediment control measures are proposed to protect the nearby resources during and after construction. A new stormwater management system will collect and convey runoff from the new development area to a stabilized outfall sized with the appropriate amount of energy dispersion for the design flows. This approach limits the potential for sediment entering the adjacent wetlands and Fore River.

4. A detailed narrative describing the existing site watershed hydrology, existing buildings, and existing land cover is included in the previously submitted stormwater management reports on file with the city and a new Supplemental Stormwater Memorandum addressing this phase of the project is included with this submission in Attachment J.

5. A memorandum detailing the proposed stormwater management components and runoff calculations is appended to this application. The proposed improvements included with this submission include the disturbance of 4.51 acres. The disturbance area is contained almost entirely within the site's previously developed impervious area (Pre-1975) and proposes the redevelopment of approximately 2.94 acres of new impervious area (roadway, building, and pedestrian access).

6. The proposed development was found to be consistent with the City Master Plans during the Master Development Plan and Subdivision Plan review process.

7. The applicant has received ability to serve letters for the currently proposed Master Development plan from all utilities. The development proposed on Lot 17 will utilize the common infrastructure sized and installed to accommodate the entire master plan. New utility services (Water, Sewer, Storm, Electrical) will be tapped on to the existing mains currently feeding the entire subdivision. Updated Letters from utilities specifically addressing this project are included in Attachment K. A new City of Portland Wastewater Capacity Application summarizing the estimated proposed wastewater flows is included in Attachment K.

8. All waste will be stored in roll out type bins inside a trash room. All residents will have access to the trash chute. These containers will be serviced by an independent solid waste contractor on a regular basis. The frequency at which the solid waste is collected will be determined by the management company on an as needed basis.

   All waste generated from the site preparation and general site work will be collected and sorted/separated on-site until they are removed and disposed of properly, off-site, by a private contractor.

   All construction waste will be collected and sorted/separated on-site and managed by the general contractor.

9. Fire/Building Codes:
   -The full Fire Department Development Checklist is made part of this submission in Attachment L.
   -The building will be designed in accordance with the city building code, as well as all applicable local, state, and federal codes/laws. The building will be fully sprinklered in accordance with NFPA 13, NFPA 14, and will have fire detection/alarm systems as dictated by NFPA 72 and the underlying codes. The proposed building construction is classified as follows:
   Group B: fitness, offices
   Group R-2: amenity, residential units
   Group S-2: parking, storage, MEP

   Technical Standard 3.2 - Fire Hydrants:
   -There are (2) Two proposed private fire hydrants and (1) one existing municipal fire hydrant located within 500 feet radius of the building. Please see the attached Fire Safety Compliance Plan C-9.0.

   Technical Standard 3.3 - Single and Two Family Residential Development:
   - Multi – Family Building will be Fully Sprinklered; Parking Structure will be Fully Sprinklered with a dry system.

   Technical Standard 3.4 - Site Access Standards:
   3.4.1. - Private road provides turnaround designed to accommodate 40' ladder truck
   3.4.2. - Fire department access is provided via Thompson's point access road and a private Drive for access to 2 sides of the building.
   3.4.3. - Zoning does not require building setbacks
   3.4.4. - Fire department access roads extend to within 50' of entrances to building
   3.4.5. - All site access provides no less than 9 feet in clearance height.
   3.4.6. - All elevators will accommodate an 80 x 24 stretcher.
   3.4.7. - The street numbering and 911 address has been reviewed and approved by the city of Portland public works.
   3.4.8. - The building will display the assigned street numbers. Approved 911 address is **125 Thompson's Point Road**

   Technical Standard 3.5 – Standards for Emergency Access Lanes and Gates:
   All access roads exceed 16' in Width and Road Radius can Accommodate a 40' long Fire Truck/ Single Body Vehicle

   Technical Standard 3.6 – Subdivision Standards
   The Subdivision Standards have been reviewed and approved by the City of Portland. This approval granted a waiver to permit a subdivision with 1 Access Road.

   Technical Standards 3.7 through 3.11 - Standards for blasting and regulation of explosives:

- Geotechnical explorations were performed and the subsurface condition does not contain bedrock. Based on the findings, large blast operations are not anticipated. Geotechnical data reports are enclosed in Attachment M.

10. A review of the Applicable Technical Design Standards of Section 3 is included in Attachment F of the application.

11. HVAC equipment has not been specified and selected yet, but Embarc, as an experienced licensed architects and engineers, will ensure that all equipment are specified and installed in full compliance with all codes and regulations, including but not limited to state and federal emissions requirements.

Section 16.1C – Plans Required for Site Plan Applications

1. Requirements 1 thru 4 - A Site Layout Plan – Sheet C-3.1 and a Grading Plan – Sheet C-5.0 accompanies this submission. These plans show the location and details for all disturbed surfaces.

5. The engineering specification and cross-sectional designs remain consistent with those approved during the Subdivision application review and are included on plan sheet C-8.8.

6. The proposed buildings will not have dedicated loading bays but will incorporate a 40 ft long loading zone space for 1 to 2 trucks to park at grade on the northerly side of the building. This space is in proximity to the service elevator and will be used for all loading, deliveries, as well as short term parking for moving vans.

7. Public transit is accessible at the near-by Portland Transportation Center via the METRO service. Forefront Partners is actively engaged with the METRO as part of the ongoing TDM effort. Two METRO stops on Thompson's Point Road are in close proximity to the front door of the residential building.

8. The design plans detail the (498) four hundred ninety-eight proposed vehicular parking spaces proposed in this application. (102) One hundred and two bicycle parking spaces are located in front of and inside the proposed Building (G). The developers will use Standard City of Portland Dero hitch bicycle posts on the exterior of the building consistent with the other onsite posts. The bike rooms will be equipped with wall mounted bike racks.

9. Snow storage is proposed to be located temporarily along the edges of the drive aisles and landscaped areas until such a time when the stockpiles need to be removed from the property. Snow removal on the parking roof deck will be plowed to a drop chute where it can be managed on the ground.

10. The plan includes a landscape preservation area and landscape plantings to screen the development from the existing trail.

11. This project does not propose alterations to any watercourses. The accompanying plan sheets show the site's proximity to existing watercourses which includes the Fore River.

12. Wetland boundaries and natural resources are shown on the referenced boundary and topographic plans. This portion of the project will fill a small area of the coastal wetlands for the installation of a new stormwater outfall. This wetland fill was approved by the ACOE and MeDEP.

13. The applicant's project proposes to setback the development from the delineated wetlands located on the panhandle portion of the site. The wetlands are preserved with the exception of a very small impact for the installation of a stormwater outfall.

14. Existing soil conditions are well documented in the previously approved Master Development Plan and Subdivision Plan. The site has a long history of heavy development and most of the surfaces are described as compacted gravel, pavement or building overlaying urban fill and clayey substrata. The existing surface land cover types are identified on the accompanying plan set. A geotechnical exploration data report for the area prepared by Summit GeoEngineering services is enclosed with this application in Attachment M further describing the underlaying soils.

15. The applicant proposes landscaping in pervious areas as shown on the enclosed Landscaping Plan L-1.0.

16. The Grading Plan Sheet C-5.0 and Overall Interim Stormwater Management Plan Sheet C-5.1 and Stormwater Management Plans 1 (C-5.2) and 2 (C-5.3) are included in the accompanying plan set. The proposed stormwater management plan is consistent with the previously approved Subdivision plan and utilizes multiple Jellyfish cartridge and Filterra bioretention filtration devices to satisfy Section 5 of the City of Portland Technical manual for stormwater quality treatment. A stormwater memorandum prepared by the engineer of record is appended to this application.

17. A Grading Plan Sheet C-5.0 accompanies this Major Site Plan submission. This plan shows the detailed site grading within the "disturbed areas" as defined in Section 5 III (F) of the City of Portland Technical Manual. The Erosion Control and Construction Management Plan C-6.0 depicts the erosion and sediment control measures meeting the Basic Standards as required as part of City of Portland's Technical Manual Section 5. Generally speaking, the site grades are greater than 13' above the 100-year floodplain as indicated on the latest Flood Hazard Maps for the City of Portland.

18. Sheet C-2.1 Demolition and Removals Plan details specific measures to handle groundwater dewatering during construction to comply with the approved MaineDEP Voluntary Response Action Program (VRAP). We anticipate very little need for groundwater dewatering during these interim phase activities. Additional ground water protection measures are included in the stormwater management treatment facilities by using an impermeable liner separating stormwater runoff and groundwater.

19. The applicant proposes two new 8" diameter sewer connections to an existing sanitary sewer manhole. The Utility Plan Sheet C-4.0 shows details for the proposed sewer services.

20. The enclosed Utility Plan Sheet C-4.0 shows the location of all existing and proposed fire hydrants. The Life Safety Compliance Plan C-9.0 shows all hydrants to be in service at the completion of this development project with service radius of 100' and 250'.

21. The existing 12" water main (publicly owned), 15" sewer main (publicly owned), and electrical/communications (private) duct bank serving the project is shown on the enclosed Utility Plan Sheet C-4.0. The proposed development will construct new utility stubs for the development lot.

22. No off-site infrastructure is required as part of this project application.

23. The residential building will have a dedicated 24' x 29' trash room and trash chute inside the building for on-site solid waste and recyclable storage receptacles. These containers will be

serviced by an independent solid waste contractor, on a regular basis. All waste generated from the site preparation and general site work will be collected and sorted/separated on-site until they are removed and disposed of properly, off-site, by a private contractor. All construction waste will be collected and sorted/separated on-site and managed by the general contractor.

24. C-3.0 Site Layout Plan shows the building location and orientation on the site. The enclosed architectural plans prepared by Embarc Designs show the proposed floor plans and building elevations for all sides of the building.

25. A shadow analysis is not applicable to this application.

26. The proposed development is not with-in a Historic preservation district. All non-determination letters are on-file with the city and included in Attachment D.

27. HVAC equipment has not been specified and selected yet, but Embarc Designs, as an experienced design architect with licensed architects and engineers, will ensure that HVAC systems are specified and installed in full compliance with all codes and regulations, including but not limited to state and federal emissions requirements. Currently, all HVAC systems are proposed to be centralized on the roof.

28. Lighting fixture locations are shown on sheet C-4.0 Utility Plan. An exterior Lighting Photometrics Plan Sheet E-0.0 is included and generally consistent with the lighting plan approved as part of the Subdivision Plan review with some updates to modernize the fixtures and bring them more in-line with current lighting technical standards.

29. A separate signage plan and application will be submitted under a separate cover and application. The applicant is anticipating signage on the canopy above the main entrance as well as a small freestanding monument sign near the intersection with Thompson's Point Road.

    Standard traffic signage shall meet MUTCD standards and is detailed in the included plan set.

30. All existing and proposed easements and rights of access are described in the Declaration of Covenants recorded in the county registry of deeds. A summary of easements specific to development Lot 17 is enclosed in Attachment O.

Att. D

Forefront Partners I, LP
501 Danforth Street | Portland, ME 04102

8 July 2024

VIA EMAIL DELIVERY

Kevin Kraft, AICP
Director, Planning & Urban Development Department
City of Portland
389 Congress Street
Portland, Maine 04101

Dear Mr. Kraft,

On behalf of Forefront Partners I, LP, I am writing to confirm that we are under contract in a Purchase and Sale Agreement with Cathartes to purchase Lots 17-19 at Thompson's Point.

They have our express permission to pursue site plan approval and all necessary permitting for their proposed multi-family project and related improvements.

If you have any questions, please do not hesitate to contact me.

Thank you for your support and very best of regards,

Chris Thompson
President, Forefront GP, LLC

ATTACHMENT D

State and Federal Permits, Local Permits, Historic Determination

Planning and Urban Development
Kevin Kraft, AICP
Director

To: Chris Thompson
From: Kevin Kraft
Date: 8/9/2024
Re: Inclusionary Zoning Applicability – Thompson's Point

Chris,

On March 11, 2014, the Planning Board voted to approve your Master Development Plan (MDP) application for the Forefront at Thompson's Point. City of Portland Land Use Code*, Section 14.3.2.B Master Development Plan*, states that MDP approval confers pending proceeding status upon development with the effect of maintaining the applicability of regulations in effect at the time of approval for as long as the MDP approval remains valid.

On October 19, 2015, the City Council adopted Inclusionary Zoning regulations which went into effect on November 18, 2015 (Order 82-15/16). The Forefront at Thompson's Point Master Development Plan was approved before the Inclusionary Zoning regulations were implemented and therefore is not subject to Portland's Inclusionary Zoning requirements.

According to Section 14.12.2 of the City of Portland Land Use Code, a Master Development Plan (MDP) expires six years after approval if no site work or building construction has commenced. Since several phases of the Thompson's Point MDP have been constructed and continuous site work has been ongoing since its approval, the MDP remains valid.

Please reach out should you have any additional questions or concerns.

Sincerely,

Kevin Kraft

CC:
Matt Grooms

389 Congress Street, Portland, Maine 04101 | ph: 207.874.8430 | kkraft@portlandmaine.gov

Mary Davis

389 Congress Street, Portland, Maine 04101 | c: 207.272.7885 | jgrondin@portlandmaine.gov

Planning & Urban Development
Christine Grimando, AICP
Director

To: Brandon Mazer, Chair, and members of the Planning Board

From: Christine Grimando, Planning & Urban Development Director

Date: June 30, 2023

RE: Master Development Plan Pending Proceeding

A question was raised in the course of the review of recent site plan applications for Portland Foreside/58 Fore Street, regarding whether a Master Development Plan (MDP) approved under a previous iteration of the Land Use Code (Code) was subject to the expiration provisions of the current Code, or whether the section in the Code in place at the time of MDP approval (for 58 Fore Street, December 2016, but the question extends to all MDPs) would apply. The Planning & Urban Development Department has determined the current Code's expiration section applies to this and other previously approved MDPs. Discussion of prior and current expiration sections, how pending proceeding is determined, and how the applicable Code standard is determined follows below.

MDP Expiration Under 2016 & 2023 Versions Of The Land Use Code
The current Code states:

> *Master development plans approved under this article shall expire six years from the date of approval if no site work or building construction has commenced.* (sec. 14.12.2) and *Master development plan approvals may be extended by the Planning Authority up to two times, for up to two years from the date of expiration of the original master development plan approval.* (sec. 14.13.4).

The Code in effect in December 2016 states:

> *Master Development Plan approval may be sought separately or currently with the Phase I Final Level III site plan approval, and shall have an initial approval period of six (6) years, with potential extension periods as provided for in section 14-532(d). (14-524(f)(i))*
>
> *Prior to the expiration of the Master Development Plan, an applicant may submit a written request to the Planning Authority for an extension of a Master Development Plan approval and associated waivers. Only two (2) such extensions may be granted by the Planning Authority, and*

each such extension shall be limited to two (2) years from the date of expiration of the Master Development Plan. (14-532(d))

The expiration language currently in effect means that once site work has commenced, the MDP won't expire, whereas the 2016 MDP expiration language included a finite 10 year end, assuming two two-year extensions were granted. Under the current and 2016 versions of the Code, Individual Site Plan approvals, including those that are part of an MDP, expire in one year, with possible extensions up to a maximum of three years. Lapses in construction for a period in excess of 12 months will also result in a site plan expiration. (2016 14-532(c)(1), 2023 14.12.1; 14.13.3)

Pending Proceeding

Pending proceeding is a term that, in context of development applications, indicates that substantive review has begun, which, in turn, determines which set of regulations an application is reviewed under. For the purposes of applications that are within the jurisdiction of a land use (Historic or Planning) Board, pending proceeding status is conferred when the Board holds its first review, whether that is a workshop or public hearing. For the purposes of administrative/staff reviewed applications, this occurs when the first substantive comments are provided. For applications in-review when the City adopts, through Council action or referendum, amendments to the City Code, it is important to understand whether an application is pending in order to determine what standards they are held to. A submitted application, accepted for the purposes of beginning review, does not have pending proceeding status, but a development application that has been before the Board for an initial workshop does, and may continue in the review and approval process under the Code in effect at the time of the first workshop.

Determining when an application has pending proceeding status is not outlined in the Land Use Code, but there are two references to the term in the Land Use Code: 1) Section 14.5.1 states that voluntary, non-binding pre-application meetings do not confer pending proceeding status; and 2) Section 14.3.2 (formerly 2016 Section 14.524(f)(iv)) states MDP a*pproval shall confer pending proceeding status upon the development with the effect of maintaining the applicability of regulations in effect at the time of approval for as long as the master development plan approval remains valid, including permissible extensions if granted*.

Sec. 14.3.2 is the reason a subsequent site plan application (or subdivision application where applicable) that is a component of an MDP is still reviewed under the regulations in effect at the time of the MDP approval, even if standards of the Code are amended over time. Pending proceeding status is one of the benefits of an MDP approval, and it offers a degree of regulatory predictability for both property developers and the City for these large multi-year phased projects. Without pending proceeding status, it would be difficult to predict all of the potential regulatory changes that could impact a project that is expected to be built out over years. For instance, if maximum heights were reduced, or minimum parking standards increased (to name a few examples of standards that could change over time in the City's Code), site plans that are phases of previously approved MDPs are not held to more stringent or restrictive standards that were adopted during a valid MDP approval period.

Though an MDP and its associated applications have pending proceeding status for the life of the MDP's approval, nothing *prohibits* an applicant of an MDP approved under a previous version of the Code from seeking review under the current version of the Code. Becoming more conforming with the adopted Land Use Code is generally something the standards encourage; a previous approval may proceed under the Code it was reviewed under, but it is not compelled to remain non-compliant with current standards.

In the event an applicant proposes to develop a site to meet current regulations that differ from the regulations in effect at the time of MDP approval, they may do so. However, substantive changes to an approved MDP would require an amendment, and substantive amendments related to areas of the Code that have been changed since the application was originally approved would be reviewed under the current Code. An applicant with an approved site plan who wishes to make use of a new provision in the Land Use Code is also free to apply for an amendment, and this also could subject them to new sections of the current Code if the amendment broaches sections that have since been amended. For example, a proposed change to the total housing units would be reviewed for consistency not only with residential density standards, but with other applicable Code requirements such as inclusionary zoning; or, as previously mentioned, if maximum heights were lowered since an approval was granted, and an amendment to a prior approval was submitted to alter heights of buildings, the new standards would apply.

Exhibit 3

Planning & Urban Development
Christine Grimando, AICP
Director

March 1, 2022

Bo Kennedy
Placemaker Partners, LLC
501 Danforth St
Portland, ME 04102

Project Name: Forefront at Thompson's Point – Master Development Plan
Project ID: 2013-262 CBL: 201-A-5
Applicant: Forefront Partners I, LP

Mr. Kennedy:

Thank you for your letter dated January 19, 2022 requesting an extension of the approval of the Master Development Plan for the Forefront at Thompson's Point project.

In my capacity as Director and under the provisions of Land Use Code Sec. 14.13, Extension of Approvals, I am granting your request to extend your approval to March 11, 2024.

If there are any questions, please contact James Rather, Development Review Manager at (207) 874-8699.

Sincerely,

Christine Grimando, AICP
Director, Planning and Urban Development

CITY OF PORTLAND

Planning & Urban Development

Christine Grimando, AICP, Director

February 14, 2020

Chris Thompson
Forefront Partners I, LP
55 Lisbon Street
Lewiston, ME 04240

Bo Kennedy
Placemaker Partners, LLC
501 Danforth Street
Portland, ME 04102

Project Name:	Forefront at Thompson's Point – Master Development Plan		
Project ID:	2013-262	CBL:	201-A-5
Applicant:	Forefront Partners I, LP		
Planner:	Shukria Wiar		

Dear Mr. Thompson:

Thank you for your letter dated January 30, 2020 requesting a two- year extension of the approval for your Master Development Plan for the Forefront located at Thompson's Point. I understand that you will continue to pursue fulfillment of the Master Development Plan through future Site Plan applications.

In my capacity as Director of the Planning & Urban Development Department and under the provisions of Section 14-532 (d), Expiration of Master Development Plan, I am granting your request to extend the approval for application ID 2013-262 to March 11, 2022.

If there are any questions, please contact Shukria Wiar at 756-8083 or at shukriaw@portlandmaine.gov.

Sincerely,

Christine Grimando, AICP
City Planning Director

CITY OF PORTLAND, MAINE

PLANNING BOARD

Stuart O'Brien, Chair
Timothy Dean, Vice Chair
Elizabeth Boepple
Sean Dundon
Bill Hall
Carol Morrissette
Jack Soley

March 12, 2014

Chris Thompson
Forefront Partners I, LP
55 Lisbon Street
Lewiston, ME 04240

Bo Kennedy
FST
778 Main Street, Suite 8
S. Portland, ME 04106

Project Name: Forefront at Thompson's Point – Master Development Plan
Project ID: 2013-262
CBL: 201-A-5
Applicant: Forefront Partners I, LP
Planner: Nell Donaldson

Dear Mr. Thompson:

On February 11 and March 11, 2014, the Planning Board considered your master development plan application for the Forefront at Thompson's Point. The Planning Board reviewed the proposal for conformance with the master development plan standards of the city's land use code, made findings that the proposal met the required standards and voted to approve the application with the conditions presented below.

MASTER PLAN

The Planning Board voted (6-0, Boepple abstained) that the proposed plans are in conformance with the master plan standards of the city's land use code, subject to the following conditions of approval, which must be met prior to subdivision approval, unless otherwise stated:

1. The applicant shall provide a summary of existing and/or proposed easements, covenants, public or private rights-of-way, or other burdens on the site, including the proposed easement to the Department of Public Services to use the private drive system for turn-around access and easements and conditions relating to public use of trails and open space on the site, for review and approval by the Department of Public Services and the Planning Authority;

2. The applicant shall provide evidence of water capacity from the Portland Water District, for review and approval by the Planning Authority;

3. The applicant shall provide evidence of sewer capacity from the Department of Public Services, for review and approval by the Planning Authority;

4. The applicant shall submit a revised report from a certified fire protection engineer describing evacuation procedures; add a note to the master development plan indicating that all buildings will include sprinkler and fire alarm systems, except for buildings determined by the Fire Prevention Bureau to be exempt from such regulations; and revise the event management plan to indicate that free and clear fire access will be maintained at all times during events, for review and approval by the city's Fire Prevention Bureau;

5. The off-site transportation-related improvements as heretofore required through prior approvals shall represent the off-site transportation-related improvements required for the master development plan and subsequent Level III subdivision and site plan review, so long as the existing Traffic Movement Permit applies; additional requirements for on-site transportation improvements shall be addressed through subdivision and site plan review.

The approval is based on the submitted plans and findings related to master development plan standards as contained in the Planning Board Report and Addendum for application 2013-262, which are attached.

STANDARD CONDITIONS OF APPROVAL & REQUIREMENTS
Please note the following standard conditions of approval and requirements for all approved master development plans:

1. **Separate Level III Subdivision/Site Plan Approvals Required** This approval establishes the general parameters to be adhered to for the development, including the supporting documentation for floor area ratio and/or residential density, general types of uses, building coverage, generalized open space plans and infrastructure systems. This master development plan approval shall not be construed as final authorization of the development. Approval shall confer pending proceeding status upon the development with the effect of maintaining the applicability of regulations in effect at the time of approval for as long as the master development plan approval remains valid, including permissible extensions if granted. Separate Level III subdivision and site plan approvals are required. Level III subdivision and site plans for each phase shall be in general conformance with the master development plan.

2. **Master Development Plan Amendments** A minor amendment to a master development Plan shall be defined as a change which is generally consistent with the approved master development plan layout of buildings, circulation infrastructure, and open spaces, and:

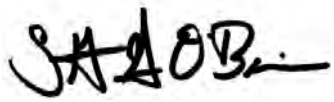
i. Does not propose any new general type of use beyond those approved initially;
ii. Does not increase the building ground coverage, floor area ratio or residential density of the Master Development Plan;
iii. Does not decrease any specified area regulations or enumerated parking ratios; and
iv. Does not substantially change access, circulation, or infrastructure on or adjacent to the site.

The Planning Authority shall be authorized to approve such minor amendments to a master development plan upon written application and explanation of the change(s) by the owner (or its agent) of the property. No further public hearings shall be required.

3. **Master Development Plan Expiration** An approved master development plan shall expire six (6) years from the date of approval unless, prior to the expiration of the master development plan, a written request for an extension is submitted to the Planning Authority. Only two (2) such extensions may be granted by the Planning Authority, and each such extension shall be limited to two (2) years from the date of expiration of the master development plan. The Planning Authority may grant an extension provided there have not been substantial changes to the underlying zoning or site plan standards since the date of the master development plan approval that would have a substantial impact on the approval. The Planning Authority may condition the extension on an amendment of the master development plan to comply with such applicable ordinance or site plan standard changes per *Section 14-532(d)* of the city's land use ordinance. Approved major or minor amendments to a master development plan do not alter the expiration date for the master development plan.

If there are any questions, please contact Nell Donaldson at (207) 874-8723.

Sincerely,



Stuart O'Brien, Chair
Portland Planning Board

Attachments:
1. Planning Board Report & Addendum

Electronic Distribution:
cc: Jeff Levine, Director of Planning and Urban Development
Alexander Jaegerman, Planning Division Director
Barbara Barhydt, Development Review Services Manager
Philip DiPierro, Development Review Coordinator, Planning
Marge Schmuckal, Zoning Administrator, Inspections Division
Tammy Munson, Inspection Division Director
Lannie Dobson, Administration, Inspections Division
Brad Saucier, Administration, Inspections Division
Michael Bobinsky, Public Services Director
Katherine Earley, Engineering Services Manager, Public Services
Bill Clark, Project Engineer, Public Services
David Margolis-Pineo, Deputy City Engineer, Public Services
Doug Roncarati, Stormwater Coordinator, Public Services
Greg Vining, Associate Engineer, Public Services
Michelle Sweeney, Associate Engineer

John Low, Associate Engineer, Public Services
Matt Doughty, Field Inspection Coordinator, Public Services
Mike Farmer, Project Engineer, Public Services
Jane Ward, Administration, Public Services
Jeff Tarling, City Arborist, Public Services
Captain Chris Pirone, Fire Department
Thomas Errico, P.E., TY Lin Associates
David Senus, P.E., Woodard and Curran
Rick Blackburn, Assessor's Department
Approval Letter File

Memorandum
Planning and Urban Development Department
Planning Division

To:	Stuart O'Brien, Chair, and Members of the Portland Planning Board
From:	Nell Donaldson, Planner
Date:	March 6, 2014
Re:	Addendum to 2/11/14 Board report, Thompson's Point Master Development Plan
Project #:	2013-262 **CBL:** 201 A 005001
Meeting Date:	March 11, 2014

I. INTRODUCTION

On February 11, 2014, the Planning Board held a final hearing on the master development plan for the Forefront at Thompson's Point. This plan, which had been reviewed by the board at a previous workshop held on January 28, 2014, represented a reiteration of a prior, approved subdivision for the site. As such, the application relied heavily on materials submitted as a product of earlier reviews. Due to time constraints, the Planning Board was not able to deliberate fully on the final master development plan during the February 11 hearing. However, several questions, mainly related to potential transportation impacts and the approach to the site's existing Traffic Movement Permit (TMP), the form and scale of the proposed buildings, and the process of managing future amendments to the master development plan, were raised. The board elected to table the plan and requested that the applicant consider these aspects of the project and return to the board at the next available hearing date on February 25. The applicant subsequently requested to be moved to the March 11 hearing, based on staff availability and a desire to develop additional supporting materials.

This addendum to the February 11 Planning Board report reviews additional materials submitted by the applicant and discusses items which were raised in the Board hearing or in the intervening time. On the basis of these materials and items, this addendum also presents a revised motion with updated conditions of approval.

II. REVISED SUBMITTALS

Following several meetings with planning staff, the applicant provided additional supporting materials to the Planning Division during the week of March 3. The materials included a revised trip generation analysis for the master development plan, intended to fit within the limits of the existing TMP, a revised parking analysis, additional renderings, and revised master plan graphics. These materials are discussed in detail below.

1. Revised Trip Generation Analysis

At the February 11 hearing, board members and members of the public raised a number of concerns regarding potential traffic and transportation impacts resulting from the project. Staff's report to the board, which referenced comments from Thomas Errico, consulting traffic engineer, provided brief overviews of the master plan's approach to transportation infrastructure; the existing Traffic Movement Permit (TMP), including off-site mitigation currently funded through the EDA grant and FHWA funding processes; the parking plan; the draft events management plan; and the draft transportation demand management plan *(Attachment 1)*. It should be reiterated that Mr. Errico expressed his satisfaction with the applicant's request to rely on the previously-developed events management and transportation demand management plans; Mr. Errico's comments note that these plans will be more fully vetted under subdivision and site plan review.

Existing Traffic Movement Permit (TMP)
As previously discussed, the applicant's plan relies heavily on the existing Traffic Movement Permit for the site, developed as a product of previous reviews. This permit, which was issued by the Maine Department of Transportation in June of 2012, includes a number of assumptions regarding uses *(Attachment 1, See J under 'Applicants' Submittals')*. Based on these assumptions, the TMP permits a certain number of AM and PM peak hour weekday trips (734 AM and 1,091 PM trips to be exact). It should be noted that the permit speaks to allowable trips and not to specific uses; modification of uses is permissible under the existing TMP so long as the program does not generate traffic exceeding the number of permitted AM and PM trips.

Based on the projected trip generation and the quantity of permitted trips, the TMP requires a substantial degree of on-site and off-site mitigation. This includes:

1. Overhead illumination for all entrances;
2. Widening of the Thompson's Point Connector Road to include an 8 ft. shared bike/pedestrian path; 3 ft. shoulders, two 11 ft. travel lanes, and one 11 ft. concrete flush median (which would transition to an exclusive outbound left-turn lane at the Fore River Parkway and be used as a reversible lane during events);
3. A provision that no concerts/sporting events be held between 4-7 pm Monday-Friday;
4. A provision that, during 'large' concerts/sporting events, flaggers and uniformed police officers be present to manage the reversible lane on the Thompson's Point Connector Road; help pedestrians cross at crosswalks, manage inbound and outbound buses at the Portland Transportation Center (PTC) entrance, assist PTC patrons leaving the PTC parking lot in merging with the outbound flow, and direct traffic at the Thompson's Point Connector Road/Fore River Parkway;
5. Improvements to the Fore River Parkway/Thompson's Point Connector Road/I-295 Exit 5A SB intersection, including the reconstruction of the southbound off-ramp to include a separate 13 ft. left turn lane and a 13 ft. through lane, the addition of a queue detector to pre-empt the signal as necessary, and the modification of signal phasing;
6. Improvements to the Fore River Parkway/Congress Street/I-295 Exit 5B intersection, including widening the southbound off-ramp to include two 12 ft. right-turn lanes, the installation of a queue detector to pre-empt the signal as necessary, modification of signal phasing, and the restriping of Congress Street westbound to lengthen the existing left-turn lane;
7. Improvements to the Congress Street/Stevens Avenue intersection, including restriping Stevens Avenue to create an exclusive left turn lane and a shared left-through-right lane, modification of signal phasing, and payment of an impact fee of $15,000 for inlaid thermoplastic paint skips, retro-reflective back plates, and overhead lane signage;
8. Payment of an impact fee of $15,000 for inlaid thermoplastic paint skips, retro-reflective back plates, and overhead lane signage at the Congress Street/Westbrook Street intersection;
9. Payment of an impact fee of $15,000 for inlaid thermoplastic paint skips, retro-reflective back plates, and overhead lane signage at the Congress Street/Frost Street intersection; and
10. A provision that transportation demand management strategies be used to offset additional traffic impacts.

The TMP also states explicitly that, if any supporting data changes, the applicant shall "request in writing from MaineDOT a decision of what impacts those changes will have on the permit. The applicant will then be required to submit those changes for review and approval and additional mitigation as a result of those changes may be required at the expense of the applicant."

In terms of history, it should be noted that staff's final report to the Planning Board on the original subdivision/Level III site plan for the project, published in June 2012, discussed the improvements required as a product of the TMP. The report did not raise significant issues related to the off-site

mitigation requirements.

It should also be noted that, as a product of the original planning process, additional off-site traffic investments are planned which will provide capacity that will benefit the Forefront at Thompson's Point. These investments include sidewalk improvements, trail connections, and lighting improvements.

As discussed in the February 11 Planning Board report, the applicant originally proposed a development program for the master plan that resulted in trip generation exceeding the existing TMP thresholds cited above. The applicant suggested a monitoring approach and, as necessary, modification of the TMP under site plan review at later phases of the project. The city's consulting traffic engineer, Tom Errico, generally agreed with this approach. However, he requested a letter from MDOT verifying their concurrence and suggested that monitoring occur at each phase of site plan review to ensure that trip generation thresholds not be exceeded. These recommendations were included in the February 11 Board report as conditions of approval.

Revised Trip Generation Analysis
Recognizing that, regardless of Mr. Errico's or MDOT's comfort with the approach to the TMP, the Board and public had concerns regarding modifications to the TMP at later stages of buildout, the applicant has chosen to submit supplemental materials which alter their development program and reassess their trip generation numbers in an effort to fit within the trip generation thresholds of the existing TMP. The applicant's revised trip generation analysis describes their approach (*Attachment B).*

In their revised analysis, the applicant has generally achieved a reduction in trip generation through three mechanisms: the modification of uses, reduction in occupancy, and the reassessment of projected trip generation numbers using revised trip generation ratios from the Institute of Traffic Engineers (ITE). Together, these have the effect of reducing the projected AM peak hour trip generation from 1,146 to 800 and the PM peak hour trip generation from 1,314 to 1,015. The trip generation changes include the following:

- In the original master plan submittal, Building B3 was proposed as a 6,000 SF restaurant generating 69 AM and 66 PM peak hour trips. In the applicant's revised trip generation analysis, the building's use has been changed such that it will be "ancillary to the Depot building and will not generate additional traffic" *(Attachment B)*. In conversation, the applicant has further explained that this building will serve as back-of-house operations for the performance space contained in the adjacent Depot. As such, no trips are estimated to be generated as a product of this building.
- In the original master plan submittal, Building C1, the Circus Conservatory of America, was estimated to generate 123 AM and 104 PM peak hour trips. These trip generation figures were based on ITE rates for community colleges using square footage as the independent variable. In the revised submittal, the applicant has recalculated trip generation figures using the ITE rate for community colleges, but basing the total on student population and staffing numbers rather than on square footage. This results in a decrease in trip generation to 25 AM and 21 PM trips.
- The original master plan submittal projected 70 AM peak hour trips as a product of Building E1, the hotel. In the revised trip generation analysis, this figure has been reduced to 54 using an ITE-based trip generation rate referenced in prior approvals.
- Under the original master plan application, the event center was proposed with an occupancy of 2,866 and projected to generate 115 AM and 224 PM peak hour trips. In the revised submittal, the occupancy has been reduced to 2,500, resulting in a decrease in trip generation to 100 AM and 195 PM peak hour trips.
- Lastly, in the original master plan submittal, Building J1 was proposed as a 160,000 SF office building. In the revised trip generation analysis, this building has been converted to 160 residential condominium units. Based on ITE ratios, this results in a decrease in AM peak hour

trips from 273 to 70 and in PM peak hour trips from 258 to 83.

It should be noted that the revised trip generation analysis also assumes a 100 trip "buffer" customarily provided by MDOT when considering TMP thresholds. While the revised cumulative PM trip generation figure stands well below the TMP threshold of 1,091 trips, the total AM trip generation figure of 800 actually exceeds the 734 trips permitted under the TMP. The buffer is needed in this case in order to accommodate these excess trips.

The applicant states in their revised trip generation analysis that "[t]he MaineDOT requires any development that exceeds their permitted trips by more than 99 trip ends in any peak hour to receive a permit modification. Since the proposed Master Plan does not exceed the 99 trip end threshold, a MaineDOT permit modification is not required. This was confirmed with MaineDOT" *(Attachment B).*

Tom Errico, consulting traffic engineer, has reviewed the revised trip generation analysis. He writes,

> *The applicant has revised the trip generation analysis to reflect the current development program and I concur with the methods used and the conclusions. Accordingly, the proposed project will comply with the MaineDOT Traffic Movement Permit (TMP) from a trip generation threshold perspective. In the issuance of a TMP, MaineDOT allows for a "buffer" of 100 trips above that noted in the Permit before a modified permit is required. As detailed by the applicant, the Project will generate less trips during the AM and PM peak hours when considering the buffer trips. I find the Master Plan to be in compliance with the TMP.*

NNEPRA/Portland Transportation Center Consultation
At the hearing on February 11, Board members raised questions regarding the involvement of Northern New England Passenger Rail Authority (NNEPRA) and the Portland Transportation Center in the planning of traffic mitigation measures. In terms of history, a stakeholder meeting was held in September of 2011, as the traffic movement permit was being developed, in order to discuss potential improvements and user conflicts on the Thompson's Point Connector Road and its surroundings. Representatives of NNEPRA, Concord Coach Lines (who owns the adjacent Portland Transportation Center), Amtrak, the city, and MDOT attended.

It should be noted that this meeting coincided with NNEPRA's *Portland Station Location Evaluation,* which considered future rail service in the context of several alternatives to the existing Portland Transportation Center site. The NNEPRA study, concluded in October of 2011, resulted in the decision to remain in the current location and invest in its improvement as a "thriving transportation hub." This decision was based, at least in part, on the "potential for increased transit connections, expansion and development associated with the Forefront project." NNEPRA's Executive Director, Patricia Quinn, has more recently indicated her organization's endorsement of the project as revised under the master plan, noting that the "project as proposed provides wonderful and exciting opportunities for the Downeaster, the City of Portland, and all of southeastern Maine" *(Attachment PC-1).*

In terms of coordination with the Portland Transportation Center, as mentioned during the February 11 hearing, the PTC contracted with Sebago Technics to conduct an independent assessment of the Thompson's Point traffic impact study during the initial subdivision and site plan review. The TMP was revised following the release of this report in an effort to accommodate concerns raised by the PTC.

Revised conditions of approval
Given Mr. Errico's review of the revised trip generation analysis, original conditions from the February 11 Board report that required written approval from MDOT regarding the TMP approach and traffic

monitoring are no longer germane. (It should be noted that compliance with the TMP will be assessed as the applicant proceeds through site plan review.) As such, these conditions of approval have been eliminated.

Further, at the applicant's request, staff has added a condition of approval related to the off-site transportation improvements required through the TMP and prior planning work, to which the applicant has made significant financial commitment. This condition is intended to define the off-site mitigation required so long as the existing TMP applies.

2. Revised Parking Analysis

The applicant's additional materials also include a revised parking analysis that recalculates peak parking demand *(Attachments C and D)*. In the original master plan submittal, the peak parking demand, represented by an average day with a live theater event after 5 PM, was estimated at 1,877 spaces. In the revised analysis, this figure has dropped to 1,822 spaces "as a result of [a] minor modification of the "outbuildings" near the old Union Station Depot outdoor event structure at the tip of the point (the removal of the second restaurant use and its consolidation with the proposed boathouse/café structure next to the "Depot")" *(Attachment C).*

Mr. Errico noted in his comments in the February 11 Board report that the peak parking demand exceeds the proposed parking supply at full buildout, 1,290 spaces. Even under the revised parking analysis, this remains the case. Mr. Errico stated previously that "during the site plan approval process the applicant will be required to demonstrate that adequate parking supply will be provided for the proposed uses" *(Attachment 1).* Again, this will remain the case. The applicant has indicated that they intend to use a combination of transportation demand management strategies, many of which are outlined in the transportation demand management plan, to accommodate peak parking demand without "over-building" parking infrastructure. It should be noted that the proposed parking supply is more than adequate to meet the projected demand on the average day without events. Mr. Errico has reviewed the revised parking analysis and writes,

> *I have reviewed the parking demand analysis and I find the method and estimates to be reasonable. I would note that the evaluation of parking supply adequacy will be conducted during each phase of the project. In general the project will provide sufficient parking for typical days and during large events a host of strategies will be employed that may include off-site parking with shuttle services. The on-going review will be linked to the TDM plan and Event Management Plan and will be adjusted as actual parking needs and management are better understood. Accordingly, I find the parking program under the Master Plan to be acceptable.*

3. Additional Renderings

At the February 11, 2014 hearing, Board members also raised questions regarding the design and massing of the proposed master plan, particularly as seen from the adjacent neighborhood to the north. In response, the applicant has provided renderings showing the site from residential streets across the railroad tracks *(Attachment E)*. It should be noted that the applicant has also provided links to the walk-throughs shown at the February 11 hearing.

4. Revised Plans

In keeping with the changes to the development program as represented in the revised trip generation and parking analyses, the applicant has provided updated master plan graphics *(Plans 1 and 2).* The updated development program includes changes in uses for Buildings B3 (from restaurant to "ancillary") and J1 (from office to residential) and slight changes in the program for Building J2 (from 120 to160 residential units) and the event center (a decrease in occupancy). Altogether, these changes result in less commercial

square footage and more residential density. The increased emphasis on residential development advances the notion of the site as a transit-oriented development and in many ways allows for a more efficient use of the site overall. The revised development program is as follows:

Table 1: Forefront at Thompson's Point, Proposed Development Program

	Building	Height	Floor area	Footprint	Units	Rooms	Seats	Surface parking	Garage parking	Total parking
1A	Building A: Office, Café, Retail	Existing	34,000	34,000				71		*71*
1B	Building B1: Multi-Purpose (Live Theater)	Existing	14,000	14,000				436		*507*
	Boat Launch									
1C	Building C: Educational	1-2 Floors	41,000	33,750				(175)		*332*
1D	Building B2: Restaurant	1 Floor	3,600	3,600				(19)		*313*
	Building D: Gym & Medical Office	1 Floor	11,000	11,000						
	Portions of West Side Trail & Outdoor Stage									
1E	Building E1: Hotel & Condominiums	120 ft	70,000	23,350	24	125		144		*457*
	Building E2: Restaurant	1 Floor	6,000	6,000						
	Remainder of West Side Trail									
1F	Building F1: Parking Garage	5 Floors	161,575	32,315				15	730	*1,202*
	Building F2: Parking Garage		1,530	1,530						
1G	Building G: Office	9 Floors	180,000	22,350				58		*1,260*
1H	Building H: Event Center	80 ft	63,000	47,564			4,800	30		*1,290*
2A	Building I: Cultural Center	1-2 Floors	25,000	18,080						*1,290*
2B	Building J1: Condominiums	6 Floors	160,000	30,000	160			(78)	78	*1,290*
	Building J2: Condominiums	TBD	196,500	19,650	160			(48)	48	
2C	Building B3: Ancillary to B1	1 Floor	6,000	6,000						*1,290*
	TOTAL		***973,205***	***303,189***	***344***	***125***	***4,800***	***434***	***856***	***1,290***

III. ADDITIONAL DISCUSSION ITEMS & MODIFICATIONS TO CONDITIONS

In addition to the supplemental materials provided by the applicant, there are several discussion items which have emerged in the time since the February 11 hearing. All of these relate to the original conditions of approval from the February 11 Board report.

1. Trail and Open Space Access

Following the hearing, representatives of Portland Trails and the city's Department of Public Services raised questions regarding bike and pedestrian access along the northern edge of the site *(Attachment 3)*. The city's *Bicycle and Pedestrian Plan* and PACTS's *Regional Bicycle and Pedestrian Plan* identify the existing rail line in this location as an alignment for a future bike/pedestrian trail link, and Portland Trails and the city's Department of Public Services expressed a desire to identify this link in some capacity in the master plan. The link would serve a different purpose from the proposed perimeter trail, which has

always been a foundational element of the master plan; a bicycle/pedestrian way along the rail corridor, when combined with other bicycle and pedestrian links defined in regional long-range planning efforts, would provide a commutable alternative to Congress Street, with direct access from outlying neighborhoods to the peninsula.

In conversations following the correspondence with DPS and Portland Trails, the applicant stated clearly that a lack of space precludes the creation of a dedicated trail or bicycle lane paralleling the railroad tracks at the northern edge of the site. However, they also expressed a willingness, in concept, to create a bicycle/pedestrian way in some capacity, through pavement markings, signage, or other mechanisms, that would establish a more direct east-west route and link with the greater Portland Trails network. It is assumed that the details of this arrangement would be resolved under Level III site plan/subdivision review.

Also related to trails and open spaces, staff requested clarification from the applicant on the terms of public access to the perimeter trail, boat launch, and water on Thompson's Point. In conversation, the applicant stated explicitly that, as will be the case under the easement for the panhandle trail, the boat launch, water access, and perimeter trail will be accessible for public use through a license or other such agreement. That agreement would include provisions reserving the right of the applicant to limit public access at particular times (e.g. during events on site).

2. Fire

Staff has suggested a minor modification to the condition of approval relating to fire safety, based on conversations conducted with Chris Pirone of the Fire Prevention Bureau regarding the Depot building at the southern end of the peninsula. Captain Pirone has indicated that this building may not require a sprinkler, depending on its use. As such, staff has modified the condition of approval to state that all buildings will be sprinklered except as determined to be exempt by the Fire Prevention Bureau.

3. Phasing Plan

Lastly, staff was able to review the master phasing plan; as a result, the original condition of approval relating to this phasing plan has been eliminated.

IV. MASTER DEVELOPMENT PLAN AMENDMENTS

As noted in the February 11 report, the city's site plan ordinance includes language related to the procedure for processing master plan amendments (*Section 14-532(b)).* The ordinance defines "minor" amendments, or those that simply require administrative approval, as those which are "generally consistent" with the approved master plan layout, circulation, infrastructure, and open spaces. A minor amendment is qualified as a change which:

> *(i) Does not propose any new general type of use beyond those approved initially;*
> *(ii) Does not increase the building ground coverage, floor area ratio or residential density of the Master Development Plan;*
> *(iii) Does not decrease any specified area regulations or enumerated parking ratios; and*
> *(iv) Does not substantially change access, circulation, or infrastructure on or adjacent to the site.*

It is implied that changes which do not meet these conditions would require Planning Board review.

However, at the February 11 hearing, both board members and the applicant pressed for further clarification on thresholds triggering board review of future master plan changes. In internal discussions, as well as in discussions with the applicant, staff considered a series of thresholds, such as when an applicant proposes an increase in net square footage, a change of use, changes in trip generation, or

substantial changes in circulation or the location of buildings. On closer inspection, however, this list of potential additional thresholds was found to closely mirror the language of the existing ordinance. As such, no condition of approval related to amendments is suggested here.

V. STAFF RECOMMENDATION

Subject to the proposed motions and conditions of approval listed below, Planning Division staff recommends that the Planning Board approve the master development plan for the Forefront at Thompson's Point.

VI. PROPOSED MOTION – MASTER DEVELOPMENT PLAN

On the basis of the application, plans, reports and other information submitted by the applicant; findings and recommendations contained in the Planning Board report for the public hearing on February 11, 2014 and the addendum to said report for the public hearing on March 11, 2014 for application 2013-262 relevant to the master development plan regulations; and the testimony presented at the Planning Board hearing, the Planning Board finds that the plan **is/is not** in conformance with the master development plan standards of the land use code, subject to the following conditions of approval, which must be met prior to subdivision approval unless otherwise stated:

1. The applicant shall provide a summary of existing and/or proposed easements, covenants, public or private rights-of-way, or other burdens on the site, including the proposed easement to the Department of Public Services to use the private drive system for turn-around access and easements and conditions relating to public use of trails and open space on the site, for review and approval by the Department of Public Services and the Planning Authority;

2. The applicant shall provide evidence of water capacity from the Portland Water District, for review and approval by the Planning Authority;

3. The applicant shall provide evidence of sewer capacity from the Department of Public Services, for review and approval by the Planning Authority;

4. The applicant shall submit a revised report from a certified fire protection engineer describing evacuation procedures; add a note to the master development plan indicating that all buildings will include sprinkler and fire alarm systems, except for buildings determined by the Fire Prevention Bureau to be exempt from such regulations; and revise the event management plan to indicate that free and clear fire access will be maintained at all times during events, for review and approval by the city's Fire Prevention Bureau;

5. The off-site transportation-related improvements as heretofore required through prior approvals shall represent the off-site transportation-related improvements required for the master development plan, so long as the existing Traffic Movement Permit applies; additional requirements for on-site transportation improvements shall be addressed through subdivision and site plan review.

VII. ATTACHMENTS

PLANNING BOARD REPORT ATTACHMENTS

1. Planning Board report for hearing date 2/11/14
2. Traffic Engineer review (memo from Thomas Errico, 12/30/13)
3. Bicycle-Pedestrian Coordinator memo (memo from Bruce Hyman, 2/27/14)

APPLICANT'S SUBMITTALS

A. Cover letter (from Bo Kennedy, FST, Inc., dated 3/4/14)
B. Trip generation summary/methodology
C. Parking memorandum (from Chris Thompson, Forefront Partners, I, dated 3/1/14)
D. Parking summary
E. Renderings of panhandle

PUBLIC COMMENT

PC-1. Letter from Patricia Quinn, NNEPRA

PLANS

Plan 1 Revised Master Plan
Plan 2 Revised Master Plan

PLANNING BOARD REPORT
PORTLAND, MAINE

The Forefront at Thompson's Point, Portland, Maine
Master Development Plan
Application #2013-262
Thompson's Point Development Company, Inc., d/b/a Forefront Partners I, LP, Applicant

Submitted to: Portland Planning Board: Public Hearing Date: February 11, 2014 CBL: 201-A-5	Prepared by: Nell Donaldson, Planner Date: February 7, 2014

I. INTRODUCTION

The Thompson's Point Development Company, Inc, doing business as Forefront Partners I, LP, appears before the Planning Board for a final review of the proposed master development plan for the Forefront at Thompson's Point. The plans represent a final iteration of a preliminary application that was presented to the board at a workshop on January 28, 2014.

Thompson's Point consists of approximately 30 acres of land located adjacent to the Portland Transportation Center. The applicant's master development plan for the Forefront at Thompson's Point involves a mixed-use development including an event center, hotel, sports medicine facility, parking structure, educational facility, residential units, restaurants, and office uses.

The project is subject to master development plan review under *Section 14-524* of the city's ordinance. A total of 262 notices were sent to property owners within 500 feet of the site and a legal ad for the Planning Board hearing ran on February 3 and 4, 2014.

Applicant: Forefront Partners, I LP
Consultants: Stephen Bushey, FST, Inc; Owens McCullough, Sebago Technics; Bill Hopkins, Archetype

II. REQUIRED REVIEWS

Review	***Applicable Standards***
Master Development Plan	*Section 14-524(a)3c(iii)*
Site Location of Development Act	*Technical Manual Chapter 14 (to be completed at time of subdivision review)*

III. PROJECT DATA

Existing Zoning	B-5 Urban Mixed Use
Existing Use	Manufacturing, construction, and storage
Proposed Use	Mixed-Use/TOD
Parcel Size	32.67 acres

	Existing	*Proposed*	*Net Change*
Building Footprint	123,684 SF	303,189 SF	179,505 SF
Building Floor Area	123,684 SF	973,205 SF	849,521 SF
Impervious Surface Area	908,661 SF	761,430 SF	-147,231 SF
Parking Spaces	Undetermined	1,290	
Estimated Cost of Project	$100-110 million		

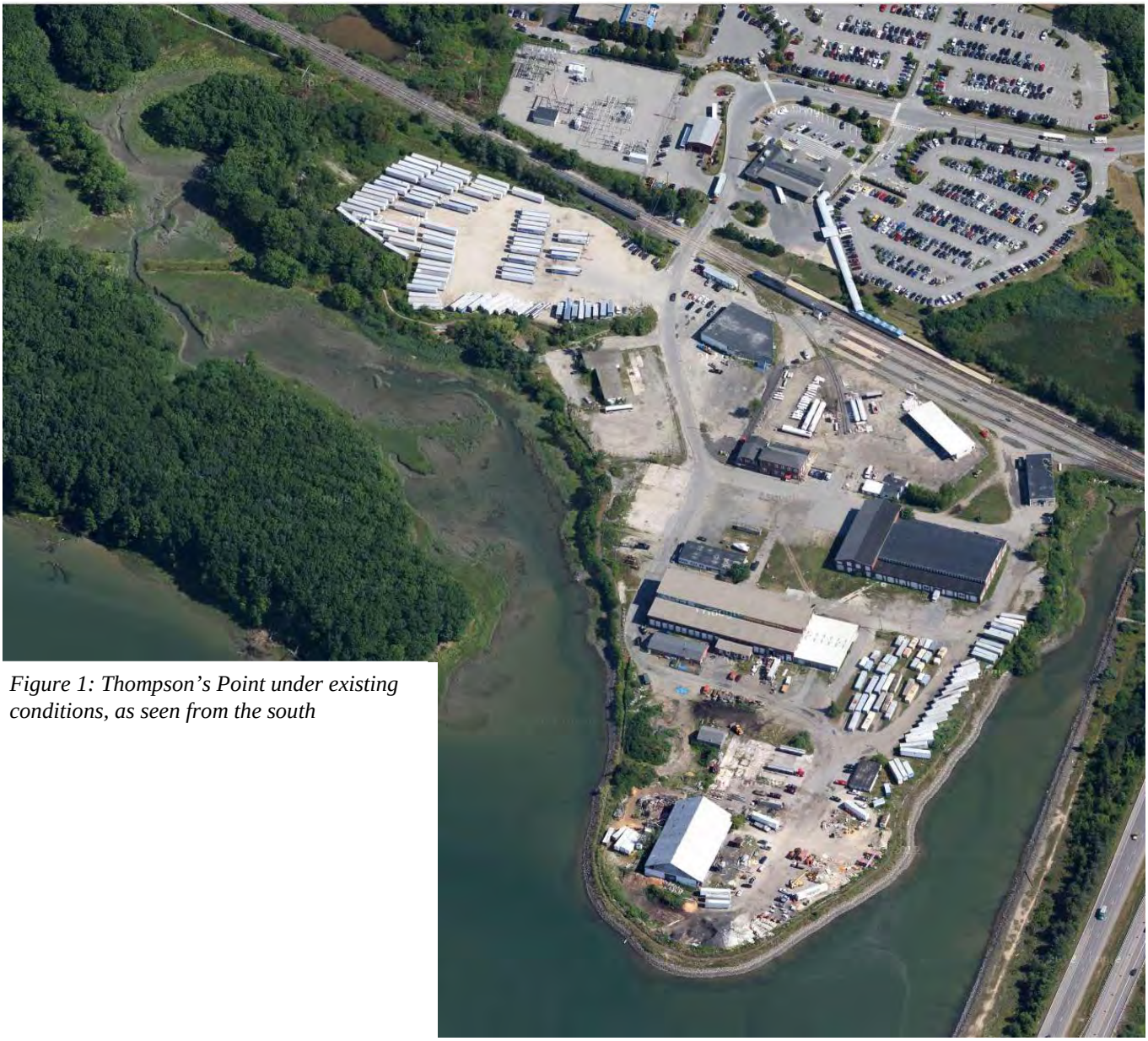


Figure 1: Thompson's Point under existing conditions, as seen from the south

IV. EXISTING CONDITIONS and BACKGROUND

Thompson's Point is a typical industrial site, bounded by railroad tracks to the north and the Fore River to the west, south, and east, and currently occupied by vacant buildings, semi-trailer box storage, and various other temporary uses *(Figure 1)*. The site does house an extension of the Fore River trail and some remnant natural areas on its western panhandle. It is a unique site in terms of its large size and its proximity to both the river and regional public transportation resources. It is zoned for urban commercial mixed-use development under the B-5 zone and is designated as a Tax Increment Financing (TIF) District.

The original plans for the Forefront at Thompson's Point, also submitted by the Thompson's Point Development Company, were approved on June 5, 2012. These plans included over 600,000 SF of non-garage building space dedicated to office, hotel, restaurant, and event center uses designed around a campus concept. In the spring of 2013, the proposed development program changed, and the applicant submitted reconfigured subdivision and site

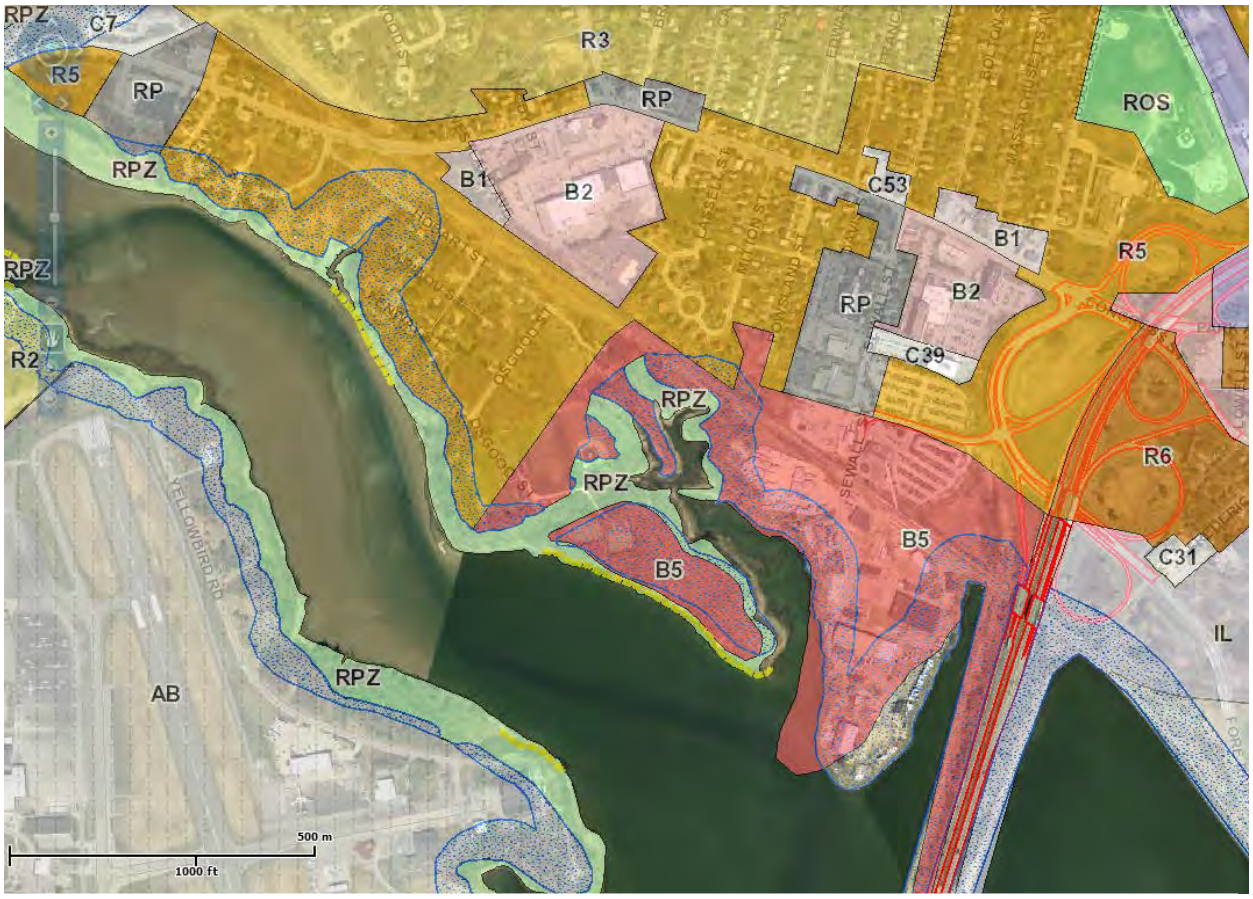


Figure 2: Thompson's Point, zoning context

plans designed to, among other things, retain existing rail-era brick buildings on the site. Amended subdivision and site plans, modified to include these buildings, were approved administratively on June 19, 2013.

In the time since these approvals, efforts to start work on off-site transportation-related improvements required through both MDOT Traffic Movement Permit (TMP) and city review processes has begun. These improvements are funded almost entirely by an EDA grant and include work to enhance bicycle and pedestrian connections, vehicular access to the adjacent highway and street networks, and the surrounding streetscape. The work is scheduled to begin in March 2014 and continue throughout the year.

V. PROPOSED DEVELOPMENT

In the time since the original approvals, the applicant has also engaged in negotiations to obtain purchase and sale agreements for two adjacent parcels critical to the development of the entire Thompson's Point peninsula. The recent acquisition of development rights to these parcels, owned by Suburban Propane and Northern New England Passenger Rail Authority (NNEPRA), has allowed the applicant to change its long-term vision for the site. In this vein, the applicant has submitted this new master development plan for the Forefront at Thompson's Point,. This plan encompasses many of the original programmatic elements of the approved subdivision. However, the physical design, affected by the additional acreage at the site's north end, is markedly different.

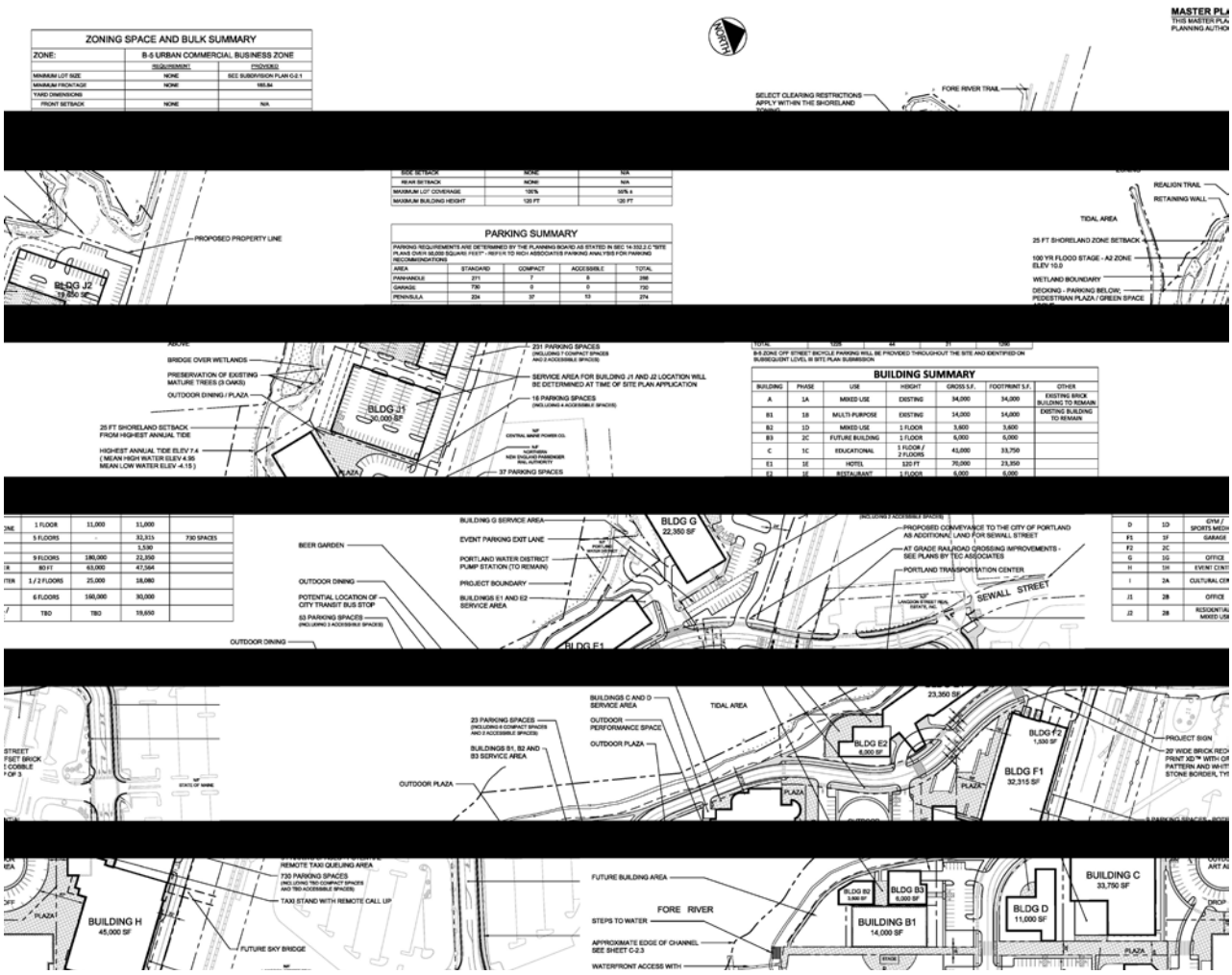


Figure 3: Revised Forefront at Thompson's Point master plan

The original Forefront at Thompson's Point plan demolished all existing structures and, as noted above, developed over 600,000 SF of non-garage square footage, comprised of institutional, office, restaurant, hotel, and event center uses. The centerpiece of the scheme was a 70,000 SF event center and concert hall. The plans included significant open space, surface parking, a perimeter trail, and public access to a shoreline boat launch. The amendments to these plans, approved in June of 2013, modified the plan to retain some of the existing buildings on site.

In the master development plan, much of this program remains. The applicant still envisions office, restaurant, educational/institutional, restaurant, hotel, event center, and garage space. The master development plan also includes live theater space, a post-secondary education complex, an 18,000 SF cultural center, and residential development. This 970,000 SF development program, by incorporating a more diverse mix of uses, including residential, advances the concept of the site as a transit-oriented development. The preliminary development program for the Forefront at Thompson's Point master plan is outlined in Table 1.

With the negotiations to acquire the Suburban Propane and NNEPRA sites and the decision to renovate four of the existing structures on the site under the master plan, the composition of the site has changed dramatically *(Figure 3)*. The master plan retains the trail surrounding the peninsula, but shortens the ring road. The development program is now organized around a stronger central core enclosed by the proposed event center and garage, a hotel and restaurant, the renovated Brick North building (to contain office, retail, and restaurant uses),

Table 1: Forefront at Thompson's Point, Proposed Development Program

Phase	Building	Height	Floor area	Footprint	Units	Rooms	Seats	Surface parking	Garage parking	Total parking
1A	Building A: Office, Café, Retail	Existing	34,000	34,000				71		*71*
1B	Building B1: Multi-Purpose (Live Theater)	Existing	14,000	14,000				436		*507*
	Boat Launch									
1C	Building C: Educational	1-2 Floors	41,000	33,750				(175)		*332*
1D	Building B2: Restaurant	1 Floor	3,600	3,600				(19)		*313*
	Building D: Gym & Medical Office	1 Floor	11,000	11,000						
	Portions of West Side Trail & Outdoor Stage									
1E	Building E1: Hotel & Condominiums	120 ft	70,000	23,350	24	125		144		*457*
	Building E2: Restaurant	1 Floor	6,000	6,000						
	Remainder of West Side Trail									
1F	Building F1: Parking Garage	5 Floors	161,575	32,315				15	730	*1,202*
	Building F2: Parking Garage		1,530	1,530						
1G	Building G: Office	9 Floors	180,000	22,350				58		*1,260*
1H	Building H: Event Center	80 ft	63,000	47,564			4,800	30		*1,290*
2A	Building I: Cultural Center	1-2 Floors	25,000	18,080						*1,290*
2B	Building J1: Office	6 Floors	160,000	30,000				(78)	78	*1,290*
	Building J2: Condominiums	TBD	196,500	19,650	120			(48)	48	
2C	Building B3: Restaurant	1 Floor	6,000	6,000						*1,290*
	TOTAL		***973,205***	***303,189***	***144***	***125***	***4,800***	***434***	***856***	***1,290***

the renovated Brick South building (to be occupied by the Circus Conservatory of America), the cultural center, and outdoor theater space/concert venue. Access from the Thompson's Point Connector Road is retained, and additional pedestrian access is provided via a sky bridge from the Portland Transportation Center.

This application is subject to master development plan review under *Section 14-524(a)3c(iii)* of the city's code. Following master development plan approval, the project will be reviewed under the city's subdivision and site plan ordinances. In addition to these municipal reviews, it should be noted that the original subdivision for the Forefront at Thompson's Point was reviewed under the state's Site Location of Development Act, for which the city had delegated review authority. Per correspondence with the Maine Department of Environmental Protection (MDEP), the city will remain the reviewing entity under the SLDA for the re-envisioned project considered here.

The original Forefront at Thompson's Point was also subject to the following state and federal permitting:

- U.S. Army Corps of Engineers General or Individual Permit (Wetland Impact)

- Natural Resources Protection Act (NRPA) Permit issued by Maine Department of Environmental Protection
- MDOT Traffic Movement Permit (issued by MDOT)
- MDEP Air Emissions License

The applicant has provided evidence of state and federal permits related to the approved subdivision plan *(Attachment J)*. In the final plan submission, the applicant has also provided a letter addressed to the Maine DEP outlining changes from the approved subdivision plan and the intent to comply with the conditions of the original NRPA permit *(Attachment L)*. Similar coordination with respect to other permitting entities will be required during subdivision review. Ultimately, evidence of new or updated permits, or documentation from reviewing entities regarding the applicability of the existing permits, will be required at the time of Level III subdivision and site plan review.

VI. PUBLIC COMMENT

The Planning Division has received no written comments from neighbors on the project. However, as noted in staff's prior workshop memo, the applicant has provided documentation from a neighborhood meeting held on December 23, 2013 *(Attachment J)*. The concerns expressed at this meeting generally focused on parking and traffic impacts, particularly during large events to be held on site. There was also some discussion of design and building height. These concerns were echoed during the board's workshop on January 28, 2014, where members of the public raised concerns regarding traffic impacts, event management, parking supply, trail access, and visual impacts from the abutting neighborhoods.

VII. RIGHT, TITLE, & INTEREST

The applicant has provided a deed demonstrating ownership of the original Thompson's Point site. In addition, the applicant has provided letters from Suburban Propane, Inc. and the Northern New England Passenger Rail Authority indicating that purchase and sale agreements have been signed for those adjacent parcels *(Attachment G)*.

VIII. FINANCIAL & TECHNICAL CAPACITY

The applicant has provided a copy of a letter from TD Bank attesting to the Thompson's Point Development Company's ability to complete the project and "see that it operates effectively over the long term" *(Attachment I)*.

IX. ZONING ANALYSIS

The Forefront at Thompson's Point lies in a B-5 zone, and is also subject to shoreland and floodplain regulations under the city's land use code. Marge Schmuckal, zoning administrator, has provided the following comments on the revised master plan:

> *I am under the realization that this review is only for a Master Plan and is not a site plan review. The applicant states that the team is working on an update to the acoustical study and compliance with B-5 Noise Performance Standards which will be forwarded upon completion. I will need that study during the Site Plan review stage.*
>
> *I have reviewed page C-3.00 where the HAT (Highest Annual Tide) for 2013 is denoted along with the 25 foot shoreland zone setback and the current 100 year flood elevation. All three of these meet the current Land Use Ordinance.*
>
> *The applicant mentions that they will comply with the Shoreland tree clearing certification as part of the Condition of Compliance. Again, I can confirm this regulation during the Site Plan Review process.*

In reference to off-street loading requirements, I will default the final review of this requirement, along with the other B-5 dimensional requirements during the Site Plan review application.

X. MASTER PLAN SUBMISSION REQUIREMENTS (*Section 14-527(e)*)

Section 14-527 of the city's site plan ordinance outlines master development plan submittal requirements. The applicant has generally met these requirements, including the submission of a digital 3D model of the development. In accordance with the submittal requirements, the city has requested a summary of existing and/or proposed easements, covenants, public or private rights-of-way, including the proposed easement to the Department of Public Services to use the private drive system for turn-around access and conditions relating to public use of trails and open space on the site, as requested under previous reviews. This has been included as a condition of approval.

XI. MASTER DEVELOPMENT PLAN STANDARDS (*Section 14-524(a)3.c(iii)*)

Section 14-524 of the city's land use code establishes standards under which master development plan applications must be reviewed. Per this section, master development plans must be:

a. A designated tract of land consisting of a parcel or parcels of contiguous land or land on both sides of a public street, totaling one (1) acre or more;
Altogether, the Thompson's Point site, when expanded to include the adjacent Suburban Propane and NNEPRA parcels, encompasses 32.67 acres.

b. Developed in a comprehensive, design-integrated manner, according to an overall master development plan;
The applicant has submitted a master plan for the Forefront at Thompson's Point which incorporates all major aspects of the site in a comprehensive manner.

c. Consistent with the objectives of this ordinance;
The application and development plan are generally consistent with the objectives of the city's ordinance, including the purpose of the B-5 zone, which is "to provide zones in areas of the peninsula near the central business district where a mixture of uses, including marine, industrial, commercial, and residential, is encouraged. The B-5 and B-5b zones are characterized by larger underdeveloped lots with great potential for denser, clustered, urban mixed use development and more efficient reuse of existing land and buildings. It is anticipated that such denser, mixed uses would rely on a shared infrastructure system, including service alleys, parking lots, public transportation facilities, stormwater management, and driveways."

d. Consistent with the City's Comprehensive Plan and consistent with City Council approved master plans and facility plans for off-premise infrastructure, including but not limited to, trails, pedestrian and bicycle network, view corridors, environmental management, sewer and stormwater, streets, or other facilities (see Section 15 of the Technical Manual);
The Forefront at Thompson's Point master plan is also generally consistent with the city's long-range transportation and economic planning work, including the following goals and policies from the comprehensive plan, among others:

- …Encourage sustainable development patterns and opportunities within the city by promoting efficient land use, conservation of natural resources, and easy access to public transportation, services, and public amenities (21);
- Create local multi-modal centers for the city's commuters and mass transit passengers, building on the presence of existing centers of activity, connected with each other and with regional transportation centers (24);
- Create a variety of job opportunities for the full spectrum of the labor pool which are appropriate to our current and potential skills, provide good pay and benefits, are rewarding/satisfying (37); and

- Encourage higher density housing for both rental and home ownership opportunities, particularly located near services, such as schools, businesses, institutions, employers, and public transportation (44).

e. Developed so as to locate buildings and improvements in a manner that provides usable open space, preserves significant natural features, as defined by the site plan ordinance standards, and preserves existing trees to the maximum extent possible;
As an industrial site, Thompson's Point is largely developed, with very few remaining natural features. Those natural features which do exist include emergent and existing wetlands and stands of trees along the westerly shoreline, at the far western end of panhandle, and along the northeastern shore. The Forefront at Thompson's Point master plan generally reorganizes the site in an efficient manner which allows for minimal wetland alteration, the preservation of some specimen trees, and the creation of significant new open spaces, both in hardscaped and landscaped areas.

In terms of landscape preservation, during the original approval process for the Forefront at Thompson's Point, the city arborist identified mature red oaks and a small stand of sapling white oaks meriting





Figures 4 & 5: Aerial view of the Forefront at Thompson's Point; rendering of the central 'quad area,' including the façade of the proposed event center

preservation in the western panhandle. In the revised submittal, these trees are shown on the master plan and referenced in the landscape narrative, where the applicant has stated that "several significant oak trees have been identified for preservation and all efforts will be made to protect the trees and provide adequate zones around them during construction" *(Attachment N)*. Notes have also been added to the master plan relating to clearing restrictions within the shoreland zone *(Plan 2)*. The applicant states in their narrative that "tree removal…will be certified by our forester to insure consistency with the Shoreland Zoning Vegetation Management requirements."

As noted previously, under the master plan, a central plaza, framed by the event center, renovated Brick North Building, and renovated Brick South building, forms the core element of the site's new open space network *(Figure 5)*. The plan links this plaza with a large, grassed open space area at the southern end of the peninsula, intended for outdoor concerts, via a tree-lined pedestrian walkway which runs the length of the peninsula's spine *(Figure 4)*. Exhibit, outdoor performance, and parking areas flank this corridor to the east and west. Additional, smaller hardscaped areas adjoin most of the site's proposed buildings. The applicant's landscape narrative emphasizes the use of native trees and shrubs, with a naturalized treatment at the perimeter of the site and more formal landscape design at the site's interior.

The plans also show a perimeter trail around the majority of the peninsula, much of which is proposed in the footprint of the existing trail. This path would link with the Fore River Trail and the Portland Trails network to the west. It would transition to sidewalk approximately one-third of the way up the eastern side of the peninsula.

Jeff Tarling, the city's arborist, has indicated his general approval of the master development plan. He writes,

> *The Thompson Point 'Landscape Master Plan' is a new look for many of the landscape treatment recommendations considered for this site in earlier renditions. Particularly important are guidelines for the shoreland zones and the upland parts of the site. 'Tree save' areas are shown for the Red Oak trees growing near the foot of the slope near building 'H' and Area 'A'.*
>
> *Overall, Thompson Point is a very visible and environmentally sensitive site with the location surrounded on three sides by the Fore River and Turning Basin. Creating a Master Plan will help guide future site work and the corresponding landscape treatment needed.*

f. Developed so as to be in conformance with Portland's Historic Preservation Ordinance standards for designated landmarks or for properties within designated historic districts or designated historic landscapes, if applicable. When proposed adjacent to or within one hundred (100) feet of designated landmarks, historic districts or historic landscapes, the Master Plan shall be developed so as to be generally compatible with the major character-defining elements of the landmark or portion of the district in the immediate vicinity of the proposed development;

The site is not located in a historic preservation district; nor is it adjacent to a designated landmark or designated historic landscape. However, the previous review for the Forefront at Thompson's Point included documentation from the Maine Historic Preservation Commission stating that the two existing brick buildings are likely eligible for designation under the National Register of Historic Places due to the lack of other existing early rail-era structures in the city. These are slated for redevelopment under the master plan. It should also be noted that the early 19th century Cumberland and Oxford Canal crossed the site; evidence of the channel and tow path remain visible in the western panhandle area. The previously-approved subdivision and site plans were deemed by the city to have no impact on these historical remnants. The applicant has noted their location and has stated that the master plan will, likewise, have no impact.

g. An efficient use of land which properly considers topography and protects significant natural features including, but not limited to, waterways, wetlands, floodplains and wildlife;
As noted above, the existing Thompson's Point site is largely developed with industrial buildings and associated paved and gravel areas. Generally, the proposed master plan respects the minimal natural features which do remain on the site.

The site is largely flat, with the exception of the northwestern panhandle, where there are several small bluffs and rocky outcroppings. These areas will require regrading under the proposed plans *(Plan 15)*. The panhandle buildings are proposed with a retaining wall.

The site is adjacent to the Fore River and its tidal flats, and as a result, the site houses fresh and saltwater wetlands on its perimeter. As with the original subdivision and site plan applications for the Forefront at Thompson's Point, the master plan proposes minimal activity in these areas, namely a seasonal dock at the southern end of the peninsula in the location of coastal wetlands and several drainage outfalls which coincide with freshwater wetlands in the panhandle area. The applicant has noted that the location and size of the seasonal dock slated for the southern end of the peninsula may change as subsequent subdivision and site plans evolve. All of these plan elements were previously reviewed under the National Resources Protection Act (NRPA) by the Maine Department of Environmental Protection (MDEP) as a product of the prior plans. As noted above, the applicant has provided a letter to MDEP generally stating their intent to comply with the conditions of the previous permit *(Attachment L)*. The original Thompson's Point approval also involved a permit from the Army Corps of Engineers regarding wetland impacts. As previously stated, the applicant will be required to provide evidence of updated permits, or the continued applicability of the previous ones, during Level III subdivision and site plan review.

During the original approval, the Maine Department of Inland Fisheries & Wildlife (MDIFW) reviewed the plans under NRPA and found that the mudflats and riparian zones below the highest annual tide (HAT) line on the western and eastern shorelines qualify as significant migratory shorebird feeding and roosting areas, respectively. This finding resulted in changes to the original plan for the site, including the selection of alternative plantings for shoreline areas to enhance screening between the shore and proposed trail yet minimize the potential for increased predatory activity. The applicant has identified these areas in the revised submittal, and, again, has reiterated the intent to comply with the conditions of the previous permit.

h. An efficient use of land demonstrating full coordination of its own site development and surrounding context including, but not limited to, the land uses and functions contemplated, architecture, open space and pedestrian networks, vehicular access and circulation, and all other infrastructure;
As noted above, in the Forefront at Thompson's Point master plan, the applicant has redesigned the Thompson's Point site to adaptively reuse existing buildings, increase densities in the panhandle area, and introduce a more balanced mix of uses, including residential development. These changes allow for a more efficient use of the site in general, and further the concept of the site as a transit-oriented development. The plans show development clustered at the northern end of the peninsula, with open space as an organizing concept linking the more developed portions of the site with the dominant open space feature at the southern end of the site and the shore. Circulation networks and infrastructure plans have been reviewed and have not elicited major concerns from staff *(Plans 15-19)*.

i. Linked and coordinated with surrounding land uses, infrastructure and off-site public facilities, including but not limited to the public school system, where appropriate, in a manner that is safe, efficient, non-injurious to the public, and an improvement or benefit to the public where possible; and
j. Designed with sizing of street and other infrastructure systems to accommodate the overall service demand of the Master Plan;
As noted during prior review processes, the Thompson's Point site both suffers and benefits from its isolated geography as a peninsula "across the tracks" and on the banks of the Fore River. Because of its isolation, the site essentially serves as its own neighborhood. Efforts have been made to coordinate uses with those surrounding the peninsula – the access to the regional transportation system lends itself to use for regional destinations such as the event center, theater, or higher education facility; the proposed medical and hotel uses integrate well with the neighboring medical office and hotel node immediately adjacent; and the residential use, though certainly different in scale and form, echoes residential uses found to the north. The master plan integrates open space uses in a manner that retains access from the greater neighborhood and provides for connections to regional open space, particularly to the west.

Circulation & Parking System
The site generally has limited vehicular access, although its proximity to a major interstate connection is an asset. The master development plan benefits from prior transportation planning work completed during the original site plan and subdivision review. This work resulted in funding for transportation-related improvements on the Thompson's Point Connector Road, Fore River Parkway, Sewall Street, and Congress Street. These improvements are intended to provide the capacity to handle trips to and from the site via all modes, and, as noted above, are slated for completion in 2014-2015. Likewise, the master plan benefits from developed events management and transportation demand management (TDM) plans created and vetted during prior review processes.

Generally, the site benefits from good transit, pedestrian, and bicycle access. Thompson's Point is located adjacent to the city's Transportation Center, including its local bus, intercity bus, intercity rail, and taxi service. As noted previously, the site also benefits from a high degree of trail connectivity.

The applicant has provided a trip generation and parking analysis, including trip generation calculations, and a revised master circulation plan in the final submittal *(Attachment M and Plan 19)*. The proposal continues to rely on one vehicular access point via the Thompson's Point Connector Road from Fore River Parkway. This three-lane connector road crosses the existing Portland Terminal Company railroad line at grade and, once past the proposed garage entrance, continues as a private two-lane, two-way perimeter road that circumnavigates the peninsula. Access to almost all of the site's buildings is provided via this ring road, with a subsidiary loop providing a connection to the western panhandle. A vehicular way is also provided through the center of the site.

Pedestrian access is proposed via sidewalk from both Sewall Street and the Fore River Parkway via the Thompson's Point Connector Road. (Note that while Sewall Street is a dead-end street with no vehicular access to the Thompson's Point Connector Road or the site, pedestrian, bike, and emergency vehicle access is proposed via a path and emergency gate.) Under the master development plan, the site would also be accessible via pedestrian or bicycle from the existing Portland Trails network to the west. The master plan depicts a skybridge to the Portland Transportation Center, which would ultimately provide a second major pedestrian access point to the north. It should be noted that the original approvals for the project included sidewalk connection on only one side of the Thompson's Point Connector Road across the Portland Terminal Company right-of-way. A waiver was granted for this condition. During prior review processes, staff also identified the need for additional pedestrian signal improvements at the Thompson's Point Connector Road/Fore River Parkway. These plan elements will be considered under

subdivision and site plan review. Generally, Tom Errico, the city's consulting engineer, has stated that he finds the master plan acceptable from a transportation perspective. He writes,

> *In general I find the Master Plan layout to be acceptable with the following comments that can be addressed during the site plan review process (a detailed review of site plan elements has not been conducted and so this should not be considered an approval of the site plan):*
>
> - *I believe the pedestrian crossing from the main entry roadway into the event center area (building H) needs special considerations.*
> - *A sidewalk connection from the back side of parking garage to the main roadway should be included.*
> - *I am concerned about the number of driveways that intersect the main circulation road in the vicinity of the hotel and parking garage.*
> - *The on-street parking spaces on the circulatory roadway do not have access to a sidewalk and will not work well for passengers entering and exiting vehicles.*

As noted in staff's prior memo to the board, the applicant has found that trip generation under the master plan exceeds thresholds from the existing Traffic Movement Permit (TMP), issued for the original site plan/subdivision by the Maine Department of Transportation (MDOT) *(Attachment J)*. The applicant has asked for master plan approval under the existing TMP, with a follow-up traffic analysis to be conducted after the completion of Phase I of the master plan, as the site is expected to approach approved trip generation levels. This analysis would assess actual trip generation and compare it against the TMP-approved trip generation levels. Pending the results of this study and projections for the remainder of the site, additional mitigation would be required. The city has requested a letter from MDOT verifying that they find this approach acceptable. The applicant has provided documentation requesting this letter *(Attachment P)* and has stated that MDOT has verbally agreed to this approach. Of the trip generation estimates and TMP, Tom Errico, the city's consulting traffic engineer, writes,

> *I have reviewed the updated traffic generation estimate conducted by the applicant and I generally concur with their findings. As noted the project is anticipated to exceed the trip threshold established by the current Traffic Movement Permit (TMP) and therefore modification to the TMP will be required in the future. I am comfortable with this approach, but would like to see documentation from MaineDOT supporting this approach. It is my suggestion that during each Site Plan approval phase, the applicant shall submit trip generation information that documents current trip generation levels (through both field monitoring and standard ITE trip generation methods), trip generation estimates for the Phase under consideration, and how the project complies with the TMP. I would note that the TMP is flexible on land use implementation and is relevant as it relates to trip levels during the peak hours of consideration.*

Conditions of approval related to MDOT's acceptance of the TMP approach, as well as Mr. Errico's request for trip generation estimates during Level III subdivision and site plan review, have been suggested.

Vehicular parking is proposed throughout the site, with a total of 1,290 spaces (approximately 856 garage spaces and 434 surface) at full buildout. Most of the proposed surface parking is located at the exterior of the site in double-loaded parking areas. Interior spaces are proposed in the event center garage and under residential and office buildings on the western panhandle. All of the garage parking is proposed for later phases of the project. The applicant's parking analysis calculates peak parking demand under each phase

of development, as well as peak cumulative parking demand at full buildout. It should be noted that the peak cumulative parking demand exceeds the proposed parking supply. Of this, Mr. Errico writes,

> *The application materials indicate that a total parking supply of 1290 parking spaces will be provided during full build-out of the project. According to the parking analysis conducted by Gorrill-Palmer, a parking demand of 1699 parking spaces is estimated during the weekday typical time period and 1877 parking spaces are estimated during evening event conditions. Accordingly, an insufficient parking supply will be provided under full build conditions. During the Site Plan approval process the applicant will be required to display that adequate parking supply will be provided for the proposed uses.*

The revised submittal includes the previous TDM plan, dated September 2011 *(Attachment J).* The TDM plan describes a scheme centered around the creation of what is functionally a transportation management association for the entire peninsula, which would coordinate the various entities on the site in a set of shared transportation demand management strategies designed to maximize the use of adjacent transit infrastructure, increase transit opportunities, reduce peak hour vehicle trip impacts, reduce parking demand, and encourage healthier transportation options. Proposed TDM-related strategies include the promotion of carpooling and car-sharing, the addition of express bus service, and the provision of shuttle service during peak events. This TDM plan will be fully reviewed at the time of Level III subdivision and site plan review. Mr. Errico notes,

> *The applicant has provided the TDM Plan that was developed in 2011 and approved as part of the original approval. In concept I find the TDM Plan to be acceptable but want to emphasize the importance of the measures included in the Plan and how the traffic study and parking analyses assume some level of TDM success. The applicant will be required to update the TDM Plan at the next Site Plan review stage to reflect the proposed implementation schedule (including what specific strategies are being implemented, implementation dates, and specific monitoring activities).*

The applicant has also provided an updated events management plan in the revised submittal *(Attachment O).* This plan restricts events to weekdays after 7 pm or weekends. The plan also includes various strategies, in conceptual form, which are designed to facilitate the movement of large numbers of visitors to and from the site. These include the use of a reversible lane on the Thompson's Point Connector Road, police officers to direct traffic at the Thompson's Point Connector Road/Fore River Parkway, traffic control personnel throughout the site (including the parking garage), and directional signage. As with the TDM plan, it is anticipated that this event management plan will be more fully vetted under subdivision and site plan review.

> *The applicant has provided a general approach to managing event traffic volumes as part of the Master Plan. I would note that a detailed traffic management plan was developed in conjunction with the original application and that plan should continue to be used (if the applicant suggests deviating from the Plan, those details should be provided). I would note that the Traffic Management Plan is a live plan and will be reviewed and adjusted over time as conditions in the area are monitored.*

It should be noted that the applicant has submitted documentation requesting that special events occur on the site during the coming summer. It is assumed that the applicant may not have completed subdivision or site plan review under the master development plan by that time. Of this, Mr. Errico writes,

> *It is my understanding that some events may occur during the summer of 2014 and those events will be permitted through the City Special Event Permit process. I would note that the applicant*

> *would be required to provide details on traffic management and parking under a scenario where the full EDA off-site traffic improvements are not in place. DPS would review the details of the traffic and parking analysis at the time of the requested permit and approval of the details is not issued as part of the Master Plan.*

Master development plan approval should not be construed as approval for these special events.

During the initial review, the city raised concerns regarding pedestrian connections from the Connector Road to the panhandle trails. This concern was voiced previously by Portland Trails, which has noted the potential for through trail traffic coming from the Fore River Trail to the west and the Fore River Parkway pedestrian accommodations to the east. In the revised master plan, the applicant has added a pedestrian connection to the panhandle trail immediately north of Building E1.

John Peverada, the city's parking manager, has repeatedly stressed the need for taxi accommodations in the master development plan. The applicant has indicated in the revised master plan that a taxi queuing area may be provided on the inbound side of the loop road to the north of the event center garage. An additional taxi stand is shown in the circle directly in front of the event center.

Water

Regarding water infrastructure, an existing 12" water main terminates at a fire line supply meter pit at the end of the Sewall Street extension. Per their master utility plan and their utility analysis, the applicant intends to extend 8"+ water onto the site from this main, providing both domestic and fire protection service *(Attachment E and Plan 17)*. The applicant has requested an updated capacity letter from the Portland Water District (PWD). This has not yet been received, and has thus been included as a condition of approval. City staff has not identified areas of major concern with respect to water service provision.

Sewer

As with the original plans for the site, the applicant proposes to connect sanitary sewer services into the PWD pump station directly adjacent to the property. The PWD has previously provided a capacity letter indicating the ability to accept the project's sanitary sewer discharge. An updated letter has not yet been received by the city; as such, it has been included as a condition of approval. At the request of the Department of Public Services, the prior approval also included a condition relating to revised wastewater flow projections and the potential need for upgrades to the PWD pump station. It is assumed that this condition will be addressed during subdivision review. David Margolis-Pineo, of the city's Department of Public Services, adds,

> *The City expects, as originally proposed, that all sources of inflow into the sanitary sewers on Thompson Point be eliminated as build out of the Thompsons Point Master Plan progresses. Also that all abandoned laterals connected to the sanitary system be sealed at the sewer main.*

The applicant has stated in their final narrative that they concur with this approach *(Attachment A)*.

Gas & Electric

In their master utility plan and utility analysis, the applicant shows new gas service extending onto the site from Sewall Street/Thompson's Point Connector Road and underground electric from an existing pole on the southwestern side of the railroad tracks. Public Services has indicated no concerns with this arrangement as proposed.

Stormwater

The applicant has provided a master grading and drainage plan which shows preliminary contour lines *(Plan 15)*. In addition, in the revised submittal, they have included a stormwater schematic which illustrates, in more detail, potential storage and water quality treatments proposed for each of the various stormwater management zones of the site *(Plan 16)*. This diagram includes notes relating the intent to comply with city and MDEP water quality treatment standards, as requested by David Senus, consulting civil engineer, during the preliminary review. Mr. Senus has indicated his satisfaction with the revisions as submitted *(Attachment 5)*.

Fire
The applicant has provided an updated fire safety compliance plan showing hydrant locations and fire vehicle turning radii on the proposed master plan layout *(Plan 18)*. In addition, the applicant has submitted an assessment from a certified fire protection engineer *(Attachment O)*. Captain Chris Pirone, of the city's Fire Prevention Bureau, has reviewed the submittal and offers the following comments,

> *I am comfortable with the FPE's analysis regarding the issues he addressed in his report, which focused on water supply, hydrants and access roads.*
>
> *However, as requested in the most recent Thompson's Point meeting with their Team, I requested that the FPE report needed to analyze the evacuation procedures from the buildings once outside the buildings and where there staging areas would be.*
>
> *I encourage them to have the FPE contact me to discuss this process which then will need to be added to his report.*
>
> *Lastly, as a reminder, when Fire Chief LaMontagne gave the approval for the single access road the condition he placed on the development was that all buildings would need to have sprinkler and fire alarm systems even if codes did not require them. He also required and approved the event management plan that would always allow free and clear access into the point; basically an emergency access lane which would be maintained by event staff.*

A condition of approval relating to these comments has been suggested.

Schools
Lastly, the plan includes 144 residential units in high-density, high-rise settings. Both of the buildings intended for residential use appear on the western panhandle of the site. While these units may ultimately house families with school-age children, the applicant has stated that they expect "minimal impact on the city's public school system" *(Attachment C)*. Any students from the development would likely attend Ocean Avenue Elementary and King Middle Schools.

k. Designed to create a street grid pattern that reflects average city block sizes of the neighborhood for street connectivity;
The master plan, which is proposed with private streets, is not organized around a traditional grid pattern *(Figure 2)*. In this way, it differs from those neighborhoods immediately to the north, which house long rectilinear blocks with limited connectivity. Instead, the project adheres to a campus-like concept, with a central 'quad' created by the hotel, existing Brick South building (slated for use as the Circus Conservatory of America), the Brick North building (slated for mixed use), and the garage and event center. Internal circulation patterns allow vehicles and pedestrians to cut through this quad or to circumnavigate the peninsula. A short loop is also provided to the panhandle area. As described above, vehicular access to the site as a whole, however, remains solely via the single access point at the





Figures 6 & 7: Aerial view of the Forefront at Thompson's Point from the north (above) and southeast, looking over the central open space feature (below)

Thompson's Point Connector Road. Pedestrian and bicycle connectivity is slightly higher, with access via the skybridge and trail, as well as the Thompson's Point Connector Road.

l. Designed as to create a cohesive identity through building scale, massing, and articulation; use of quality exterior materials, architectural detailing at pedestrian scale; consistency of design and materials for streetscape and pedestrian amenities; framing of outdoor open space and linkages; a clear conveyance of the function and significance of various buildings, entrances, and features; and to generally comply with design and development standards of the zone in which it is located;
The drawings for the Forefront at Thompson's Point master plan depict an overall scheme for the site which incorporates existing and new buildings, single-story industrial architecture with high-rise residential/hotel and event center/garage design, and significant open space *(Figures 4-7 and Attachment D)*. The applicant uses several tools to make the site cohere, namely consistent streetscape and landscaping, integrated plaza spaces, integrated design taking cues from the existing brick buildings slated for adaptive reuse, and a logical pattern of form and massing which announces entry and a clear progression onto the site.

The city's site plan standards state that projects "in the…B-5 zone…shall be designed to support the development of dense, mixed use neighborhoods with attractive, safe, and convenient street level pedestrian environments as demonstrated by compliance with all applicable design standards listed in the Design Manual." The B-5 design standards provide guidance related to building and parking lot siting. Generally, these standards are oriented toward more urban environments; many of the design standards reference proximity and orientation toward the street. Given the campus-like concept employed here, where an urban street grid is not used as an organizing concept, many of the standards don't apply. It should be noted that the applicant has generally oriented buildings towards the central spine of the site, with parking toward the perimeter, and has organized the site in an effort to create a dense and mixed-use neighborhood, in keeping with the spirit of the design standards.

m. Inclusive of provisions for the ownership and maintenance of usable open space as appropriate; and
Per the preliminary submittal, the open space slated for the Forefront at Thompson's Point is proposed on both independent and common lots. In the revised submittal, the applicant has stated that open space will be "owned and managed by the applicant's professional property management company. The trail area (easement to the city) will be maintained by Portland Trails; however the ownership and control of access is [to be] managed by the applicant. The boat launch and water access [will be] privately owned but he public [will be] encouraged to use the facilities within the rules established by the owner" *(Attachment X).* It is assumed that further details regarding ownership and maintenance of open space will be addressed under subdivision review.

n. For areas proposed as future development phase(s), the proposed interim conditions shall be managed and maintained to ensure stable, safe and attractive site conditions.
In the final submittal, the applicant has continued to provide a phasing plan consisting of two phases with 11 sub-phases. However, the applicant has also provided a master plan graphic which shows four simplified "sections" which may be used for future subdivision recording purposes *(Plan 22).* It is assumed that, under each of the eventual proposed sections, multiple site plan reviews would occur for distinct buildings which might come online at any time. Given the timing of this submittal, the city has not had an opportunity to fully review this sectional recording/phasing plan. As such, its review has been included as a condition of approval. It should be noted that, while this plan is labeled as a "subdivision plan," approval of the master development plan here should not be construed as approval of the subdivision.

XII. SITE LOCATION OF DEVELOPMENT ACT

As previously noted, under the prior subdivision and site plan review a site law permit was approved for the Forefront at Thompson's Point under the city's delegated review authority. The MDEP has granted the city the authority to continue delegated review of the Forefront at Thompson's Point under state site law. Chapter 14 of the city's *Technical Manual* enumerates standards for local site location of development review. All of these, including the standards regarding financial and technical capacity, traffic movement, and the protection of natural resources, echo master plan, subdivision, and site plan standards outlined in the city's land use ordinance. The applicant has stated their intent to comply with their existing SLDA permit. As noted previously, a formal review will occur at the time of subdivision application.

XIII. MASTER DEVELOPMENT PLAN AMENDMENTS

At the workshop on the Forefront master plan, Planning Board members raised questions regarding potential future amendments to the plan and the formal review process. The land use code includes language related to Planning Board decisions on the master plan, including the following,

> *(Section 14-524(a)3.f.(iv)) Decisions. The Planning Board shall approve, approve with conditions, or deny a MasterDevelopment Plan application based upon the applicable review standards…An approval, including an approval of waivers, establishes the general parameters to be adhered to for the development, including the supporting documentation for floor area ratio and/or residential density, general types of uses, building coverage, generalized open space plans and infrastructure systems.*

Under *Section 14-532(b) Revisions and amendments to Master Plans and approved site plans,* the land use ordinance further defines a "minor" master plan amendment, which, per the ordinance, may be approved administratively. According to the ordinance, a change qualifies as a minor amendment when it is "generally consistent" with the approved master plan layout, circulation, infrastructure, and open spaces, and:

(i) Does not propose any new general type of use beyond those approved initially;
(ii) Does not increase the building ground coverage, floor area ratio or residential density of the Master Development Plan;
(iii) Does not decrease any specified area regulations or enumerated parking ratios; and
(iv) Does not substantially change access, circulation, or infrastructure on or adjacent to the site.

It is implied that changes which do not meet these conditions would require Planning Board review.

XIV. STAFF RECOMMENDATION

Subject to the proposed motions and conditions of approval listed below, Planning Division staff recommends that the Planning Board approve the master development plan for the Forefront at Thompson's Point.

XV. PROPOSED MOTIONS – MASTER DEVELOPMENT PLAN

On the basis of the application, plans, reports and other information submitted by the applicant; findings and recommendations contained in the Planning Board Report for the public hearing on February 11, 2014 for application 2013-262 relevant to the master development plan regulations; and the testimony presented at the Planning Board hearing, the Planning Board finds that the plan **is/is not** in conformance with the master development plan standards of the land use code, subject to the following conditions of approval, which must be met prior to subdivision approval unless otherwise stated:

1. The applicant shall provide a summary of existing and/or proposed easements, covenants, public or private rights-of-way, or other burdens on the site, including the proposed easement to the Department of Public Services to use the private drive system for turn-around access and conditions relating to public use of trails and open space on the site, for review and approval by the Department of Public Services and the Planning Authority;

2. The applicant shall provide correspondence from the Maine Department of Transportation indicating their acceptance of the proposed approach to monitoring and traffic analysis related to the existing Traffic Movement Permit, for review and approval by the city's Department of Public Services;

3. For each Level III site plan/subdivision review, the applicant shall submit trip generation information that documents current trip generation levels and trip generation estimates complying with the TMP, for review and approval by the city's Department of Public Services;

4. The applicant shall provide evidence of water capacity from the Portland Water District, for review and approval by the Planning Authority;

5. The applicant shall provide evidence of sewer capacity from the Department of Public Services, for review and approval by the Planning Authority;

6. The applicant shall submit a revised report from a certified fire protection engineer describing evacuation procedures, add a note to the master development plan indicating that all buildings will include sprinkler and fire alarm systems, and revise the event management plan to indicate that free and clear fire access will be maintained at all times during events, for review and approval by the city's Fire Prevention Bureau; and

7. The applicant shall revise the master phasing plan for review and approval by the Planning Authority.

XVI. ATTACHMENTS

PLANNING BOARD REPORT ATTACHMENTS

1. Zoning administrator review (memo from Marge Schmuckal, 2/6/14)
2. City arborist review (memo from Jeff Tarling, 2/3/14)
3. Traffic Engineer review (memo from Thomas Errico, 2/6/14)
4. Department of Public Services review (memo from David Margolis-Pineo, 1/13/14)
5. Civil Engineer review (memo from David Senus, 2/3/14)
6. Fire Prevention Bureau review (memo from Chris Pirone, 1/30/14)

APPLICANT'S SUBMITTALS

A. Cover Letter (from Bo Kennedy, FST, Inc., dated 1/24/14)
B. Master Development Plan Development Review Application
C. Master Plan Submission Supporting Narrative
D. Site Graphics
E. Utility Analysis
F. Evidence of Right, Title, and Interest
G. Conformity with Applicable Design Standards
H. Letter of Financial Capacity
I. Neighborhood Meeting Minutes
J. Evidence of Prior Permitting
K. Utility Capacity Request Letters
L. Letter to MDEP (from Bo Kennedy, FST, Inc., dated 1/23/14)
M. Trip Generation and Parking Summary (with supporting data)
N. Landscaping Response (from Carroll Associates, dated 1/23/14)
O. Updated Event Management Plan
P. Letter to MDOT (from Randall Dunton, Gorrill-Palmer Consulting Engineers, Inc., dated 1/15/14)
Q. Updated Fire Protection Review (from W. Mark Cummings, PE, dated 1/29/14)

C. PLANS

Plan 1 Overall Existing Conditions Plan
Plan 2 Master Plan
Plan 3 Master Plan Phase I
Plan 4 Master Plan Phase IA
Plan 5 Master Plan Phase IB
Plan 6 Master Plan Phase IC
Plan 7 Master Plan Phase ID
Plan 8 Master Plan Phase IE
Plan 9 Master Plan Phase IF
Plan 10 Master Plan Phase IG
Plan 11 Master Plan Phase IH
Plan 12 Master Plan Phase 2A
Plan 13 Master Plan Phase 2B
Plan 14 Master Plan Phase 2C
Plan 15 Master Grading and Drainage Plan
Plan 16 Master Stormwater Management Strategy Schematic
Plan 17 Master Utility Plan
Plan 18 Master Fire Protection Plan
Plan 19 Master Circulation Plan
Plan 20 Expanded View of Event Center Plaza
Plan 21 Landscape Master Plan
Plan 22 Amended Subdivision Plan (Draft Sectional Recording "Phases")
Plan 23 Master Plan (Draft Sectional Recording "Phases")

CITY OF PORTLAND

Planning & Urban Development

Christine Grimando, AICP, Director

April 3, 2020

Chris Thompson
Forefront Partners I, LP
501 Danforth Street
Portland, Maine 04102

Bo Kennedy, PE
Placemaker Partners, LLC
501 Danforth Street
Portland, Maine 04102

Project Name:	The Forefront at Thompson's Point Subdivision Alteration		
Project ID:	2017-102	CBL:	201/A/5,8,10 202/A/1, 4
Address:	10 Thompson's Point	Applicant:	Forefront Partners I, LP
Planner:	Shukria Wiar		

Dear Mr. Thompson:

On April 2, 2020, the Planning Authority approved minor alterations to the approved Sectional 1 through 4 subdivision plats for the Forefront at Thompson's Point. The decision is based on the documents and plans as submitted and prepared by Bo Kennedy, PE, of Placemaker Partners, LLC on behalf of Forefront Partners I, LP. The proposal was reviewed for conformance with the standards of Portland's Subdivision Ordinance and has been found to meet these standards. The scope of the alteration includes changes to the internal lot boundaries for the former Suburban Propane and Northern New England Rail Authority (NNEPRA) properties (lots 8 through 16) to facilitate a proposed 2,800 square foot bar and service building, an 11,400 square foot warehouse building, a 61-room hotel, and associated site improvements. The amendments will also document the execution of the second and final phase of the land exchange between Forefront Partners I, LP and NNEPRA. No change is proposed to any approved lot line, easement, infrastructure, proposed uses, or other components of the previous approval on January 12, 2016.

Standard Procedures

Note: The following standard conditions of approval and requirements apply to all approved site plans:

1. Site Plan Expiration The site plan approval will be deemed to have expired unless work has commenced within one (1) year of the approval or within a time period up to three (3) years from the approval date as agreed upon in writing by the City and the applicant. Requests to extend approvals must be received before the one (1) year expiration date.

2. Separate Building Permits Are Required This approval does not constitute approval of building plans, which must be reviewed and approved by the City of Portland's Permitting and Inspections Department.

3. Performance Guarantee and Inspection Fees A performance guarantee of $8,400 Division that covers the site improvements for the Phase III sidewalk and an inspection fee payment of $300 must be submitted to the Planning Division.

4. Construction Management Plans The applicant, contractor and subcontractors are required to conform to the approved Construction Management Plan, and all conditions contained within the project's approval, for the entire duration of the project. Any amendments to the approved Construction Management Plan shall be reviewed and approved by the Department of Public Works prior to the execution. The Planning Authority and the Department of Public Works have the right to seek revisions to an approved Construction Management Plan. The applicant shall coordinate the project's construction schedule with the timing of nearby construction activities to avoid cumulative impacts on a neighborhood and prevent unsafe vehicle and pedestrian movements. Accordingly, nearby construction activities could involve a delay in the commencement of construction.

5. Preconstruction Meeting Prior to the release of a building permit or site construction, a pre-construction meeting shall be held at the project site. This meeting will be held with the contractor, Development Review Coordinator, Public Works representative and owner to review the construction schedule and critical aspects of the site work.

6. Department of Public Works Permits If work or obstructions will occur within the public right-of-way, such as utilities, curb, sidewalk, driveway construction, site deliveries and equipment siting, a Street Opening and/or Occupancy Permits are required for your site. Please contact the Department of Public Works Permit Clerk at (207) 874-8300, ext. 8828. (Only excavators licensed by the City of Portland are eligible.)

7. Develop Site According to Plan The site shall be developed and maintained as depicted on the site plan and in the written submission of the applicant. Any modifications of an approved site plan or alteration of a parcel, which was the subject of site plan approval after May 20, 1974, shall require the prior approval of an amended site plan by the Planning Board or Planning Authority pursuant to the terms of Chapter 14, Land Use, of the Portland City Code.

8. Design Review of Exterior Elevations If the project is subject to design review, then the exterior elevations shall be constructed and maintained as depicted on the approved elevation drawings and in the written submission of the applicant. Modification of any approved exterior elevations shall require the approval of the revised plans by the Planning Board or Planning Authority pursuant to the terms of Chapter 14, Land Use of the Portland City Code.

9. Defect Guarantee A defect guarantee, consisting of 10% of the performance guarantee, must be posted before the performance guarantee will be released.

10. As-Built Final Plans Final sets of as-built plans shall be submitted digitally to the Planning and Urban Development Department, on a CD or DVD, in AutoCAD format (.dwg), release AutoCAD 2005 or greater.

11. Mylar Copies Mylar copies of the as-built drawings for the public streets and other public infrastructure in the subdivision must be submitted to Public Works prior to the issuance of a certificate of occupancy.

12. Impact Fees New development or changes of use that result in net new residential dwelling units, non-residential building square footage, or water meters, are subject to the City of Portland's impact fee ordinance (Chapter 14, Article XVII). Impact fees are calculated at the time of building permit and must be paid prior to the certificate of occupancy. For more information, visit https://www.portlandmaine.gov/2409/Impact-Fees

The Development Review Coordinator must be notified five (5) working days prior to the date required for final site inspection. The Development Review Coordinator can be reached at the Planning and Urban Development Department at (207) 874-8632. All site plan requirements must be completed and approved by the Development Review Coordinator prior to issuance of a Certificate of Occupancy. Please schedule any property closing with these requirements in mind.

If there are any questions, please contact Shukria Wiar at (207) 756-8083 or via email shukriaw@portlandmaine.gov.

Sincerely,



Christine Grimando, AICP
Director

CITY OF PORTLAND, MAINE
PLANNING BOARD

Elizabeth Boepple, Chair
Sean Dundon, Vice Chair
Bill Hall
Carol Morrissette
Jack Soley
Dave Eaton

January 21, 2016

Chris Thompson
Parallax Partners (dba Forefront Partners I, LP)
501 Danforth Street
Portland, ME 04102

Bo E. Kennedy, P.E.
Stantec (formerly FST)
778 Main Street, Suite 8, South
Portland, ME 04106

Project Name: The Forefront at Thompson's Point Project Level III Site Plan and Subdivision Application

ID: 2015-133 & 2015-159

Address: 1 Thompson's Point, Portland, Maine 04102 CBL: 201 A 005001
Applicant: Chris Thompson
Planner: Christine Grimando

Dear Mr. Thompson:

On January 12, 2016, the Planning Board considered a Level III Site Plan and Subdivision application for an amended subdivision plan consisting of 19 lots, an amended Site Location of Development Act approval, a Level III site plan for the renovation of an existing building (Brick South) for use as a flexible 2,500 person event/assembly space with associated parking, utilities and stormwater management within the 34,000 square foot building. Included in this site plan is coordination with a previous approval of Brick North and adjacent site work. Both the site plan and subdivision application are applications towards fulfillment of the previously approved Master Development Plan for this site. The Planning Board reviewed the proposal for conformance with the standards of the: Shoreland Zoning Regulations, Floodplain Management Regulations, Traffic Movement Permit, Subdivision Ordinance and Site Plan Ordinance, including the Site Development of Location Act. The Planning Board voted 5-0 (Elizabeth Boepple absent) to approve the application with the following waivers and condition(s) as presented below.

WAIVERS

On the basis of the application, plans, reports and other information submitted by the applicant, findings and recommendations, contained in the Planning Board Report for the public hearing on January 12, 2015 for applications #2015-133 and #2015-159 relevant to Portland's Technical and Design Standards and other regulations, and the testimony presented at the Planning Board hearing, the Planning Board voted 5-0 (Boepple absent) to waive the following Technical Manual standards regarding City street design:

1. 1.7.2.1, requiring a perpendicular driveway connection to the street, to allow for an alternative angle for the proposed Parking Garage Entrance (Lot 14/Building F1).
2. 1.7.2.9, requiring that vehicular circulation to be contained off-site and to not utilize the adjacent street system, to allow for anticipated delivery truck maneuvers.
3. 10.8, requiring a minimum aggregate base course thickness of 3 inches for collector roads, to allow for alternative road design specifications as noted on Sheet C7-0. .
4. Figure I-2 (Collector Street Cross-Section), requiring continuous sidewalks on both sides of the collector road to allow for sidewalk not to be built on an easterly portion of the road, as shown on the Site Layout Plan, sheet C-3.0, for the purposes of the Level III site plan (2015-159) subject to a condition of approval for completion of full sidewalk design as shown on Sheet C-3.0, *Overall Site Plan* is (2015-133) at a future phase.
5. Figure I-2 (Collector Street Cross-Section), requiring a minimum roadway width of 40 feet for collector roads, to allow for a variable width of 30-39 feet.
6. Figure I-2 (Collector Street Cross-Section), requiring a minimum esplanade width of 5 feet for collector roads, to allow for a 4ft wide esplanade.

SUBDIVISION REVIEW

The Planning Board voted 5-0 (Boepple absent) that the plan is in conformance with the subdivision standards of the Land Use Code and the Site Location of Development Act, subject to the following condition(s) of approval:

1. The applicant shall finalize the subdivision plat for review and approval by Corporation Counsel, the Department of Public Works, and the Planning Authority. The subdivision plats shall note all conditions of public access, all relevant easements including any for city vehicle access and turning, language regarding rights of lot ingress/egress/regress, and final street turnaround easement location and design in accordance with City of Portland Technical Manual section 1.3.

2. Prior to the issuance of certificates of occupancy, the applicant shall provide a revised Declaration of Easements, Covenants and Restrictions document for review and approval by Corporation Counsel;

3. Street Lighting: The proposed street lights on the 1st segment of the public portion of the Sewell Street extension are to be privately owned, metered and maintained by the Forefront at Thompson's Point. The City shall grant a license for such a purpose at the time of street acceptance.

SITE PLAN REVIEW

The Planning Board voted 5-0 (Boepple absent) that the plan is in conformance with the site plan standards of the Land Use Code, subject to the following condition(s) of approval:

1. Future phases of work in the vicinity of the outfall associated with "Stormwater Management Zone F" (as depicted on sheet C-4.1 of the Subdivision Application) shall incorporate water quality treatment measures that provide adequate treatment capacity for runoff from the untreated parking lot south of the Brick North Building in accordance with the General Standards. If no future work occurs on the site, the Applicant will not be held to completing this measure;

2. The applicant shall provide a full construction management plan for review and approval by the Public Works Department.

3. Sidewalks and Road Improvements: At the time a Site Plan application is submitted for Buildings F1/H (or alternate Level III proposal for Lots 14 & 15 as depicted on Sheet C-2.0, *Subdivision Plan*), the portion of roadway included in Sheet C-3.0, *Site Layout Plan*, including the easterly sidewalk and all remaining road improvements, shall include provisions for conformity with the road design depicted on Sheet C-3.0, *Overall Site Plan.*

4. Final landscape plan shall incorporate 2" caliper trees in 4 foot-wide esplanade.

5. The 8'x20' Concrete Pad for the storage of CO2 tanks and chiller equipment on the North Side of Brick North, as shown on Sheet C-3.0, Site Layout Plan, will be subject to review by the Inspections Division, and any associated life safety reviews, before construction.

The approval is based on the submitted plans and the findings related to site plan and subdivision review standards as contained in Planning Report for application 2015-133 & 2015-159 which is attached.

STANDARD CONDITIONS OF APPROVAL

Please note the following standard conditions of approval and requirements for all approved site plans:

1. **Subdivision Recording Plat** Revised recording plats listing all conditions of subdivision approval must be submitted for review and signature prior to the issuance of corresponding performance guarantees. Performance guarantees must be issued prior to the release of the recording plat for recording at the Cumberland County Registry of Deeds.

2. **Subdivision Waivers** Pursuant to 30-A MRSA section 4406(B)(1), any waiver must be specified on the subdivision plan or outlined in a notice and the plan or notice must be recorded in the Cumberland County Registry of Deeds within 90 days of the final subdivision approval).

3. **Develop Site According to Plan** The site shall be developed and maintained as depicted on the site plan and in the written submission of the applicant. Modification of any approved site plan or alteration of a parcel which was the subject of site plan approval after May 20, 1974, shall require the prior approval of a revised site plan by the Planning Board or the Planning Authority pursuant to the terms of Chapter 14, Land Use, of the Portland City Code.

4. **Separate Building Permits Are Required** This approval does not constitute approval of building plans, which must be reviewed and approved by the City of Portland's Inspection Division.

5. **Note on Stormwater Management Inspection and Monitoring** The applicant and all assigns must comply with the conditions of Chapter 32 Storm Water including Article III, Post-Construction Storm Water Management, which specifies the annual inspections and reporting requirements. The developer/contractor/sub-contractor must comply with conditions of the construction storm water management plan and sediment & erosion control plan based on the applicant's submitted materials and applicable city standards and state guidelines. A maintenance agreement for the stormwater drainage system, as attached, or in substantially the same form with any changes to be approved by Corporation Counsel, shall be submitted and signed prior to the issuance of a building permit with a copy to the Department of Public Works.

6. **Site Plan Expiration** The site plan approval will be deemed to have expired unless work has commenced within one (1) year of the approval or within a time period up to three (3) years from the approval date as agreed upon in writing by the City and the applicant. Requests to extend approvals must be received before the one (1) year expiration date.

7. **Subdivision Plan Expiration** The first section of the subdivision plat shall be recorded within three years of Planning Board approval. Subdivision plat approval of the remaining sections of the plat shall remain in effect for five (5) years after Planning Board approval.

8. **Performance Guarantee and Inspection Fees** A performance guarantee covering the

site improvements as well as an inspection fee payment of 2.0% of the guarantee amount and seven (7) final sets of plans must be submitted to and approved by the Planning Division and Public Works Department prior to the release of each sectional subdivision plat for recording at the Cumberland County of Deeds, and prior to the release of a building permit, street opening permit or certificate of occupancy for site plans. If you need to make any modifications to the approved plans, you must submit a revised site plan application for staff review and approval.

9. **Defect Guarantee** A defect guarantee, consisting of 10% of the performance guarantee, must be posted before the performance guarantee will be released.

10. **Preconstruction Meeting** Prior to the release of a building permit or site construction, a pre-construction meeting shall be held at the project site. This meeting will be held with the contractor, Development Review Coordinator, Public Service's representative and owner to review the construction schedule and critical aspects of the site work. At that time, the Development Review Coordinator will confirm that the contractor is working from the approved site plan. The site/building contractor shall provide three (3) copies of a detailed construction schedule to the attending City representatives. It shall be the contractor's responsibility to arrange a mutually agreeable time for the pre-construction meeting.

11. **Department of Public Works Permits** If work will occur within the public right-of-way such as utilities, curb, sidewalk and driveway construction, a street opening permit(s) is required for your site. Please contact Carol Merritt at 874-8300, ext. 8828. (Only excavators licensed by the City of Portland are eligible.)

12. **As-Built Final Plans** Final sets of as-built plans shall be submitted digitally to the Planning Division, on a CD or DVD, in AutoCAD format (*,dwg), release AutoCAD 2005 or greater.

13. **Mylar Copies** Mylar copies of the as-built drawings for the public streets and other public infrastructure in the subdivision must be submitted to the Department of Public Works prior to the issuance of a certificate of occupancy.

The Development Review Coordinator must be notified five (5) working days prior to date required for final site inspection. The Development Review Coordinator can be reached at the Planning Division at 874-8632. All site plan requirements must be completed and approved by the Development Review Coordinator prior to issuance of a Certificate of Occupancy. Please schedule any property closing with these requirements in mind.

If there are any questions, please contact Christine Grimando at 874-8608.

Sincerely,



Elizabeth Boepple, Chair
Portland Planning Board

Attachments:

1. Planning Board Report
2. City Code, Chapter 32
3. Sample Stormwater Maintenance Agreement
4. Performance Guarantee Packet

Electronic Distribution:

cc: Jeff Levine, AICP, Director of Planning and Urban Development
Stuart G. O'Brien, City Planning Director
Barbara Barhydt, Development Review Services Manager
Christine Grimando, Planner/Senior Planner
Philip DiPierro, Development Review Coordinator, Planning
Ann Machado, Zoning Administrator, Inspections Division
Tammy Munson, Inspections Division Director
Jonathan Rioux, Inspections Division Deputy Director
Jeanie Bourke, Plan Reviewer/CEO, Inspections Division
Brad Saucier, Administration, Inspections Division
Katherine Earley, Engineering Services Manager, Public Works
Bill Clark, Project Engineer, Public Works
David Margolis-Pineo, Deputy City Engineer, Public Works
Doug Roncarati, Stormwater Coordinator, Public Services
Greg Vining, Associate Engineer, Public Works
Michelle Sweeney, Associate Engineer, Public Works
John Low, Associate Engineer, Public Works
Rhonda Zazzara, Field Inspection Coordinator, Public Works
Mike Farmer, Project Engineer, Public Works
Jane Ward, Administration, Public Works
Jeff Tarling, City Arborist, Public Works
Jeremiah Bartlett, Public Works
Keith Gautreau, Fire Department
Jennifer Thompson, Corporation Counsel
Thomas Errico, P.E., TY Lin Associates
David Senus, P.E., Woodard and Curran
Rick Blackburn, Assessor's Department
Approval Letter File

PLANNING BOARD REPORT
PORTLAND, MAINE

The Forefront at Thompson's Point
Level III Site Plan and Subdivision Review
2015-133 (Subdivision) & 2015-159 (Level III Site Plan)
Chris Thompson, Forefront Partners I LP

Submitted to: Portland Planning Board Date: January 8, 2016 Public Hearing Date: January 12, 2016	Prepared by: Christine Grimando, Senior Planner CBL: 201 A005001 Project #: 2015-133 (Subdivision) & 2015-159 (Level III Site Plan)

I. INTRODUCTION

Forefront Partners I LP has requested a Level III site plan and subdivision review for a 19 lot subdivision, and a Level III site plan for the renovation of an existing building (Brick South) for use as a flexible 2,500 person event/assembly space with associated parking, utilities and stormwater management within the 34,000 square foot building. The application includes a summary of the proposed modifications to the approved master development plan and incorporation of another existing building (Brick North), and its associated site improvements. A time line of the multiple prior approvals for this site is below as background information.



1, Brick South

The total development area consists of over 30 acres. The site's approved master development plan is for a mixed-use development including an event center, hotel, sports medicine facility, parking structure, educational facility, residential units, restaurants, and office uses. The current Site Plan and Subdivision application includes a 19 lot subdivision, and a Level III site plan for assembly/event space and related infrastructure. This application represents the first to be submitted to the Planning Board towards fulfillment of the master development plan, approved in March 2014. The application also folds in a prior approval for Brick North– this was approved, and amended under the 2012 subdivision approval that preceded the 2014 plan for this property. It is included in this application as a means to facilitate superseding the pre-Master Development Plan approvals, and begin to fulfill build-out of the site under one, consolidated program. A previous Planning Board workshop was held for this application on October 13, 2015.

This development is being referred to the Planning Board for compliance with the site plan and subdivision standards. A total of 288 notices were sent to property owners within 500 feet of the site and a legal ad ran in the Portland Press Herald on December 28 and December 29, 2015.

A Neighborhood Meeting was held on Friday, October 9th. A notice dated September 29, 2015 was sent to property owners within 500 feet of the property. Notes from that meeting are included in Attachment O. Questions and comments from the Neighborhood Meeting regarded questions about bike parking, redevelopment aesthetics, and support for the current appearance of the site and recent uses.

Applicant: Chris Thompson, Forefront Partners I LP
Consultants: Bo Kennedy, P.E., Fay, Spofford & Thorndike; Lawrence E. Bartlett, P.E., Bartlett Design; Charles D. Marchese, Surveyor, Sebago Technics



2, Thompson's Point in 2014

II. REQUIRED REVIEWS

Waiver Requests	***Applicable Standards***
1.3; 1.7.2.1; 1.7.2.9; 1.10.8; I-2	Requirement for turnaround on dead-end streets; Requirement for perpendicular driveway connection to street; Requirement for vehicular circulation to be contained off-site and not use adjacent street system; Requirement for a minimum aggregate base course thickness of 3 inches for collector roads; Requirement for continuous sidewalks on both sides of the collector road; Requirement for a minimum roadway width of 40 feet for collector roads; Requirement for a minimum esplanade width of 5 feet for collector roads
Review	***Applicable Standards***
Site Plan	*Section 14-526*
Subdivision	*Section 14-497*

III. PROJECT DATA

Existing Zoning	B-5
Existing Use	Industrial
Proposed Use	Event/Assembly

Proposed Development Program	App. 2,500 SF mixed use assembly/event space
Parcel Size	32.67 acres

	Existing	*Proposed*	*Net Change*
Building Footprint	34,600 SF	34,600 SF	N/A
Building Floor Area	34,600 SF	34,600 SF	N/A
Impervious Surface Area	725,710 SF	687,813 SF	-37,897 sf site-wide total, +2.2 ac. this development phase
Parking Spaces (on site)	Unknown	118 (8 handicapped spaces)	118 delineated
Bicycle Parking Spaces	0	16	16
Estimated Cost of Project	$3,000,000		

IV. BACKGROUND & EXISTING CONDITIONS

Thompson's Point consists of 30+ acres immediately adjacent to the Portland Transportation Center, on a peninsula of land that extends into the Fore River. It has been a continuously occupied industrial site, and in recent years has begun its transition to a mixed-use destination, hosting events at the southern tip of the peninsula and securing new tenants to support the redevelopment of the property. Bound by railroad tracks to the north, surrounded by the Fore River on three sides, it is currently occupied by existing buildings, and a mixture of long term and temporary uses. The site also includes an extension of the Fore River trail. In recognition of its unusual potential to be a new destination in the City, and its proximity to existing public transit, it was made a Tax Increment Financing District, towards further transit improvements. Zoned B-5 (urban commercial mixed-use zone), it is immediately adjacent to residential, industrial, business and resource protection zones. Its size, proximity to both the natural resource of the Fore River and the transit resources of the Portland Transportation Center, and its location at the intersection of a variety of urban contexts make this a unique development site in Portland.

Applications Timeline

In June 2012 this site was approved for 600,000 sf of office, hotel, restaurant and event center uses. The original site plan and subdivision approval was amended in June 2013, to reflect an altered development program, as well as retention of modified existing brick buildings on the site.

In late 2013, a Level III site plan application was submitted for a portion of the site, specifically a segment of road, infrastructure, and site work supporting the re-use of Brick North (Phase 1A). This site plan was submitted under the still valid 2013 approval. Approved in January 2014, it was intended to allow development to proceed while the development program for the overall site was being considered in a newly envisioned master development program, submitted for planning board review on an overlapping time frame with the 1A application. In December of 2014 the 1A application was amended to bring the proposal into greater alignment with the master development plan, including road layout.

In January and February 2014 a master development plan application was reviewed by the Planning Board, and approved in March of that year. A master development plan is a tool that establishes a cohesive development program on larger parcels (one+ acre), allowing for multiple phases over an extended time frame of six years. An approval of a master development plan then requires subsequent site plan and subdivision applications with specific construction proposals towards fulfillment of the overarching master development plan approval.

In June 2014 the applicant received a Level II approval for site work at the southern end of the Thompson's Point peninsula, in the area of the open air "Depot" structure (formerly the Barnstormers building), to allow for seasonal events. This application was amended in February 2015 to allow for additional site work and an extension of the seasonal event approval.

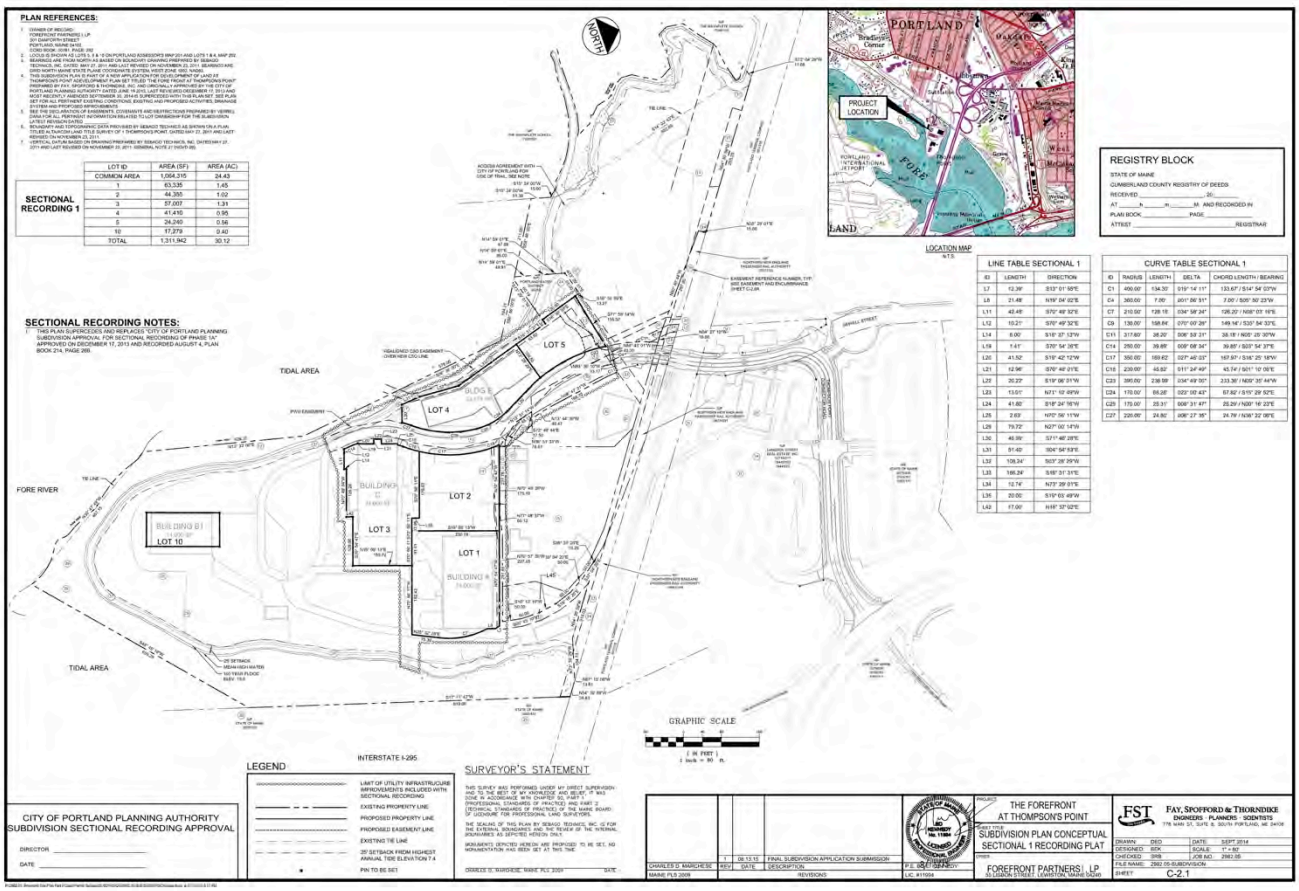
This application was originally scheduled for November 24th, and was postponed until January 12th. New information received since November is summarized in sections XVIII and XIV below.

V. PROPOSED DEVELOPMENT

Subdivision

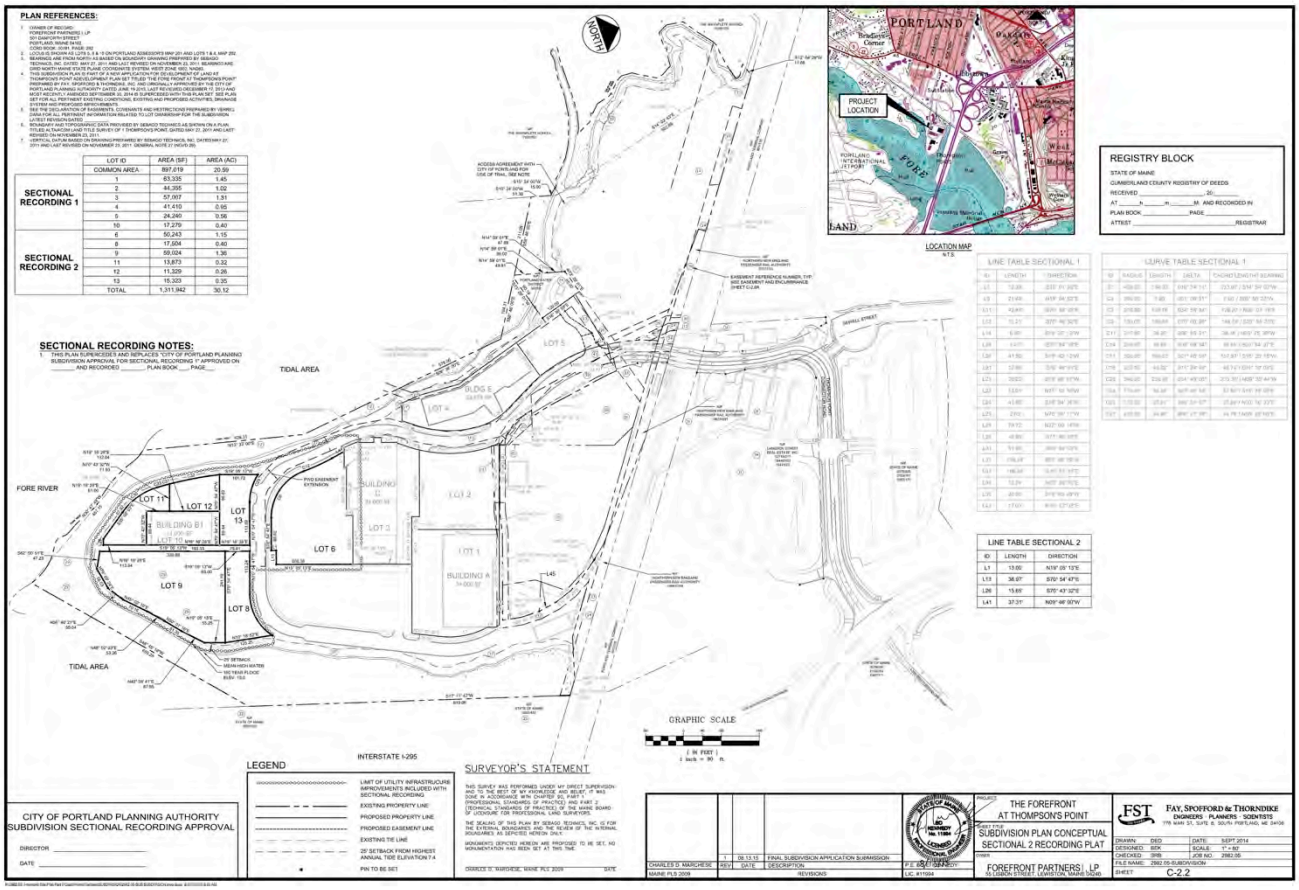
A new, site-wide subdivision plan has been submitted for review, consisting of nineteen lots. It will supersede the 2012/2013 subdivision approval. It reflects the most up to date, integrated development plan for the site, consisting of nineteen lots plus common area, and four sectional recordings. It includes detailed road geometries, grading, drainage, landscape design, and utility infrastructure details. The four proposed sectional recordings consist of the following:

Sectional 1: This encompasses six lots, two of which include Brick North and Brick South, as well as the Depot area, and two lots to the west of the access road. It incorporates redevelopment of the existing Brick North building for mixed uses, and supersedes a previously recorded sectional recording for this area. This plat encompasses the development area of the current Level III site plan application.



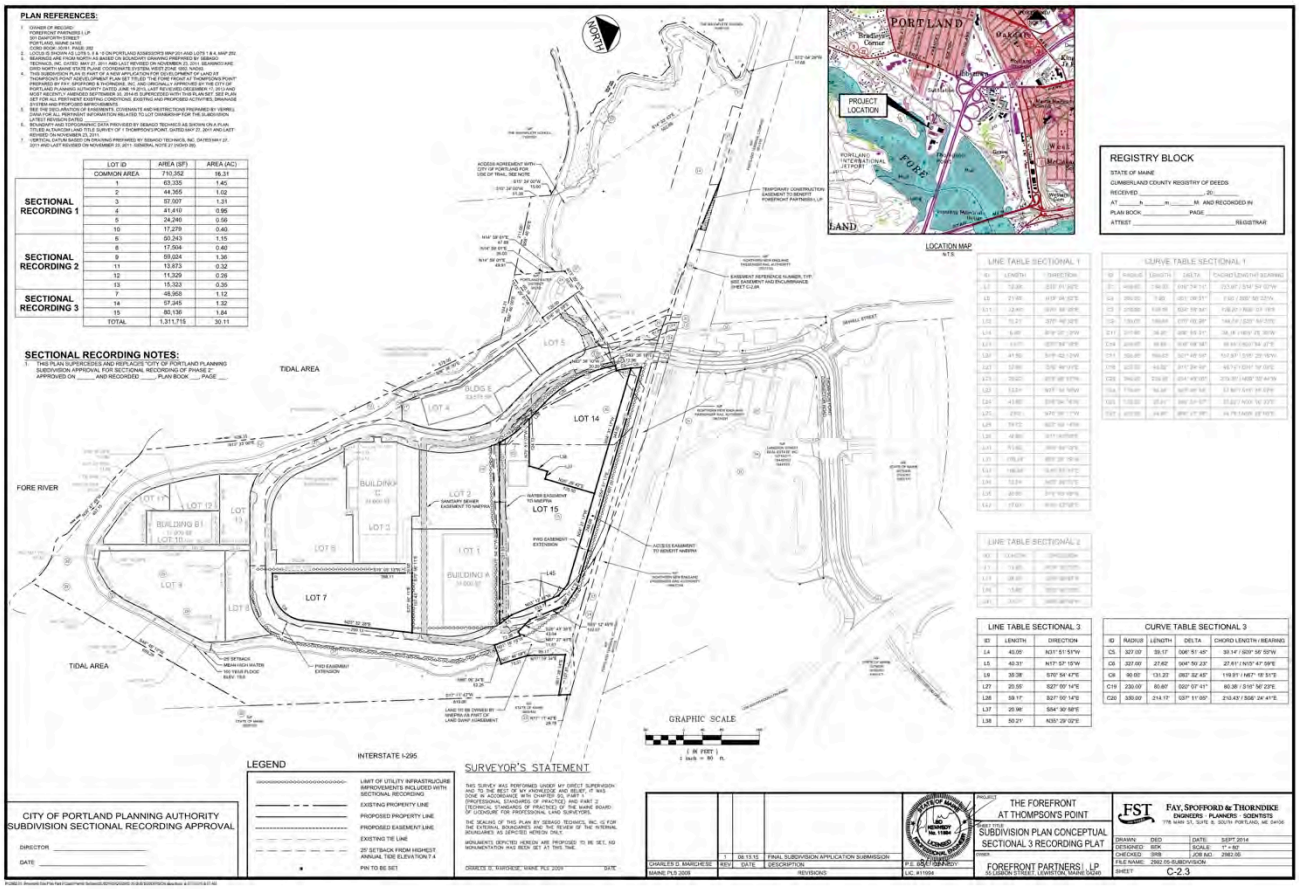
3, Sectional Recording 1

Sectional 2: The second sectional recording plat encompasses the land area surrounding Depot building. Sectional Recording 2 would create Lots 8, 9, and 11 to support The Depot as well as Lot 6 (temporary parking/future building pad) and Lots 12 and 13 (Restaurant and Parking). The area around the Depot is approved as a multi-purpose event space. An outdoor event space had previously been envisioned as adjacent to an event center in a previous iteration of the plan, but is now aligned with the Depot/Lot 10. This section also incorporates a future restaurant and an approved seasonal dock. The application indicates that the outdoor area was evaluated for public safety considerations last year: *the Fire Department asked us to assess the maximum capacity of the Depot area from a public safety perspective. It was determined by Mark Cummings, P.E. that it was feasible to accommodate 7,300 people safely on the site, assuming that an adequate off-site parking plan and temporary pedestrian safety layout could be provided, in the context of a business licensing scenario.*



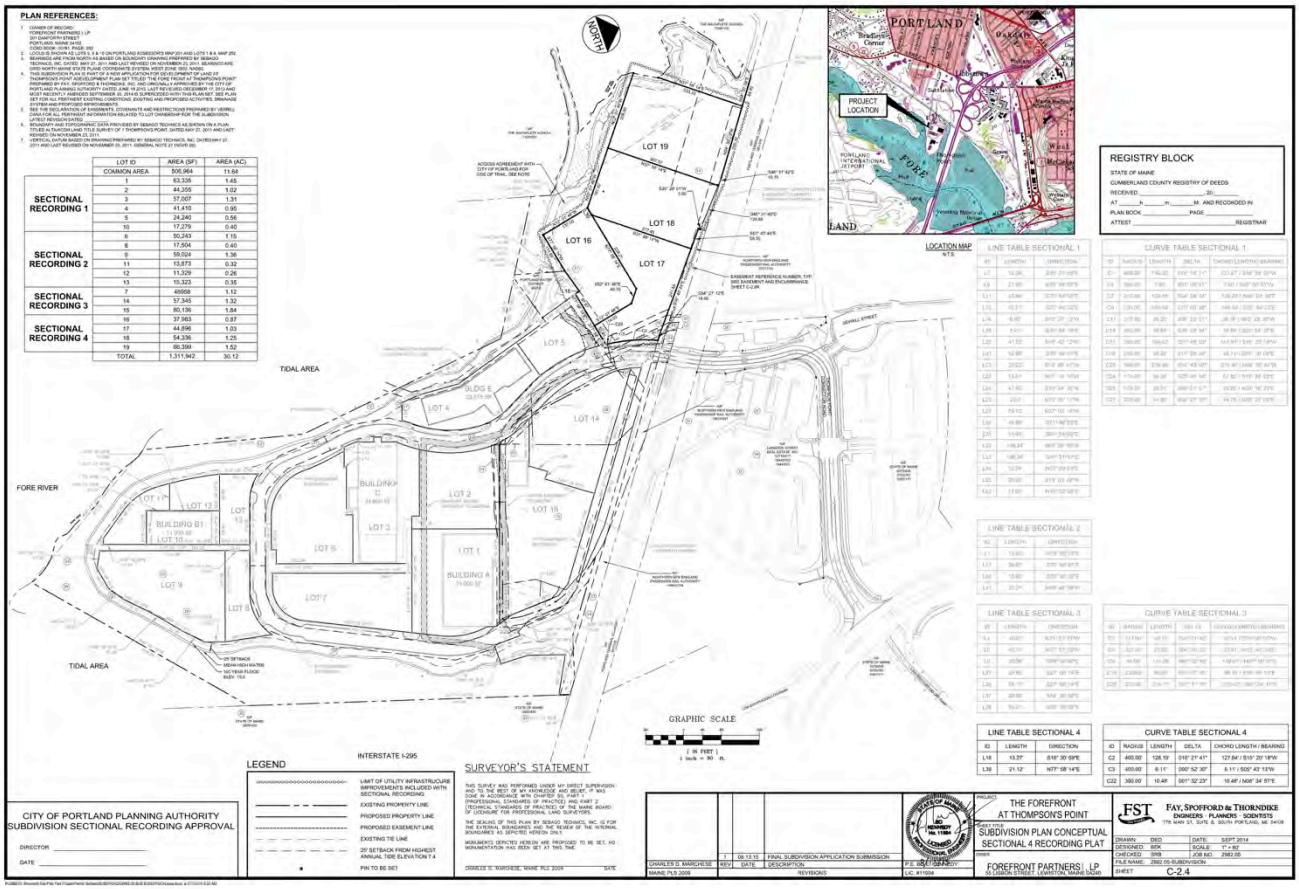
4, Sectional Recording 2

Sectional 3: Section three is premised on the closing of a land swap agreement with NNEPRA and the acquisition of the Suburban Propane property – this land will be consolidated into lots 14 and 15 for the purposes of a parking garage and event center, respectively. Lot 7 is anticipated to be the future location of a cultural center.



5, Sectional Recording 3

Sectional 4: This is anticipated to be the last recording of the full subdivision plan, and includes lots 16-19 in the northwestern "Panhandle" portion of the site. It's intended for use as office space and residential units.



	LOT ID	AREA (SF)	AREA (AC)
	COMMON AREA	506,964	11.64
SECTIONAL RECORDING 1	1	63,335	1.45
	2	44,355	1.02
	3	57,007	1.31
	4	41,410	0.95
	5	24,240	0.56
SECTIONAL RECORDING 2	10	17,279	0.40
	6	50,243	1.15
	8	17,504	0.40
	9	59,024	1.36
	11	13,873	0.32
	12	11,329	0.26
SECTIONAL RECORDING 3	13	15,323	0.35
	7	49958	1.52
	14	57,345	1.32
	15	80,136	1.84
	16	37,983	0.87
SECTIONAL RECORDING 4	17	44,896	1.03
	18	54,336	1.25
	19	66,359	1.52
	TOTAL	1,311,942	30.12

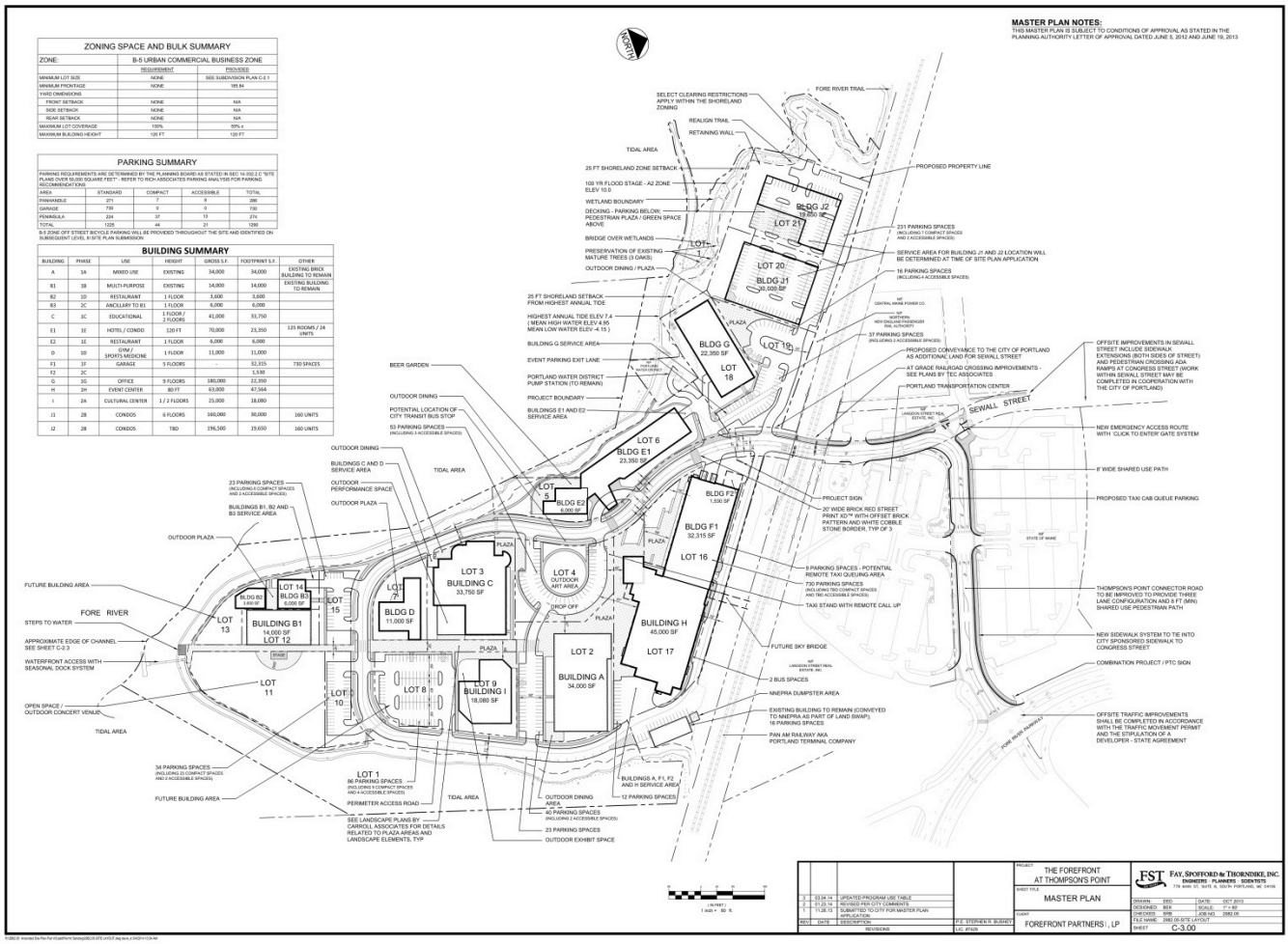
6, Sectional Recording 4

Master Plan

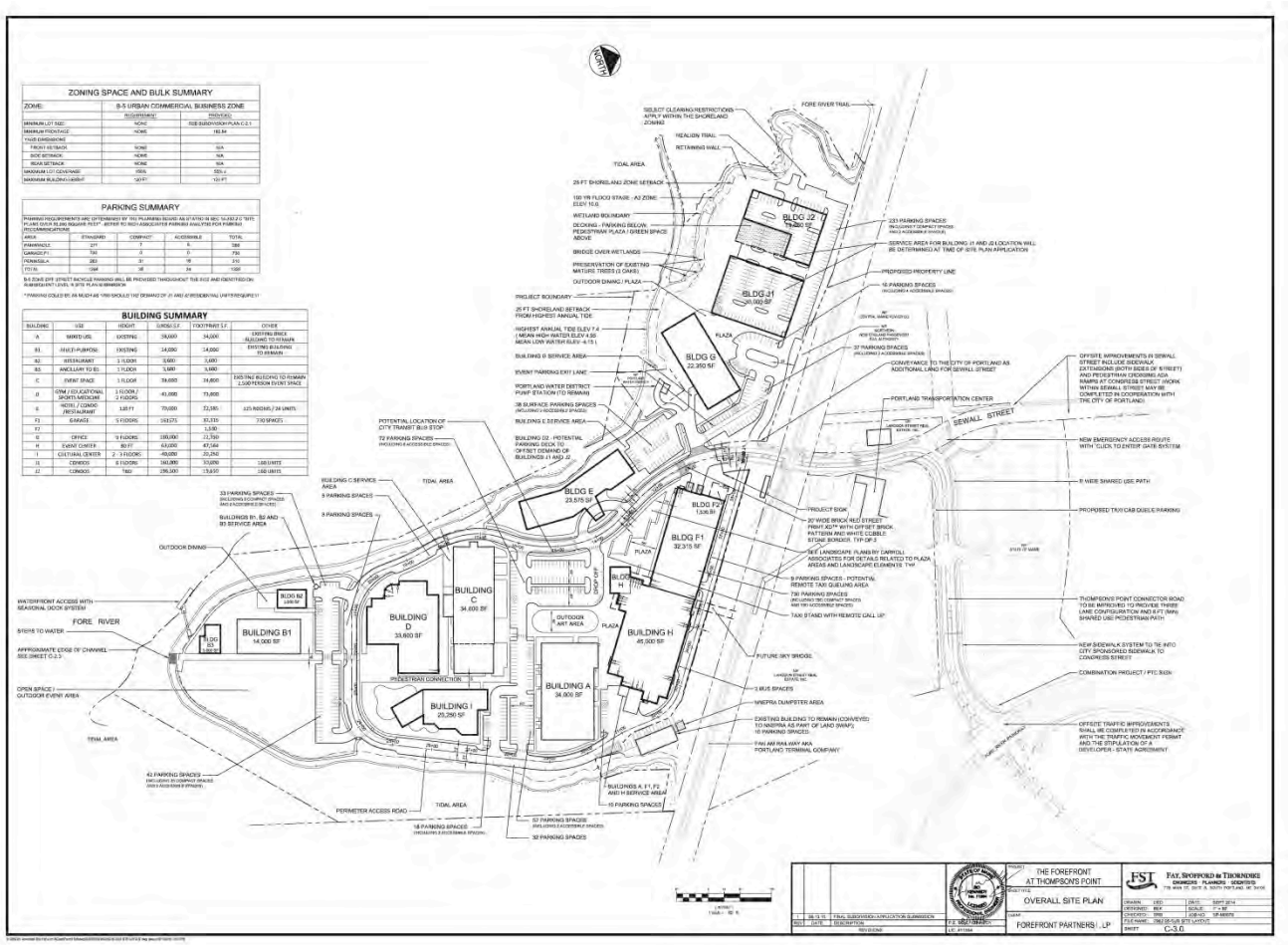
The application outlines changes to the master development plan. The subdivision application (Attachment M) cover letter gives an overview of these changes, which result in similar layout, parking, total square footage and anticipated uses as the approved master development plan. Some elements of the development that were outlined in the original master development plan application have shifted location on the site. In the original, 2012 subdivision approval the existing brick buildings were to be removed; however subsequent applications, including the 2014 master development plan have shown these as retained with some significant modifications. The current application depicts Brick South retained in its entirety. The applicant summarizes the master development plan changes as follows:

- *At the heart of the layout adjustments, is Forefront's decision to retain and renovate the existing brick building referred to as Brick South in its entirety. Brick South shown as Building C on the enclosed plans will be used as assembly event space. The event space is meant to complement the proposed event center, the outdoor event area held at the Depot and the southern portion of the site, and is not intended to increase the overall size of events, or number of people at the site at one time. Brick South will be renovated to accommodate 2,500 people and support space such as a kitchen, meeting space, storage and bathrooms, and related ancillary services for the event space.*
- *The restaurant space (E2) has been incorporated into the hotel's ground floor. This allows space for additional surface parking next to the hotel.*

- *The educational building (Circus Conservatory) will be divided into their primary space in the new Building (D) and their current leased space in a portion of the Brick North Building (Building A). There is no change in total office space proposed for the overall site.*
- *The Cultural Center (Building I) has grown in gross square footage and building footprint; however, the program has remained the same.*



7, Approved master development plan layout



8, Current proposed site layout

The modifications to the revised site layout are consistent with the overall master development plan approval – it is generally consistent with the approved layout of buildings, circulation infrastructure, open spaces, and uses, cumulative lot coverage, parking and circulation. The area west of Brick North (Lot 2/Building A) shows a modified interior circulation and parking area, the circular drive and art space being modified in shape and parking configuration. The overall proposed site circulation remains closely aligned to the originally approved master development plan.

The revised master development plan use program follows:

TABLE 1
MASTER PLAN PROGRAM

Building Master Plan		Master Plan - August 2015 Gross Size
Building A:	Mixed Use: Cellar Door Winery (5,840 SF) Circus Program (6,799 SF; 400 People) Big Room Studios (3,461 SF) Café (1377 SF) Brewery (10,068 SF) Distillery (5,284 SF) Color Me Mine (2,136 SF) Common (741 SF)	34,800 SF +/-
Building B1:	Multi-Purpose (Assume Live Theater)	4,800 Seats
Building B2:	Ancillary to B1 and Seasonal Dock	3,600 SF
Building B3:	Restaurant	3,600 SF
Building C:	Event/Assembly Space (2,500 People)	34,600 SF
Building D:	Educational/Gym/Sports Medicine	41,600 SF
Building E:	Hotel & Restaurant Condominiums	125 Rooms 24 Units
Buildings F1/F2:	Parking Garage *(see next page)	730 Spaces
Building G:	Office	180,000 SF
Building H:	Event Center	63,000 SF
Building I:	Cultural Center	40,000 SF
Building J1:	Condominiums (Assumed)	160,000 SF/160 Units
Building J2:	Condominiums (Assumed)	196,500 SF/160 Units
Total Non-Garage		**814,300 SF**

** Depending on the timing of garage construction which will follows the relocation of Suburban Propane and the commencement of the phase two buildings, it is conceivable that by the time the garage is ready to begin construction we may actually elect to add floors taking advantage of the 120' height limit to increase structured parking capacity. It may also be desirable to build the garage structure to provide for the possibility of adding floors in the future after the initial 730 spaces are built. We are continuing to assess these options now, but would suggest that the Master Plan retains the ability to plan for a dynamic future outcome without compromising the needs of the first phase of development.*

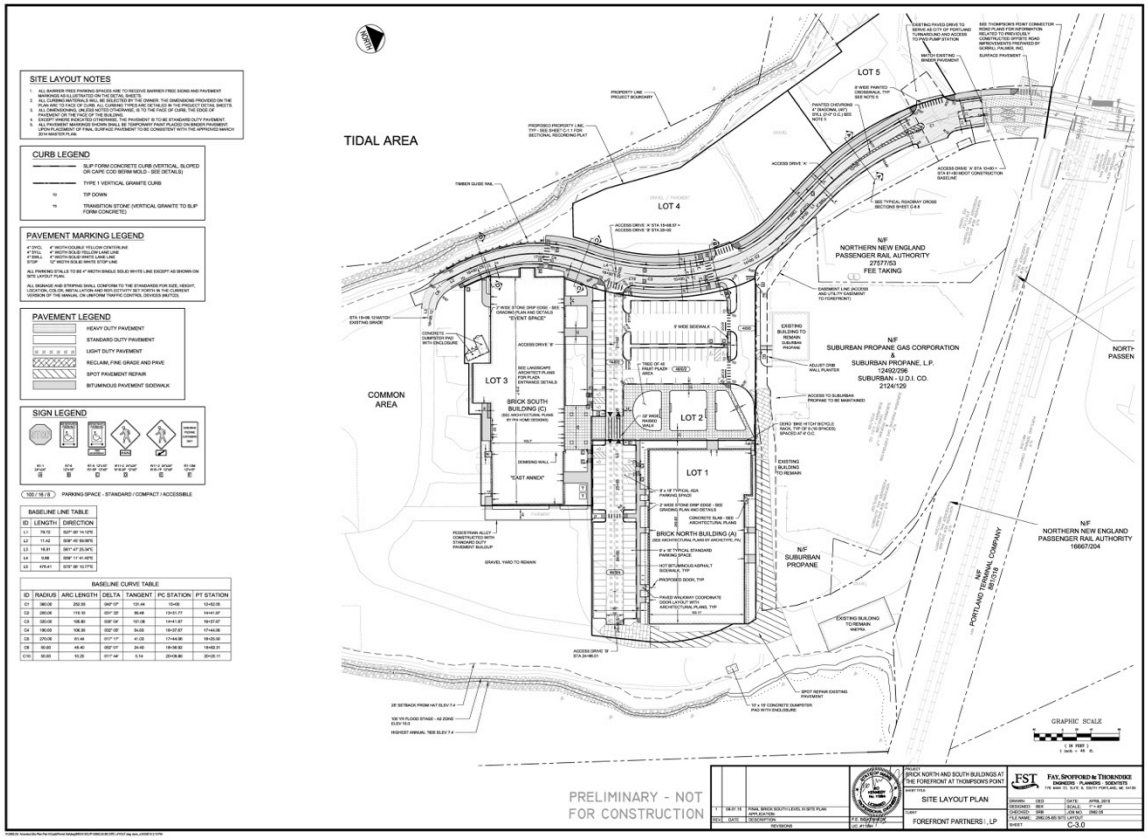
2014 master development plan square foot calculations are as follows, and show slightly higher square feet totals across the proposed use categories.

PROJECT DATA JUSTIFICATION
BUILDING AREA TABLE

Building	Height	Floor Area	Footprint
Building A: Office, Café, Retail	Existing	34,000	34,000
Building B1: Multi-Purpose (Live Theater)	Existing	14,000	14,000
Building B2: Restaurant	1 Floor	3,600	3,600
Building B3: Restaurant	1 Floor	6,000	6,000
Building C: Educational	1-2 Floors	41,000	33,750
Building D: Gym & Medical Office	1 Floor	11,000	11,000
Building E1: Hotel & Condominiums	120 ft	70,000	23,350
Building E2: Restaurant	1 Floor	6,000	6,000
Building F1: Parking Garage	5 Floors	161,575	32,315
Building F2: Parking Garage		1,530	1,530
Building G: Office	9 Floors	180,000	22,350
Building H: Event Center	80 ft	63,000	47,564
Building I: Cultural Center	1-2 Floors	25,000	18,080
Building J1: Office	6 Floors	160,000	30,000
Building J2: Condominiums	Assume 10 Floors (TBD)	196,500	19,650
TOTAL		**973,205**	**303,189**

Site Plan

The Level III site plan application encompasses the renovation of the existing Brick South (Building C/Lot 3), includes Brick North (Building A/Lot 1), currently under renovation under a prior approval, and includes a significant portion of roadway, as well as stormwater infrastructure, parking, circulation, landscaping, and utilities associated with both of these buildings. The street design for the Level III application differs from the full subdivision road design in several ways – full sidewalk on the eastern side is not proposed until a later phase, and eventual crosswalk placement, for instance. That these items be completed in a later phase of site development is noted as a condition of approval.



9, Level III Site Plan Layout



10, Renovated Brick South

VI. PUBLIC COMMENT

No comments have been received to date.

VII. RIGHT, TITLE, & INTEREST

The applicant has provided evidence of Right, Title & Interest in Attachment J of the subdivision application. Included is a trail easement, a quitclaim deed with covenant for the property, a letter from Suburban Propane, Inc. and the Northern New England Passenger Rail Authority indicating that purchase and sale agreements have been signed for those adjacent parcels and that the applicant is authorized to seek entitlements for the redevelopment of the parcels.

VIII. FINANCIAL & TECHNICAL CAPACITY

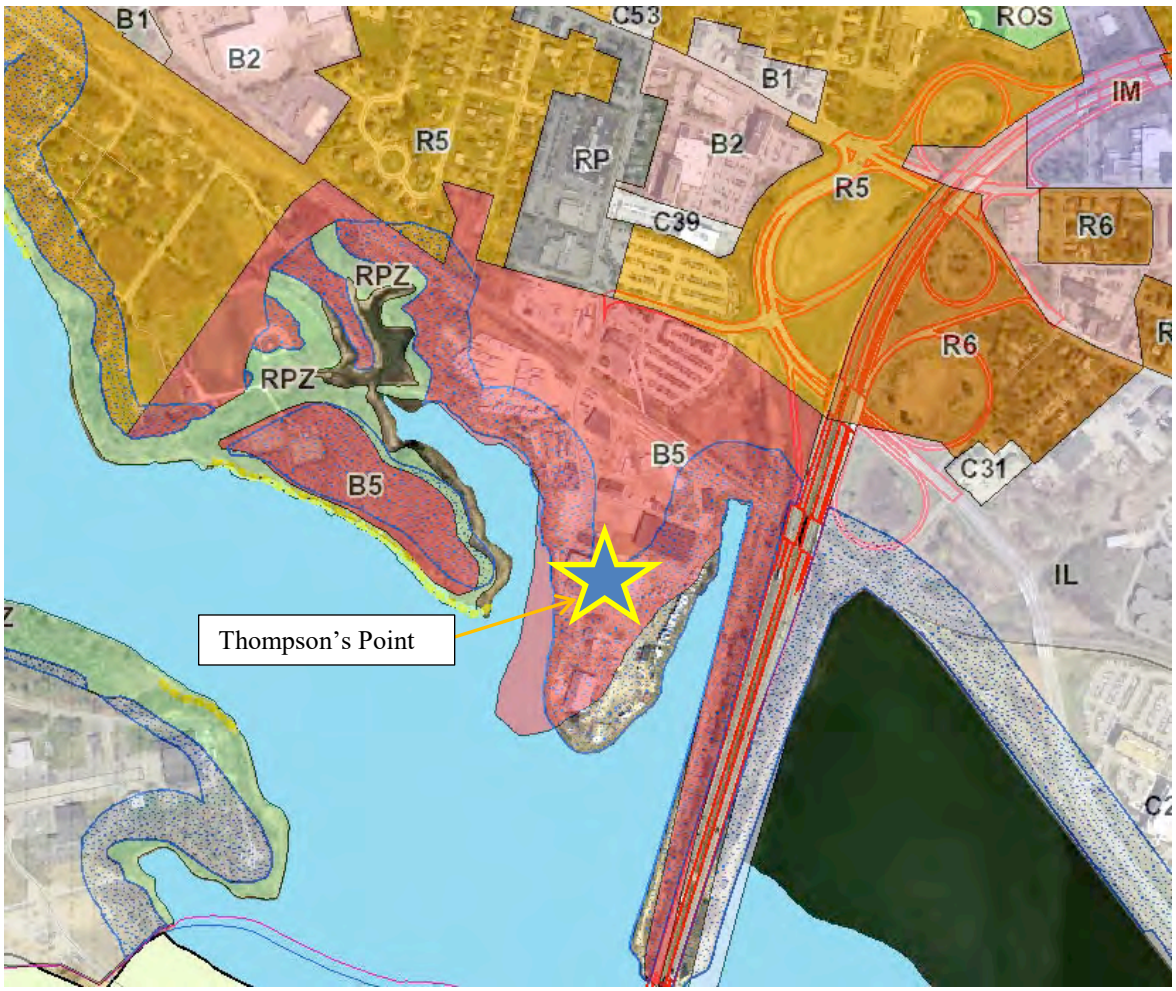
The October workshop comments included a request for updated indication of financial capacity. On file is a letter from TD Bank from 2011 attesting to the Thompson's Point Development Company's ability to complete the project and "see that it operates effectively over the long term". The applicant has supplied a letter dated October 13, 2015, from Androscoggin Bank attesting to Forefront Partners I, LP's financial capacity.

IX. ZONING ANALYSIS

Thompson's Point lies in the B-5 zone, and is also subject to shoreland and floodplain regulations under the city's land use code. The application complies with floodplain and shoreland requirements. The buildings included in the current Level III application are not in the floodplain. Shoreland setbacks are a required minimum 25' for structures from the annual mean high tide line. There are areas on the site layout plan where the road hugs the 25' line, on the allowable side of that boundary; the proposed activity meets shoreland requirements.

The project meets the requirements of the B-5 zone use and dimensional standards. The B-5 zone allows for a wide range of commercial and mixed uses, and encourages urban patterns of development. There are no lot coverage limits or applicable setbacks in the B-5, and there is a height limit of 120 feet.

There are also B-5 standards in the City's Design Manual, concerned with shared infrastructure, the location of buildings to the street, and location of parking lots, none of which is applicable to a lot of this size, particular geography, or internal circulation pattern.



11, Thompson's Point Zoning Context

X. SITE PLAN SUBMISSION REQUIREMENTS (Section 14-527) and **SUBDIVISION PLAT AND RECORDING PLAT REQUIREMENTS (**Section 14-496)

The overall subdivision plan and the four sectional recording plats have been reviewed by the Department of Public Services for conformance with 14-496, and the applicant has already incorporated initial comments. The final versions of the plats, post-approval, will need to be reviewed by the Department of Public Services and Corporation Counsel before they can be finalized, signed by the Planning Board, and recorded.

With a subdivision of this size, with 19 lots, proposed to be developed in phases, and not all with frontage on the proposed road (not required in the B-5 zone), language is needed to secure ingress and egress and access to the proposed infrastructure. The Declaration of Easements, Covenants and Restrictions (Attachment L) includes provisions for this, that Corporation Counsel has suggested some changes to in the final, recorded version:

7.2. Ingress, Egress and Regress. Each Lot Owner, and the clients, customers, guests, employees, tenants, subtenants, invitees, agents, contractors and licensees of Lot Owners shall have an easement, subject to any rules and regulations established by the Board of Directors, in common with all other Lot Owners to use the entrances, exits, corridors and other Common Area roadways as a means of ingress, egress and regress to and from the Property and the adjoining public streets. ~~The Board of Directors shall not and cannot establish any rules and regulations depriving any Lot Owner of reasonable ingress, egress and regress to and from its Lot, the Property and Common Areas and the adjoining public streets. Notwithstanding the foregoing~~The Lot Owners' use of the entrances, exits, corridors and roadways as a means of ingress, egress and regress to and from the Property and the adjoining public streets, and to parking spaces and areas located on the Property shall be subject to the Event Management Plan generally described in Schedule D attached hereto and the Transportation Demand

Management Program generally described in Schedule E attached hereto, which Event Management Plan and Transportation Demand Management Program shall be incorporated into the Rules and Regulations as adopted by, and amended from time to time, by the Board of Directors. Notwithstanding the foregoing, the Board of Directors shall not and cannot establish any rules and regulations depriving any Lot Owner of reasonable ingress, egress and regress to and from its Lot, the Property and Common Areas and the adjoining public streets.

Similar language will be required on the final recording plat, to be reviewed and approved by Corporation Counsel before final signatures and recording of the plat.

XI. SUBDIVISION REVIEW (14-497(a). Review Criteria)

The proposed amendments have been reviewed by staff for conformance with the relevant review standards of the City of Portland's subdivision ordinance.

1. Water, Air Pollution

The site plan, grading and utility plans are designed to adequately address stormwater quality and to minimize pollution from the site. No detrimental water or air quality impacts are anticipated. Stormwater review comments are included in the Site Plan Review section, below.

2 & 3. Adequacy of Water Supply

The applicant has provided evidence of capacity from the Portland Water District (Attachment H).

4. Soil Erosion

The erosion and sedimentation control plans (Plans 21, 56, 65, 66) have been reviewed and found to adequately meet the standards of avoiding soil erosion impacts.

5. Impacts on Existing or Proposed Highways and Public Roads

This project is subject to a MDOT Traffic Movement Permit, issued in 2012 (Attachment H). Efforts have been made over the course of this project's multiple reviews to coordinate this project with the surrounding neighborhood and the transportation system it abuts, and to safely plan for anticipated road impacts. To that end the project developed events management and transportation demand management (TDM) plans that were reviewed in the course of the master development plan approval. Tom Errico, the City's consulting Transportation engineer, reviews all modifications and submissions in relation to conformity with that program and related city standards. Mr. Errico's preliminary comments are included below, as well as his updated assessments of where the issues her previously raised stand in bold. Additional comments on transportation and parking follow under XII, Site Plan Review, below.

- *In general I find the overall Subdivision Plan layout to be acceptable with specific site issues addressed during the site plan review process. The applicant should be specific about what triggers the full construction of the circulatory roadway or how it is being phased. Additionally, it is unclear where the public right-of-way terminates for the phasing of the circulation road given that EDA funding is extending the public roadway system.*

  Status: The applicant has provided information responding to this comment and DPW has been coordinating directly with the applicant on the roadway design and maintenance elements. I have no further comment.

Previous staff comments indicated the need for more information regarding phasing of the subdivision. Additional annotation on infrastructure required for each subdivision section has been added to revised plan sheets, as well as color utility plan sheets submitted for the November 24th public hearing, as well

Mr. Errico offers the following additional comments regarding trip generation and traffic management, requesting more detailed trip estimates for the Level III site plan application.

- *I have reviewed the updated traffic generation estimate conducted by the applicant and request that the applicant provide back-up information for the noted AM and PM peak hour trip estimate. Additionally, the applicant should provide supporting documentation for each specific use. An example is the Brewery where 8 entering and exiting vehicles were assumed in a peak hour, when occupancy of a tasting room may be indicative of greater trip activity during the PM peak hour. The applicant does note that the project is anticipated to exceed the trip threshold established by the current Traffic Movement Permit (TMP) during the AM peak hour while the PM peak hour is projected to be under the threshold. In an attempt to understanding specific project phasing traffic impacts, the applicant should also provide the trip estimate for the Level III Site Plan application.*

  Status: Given that the full-build out of the project has been permitted under the TMP, I concur that the current application is well below the trip threshold established by the TMP. I would note that I do not endorse the trip generation methods contained in the application (e.g. Brewery Trip activity) and will require future site plan review phases to quantify actual trip activity for buildings already occupied (to ensure the trip threshold dis not exceeded).

- *The applicant has provided a general approach to managing event traffic volumes as part of the Master Plan. I would note that a detailed traffic management plan was developed in conjunction with the original application and that plan should continue to be used (if the applicant suggests deviating from the Plan, those details should be provided). I would note that the Traffic Management Plan is a live plan and will be reviewed and adjusted over time as conditions in the area are monitored.*

  Status: I have no further comment.

Mr. Errico found the Master Plan materials sufficient, but has specific Level III Site Plan comments in XII., below.

6. Sanitary Sewer/Stormwater Disposal
A wastewater capacity letter from the Portland Water District, dated March 14, 2014 (Attachment H), indicated a capacity to serve. *The application's stormwater management plan has been reviewed by the City's consulting engineer, David Senus, who had the following comment (in addition to one Site Plan-specific comment addressed below in XII):*

> *The Applicant has presented revisions to the previously approved stormwater management plan to include technologies now considered acceptable by MaineDEP as of January 2015, specifically Filterra units without an isolator row and Jellyfish Filter Units. The approach presented by the Applicant provides an acceptable means of meeting the General Standards as outlined in MaineDEP Chapter 500 and by the City of Portland Technical Manual Section 5 for both the Subdivision Application and the Brick South Level III Site Plan Application.*

7. Solid Waste
The applicant has proposed trash enclosures in association with the site plan application, to be privately managed, as well as provided evidence of sewer capacity from the Portland Water District, and full utility plans to address waste disposal. In addition, in response to previous Public Works comments, updated sewer flow estimates have been submitted in the November 10, 2015 cover letter accompanying the new submission materials (Attachment N).

8. Will not have an undue adverse effect on the scenic or natural beauty of the area, aesthetics, historic sites, significant wildlife habitat identified by the department of inland fisheries and wildlife or by the city, or rare and irreplaceable natural areas or any public rights for physical or visual access to the shoreline.
The new subdivision application is not anticipated to affect original assessments related to historic sites, significant wildlife habitat, or irreplaceable natural areas. The property has been extensively evaluated on each of these measures over the course of prior reviews. The site is largely developed with pavement, gravel lots, and existing

buildings. The project has provided an extensive landscaping plan that the City's Arborist, Jeff Tarling, has approved:

> *I have reviewed the proposed landscape plans and find them acceptable as shown. To date we have refined the landscape goals and plans a number of times to a point where the current plan meets the objective of a site on the Fore River.*

The City Arborist submitted additional comments specifically regarding the area proposed as public ROW. Though the overall landscape plan has been approved, he notes that the esplanade in this area needs to be a minimum of 4 feet if trees are to be planted there. The esplanade width is 4 feet. He also recommends smaller trees than shown on the plan (see Attachment 7 for full comments). His planting suggestions are noted in the approval conditions.

In regard to historic sites, Brick North and Brick South were found eligible for National Register but are not included in the City of Portland Historic Preservation program. However, they will be retained and repurposed as part of this proposal.

Significant Wildlife/Natural Areas: The applicant has retained a Natural Resources Protection Act (NRPA) permit from the Department of Environmental Protection (Attachment G), that protects feeding and roosting areas for migratory shore birds along the westerly shore. The need to protect this habitat resulted in prior changes to the trail alignment and to the landscaping plan, both reflected in the current application.

Shoreline Access: The shoreline of the Thompson's Point peninsula is currently ringed with an unimproved trail, which is part of the Portland Trails network. The trail is now proposed to transition from a rustic unimproved path to a perimeter paved walkway along the primary access drive. A seasonal dock providing access to the Fore River with a kayak/small boat launch ramp has been previously approved. Terms and access to the water is included in the subdivisions Declaration of Easements, Covenants and Restrictions (Attachment L) and have been referenced on the revised plan set.

9. Is in conformance with the land development plan or its successor

The B-5 zone itself is in compliance with the Comprehensive Plan, and this project that complies to the B-5 zone it is also consistent. The application is also generally consistent with long range planning goals in the areas of transportation and economic development, such as the following goals of the Comprehensive Plan, Volume 1:

- Encourage sustainable development patterns and opportunities within the city by promoting efficient land use, conservation of natural resources, and easy access to public transportation, services, and public amenities (p21);
- Create local multi-modal centers for the city's commuters and mass transit passengers, building on the presence of existing centers of activity, connected with each other and with regional transportation centers (p. 24);
- Create a variety of job opportunities for the full spectrum of the labor pool which are appropriate to our current and potential skills, provide good pay and benefits, are rewarding/satisfying (p. 37); and
- Encourage higher density housing for both rental and home ownership opportunities, particularly located near services, such as schools, businesses, institutions, employers, and public transportation (p. 44)

10. Financial and Technical Capacity

See VIII above.

11. Wetland/Water Body Impacts

With the exception of necessary stormwater discharges, all structures and paved surfaces will be set 25 feet back from high water at the shoreline, as consistent with Shoreland Zoning regulations. There is a full stormwater management plan that has been reviewed and approved for the site as a whole, with comments on revisions and specific proposals for the Level III stormwater plan addressed in the Site Plan Standards, below. The site is currently almost entirely impervious, with no stormwater treatment – proposed stormwater management techniques

post-redevelopment will benefit water quality leaving the site.

12. Groundwater Impacts
There are no anticipated impacts to groundwater supplies.

13. Flood-Prone Area
The perimeter of the peninsula is located with the flood plain. Buildings in the current site plan application are not in the flood plain.

XII. SITE PLAN REVIEW

The proposed development has been reviewed by staff for conformance with the relevant review standards of the City of Portland's site plan ordinance. Staff comments are below.

Transportation Standards

1. *Impact on Surrounding Street Systems*
   The applicant has obtained a traffic movement permit to address impacts on the surrounding street systems. The project has provided off-site improvements through an EDA Grant Program towards this end. The project also has an approved Transportation Demand Management Plan (TDM) for managing and reducing traffic trips and parking demand.

2. *Access and Circulation*
   a. Site Access and Circulation.
   Thompson's Point's relatively isolated peninsula geography has provided access challenges for this site, off-set by its access to multiple forms of transit served at the Portland Transportation Center. There has been extensive coordination on the part of the applicant and the City of Portland to establish a safe and efficient system for all users. Served by Thompson's Point Connector Road, the approved master plan provides for vehicle, transit, bicycle and pedestrian access. As individual project phases are brought forward for review, each will have to be evaluated for compliance with the approved master development plan, and for the appropriateness of each stand-alone phase. Mr. Errico's review speaks to this issue, finding the current application generally acceptable, but needing some further refinement both at the level of subdivision phasing and Level III site plan detail:

   The applicant has provided the TDM Plan that was developed in 2011 and approved as part of the original approval. In concept I find the TDM Plan to be acceptable but want to emphasize the importance of the measures included in the Plan and how the traffic study and parking analyses assume some level of TDM success. Accordingly, the applicant should provide an update of the TDM Plan for the Level III Site Plan application to reflect the proposed implementation schedule (including what specific strategies are being implemented, implementation dates, and specific monitoring activities).

   Status: The applicant should identify if there are any TDM strategies that can be implemented as part of the Level III Site Plan buildings in conjunction with a typical non-event day.

   I find the Level III Site plan to be acceptable, although further review is required. I would note that the applicant should provide details on construction activities and how current parking and traffic will be managed.

   Status: I have reviewed the construction management plan and site plans and find them to be acceptable. I would note that specific traffic control plans will be required for the project and that information will be reviewed in conjunction with the pre-construction meeting. Given that the site only impacts Thompson's Point traffic and pedestrians activity (not the general public), I'm confident safe conditions can be detailed.

Since the workshop the applicant was asked to speak to accessibility and safe access for all users on the site (as referenced in Sec. 14-526.a.2) in greater detail than the preliminary application materials had provided. New application materials (Attachment N, which addresses issues raised in regard to Site Plan and Subdivision applications) include additional information summarizing ADA compliance:

The previously submitted Site Layout Plan C-3.0 shows the site vehicular and pedestrian circulation. All sidewalks represented on the plan have been designed to meet the 2010 ADA Standards for Accessible Design. An accessible route has been provided from the public street to all main entrances as well as from designated parking stalls to the main entrances. The plan proposes a total of 118 parking spaces of which 8 have been designed to meet the ADA standards. The design provides for ADA stalls in each separate parking facility and as a result the total number of provided ADA stalls exceeds both the required number of ADA spaces if computed holistically (5 required) or the required number of spaces when tallied up per parking area (7 required).

b. Loading and Servicing

Formal loading docks have not been proposed for the Level III site plan, but a service area has been designated on the southerly side of the Brick South Building, and large doors have been retained to allow for movement of event support equipment, delivery vehicles, etc.

c. Sidewalks

Sidewalks are proposed to both Brick North and Brick South (Plan 52). Overall site circulation (Plan 15) includes sidewalks, crosswalks and trail connections throughout the site.

3. *Public Transit Access*

The development is served by the existing transit service at Portland Transportation Center. The Level III site plan does not include additional transit facilities, though the project at full build-out will include a bus stop and shelter.

4. *Parking*

a. Location and number of parking spaces

The overall site layout contains an adequate number of parking spaces, meeting the City's dimensional requirements. Mr. Errico's traffic and parking review provided the following commentary on the parking analysis that accompanied the site plan application, requesting more detail regarding demand/supply allocation for the overall site, and for the Level III site plan application:

According to the parking analysis conducted by Gorrill-Palmer, a parking demand of 1790 parking spaces is estimated. The applicant should provide specific detail on parking demand/supply allocation for the entire Master Plan and for the Level III Site Plan application plan.

Status: From an overall parking generation perspective, I find the applicant estimate to be reasonable with the understanding that updated analyses will be needed as future project phases are implemented. The applicant has not provided information as it relates to the parking demand/supply adequacy for the Level III Site Plan application. My general sense is that sufficient parking will be provided for typical day-to-day activity at the Level III buildings following occupancy. The applicant should provide documentation that a sufficient parking supply will be provided.

The applicant has sufficiently answered site-wide parking supply questions, but should directly address the sufficiency of the parking proposed for the uses and space included in this Level III site plan application by the November 24th public hearing.

b. Location and number of bicycle parking
Fifteen parking spaces are required at this stage, with sixteen provided on the western face of Brick North.

c. Motorcycle and scooter parking
There is no required amount of motorcycle or scooter parking, only that the project provide access for these vehicles, which the site plan does through the provision of conventional parking spaces.

d. Snow Storage
On-site snow storage will be accommodated along the perimeter of the site.

e. TDM
As noted, the applicant has an approved Transportation Demand Management. Comments on the TDM in relation to this Level III application are in 2.a, above.

Environmental Quality Standards

1. *Preservation of Significant Natural Features*
Preservation of significant natural features is being met through maintaining a 25' buffer from the annual mean high tide, as required by shoreland regulations, as well as adhering to the MaineDEP NRPA permit regarding protection of the western shore.

2. *Landscaping and Landscape Preservation*
The existing tree population is concentrated in the northwest corner of the site, and received some protection within the shoreland zone. The current Level III application does not have bearing on this portion of the property. The City Arborist has given extensive feedback on the proposed landscape plan (Plans 42, 43, 78), and is satisfied with the landscaping for this application (Attachment 3).

3. *Water Quality/Storm Water Management/Erosion Control*
The applicant has submitted a stormwater management and erosion control plan for the overall site, and for the specific needs of the Level III site plan. It has previously met City of Portland standards as outlined in Section 5 of the Technical Manual, as well as the standards required by the MaineDEP Site Location and Development Permit. David Senus, the consulting Civil Engineer, commented in his peer review of the revisions, and the specific proposal for the Level III application that the revisions presented are acceptable, with the following additional comments:

- *The Applicant has presented revisions to the previously approved stormwater management plan to include technologies now considered acceptable by MaineDEP as of January 2015, specifically Filterra units without an isolator row and Jellyfish Filter Units. The approach presented by the Applicant provides an acceptable means of meeting the General Standards as outlined in MaineDEP Chapter 500 and by the City of Portland Technical Manual Section 5 for both the Subdivision Application and the Brick South Level III Site Plan Application.*
- *Consistent with the previous approval for the Brick North Level III Site Plan Application, Woodard & Curran recommends including a condition of approval for the Brick South Level III Site Plan Application requiring that future phases of work in the vicinity of the outfall associated with "Stormwater Management Zone F" (as depicted on sheet C-4.1 of the Subdivision Application) incorporate water quality treatment measures that provide adequate treatment capacity for runoff from the untreated parking lot south of the Brick North Building*

in accordance with the General Standards. This condition does not need to be contingent upon future phases of work occurring on the site; if no future work occurs on the site, the Applicant will not be held to completing this measure.

Public Infrastructure and Community Safety Standards

a. Consistency with Related Master Plans
The only area currently needing clarification in regard to consistency with City standards as they relate to public infrastructure is an extension of the public portion of the access road that is being supported by EDA funding. The applicant has indicated that this section will be public roadway with the applicant providing maintenance – the pertinent road segment, ownership status, and maintenance agreements should be indicated on the final plan set.

b. Public Safety and Fire Prevention
The proposal has been reviewed for public safety and fire prevention, and has been found to allow for emergency response vehicles to move around all areas of the site. It provides for new and existing fire hydrants. A Fire Safety Compliance Plan (Plan 69) and Attachment E, a review of fire protection provisions for the site, have been submitted towards meeting the public safety requirements for the site.

c. Availability and Capacity of Public Utilities
The applicant has provided letters indicating the capacity to serve for water, sewer, gas, and power. All utility work has been reviewed with conformance with the city's Technical Manual, including all stormwater management standards. Trash will be stored in dumpsters, eventually to be served by a contracted waste management company.

Site Design Standards

1. Massing, Ventilation, and Wind Impact
These standards are concerned primarily with bulk, location, or height of buildings incurring health, safety, unsafe wind conditions, and direct impact of buildings on abutters. As the proposed buildings do not have direct abutters, these standards are not applicable to this site.

2. Shadows
As in the massing standards in 1, above, these standards are concerned with impacts on direct abutters, and are not applicable.

3. Snow and Ice Loading
This standard is concerned with snow and ice loading as it impacts neighboring properties and public ways, and is not applicable.

4. View Corridors
This standard is in regard to impacts on public view corridors, and is not applicable.

5. Historic Resources
The property is not in an historic district, and contains no designated landmarks. It has, however, received state review regarding the historic integrity of the brick existing buildings, and correspondence regarding this is included in Attachment G.

There are no known archeological resources on site.

6. Exterior Lighting
Lighting and photometric information has been submitted in Plans 37 and 76.

7. Noise and Vibration

The proposal does not anticipate exceeding current noise levels for the permanent uses on the site, or overall permitted noise levels.

8. Signage and Wayfinding
Signage and wayfinding is proposed to be submitted under a separate application, and is not included in this submission.

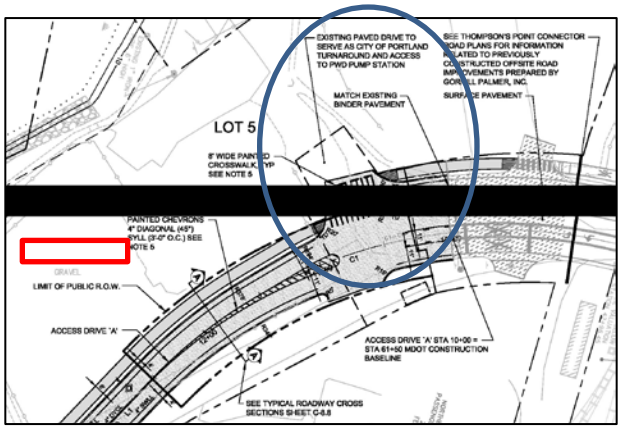
9. Zoning-Related Design Standards
Zoning-related design standards encourage dense, mixed-use development, and attractive pedestrian environments. The Design Manual standards for the B-5 zone encourages shared circulation, parking and transportation infrastructure wherever possible, and several standards for building orientation towards public streets, not applicable to this site.

XIII. EDA ROAD EXTENSION

A portion of the roadway system, approximately 400 feet, will be funded by an EDA grant. The previous subdivision review for this site included 150 linear feet of roadway on the Thompson's Point side of the new railroad crossing. Recently the EDA-funded portion of the roadway was extended another 250 feet. The terms of the EDA contract require that such rights of way be publicly owned. The revised submission materials show the limits of this extension in Plan 83 and Plan 87. DPW, through discussions with the applicant, have concurred the proposed road design specifications are acceptable. An itemized list of how these specifications diverge from the City's Technical Manual has been included as Attachment Q. The road layout, sidewalk design, site circulation, and stormwater management specifications are unchanged. The City and the applicant have agreed there will be ongoing general maintenance expectations for the applicant, including snow plowing, sanding, salting, and street sweeping.

Variations from the Technical Manual are bundled into one general waiver. An explanation of each item follows. All section references are to the City of Portland Technical Manual.

- 1.3. Requirement for turnaround on dead-end streets. This is in reference to the City street terminating without a turnaround at the end – the street itself continues, and does not physically dead-end. Since the applicant will be assuming general maintenance responsibilities beyond where the existing City turnaround currently sits on the plan, it is not being requested for this to be moved to the end of the area delineated as the Limit of Public ROW (see Figure 12).
- 1.7.2.1. This is a requirement for a perpendicular driveway connection to street. Tom Errico, consulting traffic engineer, reviewed this with the following comment: *The applicant is requesting a waiver as it relates to the angle of the Parking Garage Entrance. Given the direction of most traffic movements, the proposed design would be expected to operate adequately and therefore I support a waiver.*



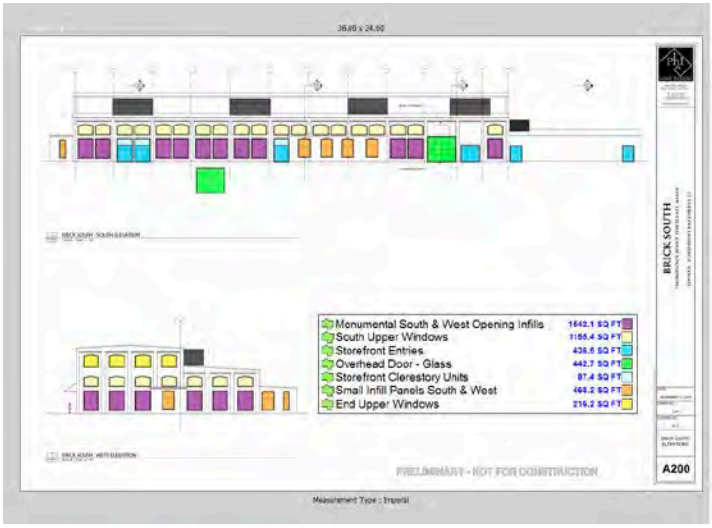
12, Turnaround, ROW limits

- 1.7.2.9. A requirement for vehicular circulation to be contained off-site and not use the adjacent street system. The designation of a portion of the development's road as a public right of way results in some of the anticipated deliveries using a public rather than a private street, triggering this standard. Mr. Errico's comments: *The applicant is requesting a waiver for use of the public street for delivery truck maneuvers. Given that few large truck deliveries are anticipated for the proposed office building, I support a waiver.*
- 1.10.8. A requirement for a minimum aggregate base course thickness of 3 inches for collector roads. The application meets MaineDOT material standards which do not meet City standards, but exceed City's materials standard.

- Figure I-2. A requirement for continuous sidewalks on both sides of the collector road. There is a sidewalk planned for full length of the western side of the road, and a facing sidewalk that begins partway in to the first lot on the eastern side (suburban propane/Lots 14 & 15/location of Building F1/H on the overall site plan). The Level III site plan does not include the eastern sidewalk. Mr. Errico's comments*: The current Level III Site Plan for the Brick North/South phase does not include a sidewalk on the east side of Thompson's Point Road Extension. I support a waiver for building this sidewalk under this phase with the condition that the applicant will be responsible for construction of a sidewalk (and any necessary improvements to the Thompson's Point Road Extension) during the construction of Building H/F1, as depicted on the overall site plan.*
- Figure I-2. A requirement for a minimum roadway width of 40 feet for collector roads. The road design shows a range of 30-39 feet. Mr. Errico notes in his comments that he is comfortable with the proposed roadway cross-section.
- Figure I-2. Requirement for a minimum esplanade width of 5 feet for collector roads. Plan depicts a 4 foot esplanade.

XIV. SUPPLEMENTAL MATERIALS

On January 6th supplemental materials were submitted that included the following changes: the Level III site plan has been revised to include an 8'x20' Concrete Pad for the storage of CO2 tanks and chiller equipment on the North Side of Brick North to serve the brewery tenant in the Brick North building (Plan 87); updated Brick South Building elevations showing window openings with faux glass infill intended to replicate glass windows but eliminate the need for most event users having to cover the windows with large shades (Plan 88 & 89). There are no transparency standards in the B-5 zone that would prohibit this change. The concrete pad is a minor change, but one that will require Inspections review, and any associated life safety review before construction.



13, Brick South Elevation, Plan 88

XV. STAFF RECOMMENDATION

Subject to the proposed motions and conditions of approval listed below, Planning Division staff recommends that the planning board approve the proposed subdivision and site plan for The Forefront at Thompson's Point.

XVI. PROPOSED MOTIONS

A. WAIVERS

On the basis of the application, plans, reports and other information submitted by the applicant; findings and recommendations contained in the planning board report for the public hearing on January 12, 2016 for applications 2015-133 and 2015-159 relevant to Portland's technical and design standards and other regulations; and the testimony presented at the planning board hearing:

1. The planning board **finds/does not find**, based upon the Department of Public Works and City Engineer review *(Attachments 5 & 6),* that extraordinary conditions exist or undue hardship may result from strict compliance with the Technical Manual standards *(Sections 1.3; 1.7.2.1; 1.7.2.9; 1.10.8; I-2*), that substantial justice and the public interest are secured with the variation from these standards, and that the variation is consistent with the intent of the

ordinance. The planning board **waives/does not waive** the Technical Manual standards *(Sections 1.3; 1.7.2.1; 1.7.2.9; 1.10.8; I-2),* applicable to the extension of the public ROW.

B. SUBDIVISION

On the basis of the application, plans, reports and other information submitted by the applicant; findings and recommendations contained in the planning board report for the public hearing on January 12, 2016 for application 2015-133 relevant to the subdivision regulations; and the testimony presented at the planning board hearing, the planning board finds that the plan **is/is not** in conformance with the subdivision standards of the land use code, subject to the following condition of approval, which must be met prior to the signing of the plat:

1. The applicant shall finalize the subdivision plat for review and approval by Corporation Counsel, the Department of Public Services, and the Planning Authority. The subdivision plats shall note all conditions of public access, all relevant easements including any for city vehicle for access and turning, language regarding rights of lot ingress/egress/regress, and any applicable road maintenance limits and agreements;

2. Prior to the issuance of certificates of occupancy, the applicant shall provide a revised Declaration of Easements, Covenants and Restrictions document for review and approval by Corporation Counsel;

3. Street Lighting: The proposed street lights on the 1st segment of the public portion of the Sewell Street extension are to be privately owned, metered and maintained by the Forefront at Thompson's Point. The City shall grant a license for such a purpose at the time of street acceptance.

C. DEVELOPMENT REVIEW

On the basis of the application, plans, reports and other information submitted by the applicant; findings and recommendations contained in the Planning Board Report for the public hearing on January 12, 2016 for application 2015-159 relevant to the site plan regulations; and the testimony presented at the planning board hearing, the planning board finds that the plan **is/is not** in conformance with the site plan standards of the land use code, subject to the following conditions of approval that must be met prior to the issuance of a building permit, unless otherwise stated:

1. Future phases of work in the vicinity of the outfall associated with "Stormwater Management Zone F" (as depicted on sheet C-4.1 of the Subdivision Application) shall incorporate water quality treatment measures that provide adequate treatment capacity for runoff from the untreated parking lot south of the Brick North Building in accordance with the General Standards. If no future work occurs on the site, the Applicant will not be held to completing this measure;

2. The applicant shall provide a full construction management plan for review and approval by the Public Works Department.

4. Sidewalks and Road Improvements: At the time a Site Plan application is submitted for Buildings F1/H (or alternate Level III proposal for Lots 14 & 15 as depicted on Sheet C-2.0, *Subdivision Plan*), the portion of roadway included in Sheet C-3.0, *Site Layout Plan*, including the easterly sidewalk and all remaining road improvements, shall include provisions for conformity with the road design depicted on Sheet C-3.0, *Overall Site Plan.*

5. Final landscape plan shall incorporate 2" caliper trees in 4 foot-wide esplanade.

6. The 8'x20' Concrete Pad for the storage of CO2 tanks and chiller equipment on the North Side of Brick North, as shown on Sheet C-3.0, Site Layout Plan, will be subject to review by the Inspections Division, and any associated life safety reviews, before construction.

XVII. ATTACHMENTS

PLANNING BOARD REPORT ATTACHMENTS

1. Civil Engineer review (10/5/2015)
2. Traffic Engineer reviews (10/8/2015 & 11/19/2015)
3. City Arborist review (10/8/2015)
4. Corporation Counsel (11/19/2015)

APPLICANT'S SUBMITTALS

Subdivision Application:

A. Supporting Narrative (August 13, 2015)
B. AutoTurn
C. Traffic Study Information
D. SWM Report
E. Life Safety Plan
F. Photometric
G. Permits
H. Utility Capacity
I. Conformity to Applicable Design Standards
J. Title Right
K. Financial Capacity
L. Declaration
M. Cover Letter
N. Narrative (November 10, 2015)
O. Neighborhood Meeting Materials

PLANS

Plan 1. Cover Sheet
Plan 2. General Notes and Legend
Plan 3. Subdivision Plan (revised)
Plan 4. Subdivision Sectional 1 (revised)
Plan 5. Subdivision Sectional 2 (revised)
Plan 6. Subdivision Sectional 3 (revised)
Plan 7. Subdivision Sectional 4 (revised)
Plan 8. Land Title Survey 1
Plan 9. Land Title Survey 2
Plan 10. Land Title Survey 3
Plan 11. Land Title Survey 4
Plan 12. Existing Conditions Plan
Plan 13. Environmental Remediation 1
Plan 14. Environmental Remediation 2
Plan 15. Overall Site Plan
Plan 16. Site Plan East
Plan 17. Site Plan West

Plan 18. Overall Grading and Drainage
Plan 19. Overall Stormwater Management
Plan 20. Water Quality Design Summary
Plan 21. Overall Erosion and Sedimentation Control
Plan 22. Overall Utility Plan
Plan 23. Utility Plan East
Plan 24. Utility Plan West
Plan 25. Pavement Sections and Sidewalk Detail
Plan 26. Curbing and Sidewalk Details
Plan 27. Parking and Traffic Control Details
Plan 28. Stormwater Details
Plan 29. Stormwater and Sanitary Sewer Details
Plan 30. Erosion and Sedimentation Control Details 1
Plan 31. Erosion and Sedimentation Control Details 2
Plan 32. Water and Gas Service Details
Plan 33. Typical Roadway Cross Sections 1
Plan 34. Typical Roadway Cross Sections 2
Plan 35. Access Drive Profile
Plan 36. Sanitary Sewer Profiles
Plan 37. Photometrics Plan
Plan 38. Electrical Master Plan 1
Plan 39. Electrical Master Plan 2
Plan 40. Electrical Master Plan 3
Plan 41. Electrical Master Plan Details
Plan 42. Landscape East
Plan 43. Landscape West
Plan 44. Conceptual Utility 1
Plan 45. Conceptual Utility 2
Plan 46. Conceptual Utility 3
Plan 47. Easements and Encumbrances

Site Plan Application:
P. Cover Letter and Application Narrative (August 13, 2015)

PLANS
Plan 48. Brick South Floor Plan
Plan 49. Brick South Elevations 1
Plan 50. Brick South Elevations 2
Plan 51. Cover Sheet
Plan 52. Subdivision Plat Sectional Recording 1
Plan 53. General Notes and Legend
Plan 54. Existing Conditions Plan
Plan 55. Demolition and Removals Plan
Plan 56. Site Layout Plan
Plan 57. Utility Plan (revised)
Plan 58. Grading Plan
Plan 59. Stormwater Management Plan
Plan 60. Erosion Control & Construction Management Plan (revised)
Plan 61. Stormwater Details 1
Plan 62. Stormater Details 2
Plan 63. Stormwater Details 3

Plan 64. Pavement Sections and Sidewalk Details
Plan 65. Curbing and Sidewalk Details
Plan 66. Parking and Traffic Control Details
Plan 67. Stormwater Details
Plan 68. Stormwater and Sanitary Sewer Details
Plan 69. Erosion and Sediment Control Details 1
Plan 70. Erosion and Sediment Control Details 2
Plan 71. Water and Gas Service Details
Plan 72. Typical Roadway Cross Sections
Plan 73. Fire Safety Compliance Plan
Plan 74. Sanitary Sewer Profiles
Plan 75. Water Profiles
Plan 76. Storm Drain Profiles Zone D
Plan 77. Storm Drain Profiles Zone D and F
Plan 78. Site Sections
Plan 79. Access Drive Profiles
Plan 80. Photometric Lighting Plan
Plan 81. Site Lighting Plan
Plan 82. Landscape Plan

Supplemental Materials for January Public Hearing:

Review Comments
5. DPW Review (Jan 8)
6. Traffic Engineer Review (Jan 7)
7. Arborist Review (Jan 6)

Documents
Q. December 23, 2015 Cover letter Re: Road Technical Specifications
R. January 6, 2016 Cover letter Re: Minor Revisions

Plans
Plan 83. Overall Site Plan
Plan 84. Site Plan East
Plan 85. Typical Roadway Cross Sections I
Plan 86. Typical Roadway Cross Sections II
Plan 87. Site Layout Plan Level III
Plan 88. Brick South Elevations I
Plan 89. Brick South Elevations II

US Army Corps of Engineers®
New England District

Section VI: Self-Verification Notification Form

(for all tidal and non-tidal projects in Maine subject to Corps jurisdiction)

At least two weeks before work commences, complete all fields (write "none" if applicable) below or use the fillable form found at www.nae.usace.army.mil/Missions/Regulatory/State-General-Permits/Maine-General-Permit/ The two-week lead time is not required for emergency situations. **Send this form, an Official Species List, and project plans to the following email address: cenae-r-me@usace.army.mil**

Maine Project Office
U.S. Army Corps of Engineers
442 Civic Center Drive, Suite 350
Augusta, Maine 04330

State Permit #: L-25672-2G-A-N
Date of State Permit: 08-24-2012; 04-10-2014
State Project Manager: Rodney Howe - Jana Jacobson

Permittee: Forefront Partners I, LP
Address, City, State, Zip: 501 Danforth Street, Portland, ME, 04102
Email, Phone: parallaxpartners@gmail.com - 207-747-5288

Agent: Bo Kennedy, Placemaker Partners, LLC
Address, City, State, Zip: 501 Danforth Street, Portland, ME 04102
Email, Phone: bo@placemakerpartners.com 207-318-8364

Contractor: Shaw Bros. Construction
Address, City, State, Zip: P.O. Box 69 - 341 Mosher Rd (RTE 237), Gorham, Maine, 04038
Email, Phone: astmichel@shawbrothers.com 207-839-2552

Project Name: Forefront at Thompson's Point
Address, City, State, Zip: Thompson's Point Road, Portland, Maine, 04102
Lat °N, Long °W: 43.64897 70.29191 Tax Map/Lot: 202 A 004
Waterway Name: Fore River
Description of Work: Anchored Dock Floats and Wetland Fill for Stormwater outfall

Proposed Starting Date: March 2024 Proposed Finish Date: June 2024

Area of wetland impact (SF): Permanent: 386 SF Temporary:
Area of waterway impact (SF): Permanent: Temporary:

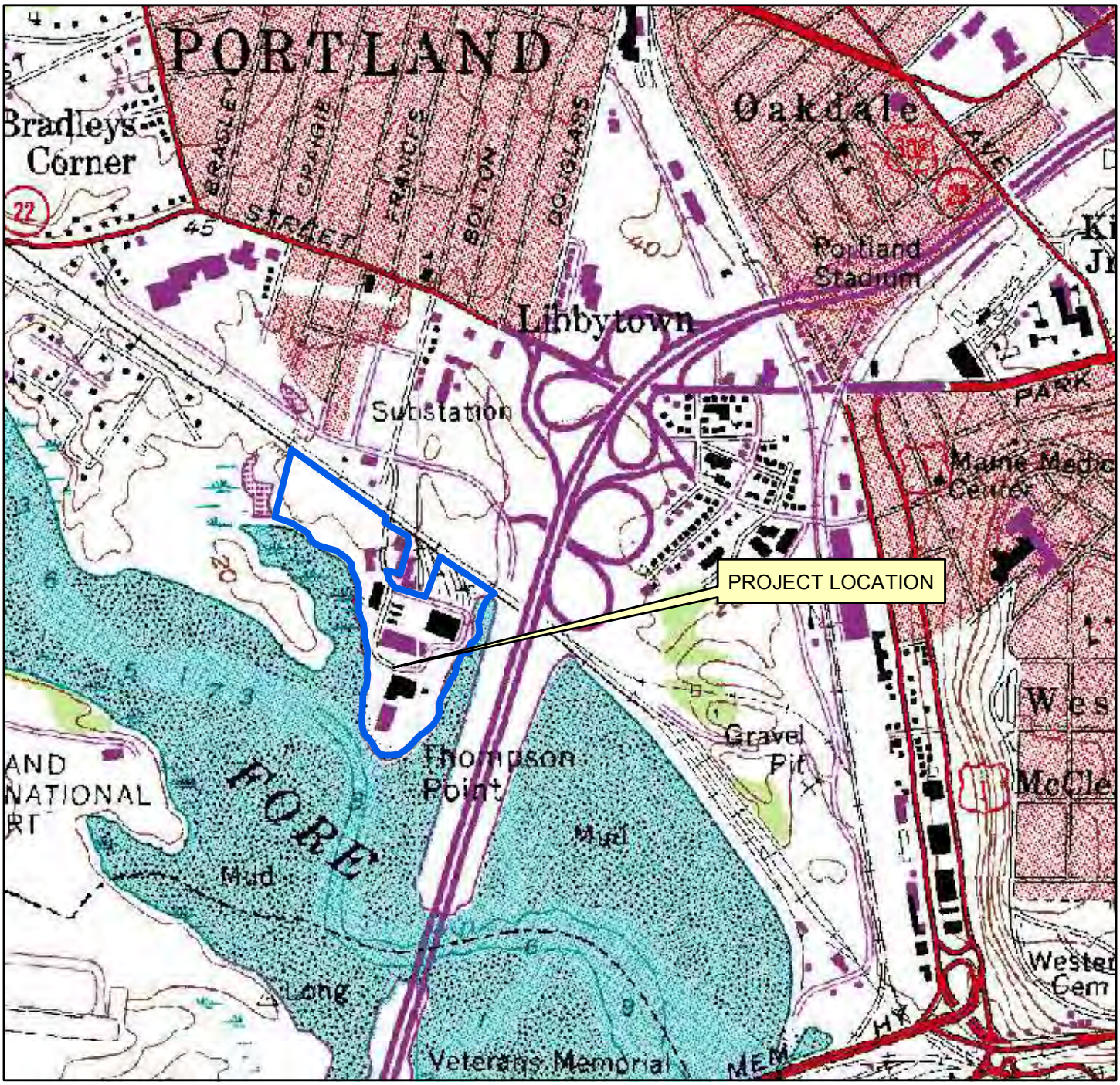
Work will be done under the following Section V General Permits (circle all that apply):

I. Inland Waters and wetlands: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23
II. Navigable Waters: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23

Have MHPC and all five federally-recognized tribes in Maine been notified of the proposed work? X Yes ____ No

Your signature below, as permittee, indicates that you accept and agree to comply with the terms, eligibility criteria, and general conditions for Self-Verification under the Maine General Permit.

Permittee Signature: Bo Kennedy Date: 2023.10.24



N
W E
S

USGS LOCATION MAP
THOMPSON'S POINT
PORTLAND, MAINE

SOURCE: MAINE OFFICE OF GIS - MAPS

DeLuca-Hoffman Associates, Inc.
778 MAIN STREET, SUITE 8
SOUTH PORTLAND, ME 04106
207-775-1121
www.delucahoffman.com

DRAWN:	DED
CHECKED:	SRB
DATE:	SEPTEMBER 2010
FILENAME:	2982-USGS
SCALE:	1 inch = 1,000 feet

FIGURE

2

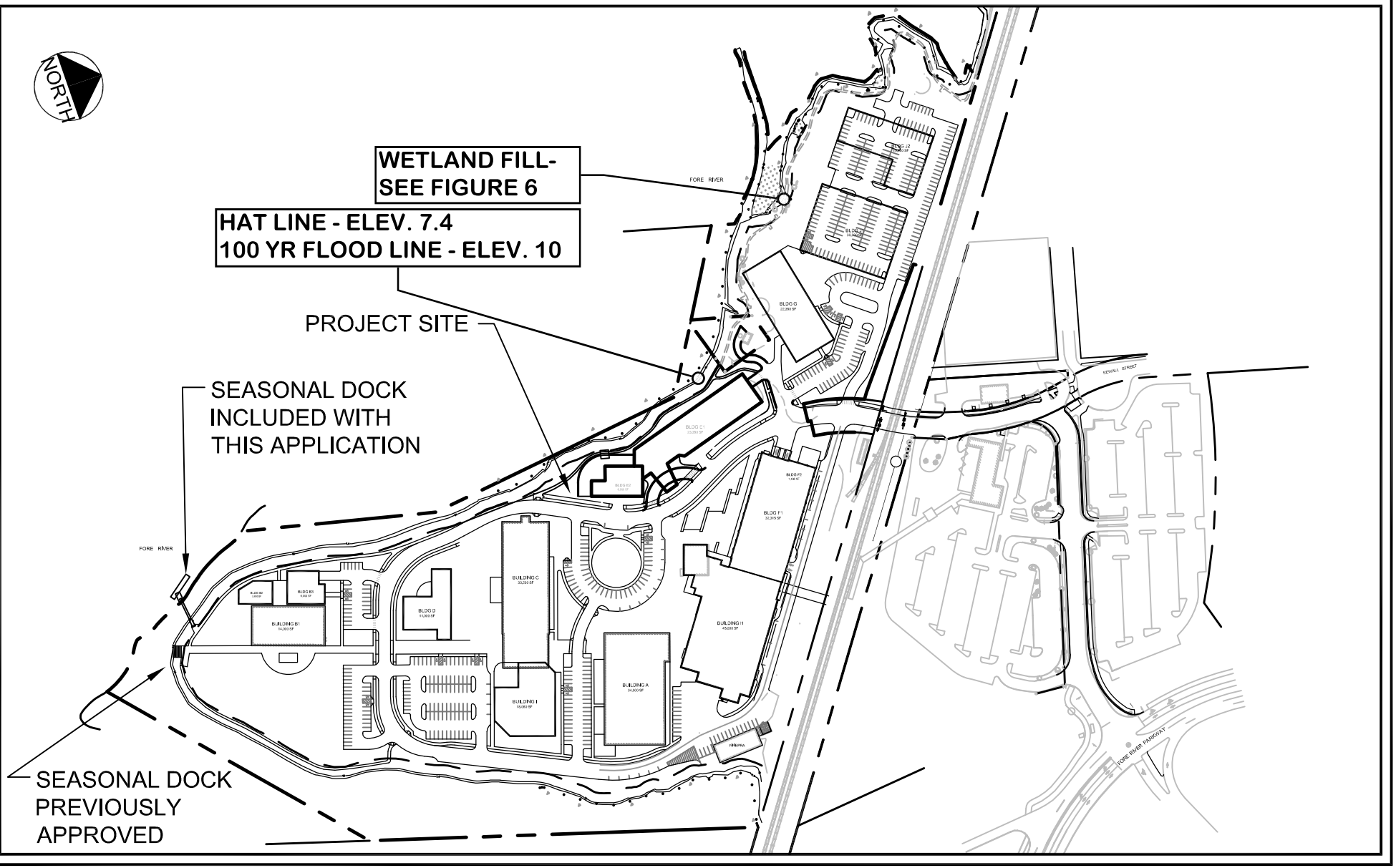


FIGURE:	BOOK:	PAGE:	LOCATION:	PROPOSED ACTIVITY:	PROJECT APPLICANT:
1	6579 6875	30 287	CITY OF PORTLAND THOMPSON'S POINT	COMMERCIAL REDEVELOPMENT	FOREFRONT PARTNERS I , LP

LEGAL DESCRIPTION:	WATER BODY:	ABUTTERS:	SCALE: 1" = 300' DATUM: -	FST
SEE ALTA SURVEY BY SEBAGO TECHNICS INC	FORE RIVER	SEE ATTACHMENT 10	DATE: MAY 2014	

NAE-2012-00992

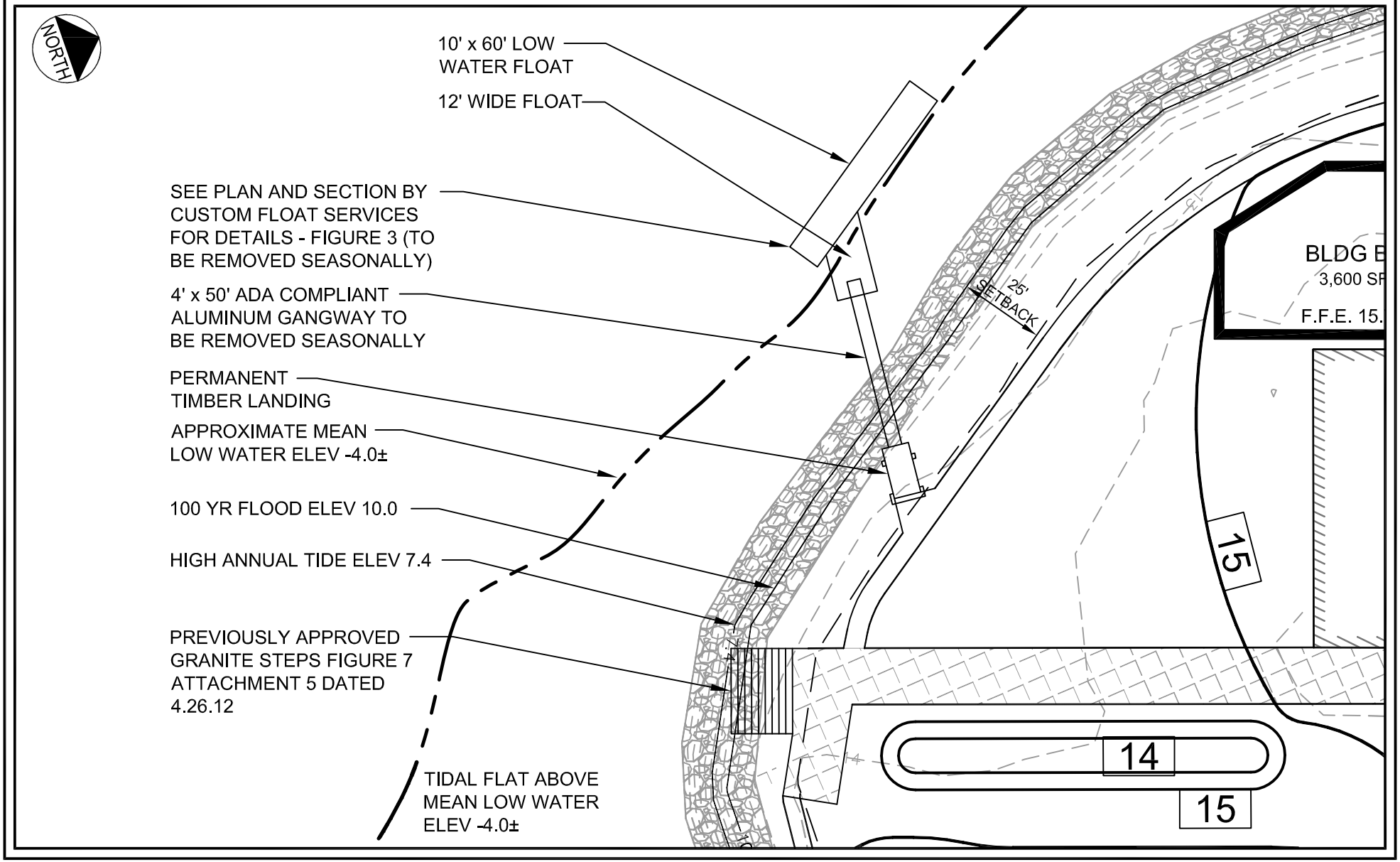
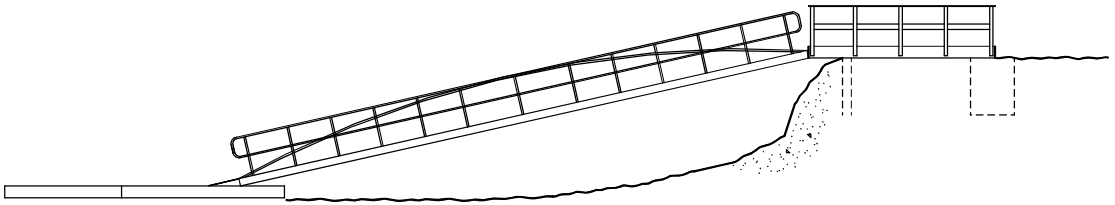


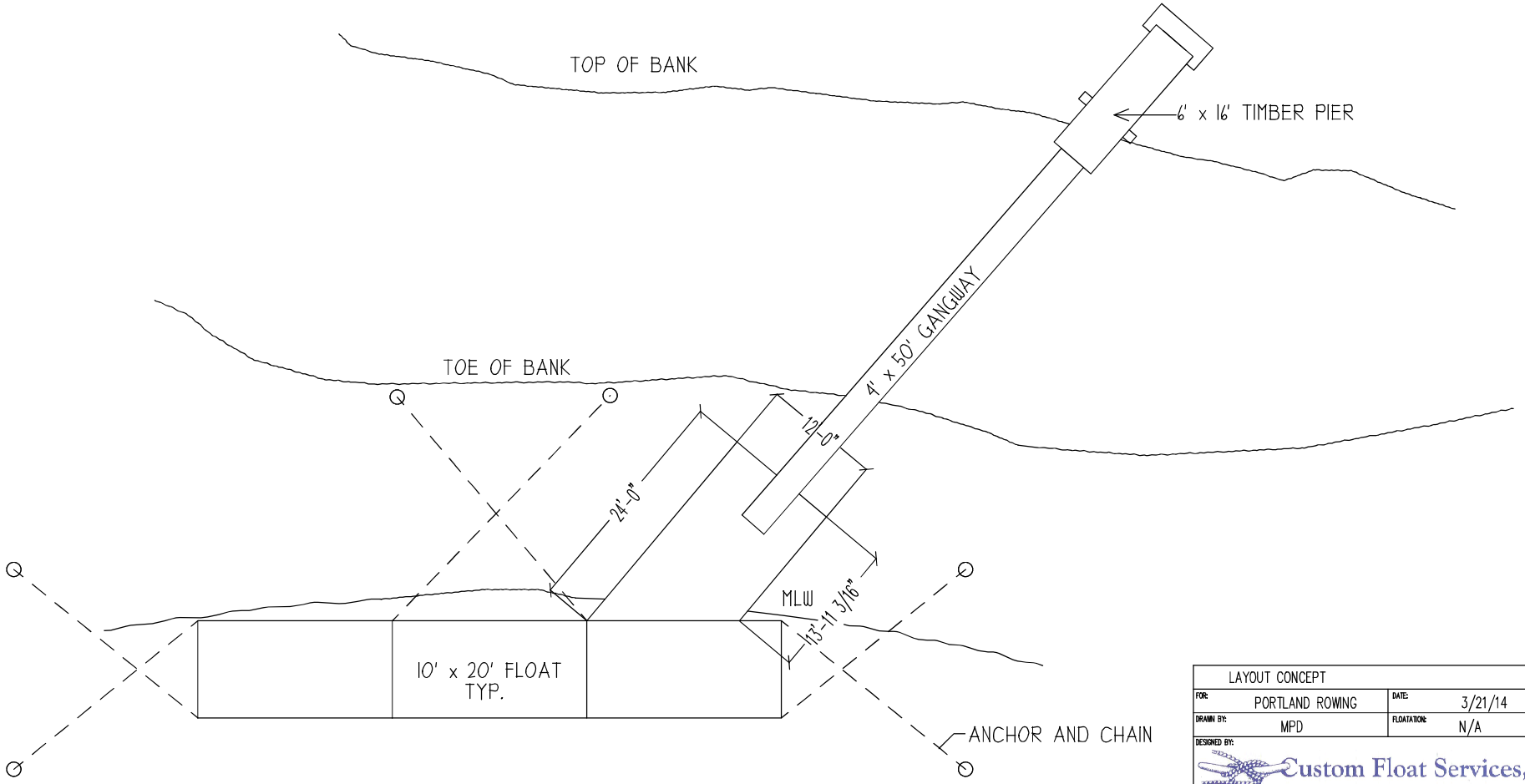
FIGURE:	BOOK:	PAGE:	LOCATION:	PROPOSED ACTIVITY:	PROJECT APPLICANT:
2	6579 6875	30 287	CITY OF PORTLAND THOMPSON'S POINT	COMMERCIAL REDEVELOPMENT	FOREFRONT PARTNERS I , LP

LEGAL DESCRIPTION:	WATER BODY:	ABUTTERS:	SCALE: 1" = 40' DATUM: -	FST
SEE ALTA SURVEY BY SEBAGO TECHNICS INC	FORE RIVER	SEE ATTACHMENT 10	DATE: MAY 2014	

NAE-2012-00992



ELEVATION VIEW



LAYOUT CONCEPT			REV: C
FOR:	PORTLAND ROWING	DATE:	3/21/14
DRAWN BY:	MPD	FLOATATION:	N/A
DESIGNED BY:			

Custom Float Services, Inc.

NAE-2012-00992

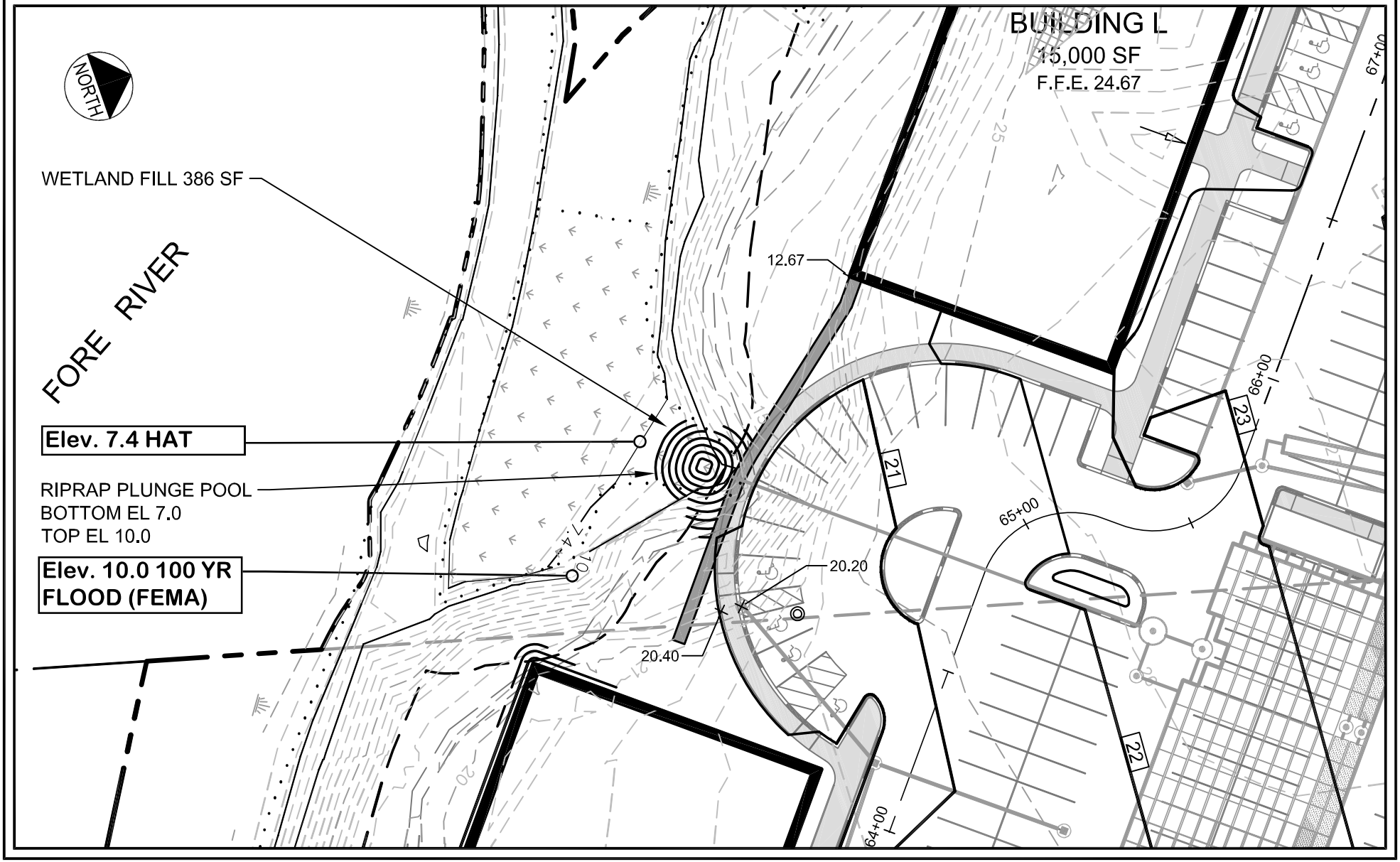


FIGURE:	BOOK:	PAGE:	LOCATION:	PROPOSED ACTIVITY:	PROJECT APPLICANT:
6	6579 6875	30 287	CITY OF PORTLAND THOMPSON'S POINT	COMMERCIAL REDEVELOPMENT	FOREFRONT PARTNERS I, LP
	LEGAL DESCRIPTION:		WATER BODY:	ABUTTERS:	SCALE: 1" = 40' DATUM: -
	SEE ALTA SURVEY BY SEBAGO TECHNICS INC		FORE RIVER	SEE ATTACHMENT 10	DATE: APR 2012

DELUCA-HOFFMAN ASSOCIATES, INC.

NAE-2012-00992

REPLY TO ATTENTION OF

DEPARTMENT OF THE ARMY
NEW ENGLAND DISTRICT, CORPS OF ENGINEERS
696 VIRGINIA ROAD
CONCORD, MASSACHUSETTS 01742-2751

MAINE GENERAL PERMIT (GP)
AUTHORIZATION LETTER AND SCREENING SUMMARY

Forefront Partners I, LP
55 Lisbon Street, Suite 2400
Lewiston, Maine 04240

CORPS PERMIT #: NAE-2012-00992 amendment
CORPS PGP ID# 12-154
STATE ID# L-25672-2G-A-N

DESCRIPTION OF WORK:
Department of the Army permit NAE-2012-00992 authorized you to construct and maintain an 8' x 9' landing with an attached 4.33' x 40' aluminum ramp leading to a 10' x 10' intermediate float with a 12' x 20' float attached perpendicular extending southwest in Fore River off Thompson's Point. As requested your permit is hereby amended to shift the pier location slightly west and construct a 6' x 16' pile and timber pier with an attached 4' x 50' ramp leading to an 12'X24' intermediate float cut at an angle with a 10' x 60' line of bottom moored floats attached at an angle extending southwest in Fore River off lot 13 at Thompson's Point at Portland, Maine as shown on the attached plans entitled " the Forefront at Thompson's Point Seasonal Dock System by FST" in 3 sheets

LAT/LONG COORDINATES : 43.64897 N 70.29191 W **USGS QUAD:** ME-Portland West

I. CORPS DETERMINATION:
Based on our review of the information you provided, we have determined that your project will have only minimal individual and cumulative impacts on waters and wetlands of the United States. **Your work is therefore authorized by the U.S. Army Corps of Engineers under the enclosed Federal Permit, the Maine General Permit (GP).** Accordingly, we do not plan to take any further action on this project.

You must perform the activity authorized herein in compliance with all the terms and conditions of the GP [including any attached Additional Conditions and any conditions placed on the State 401 Water Quality Certification including any required mitigation]. Please review the enclosed GP carefully, including the GP conditions beginning on page 5, to familiarize yourself with its contents. You are responsible for complying with all of the GP requirements; therefore you should be certain that whoever does the work fully understands all of the conditions. You may wish to discuss the conditions of this authorization with your contractor to ensure the contractor can accomplish the work in a manner that conforms to all requirements.

If you change the plans or construction methods for work within our jurisdiction, please contact us immediately to discuss modification of this authorization. This office must approve any changes before you undertake them.

Condition 41 of the GP (page 18) provides one year for completion of work that has commenced or is under contract to commence prior to the expiration of the GP on October 12, 2015. You will need to apply for reauthorization for any work within Corps jurisdiction that is not completed by October 12, 2016.

This authorization presumes the work shown on your plans noted above is in waters of the U.S. Should you desire to appeal our jurisdiction, please submit a request for an approved jurisdictional determination in writing to the undersigned.

No work may be started unless and until all other required local, State and Federal licenses and permits have been obtained. **This includes but is not limited to a Flood Hazard Development Permit issued by the town if necessary.**

II. STATE ACTIONS: PENDING [ ], ISSUED[ ], DENIED [ ] DATE_____

APPLICATION TYPE: PBR:___, TIER 1:___, TIER 2:___, TIER 3: X, LURC:___ DMR LEASE:___ NA:___

III. FEDERAL ACTIONS:

JOINT PROCESSING MEETING: 5-17-12 LEVEL OF REVIEW: CATEGORY 1:___ CATEGORY 2: X

AUTHORITY (Based on a review of plans and/or State/Federal applications): SEC 10_ X _, 404___ 10/404___, 103_

EXCLUSIONS: The exclusionary criteria identified in the general permit do not apply to this project.

FEDERAL RESOURCE AGENCY OBJECTIONS: EPA NO, USF&WS NO, NMFS NO

If you have any questions on this matter, please contact my staff at 207-623-8367 at our Manchester, Maine Project Office. In order for us to better serve you, we would appreciate your completing our Customer Service Survey located at http://per2.nwp.usace.army.mil/survey.html

Rodney A. Howe
RODNEY A. HOWE
SENIOR PROJECT MANAGER
MAINE PROJECT OFFICE

4-16-2012
FRANK J. DEL GIUDICE **DATE**
CHIEF, PERMITS & ENFORCEMENT BRANCH
REGULATORY DIVISION

-R (1145-2-303b) Date April 10, 2014

EMORANDUM FOR FILE

SUBJECT: Forefront Partners I,LP NAE-2012-00992 amendment

1. PRELIMINARY JURISDICTIONAL DETERMINATION:

__X__The State of Maine has performed a **preliminary jurisdictional determination** with which the Corps concurs. **(OR)**
___Our preliminary determination of jurisdiction is that the aquatic resources within the review area are waters of the United States due to the presence of: (Check all that apply)
__X__TNWs, including territorial seas
___Wetlands adjacent to TNWs
___Relatively permanent waters (RPWs) that flow directly or indirectly into TNWs
___Non-RPWs that flow directly or indirectly into TNWs
___Wetlands directly abutting RPWs that flow directly or indirectly into TNWs
___Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs
___Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs
___Impoundments of jurisdictional waters
___Isolated (interstate or intrastate) waters, including isolated wetlands

2. SECTION 106 COORDINATION
Coordination with the State Historic Preservation Officer Yes/ N/A **(circle one)**. Determination & date:
_____No effect by 10 day default; 8/10/12 No effect; _____May effect; _____No Adverse effect

Coordination with the Tribal Historic Preservation Officer(s) Yes/ N/A **(circle one)**.
Determination & date: 5/27/12 No effect by default;_____No effect;_____May effect; ___No Adverse effect

3. ENDANGERED SPECIES CONSULTATION: USFWS/NMFS (circle one or both).
Determination & date: 6/7/12 No effect;_____Not likely to adversely effect

4. ESSENTIAL FISH HABITAT (EFH): EFH PRESENT Y / N (circle one).
IF YES: Based on the terms and conditions of the PGP, which are intended to ensure that authorized projects cause no more than minimal environmental impacts, the Corps of Engineers has preliminary determined that this project will not cause more than minimal adverse effects to **EFH** identified under the Magnunson-Stevens Fisheries Conservation and Management Act.
Determination & date:_____No recommendations received; ___No effect; 6/7/12 May Adversely effect.
EFH recommendations: Normal TOYR construction window and Cat 2 Standards for installation.

IMPACTS: 0.0 Short-term; _____ Long-term; 0.0 Cumulative. (Brief description)

Environmental impacts are minimal both individually and cumulatively Y / N (circle one).
The original permit authorized an 8' x 9' landing with an attached 4.33' x 40' aluminum ramp leading to a 10' x 10' intermediate float with a 12' x 20' float attached perpendicular extending southwest in Fore River off Thompson's Point. This amendment authorizes the permittee to shift the pier location slightly west and construct a 6' x 16' pile and timber pier with an attached 4' x 50' ramp leading to an12'X24' intermediate float cut at an angle with a 10' x 60' line of bottom moored floats attached at an angle extending southwest in Fore River off lot 13 at Thompson's Point at Portland. The structure meets Corps guidelines for structures placed in navigable waters and there are no FNP's in the vicinity. Impacts to navigation in the immediate vicinity are considered minimal. The federal resource agencies have reviewed the original project and recommended normal TOYR restriction for construction. They determined the project is eligible for a Cat 2 GP as proposed. The permit is conditioned accordingly.

Rodney Howe
Senior Project Manager
Maine Project Office

US Army Corps
of Engineers ®
New England District

WORK-START NOTIFICATION FORM

(Minimum Notice: Two weeks before work begins)

****
* MAIL TO: U.S. Army Corps of Engineers, New England District *
*
* Policy Analysis/Technical Support Branch *
* Regulatory Division *
* 696 Virginia Road *
* Concord, Massachusetts 01742-2751 *
****

Corps of Engineers Permit No. NAE-2012-00992 was issued Forefront Partners I, LP. The permit authorized the permittee to construct a 6' x 16' pile and timber pier with an attached 4' x 50' ramp leading to an 12'X24' intermediate float cut at an angle with a 10' x 60' line of bottom moored floats attached at an angle extending southwest in Fore River off lot 13 at Thompson's Point at Portland, Maine.
The people (e.g., contractor) listed below will do the work, and they understand the permit's conditions and limitations.

PLEASE PRINT OR TYPE

Name of Person/Firm: _____

Business Address: _____

_____

_____

_____

Telephone Numbers: ( ) _____ ( ) _____

Proposed Work Dates: **Start**_____ **Finish**_____

Permittee's Signature:_____ **Date:**_____

Printed Name:_____ **Title:**_____

****

FOR USE BY THE CORPS OF ENGINEERS

PM: Howe **Submittals Required:** _____

Inspection Recommendation: _____

_____

US Army Corps of Engineers®
New England District

(Minimum Notice: Permittee must sign and return notification within one month of the completion of work.)

COMPLIANCE CERTIFICATION FORM

Corps of Engineers Permit No: NAE-2012-00992

Name of Permittee: Forefront Partners I, LP

Permit Issuance Date: _____

Please sign this certification and return it to the following address upon completion of the activity and any mitigation required by the permit. You must submit this after the mitigation is complete, but not the mitigation monitoring, which requires separate submittals.

****

* MAIL TO: U.S. Army Corps of Engineers, New England District *
* Policy Analysis/Technical Support Branch, ATTN: PAS*
* Regulatory Division *
* 696 Virginia Road *
* Concord, Massachusetts 01742-2751 *

****

Please note that your permitted activity is subject to a compliance inspection by an U.S. Army Corps of Engineers representative. If you fail to comply with this permit you are subject to permit suspension, modification, or revocation.

I hereby certify that the work authorized by the above referenced permit was completed in accordance with the terms and conditions of the above referenced permit, and any required mitigation was completed in accordance with the permit conditions.

_____ _____
Signature of Permittee ***Date***

_____ _____
Printed Name Date of Work Completion

( ) _____ ( ) _____
Telephone Number ***Telephone Number***

DEPARTMENT OF THE ARMY

NEW ENGLAND DISTRICT, CORPS OF ENGINEERS
696 VIRGINIA ROAD
CONCORD, MASSACHUSETTS 01742-2751

REPLY TO
ATTENTION OF

MAINE GENERAL PERMIT (GP)
AUTHORIZATION LETTER AND SCREENING SUMMARY

Forefront Partners I, LP
55 Lisbon Street, Suite 2400
Lewiston, Maine 04240

CORPS PERMIT # NAE-2012-00992
CORPS PGP ID# 12-154
STATE ID# L-25672-2G-A-N

DESCRIPTION OF WORK:
To construct and maintain an 8' x 9' landing with an attached 4.33' x 40' aluminum ramp leading to a 10' x 10' intermediate float with a 12' x 20' float attached perpendicular extending southwest in Fore River off Thompson's Point. The work also includes placing fill in approximately 420 SF of intertidal area in conjunction with the construction of a 25' x 20' granite block stairway and in 386 SF of intertidal area to construct a riprap plunge pool for a storm drainage outfall for a total of 806 SF (0.018 acres) off Thompson's Point at Portland, Maine as shown on the attached plans entitled "Forefront Partners I,LP, Commercial Redevelopment, City of Portland, Thompson's Point, Maine" in 4 sheets dated April 2012. **SEE ATTACHED CONDITIONS:**

LAT/LONG COORDINATES : 43.64897 N 70.29191 W **USGS QUAD:** ME-Portland West

I. CORPS DETERMINATION:

Based on our review of the information you provided, we have determined that your project will have only minimal individual and cumulative impacts on waters and wetlands of the United States. **Your work is therefore authorized by the U.S. Army Corps of Engineers under the enclosed Federal Permit, the Maine General Permit (GP).** Accordingly, we do not plan to take any further action on this project.

You must perform the activity authorized herein in compliance with all the terms and conditions of the GP [including any attached Additional Conditions and any conditions placed on the State 401 Water Quality Certification including any required mitigation]. Please review the enclosed GP carefully, including the GP conditions beginning on page 5, to familiarize yourself with its contents. You are responsible for complying with all of the GP requirements; therefore you should be certain that whoever does the work fully understands all of the conditions. You may wish to discuss the conditions of this authorization with your contractor to ensure the contractor can accomplish the work in a manner that conforms to all requirements.

If you change the plans or construction methods for work within our jurisdiction, please contact us immediately to discuss modification of this authorization. This office must approve any changes before you undertake them.

Condition 41 of the GP (page 18) provides one year for completion of work that has commenced or is under contract to commence prior to the expiration of the GP on October 12, 2015. You will need to apply for reauthorization for any work within Corps jurisdiction that is not completed by October 12, 2016.

This authorization presumes the work shown on your plans noted above is in waters of the U.S. Should you desire to appeal our jurisdiction, please submit a request for an approved jurisdictional determination in writing to the undersigned.

No work may be started unless and until all other required local, State and Federal licenses and permits have been obtained. **This includes but is not limited to a Flood Hazard Development Permit issued by the town if necessary.**

II. STATE ACTIONS: PENDING [ ], ISSUED[ ], DENIED [ ] DATE_____

APPLICATION TYPE: PBR:___, TIER 1:___, TIER 2:___, TIER 3: X , LURC:___ DMR LEASE:___ NA:___

III. FEDERAL ACTIONS:

JOINT PROCESSING MEETING: 5-17-12 LEVEL OF REVIEW: CATEGORY 1:___ CATEGORY 2: X

AUTHORITY (Based on a review of plans and/or State/Federal applications): SEC 10 X , 404___ 10/404___, 103___

EXCLUSIONS: The exclusionary criteria identified in the general permit do not apply to this project.

FEDERAL RESOURCE AGENCY OBJECTIONS: EPA NO , USF&WS NO , NMFS NO

If you have any questions on this matter, please contact my staff at 207-623-8367 at our Manchester, Maine Project Office. In order for us to better serve you, we would appreciate your completing our Customer Service Survey located at http://per2.nwp.usace.army.mil/survey.html

Rodney A Howe

RODNEY A. HOWE
SENIOR PROJECT MANAGER
MAINE PROJECT OFFICE

8-24-12

FRANK J. DEL GIUDICE **DATE**
CHIEF, PERMITS & ENFORCEMENT BRANCH
REGULATORY DIVISION

US Army Corps
of Engineers ®
New England District

PLEASE NOTE THE FOLLOWING GENERAL CONDITIONS FOR
DEPARTMENT OF THE ARMY
GENERAL PERMIT
NO. NAE-2012-00992

1. The following condition applies to the construction of the granite block stairway and the rip rapped stormwater plunge pool. Please note appendix A, II. Navigable Waters of the United States, Category 1, (a) Fill, 2. Work conducted in the intertidal zone must be conducted in-the dry during low water, or between Nov. 8 – Apr. 9.

2. The following condition applies to the construction of the ramp and float system. Please note appendix A, II. Navigable Waters of the United States Category 2 and (f) Structures and Floats Category 2 of the attached Programmatic General Permit.

MAR-2012-00992

APPLICATION FOR A NATURAL RESOURCES PROTECTION ACT PERMIT

→PLEASE TYPE OR PRINT IN *BLACK INK ONLY*

1. Name of Applicant:	Forefront Partners I, LP	**5.Name of Agent:**	DeLuca-Hoffman Associates, Inc.
2. Applicant's Mailing Address:	55 Lisbon Street, Suite 2400 Lewiston, ME 04240	**6. Agent's Mailing Address:**	778 Main Street, Suite 8 South Portland, ME 04106
3. Applicant's Daytime Phone #:	(207) 347-1614	**7. Agent's Daytime Phone #:**	(207) 775-1121
4. Applicant's Email Address (Required from *either* applicant or agent):	parallaxpartners@gmail.com	**8. Agent's Email Address:**	sbushey@delucahoffman.com

9. Location of Activity: (Nearest Road, Street, Rt.#)	1 Thompson's Point	**10. Town:**	Portland	**11. County:**	Cumberland

12. Type of Resource: (Check all that apply)

- ☐ River, stream or brook
- ☐ Great Pond
- ☐ Coastal Wetland
- ☐ Freshwater Wetland
- ☐ Wetland Special Significance
- ☒ Significant Wildlife Habitat
- ☐ Fragile Mountain

13. Name of Resource: adjacent tidal flats of the Fore River

14. Amount of Impact: (Sq.Ft.)

Fill: N/A

Dredging/Veg Removal/Other:

15. Type of Wetland: (Check all that apply)

- ☐ Forested
- ☐ Scrub Shrub
- ☐ Emergent
- ☐ Wet Meadow
- ☐ Peatland
- ☐ Open Water
- ☐ Other coastal wetland

FOR FRESHWATER WETLANDS

Tier 1	*Tier 2*	*Tier 3*
☐ 0 - 4,999 sq ft. ☐ 5,000-9,999 sq ft ☐ 10,000-14,999 sq ft	☐ 15,000 – 43,560 sq. ft.	☐ > 43,560 sq. ft. or ☐ smaller than 43,560 sq. ft., not eligible for Tier 1

16. Brief Activity Description: The applicant proposes a transit oriented development over the previously developed Thompson's Point site in Portland. See Attachment 1 for additional information.

17. Size of Lot or Parcel & UTM Locations: ☐ _____ square feet, or ☒ 27.56 acres UTM Northing: 4,833,933 UTM Easting: 395,870

18. Title, Right or Interest: ☐ own ☐ lease ☒ purchase option ☐ written agreement

19. Deed Reference Numbers:	Book#: 6579/6676 Page: 30/287	**20. Map and Lot Numbers:**	Map #: 201/202	Lot #: A-5, A-8, A-10/A-1, A-4	
21. DEP Staff Previously Contacted:	Marybeth Richardson	**22. Part of a larger project:**	☐ Yes ☒ No	**After-the-Fact:**	☐ Yes ☒ No
23. Resubmission of Application?:	☐ Yes→ ☒ No	**If yes, previous application #**		**Previous project manager:**	
24. Written Notice of Violation?:	☐ Yes → ☒ No	**If yes, name of DEP enforcement staff involved:**		**25. Previous Wetland Alteration:**	☐ Yes ☐ No

26. Detailed Directions to the Project Site: Take Exit 5 off I-295 South and proceed onto Thompson's Point Connector Road, cross railroad tracks into site.

27.

TIER 1

- ☐ Title, right or interest documentation
- ☐ Topographic Map
- ☐ Narrative Project Description
- ☐ Plan or Drawing (8 1/2" x 11")
- ☐ Photos of Area
- ☐ Statement of Avoidance & Minimization
- ☐ Statement/Copy of cover letter to MHPC

TIER 2/3 AND INDIVIDUAL PERMITS

- ☒ Title, right or interest documentation
- ☒ Topographic Map
- ☒ Copy of Public Notice/Public Information Meeting Documentation
- ☒ Wetlands Delineation Report (Attachment 1) that contains the Information listed under Site Conditions
- ☒ Alternatives Analysis (Attachment 2) including description of how wetland impacts were Avoided/Minimized
- ☒ Erosion Control/Construction Plan
- ☐ Functional Assessment (Attachment 3), if required
- ☐ Compensation Plan (Attachment 4), if required
- ☐ Appendix A and others, if required
- ☒ Statement/Copy of cover letter to MHPC
- ☐ Description of Previously Mined Peatland, if required

28. FEES Amount Enclosed:

CERTIFICATIONS AND SIGNATURES LOCATED ON PAGE 2

IMPORTANT: IF THE SIGNATURE BELOW IS NOT THE APPLICANT'S SIGNATURE, ATTACH LETTER OF AGENT AUTHORIZATION SIGNED BY THE APPLICANT.

By signing below the applicant (or authorized agent), certifies that he or she has read and understood the following :

DEP SIGNATORY REQUIREMENT

PRIVACY ACT STATEMENT

Authority: 33 USC 401, Section 10; 1413, Section 404. Principal Purpose: These laws require permits authorizing activities in or affecting navigable waters of the United States, the discharge of dredged or fill material into waters of the United States, and the transportation of dredged material for the purpose of dumping it into ocean waters. Disclosure: Disclosure of requested information is voluntary. If information is not provided, however, the permit application cannot be processed nor a permit be issued.

CORPS SIGNATORY REQUIREMENT

USC Section 1001 provides that: Whoever, in any manner within the jurisdiction of any department or agency of the United States knowingly and willfully falsifies, conceals, or covers up any trick, scheme, or disguises a material fact or makes any false, fictitious or fraudulent statements or representations or makes or uses any false writing or document knowing same to contain any false, fictitious or fraudulent statements or entry shall be fines not more than $10,000 or imprisoned not more than five years or both. I authorize the Corps to enter the property that is subject to this application, at reasonable hours, including buildings, structures or conveyances on the property, to determine the accuracy of any information provided herein.

DEP SIGNATORY REQUIREMENT

I certify under penalty of law that I have personally examined the information submitted in this document and all attachments thereto and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the information is true, accurate, and complete. I authorize the Department to enter the property that is the subject of this application, at reasonable hours, including buildings, structures or conveyances on the property, to determine the accuracy of any information provided herein. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

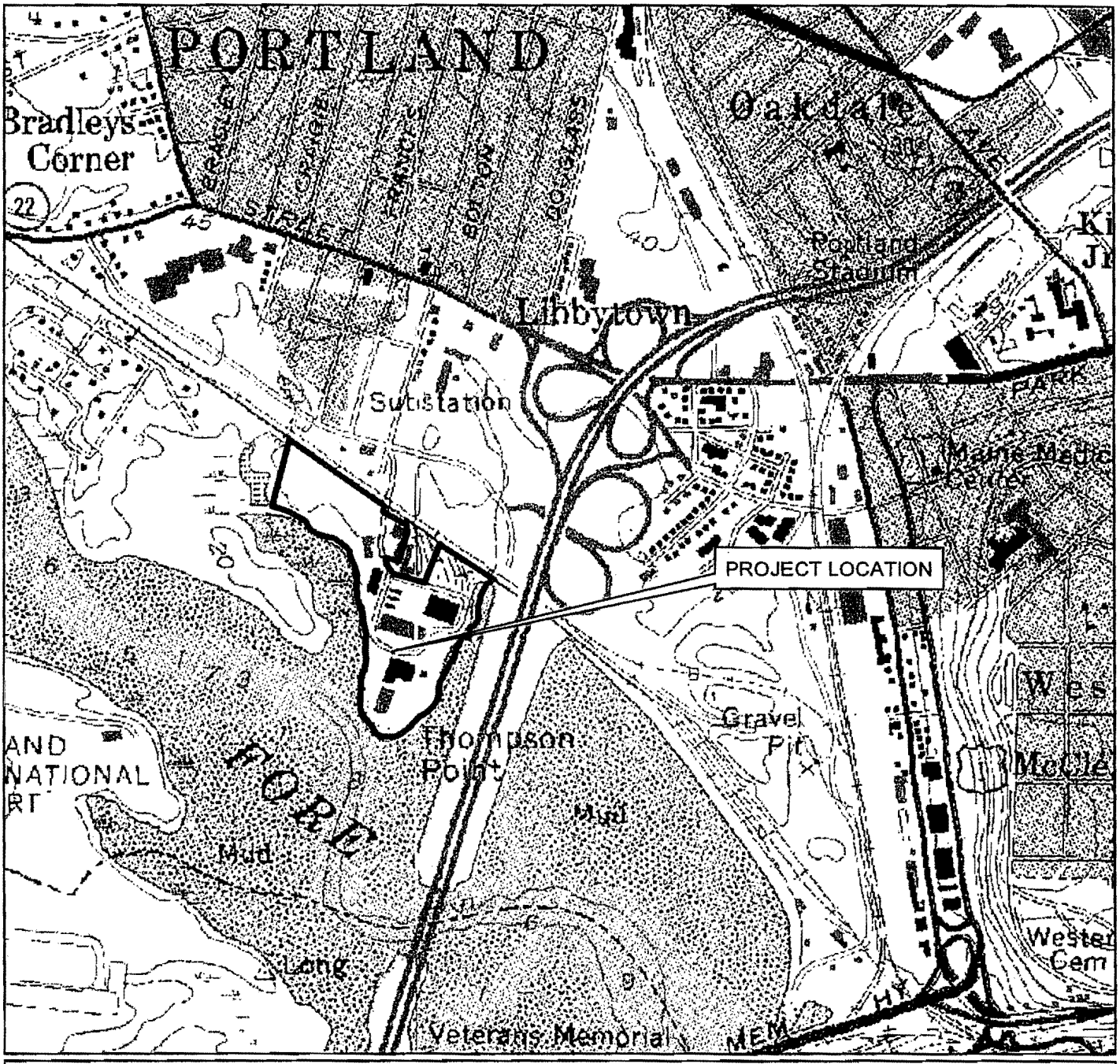
Further, I hereby authorize the DEP to send me an electronically signed decision on the license I am applying for with this application by emailing the decision to the address located on the front page of this application (see #4 for the applicant and #8 for the agent).

SIGNATURE OF AGENT/APPLICANT

Date: 4/26/12

NOTE: Any changes in activity plans must be submitted to the DEP and the Corps in writing and must be approved by both agencies prior to implementation. Failure to do so may result in enforcement action and/or the removal of the unapproved changes to the activity.

(pink)



USGS LOCATION MAP
THOMPSON'S POINT
PORTLAND, MAINE

SOURCE: MAINE OFFICE OF GIS - MAPS

DeLuca-Hoffman Associates, Inc.
778 MAIN STREET, SUITE 8
SOUTH PORTLAND, ME 04106
207-775-1121
www.delucahoffman.com

DRAWN:	DED
CHECKED:	SRB
DATE:	SEPTEMBER 2010
FILENAME:	2982-USGS
SCALE:	1 inch = 1,000 feet

FIGURE

2

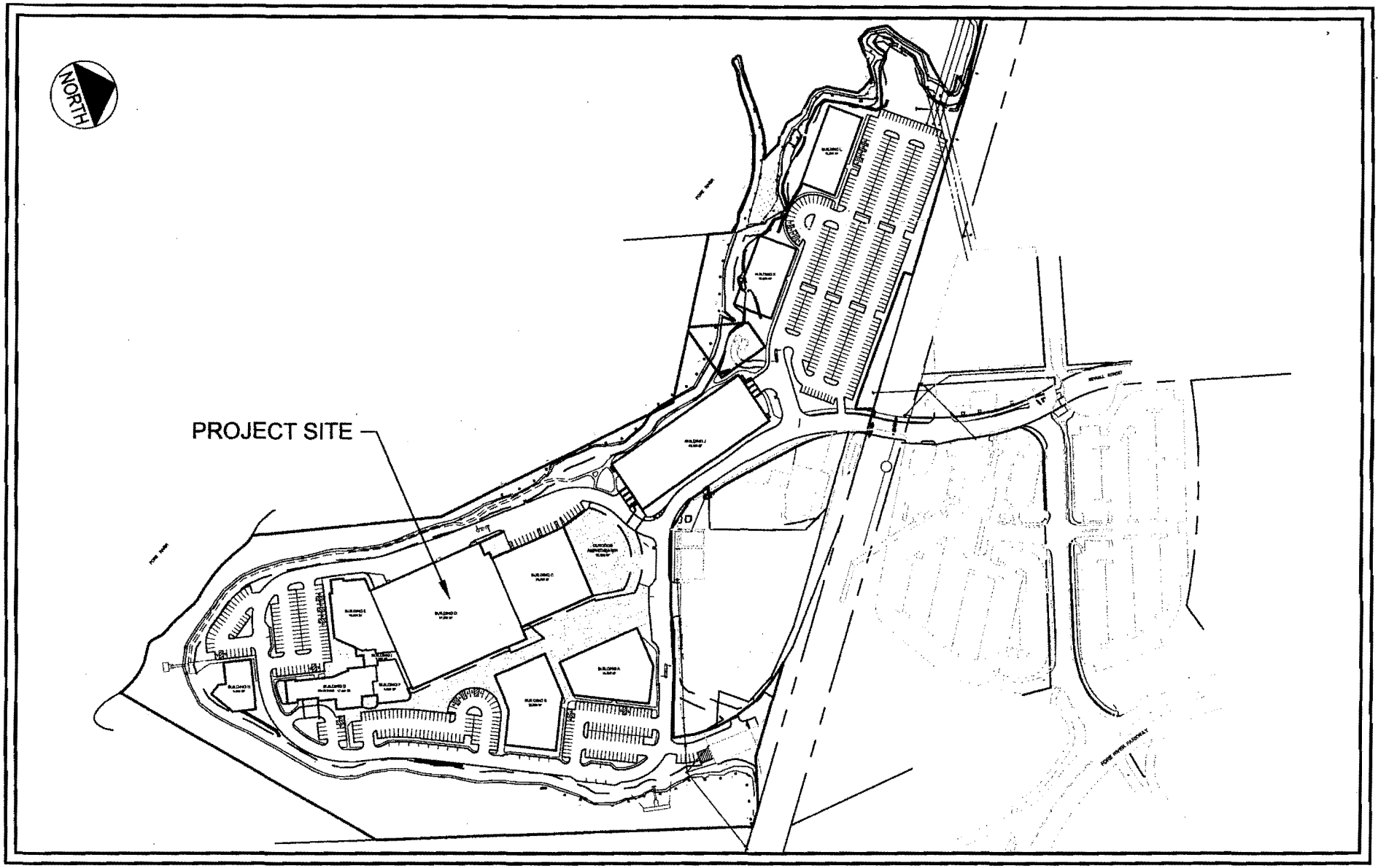


FIGURE:	BOOK:	PAGE:	LOCATION:	PROPOSED ACTIVITY:	PROJECT APPLICANT:
1	6579 6875	30 287	CITY OF PORTLAND THOMPSON'S POINT	COMMERCIAL REDEVELOPMENT	FOREFRONT PARTNERS I, LP

LEGAL DESCRIPTION:	WATER BODY:	ABUTTERS:	SCALE: 1" = 300' DATUM: -	DELUCA-HOFFMAN ASSOCIATES, INC.
SEE ALTA SURVEY BY SEBAGO TECHNICS INC	FORE RIVER	SEE ATTACHMENT 10	DATE: APR 2012	

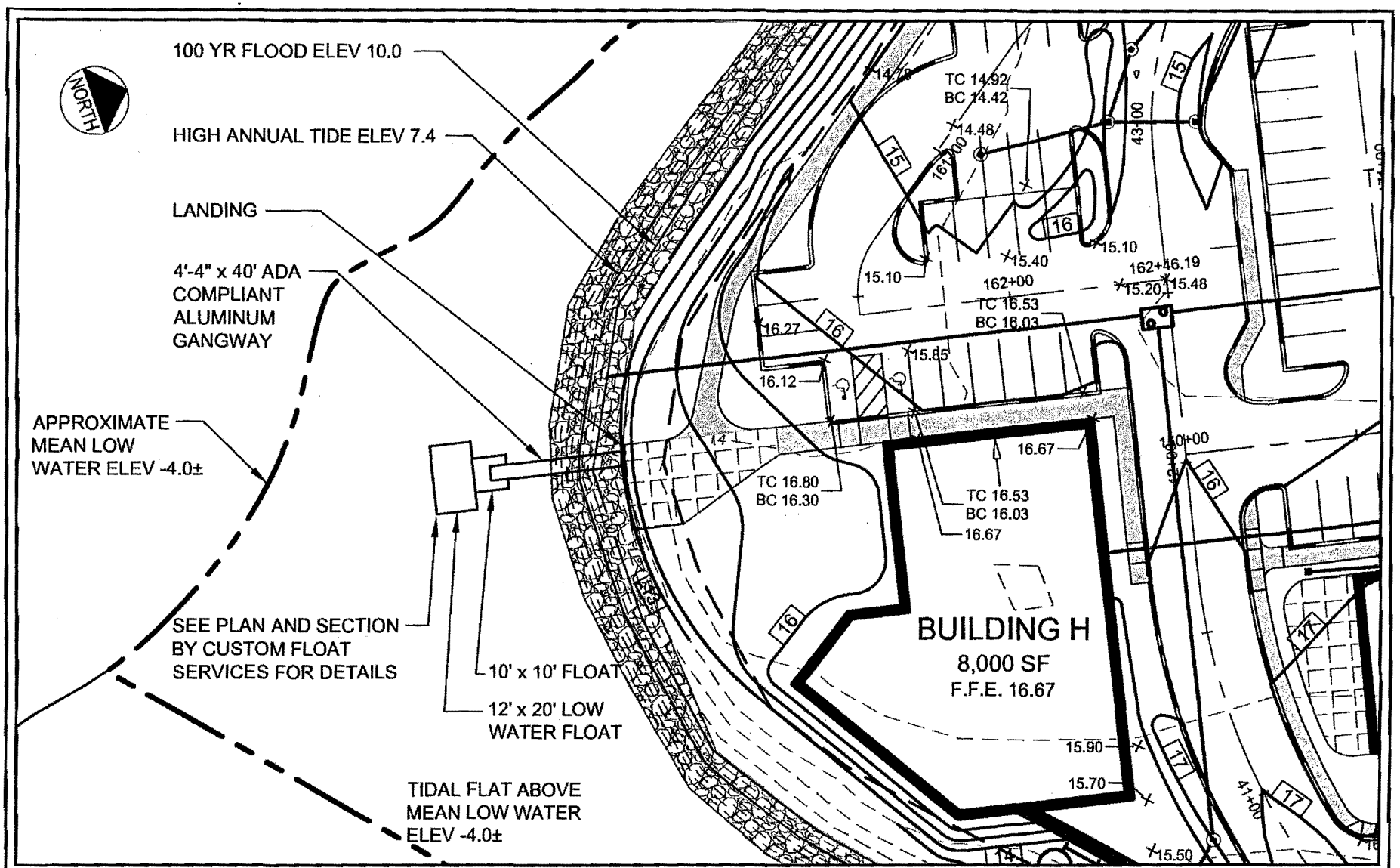
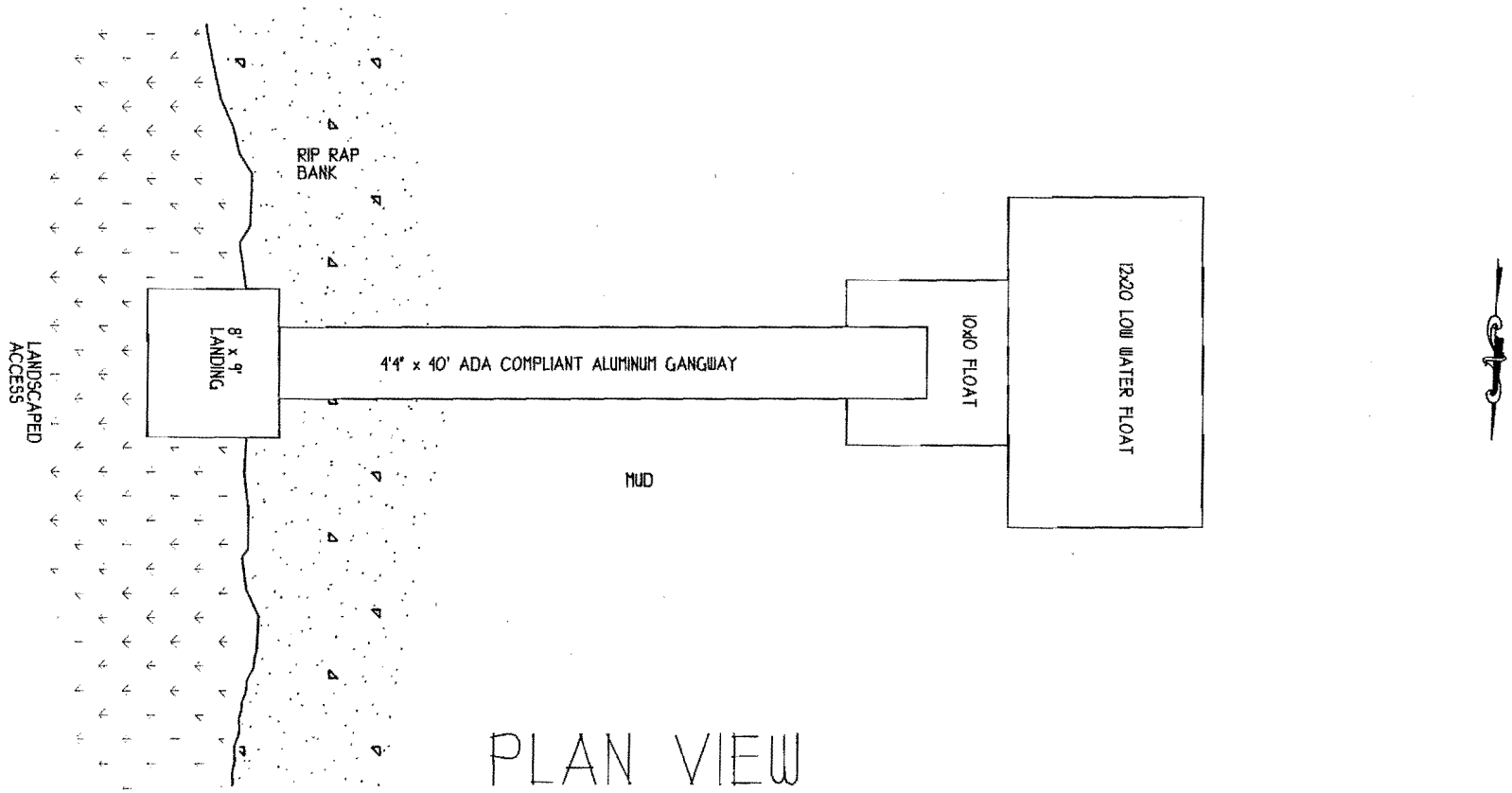
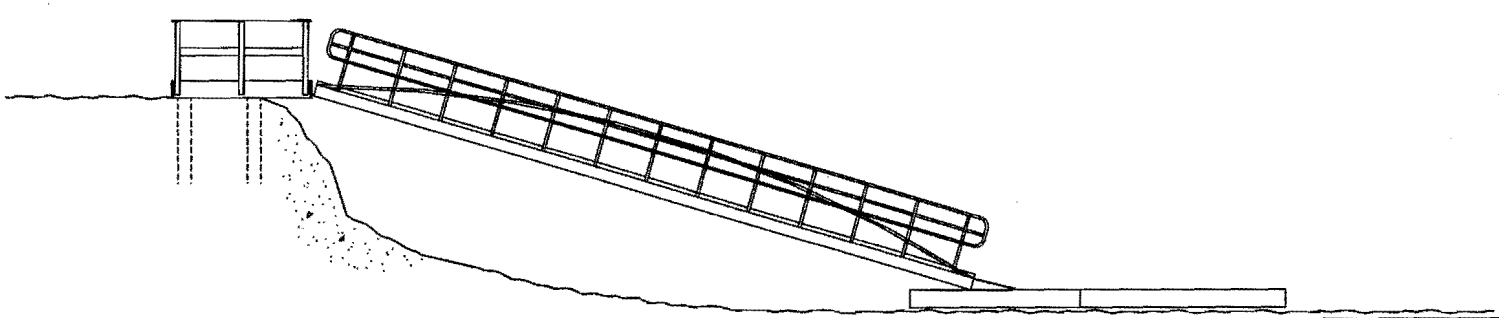


FIGURE:	BOOK:	PAGE:	LOCATION:	PROPOSED ACTIVITY:	PROJECT APPLICANT:	
2	6579 6875	30 287	CITY OF PORTLAND THOMPSON'S POINT	COMMERCIAL REDEVELOPMENT	FOREFRONT PARTNERS I, LP	
	LEGAL DESCRIPTION: SEE ALTA SURVEY BY SEBAGO TECHNICS INC		WATER BODY: FORE RIVER	ABUTTERS: SEE ATTACHMENT 10	SCALE: 1" = 40' DATUM: -	DELUCA-HOFFMAN ASSOCIATES, INC.
					DATE: APR 2012	



PLAN VIEW

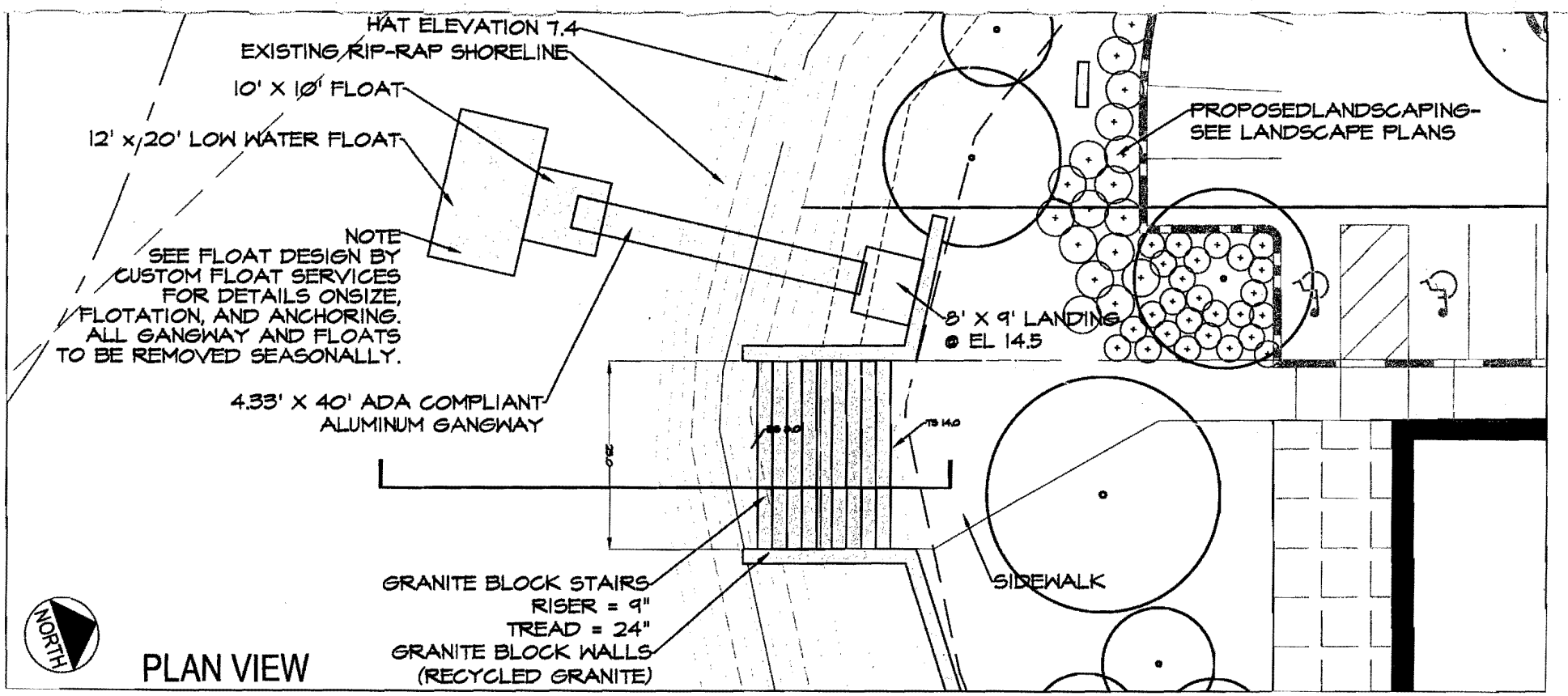


SIDE ELEVATION

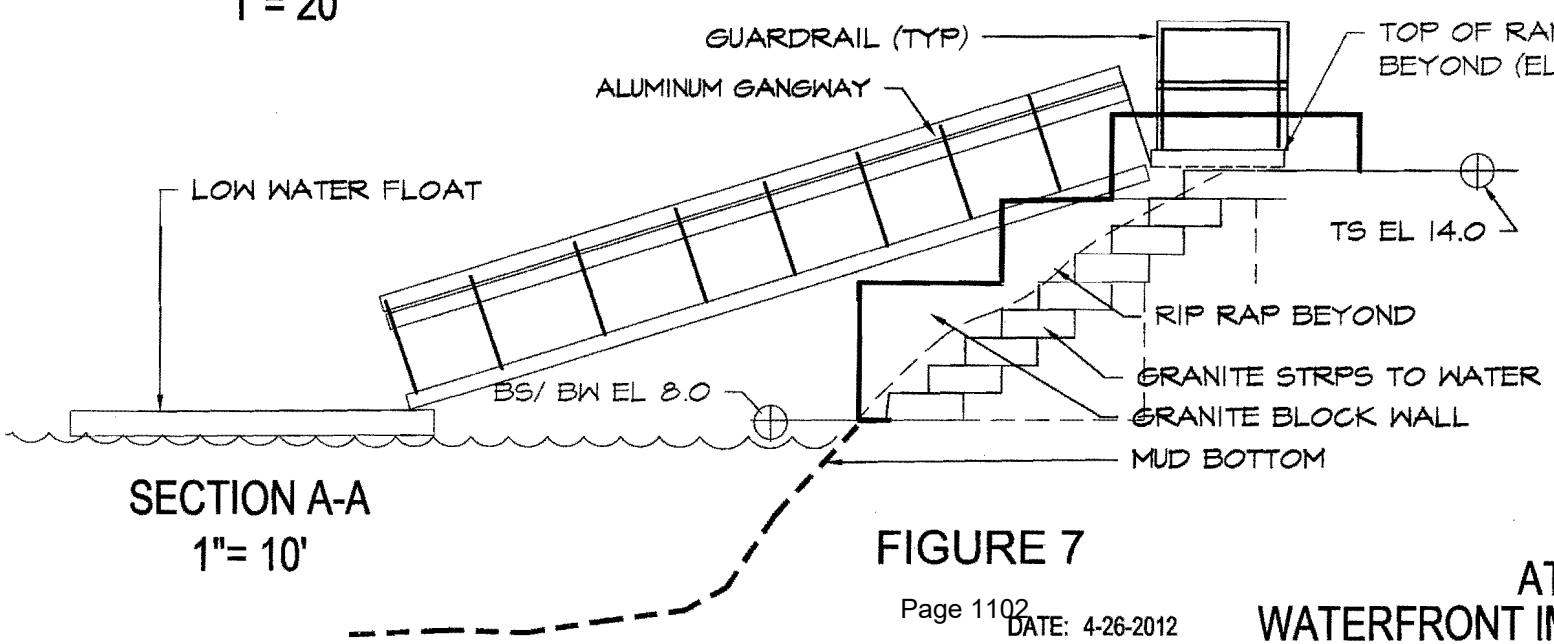
FIGURE:
5

THE FOREFRONT AT THOMPSON'S POINT PLAN #1	REV:
FOR: CHRIS THOMPSON / JON JENNINGS	DATE: 11/21/11
DRAWN BY: MPD	SCALE: NOT TO SCALE
DESIGNED BY:	

Custom Float Services



PLAN VIEW
1"= 20'



SECTION A-A
1"= 10'

FIGURE 7

CARROLL ASSOCIATES
LANDSCAPE ARCHITECTS
217 COMMERCIAL STREET
PORTLAND, MAINE 04101
PHONE: (207) 772-1552
FAX: (207) 772-0772

THE FOREFRONT
AT THOMPSON'S POINT
WATERFRONT IMPROVEMENTS PLAN

DATE: 4-26-2012

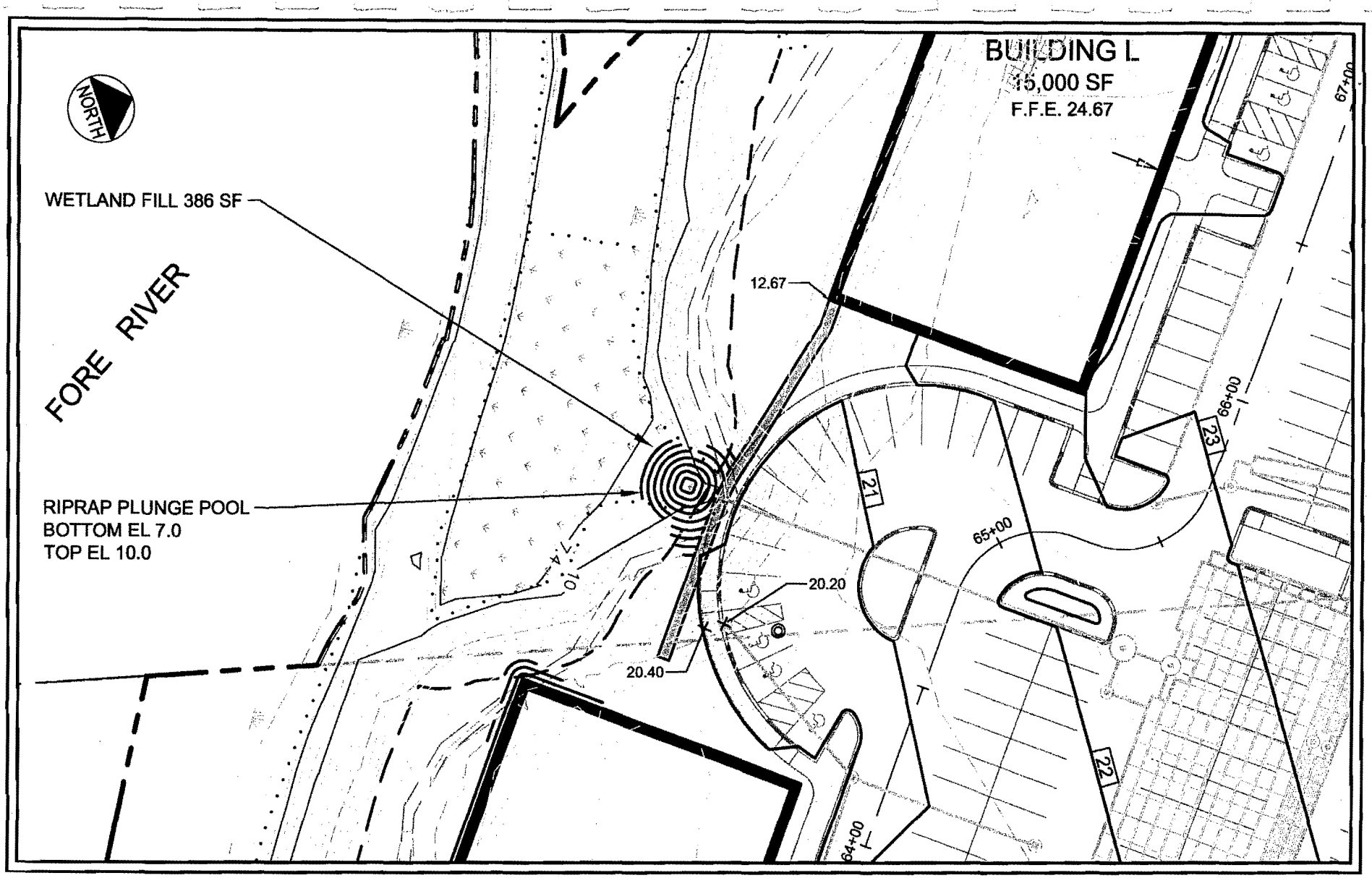


FIGURE:	BOOK:	PAGE:	LOCATION:	PROPOSED ACTIVITY:	PROJECT APPLICANT:
6	6579 6875	30 287	CITY OF PORTLAND THOMPSON'S POINT	COMMERCIAL REDEVELOPMENT	FOREFRONT PARTNERS I, LP

LEGAL DESCRIPTION:	WATER BODY:	ABUTTERS:	SCALE: 1" = 40' DATUM: -	DELUCA-HOFFMAN ASSOCIATES, INC.
SEE ALTA SURVEY BY SEBAGO TECHNICS INC	FORE RIVER	SEE ATTACHMENT 10	DATE: APR 2012	

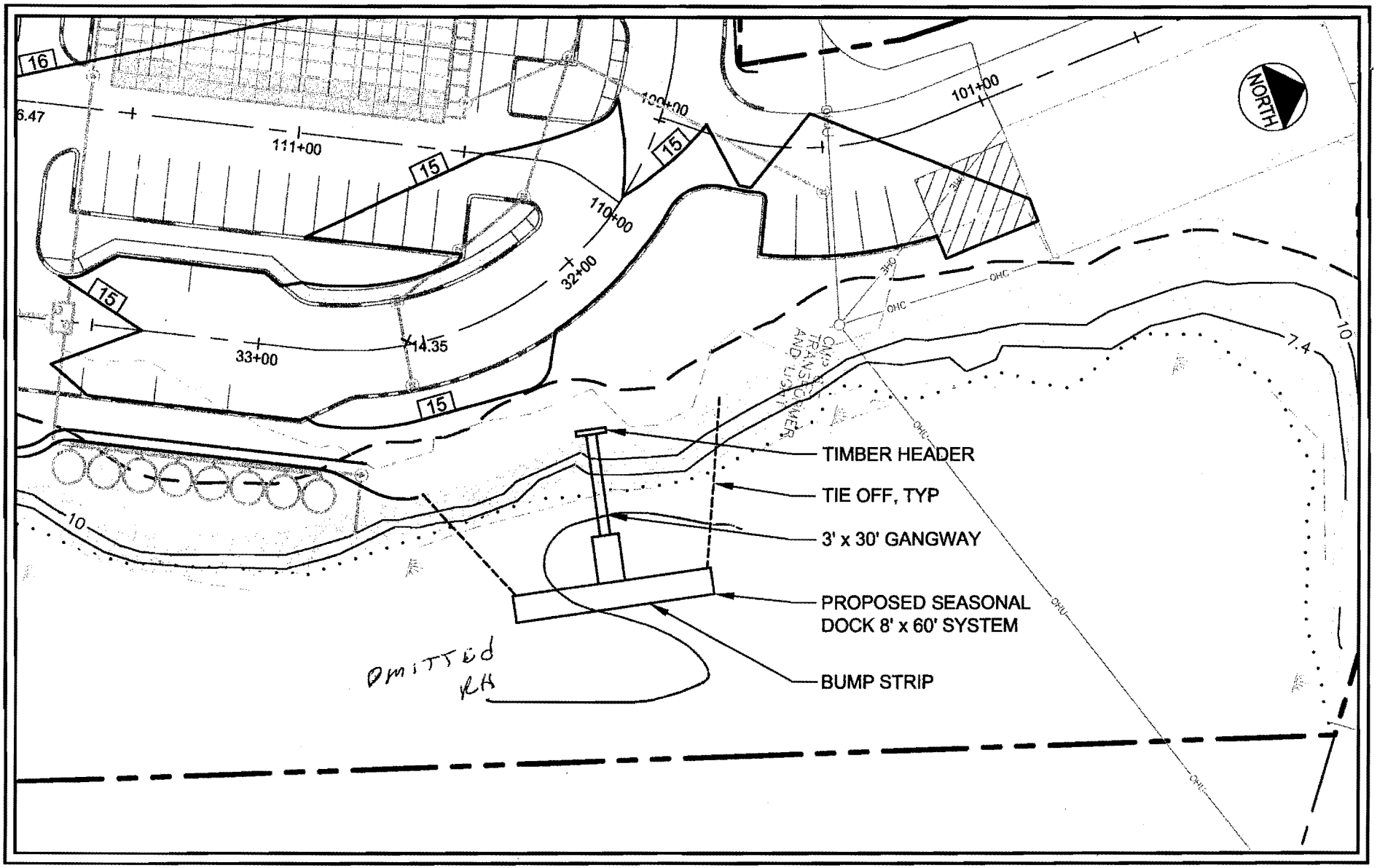


FIGURE:	BOOK:	PAGE:	LOCATION:	PROPOSED ACTIVITY:	PROJECT APPLICANT:
3	6579 6875	30 287	CITY OF PORTLAND THOMPSON'S POINT	COMMERCIAL REDEVELOPMENT	FOREFRONT PARTNERS I, LP
	LEGAL DESCRIPTION:	WATER BODY:	ABUTTERS:	SCALE: 1" = 40' DATUM: -	DELUCA-HOFFMAN ASSOCIATES, INC.
	SEE ALTA SURVEY BY SEBAGO TECHNICS INC	FORE RIVER	SEE ATTACHMENT 10	DATE: APR 2012	

Federal Aviation Administration
Air Traffic Airspace Branch, ASW-520
2601 Meacham Blvd.
Fort Worth, TX 76137-0520

Aeronautical Study No.
2010-ANE-904-OE

Issued Date: 12/21/2010

Steve Bushey
DeLuca-Hoffman Associates
778 Main Street
South Portland, ME 04106

**** FEASIBILITY REPORT ****

The Federal Aviation Administration has conducted a limited aeronautical review concerning the feasibility of a structure described as follows:

Structure:	Feasibility Study (commercial buildings)
Location:	Portland, ME
Latitude:	43-39-03.79N NAD 83
Longitude:	70-17-28.48W
Heights:	150 feet above ground level (AGL)
	175 feet above mean sea level (AMSL)

The results of this review can be found on the attached page(s).

NOTE: THE RESULTS OF OUR LIMITED REVIEW IS NOT AN OFFICIAL DETERMINATION OF FINDINGS BUT ONLY A REPORT BASED ON THE GENERAL OR ESTIMATED INFORMATION SUPPLIED FOR THE STRUCTURE. ANY FUTURE, OFFICIAL AERONAUTICAL STUDY MAY REVEAL DIFFERENT RESULTS.

If we can be of further assistance, please contact our office at (847) 294-7575. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2010-ANE-904-OE.

Signature Control No: 131185695-134672885 (FSB)
Vivian Vilaro
Specialist

Attachment(s)
Additional Information

Additional information for ASN 2010-ANE-904-OE

Feasibility Study for Aeronautical Study No. 2010-ANE-904-OE

This informal feasibility report is based on the data submitted by the sponsor. This is not a formal determination but only a report based on the information furnished to this office. Please keep in mind that there is always a possibility that the final outcome of a formal aeronautical study might prove to be different from the results of this informal feasibility study.

1. The proposed site would be located approximately 3279 feet (0.53 nautical miles) northeast of the Runway 29 threshold of the Portland International J Airport (PWM) in Portland, ME.

2. Based on Part 77, notice to the FAA would be required and the structure does not exceed the obstruction standards. This information is based on airport information currently on file with the FAA.

3. This informal feasibility report does not supercede or override any state, county or local laws or ordinances.

4. Based on the unofficial nature of this study, the FAA shall not be held responsible for any type of commitment entered into by the sponsor based solely on this informal feasibility report.

5. If the location or overall AMSL height changes, the results of this feasibility study are will not apply.

6. Please refer to the ASN noted above on any future correspondence concerning this feasibility report or if you do file formal notice with the FAA concerning the structure.

MAINE HISTORIC PRESERVATION COMMISSION
55 CAPITOL STREET
65 STATE HOUSE STATION
AUGUSTA, MAINE
04333

PAUL R. LEPAGE
GOVERNOR

EARLE G. SHETTLEWORTH, JR.
DIRECTOR

March 29, 2013

RECEIVED APR - 2 2013

Greg A. Mitchell, Director
Economic Development Department
City of Portland
389 Congress Street
Portland, Maine 04101

Project: MHPC #0812-11; Forefront at Thompson's Point, proposed commercial development; Maine Historic Building Record documentation
Location: Portland, ME

Dear Mr. Mitchell:

The Commission is in receipt of the final Maine Historic Building Record narrative history and description from Sutherland Conservation & Consulting for the subject project. This narrative meets the requirements of the Schedule of Documentation for the former Maine Central Railroad Machine Shop and Car Repair Shop/Planing Mill at Thompson's Point, Portland, Maine.

Under separate cover from Todd Caverly, we have received the photographic documentation for the Thompson's Point facility. The photographic documentation meets the requirements of the Schedule of Documentation.

The submittals described above satisfy Stipulation A of the Memorandum of Agreement between the Economic Development Administration, the Maine State Historic Preservation Officer, the City of Portland, and Forefront Partners I, LP.

If you have any questions regarding this matter, please feel free to contact me.

Sincerely,

Kirk F. Mohney
Deputy State Historic Preservation Officer

cc: Amy Cole Ives, Sutherland Conservation & Consulting
Todd Caverly

PHONE: (207) 287-2132

FAX: (207) 287-2335

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
16 STATE HOUSE STATION
AUGUSTA, MAINE 04333-0016

Paul R. LePage
GOVERNOR

David Bernhardt
COMMISSIONER

LEGAL SERVICES Tel: (207) 624-3020 Fax: (207) 624-3021
MDOT TTY TEL: 888-516-9364

April 3, 2012

Danielle P. West-Chuhta
Associate Corporation Counsel
389 Congress Street
Portland, ME 04101-3509

Re: Railroad Decision #364

Dear Ms. West-Chuhta:

I enclose Railroad Decision # 364, dated April 3, 2012, signed by David Bernhardt, P.E., Commissioner of the Maine Department of Transportation. Decision # 364 relates to the City of Portland's petition to establish a public highway crossing over railroad tracks at Sewall Street in Portland, Maine.

If you have any questions regarding the above, please contact me.

Very truly yours,

Richard N. Hewes
Attorney for MaineDOT

RNH/jas
Enclosure
cc: Nathan Moulton, Manager, Rail Transportation, MaineDOT w/enc.
David Fink, President, Pan Am Railways w/enc.
Central Maine Power Co., Land Management Dept. w/enc.
Cumberland County Commissioners w/enc.
Langdon Street Real Estate w/enc.
Mercy Hospital w/enc.
Northern New England Rail Authority w/enc.
Portland Water District w/enc.
Thompson's Point Inc. w/enc.
The Waynflete School w/enc.
Kat Beaudoin w/enc.
Robert Bremm, Ritter Project Management w/enc.
Tony Donovan, Fishman Realty Group w/enc.
James Howard, Esq. w/enc.

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MAINE DEPARTMENT OF TRANSPORTATION

RAIL DECISION - RR # 364

REGARDING:

Petition pursuant to 23 M.R.S.A. § 7202 by the City of Portland to Establish a Public Highway Crossing Over Railroad Tracks at Sewall Street in Portland, Maine.

ABSTRACT:

On September 7, 2011, the City of Portland petitioned the Maine Department of Transportation to establish a public grade crossing for highway traffic on Sewall Street in Portland, Maine at Railroad Mile Post 1.92 on the Mountain Division Branch Line. Portland Terminal Company has owned a private railroad crossing at that location for decades. Rail traffic is operated by Springfield Terminal Railway Company. The owner of the rails and the operator of rail traffic are owned by Pan Am Railways. This decision, RR # 364, establishes a public grade crossing on Sewall Street after the conditions outlined herein are satisfied.

Hearing was held February 27, 2012

Location of hearing: Portland City Hall

The petition is granted

Date of Decision: April 3, 2012

Commissioner: David Bernhardt, P.E.

Hearing Officer: Richard N. Hewes, Esq.

I. PROCEDURAL BACKGROUND

On September 7, 2011, pursuant to 23 M.R.S.A. § 7202, the City of Portland ("City") petitioned the Maine Department of Transportation ("Department") to establish a public highway crossing ("Crossing") over railroad tracks in Portland at Sewall Street. The tracks are owned by Portland Terminal Company, train traffic is operated by Springfield Terminal Railway Company and Pan Am Railways owns Portland Terminal Company and Springfield Terminal Railway Company (these three entities are separately and collectively referred to as the "Railroad"). Tracks currently cross over a private way immediately to the south of the terminus of Sewall Street at Mile Post 1.92 on the Mountain Division Branch Line. The City requests that a public crossing be established where the private crossing now exists.

Hearing on the aforementioned petition was ordered to be held at the City Hall in Portland at 6:00 o'clock in the evening on November 22, 2011. Asserting membership in a class that could be substantially and directly affected by Railroad Decision #364, Pan Am applied for intervenor status. At the November 22, 2011 hearing, Pan Am's motion for intervenor status was granted without objection. The City asked for a continuance. Representatives of the railroad were present and did not object. The City and Pan Am had not yet finalized an agreement on fundamental aspects of the Crossing, but felt they could reach agreement on those issues through further communications. The hearing was continued and rescheduled for January 12, 2012. The January hearing was cancelled because of a snow storm. The matter was rescheduled and a public hearing was held February 27, 2012 at Portland City Hall.

II. NOTICE

Exhibit 18 is a copy of the January 18, 2012 cover letter with attached notice of the February 27, 2012 hearing that was sent to the following interested parties, including abutters and stakeholders:

City of Portland
Nathan Moulton, Manager, Rail Transportation, MaineDOT.
George Thayer, Springfield Terminal Railway Company/Maine Central Railroad
David Fink, President, Pan Am Railways
Central Maine Power Co.
Cumberland County Commissioners
Langdon Street Real Estate
Mercy Hospital
Northern New England Rail Authority
Portland Terminal Co.
Portland Water District
Thompson's Point Inc.
The Waynflete School
Kat Beaudoin, Integrated Planning Solutions
Robert Bremm, Ritter Project Management
Tony Donovan, Maine Rail Transit Coalition

Exhibits 19 and 20 are pages from the February 7 and 13, 2012 editions of the Portland Press Herald, a newspaper that has general circulation in the area affected by the City's petition. These pages contain notices which state that the hearing would be held February 27, 2012 at 6:00 p. m, in the Portland City Hall. Notice was proved to have been given in the manner prescribed by 23 MRSA § 7202 and 5 MRSA § 8053. Hearing on the aforementioned petition was held at the time and place stated in the notice. The hearing officer viewed the crossings on the day of the hearing and his observations are part of the evidence.

III. EVIDENCE

A. Exhibits.

Exhibit #

1. September 7, 2011 hearing request from Danielle P. West-Chuhta, Esq., Counsel for the City of Portland.

2. Sign-up sheet for November 22, 2011 hearing.

3. Maine Sunday Telegram's Classified Section's Tear Sheet of Notice of Hearing published October 30, 2011 which indicated the hearing would be held at the Portland Transportation Center on November 22, 2011 at 6:00 p.m.

4. Notice of Hearing which indicated that the hearing would be held at the Portland Transportation Center on November 22, 2011 at 6:00 p.m.

5. Copy of Letter to Danielle P. West-Chuhta, Esq. and Interested Parties dated October 27, 2011 enclosing the Notice of Hearing which indicated that the hearing would be held at the Portland Transportation Center.

6. Notice of Hearing indicating a new location for the hearing being held on November 22, 2011 to be the Portland City Hall.

7. Copy of Letter to Danielle P. West-Chuhta, Esq. and Interested Parties dated November 3, 2011 enclosing the Notice of Hearing indicating the new location for the hearing to be held on November 22, 2011 to be the Portland City Hall.

8. Undeliverable return envelope with hearing notice mailed to Northern New England Rail Authority.

9. Email to Patricia Quinn at NNEPRA dated November 15, 2011, enclosing a copy of the Notice of Hearing with the new location of Portland City Hall incorporated.

10. Portland Press Herald Newspaper Classified Section Tear Sheet with Notice of

Hearing published November 4, 2011 with the new location of Portland City Hall incorporated.

11. Maine Sunday Telegram Classified Section Tear Sheet with Notice of Hearing published November 6, 2011 with the new location of Portland City Hall incorporated.

12. Pan Am Railways Application for Intervenor Status.

13. Email from Danielle West-Chuhta, Esq. waiving the City of Portland's objections to the Application for Intervenor Status.

14. November 22, 2010 hearing transcript.

15. Portland Press Herald Newspaper's Classified Section's Tear Sheet of Notice of Hearing published December 22, 2011.

16. Portland Press Herald Newspaper's Classified Section's Tear Sheet of Notice of Hearing published December 29, 2011.

17. Letter to Danielle P. West-Chuhta, Esq. and Interested Parties dated December 12, 2011 with Notice of the January 12, 2012 Hearing.

18. Letter to Danielle P. West-Chuhta, Esq. and Interested Parties dated January 18, 2012 with Notice of the February 27, 2012 Hearing.

19. Portland Press Herald Newspaper Tear Sheet (p. D 6) published February 7, 2012 with Advertised Notice of February 27, 2012 Hearing.

20. Portland Press Herald Newspaper Tear Sheet (p. D 3) published February 13, 2012 with Advertised Notice of February 27, 2012 Hearing.

21. Sign-in Sheet for Attendees of the February 27, 2012 Public Hearing.

22. September 7, 2012 petition for hearing with margin notations.

23. Subdivision plat of the area of the proposed Sewall Street crossing.

24. Written testimony by Gregory Mitchell, City of Portland.

25. Public Hearing Submission by City of Portland with photos, plans and descriptions of proposed crossing and Thompson's Point development.

26. Email (two pages) confirming that Pan Am Railways and the developer of Forefront at Thompson's Point reached agreement relative to the Crossing.

A. Public Comments.

Danielle P. West-Chuhta, Esquire, Associate Corporation Counsel for the City, spoke in support of the petition to establish the Crossing. Ms. West offered Exhibit 22, the request for hearing, and Exhibit 23, a plat map showing the area surrounding the Crossing and the planned extension of Sewall Street. The Crossing is located at Mile Post 1.92 on the Mountain Division Branch Line. Trains travel at 10 miles per hour through the Crossing area. The Crossing will be at grade and the purpose of the Crossing will be to create a way for highway traffic to travel to and from Thompson's Point, which will be developed in the near future.

The terminus of Sewall Street, a town way, is at the northern boundary of the railroad corridor. A private way, also known as Sewall Street, continues through the Crossing and runs into Thompson's Point. The tracks currently run through that private way. The City plans to extend Sewall Street about 130 feet to the south of the existing crossing. When this piece of road is accepted as a public way, the tracks will be located within a public street. The City requests that a public crossing be established where the private crossing now exists.

Gregory Mitchell, Acting Director of the City's Department of Planning and Urban Development said that the Crossing is part of a larger plan to develop Thompson's Point, a peninsula to the south of the Crossing that extends into the Fore River. The planned development will be a world class destination that will provide access to cultural functions, athletic events and other entertainment activities. Officials from the Portland Fire Department have reviewed plans for the proposed Crossing and approve of the design.

Christopher Thompson, a representative of Forefront Partners I, LP, the company that plans to develop Thompson's Point, said that Thompson's Point will be converted into a 27 acre complex called the Forefront at Thompson's Point. The development will have an event center, a concert hall and amphitheater, a sports medicine facility, a hotel, a restaurant, office buildings and a parking garage. The event center will offer 3500 basketball fans the chance to view Portland's local professional team. Vendors and entrepreneurs will be able to display their wares at trade shows in a 44,000 foot facility. Music enthusiasts will have the opportunity to enjoy concerts at a 4500 seat auditorium and office space will be available as well. The Forefront at Thompson's Point will serve to connect walking trails to the Portland Transportation Center. Given the large number of people expected to use this facility, the existing crossing must be upgraded to facilitate the flow of public highway traffic to and from Thompson's Point.

Stephen Bushey, an engineer who works for Deluca Hoffman Associates, spoke in favor of the Crossing. He offered Exhibit 25, a brochure entitled Public Hearing Submission by City of Portland. Exhibit 25 contains photos, plans and descriptions of the Crossing area, including the planned development. Surface parking will be available for 712 vehicles and the parking garage will have space for 732 cars.

The Crossing will be constructed sometime between 2012 and 2014 at a cost of about $500,000 - $600,000. The two sets of tracks currently in place, a main line and a siding, will be in the proposed Crossing. The Crossing will be about 36 feet wide and will have three lanes for automobiles. Incoming and outgoing traffic will each have a dedicated lane. The middle lane

will be reversible to accommodate incoming or outgoing automobiles when traffic is heavy. A path on the west side of the inbound automobile lane will be available for pedestrians.

Flashing warning lights will be attached to a cantilevered structure over the Crossing to warn highway travelers about passing rail traffic. Pedestrian access will be controlled by automatic gates. Gates will not be installed over automobile lanes. The reversible middle lane will be used for heavy traffic during peak hours. Traffic control workers will direct traffic as needed. According to Exhibit 26, the developer has concluded an agreement with the Railroad that obligates the developer to reimburse the cost of improving the Crossing.

To access the planned development, highway traffic must enter the Thompson's Point Access Road from the Fore River Parkway. Once on the access road, travelers will move in an easterly direction until they turn onto Sewall Street at a 90 degree angle and travel south toward the Crossing. Southbound motorists travel down a slight decline that begins about 50 feet north of the Crossing. The tracks cross Sewall Street in an east-west direction at the bottom of that dip in the road. Sewall Street runs in a north-south direction and intersects the tracks at a ninety degree angle. The approach for motorists leaving Thompson's Point is level.

Automobile traffic is expected to pass through the proposed crossing during peak hours at the rate of 955 total trips. The highway speed limit at the crossing will be 25 miles per hour. After southbound motorists turn onto Sewall Street, they will have sight distance of about 500 feet to the Crossing. Highway traffic approaching from Thompson's Point can view the Crossing from a distance of 300 feet.

Two to four freight trains per week move through the Crossing. No passenger train traffic uses the Crossing at this time. Track speed is ten miles per hour. Randall Pike, P. E., a member of the firm that will design the Crossing, said that eastbound trains will have sight distance on their approach to the Crossing of several thousand feet and westbound trains will have sight distance of about 1000 feet to the Crossing.

The surrounding area is generally industrial. A parking lot and passenger loading area in the rear of the Portland Transportation Center are on the northeast quadrant of the Crossing. A power transmission facility and two story metal building are on the northwest quadrant. An Amtrak office resembling a mobile home is on the southeast quadrant. A fenced parking lot that holds dozens of trailers is on the southwest quadrant. An Amtrak passenger station is located about 600 feet to the east of the Crossing.

Nathan Moulton, Manager of Rail Transportation for the Department, said that the Department supports the proposed Crossing. Exhibit 26 states that the Department will be provided with plans of the Crossing for review and approval. Signage, pavement markings, gates, lights and other safety installations must be approved by the Department and will conform to the Manual on Uniform Traffic Control Devices.

Robert Burns, a lawyer for the Railroad, confirmed that the Railroad and the developer were close to reaching an agreement for the development of the Crossing. James Howard, a lawyer for the developer of Thompson's Point, said that the parties were close to finalizing

financial concerns and that safety and design issues were resolved. Robert Haines, a Portland resident, spoke in favor of the Crossing, but expressed doubt that the access road would accommodate inevitable congestion during big events. Dory Waxman, a former City Councilor and a resident of Portland, spoke in favor of the Crossing and stressed that traffic during big events would be manageable because designers would anticipate traffic congestion problems.

IV. FINDINGS AND CONCLUSIONS

Based on exhibits, hearing testimony and site visits, the following findings are made:

1. Parties. The City of Portland petitioned the Maine Department of Transportation to issue an order establishing a public crossing. Portland Terminal Company owns the railroad in the proposed crossing area and Springfield Terminal Railway Company operates rail traffic. Pan Am Railways owns these two entities.

2. Location of Proposed Crossing. The proposed Crossing will be located at Mile Post 1.92 on the Mountain Division Branch Line, the site of a private crossing.

3. Status of Existing Crossing. The existing crossing is private. The terminus of Sewall Street, a town way, ends on the northern edge of the rail corridor. A private way, also named Sewall Street, runs in a southerly direction over the tracks to Thompson's Point. The City plans to extend Sewall Street an additional 130 feet south of the existing crossing. When this road is accepted as a public way, the tracks will be located within a public street.

4. Crossing Geometry. Two sets of tracks, a mainline and a siding, run through Sewall Street to form a double-track crossing. The rails run in an east-west direction and intersect Sewall Street at a 90 degree angle. Sewall Street runs in a north-south direction.

5. Sight Distance. Eastbound trains will have sight distance on the approach to the Crossing of several thousand feet and westbound trains will have sight distance of about 1000 feet. Southbound motorists will approach on a decline and will have a clear view of the Crossing for about 500 feet. Motorists traveling north on Sewall Street from Thompson's Point will have sight distance of about 300 feet.

6. Railroad Traffic. Four trains pass through the Crossing each week. Timetable speed over the rails is 10 miles per hour.

7. Highway Traffic. Automobile traffic is expected to pass through the Crossing during peak hours at the rate of 955 total trips. The speed limit for automobiles will be 25 miles per hour. The highway in the Crossing will be 36 feet wide with three lanes for automobile traffic. One lane will be dedicated for incoming highway traffic and one lane will be dedicated to outgoing vehicles. The middle lane will be reversible to accommodate either incoming or outgoing vehicles when traffic is heavy. A paved path will facilitate the flow of pedestrian traffic.

8. Purpose. The Crossing will allow public highway traffic to pass through the railroad corridor and flow into the planned development at Thompson's Point.

9. Area Land Use. A parking lot and passenger loading area for the Portland Transportation Center are on the northeast quadrant of the Crossing. A power transmission facility and a two story metal building occupy the northwest quadrant. An Amtrak office resembling a mobile home is on the southeast quadrant. A parking lot that holds dozens of trailers is on the southwest quadrant. An Amtrak passenger station is located about 600 feet to the east of the crossing.

10. Construction and maintenance. The Crossing is expected to be constructed between 2012 and 2014. The estimated cost is $500,000 to $600,000.

11. Design. The Railroad and Forefront Partners I, LP have reached agreement on the design of the Crossing. The Department will be provided with the plans for review and approval to ensure that the design meets safety requirements. Officials from the Portland Fire Department approve of the proposed Crossing.

V. ORDER

Based upon the evidence and the applicable law, it is hereby ORDERED that the City of Portland's Application to Establish a public highway crossing along the planned extension of Sewall Street at Mile Post 1.92 on the Mountain Division Branch Line is granted upon the fulfillment of the following conditions:

1. The City shall lay out and accept a public way across the Mountain Division Branch Line at Railroad Mile 1.92 in Portland.

2. The following actions shall be taken and safety measures installed:

   a) All safety measures including signalization, gates, bells, signage, lights and pavement shall be properly designed and constructed in accordance with the Department's Standard Specifications and Standard Details in effect at the time the Department approves the Crossing.

   b) All safety measures that are required or recommended by the Manual on Uniform Traffic Control Devices (MUTCD) in effect when the Department approves the Crossing shall be properly located and installed.

   c) Final design plans for traffic lanes at or near the Crossing shall be submitted to the Department for approval at least 30 days before construction of the Crossing commences. Construction shall not begin until the Department approves the plans.

d) The Railroad and the City shall coordinate the planning, construction and testing of all signals and other safety devises to ensure that they are properly synchronized and in good working order before the Crossing is opened for use.

e) All pedestrian access transitions at the Crossing shall be designed and installed in compliance with the Americans with Disabilities Act (ADA).

f) Street lighting shall be installed at the crossing. Said lighting shall comply with all federal, state and local requirements.

g) The City shall be responsible for the cost of constructing the Crossing. The Railroad shall be responsible for operating and maintaining the Crossing.

h) If the Crossing has not been approved by the Department for public use by January 1, 2017, then the authority to establish the Crossing under this order shall expire unless the City or the Railroad petitions the Department before January 1, 2017 to modify this Decision for an extension of the deadline.

MAINE DEPARTMENT OF TRANSPORTATION



David Bernhardt, P. E.
Commissioner

VI. APPEAL RIGHTS

Pursuant to 23 M.R.S.A. § 7202, this decision shall be final and binding on all parties unless an appeal from this decision is taken. Any party wishing to appeal must, within 14 days from the date of the filing of this decision, file in the office of the Maine Department of Transportation its reasons for appeal and shall cause to be served on any other interested parties, a copy of the reasons for appeal certified by the department. The department must be made a party to the appeal.

Pursuant to the requirements of 5 M.R.S.A. § 11001 et seq. appellate procedures also apply to an appeal of this decision. Pursuant to 5 M.R.S.A. § 11002, a petition for review of this decision shall be filed within 30 days after receipt of notice of this decision if the appeal is taken by a party to the proceeding for this decision. Any other person aggrieved shall have 40 days from the date the decision was rendered to petition for review. If the review sought is from the Department's failure or refusal to act, the petition for review shall be filed within 6 months of the expiration of the time within which the action should reasonably have occurred.

Pursuant to 5 M.R.S.A. § 11002 (2), the petition shall specify the persons seeking review, the manner in which they are aggrieved and the final agency action which they wish reviewed. It shall also contain a concise statement as to the nature of the action or inaction to be reviewed, the grounds upon which relief is sought and a demand for relief which may be in the alternative. Copies of the petition for review shall be served by Certified Mail, Return Receipt Requested, upon the Maine Department of Transportation, all parties to the proceedings, and the Department of the Maine Attorney General.

Planning and Urban Development
Christine Grimando, AICP
Director

City of portland

Applicant:	Chris Thompson Forefront Partners I, LP 501 Danforth Street Portland, Maine 04102
Project Location:	1 Thompson's Point Rd. Portland, Maine 04102
Parcel #	201 A005001
Project:	Thompson's Point/Mixed-use Development
Identification #:	Reg. 01-00155-A-N
Permit Category:	200 Plus PCE
Traffic Engineer:	Thomas Gorrill/Randy Dunton Gorrill-Palmer Consulting Engineers 300 Southborough Dr., #200 South Portland, ME 04106

Pursuant to the provision of 23 M.R.S.A. § 704-A and Chapter 305 of the Maine Department of Transportation's (MaineDOT) Regulations, the City of Portland and MaineDOT have determined that a one-time extension of the Traffic Movement Permit issued for Thompson's Point is warranted. The permit will be considered expired if construction of the project has not been completed by March 1, 2027, unless a modification is approved prior to this date.

In the event the permit expires prior to construction being completed by the end of the one-time extension date, the Applicant shall submit a new permit, with information pertaining to Sections 1 thru 6 of the General Submission Requirements and a Notice of Intent to File, as outlined in Chapter 305, and address any changes in facts since the initial analysis and approval. Consistent with Section 8 of Chapter 305, in the event the Applicant completes all mitigation required for the Development, but cannot complete the Project within the one-time extension date, the Developer will be required to submit a TMP Modification that includes any programmatic changes to the Development for review and approval. An applicant may be required to provide additional mitigation of permitted trips as a result of changes to the Development program increase beyond the initial approval. Additionally, the Developer may be required to attend a Scoping Meeting, unless the Maine Department of Transportation waives this requirement.

389 Congress Street, Portland, Maine 04101 | ph: 207.874.8608 | cdg@portlandmaine.gov

All required terms and mitigation of the original TMP approval remain in effect.

Christine Grimando, AICP
Director, Department of Planning & Urban Development
City of Portland

Date: March 1, 2024

Stephen Landry, P.E.
State Traffic Engineer
Maine Department of Transportation

Date: 3/12/24

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
16 STATE HOUSE STATION
AUGUSTA, MAINE 04333-0016

Paul R. LePage
GOVERNOR

David Bernhardt
COMMISSIONER

Applicant:	Thompson's Point Development Company Inc.
Project Location:	Thompson's Point Rd, Portland, ME Portland Tax Map 201Lot(s) 8, 9 and 10 and Map 202 Lots 2, 4 and 5
Project:	Mixed use Development
Identification #:	Reg. 01-00155-A-N
Permit Category:	200 Plus PCE
Traffic Engineer:	Thomas Gorrill Gorrill-Palmer Consulting Engineers PO Box 1237 15 Shaker Rd. Gray, ME 04039

Pursuant to the provision of 23 M.R.S.A. § 704-A and Chapter 305 of the Department's Regulations, the Maine Department of Transportation (MaineDOT) has considered the application of Thompson's Point Development Company Inc with supportive data, agency review and other related materials on file.

PROJECT DESCRIPTION

The applicant proposes to construct a 97,697 sf event center/convention hall/exhibit hall; 32,000 sf concert hall plus outdoor venue for up to 4,800 attendees; 378,000 sf of office space; 4,000 sf of medical office space; 20,000 sf gym and rehabilitation center; 125 room hotel; 6,000 sf of restaurant space (high-turnover sit down). The site is forecast to generate 734 AM and 1,091 PM weekday peak hour trip ends.

Findings

Based on a review of the files and related information, MaineDOT approves the Traffic Movement Permit Application of Thompson's Point Development Company Inc. subject to the following conditions:

MITIGATION

On-Site Mitigation

All Site Entrances

All entrances shall have overhead illumination provided, if not existing, to illuminate the intersections per MaineDOT standards at a minimum. Overhead lighting shall have an average of

0.6 to 1.0 foot candles, with the maximum to minimum lighting ratio of not more than 10:1 and an average to minimum light level of not more than 4:1.

Thompson's Point Road

Thompson's Point Road shall be widened to accommodate an 8 foot shared bike/pedestrian path, a 3 foot wide grass esplanade, a 3 foot shoulder with granite curb, an 11 foot wide outbound lane, and 11 foot wide flush concrete median, an 11 foot wide inbound lane and a 3 foot shoulder with granite curb. This section will be constructed from the site driveway to the Fore River Parkway. The 250 feet of flush median closest to Fore River Parkway shall be designated as an exclusive left turn lane outbound. The shared bike/pedestrian path shall have a crossing built at the Sewall Street cul de sac and the path extended to the existing sidewalk on Sewall Street. Another pedestrian crossing shall be installed where the current pedestrian crossing is at the bus/train station. Both crossings shall have solar powered/radio interconnected pedestrian activated rectangular rapid flashing beacon lights installed.

Thompson's Point Development

No sporting events or concerts shall begin between 4 pm and 7pm Monday through Friday.

During large sporting and concert events, the applicant shall ensure that there are flaggers and uniformed police officers present to ensure that there will be two inbound lanes prior to the event and two exit lanes after the event. Flaggers/uniformed police officers shall be stationed to ensure that pedestrians are able to cross at either of the two crosswalks, at the Transportation Center Entrance to let busses in or out and also at the transportation center parking lot entrances to ensure that transportation center patrons leaving the parking lots are merged into the out-bound flow. Uniformed police officers shall be present after an event to direct traffic at the Thompson's Point Road/Fore River Parkway intersection. Retro-reflective traffic cones shall be used by the development to create the reversible lane. Flaggers will direct vehicles into the proper lanes.

Off-Site Mitigation

Fore River Parkway/Thompson's Point Road/I-295 Exit 5A off-ramp

The Southbound off ramp at Exit 5 A shall be reconstructed to have a separate 13 foot wide left turn lane and 13 foot wide through lane. The widths include the

required curb offset. The left lane shall extend back 200 feet. Install Queue detector at the ramp gore area to act as pre-emption for the signal should the queue spill back that far.

Modify traffic signal timing and phasing accordingly.

Fore River Parkway/Congress St/I-295 Exit 5 B off-ramp

Widen the southbound off-ramp to accommodate a 5 foot wide right shoulder, two 12 foot wide right turn lanes and a 2 foot curb offset for a distance of 125 feet with an appropriate taper. Install Queue detector at the ramp gore area to act as pre-emption for the signal should the queue spill back that far.

Re-stripe Congress Street Westbound to accommodate a longer westbound left turn lane, extend back to the end of the island (to the slip lane from Park Ave to Congress St).

Modify traffic signal timing and phasing accordingly.

Congress St/Stevens Ave

Restripe Steven's Avenue to an exclusive left and a shared left/thru/right and modify traffic signal timing and phasing accordingly.

The developer shall pay an impact fee in the amount of $15,000 for inlaid thermoplastic paint skips, retro-reflective back plates and overhead lane usage signage. This money will be put towards improvements funded by PIN 19078.00.

Congress St/Westbrook St

The developer shall pay an impact fee in the amount of $15,000 for inlaid thermoplastic paint skips, retro-reflective back plates and overhead lane usage signage. This money will be put towards improvements funded by PIN 19078.00.

Congress/Frost St

The developer shall pay an impact fee in the amount of $15,000 for inlaid thermoplastic paint skips, retro-reflective back plates and overhead lane usage signage. This money will be put towards improvements funded by PIN 19078.00.

Transportation Demand Management

In lieu of additional mitigation, Transportation Demand Management shall be used to offset the traffic impacts on the roadway network. The City has implemented a Transportation Oriented Development Tax Increment Financing District for the Thompson's Point Development. This development would benefit from some increased transit connections to the airport and Old Port, funding for handicap accessible taxis or for increase in parking at the Transportation Center.

Overall

A. Provide all necessary auxiliary signs, striping and pavement markings to implement the improvements described herein according to State of Maine and/or National standards.

B. All plantings and signs (existing and/or proposed; permanent and/or temporary) shall be placed and maintained such that they do not block available sight distances and do not violate the State's "Installations and Obstructions" law. No signage or plantings shall be allowed within the "clear zone" if they constitute a deadly fixed object as determined by MaineDOT. All signs shall meet MRSA Title 23, Chapter 21, Section 1914: "On-Premise Signs".

C. If any of the supporting data or representations for which this permit is based changes in any way or is found to be incorrect / inaccurate, the applicant shall request in writing from MaineDOT a decision of what impacts those changes will have on the permit. The applicant will then be required to submit those changes for review and approval and additional mitigation as a result of those changes may be required at the expense of the applicant.

D. Because the proposed project affects the state highway and drainage systems and requires improvement to that system, the applicant must obtain approval of the design plans and coordinate work through MaineDOT's State Traffic Engineer, who can be reached at (207)-624-3620 in Augusta.

By:

Stephen Landry, P.E.
Assistant State Traffic Engineer

Date: 6/13/12

NOTICE OF INTENT TO COMPLY WITH MAINE CONSTRUCTION GENERAL PERMIT

PLEASE TYPE OR PRINT IN *BLACK INK ONLY*

Name of Applicant (Owner):	Forefront Partners I, LP Attn: Chris Thompson	**Applicant Mailing Address:**	501 Danforth Street		
Town/City:	Portland	**State:**	Maine	**Zip Code:**	04102
Daytime phone: (with area code)	207-747-5288	**Email if available:**	parallaxpartners@gmail.com	**Name of Agent:**	Bo Kennedy, P.E. - FST bkennedy@fstinc.com
Project Location: (Town/City):	Portland	**UTM Northing: (if known)**	4,833,933	**UTM Easting: (if known)**	395,870
Map #:	201/202	**Lot #:**	A-5, A-8, A-10/ A-1, A-4	**Size of disturbed area proposed:**	5.0 ac.
Creating a common plan of development or sale?	**Yes** X	**No**	**Part of a larger project?**	**Yes** X	**No**
Name of waterbody(ies) to which the disturbed area drains, or name municipality if drains to an MS4:	Fore River				
Does site drain to an Impaired Waterbody (C)? If so, give name:	No				
Detailed directions to site, including address if available:	1 Thompson's Point Road - Portland, Maine				
Description of project and its purpose:					
The construction is associated with an overall plan to develop Thompson's Point with a mixed use development.					
The development is subject to a Site Location of Development Permit as approved by the City of Portland through					
the delegated review authority.					

I am filing notice of my intent to carry out work which meets the requirements of the Construction General Permit (effective 3/10/03). I have a copy of the Construction General Permit. I have read and will comply with all of the standards. I have attached all the required submittals. *Notification forms cannot be accepted without the necessary attachments.*

- ☒ ALL: A check (non-refundable) made payable to: "Treasurer, State of Maine." **See DEP fee schedule for correct fee**. You must know # of acres being permitted to determine the fee.
- ☒ ALL: A U.S.G.S. topo map or Maine Atlas & Gazetteer map with the project site clearly marked. (previously submitted)
- ☒ ALL: Drawing of the proposed activity (site plan). (previously submitted)
- ☒ ALL: An ESC plan. (Interim Plan enclosed)
- ☒ IF this form is not being signed by the landowner or lessee of the property, attach documentation showing authorization to sign.
- ☐ IF any construction activity will occur in essential habitat, attach written approval from the Dept. of Inland Fisheries & Wildlife.

I authorize staff of the Departments of Environmental Protection to access the project site for the purpose of determining compliance with the general permit. I also understand that ***this permit is not valid until approved by the Department or 14 days after receipt by the Department, whichever is less.***

Signature of Applicant:		**Date:**	6/18/14

Keep the bottom copy as a record of permit. Send the form with attachments via certified mail to the Maine Dept. of Environmental Protection **at the appropriate regional office.** The DEP will send a copy to the Town Office as evidence of the DEP's receipt of notification. No further authorization by DEP will be issued after receipt of notice. Check with DEP Staff to determine the expiration date on this permit . **Work carried out in violation of any standard is subject to enforcement action.**

OFFICE USE ONLY	Ck.# 1190	Date 6/18/2014	Staff MR	Staff	
NOI # 58116	FP 130.00		Acc. Date 6.23.14	Def. Date	After Photos

615 ✓

STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION

PAUL R. LEPAGE
GOVERNOR

PATRICIA W. AHO
COMMISSIONER

March 6, 2013

Christopher Thompson
Forefront Partners I, LP
55 Lisbon Street, Suite 2400
Lewiston, Maine 04240

Re: The Forefront at Thompson's Point, Portland:
Voluntary Response Action Program- No Action Assurance Letter

Dear Mr. Thompson:

The Maine Department of Environmental Protection (Department) has received and reviewed an application submitted in June 2012, by your environmental consultant Credere Associates, LLC (Credere) to the Department's Voluntary Response Action Program (VRAP) for the Thompson's Point property located at 1 Thompson's Point in Portland, Maine. The following reports were compiled for this site as part of the Greater Portland Council of Government's (GPCOG) Brownfields Program and were reviewed along with this application: A Phase One Environmental Site Assessment (ESA) for the Thompson's Point property prepared by Credere, dated December 5, 2011, a Phase II ESA for Thompson's Point, prepared by Credere dated July 11, 2012, as well as a Voluntary Response Action Program Work Plan, Revision 2 dated February 27, 2013 (Work Plan). Additional documentation submitted to MDEP previously for review included two Phase I ESAs prepared by Gemini Geotchnical Associates (GGA) dated February 6, 1991 and May 16, 2006, a December 15, 1998 Test Pit Investigation report prepared by GGA, and a February 26, 1999 No Further Action Assurance Letter issued by MEDEP VRAP to a previous applicant. The current application was submitted to the Department with the request that the site participate in the VRAP and that Forefront Partners I, LP (Forefront Partners), as the applicant to the VRAP, receive the protections provided by the VRAP Law.

The Thompson's Point Property (the site) is composed of five City of Portland tax map lots (Map 201 Lots A-5, A-8, and A-10, and Map 202 Lots A-1 and A-4) totaling approximately 27.5 acres located on a peninsula along the Fore River in Portland. Land use in the area is currently primarily commercial. The site has been used historically for the following activities: a train car maintenance yard, automobile repair facilities, utility distributors (natural gas and propane), building supply retailers, metal working, concrete block manufacturing, bomb shell casing manufacturing (ordinance plant), textile manufacturing, various construction contractor offices, paperboard production, trailer storage, trucking facilities, and warehousing. The Credere Phase ESA identified the past commercial/industrial use of the property as an environmental concern and identified eight specific Recognized Environmental Concerns for further Phase II

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investigation. The Phase II investigation concluded that there is soil and groundwater contaminated with petroleum and hazardous substances, and that other universal and special wastes are located on the site, including building materials.

Based on the information presented in the above listed reports, the Department agrees with the following recommended actions as proposed in the Work Plan:

1. Known and/or potentially contaminated soils that are disturbed during redevelopment of the site will be managed according to the Work Plan and associated December 12, 2012 Soil Management Plan (SMP). Contaminated soils that are within 12 inches of the developed ground surface or removed and replaced onsite will be covered with a marker layer and a minimum of 12 inches of clean fill, and/or 6 inches of clean sand and gravel over the contaminated soil and at least 3 inches of asphalt/concrete or brick. If excess contaminated soil is generated that cannot be re-used onsite, the material will be disposed offsite at an appropriate facility as special waste.

2. Known and/or potentially contaminated groundwater that is encountered during site redevelopment work will be managed in accordance with the Work Plan and associated December 12, 2012, Groundwater Management Plan.

3. Universal, special, and hazardous waste will be properly managed and removed from the site and disposed at an appropriate facility.

4. PCB containing building materials will be characterized and managed in an appropriate manner and in accordance with the applicable provisions of the Toxic Substances Control Act 40 CFR 761 et seq. Plans for such characterization and management shall be submitted concurrently to USEPA Region 1 and the Department for review and approval.

5. Asbestos abatement and/or management activities in onsite buildings will be conducted in accordance with all applicable State and Federal rules and regulations.

6. Lead based paint abatement/management issues shall be conducted as discussed in the Work Plan and in accordance with all applicable state and federal regulations.

7. A soil screening program will be conducted after the demolition of the site buildings and removal of the concrete slabs as discussed in the Work Plan. Activities that will be completed based on the results of the screening program are discussed in the Work Plan.

8. A deed restriction will be recorded at the Cumberland County Registry of Deeds that:
    1) Prohibits excavation/disturbance of soils onsite without notification of the Department, and references the existence of an Environmental Management Plan that will be developed for the site and submitted for approval by the Department prior to deed restriction recording.
    2) Prohibits withdrawal of groundwater without notification of the Department, and references the existence of an Environmental Management Plan that will be developed for the site and submitted for approval by the Department prior to deed restriction recording.

These restrictions will be placed as Declaration of Environmental Covenants consistent with this letter and in a manner that is acceptable to the Department.

Provided that the actions described above are completed to the satisfaction of the Department, Forefront Partners I, LP and its successors and/or assigns, as well as those persons identified in 38 M.R.S.A. § 343-E(6), will be granted the liability protection provided by 38 M.R.S.A. § 343-E(1) for the property located at 1 Thompson's Point, in Portland, Maine identified as Map 201 Lots A-5, A-8, and A-10, and Map 202 Lots A-1 and A-4. The Department will take no action against Forefront Partners I, LP, its successors and assigns, and all those persons identified in 38 M.R.S.A. § 343-E(6).

Once the proposed and recommended remedial measures at the property have been implemented to the satisfaction of the Department, a report demonstrating the successful completion of the tasks must be forwarded to the VRAP. A report may be submitted when all of the remedial activities have been completed for the entire property or in stages as portions of the property are remediated and ready for redevelopment. Upon determining successful conclusion of the remedial tasks, the Department will issue a Commissioner's Certificate(s) of Completion to Forefront Partners I, LP for those portions of the property where remedial activities have been completed.

If you have any questions, please call me at 207-287-4853.

Sincerely,

Gordon Fuller
Voluntary Response Action Program
Division of Remediation

cc: Nick Hodgkins--MEDEP
Jedd Steinglass, Credere
David L. Galgay, Jr—Verrill Dana LLP.

STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION

PAUL R. LEPAGE
GOVERNOR

PAUL MERCER
COMMISSIONER

January 11, 2018

Christopher Thompson
Forefront Partners I, LP
501 Danforth Street
Portland, ME 04101

Re: Thompson's Point, Portland: Revised Voluntary Response Action
No Action Assurance Letter-Revised January 11, 2018*

Dear Mr. Thompson:

At your request, the Maine Department of Environmental Protection (MEDEP) is issuing this revised No Action Assurance (NAA) letter for Thompson's Point in Portland, Maine. This letter amends the original NAA letter issued by the Department on March 6, 2013.

The MEDEP has received and reviewed an application submitted in June 2012, by your environmental consultant Credere Associates, LLC (Credere) to the Department's Voluntary Response Action Program (VRAP) for the Thompson's Point property located at 1 Thompson's Point in Portland, Maine. The following reports were compiled for this site as part of the Greater Portland Council of Government's (GPCOG) Brownfields Program and were reviewed along with this application: A Phase One Environmental Site Assessment (ESA) for the Thompson's Point property prepared by Credere, dated December 5, 2011, a Phase II ESA for Thompson's Point, prepared by Credere dated July 11, 2012, as well as a Voluntary Response Action Program Work Plan, Revision 2 dated February 27, 2013 (Work Plan). Additional documentation submitted to MDEP previously for review included two Phase I ESAs prepared by Gemini Geotechnical Associates (GGA) dated February 6, 1991 and May 16, 2006, a December 15, 1998 Test Pit Investigation report prepared by GGA, and a February 26, 1999 No Further Action Assurance Letter issued by MEDEP VRAP to a previous applicant. The current application was submitted to the Department with the request that the site participate in the VRAP and that Forefront Partners I, LP (Forefront Partners), as the applicant to the VRAP, receive the protections provided by the VRAP Law.

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The Thompson's Point Property (the Site) is composed of five City of Portland tax map lots (Map 20 1 Lots A-5, A-8, and A-10, and Map 202 Lots A-1 and A-4) totaling approximately 27.5 acres located on a peninsula along the Fore River in Portland. Land use in the area is currently primarily commercial. The site has been used historically for the following activities: a train car maintenance yard, automobile repair facilities, utility distributors (natural gas and propane), building supply retailers, metal working, concrete block manufacturing, bombshell casing manufacturing (ordinance plant), textile manufacturing, various construction contractor offices, paperboard production, trailer storage, trucking facilities, and warehousing. The Credere Phase ESA identified the past commercial/industrial use of the property as an environmental concern and identified eight specific Recognized Environmental Concerns for further Phase II investigation. The Phase II investigation concluded that there is soil and groundwater contaminated with petroleum and hazardous substances, and that other universal and special wastes are located on the site, including building materials.

Based on the information presented in the above listed reports, the Department agrees with the following recommended actions as proposed in the Work Plan:

1. Known and/or potentially contaminated soils that are disturbed during redevelopment of the site will be managed according to the Work Plan and associated December 12, 2012 Soil Management Plan (SMP) and/or subsequent Department approved revisions.* Contaminated soils that are within 12 inches of the developed ground surface or removed and replaced onsite will be covered with a marker layer and a minimum of 12 inches of clean fill, and/or 6 inches of clean sand and gravel over the contaminated soil and at least 3 inches of asphalt/concrete or brick. If excess contaminated soil is generated that cannot be re-used onsite, the material will be disposed offsite at an appropriate facility as special waste.

2. Known and/or potentially contaminated groundwater that is encountered during site redevelopment work will be managed in accordance with the Work Plan and associated December 12, 2012 Groundwater Management Plan and/or subsequent Department approved revisions.*

3. Universal, special, and hazardous waste will be properly managed and removed from the site and disposed at an appropriate facility.

4. PCB containing building materials will be characterized and managed in an appropriate manner and in accordance with the applicable provisions of the Toxic Substances Control Act 40 CFR 761 et seq. Plans for such characterization and management shall be submitted concurrently to USEPA Region 1 and the Department for review and approval.

5. Asbestos abatement and/or management activities in onsite buildings will be conducted in accordance with all applicable State and Federal rules and regulations.

6. Lead based paint abatement/management issues shall be conducted as discussed in the Work Plan and in accordance with all applicable state and federal regulations.

7. A soil screening program will be conducted after the demolition of the site buildings and removal of the concrete slabs as discussed in the Work Plan. Activities that will be completed based on the results of the screening program are discussed in the Work Plan and/or in subsequent Department approved revisions.*

8. A deed restriction will be recorded at the Cumberland County Registry of Deeds that:
    1) Prohibits excavation/disturbance of soils onsite without notification of the Department, and references the existence of an Environmental Management Plan that will be developed for the site and submitted for approval by the Department prior to deed restriction recording.
    2) Prohibits withdrawal of groundwater without notification of the Department, and references the existence of an Environmental Management Plan that will be developed for the site and submitted for approval by the Department prior to deed restriction recording.

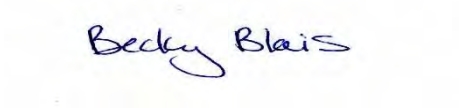
These restrictions will be placed as Declaration of Environmental Covenants consistent with this letter and in a manner that is acceptable to the Department.

Provided that the actions described above are completed to the satisfaction of the Department, Forefront Partners I, LP and its successors and/or assigns, as well as those persons identified in 38 M.R.S.A. § 343-E (6), will be granted the liability protection provided by 38 M.R.S.A. § 343- E(l) for the property located at 1 Thompson's Point, in Portland, Maine identified as Map 201 Lots A-5, A-8, and A- 10, and Map 202 Lots A-1 and A-4. The Department will take no action against Forefront Partners I, LP, its successors and assigns, and all those persons identified in 38 M.R.S.A. § 343-E (6).

Once the proposed and recommended remedial measures at the property have been implemented to the satisfaction of the Department, a report demonstrating the successful completion of the tasks must be forwarded to the VRAP. A report may be submitted when all of the remedial activities have been completed for the entire property or in stages as portions of the property are remediated and ready for redevelopment. Upon determining successful conclusion of the remedial tasks, the Department will issue a Commissioner's Certificate(s) of Completion to Forefront Partners I, LP for those portions of the property where remedial activities have been completed.

If you have any questions, please call me at 207-446-2564.

Sincerely,



Becky Blais
Maine Department of Environmental Protection
Voluntary Response Action Program

cc: Nick Hodgkins--MEDEP
Allison Drouin, Credere
David L. Galgay, Jr-Verrill Dana, LLP.

STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION

PAUL R. LEPAGE
GOVERNOR

PAUL MERCER
COMMISSIONER

December 13, 2017

Credere Associates, LLC
Attn: Allison Drouin
776 Main Street
Westbrook, ME 04092

Re: Voluntary Response Action Program
Brick North property-No Revised No Action Assurance Letter

Dear Ms. Drouin:

As we discussed in email correspondence on December 11, 2017, the Department did not issue a revised No Action Assurance (NAA) letter upon receipt of the revised VRAP application, which was submitted to the Department on January 25, 2017 and included the addition of Lots 14 & 15 (the Suburban Propane lots). The Department accepted the revised application and included these additional lots under the existing March 6, 2013 NAA, which covers the overall Site.

If you have any questions, please do not hesitate to contact me.

Sincerely,

Becky Blais

Becky Blais
Division of Remediation
Brownfields and Voluntary Response Action Programs
207-446-2564
Becky.Blais@maine.gov

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STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION
17 STATE HOUSE STATION AUGUSTA, MAINE 04333-0017

DEPARTMENT ORDER

IN THE MATTER OF

FOREFRONT PARTNERS I LP	) NATURAL RESOURCES PROTECTION ACT
Portland, Cumberland County	) COASTAL WETLAND ALTERATION
GRADING, LANDSCAPING,	) SIGNIFICANT WILDLIFE HABITAT
STORMWATER OUTFALLS, GRANITE	)
STAIRS, LANDSCAPING, PIER SYSTEM	)
L-25672-4P-H-N	)
L-25672-FS-I-N	) WATER QUALITY CERTIFICATION
L-25672-2G-J-N	) FINDINGS OF FACT AND ORDER

Pursuant to the provisions of 38 M.R.S. §§ 480-A–480-JJ, Section 401 of the Clean Water Act (33 U.S.C. § 1341), and Chapters 310, 315, and 335 of Department rules, the Department of Environmental Protection (Department) has considered the application of FOREFRONT PARTNERS I LP (applicant) with the supportive data, agency review comments, and other related materials on file and FINDS THE FOLLOWING FACTS:

1. PROJECT DESCRIPTION:

A. History of Project: Thompson's Point is an approximately 27.5-acre peninsula of land extending into the Fore River that has a 150-year history of industrial development. In the early part of the twentieth century the site was used primarily as a railroad maintenance facility. It was later used by the federal government for war-related activities such as munitions production. Subsequent uses included the operation of a concrete products manufacturing facility and other commercial activities, and the staging and stockpiling of construction materials. In Department Order #L-25672-2G-A-N/L-25672-FS-B-N, dated July 27, 2012, the Department approved a number of activities on the site located within 75 feet of the highest annual tide (HAT) line, including: clean up and removal of existing debris, stockpiles, and solid waste; building demolition; clearing and grubbing in advance of new topsoil for soil stabilization, landscaping, and trails; access drive and parking area construction; new buildings; installation or replacement of stormwater outfalls; installation of utilities; installation of a pier system at the south end of the peninsula; and a public access ramp. In Department Order #L-25672-4P-F-N/L-25672-FS-G-N, dated June 30, 2014, the Department approved relocation and reconfiguration of the approved pier system. Both licenses expired because the authorized activities were not undertaken within the time frames specified in the licenses.

B. Summary: The applicant proposes to complete the activities authorized in the previous licenses. The pier/boat launch system will consist of a six-foot wide by 16-foot long pier, a four-foot wide by 50-foot long gangway, a gangway landing float, and a 10-foot wide by 60-foot long seasonal float that will be located parallel to the shoreline. Approximately 386 square feet of freshwater wetlands adjacent to a coastal wetland will be altered by the construction of a new stormwater outfall. Other activities will include

landscaping; grading; trail construction; installation of granite block stairs for water access extending to, but not beyond, the HAT line; access drive and parking area construction; new buildings; installation or replacement of stormwater outfalls; and installation of utilities. Some of these activities will occur within 75 feet of the HAT line. Activity below the HAT line will be limited to installation of the gangway and floats for the pier system.

The proposed activities are shown on plans submitted with the 2012 and 2014 applications, included with the application by reference, and supplemented with the following: a plan titled "The Forefront at Thompson's Point Building B2 and Dock – Grading Plan," and "The Forefront at Thompson's Point Building B2 and Dock – Erosion Control and Construction Management Plan," both prepared by Placemaker Partners, LLC dated December 2022, with a latest revision date of March 17, 2023; and a plan titled "The Forefront at Thompson's Point Building B2 and Dock – Planting Plan," prepared by Carroll Associates Landscape Architects and dated December 2022, with a latest revision date of May 4, 2023.

The applicant submitted a Notice of Intent (NOI) to comply with the standards and requirements of the Maine Construction General Permit. NOI #77187 was accepted by the Department on June 13, 2023.

C. Current Use of the Site: Thompson's Point is located adjacent to Interstate 295 and is accessed by the Thompson's Point Connector Road. The parcel is identified as Lots 1, 5, 10/6, and 8 through 23 on Maps 201 and 202 of the City of Portland's tax maps. The area of the proposed project is currently a mix of urban filled land with compacted surfaces and grassed area.

2. EXISTING SCENIC, AESTHETIC, RECREATIONAL OR NAVIGATIONAL USES:

The Natural Resources Protection Act (NRPA), in 38 M.R.S. § 480-D(1), requires the applicant to demonstrate that the proposed project will not unreasonably interfere with existing scenic, aesthetic, recreational and navigational uses.

In accordance with Chapter 315, *Assessing and Mitigating Impacts to Scenic and Aesthetic Uses* (06-096 C.M.R. ch. 315, effective June 29, 2003), the applicant previously submitted a copy of the Department's Visual Evaluation Field Survey Checklist as Appendix A to the application along with a description of the property and the proposed project. The applicant previously submitted photographs of the project site and surroundings including an aerial photograph of the project site. Department staff visited the project site several times during previous application reviews involving the project site.

The proposed project is located in and adjacent to the Fore River, which is a scenic resource visited by the general public, in part, for the use, observation, enjoyment and appreciation of its natural and cultural visual qualities. The project site has been undergoing redevelopment over the last approximately ten years from a completely

developed industrial site with buildings in disrepair, construction staging areas, a wood salvage operation, and semi-trailer box storage to a mixed-use development that includes renovated buildings and an integrated landscape plan. The proposed activities are expected to further improve the visual appeal of the site from the resource.

The Department staff utilized the Department's Visual Impact Assessment Matrix in its evaluation of the proposed project and the Matrix showed an acceptable potential visual impact rating for the proposed project. Based on the information submitted in the application, the visual impact rating, and the previous site visits, the Department determined that the location and scale of the proposed activity is compatible with the existing visual quality and landscape characteristics found within the viewshed of the scenic resource in the project area.

The Department determined that based on the nature of the proposed project and its location, there are no existing recreational or navigational uses of the resource that would be unreasonably impacted.

3. SOIL EROSION:

The NRPA, in 38 M.R.S. § 480-D(2), requires the applicant to demonstrate that the proposed project will not cause unreasonable erosion of soil or sediment nor unreasonably inhibit the natural transfer of soil from the terrestrial to the marine or freshwater environment.

The applicant submitted the erosion control plan referenced in Finding 1, which includes measures to prevent erosion such as inlet protection, riprap outlet protection, erosion control blanket and mesh, and reinforced turf. Activities associated with installation of the ramp and floats is not expected to cause significant erosion into the resource.

The Department finds that the activity will not cause unreasonable erosion of soil or sediment nor unreasonably inhibit the natural transfer of soil from the terrestrial to the marine or freshwater environment.

4. HABITAT CONSIDERATIONS:

The NRPA, in 38 M.R.S. § 480-D(3), requires the applicant to demonstrate that the proposed project will not unreasonably harm significant wildlife habitat, freshwater wetland plant habitat, threatened or endangered plant habitat, aquatic or adjacent upland habitat, travel corridor, freshwater, estuarine or marine fisheries or other aquatic life.

In previous Department reviews of the site, the Maine Department of Inland Fisheries and Wildlife (MDIFW) commented that the mudflats and riparian areas below the HAT line are a valuable shorebird feeding area on the west side of the peninsula and a roosting area on the east side of the peninsula, both of which are significant wildlife habitats as defined in the NRPA. As a result of MDIFW site visits and multiple revisions to the delineation of the roosting area and the feeding area buffers based on onsite conditions, MDIFW

determined that neither buffer extends onto the project site more than 50 feet from mean high water.

In its previous review, MDIFW commented that the applicant's efforts to relocate the proposed pier system would result in less disruption to the shorebird habitats, and recommended that the applicant reiterate its commitment to installing interpretive signage in the vicinity of the pier structure and a viewing platform overlooking the salt marsh and mudflat communities in the northwest portion of the site. The applicant confirmed that it intends to comply with the findings in Department Order #L-25672-4P-F-N/L-25672-FS-G-N, dated June 30, 2014, that required the installation of a viewing platform and educational placards.

The Department finds that the applicant has avoided and minimized Significant Wildlife Habitat impacts to the greatest extent practicable, and that the proposed project represents the least environmentally damaging alternative that meets the overall purpose of the project.

The Department further finds that the activity will not unreasonably harm any freshwater wetland plant habitat, threatened or endangered plant habitat, aquatic or adjacent upland habitat, travel corridor, freshwater, estuarine or marine fisheries or other aquatic life.

5. WATER QUALITY CONSIDERATIONS:

The applicant proposes to use lumber treated with chromated copper arsenate (CCA) to construct the pier. To protect water quality, all CCA-treated lumber must be cured on dry land in a manner that exposes all surfaces to the air for 21 days prior to the start of construction.

As discussed in Finding 3, the applicant proposes to use erosion and sediment control measures during construction to minimize impacts to water quality from siltation.

Provided that CCA-treated lumber is cured as described above, the Department finds that the proposed project will not violate any state water quality law, including those governing the classification of the State's waters.

6. WETLANDS AND WATERBODIES PROTECTION RULES:

The applicant proposes to directly alter 386 square feet of freshwater wetland of special significance to construct a stormwater outfall. The wetland is considered significant because of its proximity to the coastal wetland. Approximately 1,028 square feet of coastal wetland will be indirectly altered due to shading effects from the gangway and floats. Coastal wetlands are wetlands of special significance.

The *Wetlands and Waterbodies Protection Rules*, 06-096 C.M.R. ch. 310 (last amended November 11, 2018), interpret and elaborate on the Natural Resources Protection Act (NRPA) criteria for obtaining a permit. The rules guide the Department in its

determination of whether a project's impacts would be unreasonable. A proposed project would generally be found to be unreasonable if it would cause a loss in wetland area, functions and values and there is a practicable alternative to the project that would be less damaging to the environment. Each application for a NRPA permit that involves a coastal wetland alteration must provide an analysis of alternatives in order to demonstrate that a practicable alternative does not exist.

A. Avoidance. An applicant must submit an analysis of whether there is a practicable alternative to the project that would be less damaging to the environment, and this analysis is considered by the Department in its assessment of the reasonableness of any impacts. Additionally, for activities proposed in, on, or over wetlands of special significance, the activity must be among the types listed in Chapter 310, § 5(A) or a practicable alternative less damaging to the environment is considered to exist and the impact is unreasonable. A pier is a water dependent use and its proposed construction is among the activities specifically provided for in Chapter 310, § 5(A)(1)(c). The stormwater outfall is associated with the expansion of an existing development and its proposed construction is among the activities specifically provided for in Chapter 310, § 5(A)(1)(d).

The applicant submitted an alternatives analysis for the proposed project in previous Department reviews. Because the proposed project is a transit-oriented development, the applicant selected the project site due to its proximity to the highway, passenger rail service, and bus service, all within a short distance to the Portland Jetport. There are currently no other sites in Portland that can offer the amount of land availability and the location required for this type of project, which will offer a range of activities integrating office, hospitality, and cultural uses with a focus on sustainability. Additionally, the overall project constitutes redevelopment and reuse of a former industrial site. The proposed layout includes approximately 386 square feet of wetland fill within the northwesterly "panhandle" of the site associated with a drainage outfall and grading. This alteration was determined to be unavoidable.

The pier system as approved in Department Order #L-25672-4P-F-N/L-25672-FS-G-N was relocated to a different location on the peninsula to minimize impacts to significant wildlife habitat but was also increased in size to accommodate local rowing organizations that desired access. Because of the nature of the proposed pier system, some impact to the coastal wetland is unavoidable.

B. Minimal Alteration. In support of an application and to address the analysis of the reasonableness of any impacts of a proposed project, an applicant must demonstrate that the amount of coastal wetland to be altered will be kept to the minimum amount necessary for meeting the overall purpose of the project. For the pier system, the applicant designed the size of the floats to facilitate the launch of eight oar crew boats, or shells, which are approximately 60 feet long, out into the bay. The increased pier length from the pier system approved in Department Order #L-25672-2G-A-N/L-25672-FS-B-N is needed to walk the shell down the gangway and launch it into the water and is designed at the minimum length necessary to launch rowing shells.

Regarding the wetland fill proposed in the panhandle of the project site, this alteration is necessary to manage stormwater runoff from existing and proposed developed areas on the site and has been minimized to the greatest practicable extent.

C. Compensation. In accordance with Chapter 310, § 5(C)(6)(b), compensation may be required to achieve the goal of no net loss of coastal wetland functions and values. This project will not result in over 500 square feet of fill in either the freshwater wetland of special significance or the coastal wetland, which is the threshold over which compensation is generally required. Further, the proposed project will not have an adverse impact on marine resources or wildlife habitat as determined by the Department. For these reasons, the Department determined that compensation is not required.

The Department finds that the applicant has avoided and minimized coastal wetland impacts to the greatest extent practicable, and that the proposed project represents the least environmentally damaging alternative that meets the overall purpose of the project.

7. OTHER CONSIDERATIONS:

The Department finds, based on the design, proposed construction methods, and location, the proposed project will not inhibit the natural transfer of soil from the terrestrial to the marine environment, will not interfere with the natural flow of any surface or subsurface waters, and will not cause or increase flooding. The proposed project is not located in a coastal sand dune system, is not a crossing of an outstanding river segment, and does not involve dredge spoils disposal or the transport of dredge spoils by water.

BASED on the above findings of fact, and subject to the conditions listed below, the Department makes the following conclusions pursuant to 38 M.R.S. §§ 480-A–480-JJ and Section 401 of the Clean Water Act (33 U.S.C. § 1341):

A. The proposed activity will not unreasonably interfere with existing scenic, aesthetic, recreational, or navigational uses.

B. The proposed activity will not cause unreasonable erosion of soil or sediment.

C. The proposed activity will not unreasonably inhibit the natural transfer of soil from the terrestrial to the marine or freshwater environment.

D. The proposed activity will not unreasonably harm any significant wildlife habitat, freshwater wetland plant habitat, threatened or endangered plant habitat, aquatic or adjacent upland habitat, travel corridor, freshwater, estuarine, or marine fisheries or other aquatic life.

E. The proposed activity will not unreasonably interfere with the natural flow of any surface or subsurface waters.

F. The proposed activity will not violate any state water quality law including those governing the classifications of the State's waters provided that CCA-treated lumber is cured as described in Finding 5.

G. The proposed activity will not unreasonably cause or increase the flooding of the alteration area or adjacent properties.

H. The proposed activity is not on or adjacent to a sand dune.

I. The proposed activity is not on an outstanding river segment as noted in 38 M.R.S. § 480-P.

THEREFORE, the Department APPROVES the above noted application of FOREFRONT PARTNERS I, LP to install drainage outfalls, perform grading and landscaping, install granite block stairs, install a pier/boat launch system, and perform other related activities, all as described in Finding 1, SUBJECT TO THE ATTACHED CONDITIONS, and all applicable standards and regulations:

1. Standard Conditions of Approval, a copy attached.

2. The applicant shall take all necessary measures to ensure that its activities or those of its agents do not result in measurable erosion of soil on the site during the construction of the project covered by this approval.

3. Severability. The invalidity or unenforceability of any provision, or part thereof, of this License shall not affect the remainder of the provision or any other provisions. This License shall be construed and enforced in all respects as if such invalid or unenforceable provision or part thereof had been omitted.

4. All CCA-treated lumber shall be cured on dry land in a manner that exposes all surfaces to the air for 21 days prior to the start of construction.

THIS APPROVAL DOES NOT CONSTITUTE OR SUBSTITUTE FOR ANY OTHER REQUIRED STATE, FEDERAL OR LOCAL APPROVALS NOR DOES IT VERIFY COMPLIANCE WITH ANY APPLICABLE SHORELAND ZONING ORDINANCES.

DONE AND DATED IN AUGUSTA, MAINE, THIS 15th DAY OF JUNE, 2023.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: _____
For: Melanie Loyzim, Commissioner

FILED
June 15th, 2023
State of Maine
Board of Environmental Protection

PLEASE NOTE THE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES.
MR/L25672HN/L25672IN/L25672JN/ATS91011&90970&91090

STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION

PAUL R. LEPAGE
GOVERNOR

PATRICIA W. AHO
COMMISSIONER

June 2014

Forefront Partners I, LP
55 Lisbon St., Suite 2400
Lewiston, ME 04240

RE: Natural Resources Protection Act Application, Portland
DEP #L-25672-4P-F-N/L-25672-FS-G-N

Dear Applicant:

Please find enclosed a signed copy of your Department of Environmental Protection land use permit. You will note that the permit includes a description of your project, findings of fact that relate to the approval criteria the Department used in evaluating your project, and conditions that are based on those findings and the particulars of your project. Please take several moments to read your permit carefully, paying particular attention to the conditions of the approval. The Department reviews every application thoroughly and strives to formulate reasonable conditions of approval within the context of the Department's environmental laws. You will also find attached some materials that describe the Department's appeal procedures for your information.

If you have any questions about the permit or thoughts on how the Department processed this application please get in touch with me directly. I can be reached at (207) 592-1692 or at Marybeth.richardson@maine.gov.

Sincerely,

Marybeth Richardson
Division of Land Resource Regulation
Bureau of Land and Water Quality

pc: File

AUGUSTA
17 STATE HOUSE STATION
AUGUSTA, MAINE 04333-0017
(207) 287-7688 FAX: (207) 287-7826

BANGOR
106 HOGAN ROAD, SUITE 6
BANGOR, MAINE 04401
(207) 941-4570 FAX: (207) 941-4584

PORTLAND
312 CANCO ROAD
PORTLAND, MAINE 04103
(207) 822-6300 FAX: (207) 822-6303

PRESQUE ISLE
1235 CENTRAL DRIVE, SKYWAY PARK
PRESQUE ISLE, MAINE 04769
(207) 764-0477 FAX: (207) 760-3143

web site: www.maine.gov/dep

STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION
17 STATE HOUSE STATION AUGUSTA, MAINE 04333-0017

DEPARTMENT ORDER

IN THE MATTER OF

FOREFRONT PARTNERS I, LP	) NATURAL RESOURCES PROTECTION ACT
Portland, Cumberland County	) COASTAL WETLAND ALTERATION
PIER SYSTEM	) SIGNIFICANT WILDLIFE HABITAT
L-25672-4P-F-N (approval)	) WATER QUALITY CERTIFICATION
L-25672-FS-G-N (approval)	) FINDINGS OF FACT AND ORDER

Pursuant to the provisions of 38 M.R.S.A. Sections 480-A et seq. and Section 401 of the Federal Water Pollution Control Act, the Department of Environmental Protection has considered the application of FOREFRONT PARNTERS I, LP with the supportive data, agency review comments, and other related materials on file and FINDS THE FOLLOWING FACTS:

1. PROJECT DESCRIPTION:

A. History of Project: Thompson's Point is an approximately 27.5-acre peninsula of land extending into the Fore River that has a 150-year history of industrial development. In the early part of the twentieth century the site was used primarily as a railroad maintenance facility. It was later used by the federal government for war-related activities such as munitions production. Subsequent uses included the operation of a concrete products manufacturing facility and other commercial activities, and the staging and stockpiling of construction materials.

In Department Order #L-25672-2G-A-N/L-25672-FS-B-N, dated July 27, 2012, the Department approved a number of activities on the site that will occur within 75 feet of the highest annual tide (HAT) line, including: clean up and removal of existing debris, stockpiles, and solid waste; building demolition; clearing and grubbing in advance of new topsoil for soil stabilization, landscaping, and trails; access drive and parking area construction; new buildings; installation or replacement of stormwater outfalls; installation of utilities; installation of a pier system at the south end of the peninsula; and a public access ramp.

B. Summary: The applicant proposes to shift the location of the pier system to the west from its previously-approved location at the southerly tip of the Thompson's Point peninsula to align better with the proposed master plan pedestrian access. The proposed pier system will include a longer float than the previously-approved pier system that will be large enough to accommodate crew boats, or rowing shells, and will be positioned so that water access will be available during all-tide conditions. The system will consist of a permanent six-foot wide by 16-foot long timber pier located at the top of the bank, which will serve as the top/landing approach to a four-foot wide by 50-foot long seasonal gangway and a seasonal, 10-foot wide by 60-foot long float.

The proposed pier system is shown on two plans, the first titled "The Forefront at Thompson's Point Seasonal Dock System," prepared by Fay, Spofford & Thorndike and dated March 13, 2014, and the second titled "Layout Concept for Portland Rowing," prepared by Custom Float Services, Inc. and dated March 6, 2014.

C. Current Use of the Site: A realigned combined sewer overflow has been constructed along the westerly side of the peninsula. A walking trail along the "panhandle" area of the site has also been constructed. The majority of the approximately 4,100 linear feet of shoreline at the site was previously armored with riprap. Approximately five acres of the site lie below the HAT line. There are several buildings on the site that will be demolished.

2. EXISTING SCENIC, AESTHETIC, RECREATIONAL OR NAVIGATIONAL USES:

In accordance with Chapter 315, Assessing and Mitigating Impacts to Scenic and Aesthetic Uses, the applicant submitted a copy of the Department's Visual Evaluation Field Survey Checklist as Appendix A to the application along with a description of the property and the proposed project. The applicant also submitted several photographs of the proposed project site including aerial photographs. Department staff visited the project site in July 2011.

The proposed project is located adjacent to the Fore River, which is a scenic resource visited by the general public, in part, for the use, observation, enjoyment and appreciation of its natural and cultural visual qualities. The project site is currently almost completely developed with paved areas, gravel areas, and a number of buildings and foundations. Some of the buildings are functional and contain commercial space and others are in various stages of disrepair. The developed areas extend to the top of the slope down to the river, which is armored with riprap. Existing wooded areas are limited to the far northwest corner of the site.

Overall, the existing site is heavily developed with little visual appeal. Current uses include construction staging, a wood salvage operation, and semi-trailer box storage. Most of the existing structures appear to be marginally maintained and are in average to poor condition. The proposed project is not expected to significantly change the visual impact of the redeveloped site as approved in Department Order #L-25672-2G-A-N/ L-25672-FS-B-N.

The proposed project was evaluated using the Department's Visual Impact Assessment Matrix and was found to have an acceptable potential visual impact rating. Based on the information submitted in the application, the visual impact rating, and the site visit, the Department determined that the location and scale of the proposed activity is compatible with the existing visual quality and landscape characteristics found within the viewshed of the scenic resource in the project area.

The Department did not identify any issues involving existing recreational and navigational uses.

The Department finds that the proposed activity will not unreasonably interfere with existing scenic, aesthetic, recreational or navigational uses of the protected natural resource.

3. SOIL EROSION:

Construction of the proposed project is expected to take several weeks. The float systems will be prefabricated and the permanent pier section will be constructed onsite and set into place. The permanent pier section will be supported on concrete foundations. Construction will be accomplished by excavating small holes that will be backfilled with concrete. The seasonal floats will be anchored with moorings. These activities are not anticipated to cause any significant source of sedimentation.

The Department finds that the activity will not cause unreasonable erosion of soil or sediment nor unreasonably inhibit the natural transfer of soil from the terrestrial to the marine or freshwater environment.

4. HABITAT CONSIDERATIONS:

The Department of Marine Resources (DMR) reviewed the project approved in Department Order #L-25672-2G-A-N/L-25672-FS-B-N and stated that it should not cause any significant adverse impact to marine resources.

The Maine Department of Inland Fisheries and Wildlife (MDIFW) reviewed the project approved in Department Order #L-25672-2G-A-N/L-25672-FS-B-N and stated that the mudflats and riparian areas below the HAT line are a valuable shorebird feeding area on the west side of the peninsula and a roosting area on the east side of the peninsula. MDIFW commented that the proposed project includes activities within the associated upland buffer areas that may have the potential to adversely affect shorebirds using the mudflats in the area. As a result of two site visits and multiple revisions to the delineation of the roosting area and the feeding area buffers based on onsite conditions, neither buffer extends onto the project site more than 50 feet from mean high water.

During the Department's review of the original application in 2012, MDIFW expressed concerns about the initial design of the project because it proposed rowing floats at the northeasterly corner of the site, directly adjacent to the shorebird roosting area and its associated upland buffer. This float system was subsequently deleted from the plan, and the plan that was approved by the Department included a small hand carry boat/kayak launch float at the southern tip of the site as described in Finding 1. MDIFW did not express concerns about this seasonal structure and stated that the project when complete would not result in any significant adverse impact to the habitat.

The applicant now proposes to relocate the pier and float structure from the southernmost tip of Thompson's Point to a point on the shoreline approximately 108 feet west of the previously approved pier system, further from the shorebird roosting area, but still within

the shorebird feeding area. MDIFW reviewed the proposed project and stated in a review memorandum dated June 25, 2014, that the pier system has been relocated to an area that will be less disruptive to wildlife than the original location. MDIFW recommended that the applicant reiterate its commitment to installing interpretive signage in the vicinity of the pier structure and a viewing platform overlooking the salt marsh and mudflat communities in the northwest portion of the site. The applicant confirmed that it intends to comply with the previous permit conditions that required the installation of a viewing platform and educational placards.

The Department finds that the activity will not unreasonably harm any significant wildlife habitat, freshwater wetland plant habitat, threatened or endangered plant habitat, aquatic or adjacent upland habitat, travel corridor, freshwater, estuarine or marine fisheries or other aquatic life.

5. WATER QUALITY CONSIDERATIONS:

The applicant proposes to use lumber treated with chromated copper arsenate (CCA) to construct the pier system. To protect water quality, all CCA-treated lumber must be cured on dry land in a manner that exposes all surfaces to the air for 21 days prior to the start of construction.

Provided that CCA-treated lumber is cured as described above, the Department finds that the proposed project will not violate any state water quality law, including those governing the classification of the State's waters.

6. WETLANDS AND WATERBODIES PROTECTION RULES:

The applicant proposes to indirectly alter a total of 1,028 square feet of coastal wetland as a result of shading from the proposed pier system. The permanent pier section's supports will be located above the HAT line; therefore, no direct wetland impacts are proposed. The pier system as originally approved in Department Order #L-25672-2G-A-N/L-25672-FS-B-N included 513 square feet of indirect wetland alteration due to shading.

The Wetland Protection Rules interpret and elaborate on the Natural Resources Protection Act (NRPA) criteria for obtaining a permit. The rules guide the Department in its determination of whether a project's impacts would be unreasonable. A proposed project would generally be found to be unreasonable if it would cause a loss in wetland area, functions and values and there is a practicable alternative to the project that would be less damaging to the environment. Each application for a NRPA permit that involves a coastal wetland alteration must provide an analysis of alternatives in order to demonstrate that a practicable alternative does not exist.

A. Avoidance. No activity may be permitted if there is a practicable alternative to the project that would be less damaging to the environment. The applicant submitted an alternatives analysis for the proposed project completed by Fay, Spofford & Thorndike and dated May 27, 2014 and June 12, 2014. When the project was first proposed in 2012,

the site in question was contemplated as water access for small personal kayaks, canoes and a water shuttle/taxi. The applicant stated that the purpose of the revised configuration, location, and increase in float size is to allow water access for local rowing organizations. The applicant proposes to increase the size of the floats in order to launch eight oar crew boats, or shells, which are approximately 60 feet long, out into the bay. The increased pier length is needed to walk the shell down the gangway and launch it into the water. The pier system is not intended for boats to be anchored or moored for extended periods. Because of the nature of the project purpose, some increase in impact to the coastal wetland is unavoidable.

B. Minimal Alteration. The amount of coastal wetland to be altered must be kept to the minimum amount necessary for meeting the overall purpose of the project. A permanent pier has been added to the system, but will be located above the HAT line. The gangway will be 10 feet longer than originally proposed, and the float size has been expanded to accommodate a local rowing club as descried above. The proposed 60-foot long float is the minimum size necessary to safely launch rowing shells.

C. Compensation. In accordance with Chapter 310 Section 5(C)(6)(b), compensation is not required to achieve the goal of no net loss of coastal wetland functions and values since the project will not result in over 500 square feet of fill in the resource, which is the threshold over which compensation is generally required. Further, the proposed project will not have an adverse impact on marine resources or wildlife habitat as determined by DMR and MDIFW. For these reasons, the Department determined that compensation is not required.

The Department finds that the applicant has avoided and minimized wetland impacts to the greatest extent practicable, and that the proposed project represents the least environmentally damaging alternative that meets the overall purpose of the project.

7. OTHER CONSIDERATIONS:

The Department did not identify any other issues involving existing scenic, aesthetic, or navigational uses, soil erosion, habitat or fisheries, the natural transfer of soil, natural flow of water, water quality, or flooding.

BASED on the above findings of fact, and subject to the conditions listed below, the Department makes the following conclusions pursuant to 38 M.R.S.A. Sections 480-A et seq. and Section 401 of the Federal Water Pollution Control Act:

A. The proposed activity will not unreasonably interfere with existing scenic, aesthetic, recreational, or navigational uses.

B. The proposed activity will not cause unreasonable erosion of soil or sediment.

C. The proposed activity will not unreasonably inhibit the natural transfer of soil from the terrestrial to the marine or freshwater environment.

D. The proposed activity will not unreasonably harm any significant wildlife habitat, freshwater wetland plant habitat, threatened or endangered plant habitat, aquatic or adjacent upland habitat, travel corridor, freshwater, estuarine, or marine fisheries or other aquatic life.

E. The proposed activity will not unreasonably interfere with the natural flow of any surface or subsurface waters.

F. The proposed activity will not violate any state water quality law including those governing the classifications of the State's waters provided that CCA-treated lumber is cured as described in Finding 5.

G. The proposed activity will not unreasonably cause or increase the flooding of the alteration area or adjacent properties.

H. The proposed activity is not on or adjacent to a sand dune.

I. The proposed activity is not on an outstanding river segment as noted in Title 38 M.R.S.A. Section 480-P.

THEREFORE, the Department APPROVES the above noted application of FOREFRONT PARTNERS I, LP to relocate and enlarge a previously approved pier system at Thompson's Point as described in Finding 1, SUBJECT TO THE ATTACHED CONDITIONS, and all applicable standards and regulations:

1. Standard Conditions of Approval, a copy attached.

2. The applicant shall take all necessary measures to ensure that its activities or those of its agents do not result in measurable erosion of soil on the site during the construction of the project covered by this approval.

3. Severability. The invalidity or unenforceability of any provision, or part thereof, of this License shall not affect the remainder of the provision or any other provisions. This License shall be construed and enforced in all respects as if such invalid or unenforceable provision or part thereof had been omitted.

4. All CCA-treated lumber shall be cured on dry land in a manner that exposes all surfaces to the air for 21 days prior to the start of construction.

THIS APPROVAL DOES NOT CONSTITUTE OR SUBSTITUTE FOR ANY OTHER REQUIRED STATE, FEDERAL OR LOCAL APPROVALS NOR DOES IT VERIFY COMPLIANCE WITH ANY APPLICABLE SHORELAND ZONING ORDINANCES.

DONE AND DATED IN AUGUSTA, MAINE, THIS 30th DAY OF June, 2014.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

Filed
JUN 30 2014
State of Maine
Board of Environmental Protection

BY: Michael Kuhn
For: Patricia W. Aho, Commissioner

PLEASE NOTE THE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES…

MR/L25672FNGN/ATS#77793, 77794

Natural Resources Protection Act (NRPA)
Standard Conditions

THE FOLLOWING STANDARD CONDITIONS SHALL APPLY TO ALL PERMITS GRANTED UNDER THE NATURAL RESOURCE PROTECTION ACT, TITLE 38, M.R.S.A. SECTION 480-A ET.SEQ. UNLESS OTHERWISE SPECIFICALLY STATED IN THE PERMIT.

A. Approval of Variations From Plans. The granting of this permit is dependent upon and limited to the proposals and plans contained in the application and supporting documents submitted and affirmed to by the applicant. Any variation from these plans, proposals, and supporting documents is subject to review and approval prior to implementation.

B. Compliance With All Applicable Laws. The applicant shall secure and comply with all applicable federal, state, and local licenses, permits, authorizations, conditions, agreements, and orders prior to or during construction and operation, as appropriate.

C. Erosion Control. The applicant shall take all necessary measures to ensure that his activities or those of his agents do not result in measurable erosion of soils on the site during the construction and operation of the project covered by this Approval.

D. Compliance With Conditions. Should the project be found, at any time, not to be in compliance with any of the Conditions of this Approval, or should the applicant construct or operate this development in any way other the specified in the Application or Supporting Documents, as modified by the Conditions of this Approval, then the terms of this Approval shall be considered to have been violated.

E. Time frame for approvals. If construction or operation of the activity is not begun within four years, this permit shall lapse and the applicant shall reapply to the Board for a new permit. The applicant may not begin construction or operation of the activity until a new permit is granted. Reapplications for permits may include information submitted in the initial application by reference. This approval, if construction is begun within the four-year time frame, is valid for seven years. If construction is not completed within the seven-year time frame, the applicant must reapply for, and receive, approval prior to continuing construction.

F. No Construction Equipment Below High Water. No construction equipment used in the undertaking of an approved activity is allowed below the mean high water line unless otherwise specified by this permit.

G. Permit Included In Contract Bids. A copy of this permit must be included in or attached to all contract bid specifications for the approved activity.

H. Permit Shown To Contractor. Work done by a contractor pursuant to this permit shall not begin before the contractor has been shown by the applicant a copy of this permit.

Revised (12/2011/DEP LW0428)

DEPLW0386 A2012

DEP INFORMATION SHEET

Appealing a Department Licensing Decision

Dated: March 2012 **Contact: (207) 287-2811**

SUMMARY

There are two methods available to an aggrieved person seeking to appeal a licensing decision made by the Department of Environmental Protection's ("DEP") Commissioner: (1) in an administrative process before the Board of Environmental Protection ("Board"); or (2) in a judicial process before Maine's Superior Court. An aggrieved person seeking review of a licensing decision over which the Board had original jurisdiction may seek judicial review in Maine's Superior Court.

A judicial appeal of final action by the Commissioner or the Board regarding an application for an expedited wind energy development (35-A M.R.S.A. § 3451(4)) or a general permit for an offshore wind energy demonstration project (38 M.R.S.A. § 480-HH(1)) or a general permit for a tidal energy demonstration project (38 M.R.S.A. § 636-A) must be taken to the Supreme Judicial Court sitting as the Law Court.

This INFORMATION SHEET, in conjunction with a review of the statutory and regulatory provisions referred to herein, can help a person to understand his or her rights and obligations in filing an administrative or judicial appeal.

I. ADMINISTRATIVE APPEALS TO THE BOARD

LEGAL REFERENCES

The laws concerning the DEP's *Organization and Powers*, 38 M.R.S.A. §§ 341-D(4) & 346, the *Maine Administrative Procedure Act*, 5 M.R.S.A. § 11001, and the DEP's *Rules Concerning the Processing of Applications and Other Administrative Matters* ("Chapter 2"), 06-096 CMR 2 (April 1, 2003).

HOW LONG YOU HAVE TO SUBMIT AN APPEAL TO THE BOARD

The Board must receive a written appeal within 30 days of the date on which the Commissioner's decision was filed with the Board. Appeals filed after 30 calendar days of the date on which the Commissioner's decision was filed with the Board will be rejected.

HOW TO SUBMIT AN APPEAL TO THE BOARD

Signed original appeal documents must be sent to: Chair, Board of Environmental Protection, c/o Department of Environmental Protection, 17 State House Station, Augusta, ME 04333-0017; faxes are acceptable for purposes of meeting the deadline when followed by the Board's receipt of mailed original documents within five (5) working days. Receipt on a particular day must be by 5:00 PM at DEP's offices in Augusta; materials received after 5:00 PM are not considered received until the following day. The person appealing a licensing decision must also send the DEP's Commissioner a copy of the appeal documents and if the person appealing is not the applicant in the license proceeding at issue the applicant must also be sent a copy of the appeal documents. All of the information listed in the next section must be submitted at the time the appeal is filed. Only the extraordinary circumstances described at the end of that section will justify evidence not in the DEP's record at the time of decision being added to the record for consideration by the Board as part of an appeal.

WHAT YOUR APPEAL PAPERWORK MUST CONTAIN

Appeal materials must contain the following information at the time submitted:

1. *Aggrieved Status*. The appeal must explain how the person filing the appeal has standing to maintain an appeal. This requires an explanation of how the person filing the appeal may suffer a particularized injury as a result of the Commissioner's decision.
2. *The findings, conclusions or conditions objected to or believed to be in error.* Specific references and facts regarding the appellant's issues with the decision must be provided in the notice of appeal.
3. *The basis of the objections or challenge.* If possible, specific regulations, statutes or other facts should be referenced. This may include citing omissions of relevant requirements, and errors believed to have been made in interpretations, conclusions, and relevant requirements.
4. *The remedy sought.* This can range from reversal of the Commissioner's decision on the license or permit to changes in specific permit conditions.
5. *All the matters to be contested.* The Board will limit its consideration to those arguments specifically raised in the written notice of appeal.
6. *Request for hearing.* The Board will hear presentations on appeals at its regularly scheduled meetings, unless a public hearing on the appeal is requested and granted. A request for public hearing on an appeal must be filed as part of the notice of appeal.
7. *New or additional evidence to be offered.* The Board may allow new or additional evidence, referred to as supplemental evidence, to be considered by the Board in an appeal only when the evidence is relevant and material and that the person seeking to add information to the record can show due diligence in bringing the evidence to the DEP's attention at the earliest possible time in the licensing process or that the evidence itself is newly discovered and could not have been presented earlier in the process. Specific requirements for additional evidence are found in Chapter 2.

OTHER CONSIDERATIONS IN APPEALING A DECISION TO THE BOARD

1. *Be familiar with all relevant material in the DEP record.* A license application file is public information, subject to any applicable statutory exceptions, made easily accessible by DEP. Upon request, the DEP will make the material available during normal working hours, provide space to review the file, and provide opportunity for photocopying materials. There is a charge for copies or copying services.
2. *Be familiar with the regulations and laws under which the application was processed, and the procedural rules governing your appeal.* DEP staff will provide this information on request and answer questions regarding applicable requirements.
3. *The filing of an appeal does not operate as a stay to any decision.* If a license has been granted and it has been appealed the license normally remains in effect pending the processing of the appeal. A license holder may proceed with a project pending the outcome of an appeal but the license holder runs the risk of the decision being reversed or modified as a result of the appeal.

WHAT TO EXPECT ONCE YOU FILE A TIMELY APPEAL WITH THE BOARD

The Board will formally acknowledge receipt of an appeal, including the name of the DEP project manager assigned to the specific appeal. The notice of appeal, any materials accepted by the Board Chair as supplementary evidence, and any materials submitted in response to the appeal will be sent to Board members with a recommendation from DEP staff. Persons filing appeals and interested persons are notified in advance of the date set for Board consideration of an appeal or request for public hearing. With or without holding a public hearing, the Board may affirm, amend, or reverse a Commissioner decision or remand the matter to the Commissioner for further proceedings. The Board will notify the appellant, a license holder, and interested persons of its decision.

II. JUDICIAL APPEALS

Maine law generally allows aggrieved persons to appeal final Commissioner or Board licensing decisions to Maine's Superior Court, see 38 M.R.S.A. § 346(1); 06-096 CMR 2; 5 M.R.S.A. § 11001; & M.R. Civ. P 80C. A party's appeal must be filed with the Superior Court within 30 days of receipt of notice of the Board's or the Commissioner's decision. For any other person, an appeal must be filed within 40 days of the date the decision was rendered. Failure to file a timely appeal will result in the Board's or the Commissioner's decision becoming final.

An appeal to court of a license decision regarding an expedited wind energy development, a general permit for an offshore wind energy demonstration project, or a general permit for a tidal energy demonstration project may only be taken directly to the Maine Supreme Judicial Court. See 38 M.R.S.A. § 346(4).

Maine's Administrative Procedure Act, DEP statutes governing a particular matter, and the Maine Rules of Civil Procedure must be consulted for the substantive and procedural details applicable to judicial appeals.

ADDITIONAL INFORMATION

If you have questions or need additional information on the appeal process, for administrative appeals contact the Board's Executive Analyst at (207) 287-2452 or for judicial appeals contact the court clerk's office in which your appeal will be filed.

Note: The DEP provides this INFORMATION SHEET for general guidance only; it is not intended for use as a legal reference. Maine law governs an appellant's rights.

STATE OF MAINE

Department of Environmental Protection

PAUL R. LEPAGE
GOVERNOR

PATRICIA W. AHO
COMMISSIONER

July 2012

Forefront Partners I, LP
55 Lisbon St., Suite 2400
Lewiston, ME 04240
ATTN: Chris Thompson

RE: Natural Resources Protection Act Application, Portland
DEP #L-25672-2G-A-N / #L-25672-FS-B-N

Dear Mr. Thompson:

Please find enclosed a signed copy of your Department of Environmental Protection land use permit. You will note that the permit includes a description of your project, findings of fact that relate to the approval criteria the Department used in evaluating your project, and conditions that are based on those findings and the particulars of your project. Please take several moments to read your permit carefully, paying particular attention to the conditions of the approval. The Department reviews every application thoroughly and strives to formulate reasonable conditions of approval within the context of the Department's environmental laws. You will also find attached some materials that describe the Department's appeal procedures for your information.

If you have any questions about the permit or thoughts on how the Department processed this application please get in touch with me directly. I can be reached at (207) 592-1692 or at Marybeth.richardson@maine.gov.

Sincerely,

Marybeth Richardson, Project Manager
Division of Land Resource Regulation
Bureau of Land and Water Quality

pc: File

AUGUSTA
17 STATE HOUSE STATION
AUGUSTA, MAINE04333-0017
(207) 287-7688 FAX: (207) 287-7826
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PORTLAND
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PORTLAND, MAINE 04103
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PRESQUE ISLE
1235 CENTRAL DRIVE, SKYWAY PARK
PRESQUE ISLE, MAINE 04769-2094
(207) 764-0477 FAX: (207) 764-3143

WEB SITE: WWW.MAINE.GOV/DEP

STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION
17 STATE HOUSE STATION
AUGUSTA, ME 04333

DEPARTMENT ORDER

IN THE MATTER OF

FOREFRONT PARTNERS I, LP	) NATURAL RESOURCES
PROTECTION	
Portland, Cumberland County	) COASTAL WETLAND ALTERATION
THE FOREFRONT AT THOMPSON'S POINT	) SIGNIFICANT WILDLIFE HABITAT
L-25672-2G-A-N (approval)	) WATER QUALITY CERTIFICATION
L-25672-FS-B-N (approval)	) FINDINGS OF FACT AND ORDER

Pursuant to the provisions of 38 M.R.S.A. Sections 480-A et seq. and Section 401 of the Federal Water Pollution Control Act, the Department of Environmental Protection has considered the application of FOREFRONT PARTNERS I, LP with the supportive data, agency review comments, and other related materials on file and FINDS THE FOLLOWING FACTS:

1. PROJECT DESCRIPTION:

A. History of Project: Thompson's Point is an approximately 27.5-acre peninsula of land extending into the Fore River that has a 150-year history of industrial development. In the early part of the twentieth century the site was used primarily as a railroad maintenance facility. It was later used by the federal government for war-related activities such as munitions production. Subsequent uses included the operation of a concrete products manufacturing facility and other commercial activities, and the staging and stockpiling of construction materials.

B. Summary: The applicant proposes to demolish existing structures and redevelop almost the entire project site with a number of buildings, including an events center and concert hall, outdoor amphitheater, hotel, sports medicine and athletic performance lab, parking structure, office building, surface parking, trails, public space, and small boat/kayak access. Activities contemplated by the applicant that require Natural Resources Protection Act review are those that will occur within 75 feet of the highest annual tide (HAT) line, including clean up and removal of existing debris, stockpiles, and solid waste; building demolition; clearing and grubbing in advance of new topsoil for soil stabilization, landscaping, and trails; access drive and parking area construction; new buildings; installation or replacement of stormwater outfalls; installation of utilities; installation of a seasonal dock at the south end of the peninsula; a small hand carry boat/kayak launch; and a public access ramp. Within 25 feet of the HAT line, the only proposed activities will be grading for new landscaping and drainage work.

The proposed project will result in approximately 386 square feet of freshwater wetland fill within the northwesterly "panhandle" of the site associated with a drainage outfall and grading. Under current conditions, the shoreline is riprapped around the majority of the project site. In areas not containing riprap currently, the shoreline is naturally vegetated. No significant disturbance is proposed within these areas. A total of ten drainage outfalls

are proposed and the total extent of riprap enhancement associated with the drainage work is approximately 100 linear feet.

The proposed project is shown on a set of plans, the first of which is titled "The Forefront at Thompson's Point," prepared by DeLuca-Hoffman Associates, Inc. and dated August 2011, with a latest revision date on any sheet of July 12, 2012. The project site is located on Thompson's Point, off Congress Street, in the City of Portland.

The proposed project is subject to review under the Site Location of Development Act. Pursuant to M.R.S.A. Section 489-A, the City of Portland has delegated review authority and is conducting that review.

C. Current Use of the Site: A portion of the project site is utilized as storage for refrigerated dairy trailers. Various other commercial tenants lease space throughout the remaining site. There are currently nine structures and at least several additional foundations located on the site. The majority of the approximately 4,100 linear feet of shoreline at the site has been armored with riprap. Approximately five acres of the site lie below the HAT line.

2. EXISTING SCENIC, AESTHETIC, RECREATIONAL OR NAVIGATIONAL USES:

In accordance with Chapter 315, Assessing and Mitigating Impacts to Scenic and Aesthetic Uses, the applicant submitted a copy of the Department's Visual Evaluation Field Survey Checklist as Appendix A to the application along with a description of the property and the proposed project. The applicant also submitted several photographs of the proposed project site including an aerial photograph of the project site. Department staff visited the project site in July of 2011.

The proposed project is located adjacent to the Fore River, which is a scenic resource visited by the general public, in part, for the use, observation, enjoyment and appreciation of its natural and cultural visual qualities. The project site is currently almost completely developed with paved areas, gravel areas, and a number of buildings and foundations. Some of the buildings are functional and contain commercial space and others are in various stages of disrepair. The developed areas extend to the top of the slope down to the river, which is armored with riprap. Existing wooded areas are limited to the far northwest corner of the site.

Overall, the existing site is heavily developed with little visual appeal. Current uses include construction staging, a wood salvage operation, and semi-trailer box storage. Most of the existing structures appear to be marginally maintained and are in average to poor condition. The proposed project is expected to increase the visual appeal of the site by introducing new buildings and implementing an integrated landscape enhancement plan.

The proposed project was evaluated using the Department's Visual Impact Assessment Matrix and was found to have an acceptable potential visual impact rating. Based on the information submitted in the application, the visual impact rating, and the site visit, the Department determined that the location and scale of the proposed activity is compatible with the existing visual quality and landscape characteristics found within the viewshed of the scenic resource in the project area.

The Department did not identify any issues involving existing recreational and navigational uses.

The Department finds that the proposed activity will not unreasonably interfere with existing scenic, aesthetic, recreational or navigational uses of the protected natural resource.

3. SOIL EROSION:

The applicant submitted an erosion control report and supporting plans for the proposed project, dated March 2012. Based on its review of this information, the Department finds that the activity will not cause unreasonable erosion of soil or sediment nor unreasonably inhibit the natural transfer of soil from the terrestrial to the marine or freshwater environment.

4. HABITAT CONSIDERATIONS:

The Department of Marine Resources (DMR) stated that the proposed project should not cause any significant adverse impact to marine resources, navigation or recreation.

The Maine Department of Inland Fisheries and Wildlife (MDIFW) reviewed the proposed project and stated that the mudflats and riparian areas below the HAT line are valuable shorebird feeding area on the west side of the peninsula and roosting area on the east side of the peninsula. MDIFW commented that the proposed project includes activities within the associated upland buffer areas that may have the potential to adversely affect shorebirds using the mudflats in the area. As a result of two site visits and multiple revisions to the delineation of the roosting area and the feeding area buffers based on onsite conditions, neither buffer extends onto the project site more than 50 feet from mean high water.

In response to MDIFW's concerns, the applicant revised the layout of the project to avoid and minimize potential impacts within the buffer areas, and worked with MDIFW to develop a landscape plan (revision dated July 12, 2012) that provides adequate vegetative screening of the mapped shorebird feeding area between the shoreline and proposed pedestrian trail, and limits vegetation within the shorebird roosting area buffer to lower profile shrubs that are expected to maintain visibility for the shorebirds and minimize the threat of increased raptor predation. The applicant has agreed to install interpretive signage at the proposed south end boat launch. The signage will identify the presence and significance of shorebird habitat and will be designed with MIDFW's input. Additionally, the applicant has agreed to install a raised viewing platform overlooking the salt marsh and mudflat communities in the northwest portion of the site.

In a review memorandum dated July 13, 2012, MDIFW commented: "Given the steps that the applicant has taken to maintain and enhance mapped Significant Wildlife Habitats at this site we do not feel that project completion will result in any significant adverse impact to the resource."

Based on MDIFW's review, the Department finds that the activity will not unreasonably harm any significant wildlife habitat, freshwater wetland plant habitat, threatened or endangered plant habitat, aquatic or adjacent upland habitat, travel corridor, freshwater, estuarine or marine fisheries or other aquatic life.

5. WATER QUALITY CONSIDERATIONS:

The applicant may use lumber treated with chromated copper arsenate (CCA) to construct the floats. To protect water quality, any CCA treated lumber must be cured on dry land in a manner that exposes all surfaces to the air for 21 days prior to the start of construction. Provided any CCA treated lumber is cured as described above, the Department finds that the proposed project will not violate any state water quality law, including those governing the classification of the State's waters.

The Department does not anticipate that the proposed project will violate any state water quality law, including those governing the classification of the State's waters.

6. WETLANDS AND WATERBODIES PROTECTION RULES:

The applicant proposes to alter 386 square feet of an emergent freshwater wetland in the northwestern portion of the site to regrade an area and install a stormwater outfall pipe. Other proposed impacts below the HAT line include less than 100 square feet of alteration associated with the installation of multiple drainage outfalls, most of which will replace existing outfalls. Additionally, approximately 513 square feet of coastal wetland will be altered, through shading, as a result of the seasonal installation of floats at the south end of the peninsula.

The Department's Wetlands and Waterbodies Protection Rules, Chapter 310, require that the applicant meet the following standards:

A. Avoidance. No activity may be permitted if there is a practicable alternative to the project that would be less damaging to the environment. Each application for a coastal wetland alteration permit must provide an analysis of alternatives in order to demonstrate that a practicable alternative does not exist. The applicant submitted an alternatives analysis for the proposed project completed by DeLuca-Hoffman Associates, Inc. Because the proposed project is a transit-oriented development, the applicant selected the project site due to its proximity to the highway, passenger rail service, and bus service, all within a short distance to the Portland Jetport. There are currently no other sites in Portland that can offer the amount of land availability and the location required for this type of project, which will offer a range of activities integrating office, hospitality, and cultural uses with a focus on sustainability. The proposed layout includes approximately 386 square feet of wetland fill within the northwesterly "panhandle" of the site associated with a drainage outfall and grading. This alteration was determined to be unavoidable.

B. Minimal Alteration. The amount of wetland to be altered must be kept to the minimum amount necessary for meeting the overall purpose of the project. The site is currently almost completely developed and the proposed project offers opportunities to improve the scenic character of the area as well as the water quality of runoff from the site. The applicant incorporated a number of measures into the project design and layout to minimize potential impacts to shorebird roosting and feeding areas as described in Finding 4.

C. Compensation. In accordance with Chapter 310 Section 5(C)(6)(b), compensation is not required to achieve the goal of no net loss of coastal wetland functions and values since the project will not result in over 500 square feet of fill in the resource, which is the threshold over which compensation is generally required. Further, the proposed project will not have an adverse impact on marine resources or wildlife habitat as determined by DMR and MDIFW. For these reasons, the Department determined that compensation is not required.

The Department finds that the applicant has avoided and minimized wetland impacts to the greatest extent practicable, and that the proposed project represents the least environmentally damaging alternative that meets the overall purpose of the project.

7. OTHER CONSIDERATIONS:

The Department did not identify any other issues involving existing scenic, aesthetic, or navigational uses, soil erosion, habitat or fisheries, the natural transfer of soil, natural flow of water, water quality, or flooding.

BASED on the above findings of fact, and subject to the conditions listed below, the Department makes the following conclusions pursuant to 38 M.R.S.A. Sections 480-A et seq. and Section 401 of the Federal Water Pollution Control Act:

A. The proposed activity will not unreasonably interfere with existing scenic, aesthetic, recreational, or navigational uses.

B. The proposed activity will not cause unreasonable erosion of soil or sediment.

C. The proposed activity will not unreasonably inhibit the natural transfer of soil from the terrestrial to the marine or freshwater environment.

D. The proposed activity will not unreasonably harm any significant wildlife habitat, freshwater wetland plant habitat, threatened or endangered plant habitat, aquatic or adjacent upland habitat, travel corridor, freshwater, estuarine, or marine fisheries or other aquatic life.

E. The proposed activity will not unreasonably interfere with the natural flow of any surface or subsurface waters.

F. The proposed activity will not violate any state water quality law including those governing the classifications of the State's waters provided any CCA treated lumber used for the project is cured on dry land as described in Finding 5.

G. The proposed activity will not unreasonably cause or increase the flooding of the alteration area or adjacent properties.

H. The proposed activity is not on or adjacent to a sand dune.

I. The proposed activity is not on an outstanding river segment as noted in Title 38 M.R.S.A. Section 480-P.

THEREFORE, the Department APPROVES the above noted application of FOREFRONT PARTNERS I, L.P. to alter coastal wetlands and adjacent areas as described in Finding 1, SUBJECT TO THE ATTACHED CONDITIONS, and all applicable standards and regulations:

1. Standard Conditions of Approval, a copy attached.

2. The applicant shall take all necessary measures to ensure that its activities or those of its agents do not result in measurable erosion of soil on the site during the construction of the project covered by this approval.

3. Severability. The invalidity or unenforceability of any provision, or part thereof, of this License shall not affect the remainder of the provision or any other provisions. This License shall be construed and enforced in all respects as if such invalid or unenforceable provision or part thereof had been omitted.

4. Any CCA treated lumber shall be cured on dry land in a manner that exposes all surfaces to the air for 21 days prior to the start of construction.

THIS APPROVAL DOES NOT CONSTITUTE OR SUBSTITUTE FOR ANY OTHER REQUIRED STATE, FEDERAL OR LOCAL APPROVALS NOR DOES IT VERIFY COMPLIANCE WITH ANY APPLICABLE SHORELAND ZONING ORDINANCES.

DONE AND DATED IN AUGUSTA, MAINE, THIS 27th DAY OF July, 2012.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

Filed
JUL 30 2012
State of Maine
Board of Environmental Protection

BY: Michael Kuhns for
Patricia W. Aho, Commissioner

PLEASE NOTE THE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES...

MR/L25672AN&BN/ATS#74653&74756

Natural Resource Protection Act (NRPA)
Standard Conditions

THE FOLLOWING STANDARD CONDITIONS SHALL APPLY TO ALL PERMITS GRANTED UNDER THE NATURAL RESOURCE PROTECTION ACT, TITLE 38, M.R.S.A. SECTION 480-A ET.SEQ. UNLESS OTHERWISE SPECIFICALLY STATED IN THE PERMIT.

A. Approval of Variations From Plans. The granting of this permit is dependent upon and limited to the proposals and plans contained in the application and supporting documents submitted and affirmed to by the applicant. Any variation from these plans, proposals, and supporting documents is subject to review and approval prior to implementation.

B. Compliance With All Applicable Laws. The applicant shall secure and comply with all applicable federal, state, and local licenses, permits, authorizations, conditions, agreements, and orders prior to or during construction and operation, as appropriate.

C. Erosion Control. The applicant shall take all necessary measures to ensure that his activities or those of his agents do not result in measurable erosion of soils on the site during the construction and operation of the project covered by this Approval.

D. Compliance With Conditions. Should the project be found, at any time, not to be in compliance with any of the Conditions of this Approval, or should the applicant construct or operate this development in any way other the specified in the Application or Supporting Documents, as modified by the Conditions of this Approval, then the terms of this Approval shall be considered to have been violated.

E. Time frame for approvals. If construction or operation of the activity is not begun within four years, this permit shall lapse and the applicant shall reapply to the Board for a new permit. The applicant may not begin construction or operation of the activity until a new permit is granted. Reapplications for permits may include information submitted in the initial application by reference. This approval, if construction is begun within the four-year time frame, is valid for seven years. If construction is not completed within the seven-year time frame, the applicant must reapply for, and receive, approval prior to continuing construction.

F. No Construction Equipment Below High Water. No construction equipment used in the undertaking of an approved activity is allowed below the mean high water line unless otherwise specified by this permit.

G. Permit Included In Contract Bids. A copy of this permit must be included in or attached to all contract bid specifications for the approved activity.

H. Permit Shown To Contractor. Work done by a contractor pursuant to this permit shall not begin before the contractor has been shown by the applicant a copy of this permit.

Revised (12/2011/DEP LW0428)

STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION
17 STATE HOUSE STATION, AUGUSTA, MAINE 04333

Erosion Control for Homeowners

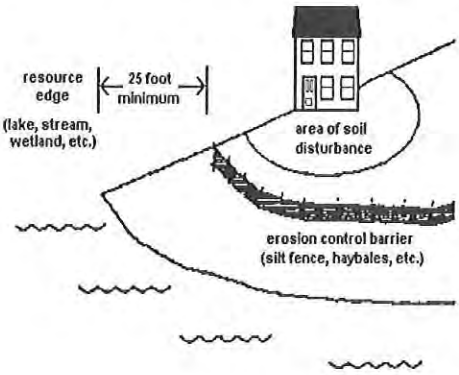
Before Construction

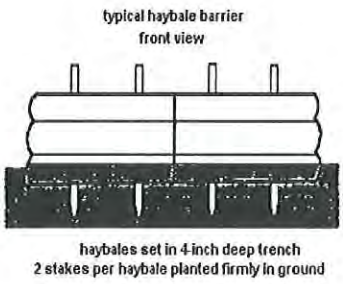
1. If you have hired a contractor, make sure you discuss your permit with them. Talk about what measures they plan to take to control erosion. Everybody involved should understand what the resource is, and where it is located. Most people can identify the edge of a lake or river. However, the edges of wetlands are often not so obvious. Your contractor may be the person actually pushing dirt around, but you are both responsible for complying with the permit.

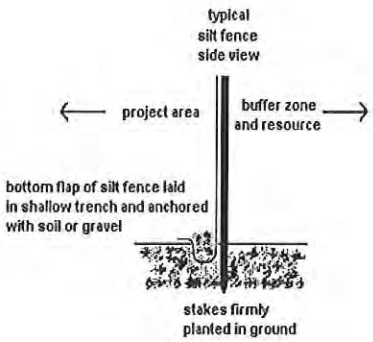
2. Call around to find where erosion control materials are available. Chances are your contractor has these materials already on hand. You probably will need silt fence, hay bales, wooden stakes, grass seed (or conservation mix), and perhaps filter fabric. Places to check for these items include farm & feed supply stores, garden & lawn suppliers, and landscaping companies. It is not always easy to find hay or straw during late winter and early spring. It also may be more expensive during those times of year. Plan ahead -- buy a supply early and keep it under a tarp.

3. Before any soil is disturbed, make sure an erosion control barrier has been installed. The barrier can be either a silt fence, a row of staked hay bales, or both. Use the drawings below as a guide for correct installation and placement. The barrier should be placed as close as possible to the soil-disturbance activity.

4. If a contractor is installing the erosion control barrier, double check it as a precaution. Erosion control barriers should be installed "on the contour", meaning at the same level or elevation across the land slope, whenever possible. This keeps stormwater from flowing to the lowest point along the barrier where it can build up and overflow or destroy the barrier.







During Construction

1. Use lots of hay or straw mulch on disturbed soil. The idea behind mulch is to prevent rain from striking the soil directly. It is the force of raindrops hitting the bare ground that makes the soil begin to move downslope with the runoff water, and cause erosion. More than 90% of erosion is prevented by keeping the soil covered.

2. Inspect your erosion control barriers frequently. This is especially important after a rainfall. If there is muddy water leaving the project site, then your erosion controls are not working as intended. You or your contractor then need to figure out what can be done to prevent more soil from getting past the barrier.

3. Keep your erosion control barrier up and maintained until you get a good and healthy growth of grass and the area is permanently stabilized.

After Construction

1. After your project is finished, seed the area. Note that all ground covers are not equal. For example, a mix of creeping red fescue and Kentucky bluegrass is a good choice for lawns and other high-maintenance areas. But this same seed mix is a poor selection for stabilizing a road shoulder or a cut bank that you don't intend to mow. Your contractor may have experience with different seed mixes, or you might contact a seed supplier for advice.

2. Do not spread grass seed after September 15. There is the likelihood that germinating seedlings could be killed by a frost before they have a chance to become established. Instead, mulch the area with a thick layer of hay or straw. In the spring, rake off the mulch and then seed the area. Don't forget to mulch again to hold in moisture and prevent the seed from washing away or being eaten by birds or other animals.

3. Keep your erosion control barrier up and maintained until you get a good and healthy growth of grass and the area is permanently stabilized.

Why Control Erosion?

To Protect Water Quality

When soil erodes into protected resources such as streams, rivers, wetlands, and lakes, it has many bad effects. Eroding soil particles carry phosphorus to the water. An excess of phosphorus can lead to explosions of algae growth in lakes and ponds called blooms. The water will look green and can have green slime in it. If you are near a lake or pond, this is not pleasant for swimming, and when the soil settles out on the bottom, it smothers fish eggs and small animals eaten by fish. There many other effects as well, which are all bad.

To Protect the Soil

It has taken thousands of years for our soil to develop. It usefulness is evident all around us, from sustaining forests and growing our garden vegetables, to even treating our septic wastewater! We cannot afford to waste this valuable resource.

To Save Money ($$)

Replacing topsoil or gravel washed off your property can be expensive. You end up paying twice because State and local governments wind up spending your tax dollars to dig out ditches and storm drains that have become choked with sediment from soil erosion.

DEP INFORMATION SHEET

Appealing a Department Licensing Decision

Dated: March 2012 **Contact: (207) 287-2811**

SUMMARY

There are two methods available to an aggrieved person seeking to appeal a licensing decision made by the Department of Environmental Protection's ("DEP") Commissioner: (1) in an administrative process before the Board of Environmental Protection ("Board"); or (2) in a judicial process before Maine's Superior Court. An aggrieved person seeking review of a licensing decision over which the Board had original jurisdiction may seek judicial review in Maine's Superior Court.

A judicial appeal of final action by the Commissioner or the Board regarding an application for an expedited wind energy development (35-A M.R.S.A. § 3451(4)) or a general permit for an offshore wind energy demonstration project (38 M.R.S.A. § 480-HH(1)) or a general permit for a tidal energy demonstration project (38 M.R.S.A. § 636-A) must be taken to the Supreme Judicial Court sitting as the Law Court.

This INFORMATION SHEET, in conjunction with a review of the statutory and regulatory provisions referred to herein, can help a person to understand his or her rights and obligations in filing an administrative or judicial appeal.

I. ADMINISTRATIVE APPEALS TO THE BOARD

LEGAL REFERENCES

The laws concerning the DEP's *Organization and Powers*, 38 M.R.S.A. §§ 341-D(4) & 346, the *Maine Administrative Procedure Act*, 5 M.R.S.A. § 11001, and the DEP's *Rules Concerning the Processing of Applications and Other Administrative Matters* ("Chapter 2"), 06-096 CMR 2 (April 1, 2003).

HOW LONG YOU HAVE TO SUBMIT AN APPEAL TO THE BOARD

The Board must receive a written appeal within 30 days of the date on which the Commissioner's decision was filed with the Board. Appeals filed after 30 calendar days of the date on which the Commissioner's decision was filed with the Board will be rejected.

HOW TO SUBMIT AN APPEAL TO THE BOARD

Signed original appeal documents must be sent to: Chair, Board of Environmental Protection, c/o Department of Environmental Protection, 17 State House Station, Augusta, ME 04333-0017; faxes are acceptable for purposes of meeting the deadline when followed by the Board's receipt of mailed original documents within five (5) working days. Receipt on a particular day must be by 5:00 PM at DEP's offices in Augusta; materials received after 5:00 PM are not considered received until the following day. The person appealing a licensing decision must also send the DEP's Commissioner a copy of the appeal documents and if the person appealing is not the applicant in the license proceeding at issue the applicant must also be sent a copy of the appeal documents. All of the information listed in the next section must be submitted at the time the appeal is filed. Only the extraordinary circumstances described at the end of that section will justify evidence not in the DEP's record at the time of decision being added to the record for consideration by the Board as part of an appeal.

WHAT YOUR APPEAL PAPERWORK MUST CONTAIN

Appeal materials must contain the following information at the time submitted:

1. *Aggrieved Status.* The appeal must explain how the person filing the appeal has standing to maintain an appeal. This requires an explanation of how the person filing the appeal may suffer a particularized injury as a result of the Commissioner's decision.
2. *The findings, conclusions or conditions objected to or believed to be in error.* Specific references and facts regarding the appellant's issues with the decision must be provided in the notice of appeal.
3. *The basis of the objections or challenge.* If possible, specific regulations, statutes or other facts should be referenced. This may include citing omissions of relevant requirements, and errors believed to have been made in interpretations, conclusions, and relevant requirements.
4. *The remedy sought.* This can range from reversal of the Commissioner's decision on the license or permit to changes in specific permit conditions.
5. *All the matters to be contested.* The Board will limit its consideration to those arguments specifically raised in the written notice of appeal.
6. *Request for hearing.* The Board will hear presentations on appeals at its regularly scheduled meetings, unless a public hearing on the appeal is requested and granted. A request for public hearing on an appeal must be filed as part of the notice of appeal.
7. *New or additional evidence to be offered.* The Board may allow new or additional evidence, referred to as supplemental evidence, to be considered by the Board in an appeal only when the evidence is relevant and material and that the person seeking to add information to the record can show due diligence in bringing the evidence to the DEP's attention at the earliest possible time in the licensing process or that the evidence itself is newly discovered and could not have been presented earlier in the process. Specific requirements for additional evidence are found in Chapter 2.

Other Considerations in Appealing a Decision to the Board

1. *Be familiar with all relevant material in the DEP record.* A license application file is public information, subject to any applicable statutory exceptions, made easily accessible by DEP. Upon request, the DEP will make the material available during normal working hours, provide space to review the file, and provide opportunity for photocopying materials. There is a charge for copies or copying services.
2. *Be familiar with the regulations and laws under which the application was processed, and the procedural rules governing your appeal.* DEP staff will provide this information on request and answer questions regarding applicable requirements.
3. *The filing of an appeal does not operate as a stay to any decision.* If a license has been granted and it has been appealed the license normally remains in effect pending the processing of the appeal. A license holder may proceed with a project pending the outcome of an appeal but the license holder runs the risk of the decision being reversed or modified as a result of the appeal.

What to Expect Once You File a Timely Appeal with the Board

The Board will formally acknowledge receipt of an appeal, including the name of the DEP project manager assigned to the specific appeal. The notice of appeal, any materials accepted by the Board Chair as supplementary evidence, and any materials submitted in response to the appeal will be sent to Board members with a recommendation from DEP staff. Persons filing appeals and interested persons are notified in advance of the date set for Board consideration of an appeal or request for public hearing. With or without holding a public hearing, the Board may affirm, amend, or reverse a Commissioner decision or remand the matter to the Commissioner for further proceedings. The Board will notify the appellant, a license holder, and interested persons of its decision.

II. JUDICIAL APPEALS

Maine law generally allows aggrieved persons to appeal final Commissioner or Board licensing decisions to Maine's Superior Court, see 38 M.R.S.A. § 346(1); 06-096 CMR 2; 5 M.R.S.A. § 11001; & M.R. Civ. P 80C. A party's appeal must be filed with the Superior Court within 30 days of receipt of notice of the Board's or the Commissioner's decision. For any other person, an appeal must be filed within 40 days of the date the decision was rendered. Failure to file a timely appeal will result in the Board's or the Commissioner's decision becoming final.

An appeal to court of a license decision regarding an expedited wind energy development, a general permit for an offshore wind energy demonstration project, or a general permit for a tidal energy demonstration project may only be taken directly to the Maine Supreme Judicial Court. See 38 M.R.S.A. § 346(4).

Maine's Administrative Procedure Act, DEP statutes governing a particular matter, and the Maine Rules of Civil Procedure must be consulted for the substantive and procedural details applicable to judicial appeals.

ADDITIONAL INFORMATION

If you have questions or need additional information on the appeal process, for administrative appeals contact the Board's Executive Analyst at (207) 287-2452 or for judicial appeals contact the court clerk's office in which your appeal will be filed.

Note: The DEP provides this INFORMATION SHEET for general guidance only; it is not intended for use as a legal reference. Maine law governs an appellant's rights.

Comments - Environmental Project Review
Maine Department of Inland Fisheries and Wildlife

Wildlife Division Comments – Region A	
Applicant's Name: Forefront Partners I, LP (Forefront at Thompson's Point)	
Project: L-25672-2G-A-N	Regulatory Agency: MDEP
Project Type: NRPA	Project Manager: Richardson
Comments Due Date:	Date Comments Sent: 7/13/12
Project Location	
Town: Portland	County: Cumberland
Waterbody: Fore River	
Wildlife Biologist(s): Camuso, Tudor, Walker	

After review of the application and consideration of the proposal's probable effect on the environment, and on our agency's programs and responsibilities, we provide the following comments:

I. Project Description/Resource Affected: Forefront Partners I, LP proposes to develop the 22.5 +/- acre Thompson's Point as a mixed use commercial and entertainment development to include an events center and concert hall, outdoor amphitheater, hotel, sports medicine facility, office complex, parking garage and surface parking for 780 vehicles. Additionally, the proposed development includes public amenities such as trails and a water access site. A seasonal rowing facility has also been suggested in the northeast corner of the site. It is our understanding that this last element has been removed from the current proposal and will potentially be reconsidered at a future date.

MDIF&W has mapped two Significant Wildlife Habitats in this portion of the Fore River, both of which include upland buffers that extend into the proposed development area. The mapped habitats include a Significant Shorebird Feeding Area along the western side of the peninsula and a Significant Shorebird Roosting Area along the eastern shoreline. Shorebirds that frequent Maine during the spring on their way to breeding grounds in the open tundra of northern Canada, and again in mid to late summer on their return trip south are dependent on open mudflats for feeding and, at times of high tide, require specific shoreline conditions that provide secure areas for roosting. Upland buffers associated both habitat types are critical in minimizing disturbance to migratory shorebirds by proximate human activities. Additionally, the vegetated condition of buffers associated with roosting habitat is an important factor in determining viability of the roost. Shorebirds will abandon roosts where tall woody vegetation that provides cover for raptors becomes established. Several of the shorebird species that frequent Maine during their migrations have shown long-term populations declines. These declines are, in part, due to significant losses of both migratory feeding and roosting stop over habitats.

II. Comments/Recommended Considerations or Conditions:

<u>Wildlife Considerations:</u>
MDIFW originally mapped Shorebird Significant Wildlife Habitats and associated buffers in 2006. At that time, shorebird roosting areas were digitized with a 250-foot associated upland

buffer based on scientific literature that documented human disturbance effects. Similarly, feeding areas were digitized with a 100-foot buffer intended to minimize unnecessary disturbance to shorebird activity on the mudflats. Where roosts occur proximate to developed areas, development was clipped out of the original buffers by GIS staff to account for existing disturbances. In the case of Thompson's Point, the originally mapped roost habitat buffer varied from 25-feet offset from mean high water to 150-feet offset from mean high water based on best available aerial photos at the time. As a result of two recent site walks and multiple revisions of the delineation of the roost area and the feeding area buffers based on on-the-ground conditions, neither buffer now extends into the site more than 50-feet from mean high water.

The applicant has adjusted the initially submitted project site plan to avoid and minimize impacts within these revised buffers and has worked closely with our Department to develop a landscape plan that at once creates adequate vegetative screening of the mapped shorebird feeding area between the shoreline and proposed pedestrian trail, and limits vegetation within the shorebird roost area buffer to shrubs that will likely not exceed 4-feet in height and thereby maintain visibility for the shorebirds and minimize the threat of increased predator activity. Additionally, the applicant has agreed to install interpretive signage at the proposed south end boat launch. The signage will identify the presence of shorebird habitat and explain the significance of these habitats. Our Department will assist the applicant in designing the signage to be installed. The applicant has also agreed to install a raised viewing platform overlooking the saltmarsh and mudflat communities in the northwestern portion of the site. This structure will serve as both an attractive amenity for the project and help to build local awareness of and appreciation for local bird life.

Given the steps that the applicant has taken to maintain and enhance mapped Significant Wildlife Habitats at this site we do not feel that project completion will result in any significant adverse impact to the resource.

Should the rowing club be constructed during a subsequent phase of development, we do feel that the structure extending into the roost and resulting presence of shells passing along the frontage of the roost will eliminate existing habitat values. With the proposed placement of the facility, it is unlikely that any mitigation for the loss of the roost could take place on-site. We would therefore recommend mitigation for the loss of this Significant Wildlife Habitat feature in the form of a contribution to the Maine Natural Resource Conservation Program for future shorebird roost protection and monitoring. The total square footage of the revised roosting habitat is 63,764sf. Should the rowing club locate in this area, the Department feels that a contribution to the MNRCP fund of $90,544 (63,764x0.71x2 per MDEP guidance) would be appropriate.



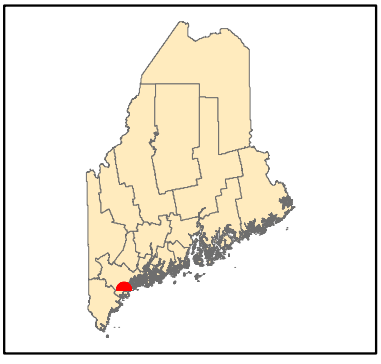
Draft II Revised Thompson's Point Shorebird Habitats

Maine Department of
Inland Fisheries and Wildlife

0 125 250 500 750 1,000 Feet

Projection: UTM, NAD83, Zone 19N

Date: 6/22/2012



Portland, Maine Yes. Life's good here.

Planning & Urban Development Department

ZONING ANALYSIS Relevant Zone(s) B-5

All Projects:

	Required	Proposed
Lot Size	None	4.67
Area Per Dwelling Unit	None	799 Sq. Ft
Minimum Street Frontage	None	138.68
Front Yard Minimum	None	35.22
Front Yard Maximum	None	35.22
Rear Yard	None	71
Yard Right	None	51
Yard Left	None	10
Side Street Setback	None	N/A
Step Back	None	N/A
Maximum Lot Coverage	100%	63%
Minimum Lot Coverage	N/A	N/A
Maximum Height	120 ft	69.1'
Open Space	N/A	N/A
Maximum Impervious Area	N/A	N/A
Pavement Setback	N/A	N/A
Floor Area Ratio	N/A	N/A
Off Street Parking Spaces	N/A	498
Loading Bays	N/A	1
Other 1		
Other 2		
Other 3		

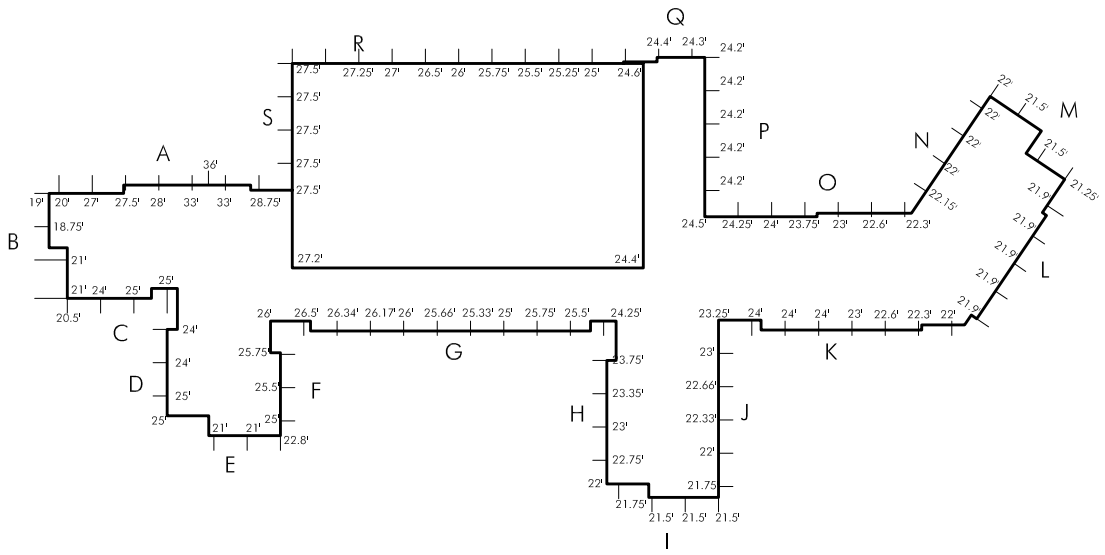
1

Planned Residential Unit Developments (PRUD) Requirements

	Required	Proposed
Minimum Lot Size	N/A	N/A
Minimum Lot Area per Dwelling	N/A	N/A
Maximum # Units per Building	N/A	N/A
Maximum Building Length	N/A	N/A
Maximum Accessory Building Length	N/A	N/A
Minimum Setbacks	N/A	N/A
Minimum Building Separation	N/A	N/A
Minimum Open Space	N/A	N/A

Affordable Housing Density Bonuses (if applicable)

	Bonus Increase or Decrease	Maximum Allowable With Bonus	Proposed
Density	N/A	N/A	N/A
Height	N/A	N/A	N/A
Setback Reduction	N/A	N/A	N/A
Recreation Space	N/A	N/A	N/A
Maximum Accessory Building Length	N/A	N/A	N/A
Minimum Setbacks	N/A	N/A	N/A
Minimum Building Separation	N/A	N/A	N/A
Minimum Open Space	N/A	N/A	N/A
Explanatory Text 1 (optional):			
Explanatory Text 2 (optional):			
Explanatory Text 3 (optional):			



BUILDING HEIGHT CALCULATIONS

Pre-development spot grades are based on site survey prepared by Sebago Technics titled "Alta/ACSM Land Title Survey" May 27, 2011, revised Nov. 23, 2011.

The pre-development average grade has been calculated by dividing the total area between elev. 0' and the 2011 grade against the proposed building by the length of the proposed building's perimeter.

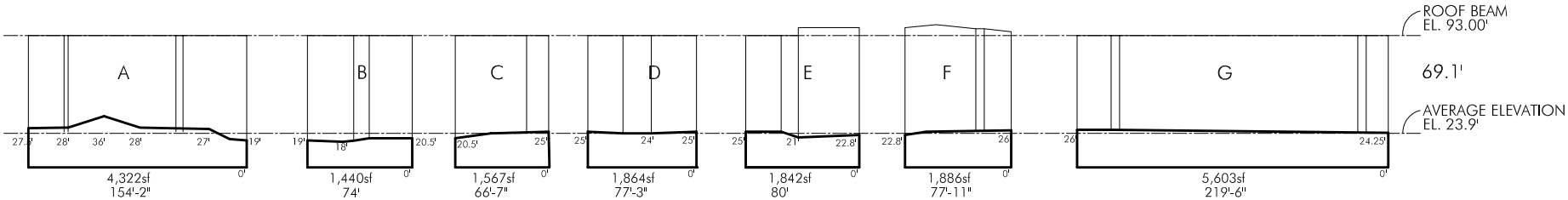
Building height has been calculated from highest roof beam elevation to the pre-development average grade per City of Portland Land Use Code, Section 7, Dimensional Standards.

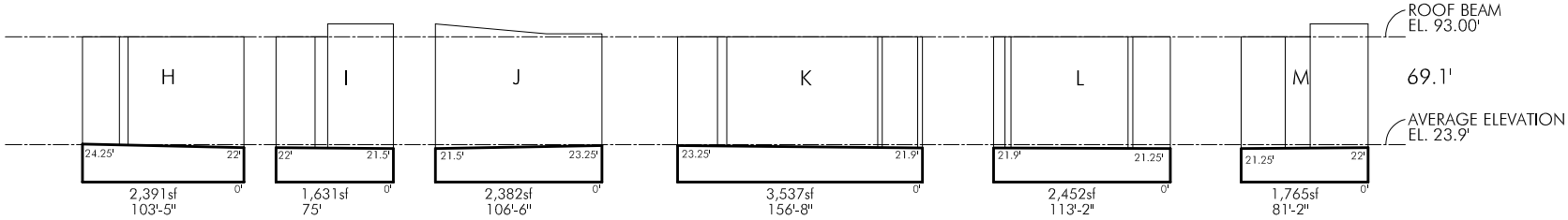
TOTAL AREA ABOVE ELEV. 0' TO PRE-DEVELOPMENT GRADE:
48,438 sf

TOTAL BUILDING PERIMETER:
2,026 linear ft

$$\frac{48{,}438 \text{ sf}}{2{,}026 \text{ linear ft}} = 23.9' \text{ average elevation}$$

ROOF BEAM ELEV:	EL. 93.00'
AVERAGE GRADE:	EL. 23.9'
BUILDING HEIGHT:	69.1'





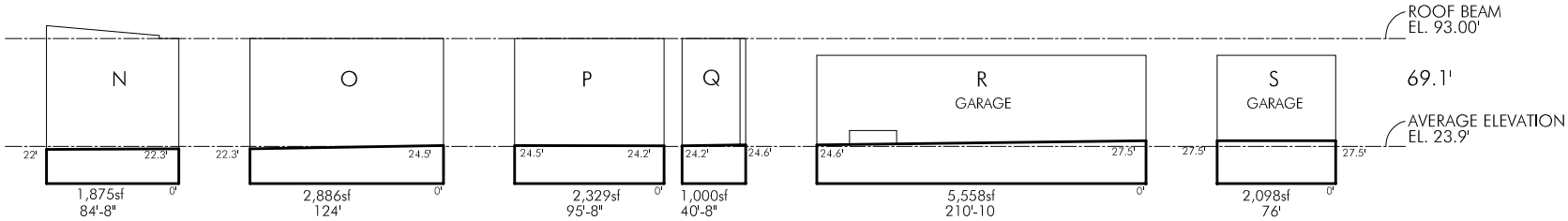


TABLE 7-E: MIXED-USE ZONE DIMENSIONAL STANDARDS

		B-1/B-1b	B-2/B-2b/B-2c	B-3/B-3b/B-3c	B-4	B-5/B-5b	B-6	B-7
Lot area (min.)	**School**	20,000 SF			10,000 SF			
	Place of assembly	10,000 SF						
Lot area per dwelling unit (min.)	**On-peninsula**	435 SF	435 SF					
	Off-peninsula	1,000 SF	1,000 SF, except 435 SF if active street frontage[3]					
Lot area per rooming unit (min.)	**On-peninsula**	150 SF	150 SF					
	Off-peninsula	350 SF	350 SF					
Street frontage (min.)		20 ft.	20 ft.	15 ft.	60 ft.			
Front setback (from all street frontages) (max.)		10 ft., or the average front yard depth of nearest developed lots if < 10 ft.	10 ft.	5 ft.	20 ft.	None, except 10 ft. in B-5b	10 ft.[7]	10 ft.
Rear setback (min.)	**Principal**	None, except 10 ft. if abutting a residential zone	10 ft.		20 ft.			
	Accessory	None, except 5 ft. if abutting a residential zone	5 ft.		7 ft.			
Side setback (min.)	**Principal**	None, except 5 ft. if abutting residential zone	None		10 ft.			
	Accessory		5 ft.		5 ft.			
Stepbacks (above 35 ft. when property line abuts a residential zone) (min.)		Side: 10 ft.	Side: 5 ft.					
		Rear: 15 ft.	Rear: 15 ft.					
Length of building wall at maximum setback (min.)							70% of street frontage or 25% of building perimeter[8]	75% of street frontage or 25% of building perimeter[9]
Length of undifferentiated blank wall along publicly accessible way (max.)				30 ft., except 15 ft. within PAD Overlay				
Floor area (max.)		Non-residential uses on first floor: 10,000 SF total[1]	Laboratory and research facilities, warehousing, 10,000 SF	None, except 15,000 SF for each floor above 125 ft.			Laboratory and research facilities and warehousing: 15,000 SF	
		Restaurants (public area): 2,000 SF					Exhibition and meeting halls: 20,000 SF	
		Clinics: 3,000 SF						

TABLE 7-E (CONT.): MIXED-USE ZONE DIMENSIONAL STANDARDS

	B-1/B-1b	B-2/B-2b/B-2c	B-3/B-3b/B-3c	B-4	B-5/B-5b	B-6	B-7
Structure height (max.)	On-Peninsula: 45 ft., except 50 ft. along Congress Street if commercial first floor and residential above[2] Off-Peninsula: 35 ft.	45 ft., except 50 ft. if first floor is in commercial use, 65 ft. in B-2 and B-2c on lots >5 ac. if required side and rear setbacks are increased by 1 foot for each foot of height over 45 ft., or as otherwise governed by the Bayside Height Overlay Map	See Downtown and Bayside Height Overlay Maps	65 ft.	65 ft., except in B-5b along W. Commercial St. south of Danforth St.[5] and 120 ft. on Thompson's Point[6]	65 ft. or as otherwise governed by the B-6 Building Height Overlay Map	See Bayside Height Overlay Map
Lot coverage (max.)			25% of lot area for portions of structures exceeding 125 ft. in height[4]				
Impervious surface ratio (max.)	90%	Residential: None Other uses in B-2 and B-2c: 80% Other uses in B-2b: 90%		80%			

[1] Uses in structures which existed prior to the date of enactment of the B-1/B-1b zones are exempt.
[2] The commercial first floor uses shall utilize at least 75 % of the first-floor frontage along Congress Street and shall have an average depth of at least 20 ft.
[3] A building will be determined to have an active street frontage upon meeting the following guidelines to the greatest extent practicable: the primary building façade shall be within 10 ft. feet of the front lot line; there shall be no parking on the lot within 35 ft. of the front lot line; no more than 25% of the first floor primary façade shall consist of access to garages, unutilized space, service entrances, storage or mechanicals and the remaining minimum 75% shall have an average depth of a minimum of 20 ft. for residential or commercial uses; and all primary ground floor entries to multi-family buildings must orient to street, not to interior blocks or parking lots.
[4] Except that no floor area shall be required to be less than 10,500 SF, gross.
[5] For parcels of land in the B-5b zone located along W. Commercial St. south of Danforth St.: West of the projection of the centerline of the Fletcher St. right-of-way, the maximum building height shall be 45 ft.; and, east of the projection of the centerline of the Fletcher St. right-of-way and west of the projection of the centerline of the Emery St. right-of-way, the maximum building height shall be 55 ft. A projection of the centerline of a street is defined by extending the centerline of the referenced street right-of-way along its most southerly block to the centerline of W. Commercial St. Furthermore, notwithstanding Subsection 7.5.1, no rooftop structure located between the projections of the centerlines of Emery St. and Fletcher St., as described above. shall exceed a height of 62 ft as measured from average grade of the building at its foundation.
[6] Applies only to parcels subject to an approved master development plan. Thompson's Point is defined as the contiguous parcels of upland occupying the peninsula bounded on the east by Route 295, on the north by the Mountain Division Rail right-of-way, and on the south and west by the Fore River and its associated wetlands. Nearby lands accessed from Hobart and Osgood Streets are not included.
[7] Does not apply to parking garages and public transportation facilities. Notwithstanding required setbacks, new structures located in the blocks located south of Fore Street and north of Commercial Street and its extension shall build to the key building envelopes shown on the B6 Building Height Overlay & Building Envelopes map. Buildings located in the area east of the Fore Street Connector shall not have a maximum front setback and shall not be required to build to the key building envelope perimeter. Parking structures and the buildings for public transportation facilities may, however, be set back beyond the key building envelopes (toward the interior of blocks), but may not occupy the land between the key building envelope and the street right-of-way.
[8] For buildings fronting on two or more streets, the minimum building wall on one street may be decreased so long as the frontage is proportionally increased on other streets in so far that the building wall on the secondary street is not reduced to less than 25 ft. Buildings in the area east of the Fore Street Connector shall not be subject to this requirement.
[9] Does not apply to additions to or relocations of designated historic structures or structures determined to be eligible by the Historic Preservation Board.

CONFORMITY WITH APPLICABLE DESIGN STANDARDS
(Site Plan and Zoning)

The following statement is made in accordance with the City of Portland Code of Ordinances, Chapter 14 Land Use, Section 14.6 – Site Plan Review Standards.

OVERVIEW

This project conforms with all the applicable design standards of Section 14.6, Site Standards as demonstrated in the following narrative.

Section 14.6.1 Transportation Standards

A. Impact on Surrounding Street Systems:

The applicant has obtained a Traffic Movement Permit which addresses impacts on surrounding street systems. A summary of calculated site trip generation with the proposed use is enclosed with this application.

B. Access and Circulation:

1) Site Access and Circulation.

a. Thompson's Point development site is accessed via Thompson's Point Road at the intersection of Fore River Parkway. The applicant has worked with fire safety and city officials to make access and circulation safe for all vehicular and pedestrian users. The proposed development includes an on-site two-way dead-end driveway with (498) four hundred ninety-eight parking stalls and a turn around hammer head. The driveway utilizes an existing 22ft curb cut and has been designed to accommodate a fire truck apparatus, emergency vehicles, small to mid-sized moving trucks, trash vehicles, and passenger vehicles.

b. Proposed pedestrian circulation connects the residences to both the adjacent public trail system and paved multi-use trail on Thompson's Point Road. The closest transit stop is 665 ft (0.13 miles) barrier free walking distance from the front door.

c. Access to the site has been designed to separate and reduce conflict between pedestrian and vehicular access.

d. The site is designed to have both visitor/short term parking near the front entrance and private long term residential parking in the parking garage. The entrance to the garage is internal to the site by several hundred feet providing ample stacking capacity for vehicles waiting to access the parking structure.

2) Loading and Servicing.

a. A short-term loading area is proposed to be at finished grade near the building utility corridor. The area of the building includes a service elevator and trash room with the ability to drive a vehicle up to an internal trash room. The loading area is designed to be separate and not interfere with site circulation of traffic, pedestrians, or bicycle access.

3) Sidewalks.

a. A 6 ft wide sidewalk and a vegetated esplanade atop 6" high curb is proposed on the front side of the residential building which connects to the existing campus sidewalk network on Thompson's Point Road.

b. The development sidewalk improvements are relatively new, and the existing sidewalks are in good working condition.

c. The development provides pedestrian access and is not requesting a waiver from this standard.

C. Public Transit access

1) The new development does not require, nor does it propose the construction of a new transit shelter along its frontage. Thompson's Point has worked closely with METRO to coordinate public transit services to and from the City of Portland in an efficient and convenient way for METRO and their riders. This includes local and regional bus service on Thompson's point.

a. The development is not located on a lot having frontage on a federally classified arterial roadway

b. The residential development will be served by (2) two existing transit stops on Thompson's Point, both of which access downtown Portland via the Number 1 Bus as well as fast regional service to Brunswick via the Breeze. The closest and most convenient stop is located at the Portland Transportation Center. This transit stop is 1/8th (665 ft) of mile from the front door. The second stop on Thompson's point, near the intersection of Resurgam Place and Thompson's Point Road is just over ¼ of a mile (1504 ft) from the front door. Both locations are accessible via barrier -free routes and benefit from a transit shelter.

2) The transit stops on Thompson's point are connected to public sidewalk system.

3) The development meets the standard for public transit access and does not request any waivers from this standard.

D. Parking:

1) Vehicular parking:

a. The Forefront at Thompson's Point Master Development Plan and Subdivision was approved ***without*** a minimum parking requirement based on the completed parking study per the Technical Manual. The development is required to be consistent with the principles of the approved parking study. The current site plan proposes (498) four hundred ninety-eight permanent paved onsite spaces for residents, visitors, and Thompson's Point managed supply. Of which, 463 parking stalls are located in a 6-story parking structure,

b. Forefront has prepared a TDM strategy report approved in 2011, updated in 2015, and March 30, 2018. The Thompson's Point TDM Coordinator has provided subsequent annual progress updates to the city in accordance with the City's reporting protocol for all sites participating in TDM strategies. Thompson's Point is proud to be a very proactive member of the TDM program and is always seeking to improve their TDM initiatives. Thompson's Point was named "Best Workplace for Commuters Site" by the Center for Urban Transportation Research in 2019. This honor was in large part to their execution of

the TDM Strategies. Copies of the TDM materials are on file with the city and are available upon request.

Specifically, the applicant of the residential development includes several TDM initiatives such as promoting safe and convenient bicycle access routes and secure inside storage. The bike storage room in the parking structure and second room inside the building amenity space that can hold a total of 90 bicycles in addition to the 12 exterior bicycle parking spaces near the main entrance. Site selection close to a multi-modal transportation center was a significant factor in the construction of a large-scale residential development on Thompson's Point. The applicant's management team will communicate with the designated Thompson's Point TDM coordinator to work on initiatives, strategies, and reporting updates

c. N/A

d. The site layout plan shows compliant parking stall and drive aisle dimensions. Combined on-site parking garage and surface spaces total 498 parking spaces and consist of 378 standard parking stalls, 94 compact parking stalls, and 26 ADA parking stalls pursuant the dimensional standards described in Section 1 – Transportation Systems and Street Design Standards of the City's Technical Manual.

2) Bicycle Parking:

a. Section 19 of the LUC Minimum off-street parking requirements does not apply to Thompson's Point because it is in the B-5 Zone. However, the applicant values the importance of secured and user-friendly bicycle storage for their tenants and provided the 2 bikes/5 units typically required (255units/5units=51*2 = 102 Bikes). Specifically, (66) sixty-six bicycle stalls for the residents are provided in the secured bike room of the garage. The bike room can be accessed from inside the parking structure or directly from the outside sidewalk system. An additional (24) twenty-four bicycle stalls for the residents are provided in the secured bike room off the amenity area of the residential building. The bike room can be accessed from inside the common area hallway or directly from the outside sidewalk system near the main entrance. A combined total of (12) twelve exterior bike stalls are in two locations near the front of the site; (4) four exterior bicycle stalls (2 Dero bicycle hitching posts or approved equal) are proposed near the main entrance and (8) (4 Dero bicycle hitching posts or approved equal) adjacent to the sidewalk near the entrance to the visitors parking area.

b. Motorcycles and Scooter Parking.

(i) The proposed structured parking does not have special provisions for motorcycles or scooters. They are anticipated to use the standard spaces designated to the unit.

3) Snow Storage
a. Snow storage will primarily be managed by removing temporary small on-site stockpiles to other designated areas of the campus or hauled off campus.
b. The garage will be plowed and utilize a shoot apparatus as required.

4) Electric Vehicle (EV) Charging

a. The City's Technical Manual cites a goal for 20 % of the parking spaces having Level 2 chargers (or higher) to meet the estimated EV Charging demand; however, given the applicant's directly applicable experience in similar real estate markets and regulatory

latitude given to structured parking structures of greater than 100 spaces, the applicant has prepared a practical EV Charging approach aimed to meet the intent of Technical Manual's section 1.14 – Electrical Vehicle Infrastructure. The proposal outlined below is believed to more than satisfy today's demand as well as future ready the parking infrastructure for years to come.

Based on the applicant's experience with owning and operating multifamily properties (currently combined for a total management of 620 units and nearly 1000 spaces) they have observed EV charging demand substantially below 20% of parking spaces, with electric vehicle (EV) chargers often unused. In the parking garages and surface lots they own and manage; they have provided Level 2 EV chargers for 1% of the parking spaces and made another 1% of the spaces EV-ready. Despite these preparations, there has been insufficient demand to justify converting these EV-ready spaces into fully operational charging stations. The applicant recognizes the EV industry is expected to continue to grow and with that in mind proposes several charging solutions to prepare for growth.

The proposed garage at Thompson's Point is primarily being used for residential use; therefore, we believe that longer-term or overnight charging solutions are more appropriate. Designing for the end user, of the 463 spaces inside the garage, we propose the following solution for 10% of the spaces (46 spaces):

- **2% +/- or (9) nine of the spaces will be equipped with Level 2 chargers**.
- **3% +/- or (14) fourteen of the spaces will be equipped with Level 1 chargers**.
- **5% +/- or (23) of the spaces will be made EV-ready for future demand.**

This proposal reflects the actual demand experienced and aligns with the nature of our primarily residential garage. We are confident that this approach will effectively meet the needs of our residents while ensuring the efficient use of resources.

Whereas, the bulk of remaining surface parking spaces are designated for Thompson's Point managed parking supply, EV charging is largely accounted for in the proximity of the building generating the parking demand rather than in these remote spaces. It is paramount to install EV infrastructure in a location where the vehicle owner will have access to the vehicle. Therefore, EV charging solutions for the surface spaces proposed for this phase take place in other areas of the shared use parking supply across the campus.

E. Transportation Demand Management (TDM):

1) The applicant has developed a campus-wide TDM Plan pursuant to the City of Portland's Code of Ordinances.

2) The TDM Plan incorporates the City goals by integrating elements described in the Technical Manual. Specifically, Thompson's Point operations team has a history of promoting and implementing TDM strategies for their employees and visitors. The Cathartes management staff will coordinate with the Thompson's Point TDM Coordinator to strategize, implement, and set SOV reduction goals. The Cathartes asset management team uses several programs in other properties that will be implemented upon opening the building here on Thompson's Point. TDM initiatives are further outlined in Attachment P.

Section 14.6.2 Environmental Quality Standards

A. Preservation of Significant Natural Features:

1) The project site is a previously developed suburban site. The applicant has preserved the very limited significant natural features to the extent practicable.

a. There are no known populations of trees or plants present on the site that have been classified as Endangered and Threatened in Maine.
b. There are no known habitats/communities, present that appear on the state or federal endangered or threatened animal list.
c. The project will not impact any moderate or high value waterfowl or wading bird habitat, nesting or feeding areas due to setbacks from such
d. No aquifers are present
e. Some wetland impact will occur but will be minimized. The project received approvals from the Army Corps of Engineer and Maine DEP to fill 386 SF of coastal wetland for the purpose of a stormwater outfall.

2) The proposed buildings are located in an area of the site that was previously developed and designed to complement, enhance, and preserve the adjacent significant natural features. Some additional clearing must occur for development but it is minor and not areas set aside for preservation or part of continuous habitat blocks.

3) The applicant is not requesting a waiver from this standard.

B. Landscaping Preservation:

1) Limited tree removal is required due to the previously developed nature of the site.

2) Fencing will be located around the dripline of individual trees and larger clusters of trees to remain. These areas will be preserved and protected from construction activities. There are a handful of significant oaks along the southern property line that had previously been requested for preservation by the former City Arborist. These are shown on the plans.

3) The significant trees for preservation had previously been identified by the City Arborist and are shown on the plans. The remaining vegetation is either non-native, invasive or scrub.

4) Not applicable. No waiver is being requested

5) The project is proposing to plant 93 new trees along with hundreds of plants on the project site

C. Site Landscaping and Buffers.

1) The combination of 93 proposed trees and hundreds of shrubs, new fencing and existing vegetation to remain should more than satisfy this requirement.
2) Buffers

a. Trash and utility service rooms are located within the building. The service portion of the building is heavily screened with trees, shrubs and ornamental grasses. All ground mounted utility structures are located within the core of the site so not visible from the public sidewalk due to distance and proposed landscaping.

b. Not applicable. Project is residential.

c. The project proposes significant plantings and also proposes to preserve existing vegetation wherever possible in the areas where detrimental impacts on the site may occur.

3) Parking Lot Landscaping

a. The project proposes significant landscaping around vehicular travel and parking areas.

b. Landscape islands are proposed to meet the standard.
c. Not applicable. No waiver is being requested.

4) Street Trees

a. Street trees have been proposed in location and quantities where possible. The project frontage along Sewall Street Extension is full of significant underground utilities so a limited number of trees can be planted in this zone. However, the rest of the site is heavily planted. Selected trees are of species that have been historically accepted/approved by the City.
b. Site constraints along the project frontage / right-of-way prevent the installation of street trees so have been located on-site but within view from the public way. The applicant understands the likely need to pay into the street tree fund due to the limited frontage and tree per dwelling unit requirement.

D. Water Quality, Stormwater Management and Erosion Control:

1) The Forefront at Thompson's Point has been designed to meet all City and State Stormwater management standards for Site Location of Development projects as part of the Subdivision Application. A supplemental stormwater management memorandum detailing how this portion of the project complies with the overall stormwater management plan has been prepared and included in this application in Attachment J.

a. All stormwater draining onto the site from adjacent properties will be directed in such a way to prevent the creation of ponding or flooding.

b. All stormwater runoff is proposed to discharge directly to the Fore River. The project will not adversely impact adjacent lots.

c. All stormwater runoff is proposed to discharge directly to the Fore River. The project will not adversely impact adjacent lots.

2) The Stormwater Management Plan demonstrates the project meets the requirements and goals of the Technical Manual.

3) The stormwater management system includes groundwater protection measures. All proposed inlets or filters are self-contained isolated from groundwater infiltration.

Section 14.6.3 Public Infrastructure and Community Safety Standards.

A. Consistency with City Master Plans:

1. The project has been designed to be consistent with the City's Zoning Ordinance and off-site infrastructure.

2. The Thompson's Point overall site proposed the conveyance of land to the City for the sole purpose of public access to the site. The City has successfully petitioned for a Public Railroad Crossing at the entrance to the site.

B. Public Safety and Fire Prevention:

1. The project aims to incorporate CPTED

a. The site has been designed to promote safe and inviting public meeting and gathering spaces.

b. The proposed development allows for emergency response vehicles to access multiple sides of the proposed building with controlled access.

c. The public gathering spaces and private patios are landscaped, fenced, and otherwise designed to create a feeling of backyard privacy and ownership one would protect as their own.

2. The site plan provides multiple points of clear access to and around the building.

C. Public Utilities:

1) The newly installed private infrastructure has been sized to accommodate the proposed residential units (255) and will tie into public infrastructure previously reviewed for compatibility with the entire subdivision.

2) The primary power electrical service will extend underground to/from a proposed pad mounted transformer sized to accommodate this new load.

3) New separate sanitary and storm infrastructure has been sized and installed in accordance with the City's technical manual.

4) The existing site sanitary sewer system is connected to the Thompson's Point sanitary pump station owned and operated by the Portland Water District. All sanitary waste discharge will be tied into the existing public wastewater system. Onsite wastewater treatment is not proposed.

5) The project will use interior dumpsters to store trash and recyclables temporarily until a contracted waste management company can pick up and dispose of the solid waste. The project proposes to remove all temporary trash receptacles at regularly scheduled intervals.

Section 14.6.4 Site Design Standards.

A. Massing, Ventilation and Wind Impact:

1) The new building will have been designed to not result in adverse impacts to other buildings or abutting properties. The proposed building is a standalone structure standing a significant distance from other existing or proposed buildings such that no unsafe wind conditions will be created.

2) The new building will have been designed to not result in adverse impacts to other buildings or abutting properties.

3) All HVAC venting is located on the roof or vented in an area that will not affect any public spaces or adjacent properties.

B. Shadows:

a. The development is located in the B5 Zone and this standard is not applicable.

C. Snow and Ice Loading:

a. The proposed roof is a flat roof and will store snow and ice until running off to adjacent areas. The roof is designed to store snowfall and not create dangerous falling snow conditions onto adjacent sidewalks, balconies, or public spaces.

D. View Corridors:

a. This standard is not applicable, the project site is located outside the Downtown Vision View Corridor Protection Plan.

E. Historic Resources:

1) This standard is not applicable, the development is not located in a historic district, historic landscape district or City designated landmark.

2) This standard is not applicable, the development is not located adjacent to or within 100 feet of a designated landmark, historic district, or historic landscape district.

3) There are no known archaeological resources on the site.

F. Exterior Lighting:

1) Site Lighting.
   a. All permanent exterior site and building mounted lighting has full cut off fixtures. Proposed site lighting is consistent with other lighting installed on the site and consists of LED cut off fixtures mounted a maximum of 20 ft high.
   a. Specialty ground bollard lighting has been added in gathering areas and shown on the enclosed Photometrics and lighting design plan.

G. Noise and Vibration:

a. HVAC and Mechanical Equipment.
   (i) All equipment will be located on the interior portion of the roof (centrally located to the site) and naturally screened from ground view due to the height of the building. All venting and emissions will meet applicable state and federal emission requirements.
   (ii) If applicable, the generator will be limited to one hour of routine maintenance per week.

H. Signage and Way finding:

1) All building signage and specialty wayfinding signage will be submitted under a separate application package. The project will include building address and modest identification signage above the main entrance canopy as well as on a freestanding monument sign near the entrance driveway.
   a. The size of signage will be complimentary in nature and not compete with architecture of the building while providing emergency response identification consistent with 911 requirements.
   b. The size of signage will be complimentary in nature and fit the scale of the building as not to detract from the building.
   c. The freestanding sign will be set back about 50 ft from the driveway intersection due to existing underground utilities and will not affect visibility at the intersection
   d. Sign Lighting will meet city standards to avoid glare and upward lighting.
   e. Signage is not proposed above the 1st floor.

2) Standard traffic signage is shown on the enclosed Site Layout Plan and designed to meet MUTCD recommendations.

I. Zoning Related Design Standards:

1) The proposed residential building is a permitted use in the B-5 Zone. The development meets all Zoning Dimensional standards as summarized in the table below:

Summary of Zoning Dimensional Requirements:		
Requirement Description	**Required**	**Provided**
Minimum Lot Size	None	4.637 acres
Minimum Frontage	None	139 +/- Ft
Yard Dimensions:		
Front	None	34 +/- FT
Side	None	10 FT
Rear	None	39 FT
Maximum Lot Coverage:	100%	63%
Maximum Building Height	120 FT	69.1’

The following statement is made in accordance with the City of Portland Design Manual Zone B-5 Urban Commercial Business Zone.

Design Manual Design Standards:

a. Shared Infrastructure: The proposed lot 17 development is part of an integrated subdivision which shares utilities and stormwater infrastructure, public transportation, pedestrian and vehicular circulation, and loading/waste facilities with other lots with-in the development.
b. The proposed building is located as close to the street as possible. Due to the presence of significant public infrastructure along the frontage of the development lot the building cannot be any closer to the street. The building shape takes advantage of the lot, views, and visibility of the main entry from the road onto Thompson’s Point.
c. The proposed building has a main entrance easily visible from the street; however, the small frontage of the lot compared to its depth prevents the bulk of the building being oriented towards the street. The residential wing adjacent to the street includes windows and façade consistent with architecture of the rest of the building.
d. On-site parking is centrally located on the site and almost entirely provided in a structure hidden from the street view. Shared parking with residences and campus parking managed supply is an integral part of the proposal. A very small amount of short-term parking is located at the front entrance to support visitors and prospective tenants.

ATTACHMENT G
TECHNICAL AND FINANCIAL CAPACITY

OVERVIEW

The applicant has retained a highly-qualified team of professionals to undertake planning, permitting and design tasks on this project. Services will be provided by the following companies and their respective team leaders.

CONSULTANT TEAM

Discipline	Common Area Road (Phase I)
Civil Engineer	Bo E. Kennedy P.E. Placemaker Partners, LLC 18 Van Aken Way Portland, ME 04102 (207) 747-5288 – Work bo@placemakerpartners.com
Surveyor	Chris LaMotte, PLS Sebago Technics, Inc. 75 John Roberts Road So. Portland, ME 04106 (207) 200.2100 – Work clamotte@sebagotechnics.com
Architect	Robert Del Savio, RA Embarc Design 500 Harrison Ave Suite 2W, Boston, MA 02118 1(617) 765-8000 – Work rdelsavio@embarcdesign.com
Landscape Architect	Patrick Carroll Carroll Associates 217 Commercial Street, Suite 204 Portland, ME 04101 Pcarroll@carroll-assoc.com
Geotechnical Consultant	Craig Coolidge, PE SUMMIT GEOENGINEERING SERVICES 210 Maine Ave Farmingdale, Maine 04344 PO Box 515 Gardiner, Maine 04345 (207) 318-7761 ccoolidge@summitgeoeng.com
Environmental Engineer	Rip Patten Credere Associates, Inc. 776 Main Street Westbrook, ME 04092 (207) 828-1272 – Work Crederellc.com

EXPERIENCE OF PROJECT TEAM

All members of the project team have significant expertise and experience on the project site. Resumes for key personnel can be provided upon request.

FINANCIAL CAPACITY

The applicant has adequate financial resources to undertake this project at Thompson's Point. A reference letter on behalf of Cathartes speaking to their good financial standing and project backing is enclosed in this Attachment G.

CONSTRUCTION COST ESTIMATE

A breakdown of the preliminary project cost estimates includes the following:

- Construction Cost: $70 million (Building, Garage, and Site Work)
- Soft Costs: $1 million
- **Total Costs: $71 million**

M&T Bank

July 24th, 2024

Planning and Urban Development
City of Portland, Maine
389 Congress Street
Portland, ME 04101

Re: Thompson's Point Residential
Developer Qualifications and Financial Capacity

By way of introduction, I am Executive Vice President and Maine Regional President, and Senior Group Manager for the Maine, New Hampshire and Vermont Commercial Real Estate divisions for M&T, a strong Super Regional Bank with a significant presence in and commitment to the Greater Portland Region, including our offices in Westbrook and downtown Portland.

For more than ten years, I have done business with Cathartes and its principals James Goldenberg and Jeff Johnston and I am pleased to have the opportunity to provide information to you regarding the longstanding banking relationships that I, personally, and that M&T Bank, have enjoyed with this company and its principals.

During the course of our relationship with Cathartes, the Bank has provided approximately $200,000,000 in construction and permanent financing for seven properties, which have included a variety of property types, such as mixed-use multifamily, hotels, and condominiums, and the principals have always performed as agreed. Throughout these years, the principals have consistently exhibited a savvy knowledge of their markets, an impressive ability to attract and maintain high quality tenants, strong property repositioning and construction expertise, and always a high level of integrity.

Cathartes is highly regarded in the commercial real estate industry, and the firm has been recognized as the developer responsible for transforming Portsmouth's former underutilized Parade Office Mall in the city's Northern Tier into Portwalk Place, creating a destination that includes 149 apartment units, 379 hotel rooms and nearly 50,000 SF of ground floor retail and restaurant activity, which has served to reconnect the area to downtown Portsmouth and further spur additional investment in the neighborhood following its success, and more recently has spurred additional private investment into the downtown area of historic riverfront city Dover, NH by redeveloping a significantly sized underutilized parcel in the core of the downtown into 130 Class A residential units. M&T is proud to have financed multiple phases of the Portwalk project, including one of the hotels and the mixed-use multifamily component, as well as the aforementioned Dover project.

We have had preliminary discussions regarding the proposed Thompson's Point site with Cathartes, and M&T Bank would be very interested in reviewing the opportunity to finance the proposed 255-unit $100 million project for the team. This project will provide additional housing inventory within Portland's Thompson's Point district and provide further economic development for the City and its residents, and Cathartes is a highly qualified team well-suited to execute.

(M&T Bank is a $210+ billion bank, following its acquisition of People's United Bank, the largest regional bank headquartered in New England, providing substantial lending capacity.)

I'm happy to provide any additional information that would be helpful to you as you move through the review process for this proposed project.

Sincerely,

Philip C. Cohen
Executive Vice President | Maine Regional President
M&T Bank
350 Fore Street
Portland, ME 04101
(207) 828-3030
pcohen@mtb.com

Construction Management Plan

Cathartes – Multi-Family Residential Building at 125 Thompson's Point Road

A. Construction Management Principles

The following narrative provides an overview of the construction management principles that the Cathartes and Placemaker Partners, LLC has identified to minimize impacts from the construction, such as noise, vibrations, ground movement, truck traffic, and other construction related factors to the surrounding building and communities.

B. Development Review of Construction Management Plan

Cathartes and Placemaker Partners, LLC submits this construction management plan that provides a comprehensive logistics and safety program for the construction project, which will be reviewed and approved as part of the site plan review process. Minimizing impacts to areas surrounding the building/construction site will be primary considerations in the process.

C. Performance Guarantees, Inspection Fees, Preconstruction Meeting, and Permits

Prior to scheduling a preconstruction meeting and the issuance of any city required permits, the general contractor (TBD) will meet all of the requirements contained in Section 14-530, Development Review Fees and post approval requirements and 14-532, General requirements and enforcement of Portland's Land Use Code.

Other permits, as applicable, include

1. **Street Opening and Street Occupancy Permits:** These permits will be filed at the time of construction.
2. **Blasting:** Blasting will not be required.
3. **Building Code:** Employ the best practices, as applicable, of Chapter 33 Safeguards During Construction, from the 2009 International Building Code.

D. Construction Administration and Communication

Cathartes or its assigned will work diligently to implement a communication strategy as outlined below. The communication strategy is intended to ensure that all construction operations are performed in accordance with all agreements, ordinances and special permits applicable to this project. The Construction Manager will work closely with adjacent abutters, businesses and all parties informed, as far in advance as possible, of scheduled work, particularly work anticipated to cause significant noise, vibrations, or dust. The final construction management plan shall provide for the following:

1. Contact Person for Cathartes or its assigned is the designated construction owner's representative. Owner's Representative is Rob Simmons (Ph. 617-840-4778) robs@cathartes.com.
2. Construction Signage will be posted on the site with Contact Information for Cathartes assigned construction manager.
3. The assigned construction manager site project manager will be in constant contact via email or phone with the Owner's Representative. The Owner's Rep will provide weekly and additional as need construction updates to neighboring business to inform them of any work that could possibly impact their day to day operations.
4. All construction site signage is temporary and will be removed at project completion.

E. Construction Schedule

1. The project is anticipated to break ground approximately Q4 2025 and be completed Q4 2027. This project will not be phased. See the preliminary construction schedule in Attachment 1.
2. Hours of Construction. Construction will occur during the daytime hours as defined in Section 17-18. Construction Activities for Building permit (Attachment 2) and Section 25-129, Noise, dust and debris (Attachment 3).
3. Extended Hours or Night Work: Pursuant to Section 17-18, this section not apply to emergency utility work or "Situations where the public works authority or the office of building inspections determines that the construction activity is of a unique character which cannot reasonably be completed or performed during the permitted hours and which is not of a recurring nature, provided that prior to engaging in such activity the contractor or his representatives gives notice of the time and scope of such proposed activity, the notice to be given in a manner approved by the public works authority."
4. Material Deliveries: Deliveries will take place between 7:00 a.m. and 5:00 p.m. Deliveries will be received in the designated laydown areas as shown on the Construction Management Plan.

F. Security & Public Safety

1. The Construction Management Plan (Attachment 4) depicts proposed construction fencing and access gates. Gates will have City of Portland Knox locking devices. Fencing separates the construction site from all other surrounding uses.
2. There are no existing structures being altered or demolished under this contract. Construction of the new structure will comply with NFPA 1 Chapter 16.
3. Fire Safety Program.
    - Good Housekeeping: All contractors and subcontractors are required per contract to clean up after their work on a daily basis.
    - On-site security: Chain link fence system (where required) with locked gates will be installed around the perimeter of the construction site.
    - Installation of new fire protection systems as construction progresses: Fire extinguishers will be located on each floor per OSHA standards and IBC 2009. A standpipe system per IBC Section 3311.1 will be provided concurrent with building construction.
    - Preservation of existing systems during demolition: There are no existing systems.
    - General Contractor will meet with local fire department prior to construction and develop a pre-fire plan.
    - The General Contractor will have a published contact list and chain of command for all rapid communication strategies that are in place.
    - Consideration of special hazards resulting from previous occupancies: There are no special hazards from previous occupancies. The site contractor will follow all Maine DEP VRAP work plan requirements for soil and groundwater handling. Trained personnel and appropriate PPE will be supplied while all sitework is being performed.
4. Blasting will not be required
5. Temporary on-site security lighting will be provided upon the request of the owner. All exterior security lighting will be pointed downward and be full cut off fixtures.

G. Construction Permitting and Traffic Control Plans

1. Construction Activity in Public Streets: There will be limited in-street utility work. All lane closures will always maintain access to Thompson's Point campus and be coordinated with the City Public Works with a documented and approved traffic control plan meeting the City's Technical Manual.
2. Sewer and Stormwater: Sewer connections are controlled by Chapters 24 of the City Code of Ordinance. There will be two new connections to the City of Portland Sanitary System currently connected to the Sewall Street Pump Station. Required permits for new connections to the existing private line have been obtained through the City Site Plan review process. Two of three Stormwater connections will discharge directly to the Fore River in a private outfall. One stormwater connection is proposed in Thompson's Point Road and discharged to the Fore River pursuant to city and state permits previously approved. The Stormwater system has been designed to meet Chapter 32 of the City Code of Ordinance.
3. Traffic Control Plans: Construction activity in the existing public street will have a traffic control plan meeting the City's MOT plan requirements. This will be submitted at the time of final Construction Management Plan approval.

H. Site Management and Controls

The final Construction Management Plan will address maintaining the site in a safe condition and will include the following:

1. Trash and debris removal management will be provided by separating recyclable and non-recyclable wastes into multiple construction dumpsters. Trash will be separated, disposed of in a proper waste facility.
2. Street cleaning and damage controls: This project will have erosion control construction entrances at the entrances to the project site. All sediment tracked off the project site and onto public streets will be swept daily and disposed of onsite in accordance with the approved erosion and sediment control plan. A truck washdown station may be required at the discretion of the owner or its assigned personnel.
3. Dust controls: The construction will comply with Portland's requirements under Section 25-129 on Noise, dust and debris (Attachment 3).
4. Noise: The construction will comply with Portland's requirements under Section 17-18 of the City Code (Attachment 2) and Section 25-129 on Noise, dust and debris Attachment 3).
5. Rodent Control will not be needed as this is new construction.
6. Snow Removal: Pursuant to Section 25-173 Contractors to ensure a safe means of travel within the work zone.
    1) Snow/ice removal or commence automatically from (1" of snow and up) or Ice
    2) Remove snow as needed within the work zone, including parking spaces & not to block any driveways or sight lines with the piles of snow.
    3) Clear all walks & ramps with the work zone
    4) Sand or Salt as needed
    5) Clear all basin or drainage to help snow melt
    6) This would include Monday-Friday Sat/Sunday/Holidays

I. Erosion Control and Preservation of Trees

1. Site Contractor will install all erosion and sedimentation controls as depicted on the approved erosion and sedimentation control plan prior to the pre-construction meeting for inspection by the City. Site Contractor will regularly inspect the control measures, no less than weekly and after significant storm events, and maintain any installed temporary or permanent stormwater management systems in working order. The Site Contractor will document all inspection activities and corrective actions and be prepared to provide these documents for inspection by the City, Maine Department of Environmental Protection or the U.S. Environmental Protection Agency upon request.
2. There is currently minimal small trees and landscaping within the limits of construction which will be removed. Trees of significance requiring protection will be protected as shown on the landscape architectural plans.
3. Storage areas are indicated on the Construction Management Plan (Attachment 4).

J. Construction Staging Area

1. The Construction Management Plan depicts location of the material staging areas, the location on onsite temporary construction trailers, the location on onsite truck delivery holding areas, the location onsite truck washing stations, masonry mixing stations, the general location of the construction security fence and the general location of temporary construction dumpsters. An open storage areas is shown on the plan.
2. Delivery Truck Holding Areas On-Site: The delivery holding area is shown on the plan and will not be blocked during construction. On days when the construction activities require multiple truck deliveries, these deliveries will be carefully scheduled so that there is always adequate on-site area for the holding of the trucks until they can be unloaded. Once at Thompson's Point all vehicles will be brought within the fence line. There will be no queueing on public streets or common area (privately owned) roadways without prior notice and coordination with the owner. Construction truck traffic will not alter normal traffic patterns or emergency vehicle access to or around the Thompson's Point Campus.
3. Delivery Truck Holding Areas Off-Site: An offsite holding area may be designated by the owner with prior approval from the owner. Offsite holding areas shall be minimized to short term parking only and will not prevent the normal operations of the site.

K. Parking During Construction

1. Construction Parking: Adequate parking for construction workers will be provided on site. The parking areas have been indicated on the Construction Management Plan.
2. Parking: There are no existing parking spaces available to the public within the construction limits that will remain operational during construction.
3. Truck Routes and Volumes: The Construction Management Plan indicates the designated truck routes. Truck volume is expected to be approximately 5-6 trucks per week.

L. Special Measures as Necessary

Construction will take approximately 22 months. Construction is not located near sensitive uses (e.g. medical care facilities, schools). Construction activity is not expected to impact the adjacent railroad operations or property; however, if a temporary condition arises the Contractor will take appropriate measures and communication to address impacts.

ATTACHMENT 1

Preliminary Construction Schedule (Subject to Change)

ATTACHMENT 2

Sec. 17-18. Construction activities.

(a) Within the R-zones, from September 1st to May 31st, no person shall engage in construction activities generating noise exceeding fifty (50) decibels, between the hours of 7:00 p.m. and 7:00 a.m., of the following day within five hundred (500) feet of any building used for residential, hospital or nursing home purposes. From June 1st to August 31st construction activity may continue until 8:00 p.m. Any other language notwithstanding, no construction activity shall begin before 8:00 a.m. on a Saturday, Sunday or legal holiday.

(b) Construction activities shall include, but not be limited to, the following:

(1) The use or operation of power or heavy equipment in connection with road, street, or bridge construction, reconstruction or repair;
(2) The use or operation of power or heavy equipment in connection with the installation or repair of utility lines, pipes, wires or cables;
(3) The use or operation of power or heavy equipment in connection with the construction of buildings, including specifically excavation for foundations or landscaping work of any kind;
(4) The renovation, repair, remodeling or demolition of the exterior or foundation of any building or structure

(c) This section shall not apply in the following situations:

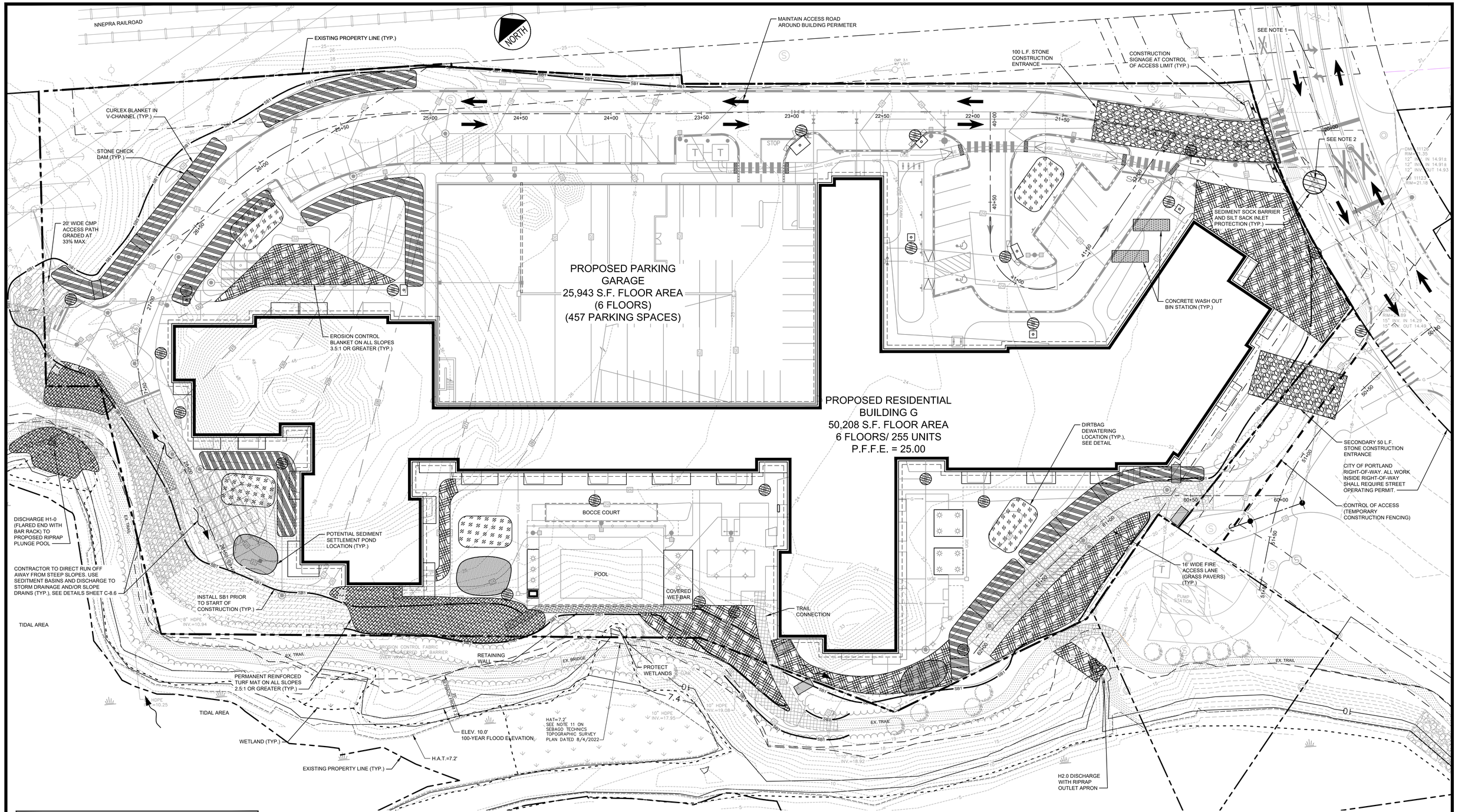
(1) Emergency repair work on any utility line, pipe, wire or cable required to restore normal utility service;

(2) Situations where the public works authority or the office of building inspections determines that the construction activity is of a unique character which cannot reasonably be completed or performed during the permitted hours and which is not of a recurring nature, provided that prior to engaging in such activity the contractor or his representatives gives notice of the time and scope of such proposed activity, the notice to be given in a manner approved by the public works authority.

ATTACHMENT 3

Sec. 25-129. Noise, dust and debris. Each permittee shall conduct and carry out excavation work in such manner as to avoid unnecessary inconvenience and annoyance to the general public and occupants of neighboring property. To the fullest extent practicable, the permittee shall take appropriate measures to reduce noise, dust and unsightly debris in the performance of the excavation work. Excavation work, including the use of any tool, appliance, or equipment, shall be performed between the hours of 7:00 a.m. and 10;00 p.m. only, exclusive of emergency work. Time waiver requests may be submitted to the public works authority for work outside of this time period and will be subject to neighborhood concerns. Excavation work shall not occur on Sundays, holidays or on major holiday weekends, unless expressly authorized by the public works authority or as a result of emergency need.

ATTACHMENT 4
Plan Sheet C-6.0 Erosion Control and Construction Management Plan



LEGEND

- INLET PROTECTION (STONE OR HAY SEDIMENT BARRIER)
- FILTERRA INLET PROTECTION (PER MANUFACTURERS REQUIREMENTS)
- RIPRAP OUTLET PROTECTION
- CURLEX BLANKET
- PERMANENT REINFORCED TURF MAT
- EROSION CONTROL BLANKET
- WASH DOWN AREA
- STONE CONSTRUCTION ENTRANCE
- DIRTBAG DEWATERING
- POTENTIAL SEDIMENT SETTLEMENT POND
- STONE CHECK DAM

Summary of Storm Water Discharges

Discharge ID	Approximate Drainage Area (Ac)	Full Build Out 25 Yr Peak Flow (CFS)	Outlet Pipe Size (In)	Description	*Minimum Required Riprap D50 (IN)
HB-0	1.86	8.89	24	RCP Flared End W/ Bar Rack, Riprap Slope Apron	12
HC-0	0.87	4.62	15	RCP Flared End W/ Bar Rack, Riprap Slope Apron	12

* D50 is a median rock size. Riprap should be a well graded mix of angular rock from about 1.5 to 0.25 times the size of the D50. The contractor shall protect existing riprap slope or replace rock to the meet the minimum required D50 stone size.

SCHEDULE OF SILT BARRIER REQUIREMENTS

SILT BARRIER	TYPE PURPOSE	TIME OF INSTALLATION
SB1 TYPE 1 SILT BARRIER	TO TRAP SEDIMENT ALONG THE GRADING EDGE WHERE THE NEW CONTOURS NEARLY PARALLEL THE EXISTING CONTOURS	AT INITIAL SITE PREPARATION; PRIOR TO OTHER WORK

NOTES:

1. EXISTING PAVEMENT TO REMAIN AS TRACKING PAD. SWEEP CLEAN DAILY OR MORE FREQUENTLY AS REQUIRED TO PREVENT TRACKING SEDIMENT ALONG THOMPSON'S POINT ROAD. SHOULD SEDIMENT BE TRACKED OFFSITE, CONTRACTOR IS RESPONSIBLE FOR SWEEPING/CLEARING PAVEMENT AS NECESSARY TO PROTECT EXISTING STORMWATER COLLECTION INLETS. CONTRACTOR MAY BE REQUIRED TO INSTALL WASHING STATION OR OTHER TRACKING PREVENTATIVE MEASURE AT NO ADDITIONAL COST TO OWNER.
2. DISCHARGE OF EXCAVATION DEWATERING MAY BE DIRECTED TO EXISTING DRAINAGE STRUCTURES IF ALL TREATMENT REQUIREMENTS ARE MET. REFER TO ENVIRONMENTAL ASSESSMENT REPORT BY CREDERE ASSOCIATES, LLC AND PROJECT SPECIFICATIONS FOR ALL DEWATERING REQUIREMENTS.
3. ALL RUNOFF FROM DISTURBED AREAS SHALL BE DIRECTED TO A FILTERING DEVICE DESIGNATED TO LIMIT TURBIDITY IN ALL DISCHARGE TO THE FORE RIVER. THE FILTERING DEVICE MAY BE BUT IS NOT LIMITED TO SAND FILTERS, EROSION CONTROL MIX, STRAW WHATTLES, FLOCCULATION CHEMICALS, DIRT GLUE AND SILT FENCE.
4. ALL CATCH BASINS TO HAVE 4" UNDERDRAIN PER DETAIL 'L' ON SHEET C-8.5.
5. ALL SUBSURFACE DETENTION AREAS ARE NOT TO BE PLACED "ON-LINE" UNTIL TRIBUTARY AREA IS STABILIZED WITH PAVEMENT OR 75% VEGETATION COVERAGE
6. STOCKPILES TO BE TEMPORARILY SEEDED AND MULCHED AS REQUIRED BY THE PROJECT SPECIFICATIONS.
7. THE CONTRACTOR SHALL TREAT DISTURBED AREAS AND CONSTRUCTION HAUL PATH WITH DUST CONTROL BMPS TO LIMIT ALL FUGITIVE DUST.
8. ALL EXCESS COMMON BORROW SHALL BE PLACE IN DESIGNATED STOCKPILE ON PANHANDLE DETAILS INCLUDED IN SEPARATE PLAN SET BY REFERENCE.

GRAPHIC SCALE

20 0 10 20 40

(IN FEET)

1 inch = 20 ft.

PRELIMINARY – NOT FOR CONSTRUCTION

REV	DATE	DESCRIPTION
1	9/6/2024	MAJOR SITE PLAN APPLICATION

REVISIONS

STATE OF MAINE BO KENNEDY No. 11994 LICENSED PROFESSIONAL ENGINEER 9/9/2024

P.E. BO KENNEDY

LIC. #11994

PROJECT
THE FOREFRONT AT THOMPSON'S POINT
MULTI-FAMILY RESIDENTIAL BUILDING (G)

SHEET TITLE
EROSION CONTROL AND CONSTRUCTION MANAGEMENT PLAN

CLIENT CPI MANAGEMENT, LLC (CATHARTES)

PLACEMAKER PARTNERS, LLC
18 VAN AKEN WAY
PORTLAND, ME 04102
bo@placemakerpartners.com

DRAWN: DB	DATE: AUGUST 2024
DESIGNED: BEK	SCALE: 1" = 20'
FILE NAME: PANHANDLE-EROSION.dwg	
SHEET C-6.0	

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GORRILL PALMER
An LJB Engineering Company

300 Southborough Drive, Suite 200, South Portland, ME 04106
(207) 772-2515|GorrillPalmer.com

Trip Generation and Parking Demand Summary
Thompson's Point
September 2024 – (Revised 12-10-24)

Date: September 4, 2024 (Revised 12-10-24)
Subject: Updated Trip Generation and Parking Demand
Thompson's Point
To: Bo Kennedy, Placemaker Partners, LLC
From: Randy Dunton / Kyle Brennan, Gorrill Palmer (JN 4346)

Gorrill Palmer (GP) has prepared this updated trip generation and parking demand summary for the Thompson's Point development in Portland, Maine. The full build out of the project received a MaineDOT Traffic Movement Permit (TMP) in 2012 (Reg. 01-00155-A-N) for 734 trip ends during the AM peak hour and 1,091 trip ends during the PM peak hour. The Traffic Movement Permit received an extension in 2024 out to March 1, 2027. The documentation for the extension is attached. The project is being constructed in phases and each phase must be evaluated to ensure that the total site trip generation does not exceed the permitted trip generation. The following is a summary of the forecast trip generation and parking demand for the existing and previously approved uses, and the proposed residential development on site. A site plan is attached showing the location of each building.

Existing and Previously Evaluated Trip Generation Summary

The trip generation for the existing Thompson's Point site is based on discussions with Bo Kennedy, project manager/engineer for the site. The trip generation was calculated using the same methodology as that used in previous trip generation evaluations for the site, including using the Institute of Transportation Engineers' publication, *Trip Generation*, 7th Edition, except where otherwise noted, and applying a 10% reduction to the total site trip generation to account for other modes of transportation and shared uses on the site. The following table summarizes the trip generation for the existing site:

Existing and Approved Site Trip Generation

Building	Description	Size	AM Peak Hour	PM Peak Hour
Building A Brick North				
	Halo (Event Space) – Previously approved	400 attendees	16	31
	Office Space – 7 Emp.	7 Employees	7	7
	Brewery & Sit-Down Restaurant – LUC 932 + 7 Emp.	14,644 sf (4,624 sf Rest. & 10,020 sf Brewery)	7	49 (42+7)
	Brewery Tap Room – LUC 932 + 5 Emp.	5,284 sf	16 (11+5)	16 (11+5)
	Color Me Mine – Previously Approved	2,136 sf	2	6
	International Cryptozoology Museum – Previously approved (doubled in size)	1919 sf	2	2
	Leisure Time Cocktails – LUC 975	1725 sf	N/A	20

	Coffee Roasting – Assumed (Employee only)	675 sf	1	1
	Brick North Total		**51**	**132**
Building C Brick South				
	Event/Assembly Space – Previously approved	2,500 Seats	100	195
	Annex	7,384 sf	--*	--*
	Brick South Total		**100**	**195**
Building F1				
	Warehouse – Previously approved	14,200 sf	11	9
	Building F1 Total		**11**	**9**
Building F2				
	Artist Studio Space – Previously approved	1,940 sf	3	4
	Building F2 Total		**3**	**4**
Building L				
	Office Space – Previously forecasted potential future development	4,000 sf	7	9
	Event Space – Previously forecasted potential future development	100 Attendees	4	8
	Existing Storage – Previously forecasted potential future development	1,760 sf	0**	0**
	Existing Office Space (Credit)	4,000 sf	(-7)	(-9)
	Building L Total		**4**	**8**
Building B2				
	Concession Building – Previously approved	960 sf	4	4
	Building B2		**4**	**4**
Building D				
	Proposed Hotel (2024 Construction Start) – Previously proposed development	148 Rooms	68	87
	Hotel Total		**68**	**87**
Building I Children's Museum and Theatre of Maine (CMTM)				
	CMTM– Previously approved	29,096 sf	33	33
	Children's Museum Total		**33**	**33**
Existing Subtotal			**274**	**472**

*Maximum of 2,500 people in the building for events. Highest trip generation would be an event in the Event space, not the Annex.
**Trip generation assumed to be negligible.

Since initially approved, there have been some minor changes to the uses. The "Rosemont Market" (2,724 sf) and Brewery & Sit-Down Restaurant (11,920 sf) have been combined and identified as "Brewery & Sit-Down Restaurant" (14,644 sf). For the purposes of this evaluation, the previously individual square footages have been combined. Trip generation for the "Brewery & Sit-Down Restaurant" was based on previously accepted "Bissell Brewery & Restaurant" methodology, where the restaurant trip generation is based on LUC 932 – High Turnover (Sit Down) Restaurant (4,624 SF) and trip generation for the brewery portion

(10,020 SF) is based on the 7 employees.

The previously approved coffee shop "Rwanda Bean" (2,400 sf) has been split with "Leisure Time Cocktails". "Rwanda Bean" (675 sf) is still occupying part of the space for coffee roasting, but the remaining space is now occupied by "Leisure Time Cocktails" (1725 sf).

The previously approved "Big Room Studios" (3,461 sf) has been replaced with an "Office Space". The square footage of the area is the same, but because the office space only has 7 employees, trip generation was based on employee trips.

The previously approved "Distillery" (5,284 sf) has been replaced with a "Brewery Tap Room" (5,284 sf). For the purposes of this evaluation due to similar use the previously approved individual square footage and trip generation will be used for the "Brewery Tap Room". Trip generation for the "Brewery Tap Room" is based on 1,200 SF of restaurant space (LUC 932) and 4,084 SF of brewery space (5 employees).

The previously approved "International Cryptozoology Museum" (993 sf) has doubled in size. Due to the "International Cryptozoology Museum" (1919 sf) doubling in size the trip generation will double from the previous report.

The site has moved onto its next phase of development, which includes Building's L, B2, and D. Building's L and B2 were identified as proposed development in the previous report. Building D was identified as potential future development in the previous report. Building's L, B2, and D will contribute 76 & 99 trip ends in the AM & PM peak hours respectively.

As shown in the table, the existing site is forecast to generate 274 trip ends during the AM peak hour and 472 trip ends during the PM peak hour.

Proposed Site Trip Generation

Our understanding is that the site is now moving into its next phase of development, which will include a 255-unit six story apartment building (identified as Building G on the enclosed site plan).

Trip generation for the proposed use has been based on the following:

- 255 Units of Residential Development – New Construction

The trip generation for the proposed use was calculated using the updated Institute of Transportation Engineers' publication, *Trip Generation*, 11th Edition (LUC 221 – Mid-Rise Apartment). It should be noted that LUC 221 provides two different trip generations, "not close to rail transit" and "close to rail transit". It is our understanding that ITE refers "close to rail transit" as more local transit, such as subways. The Amtrak located near Thompson's point, in our opinion, does not meet the intent for "close to rail transit". The following table summarizes the trip generation for the proposed uses:

Forecast Trip Generation

Building	Description	Size	AM Peak Hour	PM Peak Hour
Building G Residential				
	Apartments – LUC 221	255 Units	101	100
Forecast Trip Generation			**101**	**100**

As shown in the table, the proposed residential use is forecast to generate an additional 101 trip ends and 100 trip ends during the AM and PM peak hours of the adjacent street, respectively.

Site Trip Generation

The trip generation for the existing site has been combined with the trip generation for the proposed new and remodeled buildings to yield the total site trip generation.

Total Site Trip Generation Summary

Site	Building	AM Peak Hour	PM Peak Hour
Existing			
	Building A – Mixed Used (Brick North)	51	137
	Building C – Events (Brick South)	100	195
	Building F1 – Warehouse	11	9
	Building F2 – Artist Studio	3	4
	Building L – Office	4	8
	Building B2 – Concessions	4	4
	Building D – Hotel	68	87
	Building I – Children's Museum and Theatre of Maine	33	33
	Existing Total	**274**	**472**
Proposed			
	Market Rate Apartments	101	100
	Forecast Total	**101**	**100**
Site Subtotal		**375**	**572**
Reduction (10%) for Bus / Train / Shared Use		(-37)	(-57)
Proposed Site Trip Generation		**338**	**515**
Permitted Trip Ends		734	1091
Difference Between Permitted and Proposed Site		**396**	**576**

As shown in the table, the site inclusive of the proposed residential development is forecast to generate 338 trip ends during the AM peak hour and 515 trip ends during the PM peak hour. This yields an overall trip generation that is 396 trip ends **less** than the permitted trip generation during the AM peak hour and 576 trip ends **less** than the permitted trip generation during the PM peak hour.

Parking Demand

Proposed Apartments: Parking for the new apartments is based on the ITE Parking Generation Manual, 5th Edition. The parking demand rate (1.31 spaces/unit) is based on Land Use Code (LUC) 221 – Multifamily

Housing (Mid-Rise). Because of the nature of the housing use, the peak parking demand (334 spaces) occurs overnight with the lowest parking demand (164 spaces) occurring during the day (1:00 – 2:00 PM). This complements the other uses on site well, since they will have the highest demand around noon time, with little to no demand (approximately 26-70 spaces) overnight.

Overall Site: The overall site parking demand is based on a combination of shared and designated parking methodologies. The shared methodology (majority of the site) assumes there are parking spaces not designated for specific uses and can be shared between the uses. There are some spaces on site such as the panhandle/residential garage that are proposed to use designated parking and be specifically residential or non-public Thompson's Point managed supply spaces. The attached parking demand calculations show the detailed time of day distribution for each use and the forecast demand. Based on the calculations the peak parking demand is between 6:00 PM and 10:00 PM for the overall site. The peak parking demand (without an event in Brick South or Halo) is 475 spaces and is anticipated to occur at 10:00 PM, of which 405 is the parking demand for the hotel and apartments which have designated spaces. Excluding the hotel and apartments, the peak parking demand is 165 spaces and occurs around noon. As identified in the approval for the master development plan, when special events of a certain attendance threshold occur, additional parking measures will be implemented on an as needed basis.

Conclusions

The following is a summary of the conclusions:

1. The site (including existing and proposed uses) is forecast to generate a total of 338 trip ends during the AM peak hour and 515 trip ends. This trip generation is 396 trip ends less than the permitted trip generation during the AM peak hour and 576 trip ends less than the permitted trip generation during the PM peak hour.

2. The peak parking demand for the proposed apartments (334 spaces) occurs overnight after 10:00 PM, when there is little to no demand from the other on-site uses, with the exception of the hotel demand (110 spaces). Excluding the hotel and apartments, the overall site parking demand peaks around noon, when the hotel and apartments are near their lowest parking demand.

u:\cathartes\4346_thompsons point_residential\n traffic\revised trip gen 12-10-2024.docx



GORRILL PALMER
An LJB Engineering Company

300 Southborough Drive, Suite 200, South Portland, ME 04106
(207) 772-2515|GorrillPalmer.com

Supplemental Package
12-10-2024

The following attachments are provided as previous information that has been submitted to the City in support of the Thompson's Point development.

A. TMP Extension – Dated 3/1/24 & 3/12/24
B. Trip Generation Evaluation & Summary – June 2022
C. Trip Generation and Parking Demand Summary – April 2020
D. MaineDOT Traffic Movement Permit - Thompson's Point Development Company Inc. – Signed 6/13/12

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An LJB Engineering Company

Attachment A

TMP Extension – Dated 3/1/24 & 3/12/24

Planning and Urban Development
Christine Grimando, AICP
Director

City of portland

Applicant:	Chris Thompson Forefront Partners I, LP 501 Danforth Street Portland, Maine 04102
Project Location:	1 Thompson's Point Rd. Portland, Maine 04102
Parcel #	201 A005001
Project:	Thompson's Point/Mixed-use Development
Identification #:	Reg. 01-00155-A-N
Permit Category:	200 Plus PCE
Traffic Engineer:	Thomas Gorrill/Randy Dunton Gorrill-Palmer Consulting Engineers 300 Southborough Dr., #200 South Portland, ME 04106

Pursuant to the provision of 23 M.R.S.A. § 704-A and Chapter 305 of the Maine Department of Transportation's (MaineDOT) Regulations, the City of Portland and MaineDOT have determined that a one-time extension of the Traffic Movement Permit issued for Thompson's Point is warranted. The permit will be considered expired if construction of the project has not been completed by March 1, 2027, unless a modification is approved prior to this date.

In the event the permit expires prior to construction being completed by the end of the one-time extension date, the Applicant shall submit a new permit, with information pertaining to Sections 1 thru 6 of the General Submission Requirements and a Notice of Intent to File, as outlined in Chapter 305, and address any changes in facts since the initial analysis and approval. Consistent with Section 8 of Chapter 305, in the event the Applicant completes all mitigation required for the Development, but cannot complete the Project within the one-time extension date, the Developer will be required to submit a TMP Modification that includes any programmatic changes to the Development for review and approval. An applicant may be required to provide additional mitigation of permitted trips as a result of changes to the Development program increase beyond the initial approval. Additionally, the Developer may be required to attend a Scoping Meeting, unless the Maine Department of Transportation waives this requirement.

389 Congress Street, Portland, Maine 04101 | ph: 207.874.8608 | cdg@portlandmaine.gov

All required terms and mitigation of the original TMP approval remain in effect.

Christine Grimando, AICP
Director, Department of Planning & Urban Development
City of Portland

Date: March 1, 2024

Stephen Landry, P.E.
State Traffic Engineer
Maine Department of Transportation

Date: 3/12/24

GORRILL PALMER
An LJB Engineering Company

Attachment B

Trip Generation Evaluation & Summary – June 2022

GORRILL PALMER

707 Sable Oaks Drive, Suite 30
South Portland, Maine 04106
207.772.2515

Trip Generation Evaluation & Summary
Thompson's Point
June 13, 2022

Date: June 13, 2022
Subject: Updated Trip Generation
Thompson's Point
To: Bo Kennedy, P.E. - Placemaker Partners, LLC
From: Randy Dunton, P.E., PTOE

Gorrill Palmer (GP) has prepared this updated trip generation summary for the Thompson's Point development in Portland, Maine. The full build out of the project received a MaineDOT Traffic Movement Permit (TMP) in 2012 (Reg. 01-00155-A-N) for 734 trip ends during the AM peak hour and 1,091 trip ends during the PM peak hour. The project is being constructed in phases and each phase must be evaluated to ensure that the total site trip generation does not exceed the permitted trip generation. The following is a summary of the forecast trip generation for the existing and previously approved uses, currently proposed and potential future development and the total site trip generation. A Thompsons Point Campus Directory is attached showing the location of each building for the existing conditions. Exact location of proposed and potential future buildings is still being refined.

Existing Trip Generation Summary

The trip generation for the existing Thompson's Point site has been based on discussions with your office and previously approved uses. Where relevant, trip generation that was previously approved was maintained in this evaluation. Trip generation for change in tenants permitted under current approvals is based on ITE Trip Generation, 11th Edition or through observations at the site. As previously approved for this site, a 10% reduction has been applied to the total site trip generation to account for other modes of transportation and shared uses on the site. The following tables summarize the trip generation for the existing site:

Table 1 – Existing Site – Trip Generation

Building	Description	Size	AM Peak Hour	PM Peak Hour
Brick North				
	Rosemont Market – Based on observations	2,724 sf	0	29
	Rwanda Bean – Based on observations	2,400 sf	18	21
	Halo (Event Space) – 3.5 people / car – Night Event	400 attendees	16	31
	Big Room Studios – LUC 712	3,461 sf	6	7
	Bissell Brewery & Restaurant – LUC 932 + 7 Emp.	11,920 sf	25 (18+7)	24 (17+7)
	Distillery – LUC 932 + 5 Emp.	5,284 sf	16 (11+5)	16 (11+5)
	Color Me Mine – previously approved	2,136 sf	2	6
	International Cryptozoology Museum - assumed	993 sf	1	1
	Brick North Total		**84**	**135**

Brick South				
	Event/Assembly Space – 3.5 people / car – Night Event	2,500 Seats	100	195
	Annex	7,384 sf	--*	--*
	Brick South Total		**100**	**195**
Building F1				
	Warehouse – LUC 110	14,200 sf	11	9
	Building F1 Total		**11**	**9**
Building F2				
	Proposed Artist Studio – LUC 712	1,940 sf	3	4
	Building F2 Total		**3**	**4**
Satellite Building				
	Children's Museum – provided by Museum – previously approved	29,096 sf	33	33
	Satellite Building Total		**33**	**33**
	Existing Site Subtotal		**228**	**376**
	Reduction for Existing Site Shared Trips		**(-23)**	**(-38)**
Total			**205**	**338**

*Maximum of 2,500 people in the building for events. Highest trip generation would be an event in the Event space, not the Annex.

Since initially approved, there has been some minor changes to the uses. The "Locally Sauced (formerly Big J's Chicken) and the Bissell "Brewery" have been combined and identified above as "Bissell Brewery & Restaurant". For the purposes of this evaluation, the previously approved individual square footages and trip generations have been combined.

The previously approved Cellardoor "Winery" (5,890 sf) has been replaced with a Rosemont Market with wine bar (2,724 SF) and a Rwanda Bean (2,400 SF). The difference between the square footages is a bathroom area that is shared between the two uses. The Rosemont Market and Rwanda Bean are described in more detail as follows:

Rosemont Market – this is a boutique type store with approximately 12 seats in the café area and 15 seats at the wine bar. The store hours during a weekday are 10AM – 8PM for the store & café area and 2PM-8PM for the wine bar. Since the use is unique, it does not fit into a typical ITE category for the purpose of determining trip generation. Since the use is not open during the AM peak hour of adjacent street traffic, the trip generation for the AM peak hour was assumed to be none. To estimate the PM peak hour of adjacent street traffic, the use was counted on Thursday, April 21, 2022 from 4PM – 6PM. Both of the accesses to the facility were observed, and it was estimated who may have arrived in their own car. Based on our observations, the peak hour occurred from 4PM – 5PM with an estimated total of 11 vehicles entering and 18 vehicles exiting, for a total of 29 vehicles.

Rwanda Bean – similar to the market, this is a boutique type store with approximately 25 seats, with areas for both cooking goods and a relatively large area for the roasting and packaging of the coffee. The store hours during a weekday are 8AM – 4PM. Since the use is unique, it does not fit into a typical ITE category. The use was counted on Thursday, April 21, 2022 from 7AM – 9AM and again from 3:30PM – 4:30 PM. Similar to the market, all of the accesses to the facility were observed, and it was estimated who may have arrived in their own car. Based on our observations, the AM peak hour occurred from 8AM – 9AM. There was only one hour counted for the PM since they close at 4PM. Based on our observations, the AM experienced a total of 18 vehicles (11 entering and 7 exiting) and the PM experienced a total of 21 vehicles (11 entering and 10 exiting). Even though the PM adjacent street peak hour typically occurs between 4PM – 6PM, to be conservative we used the 3:30PM – 4;30PM counts.

As shown in the table, the existing site subtotal is forecast to generate 228 trip ends during the AM peak hour and 376 trip ends during the PM peak hour. Based on observations at the site, there are significant shared trips between the activities on site (such as Children's Museum) and the food establishments such as Rwanda Bean & Rosemont Market. Additional significant shared trips would also be expected between activities on site and Bissell Brewery & Restaurant and potentially the Distillery. Although a 10% reduction is applied to the site as a whole, that 10% also includes those taking other modes of transportation, so only a portion of that reduction is shared trips. Given the significant shared use that has been observed on site, an additional 10% was subtracted from the existing site traffic to reflect the existing shared use. Therefore, the resulting trip generation for the existing site is forecast to be 205 trip ends during the AM peak hour and 338 trips ends during the PM peak hour.

Proposed Site Trip Generation

Our understanding is that the site is now moving into its next phase of development, which will include an approximately 148 room hotel and a concession building (Building B2). A smaller Hotel (125 room) was included in the original TMP with a trip generation of 70 and 74 trips ends during the AM & PM peak hours of adjacent street traffic respectively. We understand that the final number of rooms is still being refined and may be something less than the 148.

The currently proposed concession building is intended to supplement existing uses on site and not generate significant trips from off-site. For the purposes of this evaluation, we have considered trip generation to be 4 employees during both the AM and PM peak hours.

The following Table 2 summarizes the forecast trip generation for the hotel and concession building.

Table 2 - Currently Proposed Development - Trip Generation

Building	Description	Size	AM Peak Hour	PM Peak Hour
Hotel				
	Hotel – LUC 310	148 Rooms	68	87
	Hotel Total		**68**	**87**
Building B2				
	Concession Building	960 sf	4	4
	Building B2 Total		**4**	**4**
Currently Proposed Development Trip Generation			**72**	**91**

As shown in the Table 2, the proposed uses are forecast to generate an additional 72 trip ends and 91 trip ends during the AM and PM peak hours of the adjacent street, respectively.

Potential Future Development Trip Generation

In addition to the existing and currently proposed development, there is potential future development that could occur on-site and bring the site to its full potential as envisioned in the Master Development Plan. Those potential future uses were also described in the previous May 14, 2020 evaluation and are repeated here:

"Building K – New Construction

- *Proposed Inn: 61 rooms + potential 22 room expansion*
- *The Inn is proposed to include a bar that is intended to serve primarily hotel guests and potentially guests of other Thompson's Point uses. However, it is not anticipated to draw significant outside traffic, so the trip generation for the bar is forecast to be negligible."*

"Building L – Renovation
- *Existing Office: 4,000 sf*
- *Existing Storage: 1,760 sf*
- *Proposed Office: 5,760 sf"*

The 344 apartments that are currently identified as potential future development were originally approved in the "Revised Master Plan" as J1-(160 units), J2-(160 units) and 24 units on the top of the hotel. The trip generation for the apartments is based on the ITE Trip Generation 11th Edition for Land Use Code 221 – Multifamily Housing (Mid-Rise) – between 4 & 10 stories.

The following table summarizes the trip generation for the potential future development uses:

Table 3 - Potential Future Development - Trip Generation

Building	Description	Size	AM Peak Hour	PM Peak Hour
Building K				
	Inn – LUC 310	61 Rooms	28	36
	Inn Expansion – LUC 310	22 Rooms	10	13
	Building K Total		**38**	**49**
Building L				
	Proposed Office – LUC 712	4,000 sf	7	9
	Proposed Event Space	100 attendees	4	8
	Existing Office (Credit)	4,000 sf	(-7)	(-9)
	Existing Storage	1,760 sf	0*	0*
	Building L Total		**4**	**8**
Apartments				
	Market Rate Apartments – LUC 221	344 Units	127	134
	Apartments		**127**	**134**
Potential Future Development Trip Generation			**169**	**191**

*Trip generation assumed to be negligible.

Site Trip Generation

The trip generation for the existing site has been combined with the trip generation for the currently proposed development and the potential future development to yield the site trip generation upon full development of the uses identified herein. The total site trip generation has been compared to the permitted trip generation to identify remaining available permitted trips for other approved uses within the master plan.

Table 4 - Total Site Trip Generation Summary

Condition	AM Peak Hour	PM Peak Hour
Existing Site	205	338
Currently Proposed Development	72	91
Potential Future Development	169	191
Site Subtotal	446	620
Reduction (10%) for Bus / Train / Shared Use	(-45)	(-62)
Revised Site Trip Generation	**401**	**558**
Permitted Trip Ends (2012 TMP – Reg. 01-00155-A-N)	734	1091
Difference Between Permitted and Proposed Site	**333**	**533**

As shown in Table 4, the total site uses after consideration of other modes of transportation are forecast to generate 401 trip ends during the AM peak hour and 558 trip ends during the PM peak hour. This yields an overall site trip generation that is 333 trip ends less than the permitted trip generation during the AM peak hour and 533 trip ends less than the permitted trip generation during the PM peak hour.

Attachments:
- Campus Directory
- Trip Generation

u:\3948_thompson's point_portland\n traffic\final trip gen evaluation-06-13-22.docx

LEGEND

1. PORTLAND TRANSPORTION CENTER
2. PORTLAND TRAILS - Multi-Use
   Connection to Fore River Parkway and Sewall Street
3. PORTLAND TRAILS - Fore River Trailhead
4. BRICK NORTH - Mixed Use
   - 4A. Halo At The Point - Event Space
   - 4B. Big Room Studios
   - 4C. Color Me Mine
   - 4D. Stroudwater Distillery
   - 4E. International Cryptozoology Museum
   - 4F. Bissell Brothers Kitchen
   - 4G. Bissell Brothers Brewing
   - 4H. Rosemont Market & Wine Bar
   - 4I. Rwanda Bean Coffee
5. THE GROVE
   Featuring "Tree Of 40 Fruit"
6. CHILDREN'S MUSEUM & THEATRE OF MAINE
7. BRICK SOUTH - Event Venue
   - 7A. Brick South Beer Garden
8. DEPOT PAVILION & CONCESSIONS
   - 8A. Seasonal Warming Hut & Bar
   - 8B. Portland Trails Parklet
   - 8C. Outdoor Event Lawn
9. METRO BUS STOP
   - 9A. SHELTER



PAY & DISPLAY KIOSK
Enforcement Rules In Effect 24/7

PASSPORT PARKING ZONE # 1213
Enforcement Rules In Effect 24/7

THOMPSON'S POINT

THOMPSON'S POINT CAMPUS DIRECTORY

PORTLAND, ME

Big Room Studios

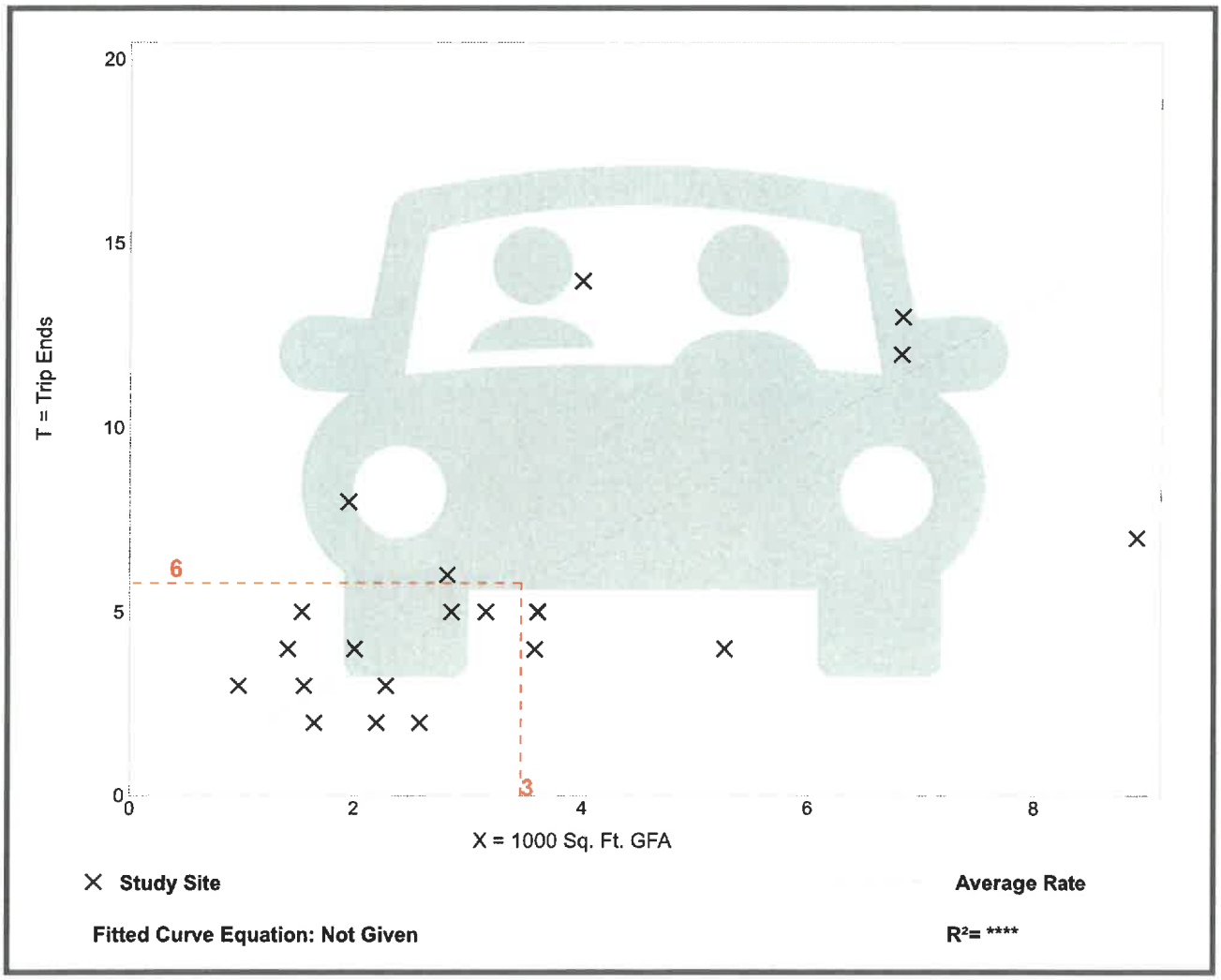
Small Office Building
(712)

Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 21
Avg. 1000 Sq. Ft. GFA: 3
Directional Distribution: 82% entering, 18% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
1.67	0.76 - 4.12	0.88

Data Plot and Equation



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Big Room Studios

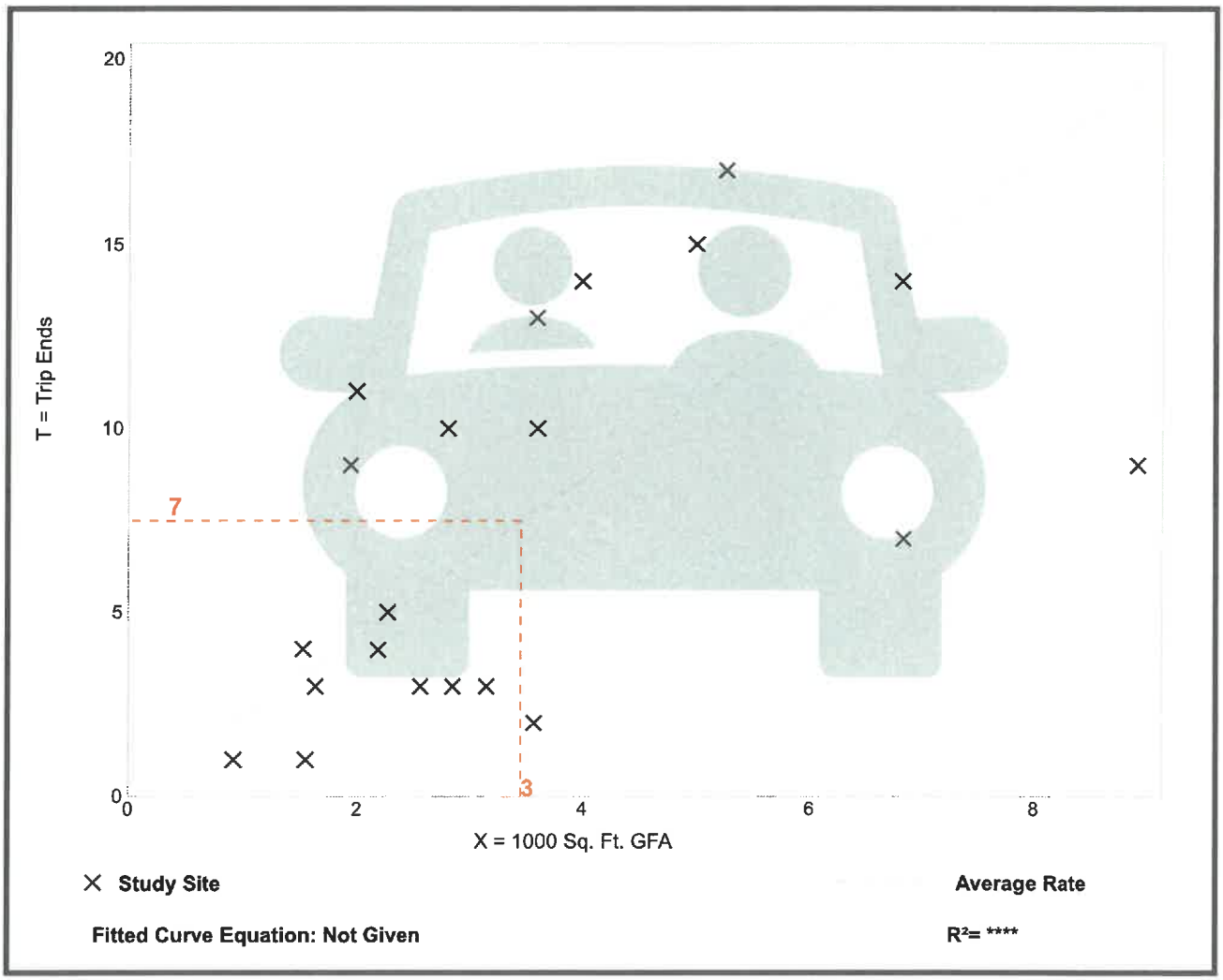
Small Office Building
(712)

Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 21
Avg. 1000 Sq. Ft. GFA: 3
Directional Distribution: 34% entering, 66% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
2.16	0.56 - 5.50	1.26

Data Plot and Equation



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Bissell
(1900# + 7 Emp)

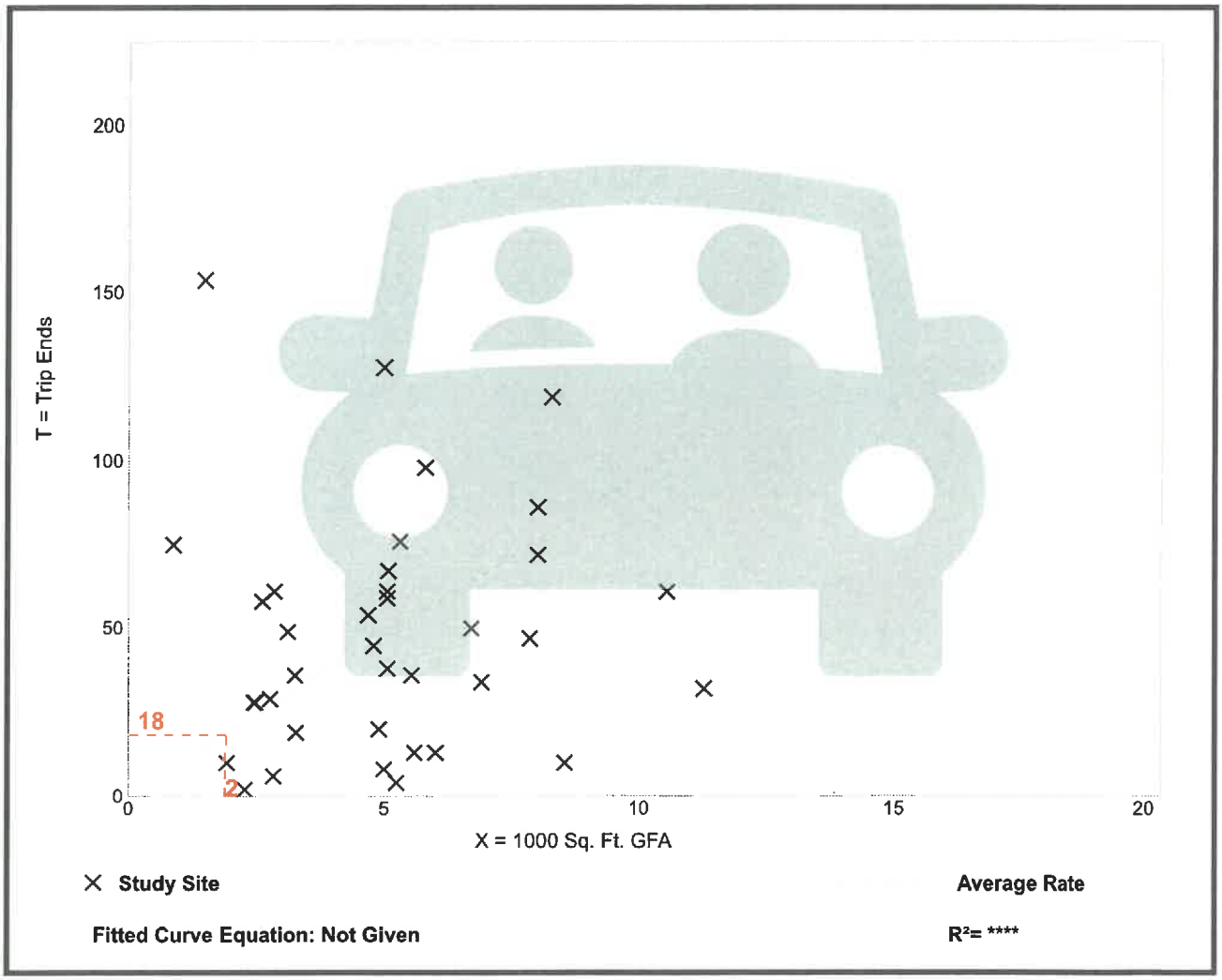
High-Turnover (Sit-Down) Restaurant
(932)

Vehicle Trip Ends vs:	**1000 Sq. Ft. GFA**
On a:	**Weekday,**
	Peak Hour of Adjacent Street Traffic,
	One Hour Between 7 and 9 a.m.
Setting/Location:	**General Urban/Suburban**
Number of Studies:	37
Avg. 1000 Sq. Ft. GFA:	5
Directional Distribution:	55% entering, 45% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
9.57	0.76 - 102.39	11.61

Data Plot and Equation



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Bissell
(1900# + 7 Emp)

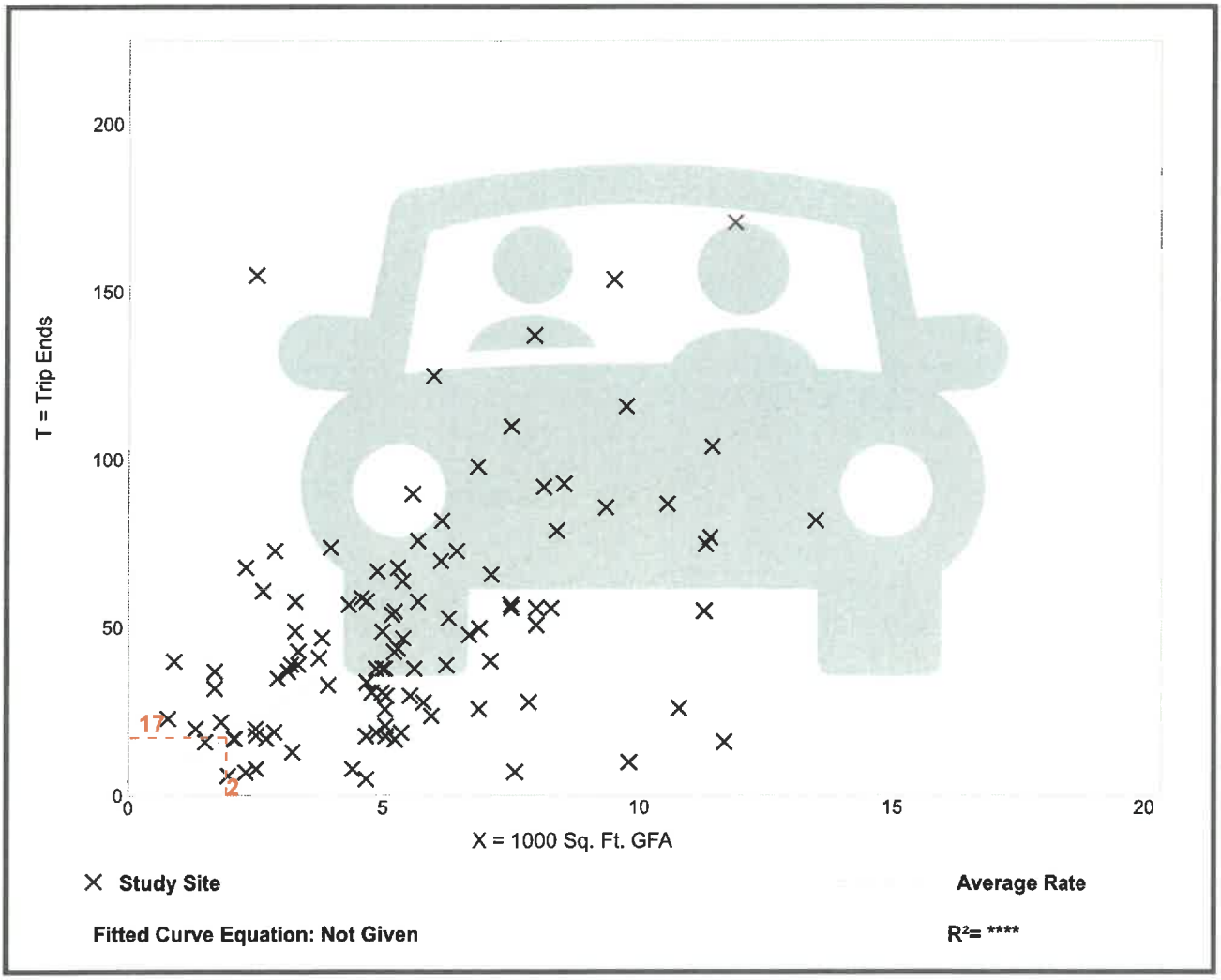
High-Turnover (Sit-Down) Restaurant
(932)

Vehicle Trip Ends vs:	**1000 Sq. Ft. GFA**
On a:	**Weekday,**
	Peak Hour of Adjacent Street Traffic,
	One Hour Between 4 and 6 p.m.
Setting/Location:	**General Urban/Suburban**
Number of Studies:	104
Avg. 1000 Sq. Ft. GFA:	6
Directional Distribution:	61% entering, 39% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
9.05	0.92 - 62.00	6.18

Data Plot and Equation



Distillery
(1200# +5)

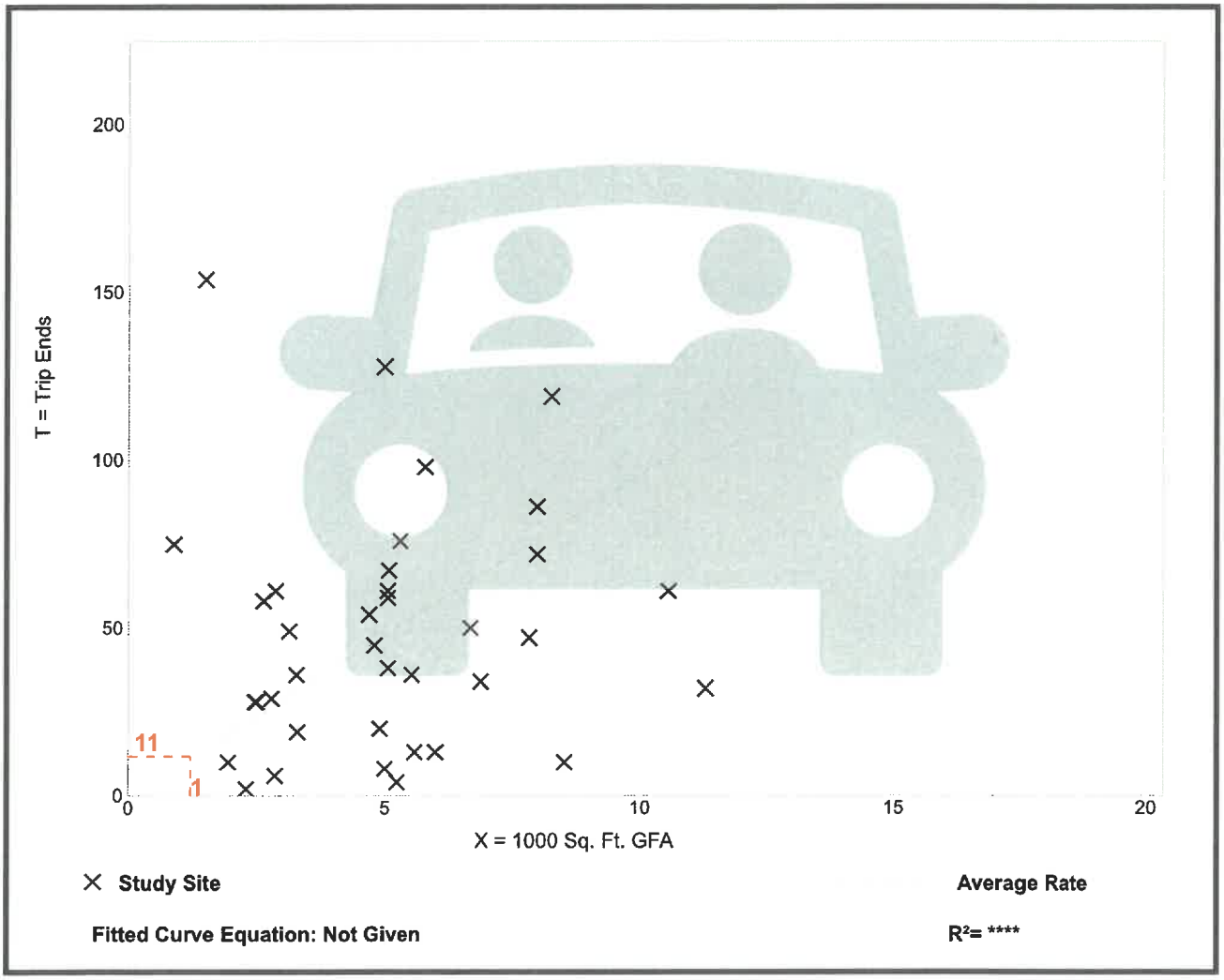
High-Turnover (Sit-Down) Restaurant
(932)

Vehicle Trip Ends vs:	**1000 Sq. Ft. GFA**
On a:	**Weekday,**
	Peak Hour of Adjacent Street Traffic,
	One Hour Between 7 and 9 a.m.
Setting/Location:	**General Urban/Suburban**
Number of Studies:	37
Avg. 1000 Sq. Ft. GFA:	5
Directional Distribution:	55% entering, 45% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
9.57	0.76 - 102.39	11.61

Data Plot and Equation



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Distillery
(1200# +5)

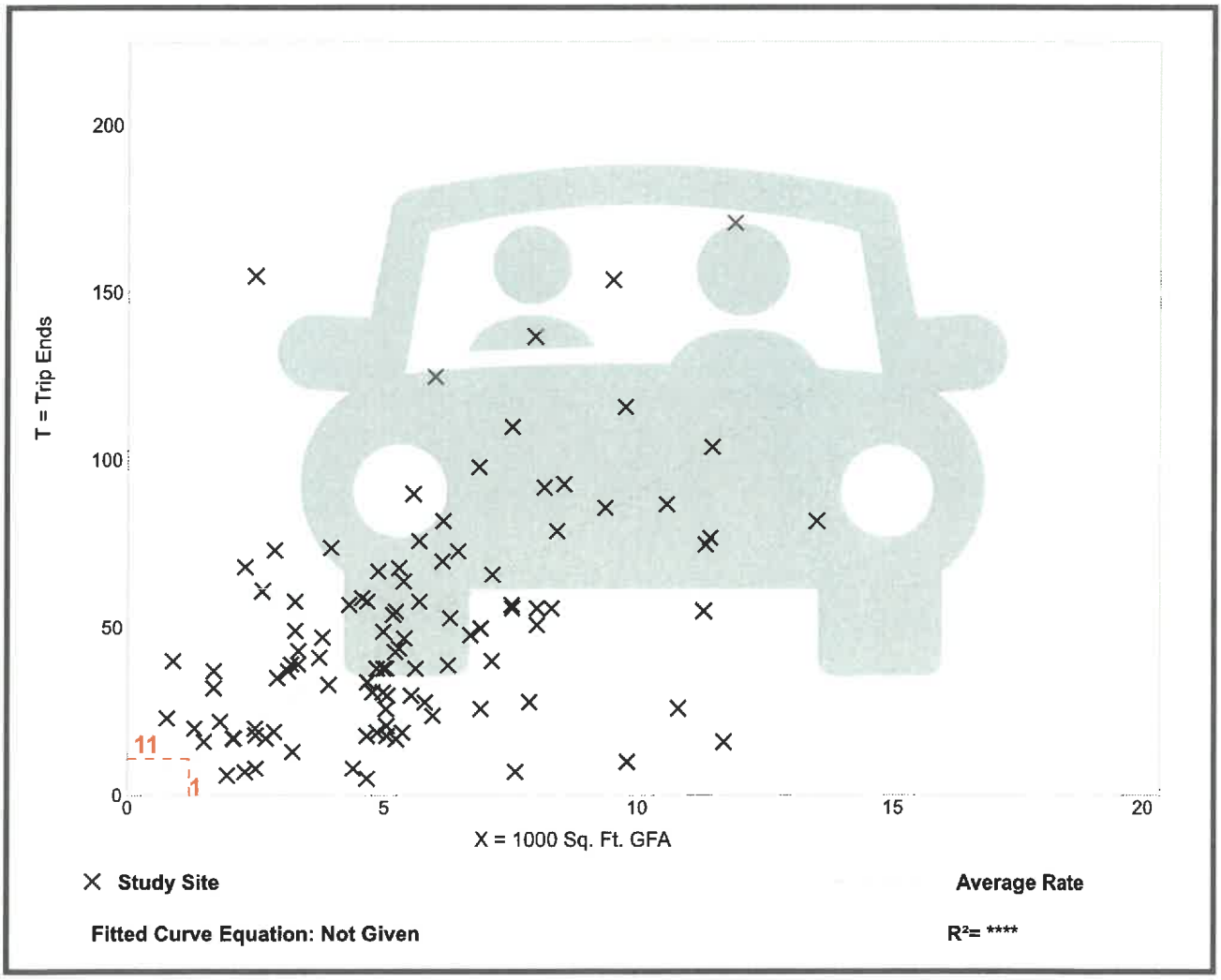
High-Turnover (Sit-Down) Restaurant
(932)

Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 104
Avg. 1000 Sq. Ft. GFA: 6
Directional Distribution: 61% entering, 39% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
9.05	0.92 - 62.00	6.18

Data Plot and Equation



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Building F1

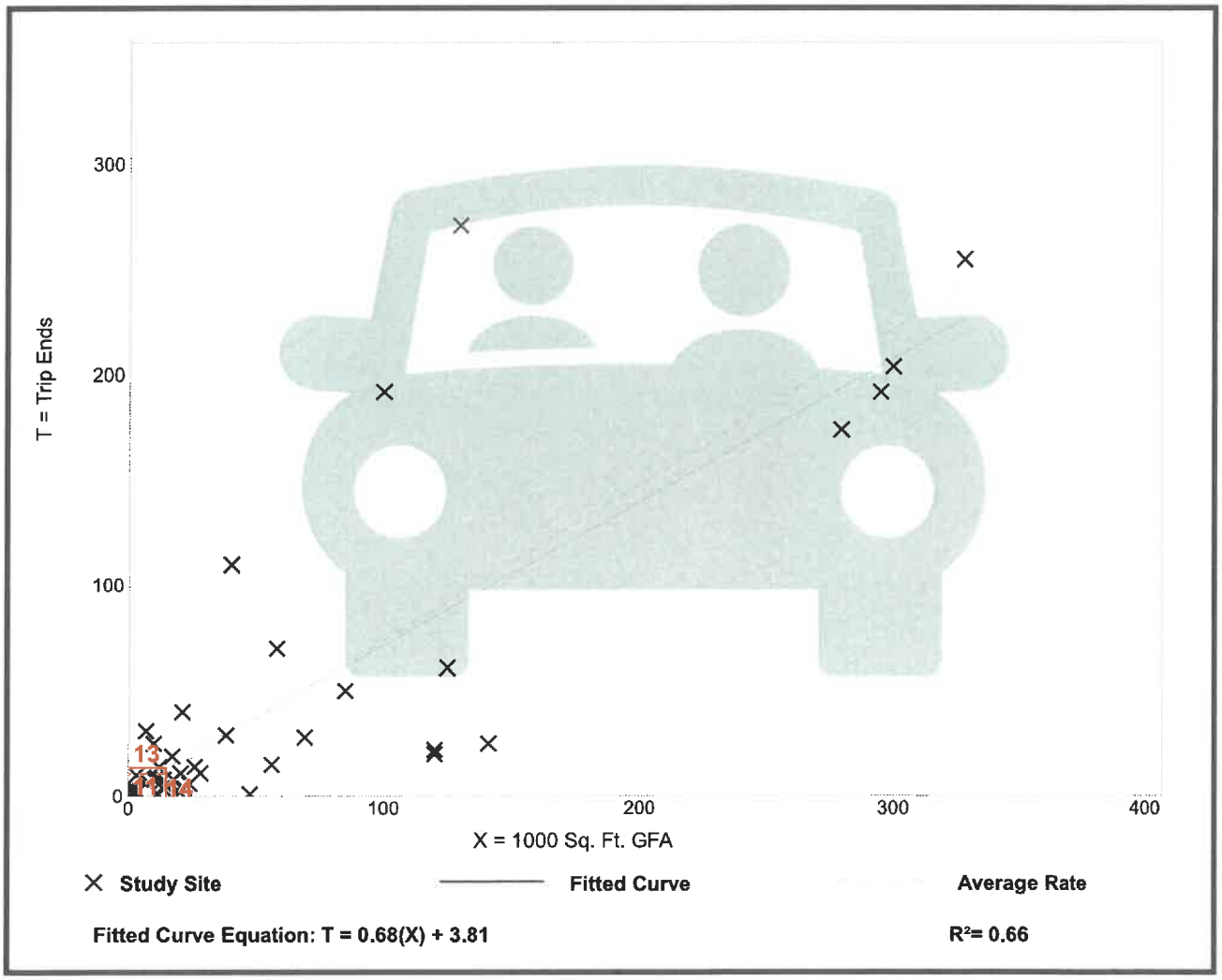
General Light Industrial
(110)

Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 41
Avg. 1000 Sq. Ft. GFA: 65
Directional Distribution: 88% entering, 12% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
0.74	0.02 - 4.46	0.61

Data Plot and Equation



Trip Gen Manual, 11th Edition • Institute of Transportation Engineers

Building F1

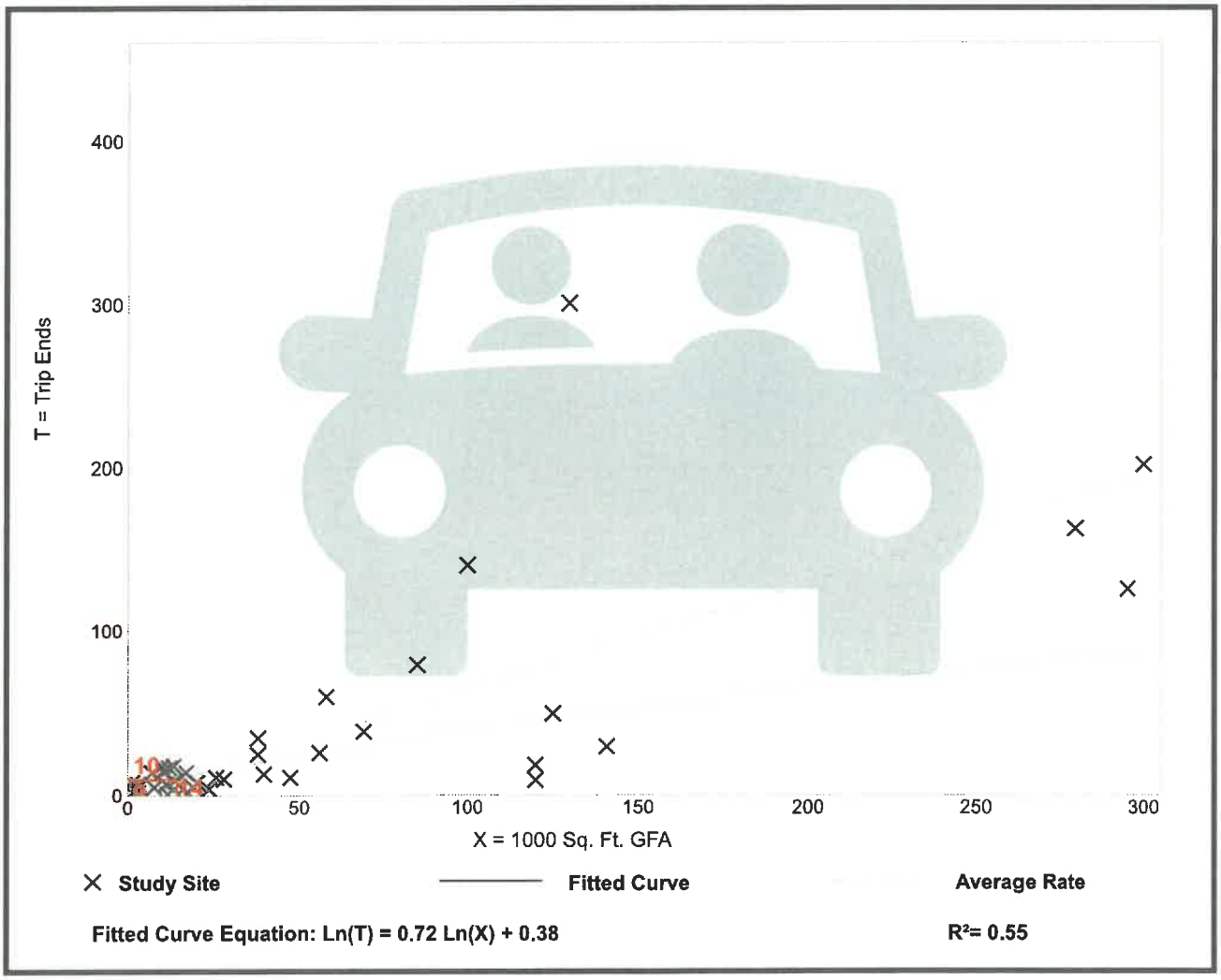
General Light Industrial
(110)

Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 40
Avg. 1000 Sq. Ft. GFA: 58
Directional Distribution: 14% entering, 86% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
0.65	0.07 - 7.02	0.56

Data Plot and Equation



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Building F2

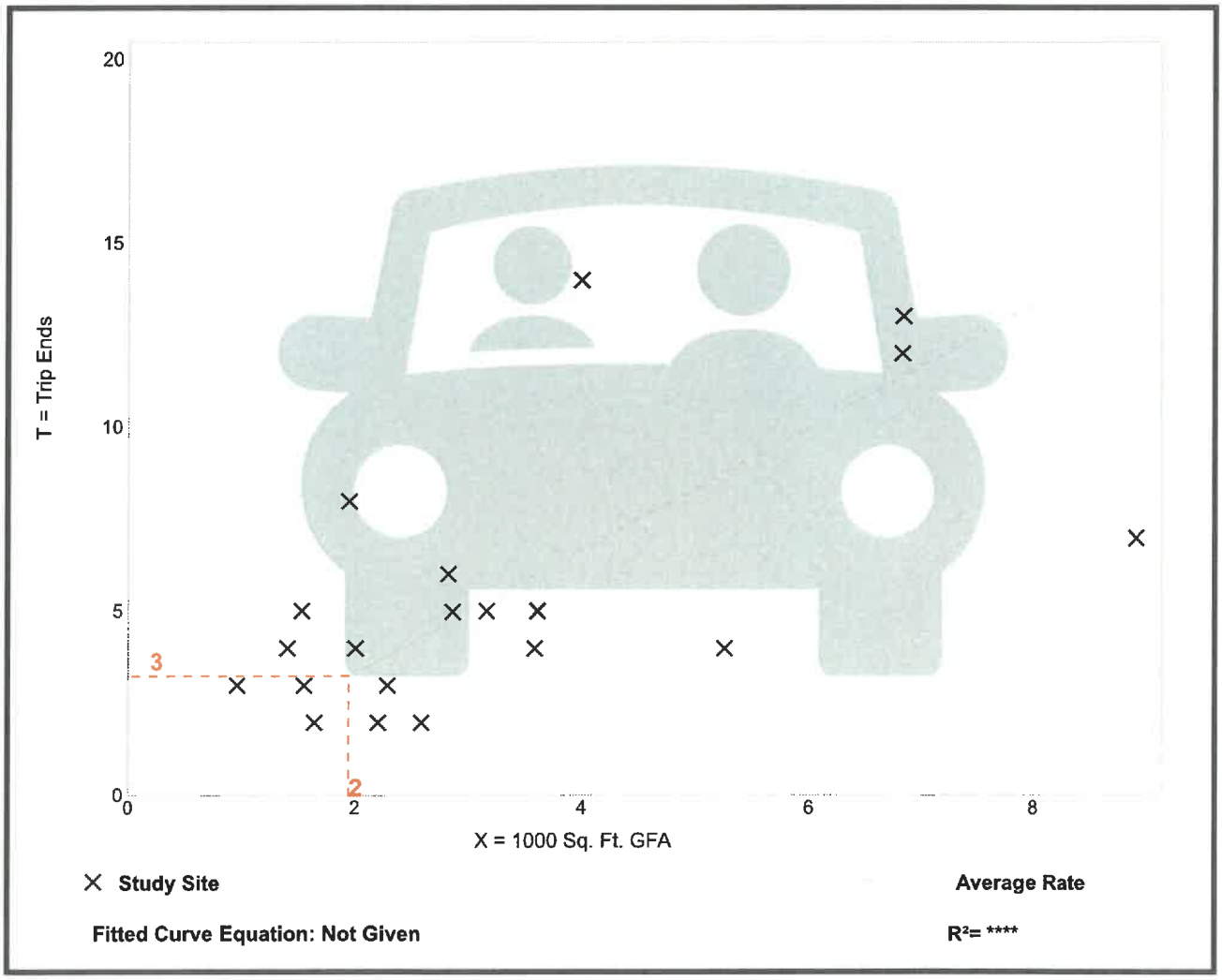
Small Office Building
(712)

Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 21
Avg. 1000 Sq. Ft. GFA: 3
Directional Distribution: 82% entering, 18% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
1.67	0.76 - 4.12	0.88

Data Plot and Equation



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Building F2

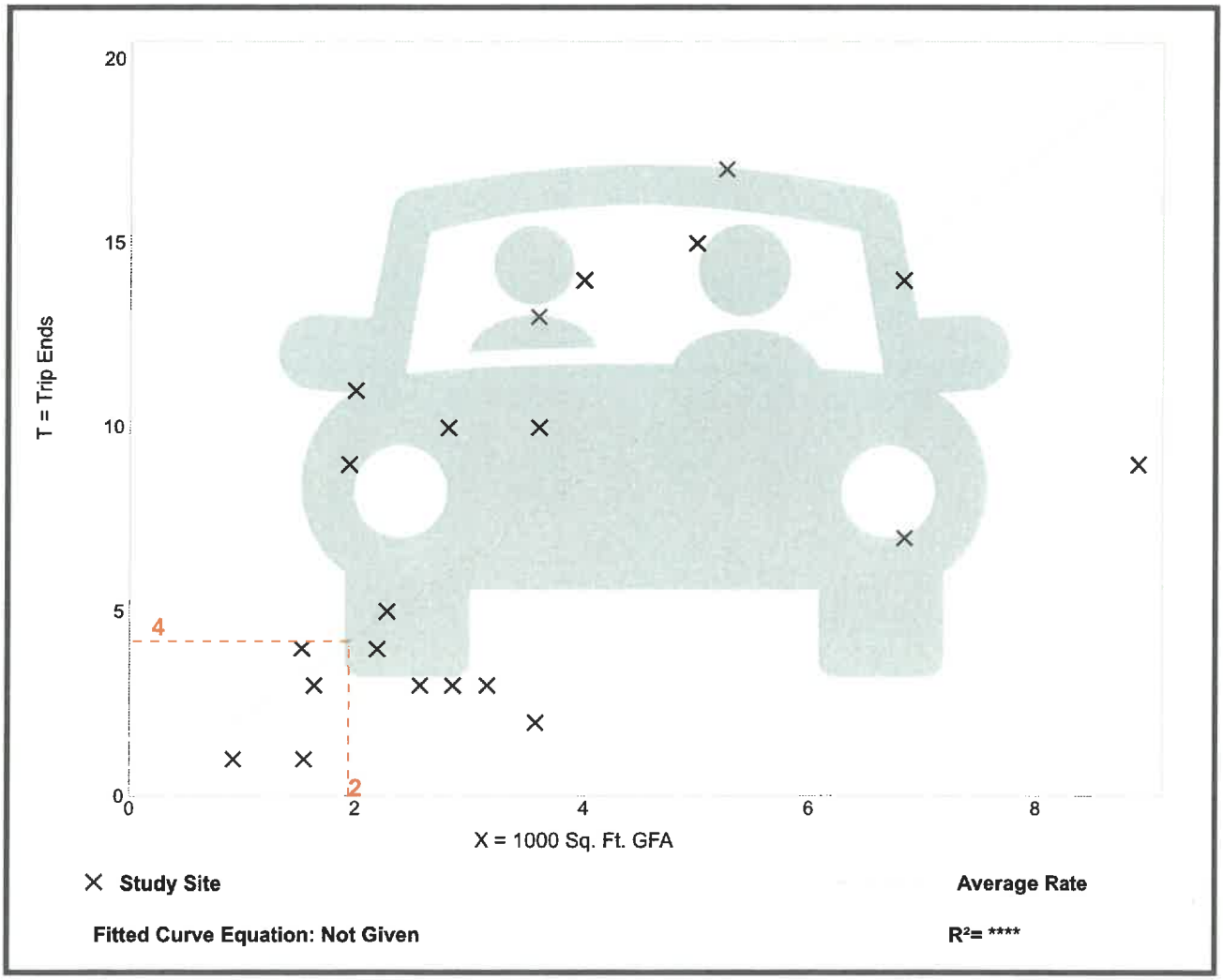
Small Office Building
(712)

Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 21
Avg. 1000 Sq. Ft. GFA: 3
Directional Distribution: 34% entering, 66% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
2.16	0.56 - 5.50	1.26

Data Plot and Equation



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Building D & K

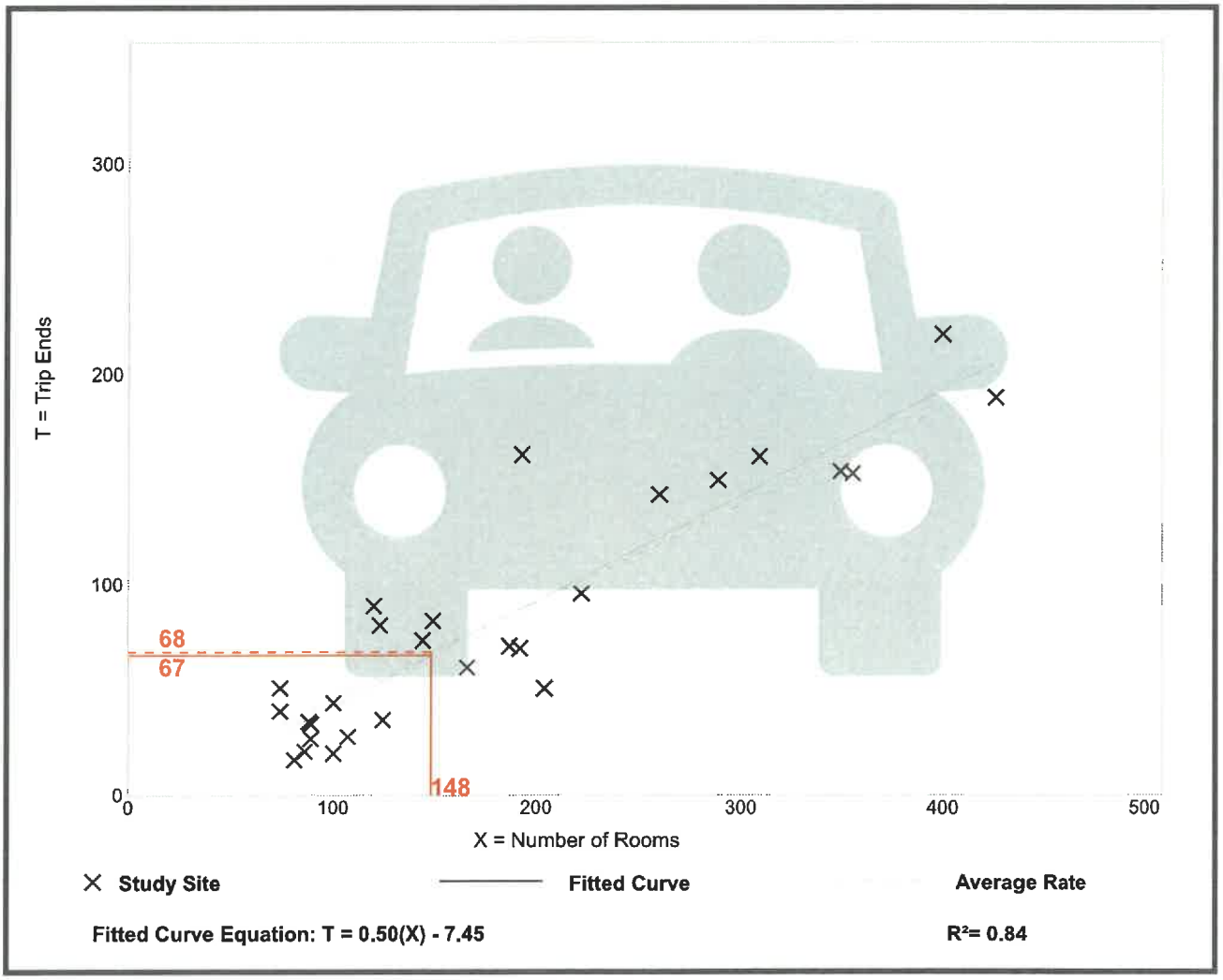
Hotel
(310)

Vehicle Trip Ends vs:	**Rooms**
On a:	**Weekday,**
	Peak Hour of Adjacent Street Traffic,
	One Hour Between 7 and 9 a.m.
Setting/Location:	**General Urban/Suburban**
Number of Studies:	28
Avg. Num. of Rooms:	182
Directional Distribution:	56% entering, 44% exiting

Vehicle Trip Generation per Room

Average Rate	Range of Rates	Standard Deviation
0.46	0.20 - 0.84	0.14

Data Plot and Equation



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Building D & K

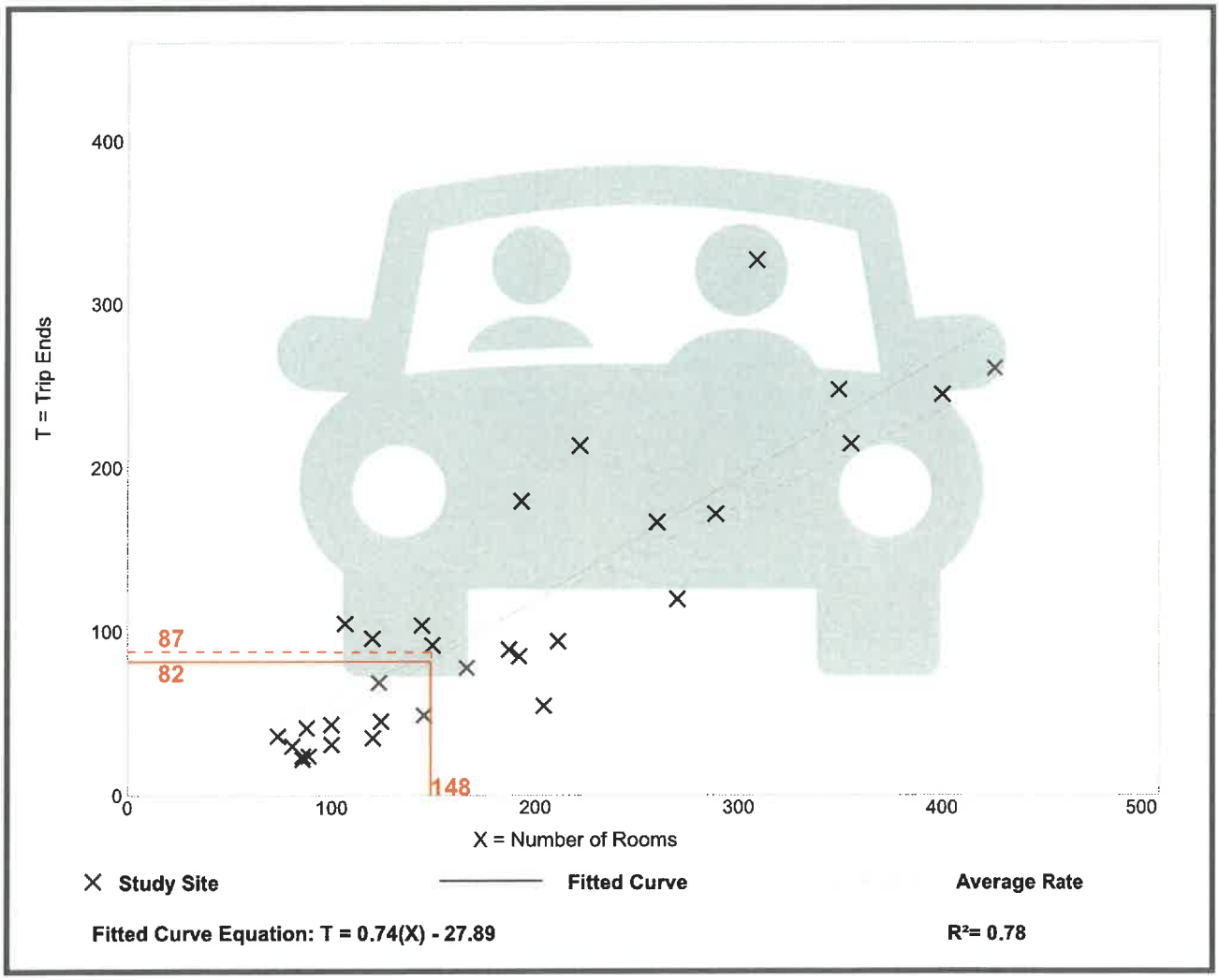
Hotel
(310)

Vehicle Trip Ends vs:	**Rooms**
On a:	**Weekday,**
	Peak Hour of Adjacent Street Traffic,
	One Hour Between 4 and 6 p.m.
Setting/Location:	**General Urban/Suburban**
Number of Studies:	31
Avg. Num. of Rooms:	186
Directional Distribution:	51% entering, 49% exiting

Vehicle Trip Generation per Room

Average Rate	Range of Rates	Standard Deviation
0.59	0.26 - 1.06	0.22

Data Plot and Equation



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Apartments

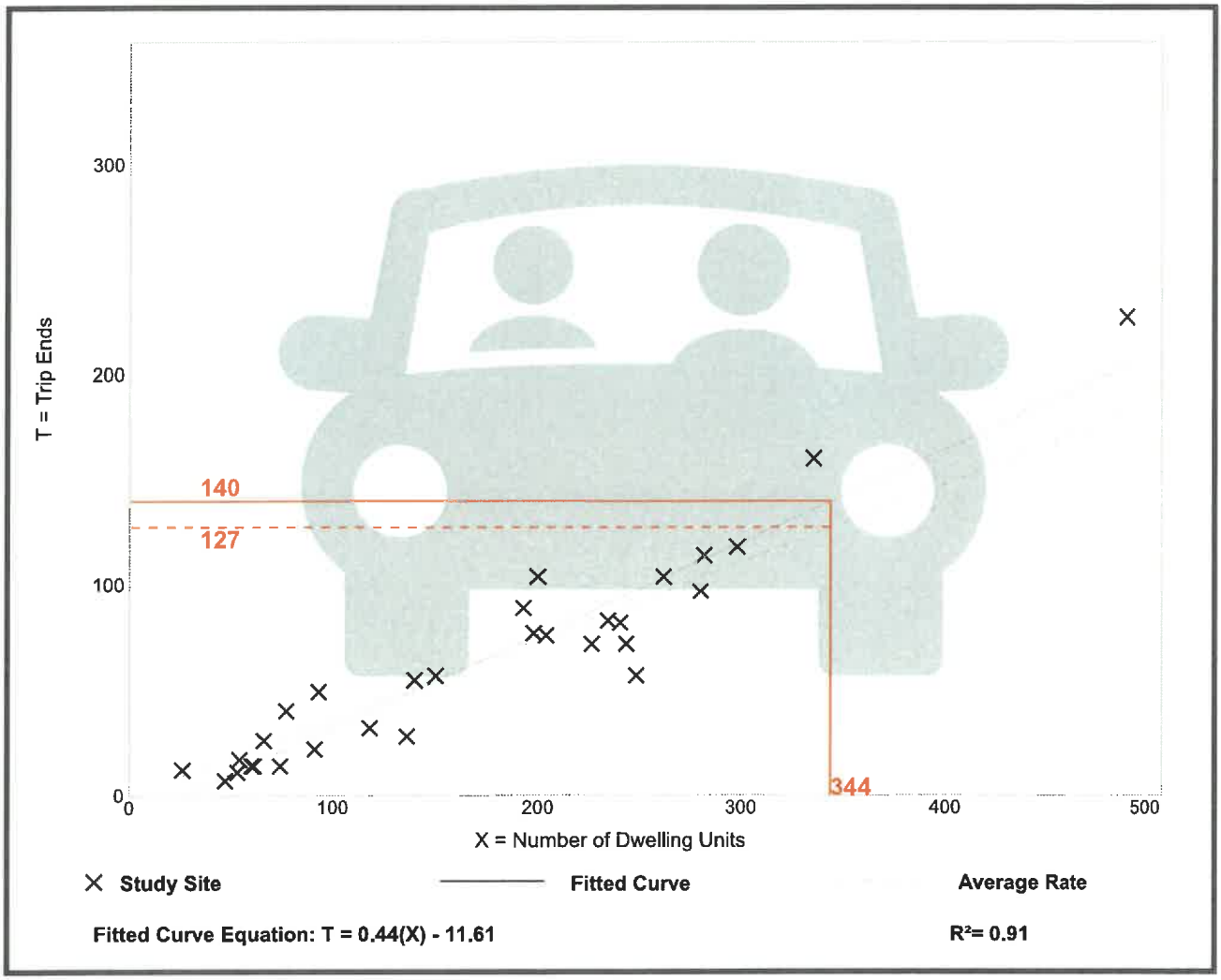
Multifamily Housing (Mid-Rise)
Not Close to Rail Transit (221)

Vehicle Trip Ends vs:	**Dwelling Units**
On a:	**Weekday,**
	Peak Hour of Adjacent Street Traffic,
	One Hour Between 7 and 9 a.m.
Setting/Location:	**General Urban/Suburban**
Number of Studies:	30
Avg. Num. of Dwelling Units:	173
Directional Distribution:	23% entering, 77% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.37	0.15 - 0.53	0.09

Data Plot and Equation



Trip Gen Manual, 11th Edition • Institute of Transportation Engineers

Apartments

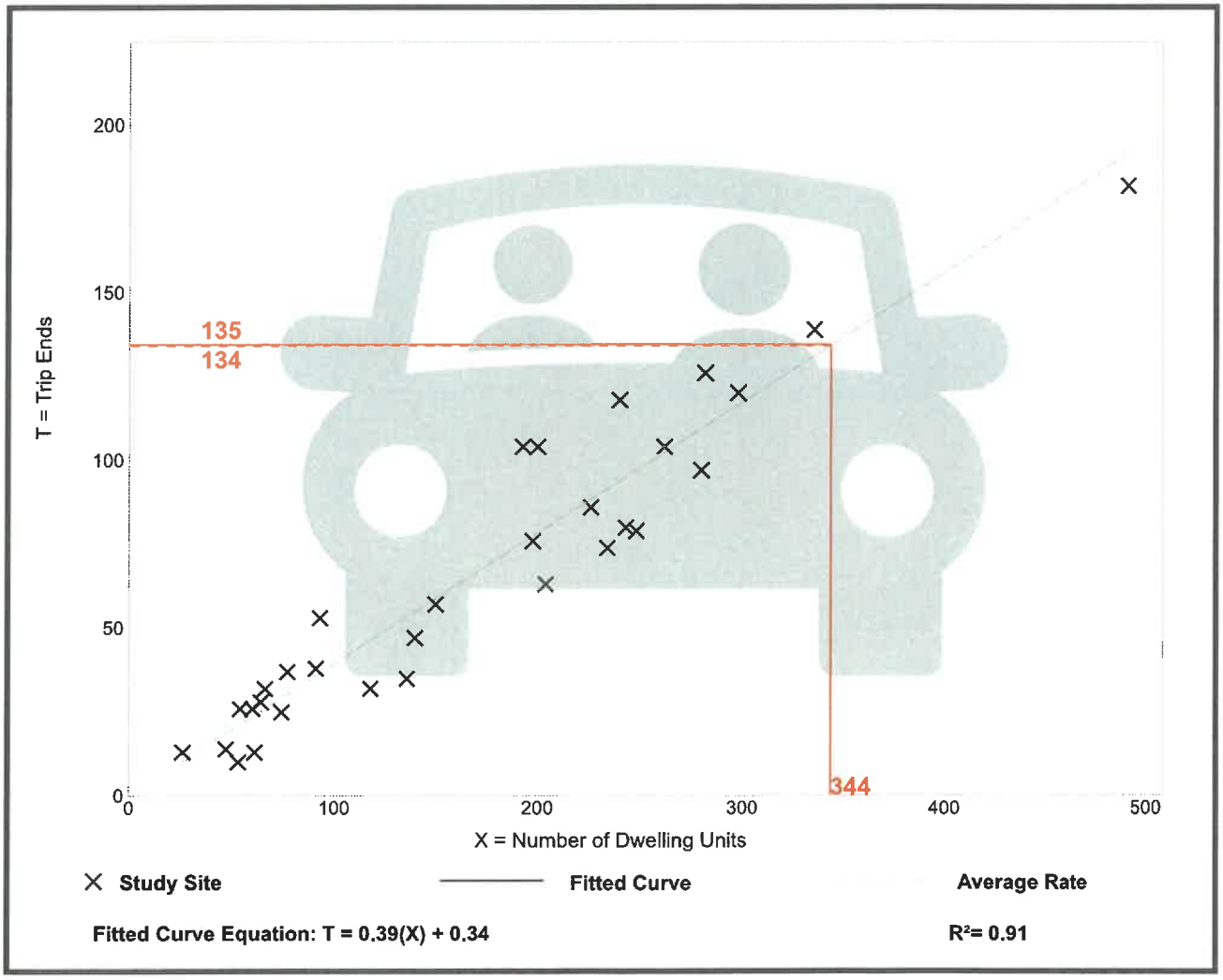
Multifamily Housing (Mid-Rise)
Not Close to Rail Transit (221)

Vehicle Trip Ends vs: **Dwelling Units**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 31
Avg. Num. of Dwelling Units: 169
Directional Distribution: 61% entering, 39% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.39	0.19 - 0.57	0.08

Data Plot and Equation



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Attachment C

Trip Generation and Parking Demand Summary – April 2020

GORRILL PALMER

707 Sable Oaks Drive, Suite 30
South Portland, Maine 04106
207.772.2515

Trip Generation and Parking Demand Summary
Thompson's Point
April 2020

Date: May 14, 2020
Subject: Updated Trip Generation and Parking Demand
Thompson's Point
To: Bo Kennedy, Placemaker Partners, LLC
From: Randy Dunton / Emily Leighton, Gorrill Palmer (JN 3646)

Gorrill Palmer (GP) has prepared this updated trip generation and parking demand summary for the Thompson's Point development in Portland, Maine. The full build out of the project received a MaineDOT Traffic Movement Permit (TMP) in 2012 (Reg. 01-00155-A-N) for 734 trip ends during the AM peak hour and 1,091 trip ends during the PM peak hour. The project is being constructed in phases and each phase must be evaluated to ensure that the total site trip generation does not exceed the permitted trip generation. The following is a summary of the forecast trip generation and parking demand for the existing and previously approved uses, the proposed Buildings K and F1, the renovation of Buildings L and F2, and the proposed Building B2 that replaces existing mobile stations. A site plan is attached showing the location of each building. Additionally, the following includes a comparison of the total trip generation to the permitted trip generation.

Existing and Previously Evaluated Trip Generation Summary

The trip generation for the existing Thompson's Point site has been based on information provided by Bo Kennedy in an email dated August 22, 2017. The trip generation was calculated using the same methodology as that used in previous trip generation evaluations for the site, including using the Institute of Transportation Engineers' publication, *Trip Generation*, 7th Edition and applying a 10% reduction to the total site trip generation to account for other modes of transportation and shared uses on the site. The following table summarizes the trip generation for the existing site:

Existing Site Trip Generation

Building	Description	Size	AM Peak Hour	PM Peak Hour
Brick North				
	Winery	5,890 sf	4	16
	Halo (Event Space)	400 attendees	16	31
	Big Room Studios	3,461 sf	13	20
	Locally Sauced (formerly Big J's Chicken)	1,852 sf	21	20
	Brewery	10,068 sf	7	7
	Distillery	5,284 sf	4	4
	Color Me Mine	2,136 sf	2	6
	International Cryptozoology Museum	993 sf	1	1
	Brick North Total		**68**	**105**

Brick South				
	Event/Assembly Space	2,500 Seats	100	195
	Annex	7,384 sf	--*	--*
	Brick South Total		**100**	**195**
Hotel				
	Hotel	148 Rooms	83	87
	Proposed Total		**83**	**87**
Under Construction				
	Children's Museum	29,096 sf	33	33
	Under Construction Total		**33**	**33**
Approved Subtotal			**284**	**420**

*Maximum of 2,500 people in the building for events. Highest trip generation would be an event in the Event space, not the Annex.

As shown in the table, the existing site is forecast to generate 284 trip ends during the AM peak hour and 420 trip ends during the PM peak hour.

Proposed Site Trip Generation

The trip generation for the proposed uses has been based on the following:

- Building K – New Construction
  - Proposed Inn: 61 rooms + potential 22 room expansion
- Building F1 – New Construction
  - Proposed Warehouse: 14,200 sf
- Building L – Renovation
  - Existing Office: 4,000 sf
  - Existing Storage: 1,760 sf
  - Proposed Office: 4,000 sf
  - Proposed Event Space: 1,760 sf / 100 attendees maximum
- Building F2 – Renovation
  - Existing Garage Workspace: 1,940 sf
  - Proposed Artist Studio Space: 1,940 sf
- Building B2 – Replacement of Temporary Structures
  - Existing: Seasonal concession stands
  - Proposed Concession Building: 2,800 sf

The trip generation has also been based on the following assumptions:

- Building K:
  - The Inn is proposed to include a bar that is intended to serve primarily guests of the inn and potentially guests of other Thompson's Point uses. However, it is not anticipated to draw significant outside traffic, so the trip generation for the bar is forecast to be negligible.
- Building F2:
  - The proposed artist studio space in Building F2 is anticipated to operate most similarly to a shared office space, although this is likely a conservative assumption, since all users are not expected to enter and exit the site during the AM and PM peak hours and are more likely to be distributed throughout the day. It may be used as meeting or assembly space for less than 100 people, however the trip generation as an event space would be less than the trip generation forecast as an office.

- Building B2:
  - This building replaces existing temporary facilities and is intended to supplement existing uses on site. The proposed building will be open daily independently of the licensed seasonal uses. The building as proposed is consistent, albeit slightly smaller, than the building included in the approved Master Development Plan. For the purposes of trip generation and parking demand, it has been assumed that this use will often serve as a supplemental use to the existing activity on site, that will generate its own site traffic and parking demand.

The trip generation for the proposed uses was calculated using the same methodology as that used to calculate the trip generation in the original master plan. It should be noted that MaineDOT allows trip generation credit to be taken for existing uses on the site that have been operational within the last 10 years, so the trip generation for the existing building uses has been subtracted from the trip generation for the proposed building uses. The following table summarizes the trip generation for the proposed uses:

Proposed Site Addition Trip Generation

Building	Description	Size	AM Peak Hour	PM Peak Hour
Building K				
	Inn	61 Rooms	34	36
	Inn Expansion	22 Rooms	12	13
	Building K Total		**46**	**49**
Building F1				
	Warehouse	14,200 sf	6	7
	Building F1 Total		**6**	**7**
Building F2				
	Proposed Artist Studio	1,940 sf	8	8
	Existing Garage Space (Credit)	1,940 sf	(-6)	(-7)
	Building F2 Total		**2**	**1**
Building L				
	Proposed Office	4,000 sf	14	13
	Proposed Event Space	100 attendees	4	8
	Existing Office (Credit)	4,000 sf	(-14)	(-13)
	Existing Storage	1,760 sf	0*	0*
	Building L Total		**0**	**0**
Building B2				
	Concession Building	2,800 sf	32	31
	Building B2 Total		**32**	**31**
Proposed Addition Trip Generation			**90**	**96**

*Trip generation assumed to be negligible.

As shown in the table, the proposed uses are forecast to generate an additional 90 trip ends and 96 trip ends during the AM and PM peak hours of the adjacent street, respectively.

Site Trip Generation

The trip generation for the existing site has been combined with the trip generation for the proposed new and remodeled buildings to yield the site trip generation. The total site trip generation after the construction of the Inn has been compared to the permitted trip generation to identify the remaining available permitted trips.

Site Trip Generation Summary

Site	Building	AM Peak Hour	PM Peak Hour
Existing			
	Brick North	68	105
	Brick South	100	195
	Hotel	83	87
	Children's Museum	33	33
	Existing Total	**284**	**420**
Proposed			
	Building K (Including Future Expansion)	46	49
	Building F1	6	7
	Building F2	2	1
	Building L	4	8
	Building B2	32	31
	Proposed Total	**90**	**96**
Proposed Site Subtotal		**374**	**516**
Reduction (10%) for Bus / Train / Shared Use		(-37)	(-52)
Proposed Site Trip Generation		**337**	**464**
Permitted Trip Ends		734	1091
Difference Between Permitted and Proposed Site		**397**	**627**

As shown in the table the proposed site uses are forecast to generate 337 trip ends during the AM peak hour and 464 trip ends during the PM peak hour. This yields an overall trip generation that is 397 trip ends less than the permitted trip generation during the AM peak hour and 627 trip ends less than the permitted trip generation during the PM peak hour.

Parking Demand

The parking demand for the site with the proposed additions added has been calculated using the same methodology as that used in the Master Development Plan. The parking demand is based on shared parking methodology, which assumes that parking spaces are not designated for specific uses or businesses, and can be used by any vehicles visiting the site. This methodology is very beneficial for mixed use developments with complementary uses such as office, whose parking demand is higher during the day, and hotel, whose parking demand is higher overnight. The attached parking demand calculations show the detailed time of day distribution for each use and the forecast shared demand. Based on the calculations the peak parking demand for the site (without an event in Brick South or Halo) is 193 spaces and is anticipated to occur at 5:00 PM. As identified in the approval for the master development plan, when special events of a certain attendance threshold occur, additional parking measures will be implemented on an as needed basis.

Conclusions

The following is a summary of the conclusions:

1. The site (including existing and proposed uses) is forecast to generate a total of 337 trip ends during the AM peak hour and 464 trip ends. This trip generation is 397 trip ends less than the permitted trip generation during the AM peak hour and 627 trip ends less than the permitted trip generation during the PM peak hour.

2. The peak parking demand for the site after the additional development is forecast to be 193 parking spaces and is forecast to occur at 5:00 PM.

NORTH

SELECT CLEARING RESTRICTIONS APPLY WITHIN THE SHORELAND ZONING
FORE RIVER TRAIL
REALIGN TRAIL
TIDAL AREA
RETAINING WALL
25 FT SHORELAND ZONE SETBACK
100 YR FLOOD STAGE - A2 ZONE ELEV 10.0
WETLAND BOUNDARY
BRIDGE OVER WETLANDS
PROTECT EXISTING OAK TREES (TYP. OF 3)
25 FT SHORELAND SETBACK FROM HIGHEST ANNUAL TIDE
HIGHEST ANNUAL TIDE ELEV 7.4 (MEAN HIGH WATER ELEV 4.95 MEAN LOW WATER ELEV -4.15)
EVENT PARKING EXIT LANE
PORTLAND WATER DISTRICT PUMP STATION (TO REMAIN)
BUILDING H MULTI-LEVEL PARKING GARAGE
PROJECT BOUNDARY
CITY OF PORTLAND TURN AROUND
TIDAL AREA
END OF PUBLIC RIGHT-OF-WAY
6 SHORT TERM PARKING SPACES
50 PARKING SPACES (INCLUDING 6 SHORT TERM SPACES AND 2 ACCESSIBLE SPACES)
16 PARKING SPACES (INCLUDING 2 ACCESSIBLE SPACES)
TREE OF FORTY FRUIT GROVE
BUILDINGS C & D DUMPSTER AREA
4 LOADING SPACES
FUTURE EXPANSION AREA
4 PARKING SPACES
14 PARKING SPACES (INCLUDING 0 COMPACT SPACES AND 4 ACCESSIBLE SPACES)
25 FT SETBACK FROM HAT
UTILITIES PAD
EMERGENCY VEHICLE ACCESS
WATERFRONT ACCESS AND SEASONAL DOCK SYSTEM
APPROXIMATE EDGE OF CHANNEL SEE SHEET C-2.3
OPEN SPACE / OUTDOOR EVENT AREA
OUTDOOR DINING AREA
PICNIC LAWN
TIDAL AREA
34 SEASONAL PARKING SPACES AND EVENT PRODUCTION AREA
22 PARKING SPACES (INCLUDING 2 ACCESSIBLE SPACES)
4 BUS/RV PARKING SPACES (NO OVERNIGHT)
7 PARKING SPACES
27 PARKING SPACES (INCLUDING 2 ACCESSIBLE SPACES)
PERIMETER ACCESS ROAD
BUILDINGS I DUMPSTER AREA
TIDAL AREA
17 PARKING SPACES (INCLUDING 17 COMPACT SPACES)
52 PARKING SPACES (INCLUDING 4 ACCESSIBLE SPACES)
BUILDING C AND D LOADING/ DELIVERIES
18 PARKING SPACES (INCLUDING 2 ACCESSIBLE SPACES)
BUILDING A DUMPSTER AREA
3 PARKING SPACES AND 4 MOPED/ MOTORCYCLE PARKING SPACES
233 PARKING SPACES (INCLUDING 7 COMPACT SPACES AND 2 ACCESSIBLE SPACES)
16 PARKING SPACES (INCLUDING 4 ACCESSIBLE SPACES)
37 PARKING SPACES (INCLUDING 2 ACCESSIBLE SPACES)
EVENT SLIP LANE
POTENTIAL METRO BUS STIP AND IN-LINE CHARGING STATION, FINAL LOCATION TBD
CONVEYANCE TO THE CITY OF PORTLAND AS ADDITIONAL LAND FOR SEWALL STREET
AT GRADE PUBLIC RAILROAD CROSSING
PORTLAND TRANSPORTATION CENTER
9 SHORT TERM PARKING SPACES
TAXI/ RIDE SHARE PICK-UP/ DROP OFF AREA AND BUS TURNAROUND
57 PARKING SPACES (INCLUDING 4 ACCESSIBLE SPACES AND 2 COMPACT SPACES)
BUILDINGS L, K AND M LOADING AREA
POTENTIAL FUTURE SKYWALK TO TRAIN PLATFORM FROM FUTURE PARKING DECK
BUILDING K EXPANSION AREA
20 PARKING SPACES (INCLUDING 2 ACCESSIBLE SPACES)
BUILDING F2 EXISTING BLOCK BUILDING TO REMAIN
7 PARKING SPACES (INCLUDING 1 ACCESSIBLE SPACE AND 2 TRACTOR TRAILER SPACES)
EXISTING BUILDING TO REMAIN
PAN AM RAILWAY AKA PORTLAND TERMINAL COMPANY
FORE RIVER PARKWAY MULTI-USE TRAIL

OFFSITE IMPROVEMENTS IN SEWALL STREET INCLUDED SIDEWALK EXTENSIONS (BOTH SIDES OF STREET) AND PEDESTRIAN CROSSING ADA RAMPS AT CONGRESS STREET
POTENTIAL DESIGNATED RIDE SHARE PICK-UP LOCATION
EMERGENCY ACCESS ROUTE WITH 'CLICK TO ENTER' GATE SYSTEM
8' WIDE SHARED USE PATH
TAXI CAB QUEUE PARKING
THOMPSON'S POINT CONNECTOR ROAD WAS IMPROVED TO PROVIDE THREE LANE CONFIGURATION AND 8 FT (MIN) SHARED USE PEDESTRIAN PATH IN 2015
NEW SIDEWALK SYSTEM TIES INTO CITY SPONSORED SIDEWALK TO CONGRESS STREET
COMBINATION PROJECT / PTC SIGN

BUILDING J2 19,650 S.F.
LOT 19
BUILDING J1 30,000 S.F.
LOT 17
BUILDING G 22,350 S.F.
LOT 18
N/F CENTRAL MAINE POWER CO.
N/F NORTHERN NEW ENGLAND PASSENGER RAIL AUTHORITY
N/F PORTLAND WATER DISTRICT
N/F LANGDON STREET REAL ESTATE, INC.
SEWALL STREET
LOT 5
BLDG H 22,422 SF GARAGE (MULTI-LEVEL)
BUILDING E 7,200 S.F. LOT 4
BUILDING M 13,500 S.F.
LOT 16
LOT 15
LOT 12
BUILDING L 3,575 S.F.
LOT 14
N/F STATE OF MAINE
LOT 9
BLDG B2 3,600 SF
PATIO
BLDG B3 3,600 SF
"THE DEPOT" BUILDING B1 14,000 S.F.
LOT 10
LOT 6
BRICK SOUTH BUILDING C 34,600 S.F.
LOT 3
LOT 2
COMMONS
BUILDING K 32,800 S.F.
LOT 13
HOTEL PORTLAND BUILDING D 90,000 S.F.
BRICK NORTH BUILDING A 34,000 S.F.
BUILDING A & F LOADING/ SERVICE
BUILDING F1 10,880 S.F.
LOT 11
LOT 8 EVENT VENUE MAIN ENTRANCE
PEDESTRIAN CONNECTION
CHILDREN'S MUSEUM & THEATRE OF MAINE BUILDING I 29,046 S.F.
LOT 7
CO2 & GRAIN SILO PAD
LOT 1
N/F LANGDON STREET REAL ESTATE, INC.
FORE RIVER PARKWAY
INTERSTATE 295

PRELIMINARY – NOT FOR CONSTRUCTION

REV	DATE	DESCRIPTION
1	10/09/2019	UPDATES TO BUILDINGS F, K AND B

REVISIONS

XX.XX.XX
P.E. BO KENNEDY
LIC. #11994

PROJECT
THE FOREFRONT AT THOMPSON'S POINT
MASTER PLAN

SHEET TITLE
OVERALL MASTER PLAN

CLIENT
FOREFRONT PARTNERS I, LP

PLACEMAKER PARTNERS, LLC
501 DANFORTH STREET
PORTLAND, ME 04102
bo@placemakerpartners.com

DRAWN: DB	DATE: MARCH 2018
DESIGNED: BEK	SCALE: 1" = 80'
FILE NAME: MASTER_SITE LAYOUT.dwg	
SHEET C-3.0	

JN: 3646
Project Description: Thompson's Point Update
Project Location: Portland, Maine
Date: 3/17/2020
Calculated By: EAL
Checked By:

Gorrill Palmer
707 Sable Oaks Drive
Suite 30
South Portland, Maine 04106

Hotel - Inn Building K
Land Use Code (LUC) 310

Rooms: 61

Average Rate

Time Period	ITE Trip Rate	Sample Size	Trip Ends	Directional Split*		Directional Distribution		R^2
				IN	OUT	IN	OUT	
Weekday	T = 8.17 (X)	10	498	50%	50%	249	249	-
AM Peak Adjacent Street	T = 0.56 (X)	20	34	60%	40%	20	14	-
PM Peak Adjacent Street	T = 0.59 (X)	25	36	55%	45%	20	16	-
AM Peak Hour of Generator	T = 0.52 (X)	32	32	55%	45%	17	15	-
PM Peak Hour of Generator	T = 0.61 (X)	35	37	60%	40%	22	15	-
Saturday	T = 8.19 (X)	8	500	50%	50%	250	250	-
Saturday Peak Hour of Gen.	T = 0.72 (X)	9	44	55%	45%	24	20	-

* Percentages rounded to nearest 5%

Fitted Curve Equation

Time Period	ITE Trip Rate	Sample Size	Trip Ends	Directional Split*		Directional Distribution		R^2
				IN	OUT	IN	OUT	
Weekday	T = 8.95 (X) - 373.16	10	173	50%	50%	87	86	0.98
AM Peak Hour of Adjacent Street Traffic	Ln(T) = 1.24 Ln(X) - 2.00	20	22	60%	40%	13	9	0.75
PM Peak Hour of Adjacent Street Traffic	--	25	--	55%	45%	--	--	--
AM Peak Hour of Generator	Ln(T) = 0.87 Ln(X) + 0.02	32	36	55%	45%	20	16	0.54
PM Peak Hour of Generator	Ln(T) = 1.00 Ln(X) - 0.58	35	34	60%	40%	20	14	0.64
Saturday	T = 9.62 (X) - 294.56	8	292	50%	50%	146	146	0.93
Saturday Peak Hour of Gen.	T = 0.69 (X) + 4.32	9	46	55%	45%	25	21	0.80

* Percentages rounded to nearest 5%

JN: 3646
Project Description: Thompson's Point Update
Project Location: Portland, Maine
Date: 3/17/2020
Calculated By: EAL
Checked By:

Gorrill Palmer
707 Sable Oaks Drive
Suite 30
South Portland, Maine 04106

Hotel - Inn Building K Expansion
Land Use Code (LUC) 310

Rooms: 22

Average Rate

Time Period	ITE Trip Rate	Sample Size	Trip Ends	Directional Split*		Directional Distribution		R^2
				IN	OUT	IN	OUT	
Weekday	T = 8.17 (X)	10	180	50%	50%	90	90	-
AM Peak Adjacent Street	T = 0.56 (X)	20	12	60%	40%	7	5	-
PM Peak Adjacent Street	T = 0.59 (X)	25	13	55%	45%	7	6	-
AM Peak Hour of Generator	T = 0.52 (X)	32	11	55%	45%	6	5	-
PM Peak Hour of Generator	T = 0.61 (X)	35	13	60%	40%	8	5	-
Saturday	T = 8.19 (X)	8	180	50%	50%	90	90	-
Saturday Peak Hour of Gen.	T = 0.72 (X)	9	16	55%	45%	9	7	-

* Percentages rounded to nearest 5%

Fitted Curve Equation

Time Period	ITE Trip Rate	Sample Size	Trip Ends	Directional Split*		Directional Distribution		R^2
				IN	OUT	IN	OUT	
Weekday	T = 8.95 (X) - 373.16	10	-176	50%	50%	-88	-88	0.98
AM Peak Hour of Adjacent Street Traffic	Ln(T) = 1.24 Ln(X) - 2.00	20	6	60%	40%	4	2	0.75
PM Peak Hour of Adjacent Street Traffic	--	25	--	55%	45%	--	--	--
AM Peak Hour of Generator	Ln(T) = 0.87 Ln(X) + 0.02	32	15	55%	45%	8	7	0.54
PM Peak Hour of Generator	Ln(T) = 1.00 Ln(X) - 0.58	35	12	60%	40%	7	5	0.64
Saturday	T = 9.62 (X) - 294.56	8	-83	50%	50%	-42	-41	0.93
Saturday Peak Hour of Gen.	T = 0.69 (X) + 4.32	9	20	55%	45%	11	9	0.80

* Percentages rounded to nearest 5%

JN: 3646
Project Description: Thompson's Point Update
Project Location: Portland, Maine
Date: 3/17/2020

Gorrill Palmer
707 Sable Oaks Drive
Suite 30
South Portland, Maine 04106

Warehousing - Building F1
Land Use Code (LUC) 150

Gross Floor Area (ft^2): 14,200

Fitted Curve

Time Period	ITE Trip Rate	Trip Ends	Sample Size	Directional Split* IN	Directional Split* OUT	Directional Distribution IN	Directional Distribution OUT	R^2
Weekday	T = 3.68 (X) + 350.27	403	16	50%	50%	202	201	0.82
AM Peak Adjacent Street	Ln(T) = 0.71 Ln(X) + 1.15	21	19	80%	20%	17	4	0.79
PM Peak Adjacent Street	Ln(T) = 0.79 Ln(X) + 0.54	14	26	25%	75%	4	10	0.75
AM Peak of Generator	T = 0.39(X) + 63.12	69	19	60%	40%	41	28	0.86
PM Peak of Generator	T = 0.46(X) + 53.12	60	18	10%	90%	6	54	0.88
Saturday	---	---	2	50%	50%	---	---	---
Saturday Peak Hour of Gen.	---	---	2	65%	35%	---	---	---

*Percentages rounded to nearest 5%

Average Rate

Time Period	ITE Trip Rate	Trip Ends	Sample Size	Directional Split* IN	Directional Split* OUT	Directional Distribution IN	Directional Distribution OUT	R^2
Weekday	T = 4.96 (X)	70	16	50%	50%	35	35	---
AM Peak Adjacent Street	T = 0.45 (X)	6	19	80%	20%	5	1	---
PM Peak Adjacent Street	T = 0.47 (X)	7	26	25%	75%	2	5	---
AM Peak of Generator	**T = 0.57 (X)**	**8**	**19**	**60%**	**40%**	**5**	**3**	**---**
PM Peak of Generator	**T = 0.61 (X)**	**9**	**18**	**10%**	**90%**	**1**	**8**	**---**
Saturday	**T = 1.22 (X)**	**17**	**2**	**50%**	**50%**	**9**	**8**	**---**
Saturday Peak Hour of Gen.	**T = 0.12 (X)**	**2**	**2**	**65%**	**35%**	**1**	**1**	**---**

*Percentages rounded to nearest 5%

JN: 3646
Project Description: Thompson's Point Update
Project Location: Portland, Maine
Date: 3/17/2020

Gorrill Palmer
707 Sable Oaks Drive
Suite 30
South Portland, Maine 04106

General Office Building - Building L
Land Use Code (LUC) 710

Square Feet 4,000

Trip Ends Based on Fitted Curve Equation

Time Period	ITE Trip Rate	Trip Ends	Number of Studies	Directional Split *		Directional Distribution		R^2
				IN	OUT	IN	OUT	
Weekday	Ln (T) = 0.77 Ln (X) + 3.65	112	78	50%	50%	56	56	0.80
AM Peak Hour	**Ln (T) = 0.80 Ln (X) + 1.55**	**14**	**217**	**90%**	**10%**	**13**	**1**	**0.83**
PM Peak Hour	**T = 1.12 (X) + 78.81**	**83**	**235**	**15%**	**85%**	**12**	**71**	**0.82**
Saturday	T = 2.14 (X) + 18.47	27	17	50%	50%	14	13	0.66
Peak Hour of Generator	Ln (T) = 0.81 Ln (X) - 0.12	3	10	55%	45%	2	1	0.59

* Percentages rounded to nearest 5%

Trip Ends Based on Average Rate

Time Period	ITE Trip Rate	Trip Ends	Number of Studies	Directional Split *		Directional Distribution		R^2
				IN	OUT	IN	OUT	
Weekday	T = 11.01 (X)	44	78	50%	50%	22	22	---
AM Peak Hour	T = 1.55 (X)	6	217	90%	10%	5	1	---
PM Peak Hour	T = 1.49 (X)	6	235	15%	85%	1	5	---
Saturday	T = 2.37 (X)	9	17	50%	50%	5	4	---
Saturday Peak Hour of Gen.	**T = 0.41 (X)**	**2**	**10**	**50%**	**50%**	**1**	**1**	**---**

* Percentages rounded to nearest 5%

PM Peak Hour:	T = 1.49/1.55 (AM Peak)	13		15%	85%	2	11	0.82

JN: 3646
Project Description: Thompson's Point Update
Project Location: Portland, Maine
Date: 3/17/2020

Gorrill Palmer
707 Sable Oaks Drive
Suite 30
South Portland, Maine 04106

General Office Building - Building F2
Land Use Code (LUC) 710

Square Feet 1,940

Trip Ends Based on Fitted Curve Equation

Time Period	ITE Trip Rate	Trip Ends	Number of Studies	Directional Split *		Directional Distribution		R^2
				IN	OUT	IN	OUT	
Weekday	Ln (T) = 0.77 Ln (X) + 3.65	64	78	50%	50%	32	32	0.80
AM Peak Hour	**Ln (T) = 0.80 Ln (X) + 1.55**	**8**	**217**	**90%**	**10%**	**7**	**1**	**0.83**
PM Peak Hour	**T = 1.12 (X) + 78.81**	**81**	**235**	**15%**	**85%**	**12**	**69**	**0.82**
Saturday	T = 2.14 (X) + 18.47	23	17	50%	50%	12	11	0.66
Peak Hour of Generator	Ln (T) = 0.81 Ln (X) - 0.12	2	10	55%	45%	1	1	0.59

* Percentages rounded to nearest 5%

Trip Ends Based on Average Rate

Time Period	ITE Trip Rate	Trip Ends	Number of Studies	Directional Split *		Directional Distribution		R^2
				IN	OUT	IN	OUT	
Weekday	T = 11.01 (X)	21	78	50%	50%	11	10	---
AM Peak Hour	T = 1.55 (X)	3	217	90%	10%	3	0	---
PM Peak Hour	T = 1.49 (X)	3	235	15%	85%	0	3	---
Saturday	T = 2.37 (X)	5	17	50%	50%	3	2	---
Saturday Peak Hour of Gen.	**T = 0.41 (X)**	**1**	**10**	**50%**	**50%**	**1**	**0**	**---**

* Percentages rounded to nearest 5%

PM Peak Hour:	T = 1.49/1.55 (AM Peak)	8		15%	85%	1	7	0.82

JN:	3646	Gorrill Palmer
Project Description:	Thompson's Point Update	707 Sable Oaks Drive
Project Location:	Portland, Maine	Suite 30
Date:	3/17/2020	South Portland, Maine 04106

Auto Service - Existing Garage F2
Land Use Code (LUC) 942

: Gross Leasable Floor Area (ft^2): 1,940

Trip Ends Based on Fitted Curve Equation

Time Period	ITE Trip Rate	Trip Ends	Directional Split *		Directional Distribution	
			IN	OUT	IN	OUT
PM Peak Adjacent Street	Ln(T) = 0.94 Ln(X) + 1.33	7	50%	50%	4	3

* Percentages rounded to nearest 5%

Trip Ends Based on Average Rate

Time Period	ITE Trip Rate	Trip Ends	Directional Split *		Directional Distribution	
			IN	OUT	IN	OUT
AM Peak Adjacent Street	T = 2.94 (X)	6	65%	35%	4	2
PM Peak Adjacent Street	T = 3.38 (X)	7	50%	50%	3	4
AM Peak of Generator	T = 3.22 (X)	6	60%	40%	4	0
PM Peak of Generator	T = 4.01 (X)	8	50%	50%	4	0

* Percentages rounded to nearest 5%

JN: 3646
Project Description: TP
Project Location: Portland, Maine
Date: May 5, 2020

Gorrill Palmer
707 Sable Oaks Drive
Suite 30
South Portland, Maine 04106

High Turnover (Sit Down) Restaurant
Land Use Code (LUC) 932

Gross Floor Area (ft^2): 2,800

Time Period	ITE Trip Rate (Average Rate)	# of Sources	Trip Ends	Directional Split		Directional Distribution		R^2
				IN	OUT	IN	OUT	
Weekday	T = 127.15 (X)	14	356	50%	50%	178	178	N/A
AM Peak Adjacent Street	T = 11.52 (X)	18	**32**	50%	50%	16	16	N/A
PM Peak Adjacent Street	T = 10.92 (X)	38	**31**	60%	40%	19	12	N/A
AM Peak of Generator	**T = 13.53 (X)**	**21**	**38**	**50%**	**50%**	**19**	**19**	**N/A**
PM Peak of Generator	**T = 18.80 (X)**	**27**	**53**	**55%**	**45%**	**29**	**24**	**N/A**
Saturday	T = 158.37 (X)	2	443	50%	50%	222	221	N/A
Saturday Peak Hour of Gen.	T = 20.00 (X)	3	**56**	65%	35%	36	20	N/A

	Previously Approved																		Currently Proposed																					
Building Letter	Brick North																Total for Brick North	Brick South		Building D				Building K		Building F1		Building F2		Building L						Building B2		Total	Total without Brick South Event	Total without Brick South Event or Halo Event
	Winery (Specialty Retail (5))		Halo (Event Space)		Big Room Studios (Office)		Locally Sauced (Restaurant (3))		Manufacturing (4)		Manufacturing (4)		Specialty Retail (1)		Cultural Center			Event Space (2)		Hotel		Childrens Museum		Inn		Light Industrial / Warehouse (4)		Office		Office		Event Space		Concession Building (Restaurant)				
Rate	200	1 / 200 sf	3.5	3.5 persons per vehicle		1/400 sf	13.56	13.56/1000	1.020	1.02 / 1000 sf	1.020	1.02 / 1000 sf	200	1 / 200 sf	1.34	Based on Client Info		3.5	3.5 persons per vehicle	1	1 per 4 guests	1.34	Based on Client Info	1	1 per 4 guests	1.19	1.19/1000 sf	400	1/400 sf	400	1/400 sf	3.5	3.5 persons per vehicle	6.5	6.5 / 10			
Monthly Adjustment				1										1		1			1	1	1		1			1					1		1.000				
SQF or Unit	5890	5,890 sf	400	400 people	3461	3,461 sf	1852	1,852 sf	10068	10,068 sf	5890	5,890 sf	2136	2,136 sf	0.993	993 sf		2500	2500 person	148	148 Rooms	40.00	40,000 sf	83	83 Rooms	14200	14,200 sf	1.94	1,940 sf	4.00	4,000 sf	100	100 person	2.80	2800 sf			
6:00AM	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0	0.00	0	1.00	37	0.00	0	1.00	21	1.00	17	0.00	0	0.00	0	0.00	0	0.00	0	75	75	75
7:00AM	0.00	0	0.01	1	0.20	2	0.10	3	0.55	6	0.55	3	0.20	2	0.48	1	17	0.01	4	1.00	37	0.48	26	1.00	21	1.00	17	0.20	1	0.20	2	0.01	0	0.10	2	125	122	121
8:00AM	0.00	0	0.01	1	0.64	6	0.10	3	0.69	7	0.69	4	0.64	7	0.50	1	27	0.01	4	1.00	37	0.50	27	1.00	21	1.00	17	0.64	3	0.64	6	0.01	0	0.10	2	144	140	140
9:00AM	0.00	0	0.01	1	0.93	8	0.20	5	0.74	8	0.74	4	0.93	10	0.44	1	36	0.01	4	0.75	28	0.44	24	0.75	16	1.00	17	0.93	5	0.93	9	0.01	0	0.20	4	141	138	137
10:00AM	0.20	6	0.01	1	1.00	9	0.30	8	0.75	8	0.75	5	1.00	11	0.50	1	46	0.01	4	0.50	19	0.50	27	0.50	10	1.00	17	1.00	5	1.00	10	0.01	0	0.30	5	143	139	139
11:00AM	0.64	19	0.01	1	1.00	9	0.90	23	0.75	8	0.75	5	1.00	11	0.52	1	75	0.01	7	0.40	15	0.52	28	0.40	8	1.00	17	1.00	5	1.00	10	0.01	0	0.90	16	181	174	173
12:00PM	0.90	27	0.01	1	0.90	8	1.00	25	0.73	7	0.73	4	0.90	10	0.55	1	83	0.01	7	0.35	13	0.55	29	0.35	7	1.00	17	0.90	4	0.90	9	0.01	0	1.00	18	188	181	180
1:00PM	0.93	27	0.01	1	0.90	8	0.90	23	0.97	10	0.97	6	0.90	10	0.63	1	85	0.01	7	0.35	13	0.63	34	0.35	7	1.00	17	0.90	4	0.90	9	0.01	0	0.90	16	193	186	185
2:00PM	1.00	29	0.02	2	1.00	9	0.65	16	1.00	10	1.00	6	1.00	11	0.77	1	84	0.02	11	0.35	13	0.77	41	0.35	7	1.00	17	1.00	5	1.00	10	0.02	0	0.65	12	200	190	188
3:00PM	1.00	29	0.03	3	1.00	9	0.35	9	0.95	10	0.95	6	1.00	11	0.96	1	78	0.03	21	0.40	15	0.96	51	0.40	8	1.00	17	1.00	5	1.00	10	0.03	1	0.35	6	213	191	188
4:00PM	0.93	27	0.10	11	0.93	8	0.35	9	0.77	8	0.77	5	0.93	10	1.00	1	79	0.10	71	0.50	19	1.00	54	0.50	10	1.00	17	0.93	5	0.93	9	0.10	3	0.35	6	273	202	190
5:00PM	0.64	19	0.55	63	0.64	6	0.60	15	0.62	6	0.62	4	0.64	7	0.89	1	120	0.55	393	0.60	22	0.89	48	0.60	12	1.00	17	0.64	3	0.64	6	0.55	16	0.60	11	649	256	193
6:00PM	0.20	6	0.85	97	0.20	2	0.90	23	0.00	0	0.00	0	0.20	2	0.69	1	130	0.85	607	0.70	26	0.69	37	0.70	15	1.00	17	0.20	1	0.20	2	0.85	24	0.90	16	876	268	171
7:00PM	0.00	0	1.00	114	0.10	1	1.00	25	0.00	0	0.00	0	0.00	0	0.43	1	141	1.00	714	0.80	30	0.43	23	0.80	17	1.00	17	0.10	0	0.10	1	1.00	29	1.00	18	990	275	161
8:00PM	0.00	0	1.00	114	0.10	1	1.00	25	0.00	0	0.00	0	0.00	0	0.00	0	140	1.00	714	0.90	33	0.00	0	0.90	19	1.00	17	0.10	0	0.10	1	1.00	29	1.00	18	972	257	143
9:00PM	0.00	0	1.00	114	0.10	1	1.00	25	0.00	0	0.00	0	0.00	0	0.00	0	140	1.00	714	0.95	35	0.00	0	0.95	20	1.00	17	0.10	0	0.10	1	1.00	29	1.00	18	975	260	146
10:00PM	0.00	0	1.00	114	0.10	1	0.75	19	0.00	0	0.00	0	0.00	0	0.00	0	134	1.00	714	1.00	37	0.00	0	1.00	21	1.00	17	0.10	0	0.10	1	1.00	29	0.75	14	967	252	138

1. Specialty Retail = Color Me Mine
2. Assumes Evening Event
3. Restaurant changes from 6.5/1,000 SF to 10/1,000SF at 4:00 PM
4. Factors based on previously approved parking demand rates for Industrial Uses
5. Factors adjusted to reflect a 11:00AM opening time

GORRILL PALMER
An LJB Engineering Company

Attachment D

MaineDOT Traffic Movement Permit - Thompson's Point Development Company Inc. – Signed 6/13/12

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
16 STATE HOUSE STATION
AUGUSTA, MAINE 04333-0016

Paul R. LePage
GOVERNOR

David Bernhardt
COMMISSIONER

Applicant:	Thompson's Point Development Company Inc.
Project Location:	Thompson's Point Rd, Portland, ME Portland Tax Map 201Lot(s) 8, 9 and 10 and Map 202 Lots 2, 4 and 5
Project:	Mixed use Development
Identification #:	Reg. 01-00155-A-N
Permit Category:	200 Plus PCE
Traffic Engineer:	Thomas Gorrill Gorrill-Palmer Consulting Engineers PO Box 1237 15 Shaker Rd. Gray, ME 04039

Pursuant to the provision of 23 M.R.S.A. § 704-A and Chapter 305 of the Department's Regulations, the Maine Department of Transportation (MaineDOT) has considered the application of Thompson's Point Development Company Inc with supportive data, agency review and other related materials on file.

PROJECT DESCRIPTION

The applicant proposes to construct a 97,697 sf event center/convention hall/exhibit hall; 32,000 sf concert hall plus outdoor venue for up to 4,800 attendees; 378,000 sf of office space; 4,000 sf of medical office space; 20,000 sf gym and rehabilitation center; 125 room hotel; 6,000 sf of restaurant space (high-turnover sit down). The site is forecast to generate 734 AM and 1,091 PM weekday peak hour trip ends.

Findings

Based on a review of the files and related information, MaineDOT approves the Traffic Movement Permit Application of Thompson's Point Development Company Inc. subject to the following conditions:

MITIGATION

On-Site Mitigation

All Site Entrances

All entrances shall have overhead illumination provided, if not existing, to illuminate the intersections per MaineDOT standards at a minimum. Overhead lighting shall have an average of

0.6 to 1.0 foot candles, with the maximum to minimum lighting ratio of not more than 10:1 and an average to minimum light level of not more than 4:1.

Thompson's Point Road

Thompson's Point Road shall be widened to accommodate an 8 foot shared bike/pedestrian path, a 3 foot wide grass esplanade, a 3 foot shoulder with granite curb, an 11 foot wide outbound lane, and 11 foot wide flush concrete median, an 11 foot wide inbound lane and a 3 foot shoulder with granite curb. This section will be constructed from the site driveway to the Fore River Parkway. The 250 feet of flush median closest to Fore River Parkway shall be designated as an exclusive left turn lane outbound. The shared bike/pedestrian path shall have a crossing built at the Sewall Street cul de sac and the path extended to the existing sidewalk on Sewall Street. Another pedestrian crossing shall be installed where the current pedestrian crossing is at the bus/train station. Both crossings shall have solar powered/radio interconnected pedestrian activated rectangular rapid flashing beacon lights installed.

Thompson's Point Development

No sporting events or concerts shall begin between 4 pm and 7pm Monday through Friday.

During large sporting and concert events, the applicant shall ensure that there are flaggers and uniformed police officers present to ensure that there will be two inbound lanes prior to the event and two exit lanes after the event. Flaggers/uniformed police officers shall be stationed to ensure that pedestrians are able to cross at either of the two crosswalks, at the Transportation Center Entrance to let busses in or out and also at the transportation center parking lot entrances to ensure that transportation center patrons leaving the parking lots are merged into the out-bound flow. Uniformed police officers shall be present after an event to direct traffic at the Thompson's Point Road/Fore River Parkway intersection. Retro-reflective traffic cones shall be used by the development to create the reversible lane. Flaggers will direct vehicles into the proper lanes.

Off-Site Mitigation

Fore River Parkway/Thompson's Point Road/I-295 Exit 5A off-ramp

The Southbound off ramp at Exit 5 A shall be reconstructed to have a separate 13 foot wide left turn lane and 13 foot wide through lane. The widths include the

required curb offset. The left lane shall extend back 200 feet. Install Queue detector at the ramp gore area to act as pre-emption for the signal should the queue spill back that far.

Modify traffic signal timing and phasing accordingly.

Fore River Parkway/Congress St/I-295 Exit 5 B off-ramp

Widen the southbound off-ramp to accommodate a 5 foot wide right shoulder, two 12 foot wide right turn lanes and a 2 foot curb offset for a distance of 125 feet with an appropriate taper. Install Queue detector at the ramp gore area to act as pre-emption for the signal should the queue spill back that far.

Re-stripe Congress Street Westbound to accommodate a longer westbound left turn lane, extend back to the end of the island (to the slip lane from Park Ave to Congress St).

Modify traffic signal timing and phasing accordingly.

Congress St/Stevens Ave

Restripe Steven's Avenue to an exclusive left and a shared left/thru/right and modify traffic signal timing and phasing accordingly.

The developer shall pay an impact fee in the amount of $15,000 for inlaid thermoplastic paint skips, retro-reflective back plates and overhead lane usage signage. This money will be put towards improvements funded by PIN 19078.00.

Congress St/Westbrook St

The developer shall pay an impact fee in the amount of $15,000 for inlaid thermoplastic paint skips, retro-reflective back plates and overhead lane usage signage. This money will be put towards improvements funded by PIN 19078.00.

Congress/Frost St

The developer shall pay an impact fee in the amount of $15,000 for inlaid thermoplastic paint skips, retro-reflective back plates and overhead lane usage signage. This money will be put towards improvements funded by PIN 19078.00.

Transportation Demand Management

In lieu of additional mitigation, Transportation Demand Management shall be used to offset the traffic impacts on the roadway network. The City has implemented a Transportation Oriented Development Tax Increment Financing District for the Thompson's Point Development. This development would benefit from some increased transit connections to the airport and Old Port, funding for handicap accessible taxis or for increase in parking at the Transportation Center.

Overall

A. Provide all necessary auxiliary signs, striping and pavement markings to implement the improvements described herein according to State of Maine and/or National standards.

B. All plantings and signs (existing and/or proposed; permanent and/or temporary) shall be placed and maintained such that they do not block available sight distances and do not violate the State's "Installations and Obstructions" law. No signage or plantings shall be allowed within the "clear zone" if they constitute a deadly fixed object as determined by MaineDOT. All signs shall meet MRSA Title 23, Chapter 21, Section 1914: "On-Premise Signs".

C. If any of the supporting data or representations for which this permit is based changes in any way or is found to be incorrect / inaccurate, the applicant shall request in writing from MaineDOT a decision of what impacts those changes will have on the permit. The applicant will then be required to submit those changes for review and approval and additional mitigation as a result of those changes may be required at the expense of the applicant.

D. Because the proposed project affects the state highway and drainage systems and requires improvement to that system, the applicant must obtain approval of the design plans and coordinate work through MaineDOT's State Traffic Engineer, who can be reached at (207)-624-3620 in Augusta.

By:

Stephen Landry, P.E.
Assistant State Traffic Engineer

Date: 6/13/12

SUPPLEMENTAL STORMWATER MANAGEMENT REPORT FOR MULTI-FAMILY RESIDENTIAL (LOT 17) MAJOR SITE PLAN APPLICATION (GENERAL AND BASIC STANDARDS)

THE FOREFRONT AT THOMPSON'S POINT
FOREFRONT PARTNERS I, LP
PORTLAND, ME

PREPARED FOR:

CATHARTES
11 PORTWALK PLACE
PORTSMOUTH, NH 03801
(617) 840-4778

PREPARED BY:

PLACEMAKER PARTNERS, LLC
18 VAN AKEN WAY
PORTLAND, MAINE 04102
(207) 747-5288

SEPTEMBER 2024

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Appendix B – Miscellaneous Sizing Calculations
Appendix C – JellyFish™ HydroCAD Model Summary
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SUPPLEMENTAL STORMWATER MANAGEMENT REPORT

1.0 Introduction

The proposed Multi-Family Residential Building is depicted on the Master Development Plan (approved Jan. 2015) and more specifically referenced on the Overall Subdivision Plan (approved January 12, 2016, last revised March, 2020) in a twin tower configuration on development lots 18 and 19. The currently proposed Residential Building as presented here-in is configured in an a long linear shape with two residential wings extending southerly on development lot 17 (consolidated Lots 17-19) in place of the previously contemplated office and residential building cluster. The Multi-Family Building plans contained in a standalone City of Portland Major Site Plan Application dated September 20, 2024 provides additional construction details and refines another area of the evolving Master Development Plan.

This supplemental report relies upon assumptions and design approaches previously discussed and approved as part of previous Stormwater Management Reports associated with The Forefront at Thompson's Point Master Development Plan Application, Subdivision Application, and Level II or III Site Plan applications (Now referred to as Minor and Major, respectively). Some of these assumptions pertinent to this report include but are not limited the following list:

- A waiver from the Flooding Standards was previously approved;
- A waiver from Channel Protection requirements (such as isolator row requirements associated with Filterra Treebox filters) was previously approved; and
- Prorated treatment credits for treatment of stormwater runoff from on-site existing impervious surfaces (MeDEP Chapter 500 rules dated 2010) that have been retained (primarily consisting of renovated buildings) are applicable to the overall treatment percentage computation.

This supplemental report details the stormwater management systems proposed for the site plan improvements associated with the construction of a Multi-Family Residential with amenities at Thompson's Point as well as demonstrates the integration of stormwater treatment and conveyance infrastructure approved under the Master Development and Subdivision Plans Stormwater Management Strategy. The enclosed computations show that this phase of the project has been designed to meet the Portland Stormwater Management Standards adopted 7/19/10, General Stormwater Standards of MeDEP (revised 2015), and Maine Stormwater Management Design Manual Technical Design Manual (Dated May 2016) and are consistent with the overall goals presented in previous Stormwater Reports. The intent and principals of the stormwater management design, erosion and sediment control, and Inspection and Maintenance Manual have remained the same as approved on June 5, 2012 and include full compliance with Chapter 32 of the City's Technical Manual Stormwater rules and Chapter 500 of the MeDEP Stormwater law.

This phase of the project will have a cumulative redeveloped area of 4.51 acres of which 2.85 acres are re-developed impervious surfaces.

2.0 Stormwater Management Zone Revisions

This supplemental report summarizes the changes to the water quality treatment zones and provides detailed land cover computations of development tributary to the respective stormwater management systems sized to convey and treat stormwater runoff from the proposed re-development.

The previously approved Stormwater Management approach combined sub catchments and treatment areas labeled as 200, 201, and 202 to a single Zone H Discharge outfall as shown on the approved Overall Stormwater Management Sheet C-4.1 dated September 2014 and last revised 2016.09.16. Due to the size and linear nature of the proposed residential building footprint a single treatment and outlet (Zone H) approach is no longer feasible as originally contemplated under the original plan. The new site plan maintains three treatment areas; however, divided into three drainage discharge zones identified as Zone Ha, Hb, and Hc on the Overall Stormwater Management Plan C-5.1 dated August 2024 last revised 09.06.2024. The Stormwater Management Zones are organized and labeled based on tributary treatment area and discharge location.

A northeasterly portion of the property will be the driveway entrance and main access drive to the development lot and includes an entrance loop with short term parking. The drainage infrastructure from this subcatchment Zone Ha (formerly a portion of 200 and 201) will be connected to an existing 12" storm drain system, and the upper end of a main storm drainage trunk line installed in the Thompson's Point Road ROW as part of the roadway constructed during the summer of 2017. This trunk line follows Thompson's Point Road onto the Thompson's Point private road and ultimately discharging to the Fore River through an existing 36" SD pipe labeled as D0.

The bulk of the new building, parking structure, central courtyard, and northerly courtyards will drain to a series of roof drains, catch basin inlets, and storm drain piping to convey runoff to a treatment system shown as Zone Hb (formerly zones 201 and 202). Zone Hb discharges to the far southwesterly corner of the development and directly to the adjacent coastal wetland and Fore River inlet branch.

Runoff from the easterly portion of the new building and the southerly courtyard are collected in roof drains and series of catch basin inlets and storm drain piping shown as Zone Hc (formerly a portion of 200). Zone Hc is tributary to a treatment system and discharges to an existing drainage channel directly connected to the Fore River inlet branch.

The area of proposed development included with this application affects the zones and subzones identified on the Overall Stormwater Management Plan as Zone H and summarized in Table 1 below:

TABLE 1 – Summary of Changes to Stormwater Management Zones

Subdivision Plan Discharge Zone ID	CB Inlet ID	Description of Change
H-200(north half)	Ha2 thru Ha9	This subcatchment (Ha) has split into two distinct areas separated north and south at the building line. This drainage area includes the northerly site developed areas only and drains towards the street. Rather than combine with Hb it will discharge to the street storm drainage system.
H-200 (south half)	Hc4 thru Hc8	This subcatchment (Hc) has split into two distinct areas separated north and south at the building line. This drainage area includes the building roof and southerly courtyard. Rather than combine with Hb it will have its own discharge.
H-201 and H-202	Hb7 thru Hb 23	This subcatchment (Hb) is similar to the previous drainage area in land cover and development area and

		continues to discharge in a single combined location; however, the discharge outfall has been shifted to the westerly side of the site from its more centrally located

The C-5.1 and C-5.2 Stormwater Management Plans show the updated stormwater management zones and proposed stormwater infrastructure and attached in Appendix E. An updated Water Quality Treatment table is shown on Plan Sheet C-5.4 Stormwater Management Plan-3 and enclosed in Appendix D.

3.0 Stormwater Quality Treatment (General Standards)

Stormwater treatment strategies have changed from the prior Subdivision approval which contemplated subsurface underdrained sand filters. The new treatment strategy for each distinct portion of Zone H is described below.

3.1 Zone Ha (Front Entrance, Visitor Parking, and Drive Aisle):

Zone Ha – Areas Ha2, 4, 5,6,7,8,9, and 10
The stormwater treatment approach to these subcatchments utilizes a proprietary high-performance bio-filtration system known as Filterra manufactured and distributed by Contech Engineered Solutions. The owner reserves the right to use an or equal system by another manufacture provided it holds the same MeDEP proprietary preapproval and is sized per the approved criteria. The proposed Filterra system has been sized and configured in accordance with the preapproval letter from Maine DEP to Contech Engineered Solutions dated February 2, 2017 and enclosed for reference in Appendix A. A Filterra system is required to be sized based on table listed in the aforementioned letter.

The resultant sizing computations are detailed in Appendix D and conclude two types of Filterra form factors will be used.

- Ha-2– Requires a 4’x8’ box with tree grate and adequate for up to 0.202 Ac of tributary area
- Ha-4– Requires a 4’x6’ box with tree grate and adequate for up to 0.151 Ac of tributary area
- Ha-5 – Requires a 6’x10’ box with tree grate and adequate for up to 0.378 Ac of tributary area
- Ha-6 – Requires a 4’x8’ box with tree grate and adequate for up to 0.202 Ac of tributary area
- Ha-7, 8, and 9 – Requires a 4’x4’ box with no top (bioscapes configuration) and adequate for up to 0.1 Ac of tributary area

The Filterra (or equal) filters are considered adequate to meet and exceed the Chapter 500 General Standards for water quality treatment in this zone.

3.2 Zone Hb (Garage, Building Roof, Westerly Portion of Site):

Zone Hb - Areas Hb – 21 and 22
The stormwater treatment approach to these subcatchments (surface runoff from the northerly courtyard) utilizes a proprietary high-performance bio-filtration system known as Filterra manufactured and distributed by Contech Engineered Solutions.

The resultant sizing computations are detailed in Appendix D and conclude the following Filterras will be used.

- Hb-21 and 22 – Requires a 4’x4’ box with no top (bioscapes configuration) and adequate for up to 0.1 Ac of tributary area.

The discharge from these two units will combine downstream with the effluent of the Zone Hb Jellyfish treatment unit and discharge at the same outfall Hb-0

Zone Hb - Areas H-Gr,Hb-5,7,9,17,19,20, H-R4, and HR5

The Zone Hb subcatchment areas numbered H-Gr, Hb-5,7,9,17,19,20, H-R4, and HR5 associated with the building, parking structure, and courtyards are tributary to a Contech Jellyfish™ Treatment Unit.

Jellyfish™ units are precast concrete manholes that utilize membrane filtration treatment cartridges. Flow enters the Jellyfish™ from an upstream pretreatment and storage chamber system and flows into a settling tank portion of the unit. Once the settling tank is filled with water, flow from the bottom of the tank is forced up through hi-flow cartridges and continues to the outlet on the by-pass conveyance trunk line. A baffle wall is located between the inlet and outlet compartments to ensure that un-treated flow from small storm events is not mixed with treated flow. When the hi-flow treatment cartridge has filled, a drain down cartridge(s) is activated treating the remaining water quality volume. A vertical orifice drilled into the cap on the Jellyfish inlet pipe will control the outflow of the pretreatment storage system. As stipulated by the MeDEP in the proprietary letter of approval, the outlet orifice has been sized to drawdown the water quality volume at a rate not to exceed a maximum drain down time of 48 hours or minimum of 24 hours. This drawdown time restriction regulates the flow to far less than the maximum flow rate each Jellyfish™ cartridge unit is designed to discharge with an approved flow rate of 80 GPM/cartridge out of the Hi-flo cartridges and 40 GPM/cartridge from the low flow drain down cartridges.

To meet Chapter 500, the Water Quality/Channel Protection Volume when provided with-in a Jellyfish™ System should be equal to or greater than the following:

1”/12 x impervious area plus 0.4”/12 x landscaped area = Water Quality/Channel Protection Volume (cubic feet)

Computations of Water Quality/Channel Protection Volume for Zone Hb can be found in Appendix D. It is noted that the project has received prior waivers from the Channel Protection Volume because the collected runoff does not impact any downstream channels and discharges directly to a coastal tidal river. The applicant reserves the right to apply this waiver to the water quality/channel protection volume provided the Jellyfish system is adequately sized to meet the flow demand.

The water quality/channel protection volume is provided in a subsurface arched chamber storage system. This portion of the design is identical to the system installed as part of the Brick North and Brick South, Hotel, and Children’s Museum and Theatre of Maine development projects on Thompson’s Point.

Jellyfish™ units are designed based on a mass sediment loading calculation. Each treatment hi-flow cartridge has a mass capacity of 125 1bs and each low-flow (draindown) cartridge has a capacity of 63 lbs. The mass loading for each zone was determined by Maine DEP sediment loading standards, assuming a 50% sediment removal from a designed pre-treatment StormTech® Isolator row.

Discharge from larger storm events are controlled over a broad crested weir housed in a precast concrete outlet control structure set above the water quality volume. The overflow piping network is sized to handle runoff from a 25-year storm event. A rain event exceeding the storm

drainage network would likely flood the catch basin inlet, into the courtyard and over the sloped bank to the river.

Pretreatment for flow entering from all inlet pipes to the storage area will be provided via the installation of a StormTech® Isolator row(s) and deep sump catch basins with hooded outlets.

Therefore, water quality goals for the Jellyfish™ Proprietary Systems meet the General Stormwater Standards of the November 2005 Chapter 500 Rules of MeDEP (rev. January 2015).

The Jellyfish™ treatment system and Filterra® are considered adequate to meet the Chapter 500 General Standards in this zone.

3.3 Zone Hc (Building Roof, Southeast Portion of Site):

Zone Hc - Areas Hc-3 and 4, H-R1, R2, and R3
The Zone Hc subcatchment areas numbered Hc-3 and 4, H-R1, R2, and R3 associated with the easterly portion of the building, and southerly courtyard are tributary to a Contech Jellyfish™ Treatment Unit.

Jellyfish™ units for Zone Hc are designed to the same standards used in Zone Hb.

Computations of Water Quality Volume for Zone Hc can be found in Appendix D.

The Jellyfish™ treatment system is considered adequate to meet the Chapter 500 General Standards in this zone.

3.4 Zone H (Landscaped slope around perimeter of the development area):

Zone H – Landscaped Slope
The proposed development area has significant topography differences from west to east and the design team has designed a stepped building approach to limit the amount of earthwork required to construct a suitable building pad to the extent practicable. The proposed site grading creates a fill slope around the southerly perimeter of the development that extends to an existing trail at the toe edge, limiting the development area. The fill slope will be covered with a geotextile net, planted with meadow seed mix, and landscaped to prevent erosion and function as a planted buffer before runoff passes under the trail in existing culverts and to the coastal tidal wetland. The fill slope is included in the redevelopment area calculations as untreated and factored into the overall treatment percentage.

4.0 Conclusion

The stormwater management strategies for this phase of the project presented herein are consistent with the Master Development Plan and Subdivision Plan Strategies. The overall Thompson's Point stormwater management strategy provides a blueprint for treating a minimum of 95% of the net new redeveloped impervious area and 80% of the net new developed area. This phase of the amended site plan treats 80.8% or 3.64 ac of the 4.51 ac. redeveloped area, and 96.87% or 2.86 ac. of the 2.96 ac. redeveloped impervious area.

When this phase of the amended site plan is added to the portion of the overall subdivision developed to date the cumulative treatment computes to be 86.21% or 12.35 ac of the 14.32 ac. redeveloped area and 95.51% or 9.64 ac. of the 10.10 ac. redeveloped impervious area.

The individual systems have been adjusted to accommodate current detailed site plan revisions but ultimately the design strategies continue to be consistent with that of the approved plans and meets or exceeds the City of Portland Stormwater Management Requirements.

5.0 Appendices

Appendix A – Filterra Approval and Sizing letter from MeDEP
Appendix B – Miscellaneous Sizing Calculations
Appendix C – JellyFish™ HydroCAD Model Summary
Appendix D – Summary of Water Quality Treatment Zone H
Appendix E – Stormwater Management Plans-1 through 3

APPENDIX A

Filterra and Jellyfish Approval and Sizing letter from MeDEP

February 2, 2017

Derek Berg
Filterra Bioretention Systems
Contech Engineered Solutions LLC
71 US Route 1, Suite F
Scarborough, ME 04074

Dear Mr. Berg:

This letter replaces the April 19, 2016 approval from the Department of Environmental Protection (Department) that authorized the use of the Filterra Bioretention System. The Filterra Bioretention System (FBS) was permitted for use by the Department of Environmental Protection (Department) on November 12, 2009, as part of a stormwater treatment train that included the use a StormTech Isolator Row following the structure as an approved alternative to the General Standards (Section 4.C) of the Stormwater Management Rules (Chapter 500). Based on new testing data, the installation of FBS structures without the StormTech Isolator Row was approved on an interim use by the Department on January 21, 2015.

The FBS structures sizing criteria must be revised based on data you provided of an appropriate rainfall intensity rate that would allow for the full treatment of 90% of an average annual runoff volume. Therefore, the Department will review and approve, on a case-by-case basis, the use of the FBS when the system is sized, installed and maintained in accordance with the following provisions:

1. The structure may be a standard concrete box or a soft shell system that is filled with the Filterra engineered filter media, provided it is sized to meet the requirements of the General Standards (Section 4.C) and is installed, operated and maintained in accordance with the manufacturer's specifications.

2. The FBS must be sized in accordance with the manufacturer's standard New England testing results and revised sizing guidelines outlined in the following table to treat 90% of the annual runoff volume:

Filterra Model Number	*Area in Acres*	*Treatment Flow Rate at 140"/hr (cfs)*	*Outlet Pipe Size*
4x4	0.100	0.05	4"
4x6	0.151	0.08	4"
4x8	0.202	0.10	4"
6x6	0.227	0.12	4"
6x8 / 4x12	0.301	0.16	4"
6x10	0.378	0.19	6"
6x12	0.454	0.23	6"
7x13	0.573	0.29	6"

Alternatively, the runoff from the entire contributing drainage area, including all pervious areas, may be modelled to provide treatment of the 0.95" storm at the approved hydraulic loading rate of 140" per hour.

3. When designed with the standard curb inlet design, the FBS must be configured "off-line" with the surface elevation at the FBS unit being up gradient of an overflow inlet. When designed with the grated inlet design, the FBS must incorporate an internal bypass and will not require an overflow inlet. The applicant must demonstrate that the proposed design meets all the manufacturer's specifications prior to submission for Department approval. Review and approval of the proposed design by the manufacturer will be sufficient to demonstrate conformance with the manufacturer's specifications.

4. The treated flow and bypass flow must be combined and directed to a detention system/structure that will store the water quality/channel protection volume (WQv) consisting of the first 1.0 inch of runoff from impervious areas and 0.4 inch of runoff from lawns and landscaped areas. An external outlet control structure must control the flow out of the system and the WQv must be detained between 24 hours and 48 hours.

5. When a boxed structure is proposed, the FBS must be delivered to the site with the engineered filter media and plumbing fully installed. The concrete box must be sealed to prevent debris and sediment from entering the system during construction. The activation of the FBS and opening of the protective mesh cover, installation of plant(s) and mulch layers as necessary, can be performed only by the supplier (Contech or its authorized dealer). The activation process must not commence until the project site is fully stabilized and cleaned (i.e., full landscaping, grass cover, final paving and street sweeping completed), minimizing the risk of construction materials contaminating the FBS system.

6. When a soft shell structure is proposed, the FBS(s) must be built on site and must include all the components of a boxed structure. The FBS must be designed per the manufacturer's specifications and must be installed on-site by the manufacturer's representative.

7. Prior to construction, a five-year binding inspection and maintenance contract must be provided for review and approval by the Department, and must be renewed before contract expiration. The contract will be with a professional with knowledge of erosion and stormwater control, including a detailed working knowledge of the proposed system. The first year's maintenance must be provided by the manufacturer to ensure that the system is operating according to the established specifications.

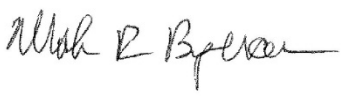
8. The overall stormwater management design must meet all Department criteria and sizing specifications and shall be reviewed and approved by the Department prior to use.

9. Each project must be reviewed and approved by the manufacturer for proposed use, layout and sizing of the system and for conformance with their design specifications. The system must be installed under the manufacturer's representative supervision.

10. This approval is conditional to on-the-ground experience confirming that the FBS's pollutant removal efficiency and sizing are appropriate. The "permit shield" provision (Section 14) of the Chapter 500 rules will apply, and the Department will not require the replacement of the system if, with proper maintenance, pollutant removals do not satisfy the General Standard Best Management Practices.

We look forward to working with you as these stormwater management structures are installed on new projects. Questions concerning this decision should be directed to Jeff Dennis at (207) 215-6376.

Sincerely,



Mark Bergeron, P.E.
Director
Bureau of Land Resources

cc: Don Witherill, Maine DEP

January 21, 2015

CONTECH Engineered Solutions LLC
71 US Route 1, Suite F
Scarborough, ME 04074
ATTN: Derek Berg

Dear Mr. Berg:

This letter is to inform you that the Department of Environmental Protection (Department) will review and approve, on a case-by-case basis, applicants' requests to use the Jellyfish Filter, manhole or vault housing, a cartridge deck supporting membrane filtration cartridges, as a low flow rate filter meeting the requirements of the General Standards (Section 4.B.) of the Stormwater Management Rules (Chapter 500) when sized, installed and maintained in accordance with the following provisions:

1. The Jellyfish Filter must be sized in accordance with the tested hydraulic loading rate, and is approved for a maximum rate of 80 gallons per minute (gpm) for each 54-inch long membrane filter cartridge (1.48 gpm per inch of cartridge length). The structure must include at least one draindown cartridge, which is approved for a hydraulic loading rate of 40 gpm per 54" cartridge (0.74 gpm per inch of cartridge length).
2. Upstream storage must be provided for the water quality/channel protection volume (WQv) consisting of the first 1.0 inch of runoff from impervious areas and 0.4 inch of runoff from lawns and landscaped areas. The WQv should be hydraulically isolated from any additional storage provided onsite by weirs or other means so that only the WQv is routed through the Jellyfish Filter. Additionally, the WQv must be detained for a minimum of 24 hours and a maximum of 48 hours (emptying time). Storage can typically be provided in an underground facility such as corrugated metal pipe, polypropylene chambers, concrete vaults or similar means.
3. All storage systems must include sufficient maintenance access for the removal of accumulated sediment and debris. It is desirable that a pretreatment structure be located upstream of the WQv storage to facilitate capture of coarse solids and trash.
4. The Jellyfish Filter must be delivered to the site and installed under the supervision of the manufacturer's representative.
5. The system must be inspected at least once every six months, and the filters maintained yearly per the manufacturer's guidelines to maintain the established efficiency for pollutant removal. A five-year binding inspection and maintenance contract must be provided prior to review and approval by the Department, and must be renewed before contract expiration.
6. The overall stormwater management design must meet all Department criteria and sizing specifications and shall be reviewed and approved by the Department prior to use.
7. Review and approval by the manufacturer for the proposed use and sizing of the Jellyfish Filter at each specific project is required to ensure conformance with the manufacturer's design specifications.

8. This approval is conditional to on-the-ground experience confirming that the Jellyfish Filter's pollutant removal efficiency and sizing are appropriate. The "permit shield" provision (Section 14) of the Chapter 500 rules will apply, and the Department will not require the replacement of the system if pollutant removals do not satisfy the General Standard Best Management Practices.

We look forward to working with you as these stormwater management structures are installed on new projects. And, we hope that this stormwater BMP will be included in our manual in the near future.

Questions concerning this decision should be directed to Marianne Hubert at (207) 215-6485 or Jeff Dennis at (207) 215-6376.

Sincerely,

Mark Bergeron, P.E.
Director, Division of Land Resource Regulation
Bureau of Land & Water Quality

C: Don Witherill, Maine DEP

APPENDIX B

Miscellaneous Sizing Calculations

Rational Method Flow Computations										
ZONE	ZONE ID	IMPERVIOUS (SF)	PERVIOUS (SF)	TOTAL AREA (SF)	TOTAL AREA (ACRES)	WEIGHTED C	25-YEAR FLOW	10-YEAR FLOW	2-YEAR FLOW	1-Year Flow
Zone H	Ha-9	0.00	1,607.00	1,607.00	0.04	0.20	0.05	0.04	0.03	0.02
	Ha-2	6,683.00	1,473.00	8,156.00	0.19	0.81	0.95	0.84	0.61	0.43
	Ha-6	6,585.00	847.00	7,432.00	0.17	0.86	0.92	0.81	0.59	0.41
	Ha-7	0.00	1,036.00	1,036.00	0.02	0.20	0.03	0.03	0.02	0.01
	Ha-8	667.00	1,147.00	1,814.00	0.04	0.48	0.12	0.11	0.08	0.06
	Ha-4	4,748.00	814.00	5,562.00	0.13	0.84	0.67	0.59	0.43	0.30
	Ha-5	12,313.40	1,513.60	13,827.00	0.32	0.87	1.72	1.52	1.10	0.77
	Zone Ha - Total	**30,996.40**	**8,437.60**	**39,434.00**	**0.91**	**0.79**	4.47	**3.93**	**2.86**	**2.00**
	Hb-R5 north (split in half for different Isolator rows)	7,222.00	0.00	7,222.00	0.17	0.95	0.98	0.87	0.63	0.44
	Hb-13	1,469.00	259.00	1,728.00	0.04	0.84	0.21	0.18	0.13	0.09
	Hb-12	1,209.00	346.00	1,555.00	0.04	0.78	0.17	0.15	0.11	0.08
	Hb-5 Isolator Subtotal	**9,900.00**	**605.00**	**10,505.00**	**0.24**	**0.91**	1.37	**1.20**	**0.87**	**0.61**
	Hb-R5 South (split in half for different Isolator rows)	7,222.00	0.00	7,222.00	0.17	0.95	0.98	0.87	0.63	0.44
	Hb-14	225.00	724.00	949.00	0.02	0.38	0.05	0.05	0.03	0.02
	Hb-15	1,146.00	2,657.00	3,803.00	0.09	0.43	0.23	0.20	0.15	0.10
	Hb-R4	7,038.00	0.00	7,038.00	0.16	0.95	0.96	0.84	0.61	0.43
	Hb-16	586.00	3,935.00	4,521.00	0.10	0.30	0.19	0.17	0.12	0.09
	Hb-17	3,056.00	179.00	3,235.00	0.07	0.91	0.42	0.37	0.27	0.19
	Hb-18	716.00	1,298.00	2,014.00	0.05	0.47	0.13	0.12	0.09	0.06
	Hb-9	1,246.00	1,622.00	2,868.00	0.07	0.53	0.22	0.19	0.14	0.10
	Hb-19	1,093.00	461.00	1,554.00	0.04	0.73	0.16	0.14	0.10	0.07
	Hb-20	601.00	506.00	1,107.00	0.03	0.61	0.10	0.08	0.06	0.04
	Hb-5 Isolator Subtotal	**22,929.00**	**11,382.00**	**34,311.00**	**0.79**	**0.70**	3.45	**3.04**	**2.21**	**1.55**
	Hb-5 Storage Subtotal	**32,829.00**	**11,987.00**	**44,816.00**	**1.03**	**0.75**	4.82	**4.24**	**3.08**	**2.16**
	Hb-GR	25,934.00	0.00	25,934.00	0.60	0.95	3.53	3.11	2.26	1.58
	Hb-11 Storage/Isolator Subtotal	**25,934.00**	**0.00**	**25,934.00**	**0.60**	**0.95**	3.53	**3.11**	**2.26**	**1.58**
	Hb-3.1 Jellyfish Total	**58,763.00**	**11,987.00**	**70,750.00**	**1.62**	**0.82**	8.35	**7.35**	**5.35**	**3.74**
	Hb-21	1,522.00	2,257.00	3,779.00	0.09	0.50	0.27	0.24	0.17	0.12
	Hb-22	682.00	6,048.00	6,730.00	0.15	0.28	0.27	0.23	0.17	0.12
	Hb-Filterra Subtotal	**2,204.00**	**8,305.00**	**10,509.00**	**0.24**	**0.36**	0.54	**0.47**	**0.34**	**0.24**
	Hc-R1	15,256.00	0.00	15,256.00	0.35	0.95	2.08	1.83	1.33	0.93
	Hc-R2	4,904.00	0.00	4,904.00	0.11	0.95	0.67	0.59	0.43	0.30
	Hc-R3	8,572.00	0.00	8,572.00	0.20	0.95	1.17	1.03	0.75	0.52
	Hc-5	2,495.00	1,852.00	4,347.00	0.10	0.63	0.39	0.35	0.25	0.18
	Hc-7	1,587.00	2,781.00	4,368.00	0.10	0.47	0.30	0.26	0.19	0.13
	Hc-6	0.00	460.00	460.00	0.01	0.20	0.01	0.01	0.01	0.01
	Hc-4 Storage/Isolator Subtotal	**32,814.00**	**5,093.00**	**37,907.00**	**0.87**	**0.85**	4.62	**4.06**	**2.96**	**2.07**
	Hb-23	520.00	262.00	782.00	0.02	0.70	0.08	0.07	0.05	0.04
	Ha-10	317.00	5,778.00	6,095.00	0.14	0.24	0.21	0.18	0.13	0.09
	Ha-City	1,296.60	768.40	2,065.00	0.05	0.67	0.20	0.17	0.13	0.09

Assumptions		
Pervious C	**0.2**	
Impervious C	**0.95**	
I-1 Year	**2.8**	**in/hr**
I -2 Year Storm	**4**	**in/hr**
I-10 Year Storm	**5.5**	**In/Hr**
I-25 Year Storm	**6.25**	**In/Hr**
Notes:		
1. Rainfall intensity based on Cumberland County IDF curve using a TC of 5 min.		

Zone Hb Required StormTech Chamber Storage Computation

North Storage (Hb-11)

Weir Wall Height	20.5	EL	
Bottom of Chamber Elevation	18	EL	
Total Chamber Height	30	Inches	30 (max chamber height)
Total Storage per chamber	61.38	CF	
Total WQV for Zone G	2,161.17	CF	
Total Chambers Required	35.2	#	
Total Chambers Provided	35	#	
Total Storage Provided	2148.3	CF	* This excludes excess storage in distribution pipes, and oversized stone on perimeter.
Total Storage Provided Per Hydro cad	2699	CF	*This includes stone around perimeter of system and base stone

South Storage (Hb-5)

Weir Wall Height	20.5	EL	
Bottom of Chamber Elevation	18	EL	
Total Chamber Height	30	Inches	30 (max chamber height)
Total Storage per chamber	61.38	CF	
Total WQV for Zone G	3,135.32	CF	
Total Chambers Required	51.1	#	
Total Chambers Provided	40	#	
Total Storage Provided	2628.2	CF	* This excludes excess storage in inlet distribution pipes, and oversized stone on perimeter. This includes volume of 55' 15" dia. outlet pipe.
Total Storage Provided	3042	CF	*This includes stone around perimeter of system and base stone

Resi Project Water Quality Volume (CF) - North Hb-11	2,161.17	
Resi Project Water Quality Volume (CF) - South Hb-5	3,135.32	

1. Height of weir wall based on WQv. See sheet "rational method flow computations". Structure Hb-3 in which weir wall is located was modeled using HydroCad. See attached computations.

	Impervious Area	Pervious Area	1 yr Peak Flow (CFS)	25 yr Peak Flow (CFS)	Flow Per SC-740 Chamber	Required Isolator Row Chambers	Provided Isolator Row Chambers
Trib. To North Inlet	25,934	0	1.58	3.53	0.2	7.92	8
Trib. To South Inlet 1	9,900	605	0.61	1.37	0.2	3.06	6
Trib. To South Inlet 2	22,929	11,382	1.55	3.45	0.2	7.73	8
			2.16	4.82		10.79	

Zone Hc Required StormTech Chamber Storage Computation

Weir Wall Height	20	EL	
Bottom of Chamber Elevation	17.5	EL	
Total Chamber Height	30	Inches	30 (max chamber height)
Total Storage per chamber	61.38	CF	
Total WQV for Zone HC	2,904.27	CF	
Total Chambers Required	47.3	#	
Total Chambers Provided	40	#	
Total Storage Provided	2455.2	CF	
Total Storage Provided as shown in Hydrocad	2938	CF	*This includes stone around perimeter of system and base stone

Resi Project Water Quality Volume (CF) - Zone Hc 2,904.27

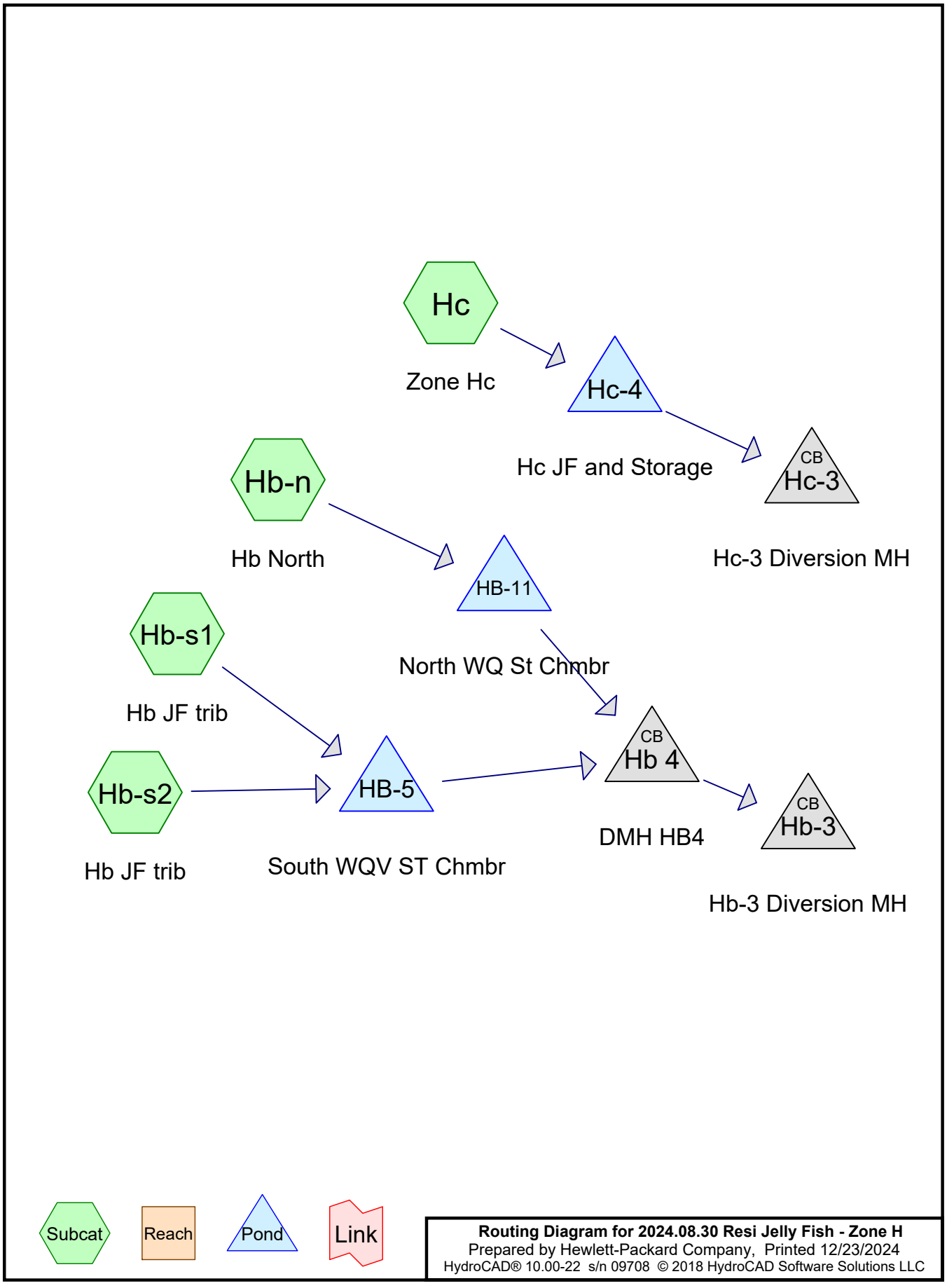
Notes:

1. Height of weirwall based based on WQv. See sheet "rational method flow compuations". Structure Hc-3 in which weir wall is located was modeled using HydroCad. See attached computations.

	Impervious Area	Pervious Area	1 yr Peak Flow (CFS)	25 yr Peak Flow (CFS)	Flow Per SC-740 Chamber	Required Isolator Row Chambers	Provided Isolator Row Chambers
Trib. To West Inlet	32,814	5,093	2.07	4.62	0.2	10.35	16
			2.07	4.62			

APPENDIX C

JellyFish™ HydroCAD Model Summary



Routing Diagram for 2024.08.30 Resi Jelly Fish - Zone H
Prepared by Hewlett-Packard Company, Printed 12/23/2024
HydroCAD® 10.00-22 s/n 09708 © 2018 HydroCAD Software Solutions LLC

Area Listing (all nodes)

Area (sq-ft)	CN	Description (subcatchment-numbers)
45,810	74	>75% Grass cover, Good, HSG C (Hb-s1, Hb-s2, Hc)
28,732	98	Building (Hc)
25,934	98	Impervious Pavement & Roofs, HSG C (Hb-n)
21,127	98	Paved parking, HSG C (Hb-s1, Hb-s2, Hc)
14,260	98	Roof (Hb-s2)
7,222	98	roof (Hb-s1)
143,085	**90**	**TOTAL AREA**

Soil Listing (all nodes)

Area (sq-ft)	Soil Group	Subcatchment Numbers
0	HSG A	
0	HSG B	
92,871	HSG C	Hb-n, Hb-s1, Hb-s2, Hc
0	HSG D	
50,214	Other	Hb-s1, Hb-s2, Hc
143,085		**TOTAL AREA**

Ground Covers (all nodes)

HSG-A (sq-ft)	HSG-B (sq-ft)	HSG-C (sq-ft)	HSG-D (sq-ft)	Other (sq-ft)	Total (sq-ft)	Ground Cover
0	0	45,810	0	0	45,810	>75% Grass cover, Good
0	0	0	0	28,732	28,732	Building
0	0	25,934	0	0	25,934	Impervious Pavement & Roofs
0	0	21,127	0	0	21,127	Paved parking
0	0	0	0	14,260	14,260	Roof
0	0	0	0	7,222	7,222	roof
0	**0**	**92,871**	**0**	**50,214**	**143,085**	**TOTAL AREA**

Pipe Listing (all nodes)

Line#	Node Number	In-Invert (feet)	Out-Invert (feet)	Length (feet)	Slope (ft/ft)	n	Diam/Width (inches)	Height (inches)	Inside-Fill (inches)
1	Hb 4	16.50	16.40	12.0	0.0083	0.012	18.0	0.0	0.0
2	HB-11	17.00	16.60	56.0	0.0071	0.012	15.0	0.0	0.0
3	Hb-3	15.70	15.10	11.0	0.0545	0.012	18.0	0.0	0.0
4	HB-5	17.00	16.60	50.0	0.0080	0.012	15.0	0.0	0.0
5	Hc-3	16.60	16.50	11.0	0.0091	0.012	15.0	0.0	0.0
6	Hc-4	17.50	17.40	12.0	0.0083	0.012	15.0	0.0	0.0

Time span=0.00-30.00 hrs, dt=0.01 hrs, 3001 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind method - Pond routing by Stor-Ind method

Subcatchment Hb-n: Hb North Runoff Area=25,934 sf 100.00% Impervious Runoff Depth=0.79"
Tc=6.0 min CN=98 Runoff=0.53 cfs 1,709 cf

Subcatchment Hb-s1: Hb JF trib Runoff Area=11,110 sf 94.55% Impervious Runoff Depth=0.71"
Tc=6.0 min CN=97 Runoff=0.21 cfs 653 cf

Subcatchment Hb-s2: Hb JF trib Runoff Area=34,311 sf 66.83% Impervious Runoff Depth=0.32"
Tc=6.0 min CN=90 Runoff=0.28 cfs 916 cf

Subcatchment Hc: Zone Hc Runoff Area=71,730 sf 52.85% Impervious Runoff Depth=0.22"
Tc=6.0 min CN=87 Runoff=0.37 cfs 1,339 cf

Pond Hb 4: DMH HB4 Peak Elev=16.84' Inflow=0.46 cfs 2,643 cf
18.0" Round Culvert n=0.012 L=12.0' S=0.0083 '/' Outflow=0.46 cfs 2,643 cf

Pond HB-11: North WQ St Chmbr Peak Elev=17.28' Storage=610 cf Inflow=0.53 cfs 1,709 cf
15.0" Round Culvert n=0.012 L=56.0' S=0.0071 '/' Outflow=0.34 cfs 1,410 cf

Pond Hb-3: Hb-3 Diversion MH Peak Elev=19.57' Inflow=0.46 cfs 2,643 cf
Outflow=0.46 cfs 2,643 cf

Pond HB-5: South WQV ST Chmbr Peak Elev=17.20' Storage=580 cf Inflow=0.49 cfs 1,569 cf
15.0" Round Culvert n=0.012 L=50.0' S=0.0080 '/' Outflow=0.18 cfs 1,233 cf

Pond Hc-3: Hc-3 Diversion MH Peak Elev=20.01' Inflow=0.07 cfs 1,022 cf
Outflow=0.07 cfs 1,022 cf

Pond Hc-4: Hc JF and Storage Peak Elev=17.63' Storage=468 cf Inflow=0.37 cfs 1,339 cf
15.0" Round Culvert n=0.012 L=12.0' S=0.0083 '/' Outflow=0.07 cfs 1,022 cf

Total Runoff Area = 143,085 sf Runoff Volume = 4,617 cf Average Runoff Depth = 0.39"
32.02% Pervious = 45,810 sf 67.98% Impervious = 97,275 sf

Summary for Subcatchment Hb-n: Hb North

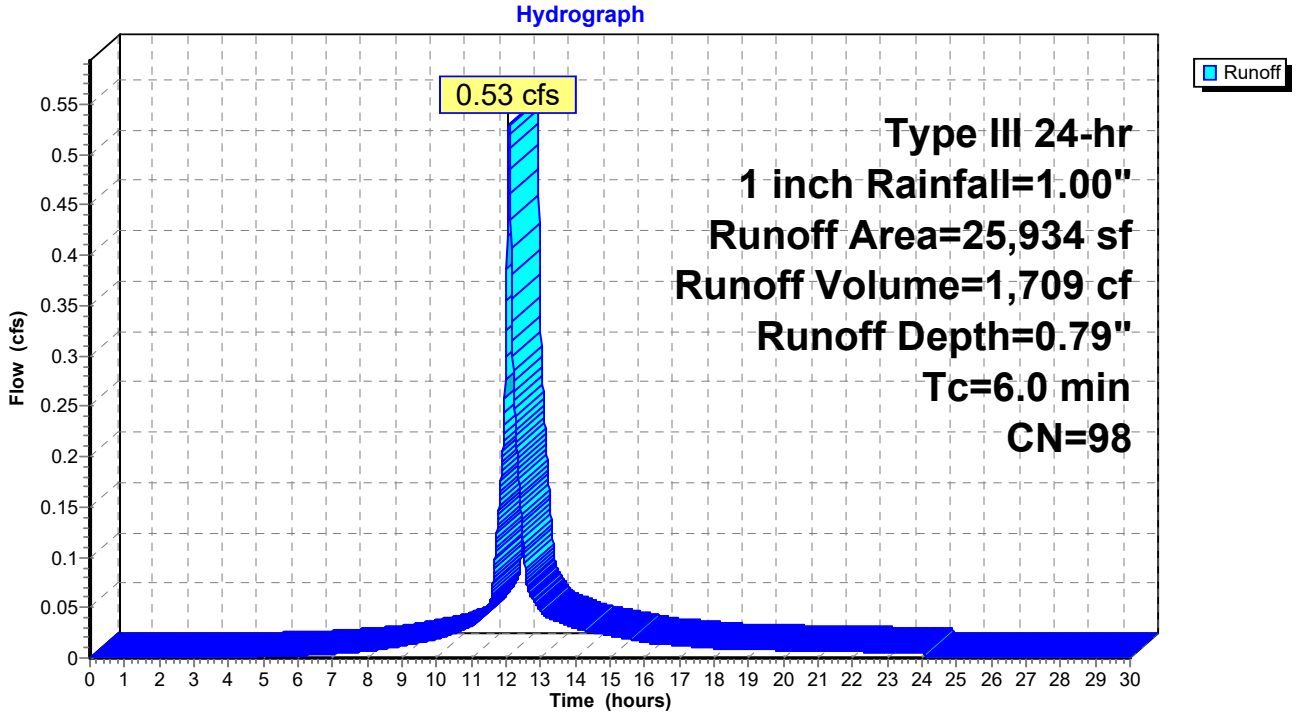
Runoff = 0.53 cfs @ 12.08 hrs, Volume= 1,709 cf, Depth= 0.79"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs
Type III 24-hr 1 inch Rainfall=1.00"

	Area (sf)	CN	Description
*	25,934	98	Impervious Pavement & Roofs, HSG C
	25,934		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Tc - Min**

Subcatchment Hb-n: Hb North



Summary for Subcatchment Hb-s1: Hb JF trib

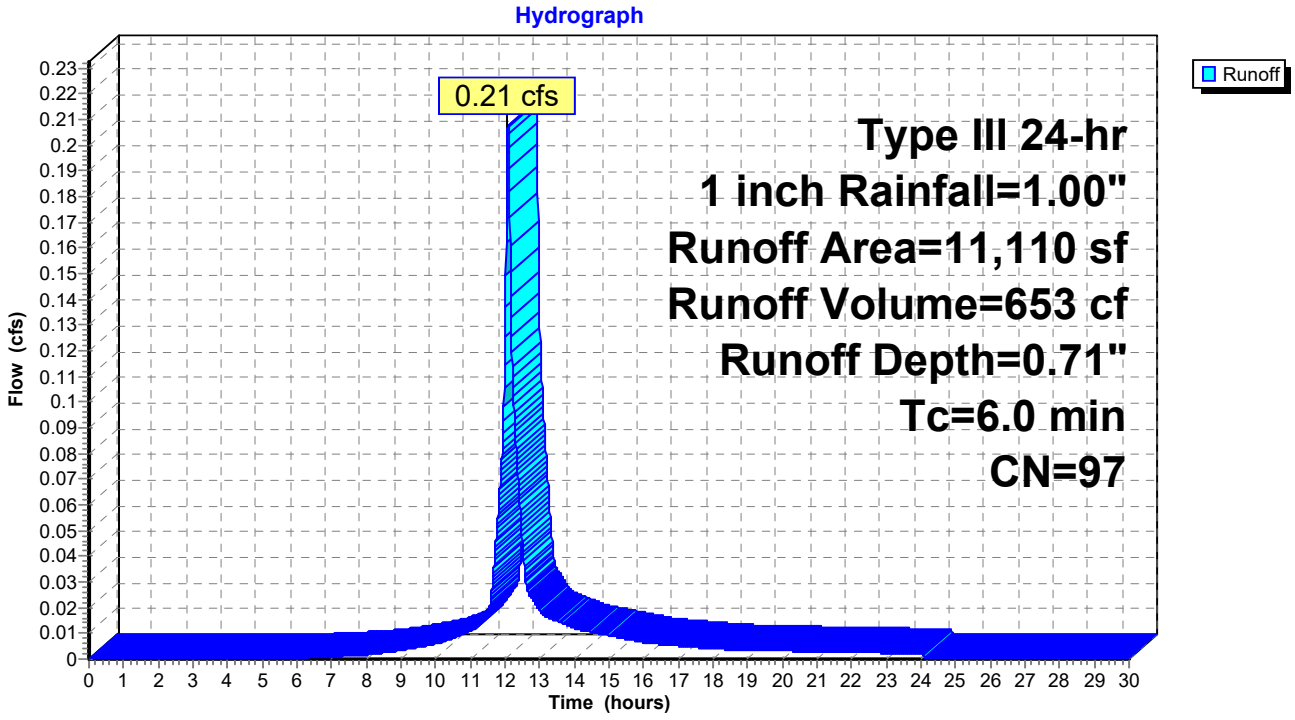
Runoff = 0.21 cfs @ 12.09 hrs, Volume= 653 cf, Depth= 0.71"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs
Type III 24-hr 1 inch Rainfall=1.00"

	Area (sf)	CN	Description
*	7,222	98	roof
	3,283	98	Paved parking, HSG C
	605	74	>75% Grass cover, Good, HSG C
	11,110	97	Weighted Average
	605		5.45% Pervious Area
	10,505		94.55% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Tc - min**

Subcatchment Hb-s1: Hb JF trib



Summary for Subcatchment Hb-s2: Hb JF trib

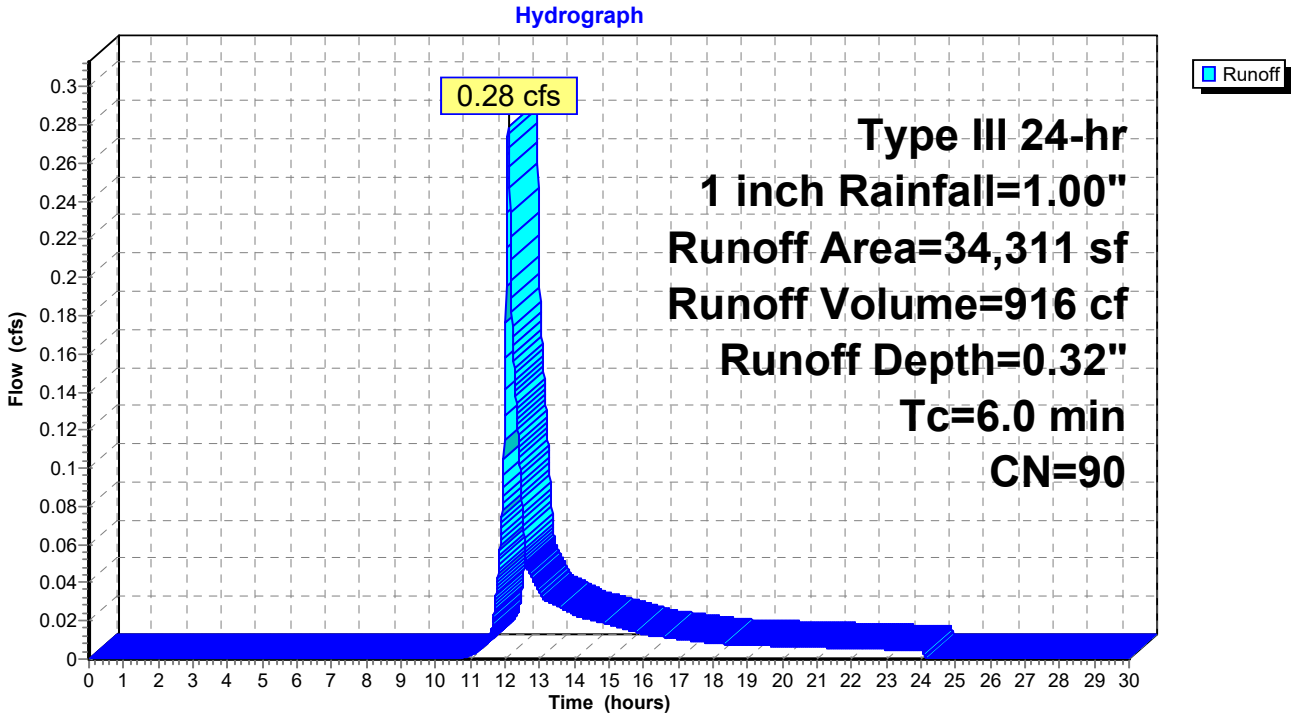
Runoff = 0.28 cfs @ 12.10 hrs, Volume= 916 cf, Depth= 0.32"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs
Type III 24-hr 1 inch Rainfall=1.00"

	Area (sf)	CN	Description
*	14,260	98	Roof
	8,669	98	Paved parking, HSG C
	11,382	74	>75% Grass cover, Good, HSG C
	34,311	90	Weighted Average
	11,382		33.17% Pervious Area
	22,929		66.83% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Tc - min**

Subcatchment Hb-s2: Hb JF trib



Summary for Subcatchment Hc: Zone Hc

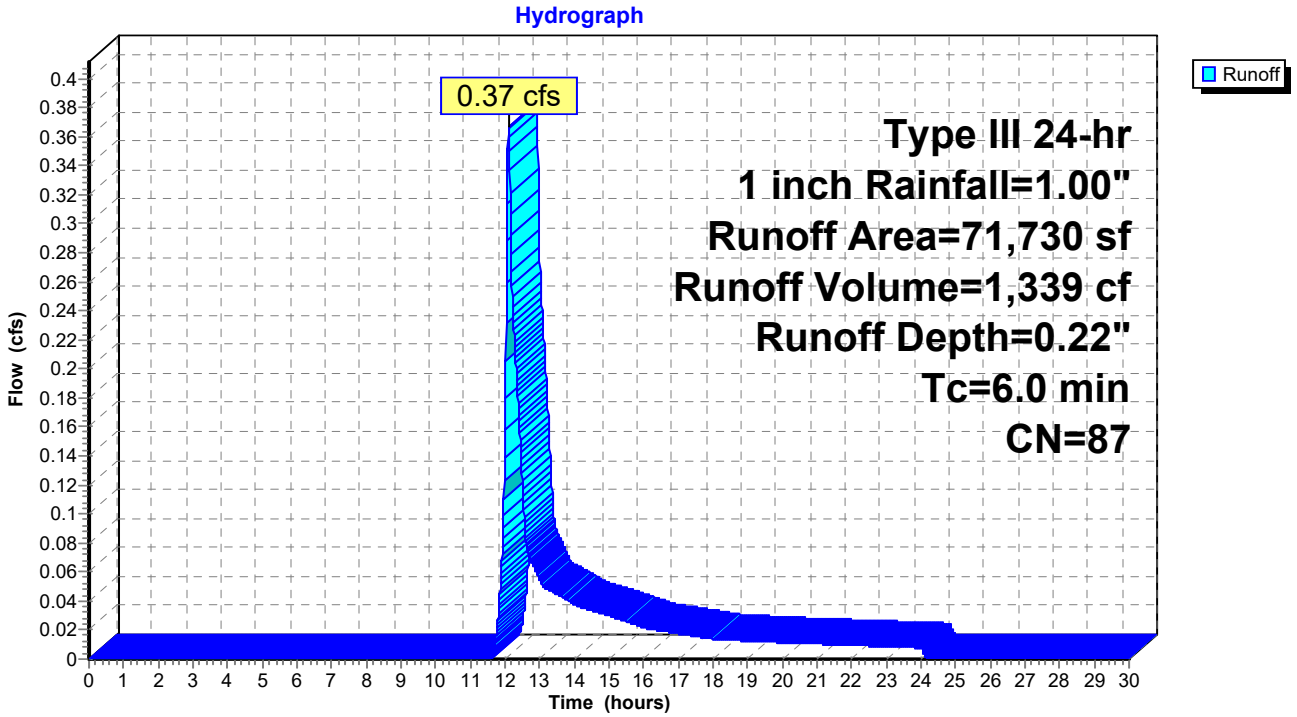
Runoff = 0.37 cfs @ 12.10 hrs, Volume= 1,339 cf, Depth= 0.22"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs
Type III 24-hr 1 inch Rainfall=1.00"

	Area (sf)	CN	Description
*	15,256	98	Building
*	4,904	98	Building
*	8,572	98	Building
	9,175	98	Paved parking, HSG C
	33,823	74	>75% Grass cover, Good, HSG C
	71,730	87	Weighted Average
	33,823		47.15% Pervious Area
	37,907		52.85% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment Hc: Zone Hc



Summary for Pond Hb 4: DMH HB4

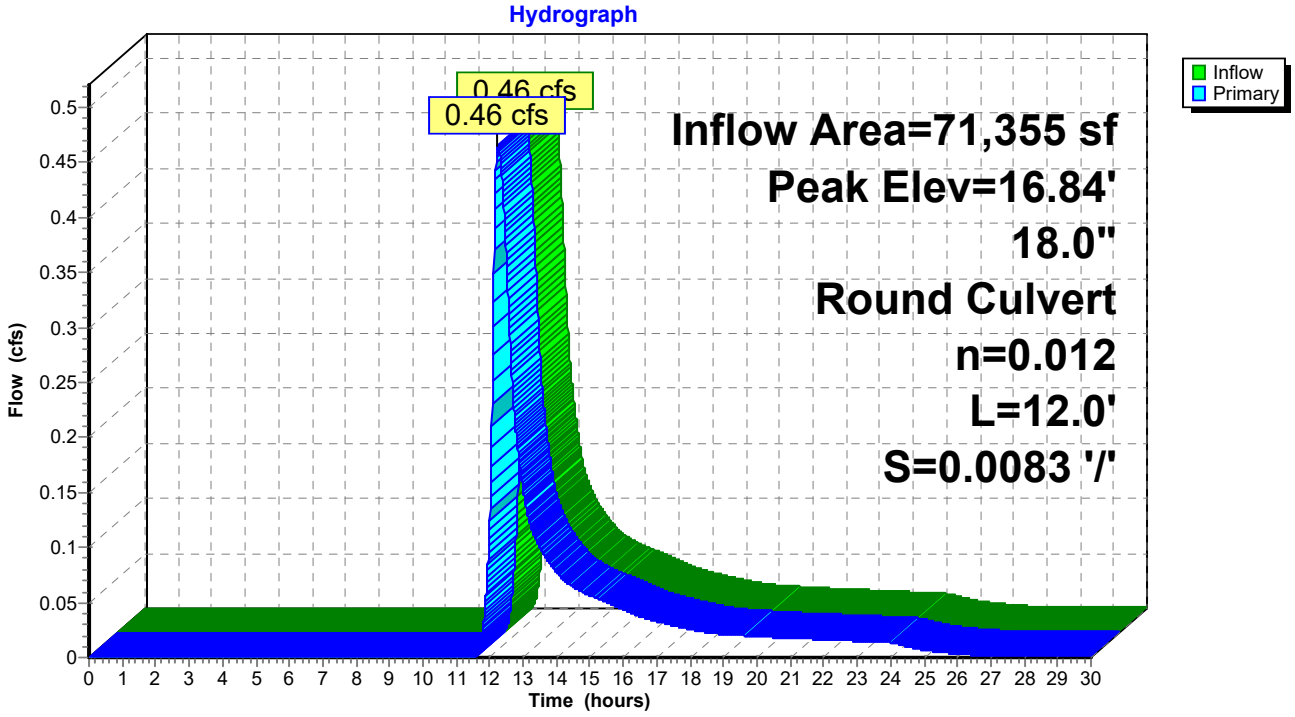
Inflow Area = 71,355 sf, 83.20% Impervious, Inflow Depth > 0.44" for 1 inch event
Inflow = 0.46 cfs @ 12.25 hrs, Volume= 2,643 cf
Outflow = 0.46 cfs @ 12.25 hrs, Volume= 2,643 cf, Atten= 0%, Lag= 0.0 min
Primary = 0.46 cfs @ 12.25 hrs, Volume= 2,643 cf

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs
Peak Elev= 16.84' @ 12.25 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	16.50'	**18.0" Round Culvert** L= 12.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 16.50' / 16.40' S= 0.0083 '/' Cc= 0.900 n= 0.012, Flow Area= 1.77 sf

Primary OutFlow Max=0.46 cfs @ 12.25 hrs HW=16.84' (Free Discharge)
1=Culvert (Barrel Controls 0.46 cfs @ 2.37 fps)

Pond Hb 4: DMH HB4



Summary for Pond HB-11: North WQ St Chmbr

Inflow Area = 25,934 sf,100.00% Impervious, Inflow Depth = 0.79" for 1 inch event
Inflow = 0.53 cfs @ 12.08 hrs, Volume= 1,709 cf
Outflow = 0.34 cfs @ 12.18 hrs, Volume= 1,410 cf, Atten= 35%, Lag= 5.5 min
Primary = 0.34 cfs @ 12.18 hrs, Volume= 1,410 cf

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs
Peak Elev= 17.28' @ 12.18 hrs Surf.Area= 1,445 sf Storage= 610 cf

Plug-Flow detention time= 151.0 min calculated for 1,410 cf (82% of inflow)
Center-of-Mass det. time= 81.2 min (869.0 - 787.9)

Volume	Invert	Avail.Storage	Storage Description
#1A	16.50'	1,068 cf	**15.75'W x 67.70'L x 3.67'H Field A** 3,909 cf Overall - 1,240 cf Embedded = 2,669 cf x 40.0% Voids
#2A	17.00'	1,240 cf	**ADS_StormTech SC-740 +Cap** x 27 Inside #1 Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap 3 Rows of 9 Chambers
#3B	16.50'	408 cf	**6.25'W x 60.58'L x 3.67'H Field B** 1,388 cf Overall - 368 cf Embedded = 1,021 cf x 40.0% Voids
#4B	17.00'	368 cf	**ADS_StormTech SC-740 +Cap** x 8 Inside #3 Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap
		3,084 cf	Total Available Storage

Storage Group A created with Chamber Wizard
Storage Group B created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	17.00'	**15.0" Round Culvert** L= 56.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 17.00' / 16.60' S= 0.0071 '/' Cc= 0.900 n= 0.012 Corrugated PP, smooth interior, Flow Area= 1.23 sf

Primary OutFlow Max=0.34 cfs @ 12.18 hrs HW=17.28' (Free Discharge)
1=Culvert (Barrel Controls 0.34 cfs @ 2.45 fps)

Pond HB-11: North WQ St Chmbr - Chamber Wizard Field A

Chamber Model = ADS_StormTech SC-740 +Cap (ADS StormTech® SC-740 with cap length)
Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf
Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap

51.0" Wide + 6.0" Spacing = 57.0" C-C Row Spacing

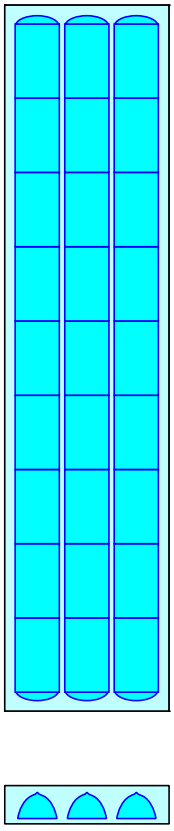
9 Chambers/Row x 7.12' Long +0.81' Cap Length x 2 = 65.70' Row Length +12.0" End Stone x 2 = 67.70' Base Length
3 Rows x 51.0" Wide + 6.0" Spacing x 2 + 12.0" Side Stone x 2 = 15.75' Base Width
6.0" Base + 30.0" Chamber Height + 8.0" Cover = 3.67' Field Height

27 Chambers x 45.9 cf = 1,240.4 cf Chamber Storage

3,909.5 cf Field - 1,240.4 cf Chambers = 2,669.1 cf Stone x 40.0% Voids = 1,067.6 cf Stone Storage

Chamber Storage + Stone Storage = 2,308.0 cf = 0.053 af
Overall Storage Efficiency = 59.0%
Overall System Size = 67.70' x 15.75' x 3.67'

27 Chambers
144.8 cy Field
98.9 cy Stone



Pond HB-11: North WQ St Chmbr - Chamber Wizard Field B

Chamber Model = ADS_StormTech SC-740 +Cap (ADS StormTech® SC-740 with cap length)
Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf
Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap

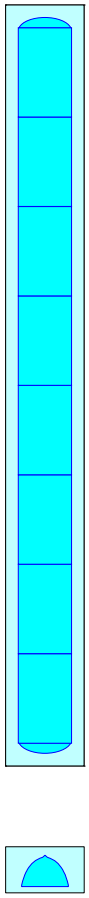
8 Chambers/Row x 7.12' Long +0.81' Cap Length x 2 = 58.58' Row Length +12.0" End Stone x 2 = 60.58' Base Length
1 Rows x 51.0" Wide + 12.0" Side Stone x 2 = 6.25' Base Width
6.0" Base + 30.0" Chamber Height + 8.0" Cover = 3.67' Field Height

8 Chambers x 45.9 cf = 367.5 cf Chamber Storage

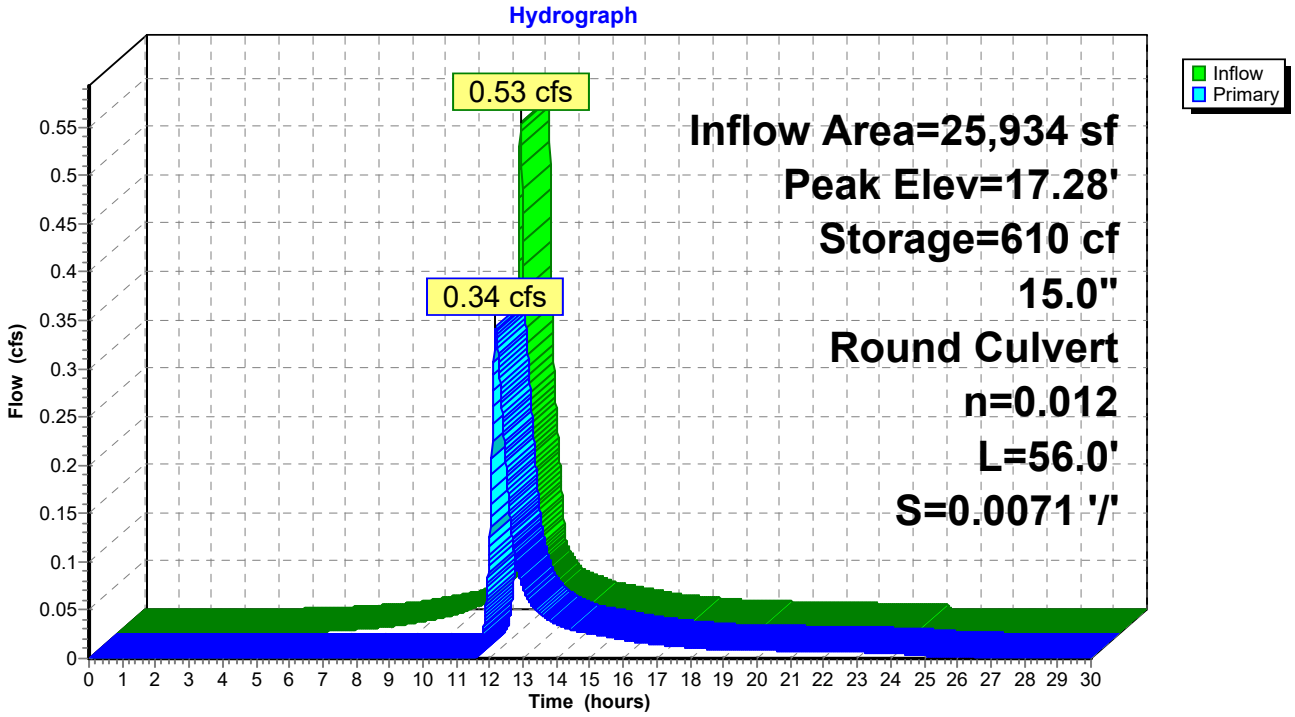
1,388.2 cf Field - 367.5 cf Chambers = 1,020.7 cf Stone x 40.0% Voids = 408.3 cf Stone Storage

Chamber Storage + Stone Storage = 775.8 cf = 0.018 af
Overall Storage Efficiency = 55.9%
Overall System Size = 60.58' x 6.25' x 3.67'

8 Chambers
51.4 cy Field
37.8 cy Stone



Pond HB-11: North WQ St Chmbr



Summary for Pond Hb-3: Hb-3 Diversion MH

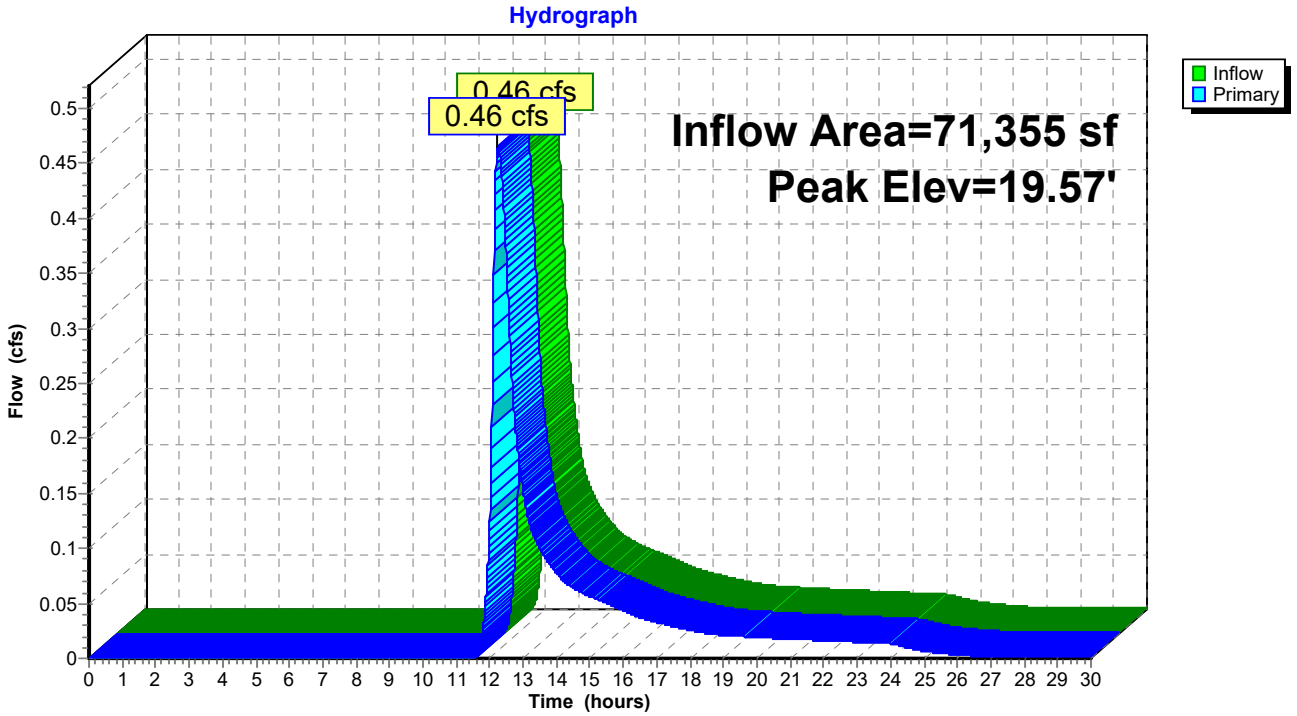
Inflow Area = 71,355 sf, 83.20% Impervious, Inflow Depth > 0.44" for 1 inch event
Inflow = 0.46 cfs @ 12.25 hrs, Volume= 2,643 cf
Outflow = 0.46 cfs @ 12.25 hrs, Volume= 2,643 cf, Atten= 0%, Lag= 0.0 min
Primary = 0.46 cfs @ 12.25 hrs, Volume= 2,643 cf

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs
Peak Elev= 19.57' @ 12.25 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	15.70'	**18.0" Round Culvert** L= 11.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 15.70' / 15.10' S= 0.0545 '/' Cc= 0.900 n= 0.012, Flow Area= 1.77 sf
#2	Device 1	16.30'	**1.4" Vert. Orifice/Grate** C= 0.600
#3	Device 1	19.50'	**7.0' long x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

Primary OutFlow Max=0.46 cfs @ 12.25 hrs HW=19.57' (Free Discharge)
└─**1=Culvert** (Passes 0.46 cfs of 15.03 cfs potential flow)
└─**2=Orifice/Grate** (Orifice Controls 0.09 cfs @ 8.63 fps)
└─**3=Broad-Crested Rectangular Weir** (Weir Controls 0.37 cfs @ 0.74 fps)

Pond Hb-3: Hb-3 Diversion MH



Summary for Pond HB-5: South WQV ST Chmbr

Inflow Area = 45,421 sf, 73.61% Impervious, Inflow Depth = 0.41" for 1 inch event
Inflow = 0.49 cfs @ 12.09 hrs, Volume= 1,569 cf
Outflow = 0.18 cfs @ 12.39 hrs, Volume= 1,233 cf, Atten= 63%, Lag= 18.1 min
Primary = 0.18 cfs @ 12.39 hrs, Volume= 1,233 cf

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs
Peak Elev= 17.20' @ 12.39 hrs Surf.Area= 1,616 sf Storage= 580 cf

Plug-Flow detention time= 174.4 min calculated for 1,232 cf (79% of inflow)
Center-of-Mass det. time= 90.7 min (928.4 - 837.7)

Volume	Invert	Avail.Storage	Storage Description
#1A	16.50'	683 cf	**11.00'W x 60.58'L x 3.67'H Field A** 2,443 cf Overall - 735 cf Embedded = 1,708 cf x 40.0% Voids
#2A	17.00'	735 cf	**ADS_StormTech SC-740 +Cap** x 16 Inside #1 Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap 2 Rows of 8 Chambers
#3B	16.50'	952 cf	**20.50'W x 46.34'L x 3.67'H Field B** 3,483 cf Overall - 1,103 cf Embedded = 2,380 cf x 40.0% Voids
#4B	17.00'	1,103 cf	**ADS_StormTech SC-740 +Cap** x 24 Inside #3 Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap 4 Rows of 6 Chambers
		3,473 cf	Total Available Storage

Storage Group A created with Chamber Wizard
Storage Group B created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	17.00'	**15.0" Round Culvert** L= 50.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 17.00' / 16.60' S= 0.0080 '/' Cc= 0.900 n= 0.012 Corrugated PP, smooth interior, Flow Area= 1.23 sf

Primary OutFlow Max=0.18 cfs @ 12.39 hrs HW=17.20' (Free Discharge)
1=Culvert (Barrel Controls 0.18 cfs @ 2.13 fps)

Pond HB-5: South WQV ST Chmbr - Chamber Wizard Field A

Chamber Model = ADS_StormTech SC-740 +Cap (ADS StormTech® SC-740 with cap length)
Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf
Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap

51.0" Wide + 6.0" Spacing = 57.0" C-C Row Spacing

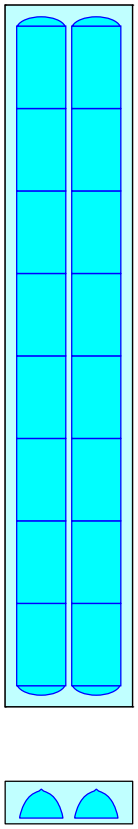
8 Chambers/Row x 7.12' Long +0.81' Cap Length x 2 = 58.58' Row Length +12.0" End Stone x 2 = 60.58' Base Length
2 Rows x 51.0" Wide + 6.0" Spacing x 1 + 12.0" Side Stone x 2 = 11.00' Base Width
6.0" Base + 30.0" Chamber Height + 8.0" Cover = 3.67' Field Height

16 Chambers x 45.9 cf = 735.0 cf Chamber Storage

2,443.3 cf Field - 735.0 cf Chambers = 1,708.2 cf Stone x 40.0% Voids = 683.3 cf Stone Storage

Chamber Storage + Stone Storage = 1,418.3 cf = 0.033 af
Overall Storage Efficiency = 58.1%
Overall System Size = 60.58' x 11.00' x 3.67'

16 Chambers
90.5 cy Field
63.3 cy Stone



Pond HB-5: South WQV ST Chmbr - Chamber Wizard Field B

Chamber Model = ADS_StormTech SC-740 +Cap (ADS StormTech® SC-740 with cap length)
Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf
Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap

51.0" Wide + 6.0" Spacing = 57.0" C-C Row Spacing

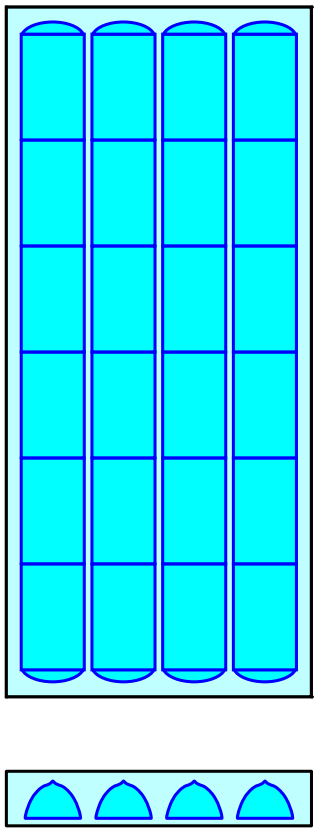
6 Chambers/Row x 7.12' Long +0.81' Cap Length x 2 = 44.34' Row Length +12.0" End Stone x 2 = 46.34' Base Length
4 Rows x 51.0" Wide + 6.0" Spacing x 3 + 12.0" Side Stone x 2 = 20.50' Base Width
6.0" Base + 30.0" Chamber Height + 8.0" Cover = 3.67' Field Height

24 Chambers x 45.9 cf = 1,102.6 cf Chamber Storage

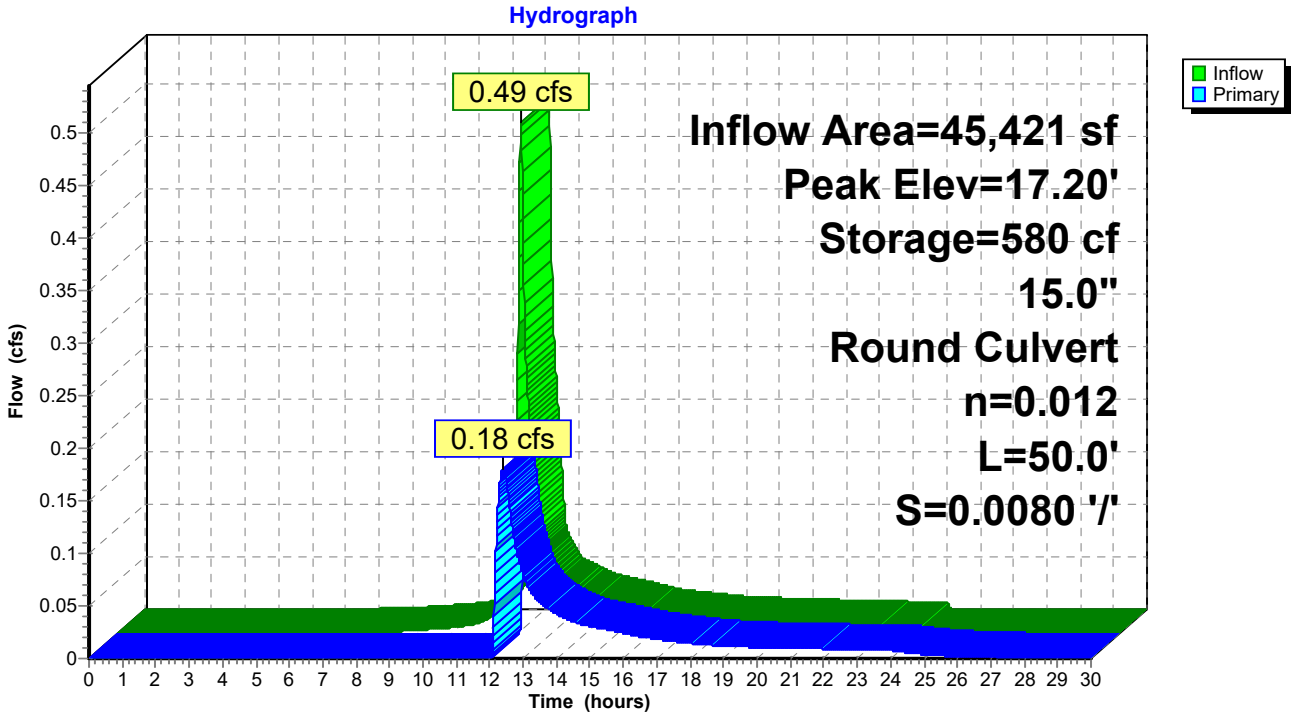
3,483.0 cf Field - 1,102.6 cf Chambers = 2,380.4 cf Stone x 40.0% Voids = 952.2 cf Stone Storage

Chamber Storage + Stone Storage = 2,054.7 cf = 0.047 af
Overall Storage Efficiency = 59.0%
Overall System Size = 46.34' x 20.50' x 3.67'

24 Chambers
129.0 cy Field
88.2 cy Stone



Pond HB-5: South WQV ST Chmbr



Summary for Pond Hc-3: Hc-3 Diversion MH

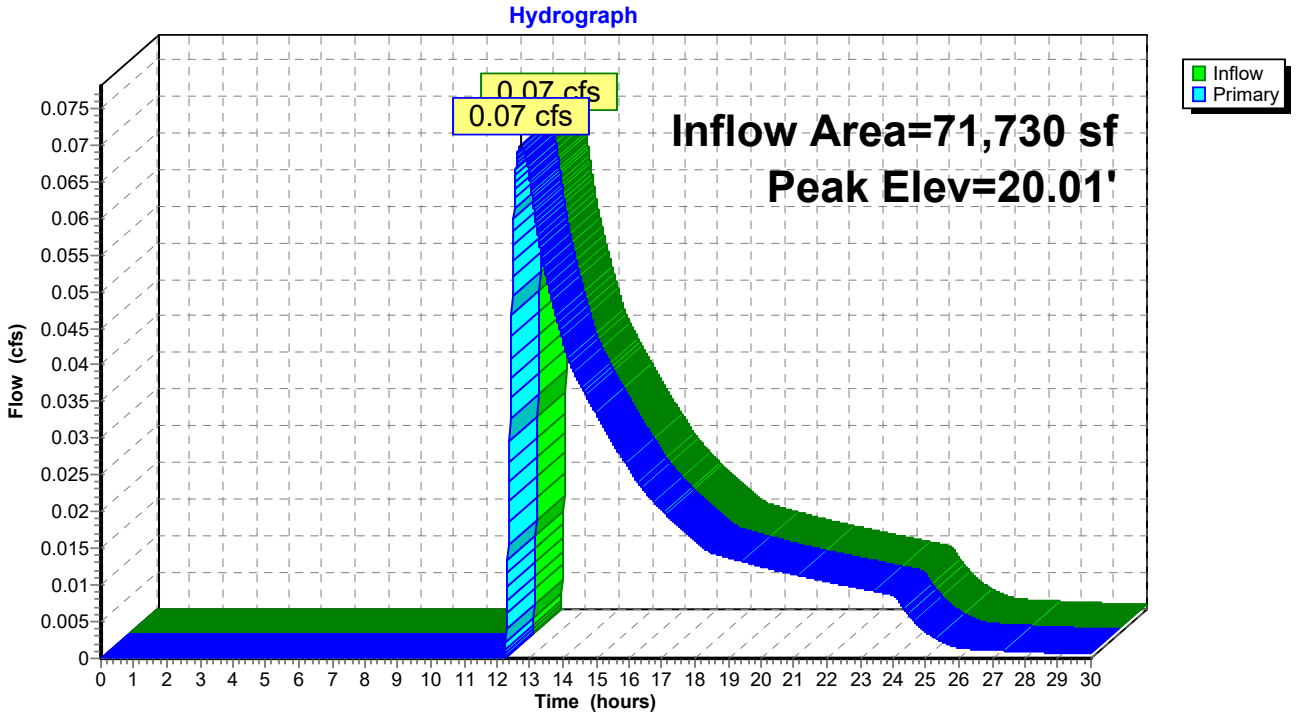
Inflow Area = 71,730 sf, 52.85% Impervious, Inflow Depth > 0.17" for 1 inch event
Inflow = 0.07 cfs @ 12.72 hrs, Volume= 1,022 cf
Outflow = 0.07 cfs @ 12.72 hrs, Volume= 1,022 cf, Atten= 0%, Lag= 0.0 min
Primary = 0.07 cfs @ 12.72 hrs, Volume= 1,022 cf

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs
Peak Elev= 20.01' @ 12.72 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	16.60'	**15.0" Round Culvert** L= 11.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 16.60' / 16.50' S= 0.0091 '/' Cc= 0.900 n= 0.012, Flow Area= 1.23 sf
#2	Device 1	17.30'	**1.0" Vert. Orifice/Grate** C= 0.600
#3	Device 1	20.00'	**7.0' long x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

Primary OutFlow Max=0.06 cfs @ 12.72 hrs HW=20.01' (Free Discharge)
└─**1=Culvert** (Passes 0.06 cfs of 9.86 cfs potential flow)
└─**2=Orifice/Grate** (Orifice Controls 0.04 cfs @ 7.86 fps)
└─**3=Broad-Crested Rectangular Weir** (Weir Controls 0.01 cfs @ 0.24 fps)

Pond Hc-3: Hc-3 Diversion MH



Summary for Pond Hc-4: Hc JF and Storage

Artificial stone cover thickness to fix storage warning and calculate correct Peak elevation over weir. (6" installed per details not 8" as specified)

Inflow Area = 71,730 sf, 52.85% Impervious, Inflow Depth = 0.22" for 1 inch event
Inflow = 0.37 cfs @ 12.10 hrs, Volume= 1,339 cf
Outflow = 0.07 cfs @ 12.72 hrs, Volume= 1,022 cf, Atten= 81%, Lag= 36.8 min
Primary = 0.07 cfs @ 12.72 hrs, Volume= 1,022 cf

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs
Peak Elev= 17.63' @ 12.72 hrs Surf.Area= 1,530 sf Storage= 468 cf
Flood Elev= 21.00' Surf.Area= 1,530 sf Storage= 3,346 cf

Plug-Flow detention time= 200.1 min calculated for 1,021 cf (76% of inflow)
Center-of-Mass det. time= 106.5 min (991.0 - 884.5)

Volume	Invert	Avail.Storage	Storage Description
#1A	17.00'	1,508 cf	**25.25'W x 60.58'L x 3.67'H Field A** 5,608 cf Overall - 1,838 cf Embedded = 3,771 cf x 40.0% Voids
#2A	17.50'	1,838 cf	**ADS_StormTech SC-740 +Cap** x 40 Inside #1 Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap 5 Rows of 8 Chambers
		3,346 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	17.50'	**15.0" Round Culvert** L= 12.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 17.50' / 17.40' S= 0.0083 '/' Cc= 0.900 n= 0.012, Flow Area= 1.23 sf

Primary OutFlow Max=0.07 cfs @ 12.72 hrs HW=17.63' (Free Discharge)
1=Culvert (Barrel Controls 0.07 cfs @ 1.55 fps)

Pond Hc-4: Hc JF and Storage - Chamber Wizard Field A

Chamber Model = ADS_StormTech SC-740 +Cap (ADS StormTech® SC-740 with cap length)
Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf
Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap

51.0" Wide + 6.0" Spacing = 57.0" C-C Row Spacing

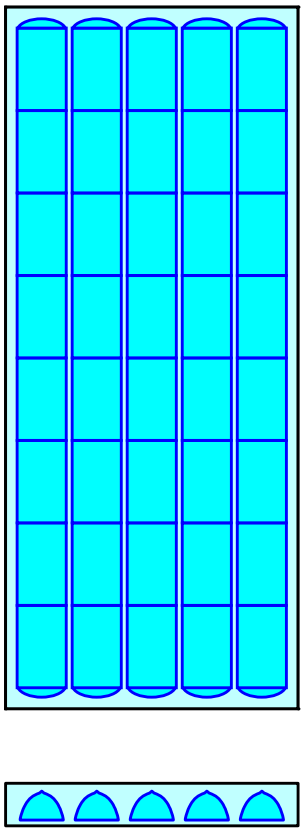
8 Chambers/Row x 7.12' Long +0.81' Cap Length x 2 = 58.58' Row Length +12.0" End Stone x 2 = 60.58' Base Length
5 Rows x 51.0" Wide + 6.0" Spacing x 4 + 12.0" Side Stone x 2 = 25.25' Base Width
6.0" Base + 30.0" Chamber Height + 8.0" Cover = 3.67' Field Height

40 Chambers x 45.9 cf = 1,837.6 cf Chamber Storage

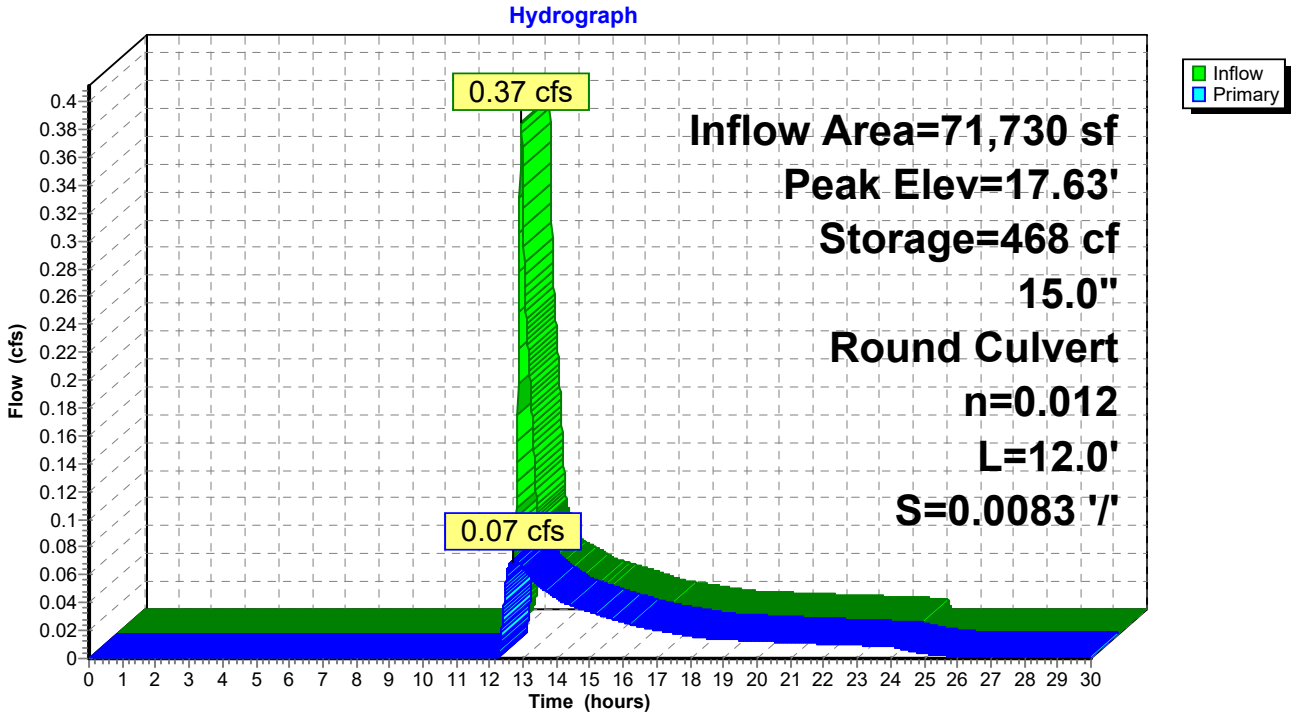
5,608.4 cf Field - 1,837.6 cf Chambers = 3,770.8 cf Stone x 40.0% Voids = 1,508.3 cf Stone Storage

Chamber Storage + Stone Storage = 3,345.9 cf = 0.077 af
Overall Storage Efficiency = 59.7%
Overall System Size = 60.58' x 25.25' x 3.67'

40 Chambers
207.7 cy Field
139.7 cy Stone



Pond Hc-4: Hc JF and Storage



Time span=0.00-30.00 hrs, dt=0.01 hrs, 3001 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind method - Pond routing by Stor-Ind method

Subcatchment Hb-n: Hb North Runoff Area=25,934 sf 100.00% Impervious Runoff Depth=2.39"
Tc=6.0 min CN=98 Runoff=1.51 cfs 5,165 cf

Subcatchment Hb-s1: Hb JF trib Runoff Area=11,110 sf 94.55% Impervious Runoff Depth=2.28"
Tc=6.0 min CN=97 Runoff=0.63 cfs 2,113 cf

Subcatchment Hb-s2: Hb JF trib Runoff Area=34,311 sf 66.83% Impervious Runoff Depth=1.64"
Tc=6.0 min CN=90 Runoff=1.51 cfs 4,685 cf

Subcatchment Hc: Zone Hc Runoff Area=71,730 sf 52.85% Impervious Runoff Depth=1.41"
Tc=6.0 min CN=87 Runoff=2.73 cfs 8,441 cf

Pond Hb 4: DMH HB4 Peak Elev=17.44' Inflow=2.92 cfs 11,325 cf
18.0" Round Culvert n=0.012 L=12.0' S=0.0083 '/' Outflow=2.92 cfs 11,325 cf

Pond HB-11: North WQ St Chmbr Peak Elev=17.56' Storage=918 cf Inflow=1.51 cfs 5,165 cf
15.0" Round Culvert n=0.012 L=56.0' S=0.0071 '/' Outflow=1.21 cfs 4,865 cf

Pond Hb-3: Hb-3 Diversion MH Peak Elev=19.77' Inflow=2.92 cfs 11,325 cf
Outflow=2.92 cfs 11,325 cf

Pond HB-5: South WQV ST Chmbr Peak Elev=17.67' Storage=1,174 cf Inflow=2.14 cfs 6,798 cf
15.0" Round Culvert n=0.012 L=50.0' S=0.0080 '/' Outflow=1.71 cfs 6,460 cf

Pond Hc-3: Hc-3 Diversion MH Peak Elev=20.23' Inflow=2.18 cfs 8,121 cf
Outflow=2.18 cfs 8,121 cf

Pond Hc-4: Hc JF and Storage Peak Elev=18.36' Storage=1,350 cf Inflow=2.73 cfs 8,441 cf
15.0" Round Culvert n=0.012 L=12.0' S=0.0083 '/' Outflow=2.18 cfs 8,121 cf

Total Runoff Area = 143,085 sf Runoff Volume = 20,404 cf Average Runoff Depth = 1.71"
32.02% Pervious = 45,810 sf 67.98% Impervious = 97,275 sf

Summary for Subcatchment Hb-n: Hb North

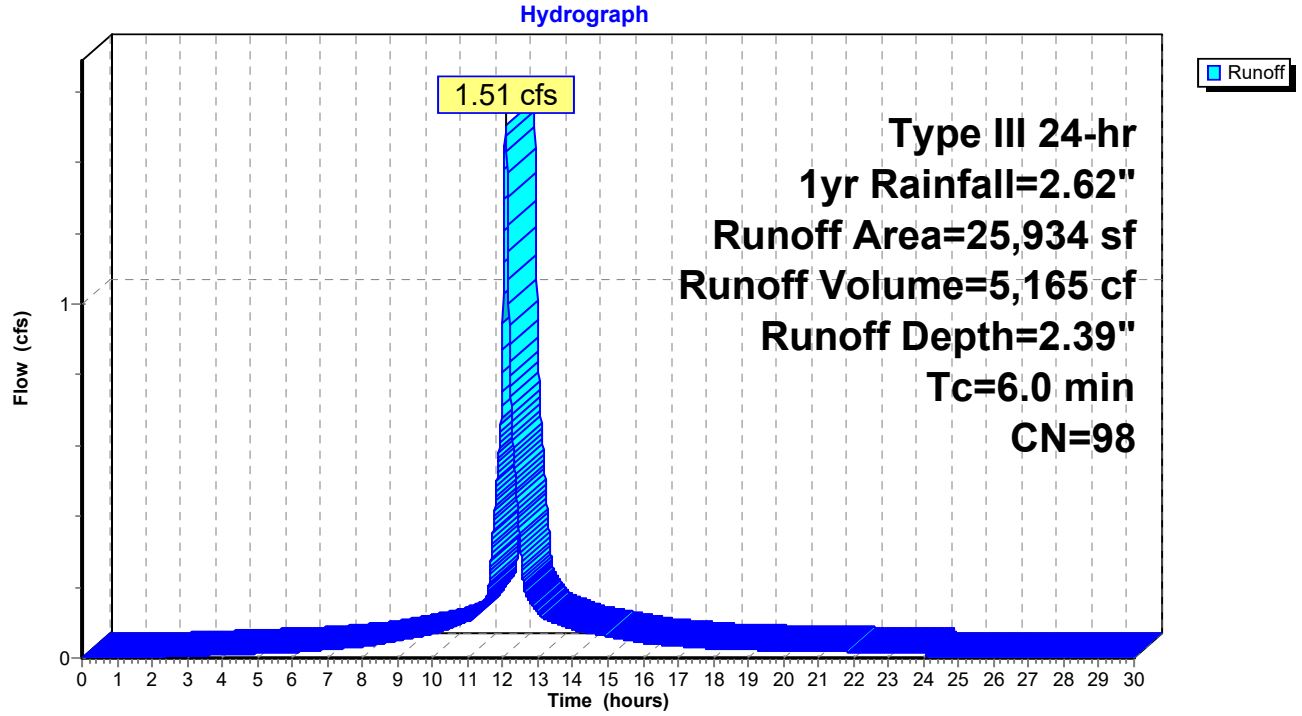
Runoff = 1.51 cfs @ 12.08 hrs, Volume= 5,165 cf, Depth= 2.39"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs
Type III 24-hr 1yr Rainfall=2.62"

	Area (sf)	CN	Description
*	25,934	98	Impervious Pavement & Roofs, HSG C
	25,934		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Tc - Min**

Subcatchment Hb-n: Hb North



Summary for Subcatchment Hb-s1: Hb JF trib

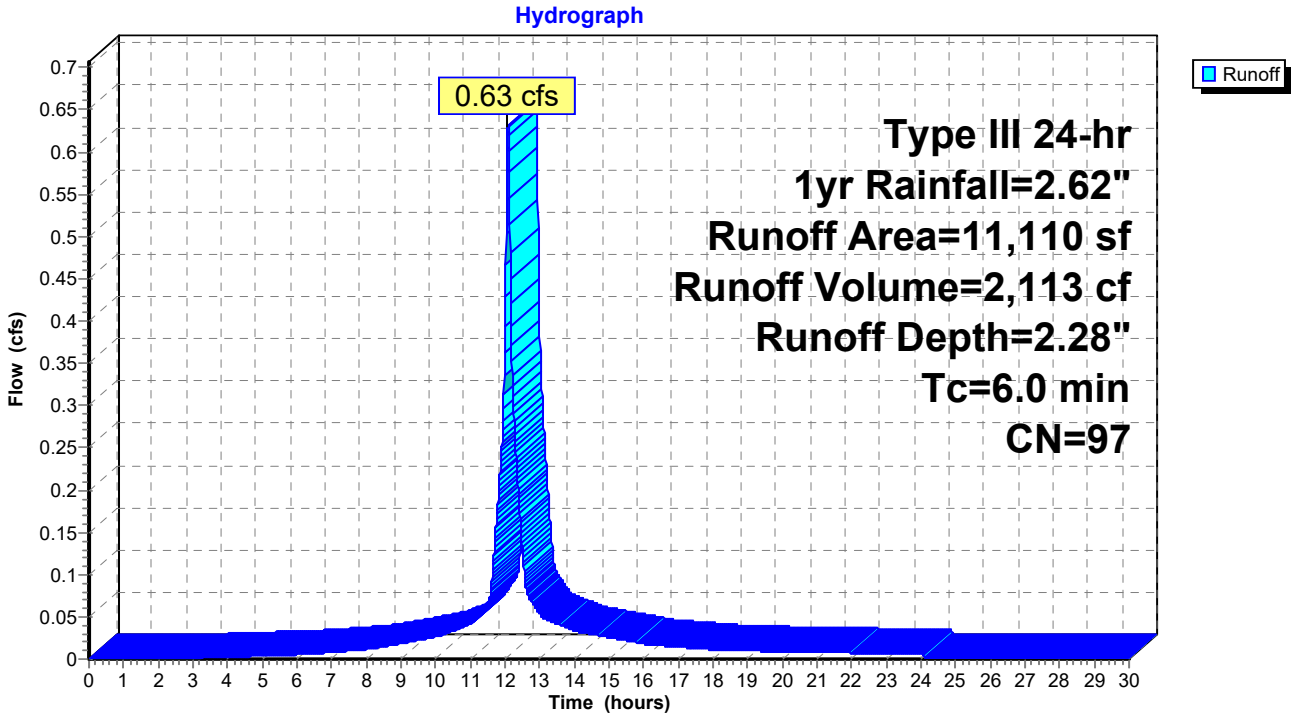
Runoff = 0.63 cfs @ 12.08 hrs, Volume= 2,113 cf, Depth= 2.28"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs
Type III 24-hr 1yr Rainfall=2.62"

	Area (sf)	CN	Description
*	7,222	98	roof
	3,283	98	Paved parking, HSG C
	605	74	>75% Grass cover, Good, HSG C
	11,110	97	Weighted Average
	605		5.45% Pervious Area
	10,505		94.55% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Tc - min**

Subcatchment Hb-s1: Hb JF trib



Summary for Subcatchment Hb-s2: Hb JF trib

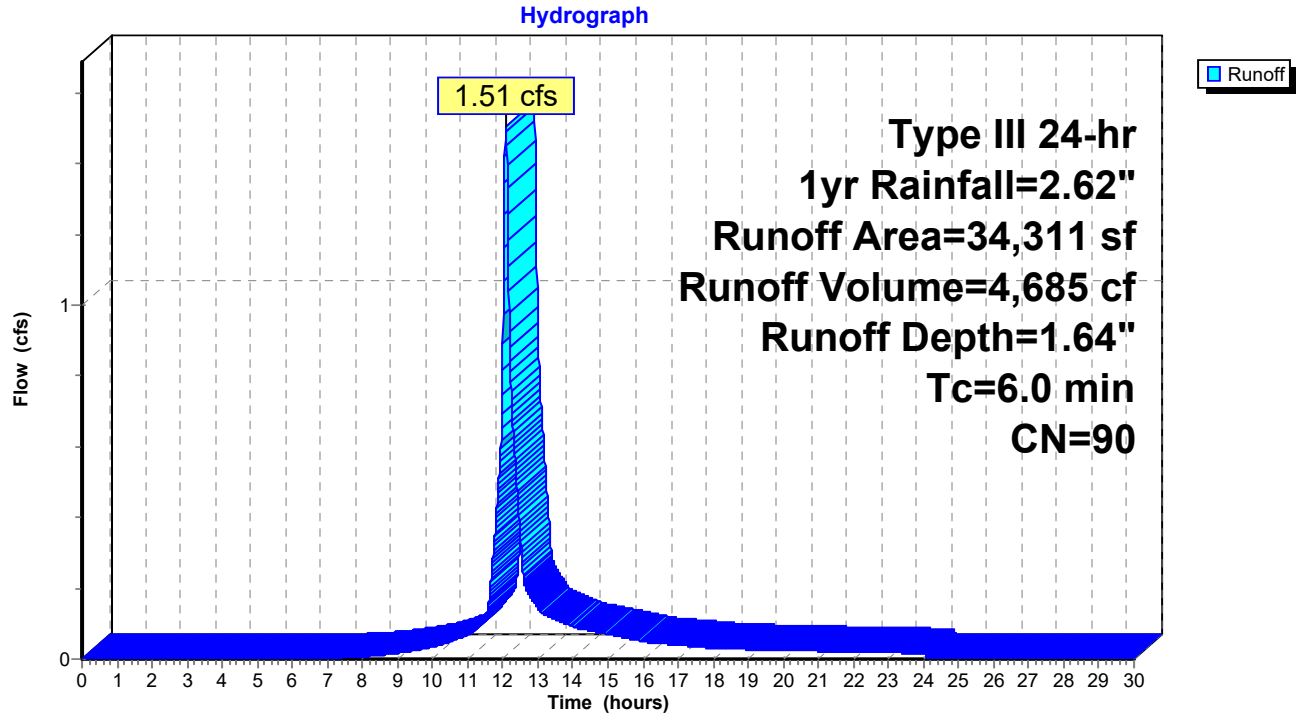
Runoff = 1.51 cfs @ 12.09 hrs, Volume= 4,685 cf, Depth= 1.64"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs
Type III 24-hr 1yr Rainfall=2.62"

	Area (sf)	CN	Description
*	14,260	98	Roof
	8,669	98	Paved parking, HSG C
	11,382	74	>75% Grass cover, Good, HSG C
	34,311	90	Weighted Average
	11,382		33.17% Pervious Area
	22,929		66.83% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Tc - min**

Subcatchment Hb-s2: Hb JF trib



Summary for Subcatchment Hc: Zone Hc

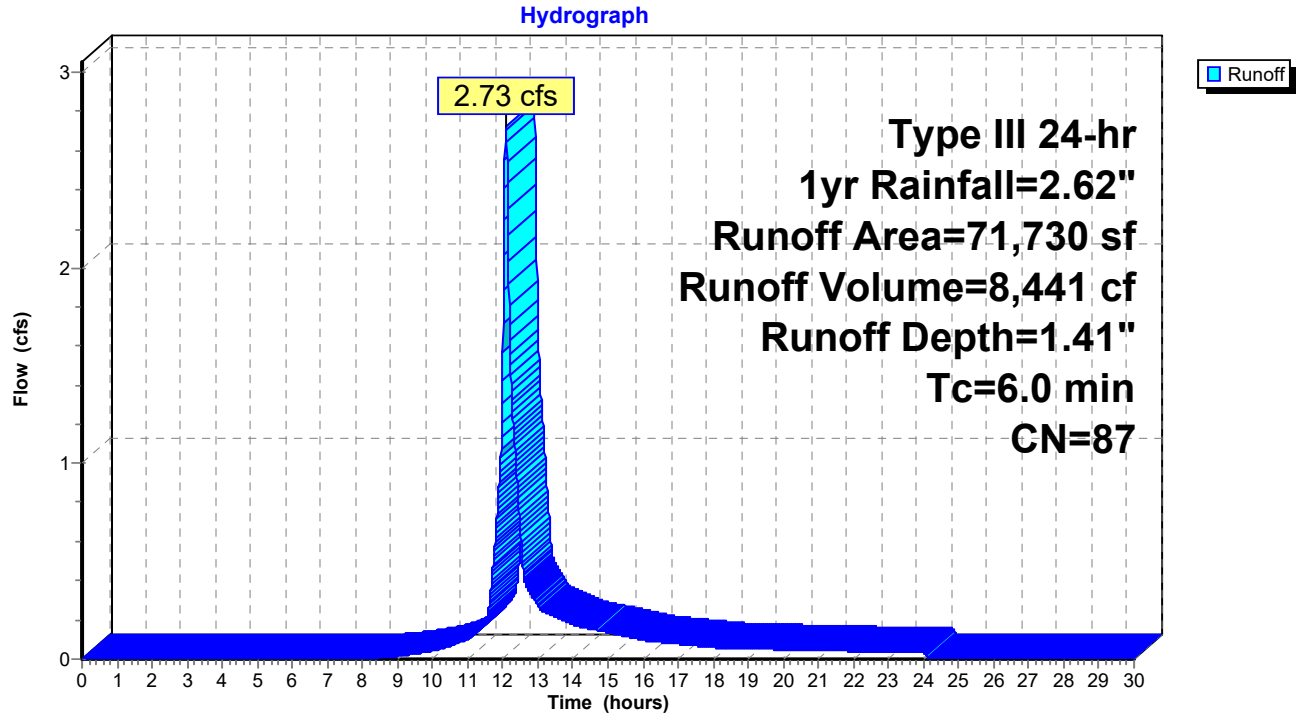
Runoff = 2.73 cfs @ 12.09 hrs, Volume= 8,441 cf, Depth= 1.41"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs
Type III 24-hr 1yr Rainfall=2.62"

	Area (sf)	CN	Description
*	15,256	98	Building
*	4,904	98	Building
*	8,572	98	Building
	9,175	98	Paved parking, HSG C
	33,823	74	>75% Grass cover, Good, HSG C
	71,730	87	Weighted Average
	33,823		47.15% Pervious Area
	37,907		52.85% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment Hc: Zone Hc



Summary for Pond Hb 4: DMH HB4

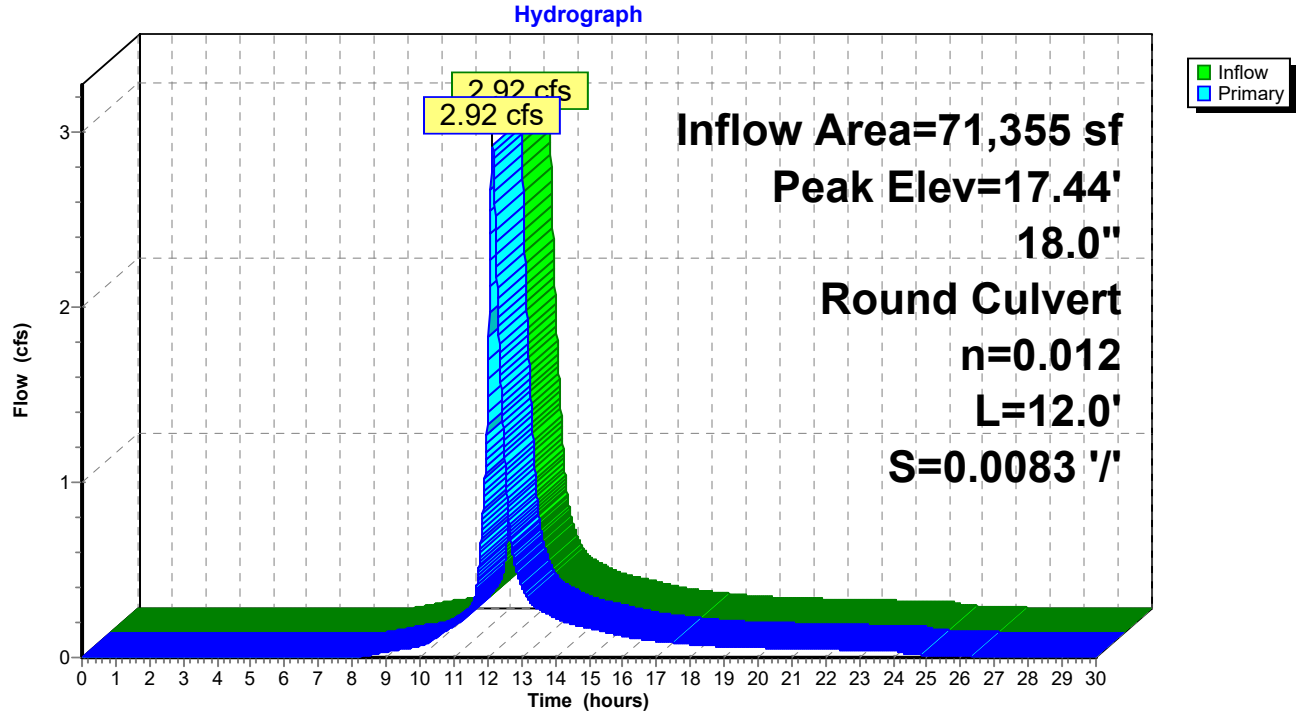
Inflow Area = 71,355 sf, 83.20% Impervious, Inflow Depth > 1.90" for 1yr event
Inflow = 2.92 cfs @ 12.14 hrs, Volume= 11,325 cf
Outflow = 2.92 cfs @ 12.14 hrs, Volume= 11,325 cf, Atten= 0%, Lag= 0.0 min
Primary = 2.92 cfs @ 12.14 hrs, Volume= 11,325 cf

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs
Peak Elev= 17.44' @ 12.14 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	16.50'	**18.0" Round Culvert** L= 12.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 16.50' / 16.40' S= 0.0083 '/' Cc= 0.900 n= 0.012, Flow Area= 1.77 sf

Primary OutFlow Max=2.92 cfs @ 12.14 hrs HW=17.44' (Free Discharge)
1=Culvert (Barrel Controls 2.92 cfs @ 3.57 fps)

Pond Hb 4: DMH HB4



Summary for Pond HB-11: North WQ St Chmbr

Inflow Area = 25,934 sf,100.00% Impervious, Inflow Depth = 2.39" for 1yr event
Inflow = 1.51 cfs @ 12.08 hrs, Volume= 5,165 cf
Outflow = 1.21 cfs @ 12.14 hrs, Volume= 4,865 cf, Atten= 20%, Lag= 3.5 min
Primary = 1.21 cfs @ 12.14 hrs, Volume= 4,865 cf

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs
Peak Elev= 17.56' @ 12.14 hrs Surf.Area= 1,445 sf Storage= 918 cf

Plug-Flow detention time= 82.2 min calculated for 4,865 cf (94% of inflow)
Center-of-Mass det. time= 49.5 min (810.3 - 760.8)

Volume	Invert	Avail.Storage	Storage Description
#1A	16.50'	1,068 cf	**15.75'W x 67.70'L x 3.67'H Field A** 3,909 cf Overall - 1,240 cf Embedded = 2,669 cf x 40.0% Voids
#2A	17.00'	1,240 cf	**ADS_StormTech SC-740 +Cap** x 27 Inside #1 Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap 3 Rows of 9 Chambers
#3B	16.50'	408 cf	**6.25'W x 60.58'L x 3.67'H Field B** 1,388 cf Overall - 368 cf Embedded = 1,021 cf x 40.0% Voids
#4B	17.00'	368 cf	**ADS_StormTech SC-740 +Cap** x 8 Inside #3 Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap
		3,084 cf	Total Available Storage

Storage Group A created with Chamber Wizard
Storage Group B created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	17.00'	**15.0" Round Culvert** L= 56.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 17.00' / 16.60' S= 0.0071 '/' Cc= 0.900 n= 0.012 Corrugated PP, smooth interior, Flow Area= 1.23 sf

Primary OutFlow Max=1.21 cfs @ 12.14 hrs HW=17.56' (Free Discharge)
1=Culvert (Barrel Controls 1.21 cfs @ 3.33 fps)

Pond HB-11: North WQ St Chmbr - Chamber Wizard Field A

Chamber Model = ADS_StormTech SC-740 +Cap (ADS StormTech® SC-740 with cap length)
Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf
Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap

51.0" Wide + 6.0" Spacing = 57.0" C-C Row Spacing

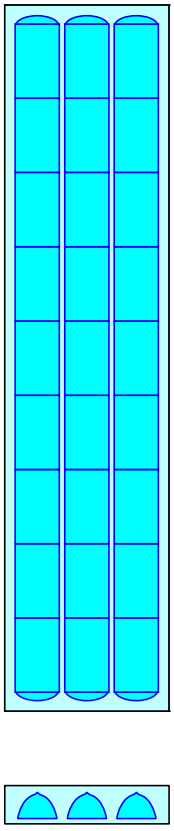
9 Chambers/Row x 7.12' Long +0.81' Cap Length x 2 = 65.70' Row Length +12.0" End Stone x 2 = 67.70' Base Length
3 Rows x 51.0" Wide + 6.0" Spacing x 2 + 12.0" Side Stone x 2 = 15.75' Base Width
6.0" Base + 30.0" Chamber Height + 8.0" Cover = 3.67' Field Height

27 Chambers x 45.9 cf = 1,240.4 cf Chamber Storage

3,909.5 cf Field - 1,240.4 cf Chambers = 2,669.1 cf Stone x 40.0% Voids = 1,067.6 cf Stone Storage

Chamber Storage + Stone Storage = 2,308.0 cf = 0.053 af
Overall Storage Efficiency = 59.0%
Overall System Size = 67.70' x 15.75' x 3.67'

27 Chambers
144.8 cy Field
98.9 cy Stone



Pond HB-11: North WQ St Chmbr - Chamber Wizard Field B

Chamber Model = ADS_StormTech SC-740 +Cap (ADS StormTech® SC-740 with cap length)
Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf
Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap

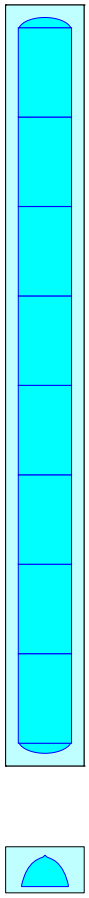
8 Chambers/Row x 7.12' Long +0.81' Cap Length x 2 = 58.58' Row Length +12.0" End Stone x 2 = 60.58' Base Length
1 Rows x 51.0" Wide + 12.0" Side Stone x 2 = 6.25' Base Width
6.0" Base + 30.0" Chamber Height + 8.0" Cover = 3.67' Field Height

8 Chambers x 45.9 cf = 367.5 cf Chamber Storage

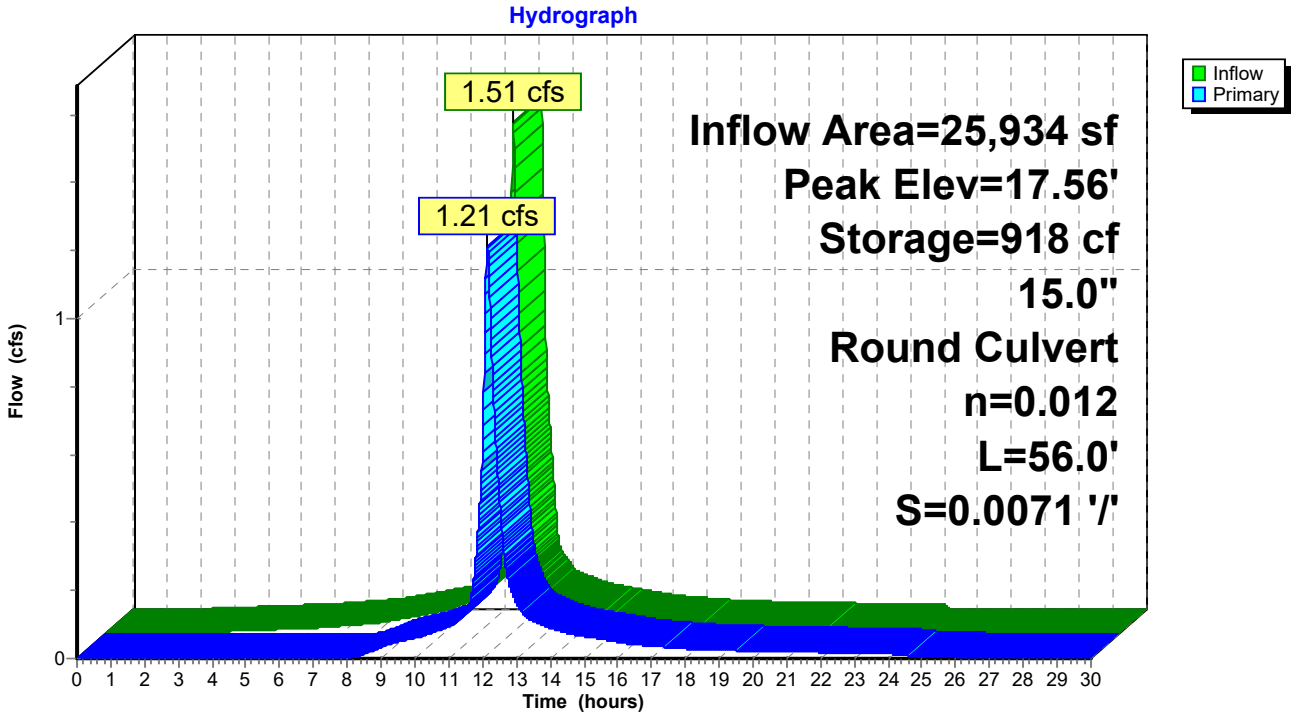
1,388.2 cf Field - 367.5 cf Chambers = 1,020.7 cf Stone x 40.0% Voids = 408.3 cf Stone Storage

Chamber Storage + Stone Storage = 775.8 cf = 0.018 af
Overall Storage Efficiency = 55.9%
Overall System Size = 60.58' x 6.25' x 3.67'

8 Chambers
51.4 cy Field
37.8 cy Stone



Pond HB-11: North WQ St Chmbr



Summary for Pond Hb-3: Hb-3 Diversion MH

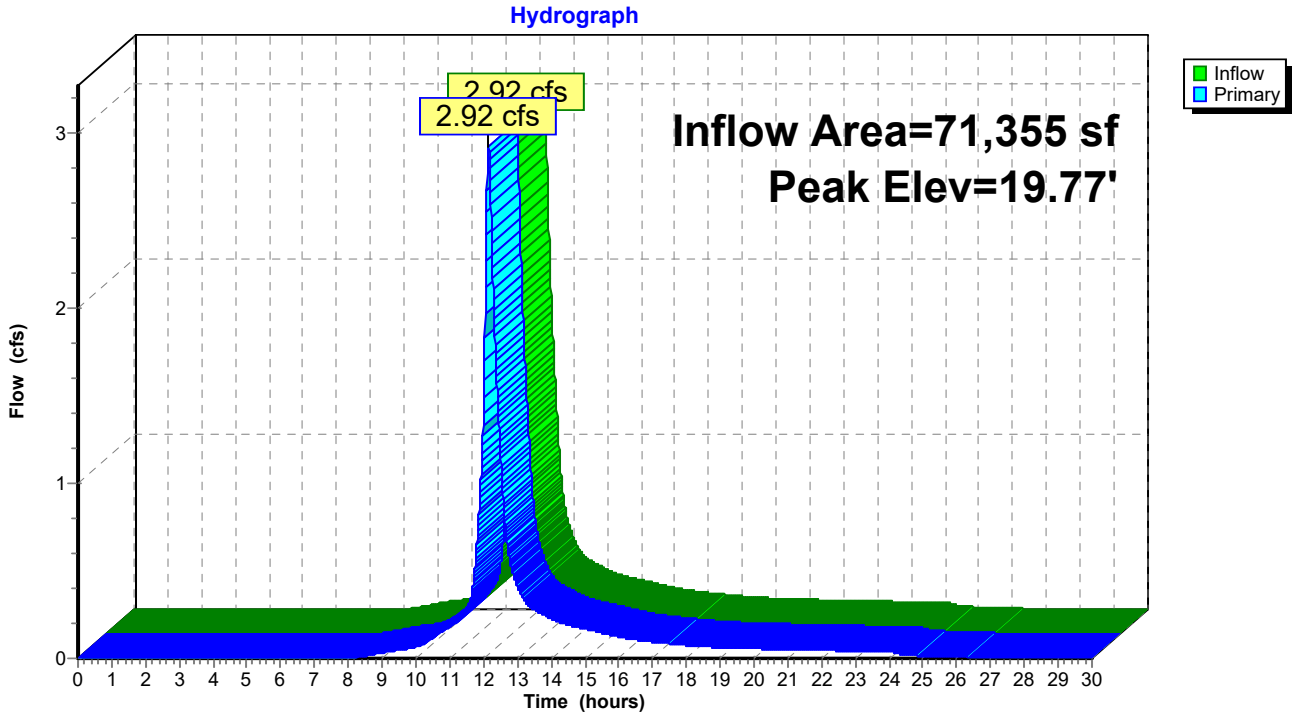
Inflow Area = 71,355 sf, 83.20% Impervious, Inflow Depth > 1.90" for 1yr event
Inflow = 2.92 cfs @ 12.14 hrs, Volume= 11,325 cf
Outflow = 2.92 cfs @ 12.14 hrs, Volume= 11,325 cf, Atten= 0%, Lag= 0.0 min
Primary = 2.92 cfs @ 12.14 hrs, Volume= 11,325 cf

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs
Peak Elev= 19.77' @ 12.14 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	15.70'	**18.0" Round Culvert** L= 11.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 15.70' / 15.10' S= 0.0545 '/' Cc= 0.900 n= 0.012, Flow Area= 1.77 sf
#2	Device 1	16.30'	**1.4" Vert. Orifice/Grate** C= 0.600
#3	Device 1	19.50'	**7.0' long x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

Primary OutFlow Max=2.92 cfs @ 12.14 hrs HW=19.77' (Free Discharge)
└**1=Culvert** (Passes 2.92 cfs of 15.51 cfs potential flow)
└**2=Orifice/Grate** (Orifice Controls 0.10 cfs @ 8.90 fps)
└**3=Broad-Crested Rectangular Weir** (Weir Controls 2.82 cfs @ 1.48 fps)

Pond Hb-3: Hb-3 Diversion MH



Summary for Pond HB-5: South WQV ST Chmbr

Inflow Area = 45,421 sf, 73.61% Impervious, Inflow Depth = 1.80" for 1yr event
Inflow = 2.14 cfs @ 12.09 hrs, Volume= 6,798 cf
Outflow = 1.71 cfs @ 12.15 hrs, Volume= 6,460 cf, Atten= 20%, Lag= 3.6 min
Primary = 1.71 cfs @ 12.15 hrs, Volume= 6,460 cf

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs
Peak Elev= 17.67' @ 12.15 hrs Surf.Area= 1,616 sf Storage= 1,174 cf

Plug-Flow detention time= 66.3 min calculated for 6,460 cf (95% of inflow)
Center-of-Mass det. time= 38.6 min (839.9 - 801.3)

Volume	Invert	Avail.Storage	Storage Description
#1A	16.50'	683 cf	**11.00'W x 60.58'L x 3.67'H Field A** 2,443 cf Overall - 735 cf Embedded = 1,708 cf x 40.0% Voids
#2A	17.00'	735 cf	**ADS_StormTech SC-740 +Cap** x 16 Inside #1 Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap 2 Rows of 8 Chambers
#3B	16.50'	952 cf	**20.50'W x 46.34'L x 3.67'H Field B** 3,483 cf Overall - 1,103 cf Embedded = 2,380 cf x 40.0% Voids
#4B	17.00'	1,103 cf	**ADS_StormTech SC-740 +Cap** x 24 Inside #3 Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap 4 Rows of 6 Chambers
		3,473 cf	Total Available Storage

Storage Group A created with Chamber Wizard
Storage Group B created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	17.00'	**15.0" Round Culvert** L= 50.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 17.00' / 16.60' S= 0.0080 '/' Cc= 0.900 n= 0.012 Corrugated PP, smooth interior, Flow Area= 1.23 sf

Primary OutFlow Max=1.71 cfs @ 12.15 hrs HW=17.67' (Free Discharge)
↑—**1=Culvert** (Barrel Controls 1.71 cfs @ 3.68 fps)

Pond HB-5: South WQV ST Chmbr - Chamber Wizard Field A

Chamber Model = ADS_StormTech SC-740 +Cap (ADS StormTech® SC-740 with cap length)
Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf
Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap

51.0" Wide + 6.0" Spacing = 57.0" C-C Row Spacing

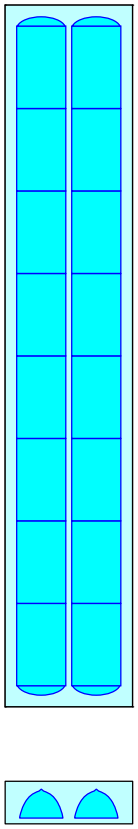
8 Chambers/Row x 7.12' Long +0.81' Cap Length x 2 = 58.58' Row Length +12.0" End Stone x 2 = 60.58' Base Length
2 Rows x 51.0" Wide + 6.0" Spacing x 1 + 12.0" Side Stone x 2 = 11.00' Base Width
6.0" Base + 30.0" Chamber Height + 8.0" Cover = 3.67' Field Height

16 Chambers x 45.9 cf = 735.0 cf Chamber Storage

2,443.3 cf Field - 735.0 cf Chambers = 1,708.2 cf Stone x 40.0% Voids = 683.3 cf Stone Storage

Chamber Storage + Stone Storage = 1,418.3 cf = 0.033 af
Overall Storage Efficiency = 58.1%
Overall System Size = 60.58' x 11.00' x 3.67'

16 Chambers
90.5 cy Field
63.3 cy Stone



Pond HB-5: South WQV ST Chmbr - Chamber Wizard Field B

Chamber Model = ADS_StormTech SC-740 +Cap (ADS StormTech® SC-740 with cap length)
Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf
Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap

51.0" Wide + 6.0" Spacing = 57.0" C-C Row Spacing

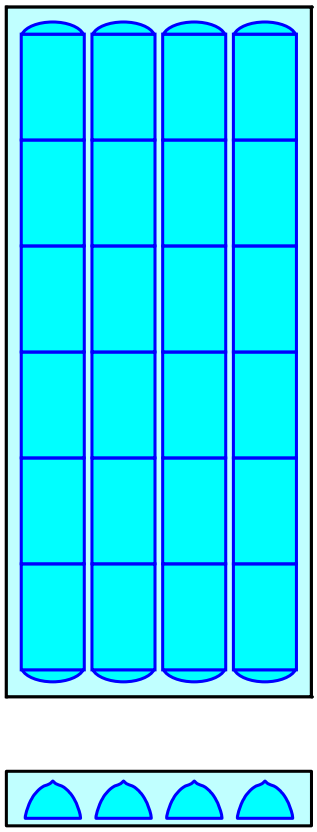
6 Chambers/Row x 7.12' Long +0.81' Cap Length x 2 = 44.34' Row Length +12.0" End Stone x 2 = 46.34' Base Length
4 Rows x 51.0" Wide + 6.0" Spacing x 3 + 12.0" Side Stone x 2 = 20.50' Base Width
6.0" Base + 30.0" Chamber Height + 8.0" Cover = 3.67' Field Height

24 Chambers x 45.9 cf = 1,102.6 cf Chamber Storage

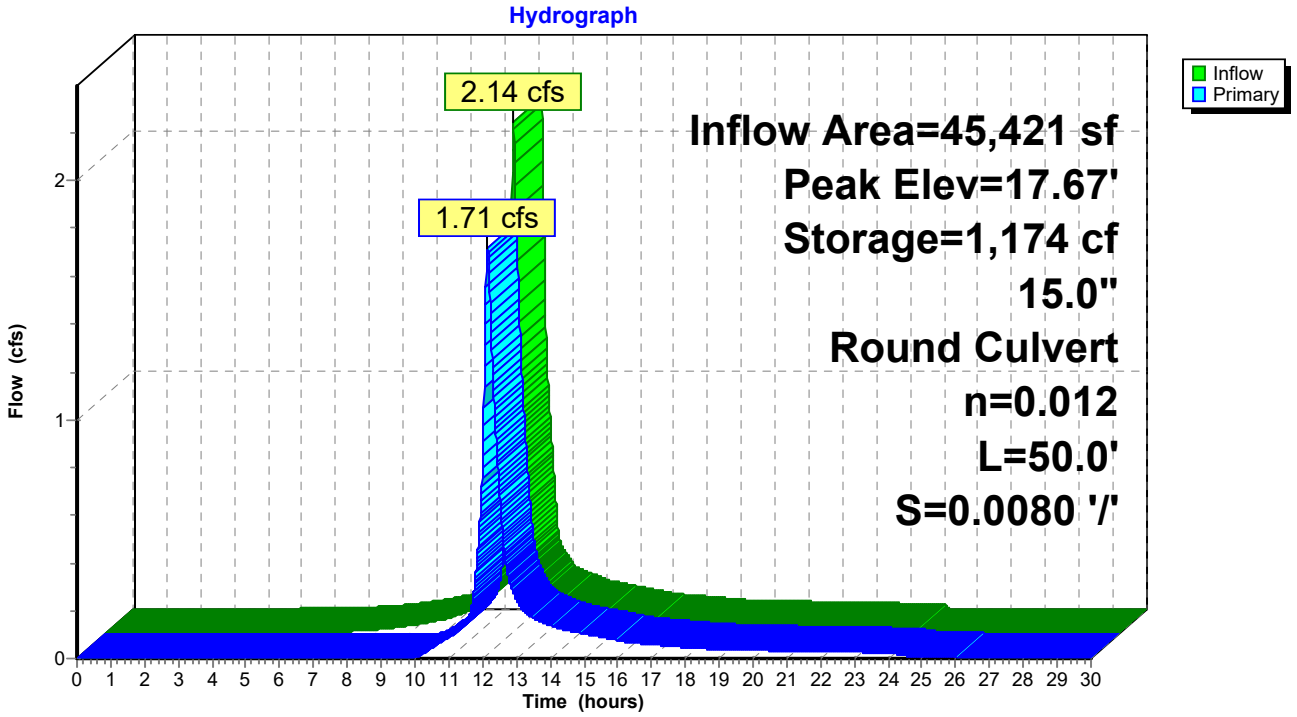
3,483.0 cf Field - 1,102.6 cf Chambers = 2,380.4 cf Stone x 40.0% Voids = 952.2 cf Stone Storage

Chamber Storage + Stone Storage = 2,054.7 cf = 0.047 af
Overall Storage Efficiency = 59.0%
Overall System Size = 46.34' x 20.50' x 3.67'

24 Chambers
129.0 cy Field
88.2 cy Stone



Pond HB-5: South WQV ST Chmbr



Summary for Pond Hc-3: Hc-3 Diversion MH

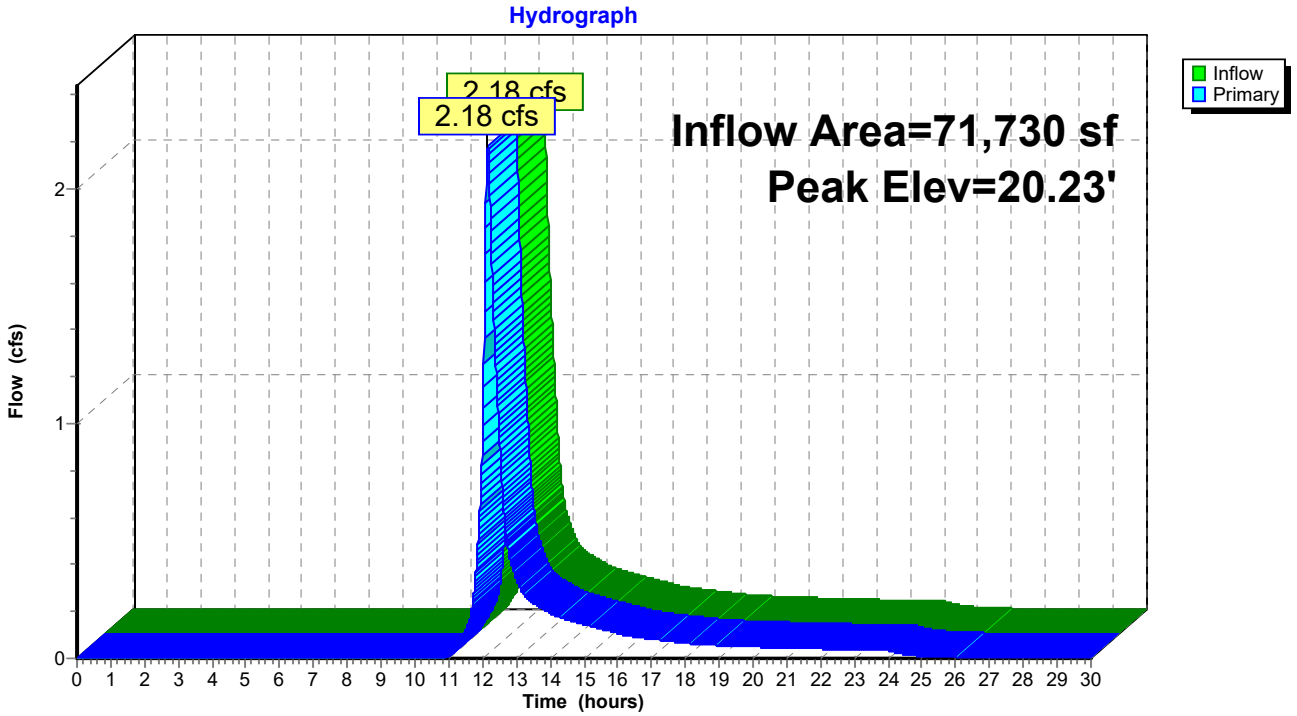
Inflow Area = 71,730 sf, 52.85% Impervious, Inflow Depth > 1.36" for 1yr event
Inflow = 2.18 cfs @ 12.15 hrs, Volume= 8,121 cf
Outflow = 2.18 cfs @ 12.15 hrs, Volume= 8,121 cf, Atten= 0%, Lag= 0.0 min
Primary = 2.18 cfs @ 12.15 hrs, Volume= 8,121 cf

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs
Peak Elev= 20.23' @ 12.15 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	16.60'	**15.0" Round Culvert** L= 11.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 16.60' / 16.50' S= 0.0091 '/' Cc= 0.900 n= 0.012, Flow Area= 1.23 sf
#2	Device 1	17.30'	**1.0" Vert. Orifice/Grate** C= 0.600
#3	Device 1	20.00'	**7.0' long x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

Primary OutFlow Max=2.17 cfs @ 12.15 hrs HW=20.23' (Free Discharge)
└**1=Culvert** (Passes 2.17 cfs of 10.24 cfs potential flow)
└**2=Orifice/Grate** (Orifice Controls 0.04 cfs @ 8.18 fps)
└**3=Broad-Crested Rectangular Weir** (Weir Controls 2.13 cfs @ 1.34 fps)

Pond Hc-3: Hc-3 Diversion MH



Summary for Pond Hc-4: Hc JF and Storage

Artificial stone cover thickness to fix storage warning and calculate correct Peak elevation over weir. (6" installed per details not 8" as specified)

Inflow Area = 71,730 sf, 52.85% Impervious, Inflow Depth = 1.41" for 1yr event
Inflow = 2.73 cfs @ 12.09 hrs, Volume= 8,441 cf
Outflow = 2.18 cfs @ 12.15 hrs, Volume= 8,121 cf, Atten= 20%, Lag= 3.6 min
Primary = 2.18 cfs @ 12.15 hrs, Volume= 8,121 cf

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs
Peak Elev= 18.36' @ 12.15 hrs Surf.Area= 1,530 sf Storage= 1,350 cf
Flood Elev= 21.00' Surf.Area= 1,530 sf Storage= 3,346 cf

Plug-Flow detention time= 50.7 min calculated for 8,121 cf (96% of inflow)
Center-of-Mass det. time= 29.4 min (857.1 - 827.6)

Volume	Invert	Avail.Storage	Storage Description
#1A	17.00'	1,508 cf	**25.25'W x 60.58'L x 3.67'H Field A** 5,608 cf Overall - 1,838 cf Embedded = 3,771 cf x 40.0% Voids
#2A	17.50'	1,838 cf	**ADS_StormTech SC-740 +Cap** x 40 Inside #1 Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap 5 Rows of 8 Chambers
		3,346 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	17.50'	**15.0" Round Culvert** L= 12.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 17.50' / 17.40' S= 0.0083 '/' Cc= 0.900 n= 0.012, Flow Area= 1.23 sf

Primary OutFlow Max=2.18 cfs @ 12.15 hrs HW=18.36' (Free Discharge)
1=Culvert (Barrel Controls 2.18 cfs @ 3.42 fps)

Pond Hc-4: Hc JF and Storage - Chamber Wizard Field A

Chamber Model = ADS_StormTech SC-740 +Cap (ADS StormTech® SC-740 with cap length)
Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf
Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap

51.0" Wide + 6.0" Spacing = 57.0" C-C Row Spacing

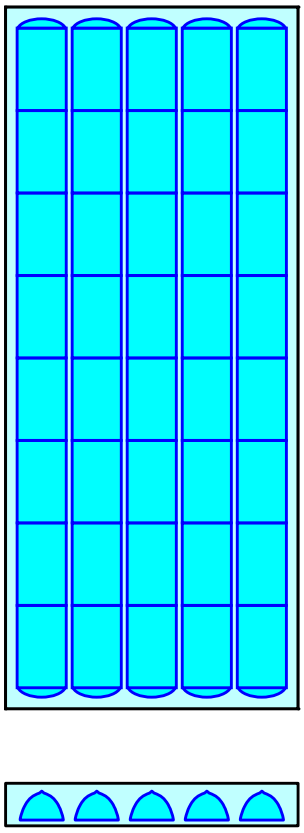
8 Chambers/Row x 7.12' Long +0.81' Cap Length x 2 = 58.58' Row Length +12.0" End Stone x 2 = 60.58' Base Length
5 Rows x 51.0" Wide + 6.0" Spacing x 4 + 12.0" Side Stone x 2 = 25.25' Base Width
6.0" Base + 30.0" Chamber Height + 8.0" Cover = 3.67' Field Height

40 Chambers x 45.9 cf = 1,837.6 cf Chamber Storage

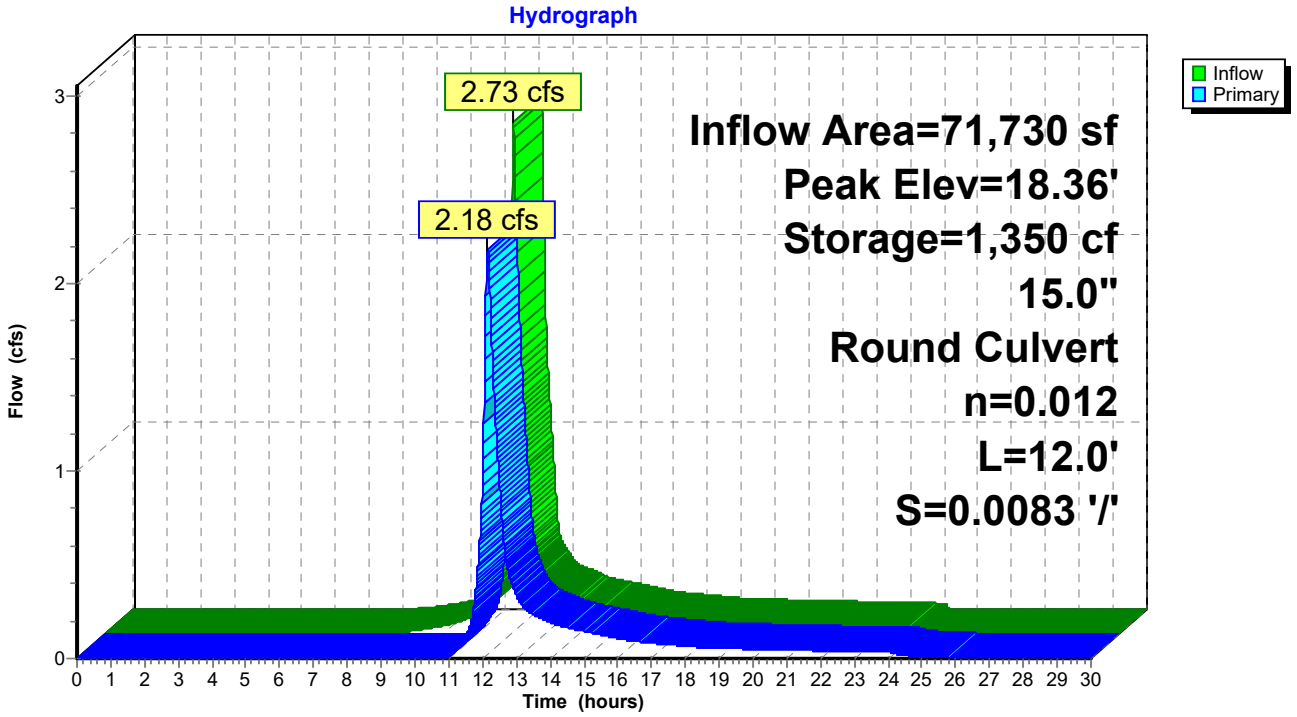
5,608.4 cf Field - 1,837.6 cf Chambers = 3,770.8 cf Stone x 40.0% Voids = 1,508.3 cf Stone Storage

Chamber Storage + Stone Storage = 3,345.9 cf = 0.077 af
Overall Storage Efficiency = 59.7%
Overall System Size = 60.58' x 25.25' x 3.67'

40 Chambers
207.7 cy Field
139.7 cy Stone



Pond Hc-4: Hc JF and Storage



Time span=0.00-30.00 hrs, dt=0.01 hrs, 3001 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind method - Pond routing by Stor-Ind method

Subcatchment Hb-n: Hb North Runoff Area=25,934 sf 100.00% Impervious Runoff Depth=5.94"
Tc=6.0 min CN=98 Runoff=3.61 cfs 12,841 cf

Subcatchment Hb-s1: Hb JF trib Runoff Area=11,110 sf 94.55% Impervious Runoff Depth=5.82"
Tc=6.0 min CN=97 Runoff=1.54 cfs 5,392 cf

Subcatchment Hb-s2: Hb JF trib Runoff Area=34,311 sf 66.83% Impervious Runoff Depth=5.02"
Tc=6.0 min CN=90 Runoff=4.41 cfs 14,357 cf

Subcatchment Hc: Zone Hc Runoff Area=71,730 sf 52.85% Impervious Runoff Depth=4.69"
Tc=6.0 min CN=87 Runoff=8.78 cfs 28,032 cf

Pond Hb 4: DMH HB4 Peak Elev=18.39' Inflow=8.14 cfs 31,950 cf
18.0" Round Culvert n=0.012 L=12.0' S=0.0083 '/' Outflow=8.14 cfs 31,950 cf

Pond HB-11: North WQ St Chmbr Peak Elev=17.99' Storage=1,377 cf Inflow=3.61 cfs 12,841 cf
15.0" Round Culvert n=0.012 L=56.0' S=0.0071 '/' Outflow=3.11 cfs 12,540 cf

Pond Hb-3: Hb-3 Diversion MH Peak Elev=20.02' Inflow=8.14 cfs 31,950 cf
Outflow=8.14 cfs 31,950 cf

Pond HB-5: South WQV ST Chmbr Peak Elev=18.39' Storage=2,016 cf Inflow=5.95 cfs 19,749 cf
15.0" Round Culvert n=0.012 L=50.0' S=0.0080 '/' Outflow=5.04 cfs 19,411 cf

Pond Hc-3: Hc-3 Diversion MH Peak Elev=20.49' Inflow=7.35 cfs 27,712 cf
Outflow=7.35 cfs 27,712 cf

Pond Hc-4: Hc JF and Storage Peak Elev=19.67' Storage=2,710 cf Inflow=8.78 cfs 28,032 cf
15.0" Round Culvert n=0.012 L=12.0' S=0.0083 '/' Outflow=7.35 cfs 27,712 cf

Total Runoff Area = 143,085 sf Runoff Volume = 60,622 cf Average Runoff Depth = 5.08"
32.02% Pervious = 45,810 sf 67.98% Impervious = 97,275 sf

Summary for Subcatchment Hb-n: Hb North

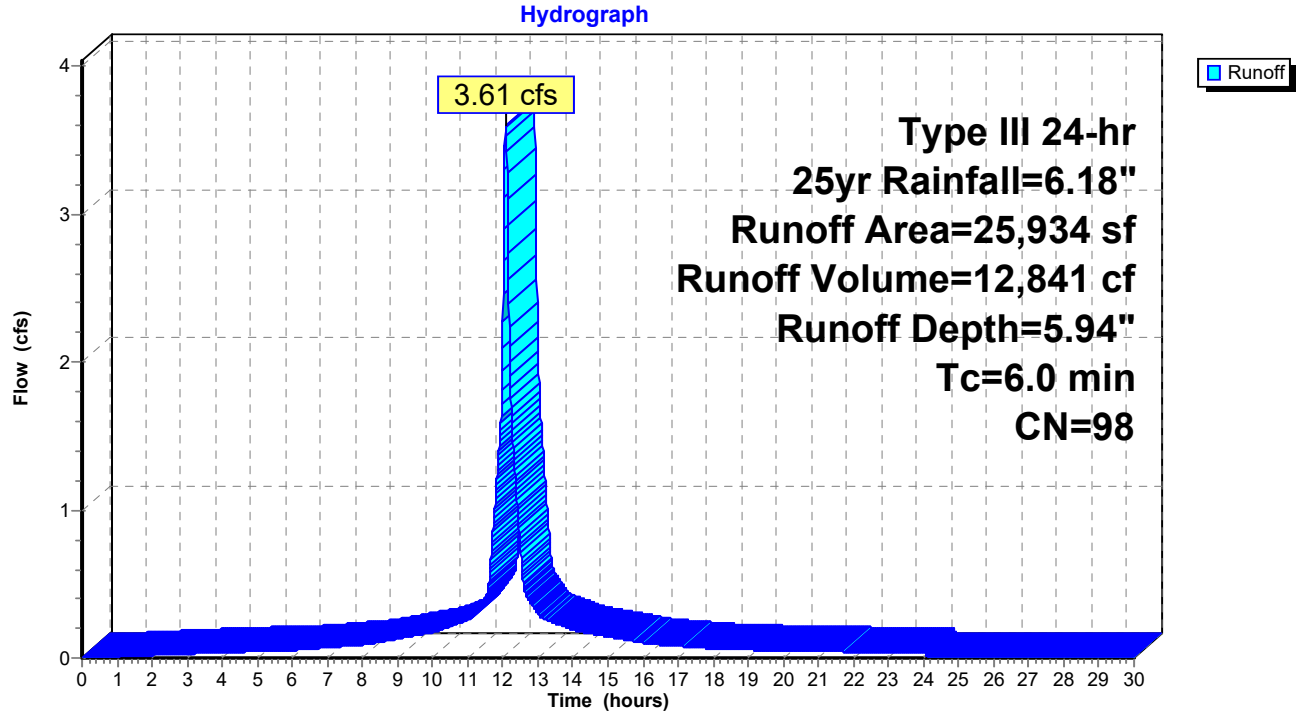
Runoff = 3.61 cfs @ 12.08 hrs, Volume= 12,841 cf, Depth= 5.94"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs
Type III 24-hr 25yr Rainfall=6.18"

	Area (sf)	CN	Description
*	25,934	98	Impervious Pavement & Roofs, HSG C
	25,934		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Tc - MIn**

Subcatchment Hb-n: Hb North



Summary for Subcatchment Hb-s1: Hb JF trib

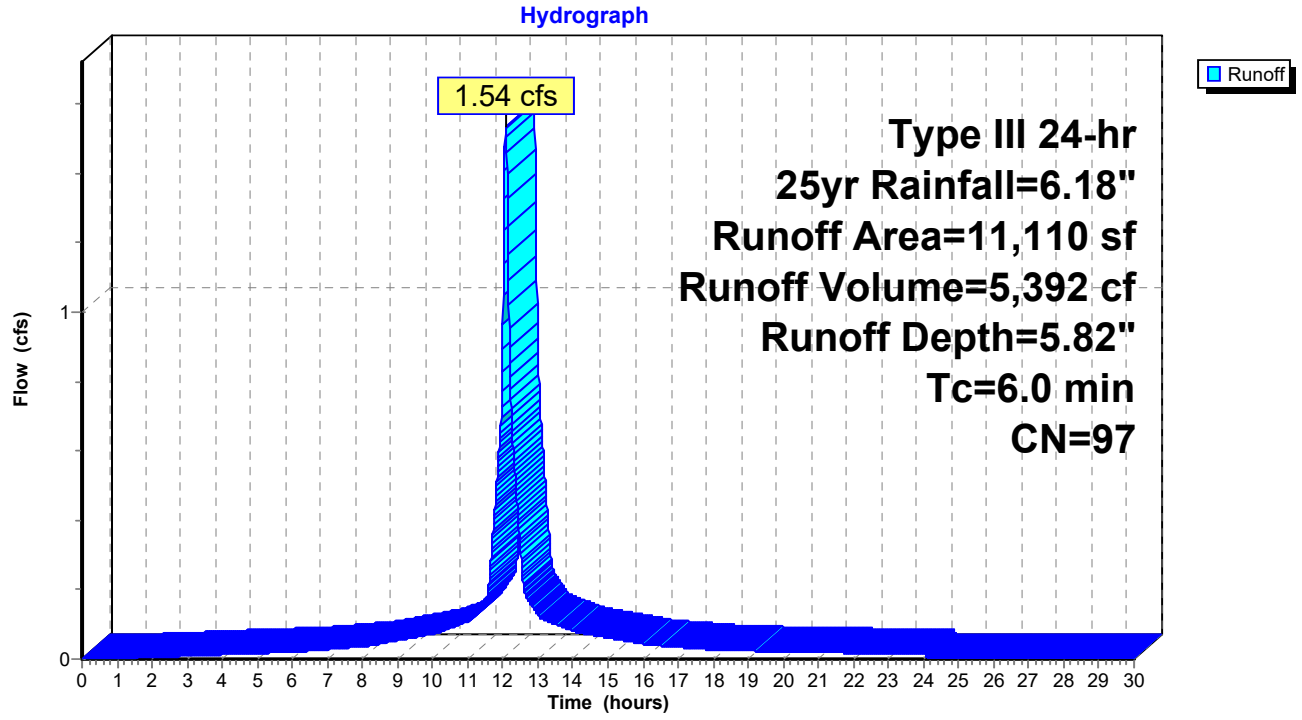
Runoff = 1.54 cfs @ 12.08 hrs, Volume= 5,392 cf, Depth= 5.82"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs
Type III 24-hr 25yr Rainfall=6.18"

	Area (sf)	CN	Description
*	7,222	98	roof
	3,283	98	Paved parking, HSG C
	605	74	>75% Grass cover, Good, HSG C
	11,110	97	Weighted Average
	605		5.45% Pervious Area
	10,505		94.55% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Tc - min**

Subcatchment Hb-s1: Hb JF trib



Summary for Subcatchment Hb-s2: Hb JF trib

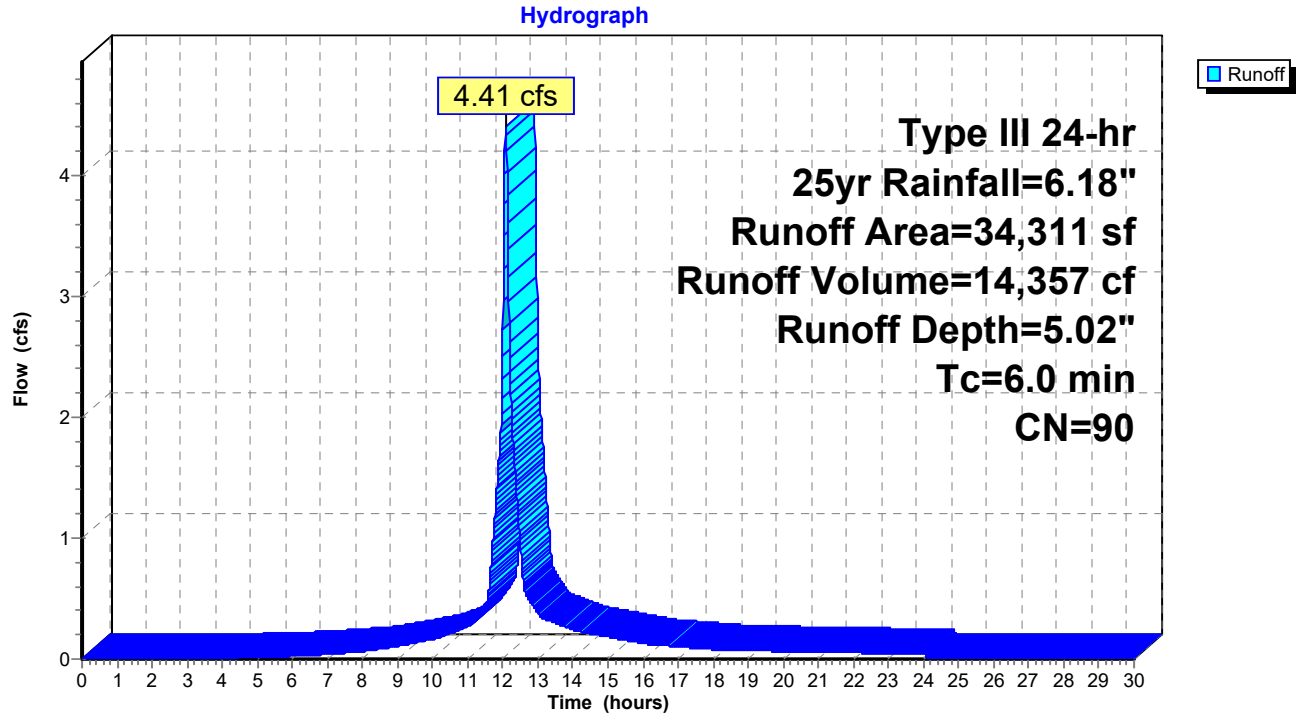
Runoff = 4.41 cfs @ 12.08 hrs, Volume= 14,357 cf, Depth= 5.02"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs
Type III 24-hr 25yr Rainfall=6.18"

	Area (sf)	CN	Description
*	14,260	98	Roof
	8,669	98	Paved parking, HSG C
	11,382	74	>75% Grass cover, Good, HSG C
	34,311	90	Weighted Average
	11,382		33.17% Pervious Area
	22,929		66.83% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Tc - min**

Subcatchment Hb-s2: Hb JF trib



Summary for Subcatchment Hc: Zone Hc

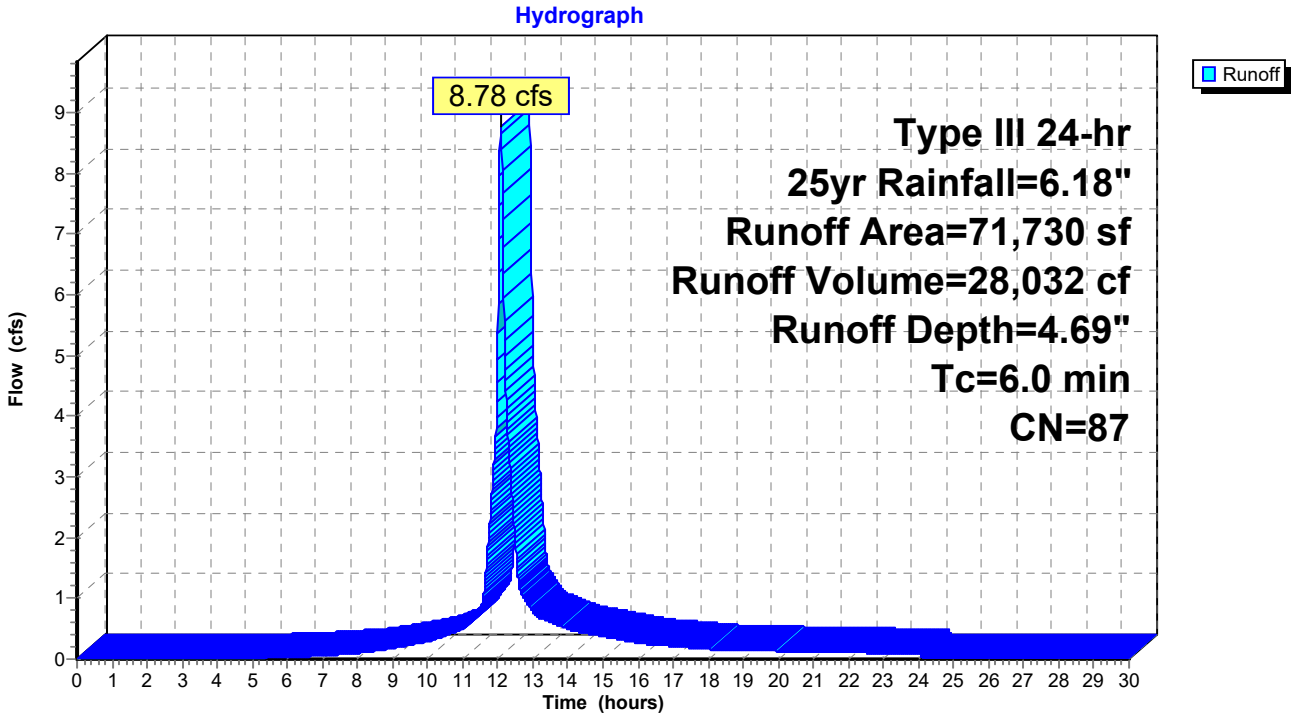
Runoff = 8.78 cfs @ 12.09 hrs, Volume= 28,032 cf, Depth= 4.69"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs
Type III 24-hr 25yr Rainfall=6.18"

	Area (sf)	CN	Description
*	15,256	98	Building
*	4,904	98	Building
*	8,572	98	Building
	9,175	98	Paved parking, HSG C
	33,823	74	>75% Grass cover, Good, HSG C
	71,730	87	Weighted Average
	33,823		47.15% Pervious Area
	37,907		52.85% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment Hc: Zone Hc



Summary for Pond Hb 4: DMH HB4

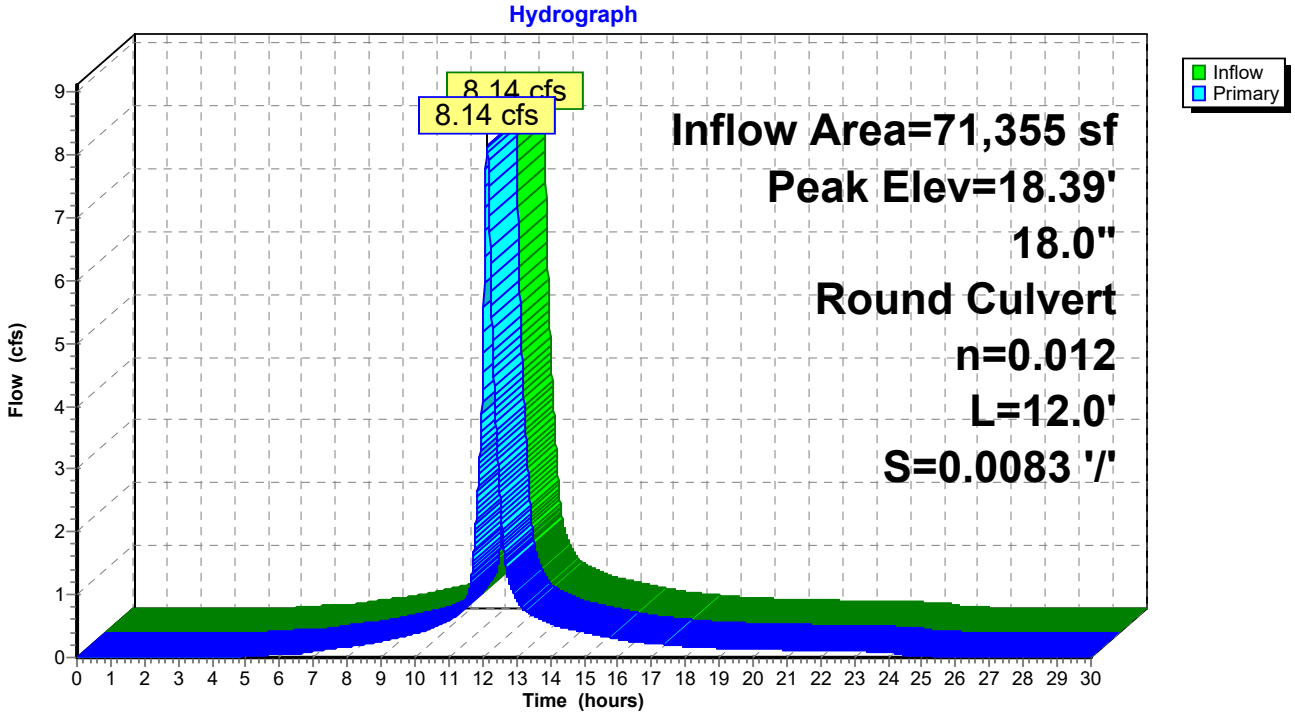
Inflow Area = 71,355 sf, 83.20% Impervious, Inflow Depth > 5.37" for 25yr event
Inflow = 8.14 cfs @ 12.13 hrs, Volume= 31,950 cf
Outflow = 8.14 cfs @ 12.13 hrs, Volume= 31,950 cf, Atten= 0%, Lag= 0.0 min
Primary = 8.14 cfs @ 12.13 hrs, Volume= 31,950 cf

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs
Peak Elev= 18.39' @ 12.13 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	16.50'	**18.0" Round Culvert** L= 12.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 16.50' / 16.40' S= 0.0083 '/' Cc= 0.900 n= 0.012, Flow Area= 1.77 sf

Primary OutFlow Max=8.14 cfs @ 12.13 hrs HW=18.38' (Free Discharge)
1=Culvert (Barrel Controls 8.14 cfs @ 4.71 fps)

Pond Hb 4: DMH HB4



Summary for Pond HB-11: North WQ St Chmbr

Inflow Area = 25,934 sf,100.00% Impervious, Inflow Depth = 5.94" for 25yr event
Inflow = 3.61 cfs @ 12.08 hrs, Volume= 12,841 cf
Outflow = 3.11 cfs @ 12.13 hrs, Volume= 12,540 cf, Atten= 14%, Lag= 2.8 min
Primary = 3.11 cfs @ 12.13 hrs, Volume= 12,540 cf

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs
Peak Elev= 17.99' @ 12.13 hrs Surf.Area= 1,445 sf Storage= 1,377 cf

Plug-Flow detention time= 46.0 min calculated for 12,540 cf (98% of inflow)
Center-of-Mass det. time= 30.9 min (775.6 - 744.7)

Volume	Invert	Avail.Storage	Storage Description
#1A	16.50'	1,068 cf	**15.75'W x 67.70'L x 3.67'H Field A** 3,909 cf Overall - 1,240 cf Embedded = 2,669 cf x 40.0% Voids
#2A	17.00'	1,240 cf	**ADS_StormTech SC-740 +Cap** x 27 Inside #1 Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap 3 Rows of 9 Chambers
#3B	16.50'	408 cf	**6.25'W x 60.58'L x 3.67'H Field B** 1,388 cf Overall - 368 cf Embedded = 1,021 cf x 40.0% Voids
#4B	17.00'	368 cf	**ADS_StormTech SC-740 +Cap** x 8 Inside #3 Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap
		3,084 cf	Total Available Storage

Storage Group A created with Chamber Wizard
Storage Group B created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	17.00'	**15.0" Round Culvert** L= 56.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 17.00' / 16.60' S= 0.0071 '/' Cc= 0.900 n= 0.012 Corrugated PP, smooth interior, Flow Area= 1.23 sf

Primary OutFlow Max=3.11 cfs @ 12.13 hrs HW=17.99' (Free Discharge)
1=Culvert (Barrel Controls 3.11 cfs @ 4.10 fps)

Pond HB-11: North WQ St Chmbr - Chamber Wizard Field A

Chamber Model = ADS_StormTech SC-740 +Cap (ADS StormTech® SC-740 with cap length)
Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf
Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap

51.0" Wide + 6.0" Spacing = 57.0" C-C Row Spacing

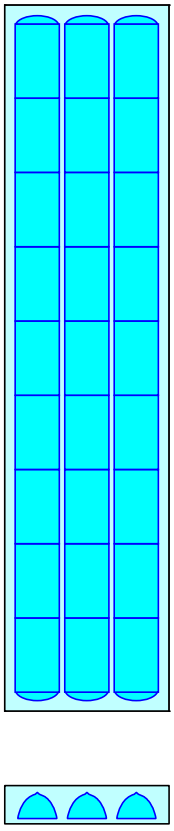
9 Chambers/Row x 7.12' Long +0.81' Cap Length x 2 = 65.70' Row Length +12.0" End Stone x 2 = 67.70' Base Length
3 Rows x 51.0" Wide + 6.0" Spacing x 2 + 12.0" Side Stone x 2 = 15.75' Base Width
6.0" Base + 30.0" Chamber Height + 8.0" Cover = 3.67' Field Height

27 Chambers x 45.9 cf = 1,240.4 cf Chamber Storage

3,909.5 cf Field - 1,240.4 cf Chambers = 2,669.1 cf Stone x 40.0% Voids = 1,067.6 cf Stone Storage

Chamber Storage + Stone Storage = 2,308.0 cf = 0.053 af
Overall Storage Efficiency = 59.0%
Overall System Size = 67.70' x 15.75' x 3.67'

27 Chambers
144.8 cy Field
98.9 cy Stone



Pond HB-11: North WQ St Chmbr - Chamber Wizard Field B

Chamber Model = ADS_StormTech SC-740 +Cap (ADS StormTech® SC-740 with cap length)
Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf
Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap

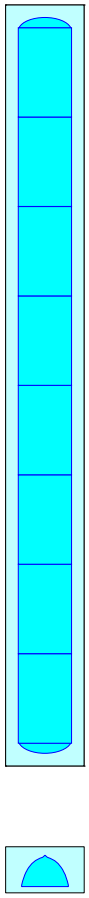
8 Chambers/Row x 7.12' Long +0.81' Cap Length x 2 = 58.58' Row Length +12.0" End Stone x 2 = 60.58' Base Length
1 Rows x 51.0" Wide + 12.0" Side Stone x 2 = 6.25' Base Width
6.0" Base + 30.0" Chamber Height + 8.0" Cover = 3.67' Field Height

8 Chambers x 45.9 cf = 367.5 cf Chamber Storage

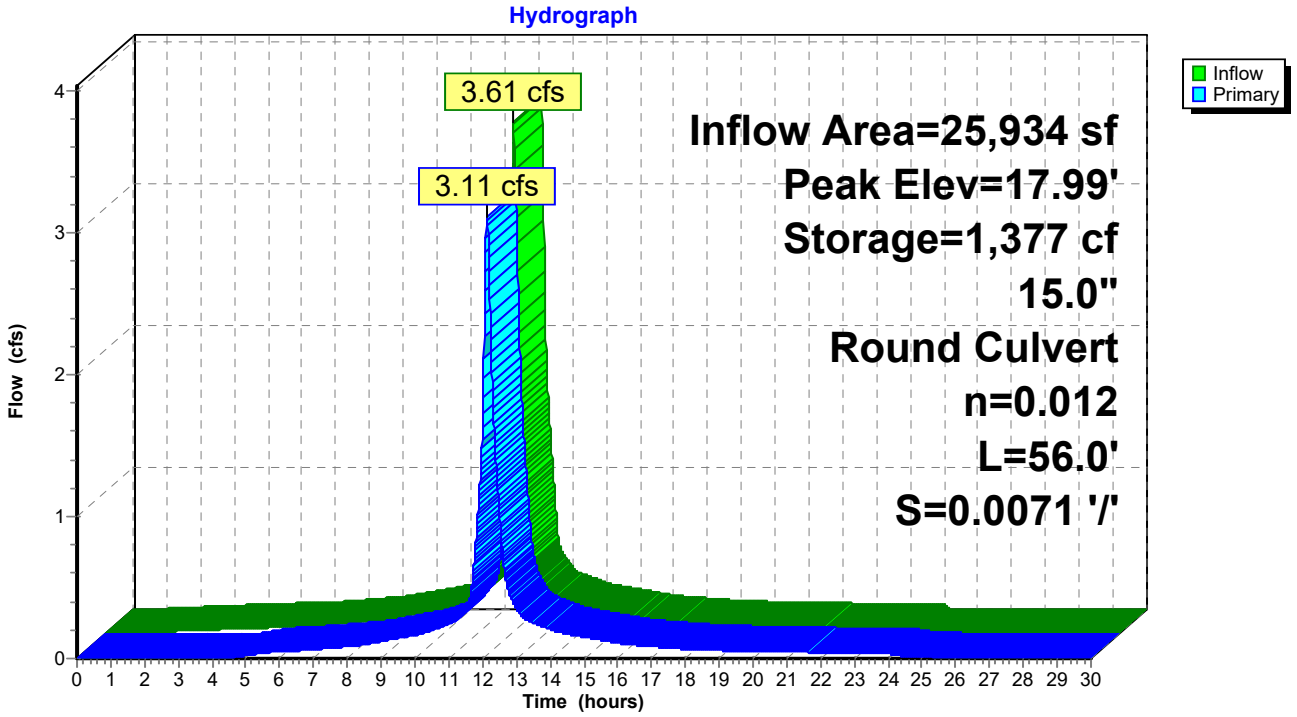
1,388.2 cf Field - 367.5 cf Chambers = 1,020.7 cf Stone x 40.0% Voids = 408.3 cf Stone Storage

Chamber Storage + Stone Storage = 775.8 cf = 0.018 af
Overall Storage Efficiency = 55.9%
Overall System Size = 60.58' x 6.25' x 3.67'

8 Chambers
51.4 cy Field
37.8 cy Stone



Pond HB-11: North WQ St Chmbr



Summary for Pond Hb-3: Hb-3 Diversion MH

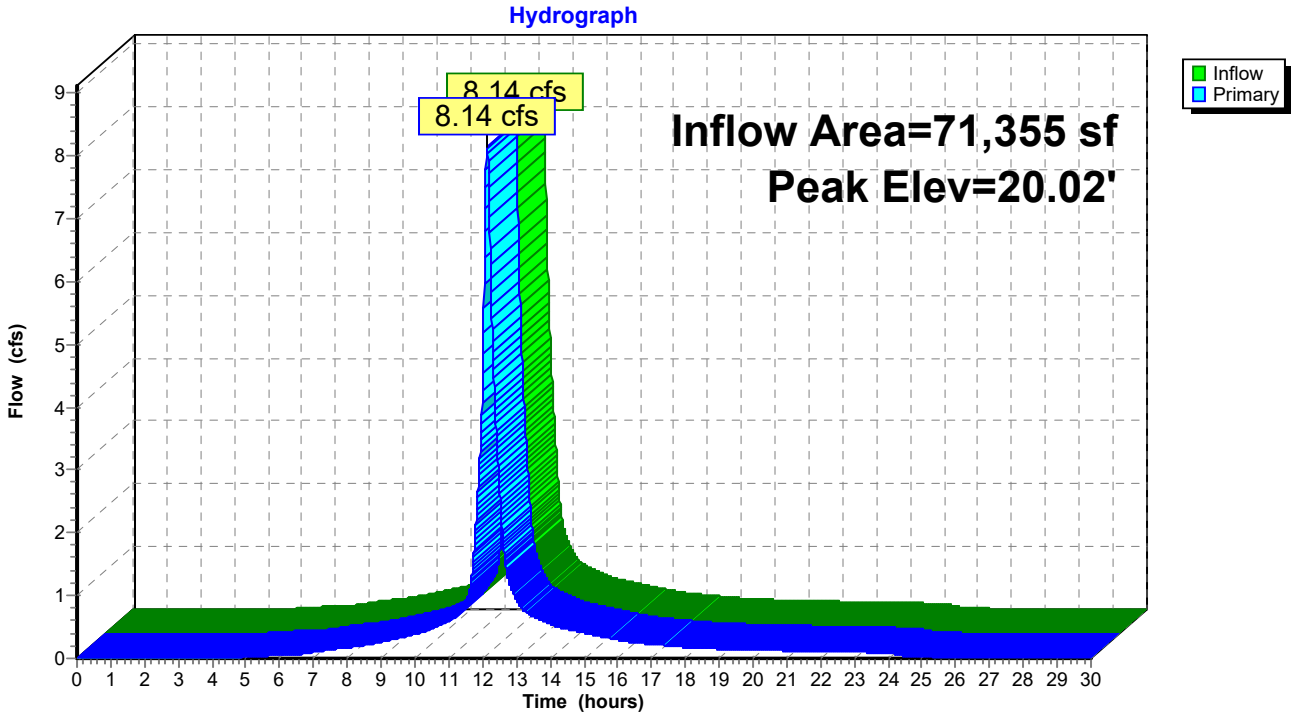
Inflow Area = 71,355 sf, 83.20% Impervious, Inflow Depth > 5.37" for 25yr event
Inflow = 8.14 cfs @ 12.13 hrs, Volume= 31,950 cf
Outflow = 8.14 cfs @ 12.13 hrs, Volume= 31,950 cf, Atten= 0%, Lag= 0.0 min
Primary = 8.14 cfs @ 12.13 hrs, Volume= 31,950 cf

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs
Peak Elev= 20.02' @ 12.13 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	15.70'	**18.0" Round Culvert** L= 11.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 15.70' / 15.10' S= 0.0545 '/' Cc= 0.900 n= 0.012, Flow Area= 1.77 sf
#2	Device 1	16.30'	**1.4" Vert. Orifice/Grate** C= 0.600
#3	Device 1	19.50'	**7.0' long x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

Primary OutFlow Max=8.13 cfs @ 12.13 hrs HW=20.02' (Free Discharge)
└**1=Culvert** (Passes 8.13 cfs of 16.09 cfs potential flow)
└**2=Orifice/Grate** (Orifice Controls 0.10 cfs @ 9.22 fps)
└**3=Broad-Crested Rectangular Weir** (Weir Controls 8.03 cfs @ 2.19 fps)

Pond Hb-3: Hb-3 Diversion MH



Summary for Pond HB-5: South WQV ST Chmbr

Inflow Area = 45,421 sf, 73.61% Impervious, Inflow Depth = 5.22" for 25yr event
Inflow = 5.95 cfs @ 12.08 hrs, Volume= 19,749 cf
Outflow = 5.04 cfs @ 12.13 hrs, Volume= 19,411 cf, Atten= 15%, Lag= 3.0 min
Primary = 5.04 cfs @ 12.13 hrs, Volume= 19,411 cf

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs
Peak Elev= 18.39' @ 12.13 hrs Surf.Area= 1,616 sf Storage= 2,016 cf

Plug-Flow detention time= 34.3 min calculated for 19,411 cf (98% of inflow)
Center-of-Mass det. time= 23.5 min (798.4 - 775.0)

Volume	Invert	Avail.Storage	Storage Description
#1A	16.50'	683 cf	**11.00'W x 60.58'L x 3.67'H Field A** 2,443 cf Overall - 735 cf Embedded = 1,708 cf x 40.0% Voids
#2A	17.00'	735 cf	**ADS_StormTech SC-740 +Cap** x 16 Inside #1 Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap 2 Rows of 8 Chambers
#3B	16.50'	952 cf	**20.50'W x 46.34'L x 3.67'H Field B** 3,483 cf Overall - 1,103 cf Embedded = 2,380 cf x 40.0% Voids
#4B	17.00'	1,103 cf	**ADS_StormTech SC-740 +Cap** x 24 Inside #3 Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap 4 Rows of 6 Chambers
		3,473 cf	Total Available Storage

Storage Group A created with Chamber Wizard
Storage Group B created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	17.00'	**15.0" Round Culvert** L= 50.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 17.00' / 16.60' S= 0.0080 '/' Cc= 0.900 n= 0.012 Corrugated PP, smooth interior, Flow Area= 1.23 sf

Primary OutFlow Max=5.03 cfs @ 12.13 hrs HW=18.39' (Free Discharge)
↑—**1=Culvert** (Barrel Controls 5.03 cfs @ 4.61 fps)

Pond HB-5: South WQV ST Chmbr - Chamber Wizard Field A

Chamber Model = ADS_StormTech SC-740 +Cap (ADS StormTech® SC-740 with cap length)
Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf
Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap

51.0" Wide + 6.0" Spacing = 57.0" C-C Row Spacing

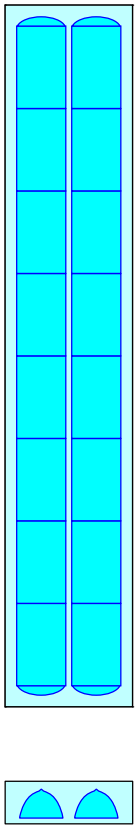
8 Chambers/Row x 7.12' Long +0.81' Cap Length x 2 = 58.58' Row Length +12.0" End Stone x 2 = 60.58' Base Length
2 Rows x 51.0" Wide + 6.0" Spacing x 1 + 12.0" Side Stone x 2 = 11.00' Base Width
6.0" Base + 30.0" Chamber Height + 8.0" Cover = 3.67' Field Height

16 Chambers x 45.9 cf = 735.0 cf Chamber Storage

2,443.3 cf Field - 735.0 cf Chambers = 1,708.2 cf Stone x 40.0% Voids = 683.3 cf Stone Storage

Chamber Storage + Stone Storage = 1,418.3 cf = 0.033 af
Overall Storage Efficiency = 58.1%
Overall System Size = 60.58' x 11.00' x 3.67'

16 Chambers
90.5 cy Field
63.3 cy Stone



Pond HB-5: South WQV ST Chmbr - Chamber Wizard Field B

Chamber Model = ADS_StormTech SC-740 +Cap (ADS StormTech® SC-740 with cap length)
Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf
Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap

51.0" Wide + 6.0" Spacing = 57.0" C-C Row Spacing

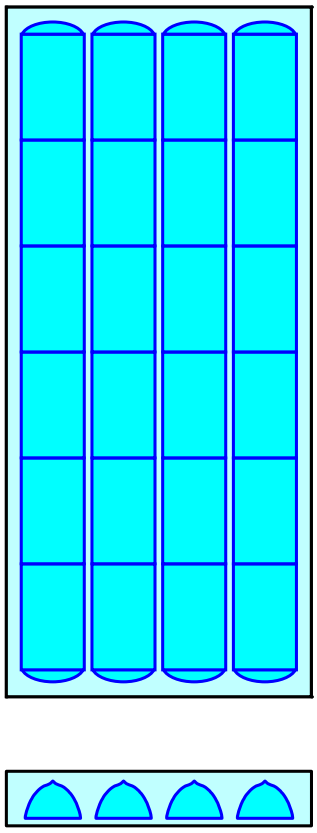
6 Chambers/Row x 7.12' Long +0.81' Cap Length x 2 = 44.34' Row Length +12.0" End Stone x 2 = 46.34' Base Length
4 Rows x 51.0" Wide + 6.0" Spacing x 3 + 12.0" Side Stone x 2 = 20.50' Base Width
6.0" Base + 30.0" Chamber Height + 8.0" Cover = 3.67' Field Height

24 Chambers x 45.9 cf = 1,102.6 cf Chamber Storage

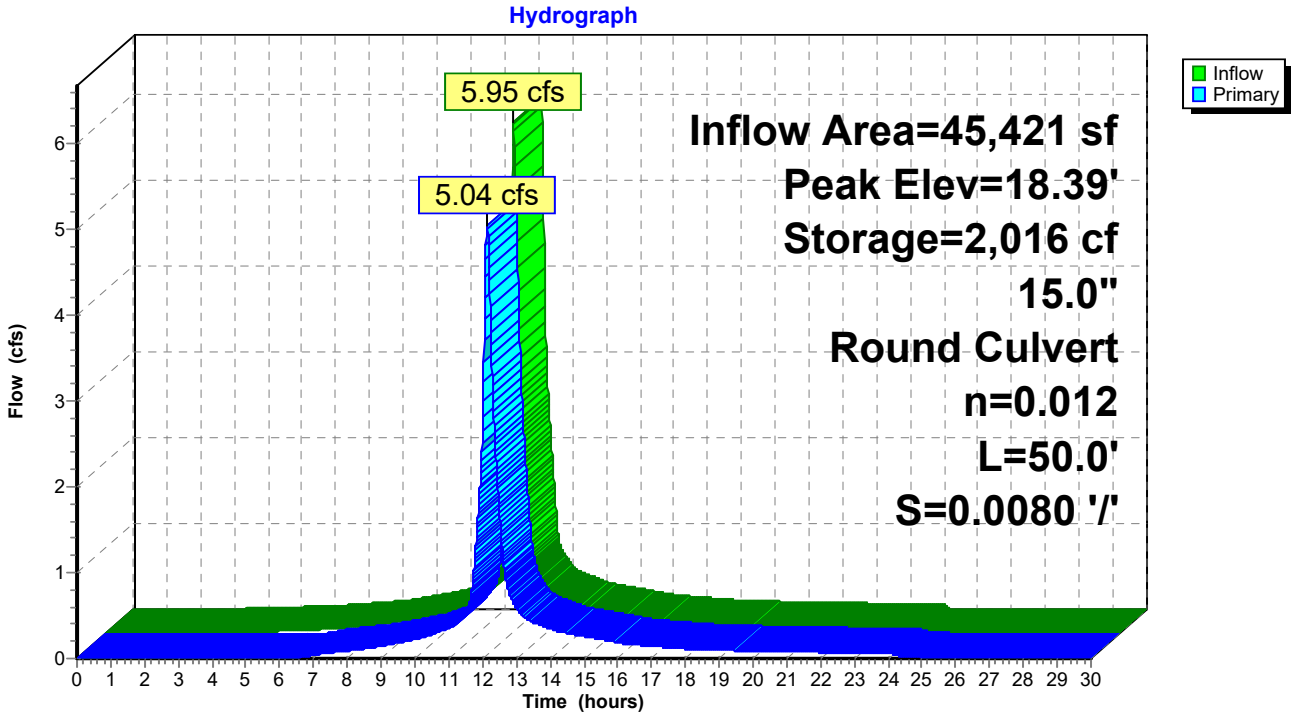
3,483.0 cf Field - 1,102.6 cf Chambers = 2,380.4 cf Stone x 40.0% Voids = 952.2 cf Stone Storage

Chamber Storage + Stone Storage = 2,054.7 cf = 0.047 af
Overall Storage Efficiency = 59.0%
Overall System Size = 46.34' x 20.50' x 3.67'

24 Chambers
129.0 cy Field
88.2 cy Stone



Pond HB-5: South WQV ST Chmbr



Summary for Pond Hc-3: Hc-3 Diversion MH

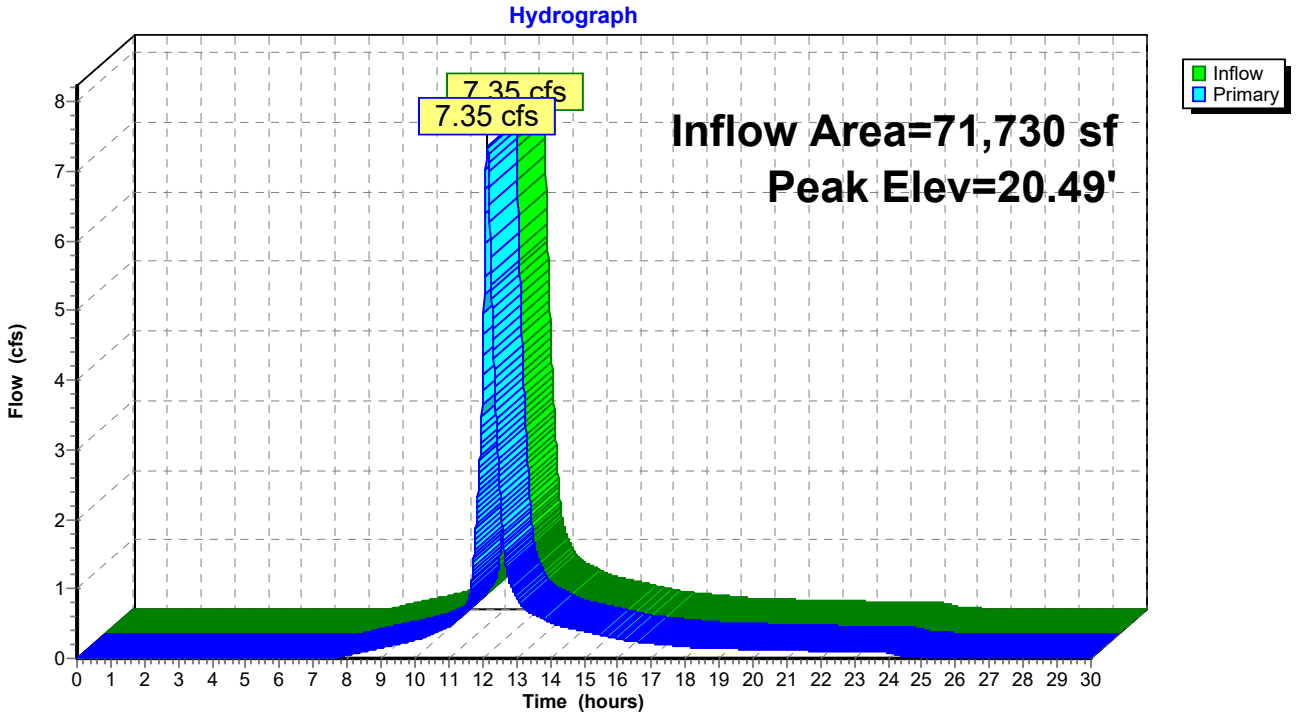
Inflow Area = 71,730 sf, 52.85% Impervious, Inflow Depth > 4.64" for 25yr event
Inflow = 7.35 cfs @ 12.14 hrs, Volume= 27,712 cf
Outflow = 7.35 cfs @ 12.14 hrs, Volume= 27,712 cf, Atten= 0%, Lag= 0.0 min
Primary = 7.35 cfs @ 12.14 hrs, Volume= 27,712 cf

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs
Peak Elev= 20.49' @ 12.14 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	16.60'	**15.0" Round Culvert** L= 11.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 16.60' / 16.50' S= 0.0091 '/' Cc= 0.900 n= 0.012, Flow Area= 1.23 sf
#2	Device 1	17.30'	**1.0" Vert. Orifice/Grate** C= 0.600
#3	Device 1	20.00'	**7.0' long x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

Primary OutFlow Max=7.34 cfs @ 12.14 hrs HW=20.49' (Free Discharge)
└**1=Culvert** (Passes 7.34 cfs of 10.68 cfs potential flow)
└**2=Orifice/Grate** (Orifice Controls 0.05 cfs @ 8.55 fps)
└**3=Broad-Crested Rectangular Weir** (Weir Controls 7.29 cfs @ 2.11 fps)

Pond Hc-3: Hc-3 Diversion MH



APPENDIX D

Summary of Water Quality Treatment Zone H

Summary of Water Quality Treatment - Lot 17 (BLDG G - Multi-Family Residential)

Zone	Inlet ID	Impervious Area (sf)	Pervious Area (sf)	Total Area (sf)	Total Area (Acres) [1]	Required Water Quality Volume (CF) [2]	Existing Developed Area Mitigation Credits (SF) [9]	Treatment Approach [6]	Filter Size Area Required [6] (SF)	Jellyfish Unit Provided [5]	1 Yr 24-hr Storm Event Peak Flow Rate (cfs) [3]	Required Isolator Row Chambers (Stormtech SC-740 (JF)) [4]	Provided Filter Bed (SF)/Water Quality Volume (CF) [7]	Isolator Row Chambers (Stormtech SC-740) Provided (EA) [6]
Zone Ha Developed Area	Ha-9	0.00	1,607.00	1,607.00	0.04	53.57	0.00	filterra w open top	< 0.1 ac 1-(4x4)	N/A	0.02	N/A	N/A	N/A
	Ha-2	6,683.00	1,473.00	8,156.00	0.19	606.02	0.00	filterra - Curbline w/ top slab	< 0.202 ac 1-(4x8)	N/A	0.43	N/A	N/A	N/A
	Ha-6	6,585.00	847.00	7,432.00	0.17	576.98	0.00	filterra - Curbline w/ top slab	< 0.202 ac 1-(4x8)	N/A	0.41	N/A	N/A	N/A
	Ha-7	0.00	1,036.00	1,036.00	0.02	34.53	0.00	filterra w open top	< 0.1 ac 1-(4x4)	N/A	0.01	N/A	N/A	N/A
	Ha-8	667.00	1,147.00	1,814.00	0.04	93.82	0.00	filterra w open top	< 0.1 ac 1-(4x4)	N/A	0.06	N/A	N/A	N/A
	Ha-4	4,748.00	814.00	5,562.00	0.13	422.80	0.00	filterra - Curbline w/ top slab	< 0.151 ac 1-(4x6)	N/A	0.30	N/A	N/A	N/A
	Ha-5	12,313.40	1,513.60	13,827.00	0.32	1076.57	0.00	filterra - Curbline w/ top slab	< 0.378 ac 1 - (6x10)	N/A	0.77	N/A	N/A	N/A
	Zone Ha - Total	**30,996.40**	**8,437.60**	**39,434.00**	**0.91**	**2,864.29**	**0.00**	Filterra Tree Box Filter	-	-	2.00	N/A	N/A	N/A
Zone Hb Developed Area	Hb-R5 north (split in half for different Isolator rows)	7,222.00	0.00	7,222.00	0.17	601.83	0.00	Contech Jellyfish Filter	N/A	JF4 2-1	0.44	2.21	3,042.00	6.00
	Hb-13	1,469.00	259.00	1,728.00	0.04	131.05	0.00				0.09	0.47		
	Hb-12	1,209.00	346.00	1,555.00	0.04	112.28	0.00				0.08	0.39		
	Hb-5 Isolator south 1 Subtotal	**9,900.00**	**605.00**	**10,505.00**	**0.24**	**845.17**	**0.00**				**0.61**	**3.06**		
	Hb-R5 South (split in half for different Isolator rows)	7,222.00	0.00	7,222.00	0.17	601.83	0.00				0.44	2.21		8.00
	Hb-14	225.00	724.00	949.00	0.02	42.88	0.00				0.02	0.12		
	Hb-15	1,146.00	2,657.00	3,803.00	0.09	184.07	0.00				0.10	0.52		
	Hb-R4	7,038.00	0.00	7,038.00	0.16	586.50	0.00				0.43	2.15		
	Hb-16	586.00	3,935.00	4,521.00	0.10	180.00	0.00				0.09	0.43		
	Hb-17	3,056.00	179.00	3,235.00	0.07	260.63	0.00				0.19	0.94		
	Hb-18	716.00	1,298.00	2,014.00	0.05	102.93	0.00				0.06	0.30		
	Hb-9	1,246.00	1,622.00	2,868.00	0.07	157.90	0.00				0.10	0.48		
	Hb-19	1,093.00	461.00	1,554.00	0.04	106.45	0.00				0.07	0.36		
	Hb-20	601.00	506.00	1,107.00	0.03	66.95	0.00				0.04	0.22		
	Hb-5 Isolator South 2 Subtotal	**22,929.00**	**11,382.00**	**34,311.00**	**0.79**	**2,290.15**	**0.00**				**1.55**	**7.73**		
	Hb-5 South Storage Subtotal	**32,829.00**	**11,987.00**	**44,816.00**	**1.03**	**3,135.32**	**0.00**				**2.16**	**10.79**		**14.00**
	Hb-GR	25,934.00	0.00	25,934.00	0.60	2161.17	0.00				1.58	7.92	2,699.00	8.00
	Hb-11 North Storage/Isolator Subtotal	**25,934.00**	**0.00**	**25,934.00**	**0.60**	**2,161.17**	**0.00**				**1.58**	**7.92**		
	Hb-3.1 Jellyfish Total	**58,763.00**	**11,987.00**	**70,750.00**	**1.62**	**5,296.48**	**0.00**				**3.74**	**18.71**	**5,741.00**	**22.00**
	Hb-21	1,522.00	2,257.00	3,779.00	0.09	202.07	0.00	filterra w open top	< 0.1 ac 1-(4x4)	N/A	0.12	N/A	N/A	N/A
	Hb-22	682.00	6,048.00	6,730.00	0.15	258.43	0.00	filterra w open top	< 0.151 ac 1-(4x6)	N/A	0.12	N/A	N/A	N/A
	Hb-Filterra Subtotal	**2,204.00**	**8,305.00**	**10,509.00**	**0.24**	**460.50**	**0.00**	Filterra Tree Box Filter	-	-	0.24			
Zone Hc Developed Area	Hc-R1	15,256.00	0.00	15,256.00	0.35	1271.33	0.00	Contech Jellyfish Filter	N/A	JF4 2-1	0.93	4.66	2938	**16**
	Hc-R2	4,904.00	0.00	4,904.00	0.11	408.67	0.00				0.30	1.50		
	Hc-R3	8,572.00	0.00	8,572.00	0.20	714.33	0.00				0.52	2.62		
	Hc-5	2,495.00	1,852.00	4,347.00	0.10	269.65	0.00				0.18	0.88		
	Hc-7	1,587.00	2,781.00	4,368.00	0.10	224.95	0.00				0.13	0.66		
	Hc-6	0.00	460.00	460.00	0.01	15.33	0.00				0.01	0.03		
	Hc-4 Storage/Isolator Subtotal	**32,814.00**	**5,093.00**	**37,907.00**	**0.87**	**2,904.27**	**0.00**				**2.07**	**10.35**		
Zone H Developed Area Treated Subtotals	Ha + Hb + Hc	**124,777.40**	**33,822.60**	**158,600.00**	**3.64**	**11,525.54**	**0.00**	Proprietary Filter Devices	See above	See above	See above	See above	See above	See above
Tributary to Hb Outfall Untreated	Hb-23	520.00	262.00	782.00	0.02	52.07	0.00	None	N/A	N/A	N/A	N/A	N/A	N/A
Tributary to ROW SD Untreated	Ha-10	317.00	5,778.00	6,095.00	0.14	219.02	0.00	None	N/A	N/A	N/A	N/A	N/A	N/A
Tributary to Ha Offsite City CB Untreated	Ha-City	1,296.60	768.40	2,065.00	0.05	133.66	0.00	None	N/A	N/A	N/A	N/A	N/A	N/A
	Disturbed Perimeter Area (H27)	1,904.00	26,834.00	28,738.00	0.66	1053.13	0.00	None	N/A	N/A	N/A	N/A	N/A	N/A
Zone H Developed Area UnTreated Subtotals		**4,037.60**	**33,642.40**	**37,680.00**	**0.87**	**1,457.88**	**0.00**	None	N/A	N/A	N/A	N/A	N/A	N/A
Zone H Developed Area Subtotals		**128,815.00**	**67,465.00**	**196,280.00**	**4.51**	**12,983.42**	**0.00**	**N/A**	N/A	N/A	N/A	N/A	N/A	N/A
Zone H Existing Buildings	N/A	0.00	0.00	0.00	0.00	0.00	0.00	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Zone H Existing Building Subtotal		**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Zone H Developed Area Totals	-	**128,815.00**	**67,465.00**	**196,280.00**	**4.51**	**12,983.42**	**0.00**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**

Developed Area Breakdown (This project phase only)		
A.) Total New Developed Area Treated (SF)	158,600.00	**3.64**
B.) Total New Developed Area untreated (SF)	37,680.00	**0.87**
C.) Total New Developed Area (SF) = A+B	196,280.00	**4.51**
D.) Existing Developed Area Treated (SF)	0.00	**0.00**
E.) Adjusted Existing Developed Area Treated (SF)	0.00	**0.00**
F.) Total Net Developed Area Treated (SF) = A+E	158,600.00	**3.64**
Impervious Area Breakdown		
G.) Total New Impervious Area treated (SF)	124,777.40	**2.86**
H.) Total New Impervious Area untreated (SF)	4,037.60	**0.09**
I.) Total New Impervious Area (SF) = G+H	128,815.00	**2.96**
J.) Existing Impervious Area Treated (SF)	0.00	**0.00**
K.) Adjusted Existing Impervious Area Treated (SF)	0.00	**0.00**
L.) Total Net Impervious Area Treated (SF) = G+K	124,777.40	**2.86**

Treatment Breakdown	Required	This Phase Only Provided
% of Net Developed Area Treated = F/C	80.00%	80.80%
% of Net Impervious Area Treated = L/I	95.00%	96.87%

Add concessions to the below totals

Developed Area Breakdown (Cumulative Campus Development To-Date)		
A.) Total New Developed Area Treated (SF)	494,298.00	**11.35**
B.) Total New Developed Area untreated (SF)	129,587.00	**2.97**
C.) Total New Developed Area (SF) = A+B	623,885.00	**14.32**
D.) Existing Developed Area Treated (SF)	72,596.00	**1.67**
E.) Adjusted Existing Developed Area Treated (SF)	43,557.40	**1.00**
F.) Total Net Developed Area Treated (SF) = A+E	537,855.40	**12.35**
Impervious Area Breakdown		
G.) Total New Impervious Area treated (SF)	376,461.74	**8.64**
H.) Total New Impervious Area untreated (SF)	63,280.60	**1.45**
I.) Total New Impervious Area (SF) = G+H	439,742.34	**10.10**
J.) Existing Impervious Area Treated (SF)	72,596.00	**1.67**
K.) Adjusted Existing Impervious Area Treated (SF)	43,557.40	**1.00**
L.) Total Net Impervious Area Treated (SF) = G+K	420,019.14	**9.64**

Treatment Breakdown	Required	Cumulative Campus Provided
% of Net Developed Area Treated = F/C	80.00%	86.21%
% of Net Impervious Area Treated = L/I	95.00%	95.51%

Development Projects Included in Cumulative Review (inorder of input):

Brick North and Brick South (Lots 1, 2, 3)
West Loop Rd (Common)
Hotel Portland (Lot 6)
East Loop Rd (Common)
CMTM (Lot 7)
Warehouse (Lot 11)
Concessions (Lot 9)
Multi-Family (Lot 17)

NOTES AND ASSUMPTIONS:

1. All areas are based on the Placemaker Partners Permit drawings dated Sept 2024.
2. The required water quality volumes have been computed based on Sections 7.4, 7.5 and 7.6 of the Maine DEP Volume III BMP's Technical Design Manual. The volume is computed to be 1" times the subcatchments impervious area and 0.4" times the subcatchments vegetated area. Existing buildings to remain are not required to be treated since they predate 1975 clean water act requirements.
3. The 1 year peak flow rates have been computed using the rational method. The rainfall intensities are derived from the Cumberland County IDF curve.
4. Subsurface storage system sizing is based on a Stormtech SC-740 chamber system. All isolator rows have been computed per a 7/29/2016 letter from State of Maine to Stormtech re: Pretreatment Isolator Row of the Maine DEP Volume III BMP's Technical Manual. One chamber is required for each 0.2 cfs of the computed tributary 1 year peak flow rate.
5. The required number of Jelly Fish treatment units have been computed based on Contech Sizing requirements. The water quality volume for each unit is storage up stream and the amount of treatment cartridges are computed based sediment mass loading.
6. The owner reserves the right to use an alternate tree box filter device provided it has been approved by the Maine DEP Chapter 500 delegated review authority of the City of Portland. Area listed is max tributary area for size selected
7. Provided Water Quality Volume for stormtreat storage system computed using 61.38 CF of storage per chamber based on Storm Tech Chamber Design Manual. This includes volume from Chamber and Surrounding stone only, excluding oversized perimeter stone, and distribution piping.
8. Vacant
9. According to Chapter 500 Maine DEP stormwater rules Dated 2015; the department allows applicants to take credit for the treatment of existing impervious areas on site. For existing roofs the credit can be calculated by multiplying the total treated area by 0.6. The overall project was approved using this methodology.
10. The MEDEP will now accept a Filterra tree box filter as a stand alone treatment unit and does not require an Isolator Row for eligible projects. This project meets the eligibility criteria noted in a letter dated June 27th, 2014 from the MEDEP and updated February 2, 2017.

APPENDIX E

Stormwater Management Plans-1 through 3

NOTES:

1. PHASE (SWM ZONE B2) WILL TEMPORARILY DISCHARGE TO EXISTING STORM DRAIN DISCHARGE. STORM DRAIN SIZED TO BE TREATED AND DISCHARGED AT ZONE B OUTFALL WHEN FUTURE PHASE IS DEVELOPED.

LEGEND

- STORMWATER MANAGEMENT AREA BOUNDARY
- SUBCATCHMENT BOUNDARY
- LOT 7 DEVELOPMENT STORM WATER MANAGEMENT AREA INTERNALLY DRAINS TO SEPARATE SUBSURFACE STORAGE AND TREATMENT INFRASTRUCTURE. DISCHARGES TO ZONE F0 DISCHARGE
- DRAINAGE DISCHARGE OUTFALL
- D15B — SUBCATCHMENT DESIGNATION
- SUBSURFACE CHAMBER SYSTEM ISOLATOR ROW WITH INSPECTION PORTS

NORTH

TIDAL AREA

ZONE HB DISCHARGE HB-0 WITH RCP FLARED END AND BAR RACK INV. = 7.8

RIPRAP ENERGY DISPERSION PLUNGE POOL

ZONE HB HB-5 SUBSURFACE WATER QUALITY STORAGE

ZONE HB HB-3.1 JELLYFISH TREATMENT UNIT (JF-4-2-1) HB-3 8'x10' OVERFLOW DIVERSION MANHOLE

LANDSCAPED SLOPE TO SHEET FLOW DIRECTLY TO FORE RIVER

LANDSCAPED SLOPE TO SHEET FLOW DIRECTLY TO FORE RIVER

ZONE HB HB-11 SUBSURFACE WATER QUALITY STORAGE

STORMWATER MANAGEMENT ZONE HB
(DEVELOPMENT OF THIS SWM ZONE REDEVELOPED UNDER THIS PROJECT PHASE)

HB-5, HB-21, HB-22, HB-7, HB-17, HB-19, HB-20, HB-9, HB-4, HB-3, HB-2, HB-1, HB-6, HB-8, HB-10, HB-CITY

BUILDING G, H-R5, H-R4, H-GR, H-R3, H-R2, H-R1

STORMWATER MANAGEMENT ZONE HC
(DEVELOPMENT OF THIS SWM ZONE REDEVELOPED UNDER THIS PROJECT PHASE)

LANDSCAPED SLOPE TO SHEET FLOW DIRECTLY TO FORE RIVER

ZONE HC HC-4 SUBSURFACE WATER QUALITY STORAGE

RIPRAP ENERGY DISPERSION OUTLET APRON AND CHANNEL PROTECTION

ZONE HC DISCHARGE HC_ WITH RCP FLARED END AND BAR RACK INV. = 13.0

ZONE HC HC-3.1 JELLYFISH TREATMENT UNIT (JF-4-2-1) HC-3 8'x10' OVERFLOW DIVERSION MANHOLE

HC-4, HC-3, HC-2, HC-1

STORMWATER MANAGEMENT ZONE HA
(DEVELOPMENT OF THIS SWM ZONE REDEVELOPED UNDER THIS PROJECT PHASE)

ZONE HA HA-5.1 6'x10' FILTERRA TB
ZONE HA HA-8.1 4'x4' FILTERRA TB
ZONE HA HA-7.1 4'x4' FILTERRA TB
ZONE HA HA-4.1 4'x6' FILTERRA TB
ZONE HA HA-6.1 4'x8' FILTERRA TB
ZONE HA HA-9.1 4'x4' FILTERRA TB
ZONE HA HA-2.1 4'x8' FILTERRA TB
ZONE HA DISCHARGE HA-15 DISCHARGE TO CITY STORM DRAINAGE SYSTEM AND 36" OUTFALL D9.0

STORMWATER MANAGEMENT ZONE D

ZONE D D9.0 - SUBSURFACE WATER QUALITY STORAGE (78) SC-740 CHAMBERS

ZONE D D9.5 - JELLYFISH TREATMENT UNIT (J4-2-1) D19 - 8'x10' OVERFLOW DIVERSION MANHOLE

ZONE D D18 - (2) 4'x6' FILTERRA TB

ZONE D D19 - 4'x6' FILTERRA TB WITH INTERNAL BY-PASS

ZONE D D21 - (2) 4'x6' FILTERRA TB

FUTURE STORMWATER MANAGEMENT ZONE E
(AREA NOT REDEVELOPED AS OF THE DATE OF THIS PLAN)

ZONE D D20 - (2) 6'x6' FILTERRA TB

STORMWATER MANAGEMENT ZONE D

APPROVED STORMWATER MANAGEMENT ZONE C
(TO BE CONSTRUCTED)

B2-14, B2-15, B2-20, B2-12, B2-20R

BUILDING B1

LANDSCAPED SLOPE TO SHEET FLOW DIRECTLY TO FORE RIVER

STORMWATER MANAGEMENT ZONE B2

BUILDING B2

FORE RIVER

100-YEAR FLOOD STAGE ZONE, ELEV. 10.0
HIGHEST ANNUAL TIDE, ELEV. 7.4

STONE DRIP EDGE FILTER TREATMENT

BUILDING B

TEMPORARY CONNECTION TO EXISTING STORM DRAIN. STORM DRAIN TO BE CONNECTED TO SWM ZONE B IN FUTURE PHASE

EXISTING SD DISCHARGE

ZONE C C6-SUBSURFACE WATER QUALITY STORAGE (66) SC-740 CHAMBER

STORMWATER MANAGEMENT ZONE B

CONNECT SWM ZONE B2 TO STORM DRAIN STUB IN FUTURE PHASE

FUTURE EXPANDED STORMWATER MANAGEMENT ZONE B2
(AREA NOT REDEVELOPED AS OF THE DATE OF THIS PLAN)

ZONE B B3 - 7'x13' FILTERRA

ZONE B AND C DISCHARGE B0 36" WITH RCP FLARED END AND BAR RACK INV. 8.60

ZONE D D9.0 DISCHARGE 36" WITH RCP FLARED END AND BAR RACK INV. 7.40

ZONE D D27 - FOCAL POINT FILTER (FUTURE) AREA = 96 S.F.

ZONE D D25 13'x7' FILTERRA TB PEDESTRIAN GRATE AND GRASS PLANTING

ZONE D D24 6'x6' FILTERRA TB

D25R, F6R, D27R, F5R, BUILDING C, F3R, C15BR, D15BR BUILDING D, C13R, BUILDING I, BUILDING A, BUILDING L, BUILDING F2, G12R BUILDING F1, D24R

STORMWATER MANAGEMENT ZONE F

ZONE F F12 - JELLYFISH TREATMENT UNIT (JF-4-2-1) F11 - 6'x12' OVERFLOW DIVERSION MANHOLE

ZONE F F13 - SUBSURFACE WATER QUALITY STORAGE (61) SC-740 CHAMBERS

ZONE F F14- 6'x6' FILTERRA TB

ZONE F CMTM STORM WATER MANAGEMENT (SEE SYSTEM NOTES)

ZONE F AND G DISCHARGE F0 36" WITH RCP FLARED END AND BAR RACK INV. 10.0

ZONE F F15 - 6'x10' FILTERRA TB

LANDSCAPED SLOPE TO SHEET FLOW DIRECTLY TO FORE RIVER

ZONE F GRAVEL DRIP EDGE TREATMENT

CONNECT TO DOWNSPOUT

PROPANE FUEL PUMP

STORMWATER MANAGEMENT ZONE G

ZONE G G10.1 - 8'x4' FILTERRA TB

ZONE G G9 - HOODED OUTLET WITH DEEP SUMP

ZONE G G8 - HOODED OUTLET WITH DEEP SUMP

ZONE G G7 - HOODED OUTLET WITH DEEP SUMP

Z6.1 - HOODED OUTLET WITH DEEP SUMP

FUTURE STORMWATER MANAGEMENT ZONE D
(AREA NOT REDEVELOPED AS OF THE DATE OF THIS PLAN)

FUTURE STORMWATER MANAGEMENT ZONE D AND G
(AREA NOT REDEVELOPED AS OF THE DATE OF THIS PLAN)

GRAPHIC SCALE
60 0 30 60 120
(IN FEET)
1 inch = 60 ft.

PRELIMINARY – NOT FOR CONSTRUCTION

REV	DATE	DESCRIPTION
2	12/23/2024	REVISED TO ADDRESS CITY COMMENTS
1	9/6/2024	MAJOR SITE PLAN APPLICATION

REVISIONS

STATE OF MAINE — BO KENNEDY No. 11994 — REGISTERED PROFESSIONAL ENGINEER — LICENSED — 12/23/2024

P.E. BO KENNEDY
LIC. #11994

PROJECT: THE FOREFRONT AT THOMPSON'S POINT MULTI-FAMILY RESIDENTIAL BUILDING (G)

SHEET TITLE: INTERIM OVERALL STORMWATER MANAGEMENT PLAN

CLIENT: CPI MANAGEMENT, LLC (CATHARTES)

PLACEMAKER PARTNERS, LLC
18 VAN AKEN WAY
PORTLAND, ME 04102
bo@placemakerpartners.com

DRAWN:	DB
DESIGNED:	BEK
DATE:	AUGUST 2024
SCALE:	1" = 60'
FILE NAME:	PANHANDLE-SMP_OVERALL.dwg
SHEET	C-5.1

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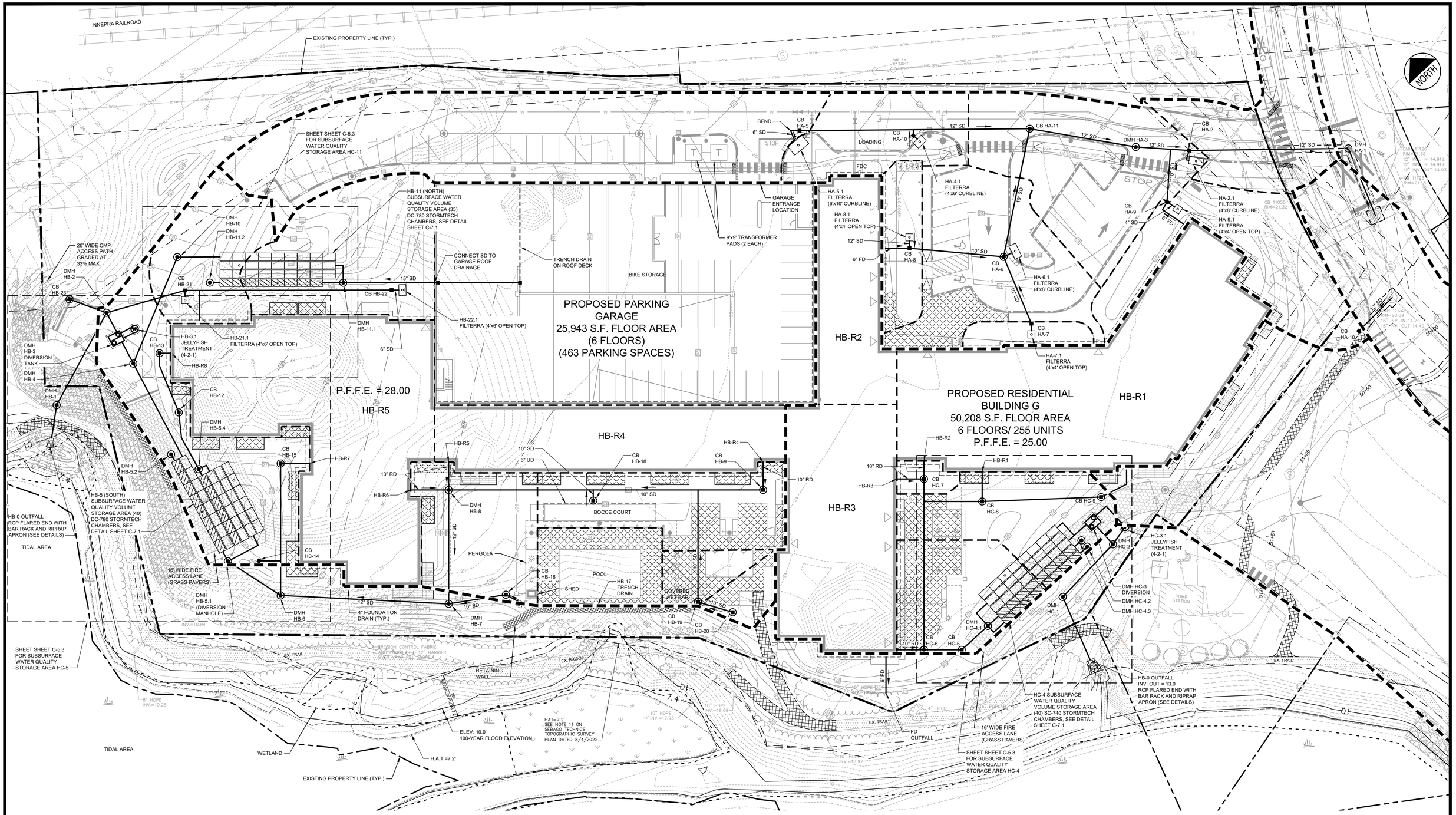

NOTE:
SEE SHEET C-5.2 FOR ZONE C AND D2 TABULAR STORMWATER QUALITY MANAGEMENT COMPUTATIONS.

PRELIMINARY – NOT FOR CONSTRUCTION

GRAPHIC SCALE
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(IN FEET)
1 inch = 20 ft.

REV	DATE	DESCRIPTION
2	12/23/2024	REVISED TO ADDRESS CITY COMMENTS
1	9/6/2024	MAJOR SITE PLAN APPLICATION

REVISIONS

STATE OF MAINE · BO KENNEDY No. 11994 · LICENSED PROFESSIONAL ENGINEER
12/23/2024
P.E. BO KENNEDY
LIC. #11994

PROJECT
THE FOREFRONT AT THOMPSON'S POINT
MULTI-FAMILY RESIDENTIAL BUILDING (G)

SHEET TITLE
STORMWATER MANAGEMENT PLAN - 1

CLIENT
CPI MANAGEMENT, LLC (CATHARTES)

PLACEMAKER PARTNERS, LLC
18 VAN AKEN WAY
PORTLAND, ME 04102
bo@placemakerpartners.com

DRAWN:	BB
DESIGNED:	BEK
DATE:	AUGUST 2024
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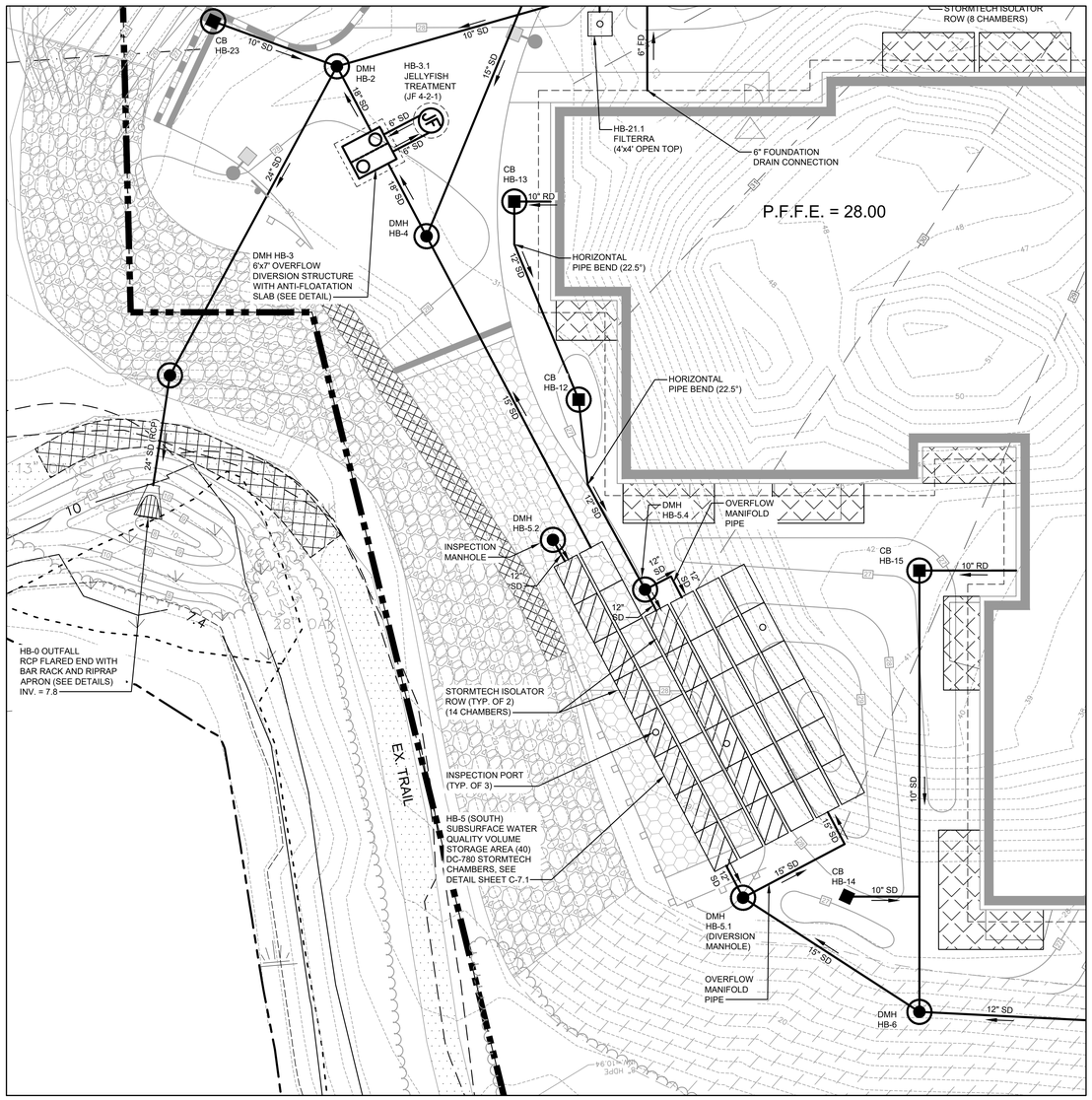
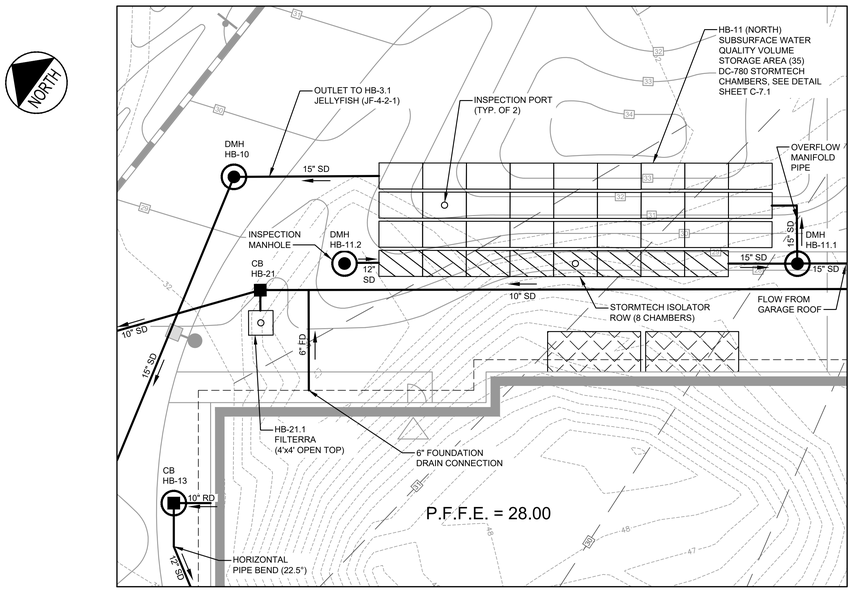
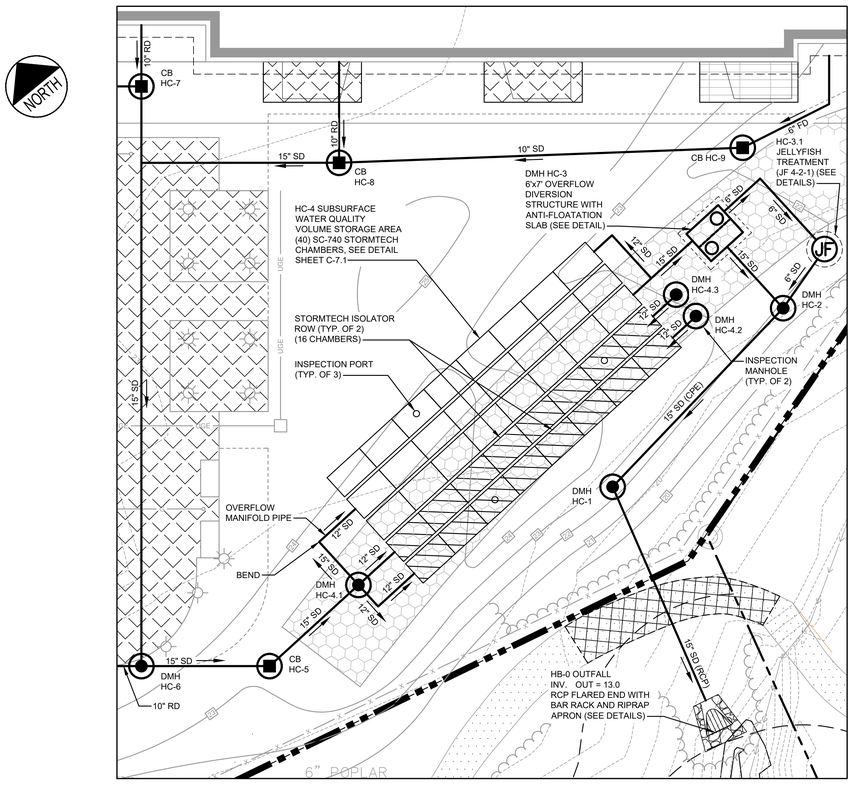


SUBSURFACE WATER QUALITY STORAGE AREA HB-5
ENLARGED VIEW
SCALE: 1"=10'



SUBSURFACE WATER QUALITY STORAGE AREA HB-11
ENLARGED VIEW
SCALE: 1"=10'



SUBSURFACE WATER QUALITY STORAGE AREA HC-4
ENLARGED VIEW
SCALE: 1"=10'

PRELIMINARY – NOT FOR CONSTRUCTION

GRAPHIC SCALE
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(IN FEET)
1 inch = 10 ft.

REV	DATE	DESCRIPTION
2	12/23/2024	REVISED TO ADDRESS CITY COMMENTS
1	9/6/2024	MAJOR SITE PLAN APPLICATION

REVISIONS

STATE OF MAINE · BO KENNEDY No. 11994 · LICENSED PROFESSIONAL ENGINEER · 12/23/2024

P.E. BO KENNEDY
LIC. #11994

PROJECT
THE FOREFRONT AT THOMPSON'S POINT
MULTI-FAMILY RESIDENTIAL BUILDING (G)

SHEET TITLE
STORMWATER MANAGEMENT PLAN - 2

CLIENT
CPI MANAGEMENT, LLC (CATHARTES)

PLACEMAKER PARTNERS, LLC
18 VAN AKEN WAY
PORTLAND, ME 04102
bo@placemakerpartners.com

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DESIGNED:	BEK
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DATE:	AUGUST 2024
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SHEET	C-5.3

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APPENDIX F

Stormwater Operation and Maintenance Manual - Approved 2016

INSPECTION AND MAINTENANCE MANUAL FOR STORMWATER MANAGEMENT AND RELATED STORMWATER FACILITIES

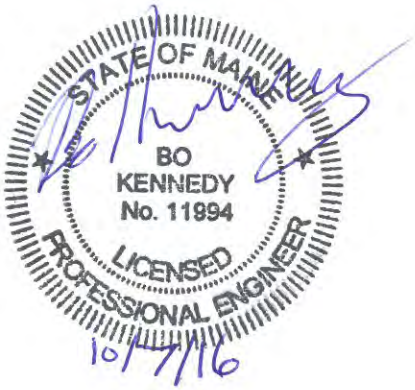
THE FOREFRONT AT THOMPSON'S POINT
PORTLAND, MAINE

PREPARED FOR:

FOREFRONT PARTNERS I, LP
55 LISBON STREET
LEWISTON, MAINE 04240
(207) 784-0335

PREPARED BY:

STANTEC CONSULTING SERVICES INC.
482 PAYNE ROAD
SCARBOROUGH, MAINE 04074
(207) 883-3355



MARCH 2012
REVISED OCTOBER 2016

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APPENDICES

Appendix A – Sample Inspection Logs

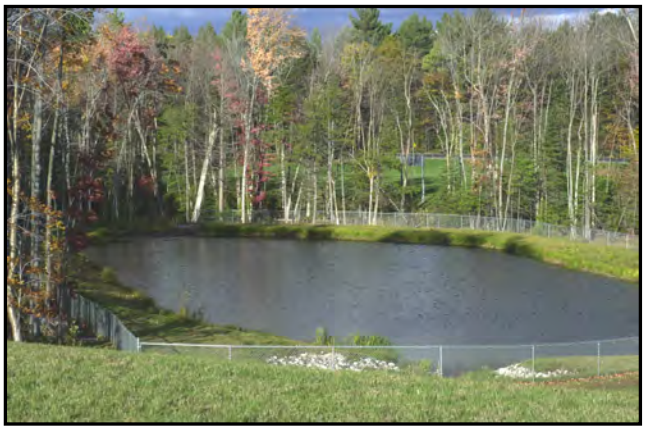
Appendix B – Permits for Project

Appendix C – Summary Checklist for Inspection and Maintenance

I. INTRODUCTION

Relatively complex stormwater management facilities are commonly installed in development projects including, commercial facilities, and many other developments. The complexity and goals of these systems vary with the nature of the receiving water, as well as the type of development. Runoff from developed areas of the project, including rooftops, paved or lawn areas, typically contain materials that can impact the receiving waters. Source control and the installation of wet ponds, infiltration galleries, and water quality units, often combined with pretreatment measures or followed by vegetated buffer strips and other best management practices, can significantly reduce the non-point pollution discharge from the developed area. These measures are particularly important to projects in the watersheds of sensitive water bodies, or projects with potential impacts to groundwater. With the increased cost of land and development, there is an increased tendency to construct portions of the stormwater management systems underground.

The effectiveness of water quality management provisions and other components of the stormwater management system are dependent on their design, upkeep, and maintenance to assure they meet their intended function over an extended period of years. It is critical that the stormwater management facilities are regularly inspected, and that maintenance is performed on an as-needed basis. It must also be recognized that the effectiveness of these facilities, and their maintenance requirements, are related to the stormwater drainage facilities that collect and transport the flow to the ponds, infiltration galleries, and other treatment measures. Thus, maintenance should be directed to the total system, not just the pond or primary stormwater management facility.



The purpose of this document is to define, in detail, the inspection and maintenance requirements deemed necessary to assure that the stormwater management facilities function as intended when they were designed. Subsequent sections identify individual maintenance items, give a brief commentary of the function and need for the item, a description of the work required, and a suggested frequency of accomplishment. While the suggested programs and schedules must be adapted to projects, the material presented should provide guidance for a successful long-term program for operation and maintenance. A supplemental section provides guidance for construction monitoring of the facilities during their installation and more detailed checklists. Certain facilities, specifically the groundwater recharge and infiltration beds are not intended to be placed in service until the tributary catchment area has the permanent cover in place and any contributing turf areas have achieved a 90% catch of vegetation (i.e. established).

A. GUIDELINES OVERVIEW

A summary of the individual components of stormwater management facilities has been prepared. The format used in the summary is as follows:

Preface: A general description of what function/benefit the element is intended to provide. This is a short summary and not intended to provide the design basis which can be found in other sources.

Inspection: This section provides the inspection requirements for the individual component.

Maintenance: The section provides general information on the routine maintenance requirements of this element.

Frequency: This section outlines the best judgment of the designer on the system to the frequency of maintenance.

Comments: This section provides any particular comment on the site-specific features of this element. This is a summary only. The owner/operator should review the design drawings and documents carefully to understand the particular elements of the project. The end of this section should allow for the owner/operator to make notes on the specific program. This may include the selected maintenance procedure, cross-references to applicable design drawings, etc.

A list of the individual inspection/maintenance elements is provided in the table of contents. The guidelines are proposed for initial use with adjustments made as appropriate based upon specific project experience.

II. PROJECT OVERVIEW

Key permits issued (or applied for) on the project include:

- MeDEP Site Location of Development (City of Portland Delegated Review Authority)
- City of Portland Site Plan Review

The permit applications pending for the project include the design information for the stormwater system.

A copy of the permits and Stormwater Management Report should be appended to this manual as Appendix B. The Owner/Operator of the stormwater management system should review these permits for a general description and background of the project, as well as any specific permit conditions or requirements of the project.

The applicant has retained Stantec Consulting Services Inc. for civil engineering for The Forefront at Thompson's Point mixed-use commercial project in Portland, Maine. Stantec Consulting Services Inc. has prepared the design for the stormwater management facilities and may be contacted at:

Stantec Consulting Services Inc.
482 Payne Road
Scarborough, Maine 04074
(207) 883-3355

It is recommended the preparer of the plan be contacted with any particular questions on the design intent or similar issues.

The applicable plans/design documents which apply to the project are:

1. Civil Site Plans/Permit Applications Prepared by Stantec Consulting Services Inc.
2. The Erosion Control/Sedimentation Control Plan for the project.
3. The Stormwater Management Plan for the project.

A copy of these documents should be retained with the manual.

The site is tributary to the Fore River watershed.

The proposed design will include deep sump catch basins, oil absorbent sorbent booms, underground detention including the use of an arched chamber system, subsurface sand filter, Jellyfish® filter, Filterra® tree box filters (or approved equal), and collection, conveyance, and discharge systems.

The project is subject to the requirements of the City of Portland Code of Ordinances, Chapter 32. Specifically, the post construction stormwater management plan. The City requirements have been reiterated for ease of reference; however, the owner shall be responsible to meet the current City code.

"Any person owning, operating or otherwise having control over a BMP required by a post construction stormwater management plan shall maintain the BMP's in accordance with the approved plan and shall demonstrate compliance with that plan as follows:

(a) Inspections. The owner of operator of a BMP shall hire a qualified post-construction stormwater inspector to at least annually, inspect the BMP's, including but not limited to any parking areas, catch basins, drainage swales, detention basins and ponds, pipes and related structures, in accordance with all municipal and state inspection, cleaning and maintenance requirements of the approved post-construction stormwater management plan.

(b) Maintenance and repair. If the BMP requires maintenance, repair or replacement to function as intended by the approved post-construction stormwater management plan, the owner or operator of the BMP shall take corrective action (s) to address the deficiency or deficiencies as soon as possible after the deficiency is discovered and shall provide a record of the deficiency and corrective action (s) to the department of public services ("DPS") in the annual report.

(c) Annual report. The owner or operator of a BMP or a qualified post-construction stormwater inspector hired by that person, shall, on or by June 30 of each year, provide a completed and signed certification to DPS in a form provided by DPS, certifying that the person has inspected the BMP (s) and that they are adequately maintained and functioning as intended by the approved post-construction stormwater management plan, or that they require maintenance or repair, including the record of the deficiency and corrective action (s) taken.

(d) Filing fee. Any persons required to file an annual certification under this section shall include with the annual certification a filing fee established by DPS to pay the administrative and technical costs of review of the annual certification.

(e) Right of entry. In order to determine compliance with this article and with the post-construction stormwater management plan, DPS may enter upon property at reasonable hours with the consent of the owner, occupant or agent to inspect the BMP's."

III. STANDARD INSPECTION/MAINTENANCE DESCRIPTIONS

The following narratives describe the inspection/maintenance provisions for the Stormwater Management area. These O&M procedures will complement scheduled sweeping of the pavement areas anticipated to occur at least twice per year. The MeDEP will require the stormwater system be certified to meet the basis of design at five year increments. Proper O&M is necessary to make sure the system can be certified.

A. POND OVERFLOW

Preface: The stormwater detention facilities proposed for the project includes underground detention systems under the paved parking areas. The underground units are a proprietary system called StormTech® SC-740 Chambers. The storage portion of the 30-inch high chambers will travel to the Jellyfish® filter or down through a sand filter. The upper storage portion will bypass the treatment system for major storm events. If the detention storage volume were exceeded, water would spill over the overflows of the underground systems and flow to the next inlet or sheet flow over the curb line and down the perimeter slope to the Fore River.

Inspection: There are inspection ports that should be checked semiannually to make sure that water is not ponded due to blockage.

Maintenance: The upstream measures are intended to reduce and presumably eliminate maintenance cleanings. Major cleaning would likely require excavation of the system although some success has been reported with fire flow flushing.

B. CONTROL STRUCTURES

Preface: The proposed underground storage systems will serve as a detention pond controlled by the hydraulic outlet control structure. The outlet control structure will be designed to detain the water quality volume with a slow release through the treatment measure (Jellyfish® or Sand Filter) and discharge runoff for storm events larger than 1". Therefore, flow is anticipated to be released during and after every major storm event. Minor events will likely filter through the sand filter or pass through the Jellyfish® filter. The Jellyfish® filters have a controlled low flow discharge of 0.066 cfs per unit. The control structure will be designed to be inspected by removing the manhole covers and inspection of the valve, orifice, weir, and channels. Debris should be removed whenever observed and reported to key maintenance personnel since any debris would indicate lack of proper system O&M in the collection and conveyance system. Entry may require CONFINED SPACE ENTRY procedures and appropriately trained personnel.

Inspection: The outlet control structures must be inspected to assure it maintains its intended hydraulic characteristics. The inspection would note any debris or sediment which may accumulate in the structure and in the inlet and

outlet pipes. It is noted that it does not take much debris or silt to alter the hydraulic characteristics of the discharge. The inlet should be inspected to assure it is not blocked or restricted or there is sediment to the extent that its flow characteristics may be altered.

Maintenance: Maintenance of the control structure will consist primarily of removing debris which may accumulate and sealing the bulkhead if leakage occurs.

Frequency: The control structure should be inspected quarterly, and after a high intensity rainfall event (in excess of 3 inches in a 24-hour period).

Maintenance/Inspection Responsibility:

Inspection Personnel: The maintenance personnel will be an outside agent hired by Forefront Partners I, LP and will perform the scheduled maintenance/inspection.

Dates of inspections, maintenance performed, and any observed problems should be noted in the logs/records maintained by the outside agent.

Outside Contract Services: The outlet structure should be opened/inspected by the outside agent of Forefront Partners I, LP on a quarterly basis. The logs and records of inspections and maintenance of the control structures should be maintained during each 5-year re-certification interval.

Replacement Parts/Repairs: No normal replacement parts are required. Inspection personnel should have a bucket to remove debris from the structure. If leakage of the bulkhead occurs, it is recommended that repairs be made by a professional contractor familiar with hydraulic grouts.

C. STORMWATER INLETS

Preface: The success of any stormwater facility relies on the ability to intercept stormwater runoff at the design locations. Stormwater inlets may include catch basins, open culverts, culverts with bar screens, and field inlets. Inlets exist throughout the system at the points of collection as well as at the outlet of many ponds. Bar racks are common on many inlet locations which intercept an open channel. This section is directed at maintenance of the actual inlet point. A later section addresses more substantive maintenance of the structures and conveyance facilities. The inlets contain oil absorbent sorbent booms to retain oils and avoid discharge to downgradient areas. These will become saturated with oil over time and require replacement.

Inspection: The inspection of inlet points will need to be coordinated with other maintenance items, these include:

- Roadway/parking lot maintenance areas
- Building maintenance areas
- Grounds maintenance

The key elements of the inspection are to assure the inlet entry point is clear of debris and will allow the intended water entry.

Maintenance: The key maintenance is the removal of any blockage which restricts the entry of stormwater to the inlet. The removed material should be taken out of the area of the inlet and placed where it will not reenter the runoff collection system. Snow should be removed from inlets in parking lots/roadway areas. Grass clippings and leaves should be bagged and removed particularly near the yard inlets near the building.

Frequency: All inlets should be inspected on a monthly basis, and after/during significant storm events. A windshield survey is suitable for most inlets but off road inlets and pond structures require more rigorous inspection.

Maintenance/Inspection Responsibility:

Maintenance Personnel: The outside agent will perform the normal maintenance/inspections of the inlets and culvert crossings.

Comments: Maintenance of inlets is critical on this project.



POORLY STABILIZED INLET ALLOWS ENTRANCE OF DEBRIS AND REDUCED CAPACITY



STABILIZED INLETS REDUCE DEBRIS ACCUMULATION AND MAINTAIN DESIGN CAPACITY

D. TRIBUTARY DRAINAGE SYSTEM

Preface: Stormwater from most of the project will be directed through a conveyance system which transports the flow to water quality units, underground sand filter, Filterra® units, or Jellyfish® filter. This conveyance system will be principally overland flow discharging to piped drain systems. Most of the sediment carried by the drainage system is intended to be trapped in the catch basin isolator rows or water quality units. Maintenance of this system can play a major role in the long-term maintenance costs and the effectiveness of the treatment systems.

Inspection: The tributary drainage system should be periodically inspected to assure that it is operating as intended, and that its carrying capacity has not been diminished by accumulations of debris and sediment or other hydraulic impediments. On piped systems the inlets must be inspected to ensure the rims are set at the proper elevation to optimize flow entry and are not clogged with leaves or other debris. The inlet basins are normally equipped with sumps which will remove large sediment particles from the flow stream with hooded outlets. The inlet basins may be equipped with oil absorbent sorbent booms which should be inspected for saturation. Once the boom becomes saturated it will appear brown or black in color and will be ineffective at removing oils.

The level of sediment in the sumps should be checked to assure their effectiveness. Pipelines connecting the inlets should be checked to determine if siltation is occurring. This will be most critical on drain lines laid at minimal slopes. This can usually be accomplished by a light and mirror procedure.

In some projects most of the stormwater is carried in open swales, channels, or ditches. These conveyance channels may be rip rapped or vegetated, depending on the gradient and expected flow velocities. These facilities must be inspected to insure debris or sedimentation does not reduce their carrying capacity. Excess vegetative growth must also be noted. The surface protection

for the channels, either stone or vegetation, must be inspected to insure its integrity. Any areas subject to erosion should be noted.

Maintenance: Maintenance of the storm drainage system must assure that it continues to serve its design function on a long term basis, and that its operation does not transport excessive sedimentation to any downstream detention pond, or the receiving waters. Elevations on the rim of catch basins should be adjusted as needed to assure optimal water entry. Depending on the frost susceptibility of the soil, the rims may become elevated over time causing flow to circumvent the inlet. When the sump in an inlet restricts capacity and is half full with silt or other deleterious materials, the catch basin cleaning would normally be accomplished with vacuum trucks contracted as a maintenance service for the development center. The removed material must be disposed of at an approved site for such materials. The removed and replaced sorbent boom shall be disposed of in accordance with local and state regulations.

If sediment in the pipeline exceeds 20% of the diameter of the pipe, it should be removed. This may be accomplished by hydraulic flushing, or by mechanical means. If hydraulic flushing is used the downstream conditions should be analyzed. In general a sump or sediment trap should be used where it can be flushed into the underground detention pond, since it will reduce pond volume and hasten the time when it must be cleaned.

Frequency: The piped drainage system should be inspected on an annual basis. Adjustment of inlet rim elevations should be on an as needed basis. Cleaning catch basin sumps and pipelines will depend on the rate of accumulation.

Maintenance/Inspection Responsibility:

Maintenance Personnel: Outside agent appointed by Forefront Partners I, LP.

Special Services: The owner will elect to contract with an independent agent for cleaning catch basins, sumps, pipelines, and replacement of sorbent booms. Remedial source control measures may be performed by the owner or an outside service depending upon the nature of the particular situation.

Comments: Maintenance of inlets is critical on this project.



A WELL STABILIZED VEGETATED SWALE SHOWS LITTLE SIGNS OF EROSIVE VELOCITIES OR FLOWS. THIS SWALE ALSO FUNCTIONS AS A POND SPILLWAY

E. JELLYFISH® FILTER

Preface: The primary purpose of the Jellyfish Filter is to capture and remove pollutants from stormwater runoff. As with any filtration system, these pollutants must be removed to maintain the filter's maximum treatment performance. Regular inspection and maintenance are required to insure proper functioning of the system.

It is recommended that Jellyfish Filter inspection and maintenance be performed by professionally trained individuals, with experience in stormwater maintenance and disposal services. Maintenance procedures may require manned entry into the Jellyfish structure. Only professional maintenance service providers trained in confined space entry procedures should enter the vessel. Procedures, safety and damage prevention precautions, and other information, included in these guidelines, should be reviewed and observed prior to all inspection and maintenance activities.

Inspection: Inspection of the Jellyfish Filter is key in determining the maintenance requirements for, and to develop a history of the site's pollutant loading characteristics. In general, inspections should be performed at the times indicated below; or per the approved project stormwater quality documents (if applicable), whichever is more frequent.

- Post-construction inspection is required prior to putting the Jellyfish Filter into service. All construction debris or construction-related sediment within the device must be removed, and any damage to system components repaired.
- A minimum of two inspections during the first year of operation to assess the sediment and floatable pollutant accumulation, and to ensure proper functioning of the system.
- Inspection frequency in subsequent years is based on the inspection and maintenance plan developed in the first year of operation. Minimum frequency should be once per year. Inspection is recommended after each major storm event.
- Immediately after an upstream oil, fuel or other chemical spill.

Inspection activities are typically conducted from surface observations and include:

- Observe if standing water is present
- Observe if there is any physical damage to the deck or cartridge lids
- Observe the amount of debris in the Maintenance Access Wall (MAW)

The following procedure is recommended when performing inspections:

- Provide traffic control measures as necessary.
- Inspect the MAW for floatable pollutants such as trash, debris, and oil sheen.
- Measure oil and sediment depth by lowering a sediment probe through the

MAW opening until contact is made with the floor of the structure. Retrieve the probe, record sediment depth, and presences of any oil layers and repeat in multiple locations within the MAW opening. Sediment depth of 12 inches or greater indicates maintenance is required.

- Inspect cartridge lids. Missing or damaged cartridge lids to be replaced.
- Inspect the MAW, cartridge deck, and backwash pool weir, for cracks or broken components. If damaged, repair is required.
- Dry weather inspections: inspect the cartridge deck for standing water.
  - No standing water under normal operating condition.
  - Standing water inside the backwash pool, but not outside the backwash pool, this condition indicates that the filter cartridges need to be rinsed.
  - Standing water outside the backwash pool may indicate a backwater condition caused by high water elevation in the receiving water body, or possibly a blockage in downstream infrastructure.
- Wet weather inspections: observe the rate and movement of water in the unit. Note the depth of water above deck elevation within the MAW.
  - Less than 6 inches, flow should be exiting the cartridge lids of each of the draindown cartridges (i.e. cartridges located outside the backwash pool).
  - Greater than 6 inches, flow should be exiting the cartridge lids of each of the draindown cartridges and each of the hi-flo cartridges (i.e. cartridges located inside the backwash pool), and water should be overflowing the backwash pool weir.
  - 18 inches or greater and relatively little flow is exiting the cartridge lids and outlet pipe, this condition indicates that the filter cartridges are occluded with sediment and need to be rinsed.

Maintenance: Maintenance frequencies and requirements are site specific and vary depending on pollutant loading. Maintenance activities may be required in the event of an upstream chemical spill or due to excessive sediment loading from site erosion or extreme runoff events. It is a good practice to inspect the system after major storm events. Recommended maintenance activities typically include:

- Removal of oil, floatable trash and debris.
- Removal of collected sediments.
- Rinsing and re-installing the filter cartridges.
- Replace filter cartridge tentacles, as needed.

Required maintenance for the Jellyfish Filter is based upon results of the most recent inspection, historical maintenance records, or the site specific water quality management plan; whichever is more frequent. In general, maintenance requires some combination of the following:

- Sediment removal for depths reaching 12 inches or greater, or within 3 years of the most recent sediment cleaning, whichever occurs sooner.
- Floatable trash, debris, and oil must be removal.
- Filter cartridges rinsed and re-installed as required by the most recent inspection results, or within 12 months of the most recent filter rinsing, whichever occurs sooner.
- Replace filter cartridge if rinsing does not remove accumulated sediment from the tentacles, or if tentacles are damaged or missing. It is recommended that tentacles should remain in service no longer than 5 years before replacement.
- Damaged or missing cartridge deck components must be repaired or replaced as indicated by results of the most recent inspection.
- The unit must be cleaned out and filter cartridges inspected immediately after an upstream oil, fuel, or chemical spill. Filter cartridge tentacles should be replaced if damaged by the spill.

The following procedures are recommended when maintaining the Jellyfish Filter:

- Provide traffic control measures as necessary.
- Open all covers and hatches. Use ventilation equipment as required, according to confined space entry procedures.
- Caution: Dropping objects onto the cartridge deck may cause damage. Perform Inspection Procedure prior to maintenance activity.
- To access the cartridge deck for filter cartridge service, descend the ladder and step directly onto the deck. Caution: Do not step onto the maintenance access wall (MAW) or backwash pool weir, as damage may result. Note that the cartridge deck may be slippery.
- Filter Cartridge Rinsing Procedure
    - Remove a cartridge lid.
    - Remove the cartridge from the receptacle using the lifting loops in the cartridge head plate. Caution: Should a snag occur, do not force the cartridge upward as damage to the tentacles may result. Rotate the cartridge with a slight sideways motion to clear the snag and continue removing the cartridge.
    - Thread a rope or cord through the lifting loops and lift the filter cartridge from the cartridge deck to the top surface outside the structure.
    - Caution: Immediately replace and secure the lid on the exposed empty receptacle as a safety precaution. Never expose more than one empty cartridge receptacle.
    - Repeat the filter cartridge removal procedure until all of the cartridges are located at the top surface outside the structure.
    - Disassemble the tentacles from each filter cartridge by rotating counter-clockwise. Remove the tentacles from the cartridge head plate.

- Position a receptacle in a plastic tub or garbage can such that the rinse water is captured. Using a low-pressure garden hose sprayer, direct a wide-angle water spray at a downward 45° angle onto the tentacle membrane, sweeping from top to bottom along the length of the tentacle. Rinse until all sediment is removed from the membrane. Caution: Do not use a high pressure sprayer or focused stream of water on the membrane. Excessive water pressure may damage the membrane.
- Remove rinse water from rinse tub or garbage can using a vacuum hose as needed.
- Slip the O-ring over the pipe nipple on the top end of the tentacle and reassemble onto the cartridge head plate; hand tighten.
- If rinsing is ineffective in removing sediment from the tentacles, or if tentacles are damaged, provisions must be made to replace the spent or damaged tentacles with new tentacles. Contact Contech to order replacement tentacles.
- Lower a rinsed filter cartridge to the cartridge deck. Remove the cartridge lid on a receptacle and carefully lower the filter cartridge into the receptacle until the head plate gasket is seated squarely on the lip of the receptacle. Caution: Should a snag occur when lowering the cartridge into the receptacle, do not force the cartridge downward; damage may occur. Rotate the cartridge with a slight sideways motion to clear the snag and complete the installation.
- Replace the cartridge lid on the exposed receptacle. Check the fit before completing rotation to a firm hand-tight attachment. Rinse away any accumulated grit from the receptacle threads if needed to get a proper fit.
- Repeat cartridge installation until all cartridges are installed.

- Vacuum Cleaning Procedure
  - Caution: Perform vacuum cleaning of the Jellyfish Filter only after filter cartridges have been removed from the system. Access the lower chamber for vacuum cleaning only through the maintenance access wall (MAW) opening, being careful not to damage the flexible plastic separator skirt that is attached to the underside of the deck. The separator skirt surrounds the filter cartridge zone, and could be torn if contacted by the wand. Do not lower the vacuum wand through a cartridge receptacle, as damage to the receptacle will result.
  - To remove floatable trash, debris, and oil, lower the vacuum hose into the MAW opening and vacuum floatable pollutants off the surface of the water. Alternatively, floatable solids may be removed by a net or skimmer.
  - Using a vacuum hose, remove the water from the lower chamber to the sanitary sewer, if permitted by the local regulating authority, or into a separate containment tank.
  - Remove the sediment from the bottom of the unit through the MAW opening.

- For larger diameter Jellyfish Filter manholes (8-ft, 10-ft, 12-ft diameter), complete

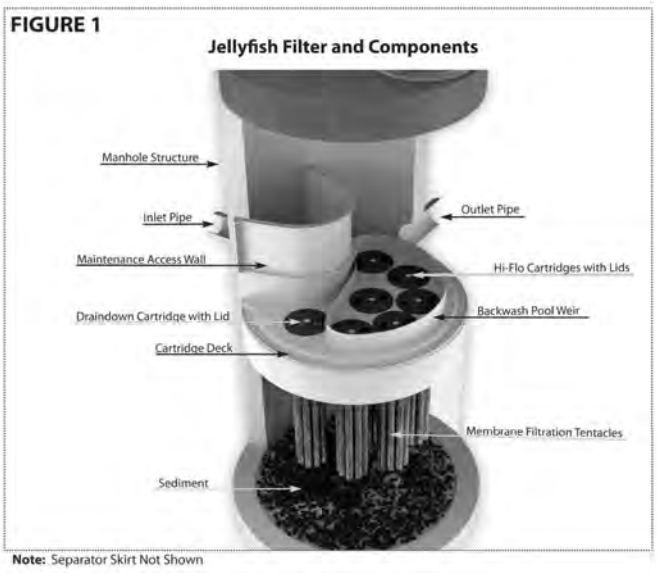
  sediment removal may be facilitated by removing a cartridge lid from an empty receptacle and inserting a jetting wand (not a vacuum wand) through the receptacle. Use the sprayer to rinse loosened sediment toward the vacuum hose in the MAW opening, being careful not to damage the receptacle.

- After the unit is clean, re-fill the lower chamber with water if required by the local jurisdiction, and re-install filter cartridges.

- Dispose of sediment, floatable trash and debris, oil, spent tentacles, and water according to local regulatory requirements.

- Chemical Spills
  - Caution: If a chemical spill has been captured by the Jellyfish Filter, do not attempt maintenance. Immediately contact the local hazard response agency, and contact Contech Engineered Services.

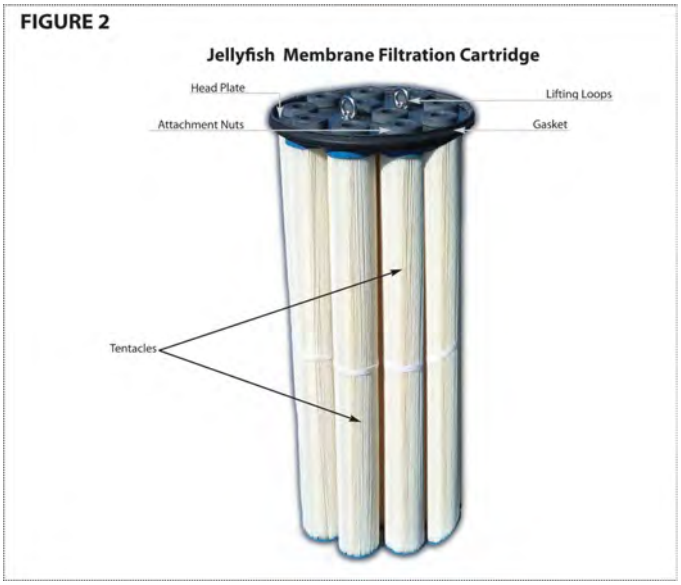
Below is a cut-away schematic of the Jellyfish Filter manhole with key components identified (6-ft. diameter manhole is depicted):



The Jellyfish Filter has no moving parts to wear out and therefore maintenance activities are generally focused on pollutant removal and filter cartridge service.

Below is a schematic of a Jellyfish Filter membrane filtration cartridge. Tentacles can be easily removed from the head plate and rinsed or replaced as needed.

FIGURE 2



Frequency: The Jellyfish Filter should be inspected a minimum of 2 times during the first year of operation and a minimum of once per year in subsequent years. Inspection is also recommended after each major storm event or immediately after an upstream oil, fuel or other chemical spill.

Maintenance/Inspection Responsibility:

Inspection Personnel: It is recommended that Jellyfish Filter inspection and maintenance be performed by professionally trained individuals, with experience in stormwater maintenance and disposal services. Maintenance procedures may require manned entry into the Jellyfish structure. Only professional maintenance service providers trained in confined space entry procedures should enter the vessel. Procedures, safety and damage prevention precautions, and other information, included in these guidelines, should be reviewed and observed prior to all inspection and maintenance activities.

Replacement Parts/Repairs: Jellyfish Filter cartridges, replacement tentacles, cartridge lids, and other system components can be ordered by contacting: Contech Engineered Solutions, 1-800-548-4667.

Comments: The benefits of regular inspection and maintenance are many from ensuring maximum operation efficiency, to keeping maintenance costs low, to the continued protection of natural waterways and provide the key to the Jellyfish Filter's long and effective service life.

F. PRETREATMENT SOLIDS REMOVAL (WATER QUALITY UNITS)

Preface: Certain vendors provide pre-manufactured systems which are effective in removal of suspended sediment particularly sand used for winter maintenance. Some of the units operate on a vortex principal with the sediment being swept from the stormwater stream and stored in the base of the unit. Other units are long linear units designed in accordance with Stokes Law. The units are constructed of durable materials requiring little maintenance of the physical component and typically are accessible via an at grade manhole cover.

The vendor of the unit should provide information on suggested maintenance which should be appended to this manual.

These units typically do not remove nutrients, metals, and dissolved materials.

Inspection: Most water quality units have an access manhole cover for inspection. The sediment storage zone is the bottom of the system and lies below the vortex in this type of unit or along the bottom. Because of the depth, a pole staff, or sludge judge is helpful in determining the depth of the sediment. Inspection should comply with applicable confined space regulations and vendor recommendations. Oil and floatables are also trapped in certain devices and should be removed.

Maintenance: The typical unit maintenance is the removal of sediment. Stantec Consulting Services Inc. typically recommends the units be inspected in the spring and late fall with adjustments based on historic operating experience.

The vendor may have specific scheduled maintenance schedules which should be followed.

The structural components of the system are principally stainless steel, concrete, and or climate resistant plastics.

Frequency: Twice per year or as outlined above.

Applicability: This system has three water quality units. The three linear units are in Zone A upstream of the underground sand filter.

Special Notes: These units are designed for a specific flow and catchment area. If the contributing watershed is increased, the need for design modifications or supplements to the water quality units should be examined.

G. IN-LINE STORAGE (UNDERGROUND DETENTION)

Preface: In-line storage may be used for storage of water ahead of treatment systems, or for buried underdrained filters. Because of the difficulty in access for inspection and maintenance, the units will be preceded with pretreatment to remove sediment.

The underground storage systems for this project include StormTech® chamber system for detention ahead of water quality treatment units or underground sand filter.

In-line storage systems typically have a restrictive outlet when used for detention. This outlet is a separate downstream appurtenance with orifices, weirs, and overflows.

Specific design cautions should be considered if in-line storage is used as part of a stormwater management system. In-line storage systems have multiple inspection ports. The locations should consider the need for confined space entry.

Inspection*:* Inspection of in-line storage systems should follow all protocols for confined space entry. Inspections should include:

- Observations of standing water and monitoring drainage to make sure drainage is achieved 72 hours after a rainfall of 1 inches or greater (annually) for Jellyfish® filter systems and 48 hours for underground sand filters.
- Sedimentation
- Outlet Controls
- Inlets
- Inspection of each isolated tank series, run of pipe, distribution of manhole, and header pipe

Maintenance*:* Maintenance of in-line storage systems will vary depending upon the extent of pretreatment, the nature of the receiving bodies, and the design. Leakage, accumulated sediment, and repairs of any damaged portion of the system should be performed immediately upon discovery.

Maintaining Responsibility: A contract for third party maintenance needs to be established before occupancy.

Frequency*:* After successful operation of the in-line storage system for one year or two major storms (whichever is longer), quarterly inspections are recommended except the drawdown test after a one-inch rain may be annually only. Maintenance repairs should be performed as soon as possible. The Site Location of Development Permit will require recertification on a periodic basis as stipulated by the permit conditions.

Applicability*:* Underground detention will be employed on this project

H. FILTERRA® TREE BOX FILTERS

Preface: The Filterra® units consist of a concrete container with an underdrain at the base, proprietary filtration media, a top layer of mulch and plants specifically selected for nutrient transformation and uptake. Access is provided through a surficial tree grate. Water enters through a curb inlet and discharges through the underdrain at the base of the tank. The Filterra® tree box type soil filter is installed upstream of an overflow catch basin.



Inspection:
Inspection of the Filterra® unit should include review of the health and condition of the plant material, the surficial mulch for

degradation and accumulation of debris and litter, and the curb inlet for clogging and debris.

Maintenance: Prune plant material during the spring and fall and replace top layer of mulch annually. The first year's maintenance shall be provided by the Manufacturer to ensure the systems are operating as intended. Ongoing inspection and maintenance shall be performed by a professional with knowledge of erosion and stormwater control, including a working knowledge of the Filterra®.

Frequency: Inspect quarterly and at any time when sustained ponding is observed near the inlet.
Maintenance/Inspection Responsibility: A third party inspection company with knowledge of stormwater controls, including a working knowledge of the Filterra® system.

Maintenance Personnel: An outside agent of Forefront Partners I, LP.

Comments: Maintenance of units are critical on this project to prevent short term clogging and replacement.

Applicability: There are several Filterra® units for the project.

I. SORBENT BOOMS

Preface: During construction, sorbent booms will be installed in the catch basins which have pavement areas. The intent of these is to absorb oil and runoff from new pavement surfaces. These will be removed and replaced when construction of the project is complete and should be inspected quarterly for the first year and annually thereafter.

Inspection: The sorbent boom should be raised out of the inlet, inspected, and replaced if necessary. Inspection should occur for the first year and annually thereafter concurrent with the catch basin cleaning.

Recommendation: It is recommended this project have additional sorbent booms or pillows onsite in the event of an unexpected spill or if oil sheen is observed frequently on any inlet.

Maintenance: The inspection and replacement should be conducted as part of a third party O&M contract and require disposal of used sorbent booms as "special wastes".

J. PARKING LOT CLEANING

To protect the catch basin sediment sumps, underground storage, Filterra® tree box, and Jellyfish® filter, it is recommended the parking lot be swept at mid winter and spring and that power washing with an appropriate vacuum/power wash vehicle be done once a year.

Maintenance: It is recommended this service be contract with the firm that maintains lawns and landscaping.

K. LITTER

Litter should be removed as a matter of course by workers and a part of the grounds maintenance contract.

L. SUMMARY CHECKLIST

The above described inspection and maintenance items have been summarized on a checklist appended hereto as Appendix C.

IV. PROGRAM ADMINISTRATION

A. GENERAL

A reliable administrative structure must be established to assure implementation of the maintenance programs described in the foregoing section. Key factors that must be considered in establishing a responsive administrative structure include:

1. Administrative body must be responsible for long-term operation and maintenance of the facilities.

2. Administrative body must have the financial resources to accomplish the inspection and maintenance program over the life of the facility.

3. The administrative body must have a responsible administrator to manage the inspection and maintenance programs.

4. The administrative body must have the staff to accomplish the inspection and maintenance programs, or must have authority to contract for the required services.

5. The administrative body must have a management information system sufficient to file, retain, and retrieve all inspection and maintenance records associated with the inspection and maintenance programs.

If any of the above criteria cannot be met by the entity assigned inspection and maintenance responsibilities, it is likely that the system will fail to meet its water quality objectives at some point during its life. While each of the above criteria may be met by a variety of formats, it is critical to clearly establish the assigned administrative body in a responsible and sustainable manner.

B. RECORD KEEPING

Records of all inspections and maintenance work accomplished must be kept and maintained to document facility operations. These records should be filed and retained for a minimum 5-year time span. The filing system should be capable of ready retrieval of data for periodic reviews by appropriate regulatory bodies. Where possible, copies of such records should also be filed with the designated primary regulatory agency for their review for compliance with permit conditions. Typical inspection and maintenance record forms are attached hereto as Appendix B.

C. CONTRACT SERVICES

In some instances or at specific times, the Maintenance Personnel may not have the staff to conduct the required inspection and/or maintenance programs as outlined in this document. In such cases the work should be accomplished on a contractual basis with a firm or organization that has the staff and equipment to accomplish the required work.

The service contract for inspection and maintenance should be formal, well written legal document which clearly defines the services to be provided, the contractual conditions that will apply, and detailed payment schedules. Liability insurance should be required in all contracts.

APPENDIX A

Sample Inspection Logs

THE FORERONT AT THOMPSON'S POINT
PORTLAND, MAINE

STORMWATER MANAGEMENT
IN-LINE STORAGE
ANNUAL INSPECTION & MAINTENANCE LOG

FACILITY:		**YEAR:**	
LOCATION:		**CONTRACTOR:**	
FUNCTION:		**INSPECTOR:**	
DATE OF INSPECTION:			
ITEM IDENTIFICATION	**DESCRIPTION OF CONDITIONS**	**MAINTENANCE ACCOMPLISHED**	**DATE OF MAINTENANCE**
GENERAL COMMENTS:			

THE FOREFRONT AT THOMPSON'S POINT
PORTLAND, MAINE

STORMWATER MANAGEMENT
IN-LINE STORAGE
MONTHLY INSPECTION & MAINTENANCE LOG

FACILITY:			YEAR:			
LOCATION:			CONTRACTOR:			
FUNCTION:						
				OVERFLOW WEIR		
MONTH	DAY	INSPECTOR	WATER DEPTH	CLEAR	DEBRIS	WEIR CONDITION
JANUARY						
FEBRUARY						
MARCH						
APRIL						
MAY						
JUNE						
JULY						
AUGUST						
SEPTEMBER						
OCTOBER						
NOVEMBER						
DECEMBER						
LIST SPECIAL MAINTENANCE UNDERTAKEN:						

THE FOREFRONT AT THOMPSON'S POINT
PORTLAND, MAINE

STORMWATER MANAGEMENT
IN-LINE STORAGE
SEMI-ANNUAL INSPECTION & MAINTENANCE LOG

SEMI-ANNUAL INSPECT 1.2	FACILITY:
DATE:	LOCATION:
INSPECTOR:	FUNCTION:
WEIR CONDITION:	
OUTLET CONDITION	

FORE BAY SUMP	EST. DEPTH SED.	REMOVED? Y/N	EST. VOL. CY	WHERE DISPOSED OF	STRUCTURAL CONDITION

CONTROL STRUCTURE:
DESCRIBE CONDITIONS FOUND & MAINTENANCE ACCOMPLISHED:

APPENDIX B

Permits for Project

(To be Added at a Subsequent Time)

APPENDIX C

Summary Checklist
Inspection and Maintenance

Stormwater Management System
Maintenance Program
Summary Checklist

Item	Commentary	Frequency				
		Monthly	Quarterly	Semi-Annual	Annual	Long Term
Control Structure	Inspect outlet control to assure it maintains its hydraulic characteristics. Inspect inlets for blockage.		X			
Stormwater Inlets in Series	Stormwater inlets allow flow entry from a surface swale to a piped system. Entry may or may not be equipped with a bar rack. Inspect entry for debris accumulation. Remove debris to allow unimpeded entry. Lawn clippings and leaves should be removed from yard areas.	X			X Clearing	
Tributary Drainage	Inspect to assure that the carrying capacity has not been diminished by debris, sediment or other hydraulic impediments.				X	
Jellyfish® Filter	The operation and maintenance of the Jellyfish® filter system is limited to annual inspections and solids removal on an as-needed basis.			X First year only	X	X
In-Line Storage (Underground detention)	Inspect for standing water not anticipated, sedimentation, outlet control, inlets. Jet Stream sediment removal from Isolator Row				X	X
Filterra® Units (or approved equal)	The Filterra® units should be inspected for sedimentation accumulation in the sump and mulch area. Replace mulch, prune plant(s), clean Isolator Row.				X	
Sorbent Booms	Sorbent boom should be raised out of the inlet, inspected, and replaced if necessary.		X For first 12 months		X After first year	
Parking Lot Cleaning	Parking lot be swept at mid winter and spring. Power washing with an appropriate vacuum/power wash vehicle be done once a year.			X	X	
Litter	Litter should be removed daily.					

CITY OF PORTLAND WASTEWATER CAPACITY APPLICATION

Department of Public Services,
55 Portland Street,
Portland, Maine 04101-2991

Bradley Roland, P.E.
Water Resources Division

Date: 2024.08.23

1. Please, Submit Utility, Site, and Locus Plans.

Site Address: 125 Thompson's Point Rd

Chart Block Lot Number: 201/A/005 - Lot 17

Proposed Use: Multi-Family Residential

Previous Use: N/A

Existing Sanitary Flows: 0 GPD

Existing Process Flows: 0 GPD

Description and location of City sewer that is to receive the proposed building sewer lateral.

Thompson's Point Pump Station

Site Category		
	Commercial *(see part 4 below)*	
	Industrial *(complete part 5 below)*	
	Governmental	
	Residential	X
	Other *(specify)*	

Clearly, indicate the proposed connections, on the submitted plans.

2. Please, Submit Contact Information.

City Planner's Name: Matt Grooms Phone: 207-756-8083

Owner/Developer Name: Cathartes

Owner/Developer Address: 501 Danforth Street, Portland, ME

Phone: 617-840-4778 Fax: E-mail: robs@cathartes.com

Engineering Consultant Name: Bo Kennedy, P.E.

Engineering Consultant Address: 18 Van Aken Way Portland, ME

Phone: 207-747-5288 ext 5 Fax: 207-747-5288 E-mail: bo@placemakerpartners.com

Note: Consultants and Developers should allow +/- 15 days, for capacity status, prior to Planning Board Review.

3. Please, Submit Domestic Wastewater Design Flow Calculations.

Estimated Domestic Wastewater Flow Generated: 38,670 GPD

Peaking Factor/ Peak Times: 6/ Morning Hours

Specify the source of design guidelines: *(i.e. "Handbook of Subsurface Wastewater Disposal in Maine," __ "Plumbers and Pipe Fitters Calculation Manual," __ Portland Water District Records, Other (specify)* Maine Subsurface Disposal Rules

Note: Please submit calculations showing the derivation of your design flows, either on the following page, in the space provided, or attached, as a separate sheet.

4. Please, Submit External Grease Interceptor Calculations.

Total Drainage Fixture Unit (DFU) Values: N/A

Size of External Grease Interceptor: N/A

Retention Time: N/A

Peaking Factor/ Peak Times: N/A

Note: In determining your restaurant process water flows, and the size of your external grease interceptor, please use The Uniform Plumbing Code. Note: In determining the retention time, sixty (60) minutes is the minimum retention time. Note: Please submit detailed calculations showing the derivation of your restaurant process water design flows, and please submit detailed calculations showing the derivation of the size of your external grease interceptor, either in the space provided below, or attached, as a separate sheet.

5. Please, Submit Industrial Process Wastewater Flow Calculations

Estimated Industrial Process Wastewater Flows Generated: N/A GPD

Do you currently hold Federal or State discharge permits? Yes ____ No ____

Is the process wastewater termed categorical under CFR 40? Yes ____ No ____

OSHA Standard Industrial Code (SIC): *(http://www.osha.gov/oshstats/sicser.html)*

Peaking Factor/Peak Process Times: _____

Note: On the submitted plans, please show where the building's domestic sanitary sewer laterals, as well as the building's industrial-commercial process wastewater sewer laterals exits the facility. Also, show where these building sewer laterals enter the city's sewer. Finally, show the location of the wet wells, control manholes, or other access points; and, the locations of filters, strainers, or grease traps.

Note: Please submit detailed calculations showing the derivation of your design flows, either in the space provided, or attached, as a separate sheet.

Proposed and Existing Forefront at Thompson's Point Development
Estimated Thompson's Point Wastewater Design Flows

	Quantity	Unit	Flow per Unit	Total Design Flow (GPD)
Hotel				
Hotel	*90,000*	*SF*		
	148	Room(s)	100 gpd/room	14,800
	20	Employee	12 gpd/employee	240
Hotel Service Restaurant (3 meals/day)	5,620	SF +/-		
	174	Seat(s)	30 gpd/seat	5,220
	10	Employee	12 gpd/employee	120
			Hotel Subtotal	**20,380**
Brick North - Building A				
Mixed Use			Previously Calc. 2015.11.05	5,441
			Brick North Subtotal	**5,441**
Brick South - Building C				
Event/Assembly Space			Previously Calc. 2015.11.05	12,500
			Brick South Subtotal	**12,500**
CMTM				
Cultural Center	555	Visitors	6 gpd/Visitor	3,330
	15	Employee	15 gpd/Employee	225
			CMTM Subtotal	**3,555**
Lot 11 Redevelopment				
F2 - Artist Studio and Presentation Space	1,888	SF	**100 gpd**	**100**
Office Use/Sudios	6	Employee	**12 gpd/employee**	**72**
			either or which ever is >	**100**
Event/Assembly Space	50	Seats	5 gpd/seat	**250**
			Studio Subtotal	**350**
F1 - Warehouse	13,000	SF	**100 gpd**	**100**
	30	Employee	**12 gpd/employee**	**360**
			either or which ever is >	**360**
			Lot 11 Subtotal	**710**
B2 Concessions	1,280	SF	**100 gpd**	**100**
	600	Visitors	**5 gpd/Visitor**	**3,000**
	5	Employee	**either or which ever is >**	**3,000**
			Lot 9 Subtotal	**3,000**
G - Multi-Family Residential	22	Studios		
	101	1 Bedroom	**120 gpd - single bedroom & Studios**	**17,520**
	23	1 Bedroom +		
	92	2 Bedroom	**180 gpd - two bedroom (90 gpd/bedroom)**	**16,560**
	17	3 Bedroom	**270 gpd - three bedroom**	**4,590**
	255	Units	**Lot 17 Subtotal**	**38,670**
			Total Cumulative Site Flow	**84,256 GPD**

THIS APPLICATION PHASE

Assumptions:

Hotel	Hotel and Rest. Share kitchen	Seats per prelim. Floor plan
Brick North	Calculated as part of Level III in 2015	
Brick South	Calculated as part of Level III in 2015	
Artist Studio	Calculated assuming it will operate like an office with indivudual spaces occupied	

References:

Chapter 241 State of Maine Subsurface Disposal Rules, DHS; January 18, 2011
Site Master Plan, September 2015
Traffic Study, Gorrill-Palmer, September 2015
Mechanical Engineer, Bennett Engineering October 2015

From: Bo Kennedy
To: AMaP MEANS; Robert Bartels
Subject: Thompson"s Point - Building G - Ability To Serve
Date: Monday, August 26, 2024 11:32:00 AM
Attachments: C - SITE PLANS (EX-OVRLL-UTIL).pdf
2024.08.26 - BLDG G - City Wastewater Application.pdf
L- LANDSCAPE PLANS.pdf
Multi-unit Resi - Peak Domestic Water Flow Based on Fixture Count 2016.xlsx

---

Hello Rob,

I'm writing on behalf of Cathartes, a development group partnering with Forefront Partners to construct a 255 Unit Multi-Family residential building (referred to as Building G on the updated Master Development Plan) in the North westerly corner of the Subdivision Plan. Development on Lot 17 of the Sectional 4 Subdivision Plat, anecdotally referred to as the "Panhandle", is being developed in accordance with the Master Development Plan and Subdivision Plan approved on or about 2014 and 2015, respectively. This portion of the project will be submitted for the Planning Authority and Planning Board review as part of a Major Site Plan Application.

I have enclosed some Draft plans, the City's Wastewater Application, and peak domestic water flow spreadsheet for review and consideration in advance of the imminent Site Plan Application Submission. I am also sending this information to the City of Portland Wastewater Department for their Review.

I am seeking an updated "Ability To Serve" letter from all utilities at this time. If your department can provide the applicant with this level of assurances, we will continue to work with the Department on the design details over the course of the Site Plan Review.

Please contact me if you have any questions.

Sincerely,

Bo Kennedy P.E.
Project Manager/Engineer

Placemaker Partners, LLC
18 Van Aken Way
Portland, ME 04102
Tel. (207) 747-5288 Ext. 5
bo@placemakerpartners.com

Unitil
ME GAS OPERATIONS

June 11, 2024

Bo Kennedy
Placemaker Partners, LLC
18 Van Aken Way
Portland, ME 04102

Re: Ability to Serve for 125 Thompson's Point Rd, Portland ME

Dear Bo,

Thank you for your interest in using natural gas for the above referenced project.

This is to confirm that natural gas can be made available from our distribution system to serve your proposed project.

Any improvements to the existing distribution system that are necessary to provide this service, as well as the design of the gas system in the project itself, will be established as the overall design and scope of your project progresses.

All work necessary to provide service will be performed in accordance with the Maine Public Utilities Commission requirements.

If you have any further questions or require additional information, please contact me directly at (207) 541-2536 or email at morrisons@unitil.com.

Sincerely,

Sara Morrison
Sara Morrison
Business Development Representative
(T) 207-541-2536 (F) 207-541-2536

ME GAS OPERATIONS
376 Riverside Industrial Parkway
Portland, ME 04103-3586

T 207.541.2508 www.unitil.com

From: MITCHELL, JOSHUA
To: Bo Kennedy
Subject: CMP Three Phase Service Process and Ability to Serve Letter for 125 Thompson's Point Road in Portland Maine
Date: Monday, July 1, 2024 10:00:21 AM
Attachments: image001.png
Easement_Information_Worksheet.doc
blank W9.pdf
Standard Easement Sample.pdf
EDET.xlsx

Bo Kennedy
Placemaker Partners, LLC
501 Danforth Street
Portland, ME 041

RE: 125 Thompson's Point Road in Portland
Letter of Ability to Serve Request

SAP: 10301097388
Project Description:

The proposed development includes 255-unit residential building and approximately 455 car structured garage with Electric Vehicle charging located at 125 Thompson's Point Road, Portland, ME 04102. The proposed residential development is expected to provide 255 units consisting of Studio, 1 bedroom, 2 bedroom, and 3-bedroom apartments with commons areas and amenities.

CMP has the ability to serve the proposed project in accordance with our CMP Handbook (web link below). We can provide you the desired pad or pole mounted transformers per your request and city approval, in accordance with our CMP Handbook of Standard Requirements. If you have any questions on the process, or need help in completion of the documents, please contact CMP at 800-565-3181.

Here is our typical process for getting your three phase or CT rated single phase service installed. If you have any questions, please let us know. The underlined links will redirect you to the appropriate site for additional information.

Service Milestones for Three Phase Services and CT Rated Single Phase Services. There are additional requirements for primary metered Solar Service Installations listed in the Chapter 324 Interconnections section below. Please refer to CMP Installation Checklists for other installations.

- Call 800-750-4000 option 4 to establish a new account (if needed) and an SAP work order. Please provide both of these to me.
- Submit Load information. Please complete the attached EDET (excel file) using load information. Please complete this and email back to me. If the loads are over 500 kw, more in depth load studies may be required with our Distribution Planning and Transmission Planning Departments. Be advised that these will involve more detailed load information, a load study agreement (signed contract), as well as other items. This additional study process may add up to two additional months to completion of the job.

- Submit the easement information worksheet, including where any CMP structures may be on ANY private property (Poles, Wires, Anchors). You are responsible for obtaining all information for all required easements. Please complete this form and either email or fax back to me.
- Submit any electronic drawings (PDF (preferred) or DWG files) of the site layout and proposed electrical connections.
- For Primary Metered installations (including PV), please have the access road in for pole staking.
- Preliminary meetings with CMP Advisor and Engineer to determine details of job (I will need to schedule with your electrician/contractor-please let me know who this is)
- Field planner design appointment scheduled once the preliminary information is complete. This will allow us to cost out the job and develop a CMP Invoice. The invoice is typically generated 5-6 weeks after the design appointment. This expires after 90 days from the invoice date.
- Submit completed W9 so that your bill can be properly processed. This is a new CMP process.
- CMP submits invoice to the customer for payment (typically via email). Payment received from customer.
- Easements (based on easement information worksheet) sent out, signed and originals returned to CMP.
- Job scheduled for completion after the electrical inspection has been received.

This process can take several months, depending upon several factors including transformer or materials delivery, return of completed paperwork, and other jobs in the system that may be ahead of yours. In addition, contact with the other utilities, including telephone and cable, should be commenced as soon as practical. They may have additional work or charges in addition to the CMP work required to bring your project on line.

As you may be aware, there are global supply chain issues impacting the utility industry. CMP is closely monitoring and managing their inventory in order to serve our customers. Larger padmount transformers may not be readily available for the date that you will need to be energized. Please consider this as part of your construction plan. The energy service advisor will continue to work closely with you and let you know as soon as the transformer becomes available. Should you have any questions or concerns throughout this process, please do not hesitate to contact your ESA directly at the number or email provided.

Please complete the attached forms (the specific instructions are on each form). Please email them at your earliest convenience. If you are returning an Easement Form, a 1190 or State Permit please be sure to send those documents to lineclerknewservice@cmpco.com, All W9's should be sent to gettingconnected@cmpco.com. All other forms including the EDET (load sheet) and technical information should be sent to me.

For your convenience, here is a link to the CMP Website which contains our Handbook with details on most service requirements: CMP Handbook of Standard Requirements An additional resource is our Distribution Construction Standards: CMP Distribution Construction Standards CMP Distribution Construction Standards.

You will be responsible for installing the customer connections, conduits, and metering in accordance with the CMP Handbook of Standard Requirements The transformer will be sized based on your submitted load sheets.

Your deposit amount will be typically based on an estimated two month bill, calculated from your completed load sheet unless otherwise determined by CMP.

In addition, we have recently added on an online map that shows single phase and three phase power locations within CMP. Here is that link: CMP ArcGIS Information

Metering:

All metering (including locations) must be preapproved by CMP. If you have any questions, please consult the CMP Handbook of Standard Requirements

Chapter 324 Interconnections:

Please be advised that if you plan to install solar/wind/hydro generation, you must complete an application under the MPUC mandated Chapter 324 Interconnection Standards. If you go to Chapter 324 Interconnection Standards and follow the instructions for the Small Generator Interconnection Procedures, CMP can do this work in parallel to your service request that will be handled by me. If you project is under 660 KW You will be able to have a Customer Net Energy Billing contract. Information concerning Customer Net Energy Billing can be accessed thru the Chapter 324 website or by clicking here: Net Energy Billing

Reallocation/Line Extensions:

Recently, changes were made to the three-phase construction policy, which require CMP to reallocate construction costs paid by customers. If applicable, those projects identified as "developments" do not qualify for reallocation of funds. Please see this document at our website for details about the reallocation conditions. Any reallocation charges will be specifically denoted on your invoice. The website address for this is: PolyphaseLineExtension.

This line extension will be part of Central Maine Power's distribution system. In the event the property served under this Agreement is sold or otherwise conveyed, all rights and obligations of the Agreement shall stay with the property. Please note that if you rent or lease this property to another and you want to receive the reimbursement payments, you must make special arrangements with the Central Maine Power Company. Otherwise, any reimbursement payments will be sent to the "Customer" taking service at the service location.

Electricity Supplier Information:

Central Maine Power Company (CMP) will provide your facility with electric delivery service. If you don't already have a provider, you will need to make arrangements with a competitive electricity provider in order to receive electricity supply for your facility. In the event you fail to choose a

competitive electricity provider, you will receive Standard Offer service arranged by the Maine Public Utilities Commission. If you wish to be served by a competitive electricity provider immediately upon establishment of delivery service, you must arrange for this service directly through your chosen competitive electricity provider, who must enroll your account no later than 5 PM on the business day prior initiation of delivery service by CMP. An up-to-date list of competitive suppliers can be found at the:

1. Maine Public Utilities Commission (MPUC) web site- **Maine PUC**
2. By calling the MPUC at (207) 287-3831

Best regards,

Josh



Joshua Mitchell
Energy Service Specialist
Portland Service Area
207-200-0333
Joshua.Mitchell@cmpco.com

Internal Use

Please consider the environment before printing this email.
If you have received this message in error, please notify the sender and immediately delete this message and any attachment hereto and/or copy hereof, as such message contains confidential information intended solely for the individual or entity to whom it is addressed. The use or disclosure of such information to third parties is prohibited by law and may give rise to civil or criminal liability. The views presented in this message are solely those of the author(s) and do not necessarily represent the opinion of Avangrid Networks, Inc. or any company of its group. Neither Avangrid Networks, Inc. nor any company of its group guarantees the integrity, security or proper receipt of this message. Likewise, neither Avangrid Networks, Inc. nor any company of its group accepts any liability whatsoever for any possible damages arising from, or in connection with, data interception, software viruses or manipulation by third parties.

PORTLAND FIRE DEPARTMENT
SITE REVIEW
FIRE DEPARTMENT CHECKLIST

SEE ATTACHED C-9.0 FIRE SAFETY COMPLIANCE PLAN

A separate drawing[s] shall be provided as part of the site plan application for the Portland Fire Department's review.

1. Name, address, telephone number of applicant
2. **CPI MANAGMENT, LLC (Cathartes) 11 Portwalk Place Portsmouth, NH 03801 Ph - 1.617.840.4778**
3. Name address, telephone number of architect
   Embarc 580 Harrison Avenue, Suite 2W Boston, MA 02118 Ph - 1.617.765.8000
4. Proposed uses of any structures [NFPA and IBC classification]
5. **Embarc .....**
6. Square footage of all structures [total and per story]
   50,208 SF Floor Area per 6 stories; 301,248 SF Gross Building Area
7. Elevation of all structures
   See Plan Sheets A-2.1, 2.2, and 2.3 for Building Elevations
8. Proposed fire protection of all structures
   - ***As of September 16, 2010 all new construction of one and two family homes are required to be sprinkled in compliance with NFPA 13D. This is required by City Code. (NFPA 101 2009 ed.)***

   Sprinkler meeting NFPA 13 and NFPA 14
9. **1 Public Hydrant & 2 Private Hydrants - See Plan Sheets C-4.0 (Utility Plan) & C9.0 (Fire Safety Plan)**
10. Water main[s] size and location
    12" Water Main See Plan Sheets C-4.0 (Utility Plan) & C9.0 (Fire Safety Plan)
11. Access to all structures [min. 2 sides]
    See Plan Sheets C-4.0 (Utility Plan) & C9.0 (Fire Safety Plan)
12. A code summary shall be included referencing NFPA 1 and all fire department. Technical standards.
    See Plan Sheet C9.0 (Fire Safety Plan)

Some structures may require Fire flows using annex H of NFPA 1

3. CODE SUMMARY PER NFPA 1 AND FIRE DEPT. TECHNICAL STANDARDS FOR PROPOSED MULTI-FMILY HOUSING

FIRE/BUILDING CODES:

-THE BUILDING WILL BE DESIGNED IN ACCORDANCE WITH THE CITY BUILDING CODE, AS WELL AS ALL APPLICABLE LOCAL, STATE, AND FEDERAL CODES/LAWS. THE BUILDING WILL BE FULLY SPRINKLERED IN ACCORDANCE WITH NFPA 13, AND WILL HAVE FIRE DETECTION/ALARM SYSTEMS AS DICTATED BY NFPA 72 AND THE UNDERLYING CODES.

TECHNICAL STANDARD 3.2 - FIRE HYDRANTS:

-THERE IS (1) MUNICIPAL FIRE HYDRANT AND (2) PROPOSED PRIVATE HYDRANT LOCATED WITHIN 500 FEET RADIUS OF THE BUILDING. PLEASE SEE THE ATTACHED FIRE SAFETY COMPLIANCE PLAN C-9.0.

TECHNICAL STANDARD 3.3 - SINGLE AND TWO FAMILY RESIDENTIAL DEVELOPMENT:

-MULTI-FAMILY BUILDING WILL BE FULLY SPRINKLERED

TECHNICAL STANDARD 3.4 - SITE ACCESS STANDARDS:

3.4.1. - PRIVATE ROAD PROVIDES TURNAROUND DESIGNED TO ACCOMODATE 45' LADDER TRUCK

3.4.2. - FIRE DEPARTMENT ACCESS IS PROVIDED VIA THOMPSON'S POINT ACCESS ROAD AND A PRIVATE DRIVE FOR ACCESS TO 2 SIDES OF THE BUILDING.

3.4.3. - ZONING DOES NOT REQUIRE BUILDING SETBACKS

3.4.4. - FIRE DEPARTMENT ACCESS ROADS EXTEND TO WITHIN 50' OF ENTRANCES TO BUILDING

3.4.5. - ALL SITE ACCESS PROVIDES NO LESS THAN 9 FEET IN CLEARANCE HEIGHT.

3.4.6. - ALL ELEVATORS WILL ACCOMMODATE AN 80 X 24 STRETCHER.

3.4.7. - THE STREET NUMBERING AND 911 ADDRESS HAS BEEN REVIEWED AND APPROVED BY THE CITY OF PORTLAND PUBLIC WORKS.

3.4.8. - THE BUILDING WILL DISPLAY THE ASSIGNED STREET NUMBERS. ANTICIPATED 911 ADDRESS IS 125 THOMPSON'S POINT ROAD.

TECHNICAL STANDARD 3.5 - STANDARDS FOR EMERGENCY ACCESS LANES AND GATES:

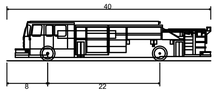
ALL ACCESS ROADS EXCEED 16' IN WIDTH AND ROAD RADIUS CAN ACCOMMODATE A 40' LONG FIRE TRUCK

TECHNICAL STANDARD 3.6 - SUBDIVISION STANDARDS:

APPROVED SUBDIVISION WITH 1 ACCESS ROAD

TECHNICAL STANDARDS 3.7 THROUGH 3.11 - STANDARDS FOR BLASTING AND REGULATION OF EXPLOSIVES:

-GEOTECHNICAL EXPLORATIONS WERE PERFORMED AND THE SUBSURFACE CONDITION DOES NOT CONTAIN BEDROCK. BASED ON THE FINDINGS, LARGE BLAST OPERATIONS ARE NOT ANTICIPATED.



Pumper Fire Truck	
Overall Length	40.000ft
Overall Width	8.167ft
Overall Body Height	7.745ft
Min Body Ground Clearance	0.656ft
Track Width	8.167ft
Lock-to-lock time	5.00s
Max Wheel Angle	45.00°

FIRE TRUCK VEHICLE PROFILE
N.T.S

NORTH

26' WIDE SWING GATE WITH CLICK TO ENTER ACCESS

FIRE TRUCK TURNING MOVEMENT SIMULATION (10 MPH) VEHICLE: 40' FIRE TRUCK, SEE PROFILE

GARAGE ENTRANCE LOCATION

PROPOSED PRIVATE HYDRANT

6' CLEAR RADIUS AROUND HYDRANT (TYP.)

BIKE STORAGE (62 BIKES)

FIRE DEPARTMENT CONNECTION

PROPOSED PARKING GARAGE
25,943 S.F. FLOOR AREA
(6 FLOORS)
(457 PARKING SPACES)

WATER ROOM

ELEC. ROOM

UTILITIES MECHANICAL ROOM

BIKE ROOM

TRASH ROOM

DOG WASH ROOM

ANNUNCIATOR PANEL

ENTRANCE LOCATION

DROP-OFF PARKING

PROPOSED PRIVATE HYDRANT

EXISTING PUBLIC HYDRANT
STATIC PRESSURE PSI 112±
RESIDUAL PRESSURE TESTED 102 PSI ±

100' (TYP.)

350' (TYP.)

PROPOSED RESIDENTIAL BUILDING G
50,208 S.F. FLOOR AREA
6 FLOORS/ 255 UNITS

KNOX BOX (TYP.)

RAMP

RAMP

RETAINING WALL

16' WIDE FIRE ACCESS LANE (GRASS PAVERS)

BOCCE COURT

6.5'x22' PERGOLA

6.5'x5' SHED

POOL

COVERED WET BAR

PERGOLA (TYP. OF 2)

16' WIDE FIRE ACCESS LANE (GRASS PAVERS OR EQUAL)

PUMP STATION

GRAVEL LOT

EX. TRAIL

EX. BRIDGE

OAK

HAT=7.2'

PRELIMINARY – NOT FOR CONSTRUCTION

GRAPHIC SCALE
20 0 10 20 40
(IN FEET)
1 inch = 20 ft.

REV	DATE	DESCRIPTION
1	8/9/2024	MAJOR SITE PLAN APPLICATION

REVISIONS

XX-XX-XX
P.E. BO KENNEDY
LIC. #11994

PROJECT
THE FOREFRONT AT THOMPSON'S POINT
MULTI-FAMILY RESIDENTIAL BUILDING (G)

SHEET TITLE
FIRE SAFETY PLAN

CLIENT
CATHARTES

PLACEMAKER PARTNERS, LLC
18 VAN AKEN WAY
PORTLAND, ME 04102
bo@placemakerpartners.com

DRAWN: DB	DATE: AUGUST 2024
DESIGNED: BEK	SCALE: 1" = 20'
FILE NAME: PANHANDLE-FIRE SAFETY.dwg	
SHEET C-9.0	

C:\Users\diana\Dropbox\DCS-Projects\Placemaker\Thompson's Point\Panhandle\Plans\Site Plan\CAD\PANHANDLE-FIRE SAFETY.dwg diana 8/22/2024 1:01 PM

APPENDIX A

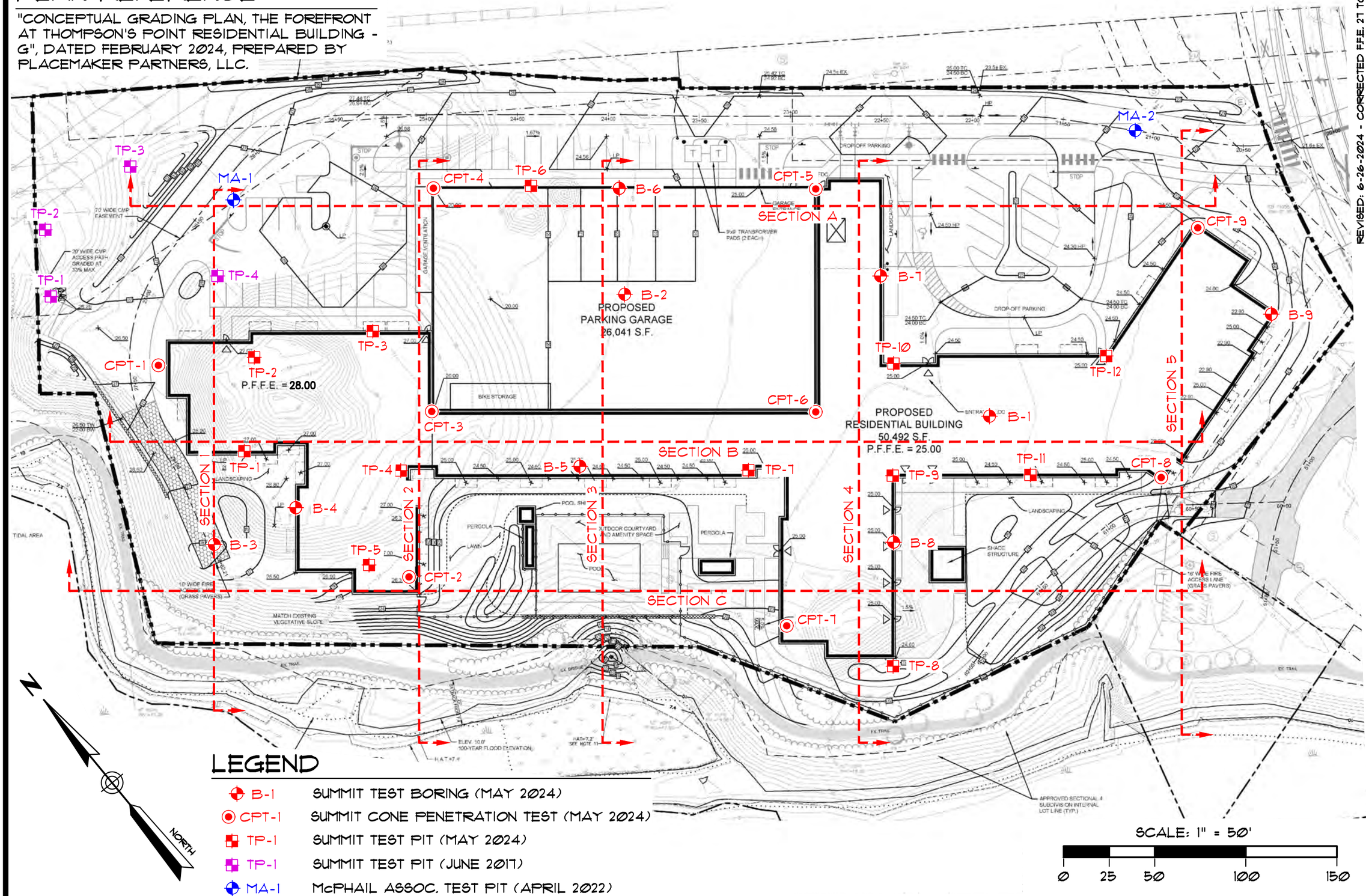
EXPLORATION LOCATION PLAN

INTERPRETIVE CROSS SECTIONS

Mailing: PO Box 515, Gardiner, ME 04345
Office: 210 Maine Avenue, Farmingdale, ME 04344
www.summitgeoeng.com

PLAN REFERENCE

"CONCEPTUAL GRADING PLAN, THE FOREFRONT AT THOMPSON'S POINT RESIDENTIAL BUILDING - G", DATED FEBRUARY 2024, PREPARED BY PLACEMAKER PARTNERS, LLC.



LEGEND

B-1	SUMMIT TEST BORING (MAY 2024)
CPT-1	SUMMIT CONE PENETRATION TEST (MAY 2024)
TP-1	SUMMIT TEST PIT (MAY 2024)
TP-1	SUMMIT TEST PIT (JUNE 2017)
MA-1	McPHAIL ASSOC. TEST PIT (APRIL 2022)

SCALE: 1" = 50'

0 25 50 100 150

REVISED: 6-26-2024 - CORRECTED F.F.E. 21 TO 28

PROJECT: THE FOREFRONT AT THOMPSON'S POINT
PORTLAND, MAINE

CLIENT: CATHARTES

TITLE: EXPLORATION LOCATION PLAN

SCALE: 1" = 50'

DATE: MAY 7, 2024

DRAWN BY: KRF

APPR. BY: CWC

SUMMIT
GEOENGINEERING SERVICES
MAIL: P.O. BOX 515 GARDINER, ME 04345
OFFICE: 210 MAINE AVENUE FARMINGDALE, MAINE
TEL.: (207) 446-3360

PROJ.#: 24098

FIGURE: 1

(SUMMIT #17173)
TP-3
BOR MA-1
2022, BY OTHERS
(+3')
EXISTING GRADE
(+10')
CPT-4
(+10')
TP-6
(+10')
B-6
(+10')
CPT-5
(-38')
B-7
EXISTING GRADE
(+12')
CPT-9
FILL
GLACIAL MARINE
Su=1000 psf (FV-1 TO FV-4)
Su=1125 psf
FV-1
FV-2
FV-3
FV-4
FV-5
Su=800 psf FV-3
Su=750 psf FV-5
Su=750 psf FV-7
FV-1 Su=950 psf
FV-2 Su=850 psf
FV-4 Su=700 psf
FV-6 Su=800 psf
FV-8 Su=600 psf
PROBABLE BEDROCK

CROSS SECTION A

SCALE: HORIZ. - 1" = 40'
VERT. - 1" = 20'

0 20 40 80 120(H)
0 10 20 40 60(V)

EXISTING GRADE
(-5')
TP-1
(+46')
TP-4
(+16')
CPT-3
(+42')
CPT-1
FILL
(+13')
B-5
FILL/REWORKED
(+15')
TP-7
(+16')
CPT-6
(-19')
TP-9
EXISTING GRADE
(+14')
B-1
(-19')
TP-11
FILL/REWORKED
(-19')
CPT-8
NO REFUSAL
GLACIAL MARINE
UT-1
Su=100 psf FV-2
Su=100 psf FV-4
UT-2
Su=550 psf FV-7
Su=600 psf FV-9
UT-3
Su=700 psf FV-12
Su=700 psf FV-14
Su=800 psf FV-16
FV-1 Su=850 psf
FV-3 Su=700 psf
FV-5 Su=650 psf
FV-6 Su=650 psf
FV-8 Su=600 psf
FV-10 Su=600 psf
FV-11 Su=450 psf
FV-13 Su=500 psf
FV-15 Su=900 psf
PROBABLE BEDROCK

CROSS SECTION B

PROJECT: THE FOREFRONT AT THOMPSON'S POINT
PORTLAND, MAINE

CLIENT: CATHARTES

TITLE: CROSS SECTIONS A & B

SCALE: AS NOTED

DRAWN BY: KRF

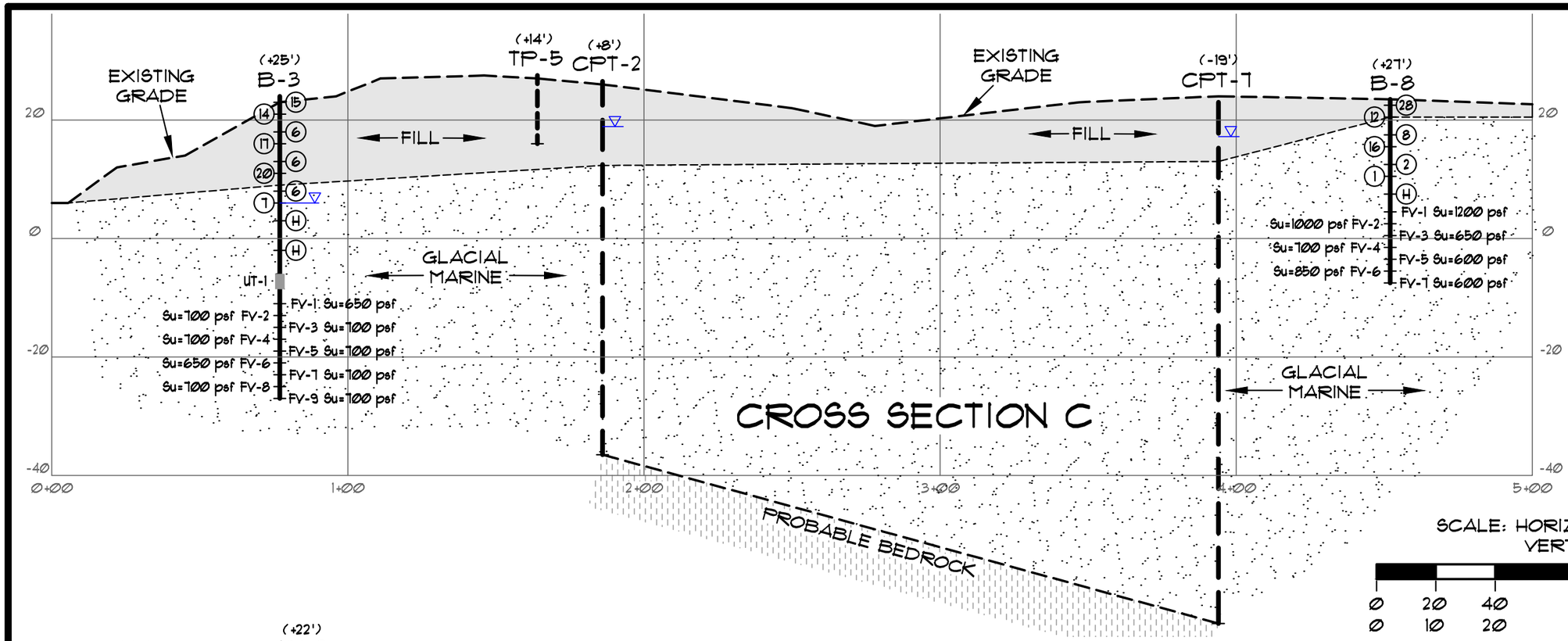
APPR BY: CWC

DATE: JUNE 13, 2024

SUMMIT
GEOENGINEERING SERVICES
MAIL: P.O. BOX 515
GARDINER, ME 04345
OFFICE: 210 MAINE AVENUE
FARMINGDALE, MAINE
TEL.: (207) 446-3360

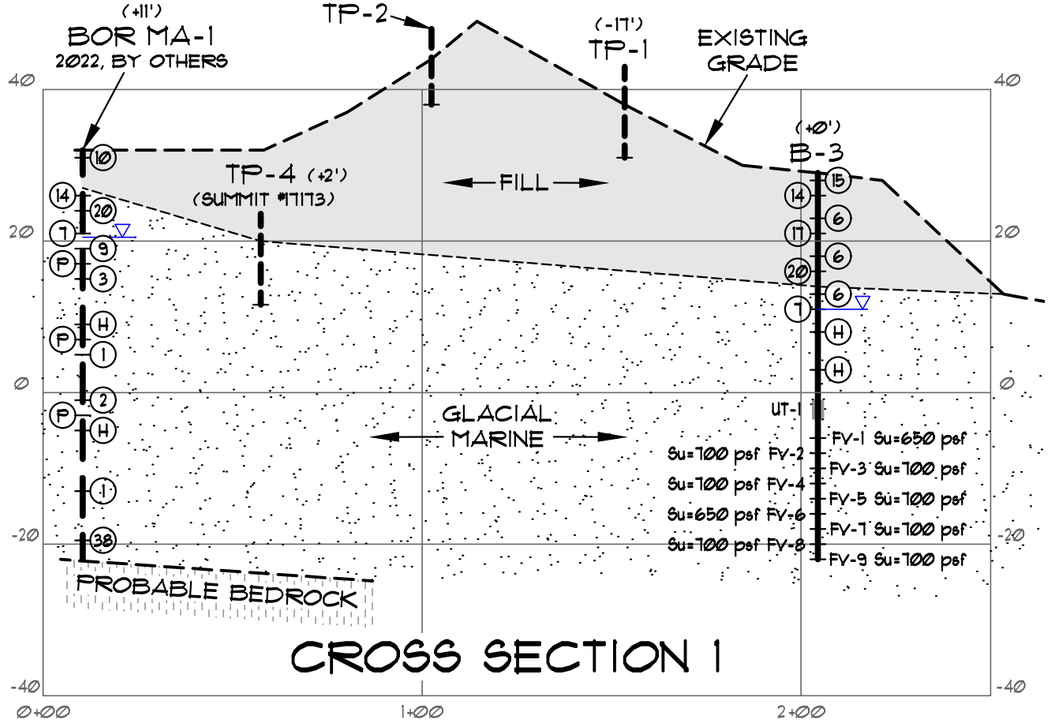
PROJ.#: 24098

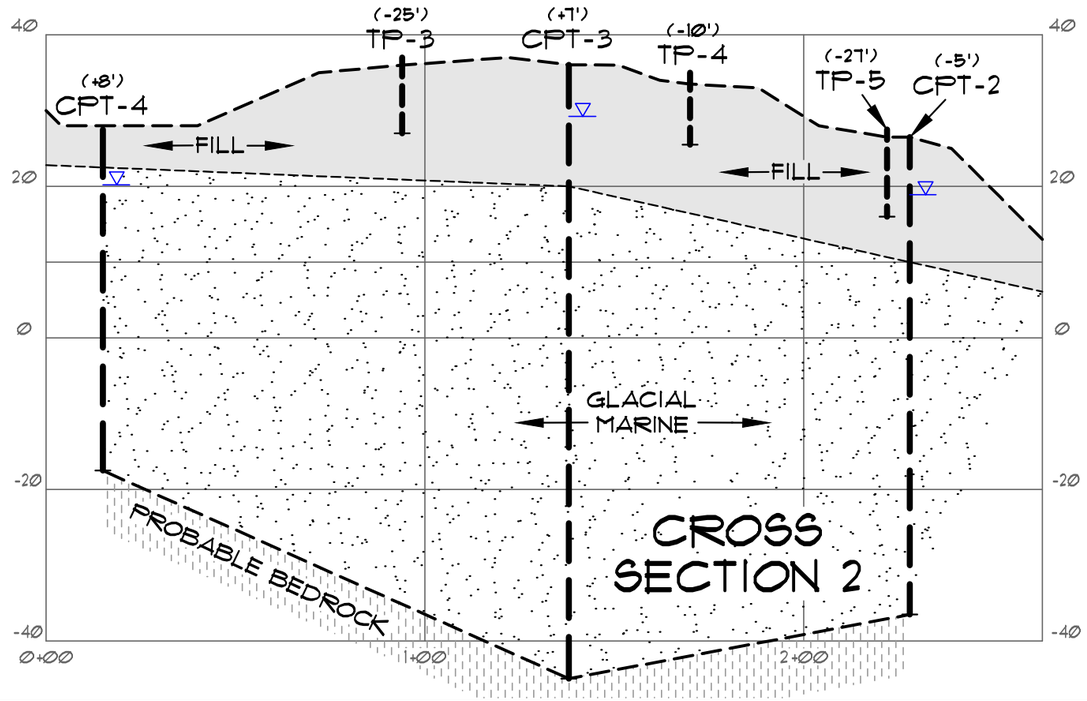
FIGURE: 2



SCALE: HORIZ. - 1" = 40'
VERT. - 1" = 20'

0 20 40 80 120(H)
0 10 20 40 60(V)





PROJECT: THE FOREFRONT AT THOMPSON'S POINT
PORTLAND, MAINE

CLIENT: CATHARTES

TITLE: CROSS SECTIONS C, 1 & 2

SCALE: AS NOTED

DATE: JUNE 13, 2024

DRAWN BY: KRF

APPR BY: CWC

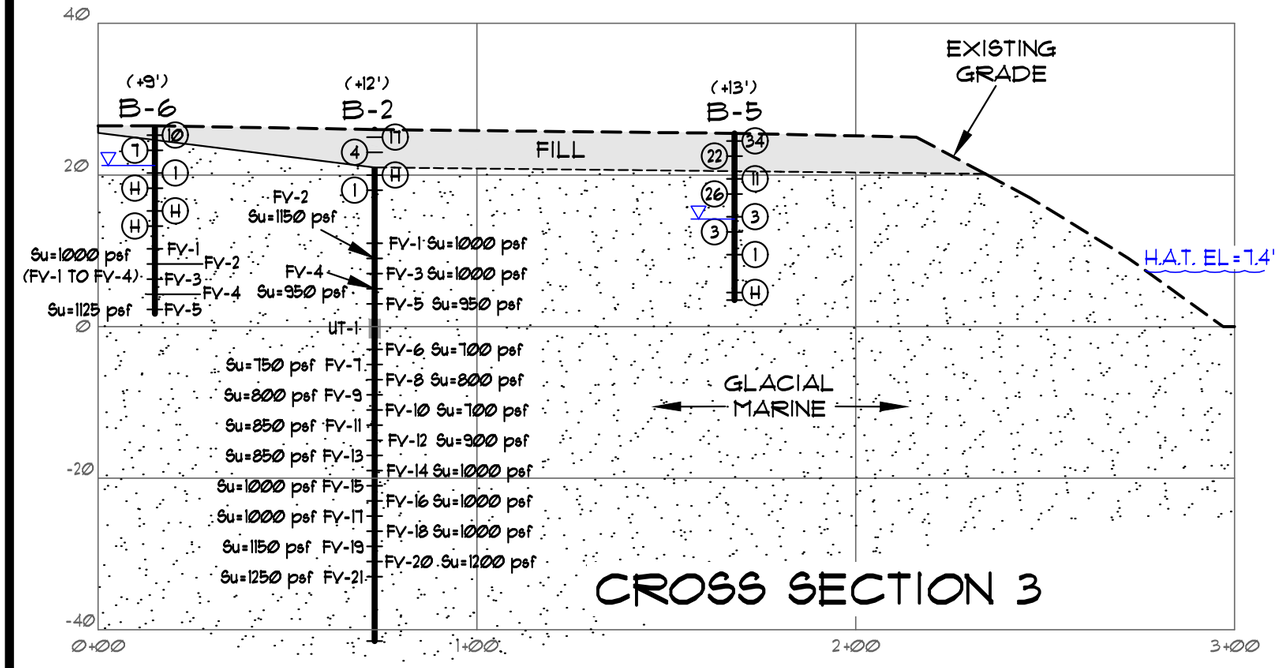
MAIL: P.O. BOX 515
GARDINER, ME 04345

OFFICE: 210 MAINE AVENUE
FARMINGDALE, MAINE
TEL.: (207) 446-3360

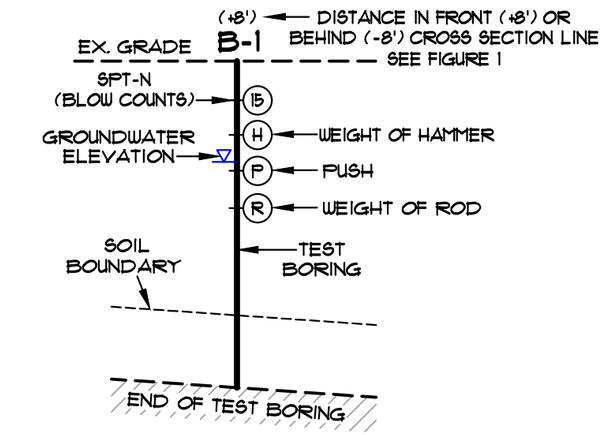
SUMMIT
GEOENGINEERING SERVICES

PROJ.#: 24098

FIGURE: 3

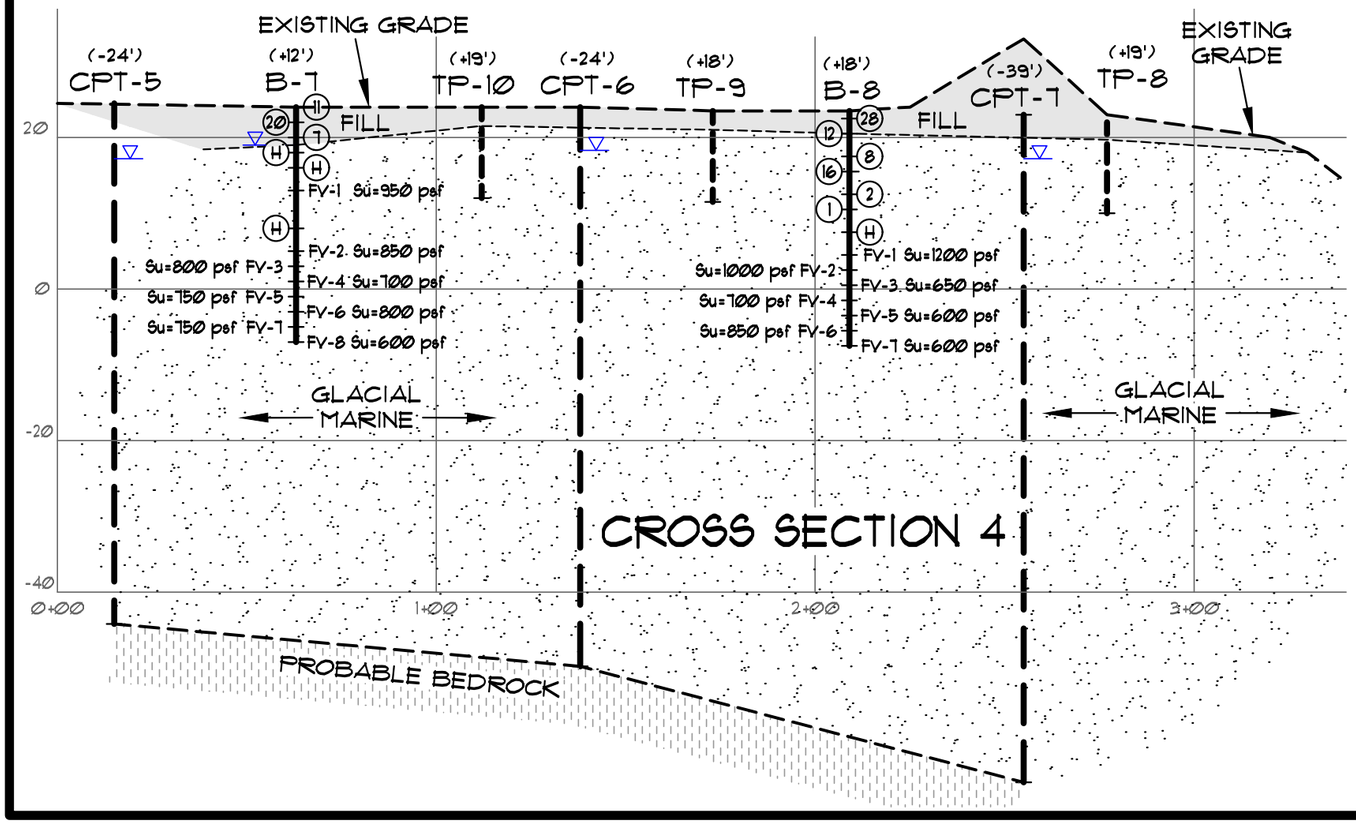


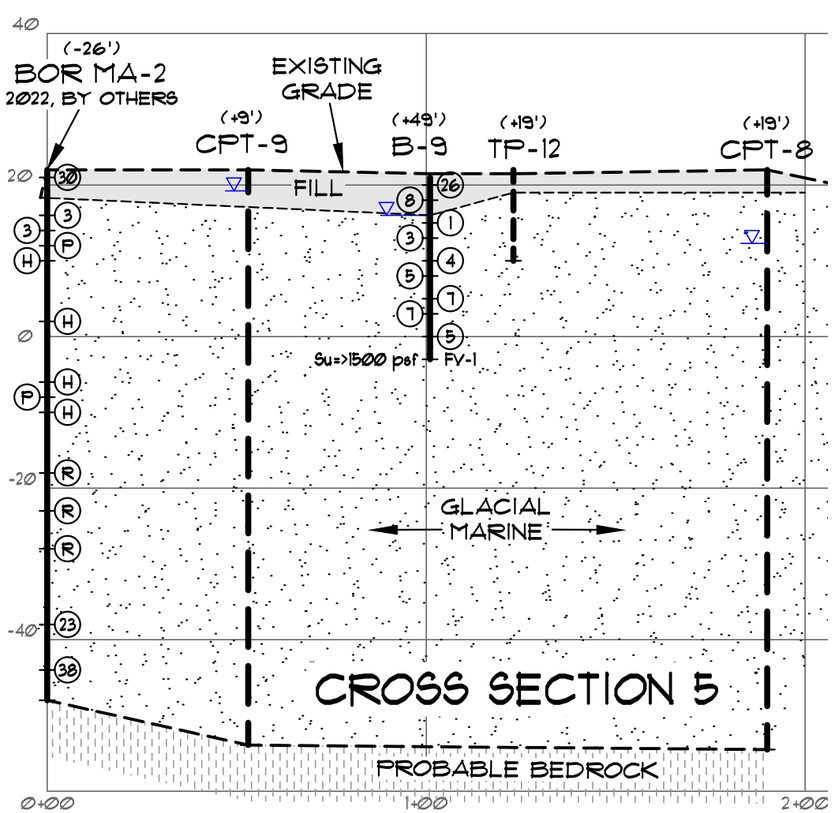
LEGEND



SCALE: HORIZ. - 1" = 40'
VERT. - 1" = 20'

0	20	40	80	120(H)
0	10	20	40	60(V)





PROJECT: THE FOREFRONT AT THOMPSON'S POINT
PORTLAND, MAINE

CLIENT: CATHARTES

TITLE: CROSS SECTIONS 3, 4 & 5

SCALE: AS NOTED

DRAWN BY: KRF

APPR BY: CWC

DATE: JUNE 13, 2024

MAIL: P.O. BOX 515
GARDINER, ME 04345

OFFICE: 210 MAINE AVENUE
FARMINGDALE, MAINE
TEL.: (207) 446-3360

SUMMIT
GEOENGINEERING SERVICES

PROJ.#: 24098

FIGURE: 4

APPENDIX B

EXPLORATION SUMMARY TABLES

EXPLORATION LOGS

SUMMIT
GEOENGINEERING SERVICES

Project Name: Forefront at Thompson's Point
Location: Portland, ME
Project Number: 24098
Dates: 5/20/24 to 5/23/24

EXPLORATION SUMMARY TABLE (BORINGS)

EXPLORATION NUMBER	SURFACE ELEVATION	FILL	MARINE DEPOSIT	REFUSAL DEPTH	GROUNDWATER DEPTH	NOTES
B-1	23.0	0 to 5	5 to 77	77	6.3	Probe refusal on probable bedrock
B-2	26.0	0 to 5	5 to 67	67	10.3	Probe refusal on bedrock
B-3	29.0	0 to 15	15 to 51	NE	11.0	No Refusal
B-4	40.0	0 to 20	20 to 22	NE	5.5	No Refusal
B-5	11.3	0 to 5	5 to 22	NE	11.3	No Refusal
B-6	26.0	0 to 1	10 to 24	NE	5.0	No Refusal
B-7	24.0	0 to 5	5 to 31	NE	5.0	No Refusal
B-8	23.0	0 to 2	2 to 31	NE	11.0	No Refusal
B-9	23.0	0 to 5	5 to 24	NE	5.0	No Refusal

NOTES:

1.) Test borings were performed by Summit Geoengineering Services on May 20th to May 23rd, 2024 using a 9580 VTR ATV Drill Rig.

2.) Explorations were field located by SGS by measuring off existing site features.

3.) Surface elevations are estimated using 1-ft contours provided on the Conceptual Grading Plan, The Forefront at Thompson's Point Residential Building prepared by Placemaker Partners, LLC dated February, 2024.

4.) Groundwater is based upon measured depth within open borehole upon completion.

SUMMIT
GEOENGINEERING SERVICES

Project Name: Forefront at Thompson's Point
Location: Portland, ME
Project Number: 24098
Dates: 5/17/24

EXPLORATION SUMMARY TABLE (TEST PITS)

EXPLORATION NUMBER	SURFACE ELEVATION	FILL	MARINE DEPOSIT	REFUSAL DEPTH	GROUNDWATER DEPTH	NOTES
TP-1	43.0	0.5 to 10	10 to 11.5	NE	9.8	Hole caved to 8', Reworked Native
TP-2	38.0	0 to 7.5	7.5 to 10	10	7.5	Refusal on Concrete/Cement Rubble
TP-3	37.0	0 to 9	9 to 10	NE	8.5	Hole caved to 7', Reworked Native
TP-4	35.0	0.5 to 7	7 to 9.5	NE	7.5	Hole caving. Reworked Native
TP-5	27.0	0.5 to 11.5	NE	NE	10.0	No Refusal
TP-6	27.0	0 to 1.5	1.5 to 11.8	NE	8.4	No Refusal
TP-7	24.0	0 to 3	3 to 12	NE	9.0	No Refusal
TP-8	22.0	0 to 2.3	2.3 to 12	NE	5.0	No Refusal
TP-9	23.0	0 to 1.5	1.5 to 12	NE	9.0	No Refusal
TP-10	24.0	0 to 2.5	2.5 to 12	NE	9.0	No Refusal
TP-11	23.0	0 to 2	2 to 11.8	NE	9.5	No Refusal
TP-12	22.0	0.2 to 3	3 to 12	NE	7.0	No Refusal

NOTES:

1.) Test pit explorations were performed by Summit Geoengineering Services on May 17th, 2024 using a Kubota KX040 rubber track excavator. Test pits were excavated to a depth of 10 to 12 feet below ground surface (BGS).

2.) Explorations were field located by SGS by measuring off existing site features.

3.) Surface elevations are estimated using 1-ft contours provided on the Conceptual Grading Plan, The Forefront at Thompson's Point Residential Building prepared by Placemaker Partners, LLC dated February, 2024.

4.) Groundwater is based upon measured sidewall seeage or depth within open test pits during excavation.

SUMMIT
GEOENGINEERING SERVICES

Project Name: Forefront at Thompson's Point
Location: Portland, ME

Project Number: 24098
Dates: 5/20/24 to 5/23/24

EXPLORATION SUMMARY TABLE (CPT)

EXPLORATION NUMBER	SURFACE ELEVATION	FILL	MARINE DEPOSIT	REFUSAL DEPTH	GROUNDWATER DEPTH	NOTES
CPT-1	32 +/-	0 to 15 +/-	15 to 75.6	76	21.3	Refusal on Probable Bedrock
CPT-2	26 +/-	0 to 15 +/-	16 to 63.3	63	7.6	Refusal on Probable Bedrock
CPT-3	36 +/-	0 to 18 +/-	18 to 81	81	6.8	Refusal on Probable Bedrock
CPT-4	27 +/-	0 to 5 +/-	5 to 45.2	45	7.3	Refusal on Probable Bedrock
CPT-5	25 +/-	0 to 5 +/-	5 to 68.8	69	7.3	Refusal on Probable Bedrock
CPT-6	24 +/-	0 to 3 +/-	3 to 75.3	75	5.7	Refusal on Probable Bedrock
CPT-7	23 +/-	0 to 10 +/-	10 to 88	88	5.8	Refusal on Probable Bedrock
CPT-8	22 +/-	0 to 2 +/-	2 to 76.5	77	9.7	Refusal on Probable Bedrock
CPT-9	22 +/-	0 to 3 +/-	3 to 75.9	76	5.5	Refusal on Probable Bedrock

NOTES:

1.) CPT explorations were performed by Summit Geoengineering Services on May 20th to May 23rd, 2024 using a 9500 VTR ATV Drill Rig. Piezocone penetration tests (CPT) were explored to a depth of push refusal ranging from 45.0 to 88.0 feet below ground surface (BGS).

2.) Explorations were field located by SGS by measuring off existing site features.

3.) Surface elevations are estimated using 1-ft contours provided on the Conceptual Grading Plan, The Forefront at Thompson's Point Residential Building prepared by Placemaker Partners, LLC dated February, 2024. Bedrock depths were measured from the ground surface to the nearest tenth of a foot. Accuracy of bedrock elevations published in the table above are limited by the accuracy of surface elevations.

4.) Groundwater is based upon measured depth within open CPT borehole upon completion.

SUMMIT GEOENGINEERING SERVICES	TEST PIT LOG	Test Pit # TP-1
	Project: Forefront at Thompson's Point Portland, Maine	Project #: 24098
		Groundwater: 9.8 ft
Contractor: Summit Geoengineering Services	Ground Surface Elevation: 43 ft	
Equipment: Kubota KX040-4	Reference: "Conceptual Grading Plan" by Placemarker Partners	
Summit Staff: J.Barnes, E.I.	Date: 5/17/2024	Weather: Sunny

Depth (ft)	DESCRIPTION	
	ENGINEERING	GEOLOGIC/GENERAL
	Brown Sandy SILT, rootlets, loose, humid, ML	TOSPSOIL
1	Dark brown SAND, some Silt,some to little Gravel,	0.5'
	ocassional brick pieces, loose, moist to damp, SM	FILL
2		
3		
4		
5		
	Timbers and concrete pieces at 5'	
6	Ocassional SILT-CLAY clumps at 5.5'	
7		
8		
9		
	Groundwater observed at 9.8 ft	
10		
	Gray Silty CLAY interlayered with Sand, black	10'
11	staining, firm to soft, moist, CL	REWORKED NATIVE
12	End of Exploration at 11.5', Hole Caved to 8'	
13		
14		
15		
16		
17		

SUMMIT GEOENGINEERING SERVICES	TEST PIT LOG	Test Pit # TP-2
	Project: Forefront at Thompson's Point Portland, Maine	Project #: 24098
		Groundwater: 7.5 ft
Contractor: Summit Geoengineering Services	Ground Surface Elevation: 38 ft	
Equipment: Kubota KX040-4	Reference: "Conceptual Grading Plan" by Placemarker Partners	
Summit Staff: J.Barnes, E.I.	Date: 5/17/2024	Weather: Sunny

Depth (ft)	DESCRIPTION	
	ENGINEERING	GEOLOGIC/GENERAL
1	Dark brown Silty SAND, some Clay, little Gravel, miost, SM	FILL
2	Oilve brown SILT-CLAY, some Sand, little Gravel, stiff to firm, wet to moist, ML-CL	
3	Bricks and wood pieces from 2' - 3'	
4		
5		
6	Geotextile fabric pieces at 5'	
7	Large wood pieces in western portion at 2' and 6'	
8	Gray Silty CLAY, some Sand, firm to soft, wet, CL	7.5' REWORKED NATIVE
9		
10		
11	End of Exploration at 10', Refusal on concrete or cement rubble	
12		
13		
14		
15		
16		
17		

SUMMIT GEOENGINEERING SERVICES	TEST PIT LOG	Test Pit # TP-3
	Project: Forefront at Thompson's Point Portland, Maine	Project #: 24098
		Groundwater: 8.5 ft
Contractor: Summit Geoengineering Services	Ground Surface Elevation: 37 ft	
Equipment: Kubota KX040-4	Reference: "Conceptual Grading Plan" by Placemarker Partners	
Summit Staff: J.Barnes, E.I.	Date: 5/17/2024	Weather: Sunny

Depth (ft)	DESCRIPTION	
	ENGINEERING	GEOLOGIC/GENERAL
1	Dark brown Sandy SILT, rootlets, soft, ML	FILL
2	Dark brown Silty SAND, some to little Gravel, occasional Clay clumps, bricks and polyesterene pieces, loose, damp to moist with depth, SM	
3		
4		
5	Wood pieces and bricks at 4', occasional asphalt pieces, concrete piece at 5'	
6		
7	Gray Silty CLAY, some to little Sand, blocky, firm, moist to wet, CL	
8		
9	Groundwater at 8.5'	
10	Olive brown Silty CLAY, blocky, trace fine Sand, firm to stiff, moist to wet, CL	9' REWORKED NATIVE
11	End of Exploration at 10', hole caved to 7'	
12		
13		
14		
15		
16		
17		

SUMMIT GEOENGINEERING SERVICES	TEST PIT LOG	Test Pit # TP-4
	Project: Forefront at Thompson's Point Portland, Maine	Project #: 24098
		Groundwater: 7.5 ft
Contractor: Summit Geoengineering Services	Ground Surface Elevation: 35 ft	
Equipment: Kubota KX040-4	Reference: "Conceptual Grading Plan" by Placemarker Partners	
Summit Staff: J.Barnes, E.I.	Date: 5/17/2024	Weather: Sunny

Depth (ft)	DESCRIPTION	
	ENGINEERING	GEOLOGIC/GENERAL
1	Dark brown Sandy SILT, trace Gravel, rootlets, soft, humid, ML	TOPSOIL FILL
2	Dark brown Silty Sand to SAND, some Silt, little Gravel, loose, humid to damp, SM	
3	Freqeunt asphalt and concrete pieces, occasional Silty CLAY clumps at 2.5'	
4		
5	Occasional plastic and polyesterene pieces Timbers, wood pieces, and bricks starting at 3.5'	
6		
7		
8	Gray SILT-CLAY interlayered with dark brown Sand, soft to firm, wet, ML-CL Groundwater at 7.5'	7' REWORKED NATIVE
9	Geotextile fabric at 8.5'	
10	End of Exploration at 9.5', Hole caving	
11		
12		
13		
14		
15		
16		
17		

SUMMIT GEOENGINEERING SERVICES	TEST PIT LOG	Test Pit # TP-5
	Project: Forefront at Thompson's Point Portland, Maine	Project #: 24098
		Groundwater: 10 ft
Contractor: Summit Geoengineering Services	Ground Surface Elevation: 27 feet	
Equipment: Kubota KX040-4	Reference: "Conceptual Grading Plan" by Placemarker Partners	
Summit Staff: J.Barnes, E.I.	Date: 5/17/2024	Weather: Sunny

Depth (ft)	DESCRIPTION	
	ENGINEERING	GEOLOGIC/GENERAL
1	Dark brown Silty SAND, some Clay, little Gravel, moist, SM	TOPSOIL FILL
2	Dark brown Silty SAND to SAND, some Silt, little Gravel, brick and polyesterene pieces, loose, damp, SM	
3	Dark brown Sandy SILT, little to some Gravel, bricks, wood, and polyesterene pieces, damp to moist, ML	
4		
5		
6	Occasional CLAY clumps with black staining and petroleum odor starting at 5.5'	
7		
8	Olive brown Silty CLAY, fine Sand Seams, mottled, moist to wet, CL	
9		
10	Dark brown organic SILT pocket, frequent wood pieces and roots, firm to stiff, damp to moist, OL	
11	Gray to olive gray SILT-CLAY to Clayey SILT, roots, wood pieces, soft to firm, wet, ML-CL to ML	
12	End of Exploration at 11.5', No Refusal	
13		
14		
15		
16		
17		

SUMMIT GEOENGINEERING SERVICES	TEST PIT LOG	Test Pit # TP-6
	Project: Forefront at Thompson's Point Portland, Maine	Project #: 24098
		Groundwater: 8.4 ft
Contractor: Summit Geoengineering Services	Ground Surface Elevation: 27 feet	
Equipment: Kubota KX040-4	Reference: "Conceptual Grading Plan" by Placemarker Partners	
Summit Staff: J.Barnes, E.I.	Date: 5/17/2024	Weather: Sunny

Depth (ft)	DESCRIPTION	
	ENGINEERING	GEOLOGIC/GENERAL
1	Olive brown SAND, little to some Silt, little Gravel, bricks, wires, and rebar, loose, moist, SM	FILL
2	Gray Silty CLAY, blocky, mottled, damp to moist with depth	1.5' GLACIAL MARINE DEPOSIT
3		
4		
5		
6		
7	Clay gets softer at 6', occasional Sand seams	
8		Groundwater at 8.4'
9	Gray CLAY, some Silt, wet, CL	
10		
11		
12		
13	End of Exploration at 11.8', No Refusal	
14		
15		
16		
17		

SUMMIT GEOENGINEERING SERVICES	TEST PIT LOG	Test Pit # TP-7
	Project: Forefront at Thompson's Point Portland, Maine	Project #: 24098
		Groundwater: 9 ft
Contractor: Summit Geoengineering Services	Ground Surface Elevation: 24 ft	
Equipment: Kubota KX040-4	Reference: "Conceptual Grading Plan" by Placemarker Partners	
Summit Staff: J.Barnes, E.I.	Date: 5/17/2024	Weather: Sunny

Depth (ft)	DESCRIPTION	
	ENGINEERING	GEOLOGIC/GENERAL
1	Brown Sandy Gravel, compact to dense, humid, SP	FILL
2	Frequent small boulders and large cobbles	
3		
4	Olive brown to gray SILT-CLAY, heavily mottled, blocky, stiff, moist, ML-CL	3' GLACIAL MARINE DEPOSIT
5	PP = 6,000 psf	
6		
7	Olive brown to gray heavily mottled Silty CLAY, blocky, very stiff to stiff, moist, CL	
8	PP = 6,000 - 8,000 psf	
9	Groundwater at 9'	
10	Clay softens slightly, frequent fine sand seams PP = 5,000 - 6,000 psf	
11		
12		
13	End of Exploration at 12', No Refusal	
14		
15		
16		
17		

SUMMIT GEOENGINEERING SERVICES	TEST PIT LOG	Test Pit # TP-8
	Project: Forefront at Thompson's Point Portland, Maine	Project #: 24098
		Groundwater: 5 ft
Contractor: Summit Geoengineering Services	Ground Surface Elevation: 22 ft	
Equipment: Kubota KX040-4	Reference: "Conceptual Grading Plan" by Placemarker Partners	
Summit Staff: J.Barnes, E.I.	Date: 5/17/2024	Weather: Sunny

Depth (ft)	DESCRIPTION	
	ENGINEERING	GEOLOGIC/GENERAL
1	Dark brown Sandy SILT to Silty SAND, soft/loose, SM or ML	FILL
2	Brown SAND, little to some Gravel, trace to little Silt, loose, damp, SP to SP-SM	0.7' 1.5'
3	Black Sandy SILT, brick pieces, petroleum odor, firm, moist, ML	2.3'
4	Gray Sandy SILT, some CLAY, firm, moist to wet, ML	GLACIAL MARINE DEPOSIT
5		
6	Olive brown to gray SILT-CLAY, blocky, heavily mottled, stiff, moist, ML-CL	
7		
8	Olive brown to gray Silty CLAY, blocky, mottled, stiff to hard, moist, CL	
9	PP = 6,000 - 9,000 psf	
10		
11		
12		
13	End of Exploration at 12', No Refusal	
14		
15		
16		
17		

SUMMIT GEOENGINEERING SERVICES	TEST PIT LOG	Test Pit # TP-9
	Project: Forefront at Thompson's Point Portland, Maine	Project #: 24098
		Groundwater: 9 ft
Contractor: Summit Geoengineering Services	Ground Surface Elevation: 23 ft	
Equipment: Kubota KX040-4	Reference: "Conceptual Grading Plan" by Placemarker Partners	
Summit Staff: J.Barnes, E.I.	Date: 5/17/2024	Weather: Sunny

Depth (ft)	DESCRIPTION	
	ENGINEERING	GEOLOGIC/GENERAL
1	Brown Sandy Gravel, compact to dense, humid, SP	FILL
2	Olive brown to gray SILT-CLAY, blocky, stiff, damp, ML-CL	1.5' GLACIAL MARINE DEPOSIT
3		
4		
5		
6	Olive gray Silty CLAY, heavily mottled, firm to stiff, moist, CL	
7	Fine Sand seams at 6.5' PP = 3,000 - 5,000 psf	
8		
9		
10	Gray Silty CLAY, soft, wet, CL Groundwater at 9'	
11		
12		
13	End of Exploration at 12', No Refusal	
14		
15		
16		
17		

SUMMIT GEOENGINEERING SERVICES	TEST PIT LOG	Test Pit # TP-10
	Project: Forefront at Thompson's Point Portland, Maine	Project #: 24098
		Groundwater: 9 ft
Contractor: Summit Geoengineering Services	Ground Surface Elevation: 24 ft	
Equipment: Kubota KX040-4	Reference: "Conceptual Grading Plan" by Placemarker Partners	
Summit Staff: J.Barnes, E.I.	Date: 5/17/2024	Weather: Sunny

Depth (ft)	DESCRIPTION	
	ENGINEERING	GEOLOGIC/GENERAL
1	Brown Sandy Gravel, compact to dense, humid, SP	FILL
2	Frequent small boulders and large cobbles	
3	Olive gray to brown SILT-CLAY, frequent fine Sand seams, heavily mottled, ML-CL	2.5' GLACIAL MARINE DEPOSIT
4		
5		
6		
7	Olive brown to gray Silty CLAY, fine Sand seams, mottled, soft ot firm, moist, CL	PP = 3,000 - 5,000 psf
8	PP = 3,000 - 5,000 psf	
9	Groundwater at 9'	
10	Gray Silty CLAY, very soft, wet, CL PP = 2,000 - 500 psf with depth	
11		
12		
13	End of Exploration at 12', No Refusal	12' 
14		
15		
16		
17		

SUMMIT GEOENGINEERING SERVICES	TEST PIT LOG	Test Pit # TP-11
	Project: Forefront at Thompson's Point Portland, Maine	Project #: 24098
		Groundwater: 9.5 ft
Contractor: Summit Geoengineering Services	Ground Surface Elevation: 23 ft	
Equipment: Kubota KX040-4	Reference: "Conceptual Grading Plan" by Placemarker Partners	
Summit Staff: J.Barnes, E.I.	Date: 5/17/2024	Weather: Sunny

Depth (ft)	DESCRIPTION	
	ENGINEERING	GEOLOGIC/GENERAL
1	Brown Gravelly SAND, compact, humid, SP	FILL
2		
3	Olive brown Sandy SILT, little to some Clay, firm, humid, ML	2' GLAICAL MARINE DEPOSIT
4		
5	Olive brown to gray SILT-CLAY, mottled, stiff, moist, ML-CL	
6		
7		
8	Oive brown to gray Silty CLAY, heavily mottled, blocky, stiff, moist, CL	
9		
10	Fine Sand seam at 9' Significant groundwater seepage observed at 9.5'	
11		
12		
13	End of Exploration at 11.8', No Refusal	11.8'
14		
15		
16		
17		

SUMMIT GEOENGINEERING SERVICES	**TEST PIT LOG**	Test Pit # **TP-12**
	Project: Forefront at Thompson's Point Portland, Maine	Project #: 24098
		Groundwater: 7 ft
Contractor: Summit Geoengineering Services	Ground Surface Elevation: 22 ft	
Equipment: Kubota KX040-4	Reference: "Conceptual Grading Plan" by Placemarker Partners	
Summit Staff: J.Barnes, E.I.	Date: 5/17/2024	Weather: Sunny

Depth (ft)	DESCRIPTION	
	ENGINEERING	**GEOLOGIC/GENERAL**
	Bituminous Pavement	PAVEMENT
1	Brown to black Silty SAND, little Gravel, damp, SM	0.2' FILL
2	Light brown SAND, loose, moist, SP	
3	Black Sandy SILT, heavy organic odor, roots and wood pieces, firm, moist, ML	
		3' GLACIAL MARINE DEPOSIT
4		
5	Gray SILT-CLAY, little Sand, firm, damp to moist, ML-CL	
6		
7		Groundwater observed at 7'
8		
9	Olive gray Silty CLAY, blocky, stiff, moist to wet, CL	
10		
11		
12		
	End of Exploration at 12', No Refusal	12'
13		
14		
15		
16		
17		

EXPLORATION COVER SHEET

The exploration logs are prepared by the geotechnical engineer from both field and laboratory data. Soil descriptions are based upon the Unified Soil Classification System (USCS) per ASTM D2487 and/or ASTM D2488 as applicable. Supplemental descriptive terms for estimated particle percentage, color, density, moisture condition, and bedrock may also be included to further describe conditions.

Drilling and Sampling Symbols:

SS = Split Spoon Sample
UT = Thin Wall Shelby Tube
SSA = Solid Stem Auger
HSA = Hollow Stem Auger
RW = Rotary Wash
SV = Shear Vane
PP = Pocket Penetrometer
RC = Rock Core Sample
FV = Field Vane Shear Test
PS = Concrete Punch Sample
Hyd = Hydraulic Advancement of Drilling Rods
Push = Direct Push of Drilling Rods
WOH = Weight of Hammer
WOR = Weight of Rod
PI = Plasticity Index
LL = Liquid Limit
W = Natural Water Content
USCS = Unified Soil Classification System
Su = Undrained Shear Strength
Su(r) = Remolded Shear Strength

Water Level Measurements:

Water levels indicated on the boring logs are the levels measured in the boring at the times indicated. In pervious soils, the indicated elevations are considered reliable groundwater levels. In impervious soils, the accurate determination of groundwater elevations may not be possible, even after several days of observations. Groundwater monitoring wells may be required to record accurate depths and fluctuation.

Gradation Description and Terminology:

Boulders:	Over 12 inches	Trace:	Less than 5%
Cobbles:	12 inches to 3 inches	Little:	5% to 15%
Gravel:	3 inches to No.4 sieve	Some:	15% to 30%
Sand:	No.4 to No. 200 sieve	Silty, Sandy, etc.:	Greater than 30%
Silt:	No. 200 sieve to 0.005 mm		
Clay:	less than 0.005 mm		

Density of Granular Soils and Consistency of Cohesive Soils:

CONSISTENCY OF COHESIVE SOILS		DENSITY OF GRANULAR SOILS	
SPT N-value blows/ft	**Consistency**	**SPT N-value blows/ft**	**Relative Density**
0 to 2	Very Soft	0 to 4	Very Loose
2 to 4	Soft	5 to 10	Loose
5 to 8	Firm	11 to 30	Compact
9 to 15	Stiff	31 to 50	Dense
16 to 30	Very Stiff	>50	Very Dense
>30	Hard		

SOIL BORING LOG

SUMMIT GEOENGINEERING SERVICES

Project:	Forefront at Thompson's Point	Boring #:	B-1
Location:	Thompson's Point Road	Project #:	24098
City, State:	Portland, Maine	Sheet:	1 of 4
		Chkd by:	CWC

Drilling Co:	Summit Geoengineering Services
Driller:	S. Floyd
Summit Staff:	J. Barnes, E.I.

Boring Elevation: 23 feet

Reference: Interpolated from "Conceptual Grading Plan" prepared by Placemarker Partners, LLC.

Date started: 5/22/2024 Date Completed: 5/22/2024

DRILLING METHOD		SAMPLER	
Vehicle:	ATV	Length:	24" SS
Model:	9580 VTR	Diameter:	2"OD/1.5"ID
Method:	RW/4" Casing	Hammer:	140 lb
Hammer Style:	Auto	Method:	ASTM D1586

ESTIMATED GROUND WATER DEPTH

Date	Depth	Elevation	Reference
5/23/2024	6.3 ft	16.7 ft	Measured in open hole

Depth (ft.)	No.	Pen/Rec (in)	Depth (ft)	blows/6"	Elev. (ft.)	SAMPLE DESCRIPTION	Geological/ Test Data	Geological Stratum
	S-1	24/8	0 - 2	12		Brown Gravelly SAND, dense, damp, SP		FILL
1				24				
				20		Brown to black Sandy SILT, trace Gravel, hard, damp,		
2				21		ML		
	S-2	24/16	2 - 4	18		Brown Silty SAND, trace Gravel, dense, damp, SM		
3				16				
				9				
4				5		Black Sandy SILT, little ash, stiff, damp, ML		
5					18			
	S-3	24/24	5 - 7	3		Olive gray Silty CLAY, frequent fine Sand seams,	PP = 8,000 -	5'
6				4		firm to stiff, moist, CL	9,000 psf	GLACIAL MARINE
				5				DEPOSIT
7				7				
	S-4	24/24	7 - 9	10		Olive gray to brown Silty CLAY, frequent Sand seams,	PP = 3,000 -	
8				6		firm to stiff, CL	6,000 psf	
				5				
9				5				
10								
	S-5	24/24	10 - 12	1		Olive gray to brown Silty CLAY, frequent Sand seams,		
11				1		soft, wet, CL	PP = 1,000 psf	
				1				
12				1				
	S-6	24/24	12 - 14	WOH		Olive gray to brown Silty CLAY, frequent Sand seams,		
13				WOH		very soft, wet to saturated, CL	PP < 500 psf	
				WOH				
14				WOH				
15								
16	UT-1	30/28	15.5 - 18	PUSH		Gray Silty CLAY, frequent SILT-SAND seams, soft,		
						wet, CL		
17								
18								
19								
	FIELD VANE DATA							
20	FV-1		20			S_u = 850 psf $S_{u(r)}$ = 100 psf		
21								
22	FV-2		22			S_u = 700 psf $S_{u(r)}$ = 150 psf		

Granular Soils		Cohesive Soils	
Blows/ft.	Density	Blows/ft.	Consistency
0-4	V. Loose	<2	V. soft
5-10	Loose	2-4	Soft
11-30	Compact	5-8	Firm
31-50	Dense	9-15	Stiff
>50	V. Dense	16-30	V. Stiff
		>30	Hard

% Composition ASTM D2487

< 5% Trace
5-15% Little
15-30% Some
> 30% With

NOTES: PP = Pocket Penetrometer, MC = Moisture Content
LL = Liquid Limit, PI = Plastic Index, FV = Field Vane Test
Su = Undrained Shear Strength, Su(r) = Remolded Shear Strength

Bedrock Joints
Shallow = 0 to 35 degrees
Dipping = 35 to 55 degrees
Steep = 55 to 90 degrees

Boulders = diameter > 12 inches, Cobbles = diameter < 12 inches and > 3 inches
Gravel = < 3 inch and > No 4, Sand = < No 4 and >No 200, Silt/Clay = < No 200

Soil Moisture Condition

Dry: S = 0%
Humid: S = 1 to 25%
Damp: S = 26 to 50%
Moist: S = 51 to 75%
Wet: S = 76 to 99%
Saturated: S = 100%

SUMMIT GEOENGINEERING SERVICES

SOIL BORING LOG

Project:	Forefront at Thompson's Point	Boring #:	B-1
Location:	Thompson's Point Road	Project #:	24098
City, State:	Portland, Maine	Sheet:	2 of 4
		Chkd by:	CWC

Drilling Co:	Summit Geoengineering Services
Driller:	S. Floyd
Summit Staff:	J. Barnes, E.I.

Boring Elevation: 23 feet

Reference: Interpolated from "Conceptual Grading Plan" prepared by Placemarker Partners, LLC.

Date started: 5/22/2024 Date Completed: 5/22/2024

DRILLING METHOD		SAMPLER	
Vehicle:	ATV	Length:	24" SS
Model:	9580 VTR	Diameter:	2"OD/1.5"ID
Method:	RW/4" Casing	Hammer:	140 lb
Hammer Style:	Auto	Method:	ASTM D1586

ESTIMATED GROUND WATER DEPTH

Date	Depth	Elevation	Reference
5/23/2024	6.3 ft	16.7 ft	Measured in open hole

Depth (ft.)	No.	Pen/Rec (in)	Depth (ft)	blows/6"	Elev. (ft.)	SAMPLE DESCRIPTION	Geological/ Test Data	Geological Stratum
	FIELD VANE DATA							GLACIAL MARINE DEPOSIT
23								
24	FV-3		24			S_u = 700 psf $S_{u(r)}$ = 115 psf		
25								
26	FV-4		26			S_u = 700 psf $S_{u(r)}$ = 125 psf		
27								
28	FV-5		28			S_u = 650 psf $S_{u(r)}$ = 125 psf		
29								
30								
	UT-2	30/27	30 - 32.5	PUSH		Gray Silty CLAY, soft, wet, CL		
31				↓				
32				↓				
33				↓				
34								
	FIELD VANE DATA							
35	FV-6		35			S_u = 650 psf $S_{u(r)}$ = 50 psf		
36								
37	FV-7		37			S_u = 550 psf $S_{u(r)}$ = 25 psf		
38								
39	FV-8		39			S_u = 600 psf $S_{u(r)}$ = 50 psf		
40								
41	FV-9		41			S_u = 600 psf $S_{u(r)}$ = 25 psf		
42								
43	FV-10		43			S_u = 600 psf $S_{u(r)}$ = 50 psf		
44								

Granular Soils		Cohesive Soils		% Composition
Blows/ft.	Density	Blows/ft.	Consistency	ASTM D2487
0-4	V. Loose	<2	V. soft	
5-10	Loose	2-4	Soft	< 5% Trace
11-30	Compact	5-8	Firm	5-15% Little
31-50	Dense	9-15	Stiff	15-30% Some
>50	V. Dense	16-30	V. Stiff	> 30% With
		>30	Hard	

NOTES: PP = Pocket Penetrometer, MC = Moisture Content
LL = Liquid Limit, PI = Plastic Index, FV = Field Vane Test
Su = Undrained Shear Strength, Su(r) = Remolded Shear Strength

Bedrock Joints
Shallow = 0 to 35 degrees
Dipping = 35 to 55 degrees
Steep = 55 to 90 degrees

Boulders = diameter > 12 inches, Cobbles = diameter < 12 inches and > 3 inches
Gravel = < 3 inch and > No 4, Sand = < No 4 and >No 200, Silt/Clay = < No 200

Soil Moisture Condition
Dry: S = 0%
Humid: S = 1 to 25%
Damp: S = 26 to 50%
Moist: S = 51 to 75%
Wet: S = 76 to 99%
Saturated: S = 100%

SOIL BORING LOG

Project:	Forefront at Thompson's Point	Boring #:	B-1
Location:	Thompson's Point Road	Project #:	24098
City, State:	Portland, Maine	Sheet:	3 of 4
		Chkd by:	CWC

Drilling Co:	Summit Geoengineering Services
Driller:	S. Floyd
Summit Staff:	J. Barnes, E.I.

Boring Elevation: 23 feet

Reference: Interpolated from "Conceptual Grading Plan" prepared by Placemarker Partners, LLC.

Date started: 5/22/2024 Date Completed: 5/22/2024

DRILLING METHOD		SAMPLER	
Vehicle:	ATV	Length:	24" SS
Model:	9580 VTR	Diameter:	2"OD/1.5"ID
Method:	RW/4" Casing	Hammer:	140 lb
Hammer Style:	Auto	Method:	ASTM D1586

ESTIMATED GROUND WATER DEPTH

Date	Depth	Elevation	Reference
5/23/2024	6.3 ft	16.7 ft	Measured in open hole

Depth (ft.)	No.	Pen/Rec (in)	Depth (ft)	blows/6"	Elev. (ft.)	SAMPLE DESCRIPTION	Geological/ Test Data	Geological Stratum
45								GLACIAL MARINE DEPOSIT
	UT-3	30/27	45 - 47.5	PUSH		Gray Silty CLAY, black organics streaks, very soft, wet, CL		
46								
47								
48								
49								
		FIELD VANE DATA						
50	FV-11		50			S_u = 450 psf $S_{u(r)}$ = 50 psf		
51								
52	FV-12		52			S_u = 700 psf $S_{u(r)}$ = 50 psf		
53								
54	FV-13		54			S_u = 500 psf $S_{u(r)}$ = 75 psf		
55								
56	FV-14		56			S_u = 700 psf $S_{u(r)}$ = 100 psf		
57								
58	FV-15		58			S_u = 900 psf $S_{u(r)}$ = 75 psf		
59								
60	FV-16		60			S_u = 800 psf $S_{u(r)}$ = 50 psf		
61				WOH		Spear tipped rod probe with SPT-N hammer, blows counted per foot		
62				WOH				
63				WOH				
64				WOH				
65				WOH				
66				WOH				
				WOH				

Granular Soils		Cohesive Soils		% Composition
Blows/ft.	Density	Blows/ft.	Consistency	ASTM D2487
0-4	V. Loose	<2	V. soft	
5-10	Loose	2-4	Soft	< 5% Trace
11-30	Compact	5-8	Firm	5-15% Little
31-50	Dense	9-15	Stiff	15-30% Some
>50	V. Dense	16-30	V. Stiff	> 30% With
		>30	Hard	

NOTES: PP = Pocket Penetrometer, MC = Moisture Content

LL = Liquid Limit, PI = Plastic Index, FV = Field Vane Test

Su = Undrained Shear Strength, Su(r) = Remolded Shear Strength

Bedrock Joints

Shallow = 0 to 35 degrees

Dipping = 35 to 55 degrees

Steep = 55 to 90 degrees

Boulders = diameter > 12 inches, Cobbles = diameter < 12 inches and > 3 inches

Gravel = < 3 inch and > No 4, Sand = < No 4 and >No 200, Silt/Clay = < No 200

Soil Moisture Condition
Dry: S = 0%
Humid: S = 1 to 25%
Damp: S = 26 to 50%
Moist: S = 51 to 75%
Wet: S = 76 to 99%
Saturated: S = 100%

SUMMIT GEOENGINEERING SERVICES

SOIL BORING LOG

Project:	Forefront at Thompson's Point	Boring #:	B-1
Location:	Thompson's Point Road	Project #:	24098
City, State:	Portland, Maine	Sheet:	4 of 4
		Chkd by:	CWC

Drilling Co:	Summit Geoengineering Services
Driller:	S. Floyd
Summit Staff:	J. Barnes, E.I.

Boring Elevation: 23 feet

Reference: Interpolated from "Conceptual Grading Plan" prepared by Placemarker Partners, LLC.

Date started: 5/22/2024 Date Completed: 5/22/2024

DRILLING METHOD		SAMPLER	
Vehicle:	ATV	Length:	24" SS
Model:	9580 VTR	Diameter:	2"OD/1.5"ID
Method:	RW/4" Casing	Hammer:	140 lb
Hammer Style:	Auto	Method:	ASTM D1586

ESTIMATED GROUND WATER DEPTH

Date	Depth	Elevation	Reference
5/23/2024	6.3 ft	16.7 ft	Measured in open hole

Depth (ft.)	No.	Pen/Rec (in)	Depth (ft)	blows/6"	Elev. (ft.)	SAMPLE DESCRIPTION	Geological/ Test Data	Geological Stratum
67				WOH		Spear tipped rod probe with SPT-N hammer, blows counted per foot		GLCAIAL MARINE DEPOSIT
68				WOH				
69				WOH				
70				WOH				
71				WOH				
72				WOH				
73				1				
74				3				
75				1				
76				1				
77				1				
78						End of Exploration at 77', Probe Refusal on Probable Bedrock		77' PROBABLE
79								
80								
81								
82								
83								
84								
85								
86								
87								
88								

Granular Soils		Cohesive Soils		% Composition
Blows/ft.	Density	Blows/ft.	Consistency	ASTM D2487
0-4	V. Loose	<2	V. soft	
5-10	Loose	2-4	Soft	< 5% Trace
11-30	Compact	5-8	Firm	5-15% Little
31-50	Dense	9-15	Stiff	15-30% Some
>50	V. Dense	16-30	V. Stiff	> 30% With
		>30	Hard	

NOTES: PP = Pocket Penetrometer, MC = Moisture Content

LL = Liquid Limit, PI = Plastic Index, FV = Field Vane Test

Su = Undrained Shear Strength, Su(r) = Remolded Shear Strength

Bedrock Joints

Shallow = 0 to 35 degrees

Dipping = 35 to 55 degrees

Steep = 55 to 90 degrees

Boulders = diameter > 12 inches, Cobbles = diameter < 12 inches and > 3 inches

Gravel = < 3 inch and > No 4, Sand = < No 4 and >No 200, Silt/Clay = < No 200

Soil Moisture Condition
Dry: S = 0%
Humid: S = 1 to 25%
Damp: S = 26 to 50%
Moist: S = 51 to 75%
Wet: S = 76 to 99%
Saturated: S = 100%

SOIL BORING LOG

SUMMIT GEOENGINEERING SERVICES

Project:	Forefront at Thompson's Point	Boring #:	B-2
Location:	Thompson's Point Road	Project #:	24098
City, State:	Portland, Maine	Sheet:	1 of 4
		Chkd by:	CWC

Drilling Co:	Summit Geoengineering Services	Boring Elevation: 26 feet	
Driller:	S. Floyd	Reference: Interpolated from "Conceptual Grading Plan" prepared by Placemarker Partners, LLC.	
Summit Staff:	J. Barnes, E.I.	Date started: 5/22/2024	Date Completed: 5/23/2024

DRILLING METHOD		SAMPLER		ESTIMATED GROUND WATER DEPTH			
Vehicle:	ATV	Length:	24" SS	Date	Depth	Elevation	Reference
Model:	9580 VTR	Diameter:	2"OD/1.5"ID	5/23/2024	10.3 ft	15.7 ft	Measured in open hole
Method:	RW/4" Casing	Hammer:	140 lb				
Hammer Style:	Auto	Method:	ASTM D1586				

Depth (ft.)	No.	Pen/Rec (in)	Depth (ft)	blows/6"	Elev. (ft.)	SAMPLE DESCRIPTION	Geological/ Test Data	Geological Stratum
	S-1	24/24	0 - 2	6		Light brown SAND, little to some Gravel, compact,		FILL
1				8		humid, SP		
				9		Olive brown Silty SAND, compact, damp, SM		
2				3				
	S-2	24/24	2 - 4	2		Olive brown Silty CLAY, Sand seam at 3.7', soft,	PP = 6,000 psf	
3				2		moist, CL		
				2				
4				2				
5					21			
	S-3	24/20	5 - 7	WOH		Gray Silty CLAY, Sand seams at 6.1' and 6.7', very	PP < 500 psf	5'
6				WOH		soft, wet, CL		GLACIAL MARINE
				WOH				DEPOSIT
7				WOH				
	S-4	24/6	7 - 9	1		Brown SAND, little Gravel, very loose, wet, SP		
8				1		Gray Silty CLAY, soft, saturated, CL		
				1				
9				1				
10								
						Attempted tube at 10' - 12.5', No Recovery		
11								
12								
13								
14	FIELD VANE DATA							
15	FV-1		15			S_u = 1,000 psf $S_{u(r)}$ = 150 psf		
16								
17	FV-2		17			S_u = 1,150 psf $S_{u(r)}$ = 200 psf		
18								
19	FV-3		19			S_u = 1,000 psf $S_{u(r)}$ = 200 psf		
20								
21	FV-4		21			S_u = 950 psf $S_{u(r)}$ = 200 psf		
22								

Granular Soils		Cohesive Soils		% Composition
Blows/ft.	Density	Blows/ft.	Consistency	ASTM D2487
0-4	V. Loose	<2	V. soft	
5-10	Loose	2-4	Soft	< 5% Trace
11-30	Compact	5-8	Firm	5-15% Little
31-50	Dense	9-15	Stiff	15-30% Some
>50	V. Dense	16-30	V. Stiff	> 30% With
		>30	Hard	

NOTES: PP = Pocket Penetrometer, MC = Moisture Content
LL = Liquid Limit, PI = Plastic Index, FV = Field Vane Test
Su = Undrained Shear Strength, Su(r) = Remolded Shear Strength

Bedrock Joints
Shallow = 0 to 35 degrees
Dipping = 35 to 55 degrees
Steep = 55 to 90 degrees

Boulders = diameter > 12 inches, Cobbles = diameter < 12 inches and > 3 inches
Gravel = < 3 inch and > No 4, Sand = < No 4 and >No 200, Silt/Clay = < No 200

Soil Moisture Condition
Dry: S = 0%
Humid: S = 1 to 25%
Damp: S = 26 to 50%
Moist: S = 51 to 75%
Wet: S = 76 to 99%
Saturated: S = 100%

SUMMIT GEOENGINEERING SERVICES

SOIL BORING LOG

Project:	Forefront at Thompson's Point	Boring #:	B-2
Location:	Thompson's Point Road	Project #:	24098
City, State:	Portland, Maine	Sheet:	2 of 4
		Chkd by:	CWC

Drilling Co:	Summit Geoengineering Services
Driller:	S. Floyd
Summit Staff:	J. Barnes, E.I.

Boring Elevation: 26 feet

Reference: Interpolated from "Conceptual Grading Plan" prepared by Placemarker Partners, LLC.

Date started: 5/22/2024 Date Completed: 5/23/2024

DRILLING METHOD		SAMPLER	
Vehicle:	ATV	Length:	24" SS
Model:	9580 VTR	Diameter:	2"OD/1.5"ID
Method:	RW/4" Casing	Hammer:	140 lb
Hammer Style:	Auto	Method:	ASTM D1586

ESTIMATED GROUND WATER DEPTH

Date	Depth	Elevation	Reference
5/23/2024	10.3 ft	15.7 ft	Measured in open hole

Depth (ft.)	No.	Pen/Rec (in)	Depth (ft)	blows/6"	Elev. (ft.)	SAMPLE DESCRIPTION	Geological/ Test Data	Geological Stratum
	FIELD VANE DATA							GLACIAL MARINE
23	FV-5		23			S_u = 950 psf $S_{u(r)}$ = 200 psf		DEPOSIT
24								
25								
	UT-1	30/28	25 - 27.5	PUSH		Gray Silty CLAY, very soft, wet to saturated, CL		
26				↓				
27				↓				
28				↓				
	FIELD VANE DATA							
29	FV-6		29			S_u = 700 psf $S_{u(r)}$ = 75 psf		
30								
31	FV-7		31			S_u = 750 psf $S_{u(r)}$ = 100 psf		
32								
33	FV-8		33			S_u = 800 psf $S_{u(r)}$ = 100 psf		
34								
35	FV-9		35			S_u = 800 psf $S_{u(r)}$ = 75 psf		
36								
37	FV-10		37			S_u = 700 psf $S_{u(r)}$ = 50 psf		
38								
39	FV-11		39			S_u = 850 psf $S_{u(r)}$ = 50 psf		
40								
41	FV-12		41			S_u = 900 psf $S_{u(r)}$ = 75 psf		
42								
43	FV-13		43			S_u = 850 psf $S_{u(r)}$ = 50 psf		
44								
	FV-14		45			S_u = 1,000 psf $S_{u(r)}$ = 50 psf		

Granular Soils		Cohesive Soils		% Composition
Blows/ft.	Density	Blows/ft.	Consistency	ASTM D2487
0-4	V. Loose	<2	V. soft	
5-10	Loose	2-4	Soft	< 5% Trace
11-30	Compact	5-8	Firm	5-15% Little
31-50	Dense	9-15	Stiff	15-30% Some
>50	V. Dense	16-30	V. Stiff	> 30% With
		>30	Hard	

NOTES: PP = Pocket Penetrometer, MC = Moisture Content
LL = Liquid Limit, PI = Plastic Index, FV = Field Vane Test
Bedrock Joints Su = Undrained Shear Strength, Su(r) = Remolded Shear Strength
Shallow = 0 to 35 degrees
Dipping = 35 to 55 degrees
Steep = 55 to 90 degrees

Boulders = diameter > 12 inches, Cobbles = diameter < 12 inches and > 3 inches
Gravel = < 3 inch and > No 4, Sand = < No 4 and >No 200, Silt/Clay = < No 200

Soil Moisture Condition
Dry: S = 0%
Humid: S = 1 to 25%
Damp: S = 26 to 50%
Moist: S = 51 to 75%
Wet: S = 76 to 99%
Saturated: S = 100%

SUMMIT GEOENGINEERING SERVICES

SOIL BORING LOG

Boring #: **B-2**

Project:	Forefront at Thompson's Point	Project #:	24098
Location:	Thompson's Point Road	Sheet:	3 of 4
City, State:	Portland, Maine	Chkd by:	CWC

Drilling Co:	Summit Geoengineering Services	Boring Elevation: 26 feet	
Driller:	S. Floyd	Reference: Interpolated from "Conceptual Grading Plan" prepared by Placemarker Partners, LLC.	
Summit Staff:	J. Barnes, E.I.	Date started: 5/22/2024	Date Completed: 5/23/2024

DRILLING METHOD		SAMPLER	
Vehicle:	ATV	Length:	24" SS
Model:	9580 VTR	Diameter:	2"OD/1.5"ID
Method:	RW/4" Casing	Hammer:	140 lb
Hammer Style:	Auto	Method:	ASTM D1586

ESTIMATED GROUND WATER DEPTH

Date	Depth	Elevation	Reference
5/23/2024	10.3 ft	15.7 ft	Measured in open hole

Depth (ft.)	No.	Pen/Rec (in)	Depth (ft)	blows/6"	Elev. (ft.)	SAMPLE DESCRIPTION	Geological/ Test Data	Geological Stratum
	FIELD VANE DATA							GLACIAL MARINE
45	FV-14		45			S_u = 1,000 psf $S_{u(r)}$ = 50 psf		DEPOSIT
46								
47	FV-15		47			S_u = 1,000 psf $S_{u(r)}$ = 50 psf		
48								
49	FV-16		49			S_u = 1,000 psf $S_{u(r)}$ = 50 psf		
50								
51	FV-17		51			S_u = 1,000 psf $S_{u(r)}$ = 75 psf		
52								
53	FV-18		53			S_u = 1,000 psf $S_{u(r)}$ = 75 psf		
54								
55	FV-19		55			S_u = 1,150 psf $S_{u(r)}$ = 100 psf		
56								
57	FV-20		57			S_u = 1,200 psf $S_{u(r)}$ = 150 psf		
58								
59	FV-21		59			S_u = 1,250 psf $S_{u(r)}$ = 175 psf		
60						Vane push refusal at 60'		
61				WOH		Spear tipped rod probe with SPT-N hammer, blows counted per foot		
62				WOH				
63				3				
64				3				
65				7				
66				13				
				50				

Granular Soils		Cohesive Soils		% Composition
Blows/ft.	Density	Blows/ft.	Consistency	ASTM D2487
0-4	V. Loose	<2	V. soft	
5-10	Loose	2-4	Soft	< 5% Trace
11-30	Compact	5-8	Firm	5-15% Little
31-50	Dense	9-15	Stiff	15-30% Some
>50	V. Dense	16-30	V. Stiff	> 30% With
		>30	Hard	

NOTES: PP = Pocket Penetrometer, MC = Moisture Content
LL = Liquid Limit, PI = Plastic Index, FV = Field Vane Test
Su = Undrained Shear Strength, Su(r) = Remolded Shear Strength

Bedrock Joints
Shallow = 0 to 35 degrees
Dipping = 35 to 55 degrees
Steep = 55 to 90 degrees

Boulders = diameter > 12 inches, Cobbles = diameter < 12 inches and > 3 inches
Gravel = < 3 inch and > No 4, Sand = < No 4 and >No 200, Silt/Clay = < No 200

Soil Moisture Condition
Dry: S = 0%
Humid: S = 1 to 25%
Damp: S = 26 to 50%
Moist: S = 51 to 75%
Wet: S = 76 to 99%
Saturated: S = 100%

SUMMIT GEOENGINEERING SERVICES

SOIL BORING LOG

Project:	Forefront at Thompson's Point	Boring #:	B-2
Location:	Thompson's Point Road	Project #:	24098
City, State:	Portland, Maine	Sheet:	4 of 4
		Chkd by:	CWC

Drilling Co:	Summit Geoengineering Services
Driller:	S. Floyd
Summit Staff:	J. Barnes, E.I.

Boring Elevation: 26 feet

Reference: Interpolated from "Conceptual Grading Plan" prepared by Placemarker Partners, LLC.

Date started: 5/22/2024 Date Completed: 5/23/2024

DRILLING METHOD		SAMPLER	
Vehicle:	ATV	Length:	24" SS
Model:	9580 VTR	Diameter:	2"OD/1.5"ID
Method:	RW/4" Casing	Hammer:	140 lb
Hammer Style:	Auto	Method:	ASTM D1586

ESTIMATED GROUND WATER DEPTH

Date	Depth	Elevation	Reference
5/23/2024	10.3 ft	15.7 ft	Measured in open hole

Depth (ft.)	No.	Pen/Rec (in)	Depth (ft)	blows/6"	Elev. (ft.)	SAMPLE DESCRIPTION	Geological/ Test Data	Geological Stratum
67				50		Spear tipped rod probe with SPT-N hammer, blows counted per foot		GLACIAL MARINE DEPOSIT
				50/0"	-41			
68						Probe refusal at 67'		67'
	ROCK CORE DATA							BEDROCK
69	RUN	RECOVERY	DEPTH (ft)	RQD		Hard, slightly weathered, fine grained quartz-plagioclase PHYLLITE		
	C-1	93%	67 - 72	74%				
70						Joints are close, shallow (5° to 35°), planar, rough and loose		
71						Softened portion at 71'+/-		
72					-46	Mohs hardness = 5		
73						End of Exploration at 72'		
74								
75								
76								
77								
78								
79								
80								
81								
82								
83								
84								
85								
86								
87								
88								

Granular Soils		Cohesive Soils		% Composition
	Density	Blows/ft.	Consistency	ASTM D2487
0-4	V. Loose	<2	V. soft	
5-10	Loose	2-4	Soft	< 5% Trace
11-30	Compact	5-8	Firm	5-15% Little
31-50	Dense	9-15	Stiff	15-30% Some
>50	V. Dense	16-30	V. Stiff	> 30% With
		>30	Hard	

NOTES: PP = Pocket Penetrometer, MC = Moisture Content

LL = Liquid Limit, PI = Plastic Index, FV = Field Vane Test

Su = Undrained Shear Strength, Su(r) = Remolded Shear Strength

Bedrock Joints

Shallow = 0 to 35 degrees

Dipping = 35 to 55 degrees

Steep = 55 to 90 degrees

Boulders = diameter > 12 inches, Cobbles = diameter < 12 inches and > 3 inches

Gravel = < 3 inch and > No 4, Sand = < No 4 and >No 200, Silt/Clay = < No 200

Soil Moisture Condition
Dry: S = 0%
Humid: S = 1 to 25%
Damp: S = 26 to 50%
Moist: S = 51 to 75%
Wet: S = 76 to 99%
Saturated: S = 100%

SUMMIT GEOENGINEERING SERVICES

SOIL BORING LOG

Project:	Forefront at Thompson's Point	Boring #:	B-3
Location:	Thompson's Point Road	Project #:	24098
City, State:	Portland, Maine	Sheet:	1 of 3
		Chkd by:	CWC

Drilling Co:	Summit Geoengineering Services
Driller:	S. Floyd
Summit Staff:	J. Barnes, E.I.

Boring Elevation: 29 feet

Reference: Interpolated from "Conceptual Grading Plan" prepared by Placemarker Partners, LLC.

Date started: 5/23/2024 Date Completed: 5/23/2024

DRILLING METHOD		SAMPLER	
Vehicle:	ATV	Length:	24" SS
Model:	9580 VTR	Diameter:	2"OD/1.5"ID
Method:	RW/4" Casing	Hammer:	140 lb
Hammer Style:	Auto	Method:	ASTM D1586

ESTIMATED GROUND WATER DEPTH

Date	Depth	Elevation	Reference
5/23/2024	11 ft	18 ft	Estimated moisture content of samples

Depth (ft.)	No.	Pen/Rec (in)	Depth (ft)	blows/6"	Elev. (ft.)	SAMPLE DESCRIPTION	Geological/ Test Data	Geological Stratum
	S-1	24/7	0 - 2	3		Olive brown to black Sandy SILT, some Clay, trace to		FILL
1				6		little Gravel, rootlets, damp, ML		
				9				
2				4				
	S-2	24/0	2 - 4	8		No recovery in spoon		
3				7				
				7				
4				7				
5								
	S-3	24/13	5 - 7	3		Black Sandy SILT, some Clay, little Gravel, firm, moist,		
6				3		ML		
				3				
7				6		Orange to light brown SAND, loose, humid, SP		
	S-4	24/6	7 - 9	8		Olive to black Clayey SILT, some Sand, brick piece at		
8				8		7.3', very stiff, damp, ML		
				9				
9				7				
10								
	S-5	24/24	10 - 12	2		Oilve to black Sandy SILT, some Clay, trace Gravel,		
11				2		firm, moist, ML		
				4		Olive brown SILT, some Sand and Clay, stiff,		
12				5		moist to wet, ML		
	S-6	24/24	12 - 14	8		Olive to black Sandy SILT, some Clay, trace Gravel,		
13				10		brick pieces, stiff, moist, ML		
				10		Olive brown interlayered Silty CLAY and SAND,		
14				8		stiff/compact, damp to moist, CL or SC		
15					14			
	S-7	24/24	15 - 17	2		Olive brown Silty CLAY, frequent fine Sand seams,	PP = 7,000 psf	15'
16				3		stiff, moist, CL		GLACIAL MARINE
				3				DEPOSIT
17				4				
	S-8	24/24	17 - 19	2		Olive brown SILT-CLAY, some Sand, black staining		
18				3		throughout, firm, moist, ML-CL		
				4				
19				5				
20								
	S-8	24/22	20 - 22	WOH		Olive brown Silty CLAY, trace to little fine Sand,		
21				WOH		coarse Sand seams at 20' and 21.2', very soft, wet		
				WOH		to saturated, CL		
22				WOH				

Granular Soils		Cohesive Soils		% Composition
Blows/ft.	Density	Blows/ft.	Consistency	ASTM D2487
0-4	V. Loose	<2	V. soft	
5-10	Loose	2-4	Soft	< 5% Trace
11-30	Compact	5-8	Firm	5-15% Little
31-50	Dense	9-15	Stiff	15-30% Some
>50	V. Dense	16-30	V. Stiff	> 30% With
		>30	Hard	

NOTES: PP = Pocket Penetrometer, MC = Moisture Content

LL = Liquid Limit, PI = Plastic Index, FV = Field Vane Test

Su = Undrained Shear Strength, Su(r) = Remolded Shear Strength

Bedrock Joints

Shallow = 0 to 35 degrees

Dipping = 35 to 55 degrees

Steep = 55 to 90 degrees

Boulders = diameter > 12 inches, Cobbles = diameter < 12 inches and > 3 inches

Gravel = < 3 inch and > No 4, Sand = < No 4 and >No 200, Silt/Clay = < No 200

Soil Moisture Condition
Dry: S = 0%
Humid: S = 1 to 25%
Damp: S = 26 to 50%
Moist: S = 51 to 75%
Wet: S = 76 to 99%
Saturated: S = 100%

SOIL BORING LOG

Project:	Forefront at Thompson's Point	Boring #:	B-3
Location:	Thompson's Point Road	Project #:	24098
City, State:	Portland, Maine	Sheet:	1 of 3
		Chkd by:	CWC

Drilling Co:	Summit Geoengineering Services	Boring Elevation: 29 feet	
Driller:	S. Floyd	Reference: Interpolated from "Conceptual Grading Plan" prepared by Placemarker Partners, LLC.	
Summit Staff:	J. Barnes, E.I.	Date started: 5/23/2024	Date Completed: 5/23/2024

DRILLING METHOD		SAMPLER	
Vehicle:	ATV	Length:	24" SS
Model:	9580 VTR	Diameter:	2"OD/1.5"ID
Method:	RW/4" Casing	Hammer:	140 lb
Hammer Style:	Auto	Method:	ASTM D1586

ESTIMATED GROUND WATER DEPTH

Date	Depth	Elevation	Reference
5/23/2024	11 ft	18 ft	Estimated moisture content of samples

Depth (ft.)	No.	Pen/Rec (in)	Depth (ft)	blows/6"	Elev. (ft.)	SAMPLE DESCRIPTION	Geological/ Test Data	Geological Stratum
								GLACIAL MARINE DEPOSIT
23								
24								
25								
	S-9	24/24	25 - 27	WOH		Olive brown to gray Silty CLAY, fine Sand seams throughout, coarse Sand seam at 25.5', very soft, saturated, CL		
26				WOH				
				WOH				
27				WOH				
28								
29								
30								
	UT-1	30/	30 - 32.5	PUSH		Gray Silty CLAY, very soft, wet, CL		
31								
32								
33								
34								
	FIELD VANE DATA							
35	FV-1		35			S_u = 650 psf $S_{u(r)}$ = 100 psf		
36								
37	FV-2		37			S_u = 700 psf $S_{u(r)}$ = 150 psf		
38								
39	FV-3		39			S_u = 700 psf $S_{u(r)}$ = 125 psf		
40								
41	FV-4		41			S_u = 700 psf $S_{u(r)}$ = 100 psf		
42								
43	FV-5		43			S_u = 700 psf $S_{u(r)}$ = 125 psf		
44								
	FV-6		45			S_u = 650 psf $S_{u(r)}$ = 125 psf		

Granular Soils		Cohesive Soils		% Composition
Blows/ft.	Density	Blows/ft.	Consistency	ASTM D2487
0-4	V. Loose	<2	V. soft	
5-10	Loose	2-4	Soft	< 5% Trace
11-30	Compact	5-8	Firm	5-15% Little
31-50	Dense	9-15	Stiff	15-30% Some
>50	V. Dense	16-30	V. Stiff	> 30% With
		>30	Hard	

NOTES: PP = Pocket Penetrometer, MC = Moisture Content
LL = Liquid Limit, PI = Plastic Index, FV = Field Vane Test
Su = Undrained Shear Strength, Su(r) = Remolded Shear Strength

Bedrock Joints
Shallow = 0 to 35 degrees
Dipping = 35 to 55 degrees
Steep = 55 to 90 degrees

Boulders = diameter > 12 inches, Cobbles = diameter < 12 inches and > 3 inches
Gravel = < 3 inch and > No 4, Sand = < No 4 and >No 200, Silt/Clay = < No 200

Soil Moisture Condition
Dry: S = 0%
Humid: S = 1 to 25%
Damp: S = 26 to 50%
Moist: S = 51 to 75%
Wet: S = 76 to 99%
Saturated: S = 100%

SOIL BORING LOG

Project:	Forefront at Thompson's Point	Boring #:	B-3
Location:	Thompson's Point Road	Project #:	24098
City, State:	Portland, Maine	Sheet:	3 of 3
		Chkd by:	CWC

Drilling Co:	Summit Geoengineering Services	Boring Elevation: 29 feet	
Driller:	S. Floyd	Reference: Interpolated from "Conceptual Grading Plan" prepared by Placemarker Partners, LLC.	
Summit Staff:	J. Barnes, E.I.	Date started: 5/23/2024	Date Completed: 5/23/2024

DRILLING METHOD		SAMPLER	
Vehicle:	ATV	Length:	24" SS
Model:	9580 VTR	Diameter:	2"OD/1.5"ID
Method:	RW/4" Casing	Hammer:	140 lb
Hammer Style:	Auto	Method:	ASTM D1586

ESTIMATED GROUND WATER DEPTH

Date	Depth	Elevation	Reference
5/23/2024	11 ft	18 ft	Estimated moisture content of samples

Depth (ft.)	No.	Pen/Rec (in)	Depth (ft)	blows/6"	Elev. (ft.)	SAMPLE DESCRIPTION	Geological/ Test Data	Geological Stratum
	FIELD VANE DATA							GLACIAL MARINE
45	FV-6		45			S_u = 650 psf $S_{u(r)}$ = 125 psf		DEPOSIT
46								
47	FV-7		47			S_u = 700 psf $S_{u(r)}$ = 125 psf		
48								
49	FV-8		49			S_u = 700 psf $S_{u(r)}$ = 125 psf		
50								
51	FV-9		51		-22	S_u = 700 psf $S_{u(r)}$ = 125 psf		
52						End of Exploration at 51', No Refusal		51'
53								
54								
55								
56								
57								
58								
59								
60								
61								
62								
63								
64								
65								
66								

Granular Soils		Cohesive Soils		% Composition
Blows/ft.	Density	Blows/ft.	Consistency	ASTM D2487
0-4	V. Loose	<2	V. soft	
5-10	Loose	2-4	Soft	< 5% Trace
11-30	Compact	5-8	Firm	5-15% Little
31-50	Dense	9-15	Stiff	15-30% Some
>50	V. Dense	16-30	V. Stiff	> 30% With
		>30	Hard	

NOTES: PP = Pocket Penetrometer, MC = Moisture Content
LL = Liquid Limit, PI = Plastic Index, FV = Field Vane Test
Su = Undrained Shear Strength, Su(r) = Remolded Shear Strength

Bedrock Joints
Shallow = 0 to 35 degrees
Dipping = 35 to 55 degrees
Steep = 55 to 90 degrees

Boulders = diameter > 12 inches, Cobbles = diameter < 12 inches and > 3 inches
Gravel = < 3 inch and > No 4, Sand = < No 4 and >No 200, Silt/Clay = < No 200

Soil Moisture Condition
Dry: S = 0%
Humid: S = 1 to 25%
Damp: S = 26 to 50%
Moist: S = 51 to 75%
Wet: S = 76 to 99%
Saturated: S = 100%

SOIL BORING LOG

SUMMIT GEOENGINEERING SERVICES

Project:	Forefront at Thompson's Point	Boring #:	B-4
Location:	Thompson's Point Road	Project #:	24098
City, State:	Portland, Maine	Sheet:	1 of 1
		Chkd by:	CWC

Drilling Co:	Summit Geoengineering Services
Driller:	S. Floyd
Summit Staff:	J. Barnes, E.I.

Boring Elevation: 40 feet

Reference: Interpolated from "Conceptual Grading Plan" prepared by Placemarker Partners, LLC.

Date started: 5/21/2024 Date Completed: 5/21/2024

DRILLING METHOD		SAMPLER	
Vehicle:	ATV	Length:	24" SS
Model:	9580 VTR	Diameter:	2"OD/1.5"ID
Method:	2-1/4" HSA	Hammer:	140 lb
Hammer Style:	Auto	Method:	ASTM D1586

ESTIMATED GROUND WATER DEPTH

Date	Depth	Elevation	Reference
5/21/2024	5.5 ft	34.5 ft	Estimated moisture content of samples

Depth (ft.)	No.	Pen/Rec (in)	Depth (ft)	blows/6"	Elev. (ft.)	SAMPLE DESCRIPTION	Geological/ Test Data	Geological Stratum
	S-1	24/16	0 - 2	4		Dark brown Silty SAND, brick piece at 0.5', loose,		FILL
1				7		damp, SM		
				3				
2				3				
	S-2	24/22	2 - 4	3		Dark brown to black Sandy SILT, trace clay and brick		
3				3		pieces, firm, damp, ML		
				3				
4				20		Light brown SAND, little Gravel, compact, humid, SP		3.5'
5								
	S-3	24/14	5 - 7	8		Light brown SAND, trace to little Gravel, compact,		
6				3		humid, SP		5.5'
				2		Dark gray to black Sandy SILT, soft, moist, ML		
7				2				
	S-4	24/12	7 - 9	2		Black Sandy SILT, trace Gravel, organic odor,		
8				1		soft, wet, ML		
				1				
9				1				
10								
	S-5	24/10	10 - 12	WOH		Olive to brown SAND, little Silt, trace Gravel, very		
11				2		loose, wet to saturated, SP-SM		
				17		Black and orange SAND, some Gravel, compact,		
12				14		wet, SP		
	S-6	24/16	12 - 14	13		Black SAND, litle to some Silt, trace to little Gravel,		
13				9		compact, wet to saturated, SP-SM		
				16		Black Sandy SILT, stiff, moist to wet, ML		
14				8				
15								
	S-7	24/24	15 - 17	9		Olive brown Silty CLAY, firm, wet, CL		
16				19		Black Sandy SILT, brick from 15.5' to 16.3', very		
				11		stiff, wet, ML		
17				14				
18								
19								
20					20			
	S-8	24/20	20 - 22	5		Olive brown to gray SILT-CLAY, stiff, damp, ML-CL		20'
21				6				GLACIAL MARINE
				7				DEPOSIT
22				13	18			
						End of Exploration at 22', No Refusal		

Granular Soils		Cohesive Soils		% Composition
Blows/ft.	Density	Blows/ft.	Consistency	ASTM D2487
0-4	V. Loose	<2	V. soft	
5-10	Loose	2-4	Soft	< 5% Trace
11-30	Compact	5-8	Firm	5-15% Little
31-50	Dense	9-15	Stiff	15-30% Some
>50	V. Dense	16-30	V. Stiff	> 30% With
		>30	Hard	

NOTES: PP = Pocket Penetrometer, MC = Moisture Content

LL = Liquid Limit, PI = Plastic Index, FV = Field Vane Test

Su = Undrained Shear Strength, Su(r) = Remolded Shear Strength

Bedrock Joints

Shallow = 0 to 35 degrees

Dipping = 35 to 55 degrees

Steep = 55 to 90 degrees

Boulders = diameter > 12 inches, Cobbles = diameter < 12 inches and > 3 inches

Gravel = < 3 inch and > No 4, Sand = < No 4 and >No 200, Silt/Clay = < No 200

Soil Moisture Condition
Dry: S = 0%
Humid: S = 1 to 25%
Damp: S = 26 to 50%
Moist: S = 51 to 75%
Wet: S = 76 to 99%
Saturated: S = 100%

SOIL BORING LOG

SUMMIT GEOENGINEERING SERVICES

Project:	Forefront at Thompson's Point	Boring #:	B-5
Location:	Thompson's Point Road	Project #:	24098
City, State:	Portland, Maine	Sheet:	1 of 1
		Chkd by:	CWC

Drilling Co:	Summit Geoengineering Services
Driller:	S. Floyd
Summit Staff:	J. Barnes, E.I.

Boring Elevation: 26 feet

Reference: Interpolated from "Conceptual Grading Plan" prepared by Placemarker Partners, LLC.

Date started: 5/21/2024 Date Completed: 5/21/2024

DRILLING METHOD		SAMPLER	
Vehicle:	ATV	Length:	24" SS
Model:	9580 VTR	Diameter:	2"OD/1.5"ID
Method:	2-1/4" HSA	Hammer:	140 lb
Hammer Style:	Auto	Method:	ASTM D1586

ESTIMATED GROUND WATER DEPTH

Date	Depth	Elevation	Reference
5/21/2024	11.3 ft	14.7 ft	Measured in 15 feet of augers

Depth (ft.)	No.	Pen/Rec (in)	Depth (ft)	blows/6"	Elev. (ft.)	SAMPLE DESCRIPTION	Geological/ Test Data	Geological Stratum
	S-1	24/15	0 - 2	5		Dark brown SAND, little Silt and Gravel, compact,		
1				10		humid, SP-SM		FILL/REWORKED
				24		Olive to dark gray Sandy SILT, trace Gravel, cobble		NATIVE
2				14		in spoon tip, hard, damp, ML	PP > 9,000 psf	
	S-2	24/24	2 - 4	8		Olive gray SILT-CLAY, trace SAND, stiff, damp, ML-CL		
3				10				
				12		Black Sandy SILT, little Gravel, wood piece at 3.3',		
4				12		petroleum odor, stiff, damp, ML		
5					21			
	S-3	24/20	5 - 7	1		Olive brown to gray SILT-CLAY, trace fine Sand, stiff,		5'
6				3		damp, ML-CL	PP > 9,000 psf	GLACIAL MARINE
				8				DEPOSIT
7				12				
	S-4	24/24	7 - 9	11		Olvie brown to gray SILT-CLAY, trace fine Sand,	PP > 9,000 psf	
8				13		root at 7.5' +/-, heavily mottled, very stiff, damp to		
				13		moist, ML-CL		
9				14				
10								
	S-5	24/24	10 - 12	1		Olive brown to gray Silty CLAY, fine Sand seam from	PP = 4,000 psf	
11				1		11.6' to 11.8', mottled, soft, moist to wet with		
				2		depth, CL		
12				3				
	S-6	24/24	12 - 14	2		Olive brown CLAY interlayered with fine SAND,		
13				2		heavily mottled, soft/very loose, wet to saturated,		
				1		CL or SC		
14				1				
15								
	S-7	24/24	15 - 17	WOH		Olive brown Silty CLAY, trace to little fine Sand,	PP = 1,000 -	
16				WOH		very soft, wet to saturated, CL	500 psf	
				1				
17				WOH				
18								
19								
20								
	S-8	24/24	20 - 22	WOH		Gray Silty CLAY, very soft, saturated, CL	PP < 500 psf	
21				WOH				
				WOH				
22				WOH	4			
						End of Exploration at 22', No Refusal		22'

Granular Soils		Cohesive Soils		% Composition
Blows/ft.	Density	Blows/ft.	Consistency	ASTM D2487
0-4	V. Loose	<2	V. soft	
5-10	Loose	2-4	Soft	< 5% Trace
11-30	Compact	5-8	Firm	5-15% Little
31-50	Dense	9-15	Stiff	15-30% Some
>50	V. Dense	16-30	V. Stiff	> 30% With
		>30	Hard	

NOTES: PP = Pocket Penetrometer, MC = Moisture Content

LL = Liquid Limit, PI = Plastic Index, FV = Field Vane Test

Su = Undrained Shear Strength, Su(r) = Remolded Shear Strength

Bedrock Joints

Shallow = 0 to 35 degrees

Dipping = 35 to 55 degrees

Steep = 55 to 90 degrees

Boulders = diameter > 12 inches, Cobbles = diameter < 12 inches and > 3 inches

Gravel = < 3 inch and > No 4, Sand = < No 4 and >No 200, Silt/Clay = < No 200

Soil Moisture Condition
Dry: S = 0%
Humid: S = 1 to 25%
Damp: S = 26 to 50%
Moist: S = 51 to 75%
Wet: S = 76 to 99%
Saturated: S = 100%

SOIL BORING LOG

SUMMIT GEOENGINEERING SERVICES

Project:	Forefront at Thompson's Point	Boring #:	B-6
Location:	Thompson's Point Road	Project #:	24098
City, State:	Portland, Maine	Sheet:	1 of 2
		Chkd by:	CWC

Drilling Co:	Summit Geoengineering Services
Driller:	S. Floyd
Summit Staff:	J. Barnes, E.I.

Boring Elevation: 26 feet

Reference: Interpolated from "Conceptual Grading Plan" prepared by Placemarker Partners, LLC.

Date started: 5/21/2024 Date Completed: 5/21/2024

DRILLING METHOD		SAMPLER	
Vehicle:	ATV	Length:	24" SS
Model:	9580 VTR	Diameter:	2"OD/1.5"ID
Method:	2-1/4" HSA	Hammer:	140 lb
Hammer Style:	Auto	Method:	ASTM D1586

ESTIMATED GROUND WATER DEPTH

Date	Depth	Elevation	Reference
5/21/2024	5 ft	21 ft	Estimated moisture content of samples

Depth (ft.)	No.	Pen/Rec (in)	Depth (ft)	blows/6"	Elev. (ft.)	SAMPLE DESCRIPTION	Geological/ Test Data	Geological Stratum
	S-1	24/18	0 - 2	4		Brown SAND, some Gravel, trace Silt, loose, humid,		FILL
1				5	25	SP		
				5		Olive brown SILT-CLAY, stiff, humid, ML-CL		1'
2				6				
	S-2	24/17	2 - 4	5		Olive brown Silty CLAY, sitff, damp to moist, CL	PP = 4,000 psf	
3				4				
				3				
4				5				
5								
	S-3	24/24	5 - 7	1		Olive brown Silty CLAY, frequent Sand seams, very	PP < 500 psf	
6				1		soft, wet, CL		
				WOH				
7				1				
	S-4	24/24	7 - 9	WOH		Olive brown Silty CLAY, Sand seam at 7', very soft,	PP < 500 psf	
8				WOH		saturated, CL		
				WOH	17.6			
9				WOH		Gray Silty CLAY, very soft, saturated, CL	PP < 500 psf	8.4'
10								
	S-5	24/24	10 - 12	WOH		Gray Silty CLAY, very soft, saturated, CL	PP < 500 psf	
11				WOH				
				WOH				
12				WOH				
	S-6	24/24	12 - 14	WOH		Gray Silty CLAY, very soft, saturated, CL	PP < 500 psf	
13				WOH				
				WOH				
14				WOH				
				WOH				
15								
	FiELD VANE DATA							
16	FV-1		16			S_u = 1,000 psf $S_{u(r)}$ = 200 psf		
17								
18	FV-2		18			S_u = 1,000 psf $S_{u(r)}$ = 250 psf		
19								
20	FV-3		20			S_u = 1,000 psf $S_{u(r)}$ = 250 psf		
21								
22	FV-4		22			S_u = 1,000 psf $S_{u(r)}$ = 250 psf		

Granular Soils		Cohesive Soils		% Composition
Blows/ft.	Density	Blows/ft.	Consistency	ASTM D2487
0-4	V. Loose	<2	V. soft	
5-10	Loose	2-4	Soft	< 5% Trace
11-30	Compact	5-8	Firm	5-15% Little
31-50	Dense	9-15	Stiff	15-30% Some
>50	V. Dense	16-30	V. Stiff	> 30% With
		>30	Hard	

NOTES: PP = Pocket Penetrometer, MC = Moisture Content
LL = Liquid Limit, PI = Plastic Index, FV = Field Vane Test
Su = Undrained Shear Strength, Su(r) = Remolded Shear Strength

Bedrock Joints
Shallow = 0 to 35 degrees
Dipping = 35 to 55 degrees
Steep = 55 to 90 degrees

Boulders = diameter > 12 inches, Cobbles = diameter < 12 inches and > 3 inches
Gravel = < 3 inch and > No 4, Sand = < No 4 and >No 200, Silt/Clay = < No 200

Soil Moisture Condition
Dry: S = 0%
Humid: S = 1 to 25%
Damp: S = 26 to 50%
Moist: S = 51 to 75%
Wet: S = 76 to 99%
Saturated: S = 100%

SOIL BORING LOG

Project:	Forefront at Thompson's Point	Boring #:	**B-6**
Location:	Thompson's Point Road	Project #:	24098
City, State:	Portland, Maine	Sheet:	2 of 2
		Chkd by:	CWC

Drilling Co:	Summit Geoengineering Services
Driller:	S. Floyd
Summit Staff:	J. Barnes, E.I.

Boring Elevation: 26 feet

Reference: Interpolated from "Conceptual Grading Plan" prepared by Placemarker Partners, LLC.

Date started: 5/21/2024 Date Completed: 5/21/2024

DRILLING METHOD		SAMPLER	
Vehicle:	ATV	Length:	24" SS
Model:	9580 VTR	Diameter:	2"OD/1.5"ID
Method:	2-1/4" HSA	Hammer:	140 lb
Hammer Style:	Auto	Method:	ASTM D1586

ESTIMATED GROUND WATER DEPTH

Date	Depth	Elevation	Reference
5/21/2024	5 ft	21 ft	Estimated moisture content of samples

Depth (ft.)	No.	Pen/Rec (in)	Depth (ft)	blows/6"	Elev. (ft.)	**SAMPLE DESCRIPTION**	Geological/ Test Data	Geological Stratum
	FIELD VANE DATA							GLACIAL MARINE DEPOSIT
23								
24	FV-5		24		1.7	S_u = 1,125 psf $S_{u(r)}$ = 300 psf		
25						End of Exploration at 24.3', Vane Push Refusal on Probable Sand Seam		24.3'
26								
27								
28								
29								
30								
31								
32								
33								
34								
35								
36								
37								
38								
39								
40								
41								
42								
43								
44								

Granular Soils		Cohesive Soils	
Blows/ft.	Density	Blows/ft.	Consistency
0-4	V. Loose	<2	V. soft
5-10	Loose	2-4	Soft
11-30	Compact	5-8	Firm
31-50	Dense	9-15	Stiff
>50	V. Dense	16-30	V. Stiff
		>30	Hard

% Composition
ASTM D2487
< 5% Trace
5-15% Little
15-30% Some
> 30% With

NOTES: PP = Pocket Penetrometer, MC = Moisture Content

LL = Liquid Limit, PI = Plastic Index, FV = Field Vane Test

Bedrock Joints Su = Undrained Shear Strength, Su(r) = Remolded Shear Strength

Shallow = 0 to 35 degrees

Dipping = 35 to 55 degrees

Steep = 55 to 90 degrees

Boulders = diameter > 12 inches, Cobbles = diameter < 12 inches and > 3 inches

Gravel = < 3 inch and > No 4, Sand = < No 4 and >No 200, Silt/Clay = < No 200

Soil Moisture Condition
Dry: S = 0%
Humid: S = 1 to 25%
Damp: S = 26 to 50%
Moist: S = 51 to 75%
Wet: S = 76 to 99%
Saturated: S = 100%

SOIL BORING LOG

Project:	Forefront at Thompson's Point	Boring #:	**B-7**
Location:	Thompson's Point Road	Project #:	24098
City, State:	Portland, Maine	Sheet:	1 of 2
		Chkd by:	CWC

Drilling Co:	Summit Geoengineering Services	Boring Elevation: 24 feet	
Driller:	S. Floyd	Reference: Interpolated from "Conceptual Grading Plan" prepared by Placemarker Partners, LLC.	
Summit Staff:	J. Barnes, E.I.	Date started: 5/21/2024	Date Completed: 5/21/2024

DRILLING METHOD		SAMPLER		ESTIMATED GROUND WATER DEPTH			
Vehicle:	ATV	Length:	24" SS	Date	Depth	Elevation	Reference
Model:	9580 VTR	Diameter:	2"OD/1.5"ID	5/21/2024	5 ft	19 ft	Estimated moisture content of samples
Method:	2-1/4" HSA	Hammer:	140 lb				
Hammer Style:	Auto	Method:	ASTM D1586				

Depth (ft.)	No.	Pen/Rec (in)	Depth (ft)	blows/6"	Elev. (ft.)	SAMPLE DESCRIPTION	Geological/ Test Data	Geological Stratum
	S-1	12/12	0 - 1	PUSH	23.8	2" Bituminous asphalt		PAVEMENT
1				▼		Brown SAND, some Gravel, little black ash, compact,		FILL/REWORKED
	S-2	24/16	1 - 3	11		damp, SP		NATIVE
2				12		Brown to orange Sandy SILT, trace Gravel, very stiff,		
				8		damp, ML		
3				8		Olive gray CLAY, Sand seams throughout, very stiff,		
	S-3	24/24	3 - 5	4		damp, CL		
4				4		Black ash from 2.5' to 3'		
				3		Olive to light brown SAND, little black ash, loose, damp		
5				2	19	to moist, SP		
	S-4	24/24	5 - 7	WOH		Gray Silty CLAY, frequent fine Sand seams, very soft,		5'
6				WOH		saturated, CL	PP < 500 psf	GLACIAL MARINE
				WOH				DEPOSIT
7				WOH				
	S-5	24/24	7 - 9	WOH		Gray Silty CLAY, Sand seam from 7' to 7.2', very soft,		
8				WOH		saturated, CL		
				WOH				
9				WOH				
10								
	FIELD VANE DATA							
11	FV-1		11			S_u = 950 psf $S_{u(r)}$ = 100 psf		
12								
						Vane push refusal at 12' on probable Sand seam		
13								
14								
15								
	S-6	24/24	15 - 17	WOH		Gray Silty CLAY, fine Sand seams throughout, very soft,		
16				WOH		saturated, CL		
				WOH				
17				WOH				
18								
	FIELD VANE DATA							
19	FV-2		19			S_u = 850 psf $S_{u(r)}$ = 200 psf		
20								
21	FV-3		21			S_u = 800 psf $S_{u(r)}$ = 100 psf		
22								
	FV-4		23			S_u = 700 psf $S_{u(r)}$ = 125 psf		

Granular Soils		Cohesive Soils		% Composition
Blows/ft.	Density	Blows/ft.	Consistency	ASTM D2487
0-4	V. Loose	<2	V. soft	
5-10	Loose	2-4	Soft	< 5% Trace
11-30	Compact	5-8	Firm	5-15% Little
31-50	Dense	9-15	Stiff	15-30% Some
>50	V. Dense	16-30	V. Stiff	> 30% With
		>30	Hard	

NOTES: PP = Pocket Penetrometer, MC = Moisture Content
LL = Liquid Limit, PI = Plastic Index, FV = Field Vane Test
Su = Undrained Shear Strength, Su(r) = Remolded Shear Strength

Bedrock Joints
Shallow = 0 to 35 degrees
Dipping = 35 to 55 degrees
Steep = 55 to 90 degrees

Boulders = diameter > 12 inches, Cobbles = diameter < 12 inches and > 3 inches
Gravel = < 3 inch and > No 4, Sand = < No 4 and >No 200, Silt/Clay = < No 200

Soil Moisture Condition
Dry: S = 0%
Humid: S = 1 to 25%
Damp: S = 26 to 50%
Moist: S = 51 to 75%
Wet: S = 76 to 99%
Saturated: S = 100%

SOIL BORING LOG

SUMMIT GEOENGINEERING SERVICES

Project:	Forefront at Thompson's Point	Boring #:	B-7
Location:	Thompson's Point Road	Project #:	24098
City, State:	Portland, Maine	Sheet:	2 of 2
		Chkd by:	CWC

Drilling Co:	Summit Geoengineering Services	Boring Elevation: 24 feet	
Driller:	S. Floyd	Reference: Interpolated from "Conceptual Grading Plan" prepared by Placemarker Partners, LLC.	
Summit Staff:	J. Barnes, E.I.	Date started: 5/21/2024	Date Completed: 5/21/2024

DRILLING METHOD		SAMPLER	
Vehicle:	ATV	Length:	24" SS
Model:	9580 VTR	Diameter:	2"OD/1.5"ID
Method:	2-1/4" HSA	Hammer:	140 lb
Hammer Style:	Auto	Method:	ASTM D1586

ESTIMATED GROUND WATER DEPTH			
Date	Depth	Elevation	Reference
5/21/2024	5 ft	19 ft	Estimated moisture content of samples

Depth (ft.)	No.	Pen/Rec (in)	Depth (ft)	blows/6"	Elev. (ft.)	SAMPLE DESCRIPTION	Geological/ Test Data	Geological Stratum
	FIELD VANE DATA							GLACIAL MARINE
23	FV-4		23			S_u = 700 psf $S_{u(r)}$ = 125 psf		DEPOSIT
24								
25	FV-5		25			S_u = 750 psf $S_{u(r)}$ = 100 psf		
26								
27	FV-6		27			S_u = 800 psf $S_{u(r)}$ = 150 psf		
28								
29	FV-7		29			S_u = 750 psf $S_{u(r)}$ = 150 psf		
30								
31	FV-8		31		-7	S_u = 600 psf $S_{u(r)}$ = 175 psf		
32						End of Exploration at 31', No Refusal		31'
33								
34								
35								
36								
37								
38								
39								
40								
41								
42								
43								
44								

Granular Soils		Cohesive Soils		% Composition
Blows/ft.	Density	Blows/ft.	Consistency	ASTM D2487
0-4	V. Loose	<2	V. soft	
5-10	Loose	2-4	Soft	< 5% Trace
11-30	Compact	5-8	Firm	5-15% Little
31-50	Dense	9-15	Stiff	15-30% Some
>50	V. Dense	16-30	V. Stiff	> 30% With
		>30	Hard	

NOTES: PP = Pocket Penetrometer, MC = Moisture Content
LL = Liquid Limit, PI = Plastic Index, FV = Field Vane Test
Su = Undrained Shear Strength, Su(r) = Remolded Shear Strength

Bedrock Joints
Shallow = 0 to 35 degrees
Dipping = 35 to 55 degrees
Steep = 55 to 90 degrees

Boulders = diameter > 12 inches, Cobbles = diameter < 12 inches and > 3 inches
Gravel = < 3 inch and > No 4, Sand = < No 4 and >No 200, Silt/Clay = < No 200

Soil Moisture Condition
Dry: S = 0%
Humid: S = 1 to 25%
Damp: S = 26 to 50%
Moist: S = 51 to 75%
Wet: S = 76 to 99%
Saturated: S = 100%

SUMMIT GEOENGINEERING SERVICES

SOIL BORING LOG

Project:	Forefront at Thompson's Point	Boring #:	B-8
Location:	Thompson's Point Road	Project #:	24098
City, State:	Portland, Maine	Sheet:	1 of 2
		Chkd by:	CWC

Drilling Co:	Summit Geoengineering Services
Driller:	S. Floyd
Summit Staff:	J. Barnes, E.I.

Boring Elevation: 23 feet

Reference: Interpolated from "Conceptual Grading Plan" prepared by Placemarker Partners, LLC.

Date started: 5/21/2024 Date Completed: 5/21/2024

DRILLING METHOD		SAMPLER	
Vehicle:	ATV	Length:	24" SS
Model:	9580 VTR	Diameter:	2"OD/1.5"ID
Method:	2-1/4" HSA	Hammer:	140 lb
Hammer Style:	Auto	Method:	ASTM D1586

ESTIMATED GROUND WATER DEPTH

Date	Depth	Elevation	Reference
5/21/2024	11 ft	12 ft	Estimated moisture content of samples

Depth (ft.)	No.	Pen/Rec (in)	Depth (ft)	blows/6"	Elev. (ft.)	SAMPLE DESCRIPTION	Geological/ Test Data	Geological Stratum
	S-1	24/8	0 - 2	9		Brown SAND, little Gravel, compact, humid, SP		FILL
1				12				
				16				
2				10	21			
	S-2	24/18	2 - 4	5		Olive brown SILT-CLAY, frequent fine Sand seams,		2' +/-
3				5		mottled, stiff, damp, ML-CL		GLACIAL MARINE
				7				DEPOSIT
4				9				
5								
	S-3	24/20	5 - 7	5		Olive brown CLAY, some Silt, frequent Sand seams,	PP = 7,000 -	
6				5		stiff, damp, CL	8,000 psf	
				3				
7				5				
	S-4	24/24	7 - 9	6		Olive gray Silty CLAY, fine Sand seams throughout,	PP = 5,000 -	
8				9		stiff, moist, CL	6,000 psf	
				7				
9				6				
10								
	S-5	24/24	10 - 12	1		Olive brown Silty CLAY, fine Sand seams throughout,	PP = 4,000 psf	
11				1		soft, moist, CL	to 2,000 with	
				1			depth	
12				1				
	S-6	24/24	12 - 14	1		Gray CLAY interlayered with fine SAND, soft/loose,		
13				WOH	10	saturated, CL or SC		
				1		Gray Silty CLAY, very soft, saturated, CL		13' +/-
14				WOH				
15								
	S-7	24/24	15 - 17	WOH		Gray Silty CLAY, frequent fine Sand seams, very soft,	PP < 500 psf	
16				WOH		saturated, CL		
				WOH				
17				WOH				
18								
	FIELD VANE DATA							
19	FV-1		19			S_u = 1,200 psf $S_{u(r)}$ = 150 psf		
20								
21	FV-2		21			S_u = 1,000 psf $S_{u(r)}$ = 100 psf		
22								
	FV-3		23			S_u = 650 psf $S_{u(r)}$ = 100 psf		

Granular Soils		Cohesive Soils		% Composition
Blows/ft.	Density	Blows/ft.	Consistency	ASTM D2487
0-4	V. Loose	<2	V. soft	
5-10	Loose	2-4	Soft	< 5% Trace
11-30	Compact	5-8	Firm	5-15% Little
31-50	Dense	9-15	Stiff	15-30% Some
>50	V. Dense	16-30	V. Stiff	> 30% With
		>30	Hard	

NOTES: PP = Pocket Penetrometer, MC = Moisture Content
LL = Liquid Limit, PI = Plastic Index, FV = Field Vane Test
Su = Undrained Shear Strength, Su(r) = Remolded Shear Strength

Bedrock Joints
Shallow = 0 to 35 degrees
Dipping = 35 to 55 degrees
Steep = 55 to 90 degrees

Boulders = diameter > 12 inches, Cobbles = diameter < 12 inches and > 3 inches
Gravel = < 3 inch and > No 4, Sand = < No 4 and >No 200, Silt/Clay = < No 200

Soil Moisture Condition
Dry: S = 0%
Humid: S = 1 to 25%
Damp: S = 26 to 50%
Moist: S = 51 to 75%
Wet: S = 76 to 99%
Saturated: S = 100%

SOIL BORING LOG

SUMMIT GEOENGINEERING SERVICES

Project:	Forefront at Thompson's Point	Boring #:	B-8
Location:	Thompson's Point Road	Project #:	24098
City, State:	Portland, Maine	Sheet:	2 of 2
		Chkd by:	CWC

Drilling Co:	Summit Geoengineering Services	Boring Elevation: 40 feet	
Driller:	S. Floyd	Reference: Interpolated from "Conceptual Grading Plan" prepared by Placemarker Partners, LLC.	
Summit Staff:	J. Barnes, E.I.	Date started: 5/21/2024	Date Completed: 5/21/2024

DRILLING METHOD		SAMPLER	
Vehicle:	ATV	Length:	24" SS
Model:	9580 VTR	Diameter:	2"OD/1.5"ID
Method:	2-1/4" HSA	Hammer:	140 lb
Hammer Style:	Auto	Method:	ASTM D1586

ESTIMATED GROUND WATER DEPTH			
Date	Depth	Elevation	Reference
5/21/2024	11 ft	12 ft	Estimated moisture content of samples

Depth (ft.)	No.	Pen/Rec (in)	Depth (ft)	blows/6"	Elev. (ft.)	SAMPLE DESCRIPTION	Geological/ Test Data	Geological Stratum
	FIELD VANE DATA							GLACIAL MARINE
23	FV-3		23			S_u = 650 psf $S_{u(r)}$ = 100 psf		DEPOSIT
24								
25	FV-4		25			S_u = 700 psf $S_{u(r)}$ = 100 psf		
26								
27	FV-5		27			S_u = 600 psf $S_{u(r)}$ = 100 psf		
28								
29	FV-6		29			S_u = 850 psf $S_{u(r)}$ = 100 psf		
30								
31	FV-7		31		-8	S_u = 600 psf $S_{u(r)}$ = 100 psf		
32						End of Exploration at 31', No Refusal		31'
33								
34								
35								
36								
37								
38								
39								
40								
41								
42								
43								
44								

Granular Soils		Cohesive Soils		% Composition
Blows/ft.	Density	Blows/ft.	Consistency	ASTM D2487
0-4	V. Loose	<2	V. soft	
5-10	Loose	2-4	Soft	< 5% Trace
11-30	Compact	5-8	Firm	5-15% Little
31-50	Dense	9-15	Stiff	15-30% Some
>50	V. Dense	16-30	V. Stiff	> 30% With
		>30	Hard	

NOTES: PP = Pocket Penetrometer, MC = Moisture Content
LL = Liquid Limit, PI = Plastic Index, FV = Field Vane Test
Su = Undrained Shear Strength, Su(r) = Remolded Shear Strength

Bedrock Joints
Shallow = 0 to 35 degrees
Dipping = 35 to 55 degrees
Steep = 55 to 90 degrees

Boulders = diameter > 12 inches, Cobbles = diameter < 12 inches and > 3 inches
Gravel = < 3 inch and > No 4, Sand = < No 4 and >No 200, Silt/Clay = < No 200

Soil Moisture Condition
Dry: S = 0%
Humid: S = 1 to 25%
Damp: S = 26 to 50%
Moist: S = 51 to 75%
Wet: S = 76 to 99%
Saturated: S = 100%

SOIL BORING LOG

SUMMIT GEOENGINEERING SERVICES

Project:	Forefront at Thompson's Point	Boring #:	B-9
Location:	Thompson's Point Road	Project #:	24098
City, State:	Portland, Maine	Sheet:	1 of 2
		Chkd by:	CWC

Drilling Co:	Summit Geoengineering Services
Driller:	S. Floyd
Summit Staff:	J. Barnes, E.I.

Boring Elevation: 21 feet

Reference: Interpolated from "Conceptual Grading Plan" prepared by Placemarker Partners, LLC.

Date started: 5/21/2024 Date Completed: 5/21/2024

DRILLING METHOD		SAMPLER	
Vehicle:	ATV	Length:	24" SS
Model:	9580 VTR	Diameter:	2"OD/1.5"ID
Method:	2-1/4" HSA	Hammer:	140 lb
Hammer Style:	Auto	Method:	ASTM D1586

ESTIMATED GROUND WATER DEPTH

Date	Depth	Elevation	Reference
5/21/2024	5 ft	16 ft	Estimated moisture content of samples

Depth (ft.)	No.	Pen/Rec (in)	Depth (ft)	blows/6"	Elev. (ft.)	SAMPLE DESCRIPTION	Geological/ Test Data	Geological Stratum
	S-1	24/14	0 - 2	10		Brown to black SAND, some Gravel, compact, humid,		FILL
1				14	20	SP		
				12		Black SILT and ash, stiff, moist, ML		1'
2				10				
	S-2	24/16	2 - 4	4		Black ash, trace Sand, organic odor		
3				4				
				4				
4				4		Orange fine SAND, very loose, damp, SP		
5					16			
	S-3	24/19	5 - 7	1		Olive brown to gray Silty CLAY, frequent fine Sand		5' +/-
6				WOH		seams, very soft, wet, CL		GLACIAL MARINE
				1				DEPOSIT
7				2				
	S-4	24/20	7 - 9	1		Olive gray SILT-CLAY, Sand seam at 7.3' to 7.5',	PP = 4,000 psf	
8				2		black stained portion at 7.5', soft, wet, ML-CL		
				1				
9				1				
10								
	S-5	24/16	10 - 12	1		Dark brown to gray Sandy SILT, soft, moist to wet,		
11				2		ML		
				2				
12				3				
	S-6	24/20	12 - 14	3		Olive brown to gray Sandy SILT, rootlets, occasional		
13				3		black staining, wet, soft, ML		
				2				
14				2				
15								
	S-7	24/22	15 - 17	2		Olive gray Silty CLAY, firm, wet to saturated, CL	PP = 6,000 -	
16				3			7,000 psf	
				4				
17				5				
	S-8	24/20	17 - 19	3		Olive gray Silty CLAY, occasional fine Sand seams,	PP = 5,000 -	
18				3		firm, wet to saturated, CL	7,000 psf	
				4				
19				5				
20								
	S-9	24/24	20 - 22	1		Olive gray Silty CLAY, frequent fine Sand seams,	PP = 5,000 -	
21				2		firm, wet to saturated, CL	7,000 psf	
				3				
22				3				

Granular Soils		Cohesive Soils		% Composition
Blows/ft.	Density	Blows/ft.	Consistency	ASTM D2487
0-4	V. Loose	<2	V. soft	
5-10	Loose	2-4	Soft	< 5% Trace
11-30	Compact	5-8	Firm	5-15% Little
31-50	Dense	9-15	Stiff	15-30% Some
>50	V. Dense	16-30	V. Stiff	> 30% With
		>30	Hard	

NOTES: PP = Pocket Penetrometer, MC = Moisture Content

LL = Liquid Limit, PI = Plastic Index, FV = Field Vane Test

Su = Undrained Shear Strength, Su(r) = Remolded Shear Strength

Bedrock Joints

Shallow = 0 to 35 degrees

Dipping = 35 to 55 degrees

Steep = 55 to 90 degrees

Boulders = diameter > 12 inches, Cobbles = diameter < 12 inches and > 3 inches

Gravel = < 3 inch and > No 4, Sand = < No 4 and >No 200, Silt/Clay = < No 200

Soil Moisture Condition
Dry: S = 0%
Humid: S = 1 to 25%
Damp: S = 26 to 50%
Moist: S = 51 to 75%
Wet: S = 76 to 99%
Saturated: S = 100%

SUMMIT GEOENGINEERING SERVICES

SOIL BORING LOG

Project:	Forefront at Thompson's Point	Boring #:	B-9
Location:	Thompson's Point Road	Project #:	24098
City, State:	Portland, Maine	Sheet:	2 of 2
		Chkd by:	CWC

Drilling Co:	Summit Geoengineering Services
Driller:	S. Floyd
Summit Staff:	J. Barnes, E.I.

Boring Elevation: 23 feet

Reference: Interpolated from "Conceptual Grading Plan" prepared by Placemarker Partners, LLC.

Date started: 5/21/2024 Date Completed: 5/21/2024

DRILLING METHOD		SAMPLER	
Vehicle:	ATV	Length:	24" SS
Model:	9580 VTR	Diameter:	2"OD/1.5"ID
Method:	2-1/4" HSA	Hammer:	140 lb
Hammer Style:	Auto	Method:	ASTM D1586

ESTIMATED GROUND WATER DEPTH

Date	Depth	Elevation	Reference
5/21/2024	5 ft	16 ft	Estimated moisture content of samples

Depth (ft.)	No.	Pen/Rec (in)	Depth (ft)	blows/6"	Elev. (ft.)	SAMPLE DESCRIPTION	Geological/ Test Data	Geological Stratum
	FIELD VANE DATA							
23								GLACIAL MARINE DEPOSIT
24	FV-1		24		-1	S_u > 1,500 psf		
25						End of Exploration at 24', Vane Push Refusal		24'
26								
27								
28								
29								
30								
31								
32								
33								
34								
35								
36								
37								
38								
39								
40								
41								
42								
43								
44								

Granular Soils		Cohesive Soils	
Blows/ft.	Density	Blows/ft.	Consistency
0-4	V. Loose	<2	V. soft
5-10	Loose	2-4	Soft
11-30	Compact	5-8	Firm
31-50	Dense	9-15	Stiff
>50	V. Dense	16-30	V. Stiff
		>30	Hard

% Composition ASTM D2487
< 5% Trace
5-15% Little
15-30% Some
> 30% With

NOTES: PP = Pocket Penetrometer, MC = Moisture Content
LL = Liquid Limit, PI = Plastic Index, FV = Field Vane Test
Bedrock Joints Su = Undrained Shear Strength, Su(r) = Remolded Shear Strength
Shallow = 0 to 35 degrees
Dipping = 35 to 55 degrees
Steep = 55 to 90 degrees

Boulders = diameter > 12 inches, Cobbles = diameter < 12 inches and > 3 inches
Gravel = < 3 inch and > No 4, Sand = < No 4 and >No 200, Silt/Clay = < No 200

Soil Moisture Condition
Dry: S = 0%
Humid: S = 1 to 25%
Damp: S = 26 to 50%
Moist: S = 51 to 75%
Wet: S = 76 to 99%
Saturated: S = 100%

CPT EXPLORATION COVER SHEET

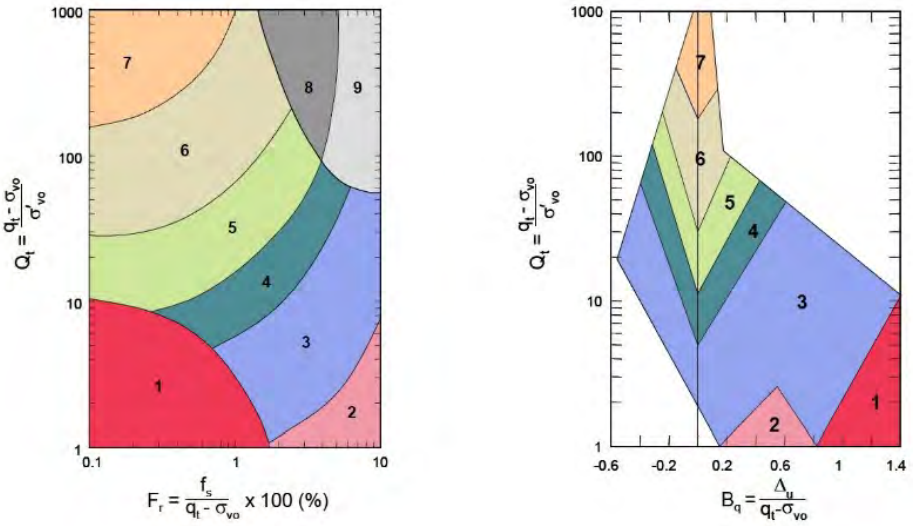
Piezocone penetration test (CPT) is performed by a cone on the end of a series of rods pushed into the ground at a constant rate (2 cm/s) to obtain near continuous measurements of soil parameters. Parameters obtained during the CPT test include cone tip resistance, sleeve friction, and piezocone pore pressure per ASTM D5778 and shear wave velocity per ASTM D7400. These parameters are presented graphically on the CPT log.

CPT Data Symbols:

q_c = Tip Resistance	u_2 = Pore Pressure	q_t = Total Resistance
f_s = Sleeve Friction	v_s = Shear Wave Velocity	c_h = Coefficient of Consolidation

Soil Behavior Type:

Soil behavior type is interpreted from CPT data as one of 9 soil behavior types published by Robertson et al. 1990, shown below. Each soil behavior type (SBT) is assigned a color which correlates to the SBT plot on the CPT log.



Zone	Soil Behavior Type
1	Sensitive, Fine Grained
2	Organic Soils-Peats
3	Clays; Clay to Silty Clay
4	Silt Mixtures; Clayey Silt to Silty Clay
5	Sand Mixtures; Silty Sand to Sandy Silt
6	Sands; Clean Sands to Silty Sands
7	Gravelly Sand to Sand
8	Very Stiff Sand to Clayey Sand*
9	Very Stiff Fine Grained*

*Overconsolidated or Cemented

SUMMIT
GEOENGINEERING SERVICES

CPTu PORE PRESSURE DISSIPATION SUMMARY

NCHRP 368 Figure 58 (G/S_u)

Location	Depth	U_0	U_{100}	U_{50}	$T_{50\,(s)}$	$T_{50\,(min)}$	G	S_u	I_r	$c_{h\,(cm2/min)}$	$c_{h\,(ft2/day)}$
CPT-1	17.80	20.30	4.8	12.55	586.10	9.77	Figure 58	Figure 58	200	1.13	**1.75**
CPT-3	17.83	99.63	4.78	52.21	341.10	5.69	Figure 58	Figure 58	200	1.94	**3.01**
CPT-3	41.62	71.89	15.09	43.49	1718.70	28.65	Figure 58	Figure 58	200	0.39	**0.60**
CPT-5	11.32	58.60	1.74	30.17	635.60	10.59	Figure 58	Figure 58	200	1.04	**1.62**
CPT-5	35.08	84.42	12.03	48.23	2411.70	40.20	Figure 58	Figure 58	200	0.27	**0.43**
CPT-6	18.05	59.64	5.35	32.50	678.70	11.31	Figure 58	Figure 58	200	0.98	**1.51**
CPT-6	31.78	77.36	11.31	44.33	1783.00	29.72	Figure 58	Figure 58	200	0.37	**0.58**
CPT-7	14.58	86.22	45.01	3.80	463.70	7.73	Figure 58	Figure 58	200	1.43	**2.21**
CPT-8	17.88	53.86	3.55	28.70	623.20	10.39	Figure 58	Figure 58	200	1.06	**1.65**
CPT-8	76.46	39.72	28.34	34.33	351.30	5.86	Figure 58	Figure 58	200	1.89	**2.92**

Reference: FIGURE 58 from the National Cooperative Highway Research Program (NCHRP) Synthesis 368 Cone Pentration Testing

Groundwater Head Pressure

Location	Depth	U_{100}	Depth (ft)	Depth (ft)
CPT-1	75.61	23.42	54.02	**21.59**
CPT-3	80.99	23.28	53.70	**27.29**
CPT-4	45.20	12.85	29.64	**15.56**
CPT-5	68.74	20.27	46.75	**21.99**
CPT-6	75.34	23.46	54.11	**21.23**
CPT-7	88.07	30.64	70.67	**17.40**
CPT-9	75.90	23.83	54.97	**20.93**

T	0.245
r	1.785
OCR	1.5
PI	15

$c_h = (T*r^2*\sqrt{I_r})/t$
T = 0.245 at 50%
$I_r = G/S_u$ = 50 to 500 (typical)
d = 3.57 cm (10 cm^2 cone)
r = (½)d = 1.785 cm

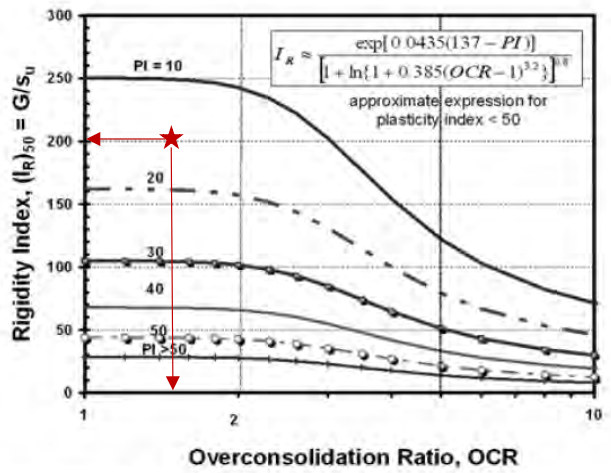
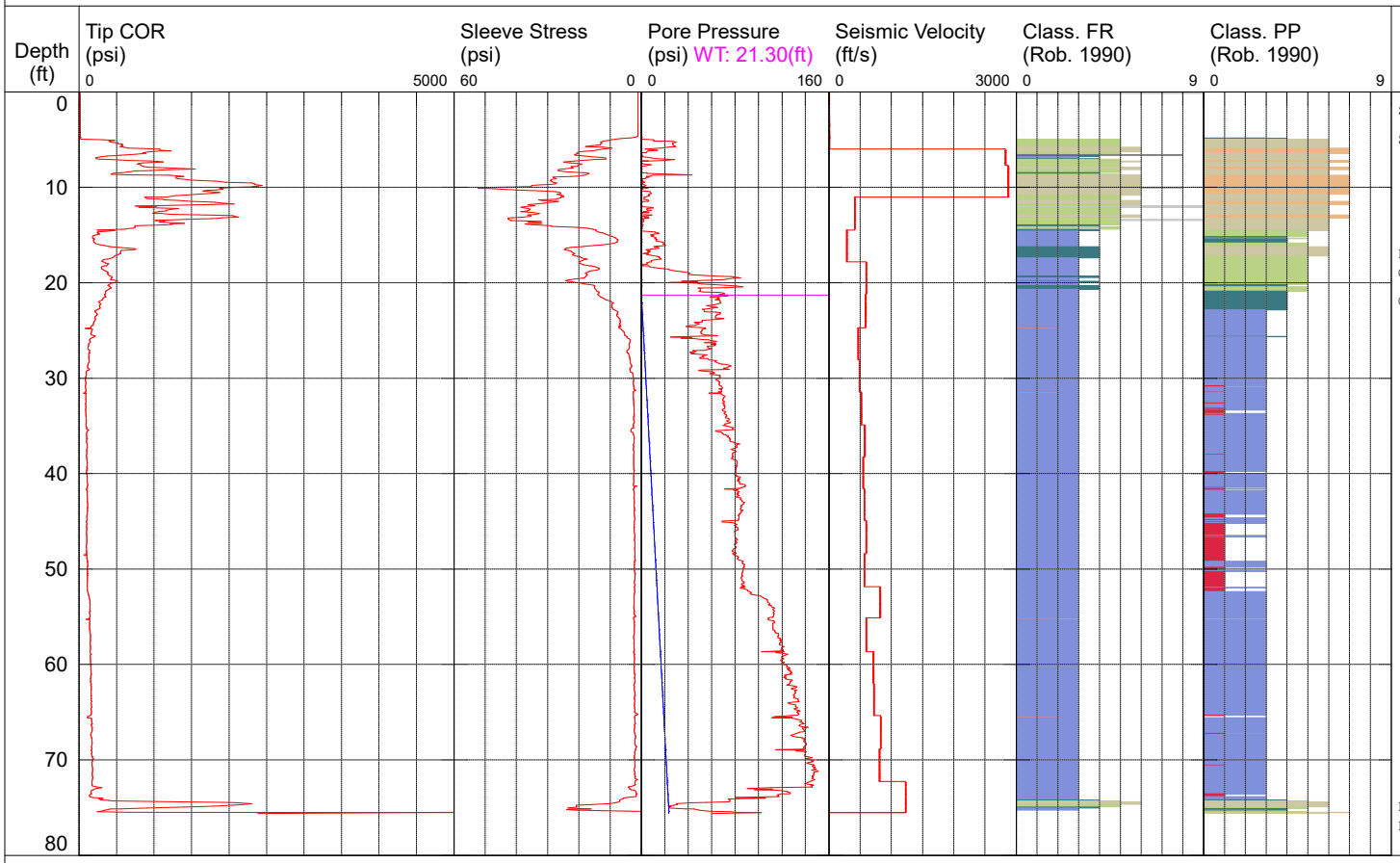


FIGURE 58 Evaluation of rigidity index from plasticity index and OCR (after Keaveny and Mitchell 1986).

CPT-1

COMPANY: Summit Geoengineering Services
OPERATOR: C. Coolidge, P.E.
CREW: C. Sullivan, E.I
CLIENT: Cathartes
CLIENT REP: Rob Simmons

TEST DATE: Thu 23/May/2024
TEST ID: CPT-1
PROJECT: 24098
SITE: The Forefront at Thompson's Point
LOCATION: Thompson's Point Road, Portland, ME



REMARKS

Set Anchor to 5 Ft
Start CPT @ 5 Ft
Dissipation Test @ 17.8 Ft
Ch = 1.8 ft2/day
Groundwater @ 21.3 Ft
Dissipation Test @ 75.6 Ft
Dissipation Head = 21.6 Ft

TOTAL DEPTH: 75.616 ft

PROBE ID: 4544.106XX

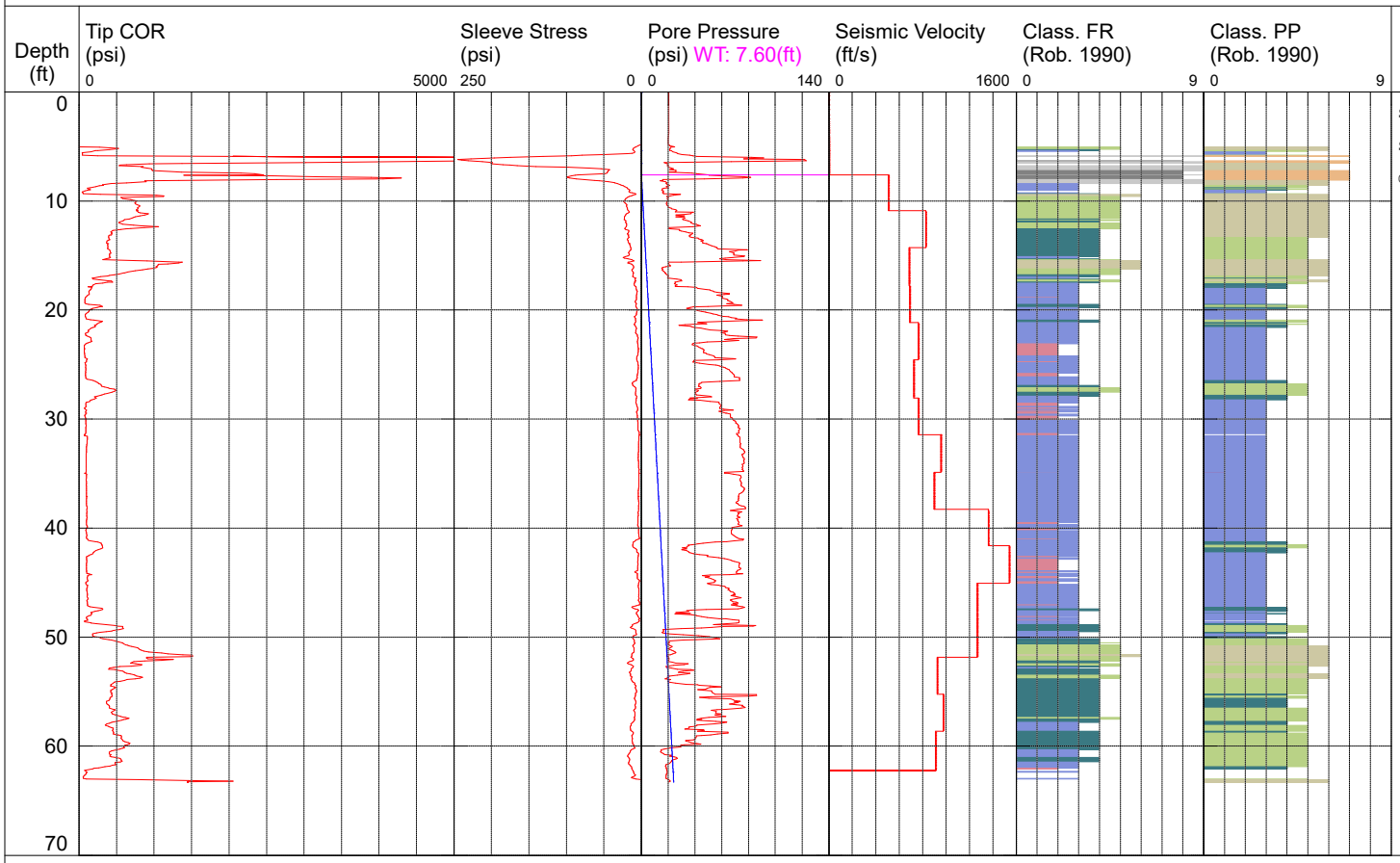
1 Sensitive, fine grained
2 Organic soils - peats
3 Clays - clay to silty clay
4 Silt mixtures - clayey silt to silty clay
5 Sand mixtures - silty sand to sandy silt
6 Sands - clean sand to silty sand
7 Gravelly sand to sand
8 Very stiff sand to clayey sand **
9 Very stiff, fine grained **

*SBT: Robertson 1990; **Overconsolidated or Cemented; *SBT/SPT CORRELATION: UBC-1983

CPT-2

COMPANY: Summit Geoengineering Services
OPERATOR: C. Coolidge, P.E.
CREW: C. Sullivan, E.I
CLIENT: Cathartes
CLIENT REP: Rob Simmons

TEST DATE: Thu 23/May/2024
TEST ID: CPT-2
PROJECT: 24098
SITE: The Forefront at Thompson's Point
LOCATION: Thompson's Point Road, Portland, ME



REMARKS

Set Anchor to 5 Ft

Start CPT @ 5 Ft

Groundwater @ 7.6 Ft

TOTAL DEPTH: 63.326 ft

PROBE ID: 4544.106XX

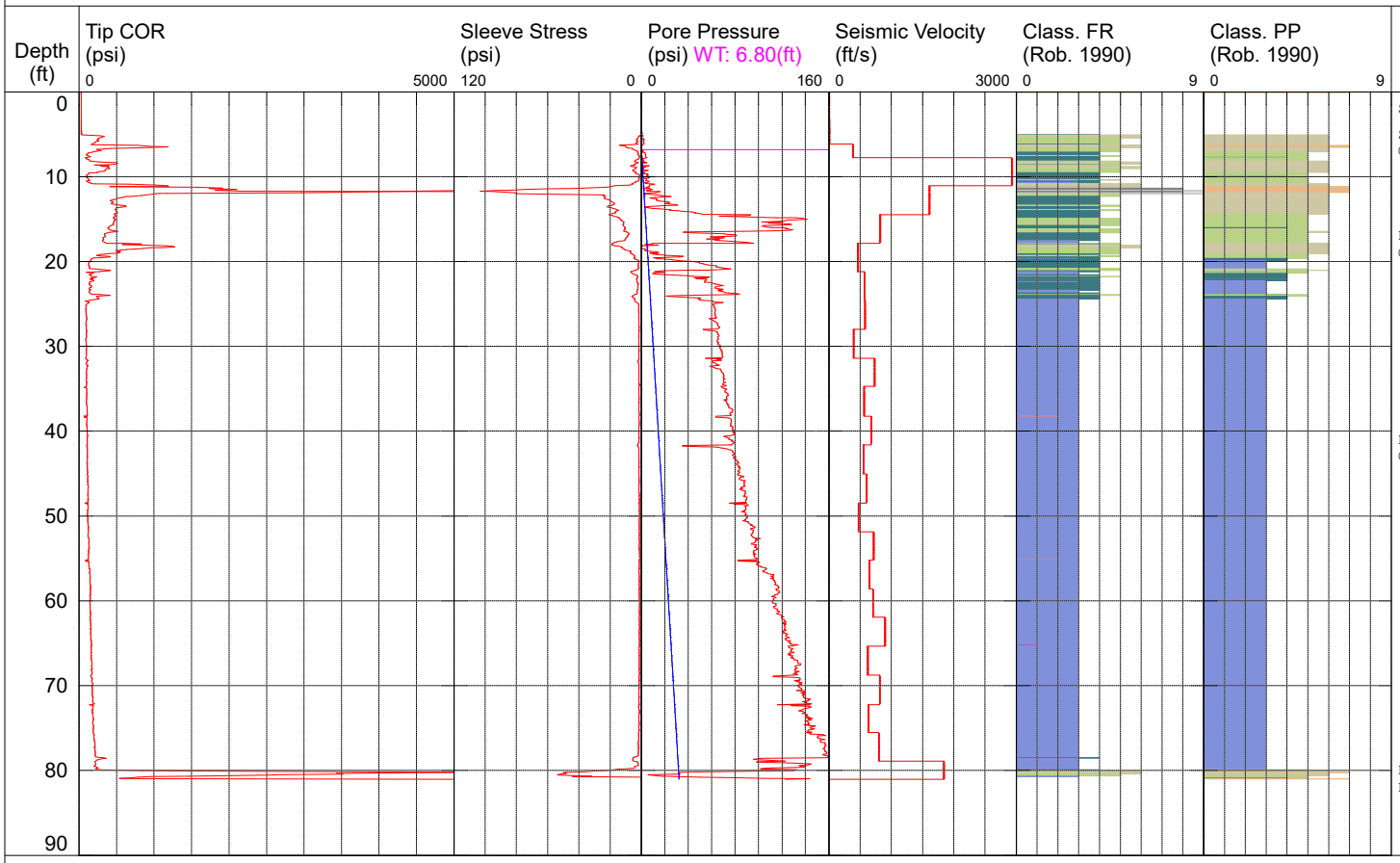
1 Sensitive, fine grained
2 Organic soils - peats
3 Clays - clay to silty clay
4 Silt mixtures - clayey silt to silty clay
5 Sand mixtures - silty sand to sandy silt
6 Sands - clean sand to silty sand
7 Gravelly sand to sand
8 Very stiff sand to clayey sand **
9 Very stiff, fine grained **

*SBT: Robertson 1990; **Overconsolidated or Cemented; *SBT/SPT CORRELATION: UBC-1983

CPT-3

COMPANY: Summit Geoengineering Services
OPERATOR: C. Coolidge, P.E.
CREW: C. Sullivan, E.I
CLIENT: Cathartes
CLIENT REP: Rob Simmons

TEST DATE: Wed 22/May/2024
TEST ID: CPT-3
PROJECT: 24098
SITE: The Forefront at Thompson's Point
LOCATION: Thompson's Point Road, Portland, ME



REMARKS

Set Anchor to 5 Ft

Start CPT @ 5 Ft
Groundwater @ 6.8 Ft

Dissipation Test @ 17.8 Ft
Ch = 3.0 ft2/day

Dissipation Test @ 41.6 Ft
Ch = 0.6 ft2/day

Dissipation Test @ 81.0 Ft
Dissipation Head = 27.3 Ft

TOTAL DEPTH: 81.038 ft

PROBE ID: 4544.106XX

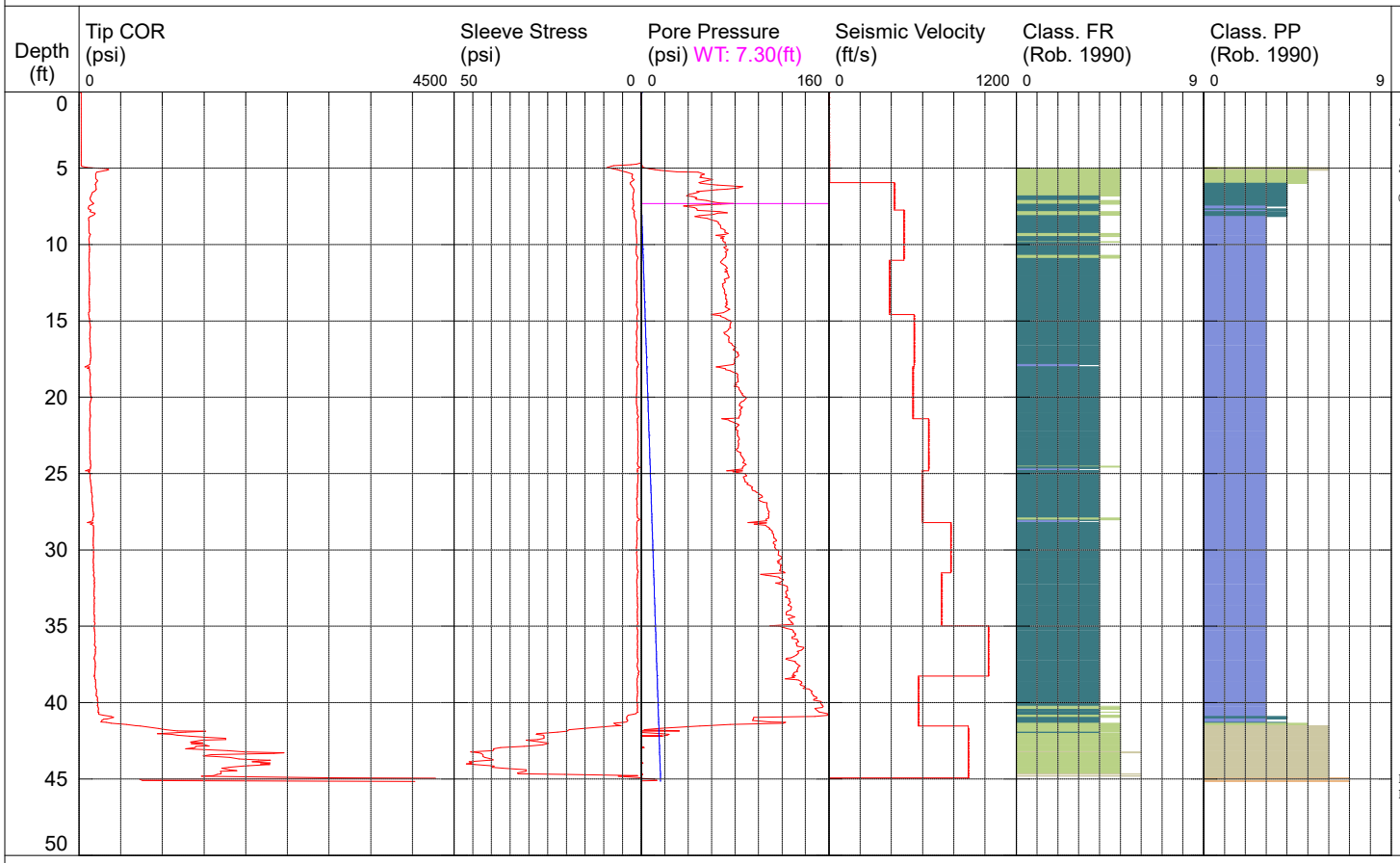
1 Sensitive, fine grained
2 Organic soils - peats
3 Clays - clay to silty clay
4 Silt mixtures - clayey silt to silty clay
5 Sand mixtures - silty sand to sandy silt
6 Sands - clean sand to silty sand
7 Gravelly sand to sand
8 Very stiff sand to clayey sand **
9 Very stiff, fine grained **

*SBT: Robertson 1990; **Overconsolidated or Cemented; *SBT/SPT CORRELATION: UBC-1983

CPT-4

COMPANY: Summit Geoengineering Services
OPERATOR: C. Coolidge, P.E.
CREW: C. Sullivan, E.I
CLIENT: Cathartes
CLIENT REP: Rob Simmons

TEST DATE: Wed 22/May/2024
TEST ID: CPT-4
PROJECT: 24098
SITE: The Forefront at Thompson's Point
LOCATION: Thompson's Point Road, Portland, ME



REMARKS

Set Anchor to 5 Ft

Start CPT @ 5 Ft

Groundwater @ 7.3 Ft

Dissipation Test @ 45.2 Ft
Dissipation Head = 15.6 Ft

TOTAL DEPTH: 45.161 ft

PROBE ID: 4544.106XX

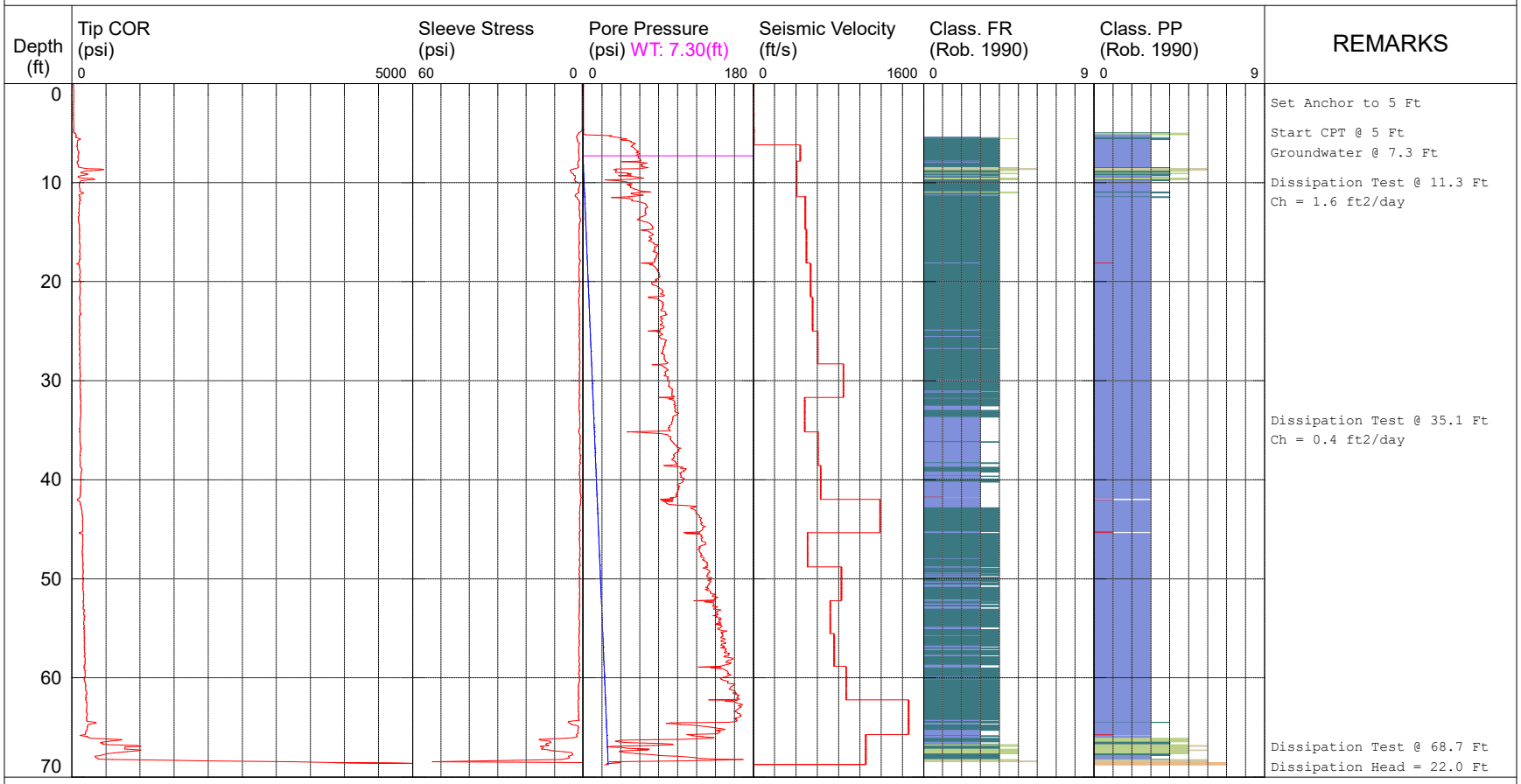
1 Sensitive, fine grained
2 Organic soils - peats
3 Clays - clay to silty clay
4 Silt mixtures - clayey silt to silty clay
5 Sand mixtures - silty sand to sandy silt
6 Sands - clean sand to silty sand
7 Gravelly sand to sand
8 Very stiff sand to clayey sand **
9 Very stiff, fine grained **

*SBT: Robertson 1990; **Overconsolidated or Cemented; *SBT/SPT CORRELATION: UBC-1983

CPT-5

COMPANY: Summit Geoengineering Services
OPERATOR: C. Coolidge, P.E.
CREW: C. Sullivan, E.I
CLIENT: Cathartes
CLIENT REP: Rob Simmons

TEST DATE: Wed 22/May/2024
TEST ID: CPT-5
PROJECT: 24098
SITE: The Forefront at Thompson's Point
LOCATION: Thompson's Point Road, Portland, ME



REMARKS

Set Anchor to 5 Ft
Start CPT @ 5 Ft
Groundwater @ 7.3 Ft
Dissipation Test @ 11.3 Ft
Ch = 1.6 ft2/day
Dissipation Test @ 35.1 Ft
Ch = 0.4 ft2/day
Dissipation Test @ 68.7 Ft
Dissipation Head = 22.0 Ft

TOTAL DEPTH: 68.771 ft

PROBE ID: 4544.106XX

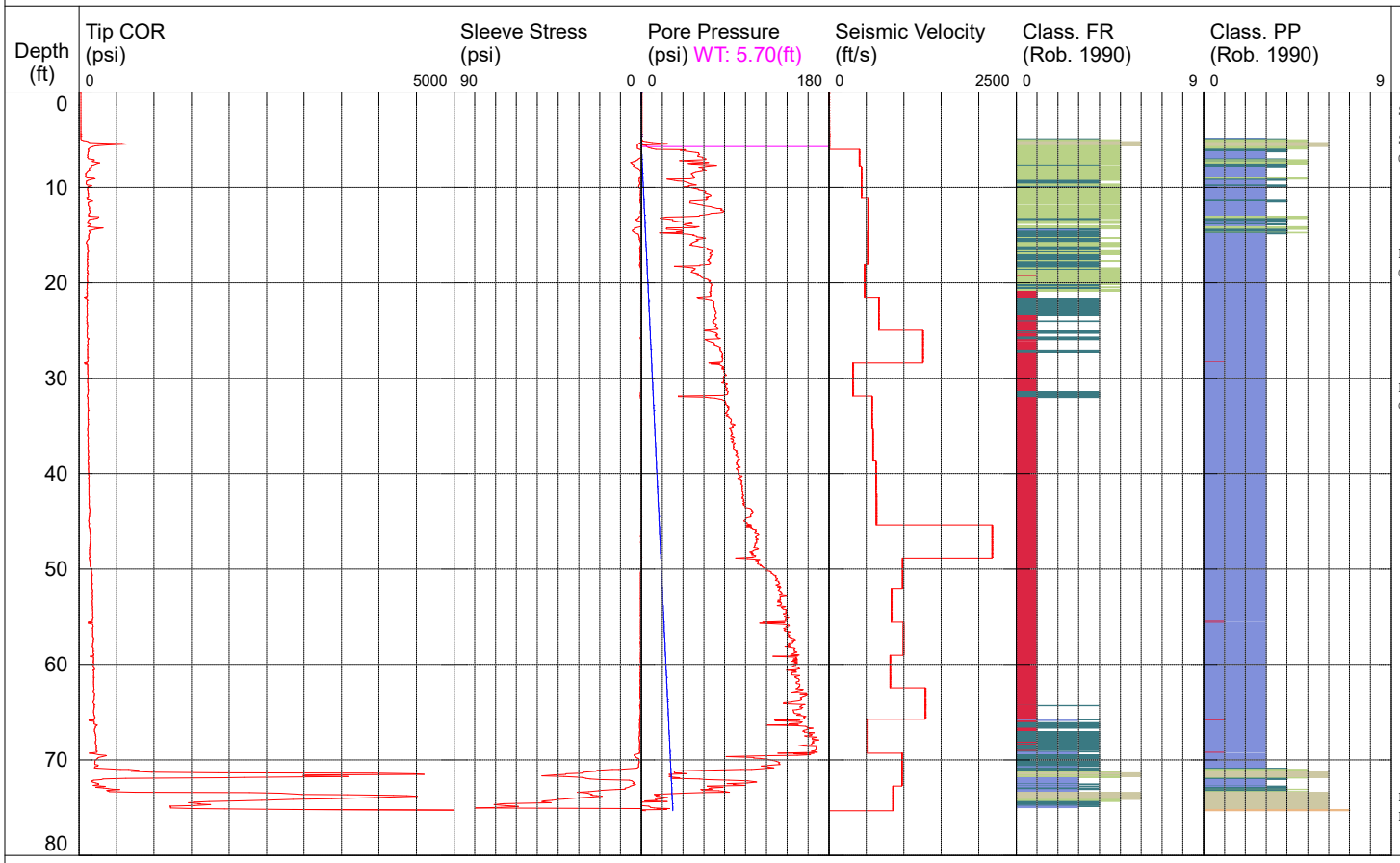
1 Sensitive, fine grained
2 Organic soils - peats
3 Clays - clay to silty clay
4 Silt mixtures - clayey silt to silty clay
5 Sand mixtures - silty sand to sandy silt
6 Sands - clean sand to silty sand
7 Gravelly sand to sand
8 Very stiff sand to clayey sand **
9 Very stiff, fine grained **

*SBT: Robertson 1990; **Overconsolidated or Cemented; *SBT/SPT CORRELATION: UBC-1983

CPT-6

COMPANY: Summit Geoengineering Services
OPERATOR: C. Coolidge, P.E.
CREW: C. Sullivan, E.I
CLIENT: Cathartes
CLIENT REP: Rob Simmons

TEST DATE: Tue 21/May/2024
TEST ID: CPT-6
PROJECT: 24098
SITE: The Forefront at Thompson's Point
LOCATION: Thompson's Point Road, Portland, ME



REMARKS

Set Anchor to 5 Ft

Start CPT @ 5 Ft
Groundwater @ 5.7 Ft

Dissipation Test @ 18.1 Ft
Ch = 1.5 ft2/day

Dissipation Test @ 31.8 Ft
Ch = 0.6 ft2/day

Dissipation Test @ 75.3 Ft
Dissipation Head = 21.2 Ft

TOTAL DEPTH: 75.336 ft

PROBE ID: 4544.106XX

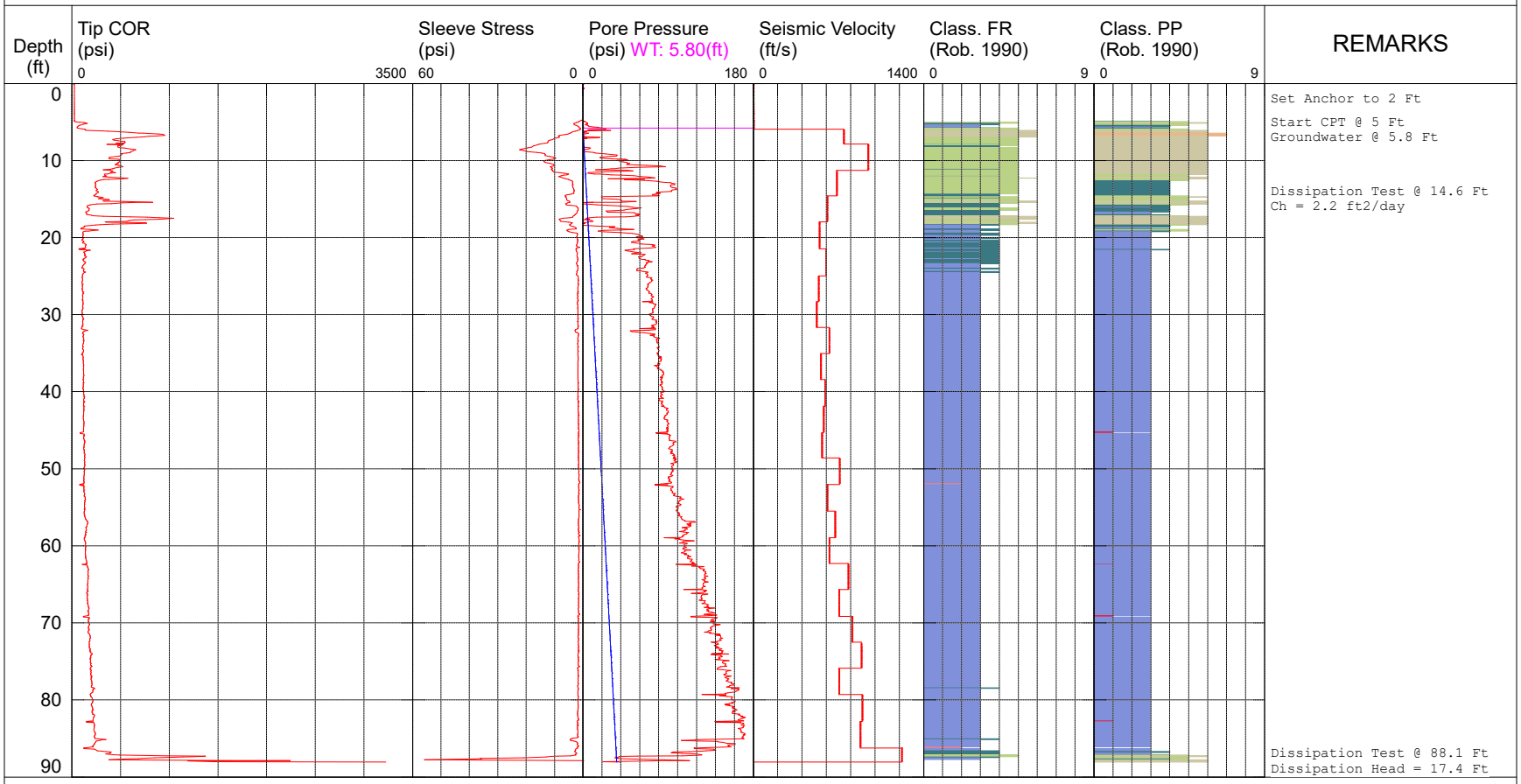
1 Sensitive, fine grained
2 Organic soils - peats
3 Clays - clay to silty clay
4 Silt mixtures - clayey silt to silty clay
5 Sand mixtures - silty sand to sandy silt
6 Sands - clean sand to silty sand
7 Gravelly sand to sand
8 Very stiff sand to clayey sand **
9 Very stiff, fine grained **

*SBT: Robertson 1990; **Overconsolidated or Cemented; *SBT/SPT CORRELATION: UBC-1983

CPT-7

COMPANY: Summit Geoengineering Services
OPERATOR: C. Coolidge, P.E.
CREW: C. Sullivan, E.I
CLIENT: Cathartes
CLIENT REP: Rob Simmons

TEST DATE: Thu 23/May/2024
TEST ID: CPT-7
PROJECT: 24098
SITE: The Forefront at Thompson's Point
LOCATION: Thompson's Point Road, Portland, ME



REMARKS

Set Anchor to 2 Ft

Start CPT @ 5 Ft
Groundwater @ 5.8 Ft

Dissipation Test @ 14.6 Ft
Ch = 2.2 ft2/day

Dissipation Test @ 88.1 Ft
Dissipation Head = 17.4 Ft

TOTAL DEPTH: 88.068 ft

PROBE ID: 4544.104XX

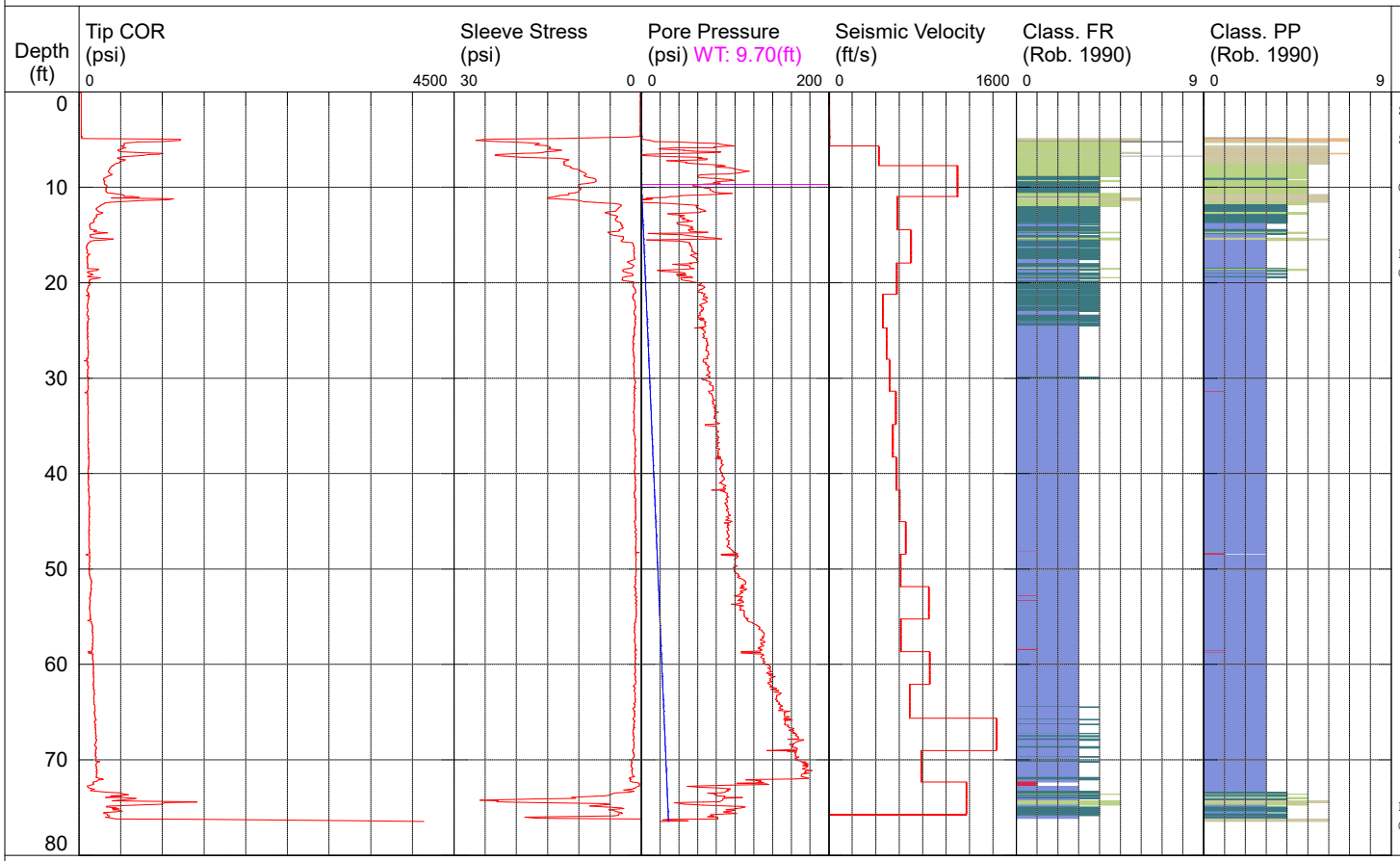
1 Sensitive, fine grained
2 Organic soils - peats
3 Clays - clay to silty clay
4 Silt mixtures - clayey silt to silty clay
5 Sand mixtures - silty sand to sandy silt
6 Sands - clean sand to silty sand
7 Gravelly sand to sand
8 Very stiff sand to clayey sand **
9 Very stiff, fine grained **

*SBT: Robertson 1990; **Overconsolidated or Cemented; *SBT/SPT CORRELATION: UBC-1983

CPT-8

COMPANY: Summit Geoengineering Services
OPERATOR: C. Coolidge, P.E.
CREW: C. Sullivan, E.I
CLIENT: Cathartes
CLIENT REP: Rob Simmons

TEST DATE: Tue 21/May/2024
TEST ID: CPT-8
PROJECT: 24098
SITE: The Forefront at Thompson's Point
LOCATION: Thompson's Point Road, Portland, ME



REMARKS

Set Anchor to 5 Ft
Start CPT @ 5 Ft
Groundwater @ 9.7 Ft
Dissipation Test @ 17.9 Ft
Ch = 1.7 ft2/day
Dissipation Test @ 76.5 Ft
Ch = 2.9 ft2/day

TOTAL DEPTH: 76.458 ft

PROBE ID: 4544.106XX

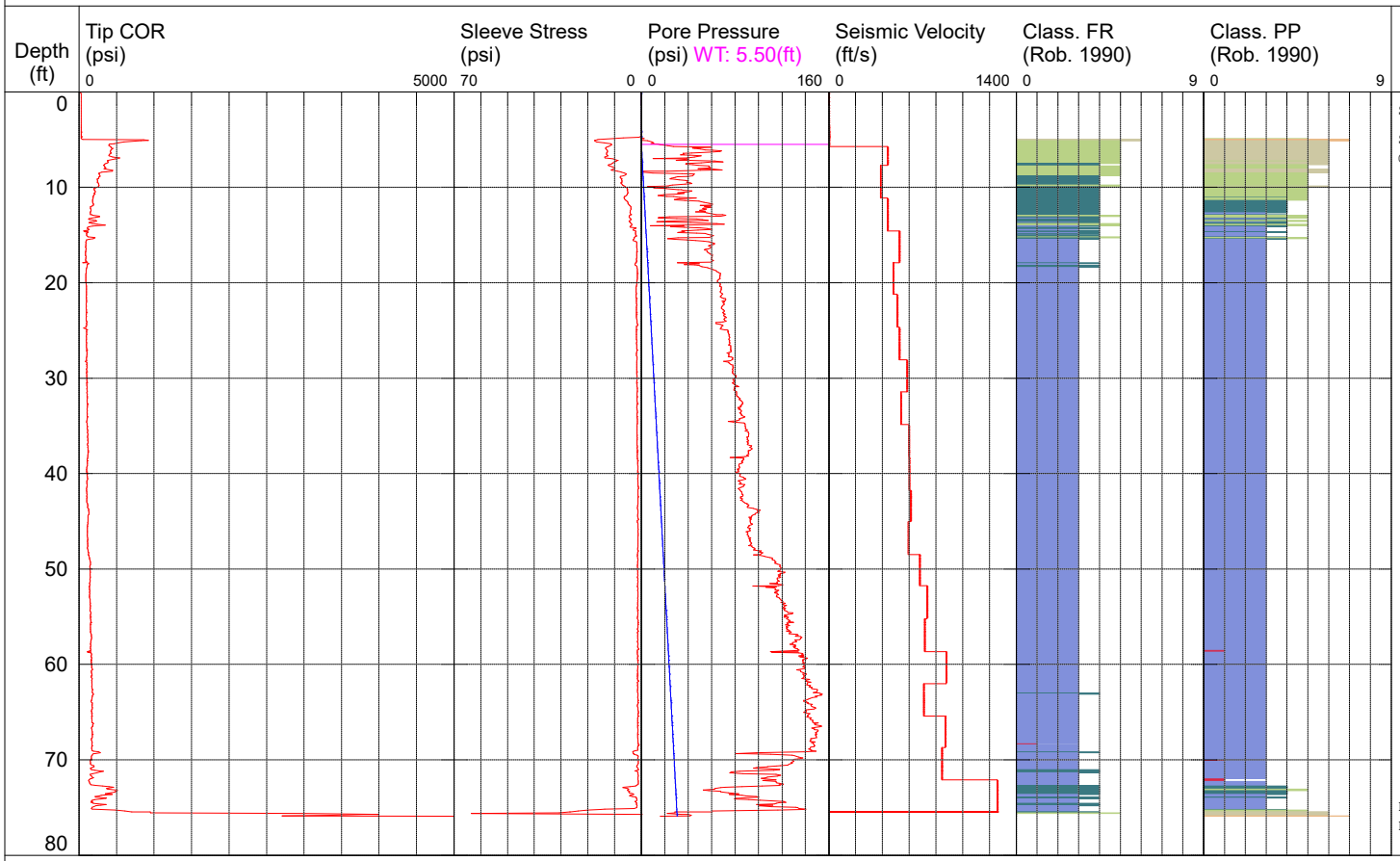
1 Sensitive, fine grained
2 Organic soils - peats
3 Clays - clay to silty clay
4 Silt mixtures - clayey silt to silty clay
5 Sand mixtures - silty sand to sandy silt
6 Sands - clean sand to silty sand
7 Gravelly sand to sand
8 Very stiff sand to clayey sand **
9 Very stiff, fine grained **

*SBT: Robertson 1990; **Overconsolidated or Cemented; *SBT/SPT CORRELATION: UBC-1983

CPT-9

COMPANY: Summit Geoengineering Services
OPERATOR: C. Coolidge, P.E.
CREW: C. Sullivan, E.I
CLIENT: Cathartes
CLIENT REP: Rob Simmons

TEST DATE: Tue 21/May/2024
TEST ID: CPT-9
PROJECT: 24098
SITE: The Forefront at Thompson's Point
LOCATION: Thompson's Point Road, Portland, ME



REMARKS

Set Anchor to 5 Ft

Start CPT @ 5 Ft
Groundwater @ 5.5 Ft

Dissipation Test @ 75.9 Ft
Dissipation Head = 20.9 Ft

TOTAL DEPTH: 75.921 ft

PROBE ID: 4544.106XX

1 Sensitive, fine grained
2 Organic soils - peats
3 Clays - clay to silty clay
4 Silt mixtures - clayey silt to silty clay
5 Sand mixtures - silty sand to sandy silt
6 Sands - clean sand to silty sand
7 Gravelly sand to sand
8 Very stiff sand to clayey sand **
9 Very stiff, fine grained **

*SBT: Robertson 1990; **Overconsolidated or Cemented; *SBT/SPT CORRELATION: UBC-1983

SUMMIT GEOENGINEERING SERVICES	TEST PIT LOG	Test Pit # TP-1
	Project: Proposed Fill Slope Thompson's Point Portland, Maine	Project #: 17173 Groundwater: 14.0' Depth
Contractor: Shaw Brothers Construction	Ground Surface Elevation: 20.1 ft. +/-	
Equipment: CAT 330 Tracked Excavator	Reference: Surveyed by Shaw Bros. on day of Explorations	
Summit Staff: M. Hardison, E.I.	Date: 6/14/2017	Weather: 75° Sunny

Depth (ft)	DESCRIPTION	
	ENGINEERING	**GEOLOGIC/GENERAL**
1	12" Dark Brown Sandy SILT, trace Clay, frequent roots and rootlets, damp, loose, ML	TOPSOIL
2	Olive Brown Clayey SILT, little to some Sand, slightly mottled and blocky, humid, stiff, ML	Pocket Penetrometer = 5,000 psf to 7,000 psf
3		GLACIAL MARINE
4		
5	Similar to above, Silty CLAY, slighly mottled, heavily blocky, very stiff, CL	Pocket Penetrometer = 9,000 psf
6		Pocket Penetrometer = 5,500 psf
7		
8	Similar to above, slightly mottled and blocky, trace Silt and Sand seams	Pocket Penetrometer = 4,500 psf
9		
10		
11	Similar to above, slightly mottled, not blocky	Pocket Penetrometer = 3,000 psf
12		
13		
14		▽ Groundwater
15	Gray Silty CLAY, wet, very soft, CL	Pocket Penetrometer <= 500 psf
16	End of Test Pit at 14.7', no refusal	
17		

SUMMIT GEOENGINEERING SERVICES	TEST PIT LOG	Test Pit # TP-2
	Project: Proposed Fill Slope Thompson's Point Portland, Maine	Project #: 17173 Groundwater: None Observed
Contractor: Shaw Brothers Construction	Ground Surface Elevation: 20.1 ft. +/-	
Equipment: CAT 330 Tracked Excavator	Reference: Surveyed by Shaw Bros. on day of Explorations	
Summit Staff: M. Hardison, E.I.	Date: 6/14/2017	Weather: 75° Sunny

Depth (ft)	DESCRIPTION	
	ENGINEERING	**GEOLOGIC/GENERAL**
1	8" Dark Brown Sandy SILT, trace Clay, frequent roots and rootlets, damp, loose, ML	TOPSOIL
2	Olive Brown Clayey SILT, trace to little Sand, moderately mottled and blocky, humid, stiff to very stiff, ML	Pocket Penetrometer > 9,000 psf
3		GLACIAL MARINE
4	Olive gray Silty CLAY, slightly mottled and blocky, frequent Sand and Silt seams, soft to stiff, CL	Pocket Penetrometer = 5,000 psf to 7,000 psf
5		
6		
7		
8	Similar to above, trace Silt and Sand seams	Pocket Penetrometer = 3,500 psf to 9,000 psf
9		
10	Similar to above, slightly mottled, not blocky	
11	End of Test Pit at 10.0', no refusal	
12		
13		
14		
15		
16		
17		

SUMMIT GEOENGINEERING SERVICES	TEST PIT LOG	Test Pit # TP-3
	Project: Proposed Fill Slope Thompson's Point Portland, Maine	Project #: 17173 Groundwater: None Observed
Contractor: Shaw Brothers Construction	Ground Surface Elevation: 23.1 ft.	
Equipment: CAT 330 Tracked Excavator	Reference: Surveyed by Shaw Bros. on day of Explorations	
Summit Staff: M. Hardison, E.I.	Date: 6/14/2017	Weather: 75° Sunny

Depth (ft)	DESCRIPTION	
	ENGINEERING	**GEOLOGIC/GENERAL**
1	17" Dark Brown Sandy SILT, trace Clay, frequent roots and rootlets, damp, loose, ML	TOPSOIL
2	Reddish Brown Silty SAND, little Clay, humid, loose, SM	GLACIAL MARINE
3		
4	Olive brown Silty CLAY, trace Sand, heavily mottled and blocky, humid, firm to stiff	Pocket Penetrometer = 7,000 psf to 8,000 psf
5		
6		
7		
8	Similar to above, slightly mottled and blocky, trace Silt and Sand seams	Pocket Penetrometer = 3,500 psf to 5,500 psf
9		
10	Similar to above, slightly mottled, not blocky	Pocket Penetrometer = 5,000 psf to 7,000 psf
11	End of Test Pit at 10.2', no refusal	
12		
13		
14		
15		
16		
17		

SUMMIT GEOENGINEERING SERVICES	**TEST PIT LOG**	Test Pit # **TP-4**
	Project: Proposed Fill Slope Thompson's Point Portland, Maine	Project #: 17173 Groundwater: None Observed
Contractor: Shaw Brothers Construction	Ground Surface Elevation: 23.6 ft.	
Equipment: CAT 330 Tracked Excavator	Reference: Surveyed by Shaw Bros. on day of Explorations	
Summit Staff: M. Hardison, E.I.	Date: 6/14/2017	Weather: 75° Sunny

Depth (ft)	DESCRIPTION	
	ENGINEERING	**GEOLOGIC/GENERAL**
1	Brown Silty SAND, trace to little Clay, humid, loose, SM	
2		FILL
3	Olive Brown Silty CLAY, trace to little Sand, heavily mottled and blocky, humid, stiff, CL	Pocket Penetrometer = 4,000 psf
4		
5	Similar to above, moderatley mottled and blocky	Pocket Penetrometer = 5,000 psf
6		
7		
8	Similar to above, slightly mottled and blocky, trace Silt and Sand seams	Pocket Penetrometer = 3,000 psf to 6,000 psf
9		
10	Similar to above, soft to firm	
11		
12		Pocket Penetrometer = 1,500 psf
13	End of Test Pit at 12.0', no refusal	
14		
15		
16		
17		

Project:	Thompson's Point	**Job #:**	7430.2.T1
Location:	Stockplie area	**Date Started:**	4-7-22
City/State:	Portland, Maine	**Date Finished:**	4-12-22

Boring No.

MA-1

Contractor: Carr-Dee Corp
Driller/Helper: G. Smith/C. Smith
Logged By/Reviewed By: T. M. Cormican
Surface Elevation (ft): 32.8

Casing Type: 2.25 inch HSA/HW
Casing Hammer (lbs)/Drop (in): 300 lbs./24 inches
Sampler Size/Type: 1-3/8 inch I.D. Split spoon
Sampler Hammer (lbs)/Drop (in): 140 lbs./30 inches

Groundwater Observations

Date	Depth	Elev.	Notes
4-7-22	11.5	21.3	

Depth (ft)	Elev. (ft)	Symbol	Depth/EL to Strata Change (ft)	Stratum	Sample N-Value / RQD	Sample No.	Sample Pen./Rec. (in)	Sample Depth (ft)	Sample Blows/6" / Min/ft	Sample Description and Boring Notes
1	32			FILL	10	S-1	24/20	0.0-2.0	5 5 5 9	Loose to compact gray-brown silty CLAY, some sand, trace gravel. (FILL) NOTE(s): Advanced Augers to 5 ft. Sampled contionously to 9 ft. Removed HSA and Replace with HW casing to 9 ft. Performed wet rotary drilling open hole to 55 feet.
2	31									
3	30		3.0 / 29.8							
4	29			MARINE CLAY						
5	28				14	S-2	24/24	5.0-7.0	9 6 8 9	Compact stratified yellow-gray and blue-gray fine sandy SILT and silty fine SAND to stiff mottled yellow-gray silty CLAY, with occasional fine SAND, partings. (MARINE CLAY)
6	27									
7	26				20	S-3	24/16	7.0-9.0	10 10 10 9	Very stiff ywllow-gray silty CLAY, with occasional fine SAND partings. (MARINE CLAY)
8	25									
9	24									
10	23				7	S-4	24/20	10.0-12.0	2 3 4 4	Firm mottled yellow-gray and blue-gray silty CLAY, with occasional fine SAND partings. (MARINE CLAY)
11	22									
12	21				9	S-5	24/20	12.0-14.0	6 4 5 4	Stiff yellow-gray silty CLAY, with occasional fine SAND partings. (MARINE CLAY)
13	20									
14	19				n/a	U.P.-1	24/19	14.0-16.0	P U S H	mottled yellow-gray silty CLAY. (MARINE CLAY)
15	18									
16	17				3	S-6	24/14	16.0-18.0	1 1 2 1	Soft mottled yellow-gray silty CLAY. (MARINE CLAY)
17	16									
18	15									
19	14									
20	13									
21	12									
22	11									Very soft gray silty CLAY. (MARINE CLAY)
	10									

GRANULAR SOILS	
BLOWS/FT.	DENSITY
0-4	V.LOOSE
4-10	LOOSE
10-30	COMPACT
30-50	DENSE
>50	V.DENSE

COHESIVE SOILS	
BLOWS/FT.	CONSISTENCY
<2	V.SOFT
2-4	SOFT
4-8	FIRM
8-15	STIFF
15-30	V.STIFF
>30	HARD

SOIL COMPONENT

DESCRIPTIVE TERM	PROPORTION OF TOTAL
"TRACE"	0-10%
"SOME"	10-20%
"ADJECTIVE" (eg SANDY, SILTY)	20-35%
"AND"	35-50%

SOIL CONTAINING THREE COMPONENTS EACH OF WHICH COMPRISE AT LEAST 25% OF THE TOTAL ARE CLASSIFIED AS "A WELL-GRADED MIXTURE OF"

Notes:
Automatic Hammer

Weather: Variable

McPHAIL ASSOCIATES, LLC
2269 MASSACHUSETTS AVENUE
CAMBRIDGE, MA 02140
TEL: 617-868-1420
FAX: 617-868-1423

Project:	Thompson's Point	**Job #:**	7430.2.T1
Location:	Stockplie area	**Date Started:**	4-7-22
City/State:	Portland, Maine	**Date Finished:**	4-12-22

Boring No.

MA-1

Contractor: Carr-Dee Corp
Driller/Helper: G. Smith/C. Smith
Logged By/Reviewed By: T. M. Cormican
Surface Elevation (ft): 32.8

Casing Type: 2.25 inch HSA/HW
Casing Hammer (lbs)/Drop (in): 300 lbs./24 inches
Sampler Size/Type: 1-3/8 inch I.D. Split spoon
Sampler Hammer (lbs)/Drop (in): 140 lbs./30 inches

Groundwater Observations

Date	Depth	Elev.	Notes
4-7-22	11.5	21.3	

Depth (ft)	Elev. (ft)	Symbol	Depth/EL to Strata Change (ft)	Stratum	Sample N-Value/RQD	Sample No.	Sample Pen./Rec. (in)	Sample Depth (ft)	Sample Blows/6"/Min/ft	Sample Description and Boring Notes
24	9				0	S-7	24/24	22.0-24.0	WOH WOH	
25	8				n/a	U.P. 2	24/22	24.0-26.0	WOH P U S H	gray silty CLAY. (MARINE CLAY)
26	7									
27	6				1	S-8	24/24	26.0-28.0	WOH WOH 1 2	Very soft gray silty CLAY to mottled gray-black ORGANIC SILT/CLAY? (MARINE CLAY)
28	5									
29	4									
30	3									
31	2									
32	1									
33	0				2	S-9	24/24	32.0-34.0	WOH WOH 2 2	Very soft to soft gray silty CLAY, with specks/splotches of black organic silt/clay? (MARINE CLAY)
34	-1									
35	-2			MARINE CLAY	n/a	U.P.-3	24/22	34.0-36.0	P U S H	gray silty CLAY, with black organic silt/clay? (MARINE CLAY)
36	-3									
37	-4				O	S-10	24/18	36.0-38.0	WOR WOR WOH WOH	Very soft gray silty CLAY, with specks/splotches of black organic silt/clay? (MARINE CLAY)
38	-5									
39	-6									
40	-7									
41	-8									
42	-9									
43	-10									
44	-11									
45	-12				1	S-11	24/24	44.0-46.0	WOR WOR 1 2	Very soft gray silty CLAY, with frequent fine SAND partings and frequent partings and seams of black organic silt/clay? (MARINE CLAY)
	-13									

GRANULAR SOILS	
BLOWS/FT.	DENSITY
0-4	V.LOOSE
4-10	LOOSE
10-30	COMPACT
30-50	DENSE
>50	V.DENSE

COHESIVE SOILS	
BLOWS/FT.	CONSISTENCY
<2	V.SOFT
2-4	SOFT
4-8	FIRM
8-15	STIFF
15-30	V.STIFF
>30	HARD

SOIL COMPONENT

DESCRIPTIVE TERM	PROPORTION OF TOTAL
"TRACE"	0-10%
"SOME"	10-20%
"ADJECTIVE" (eg SANDY, SILTY)	20-35%
"AND"	35-50%

SOIL CONTAINING THREE COMPONENTS EACH OF WHICH COMPRISE AT LEAST 25% OF THE TOTAL ARE CLASSIFIED AS "A WELL-GRADED MIXTURE OF"

Notes:
Automatic Hammer

Weather: Variable

McPHAIL ASSOCIATES, LLC
2269 MASSACHUSETTS AVENUE
CAMBRIDGE, MA 02140
TEL: 617-868-1420
FAX: 617-868-1423

Project: Thompson's Point
Location: Stockplie area
City/State: Portland, Maine

Job #: 7430.2.T1
Date Started: 4-7-22
Date Finished: 4-12-22

Boring No. MA-1

Contractor: Carr-Dee Corp
Driller/Helper: G. Smith/C. Smith
Logged By/Reviewed By: T. M. Cormican
Surface Elevation (ft): 32.8

Casing Type: 2.25 inch HSA/HW
Casing Hammer (lbs)/Drop (in): 300 lbs./24 inches
Sampler Size/Type: 1-3/8 inch I.D. Split spoon
Sampler Hammer (lbs)/Drop (in): 140 lbs./30 inches

Groundwater Observations

Date	Depth	Elev.	Notes
4-7-22	11.5	21.3	

Depth (ft)	Elev. (ft)	Symbol	Depth/EL to Strata Change (ft)	Stratum	Sample N-Value / RQD	Sample No.	Sample Pen./Rec. (in)	Sample Depth (ft)	Sample Blows/6" / Min/ft	Sample Description and Boring Notes
47	-14			MARINE CLAY						
48	-15									
49	-16									
50	-17		50.0 / -17.2							
51	-18			GLACIAL OUTWASH	38	S-12	24/9	50.5-52.5	15 15 23 8	Dense gray silty fine to medium SAND, trace gravel. (GLACIAL OUTWASH)
52	-19									
53	-20		53.5 / -20.7							
54	-21			WEATHERED/FRACTURED BEDROCK WITH GLACIAL TILL SEAMS	100/2"	S-13	2/2	55.0-55.2	100/2"	Very dense gray-black SILT, SAND and GRAVEL. (WEATHERED/FRACTUED BEDROCK with GLACIAL TILL seams). NOTE: Hole caved after sampling. Drove HW casing to refusal at 54.1 feet. Washed out and continued open hole to practical button bit refusal at 56.5 feet.
55	-22									
56	-23		56.0 / -23.2							
57	-24			GNEISSIC SCHIST BEDROCK	75%	R.C.-1	60/60	56.5-61.5	7-7.5-7.5-8.5-8.5	Very hard, freshly weathered, moderately fractured to sound, gray, black and white, amorphous to fine grained gniessic SCHIST, close, tight, horizontal to shallow dipping, rough joints; horizontal banding. (BEDROCK) Performed rock coring operations with NX split inner barrel. Borehole grouted upon completion.
58	-25									
59	-26									
60	-27									
61	-28		61.5 / -28.7							
62	-29			Bottom of Borehole at 61.5 feet below existing grade.						
63	-30									
64	-31									
65	-32									
66	-33									
67	-34									
68	-35									
	-36									

GRANULAR SOILS	
BLOWS/FT.	DENSITY
0-4	V.LOOSE
4-10	LOOSE
10-30	COMPACT
30-50	DENSE
>50	V.DENSE

COHESIVE SOILS	
BLOWS/FT.	CONSISTENCY
<2	V.SOFT
2-4	SOFT
4-8	FIRM
8-15	STIFF
15-30	V.STIFF
>30	HARD

SOIL COMPONENT

DESCRIPTIVE TERM	PROPORTION OF TOTAL
"TRACE"	0-10%
"SOME"	10-20%
"ADJECTIVE" (eg SANDY, SILTY)	20-35%
"AND"	35-50%

SOIL CONTAINING THREE COMPONENTS EACH OF WHICH COMPRISE AT LEAST 25% OF THE TOTAL ARE CLASSIFIED AS "A WELL-GRADED MIXTURE OF"

Notes:
Automatic Hammer

Weather: Variable

McPHAIL ASSOCIATES, LLC
2269 MASSACHUSETTS AVENUE
CAMBRIDGE, MA 02140
TEL: 617-868-1420
FAX: 617-868-1423

Project:	Thompson's Point	**Job #:**	7430.2.T1
Location:	Gravel Parking Lot	**Date Started:**	4-6-22
City/State:	Portland, Maine	**Date Finished:**	4-7-22

Boring No.

MA-2

Contractor: Carr-Dee Corp
Driller/Helper: G. Smith/C. Smith
Logged By/Reviewed By: T. M. Cormican
Surface Elevation (ft): 21.8

Casing Type: 2.25 inch HSA/HW
Casing Hammer (lbs)/Drop (in): 300 lbs./24 inches
Sampler Size/Type: 1-3/8 inch I.D. Split spoon
Sampler Hammer (lbs)/Drop (in): 140 lbs./30 inches

Groundwater Observations

Date	Depth	Elev.	Notes
4-6-22	6.5	15.3	

Depth (ft)	Elev. (ft)	Symbol	Depth/EL to Strata Change (ft)	Stratum	Sample N-Value / RQD	Sample No.	Sample Pen./Rec. (in)	Sample Depth (ft)	Sample Blows/6" / Min/ft	Sample Description and Boring Notes
1	21			FILL	30	S-1	24/24	0.0-2.0	19 15 15 53	Compact to dense gray-brown gravelly SAND, trace silt to black SILT and SAND and ASH and CINDERS. (FILL) NOTE(s): Augered to 5 feet, sampled continously to 9 feet. Removed HSA and replaced with HW casing to 9 feet. Performed wet rotary drilling open hole to bottom of borehole.
2	20									
3	19		3.0 / 18.8							
4	18									
5	17									
6	16				3	S-2	24/24	5.0-7.0	1 2 1 2	Soft yellow-gray to blue-gray silty CLAY, with occasional fine SAND partings. (MARINE CLAY)
7	15									
8	14				3	S-3	24/24	7.0-9.0	1 2 1 2	Soft blu-gay silty CLAY, with occasional fine SAND partings. (MARINE CLAY)
9	13									
10	12				n/a	U.P.-1	24/18	9.0-11.0	P U S H	gray silty CLAY with fine SAND paring at bottom of sample. (MARINE CLAY)
11	11									
12	10				0	S-4	24/24	11.0-13.0	WOH WOH WOH WOH	Very soft gray silty CLAY, with occasional fine SAND partings. (MARINE CLAY)
13	9			MARINE CLAY						
14	8									
15	7									
16	6									
17	5									
18	4									
19	3									
20	2				0	S-5	24/24	19.0-21.0	WOH WOH WOH WOH	Very soft gray silty CLAY, with occasional fine SAND partings. (MARINE CLAY)
21	1									
22	0									
	-1									

GRANULAR SOILS	
BLOWS/FT.	DENSITY
0-4	V.LOOSE
4-10	LOOSE
10-30	COMPACT
30-50	DENSE
>50	V.DENSE

COHESIVE SOILS	
BLOWS/FT.	CONSISTENCY
<2	V.SOFT
2-4	SOFT
4-8	FIRM
8-15	STIFF
15-30	V.STIFF
>30	HARD

SOIL COMPONENT

DESCRIPTIVE TERM	PROPORTION OF TOTAL
"TRACE"	0-10%
"SOME"	10-20%
"ADJECTIVE" (eg SANDY, SILTY)	20-35%
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SOIL CONTAINING THREE COMPONENTS EACH OF WHICH COMPRISE AT LEAST 25% OF THE TOTAL ARE CLASSIFIED AS "A WELL-GRADED MIXTURE OF"

Notes:
Automatic Hammer

Weather: Variable

McPHAIL ASSOCIATES, LLC
2269 MASSACHUSETTS AVENUE
CAMBRIDGE, MA 02140
TEL: 617-868-1420
FAX: 617-868-1423

Project:	Thompson's Point	**Job #:**	7430.2.T1
Location:	Gravel Parking Lot	**Date Started:**	4-6-22
City/State:	Portland, Maine	**Date Finished:**	4-7-22

Boring No.

MA-2

Contractor: Carr-Dee Corp
Driller/Helper: G. Smith/C. Smith
Logged By/Reviewed By: T. M. Cormican
Surface Elevation (ft): 21.8

Casing Type: 2.25 inch HSA/HW
Casing Hammer (lbs)/Drop (in): 300 lbs./24 inches
Sampler Size/Type: 1-3/8 inch I.D. Split spoon
Sampler Hammer (lbs)/Drop (in): 140 lbs./30 inches

Groundwater Observations

Date	Depth	Elev.	Notes
4-6-22	6.5	15.3	

Depth (ft)	Elev. (ft)	Symbol	Depth/EL to Strata Change (ft)	Stratum	Sample N-Value / RQD	Sample No.	Sample Pen./Rec. (in)	Sample Depth (ft)	Sample Blows/6" / Min/ft	Sample Description and Boring Notes
24	-2									
25	-3									
26	-4									
27	-5									
28	-6				0	S-6	24/24	27.0-29.0	WOR WOR WOH WOH	Very soft gray silty CLAY. (MARINE CLAY)
29	-7									
30	-8				n/a	U.P.-2	24/16	29.0-31.0	P U S H	gray silty CLAY. (MARINE CLAY)
31	-9									
32	-10				0	S-7	24/24	31.0-33.0	WOH WOH WOH WOH	Very soft gray silty CLAY, with occasional black ORGANIC SILT ? partings and seams near bootom of sample. (MARINE CLAY)
33	-11									
34	-12									
35	-13			MARINE CLAY						
36	-14									
37	-15									
38	-16									
39	-17									
40	-18				0	S-8	24/3	39.0-41.0	WOR WOR WOR WOH	Very soft gray-black silty CLAY, with organic odor. (MARINE CLAY) NOTE(s): Gray-black color change in wash return water at ~ 36 feet. Made multible attempts to get split sppon recovery.
41	-19									
42	-20									
43	-21									
44	-22									
45	-23				0	S-9	24/0	44.0-46.0	WOR WOR WOR WOR	No Recovery NOTE: Made mutible attempts to get split spoon recovery.
	-24									

GRANULAR SOILS	
BLOWS/FT.	DENSITY
0-4	V.LOOSE
4-10	LOOSE
10-30	COMPACT
30-50	DENSE
>50	V.DENSE

COHESIVE SOILS	
BLOWS/FT.	CONSISTENCY
<2	V.SOFT
2-4	SOFT
4-8	FIRM
8-15	STIFF
15-30	V.STIFF
>30	HARD

SOIL COMPONENT

DESCRIPTIVE TERM	PROPORTION OF TOTAL
"TRACE"	0-10%
"SOME"	10-20%
"ADJECTIVE" (eg SANDY, SILTY)	20-35%
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SOIL CONTAINING THREE COMPONENTS EACH OF WHICH COMPRISE AT LEAST 25% OF THE TOTAL ARE CLASSIFIED AS "A WELL-GRADED MIXTURE OF"

Notes:
Automatic Hammer

Weather: Variable

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CAMBRIDGE, MA 02140
TEL: 617-868-1420
FAX: 617-868-1423

Project: Thompson's Point
Location: Gravel Parking Lot
City/State: Portland, Maine

Job #: 7430.2.T1
Date Started: 4-6-22
Date Finished: 4-7-22

Boring No.
MA-2

Contractor: Carr-Dee Corp
Driller/Helper: G. Smith/C. Smith
Logged By/Reviewed By: T. M. Cormican
Surface Elevation (ft): 21.8

Casing Type: 2.25 inch HSA/HW
Casing Hammer (lbs)/Drop (in): 300 lbs./24 inches
Sampler Size/Type: 1-3/8 inch I.D. Split spoon
Sampler Hammer (lbs)/Drop (in): 140 lbs./30 inches

Groundwater Observations

Date	Depth	Elev.	Notes
4-6-22	6.5	15.3	

Depth (ft)	Elev. (ft)	Symbol	Depth/EL to Strata Change (ft)	Stratum	Sample N-Value / RQD	Sample No.	Sample Pen./Rec. (in)	Sample Depth (ft)	Sample Blows/6" / Min/ft	Sample Description and Boring Notes
47	-25									
48	-26									
49	-27									
50	-28				0	S-10	24/0	49.0-51.0	WOR WOR WOR WOR	No Recovery NOTE: Made mutible attempts to get split spoon recovery in addtion to pushing split spoon to 54 feet and still no recovery.
51	-29									
52	-30									
53	-31			MARINE CLAY						
54	-32									
55	-33									
56	-34									
57	-35									
58	-36									
59	-37									
60	-38		60.0 / -38.2		3	S-11	12/10	59.0-60.0	1 2	Soft black silty CLAY/ORANIC CLAY? (MUDLINE?)
61	-39				23	S-11a	12/6	60.0-61.0	21 23	Dense gray SAND, trace to some silt, with gravel in split spoon nose. (GLACIAL OUTWASH)
62	-40									
63	-41									
64	-42									
65	-43			GLACIAL OUTWASH						
66	-44				38	S-12	24/8	65.0-67.0	9 10 28 14	Dense gray-black SAND and GRAVEL, some silt, trace clay. (GLACIAL OUTWASH)
67	-45									
68	-46									
	-47									

GRANULAR SOILS	
BLOWS/FT.	DENSITY
0-4	V.LOOSE
4-10	LOOSE
10-30	COMPACT
30-50	DENSE
>50	V.DENSE

COHESIVE SOILS	
BLOWS/FT.	CONSISTENCY
<2	V.SOFT
2-4	SOFT
4-8	FIRM
8-15	STIFF
15-30	V.STIFF
>30	HARD

SOIL COMPONENT

DESCRIPTIVE TERM	PROPORTION OF TOTAL
"TRACE"	0-10%
"SOME"	10-20%
"ADJECTIVE" (eg SANDY, SILTY)	20-35%
"AND"	35-50%

SOIL CONTAINING THREE COMPONENTS EACH OF WHICH COMPRISE AT LEAST 25% OF THE TOTAL ARE CLASSIFIED AS "A WELL-GRADED MIXTURE OF"

Notes:
Automatic Hammer

Weather: Variable

McPHAIL ASSOCIATES, LLC
2269 MASSACHUSETTS AVENUE
CAMBRIDGE, MA 02140
TEL: 617-868-1420
FAX: 617-868-1423

Project: Thompson's Point
Location: Gravel Parking Lot
City/State: Portland, Maine

Job #: 7430.2.T1
Date Started: 4-6-22
Date Finished: 4-7-22

Boring No.
MA-2

Contractor: Carr-Dee Corp
Driller/Helper: G. Smith/C. Smith
Logged By/Reviewed By: T. M. Cormican
Surface Elevation (ft): 21.8

Casing Type: 2.25 inch HSA/HW
Casing Hammer (lbs)/Drop (in): 300 lbs./24 inches
Sampler Size/Type: 1-3/8 inch I.D. Split spoon
Sampler Hammer (lbs)/Drop (in): 140 lbs./30 inches

Groundwater Observations

Date	Depth	Elev.	Notes
4-6-22	6.5	15.3	

Depth (ft)	Elev. (ft)	Symbol	Depth/EL to Strata Change (ft)	Stratum	Sample N-Value / RQD	Sample No.	Sample Pen./Rec. (in)	Sample Depth (ft)	Sample Blows/6" / Min/ft	Sample Description and Boring Notes
70	-48			GLACIAL OUTWASH						
			70.5 / -48.7		52	S-13	6/5	70.0-70.5	26	Compact to dense gray SAND and GRAVEL, trace to some silt. (GLACIAL OUTWASH)
71	-49		70.7 / -48.9	GLACIAL TILL	100/2"	S-13a	2/2	70.5-70.7	100/2"	Very dense gray SILT and fine SAND, trace gravel. (GLACIAL TILL)
72	-50			WEATHERD/FRACTURED PHYLLITIC SCHIST BEDROCK						
			72.5 / -50.7							
73	-51			Bottomof Borehole at 72.5 feet below existing grade.	100/0"	S-14	0/0	72.5-72.5	100/0"	No Penetration - Split spoon refusal. NOTE: Advance roller bit through probable Weathered/Fractured PHYLLITIC SCHIST from 70.7 to 72.5 feet. Borehole grouted upon completion.
74	-52									
75	-53									
76	-54									
77	-55									
78	-56									
79	-57									
80	-58									
81	-59									
82	-60									
83	-61									
84	-62									
85	-63									
86	-64									
87	-65									
88	-66									
89	-67									
90	-68									
91	-69									
	-70									

GRANULAR SOILS	
BLOWS/FT.	DENSITY
0-4	V.LOOSE
4-10	LOOSE
10-30	COMPACT
30-50	DENSE
>50	V.DENSE

COHESIVE SOILS	
BLOWS/FT.	CONSISTENCY
<2	V.SOFT
2-4	SOFT
4-8	FIRM
8-15	STIFF
15-30	V.STIFF
>30	HARD

SOIL COMPONENT

DESCRIPTIVE TERM	PROPORTION OF TOTAL
"TRACE"	0-10%
"SOME"	10-20%
"ADJECTIVE" (eg SANDY, SILTY)	20-35%
"AND"	35-50%

SOIL CONTAINING THREE COMPONENTS EACH OF WHICH COMPRISE AT LEAST 25% OF THE TOTAL ARE CLASSIFIED AS "A WELL-GRADED MIXTURE OF"

Notes:
Automatic Hammer

Weather: Variable

McPHAIL ASSOCIATES, LLC
2269 MASSACHUSETTS AVENUE
CAMBRIDGE, MA 02140
TEL: 617-868-1420
FAX: 617-868-1423

APPENDIX C

LABORATORY TEST RESULTS

SUMMIT
GEOENGINEERING SERVICES

THIN WALLED TUBE SAMPLING - ASTM D1587

PROJECT NAME:	The Forefront at Thompson's Point	PROJECT #:	24098
PROJECT LOCATION:	Thompson's Point, Portland, Maine	CLIENT:	Cathartes
COLLECTION DATE:	5/22/2024	SAMPLE #:	UT-1
TEST DATE:	6/3/2024	TECHNICIAN:	Colleen Sullivan, E.I.

Test Boring Information

Boring Number: B-1
Drilling Method: Rotary Wash
Drilling Tooling: 4-inch Casing
Sampling Method: Tube Push

Sample Information

Tube Length: 30"
Recovery: 28"
Tube Diameter: 3"
Depth: 15.5' - 18'

Trial / Specimen Number	Moisture Content	Unit Weight	Torvane
1*	32.2%	115 pcf	200 psf
2*	33.7%	112 pcf	300 psf
3	44.5%	111 pcf	500 psf
Average	36.8%	112 pcf	340 psf

* Specimen 1 & 2 performed on Clay w/ frequent Silt-Sand seams indicating lower moisture content

Visual Description (ASTM D2488):

Gray Silty CLAY, occasional Silt-Sand seams from 15.5' - 17.5', frequent Silt-Sand seams from 17.5' - 18', soft, wet, CL



Photograph of cross sectional sample view.



Photograph of longitudinal sample view.

REMARKS:

Reviewed By: ELS

SUMMIT
GEOENGINEERING SERVICES

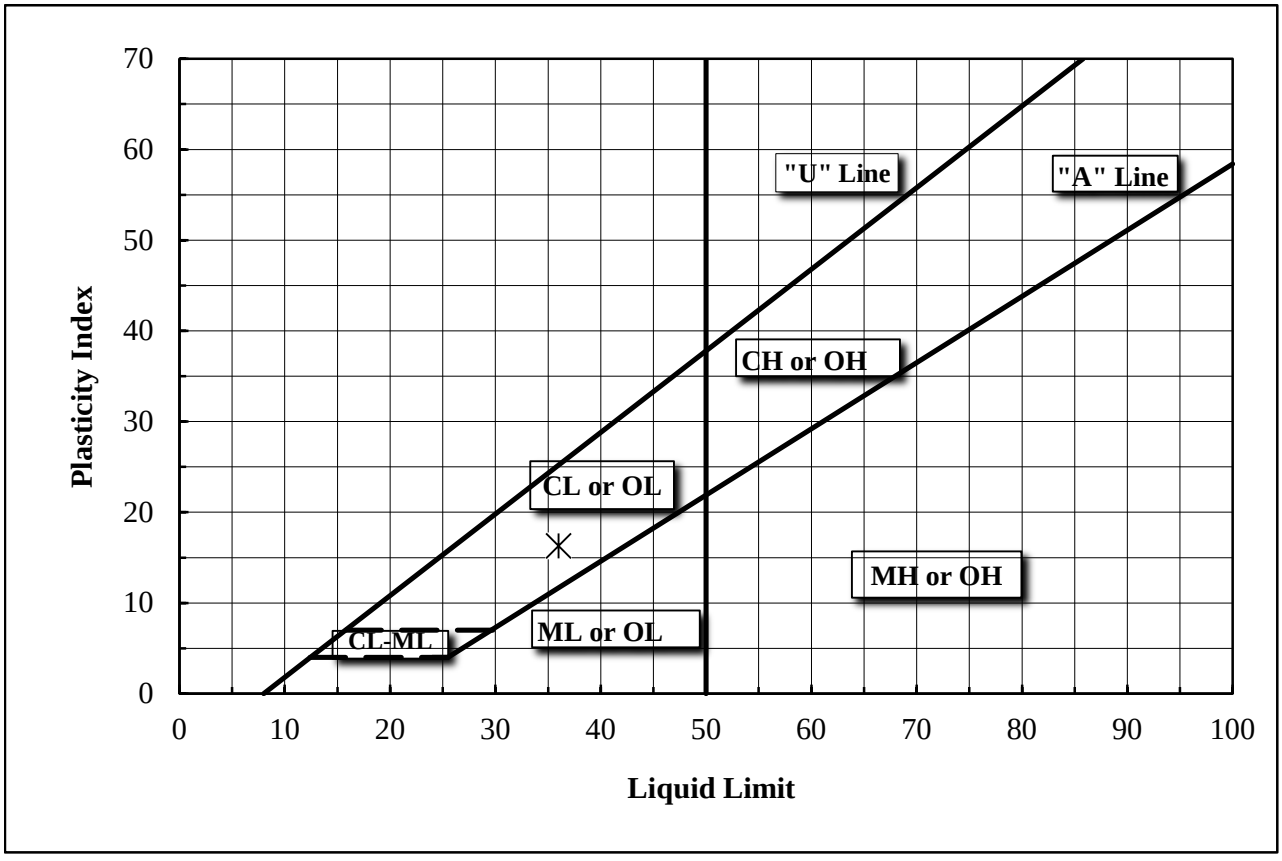
ATTERBERG LIMIT TEST - ASTM D4318

Method "A" (Multi-point)

PROJECT NAME:	The Forefront at Thompson's Point	PROJECT NUMBER:	24098
LOCATION:	Thompson's Point, Portland, Maine	SAMPLE NUMBER:	UT-1
CLIENT:	Cathartes	DEPTH:	15.5' - 18'
TEST DATE:	6/3/2024	TECHNICIAN:	Ellis Dixon, E.I.

DATA

Source	Depth	LL	PL	PI	Classification
B-1	15.5' - 18'	36	20	16	Gray Silty CLAY, occasional Silt-Sand
					seams, CL



Notes: Moisture Content = 38.7%

Reviewed By: CRS

Mailing: PO Box 515, Gardiner, ME 04345
Office: 210 Maine Avenue, Farmingdale, ME 04344

SUMMIT
GEOENGINEERING SERVICES

UNCONFINED COMPRESSIVE STRENGTH OF COHESIVE SOILS - ASTM D2166

PROJECT NAME:	The Forefront at Thompson's Point	PROJECT #:	24098
PROJECT LOCATION:	Thompson's Point, Portland, ME	CLIENT:	Cathartes
COLLECTION DATE:	5/22/2024	TECHNICIAN:	Colleen Sullivan, E.I.
TEST DATE:	6/3/2024	CHECKED BY:	Erika Stewart, P.E.

Sample & Testing Information

Boring Number:	B-1	**Trimming Method:**	Tube	
Sample Number:	UT-1	**Liquid Limit (LL):**	36	
Sample Depth:	15.5' - 18'	**Plasticity Index (PI):**	16	
Sample Type:	Shelby Tube	**Rate of Strain:**	0.1	in/min
Sample State:	Intact	**H/D Ratio:**	2.0	

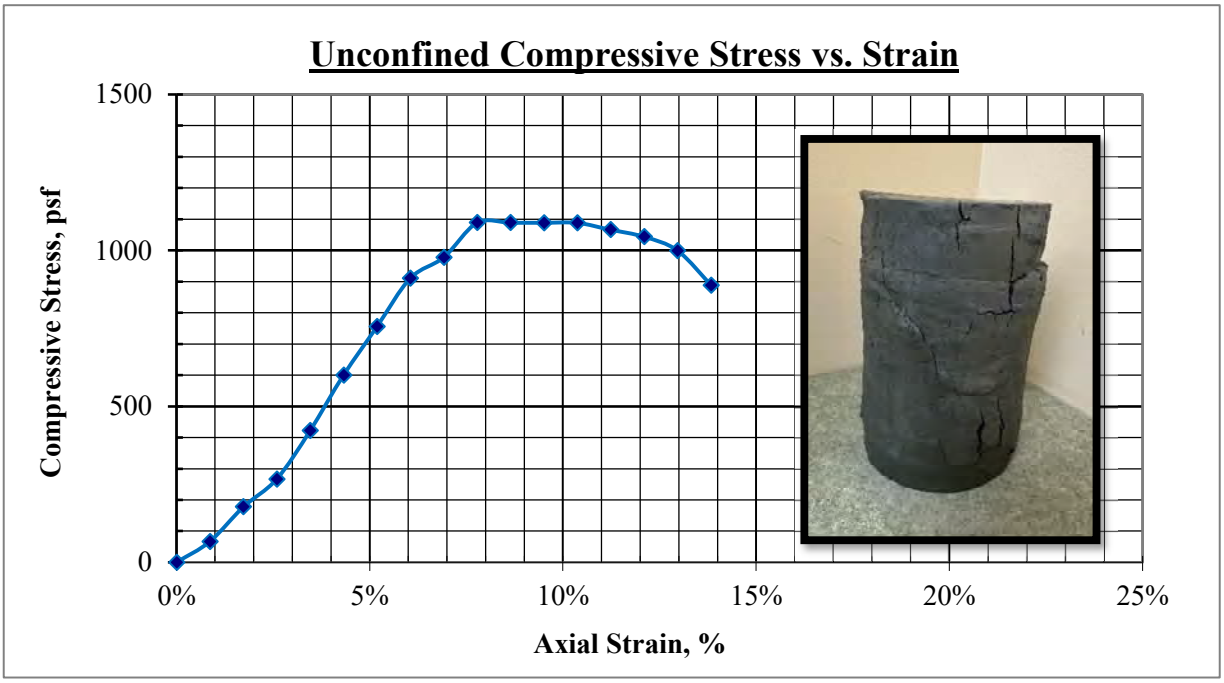
Sample Height:	5.79	in	**Sample Mass:**	1087.8	g
Sample Diameter:	2.87	in	**Moisture Content:**	44.9%	
Sample Volume:	37.46	in^3	**Moist Unit Weight:**	111	pcf
Cross Sectional Area:	6.48	in^2	**Dry Density:**	76	pcf

Sample Description & Classification

Gray Silty CLAY, occasional Silt-Sand seams, soft, wet, CL

Test Results

Unconfined Compressive Strength:	1080	psf	**Strain at Failure:**	8%
Shear Strength:	540	psf	**Failure Type:**	Bulge/Shear

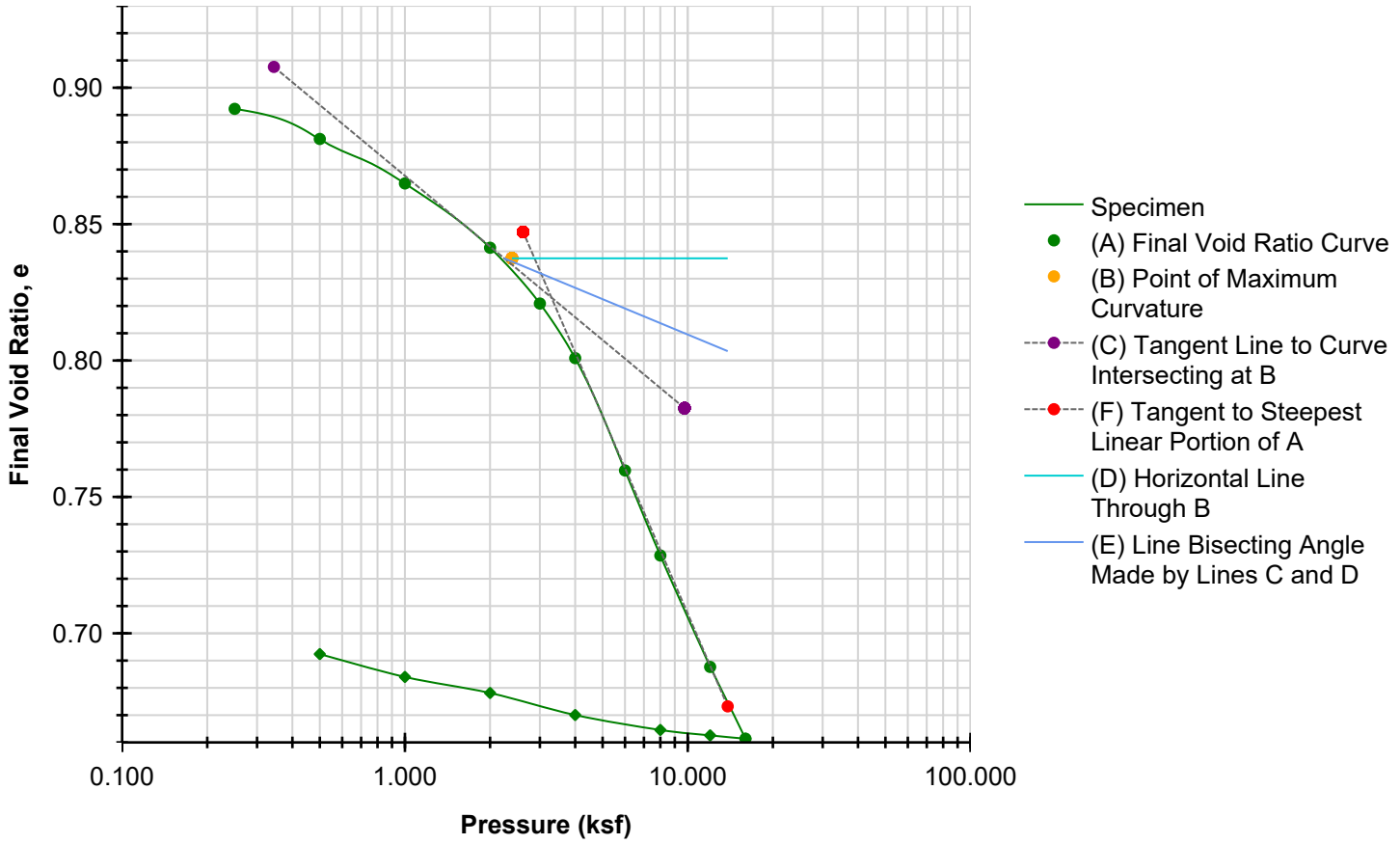


REMARKS:

Summit Geoengineering Services
210 Maine Avenue
Farmingdale, Maine 04344
207-446-3360

Final Voids [Log]

ASTM D2435



Preconsolidation Stress (ksf)	3.031	**Cc** 0.244	**Cr** 0.021

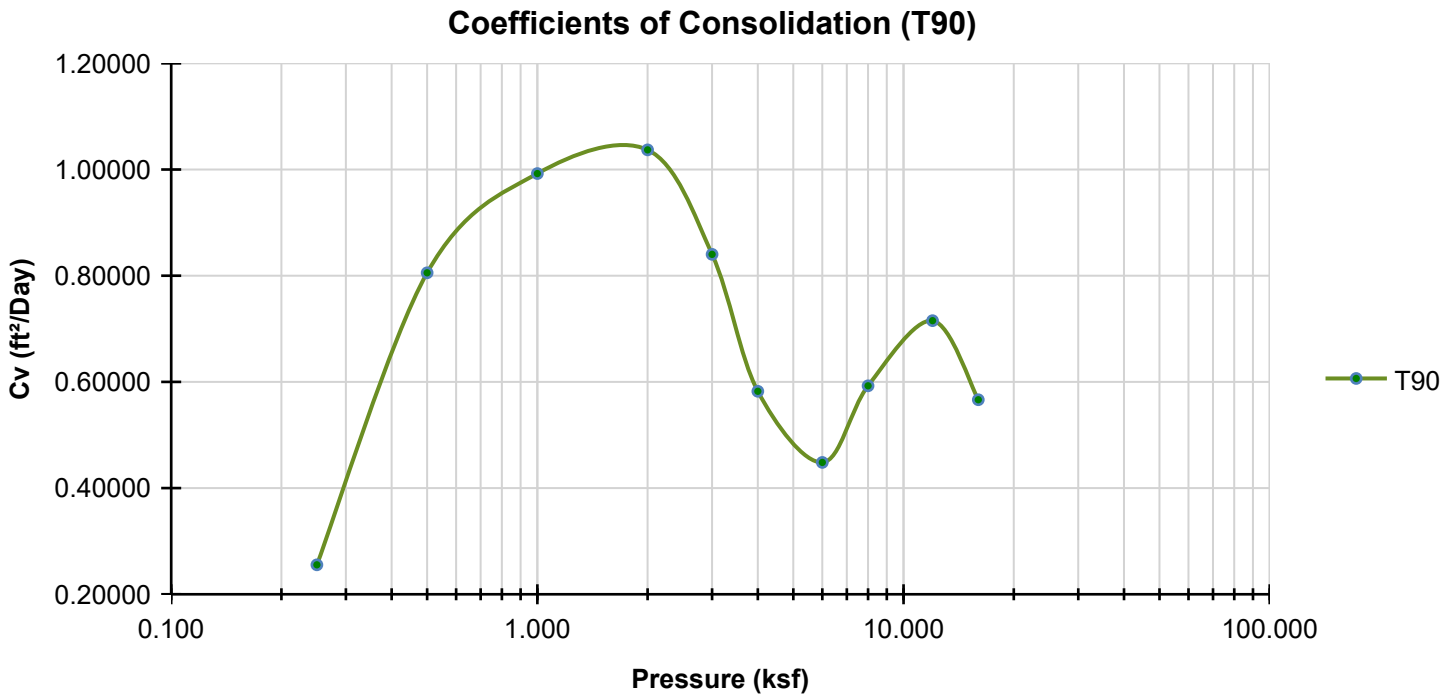
	BEFORE	AFTER			
			Liquid Limits	36	**Test Date** 6/3/2024
Moisture (%)	33.7	26.0	**Plastic Limits**	20	
Dry Density (pcf)	90.3	101.3			
Saturation (%)	102.8	103.2			
Void Ratio	0.90	0.69	**Specific Gravity**	2.75	ASSUMED

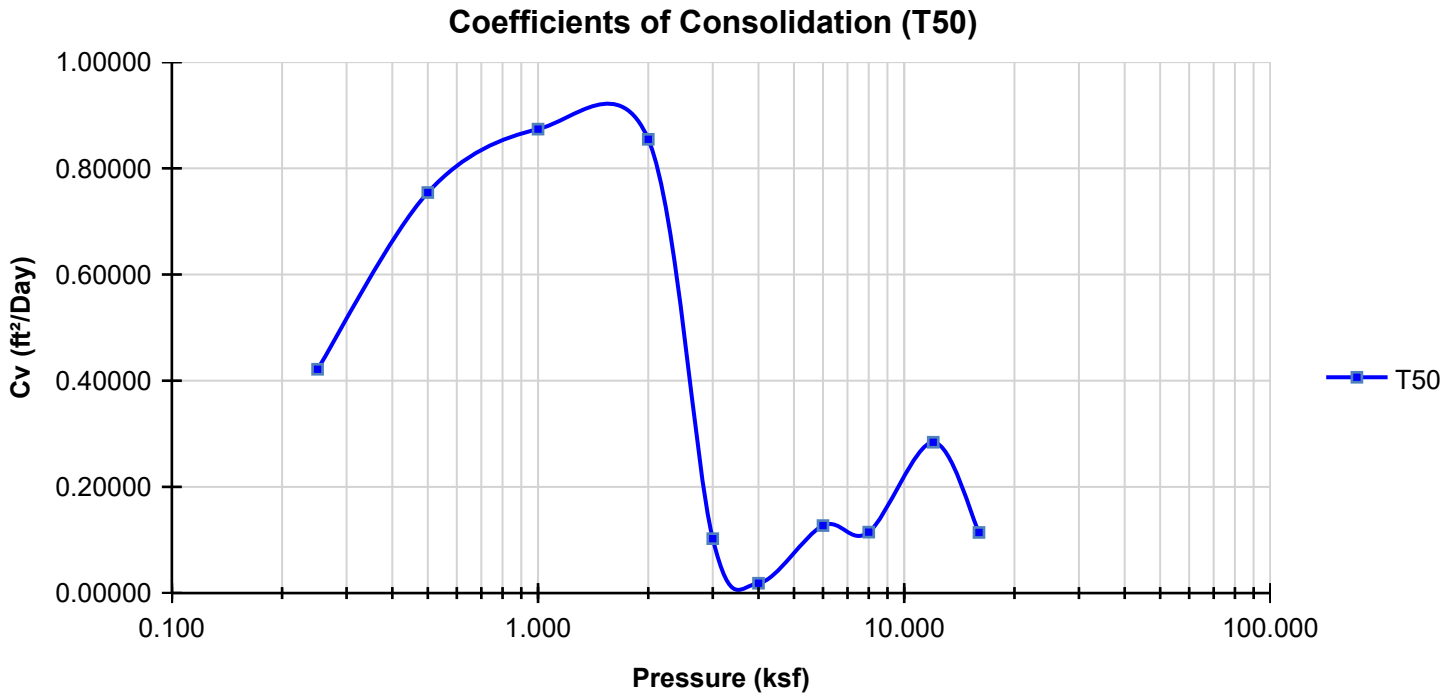
Sample Description	Gray Silty CLAY, frequent Silt-Sand seams, soft, wet, CL			
Project Number	24098	**Depth (ft)**	15.5-18	**Remarks**
Sample Number	UT-1	**Boring Number**	B-1	
Project	The Forefront at Thompson's Point			
Client	Cathartes			
Location	Thompson's Point Road, Portland, Maine			

Summit Geoengineering Services
210 Maine Avenue
Farmingdale, Maine 04344
207-446-3360

Coefficients of Consolidation

ASTM D2435





Project Name: The Forefront at Thompson's Point Project Number: 24098

Technician: Colleen Sullivan, E.I. Test Date: 6/3/2024 Checked By: _____ Date: _____

SUMMIT
GEOENGINEERING SERVICES

THIN WALLED TUBE SAMPLING - ASTM D1587

PROJECT NAME:	The Forefront at Thompson's Point	PROJECT #:	24098
PROJECT LOCATION:	Thompson's Point, Portland, ME	CLIENT:	Cathartes
COLLECTION DATE:	5/22/2024	SAMPLE #:	UT-2
TEST DATE:	5/29/2024	TECHNICIAN:	Colleen Sullivan, E.I.

Test Boring Information

Boring Number: B-1
Drilling Method: Rotary Wash
Drilling Tooling: 4-inch Casing
Sampling Method: Tube Push

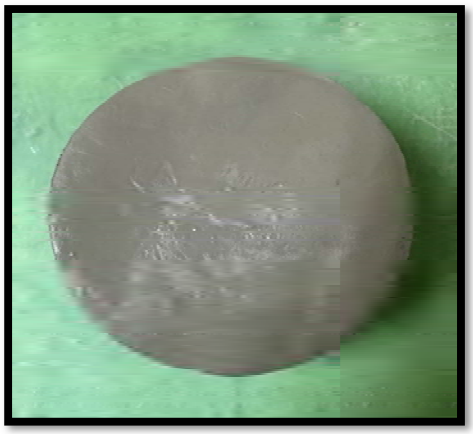
Sample Information

Tube Length: 30"
Recovery: 27"
Tube Diameter: 3"
Depth: 30' - 32.5'

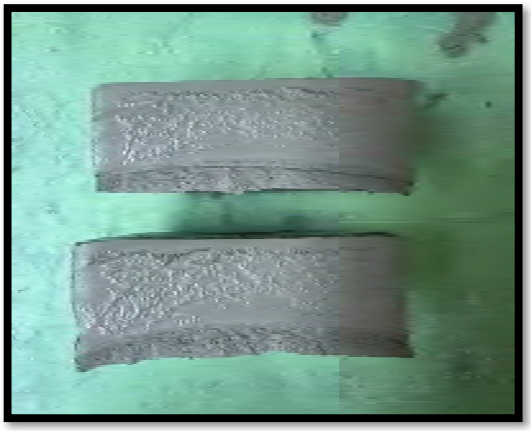
Trial / Specimen Number	Moisture Content	Unit Weight	Torvane
1	45.6%	115 pcf	400 psf
2	42.2%	113 pcf	400 psf
3	47.2%	115 pcf	500 psf
Average	45.0%	114 pcf	440 psf

Visual Description (ASTM D2488):

Gray Silty CLAY, soft, wet, CL



Photograph of cross sectional sample view.



Photograph of longitudinal sample view.

REMARKS:

Reviewed By: ELS

SUMMIT
GEOENGINEERING SERVICES

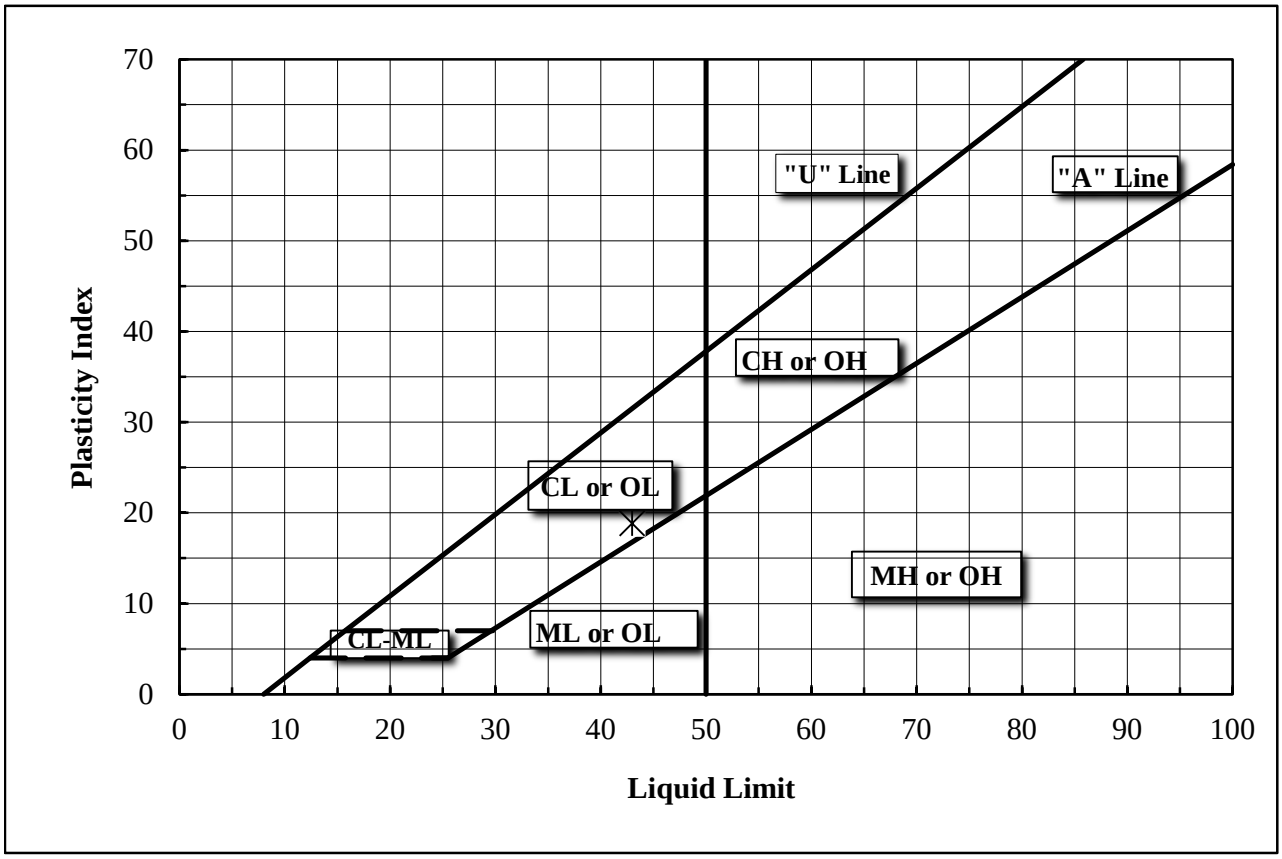
ATTERBERG LIMIT TEST - ASTM D4318

Method "A" (Multi-point)

PROJECT NAME:	The Forefront at Thompson's Point	PROJECT NUMBER:	24098
LOCATION:	Thompson's Point, Portland, Maine	SAMPLE NUMBER:	UT-2
CLIENT:	Cathartes	DEPTH:	30' - 32.5'
TEST DATE:	6/3/2024	TECHNICIAN:	Ellis Dixon, E.I.

DATA

Source	Depth	LL	PL	PI	Classification
B-1	30' - 32.5'	43	24	19	Gray Silty CLAY, CL



Notes: Moisture Content = 45.6%

Reviewed By: CRS

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Office: 210 Maine Avenue, Farmingdale, ME 04344

SUMMIT
GEOENGINEERING SERVICES

UNCONFINED COMPRESSIVE STRENGTH OF COHESIVE SOILS - ASTM D2166

PROJECT NAME:	The Forefront at Thompson's Point	PROJECT #:	24098
PROJECT LOCATION:	Thompson's Point, Portland, ME	CLIENT:	Cathartes
COLLECTION DATE:	5/22/2024	TECHNICIAN:	Colleen Sullivan, E.I.
TEST DATE:	5/29/2024	CHECKED BY:	Erika Stewart, P.E.

Sample & Testing Information

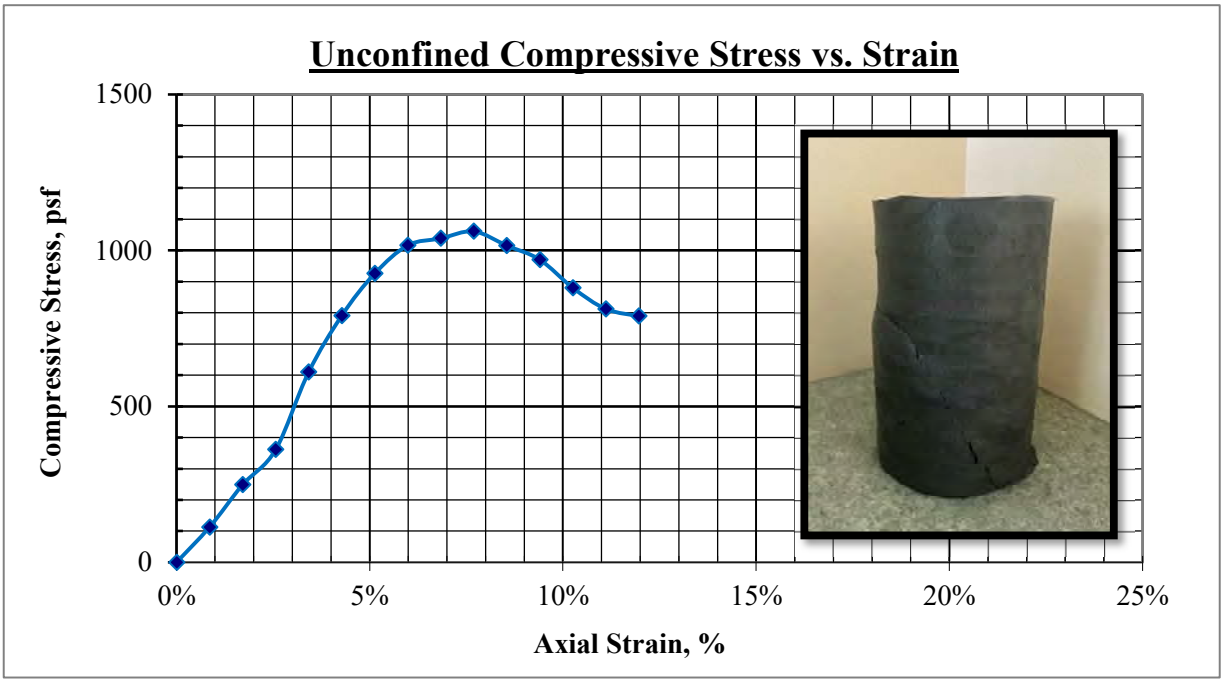
Boring Number:	B-1		**Trimming Method:**	Tube	
Sample Number:	UT-2		**Liquid Limit (LL):**	43	
Sample Depth:	30' - 32.5'		**Plasticity Index (PI):**	19	
Sample Type:	Shelby Tube		**Rate of Strain:**	0.1	in/min
Sample State:	Intact		**H/D Ratio:**	2.1	
Sample Height:	5.85	in	**Sample Mass:**	1122.2	g
Sample Diameter:	2.85	in	**Moisture Content:**	41.1%	
Sample Volume:	37.30	in^3	**Moist Unit Weight:**	115	pcf
Cross Sectional Area:	6.37	in^2	**Dry Density:**	81	pcf

Sample Description & Classification

Gray Silty CLAY, soft, wet, CL

Test Results

Unconfined Compressive Strength:	1060	psf	**Strain at Failure:**	8%
Shear Strength:	530	psf	**Failure Type:**	Bulge/Shear

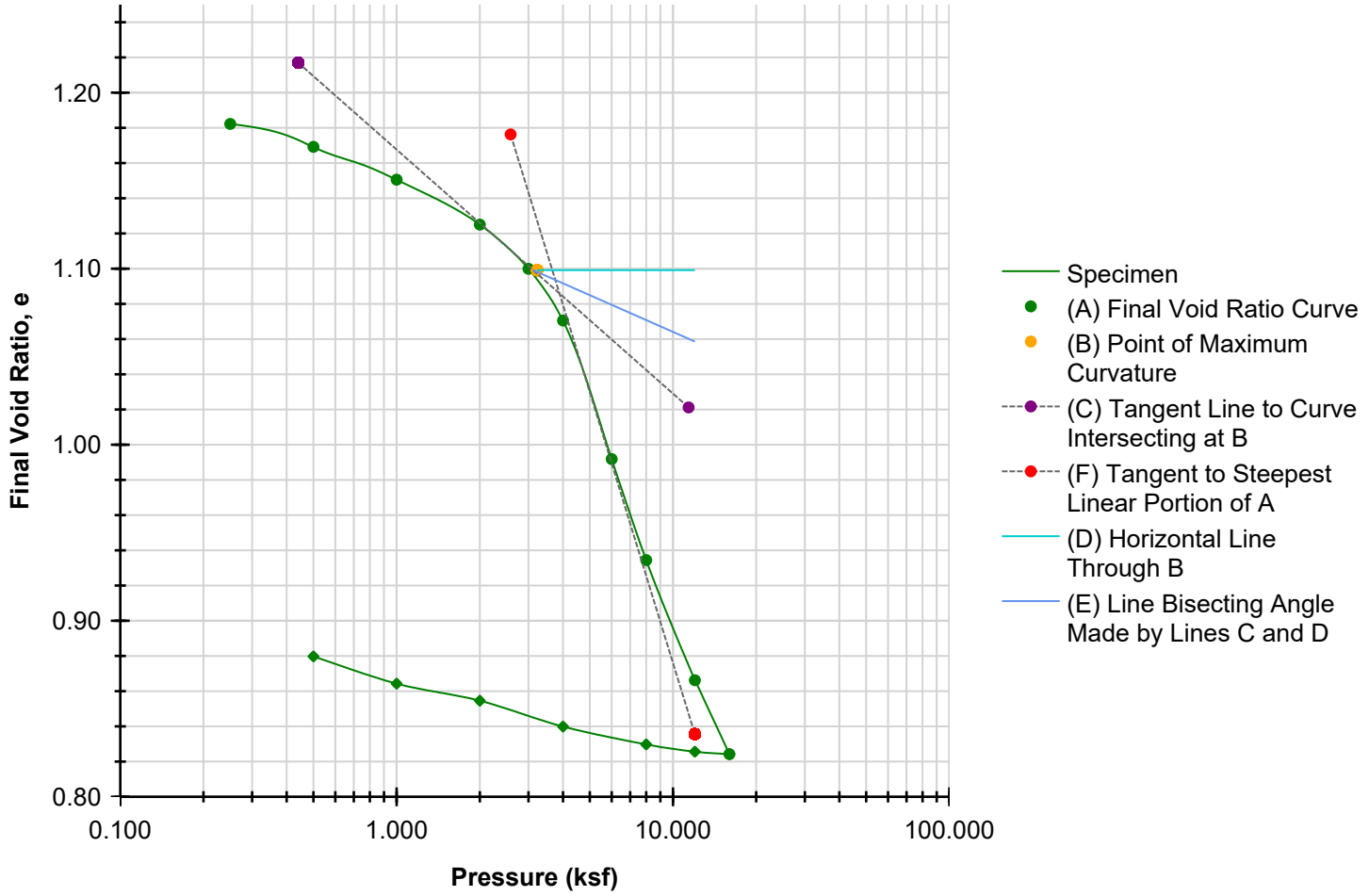


REMARKS:

Summit Geoengineering Services
210 Maine Avenue
Farmingdale, Maine 04344
207-446-3360

Final Voids [Log]

ASTM D2435



Preconsolidation Stress (ksf)	3.752	**Cc**	0.489	**Cr**	0.038

	BEFORE	AFTER			
			Liquid Limits	43	**Test Date** 5/29/2024
Moisture (%)	43.5	34.6	**Plastic Limits**	24	
Dry Density (pcf)	78.2	89.4			
Saturation (%)	100.1	103.4			
Void Ratio	1.19	0.92	**Specific Gravity**	2.75	ASSUMED

Sample Description	Gray Silty CLAY, soft, wet, CL			
Project Number	24098	**Depth (ft)**	30-32.5	**Remarks**
Sample Number	UT-2	**Boring Number**	B-1	
Project	The Forefront at Thompson's Point			
Client	Cathartes			
Location	Thompson's Point, Portland, Maine			

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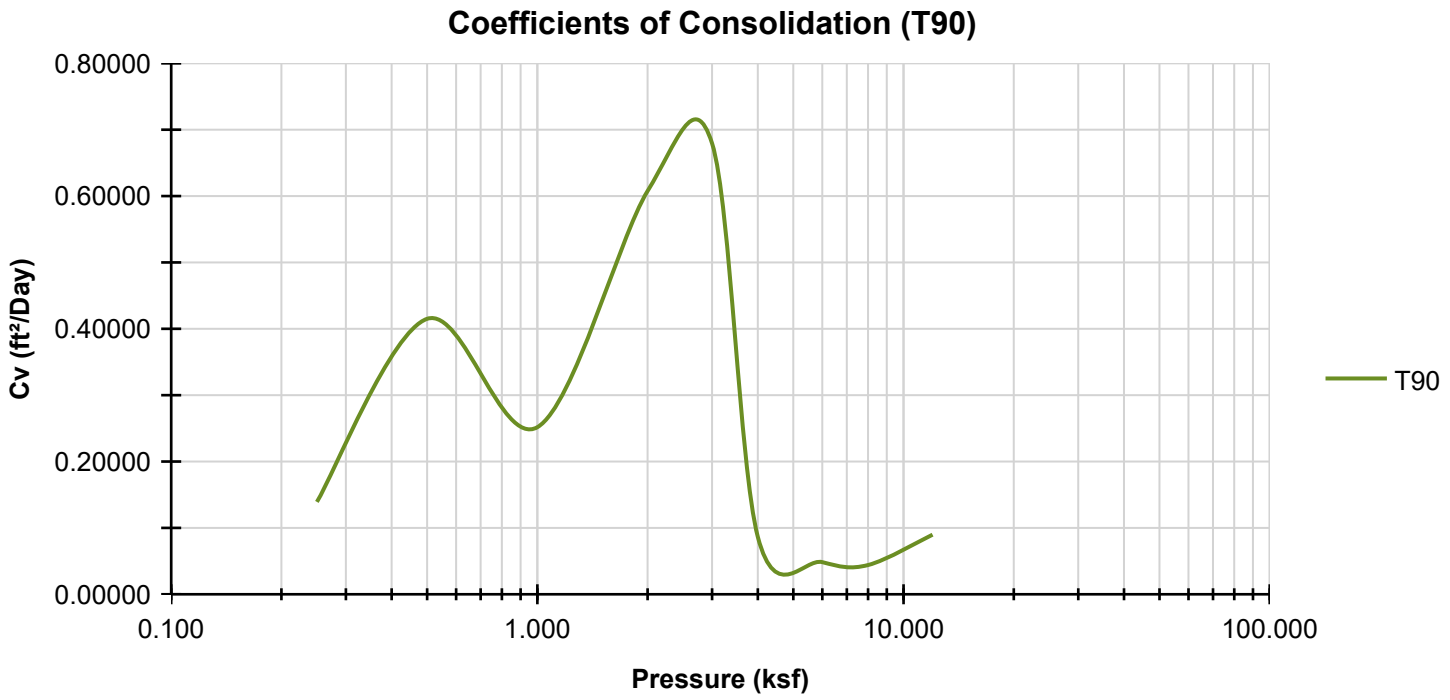
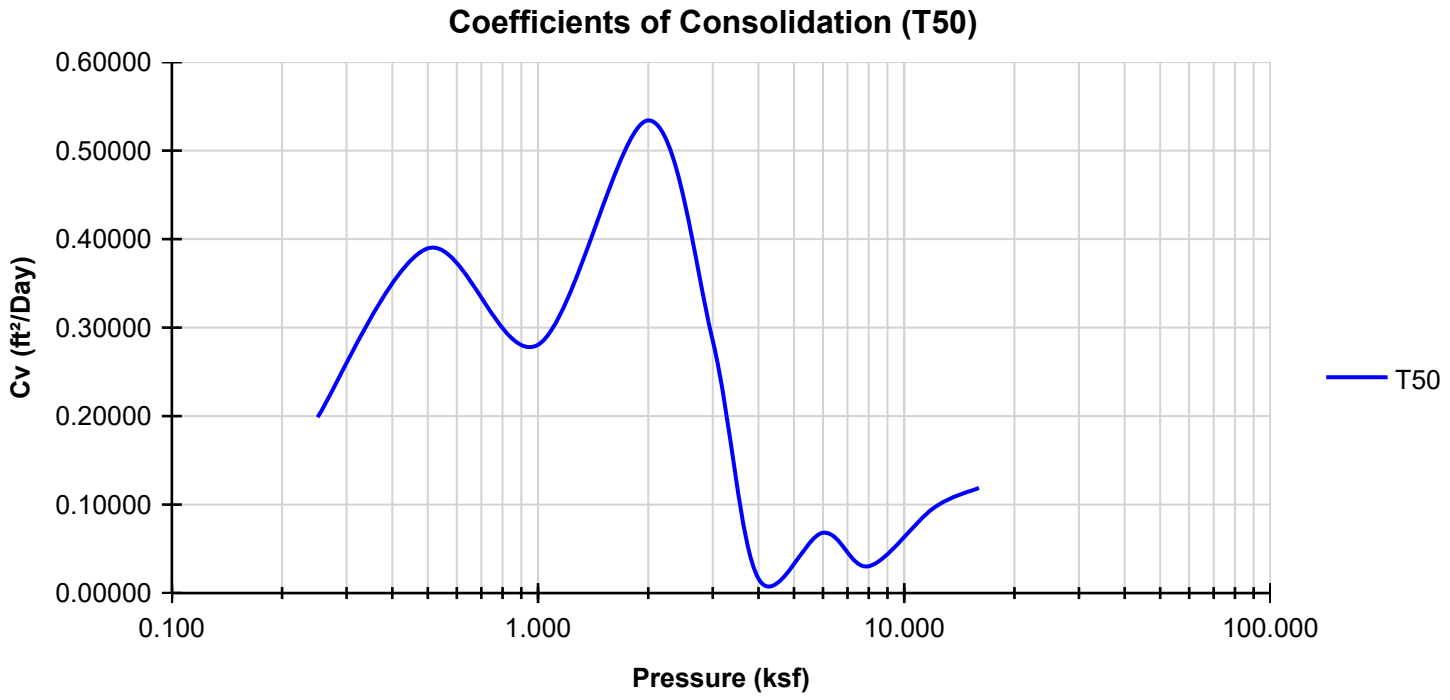
Coefficients of Consolidation

ASTM D2435





Project Name: The Forefront at Thompson's Point Project Number: 24098

Technician: Colleen Sullivan, E.I. Test Date: 5/29/2024 Checked By: _____ Date: _____

SUMMIT
GEOENGINEERING SERVICES

THIN WALLED TUBE SAMPLING - ASTM D1587

PROJECT NAME: The Forefront at Thompson's Point
PROJECT LOCATION: Thompson's Point, Portland, ME
COLLECTION DATE: 5/22/2024
TEST DATE: 5/23/2024

PROJECT #: 24098
CLIENT: Cathartes
SAMPLE #: UT-3
TECHNICIAN: Erika Stewart, P.E.

Test Boring Information

Boring Number: B-1
Drilling Method: Rotary Wash
Drilling Tooling: 4-inch Casing
Sampling Method: Tube Push

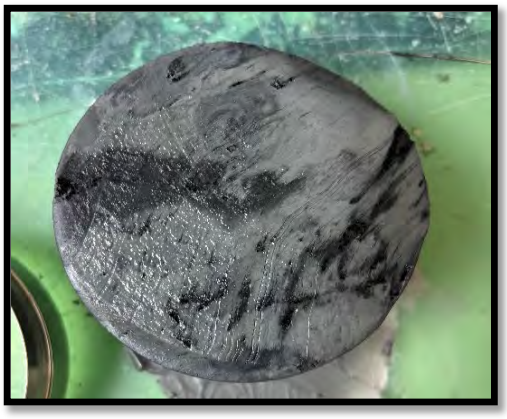
Sample Information

Tube Length: 30"
Recovery: 27"
Tube Diameter: 3"
Depth: 45' - 47.5'

Trial / Specimen Number	Moisture Content	Unit Weight	Torvane
1	43.8%	116 pcf	440 psf
2	41.1%	116 pcf	360 psf
3	40.9%	119 pcf	328 psf
Average	41.9%	117 pcf	380 psf

Visual Description (ASTM D2488):

Dark gray Silty CLAY, black Organic streaks, soft, wet, CL



Photograph of cross sectional sample view.



Photograph of longitudinal sample view.

REMARKS:

Reviewed By: CRS

SUMMIT
GEOENGINEERING SERVICES

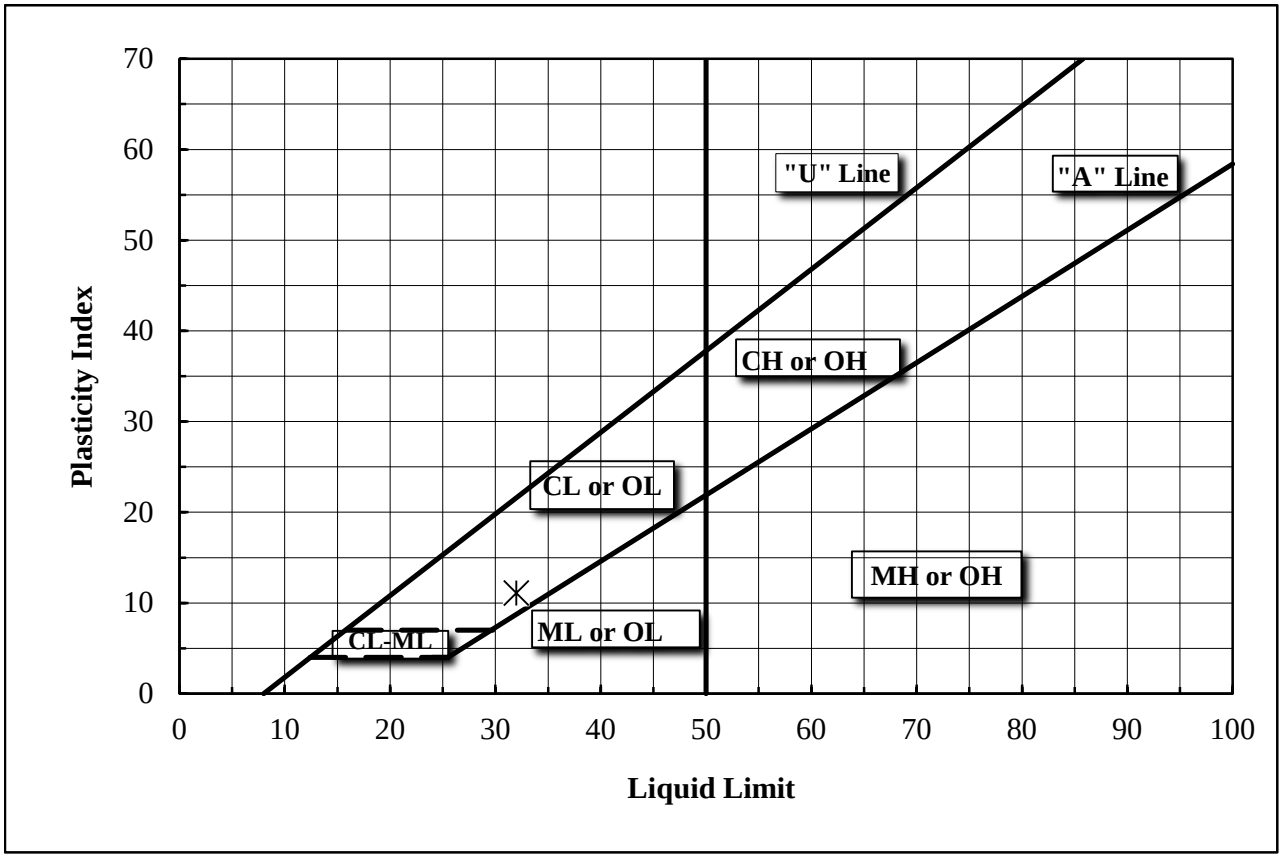
ATTERBERG LIMIT TEST - ASTM D4318

Method "A" (Multi-point)

PROJECT NAME:	The Forefront at Thompson's Point	PROJECT NUMBER:	24098
LOCATION:	Thompson's Point, Portland, Maine	SAMPLE NUMBER:	UT-3
CLIENT:	Cathartes	DEPTH:	45' - 47.5'
TEST DATE:	5/24/2024	TECHNICIAN:	Katie Luce

DATA

Source	Depth	LL	PL	PI	Classification
B-1	45' - 47.5'	32	21	11	Dark gray Silty CLAY, black Organic streaks, CL



Notes: Moisture Content = 38.4%

Reviewed By: CRS

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Office: 210 Maine Avenue, Farmingdale, ME 04344

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GEOENGINEERING SERVICES

UNCONFINED COMPRESSIVE STRENGTH OF COHESIVE SOILS - ASTM D2166

PROJECT NAME:	The Forefront at Thompson's Point	PROJECT #:	24098
PROJECT LOCATION:	Thompson's Point, Portland, ME	CLIENT:	Cathartes
COLLECTION DATE:	5/22/2024	TECHNICIAN:	Erika Stewart, P.E.
TEST DATE:	5/23/2024	CHECKED BY:	Colleen Sullivan, E.I.

Sample & Testing Information

Boring Number:	B-1	**Trimming Method:**	Tube	
Sample Number:	UT-3	**Liquid Limit (LL):**	32	
Sample Depth:	45' - 47.5'	**Plasticity Index (PI):**	11	
Sample Type:	Shelby Tube	**Rate of Strain:**	0.1	in/min
Sample State:	Intact	**H/D Ratio:**	2.2	

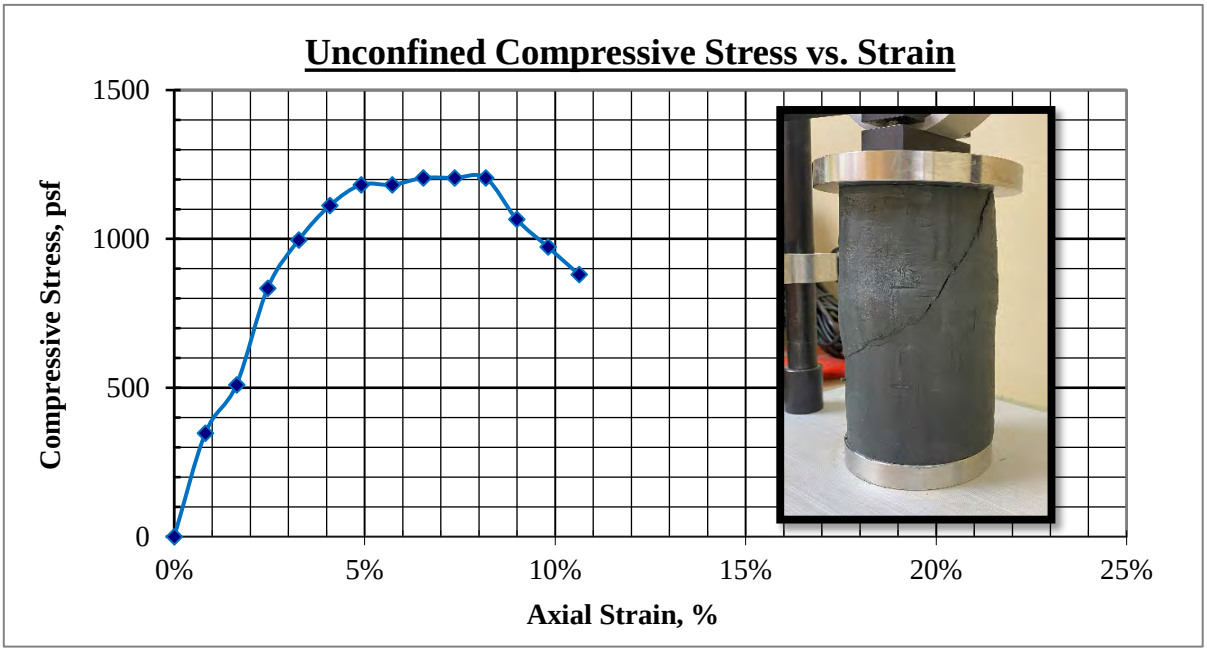
Sample Height:	6.12	in	**Sample Mass:**	1187.8	g
Sample Diameter:	2.81	in	**Moisture Content:**	37.3%	
Sample Volume:	37.98	in^3	**Moist Unit Weight:**	119	pcf
Cross Sectional Area:	6.21	in^2	**Dry Density:**	87	pcf

Sample Description & Classification

Dark gray Silty CLAY, black Organic streaks, soft, wet, CL

Test Results

Unconfined Compressive Strength:	1200	psf	**Strain at Failure:**	7%
Shear Strength:	600	psf	**Failure Type:**	Bulge/Shear

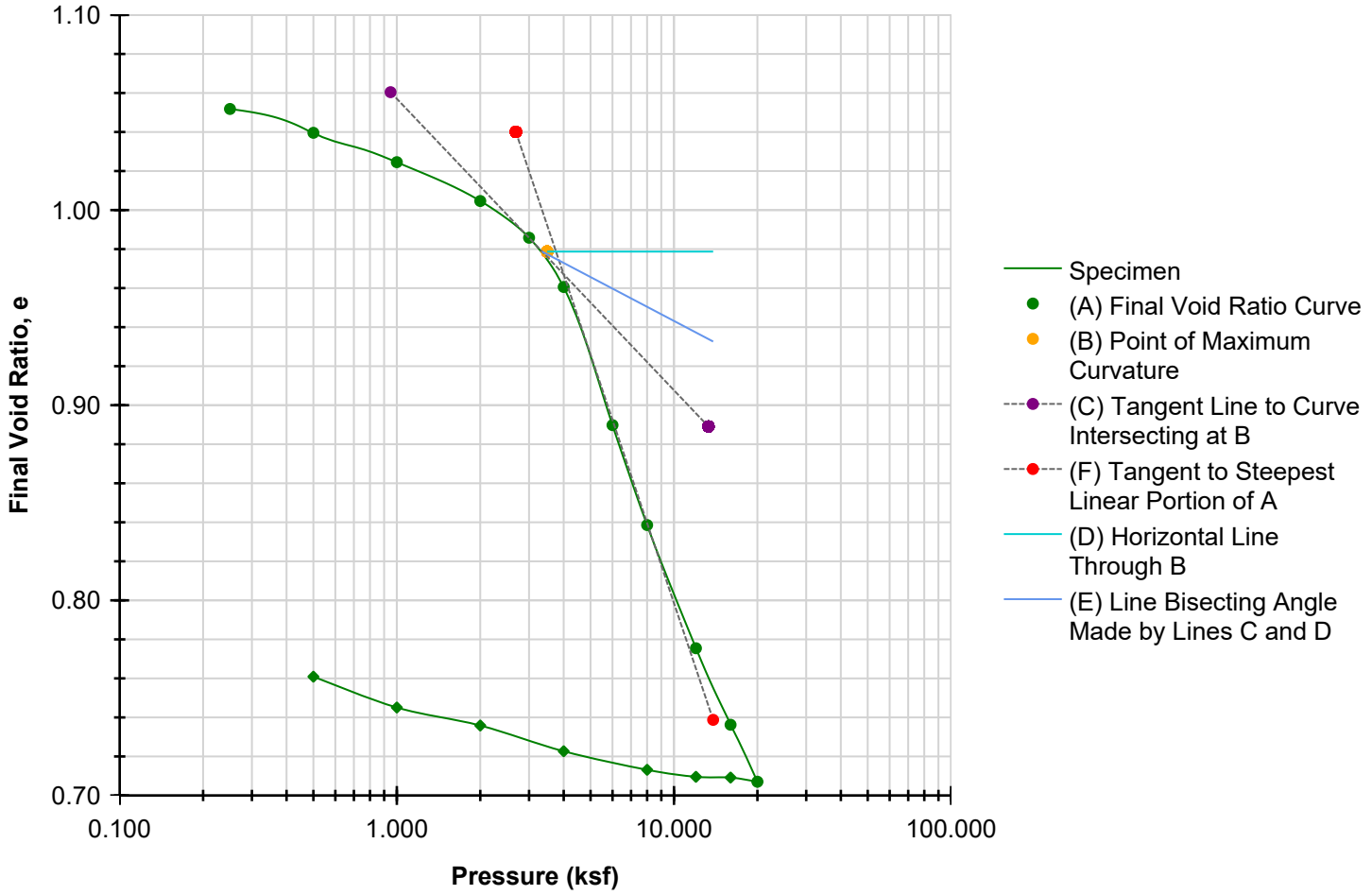


REMARKS:

Summit Geoengineering Services
210 Maine Avenue
Farmingdale, Maine 04344
207-446-3360

Final Voids [Log]

ASTM D2435



Preconsolidation Stress (ksf)	3.846	**Cc**	0.410	**Cr**	0.038

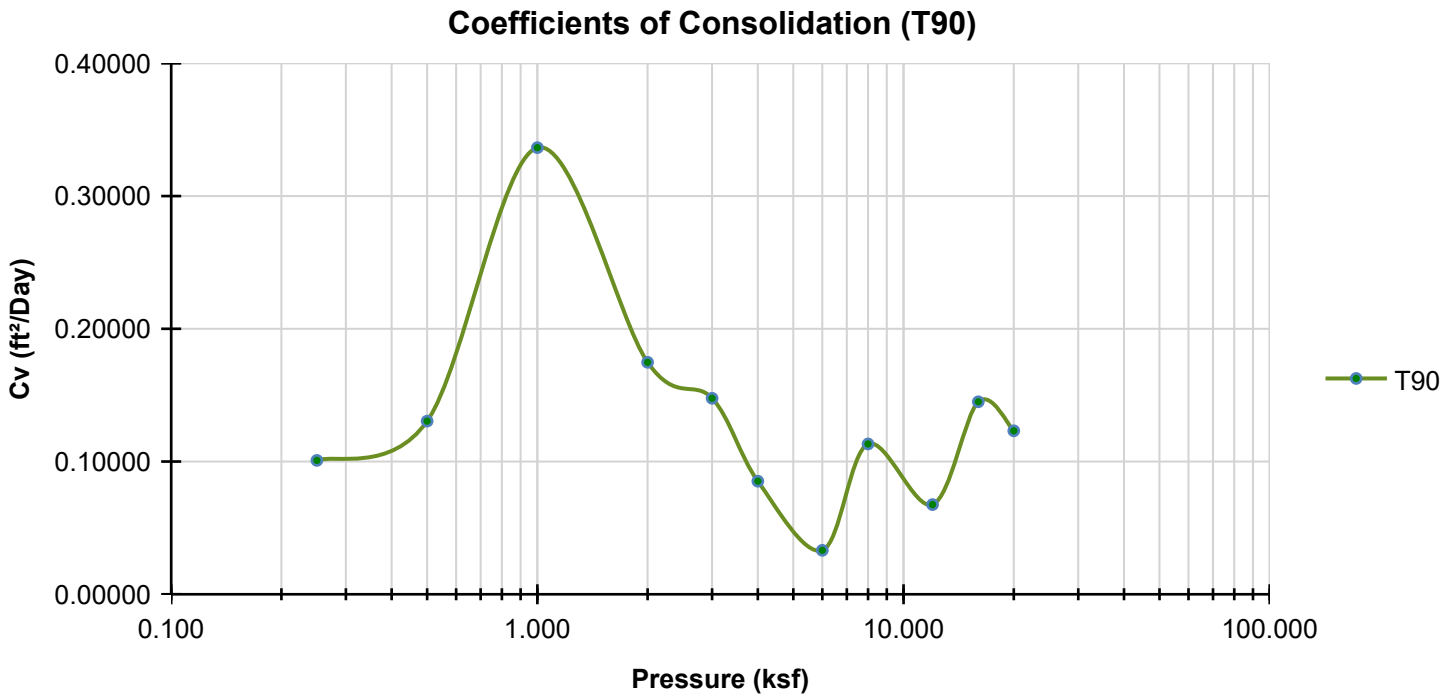
	BEFORE	AFTER			
			Liquid Limits	32	**Test Date** 5/23/2024
Moisture (%)	37.4	30.0	**Plastic Limits**	21	
Dry Density (pcf)	83.3	94.5			
Saturation (%)	97.0	101.1			
Void Ratio	1.06	0.82	**Specific Gravity**	2.75	ASSUMED

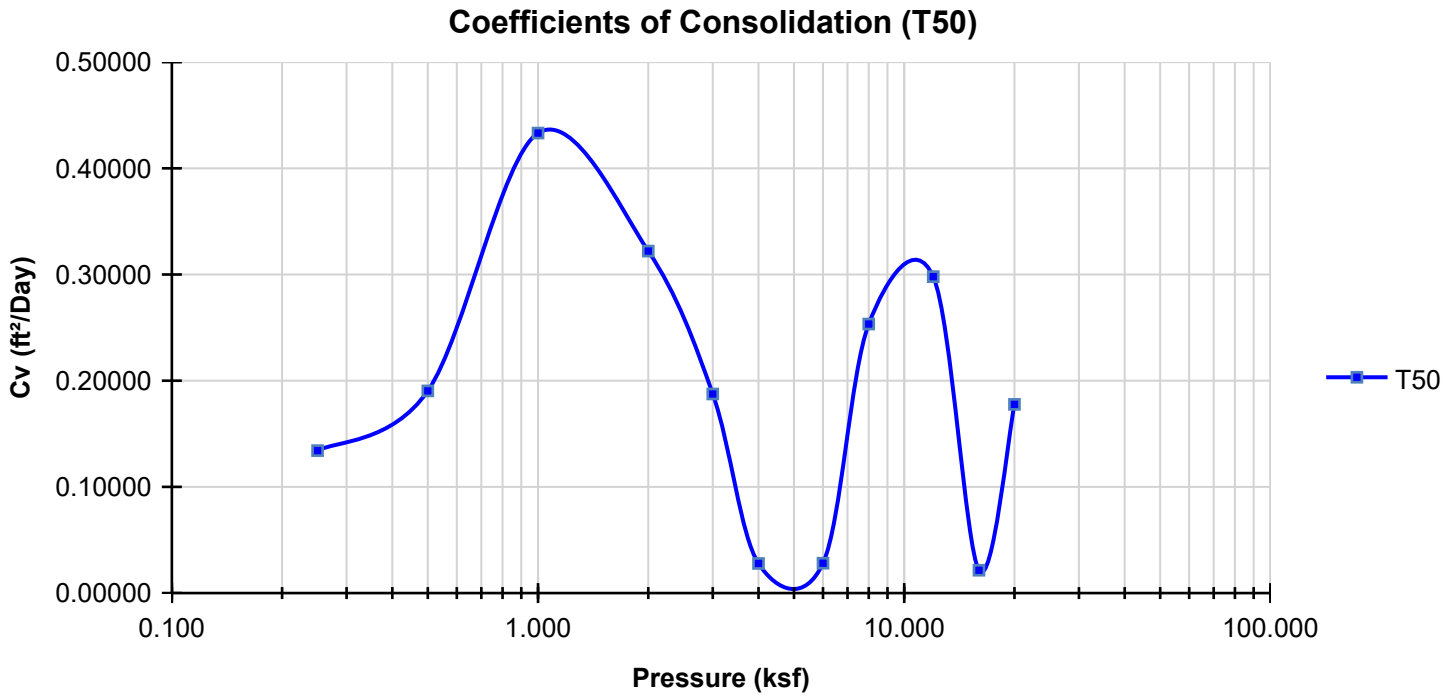
Sample Description	Dark gray Silty CLAY, black Organic streaks, soft, wet, CL			
Project Number	24098	**Depth (ft)**	45-47.5	**Remarks**
Sample Number	UT-3	**Boring Number**	B-1	
Project	The Forefront at Thompson's Point			
Client	Cathartes			
Location	Thompson's Point, Portland, Maine			

Summit Geoengineering Services
210 Maine Avenue
Farmingdale, Maine 04344
207-446-3360

Coefficients of Consolidation

ASTM D2435





Project Name: The Forefront at Thompson's Point Project Number: 24098

Technician: Erika Stewart, P.E. Test Date: 5/23/2024 Checked By: _____ Date: _____

SUMMIT
GEOENGINEERING SERVICES

THIN WALLED TUBE SAMPLING - ASTM D1587

PROJECT NAME:	The Forefront at Thompson's Point	PROJECT #:	24098
PROJECT LOCATION:	Thompson's Point, Portland, Maine	CLIENT:	Cathartes
COLLECTION DATE:	5/22/2024	SAMPLE #:	UT-1
TEST DATE:	6/6/2024	TECHNICIAN:	Jason Barnes, E.I.

Test Boring Information

Boring Number: B-2
Drilling Method: Rotary Wash
Drilling Tooling: 4-inch Casing
Sampling Method: Tube Push

Sample Information

Tube Length: 30"
Recovery: 28"
Tube Diameter: 3"
Depth: 25' - 27.5'

Trial / Specimen Number	Moisture Content	Unit Weight	Torvane
1	41.7%	109 pcf	200 psf
2	39.4%	109 pcf	200 psf
3	38.7%	111 pcf	160 psf
Average	39.9%	110 pcf *	180 psf *

* Sample appears softened & slightly disturbed which may result in low readings

Visual Description (ASTM D2488):

Gray Silty CLAY, very soft-soft, wet, CL



Photograph of cross sectional sample view.



Photograph of longitudinal sample view.

REMARKS:

Reviewed By: CRS

SUMMIT
GEOENGINEERING SERVICES

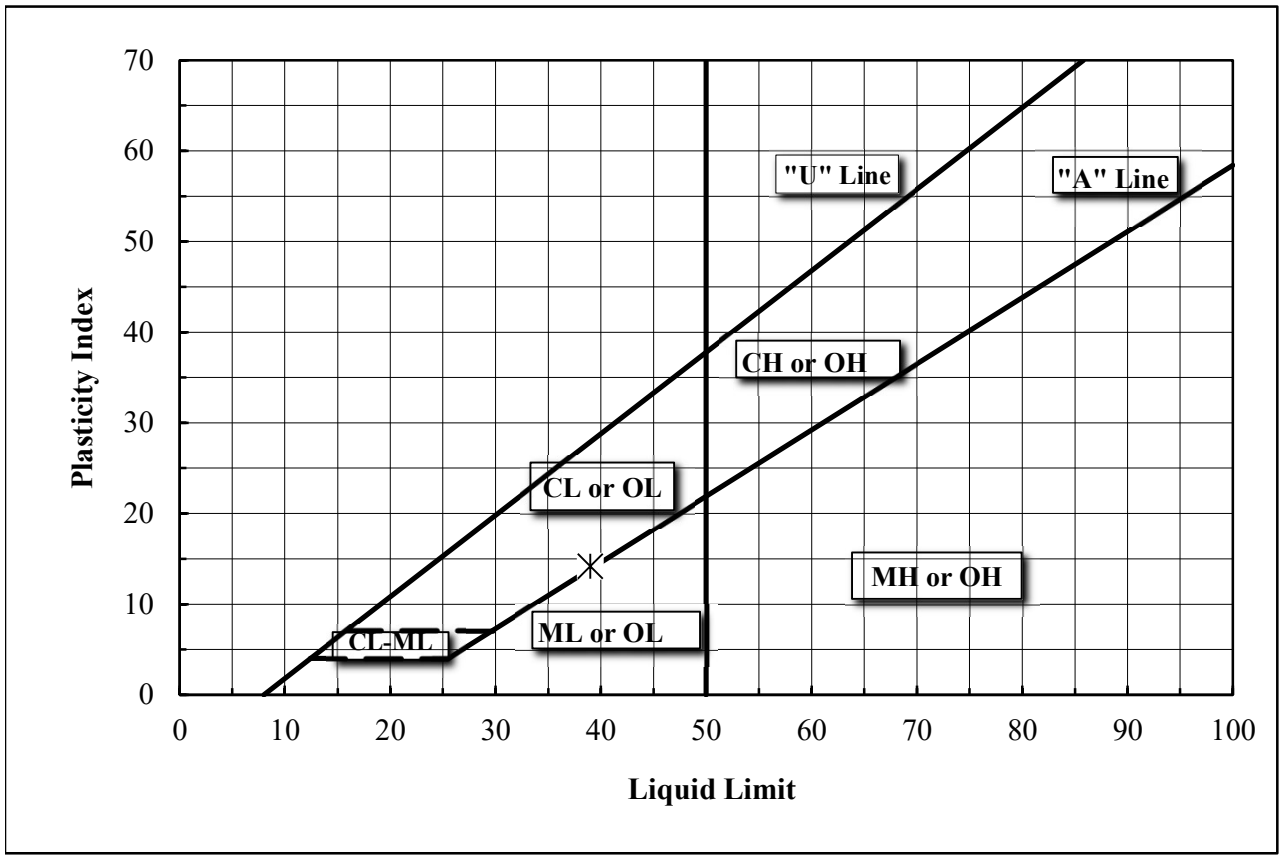
ATTERBERG LIMIT TEST - ASTM D4318

Method "A" (Multi-point)

PROJECT NAME:	The Forefront at Thompson's Point	PROJECT NUMBER:	24098
LOCATION:	Thompson's Point, Portland, Maine	SAMPLE NUMBER:	UT-1
CLIENT:	Cathartes	DEPTH:	25' - 27.5'
TEST DATE:	6/6/2024	TECHNICIAN:	Jason Barnes, E.I.

DATA

Source	Depth	LL	PL	PI	Classification
B-2	25' - 27.5'	39	25	14	Gray Silty CLAY, CL



Notes: Moisture Content = 39.1%

Reviewed By: CRS

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Office: 210 Maine Avenue, Farmingdale, ME 04344

SUMMIT
GEOENGINEERING SERVICES

THIN WALLED TUBE SAMPLING - ASTM D1587

PROJECT NAME:	The Forefront at Thompson's Point	PROJECT #:	24098
PROJECT LOCATION:	Thompson's Point, Portland, ME	CLIENT:	Cathartes
COLLECTION DATE:	5/23/2024	SAMPLE #:	UT-1
TEST DATE:	6/10/2024	TECHNICIAN:	Colleen Sullivan, E.I.

Test Boring Information

Boring Number: B-3
Drilling Method: Rotary Wash
Drilling Tooling: 4-inch Casing
Sampling Method: Tube Push

Sample Information

Tube Length: 30"
Recovery: 27"
Tube Diameter: 3"
Depth: 30' - 32.5'

Trial / Specimen Number	Moisture Content	Unit Weight	Torvane
1	45.6%	115 pcf	300 psf
2	44.4%	116 pcf	328 psf
3	42.1%	115 pcf	560 psf
Average	44.0%	115 pcf	400 psf

Visual Description (ASTM D2488):

Gray Silty CLAY, occasional Silt-Sand seams, soft, wet, CL



Photograph of cross sectional sample view.



Photograph of longitudinal sample view.

REMARKS:

Reviewed By: ELS

SUMMIT
GEOENGINEERING SERVICES

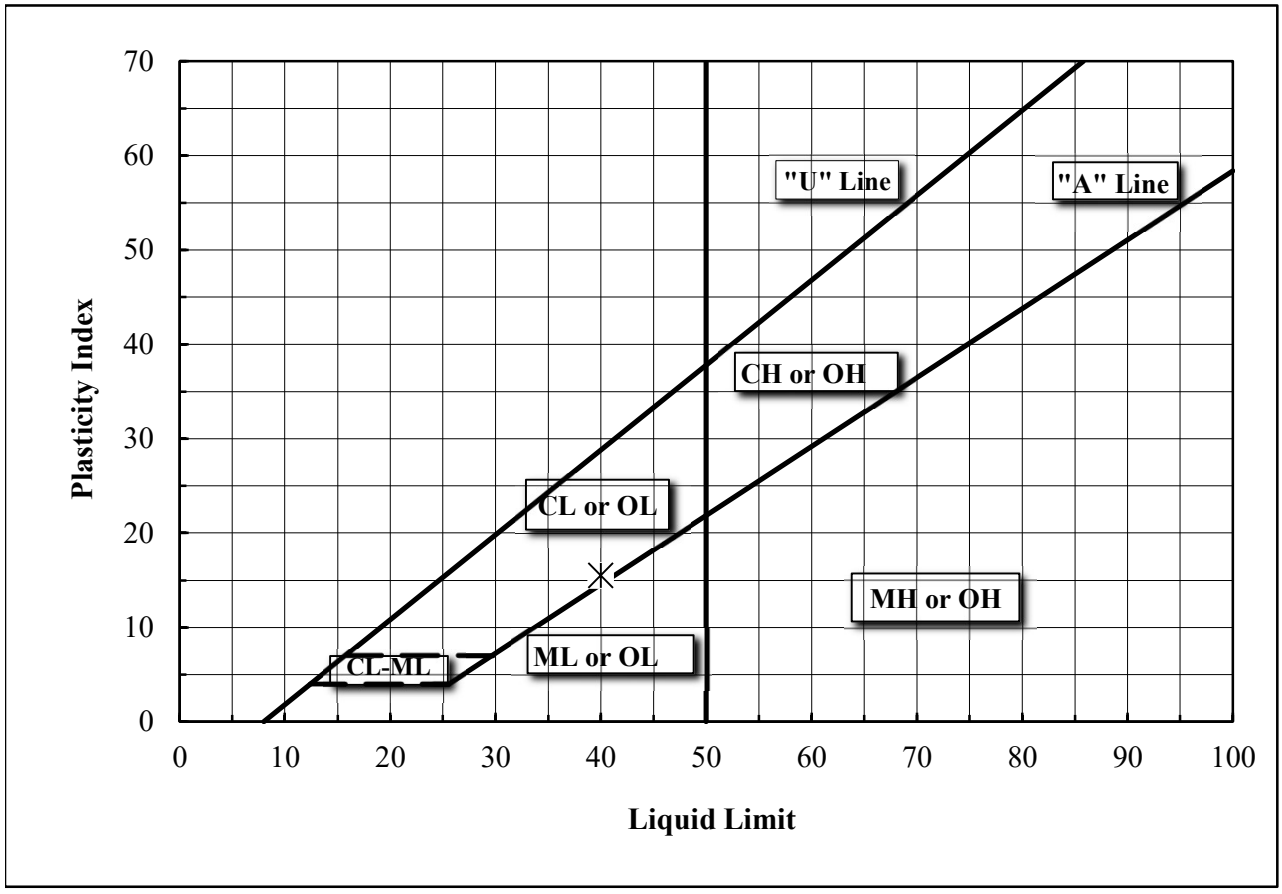
ATTERBERG LIMIT TEST - ASTM D4318

Method "A" (Multi-point)

PROJECT NAME:	The Forefront at Thompson's Point	PROJECT NUMBER:	24098
LOCATION:	Thompson's Point, Portland, Maine	SAMPLE NUMBER:	UT-1
CLIENT:	Cathartes	DEPTH:	30' - 32.5'
TEST DATE:	6/11/2024	TECHNICIAN:	Colleen Sullivan, E.I.

DATA

Source	Depth	LL	PL	PI	Classification
B-3	30' - 32.5'	40	25	15	Gray Silty CLAY, occasional Silt-Sand
					seams, CL



Notes: Moisture Content = 44.3%

Reviewed By: ELS

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Office: 210 Maine Avenue, Farmingdale, ME 04344

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GEOENGINEERING SERVICES

UNCONFINED COMPRESSIVE STRENGTH OF COHESIVE SOILS - ASTM D2166

PROJECT NAME:	The Forefront at Thompson's Point	PROJECT #:	24098
PROJECT LOCATION:	Thompson's Point, Portland, ME	CLIENT:	Cathartes
COLLECTION DATE:	5/23/2024	TECHNICIAN:	Colleen Sullivan, E.I.
TEST DATE:	6/10/2024	CHECKED BY:	Erika Stewart, P.E.

Sample & Testing Information

Boring Number:	B-3	**Trimming Method:**	Tube	
Sample Number:	UT-1	**Liquid Limit (LL):**	40	
Sample Depth:	30' - 32.5'	**Plasticity Index (PI):**	15	
Sample Type:	Shelby Tube	**Rate of Strain:**	0.1	in/min
Sample State:	Intact	**H/D Ratio:**	2.1	

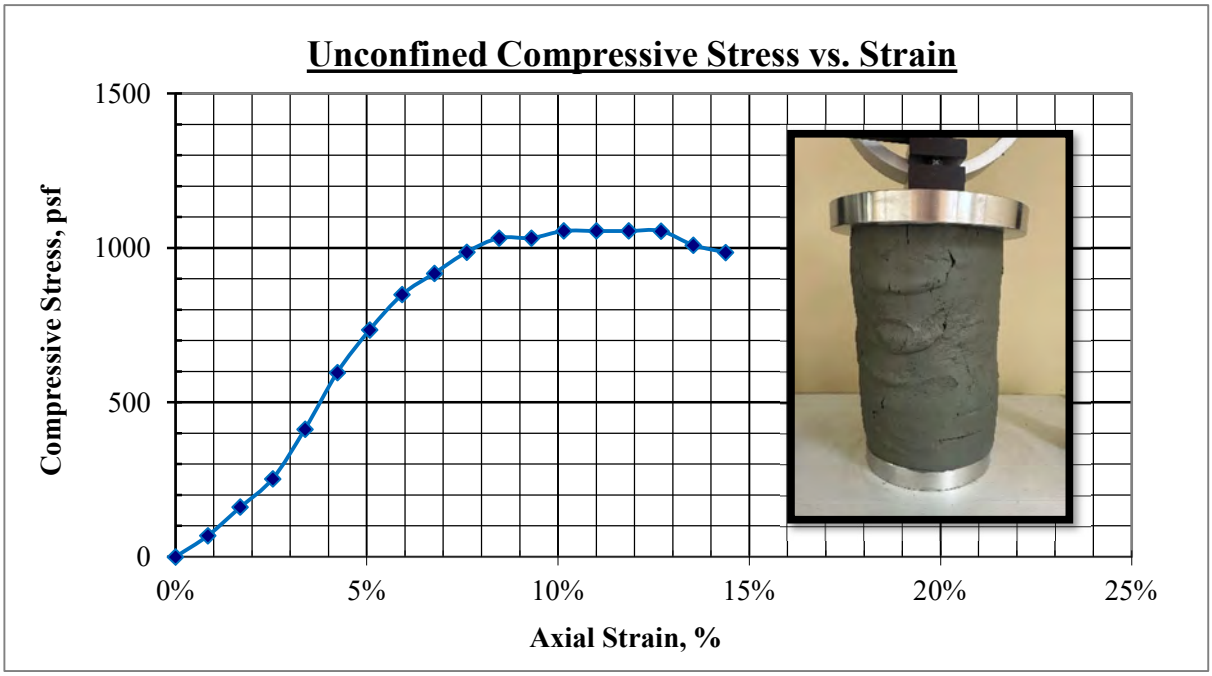
Sample Height:	5.91	in	**Sample Mass:**	1127.2 g
Sample Diameter:	2.83	in	**Moisture Content:**	42.5%
Sample Volume:	37.06	in^3	**Moist Unit Weight:**	116 pcf
Cross Sectional Area:	6.27	in^2	**Dry Density:**	81 pcf

Sample Description & Classification

Gray Silty CLAY, occasional Silt-Sand seams, soft, wet, CL

Test Results

Unconfined Compressive Strength:	1060	psf	**Strain at Failure:**	10%
Shear Strength:	530	psf	**Failure Type:**	Bulge/Shear

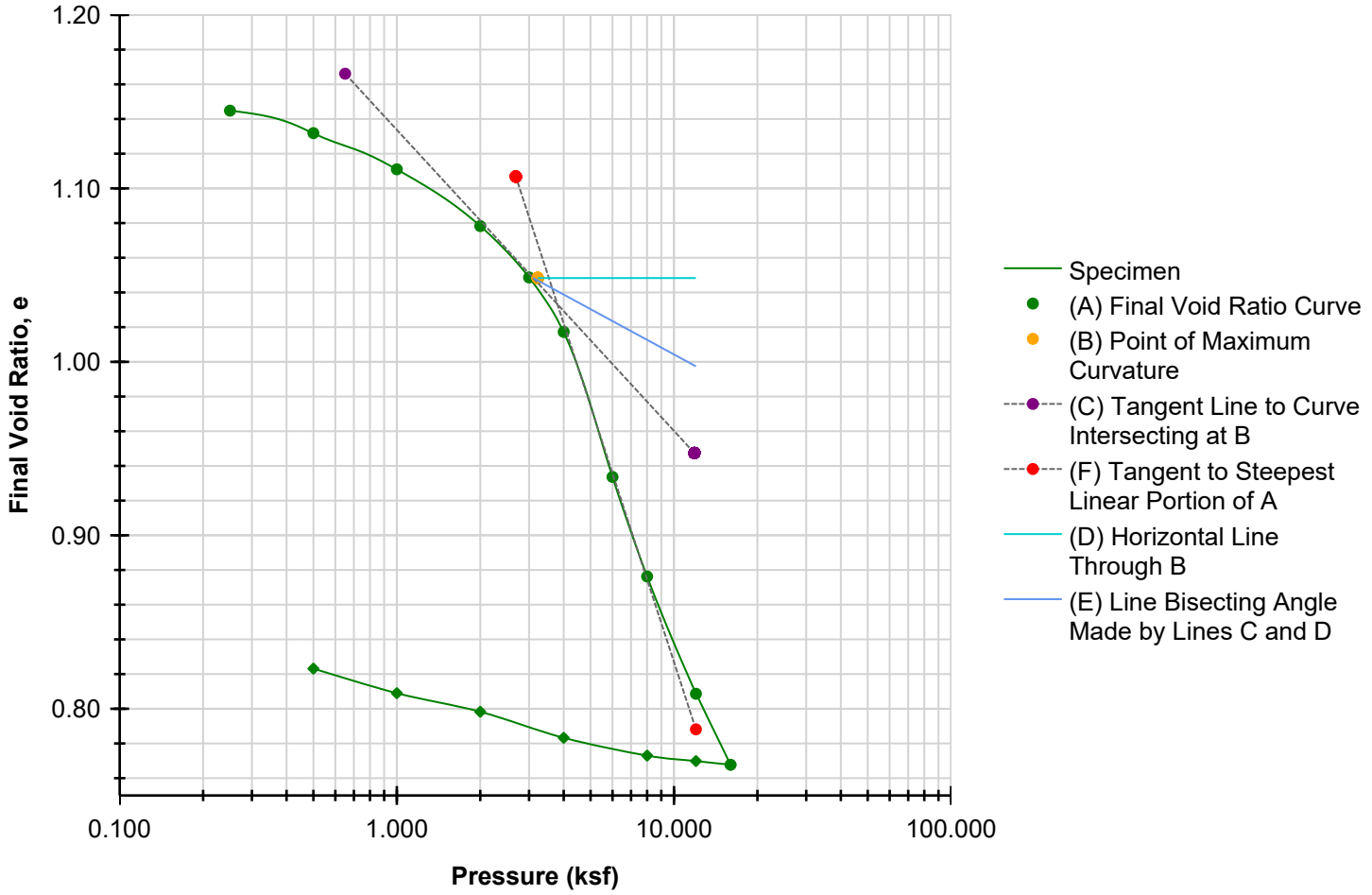


REMARKS:

Summit Geoengineering Services
210 Maine Avenue
Farmingdale, Maine 04344
207-446-3360

Final Voids [Log]

ASTM D2435



Preconsolidation Stress (ksf)	3.637	**Cc**	0.510	**Cr**	0.040

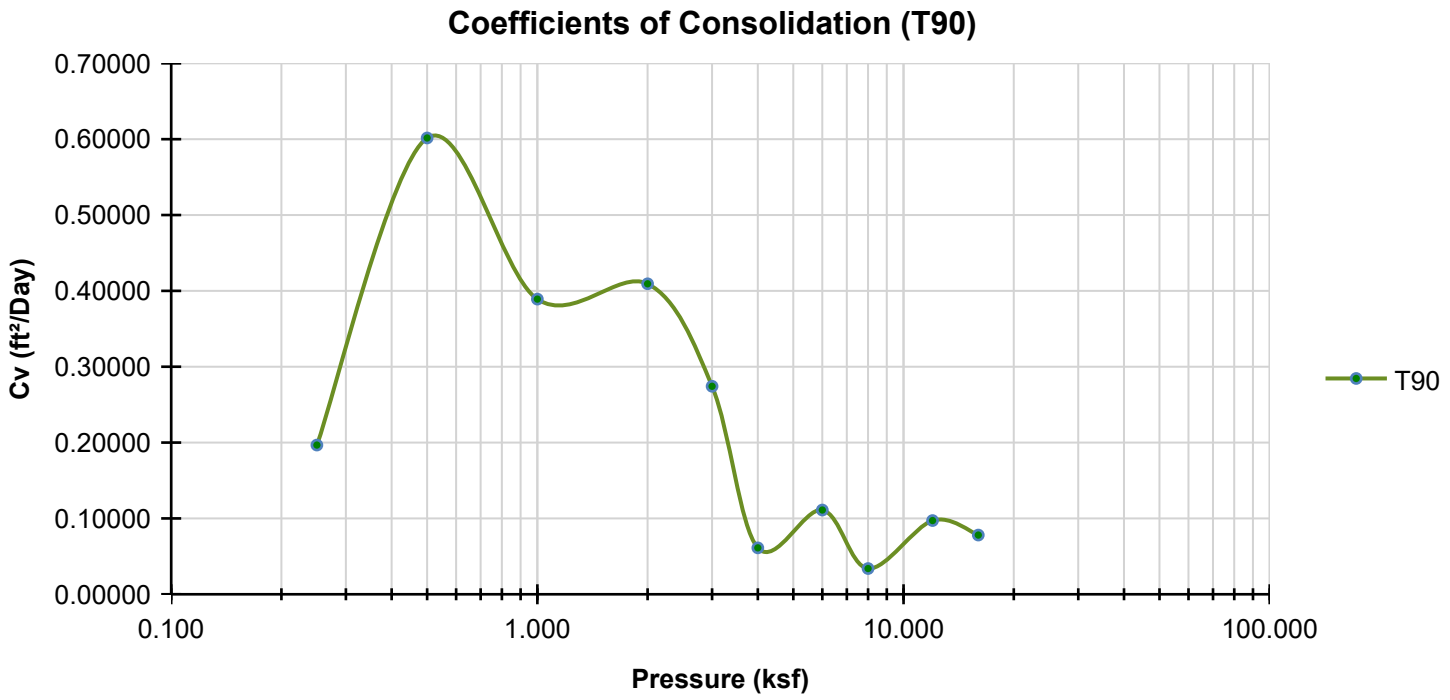
	BEFORE	AFTER			
			Liquid Limits	40	**Test Date** 6/10/2024
Moisture (%)	40.7	32.8	**Plastic Limits**	25	
Dry Density (pcf)	79.7	91.3			
Saturation (%)	96.9	102.5			
Void Ratio	1.15	0.88	**Specific Gravity**	2.75	ASSUMED

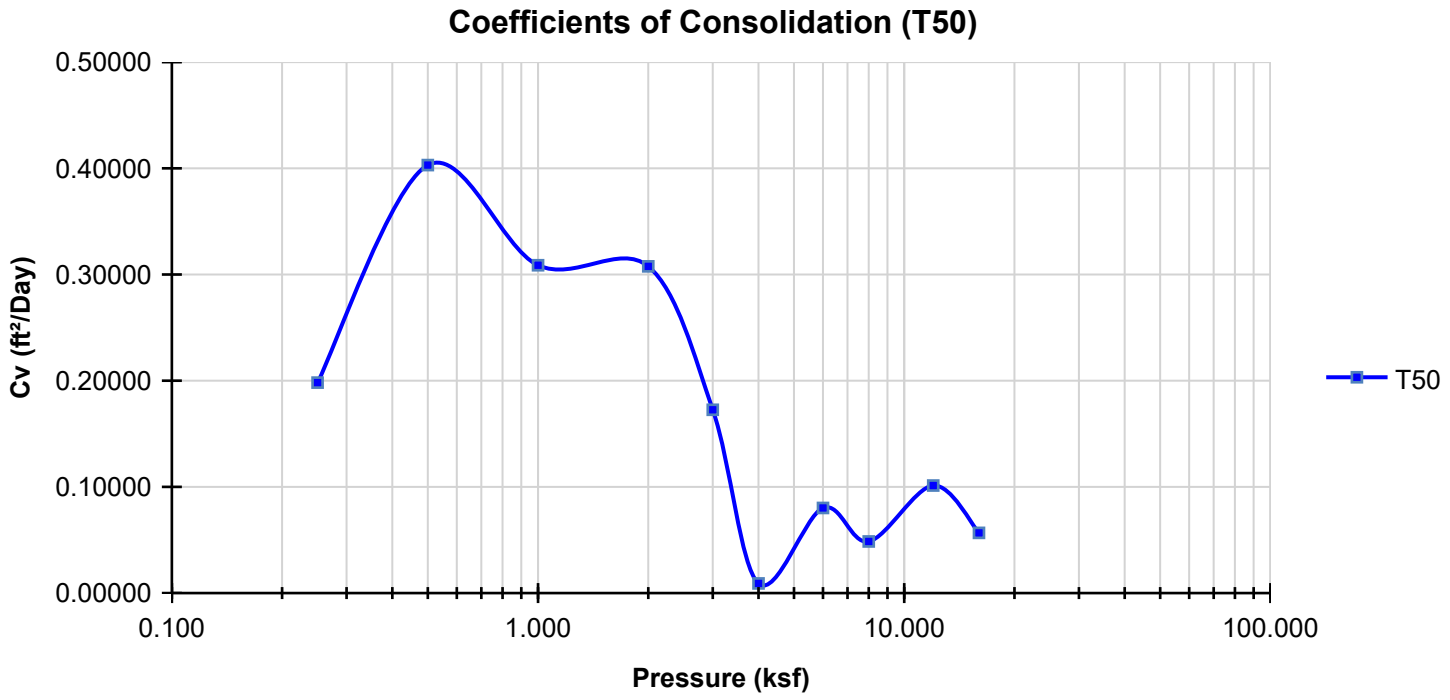
Sample Description	Gray Silty CLAY, occasional Silt-Sand seams, soft, wet, CL			
Project Number	24098	**Depth (ft)**	30-32.5	**Remarks**
Sample Number	UT-1	**Boring Number**	B-3	
Project	The Forefront at Thompson's Point			
Client	Cathartes			
Location	Thompson's Point, Portland, Maine			

Summit Geoengineering Services
210 Maine Avenue
Farmingdale, Maine 04344
207-446-3360

Coefficients of Consolidation

ASTM D2435





Project Name: The Forefront at Thompson's Point Project Number: 24098

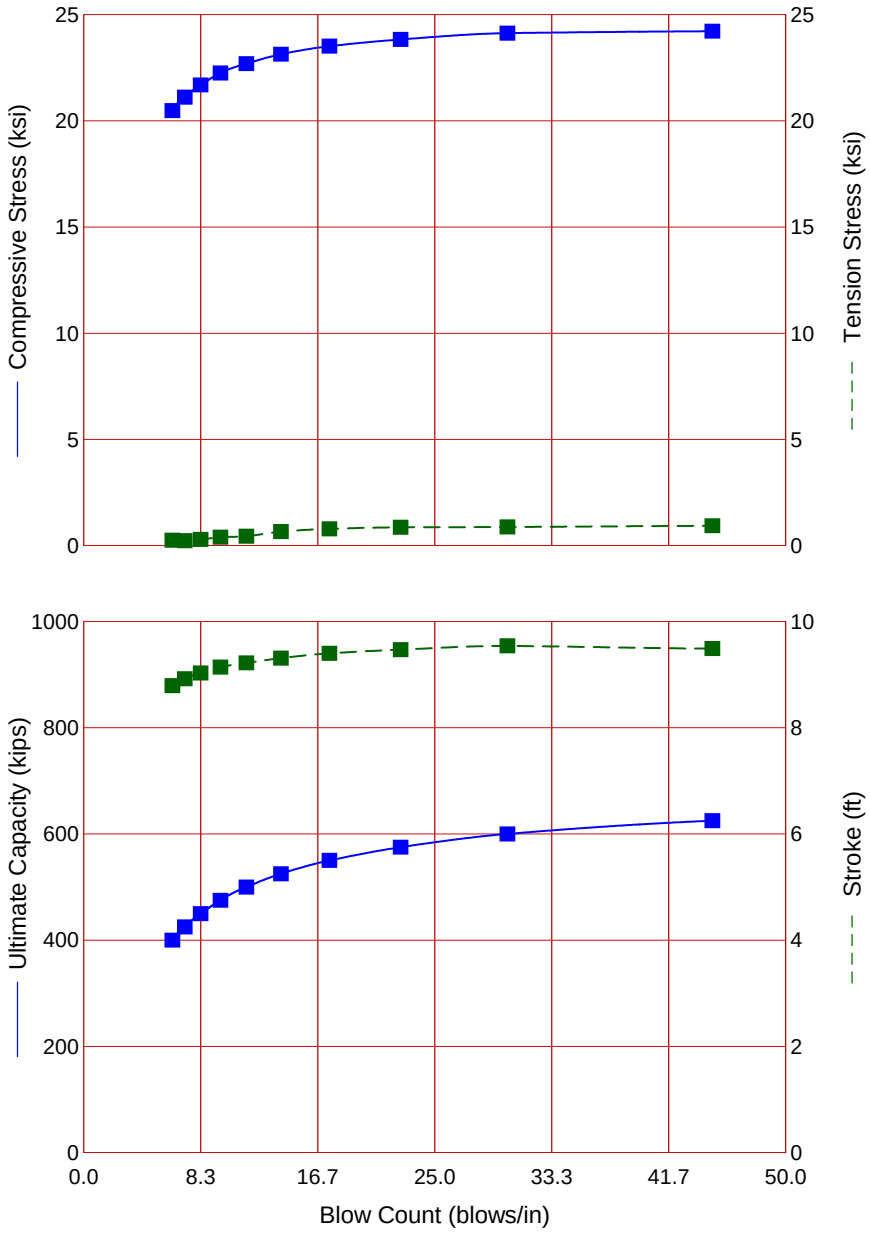
Technician: Colleen Sullivan, E.I. Test Date: 6/10/2024 Checked By: _____ Date: _____

APPENDIX D

GRLWEAP OUTPUT

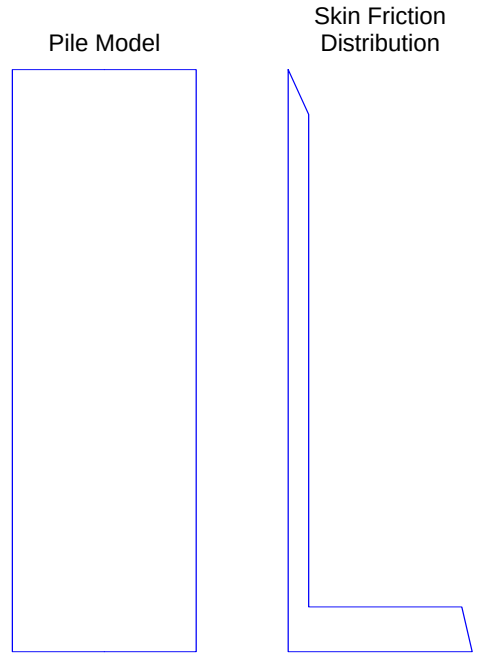
PILE DRIVER DATA SHEET

PILE INSTALLATION LOG



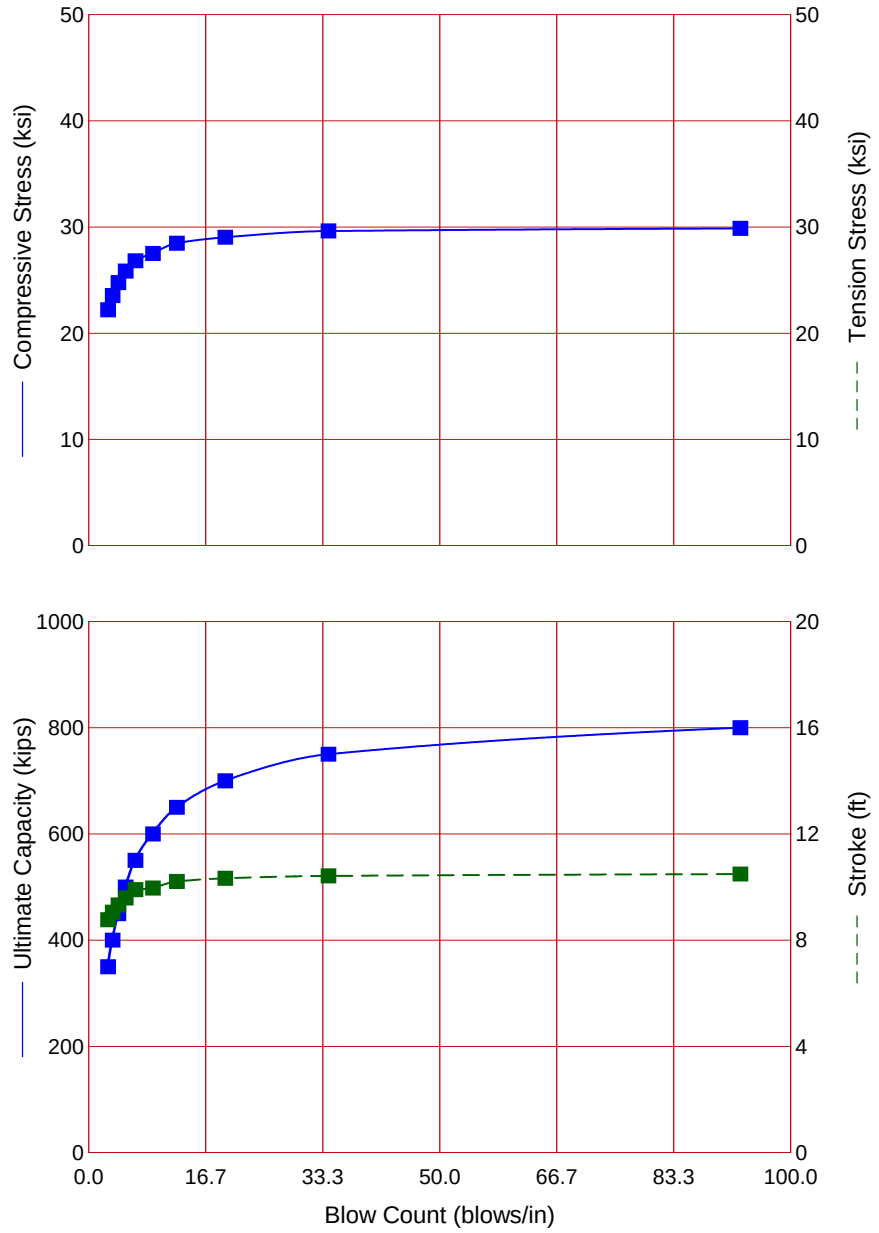
APE D 19-42

Efficiency	0.800	
Helmet	0.95	kips
Hammer Cushion	1767	kips/in
Skin Quake	0.100	in
Toe Quake	0.040	in
Skin Damping	0.137	sec/ft
Toe Damping	0.150	sec/ft
Pile Length	65.00	ft
Pile Penetration	65.00	ft
Pile Top Area	26.10	in2



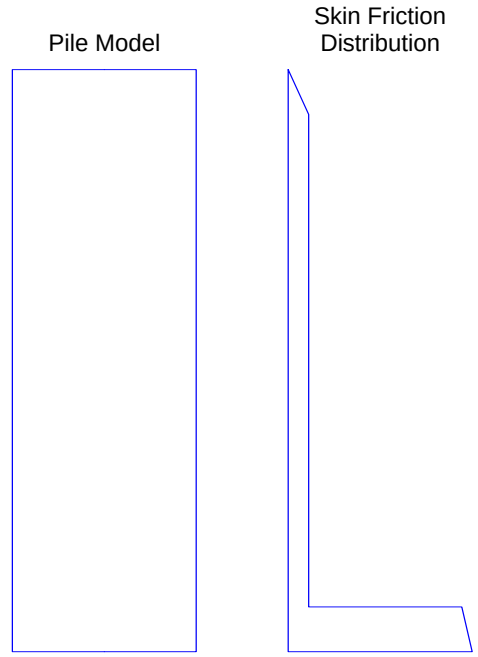
Res. Shaft = 27 %
(Proportional)

Ultimate Capacity kips	Maximum Compression Stress ksi	Maximum Tension Stress ksi	Blow Count blows/in	Stroke ft	Energy kips-ft
400.0	20.48	0.26	6.3	8.79	15.47
425.0	21.11	0.23	7.2	8.92	15.71
450.0	21.68	0.29	8.3	9.03	15.91
475.0	22.25	0.40	9.7	9.14	16.10
500.0	22.69	0.45	11.6	9.22	16.25
525.0	23.13	0.66	14.0	9.31	16.40
550.0	23.51	0.79	17.5	9.40	16.54
575.0	23.83	0.87	22.6	9.47	16.65
600.0	24.13	0.88	30.2	9.54	16.76
625.0	24.22	0.94	44.8	9.49	16.60



APE D 30-32

Efficiency	0.800	
Helmet	0.95	kips
Hammer Cushion	1767	kips/in
Skin Quake	0.100	in
Toe Quake	0.040	in
Skin Damping	0.137	sec/ft
Toe Damping	0.150	sec/ft
Pile Length	65.00	ft
Pile Penetration	65.00	ft
Pile Top Area	26.10	in2



Res. Shaft = 27 %
(Proportional)

Ultimate Capacity kips	Maximum Compression Stress ksi	Maximum Tension Stress ksi	Blow Count blows/in	Stroke ft	Energy kips-ft
350.0	22.20	0.00	2.8	8.77	23.77
400.0	23.54	0.00	3.4	9.05	24.36
450.0	24.77	0.00	4.2	9.32	25.06
500.0	25.84	0.00	5.3	9.59	25.78
550.0	26.82	0.00	6.7	9.90	26.52
600.0	27.50	0.00	9.2	9.96	26.47
650.0	28.47	0.00	12.6	10.21	27.08
700.0	29.03	0.00	19.5	10.33	27.17
750.0	29.62	0.00	34.2	10.42	27.44
800.0	29.87	0.00	92.8	10.49	27.38

APE Model D19-42 Single Acting Diesel Impact Hammer

D19-42 driving H-beam.



MODEL D19-42 (1.9 metric ton ram)

SPECIFICATIONS

Stroke at maximum rated energy	135 in (343 cm)
Maximum rated energy (Setting 4)	47,132 ft-lbs (63.63 kNm)
Setting 3	39,119 ft-lbs (52.81 kNm)
Setting 2	31,107 ft-lbs (41.99 kNm)
Minimum rated energy (Setting 1)	23,566 ft-lbs (31.81 kNm)
(Variable throttle allows for infinite fuel settings)	
Maximum obtainable stroke	150 in (381 cm)
Maximum obtainable energy	52,362 ft-lbs (71 kNm)
Speed (blows per minute)	34-52

WEIGHTS (Approximate)

Ram	4,189 lbs (1900 kg)
Anvil	749 lbs (340 kg)
Anvil cross sectional area	124.42 in² (802.71 cm²)
Hammer weight (includes trip device)	8,400 lbs (3,810 kg)
Typical operating (weight with DB26 and H-beam insert)	11,052 lbs (5,013 kg)

CAPACITIES

Fuel tank (runs on diesel or bio-diesel)	8.3 gal (31.41 liters)
Oil tank	2.3 gal (8.7 liters)

CONSUMPTION

Diesel or Bio-diesel fuel	1.3 gal/hr (6.6 liters/hr)
Lubrication	0.13 gal/hr (.49 liters/hr)
Grease	8 to 10 pumps every 20 minutes of operation time.

Optional Variable Throttle.



STRIKER PLATE FOR DB 26

Weight	628 lbs (284 kg)
Diameter	22.5 in (57.15 cm)
Area	398 in² (2567.74 cm²)
Thickness	6 in (15.24 cm)

STRIKER PLATE FOR DB 20

Weight	440 lbs (199 kg)
Diameter	17.75 in (45.08 cm)
Area	247 in² (1593.55 cm²)
Thickness	6 in (15.24 cm)

CUSHION MATERIAL

Type	Monocast MC 904
Diameter-DB26	22.5 in (57.15 cm)
Diameter-DB20	17.75 in (45.08 cm)
Thickness	2 in (5.08 cm)
Elastic-modulus	285 ksi (1,965 mpa)
Coeff. of restitution	0.8

Drive Base Assembly.



DRIVE CAP

DB 26:	1,076 lbs (488 kg)
DB 20:	750 lbs (340 kg)

INSERT WEIGHT

H-Beam insert for 12” (305 mm) and 14” (355 mm):	948 lbs (430 kg)
Large pipe insert for sizes 12” to 24” diameter:	1,830 lbs (830 kg)

MINIMUM BOX LEAD SIZE/OPERATING LENGTH

Minimum box leader size	8 in x 21 in (20.32 cm x 53.34 cm)
Operating length w/ base and insert	348 in (883.92 cm)

Corporate Offices
7032 South 196th
Kent, Washington 98032 USA
(800) 248-8498 & (253) 872-0141
(253) 872-8710 Fax

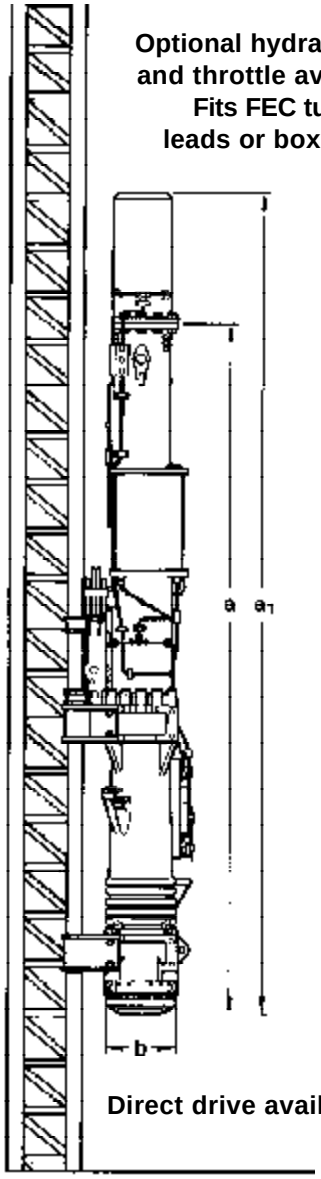
Visit our WEB site:
www.apevibro.com
e-mail: ape@apevibro.com

Note: All specifications are subject to change without notice 08/20/2012

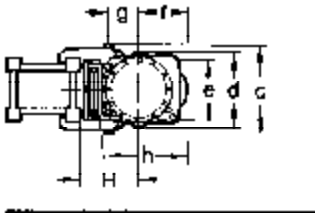
APE/SEMW Model D30-32 Single Acting Impact Hammer

German technology and ISO 9001 quality

Optional hydraulic trip and throttle available. Fits FEC tube leads or box type.



Direct drive available



MODEL D30-32 (3.0 metric ton ram)

(APE offers diesel hammers with ram weights up to 22,000 lbs.)

SPECIFICATIONS

Maximum rated energy	69,898 ft-lbs
Minimum rated energy	35,383 ft-lbs
Stroke at rated energy	10 feet 6 inches
Maximum obtainable stroke	12 feet 5 inches
Speed (blows per minute)	36-52

WEIGHTS

Ram	6,615 lbs
Avil	1,360 lbs
Hammer weight (includes trip device)	12,155 lbs
Typical operating (weight with drive cap)	14,600 lbs

STRIKER PLATE

Weight (D^2 X 3.14/4 X 6 X .283=	675 lbs
Diameter	22.5 inches
Thickness (the 6 in above equation is thickness of plate)	6 inches

CUSHION MATERIAL

Type	Monocast MC 901
Diameter	22.5 inches
Thickness	2 inches
Elastic-Modulus	285 kips per square inch
Coeff. of Restitution	.8

DRIVE CAP (HELMET)

Weight (fits 8 by 26" leads)	1,166 lbs
Note: if using 32 inch leads the drive cap will weigh:	1,550 lbs

DRIVE CAP INSERT WEIGHT

Square box inserts size 10" through 20 inch:	1,400 lbs
Pipe inserts for pipe size 12" to 24" diameter:	2,545 lbs

CAPACITIES

Fuel tank (runs on diesel or bio-diesel)	17.70 gal
Oil tank	2.4 gal

CONSUMPTION

Diesel or Bio-diesel fuel	2.64 gal/hr
Lubrication oil	0.26 gal/hr
Grease:	Grease twice per day or after 45 minutes of continous driving

DIMENSIONS OF HAMMER

a	Length overall	207.1 inches
a	Length over cylinder extension	246.4 inches
b	Impact block diameter	22.0 inches
c	Width over bolts	30.7 inches
d	Hammer width overall	28.3 inches
e	Width for guiding- face to face	21.2 inches
f	Hammer center to pump guard	15.9 inches
g	Hammer center to bolt center	9.2 inches
h	Hammer depth overall	28.1 inches
H	Minimum clearance for leads	19.7 inches

AMERICAN PILEDRIVING EQUIPMENT, INC. APE

SHANGHAI JINTAI CO., LTD.

Corporate Offices
7032 South 196th
Kent, Washington 98032 USA
(800) 248-8498 & (253) 872-0141
(253) 872-8710 Fax 10/99

Visit our WEB site:
www.apevibro.com
e-mail: ape@apevibro.com

We reserve the right to modify specifications without notice.

SUMMIT
GEOENGINEERING SERVICES

PILE DRIVING RECORD

PROJECT NAME: _____ PROJECT #: _____

JOB LOCATION: _____ DATE: _____

WEATHER/TEMP: _____ CONTRACTOR: _____

Pile Type: _____ Hammer: _____
Length _____ Energy/Blow: _____
Pile No.: _____ Oper. Rate: _____
Splice Elev. _____ Helmet Weight: _____
Pile Toe Elev.: _____
Pile Cutoff Elev.: _____

Depth (ft)	Blows/ ft	Remarks	Depth (ft)	Blows/ ft	Remarks	Depth (ft)	Blows/ ft	Remarks
1			26			51		
2			27			52		
3			28			53		
4			29			54		
5			30			55		
6			31			56		
7			32			57		
8			33			58		
9			34			59		
10			35			60		
11			36			61		
12			37			62		
13			38			63		
14			39			64		
15			40			65		
16			41			66		
17			42			67		
18			43			68		
19			44			69		
20			45			70		
21			46			71		
22			47			72		
23			48			73		
24			49			74		
25			50			75		

Observations: _____

_____

_____

_____

Pile Inspection By: _____

Docusign Envelope ID: B3034BE4-1A27-43B9-9A54-93064BC1AC5E

Att P

Applicants Letter of Authorization

This letter is to authorize Bo Kennedy of Placemaker Partners, LLC, located at 18 Van Aken Way, Portland, ME 04102, Inc. to represent the interest of CPI Management, LLC (Applicant) in all site design and permitting matters for the proposed development project located at 125 Thompson Point, Portland, ME 04102. This authorization shall include any required signatures for local, state and federal permit applications.

Sincerely,

DocuSigned by: Rob Simmons F303420CFE6043A...	Rob Simmons	8/16/2024
Signature	Print Name	Date

ATTACHMENT O

Att Q

SUMMARY OF EXISTING AND/OR PROPOSED EASEMENTS OR COVENANTS

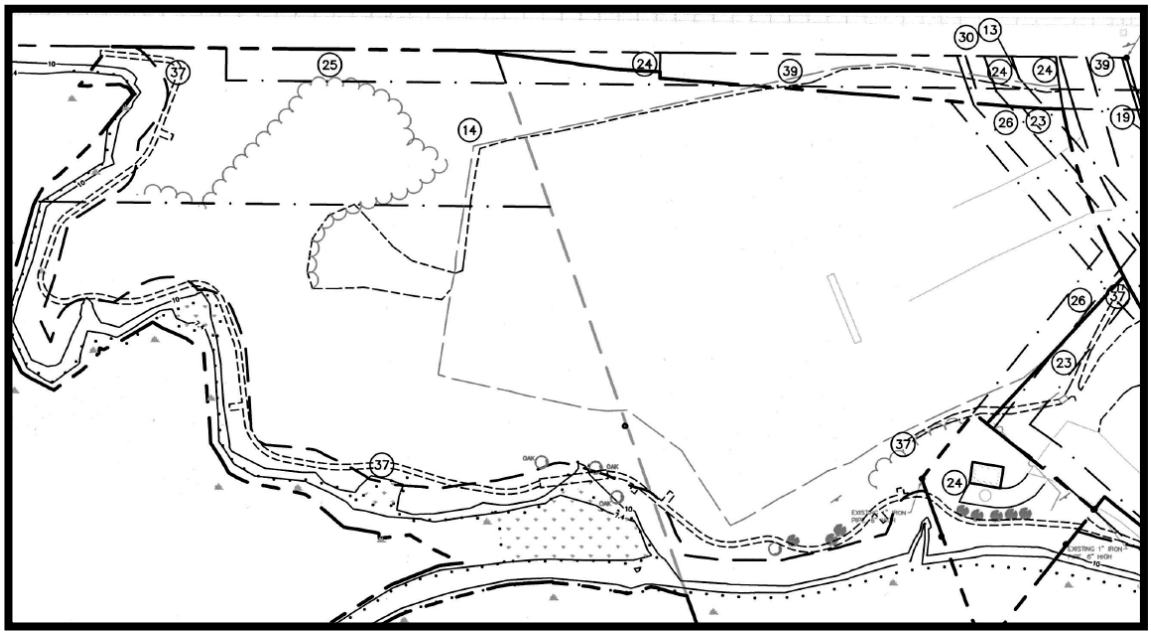
There are several existing easements around the perimeter of the property described as Lot 17 on the Forefront at Thompson's Point Subdivision Sectional 4 Plat, last revised 2024.08.23. Furthermore, a plan sheet titled C-2.0A Subdivision Plan – Easements and Encumbrances dated September 2014, last revised 2016.08.22 and recorded in CCRD Plan book 223, page 133 depicts and lists all existing easements. A summary list of existing easements is noted below.

Existing Easements Encumbering Lot 17:

- CMP Transmission Corridor
- CMP Aerial Power Lines
- CMP Underground Power Lines
- CMP Access Easement (Not Depicted)
- PWD Sanitary Sewer
- PWD CSO Sewer
- PWD Water Main
- PWD water service to pumpstation
- City of Portland Trail Easement
- City of Portland Sewer
- Forefront at Thompson's Point – Declaration of Easements, Covenants and Restrictions

Proposed Easements:

- -Drainage Easement (Thompson's Point ROW)



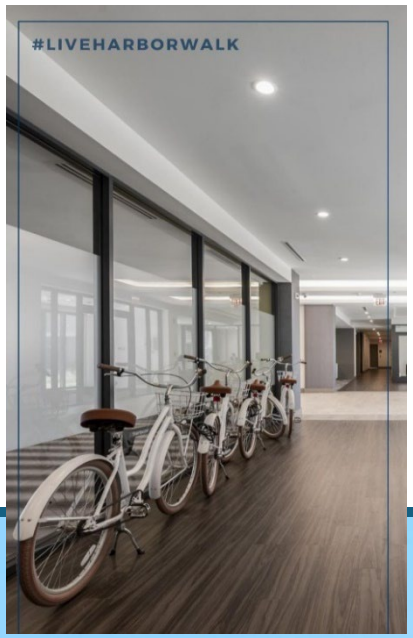
ATTACHMENT P
TDM – Multi-Family Residential

Forefront has prepared a TDM strategy report approved in 2011, updated in 2015, and March 30, 2018. The Thompson's Point TDM Coordinator has provided subsequent annual progress updates to the city in accordance with the City's reporting protocol for all sites participating in TDM strategies. Thompson's Point is proud to be a very proactive member of the TDM program and is always seeking to improve their TDM initiatives. Copies of the TDM materials are on file with the city and are available upon request. The TP TDM coordinator will continue to work with Cathartes to pursue the TDM measures noted below and more.

Cathartes asset management team has TDM programs in place for its residents to take advantage of and reduce their reliance on Single Occupant Vehicles. Some of those initiatives are summarized below:

- Shareable bikes and e-scooters that can be checked out for free by residents (photos attached).
- Promote indoor, secured bike storage. (upwards of 90 bikes)
- Provide work from home spaces so that residents working from home don't have to commute to a co-work or cafe location.
- Tenants can walk to restaurants & entertainment available to them on-campus.
- Tenants have close access to local and regional bus and train lines.
- Tenants have direct connection to local multi-use trails maintained by Portland Trails.
- Thompson's Point reserves space for Portland Bike Share program (Tandem Mobility) to have a Bike Station
- Thompson's Point was named Best Workplace for Commuters site by the Center for Urban Transportation Research in 2019









Specification Sheet

Type B1 & B2

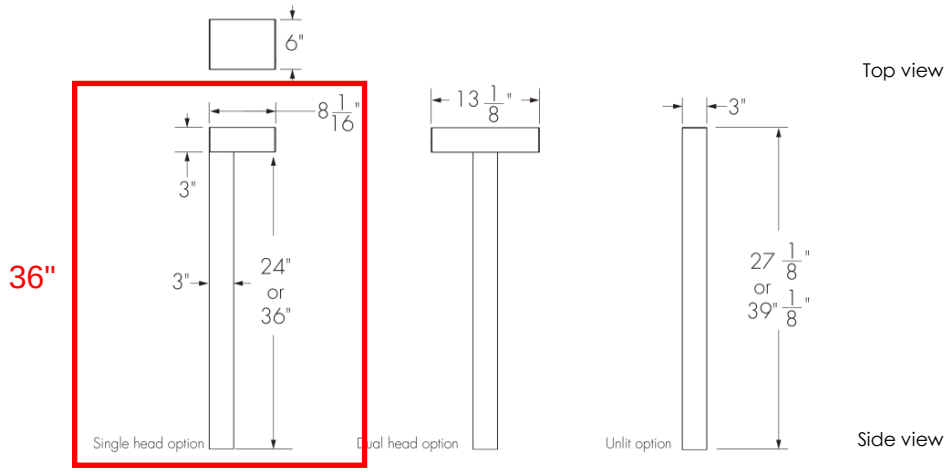
lumenblade
Bollard
Att. S BLDB

Catalog Number:
BLDG-TM1-VOLTAGE-CSL-N03-30K-CRI80-3-FINISH-CONTROL

Project Name _____ **Qty** _____

Type _____ **Catalog / Part Number** _____



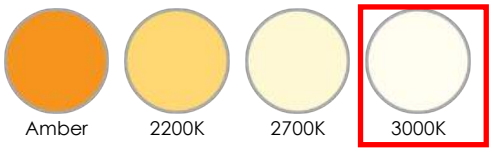


Distributions





Color and Color Temperature





Control

ON/OFF 0-10V LT

Ratings

IP66 (optical chamber) IK06 (lens) IK10* (frame)
*IK10 polycarbonate lens option available, consult factory.

Certifications

Description

The Lumenpulse Lumenblade Bollard is an outdoor LED luminaire that uses a rectilinear version of the Lumencentro light engine to create a continuous line of light. Options include: heights of either two feet or three feet, with a Single or Dual head. Its seen-but-not-seen, minimalist design is sustainable, blends with both contemporary and heritage architectures, provides a high level of security, and is sensitive to the natural environment with low outputs and with a BUG rating of 0.

Features

Mounting	Single head, Dual head, Unlit bollard
Height	2 ft, 3 ft
Color and Color Temperature	Amber, 2200K, 2700K, 3000K, 3500K, 4000K, 5700K
Distributions	Type II, Type III or Type IV (with or without backlight shield), Type V, Type V square
Optical Option (factory installed)	Louver
Vibration Rating	Meets ANSI C136.31-2018 vibration rating for Bridge & Overpass applications
Options	Vibration Rated for Bridge and Overpass, Corrosion-resistant coating for hostile environments, Surge protector, Photoelectric Cell Button Type, Ground Fault Duplex Receptacle, Duplex receptacle with USB A and USB C
Warranty	5-year limited warranty

Performance

Output (nominal lumens)	Minimum 200lm (single head)/ Maximum 2000lm (dual head)
Efficacy	Up to 86 lm/W (N10 lumen output, 4000K, CRI 70+, Type III)
Color Rendering	3 SDCM for CRI 70+, 2 SDCM for CRI 80+ and CRI 90+
Lumen Maintenance	TM-21 L70 > 145,000 hrs (reported, Ta 25 - 50 °C [77 - 122 °F])
Dark Sky	Dark sky compliant (2200K, 2700K, 3000K and Amber color

lumenpulse™
1220 Marie-Victorin Blvd., Longueuil, QC, J4G 2H9, CA **T** United States 617.307.5700 | Canada 1.877.937.3003 | 514.937.3003 **F** 514.937.6289
info@lumenpulse.com **www.lumenpulse.com** **www.lumenpulse.com/products/2323**

LMPG Inc. reserves the right to make changes to this product at any time without prior notice and such modification shall be effective immediately
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temperatures, BUG rating of U0)

Physical

Housing Material	Extruded aluminium 6000 alloy series
Lens Material	Optical tempered clear glass (Clearsite lens), Optical tempered frosted glass (Frostsite lens), Optical tempered half-frosted glass (Half-Frostsite lens)
Head Option	Bollard Head
Surface Finish	Super durable resistant exterior polyester powder coating meets AAMA 2604-98 requirements (5-years Florida exposure) a corrosion resistant finish (CRC) pre-finish is available to meet ASTM B-117 & ASTM D-1654 (salt spray resistance) and ASTM D-2247 requirements (humidity resistance).
Weight	16.53 lbs

Electrical and control

Voltage	120 volts, 208 volts, 240 volts, 277 volts, 347 volts, 480 volts
Control	On/Off control, 0-10V dimming, Lumentalk

Environmental

Storage Temperature	-40°C to 50°C [-40°F to 122°F] (device must reach start-up temperature value before operating)
Operating Temperature	-40°C [-40 °F] to 50°C [122 °F]
Start-up Temperature	-25°C [-13 °F] to 50°C [122 °F]
Impact Resistance Rating	IK06 (glass lens), IK10 (frame) *IK10 polycarbonate lens option available, consult factory
Ingress Protection Rating	IP66 (optical chamber), Wet location rated
Environment	Dry/damp/wet location

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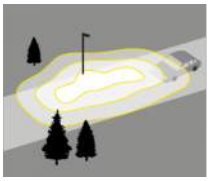
Photometric information

Type II, 4000K, CRI 70+, Clearsite lens



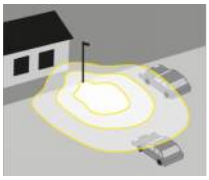
Nominal output [lm]	Typical delivered output [lm]	Efficiency (lm/W)	BUG Rating B U G	Typical maximum power 120/277V (W)
N03	209	70	0 0 0	3
N05	428	71	0 0 0	6
N07	672	75	0 0 0	9
N10	873	79	0 0 0	11

Type III, 4000K, CRI 70+, Clearsite lens



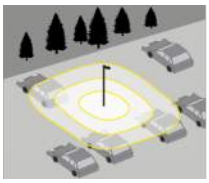
Nominal output [lm]	Typical delivered output [lm]	Efficiency (lm/W)	BUG Rating B U G	Typical maximum power 120/277V (W)
N03	228	76	0 0 0	3
N05	465	78	0 0 0	6
N07	731	81	0 0 0	9
N10	950	86	0 0 0	11

Type IV, 4000K, CRI 70+, Clearsite lens



Nominal output [lm]	Typical delivered output [lm]	Efficiency (lm/W)	BUG Rating B U G	Typical maximum power 120/277V (W)
N03	186	62	0 0 0	3
N05	380	63	0 0 0	6
N07	597	66	0 0 0	9
N10	775	70	0 0 0	11

Type V square, 4000K, CRI 70+, Clearsite lens



Nominal output [lm]	Typical delivered output [lm]	Efficiency (lm/W)	BUG Rating B U G	Typical maximum power 120/277V (W)
N03	191	64	0 0 0	3
N05	390	65	0 0 0	6
N07	613	68	0 0 0	9
N10	797	72	1 0 1	11

*Photometric performance is measured in compliance with IESNA LM-79-19. Due to rapid and continous advances in LED technology, photometric information is subject to change without notice.

LMPG Inc. reserves the right to make changes to this product at any time without prior notice and such modification shall be effective immediately
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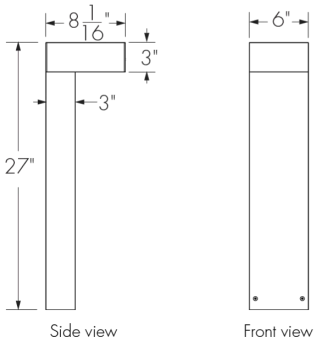
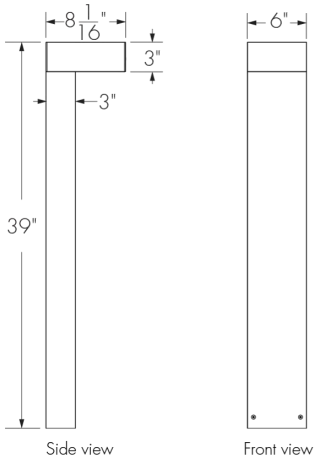
Configuration dimensions

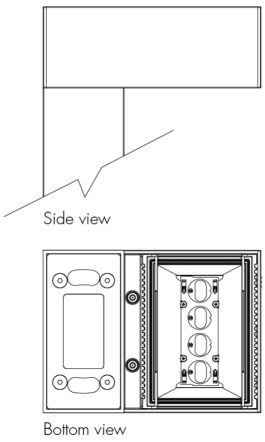
TM1 - Single head bollard, 2 ft



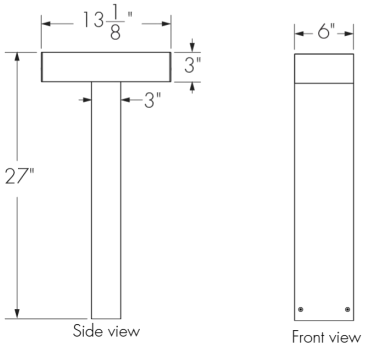
TM1 - Single head bollard, 3 ft



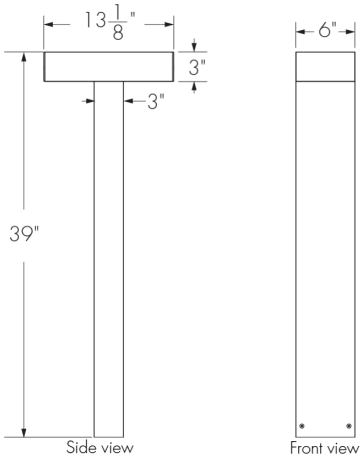
TM1 - Single luminaire head



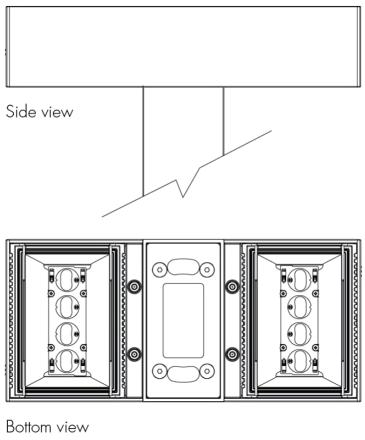
TM2 - Dual head bollard, 2 ft



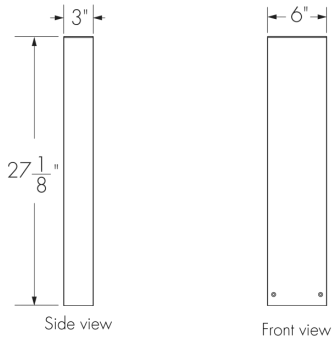
TM2 - Dual head bollard, 3 ft



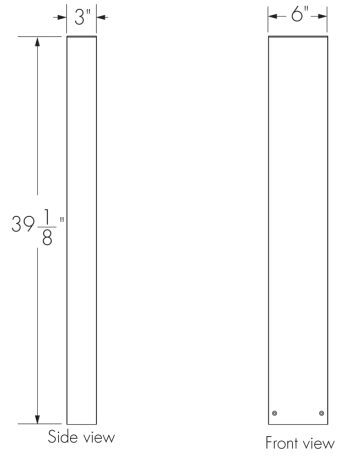
TM2 - Dual luminaire head



UNLIT - Unlit bollard 2 ft



UNLIT - Unlit bollard 3 ft



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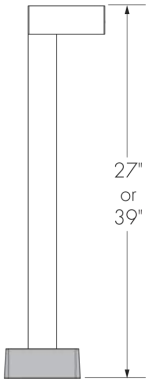
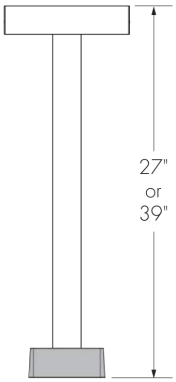
VRBO option dimensions

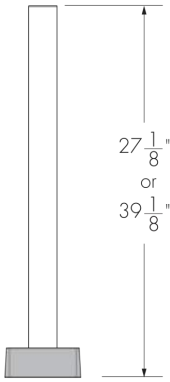
TM1 - Single head bollard



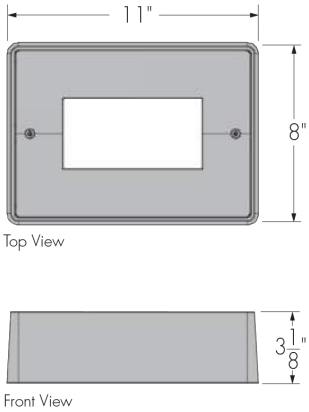
TM2 - Dual head bollard



UNLIT - Unlit bollard

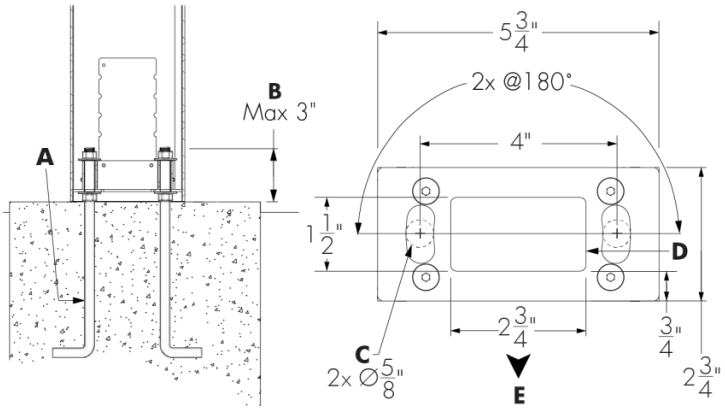


Base cover



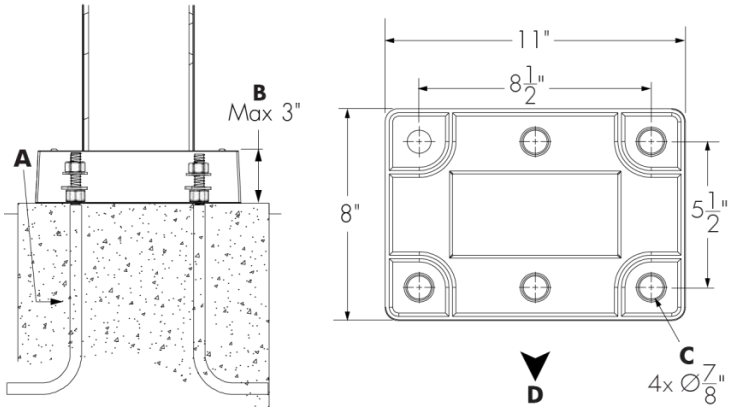
Anchoring details

Standard anchoring



A - (2x) Ø1/2 in by 12 in long anchor bolts with flats washers and nuts for each
B - Between 2.5 in and 3 in of the anchor bolts must be above ground for installation
C - Bolt circle
D - Hole for conduit (conduit by others)
E - Street side/Light side

BLDB-VRBO anchoring



A - (4x) Ø3/4 in by 26 in long anchor bolts with flats washers and nuts for each
B - Between 2.5 in and 3 in of the anchor bolts must be above ground for installation
C - Bolt circle
D - Access door and street side

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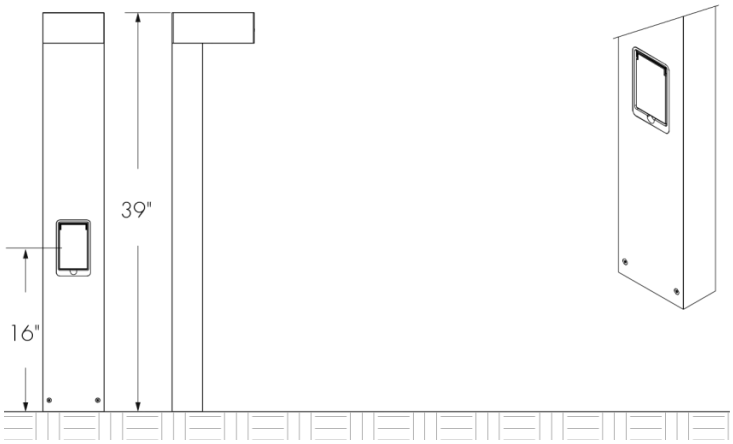
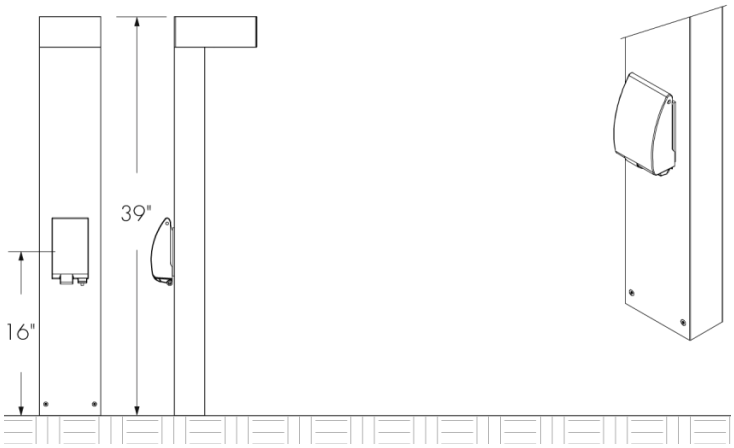
Duplex Receptacle installation dimensions

DRG - Ground fault duplex receptacle
USB - Duplex receptacle with USB A and USB C



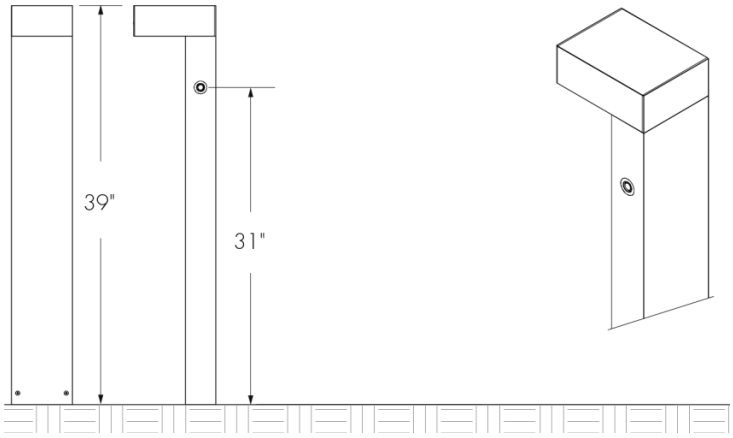
DRG IU - Ground Fault Duplex Receptacle (while in use)
USB IU - Duplex receptacle with USB A and USB C (while in use)



The duplex receptacle must be installed in accordance with applicable national and local electrical and construction codes by a person familiar with the construction and operation of the product and the hazards involved. Refer to national and local electrical codes before selecting a duplex receptacle to ensure all requirements are met.

Photoelectric Cell Button installation dimensions

PB - Photoelectric Cell Button Type



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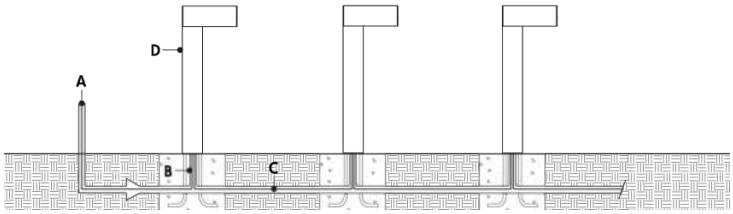
Typical Wiring Diagrams

Wiring Color Code

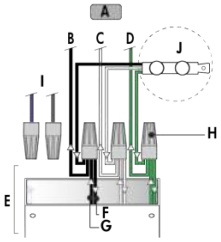
Color	Black	White	Green	Purple	Gray
Use	Line	Line/Neutral	Ground	0 -10V+	0 -10V -

On/Off Control (NO)



A - Power input (120-480V)
B - Conduit (by others)
C - Power wiring (by others)
D - Lumenblade Bollard

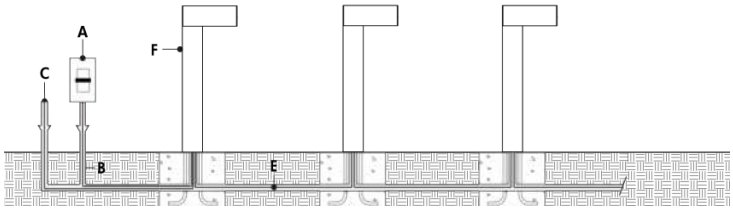
On/Off Control (NO) - wiring detail



A - To fixture
B - Line
C - Line/Neutral
D - Ground
E - Conduit (by others)
F - To next fixture
G - Power input or from previous fixture
H - Wire-nuts (by others)
I - Not required
J - Wiring for SP option

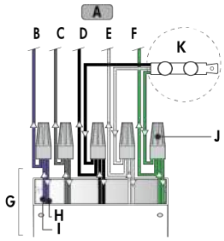
- Consult factory for specific applications and maximum fixture count/cable length recommendations.

0-10V dimming (DIM)



A - Dimmer (by others)
B - Data wiring (by others)
C - Power input (120-480V, wiring by others)
D - Conduit (by others)
E - Power and data wiring (by others)
F - Lumenblade Bollard

0-10V dimming (DIM) - wiring detail



A - To fixture
B - 0-10V +
C - 0-10V -
D - Line
E - Neutral
F - Ground
G - Conduit (by others)
H - To next fixture
I - Power input or from previous fixture
J - Wire-nuts (by others)
K - Wiring for SP option

- Consult factory for specific applications and maximum fixture count/cable length recommendations.
- 0-10V mA ratings: passive dimmer (Current Sink): 3mA per fixture, active dimmer (Current Source): 0.5mA per fixture.
- 1% minimum dimming value.

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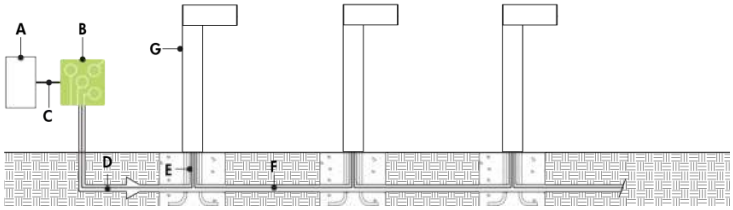
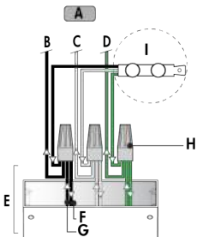
Lumentalk (LT)



A - Dimmer/controller (order separately from Lumenpulse, or by others)
B - Lumentranslator (LTL-010)
C - Data wiring (by others)
D - Power line (120-277V, wiring by others)
E - Conduct (by others)
F - Power wiring (by others)
G - Lumenblade Bollard

Lumentalk (LT) - wiring detail



A - To fixture
B - Line
C - Line/Neutral
D - Ground
E - Conduit (by others)
F - To next fixture
G - Power input or from previous fixture
H - Wire-nuts (by others)
I - Wiring for SP option

- Consult factory for specific applications and maximum fixture count/cable length recommendations.
- Lumentalk enabled fixtures must be commissioned using LumentalkID software and a LID-LT. Consult factory for details.
- Maximum of 1 transmitter (Lumentranslator or Lumenlink) per system.
- No third party fixtures allowed on the same circuit.
- DRG or USB option must be on a separated circuit.

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How to Order

Housing	Mounting	Voltage	Height	Lens [3]	Output (nominal lumens) [8]	Color and Color Temperature	Color Rendering	Distributions	Optical Option	Finish	Control
BLDB Lumenblade Bollard	**TM1** Single head **TM2** Dual head [1] **UNLIT** Unlit bollard	**120** 120 volts **208** 208 volts **240** 240 volts **277** 277 volts **347** 347 volts [2] **480** 480 volts [2]	**2FT** 2 ft **3FT** 3 ft	**CSL** Clearsite lens [4] **FSL** Frostsite lens [5] **HFSL** Half-Frostsite lens [6] [7]	**N02** 200lm (4 LEDs) [4] [9] [10] **N03** 300lm (4 LEDs) **N05** 500lm (4 LEDs) **N07** 700lm (4 LEDs) **N10** 1000lm (4 LEDs)	**AMB** Amber [4] [10] [11] **22K** 2200K [12] **27K** 2700K [13] **30K** 3000K **35K** 3500K **40K** 4000K **57K** 5700K [14]	**CRI 70** CRI 70+ [15] **CRI 80** CRI 80+ [16] **CRI 90** CRI 90+ [17]	**2** Type II **2BLS** Type II backlight shield **3** Type III **3BLS** Type III backlight shield **4** Type IV **4BLS** Type IV backlight shield **5** Type V **5S** Type V square	**LV** Louver [18] [19]	**BK** Black Sandtex® **BRZ** Bronze Sandtex® **SI** Silver Sandtex® **BKTX** Textured Black **BRZTX** Textured Bronze Non-Metallic **GRATX** Textured Medium Gray **GRNTX** Textured Green **WHTX** Textured White **CC** Custom Color & Finish [20] [21] [22]	**DIM** 0-10V dimming [23] **LT** Lumentalk [24] [25]

Notes:

1. A ground fault duplex receptacle (DRG or DRG IU) and a duplex USB receptacle (USB or USB IU) cannot be combined with TM2 mounting.
2. Not available with LT control option.
3. Standard IK06 rating for glass lens. IK10 rated polycarbonate lens available, please consult factory.
4. Not available with type 5 distribution.
5. Available with type 3 and 5 distributions only.
6. Available with type 2, 3 and 4 distributions only.
7. Available for N03, N05, N07 and N10 outputs only.
8. Lumen output will vary according to the lens and distribution specified for the fixture. Please consult the photometric information section of the specification sheet for more details.
9. Available with AMB color temperature only.
10. Not available for FSL and HFSL lens.
11. Available with N02 output only.
12. Available for CRI 80 only.
13. Available for CRI 80 and CRI 90 only.
14. Available for CRI 70 and CRI 80 only.
15. Binning within a 3-step McAdam ellipse, with the exception of 5700K.
16. Binning within a 2-step MacAdam ellipse, with the exception of 2200K and 5700K.
17. Binning within a 2-step MacAdam ellipse
18. Available with CSL and HFSL lenses only.
19. Factory installed, not field changeable.
20. Specify RAL number followed by "TX" for textured finish (ex: RAL9007TX) or STX for Sandtex finish (ex: RAL9007STX). Textured or Sandtex finishes are recommended for the durability of all products. If a finish is not specified with the RAL number (ex: RAL9007), a glossy finish will be provided. Please consult factory for other RAL textures and glosses, or to match alternate color charts. Final color matching results may vary.
21. Setup charges apply for RAL colors. Consult factory for details.
22. Longer lead times can be expected for custom RAL color finishes.
23. DIM control can be used as NO (On/off control) if no data is required.
24. Not available with PB option.
25. When combined with 2 ft height option, Lumentalk cannot be combined with a ground fault duplex receptacle (DRG or DRG IU) or a duplex USB receptacle (USB or USB IU).

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How to Order

Option	Head Option	Head Lens	Head Output	Head Color and Color Temperature	Head Color Rendering	Head Distributions	Head Optical Option
VRBO Vibration Rated for Bridge and Overpass [26] [27] **CRC** Corrosion-resistant coating [28] [29] **SP** Surge protector **PB** Photoelectric Cell Button Type [2] [30] **DRG** Ground Fault Duplex Receptacle [31] **DRG IU** Ground Fault Duplex Receptacle (while in use) [31] **USB** Duplex receptacle with USB A and USB C [31] **USB IU** Duplex receptacle with USB A and USB C in-use [31]	**BH** Bollard Head	**CSL** Clearsite lens [4] **FSL** Frostsite lens [5] **HFSL** Half-Frostsite lens [6] [7]	**N02** 200lm (4 LEDs) [4] [9] [10] **N03** 300lm (4 LEDs) **N05** 500lm (4 LEDs) **N07** 700lm (4 LEDs) **N10** 1000lm (4 LEDs)	**AMB** Amber [4] [10] [11] **22K** 2200K [12] **27K** 2700K [13] **30K** 3000K **35K** 3500K **40K** 4000K **57K** 5700K [14]	**CRI 70** CRI 70+ [15] **CRI 80** CRI 80+ [16] **CRI 90** CRI 90+ [17]	**2** Type II **2BLS** Type II backlight shield **3** Type III **3BLS** Type III backlight shield **4** Type IV **4BLS** Type IV backlight shield **5** Type V **5S** Type V square	**LV** Louver [18]

Notes:

2. Not available with LT control option.
4. Not available with type 5 distribution.
5. Available with type 3 and 5 distributions only.
6. Available with type 2, 3 and 4 distributions only.
7. Available for N03, N05, N07 and N10 outputs only.
9. Available with AMB color temperature only.
10. Not available for FSL and HFSL lens.
11. Available with N02 output only.
12. Available for CRI 80 only.
13. Available for CRI 80 and CRI 90 only.
14. Available for CRI 70 and CRI 80 only.
15. Binning within a 3-step McAdam ellipse, with the exception of 5700K.
16. Binning within a 2-step MacAdam ellipse, with the exception of 2200K and 5700K.
17. Binning within a 2-step MacAdam ellipse
18. Available with CSL and HFSL lenses only.
26. Vibration tested in accordance with ANSI 136.31 2018 for bridge and overpass applications at 5Gv.
27. Specify only if a bridge or overpass application is required.
28. Use only when exposed to salt spray. This option is not required for normal outdoor exposure.
29. Setup charges apply. Consult factory for details.
30. Not available for 480V voltage option.
31. A ground fault duplex receptacle (DRG or DRG IU) and a duplex USB receptacle (USB or USB IU) cannot be combined.

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TYPE SL-1, SL-2, & SL-3

lumenblade
Medium
BLDM

SL-1 Catalog Number:
BLDM-SD-120/277-CSL-M80-30K-CRI 80-2

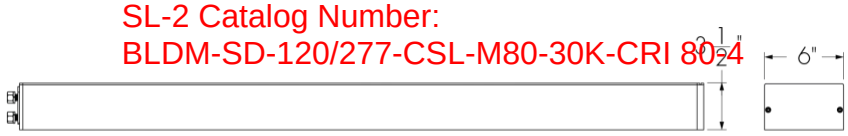
SL-2 Catalog Number:
BLDM-SD-120/277-CSL-M80-30K-CRI 80-3

SL-2 Catalog Number:
BLDM-SD-120/277-CSL-M80-30K-CRI 80-4

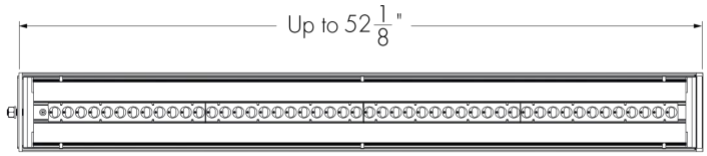
Project Name _____ **Qty** _____

Type _____ **Catalog / Part Number** _____



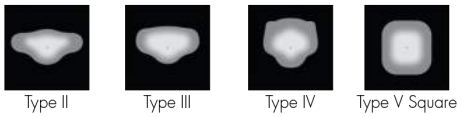


Side and front views



Bottom view
XL180 or XL200 (4 boards) shown

Distributions





SL-1: TYPE II DISTRIBUTION
SL-2: TYPE III DISTRIBUTION
SL-3: TYPE IV DISTRIBUTION

Description

The Lumenpulse Lumenblade Medium is an outdoor LED luminaire that uses a rectilinear version of the Lumencentro light engine to create a continuous line of light. Its seen-but-not-seen, minimalist design is sustainable, blends with both contemporary and heritage architectures, provides a high level of security, and is sensitive to the natural environment. The Lumenblade Medium is available in several lengths, a number of distributions and output options, and provides a stellar quality of light that brings the night to life.

Colors and Color Temperatures



Control

ON/OFF 0-10V LT

Motion Detector Options



Rating

IP66 (optical chamber)

Certifications

Features

Mounting	Side mounting
Color and Color Temperature	2200K, 2700K, 3000K, 3500K, 4000K, 5700K
Distributions	Type II, Type III or Type IV (with or without backlight shield), Type 5 square
1.5G Vibration Rated	Meets 1.5G ANSI C136.31 - 2010 vibration standard for Roadway applications 3G ANSI C136.31-2010 Vibration Rating for bridge applications available for certain configurations, refer to product configurator and website for details
Options	3G ANSI C136.31-2010 Vibration Rating for bridge applications, Corrosion-resistant coating for hostile environments, Surge protector, 3-Pin Receptacle with or without shorting cap, 5-Pin Receptacle with or without shorting cap, 7-Pin Receptacle with or without shorting cap, Motion detector
Pole Mounting Adaptor	Straight pole and Muffler pole adaptor (round and square pole): 6 in Lumentech pole adaptor (square and round pole): 6 in
Warranty	5-year limited warranty

Performance

Output (nominal lumens)	Minimum 4,000lm (1 board) / Maximum 20,000lm (4 boards)

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Efficacy	Up to 107 lm/W (Type 5 square, 4000K, M80 lumen output)
Color Rendering	3 SDCM for CRI 70+, 2 SDCM for CRI 80+ and CRI 90+
Lumen Maintenance	TM-21 L70 > 145,000 hrs (reported, Ta 25 - 50 °C [77 - 122 °F])
Dark Sky	Dark sky compliant (2200K, 2700K and 3000K color temperatures, BUG rating of U0)

Physical

Housing Material	Extruded aluminium 6000 alloy series
Lens Material	Optical tempered clear glass (Clearsite lens)
Surface Finish	Super durable resistant exterior polyester powder coating meets AAMA 2604-98 requirements (5-years Florida exposure). A corrosion resistant finish (CRC) pre-finish is available to meet ASTM B-117 & ASTM D-1654 (salt spray resistance) and ASTM D-2247 requirements (humidity resistance).
Weight	1 board: 12.5 lbs 2 boards: 16 lbs 3 boards: 21 lbs 4 boards: 25 lbs Refer to Fixture Weights Table in complete specification sheet for fixture weights with motion detector installed and double configurations

Electrical and control

Voltage	120 volts, 208 volts, 240 volts, 277 volts, 347 volts, 480 volts
Control	On/Off control, 0-10V dimming, Lumentalk

Environmental

Storage Temperature	-40°C to 50°C [-40°F to 122°F] (device must reach start-up temperature value before operating)
Operating Temperature	-40°C [-40 °F] to 50°C [122 °F]
Start-up Temperature	-25°C [-13 °F] to 50°C [122 °F]
Ingress Protection Rating	IP66 (optical chamber), Wet location rated
Impact Resistance Rating	IK07 (glass lens), IK10 (frame)
Environment	Dry/damp/wet location

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EPA and Fixture Weight Tables

*Fixture weights are estimated.

Standard Fixture

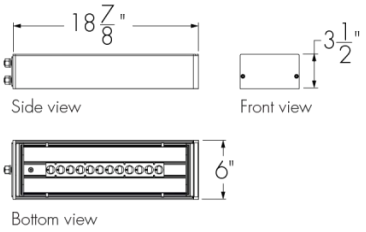
		S40/S60 1 board	M80/M100 2 boards	L120/L140/L160 3 boards	XL180/XL200 4 boards
EPA (sq ft.)	S1E	0.69	1.03	1.46	1.90
	S2E	1.38	2.06	2.92	3.8
Weight* (lbs)	S1E	12.5	16	21	25
	S2E	25	32	42	50

Fixture With Motion Detector Option

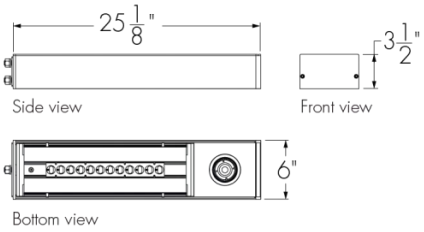
		S40/S60 1 board	M80/M100 2 boards	L120/L140/L160 3 boards	XL180/XL200 4 boards
EPA (sq ft.)	S1E	0.92	1.25	1.69	2.13
	S2E	1.84	2.5	3.38	4.26
Weight* (lbs)	S1E	15	18.5	23.5	27.5
	S2E	30	37	47	55

Dimensions

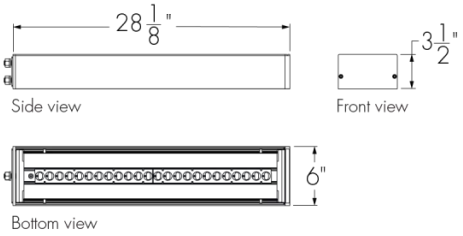
S40 and S60 (1 Board)



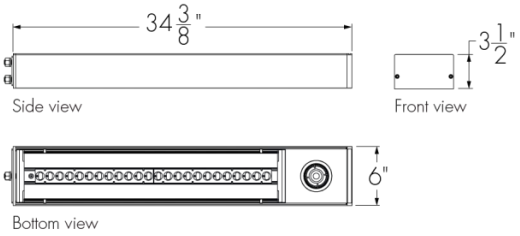
S40 and S60 (1 Board) - Motion Detector Option



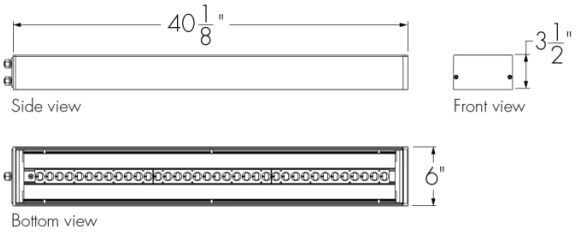
M80 and M100 (2 Boards)



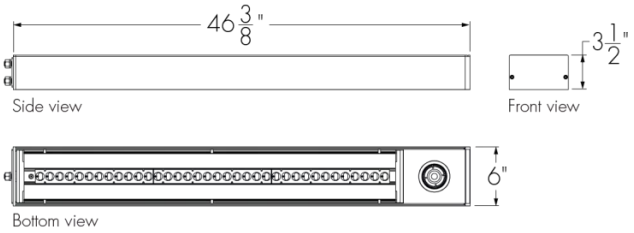
M80 and M100 (2 Boards) - Motion Detector Option



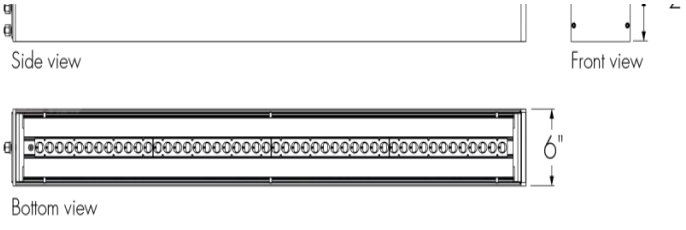
L120, L140 and L160 (3 Boards)



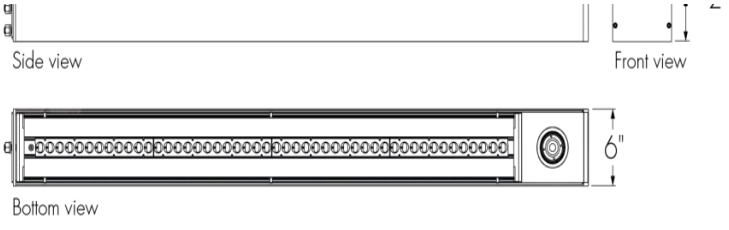
L120, L140 and L160 (3 Boards) - Motion Detector Option



XL180 and XL200 (4 Boards)



XL180 and XL200 (4 Boards) - Motion Detector Option



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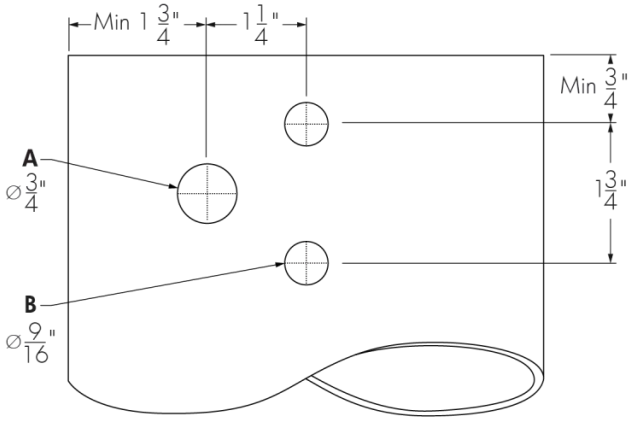
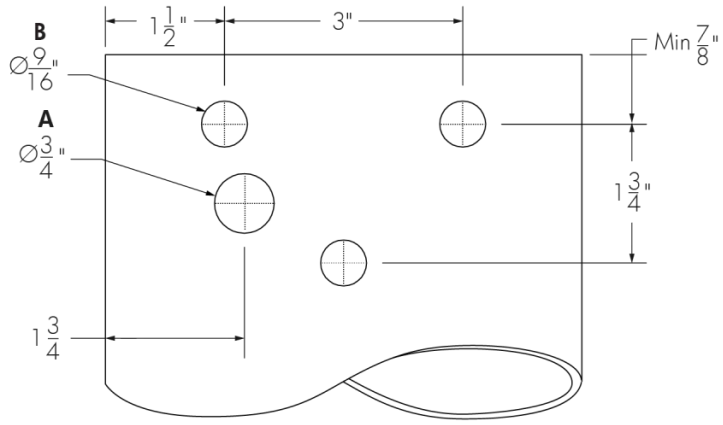
Pole Drilling Pattern

BLDM-S1E and BLDM-S2E Drilling Pattern



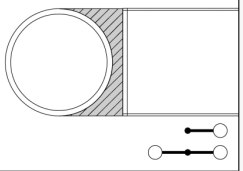
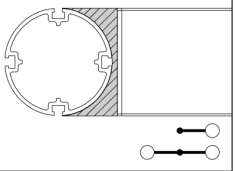
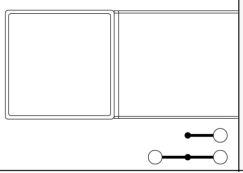
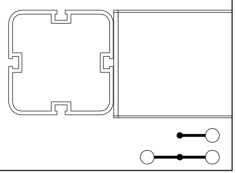
A - Wire feeding location
B - (2X) for Ø1/2-13 bolts (included with luminaire)

BLDM-S1E-3GV and BLDM-S2E-3GV Drilling Pattern



A - Wire feeding location
B - (3X) for Ø1/2-13 bolts (included with luminaire)

Pole Mounting Adaptor

	Straight and muffler poles			Lumentech pole	
	4in	**5in**	**6in**	**5in**	**6in**
Round shape	n/a	n/a	**RPA6M** 	n/a	**RPA6TM** 
Square shape [1]			**SPA6** 		**SPA6T** 

Available configurations*:
S1E —○ Simple
S2E ○—○ Double

[1] Square poles do not require adaptors, specification codes are used by Lumenpulse to provide appropriate hardware for installation only.

*Consult factory for other configurations.

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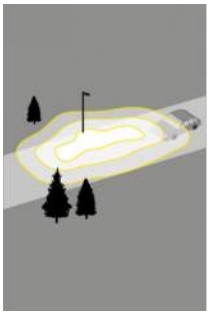
Photometric Information

Type II, 4000K, CRI 70+



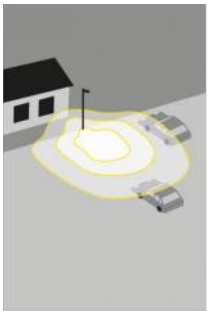
	Nominal output [lm]	Typical delivered output [lm]	Efficiency (lm/W)	BUG Rating B U G	Typical maximum power 120/277V (W)
S40	3,236	90	1 0 1	36
S60	4,758	87	1 0 1	55
M80	7,423	95	2 0 2	78
M100	9,897	86	2 0 2	115
L120	11,039	92	2 0 2	120
L140	12,561	90	3 0 3	140
L160	14,274	79	3 0 3	180
XL180	17,890	87	3 0 3	205
XL200	19,032*	79	3* 0* 3*	240

Type III, 4000K, CRI 70+



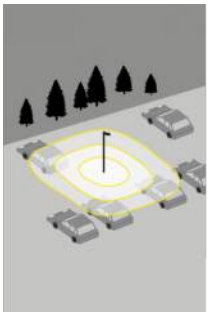
	Nominal output [lm]	Typical delivered output [lm]	Efficiency (lm/W)	BUG Rating B U G	Typical maximum power 120/277V (W)
S40	3,496	97	1 0 1	36
S60	5,141	94	1 0 1	55
M80	8,019	103	2 0 2	78
M100	10,693	93	2 0 2	115
L120	11,926	99	2 0 2	120
L140	13,571	97	3 0 3	140
L160	15,422	86	3 0 3	180
XL180	19,329	94	3 0 3	205
XL200	20,563*	86	3* 0* 3*	240

Type IV, 4000K, CRI 70+



	Nominal output [lm]	Typical delivered output [lm]	Efficiency (lm/W)	BUG Rating B U G	Typical maximum power 120/277V (W)
S40	2,989	83	1 0 1	36
S60	4,396	80	1 0 1	55
M80	6,858	88	2 0 2	78
M100	9,144	80	2 0 2	115
L120	10,199	85	2 0 2	120
L140	11,606	83	3 0 3	140
L160	13,189	73	3 0 3	180
XL180	16,530	81	3 0 3	205
XL200	17,585*	73	3* 0* 3*	240

Type V square, 4000K, CRI 70+



	Nominal output [lm]	Typical delivered output [lm]	Efficiency (lm/W)	BUG Rating B U G	Typical maximum power 120/277V (W)
S40	3,630	101	2 0 1	36
S60	5,339	97	3 0 1	55
M80	8,328	107	3 0 2	78
M100	11,104	97	4 0 2	115
L120	12,385	103	4 0 2	120
L140	14,094	101	4 0 2	140
L160	16,016	89	4 0 2	180
XL180	20,073	98	4 0 2	205
XL200	21,354*	89	5* 0* 3*	240

*Photometric performance is measured in compliance with IESNA LM-79-08. Due to rapid and continous advance in LED technology, photometric information is subject to change without notice.

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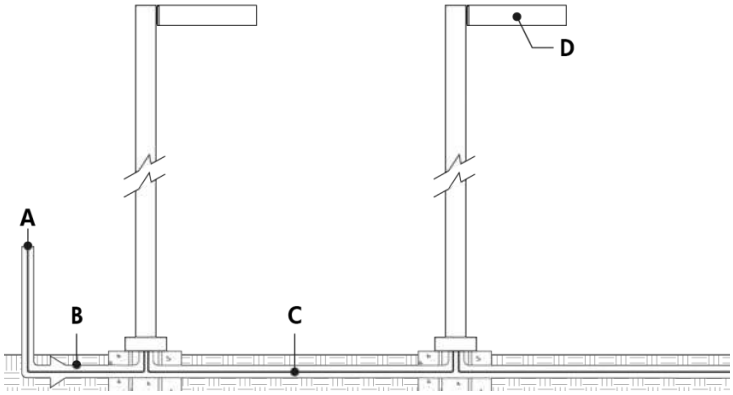
Typical Wiring Diagrams

Wiring Color Code

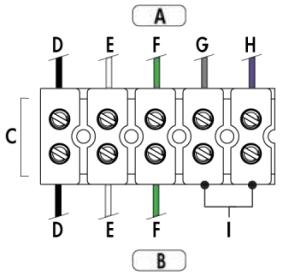
Color	Black	White	Green	Purple	Gray
Use	Line	Line/Neutral	Ground	0-10V+	0-10V -

On/Off Control (NO)



A - Power input (120-480V, wiring by others)
B - Conduit (by others)
C - Power wiring (by others)
D - Lumenblade

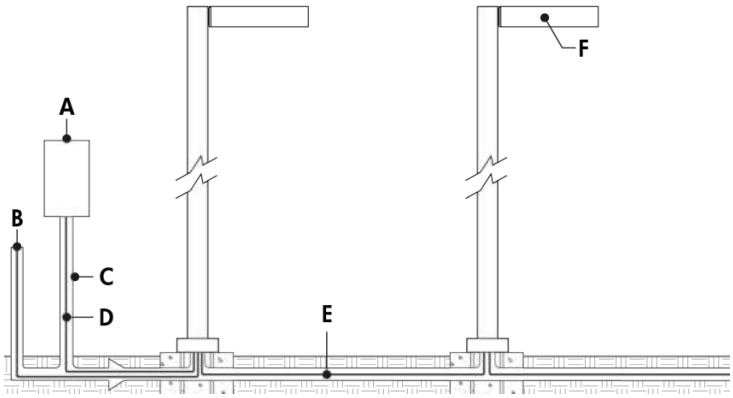
On/Off control (NO) - Terminal Connector Wiring Detail



A - To driver
B - Power input or from previous fixture
C - Terminal connector
D - Line
E - Line/Neutral
F - Ground
G - 0-10V -
H - 0-10V +
I - Not required

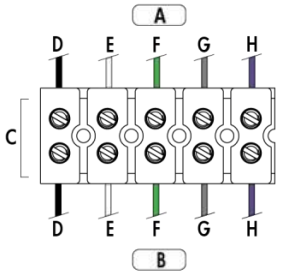
- Consult factory for specific applications and maximum fixture count/cable length recommendations.

0-10V Dimming (DIM)



A - Dimmer (by others)
B - Power input (120-480V, wiring by others)
C - Conduit (by others)
D - Data wiring (by others)
E - Power and data wiring (by others)
F - Lumenblade

0-10V Dimming (DIM) - Terminal Connector Wiring Detail



A - To driver
B - Power input or from previous fixture
C - Terminal connector
D - Line
E - Line/Neutral
F - Ground
G - 0-10V -
H - 0-10V +

- Consult factory for specific applications and maximum fixture count/cable length recommendations.
- 0-10V mA ratings: passive dimmer (Current Sink): 3mA per fixture, active dimmer (Current Source): 0.5mA per fixture.
- 1% minimum dimming value.

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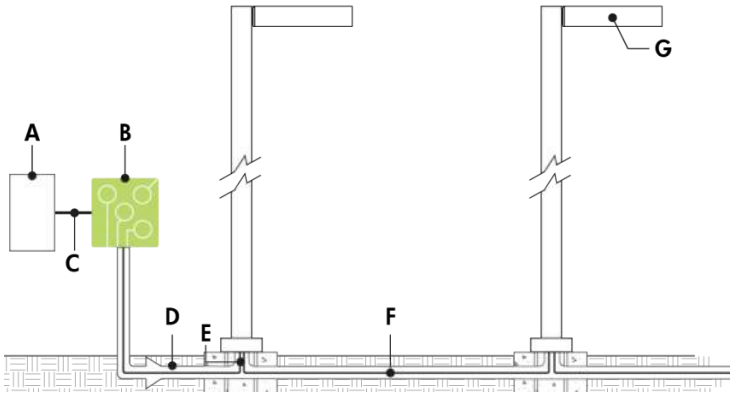
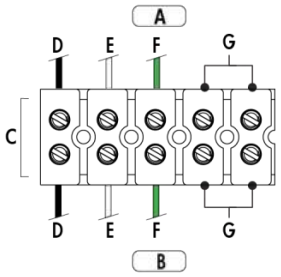
Lumentalk (LT)



A - Third party dimmer/controller
B - Lumentranslator (LTL-010)
C - Data wiring (by others)
D - Power line (120-277V, wiring by others)
E - Conduct (by others)
F - Power wiring (by others)
G - Lumenblade

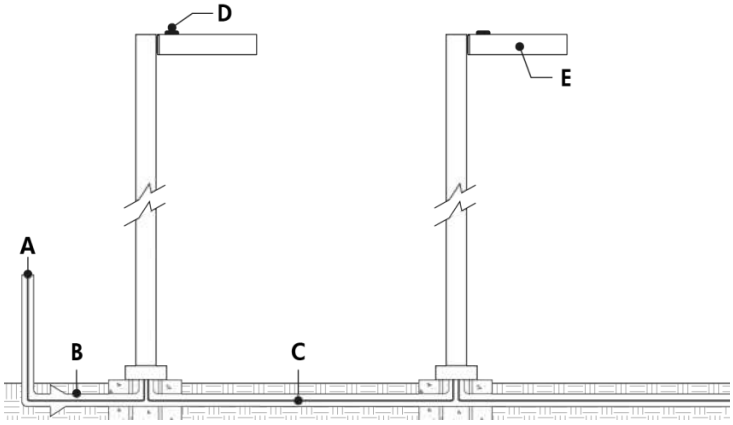
Lumentalk (LT) - Terminal Connector Wiring Detail



A - To driver
B - Power input or from previous fixture
C - Terminal connector
D - Line
E - Line/Neutral
F - Ground
G- Not required

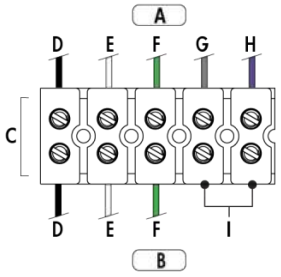
- Consult factory for specific applications and maximum fixture count/cable length recommendations.
- Lumentalk enabled fixtures must be commissioned using LumentalkID software and a LID-LT. Consult factory for details.
- Maximum of 1 transmitter (Lumentranslator or Lumenlink) per system.
- No third party fixtures allowed on the same circuit

3 pins, 5 pins and 7pins Receptacle Control (SPR3, SPR3 SC, SPR5, SPR5 SC, SPR7, SPR7 SC)



A - Power input (120-480V, wiring by others)
B - Conduit (by others)
C - Power wiring (by others)
D - Photoelectric control
E - Lumenblade

3 pins, 5 pins and 7pins Receptacle Control (SPR3, SPR3 SC,SPR5, SPR5 SC, SPR7, SPR7 SC) - terminal connector wiring detail



A - To driver
B - Power input or from previous fixture
C - Terminal connector
D - Line
E - Line/Neutral
F - Ground
G - 0-10V -
H - 0-10V +
I - SPR3: Not required. SPR5/SPR7: From photocell receptacle

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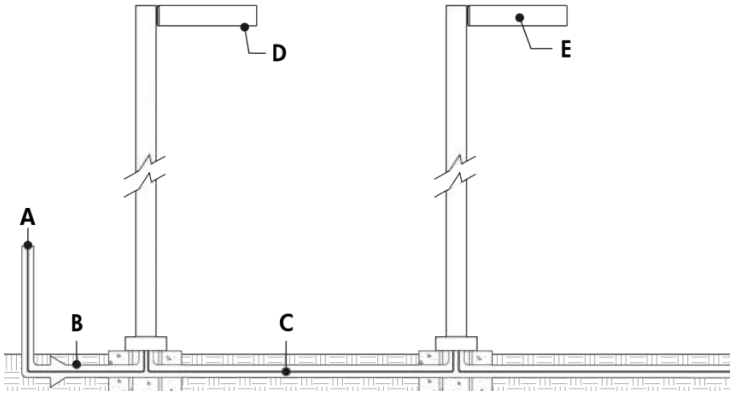
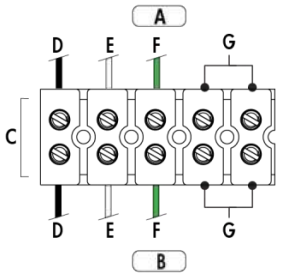
Motion Detector Control (MDxx)



A - Power input (120-480V, wiring by others)
B - Conduit (by others)
C - Power wiring (by others)
D - Motion detector
E - Lumenblade

Motion Detector (MDxx) - Terminal Connector Wiring Detail



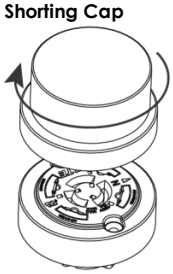
A - To driver
B - Power input or from previous fixture
C - Terminal connector
D - Line
E - Line/Neutral
F - Ground
G- Not required

Options

SPR3, SPR5 and SPR7 - 3-Pin, 5-Pin and 7-Pin Receptacles



SPR3 SC, SPR5 SC and SPR7 SC - 3-Pin, 5-Pin and 7-Pin Receptacles with Shorting Cap



- Dimming receptacle meets ANSI C136.41 Standard

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Motion Detector Options

Programming

	MD10N - Narrow lens, 10% dimming level **MD10W -** Wide lens, 10% dimming level	**MD30N -** Narrow lens, 30% dimming level **MD30W -** Wide lens, 30% dimming level	**MD50N -** Narrow lens, 50% dimming level **MD50W -** Wide lens, 50% dimming level	**MDPN -** Narrow lens, programmable **MDPW -** Wide lens, programmable	
	100% (10V) — **10%** (1V)	**100%** (10V) — **30%** (3V)	**100%** (10V) — **50%** (5V)		*How to provide code:*
High mode [1]	10V	10V	10V	• 5V - 10V (Increment: **0.2V**)	10V
Low mode [2]	1V	3V	5V	• Off • 0V - 9.8V (Increment: **0.2V**)	2.6V
Time delay [3]	5 min	5 min	5 min	• 1min - 30min (Increment: **30 seconds**)	10 min
Cut off [4]	1 hr	1 hr	1 hr	• Disable • 1min - 59min (Increment: **30 seconds**) • 1hr - 5hr (Increment: **1 hour**)	3 hr
Set point [5]	Dis	Dis	Dis	• Disable • Auto • 1fc - 250fc (Increment: **1fc**)	Auto
Sensitivity [6]	Max	Max	Max	• On-Fix • Off-Fix • Low • Med • Max	Med
Ramp up time [7]	3 sec	3 sec	3 sec	• Disable • 1sec - 60sec (Increment: **1 second**)	10 sec
Fade down time [8]	3 sec	3 sec	3 sec	• Disable • 1sec - 60sec (Increment: **1 second**)	10 sec
Photocell On/Off [9]	Dis	Dis	Dis	• Disable • 1fc - 250fc (Increment: **1fc**)	Dis

[1] When the sensor detects motion, the dimming control output ramps up to the selected HIGH light level.
[2] After the sensor stops detecting motion and the time delay expires, the dimming control output fades down to the selected LOW light level.
[3] The selected time period that must elapse after the last time the sensor detects motion for the electric lights to fade to LOW mode.
[4] The time period that must elapse after the lights fade to LOW mode, and the sensor detects no motion for the electric lights to turn OFF.
[5] When enabled, the selectable ambient light level threshold that will hold the electric lights off or at LOW level when the sensor detects motion.
[6] The response of the PIR detector to motion within the sensor's coverage area.
[7] Time period for light level to increase from LOW to HIGH.
[8] Time period for light level to decrease from HIGH to LOW.
[9] When enabled, the sensor will force the load OFF after the light level has exceeded the selected photocell setpoint PRIOR SAVE SEND for at least a minute. It will also force the load ON when the light level goes below the setpoint, even if no motion is detected.
[10] The motion detector programming can be modified on site. A remote is required, order separately. See Remote section in the specification sheet for details.

Dimming: When motion is detected within the sensor's coverage area, the sensor sends a signal to ramp the load up to the selectable High Mode level unless the ambient light level is higher than the selected setpoint. When no motion is detected for the duration of the time delay setting, the lights will go to the selectable Low Mode level based on the signal from the sensor. If desired, a cut off time delay will trigger to eventually turn the lights OFF.
Non dimming: When motion is detected within the sensor's coverage area, the sensor sends a signal to turn the load ON unless the ambient light level is higher than the selected setpoint. When no motion is detected for the duration of the time delay setting, the lights will go OFF based on the signal from the sensor.
Dusk to dawn control: When photocell on/off is enabled, and the ambient light falls below the photocell setpoint, the sensor ramps the load up to the selectable High Mode level. If no motion is detected for the duration of the time delay setting, the lights will go to the selectable Low Mode level. If the cut off time delay is disabled, the load will remain on, at High or Low level, based on motion detection, until the ambient light increases above the photocell setpoint.

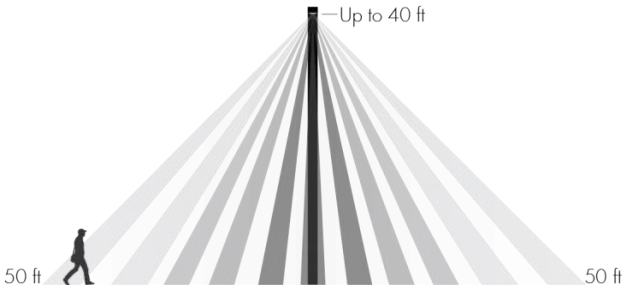
Coverage Area

Narrow Lens (MD10N, MD30N, MD50N and MDPN)*



* Maximum 20 ft height, 40 ft diameter coverage area

Wide Lens (MD10W, MD30W, MD50W and MDPN)*



* Maximum 40 ft height, 100 ft diameter coverage area (Lumenpulse maximum pole height: up to 30 ft consult relative pole specification sheets for more details).

High temperatures at the covered area (above 88 °F - 91 °F) reduce the detection zone of the sensor. Consider adding more sensors if the ambient temperatures are expected to be high. Additionally, high floor level temperature may require larger movement for detection. Coverages shown in the diagrams are maximum, measured in linear feet. They represent coverage for walking motion, with no obstacles.

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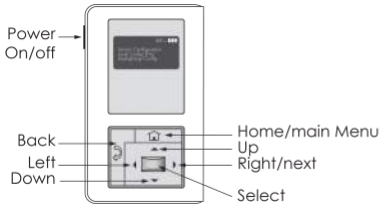
Remote (Order Separately)

MDRC001 - Remote to Program Motion Detector on Site



- Compatible with all motion detector options.

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How to Order

Housing	Mounting	Voltage	Lens [3]	Output (nominal lumens)	Color and Color Temperature	Color Rendering	Distributions	Finish	Control	Option	Pole Mounting Adaptor [24]
BLDM Lumenblade medium [1]	**SD** Side mounting	**120** 120 volts **208** 208 volts **240** 240 volts **277** 277 volts **347** 347 volts [2] **480** 480 volts [2]	**CSL** Clearsite lens SL-1 & SL-2 SL-3	**S40** 4000lm (1 board, 18 7/8 in) [2] [4] [5] **S60** 6000lm (1 board, 18 7/8 in) [2] [4] **M80** 8000lm (2 boards, 28 1/8 in) [4] **M100** 10000lm (2 boards, 28 1/8 in) [4] **L120** 12000lm (3 boards, 40 1/8 in) [4] **L140** 14000lm (3 boards, 40 1/8 in) [4] **L160** 16000lm (3 boards, 40 1/8 in) [4] **XL180** 18000lm (4 boards, 52 1/8 in) [4] **XL200** 20000lm (4 boards, 52 1/8 in) [4]	**22K** 2200K [6] **27K** 2700K [7] **30K** 3000K **35K** 3500K **40K** 4000K **57K** 5700K [8]	**CRI 70** CRI 70+ [9] **CRI 80** CRI 80+ [10] **CRI 90** CRI 90+ [11]	**2** SL-1 Type II **2BLS** Type II backlight shield **3** SL-2 Type III **3BLS** Type III backlight shield **4** SL-3 Type IV **4BLS** Type IV backlight shield **5S** Type V square	**BK** Black Sandtex® **BRZ** Bronze Sandtex® **SI** Silver Sandtex® **BKTX** Textured Black **BRZTX** Textured Bronze Non-Metallic **GRATX** Textured Medium Gray **GRNTX** Textured Green **WHTX** Textured White **CC** Custom Color & Finish [12] [13] [14]	**DIM** 0-10V dimming [15] **LT** Lumentalk [16]	**3GV** 3G ANSI C136.31-2010 Vibration Rating for bridge applications [16] [17] **CRC** Corrosion-resistant coating [18] [19] **SP** Surge protector **SPR3** 3-Pin Receptacle [20] **SPR3 SC** 3-Pin Receptacle with Shorting Cap [20] **SPR5** 5-Pin Receptacle [20] **SPR5 SC** 5-Pin Receptacle with Shorting Cap [20] **SPR7** 7-Pin Receptacle [20] **SPR7 SC** 7-Pin Receptacle with Shorting Cap [20] **MD10N** Motion detector 10% factory-set dimming level (narrow lens) [21] [22] **MD10W** Motion detector 10% factory-set dimming level (wide lens) [21] [22] **MD30N** Motion detector 30% factory-set dimming level (narrow lens) [21] [22] **MD30W** Motion detector 30% factory-set dimming level (wide lens) [21] [22] **MD50N** Motion detector 50% factory-set dimming level (narrow lens) [21] [22] **MD50W** Motion detector 50% factory-set dimming level (wide lens) [21] [22] **MDPN** Motion detector programmable, factory-set dimming level (narrow lens) [21] [22] [23] **MDPW** Motion detector programmable, factory-set dimming level (wide lens) [21] [22] [23]	**RPA6M** Round pole adaptor for Ø6 in pole **SPA6** Square pole adaptor for Ø6 in pole **RPA6TM** Round pole adaptor for Lumentech Ø6 in pole **SPA6T** Square pole adaptor for Lumentech Ø6 in pole

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Notes:

1. Product code is for a single fixture only (S1E configuration). For double configuration (S2E), a second product code must be completed.
2. Not available with LT control option.
3. Consult factory for Softsite lens option. Available for 3000lm (1 board), 5000lm (2 boards), 7000lm (3 boards) and 10000lm (4 boards) outputs.
4. Motion detector options add 6 1/4 in to total length of fixture.
5. Available up to 277V.
6. Available for CRI 80 only.
7. Available for CRI 80 and CRI 90 only.
8. Available for CRI 70 and CRI 80 only.
9. Binning within a 3-step McAdam ellipse, with the exception of 5700K.
10. Binning within a 2-step MacAdam ellipse, with the exception of 2200K and 5700K.
11. Binning within a 2-step MacAdam ellipse
12. Specify RAL number followed by "TX" for textured finish (ex: RAL9007TX) or STX for Sandtex finish (ex: RAL9007STX). Textured or Sandtex finishes are recommended for the durability of all products. If a finish is not specified with the RAL number (ex: RAL9007), a glossy finish will be provided. Please consult factory for other RAL textures and glosses, or to match alternate color charts. Final color matching results may vary.
13. Setup charges apply for RAL colors. Consult factory for details.
14. Longer lead times can be expected for custom RAL color finishes.
15. DIM control can be used as NO (On/off control) if no data is required.
16. Not available with SPR3, SPR3 SC, SPR5, SPR5 SC, SPR7 and SPR7 SC 3-Pin, 5-Pin, and 7-Pin receptacles options and MD10N, MD10W, MD30N, MD30W, MD50N, MD50W, MDPN and MDPW motion detector options.
17. Available with S40, S60, M80 and M100 output options only.
18. Use only when exposed to salt spray. This option is not required for normal outdoor exposure.
19. Setup charges apply. Consult factory for details.
20. Only one receptacle can be specified per fixture, cannot be combined with motion detector option.
21. The motion detector programming can be modified on site. A remote is required, order separately. See Remote section in the specification sheet for details.
22. Only one motion detector can be specified per fixture, cannot be combined with a receptacle.
23. The motion detector is programmed in the factory, as per the settings requested at the time of the order.
24. Consult Pole Mounting Adaptor section for standard available configurations.

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TYPE SL-4

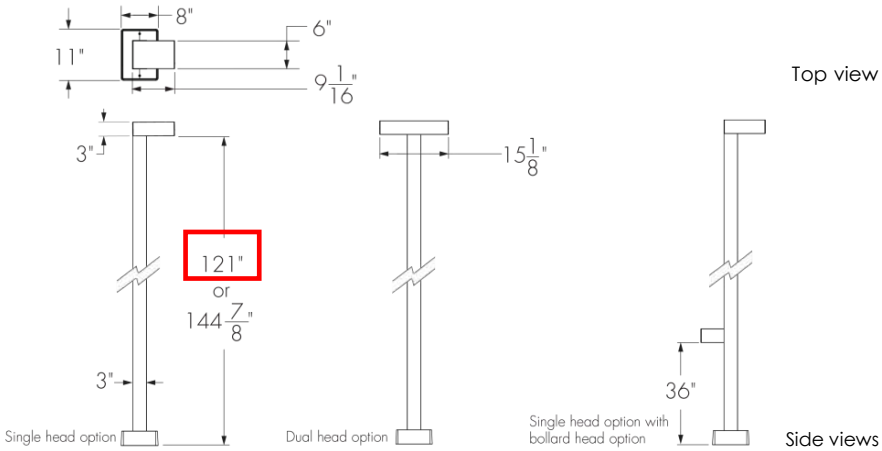
lumenblade
Column
BLDC

Catalog Number:
BLDC-TM1-VOLTAGE-10FT-CSL-XS25-30K-CRI 80-4-FINISH CONTROL

Project Name _____ **Qty** _____

Type _____ **Catalog / Part Number** _____

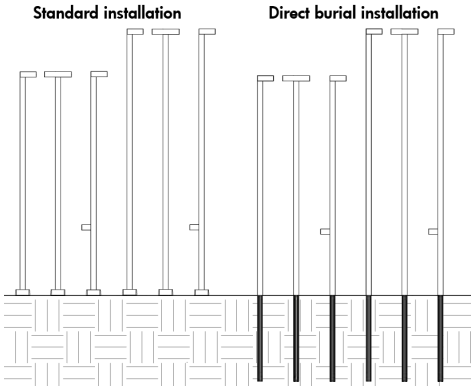

Single head option shown



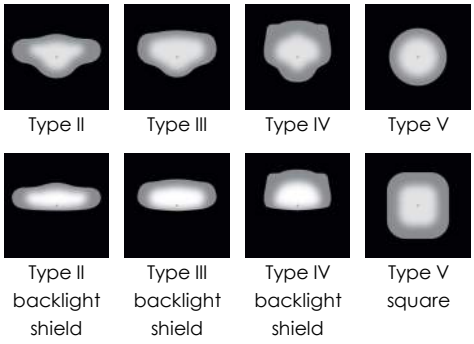
Top view

Side views

Configurations



Distributions



Description

The Lumenpulse Lumenblade Column is an outdoor LED luminaire that uses a rectilinear version of the Lumencentro light engine to create a continuous line of light. Options include: heights of either 10 feet or 12 feet, with a Single or Dual head. Its seen-but-not-seen, minimalist design is sustainable, blends with both contemporary and heritage architectures, provides a high level of security, and is sensitive to the natural environment with low outputs and with a BUG rating of 0.

Features

Mounting	Single head, Dual head
Height	10 ft, 12 ft
Color and Color Temperature	Amber, 2200K, 2700K, 3000K, 3500K, 4000K, 5700K
Distributions	Type II, Type III or Type IV (with or without backlight shield), Type V, Type V square
Optical Option (factory installed)	Louver
Vibration Rating	Meets ANSI C136.31-2018 vibration rating for Bridge & Overpass applications
Options	Vibration Rated for Bridge and Overpass, Corrosion-resistant coating for hostile environments, Surge protector, Photoelectric Cell Button Type, Ground Fault Duplex Receptacle, Duplex receptacle with USB A and USB C, 3-Pin Receptacle with or without shorting cap, 5-Pin Receptacle with or without shorting cap, 7-Pin Receptacle with or without shorting cap, Motion detector, Direct Burial
Warranty	5-year limited warranty

Performance

Output (nominal lumens)	Minimum 300lm (single head)/ 200lm for bollard head option, Maximum 5000lm (dual head)
Efficacy	Up to 106 lm/W (XS10 lumen output, 4000K, CRI 70+,Type III)

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Color and Color Temperature



Control

ON/OFF 0-10V LT

Ratings

IP66 (optical chamber) IK06 (lens) IK10*(frame)
*IK10 polycarbonate lens option available, consult factory.

Motion detector options



Certifications

Color Rendering	3 SDCM for CRI 70+, 2 SDCM for CRI 80+ and CRI 90+
Lumen Maintenance	TM-21 L70 > 145,000 hrs (reported, Ta 25 - 50 °C [77 - 122 °F])
Dark Sky	Dark sky compliant (2200K, 2700K, 3000K and Amber color temperatures, BUG rating of U0)

Physical

Housing Material	Extruded aluminium 6000 alloy series
Lens Material	Optical tempered clear glass (Clearsite lens), Optical tempered frosted glass (Frostsite lens), Optical tempered half-frosted glass (Half-Frostsite lens)
Head Option	Bollard Head, Column head
Head Option Height	3 ft
Surface Finish	Super durable resistant exterior polyester powder coating meets AAMA 2604-98 requirements (5-years Florida exposure) a corrosion resistant finish (CRC) pre-finish is available to meet ASTM B-117 & ASTM D-1654 (salt spray resistance) and ASTM D-2247 requirements (humidity resistance).
Weight	22.5 lbs for single head option (10 ft fixture)

Electrical and control

Voltage	120 volts, 208 volts, 240 volts, 277 volts, 347 volts, 480 volts
Control	On/Off control, 0-10V dimming, Lumentalk

Environmental

Storage Temperature	-40°C to 50°C [-40°F to 122°F] (device must reach start-up temperature value before operating)
Operating Temperature	-40°C to 50°C [-40°F to 122°F]
Start-up Temperature	-25°C [-13 °F] to 50°C [122 °F]
Ingress Protection Rating	IP66 (optical chamber), Wet location rated
Impact Resistance Rating	IK06 (glass lens), IK10 (frame) *IK10 polycarbonate lens option available, consult factory
Environment	Dry/damp/wet location

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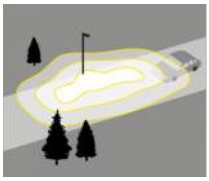
Photometric information

Type II, 4000K, CRI 70+, Clearsite lens



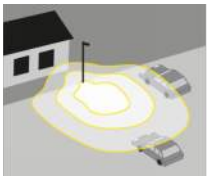
	Nominal output [lm]	Typical delivered output [lm]	Efficiency (lm/W)	BUG Rating B U G	Typical maximum power 120/277V (W)
XS10	1,014	101	0 0 0	10
XS15	1,452	85	0 0 0	17
XS20	1,821	73	1 0 1	25
XS25	2,305	77	1 0 1	30

Type III, 4000K, CRI 70+, Clearsite lens



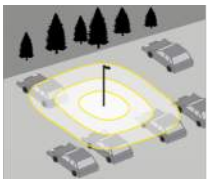
	Nominal output [lm]	Typical delivered output [lm]	Efficiency (lm/W)	BUG Rating B U G	Typical maximum power 120/277V (W)
XS10	1,060	106	0 0 0	10
XS15	1,517	89	0 0 0	17
XS20	1,902	76	1 0 1	25
XS25	2,408	80	1 0 1	30

Type IV, 4000K, CRI 70+, Clearsite lens



	Nominal output [lm]	Typical delivered output [lm]	Efficiency (lm/W)	BUG Rating B U G	Typical maximum power 120/277V (W)
XS10	883	88	0 0 0	10
XS15	1,265	74	0 0 1	17
XS20	1,586	63	0 0 1	25
XS25	2,007	67	1 0 1	30

Type V square, 4000K, CRI 70+, Clearsite lens



	Nominal output [lm]	Typical delivered output [lm]	Efficiency (lm/W)	BUG Rating B U G	Typical maximum power 120/277V (W)
XS10	977	98	1 0 1	10
XS15	1,399	82	1 0 1	17
XS20	1,754	70	1 0 1	25
XS25	2,220	74	1 0 1	30

*Photometric performance is measured in compliance with IESNA LM-79-19. Due to rapid and continous advances in LED technology, photometric information is subject to change without notice.

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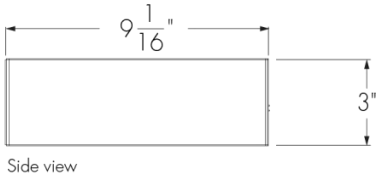
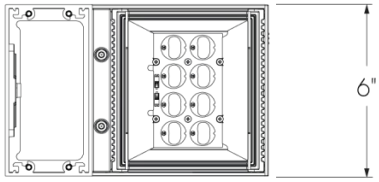
Luminaire head dimensions

TM1 - Single head

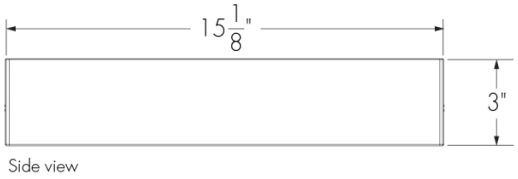


Side view

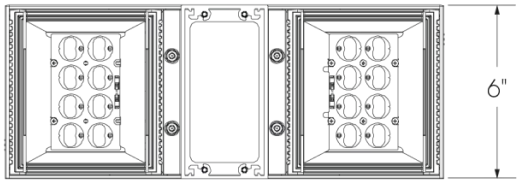


Bottom view

TM2 - Dual head



Side view

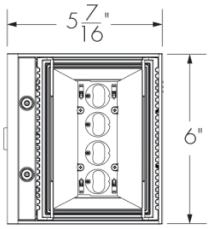


Bottom view

BH - Bollard head

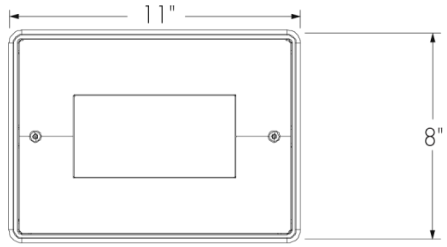


Side view



Bottom view

Base dimensions



Top View



Side View

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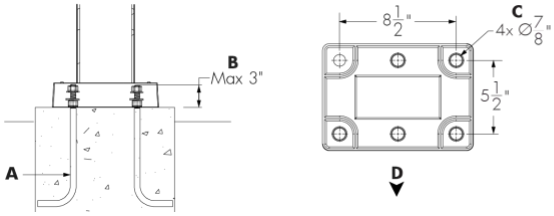
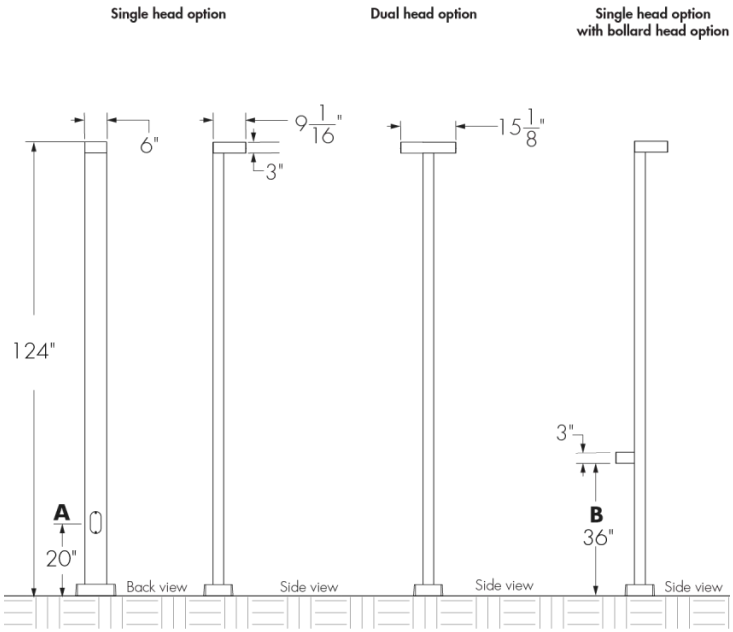
Standard installation assembly details



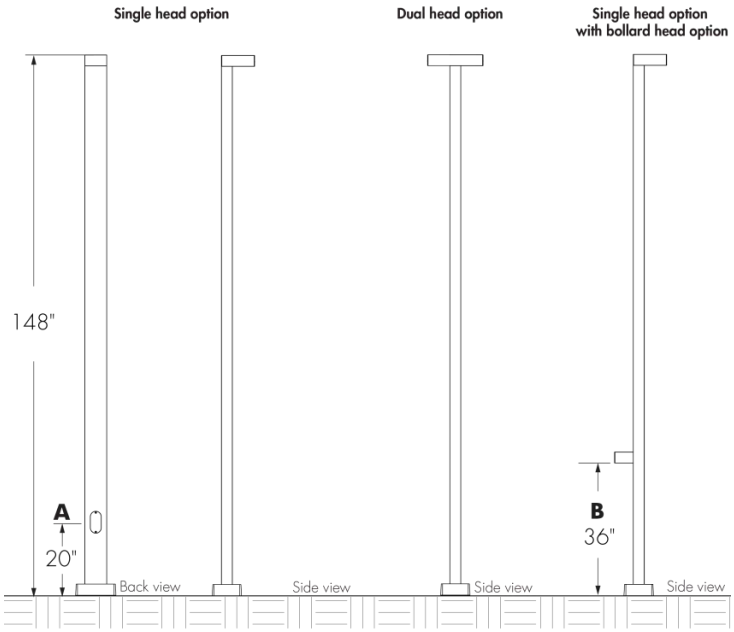
A - (4x) Ø3/4 in by 26 in long anchor bolts with flats washers and nuts for each
B - Between 2.5 in and 3 in of the anchor bolts must be above ground for installation
C - Bolt circle
D - Access door and street side

Standard installation dimensions

10 ft column

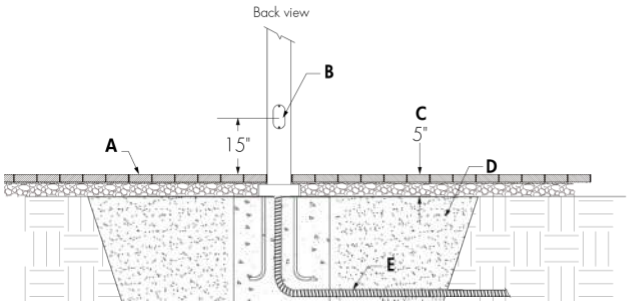


12 ft column



A - Access door (distance from ground to center of access door)
B - Bollard head option (distance from ground to bollard head)

Semi-buried installation assembly details



A - Finished grade
B - Access door
C - Buried section, at least 5 in
D - Filling
E - Conduit (by others)

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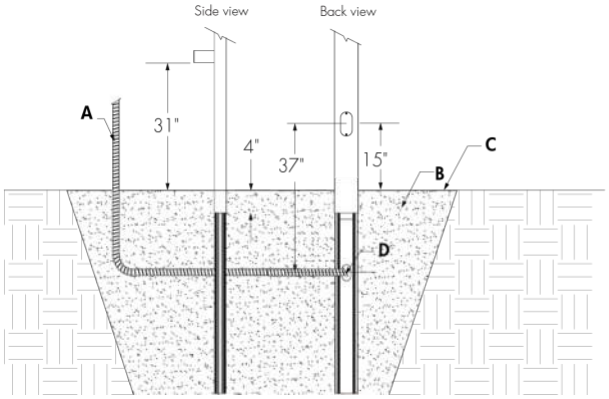
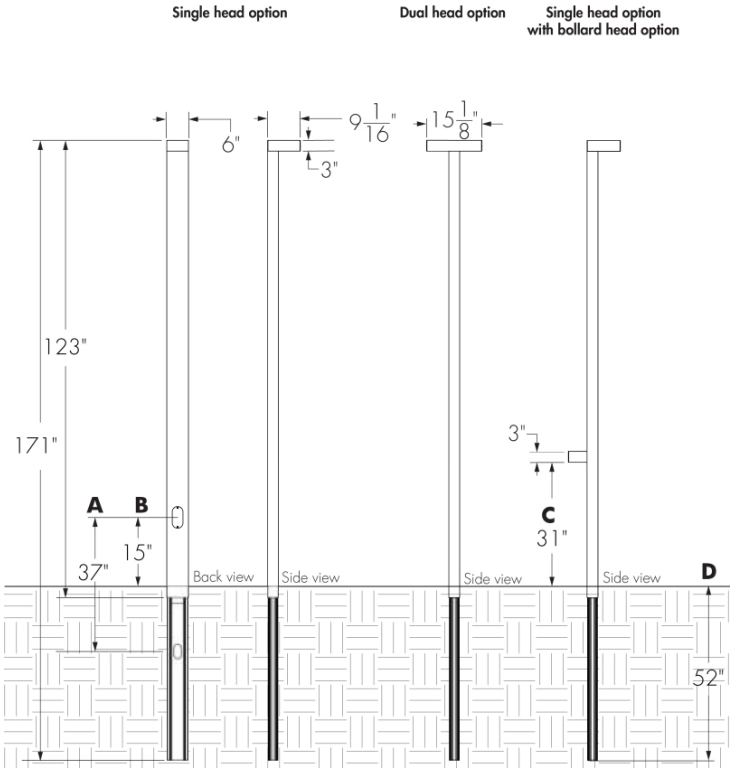
Direct burial installation assembly details



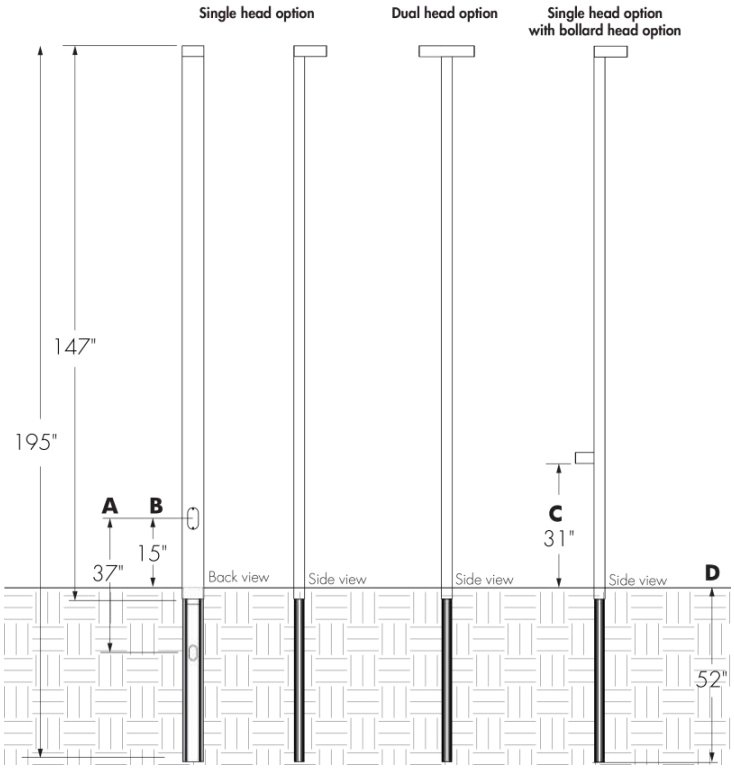
A - Conduit (by others)
B - Filling
C - Finished grade
D - Opening for conduit

Direct burial installation dimensions

10 ft direct burial column



12 ft direct burial column



A - Distance from center of access door to opening for conduit
B - Access door (distance from ground to center of access door)
C - Bollard head option (distance from ground to bollard head)
D - Buried section

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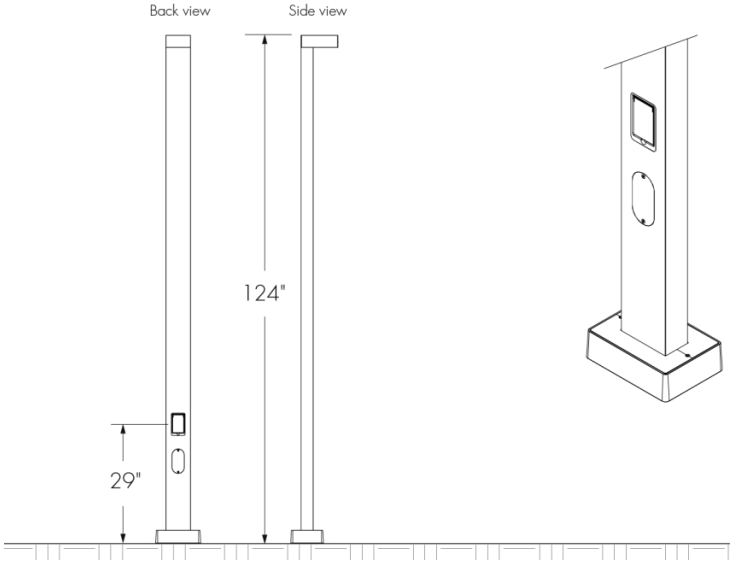
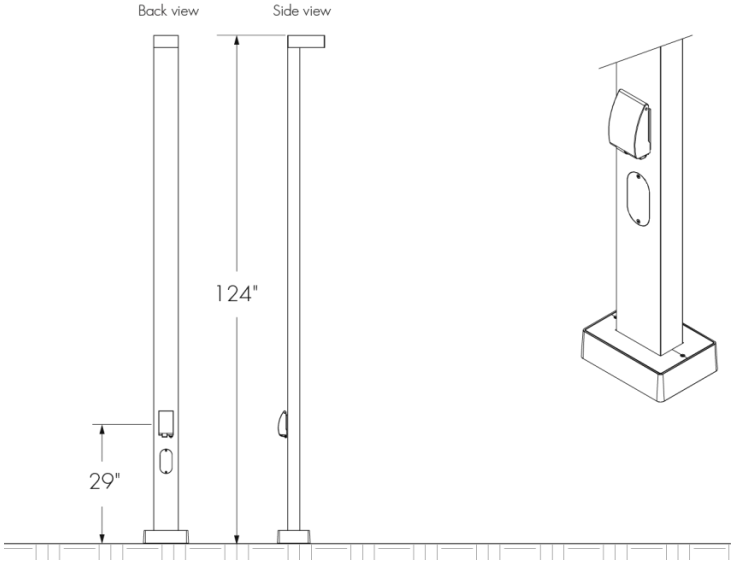
Duplex Receptacle installation dimensions

DRG - Ground fault duplex receptacle
USB - Duplex receptacle with USB A and USB C



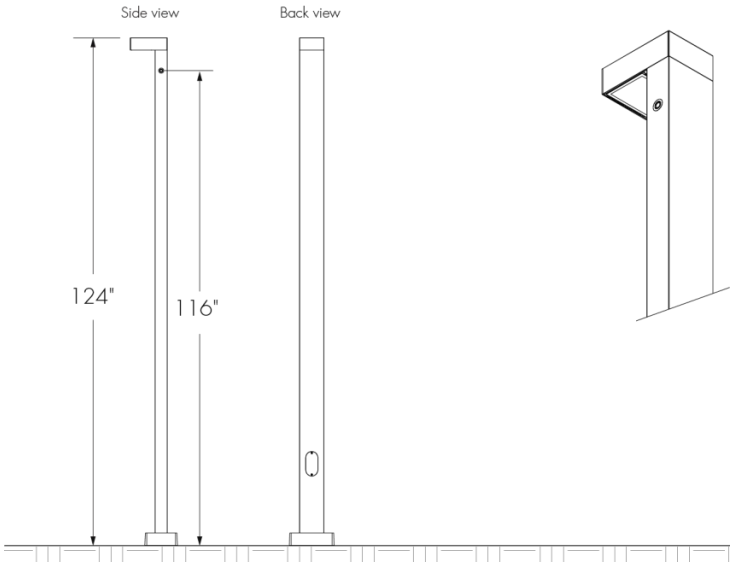
DRG IU - Ground Fault Duplex Receptacle (while in use)
USB IU - Duplex receptacle with USB A and USB C (while in use)



The duplex receptacle must be installed in accordance with applicable national and local electrical and construction codes by a person familiar with the construction and operation of the product and the hazards involved. Refer to national and local electrical codes before selecting a duplex receptacle to ensure all requirements are met.

Photoelectric Cell Button installation dimensions

PB - Photoelectric Cell Button Type



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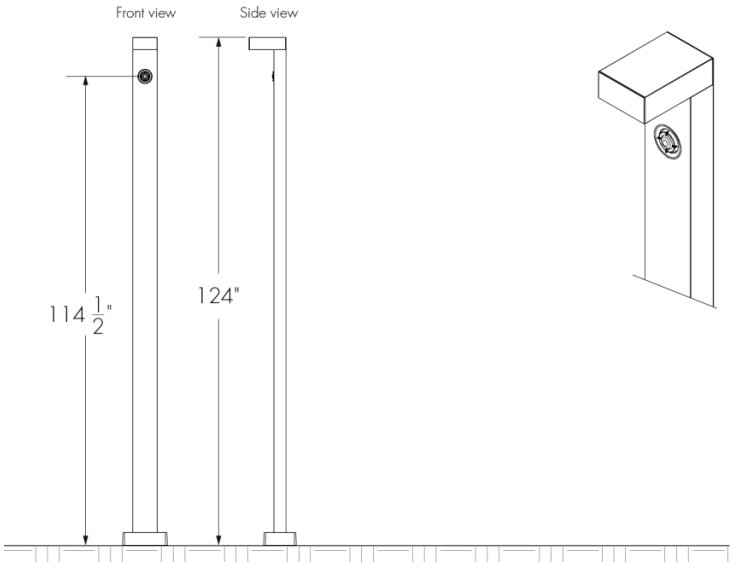
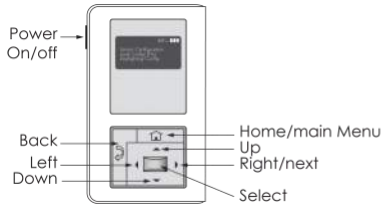
Motion detector installation dimensions

Motion detector (MD10N, MD30N, MD50N, MDNL and MDPN)



Remote (order separately)

MDRC001 - Remote to program motion detector on site



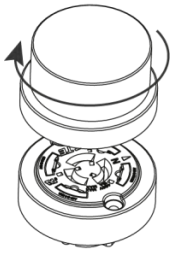
- Compatible with all motion detector options.

3-Pin, 5-Pin and 7-Pin Receptacles Options

SPR3, SPR5 and SPR7 - 3-Pin, 5-Pin and 7-Pin Receptacles



SPR3 SC, SPR5 SC and SPR7 SC - 3-Pin, 5-Pin and 7-Pin Receptacles with Shorting Cap



- Dimming receptacle meets ANSI C136.41 Standard

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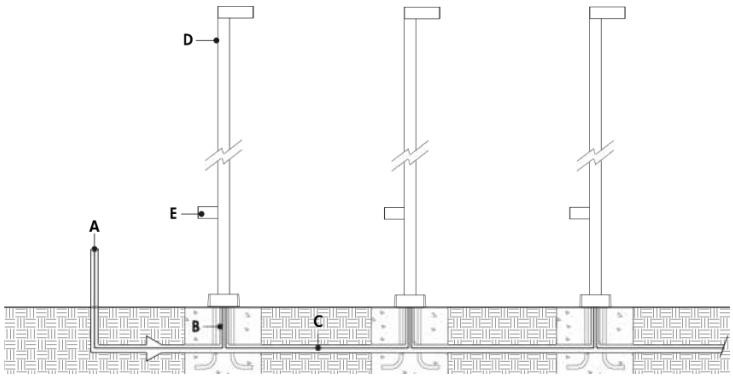
Typical Wiring Diagrams

Wiring Color Code

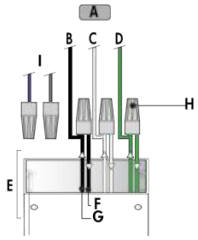
Color	Black	White	Green	Purple	Gray
Use	Line	Line/Neutral	Ground	0 -10V+	0 -10V -

On/Off Control (NO)



A - Power input (120-480V)
B - Conduit (by others)
C - Power wiring (by others)
D - Lumenblade Column
E - Bollard head option

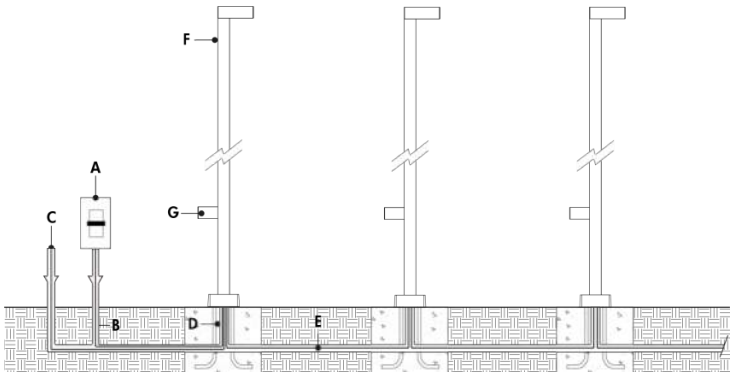
On/Off Control (NO) - wiring detail



A - To fixture
B - Line
C - Line/Neutral
D - Ground
E - Conduit (by others)
F - To next fixture
G - Power input or from previous fixture
H - Wire-nuts (by others)
I - Not required

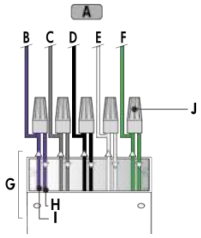
- Consult factory for specific applications and maximum fixture count/cable length recommendations.

0-10V dimming (DIM)



A - Dimmer (by others)
B - Data wiring (by others)
C - Power input (120-480V, wiring by others)
D - Conduit (by others)
E - Power and data wiring (by others)
F - Lumenblade Column
G - Bollard head option

0-10V dimming (DIM) - wiring detail



A - To fixture
B - 0-10V +
C - 0-10V -
D - Line
E - Neutral
F - Ground
G - Conduit (by others)
H - To next fixture
I - Power input or from previous fixture
J - Wire-nuts (by others)

- Consult factory for specific applications and maximum fixture count/cable length recommendations.
- 0-10V mA ratings: passive dimmer (Current Sink): 3mA per fixture, active dimmer (Current Source): 0.5mA per fixture.
- 1% minimum dimming value.

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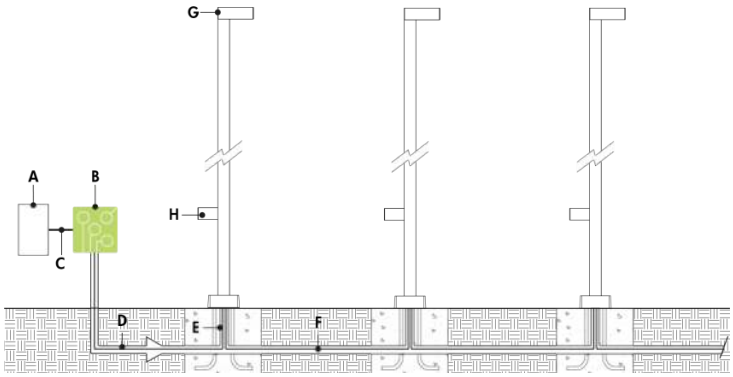
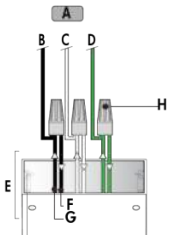
Lumentalk (LT)



A - Third party dimmer/controller
B - Lumentranslator (LTL-010)
C - Data wiring (by others)
D - Power line (120-277V, wiring by others)
E - Conduct (by others)
F - Power wiring (by others)
G - Lumenblade Column
H - Bollard head option



A - To fixture
B - Line
C - Line/Neutral
D - Ground
E - Conduit (by others)
F - To next fixture
G - Power input or from previous fixture
H - Wire-nuts (by others)

- Consult factory for specific applications and maximum fixture count/cable length recommendations.
- Lumentalk enabled fixtures must be commissioned using LumentalkID software and a LID-LT. Consult factory for details.
- Maximum of 1 transmitter (Lumentranslator or Lumenlink) per system.
- No third party fixtures allowed on the same circuit.
- DRG or USB option must be on a separated circuit.

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Motion detector options

Programming

	MD10N - Narrow lens, 10% dimming level	**MD30N -** Narrow lens, 30% dimming level	**MD50N -** Narrow lens, 50% dimming level	**MDPN -** Narrow lens, programmable	
	100% (10V) 10% (1V)	100% (10V) 30% (3V)	100% (10V) 50% (5V)		*How to provide code:*
High mode [1]	10V	10V	10V	• 5V - 10V (Increment: **0.2V**)	10V
Low mode [2]	1V	3V	5V	• Off • 0V - 9.8V (Increment: **0.2V**)	2.6V
Time delay [3]	5 min	5 min	5 min	• 1min - 30min (Increment: **30 seconds**)	10 min
Cut off [4]	1 hr	1 hr	1 hr	• Disable • 1min - 59min (Increment: **30 seconds**) • 1hr - 5hr (Increment: **1 hour**)	3 hr
Set point [5]	Dis	Dis	Dis	• Disable • Auto • 1fc - 250fc (Increment: **1fc**)	Auto
Sensitivity [6]	Max	Max	Max	• On-Fix • Off-Fix • Low • Med • Max	Med
Ramp up [7] **time**	3 sec	3 sec	3 sec	• Disable • 1sec - 60sec (Increment: **1 second**)	10 sec
Fade down [8] **time**	3 sec	3 sec	3 sec	• Disable • 1sec - 60sec (Increment: **1 second**)	10 sec
Photocell [9] **On/Off**	Dis	Dis	Dis	• Disable • 1fc - 250fc (Increment: **1fc**)	Dis

[1] When the sensor detects motion, the dimming control output ramps up to the selected HIGH light level.
[2] After the sensor stops detecting motion and the time delay expires, the dimming control output fades down to the selected LOW light level.
[3] The selected time period that must elapse after the last time the sensor detects motion for the electric lights to fade to LOW mode.
[4] The time period that must elapse after the lights fade to LOW mode, and the sensor detects no motion for the electric lights to turn OFF.
[5] When enabled, the selectable ambient light level threshold that will hold the electric lights off or at LOW level when the sensor detects motion.
[6] The response of the PIR detector to motion within the sensor's coverage area.
[7] Time period for light level to increase from LOW to HIGH.
[8] Time period for light level to decrease from HIGH to LOW.
[9] When enabled, the sensor will force the load OFF after the light level has exceeded the selected photocell setpoint PRIOR SAVE SEND for at least a minute. It will also force the load ON when the light level goes below the setpoint, even if no motion is detected.
[10] The motion detector programming can be modified on site. A remote is required, order separately. See Remote section in the specification sheet for details.

Dimming: When motion is detected within the sensor's coverage area, the sensor sends a signal to ramp the load up to the selectable High Mode level unless the ambient light level is higher than the selected setpoint. When no motion is detected for the duration of the time delay setting, the lights will go to the selectable Low Mode level based on the signal from the sensor. If desired, a cut off time delay will trigger to eventually turn the lights OFF.
Non dimming: When motion is detected within the sensor's coverage area, the sensor sends a signal to turn the load ON unless the ambient light level is higher than the selected setpoint. When no motion is detected for the duration of the time delay setting, the lights will go OFF based on the signal from the sensor.
Dusk to dawn control: When photocell on/off is enabled, and the ambient light falls below the photocell setpoint, the sensor ramps the load up to the selectable High Mode level. If no motion is detected for the duration of the time delay setting, the lights will go to the selectable Low Mode level. If the cut off time delay is disabled, the load will remain on, at High or Low level, based on motion detection, until the ambient light increases above the photocell setpoint.

Coverage area

Narrow lens (MD10N, MD30N, MD50N and MDPN)*



* Maximum 12 ft height, 24 ft diameter coverage area.

High temperatures at the covered area (above 88 °F - 91 °F) reduce the detection zone of the sensor. Consider adding more sensors if the ambient temperatures are expected to be high. Additionally, high floor level temperature may require larger movement for detection. Coverages shown in the diagrams are maximum, measured in linear feet. They represent coverage for walking motion, with no obstacles.

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How to Order

Housing	Mounting	Voltage	Height	Lens [5]	Output (nominal lumens) [8]	Color and Color Temperature	Color Rendering	Distributions	Optical Option	Finish	Control
BLDC Lumenblade Column	**TM1** Single head [1] **TM2** Dual head [2] [3]	**120** 120 volts **208** 208 volts **240** 240 volts **277** 277 volts **347** 347 volts [4] **480** 480 volts [4]	**10FT** 10 ft **12FT** 12 ft	**CSL** Clearsite lens [6] **FSL** Frostsite lens [7]	**XS03** 300lm (8 LEDs) [6] [9] **XS10** 1000lm (8 LEDs) **XS15** 1500lm (8 LEDs) **XS20** 2000lm (8 LEDs) **XS25** 2500lm (8 LEDs)	**AMB** Amber [6] [10] **22K** 2200K [11] **27K** 2700K [12] **30K** 3000K **35K** 3500K **40K** 4000K **57K** 5700K [13]	**CRI 70** CRI 70+ [14] **CRI 80** CRI 80+ [15] **CRI 90** CRI 90+ [16]	**2** Type II **2BLS** Type II backlight shield **3** Type III **3BLS** Type III backlight shield **4** Type IV **4BLS** Type IV backlight shield **5** Type V **5S** Type V square	**LV** Louver [6] [17] [18]	**BK** Black Sandtex® **BRZ** Bronze Sandtex® **SI** Silver Sandtex® **BKTX** Textured Black **BRZTX** Textured Bronze Non-Metallic **GRATX** Textured Medium Gray **GRNTX** Textured Green **WHTX** Textured White **CC** Custom Color & Finish [19] [20] [21]	**DIM** 0-10V dimming [22] **LT** Lumentalk [23]

Notes:

1. Not available with CH head option.
2. Not available with BH head option.
3. Not available with HFSL lens.
4. Not available with LT control option.
5. Standard IK06 rating for glass lens. IK10 rated polycarbonate lens available, please consult factory.
6. Not available with type 5 distribution.
7. Available with type 3 and 5 distributions only.
8. Lumen output will vary according to the lens and distribution specified for the fixture. Please consult the photometric information section of the specification sheet for more details.
9. Available with AMB color temperature only.
10. Available with column head XS03 output only.
11. Available for CRI 80 only.
12. Available for CRI 80 and CRI 90 only.
13. Available for CRI 70 and CRI 80 only.
14. Binning within a 3-step McAdam ellipse, with the exception of 5700K.
15. Binning within a 2-step MacAdam ellipse, with the exception of 2200K and 5700K.
16. Binning within a 2-step MacAdam ellipse
17. Available with CSL lens only.
18. Factory installed, not field changeable.
19. Specify RAL number followed by "TX" for textured finish (ex: RAL9007TX) or STX for Sandtex finish (ex: RAL9007STX). Textured or Sandtex finishes are recommended for the durability of all products. If a finish is not specified with the RAL number (ex: RAL9007), a glossy finish will be provided. Please consult factory for other RAL textures and glosses, or to match alternate color charts. Final color matching results may vary.
20. Setup charges apply for RAL colors. Consult factory for details.
21. Longer lead times can be expected for custom RAL color finishes.
22. DIM control can be used as NO (On/off control) if no data is required.
23. Not available with PB photoelectric cell, SPR3, SPR3 SC, SPR5, SPR5 SC, SPR7 and SPR7 SC 3-Pin, 5-Pin, and 7-Pin receptacles and MD10N, MD30N, MD50N, MDPN and MDNL motion detector options.

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How to Order

Option	Head Option	Head Option Height [1]	Head Lens [5]	Head Output	Head Color and Color Temperature	Head Color Rendering	Head Distributions	Head Optical Option
VRBO Vibration Rated for Bridge and Overpass [24] [25] **CRC** Corrosion-resistant coating [26] [27] **SP** Surge protector **PB** Photoelectric Cell Button Type [4] [28] [29] **DRG** Ground Fault Duplex Receptacle [30] **DRG IU** Ground Fault Duplex Receptacle (while in use) [30] **USB** Duplex receptacle with USB A and USB C [30] **USB IU** Duplex receptacle with USB A and USB C in-use [30] **SPR3** 3-Pin Receptacle [4] [31] [32] **SPR3 SC** 3-Pin Receptacle with Shorting Cap [4] [31] [32] **SPR5** 5-Pin Receptacle [4] [31] [32] **SPR5 SC** 5-Pin Receptacle with Shorting Cap [4] [31] [32] **SPR7** 7-Pin Receptacle [4] [31] [32] **SPR7 SC** 7-Pin Receptacle with Shorting Cap [4] [31] [32] **MD10N** Motion detector 10% factory-set dimming level (narrow lens) [4] [33] [34] [35] **MD30N** Motion detector 30% factory-set dimming level (narrow lens) [4] [33] [34] [35] **MD50N** Motion detector 50% factory-set dimming level (narrow lens) [4] [33] [34] [35] **MDNL** Détecteur de mouvements, pas de niveau de gradation programmé en usine (lentille étroite) [4] [34] [36] [37] [38] **MDPN** Motion detector programmable, factory-set dimming level (narrow lens) [4] [33] [34] [35] [39] **DB** Direct Burial	**BH** Bollard Head [40] **CH** Column head [3] [41]	**3FT** 3 ft	**CSL** Clearsite lens [42] **FSL** Frostsite lens [43] **HFSL** Half-Frostsite lens [44] [45]	**N02** 200lm (4 LEDs) [6] [46] **N03** 300lm (4 LEDs) **N05** 500lm (4 LEDs) **N07** 700lm (4 LEDs) **N10** 1000lm (4 LEDs) **XS03** 300lm (8 LEDs) [6] [46] **XS10** 1000lm (8 LEDs) **XS15** 1500lm (8 LEDs) **XS20** 2000lm (8 LEDs) **XS25** 2500lm (8 LEDs)	**AMB** Amber [6] [47] [48] **22K** 2200K [11] **27K** 2700K [12] **30K** 3000K **35K** 3500K **40K** 4000K **57K** 5700K [13]	**CRI 70** CRI 70+ [14] **CRI 80** CRI 80+ [15] **CRI 90** CRI 90+ [16]	**2** Type II **2BLS** Type II backlight shield **3** Type III **3BLS** Type III backlight shield **4** Type IV **4BLS** Type IV backlight shield **5** Type V **5S** Type V square	**LV** Louver [6] [18] [49]

Notes:

1. Not available with CH head option.
3. Not available with HFSL lens.
4. Not available with LT control option.
5. Standard IK06 rating for glass lens. IK10 rated polycarbonate lens available, please consult factory.
6. Not available with type 5 distribution.
11. Available for CRI 80 only.
12. Available for CRI 80 and CRI 90 only.
13. Available for CRI 70 and CRI 80 only.
14. Binning within a 3-step McAdam ellipse, with the exception of 5700K.
15. Binning within a 2-step MacAdam ellipse, with the exception of 2200K and 5700K.
16. Binning within a 2-step MacAdam ellipse
18. Factory installed, not field changeable.
24. Vibration tested in accordance with ANSI 136.31 2018 for bridge and overpass applications at 5Gv.
25. Specify only if a bridge or overpass application is required.
26. Use only when exposed to salt spray. This option is not required for normal outdoor exposure.
27. Setup charges apply. Consult factory for details.
28. Not available for 480V voltage option.
29. Not available with MD10N, MD30N, MD50N, MDPN and MDNL motion detector options.
30. A ground fault duplex receptacle (DRG or DRG IU) and a duplex USB receptacle (USB or USB IU) cannot be combined.
31. Only one receptacle can be specified per fixture, cannot be combined with motion detector option.
32. Not available with PB option.
33. The motion detector programming can be modified on site. A remote is required, order separately. See Remote section in the specification sheet for details.
34. Only one motion detector can be specified per fixture, cannot be combined with a receptacle.
35. MD10N, MD30N, MD50N and MDPN are Wattstopper motion detectors.
36. MDNL is an N-Light motion detector.
37. Consult factory for details.
38. Not available for 347V and 480V voltage options.
39. The motion detector is programmed in the factory, as per the settings requested at the time of the order.
40. Available for N02, N03, N05, N07 and N10 bollard head outputs only.
41. Available for XS03, XS10, XS15, XS20 and XS25 column head outputs only.
42. Not available with type 5 distribution when head option is specified for the Lumenblade column.
43. Available with type 3 and type 5 distributions when a head option is specified for the Lumenblade column.
44. Available with type 2, type 3 and type 4 distributions when a bollard head is specified for the Lumenblade column.
45. Available for N03, N05, N07 and N10 bollard head outputs only.
46. Available with AMB head color temperature only.
47. Available with N02 output when a bollard head is specified. Available with XS03 output when a second column head is specified for the Lumenblade column.
48. Not available for FSL and HFSL lens.
49. Not available for FSL lens.

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BRICK-OD OUTDOOR

FOR INDOOR, REFER TO MODEL #: 1575

Catalog Number:
7075-12-TW-H08-30K

TYPE WP-1

BROWNLEE



7075-12” in Textured Black (TB)



7075-24” in Textured Black (TB)

7075 LED

The BRICK-OD (outdoor) is a minimal, clean and contemporary exterior sconce with exceptional versatility: Three ADA compliant sizes (8”, 12” and 24”), single direction LED distribution, and three finishes to choose from. Perfect for exterior facades, entryways, columns, and breezeways. Since this is a wet-listed unit, it can also be used in healthcare applications requiring durable luminaires which can be wiped down. Available with integral battery backup.

FINISHES

TB TG TW

BRICK-OD OUTDOOR

FOR INDOOR, REFER TO MODEL #: 1575

PROJECT:
MODEL #:
FIXTURE TYPE:

STANDARD SPECIFICATIONS - *SINGLE DIRECTION DISTRIBUTION (7075)*

OUTER FRAME & MOUNT PLATE
Formed and welded aluminum. Countersunk fasteners located on top of fixture. No exposed hardware on sides or bottom of fixture. Closed cell foam gasket on rear mount plate.

DIFFUSER
UV stabilized frosted acrylic diffuser. Smooth uniform illumination.

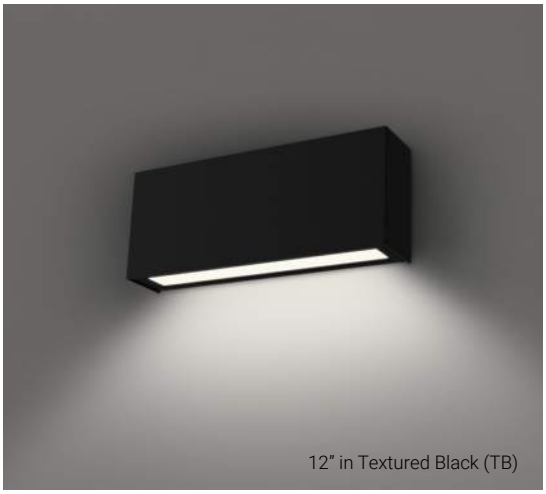
LED PERFORMANCE - 3500K STANDARD - TYPE 2 DISTRIBUTION
120-277V - 3500K, L80 rating - 60,000 hrs - L70 rating (projected) - 100,000 hrs
Amperage rated @ 110V input
Operating ambient temperature: -20°C / -4°F - 50°C / 122°F

Delivered 3500K lumens noted. Consult Brownlee.com for performance of all CCTs.
08 Size: C13 – 13W nominal, .10 A input - 1165 lm. Dimmable (0-10V). 82 CRI Standard.
12 Size: H08 – 8W nominal, .07 A input - 860 lm. Dimmable (0-10V). 90+ CRI Standard.
12 Size: H16 – 16W nominal, .14 A input – 1490 lm. Dimmable (0-10V). 90+ CRI Standard.
12 Size: H21 – 21W nominal, .18 A input – 1725 lm. Dimmable (0-10V). 90+ CRI Standard.
24 Size: H16 – 16W nominal, .14 A input – 1470 lm. Dimmable (0-10V). 90+ CRI Standard.
24 Size: H32 – 32W nominal, .27 A input – 3030 lm. Dimmable (0-10V). 90+ CRI Standard.
24 Size: H41 – 41W nominal, .35 A input – 3410 lm. Dimmable (0-10V). 90+ CRI Standard.

MOUNTING
Fixture mounts to a 4x4 junction box (by others).
Wet-listed in the downward orientation only (light source facing down).

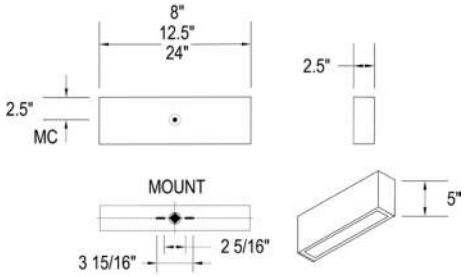
FINISH
Durable corrosion resistant powder coat finish.
Custom colors available, contact factory.

WARRANTY
5 year limited warranty on this LED product.
Consult factory for details.


12" in Textured Black (TB)

Integral Battery Backup
Refer to options section





WET

ADA

ORDERING INFORMATION

7075 - _____ - _____ - _____ - _____ - _____

Model | 2. | 3. | 4. | 5. | 6.

2. SIZE

08	L: 08"
12	L: 12"
24	L: 24"

3. FINISH

TB	Textured Black
TG	Textured Grey
TW	Textured White

Note: TB, TG, TW are ultra fine textured matte finishes. Contact your local representative for color swatches.

CUSTOM
Additional finishes available as a modified option. Refer to Brownlee's Finishes webpage for inspiration.

4. WATTAGE

08 SIZE

C13	13W C Series LED

12 SIZE

H08	08W H Series LED
H16	16W H Series LED
H21	21W H Series LED

24 SIZE

H16	16W H Series LED
H32	32W H Series LED
H41	41W H Series LED

5. COLOR TEMPERATURE

35K	3500K color temperature
27K	2700K color temperature (C Series Only)
30K	3000K color temperature
40K	4000K color temperature

6. AVAILABLE OPTIONS

90R[0]	90 CRI (C-Series Wattages: 30K only)
BAC[1]	Buy American Compliant
BBI[2]	Integral Battery Backup - 10W (32F minimum)
BBC[2]	Integral Battery Backup, Cold Weather - 15W (-4F minimum) (24 Size Only)

Battery must be connected to continuous power supply within 7 Mo. of shipping. See Warranty Note 3.

DTR[4]	Triac (Line Voltage) Dimming (120V) (Cannot be combined with BBI/BBC)
ES[6]	ENERGY STAR® (All except H08, H21, H41)
FCL[7]	French Canadian Label
PO1	Photo Control (120V)
PO2	Photo Control (208, 240, 277V)
T24[9]	Title 24 JA8 Compliant (H16 & H32 only)

Universal Footnotes (only applies if option is listed on spec sheet): (0) 90R - 90 CRI output-loss multiplier: 0.85 (estimate). Cannot be combined with ES. **1) BAC** - cannot be combined with FCL. **(2) BBI/BBS/BBC** - cannot be combined with ECW or EXT. **(3) BLD** - includes integral microwave motion sensor (do not combine with OCC option). Cannot be combined with DTR. **(4) DTR** - cannot be combined with BLD. **(5) ECW** - cannot be combined with BBI, BBC, or DTR. **(6) ES** - cannot be combined with 90R or T24. **(7) FCL** - cannot be combined with BAC. **(8) OCC** - integral microwave motion sensor (ON/OFF). **(9) T24** - includes JA8 labeling and 90 CRI LEDs (do not combine with 90R option). Cannot be combined with ES. **(10) PCH/PC4** - cannot be combined with BLD or OCC. **Add'l Notes: *BBI/BBC** - BBI minimum operating temp: 10C/50F unless otherwise stated. BBC minimum operating temp: -20C/-4F. ****BLD** - integral microwave motion sensor with step-dim control. 1: Motion is detected, illuminate to 100%. 2: Motion no longer detected, dim to set level. 3: Remain in continuous dimmed state or turn off after set period. Configurable via onboard dip switches.

Specifications and dimensions subject to change without notice.
Consult your Brownlee Lighting representative for availability and ordering information.

BROWNLEE LIGHTING
www.brownlee.com

REVISED
2024.05.15

BRICK-OD OUTDOOR

PHOTOMETRIC DATA - For theoretical reference only. Data subject to change without notice.

PROJECT:
MODEL #:
FIXTURE TYPE:

ISOFOOTCANDLE PLOT LEGEND

10 fc 5 fc 2 fc .5 fc .25 fc

Mounting Height: 10'

Calculation Grid: 10' x 10'

POLAR GRAPH LEGEND

1 - Vertical Plane Through Horizontal Angles (5 - 185) (Through Max. Cd.)

2 - Vertical Plane Through Horizontal Angles (90 - 270)

3 - Horizontal Cone Through Vertical Angle (17.5) (Through Max. Cd.)

PHOTOMETRIC DATA

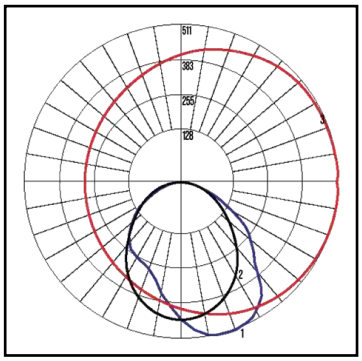
ADDITIONAL LUMEN PACKAGES AVAILABLE. CONTACT FACTORY FOR SUPPORTING PLOTS OR REFER TO IES FILES ONLINE.

Model: 7075-08-C13-35K / QTY: 1
Description: 08" Size, 13W, 1160 lm

ISOFOOTCANDLE PLOT



POLAR GRAPH



BUG RATING
B1-U0-G0

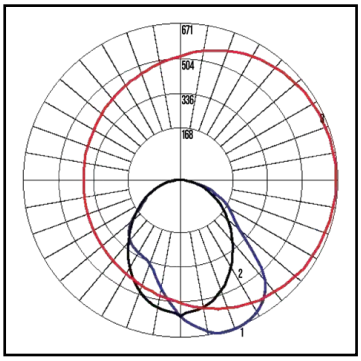
DISTRIBUTION
TYPE 2

Model: 7075-12-H16-35K / QTY: 1
Description: 12" Size, 16W, 1490 lm

ISOFOOTCANDLE PLOT



POLAR GRAPH

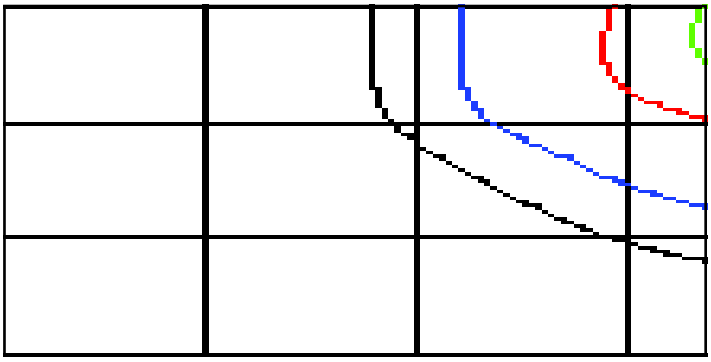


BUG RATING
B1-U0-G1

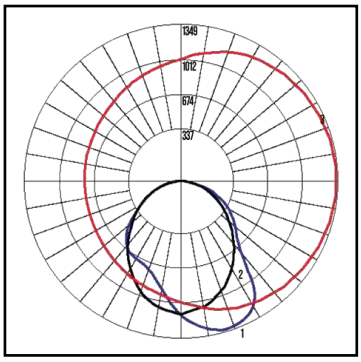
DISTRIBUTION
TYPE 2

Model: 7075-24-H32-35K / QTY: 1
Description: 24" Size, 32W, 3030 lm

ISOFOOTCANDLE PLOT



POLAR GRAPH



BUG RATING
B1-U0-G1

DISTRIBUTION
TYPE 2

Specifications and dimensions subject to change without notice.
Consult your Brownlee Lighting representative for availability and ordering information.

BROWNLEE LIGHTING
www.brownlee.com

REVISED
2024.05.15

Specification Sheet

Catalog Number:
BLDN-WM-VOLTAGE-CSL-XS25-30K-CRI 80-3-FINISH-CONTROL

TYPE WP-2

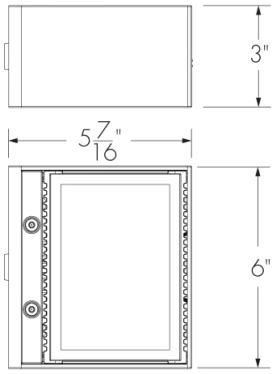
Lumenblade
Nano
BLDN

Project Name _____ **Qty** _____

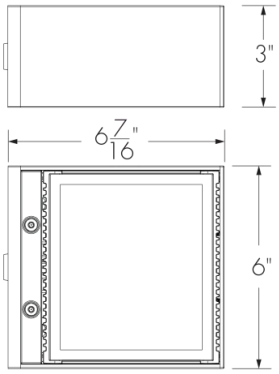
Type _____ **Catalog / Part Number** _____



W1H2 Wall Mount Option Shown



N02, N03, N05, N07 and N10 outputs



XS03, XS10, XS15, XS20 and XS25 outputs

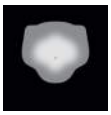
Side views

Bottom views

Distributions


Type II


Type III


Type IV


Type V


Type II Backlight Shield


Type III Backlight Shield


Type IV Backlight Shield


Type V Square

Color and Color Temperature


Amber


2200K


2700K


3000K


3500K


4000K


5700K

Control

ON/OFF 0-10V

Ratings

IP66 (optical chamber) IK06 (lens) IK10* (frame)

*IK10 polycarbonate lens option available, consult factory.

Certifications

Description

The Lumenpulse Lumenblade Nano is an outdoor LED luminaire that uses a rectilinear version of the Lumencentro light engine to create a continuous line of light. Side Mount or Wall Mount options are available. Its seen-but-not-seen, minimalist design is sustainable, blends with both contemporary and heritage architectures, provides a high level of security, and is sensitive to the natural environment with low outputs and with a BUG rating of 0.

Features

Mounting	Side Mounting, Wall Mounting
Color and Color Temperature	True Amber 585nm-595nm (Turtle-Friendly), 2200K, 2700K, 3000K, 3500K, 4000K
Distributions	Type II, Type III or Type IV (with or without backlight shield), Type V, Type V square
Optical Option (factory installed)	Louver
Vibration Rating	Meets ANSI C136.31-2018 vibration rating for Bridge & Overpass applications
Option	Vibration Rated for Bridge and Overpass Corrosion-resistant Coating for Hostile Environments
Warranty	5-year limited warranty

Performance

Output (Nominal Lumens)	Minimum 200lm/ Maximum 2500lm
Efficacy	Up to 127 lm/W (XS10 lumen output, 4000K, CRI 70+, Type VS)
Color Rendering	3 SDCM for CRI 70+, 2 SDCM for CRI 80+ and CRI 90+
Lumen Maintenance	TM-21 L70 > 145,000 hrs (reported, Ta 25 - 50 °C [77 - 122 °F])
Dark Sky	Dark sky compliant (2200K, 2700K, 3000K and Amber color temperatures, BUG rating of U0)

lumenpulse™
1220 Marie-Victorin Blvd., Longueuil, QC, J4G 2H9, CAN | T 514.937.3003 | Toll-Free 1.877.937.3003 | info@lumenpulse.com
www.lumenpulse.com www.lumenpulse.com/products/2963

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SA - R3

Physical

Housing Material	Extruded aluminium 6000 alloy series
Lens Material	Optical tempered clear glass (Clearsite lens), Optical tempered frosted glass (Frostsite lens), Optical tempered half-frosted glass (Half-Frostsite lens)
Surface Finish	Super durable resistant exterior polyester powder coating meets AAMA 2604-98 requirements (5-years Florida exposure). A corrosion resistant finish (CRC) pre-finish is available to meet ASTM B-117 & ASTM D-1654 (salt spray resistance) and ASTM D-2247 requirements (humidity resistance).
Weight	1.87 lbs to 4.84 lbs, refer to EPA and fixture weight tables for details

Electrical and Control

Voltage	120 volts, 208 volts, 240 volts, 277 volts
Control	On/Off Control, 0-10V Dimming

Environmental

Storage Temperature	-40°C to 50°C [-40°F to 122°F] (device must reach start-up temperature value before operating)
Operating Temperature	-40°C to 50°C [-40°F to 122°F]
Start-up Temperature	-25°C to 50°C [-13°F to 122°F]
Ingress Protection Rating	IP66 (optical chamber) Wet location rated
Impact Resistance Rating	IK06 (glass lens) IK10 (frame) *IK10 polycarbonate lens option available, consult factory
Environment	Dry/damp/wet location

EPA And Fixture Weight Tables

*Fixture weights are estimated.

N02, N03, N05, N07 And N10 Output (Board With 4 LEDs)

		SD-RPA6N SD-RPA6TN	SD-SPA6N	SD-SPA6TN	SD-RPA8N SD-RPA8TN	SD-SPA8N SD-SPA8TN
EPA (sq ft.)	S1E	0.171	0.170	0.170	0.171	0.170
	S2E	0.342	0.340	0.340	0.342	0.340
Weight* (lbs)	S1E	2.22	1.87	1.90	2.06	1.87
	S2E	4.44	3.74	3.80	4.12	3.74

	WM-W1H2	WM-W1H4	WM-W1HSJB
EPA (sq ft.)	0.170	0.170	0.293
Weight* (lbs)	1.87	2.20	3.86

XS03, XS10, XS15, XS20 And XS25 Output (Board With 8 LEDs)

		SD-RPA6N SD-RPA6TN	SD-SPA6N	SD-SPA6TN	SD-RPA8N SD-RPA8TN	SD-SPA8N SD-SPA8TN
EPA (sq ft.)	S1E	0.197	0.201	0.201	0.197	0.201
	S2E	0.394	0.402	0.402	0.394	0.402
Weight* (lbs)	S1E	2.42	2.07	2.10	2.26	2.07
	S2E	4.84	4.14	4.20	4.52	4.14

	WM-W1H2	WM-W1H4	WM-W1HSJB
EPA (sq ft.)	0.201	0.201	0.324
Weight* (lbs)	2.07	2.40	4.06

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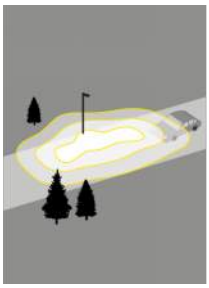
Photometric Information

Type II, 4000K, CRI 70+, Clearsite Lens



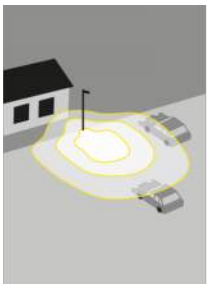
	Nominal output [lm]	Typical delivered output [lm]	Efficiency (lm/W)	BUG Rating B U G	Typical maximum power 120/277V (W)
N03	233	78	0 0 0	3
N05	476	79	0 0 0	6
N07	748	83	0 0 0	9
N10	971	88	0 0 0	11
XS10	1,113	111	0 0 0	10
XS15	1,594	94	1 0 1	17
XS20	1,999	80	1 0 1	25
XS25	2,531	84	1 0 1	30

Type III, 4000K, CRI 70+, Clearsite Lens



	Nominal output [lm]	Typical delivered output [lm]	Efficiency (lm/W)	BUG Rating B U G	Typical maximum power 120/277V (W)
N03	255	85	0 0 0	3
N05	520	87	0 0 0	6
N07	818	91	0 0 0	9
N10	1,062	97	0 0 0	11
XS10	1,174	117	0 0 0	10
XS15	1,681	99	1 0 1	17
XS20	2,107	84	1 0 1	25
XS25	2,668	89	1 0 1	30

Type IV, 4000K, CRI 70+, Clearsite Lens



	Nominal output [lm]	Typical delivered output [lm]	Efficiency (lm/W)	BUG Rating B U G	Typical maximum power 120/277V (W)
N03	214	71	0 0 0	3
N05	437	73	0 0 0	6
N07	687	76	0 0 0	9
N10	892	81	0 0 0	11
XS10	1,004	100	0 0 0	10
XS15	1,438	85	1 0 1	17
XS20	1,803	72	1 0 1	25
XS25	2,282	76	1 0 1	30

Type V Square, 4000K, CRI 70+, Clearsite Lens



	Nominal output [lm]	Typical delivered output [lm]	Efficiency (lm/W)	BUG Rating B U G	Typical maximum power 120/277V (W)
N03	258	86	0 0 0	3
N05	526	88	0 0 0	6
N07	827	92	0 0 0	9
N10	1,074	98	0 0 0	11
XS10	1,267	127	0 0 0	10
XS15	1,813	107	1 0 1	17
XS20	2,274	91	1 0 1	25
XS25	2,879	96	1 0 1	30

*Photometric performance is measured in compliance with IESNA LM-79-19. Due to rapid and continous advances in LED technology, photometric information is subject to change without notice.

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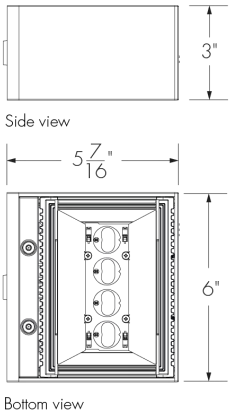
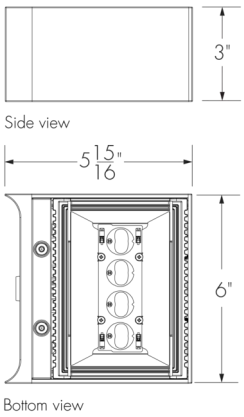
Dimensions

N02, N03, N05, N07 And N10 Output (Board With 4 LEDs)

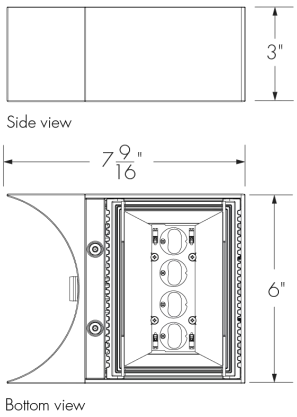
W1H2, SPA6N, SPA8N and SPA8TN



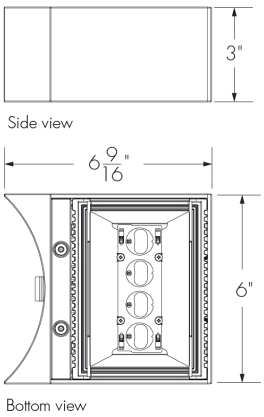
SPA6TN



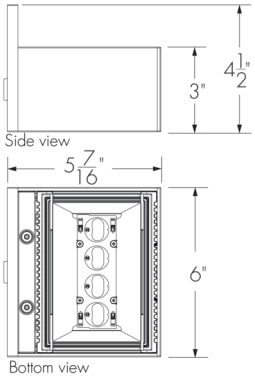
RPA6N And RPA6TN



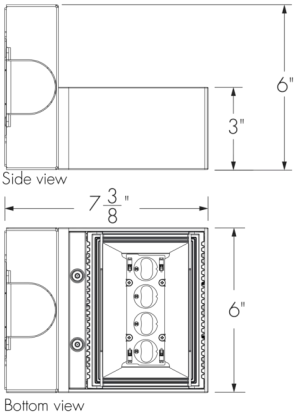
RPA8N And RPA8TN



W1H4



W1HSJB



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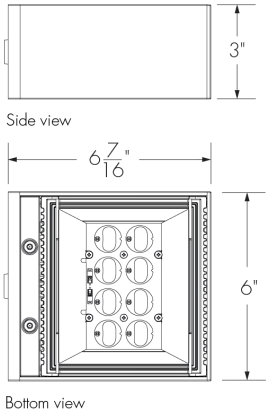
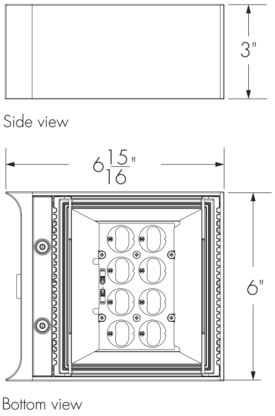
XS03, XS10, XS15, XS20 And XS25 Output (Board With 8 LEDs)

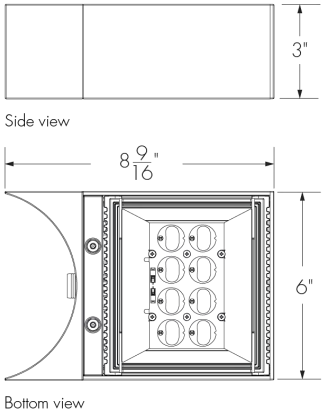
W1H2, SPA6N, SPA8N and SPA8TN



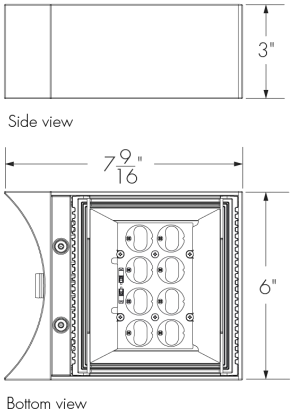
SPA6TN



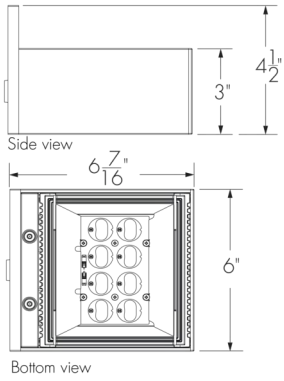
RPA6N And RPA6TN



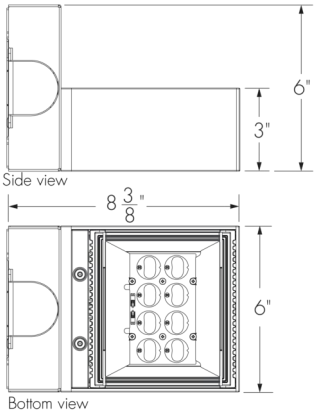
RPA8N And RPA8TN



W1H4



W1HSJB



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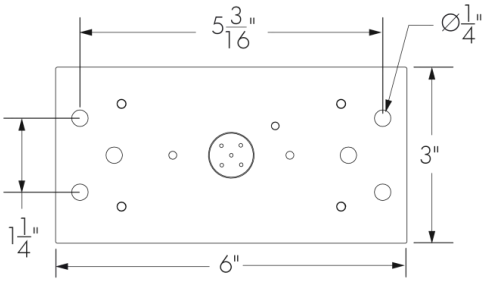
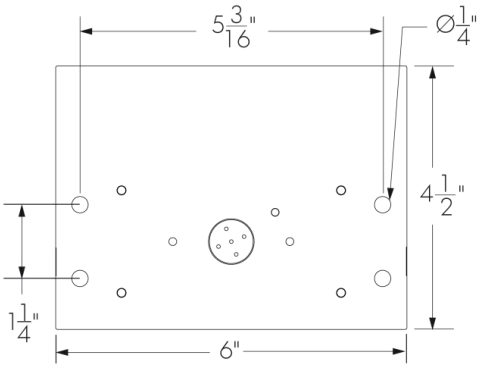
Mounting Details

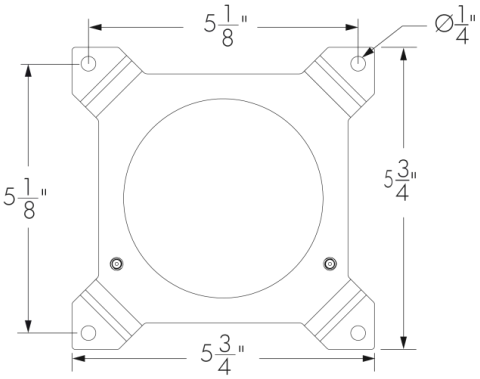
BLDN-WM-W1H2 Mounting Plate Details



BLDN-WM-W1H4 Mounting Plate Details



BLDN-WM-W1HSJB Mounting Plate Details



The WM-W1HSJB mounting is designed for installation on a round exterior (weatherproof) surface junction box (Ø4 in diameter and 1 5/8 in deep) that accommodates up to 3/4" NPT trade size conduit. For all other types of junction boxes, consult the factory.

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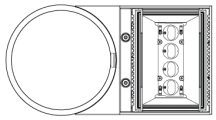
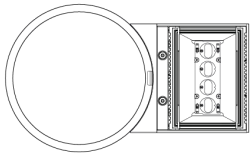
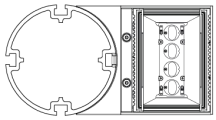
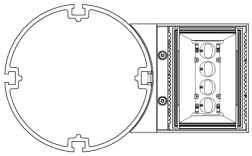
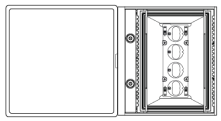
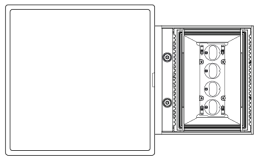
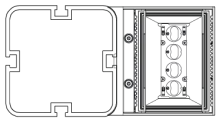
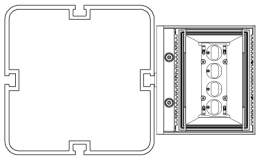
BLDN-SD Pole Mounting Option

	Straight and muffler poles		Lumentech pole	
	6in	8in	6in	8in
Round shape	RPA6N 	RPA8N 	RPA6TN 	RPA8TN 
Square shape	SPA6N 	SPA8N 	SPA6TN 	SPA8TN 

BLDN-SD with 4 LEDs shown.
Available configurations:

S1E Single pole-top
S2E Double pole-top
S1X Variable Height Mounting Arm

*Consult factory for other configurations.

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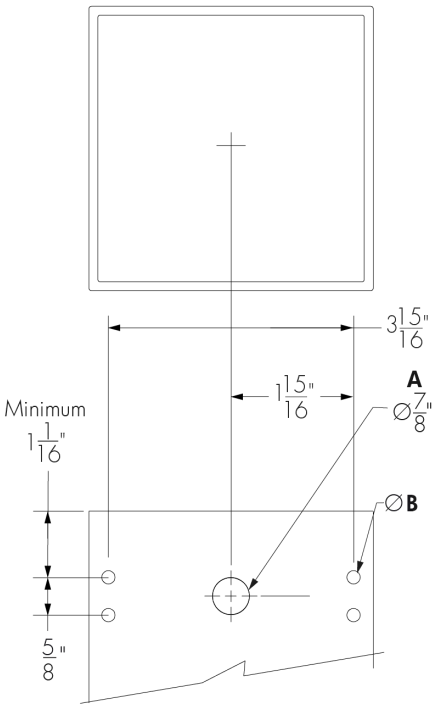
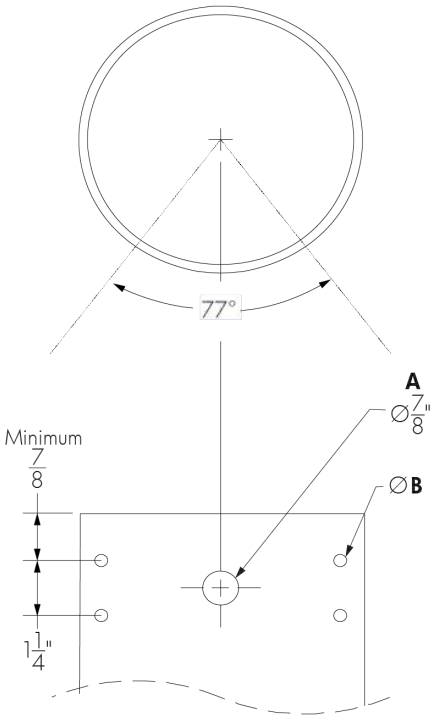
BLDN-SD Poles Drilling Patterns

SPA6N, SPA6TN, SPA8N and SPA8TN



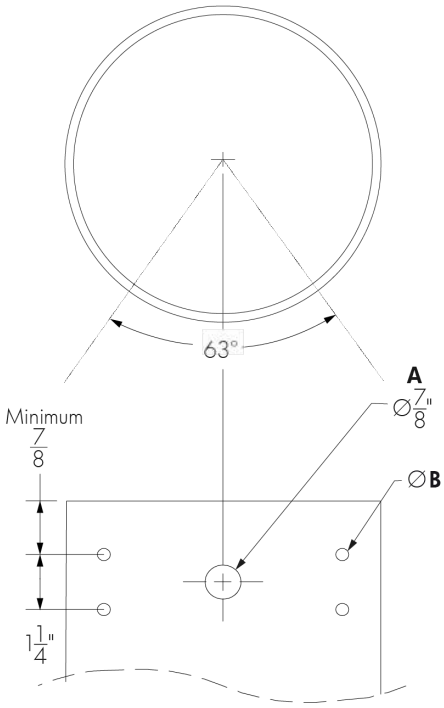
6 in or 8 in Square pole mount.

RPA6N And RPA6TN



6 in Ø round pole mounting.

RPA8N And RPA8TN



8 in Ø round pole mounting.

A - Wire feeding location

B - **S1E and S2E pole configuration**

9/32 in drilling holes. Nylon nuts (x4) and screws (4x) 1/4-20 x 1.25 in provided by lumenpulse.

S1X pole configuration

1/4-20 threaded holes. Screws (4x) 1/4-20 x 1.25 in provided by lumenpulse.

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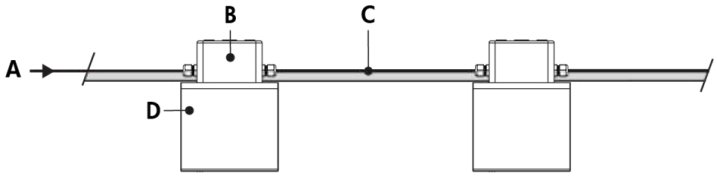
Typical Wiring Diagrams

Wiring Color Code

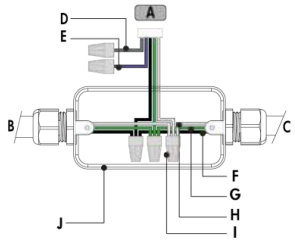
Color	Black	White	Green	Purple	Gray
Use	Line	Line/Neutral	Ground	0 -10V+	0 -10V -

On/Off Control (NO)



A - Power input (120-277V)
B - Junction box (by others)
C - Power wiring (by others)
D - Lumenblade Nano Wall Mount

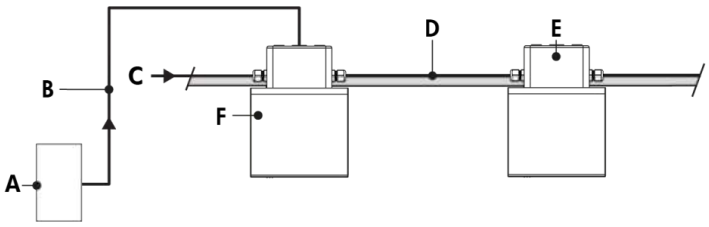
On/Off Control (NO) - Wiring Detail



A - To fixture
B - Power input or from previous fixture
C - To next fixture
D - Not required
E - Not required
F - Line
G - Ground
H - Neutral
I - Wire-nuts
J - Junction box (by others)

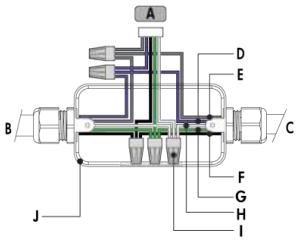
- Consult factory for specific applications and maximum fixture count/cable length recommendations.

0-10V Dimming (DIM)



A - Dimmer (by others)
B - Data wiring (by others)
C - Power input (120-277V, wiring by others)
D - Conduit (by others)
E - Junction box (by others)
F - Lumenblade Nano Wall mount

0-10V Dimming (DIM) - Wiring Detail



A - To fixture
B - Power input or from previous fixture
C - To next fixture
D - 0-10V +
E - 0-10V -
F - Line
G - Ground
H - Neutral
I - Wire-nuts
J - Junction box (by others)

- Consult factory for specific applications and maximum fixture count/cable length recommendations.
- 0-10V mA ratings: passive dimmer (Current Sink): 3mA per fixture, active dimmer (Current Source): 0.5mA per fixture.
- 1% minimum dimming value.

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How to Order

Housing	Mounting	Voltage	Lens [5]	Output (Nominal Lumens) [9]	Color and Color Temperature	Color Rendering	Distributions	Optical Option	Finish	Control	Option	Mounting Adaptor
BLDN Lumenblade Nano	**SD** Side Mounting [1] **WM** Wall Mounting [2] [3] [4]	**120** 120 volts **208** 208 volts **240** 240 volts **277** 277 volts	**CSL** Clearsite Lens [6] **FSL** Frostsite Lens [7] **HFSL** Half-Frosted Site Lens [4] [8]	**N02** 200lm (4 LEDs) [6] [10] [11] **N03** 300lm (4 LEDs) **N05** 500lm (4 LEDs) **N07** 700lm (4 LEDs) **N10** 1000lm (4 LEDs) **XS03** 300lm (8 LEDs) [6] [10] [11] **XS10** 1000lm (8 LEDs) **XS15** 1500lm (8 LEDs) **XS20** 2000lm (8 LEDs) **XS25** 2500lm (8 LEDs)	**AMB** Amber [6] [11] [12] [13] **22K** 2200K [14] **27K** 2700K [15] **30K** 3000K **35K** 3500K **40K** 4000K **57K** 5700K [16]	**CRI 70** CRI 70+ [17] **CRI 80** CRI 80+ [18] **CRI 90** CRI 90+ [19]	**2** Type II **2BLS** Type II Backlight Shield **3** Type III **3BLS** Type III Backlight Shield **4** Type IV **4BLS** Type IV Backlight Shield **5** Type V **5S** Type V Square	**LV** Louver [6] [20] [21]	**BK** Black Sandtex® **BRZ** Bronze Sandtex® **SI** Silver Sandtex® **BKTX** Textured Black **BRZTX** Textured Bronze Non-Metallic **GRATX** Textured Medium Gray **GRNTX** Textured Green **WHTX** Textured White **CC** Custom Color & Finish [22] [23] [24]	**DIM** 0-10V Dimming [25]	**VRBO** Vibration Rated for Bridge and Overpass [26] [27] [28] **CRC** Corrosion-resistant coating [29] [30]	**RPA6N** Round Pole Adaptor for Ø6 in Pole **SPA6N** Square Pole Adaptor for Ø6 in Pole **RPA8N** Round Pole Adaptor for Ø8 in Pole **SPA8N** Square Pole Adaptor for Ø8 in Pole **RPA6TN** Round Pole Adaptor for Lumentech Ø6 in Pole **SPA6TN** Square Pole Adaptor for Lumentech Ø6 in Pole **RPA8TN** Round Pole Adaptor for Lumentech Ø8 in Pole **SPA8TN** Square Pole Adaptor for Lumentech Ø8 in Pole **W1H2** Horizontal Wall Mount Adaptor for 2 in x 4 in Recessed Junction Box **W1H4** Horizontal Wall Mounting Adaptor for 4 in x 4 in Recessed Junction Box **W1HSJB** Horizontal Wall Mounting Adaptor for Ø4 in Round Exterior Surface Junction Box [31] [32]

Notes:

1. Available with all pole mounting options.
2. Available with W1H2, WIH4 and W1HSJB adaptors only.
3. When combined with CSL lens, only AMB color temperature is available.
4. Available with Type 2, 3 and 4 distributions only.
5. Standard IK06 rating for glass lens. IK10 rated polycarbonate lens available, please consult factory.
6. Not available with type 5 distribution.
7. Available with type 3 and 5 distributions only.
8. Available for N03, N05, N07 and N10 outputs only.
9. Lumen output will vary according to the lens and distribution specified for the fixture. Please consult the photometric information section of the specification sheet for more details.
10. Available with AMB color temperature only.
11. Not available for FSL and HFSL lens.
12. Available with N02 and XS03 outputs only.
13. Backlight shield distributions not available if combined with WM option.
14. Available for CRI 80 only.
15. Available for CRI 80 and CRI 90 only.
16. Available for CRI 70 and CRI 80 only.
17. Binning within a 3-step McAdam ellipse, with the exception of 5700K.
18. Binning within a 2-step MacAdam ellipse, with the exception of 2200K and 5700K.
19. Binning within a 2-step MacAdam ellipse.
20. Available with CSL and HFSL lenses only.
21. Factory installed, not field changeable.
22. Specify RAL number followed by "TX" for textured finish (ex: RAL9007TX) or STX for Sandtex finish (ex: RAL9007STX). Textured or Sandtex finishes are recommended for the durability of all products. If a finish is not specified with the RAL number (ex: RAL9007), a glossy finish will be provided. Please consult factory for other RAL textures and glosses, or to match alternate color charts. Final color matching results may vary.
23. Longer lead times can be expected for custom RAL color finishes.
24. Setup charges apply for RAL colors. Consult factory for details.
25. DIM control can be used as NO (On/Off control) if no data is required.
26. Vibration tested in accordance with ANSI 136.31 2018 for bridge and overpass applications at 5Gv.
27. Specify only if a bridge or overpass application is required.
28. Not available for W1HSJB mounting adaptor.
29. Use only when exposed to salt spray. This option is not required for normal outdoor exposure.
30. Setup charges apply. Consult factory for details.
31. The WM-W1HSJB mounting is designed for installation on a round exterior (weatherproof) surface junction box (Ø4 in diameter and 1 5/8 in deep). For all other types of junction box, consult the factory.
32. Not available with VRBO option.

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LUMINIS®

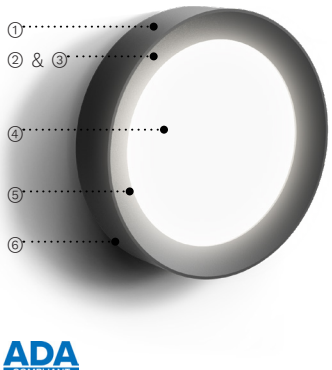
Type C

Catalog Number:
SN800C-L1L11-30K-VOLTAGE-CONDUIT-PHOTOCELL-LOUVERS-FINISH-XX

SN800/SN800C
SCENA
WALL/CEILING

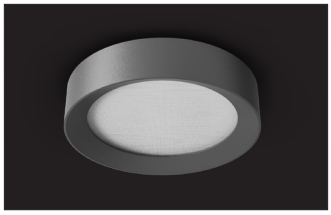
PROJECT NAME: QUANTITY: TYPE:

ORDERING CODE:



ADA COMPLIANT

① Corrosion resistant diecast aluminum housing.
② Integrated standard 0-10V driver.
③ Light guide LED technology for uniform lambertian light distribution.
④ Impact resistant patterned tempered glass.
⑤ Sealed enclosure with durable gaskets.
⑥ All hardware in stainless steel.


SN800C


SN800

MATERIALS

Scena is made of aluminum diecast offering exceptional precision and durability. The main housing is perfectly sealed with durable gaskets. The integrated LED light module and 0-10V driver are protected by a patterned tempered glass. With a distinctive look and perceptible quality, Scena is designed for uniform lighting performance.

ELECTRICAL DRIVER

Standard driver is 0-10V dimming-ready (min. dim 5% / dim-to-off)* with: 120-277 multivolt compatibility, operating temperature range of -40°C/-40°F to 85°C/185°F*, over current and output short circuit protection.

LED LIGHT ENGINE

Offered in 2700K, 3000K, 3500K & 4000K / 80CRI.
70% LED lumen maintenance at 60,000 hours (L70/B50) based on IESNA LM-80-08 LED extrapolated life, calculated per IESNA TM-21-21.

FINISH

Five-stage preparation process includes preheating of cast aluminum parts for air extraction. Polyester powder coating is applied through an electrostatic process, and oven cured for long term finish.

CERTIFICATION

UL certified to Canadian and U.S. safety standards. Certified for use in wet locations. Rated IP65 / IK10. Photometric testing performed by an independent laboratory in accordance with IES LM-79-08 standards at 25°C. Actual performance may differ as a result of end-user environment and application.

WARRANTY

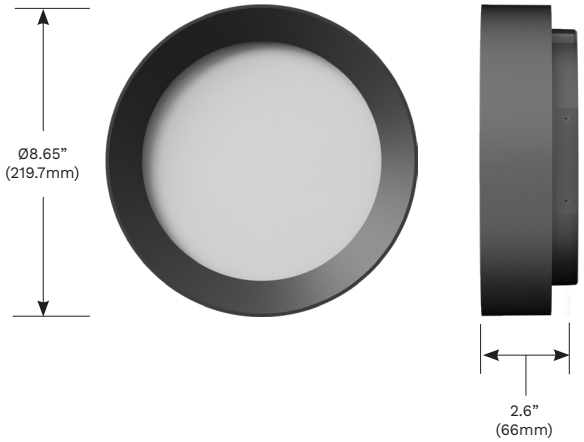
5-year limited warranty. This is the only warranty provided and no other statements in this specification sheet create any warranty of any kind. All other express and implied warranties are disclaimed. Complete warranty terms located at: https://www.luminis.com/technical/warranty/

MOUNTING

The mounting plate is designed to fit on a 4" (102mm) octagonal electrical box using 3.5" (89mm) C/C mounting holes. Fixture must be installed on a wall or a finished ceiling for exterior applications and/or when exposed to inclement weather.

MEASUREMENTS

Maximum weight: 3.8 lbs (1.7 kg)



* L1L23 light output dims to min. 1% / dim-to-off and has an operating temperature of -20°C/-4°F to 50°C/122°F

LUMINIS.COM
Toll free: (866) 586-4647 | Fax: (514) 683-8872 | Email: info@luminis.com
260 Labrosse, Pointe-Claire (QC) Canada H9R 5L5

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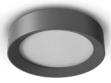
ORDERING CODE

*SERIES	*LIGHT OUTPUT	*CCT	*VOLTAGE	CONDUIT COVER
SN800  **SN800C** 	**L1L11** 1189 lm / 14w **L1L23** 2306 lm / 29w **Delivered lumens calculated at 4000K/80CRI. Typical power consumption. Refer to LCF table for outputs at other CCTs.**	**27K** 2700K **30K** 3000K **35K** 3500K **40K** 4000K	**120** 120V **277** 277V **MVOLT** 120V-277V	**SWK** Decorative cover for 3/4" conduit junction box

PHOTOCELL	LOUVERS	*FINISH	ENVIRONMENT
PH Photocell	**CB** Cross blade louvers	**BKT** Jet black **BZT** Bronze **CHT** Champagne **DGT** Gun metal **GRT** Titanium gray **MST** Matte silver **SGT** Steel gray **WHT** Snow white **CMC** Custom matched color[1] **RAL** RAL color[2]	**MG** Marine grade paint[3] **NT** Natatorium suitable[4]

NOTES
*- Denotes a required field
1- Contact factory to coordinate custom matching color.
2- Specify RAL number.
3- Marine grade paint for harsh, coastal environment and exposure to salt water. Additional delay required.
4- Available only in WHT and BKT.

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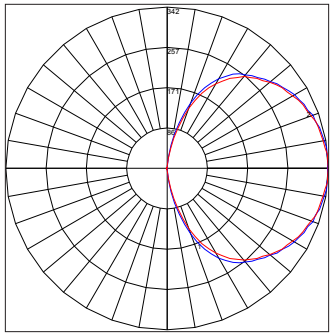
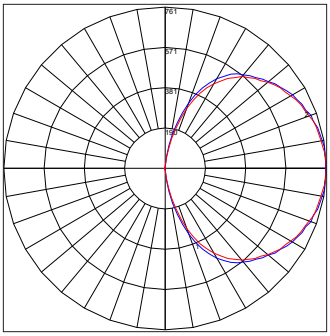
TYPICAL PHOTOMETRY SUMMARY

SN800-L1L11



Total Lms: 1189 Lumens
Total Input Watts: 14 W
Efficacy: 85 Lumens/Watt
CCT/CRI: 4000K/80
Maximum Candela: 342.45 @ 0°H/92.5°V
BUG Rating: B0-U3-G2

SN800-L1L23



Total Lms: 2306 Lumens
Total Input Watts: 29 W
Efficacy: 79.5 Lumens/Watt
CCT/CRI: 4000K/80
Maximum Candela: 761 @ 0°H/92.5°V
BUG Rating: B0-U5-G3

LUMEN CONVERSION FACTOR (LCF)		
CCT	CRI	LCF
2700K	80	0.92
3000K	80	0.94
3500K	80	0.98
4000K	80	1.00

All Photometry shown use the 80CRI 4000K LEDs.
Please visit our web site www.luminis.com for complete I.E.S. file.

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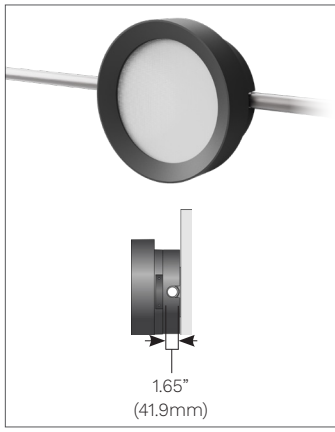
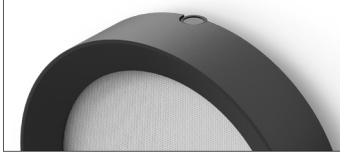
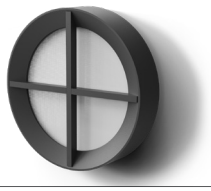
OPTION DETAILS



SWK
Surface (wall or ceiling) mounting option for Ø4” weatherproof junction box (3/4” conduit trade size). Weatherproof junction box, conduit and connectors by others. The SWK option adds 1.65" to the total depth of the product. (Not ADA compliant).



PH
Button-size photocell mounted on top casted housing. Instant turn-on, standard 5-10 second turn-off time delay.



CB
Decorative cross blades. (LCF 0.93)

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BUILDING G

(MULTI FAMILY RESIDENTIAL)

PHOTOS OF EXISTING AREA

(BUILDING AREA)



PROJECT ENTRANCE AREA LOOKING NORTHERLY



PROJECT ENTRANCE AREA LOOKING NORTHERLY



PROJECT ENTRANCE AREA LOOKING WESTERLY



PROJECT EAST WING AREA
LOOKING SOUTHWESTERLY



PROJECT EAST WING AREA
LOOKING SOUTHERLY



PROJECT GARAGE AREA
LOOKING WESTERLY



CMP TRANSMISSION LINE ALONG NORTHWESTERLY CORNER OF PROJECT



PROJECT FIRE SAFETY TURNAROUND AREA LOOKING SOUTHWESTERLY



PROJECT GARAGE AREA LOOKING EASTERLY



EXISTING FILL SLOPE
LOOKING WESTERLY



PROJECT STORMWATER OUTFALL AND WETLAND FILL LOOKING SOUTHERLY

Att. U

BUILDING G

(MULTI FAMILY RESIDENTIAL)

PHOTOS OF EXISTING AREA

(TRAIL AREA)



EXISTING WEST END OF TRAIL LOOKING WESTERLY



EXISTING TRAIL NEAR PROPOSED WEST WING LOOKING EASTERLY



EXISTING TRAIL NEAR PROPOSED WEST WING LOOKING WESTERLY



EXISTING TRAIL FOOTBRIDGE NEAR CENTRAL COURTYARD



EXISTING OAK TREE NEAR CENTRAL COURTYARD -TO BE PRESERVED



EXISTING OAK TREE NEAR CENTRAL COURTYARD -TO BE PRESERVED



EXISTING TRAIL NEAR PROPOSED EAST WING LOOKING NORTHWESTERLY



EXISTING TRAIL NEAR PROPOSED EAST WING LOOKING WESTERLY



EXISTING TRAIL NEAR EAST COURTYARD LOOKING NORTHWESTERLY



EXISTING WATER DISTRICT PUMP STATION - PROPOSED FIRE LANE LOOKING NORTHERLY

Type B1 & B2

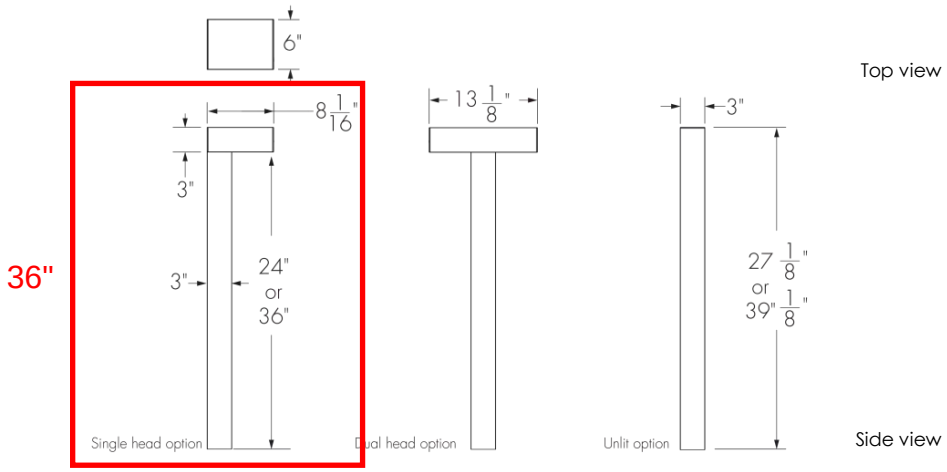
lumenblade
Bollard
BLDB

Catalog Number:
BLDG-TM1-VOLTAGE-CSL-N03-30K-CRI80-3-FINISH-CONTROL

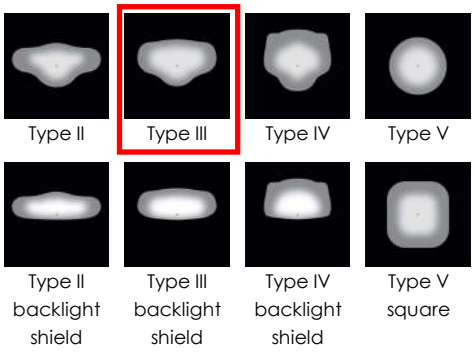
Project Name _____ **Qty** _____

Type _____ **Catalog / Part Number** _____

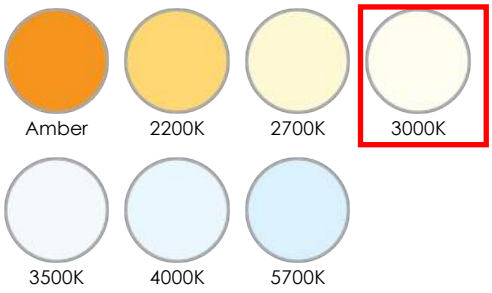




Distributions



Color and Color Temperature



Control

ON/OFF 0-10V LT

Ratings

IP66 (optical chamber) IK06 (lens) IK10*(frame)

*IK10 polycarbonate lens option available, consult factory.

Certifications

c UL us 5 YEARS lumenpulse VRBO

Description

The Lumenpulse Lumenblade Bollard is an outdoor LED luminaire that uses a rectilinear version of the Lumencentro light engine to create a continuous line of light. Options include: heights of either two feet or three feet, with a Single or Dual head. Its seen-but-not-seen, minimalist design is sustainable, blends with both contemporary and heritage architectures, provides a high level of security, and is sensitive to the natural environment with low outputs and with a BUG rating of 0.

Features

Mounting	Single head, Dual head, Unlit bollard
Height	2 ft, 3 ft
Color and Color Temperature	Amber, 2200K, 2700K, 3000K, 3500K, 4000K, 5700K
Distributions	Type II, Type III or Type IV (with or without backlight shield), Type V, Type V square
Optical Option (factory installed)	Louver
Vibration Rating	Meets ANSI C136.31-2018 vibration rating for Bridge & Overpass applications
Options	Vibration Rated for Bridge and Overpass, Corrosion-resistant coating for hostile environments, Surge protector, Photoelectric Cell Button Type, Ground Fault Duplex Receptacle, Duplex receptacle with USB A and USB C
Warranty	5-year limited warranty

Performance

Output (nominal lumens)	Minimum 200lm (single head)/ Maximum 2000lm (dual head)
Efficacy	Up to 86 lm/W (N10 lumen output, 4000K, CRI 70+, Type III)
Color Rendering	3 SDCM for CRI 70+, 2 SDCM for CRI 80+ and CRI 90+
Lumen Maintenance	TM-21 L70 > 145,000 hrs (reported, Ta 25 - 50 °C [77 - 122 °F])
Dark Sky	Dark sky compliant (2200K, 2700K, 3000K and Amber color

lumenpulse™
1220 Marie-Victorin Blvd., Longueuil, QC, J4G 2H9, CA **T** United States 617.307.5700 | Canada 1.877.937.3003 | 514.937.3003 **F** 514.937.6289
info@lumenpulse.com **www.lumenpulse.com** **www.lumenpulse.com/products/2323**

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temperatures, BUG rating of U0)

Physical

Housing Material	Extruded aluminium 6000 alloy series
Lens Material	Optical tempered clear glass (Clearsite lens), Optical tempered frosted glass (Frostsite lens), Optical tempered half-frosted glass (Half-Frostsite lens)
Head Option	Bollard Head
Surface Finish	Super durable resistant exterior polyester powder coating meets AAMA 2604-98 requirements (5-years Florida exposure) a corrosion resistant finish (CRC) pre-finish is available to meet ASTM B-117 & ASTM D-1654 (salt spray resistance) and ASTM D-2247 requirements (humidity resistance).
Weight	16.53 lbs

Electrical and control

Voltage	120 volts, 208 volts, 240 volts, 277 volts, 347 volts, 480 volts
Control	On/Off control, 0-10V dimming, Lumentalk

Environmental

Storage Temperature	-40°C to 50°C [-40°F to 122°F] (device must reach start-up temperature value before operating)
Operating Temperature	-40°C [-40 °F] to 50°C [122 °F]
Start-up Temperature	-25°C [-13 °F] to 50°C [122 °F]
Impact Resistance Rating	IK06 (glass lens), IK10 (frame) *IK10 polycarbonate lens option available, consult factory
Ingress Protection Rating	IP66 (optical chamber), Wet location rated
Environment	Dry/damp/wet location

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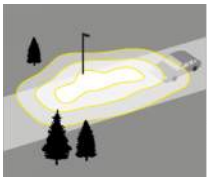
Photometric information

Type II, 4000K, CRI 70+, Clearsite lens



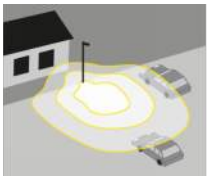
Nominal output [lm]	Typical delivered output [lm]	Efficiency (lm/W)	BUG Rating B U G	Typical maximum power 120/277V (W)
N03	209	70	0 0 0	3
N05	428	71	0 0 0	6
N07	672	75	0 0 0	9
N10	873	79	0 0 0	11

Type III, 4000K, CRI 70+, Clearsite lens



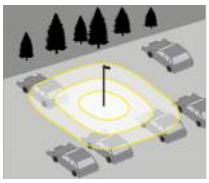
Nominal output [lm]	Typical delivered output [lm]	Efficiency (lm/W)	BUG Rating B U G	Typical maximum power 120/277V (W)
N03	228	76	0 0 0	3
N05	465	78	0 0 0	6
N07	731	81	0 0 0	9
N10	950	86	0 0 0	11

Type IV, 4000K, CRI 70+, Clearsite lens



Nominal output [lm]	Typical delivered output [lm]	Efficiency (lm/W)	BUG Rating B U G	Typical maximum power 120/277V (W)
N03	186	62	0 0 0	3
N05	380	63	0 0 0	6
N07	597	66	0 0 0	9
N10	775	70	0 0 0	11

Type V square, 4000K, CRI 70+, Clearsite lens



Nominal output [lm]	Typical delivered output [lm]	Efficiency (lm/W)	BUG Rating B U G	Typical maximum power 120/277V (W)
N03	191	64	0 0 0	3
N05	390	65	0 0 0	6
N07	613	68	0 0 0	9
N10	797	72	1 0 1	11

*Photometric performance is measured in compliance with IESNA LM-79-19. Due to rapid and continous advances in LED technology, photometric information is subject to change without notice.

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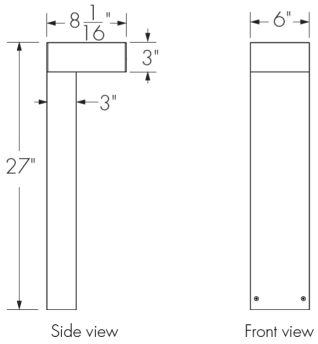
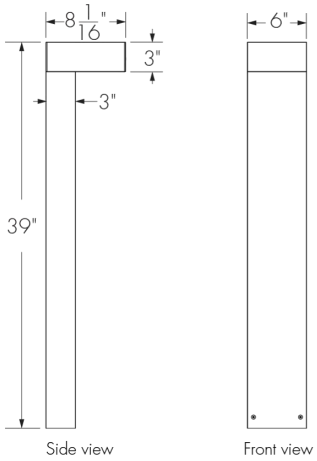
Configuration dimensions

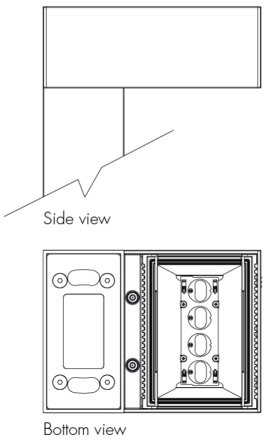
TM1 - Single head bollard, 2 ft



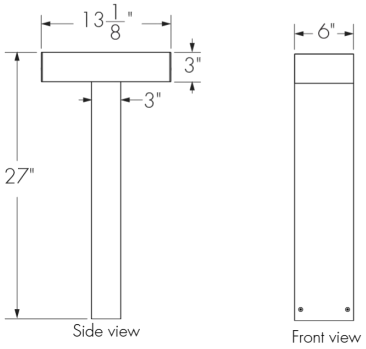
TM1 - Single head bollard, 3 ft



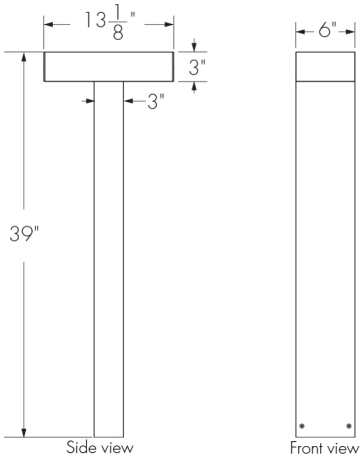
TM1 - Single luminaire head



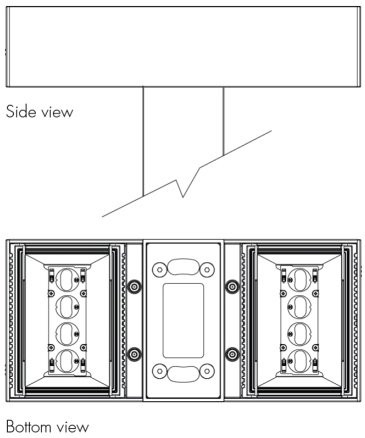
TM2 - Dual head bollard, 2 ft



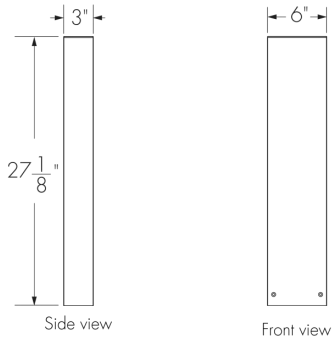
TM2 - Dual head bollard, 3 ft



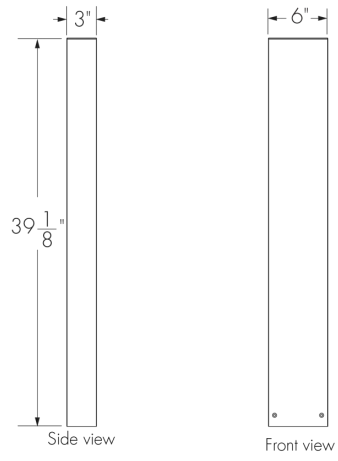
TM2 - Dual luminaire head



UNLIT - Unlit bollard 2 ft



UNLIT - Unlit bollard 3 ft



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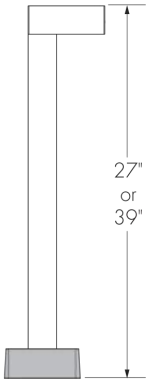
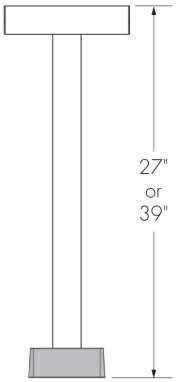
VRBO option dimensions

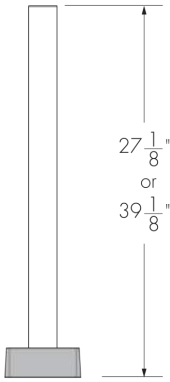
TM1 - Single head bollard



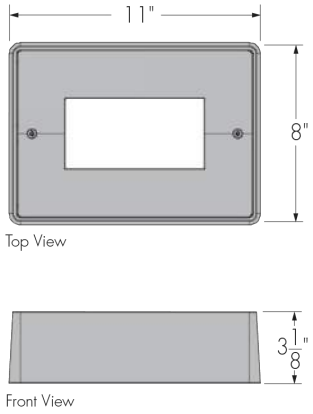
TM2 - Dual head bollard



UNLIT - Unlit bollard

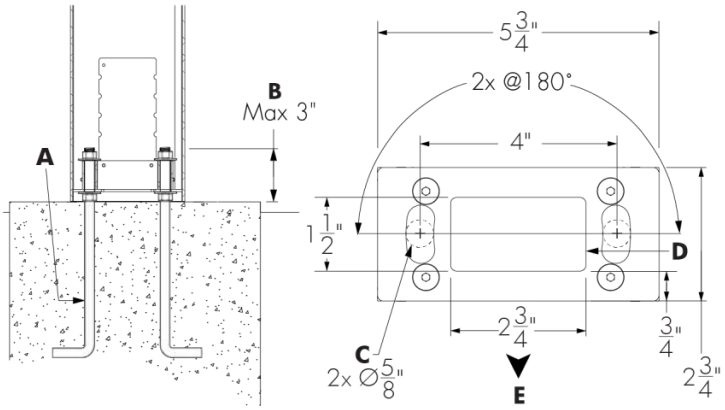


Base cover



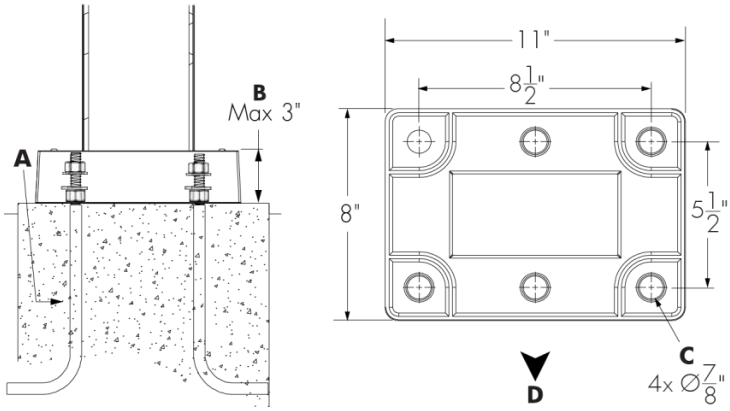
Anchoring details

Standard anchoring



A - (2x) Ø1/2 in by 12 in long anchor bolts with flats washers and nuts for each
B - Between 2.5 in and 3 in of the anchor bolts must be above ground for installation
C - Bolt circle
D - Hole for conduit (conduit by others)
E - Street side/Light side

BLDB-VRBO anchoring



A - (4x) Ø3/4 in by 26 in long anchor bolts with flats washers and nuts for each
B - Between 2.5 in and 3 in of the anchor bolts must be above ground for installation
C - Bolt circle
D - Access door and street side

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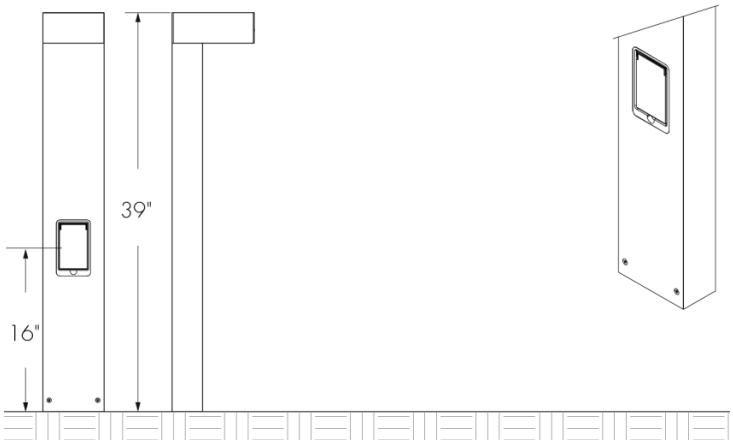
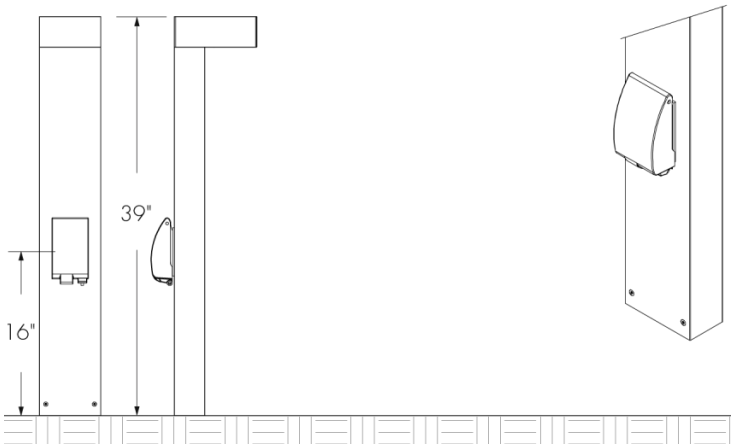
Duplex Receptacle installation dimensions

DRG - Ground fault duplex receptacle
USB - Duplex receptacle with USB A and USB C



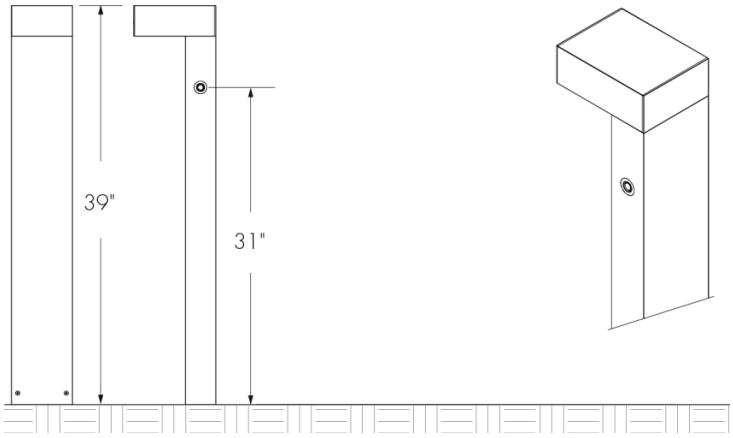
DRG IU - Ground Fault Duplex Receptacle (while in use)
USB IU - Duplex receptacle with USB A and USB C (while in use)



The duplex receptacle must be installed in accordance with applicable national and local electrical and construction codes by a person familiar with the construction and operation of the product and the hazards involved. Refer to national and local electrical codes before selecting a duplex receptacle to ensure all requirements are met.

Photoelectric Cell Button installation dimensions

PB - Photoelectric Cell Button Type



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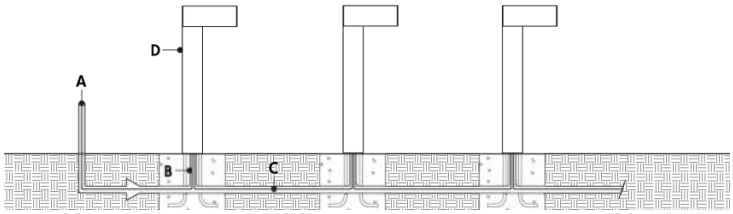
Typical Wiring Diagrams

Wiring Color Code

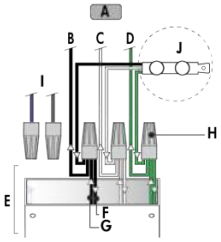
Color	Black	White	Green	Purple	Gray
Use	Line	Line/Neutral	Ground	0 -10V+	0 -10V -

On/Off Control (NO)



A - Power input (120-480V)
B - Conduit (by others)
C - Power wiring (by others)
D - Lumenblade Bollard

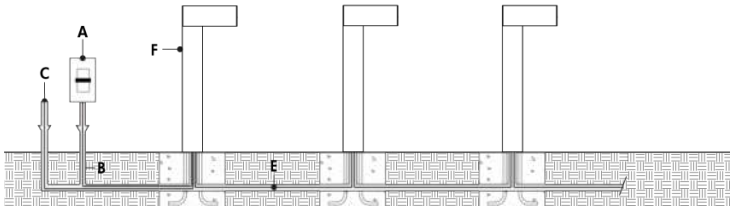
On/Off Control (NO) - wiring detail



A - To fixture
B - Line
C - Line/Neutral
D - Ground
E - Conduit (by others)
F - To next fixture
G - Power input or from previous fixture
H - Wire-nuts (by others)
I - Not required
J - Wiring for SP option

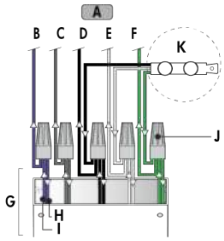
- Consult factory for specific applications and maximum fixture count/cable length recommendations.

0-10V dimming (DIM)



A - Dimmer (by others)
B - Data wiring (by others)
C - Power input (120-480V, wiring by others)
D - Conduit (by others)
E - Power and data wiring (by others)
F - Lumenblade Bollard

0-10V dimming (DIM) - wiring detail



A - To fixture
B - 0-10V +
C - 0-10V -
D - Line
E - Neutral
F - Ground
G - Conduit (by others)
H - To next fixture
I - Power input or from previous fixture
J - Wire-nuts (by others)
K - Wiring for SP option

- Consult factory for specific applications and maximum fixture count/cable length recommendations.
- 0-10V mA ratings: passive dimmer (Current Sink): 3mA per fixture, active dimmer (Current Source): 0.5mA per fixture.
- 1% minimum dimming value.

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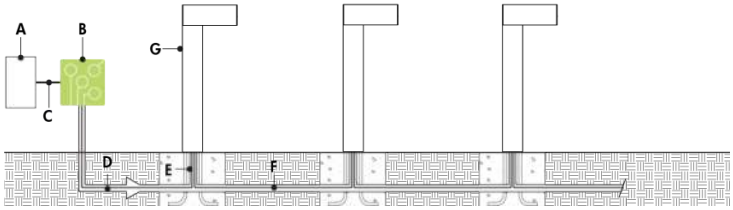
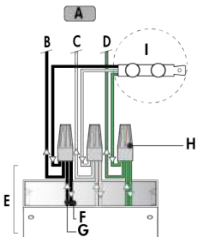
Lumentalk (LT)



A - Dimmer/controller (order separately from Lumenpulse, or by others)
B - Lumentranslator (LTL-010)
C - Data wiring (by others)
D - Power line (120-277V, wiring by others)
E - Conduct (by others)
F - Power wiring (by others)
G - Lumenblade Bollard

Lumentalk (LT) - wiring detail



A - To fixture
B - Line
C - Line/Neutral
D - Ground
E - Conduit (by others)
F - To next fixture
G - Power input or from previous fixture
H - Wire-nuts (by others)
I - Wiring for SP option

- Consult factory for specific applications and maximum fixture count/cable length recommendations.
- Lumentalk enabled fixtures must be commissioned using LumentalkID software and a LID-LT. Consult factory for details.
- Maximum of 1 transmitter (Lumentranslator or Lumenlink) per system.
- No third party fixtures allowed on the same circuit.
- DRG or USB option must be on a separated circuit.

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How to Order

Housing	Mounting	Voltage	Height	Lens [3]	Output (nominal lumens) [8]	Color and Color Temperature	Color Rendering	Distributions	Optical Option	Finish	Control
BLDB Lumenblade Bollard	**TM1** Single head **TM2** Dual head [1] **UNLIT** Unlit bollard	**120** 120 volts **208** 208 volts **240** 240 volts **277** 277 volts **347** 347 volts [2] **480** 480 volts [2]	**2FT** 2 ft **3FT** 3 ft	**CSL** Clearsite lens [4] **FSL** Frostsite lens [5] **HFSL** Half-Frostsite lens [6] [7]	**N02** 200lm (4 LEDs) [4] [9] [10] **N03** 300lm (4 LEDs) **N05** 500lm (4 LEDs) **N07** 700lm (4 LEDs) **N10** 1000lm (4 LEDs)	**AMB** Amber [4] [10] [11] **22K** 2200K [12] **27K** 2700K [13] **30K** 3000K **35K** 3500K **40K** 4000K **57K** 5700K [14]	**CRI 70** CRI 70+ [15] **CRI 80** CRI 80+ [16] **CRI 90** CRI 90+ [17]	**2** Type II **2BLS** Type II backlight shield **3** Type III **3BLS** Type III backlight shield **4** Type IV **4BLS** Type IV backlight shield **5** Type V **5S** Type V square	**LV** Louver [18] [19]	**BK** Black Sandtex® **BRZ** Bronze Sandtex® **SI** Silver Sandtex® **BKTX** Textured Black **BRZTX** Textured Bronze Non-Metallic **GRATX** Textured Medium Gray **GRNTX** Textured Green **WHTX** Textured White **CC** Custom Color & Finish [20] [21] [22]	**DIM** 0-10V dimming [23] **LT** Lumentalk [24] [25]

Notes:

1. A ground fault duplex receptacle (DRG or DRG IU) and a duplex USB receptacle (USB or USB IU) cannot be combined with TM2 mounting.
2. Not available with LT control option.
3. Standard IK06 rating for glass lens. IK10 rated polycarbonate lens available, please consult factory.
4. Not available with type 5 distribution.
5. Available with type 3 and 5 distributions only.
6. Available with type 2, 3 and 4 distributions only.
7. Available for N03, N05, N07 and N10 outputs only.
8. Lumen output will vary according to the lens and distribution specified for the fixture. Please consult the photometric information section of the specification sheet for more details.
9. Available with AMB color temperature only.
10. Not available for FSL and HFSL lens.
11. Available with N02 output only.
12. Available for CRI 80 only.
13. Available for CRI 80 and CRI 90 only.
14. Available for CRI 70 and CRI 80 only.
15. Binning within a 3-step McAdam ellipse, with the exception of 5700K.
16. Binning within a 2-step MacAdam ellipse, with the exception of 2200K and 5700K.
17. Binning within a 2-step MacAdam ellipse
18. Available with CSL and HFSL lenses only.
19. Factory installed, not field changeable.
20. Specify RAL number followed by "TX" for textured finish (ex: RAL9007TX) or STX for Sandtex finish (ex: RAL9007STX). Textured or Sandtex finishes are recommended for the durability of all products. If a finish is not specified with the RAL number (ex: RAL9007), a glossy finish will be provided. Please consult factory for other RAL textures and glosses, or to match alternate color charts. Final color matching results may vary.
21. Setup charges apply for RAL colors. Consult factory for details.
22. Longer lead times can be expected for custom RAL color finishes.
23. DIM control can be used as NO (On/off control) if no data is required.
24. Not available with PB option.
25. When combined with 2 ft height option, Lumentalk cannot be combined with a ground fault duplex receptacle (DRG or DRG IU) or a duplex USB receptacle (USB or USB IU).

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How to Order

Option	Head Option	Head Lens	Head Output	Head Color and Color Temperature	Head Color Rendering	Head Distributions	Head Optical Option
VRBO Vibration Rated for Bridge and Overpass [26] [27] **CRC** Corrosion-resistant coating [28] [29] **SP** Surge protector **PB** Photoelectric Cell Button Type [2] [30] **DRG** Ground Fault Duplex Receptacle [31] **DRG IU** Ground Fault Duplex Receptacle (while in use) [31] **USB** Duplex receptacle with USB A and USB C [31] **USB IU** Duplex receptacle with USB A and USB C in-use [31]	**BH** Bollard Head	**CSL** Clearsite lens [4] **FSL** Frostsite lens [5] **HFSL** Half-Frostsite lens [6] [7]	**N02** 200lm (4 LEDs) [4] [9] [10] **N03** 300lm (4 LEDs) **N05** 500lm (4 LEDs) **N07** 700lm (4 LEDs) **N10** 1000lm (4 LEDs)	**AMB** Amber [4] [10] [11] **22K** 2200K [12] **27K** 2700K [13] **30K** 3000K **35K** 3500K **40K** 4000K **57K** 5700K [14]	**CRI 70** CRI 70+ [15] **CRI 80** CRI 80+ [16] **CRI 90** CRI 90+ [17]	**2** Type II **2BLS** Type II backlight shield **3** Type III **3BLS** Type III backlight shield **4** Type IV **4BLS** Type IV backlight shield **5** Type V **5S** Type V square	**LV** Louver [18]

Notes:

2. Not available with LT control option.
4. Not available with type 5 distribution.
5. Available with type 3 and 5 distributions only.
6. Available with type 2, 3 and 4 distributions only.
7. Available for N03, N05, N07 and N10 outputs only.
9. Available with AMB color temperature only.
10. Not available for FSL and HFSL lens.
11. Available with N02 output only.
12. Available for CRI 80 only.
13. Available for CRI 80 and CRI 90 only.
14. Available for CRI 70 and CRI 80 only.
15. Binning within a 3-step McAdam ellipse, with the exception of 5700K.
16. Binning within a 2-step MacAdam ellipse, with the exception of 2200K and 5700K.
17. Binning within a 2-step MacAdam ellipse
18. Available with CSL and HFSL lenses only.
26. Vibration tested in accordance with ANSI 136.31 2018 for bridge and overpass applications at 5Gv.
27. Specify only if a bridge or overpass application is required.
28. Use only when exposed to salt spray. This option is not required for normal outdoor exposure.
29. Setup charges apply. Consult factory for details.
30. Not available for 480V voltage option.
31. A ground fault duplex receptacle (DRG or DRG IU) and a duplex USB receptacle (USB or USB IU) cannot be combined.

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TYPE SL-1, SL-2, & SL-3

lumenblade
Medium
BLDM

SL-1 Catalog Number:
BLDM-SD-120/277-CSL-M80-30K-CRI 80-2

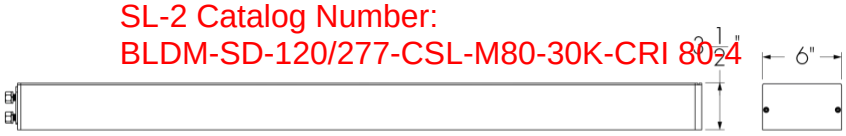
SL-2 Catalog Number:
BLDM-SD-120/277-CSL-M80-30K-CRI 80-3

SL-2 Catalog Number:
BLDM-SD-120/277-CSL-M80-30K-CRI 80-4

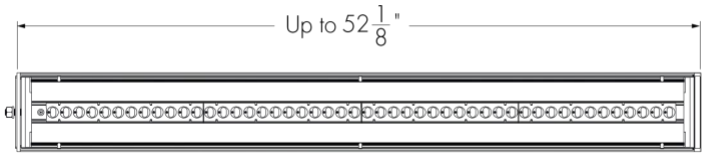
Project Name _____ **Qty** _____

Type _____ **Catalog / Part Number** _____



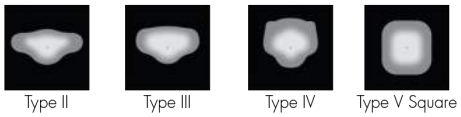


Side and front views



Bottom view
XL180 or XL200 (4 boards) shown

Distributions





SL-1: TYPE II DISTRIBUTION
SL-2: TYPE III DISTRIBUTION
SL-3: TYPE IV DISTRIBUTION

Description

The Lumenpulse Lumenblade Medium is an outdoor LED luminaire that uses a rectilinear version of the Lumencentro light engine to create a continuous line of light. Its seen-but-not-seen, minimalist design is sustainable, blends with both contemporary and heritage architectures, provides a high level of security, and is sensitive to the natural environment. The Lumenblade Medium is available in several lengths, a number of distributions and output options, and provides a stellar quality of light that brings the night to life.

Colors and Color Temperatures



Control

ON/OFF 0-10V LT

Motion Detector Options



Rating

IP66 (optical chamber)

Certifications

Features

Mounting	Side mounting
Color and Color Temperature	2200K, 2700K, 3000K, 3500K, 4000K, 5700K
Distributions	Type II, Type III or Type IV (with or without backlight shield), Type 5 square
1.5G Vibration Rated	Meets 1.5G ANSI C136.31 - 2010 vibration standard for Roadway applications 3G ANSI C136.31-2010 Vibration Rating for bridge applications available for certain configurations, refer to product configurator and website for details
Options	3G ANSI C136.31-2010 Vibration Rating for bridge applications, Corrosion-resistant coating for hostile environments, Surge protector, 3-Pin Receptacle with or without shorting cap, 5-Pin Receptacle with or without shorting cap, 7-Pin Receptacle with or without shorting cap, Motion detector
Pole Mounting Adaptor	Straight pole and Muffler pole adaptor (round and square pole): 6 in Lumentech pole adaptor (square and round pole): 6 in
Warranty	5-year limited warranty

Performance

Output (nominal lumens)	Minimum 4,000lm (1 board) / Maximum 20,000lm (4 boards)

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Efficacy	Up to 107 lm/W (Type 5 square, 4000K, M80 lumen output)
Color Rendering	3 SDCM for CRI 70+, 2 SDCM for CRI 80+ and CRI 90+
Lumen Maintenance	TM-21 L70 > 145,000 hrs (reported, Ta 25 - 50 °C [77 - 122 °F])
Dark Sky	Dark sky compliant (2200K, 2700K and 3000K color temperatures, BUG rating of U0)

Physical

Housing Material	Extruded aluminium 6000 alloy series
Lens Material	Optical tempered clear glass (Clearsite lens)
Surface Finish	Super durable resistant exterior polyester powder coating meets AAMA 2604-98 requirements (5-years Florida exposure). A corrosion resistant finish (CRC) pre-finish is available to meet ASTM B-117 & ASTM D-1654 (salt spray resistance) and ASTM D-2247 requirements (humidity resistance).
Weight	1 board: 12.5 lbs 2 boards: 16 lbs 3 boards: 21 lbs 4 boards: 25 lbs Refer to Fixture Weights Table in complete specification sheet for fixture weights with motion detector installed and double configurations

Electrical and control

Voltage	120 volts, 208 volts, 240 volts, 277 volts, 347 volts, 480 volts
Control	On/Off control, 0-10V dimming, Lumentalk

Environmental

Storage Temperature	-40°C to 50°C [-40°F to 122°F] (device must reach start-up temperature value before operating)
Operating Temperature	-40°C [-40 °F] to 50°C [122 °F]
Start-up Temperature	-25°C [-13 °F] to 50°C [122 °F]
Ingress Protection Rating	IP66 (optical chamber), Wet location rated
Impact Resistance Rating	IK07 (glass lens), IK10 (frame)
Environment	Dry/damp/wet location

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EPA and Fixture Weight Tables

*Fixture weights are estimated.

Standard Fixture

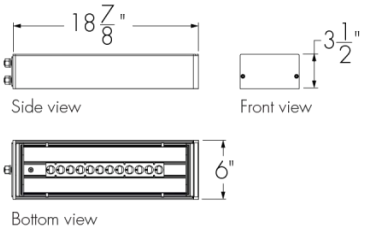
		S40/S60 1 board	M80/M100 2 boards	L120/L140/L160 3 boards	XL180/XL200 4 boards
EPA (sq ft.)	S1E	0.69	1.03	1.46	1.90
	S2E	1.38	2.06	2.92	3.8
Weight* (lbs)	S1E	12.5	16	21	25
	S2E	25	32	42	50

Fixture With Motion Detector Option

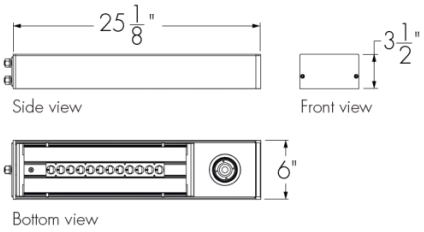
		S40/S60 1 board	M80/M100 2 boards	L120/L140/L160 3 boards	XL180/XL200 4 boards
EPA (sq ft.)	S1E	0.92	1.25	1.69	2.13
	S2E	1.84	2.5	3.38	4.26
Weight* (lbs)	S1E	15	18.5	23.5	27.5
	S2E	30	37	47	55

Dimensions

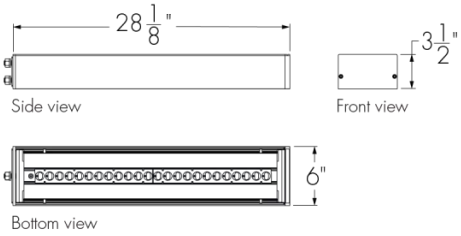
S40 and S60 (1 Board)



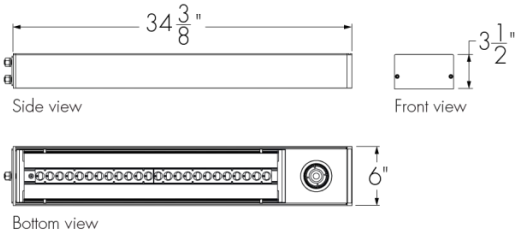
S40 and S60 (1 Board) - Motion Detector Option



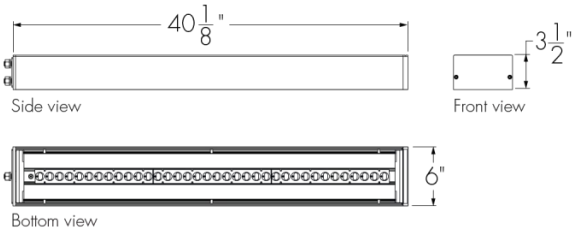
M80 and M100 (2 Boards)



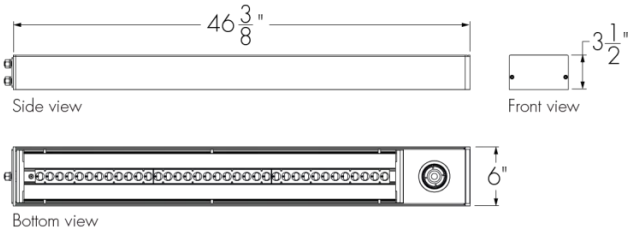
M80 and M100 (2 Boards) - Motion Detector Option



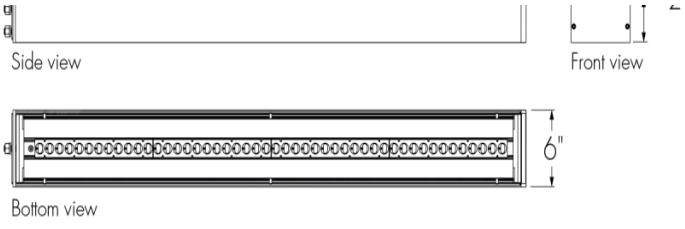
L120, L140 and L160 (3 Boards)



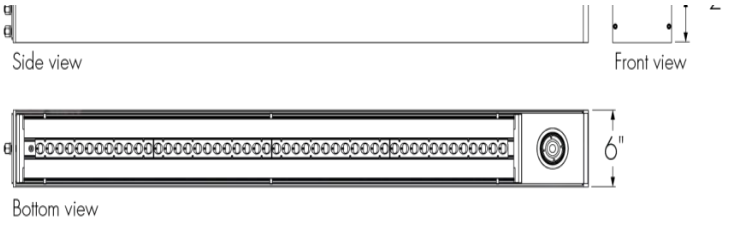
L120, L140 and L160 (3 Boards) - Motion Detector Option



XL180 and XL200 (4 Boards)



XL180 and XL200 (4 Boards) - Motion Detector Option



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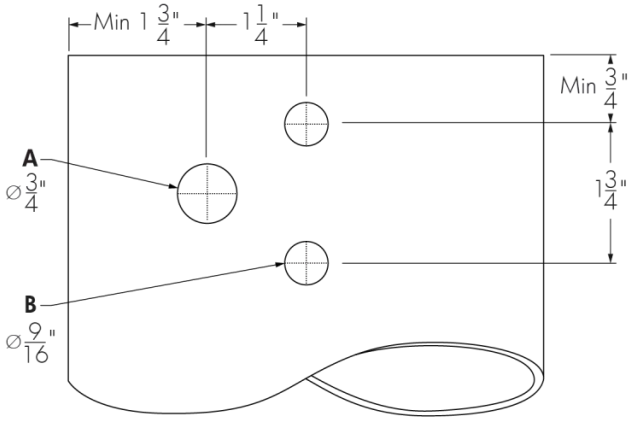
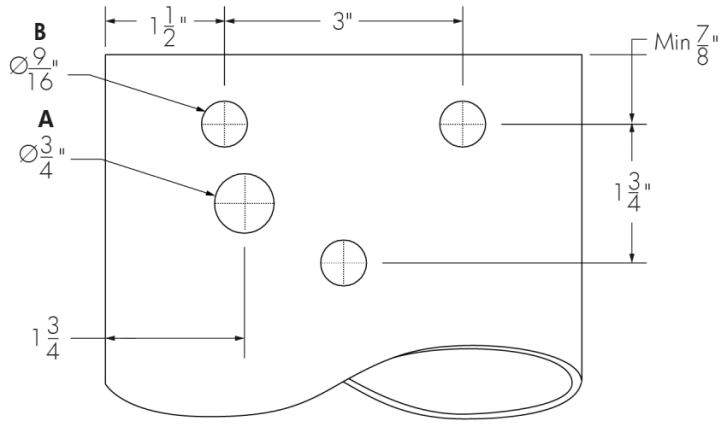
Pole Drilling Pattern

BLDM-S1E and BLDM-S2E Drilling Pattern



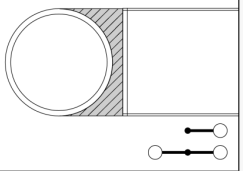
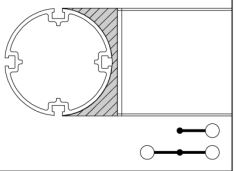
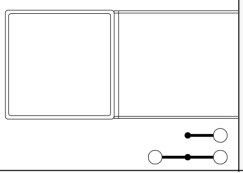
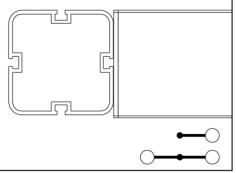
A - Wire feeding location
B - (2X) for Ø1/2-13 bolts (included with luminaire)

BLDM-S1E-3GV and BLDM-S2E-3GV Drilling Pattern



A - Wire feeding location
B - (3X) for Ø1/2-13 bolts (included with luminaire)

Pole Mounting Adaptor

	Straight and muffler poles			Lumentech pole	
	4in	**5in**	**6in**	**5in**	**6in**
Round shape	n/a	n/a	**RPA6M** 	n/a	**RPA6TM** 
Square shape [1]			**SPA6** 		**SPA6T** 

Available configurations*:
S1E —○ Simple
S2E ○—○ Double

[1] Square poles do not require adaptors, specification codes are used by Lumenpulse to provide appropriate hardware for installation only.

*Consult factory for other configurations.

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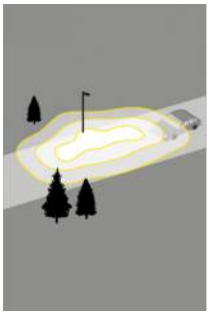
Photometric Information

Type II, 4000K, CRI 70+



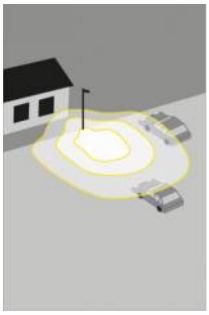
	Nominal output [lm]	Typical delivered output [lm]	Efficiency (lm/W)	BUG Rating B U G	Typical maximum power 120/277V (W)
S40	3,236	90	1 0 1	36
S60	4,758	87	1 0 1	55
M80	7,423	95	2 0 2	78
M100	9,897	86	2 0 2	115
L120	11,039	92	2 0 2	120
L140	12,561	90	3 0 3	140
L160	14,274	79	3 0 3	180
XL180	17,890	87	3 0 3	205
XL200	19,032*	79	3* 0* 3*	240

Type III, 4000K, CRI 70+



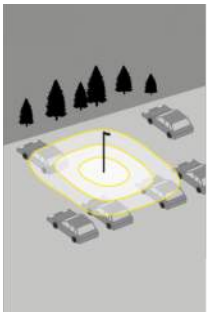
	Nominal output [lm]	Typical delivered output [lm]	Efficiency (lm/W)	BUG Rating B U G	Typical maximum power 120/277V (W)
S40	3,496	97	1 0 1	36
S60	5,141	94	1 0 1	55
M80	8,019	103	2 0 2	78
M100	10,693	93	2 0 2	115
L120	11,926	99	2 0 2	120
L140	13,571	97	3 0 3	140
L160	15,422	86	3 0 3	180
XL180	19,329	94	3 0 3	205
XL200	20,563*	86	3* 0* 3*	240

Type IV, 4000K, CRI 70+



	Nominal output [lm]	Typical delivered output [lm]	Efficiency (lm/W)	BUG Rating B U G	Typical maximum power 120/277V (W)
S40	2,989	83	1 0 1	36
S60	4,396	80	1 0 1	55
M80	6,858	88	2 0 2	78
M100	9,144	80	2 0 2	115
L120	10,199	85	2 0 2	120
L140	11,606	83	3 0 3	140
L160	13,189	73	3 0 3	180
XL180	16,530	81	3 0 3	205
XL200	17,585*	73	3* 0* 3*	240

Type V square, 4000K, CRI 70+



	Nominal output [lm]	Typical delivered output [lm]	Efficiency (lm/W)	BUG Rating B U G	Typical maximum power 120/277V (W)
S40	3,630	101	2 0 1	36
S60	5,339	97	3 0 1	55
M80	8,328	107	3 0 2	78
M100	11,104	97	4 0 2	115
L120	12,385	103	4 0 2	120
L140	14,094	101	4 0 2	140
L160	16,016	89	4 0 2	180
XL180	20,073	98	4 0 2	205
XL200	21,354*	89	5* 0* 3*	240

*Photometric performance is measured in compliance with IESNA LM-79-08. Due to rapid and continous advance in LED technology, photometric information is subject to change without notice.

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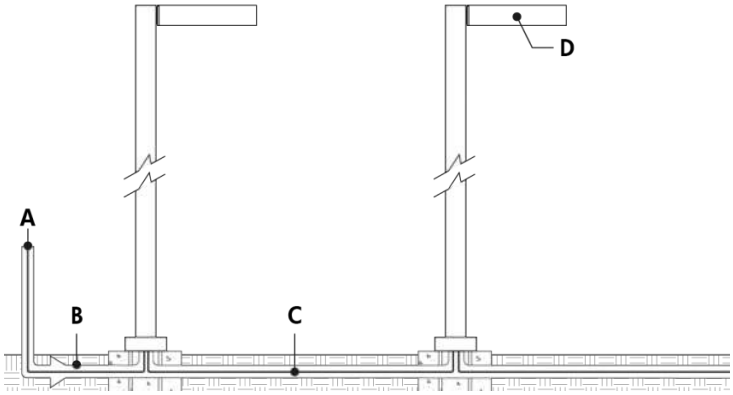
Typical Wiring Diagrams

Wiring Color Code

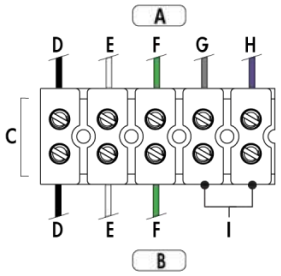
Color	Black	White	Green	Purple	Gray
Use	Line	Line/Neutral	Ground	0-10V+	0-10V -

On/Off Control (NO)



A - Power input (120-480V, wiring by others)
B - Conduit (by others)
C - Power wiring (by others)
D - Lumenblade

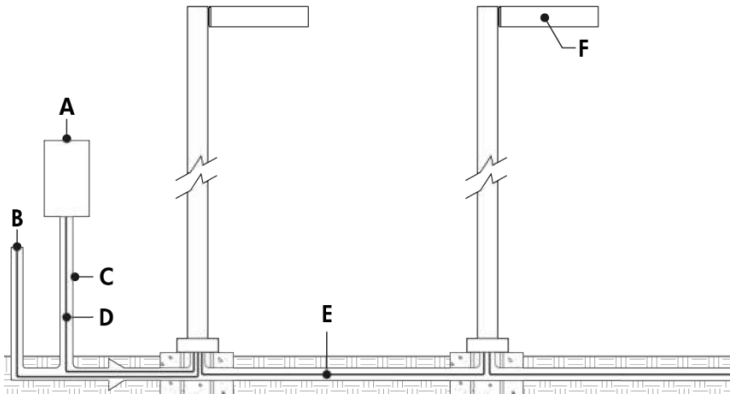
On/Off control (NO) - Terminal Connector Wiring Detail



A - To driver
B - Power input or from previous fixture
C - Terminal connector
D - Line
E - Line/Neutral
F - Ground
G - 0-10V -
H - 0-10V +
I - Not required

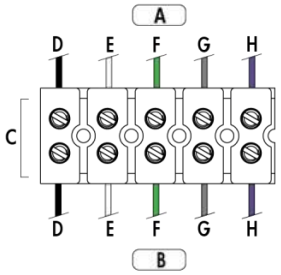
- Consult factory for specific applications and maximum fixture count/cable length recommendations.

0-10V Dimming (DIM)



A - Dimmer (by others)
B - Power input (120-480V, wiring by others)
C - Conduit (by others)
D - Data wiring (by others)
E - Power and data wiring (by others)
F - Lumenblade

0-10V Dimming (DIM) - Terminal Connector Wiring Detail



A - To driver
B - Power input or from previous fixture
C - Terminal connector
D - Line
E - Line/Neutral
F - Ground
G - 0-10V -
H - 0-10V +

- Consult factory for specific applications and maximum fixture count/cable length recommendations.
- 0-10V mA ratings: passive dimmer (Current Sink): 3mA per fixture, active dimmer (Current Source): 0.5mA per fixture.
- 1% minimum dimming value.

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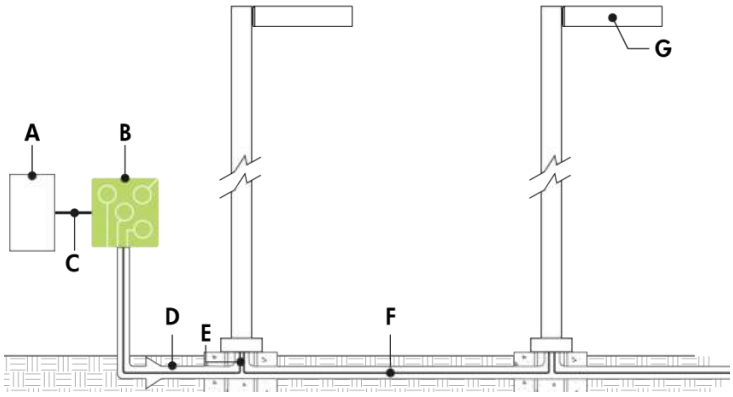
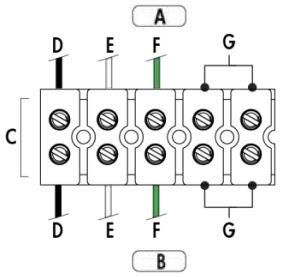
Lumentalk (LT)



A - Third party dimmer/controller
B - Lumentranslator (LTL-010)
C - Data wiring (by others)
D - Power line (120-277V, wiring by others)
E - Conduct (by others)
F - Power wiring (by others)
G - Lumenblade

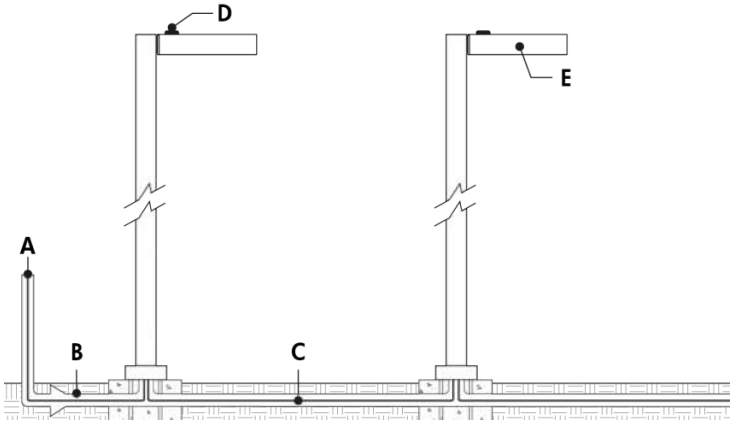
Lumentalk (LT) - Terminal Connector Wiring Detail



A - To driver
B - Power input or from previous fixture
C - Terminal connector
D - Line
E - Line/Neutral
F - Ground
G- Not required

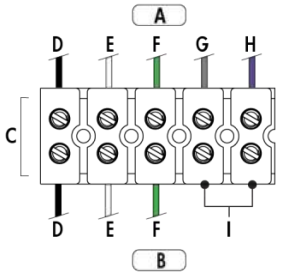
- Consult factory for specific applications and maximum fixture count/cable length recommendations.
- Lumentalk enabled fixtures must be commissioned using LumentalkID software and a LID-LT. Consult factory for details.
- Maximum of 1 transmitter (Lumentranslator or Lumenlink) per system.
- No third party fixtures allowed on the same circuit

3 pins, 5 pins and 7pins Receptacle Control (SPR3, SPR3 SC, SPR5, SPR5 SC, SPR7, SPR7 SC)



A - Power input (120-480V, wiring by others)
B - Conduit (by others)
C - Power wiring (by others)
D - Photoelectric control
E - Lumenblade

3 pins, 5 pins and 7pins Receptacle Control (SPR3, SPR3 SC,SPR5, SPR5 SC, SPR7, SPR7 SC) - terminal connector wiring detail



A - To driver
B - Power input or from previous fixture
C - Terminal connector
D - Line
E - Line/Neutral
F - Ground
G - 0-10V -
H - 0-10V +
I - SPR3: Not required. SPR5/SPR7: From photocell receptacle

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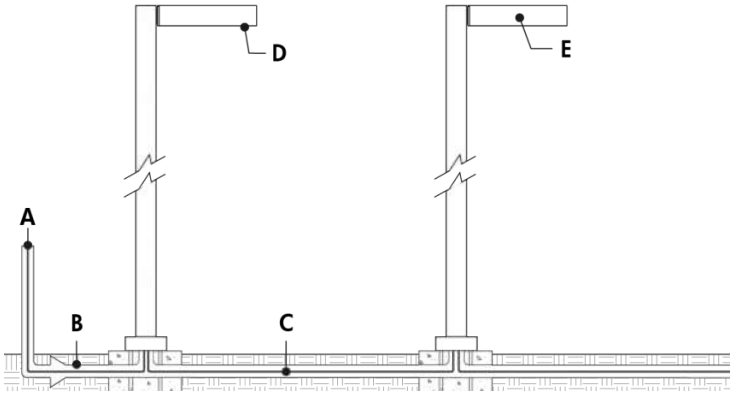
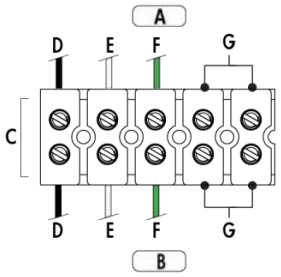
Motion Detector Control (MDxx)



A - Power input (120-480V, wiring by others)
B - Conduit (by others)
C - Power wiring (by others)
D - Motion detector
E - Lumenblade

Motion Detector (MDxx) - Terminal Connector Wiring Detail



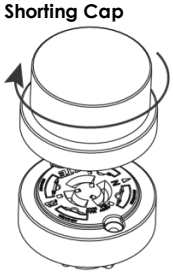
A - To driver
B - Power input or from previous fixture
C - Terminal connector
D - Line
E - Line/Neutral
F - Ground
G- Not required

Options

SPR3, SPR5 and SPR7 - 3-Pin, 5-Pin and 7-Pin Receptacles



SPR3 SC, SPR5 SC and SPR7 SC - 3-Pin, 5-Pin and 7-Pin Receptacles with Shorting Cap



- Dimming receptacle meets ANSI C136.41 Standard

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Motion Detector Options

Programming

	MD10N - Narrow lens, 10% dimming level **MD10W -** Wide lens, 10% dimming level	**MD30N -** Narrow lens, 30% dimming level **MD30W -** Wide lens, 30% dimming level	**MD50N -** Narrow lens, 50% dimming level **MD50W -** Wide lens, 50% dimming level	**MDPN -** Narrow lens, programmable **MDPW -** Wide lens, programmable	
	100% (10V) — **10%** (1V)	**100%** (10V) — **30%** (3V)	**100%** (10V) — **50%** (5V)		*How to provide code:*
High mode [1]	10V	10V	10V	• 5V - 10V (Increment: **0.2V**)	10V
Low mode [2]	1V	3V	5V	• Off • 0V - 9.8V (Increment: **0.2V**)	2.6V
Time delay [3]	5 min	5 min	5 min	• 1min - 30min (Increment: **30 seconds**)	10 min
Cut off [4]	1 hr	1 hr	1 hr	• Disable • 1min - 59min (Increment: **30 seconds**) • 1hr - 5hr (Increment: **1 hour**)	3 hr
Set point [5]	Dis	Dis	Dis	• Disable • Auto • 1fc - 250fc (Increment: **1fc**)	Auto
Sensitivity [6]	Max	Max	Max	• On-Fix • Off-Fix • Low • Med • Max	Med
Ramp up time [7]	3 sec	3 sec	3 sec	• Disable • 1sec - 60sec (Increment: **1 second**)	10 sec
Fade down time [8]	3 sec	3 sec	3 sec	• Disable • 1sec - 60sec (Increment: **1 second**)	10 sec
Photocell On/Off [9]	Dis	Dis	Dis	• Disable • 1fc - 250fc (Increment: **1fc**)	Dis

[1] When the sensor detects motion, the dimming control output ramps up to the selected HIGH light level.
[2] After the sensor stops detecting motion and the time delay expires, the dimming control output fades down to the selected LOW light level.
[3] The selected time period that must elapse after the last time the sensor detects motion for the electric lights to fade to LOW mode.
[4] The time period that must elapse after the lights fade to LOW mode, and the sensor detects no motion for the electric lights to turn OFF.
[5] When enabled, the selectable ambient light level threshold that will hold the electric lights off or at LOW level when the sensor detects motion.
[6] The response of the PIR detector to motion within the sensor's coverage area.
[7] Time period for light level to increase from LOW to HIGH.
[8] Time period for light level to decrease from HIGH to LOW.
[9] When enabled, the sensor will force the load OFF after the light level has exceeded the selected photocell setpoint PRIOR SAVE SEND for at least a minute. It will also force the load ON when the light level goes below the setpoint, even if no motion is detected.
[10] The motion detector programming can be modified on site. A remote is required, order separately. See Remote section in the specification sheet for details.

Dimming: When motion is detected within the sensor's coverage area, the sensor sends a signal to ramp the load up to the selectable High Mode level unless the ambient light level is higher than the selected setpoint. When no motion is detected for the duration of the time delay setting, the lights will go to the selectable Low Mode level based on the signal from the sensor. If desired, a cut off time delay will trigger to eventually turn the lights OFF.
Non dimming: When motion is detected within the sensor's coverage area, the sensor sends a signal to turn the load ON unless the ambient light level is higher than the selected setpoint. When no motion is detected for the duration of the time delay setting, the lights will go OFF based on the signal from the sensor.
Dusk to dawn control: When photocell on/off is enabled, and the ambient light falls below the photocell setpoint, the sensor ramps the load up to the selectable High Mode level. If no motion is detected for the duration of the time delay setting, the lights will go to the selectable Low Mode level. If the cut off time delay is disabled, the load will remain on, at High or Low level, based on motion detection, until the ambient light increases above the photocell setpoint.

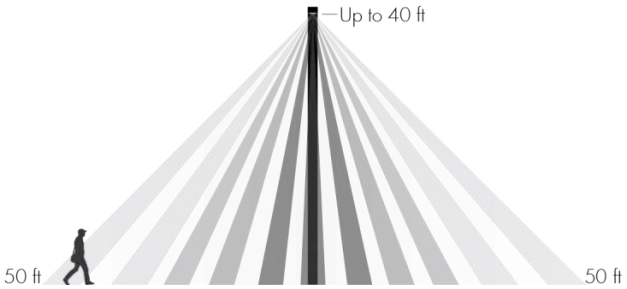
Coverage Area

Narrow Lens (MD10N, MD30N, MD50N and MDPN)*



* Maximum 20 ft height, 40 ft diameter coverage area

Wide Lens (MD10W, MD30W, MD50W and MDPN)*



* Maximum 40 ft height, 100 ft diameter coverage area (Lumenpulse maximum pole height: up to 30 ft consult relative pole specification sheets for more details).

High temperatures at the covered area (above 88 °F - 91 °F) reduce the detection zone of the sensor. Consider adding more sensors if the ambient temperatures are expected to be high. Additionally, high floor level temperature may require larger movement for detection. Coverages shown in the diagrams are maximum, measured in linear feet. They represent coverage for walking motion, with no obstacles.

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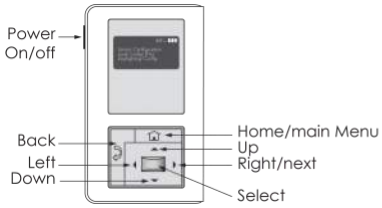
Remote (Order Separately)

MDRC001 - Remote to Program Motion Detector on Site



- Compatible with all motion detector options.

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How to Order

Housing	Mounting	Voltage	Lens [3]	Output (nominal lumens)	Color and Color Temperature	Color Rendering	Distributions	Finish	Control	Option	Pole Mounting Adaptor [24]
BLDM Lumenblade medium [1]	**SD** Side mounting	**120** 120 volts **208** 208 volts **240** 240 volts **277** 277 volts **347** 347 volts [2] **480** 480 volts [2]	**CSL** Clearsite lens SL-1 & SL-2 SL-3	**S40** 4000lm (1 board, 18 7/8 in) [2] [4] [5] **S60** 6000lm (1 board, 18 7/8 in) [2] [4] **M80** 8000lm (2 boards, 28 1/8 in) [4] **M100** 10000lm (2 boards, 28 1/8 in) [4] **L120** 12000lm (3 boards, 40 1/8 in) [4] **L140** 14000lm (3 boards, 40 1/8 in) [4] **L160** 16000lm (3 boards, 40 1/8 in) [4] **XL180** 18000lm (4 boards, 52 1/8 in) [4] **XL200** 20000lm (4 boards, 52 1/8 in) [4]	**22K** 2200K [6] **27K** 2700K [7] **30K** 3000K **35K** 3500K **40K** 4000K **57K** 5700K [8]	**CRI 70** CRI 70+ [9] **CRI 80** CRI 80+ [10] **CRI 90** CRI 90+ [11]	**2** SL-1 Type II **2BLS** Type II backlight shield **3** SL-2 Type III **3BLS** Type III backlight shield **4** SL-3 Type IV **4BLS** Type IV backlight shield **5S** Type V square	**BK** Black Sandtex® **BRZ** Bronze Sandtex® **SI** Silver Sandtex® **BKTX** Textured Black **BRZTX** Textured Bronze Non-Metallic **GRATX** Textured Medium Gray **GRNTX** Textured Green **WHTX** Textured White **CC** Custom Color & Finish [12] [13] [14]	**DIM** 0-10V dimming [15] **LT** Lumentalk [16]	**3GV** 3G ANSI C136.31-2010 Vibration Rating for bridge applications [16] [17] **CRC** Corrosion-resistant coating [18] [19] **SP** Surge protector **SPR3** 3-Pin Receptacle [20] **SPR3 SC** 3-Pin Receptacle with Shorting Cap [20] **SPR5** 5-Pin Receptacle [20] **SPR5 SC** 5-Pin Receptacle with Shorting Cap [20] **SPR7** 7-Pin Receptacle [20] **SPR7 SC** 7-Pin Receptacle with Shorting Cap [20] **MD10N** Motion detector 10% factory-set dimming level (narrow lens) [21] [22] **MD10W** Motion detector 10% factory-set dimming level (wide lens) [21] [22] **MD30N** Motion detector 30% factory-set dimming level (narrow lens) [21] [22] **MD30W** Motion detector 30% factory-set dimming level (wide lens) [21] [22] **MD50N** Motion detector 50% factory-set dimming level (narrow lens) [21] [22] **MD50W** Motion detector 50% factory-set dimming level (wide lens) [21] [22] **MDPN** Motion detector programmable, factory-set dimming level (narrow lens) [21] [22] [23] **MDPW** Motion detector programmable, factory-set dimming level (wide lens) [21] [22] [23]	**RPA6M** Round pole adaptor for Ø6 in pole **SPA6** Square pole adaptor for Ø6 in pole **RPA6TM** Round pole adaptor for Lumentech Ø6 in pole **SPA6T** Square pole adaptor for Lumentech Ø6 in pole

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Notes:

1. Product code is for a single fixture only (S1E configuration). For double configuration (S2E), a second product code must be completed.
2. Not available with LT control option.
3. Consult factory for Softsite lens option. Available for 3000lm (1 board), 5000lm (2 boards), 7000lm (3 boards) and 10000lm (4 boards) outputs.
4. Motion detector options add 6 1/4 in to total length of fixture.
5. Available up to 277V.
6. Available for CRI 80 only.
7. Available for CRI 80 and CRI 90 only.
8. Available for CRI 70 and CRI 80 only.
9. Binning within a 3-step McAdam ellipse, with the exception of 5700K.
10. Binning within a 2-step MacAdam ellipse, with the exception of 2200K and 5700K.
11. Binning within a 2-step MacAdam ellipse
12. Specify RAL number followed by "TX" for textured finish (ex: RAL9007TX) or STX for Sandtex finish (ex: RAL9007STX). Textured or Sandtex finishes are recommended for the durability of all products. If a finish is not specified with the RAL number (ex: RAL9007), a glossy finish will be provided. Please consult factory for other RAL textures and glosses, or to match alternate color charts. Final color matching results may vary.
13. Setup charges apply for RAL colors. Consult factory for details.
14. Longer lead times can be expected for custom RAL color finishes.
15. DIM control can be used as NO (On/off control) if no data is required.
16. Not available with SPR3, SPR3 SC, SPR5, SPR5 SC, SPR7 and SPR7 SC 3-Pin, 5-Pin, and 7-Pin receptacles options and MD10N, MD10W, MD30N, MD30W, MD50N, MD50W, MDPN and MDPW motion detector options.
17. Available with S40, S60, M80 and M100 output options only.
18. Use only when exposed to salt spray. This option is not required for normal outdoor exposure.
19. Setup charges apply. Consult factory for details.
20. Only one receptacle can be specified per fixture, cannot be combined with motion detector option.
21. The motion detector programming can be modified on site. A remote is required, order separately. See Remote section in the specification sheet for details.
22. Only one motion detector can be specified per fixture, cannot be combined with a receptacle.
23. The motion detector is programmed in the factory, as per the settings requested at the time of the order.
24. Consult Pole Mounting Adaptor section for standard available configurations.

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TYPE SL-4

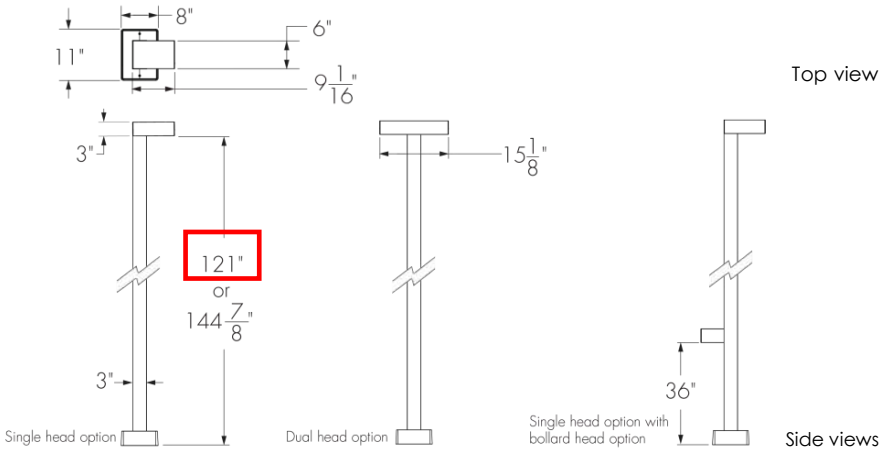
lumenblade
Column
BLDC

Catalog Number:
BLDC-TM1-VOLTAGE-10FT-CSL-XS25-30K-CRI 80-4-FINISH CONTROL

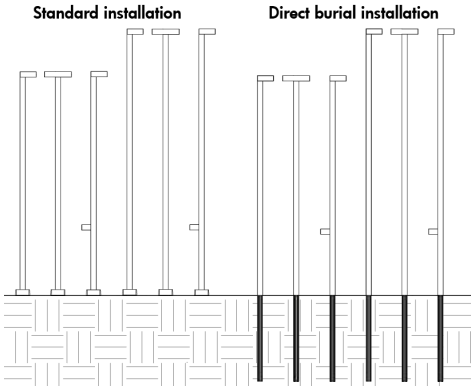
Project Name _____ **Qty** _____

Type _____ **Catalog / Part Number** _____

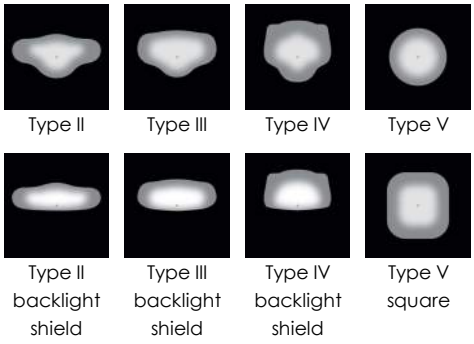

Single head option shown



Configurations



Distributions



Description

The Lumenpulse Lumenblade Column is an outdoor LED luminaire that uses a rectilinear version of the Lumencentro light engine to create a continuous line of light. Options include: heights of either 10 feet or 12 feet, with a Single or Dual head. Its seen-but-not-seen, minimalist design is sustainable, blends with both contemporary and heritage architectures, provides a high level of security, and is sensitive to the natural environment with low outputs and with a BUG rating of 0.

Features

Mounting	Single head, Dual head
Height	10 ft, 12 ft
Color and Color Temperature	Amber, 2200K, 2700K, 3000K, 3500K, 4000K, 5700K
Distributions	Type II, Type III or Type IV (with or without backlight shield), Type V, Type V square
Optical Option (factory installed)	Louver
Vibration Rating	Meets ANSI C136.31-2018 vibration rating for Bridge & Overpass applications
Options	Vibration Rated for Bridge and Overpass, Corrosion-resistant coating for hostile environments, Surge protector, Photoelectric Cell Button Type, Ground Fault Duplex Receptacle, Duplex receptacle with USB A and USB C, 3-Pin Receptacle with or without shorting cap, 5-Pin Receptacle with or without shorting cap, 7-Pin Receptacle with or without shorting cap, Motion detector, Direct Burial
Warranty	5-year limited warranty

Performance

Output (nominal lumens)	Minimum 300lm (single head)/ 200lm for bollard head option, Maximum 5000lm (dual head)
Efficacy	Up to 106 lm/W (XS10 lumen output, 4000K, CRI 70+,Type III)

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Color and Color Temperature



Control

ON/OFF 0-10V LT

Ratings

IP66 (optical chamber) IK06 (lens) IK10*(frame)
*IK10 polycarbonate lens option available, consult factory.

Motion detector options



Certifications

Color Rendering	3 SDCM for CRI 70+, 2 SDCM for CRI 80+ and CRI 90+
Lumen Maintenance	TM-21 L70 > 145,000 hrs (reported, Ta 25 - 50 °C [77 - 122 °F])
Dark Sky	Dark sky compliant (2200K, 2700K, 3000K and Amber color temperatures, BUG rating of U0)

Physical

Housing Material	Extruded aluminium 6000 alloy series
Lens Material	Optical tempered clear glass (Clearsite lens), Optical tempered frosted glass (Frostsite lens), Optical tempered half-frosted glass (Half-Frostsite lens)
Head Option	Bollard Head, Column head
Head Option Height	3 ft
Surface Finish	Super durable resistant exterior polyester powder coating meets AAMA 2604-98 requirements (5-years Florida exposure) a corrosion resistant finish (CRC) pre-finish is available to meet ASTM B-117 & ASTM D-1654 (salt spray resistance) and ASTM D-2247 requirements (humidity resistance).
Weight	22.5 lbs for single head option (10 ft fixture)

Electrical and control

Voltage	120 volts, 208 volts, 240 volts, 277 volts, 347 volts, 480 volts
Control	On/Off control, 0-10V dimming, Lumentalk

Environmental

Storage Temperature	-40°C to 50°C [-40°F to 122°F] (device must reach start-up temperature value before operating)
Operating Temperature	-40°C to 50°C [-40°F to 122°F]
Start-up Temperature	-25°C [-13 °F] to 50°C [122 °F]
Ingress Protection Rating	IP66 (optical chamber), Wet location rated
Impact Resistance Rating	IK06 (glass lens), IK10 (frame) *IK10 polycarbonate lens option available, consult factory
Environment	Dry/damp/wet location

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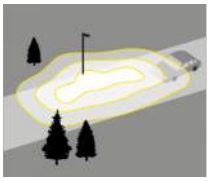
Photometric information

Type II, 4000K, CRI 70+, Clearsite lens



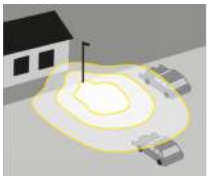
	Nominal output [lm]	Typical delivered output [lm]	Efficiency (lm/W)	BUG Rating B U G	Typical maximum power 120/277V (W)
XS10	1,014	101	0 0 0	10
XS15	1,452	85	0 0 0	17
XS20	1,821	73	1 0 1	25
XS25	2,305	77	1 0 1	30

Type III, 4000K, CRI 70+, Clearsite lens



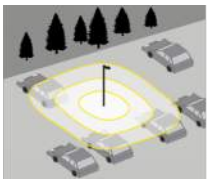
	Nominal output [lm]	Typical delivered output [lm]	Efficiency (lm/W)	BUG Rating B U G	Typical maximum power 120/277V (W)
XS10	1,060	106	0 0 0	10
XS15	1,517	89	0 0 0	17
XS20	1,902	76	1 0 1	25
XS25	2,408	80	1 0 1	30

Type IV, 4000K, CRI 70+, Clearsite lens



	Nominal output [lm]	Typical delivered output [lm]	Efficiency (lm/W)	BUG Rating B U G	Typical maximum power 120/277V (W)
XS10	883	88	0 0 0	10
XS15	1,265	74	0 0 1	17
XS20	1,586	63	0 0 1	25
XS25	2,007	67	1 0 1	30

Type V square, 4000K, CRI 70+, Clearsite lens



	Nominal output [lm]	Typical delivered output [lm]	Efficiency (lm/W)	BUG Rating B U G	Typical maximum power 120/277V (W)
XS10	977	98	1 0 1	10
XS15	1,399	82	1 0 1	17
XS20	1,754	70	1 0 1	25
XS25	2,220	74	1 0 1	30

*Photometric performance is measured in compliance with IESNA LM-79-19. Due to rapid and continous advances in LED technology, photometric information is subject to change without notice.

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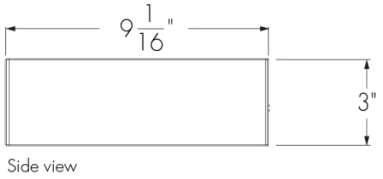
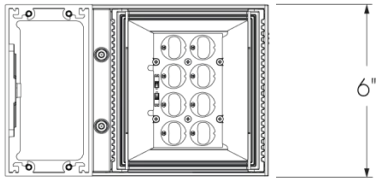
Luminaire head dimensions

TM1 - Single head

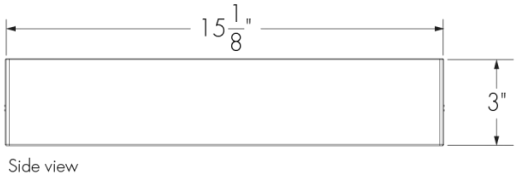


Side view

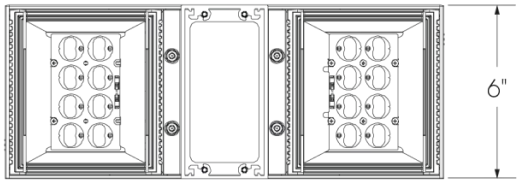


Bottom view

TM2 - Dual head



Side view

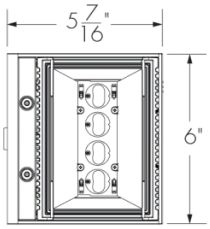


Bottom view

BH - Bollard head

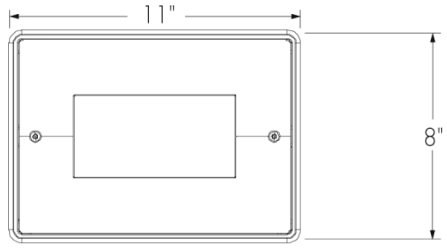


Side view



Bottom view

Base dimensions



Top View



Side View

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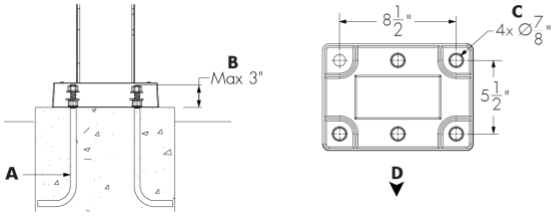
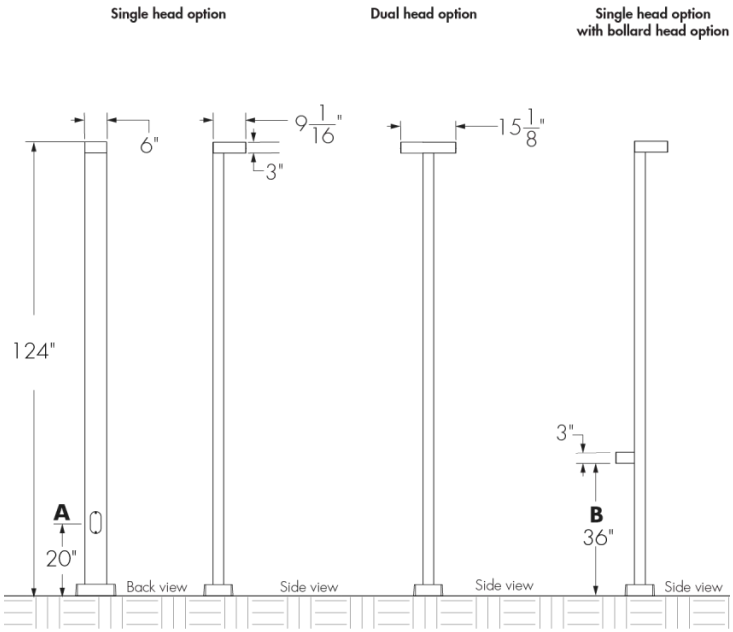
Standard installation assembly details



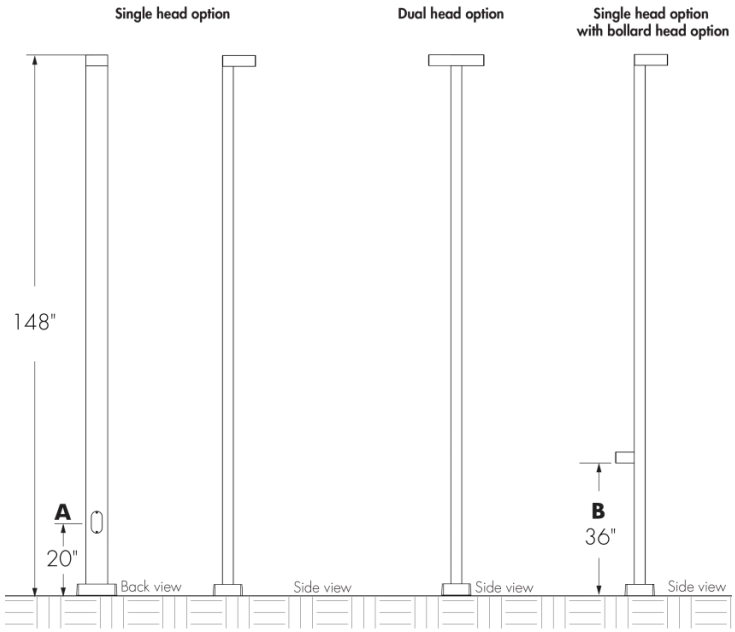
A - (4x) Ø3/4 in by 26 in long anchor bolts with flats washers and nuts for each
B - Between 2.5 in and 3 in of the anchor bolts must be above ground for installation
C - Bolt circle
D - Access door and street side

Standard installation dimensions

10 ft column

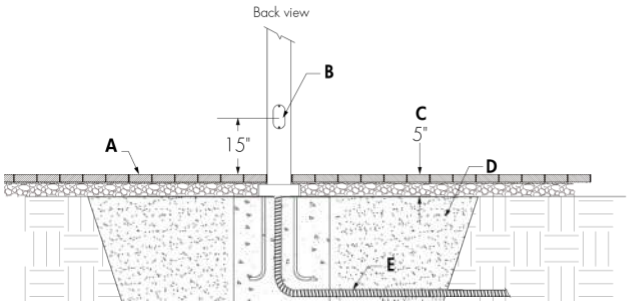


12 ft column



A - Access door (distance from ground to center of access door)
B - Bollard head option (distance from ground to bollard head)

Semi-buried installation assembly details



A - Finished grade
B - Access door
C - Buried section, at least 5 in
D - Filling
E - Conduit (by others)

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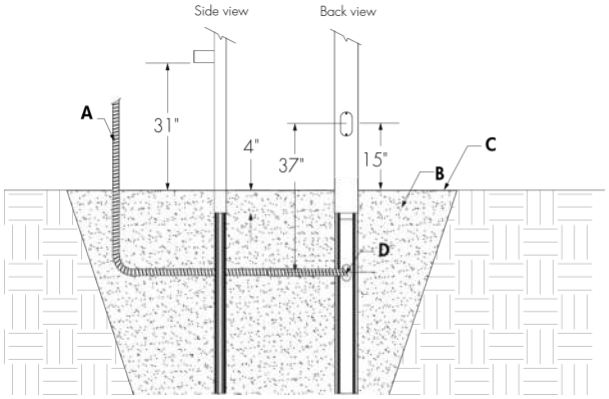
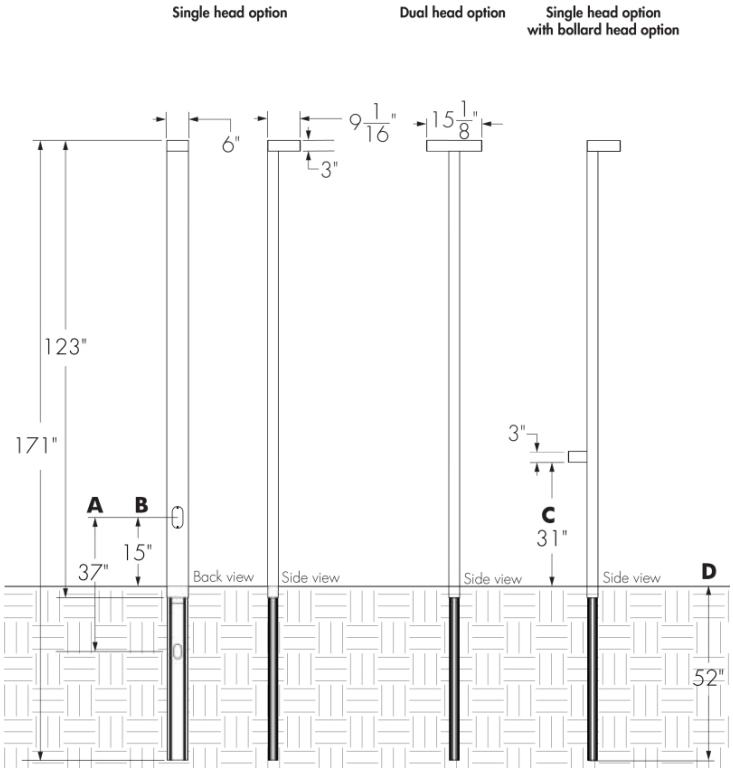
Direct burial installation assembly details



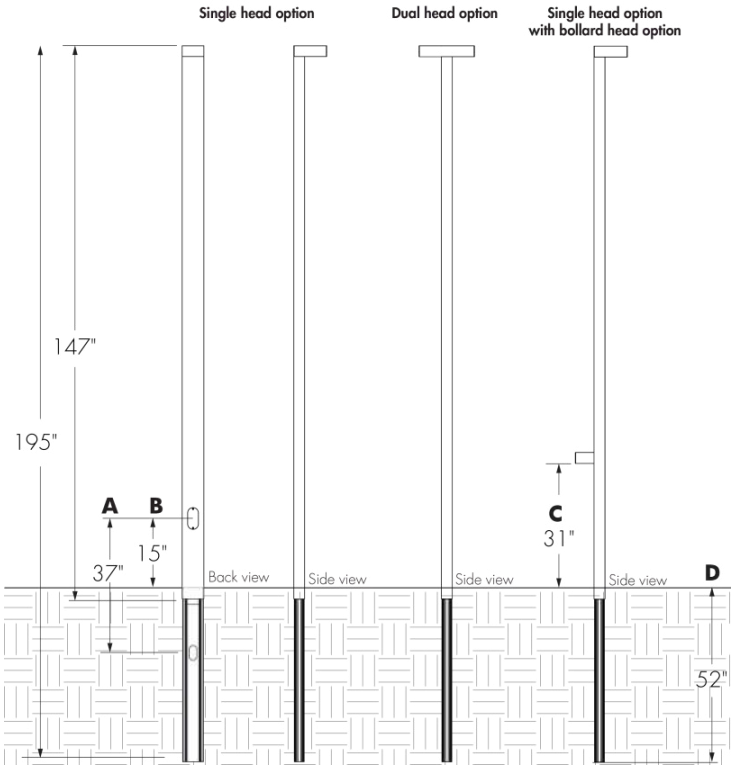
A - Conduit (by others)
B - Filling
C - Finished grade
D - Opening for conduit

Direct burial installation dimensions

10 ft direct burial column



12 ft direct burial column



A - Distance from center of access door to opening for conduit
B - Access door (distance from ground to center of access door)
C - Bollard head option (distance from ground to bollard head)
D - Buried section

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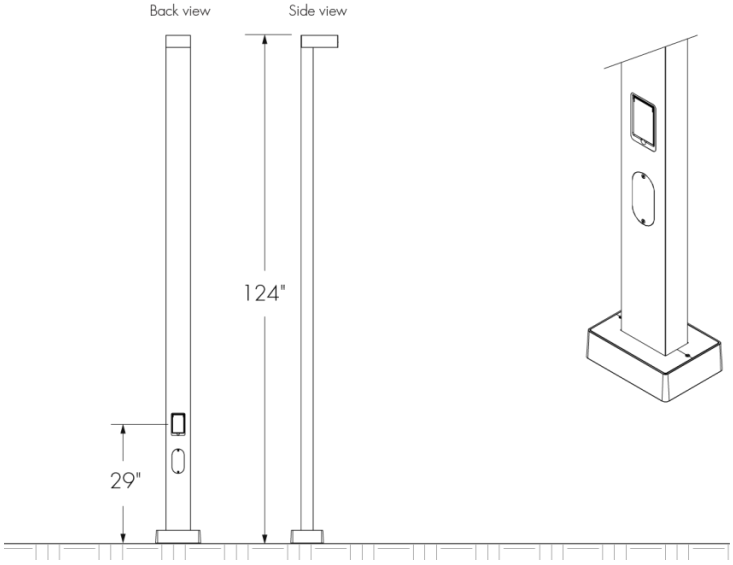
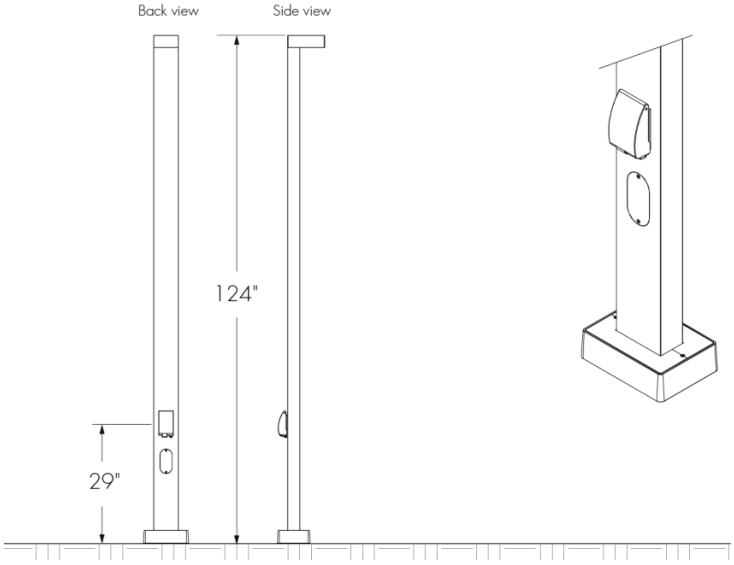
Duplex Receptacle installation dimensions

DRG - Ground fault duplex receptacle
USB - Duplex receptacle with USB A and USB C



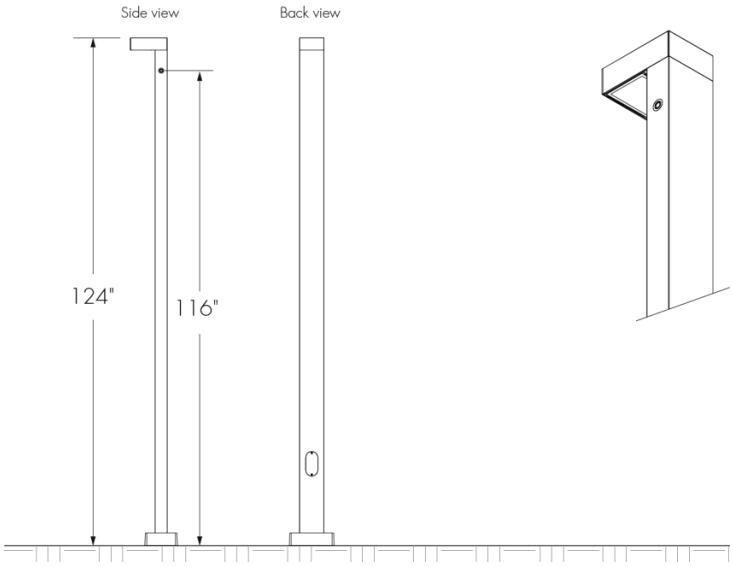
DRG IU - Ground Fault Duplex Receptacle (while in use)
USB IU - Duplex receptacle with USB A and USB C (while in use)



The duplex receptacle must be installed in accordance with applicable national and local electrical and construction codes by a person familiar with the construction and operation of the product and the hazards involved. Refer to national and local electrical codes before selecting a duplex receptacle to ensure all requirements are met.

Photoelectric Cell Button installation dimensions

PB - Photoelectric Cell Button Type



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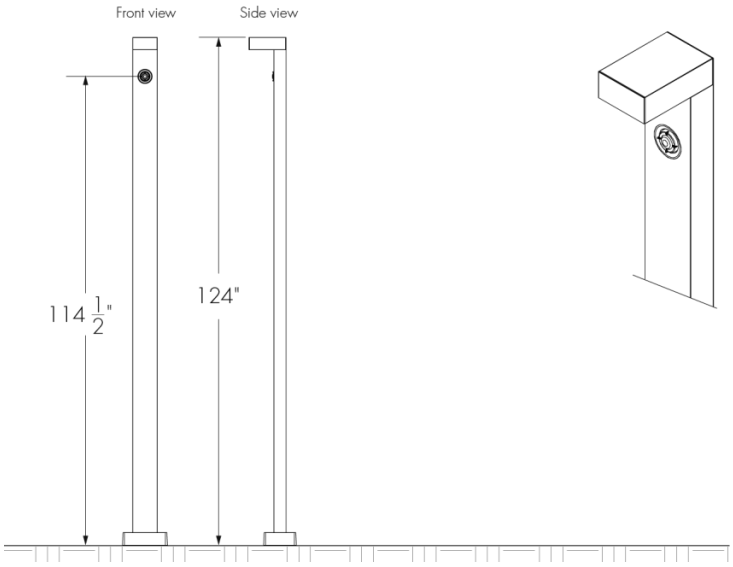
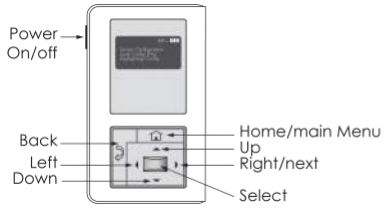
Motion detector installation dimensions

Motion detector (MD10N, MD30N, MD50N, MDNL and MDPN)



Remote (order separately)

MDRC001 - Remote to program motion detector on site



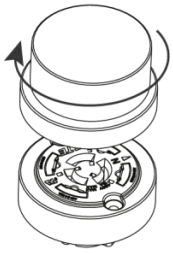
- Compatible with all motion detector options.

3-Pin, 5-Pin and 7-Pin Receptacles Options

SPR3, SPR5 and SPR7 - 3-Pin, 5-Pin and 7-Pin Receptacles



SPR3 SC, SPR5 SC and SPR7 SC - 3-Pin, 5-Pin and 7-Pin Receptacles with Shorting Cap



- Dimming receptacle meets ANSI C136.41 Standard

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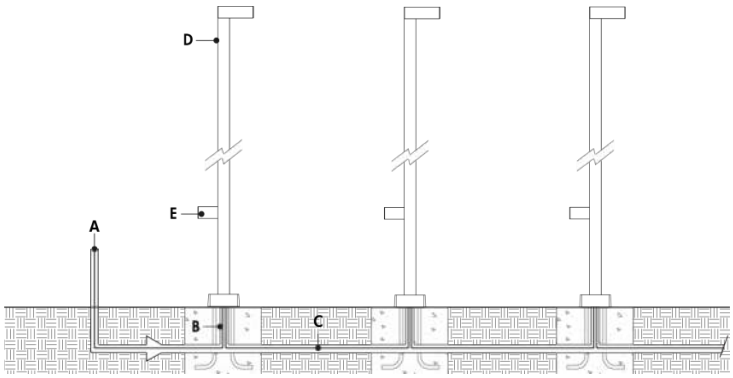
Typical Wiring Diagrams

Wiring Color Code

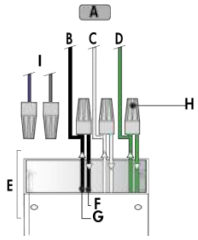
Color	Black	White	Green	Purple	Gray
Use	Line	Line/Neutral	Ground	0 -10V+	0 -10V -

On/Off Control (NO)



A - Power input (120-480V)
B - Conduit (by others)
C - Power wiring (by others)
D - Lumenblade Column
E - Bollard head option

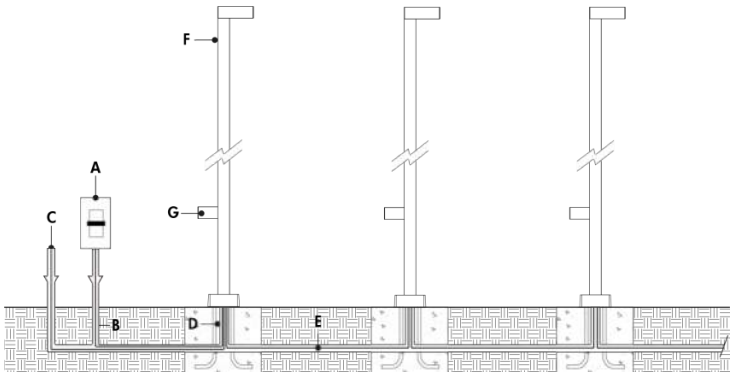
On/Off Control (NO) - wiring detail



A - To fixture
B - Line
C - Line/Neutral
D - Ground
E - Conduit (by others)
F - To next fixture
G - Power input or from previous fixture
H - Wire-nuts (by others)
I - Not required

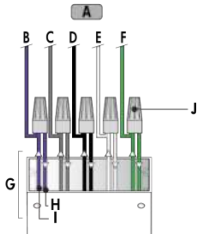
- Consult factory for specific applications and maximum fixture count/cable length recommendations.

0-10V dimming (DIM)



A - Dimmer (by others)
B - Data wiring (by others)
C - Power input (120-480V, wiring by others)
D - Conduit (by others)
E - Power and data wiring (by others)
F - Lumenblade Column
G - Bollard head option

0-10V dimming (DIM) - wiring detail



A - To fixture
B - 0-10V +
C - 0-10V -
D - Line
E - Neutral
F - Ground
G - Conduit (by others)
H - To next fixture
I - Power input or from previous fixture
J - Wire-nuts (by others)

- Consult factory for specific applications and maximum fixture count/cable length recommendations.
- 0-10V mA ratings: passive dimmer (Current Sink): 3mA per fixture, active dimmer (Current Source): 0.5mA per fixture.
- 1% minimum dimming value.

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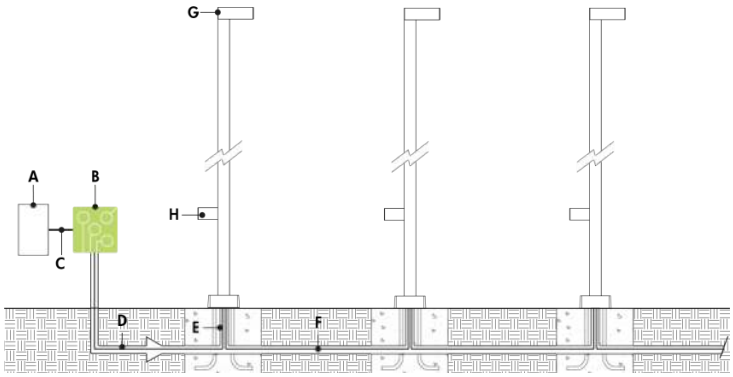
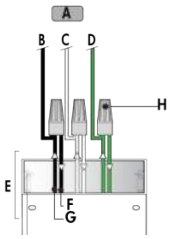
Lumentalk (LT)



A - Third party dimmer/controller
B - Lumentranslator (LTL-010)
C - Data wiring (by others)
D - Power line (120-277V, wiring by others)
E - Conduct (by others)
F - Power wiring (by others)
G - Lumenblade Column
H - Bollard head option



A - To fixture
B - Line
C - Line/Neutral
D - Ground
E - Conduit (by others)
F - To next fixture
G - Power input or from previous fixture
H - Wire-nuts (by others)

- Consult factory for specific applications and maximum fixture count/cable length recommendations.
- Lumentalk enabled fixtures must be commissioned using LumentalkID software and a LID-LT. Consult factory for details.
- Maximum of 1 transmitter (Lumentranslator or Lumenlink) per system.
- No third party fixtures allowed on the same circuit.
- DRG or USB option must be on a separated circuit.

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Motion detector options

Programming

	MD10N - Narrow lens, 10% dimming level	**MD30N -** Narrow lens, 30% dimming level	**MD50N -** Narrow lens, 50% dimming level	**MDPN -** Narrow lens, programmable	
	100% (10V) 10% (1V)	100% (10V) 30% (3V)	100% (10V) 50% (5V)		*How to provide code:*
High mode [1]	10V	10V	10V	• 5V - 10V (Increment: **0.2V**)	10V
Low mode [2]	1V	3V	5V	• Off • 0V - 9.8V (Increment: **0.2V**)	2.6V
Time delay [3]	5 min	5 min	5 min	• 1min - 30min (Increment: **30 seconds**)	10 min
Cut off [4]	1 hr	1 hr	1 hr	• Disable • 1min - 59min (Increment: **30 seconds**) • 1hr - 5hr (Increment: **1 hour**)	3 hr
Set point [5]	Dis	Dis	Dis	• Disable • Auto • 1fc - 250fc (Increment: **1fc**)	Auto
Sensitivity [6]	Max	Max	Max	• On-Fix • Off-Fix • Low • Med • Max	Med
Ramp up [7] **time**	3 sec	3 sec	3 sec	• Disable • 1sec - 60sec (Increment: **1 second**)	10 sec
Fade down [8] **time**	3 sec	3 sec	3 sec	• Disable • 1sec - 60sec (Increment: **1 second**)	10 sec
Photocell [9] **On/Off**	Dis	Dis	Dis	• Disable • 1fc - 250fc (Increment: **1fc**)	Dis

[1] When the sensor detects motion, the dimming control output ramps up to the selected HIGH light level.
[2] After the sensor stops detecting motion and the time delay expires, the dimming control output fades down to the selected LOW light level.
[3] The selected time period that must elapse after the last time the sensor detects motion for the electric lights to fade to LOW mode.
[4] The time period that must elapse after the lights fade to LOW mode, and the sensor detects no motion for the electric lights to turn OFF.
[5] When enabled, the selectable ambient light level threshold that will hold the electric lights off or at LOW level when the sensor detects motion.
[6] The response of the PIR detector to motion within the sensor's coverage area.
[7] Time period for light level to increase from LOW to HIGH.
[8] Time period for light level to decrease from HIGH to LOW.
[9] When enabled, the sensor will force the load OFF after the light level has exceeded the selected photocell setpoint PRIOR SAVE SEND for at least a minute. It will also force the load ON when the light level goes below the setpoint, even if no motion is detected.
[10] The motion detector programming can be modified on site. A remote is required, order separately. See Remote section in the specification sheet for details.

Dimming: When motion is detected within the sensor's coverage area, the sensor sends a signal to ramp the load up to the selectable High Mode level unless the ambient light level is higher than the selected setpoint. When no motion is detected for the duration of the time delay setting, the lights will go to the selectable Low Mode level based on the signal from the sensor. If desired, a cut off time delay will trigger to eventually turn the lights OFF.
Non dimming: When motion is detected within the sensor's coverage area, the sensor sends a signal to turn the load ON unless the ambient light level is higher than the selected setpoint. When no motion is detected for the duration of the time delay setting, the lights will go OFF based on the signal from the sensor.
Dusk to dawn control: When photocell on/off is enabled, and the ambient light falls below the photocell setpoint, the sensor ramps the load up to the selectable High Mode level. If no motion is detected for the duration of the time delay setting, the lights will go to the selectable Low Mode level. If the cut off time delay is disabled, the load will remain on, at High or Low level, based on motion detection, until the ambient light increases above the photocell setpoint.

Coverage area

Narrow lens (MD10N, MD30N, MD50N and MDPN)*



* Maximum 12 ft height, 24 ft diameter coverage area.

High temperatures at the covered area (above 88 °F - 91 °F) reduce the detection zone of the sensor. Consider adding more sensors if the ambient temperatures are expected to be high. Additionally, high floor level temperature may require larger movement for detection. Coverages shown in the diagrams are maximum, measured in linear feet. They represent coverage for walking motion, with no obstacles.

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How to Order

Housing	Mounting	Voltage	Height	Lens [5]	Output (nominal lumens) [8]	Color and Color Temperature	Color Rendering	Distributions	Optical Option	Finish	Control
BLDC Lumenblade Column	**TM1** Single head [1] **TM2** Dual head [2] [3]	**120** 120 volts **208** 208 volts **240** 240 volts **277** 277 volts **347** 347 volts [4] **480** 480 volts [4]	**10FT** 10 ft **12FT** 12 ft	**CSL** Clearsite lens [6] **FSL** Frostsite lens [7]	**XS03** 300lm (8 LEDs) [6] [9] **XS10** 1000lm (8 LEDs) **XS15** 1500lm (8 LEDs) **XS20** 2000lm (8 LEDs) **XS25** 2500lm (8 LEDs)	**AMB** Amber [6] [10] **22K** 2200K [11] **27K** 2700K [12] **30K** 3000K **35K** 3500K **40K** 4000K **57K** 5700K [13]	**CRI 70** CRI 70+ [14] **CRI 80** CRI 80+ [15] **CRI 90** CRI 90+ [16]	**2** Type II **2BLS** Type II backlight shield **3** Type III **3BLS** Type III backlight shield **4** Type IV **4BLS** Type IV backlight shield **5** Type V **5S** Type V square	**LV** Louver [6] [17] [18]	**BK** Black Sandtex® **BRZ** Bronze Sandtex® **SI** Silver Sandtex® **BKTX** Textured Black **BRZTX** Textured Bronze Non-Metallic **GRATX** Textured Medium Gray **GRNTX** Textured Green **WHTX** Textured White **CC** Custom Color & Finish [19] [20] [21]	**DIM** 0-10V dimming [22] **LT** Lumentalk [23]

Notes:

1. Not available with CH head option.
2. Not available with BH head option.
3. Not available with HFSL lens.
4. Not available with LT control option.
5. Standard IK06 rating for glass lens. IK10 rated polycarbonate lens available, please consult factory.
6. Not available with type 5 distribution.
7. Available with type 3 and 5 distributions only.
8. Lumen output will vary according to the lens and distribution specified for the fixture. Please consult the photometric information section of the specification sheet for more details.
9. Available with AMB color temperature only.
10. Available with column head XS03 output only.
11. Available for CRI 80 only.
12. Available for CRI 80 and CRI 90 only.
13. Available for CRI 70 and CRI 80 only.
14. Binning within a 3-step McAdam ellipse, with the exception of 5700K.
15. Binning within a 2-step MacAdam ellipse, with the exception of 2200K and 5700K.
16. Binning within a 2-step MacAdam ellipse
17. Available with CSL lens only.
18. Factory installed, not field changeable.
19. Specify RAL number followed by "TX" for textured finish (ex: RAL9007TX) or STX for Sandtex finish (ex: RAL9007STX). Textured or Sandtex finishes are recommended for the durability of all products. If a finish is not specified with the RAL number (ex: RAL9007), a glossy finish will be provided. Please consult factory for other RAL textures and glosses, or to match alternate color charts. Final color matching results may vary.
20. Setup charges apply for RAL colors. Consult factory for details.
21. Longer lead times can be expected for custom RAL color finishes.
22. DIM control can be used as NO (On/off control) if no data is required.
23. Not available with PB photoelectric cell, SPR3, SPR3 SC, SPR5, SPR5 SC, SPR7 and SPR7 SC 3-Pin, 5-Pin, and 7-Pin receptacles and MD10N, MD30N, MD50N, MDPN and MDNL motion detector options.

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How to Order

Option	Head Option	Head Option Height [1]	Head Lens [5]	Head Output	Head Color and Color Temperature	Head Color Rendering	Head Distributions	Head Optical Option
VRBO Vibration Rated for Bridge and Overpass [24] [25] **CRC** Corrosion-resistant coating [26] [27] **SP** Surge protector **PB** Photoelectric Cell Button Type [4] [28] [29] **DRG** Ground Fault Duplex Receptacle [30] **DRG IU** Ground Fault Duplex Receptacle (while in use) [30] **USB** Duplex receptacle with USB A and USB C [30] **USB IU** Duplex receptacle with USB A and USB C in-use [30] **SPR3** 3-Pin Receptacle [4] [31] [32] **SPR3 SC** 3-Pin Receptacle with Shorting Cap [4] [31] [32] **SPR5** 5-Pin Receptacle [4] [31] [32] **SPR5 SC** 5-Pin Receptacle with Shorting Cap [4] [31] [32] **SPR7** 7-Pin Receptacle [4] [31] [32] **SPR7 SC** 7-Pin Receptacle with Shorting Cap [4] [31] [32] **MD10N** Motion detector 10% factory-set dimming level (narrow lens) [4] [33] [34] [35] **MD30N** Motion detector 30% factory-set dimming level (narrow lens) [4] [33] [34] [35] **MD50N** Motion detector 50% factory-set dimming level (narrow lens) [4] [33] [34] [35] **MDNL** Détecteur de mouvements, pas de niveau de gradation programmé en usine (lentille étroite) [4] [34] [36] [37] [38] **MDPN** Motion detector programmable, factory-set dimming level (narrow lens) [4] [33] [34] [35] [39] **DB** Direct Burial	**BH** Bollard Head [40] **CH** Column head [3] [41]	**3FT** 3 ft	**CSL** Clearsite lens [42] **FSL** Frostsite lens [43] **HFSL** Half-Frostsite lens [44] [45]	**N02** 200lm (4 LEDs) [6] [46] **N03** 300lm (4 LEDs) **N05** 500lm (4 LEDs) **N07** 700lm (4 LEDs) **N10** 1000lm (4 LEDs) **XS03** 300lm (8 LEDs) [6] [46] **XS10** 1000lm (8 LEDs) **XS15** 1500lm (8 LEDs) **XS20** 2000lm (8 LEDs) **XS25** 2500lm (8 LEDs)	**AMB** Amber [6] [47] [48] **22K** 2200K [11] **27K** 2700K [12] **30K** 3000K **35K** 3500K **40K** 4000K **57K** 5700K [13]	**CRI 70** CRI 70+ [14] **CRI 80** CRI 80+ [15] **CRI 90** CRI 90+ [16]	**2** Type II **2BLS** Type II backlight shield **3** Type III **3BLS** Type III backlight shield **4** Type IV **4BLS** Type IV backlight shield **5** Type V **5S** Type V square	**LV** Louver [6] [18] [49]

Notes:

1. Not available with CH head option.
3. Not available with HFSL lens.
4. Not available with LT control option.
5. Standard IK06 rating for glass lens. IK10 rated polycarbonate lens available, please consult factory.
6. Not available with type 5 distribution.
11. Available for CRI 80 only.
12. Available for CRI 80 and CRI 90 only.
13. Available for CRI 70 and CRI 80 only.
14. Binning within a 3-step McAdam ellipse, with the exception of 5700K.
15. Binning within a 2-step MacAdam ellipse, with the exception of 2200K and 5700K.
16. Binning within a 2-step MacAdam ellipse
18. Factory installed, not field changeable.
24. Vibration tested in accordance with ANSI 136.31 2018 for bridge and overpass applications at 5Gv.
25. Specify only if a bridge or overpass application is required.
26. Use only when exposed to salt spray. This option is not required for normal outdoor exposure.
27. Setup charges apply. Consult factory for details.
28. Not available for 480V voltage option.
29. Not available with MD10N, MD30N, MD50N, MDPN and MDNL motion detector options.
30. A ground fault duplex receptacle (DRG or DRG IU) and a duplex USB receptacle (USB or USB IU) cannot be combined.
31. Only one receptacle can be specified per fixture, cannot be combined with motion detector option.
32. Not available with PB option.
33. The motion detector programming can be modified on site. A remote is required, order separately. See Remote section in the specification sheet for details.
34. Only one motion detector can be specified per fixture, cannot be combined with a receptacle.
35. MD10N, MD30N, MD50N and MDPN are Wattstopper motion detectors.
36. MDNL is an N-Light motion detector.
37. Consult factory for details.
38. Not available for 347V and 480V voltage options.
39. The motion detector is programmed in the factory, as per the settings requested at the time of the order.
40. Available for N02, N03, N05, N07 and N10 bollard head outputs only.
41. Available for XS03, XS10, XS15, XS20 and XS25 column head outputs only.
42. Not available with type 5 distribution when head option is specified for the Lumenblade column.
43. Available with type 3 and type 5 distributions when a head option is specified for the Lumenblade column.
44. Available with type 2, type 3 and type 4 distributions when a bollard head is specified for the Lumenblade column.
45. Available for N03, N05, N07 and N10 bollard head outputs only.
46. Available with AMB head color temperature only.
47. Available with N02 output when a bollard head is specified. Available with XS03 output when a second column head is specified for the Lumenblade column.
48. Not available for FSL and HFSL lens.
49. Not available for FSL lens.

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BRICK-OD OUTDOOR

FOR INDOOR, REFER TO MODEL #: 1575

Catalog Number:
7075-12-TW-H08-30K

TYPE WP-1

BROWNLEE



7075-12” in Textured Black (TB)



7075-24” in Textured Black (TB)

7075 LED

The BRICK-OD (outdoor) is a minimal, clean and contemporary exterior sconce with exceptional versatility: Three ADA compliant sizes (8”, 12” and 24”), single direction LED distribution, and three finishes to choose from. Perfect for exterior facades, entryways, columns, and breezeways. Since this is a wet-listed unit, it can also be used in healthcare applications requiring durable luminaires which can be wiped down. Available with integral battery backup.

FINISHES



BRICK-OD OUTDOOR

FOR INDOOR, REFER TO MODEL #: 1575

PROJECT:
MODEL #:
FIXTURE TYPE:

STANDARD SPECIFICATIONS - *SINGLE DIRECTION DISTRIBUTION (7075)*

OUTER FRAME & MOUNT PLATE
Formed and welded aluminum. Countersunk fasteners located on top of fixture. No exposed hardware on sides or bottom of fixture. Closed cell foam gasket on rear mount plate.

DIFFUSER
UV stabilized frosted acrylic diffuser. Smooth uniform illumination.

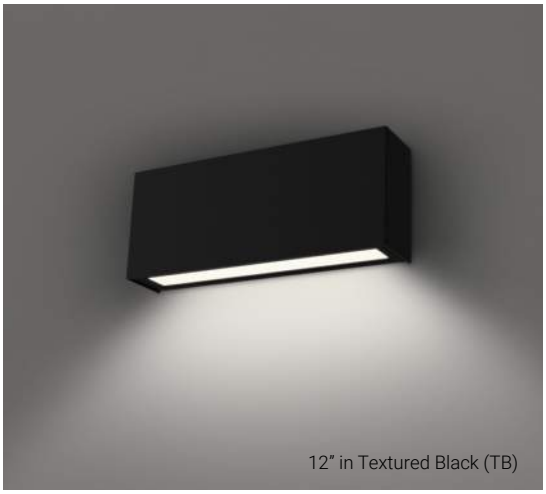
LED PERFORMANCE - 3500K STANDARD - TYPE 2 DISTRIBUTION
120-277V - 3500K, L80 rating - 60,000 hrs - L70 rating (projected) - 100,000 hrs
Amperage rated @ 110V input
Operating ambient temperature: -20°C / -4°F - 50°C / 122°F

Delivered 3500K lumens noted. Consult Brownlee.com for performance of all CCTs.
08 Size: C13 – 13W nominal, .10 A input - 1165 lm. Dimmable (0-10V). 82 CRI Standard.
12 Size: H08 – 8W nominal, .07 A input - 860 lm. Dimmable (0-10V). 90+ CRI Standard.
12 Size: H16 – 16W nominal, .14 A input – 1490 lm. Dimmable (0-10V). 90+ CRI Standard.
12 Size: H21 – 21W nominal, .18 A input – 1725 lm. Dimmable (0-10V). 90+ CRI Standard.
24 Size: H16 – 16W nominal, .14 A input – 1470 lm. Dimmable (0-10V). 90+ CRI Standard.
24 Size: H32 – 32W nominal, .27 A input – 3030 lm. Dimmable (0-10V). 90+ CRI Standard.
24 Size: H41 – 41W nominal, .35 A input – 3410 lm. Dimmable (0-10V). 90+ CRI Standard.

MOUNTING
Fixture mounts to a 4x4 junction box (by others).
Wet-listed in the downward orientation only (light source facing down).

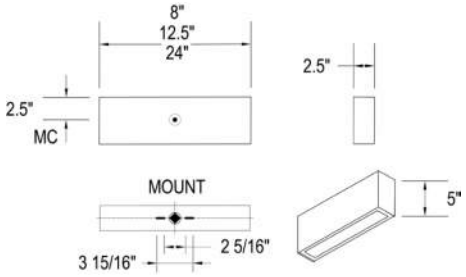
FINISH
Durable corrosion resistant powder coat finish.
Custom colors available, contact factory.

WARRANTY
5 year limited warranty on this LED product.
Consult factory for details.



Integral Battery Backup
Refer to options section





WET

ADA

ORDERING INFORMATION

7075 - _____ - _____ - _____ - _____ - _____

Model | 2. | 3. | 4. | 5. | 6.

2. SIZE

08	L: 08"
12	L: 12"
24	L: 24"

3. FINISH

TB	Textured Black
TG	Textured Grey
TW	Textured White

Note: TB, TG, TW are ultra fine textured matte finishes. Contact your local representative for color swatches.

CUSTOM
Additional finishes available as a modified option. Refer to Brownlee's Finishes webpage for inspiration.

4. WATTAGE

08 SIZE

C13	13W C Series LED

12 SIZE

H08	08W H Series LED
H16	16W H Series LED
H21	21W H Series LED

24 SIZE

H16	16W H Series LED
H32	32W H Series LED
H41	41W H Series LED

5. COLOR TEMPERATURE

35K	3500K color temperature
27K	2700K color temperature (C Series Only)
30K	3000K color temperature
40K	4000K color temperature

6. AVAILABLE OPTIONS

90R[0]	90 CRI (C-Series Wattages: 30K only)
BAC[1]	Buy American Compliant
BBI[2]	Integral Battery Backup - 10W (32F minimum)
BBC[2]	Integral Battery Backup, Cold Weather - 15W (-4F minimum) (24 Size Only)

Battery must be connected to continuous power supply within 7 Mo. of shipping. See Warranty Note 3.

DTR[4]	Triac (Line Voltage) Dimming (120V) (Cannot be combined with BBI/BBC)
ES[6]	ENERGY STAR® (All except H08, H21, H41)
FCL[7]	French Canadian Label
PO1	Photo Control (120V)
PO2	Photo Control (208, 240, 277V)
T24[9]	Title 24 JA8 Compliant (H16 & H32 only)

Universal Footnotes (only applies if option is listed on spec sheet): (0) 90R - 90 CRI output-loss multiplier: 0.85 (estimate). Cannot be combined with ES. **1) BAC** - cannot be combined with FCL. **(2) BBI/BBS/BBC** - cannot be combined with ECW or EXT. **(3) BLD** - includes integral microwave motion sensor (do not combine with OCC option). Cannot be combined with DTR. **(4) DTR** - cannot be combined with BLD. **(5) ECW** - cannot be combined with BBI, BBC, or DTR. **(6) ES** - cannot be combined with 90R or T24. **(7) FCL** - cannot be combined with BAC. **(8) OCC** - integral microwave motion sensor (ON/OFF). **(9) T24** - includes JA8 labeling and 90 CRI LEDs (do not combine with 90R option). Cannot be combined with ES. **(10) PCH/PC4** - cannot be combined with BLD or OCC. **Add'l Notes: *BBI/BBC** - BBI minimum operating temp: 10C/50F unless otherwise stated. BBC minimum operating temp: -20C/-4F. ****BLD** - integral microwave motion sensor with step-dim control. 1: Motion is detected, illuminate to 100%. 2: Motion no longer detected, dim to set level. 3: Remain in continuous dimmed state or turn off after set period. Configurable via onboard dip switches.

Specifications and dimensions subject to change without notice.
Consult your Brownlee Lighting representative for availability and ordering information.

BROWNLEE LIGHTING
www.brownlee.com

REVISED
2024.05.15

BRICK-OD OUTDOOR

PHOTOMETRIC DATA - For theoretical reference only. Data subject to change without notice.

PROJECT:
MODEL #:
FIXTURE TYPE:

ISOFOOTCANDLE PLOT LEGEND

10 fc 5 fc 2 fc .5 fc .25 fc

Mounting Height: 10'

Calculation Grid: 10' x 10'

POLAR GRAPH LEGEND

1 - Vertical Plane Through Horizontal Angles (5 - 185) (Through Max. Cd.)

2 - Vertical Plane Through Horizontal Angles (90 - 270)

3 - Horizontal Cone Through Vertical Angle (17.5) (Through Max. Cd.)

PHOTOMETRIC DATA

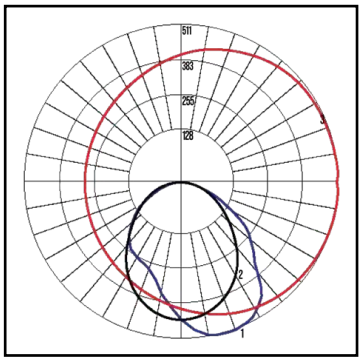
ADDITIONAL LUMEN PACKAGES AVAILABLE. CONTACT FACTORY FOR SUPPORTING PLOTS OR REFER TO IES FILES ONLINE.

Model: 7075-08-C13-35K / QTY: 1
Description: 08" Size, 13W, 1160 lm

ISOFOOTCANDLE PLOT



POLAR GRAPH



BUG RATING
B1-U0-G0

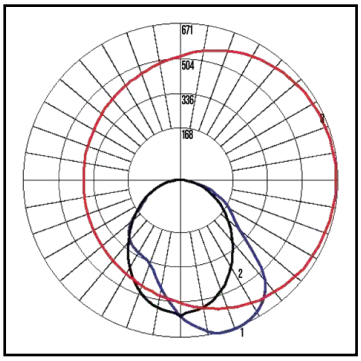
DISTRIBUTION
TYPE 2

Model: 7075-12-H16-35K / QTY: 1
Description: 12" Size, 16W, 1490 lm

ISOFOOTCANDLE PLOT



POLAR GRAPH

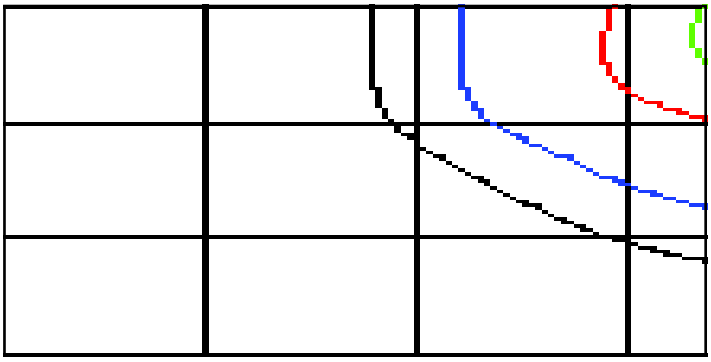


BUG RATING
B1-U0-G1

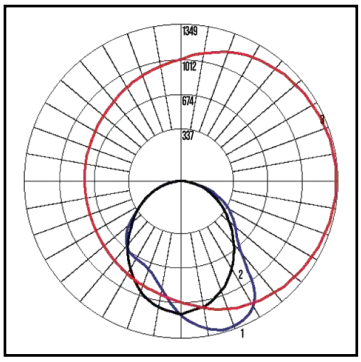
DISTRIBUTION
TYPE 2

Model: 7075-24-H32-35K / QTY: 1
Description: 24" Size, 32W, 3030 lm

ISOFOOTCANDLE PLOT



POLAR GRAPH



BUG RATING
B1-U0-G1

DISTRIBUTION
TYPE 2

Specifications and dimensions subject to change without notice.
Consult your Brownlee Lighting representative for availability and ordering information.

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REVISED
2024.05.15

Specification Sheet

Catalog Number:
BLDN-WM-VOLTAGE-CSL-XS25-30K-CRI80-3-FINISH-CONTROL

TYPE WP-2

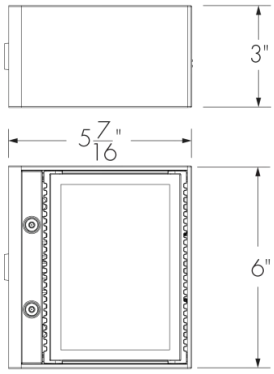
Lumenblade
Nano
BLDN

Project Name _____ **Qty** _____

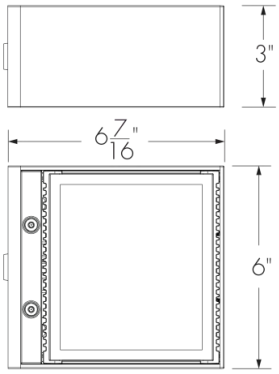
Type _____ **Catalog / Part Number** _____



W1H2 Wall Mount Option Shown



N02, N03, N05, N07
and N10 outputs



XS03, XS10, XS15, XS20
and XS25 outputs

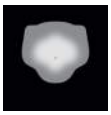
Side views

Bottom views

Distributions


Type II


Type III


Type IV


Type V


Type II Backlight Shield


Type III Backlight Shield


Type IV Backlight Shield


Type V Square

Color and Color Temperature


Amber


2200K


2700K


3000K


3500K


4000K


5700K

Control

ON/OFF 0-10V

Ratings

IP66 (optical chamber) IK06 (lens) IK10* (frame)

*IK10 polycarbonate lens option available, consult factory.

Certifications

Description

The Lumenpulse Lumenblade Nano is an outdoor LED luminaire that uses a rectilinear version of the Lumencentro light engine to create a continuous line of light. Side Mount or Wall Mount options are available. Its seen-but-not-seen, minimalist design is sustainable, blends with both contemporary and heritage architectures, provides a high level of security, and is sensitive to the natural environment with low outputs and with a BUG rating of 0.

Features

Mounting	Side Mounting, Wall Mounting
Color and Color Temperature	True Amber 585nm-595nm (Turtle-Friendly), 2200K, 2700K, 3000K, 3500K, 4000K
Distributions	Type II, Type III or Type IV (with or without backlight shield), Type V, Type V square
Optical Option (factory installed)	Louver
Vibration Rating	Meets ANSI C136.31-2018 vibration rating for Bridge & Overpass applications
Option	Vibration Rated for Bridge and Overpass Corrosion-resistant Coating for Hostile Environments
Warranty	5-year limited warranty

Performance

Output (Nominal Lumens)	Minimum 200lm/ Maximum 2500lm
Efficacy	Up to 127 lm/W (XS10 lumen output, 4000K, CRI 70+, Type VS)
Color Rendering	3 SDCM for CRI 70+, 2 SDCM for CRI 80+ and CRI 90+
Lumen Maintenance	TM-21 L70 > 145,000 hrs (reported, Ta 25 - 50 °C [77 - 122 °F])
Dark Sky	Dark sky compliant (2200K, 2700K, 3000K and Amber color temperatures, BUG rating of U0)

lumenpulse™
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www.lumenpulse.com www.lumenpulse.com/products/2963

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SA - R3

Physical

Housing Material	Extruded aluminium 6000 alloy series
Lens Material	Optical tempered clear glass (Clearsite lens), Optical tempered frosted glass (Frostsite lens), Optical tempered half-frosted glass (Half-Frostsite lens)
Surface Finish	Super durable resistant exterior polyester powder coating meets AAMA 2604-98 requirements (5-years Florida exposure). A corrosion resistant finish (CRC) pre-finish is available to meet ASTM B-117 & ASTM D-1654 (salt spray resistance) and ASTM D-2247 requirements (humidity resistance).
Weight	1.87 lbs to 4.84 lbs, refer to EPA and fixture weight tables for details

Electrical and Control

Voltage	120 volts, 208 volts, 240 volts, 277 volts
Control	On/Off Control, 0-10V Dimming

Environmental

Storage Temperature	-40°C to 50°C [-40°F to 122°F] (device must reach start-up temperature value before operating)
Operating Temperature	-40°C to 50°C [-40°F to 122°F]
Start-up Temperature	-25°C to 50°C [-13°F to 122°F]
Ingress Protection Rating	IP66 (optical chamber) Wet location rated
Impact Resistance Rating	IK06 (glass lens) IK10 (frame) *IK10 polycarbonate lens option available, consult factory
Environment	Dry/damp/wet location

EPA And Fixture Weight Tables

*Fixture weights are estimated.

N02, N03, N05, N07 And N10 Output (Board With 4 LEDs)

		SD-RPA6N SD-RPA6TN	SD-SPA6N	SD-SPA6TN	SD-RPA8N SD-RPA8TN	SD-SPA8N SD-SPA8TN
EPA (sq ft.)	S1E	0.171	0.170	0.170	0.171	0.170
	S2E	0.342	0.340	0.340	0.342	0.340
Weight* (lbs)	S1E	2.22	1.87	1.90	2.06	1.87
	S2E	4.44	3.74	3.80	4.12	3.74

	WM-W1H2	WM-W1H4	WM-W1HSJB
EPA (sq ft.)	0.170	0.170	0.293
Weight* (lbs)	1.87	2.20	3.86

XS03, XS10, XS15, XS20 And XS25 Output (Board With 8 LEDs)

		SD-RPA6N SD-RPA6TN	SD-SPA6N	SD-SPA6TN	SD-RPA8N SD-RPA8TN	SD-SPA8N SD-SPA8TN
EPA (sq ft.)	S1E	0.197	0.201	0.201	0.197	0.201
	S2E	0.394	0.402	0.402	0.394	0.402
Weight* (lbs)	S1E	2.42	2.07	2.10	2.26	2.07
	S2E	4.84	4.14	4.20	4.52	4.14

	WM-W1H2	WM-W1H4	WM-W1HSJB
EPA (sq ft.)	0.201	0.201	0.324
Weight* (lbs)	2.07	2.40	4.06

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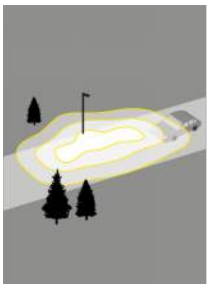
Photometric Information

Type II, 4000K, CRI 70+, Clearsite Lens



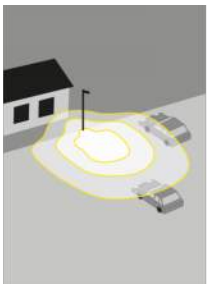
	Nominal output [lm]	Typical delivered output [lm]	Efficiency (lm/W)	BUG Rating B U G	Typical maximum power 120/277V (W)
N03	233	78	0 0 0	3
N05	476	79	0 0 0	6
N07	748	83	0 0 0	9
N10	971	88	0 0 0	11
XS10	1,113	111	0 0 0	10
XS15	1,594	94	1 0 1	17
XS20	1,999	80	1 0 1	25
XS25	2,531	84	1 0 1	30

Type III, 4000K, CRI 70+, Clearsite Lens



	Nominal output [lm]	Typical delivered output [lm]	Efficiency (lm/W)	BUG Rating B U G	Typical maximum power 120/277V (W)
N03	255	85	0 0 0	3
N05	520	87	0 0 0	6
N07	818	91	0 0 0	9
N10	1,062	97	0 0 0	11
XS10	1,174	117	0 0 0	10
XS15	1,681	99	1 0 1	17
XS20	2,107	84	1 0 1	25
XS25	2,668	89	1 0 1	30

Type IV, 4000K, CRI 70+, Clearsite Lens



	Nominal output [lm]	Typical delivered output [lm]	Efficiency (lm/W)	BUG Rating B U G	Typical maximum power 120/277V (W)
N03	214	71	0 0 0	3
N05	437	73	0 0 0	6
N07	687	76	0 0 0	9
N10	892	81	0 0 0	11
XS10	1,004	100	0 0 0	10
XS15	1,438	85	1 0 1	17
XS20	1,803	72	1 0 1	25
XS25	2,282	76	1 0 1	30

Type V Square, 4000K, CRI 70+, Clearsite Lens



	Nominal output [lm]	Typical delivered output [lm]	Efficiency (lm/W)	BUG Rating B U G	Typical maximum power 120/277V (W)
N03	258	86	0 0 0	3
N05	526	88	0 0 0	6
N07	827	92	0 0 0	9
N10	1,074	98	0 0 0	11
XS10	1,267	127	0 0 0	10
XS15	1,813	107	1 0 1	17
XS20	2,274	91	1 0 1	25
XS25	2,879	96	1 0 1	30

*Photometric performance is measured in compliance with IESNA LM-79-19. Due to rapid and continous advances in LED technology, photometric information is subject to change without notice.

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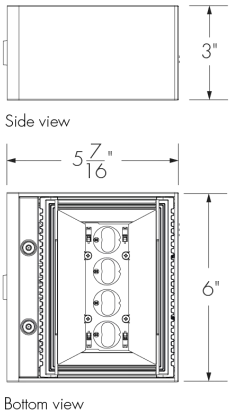
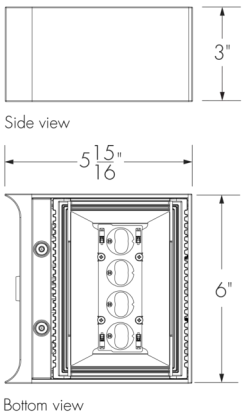
Dimensions

N02, N03, N05, N07 And N10 Output (Board With 4 LEDs)

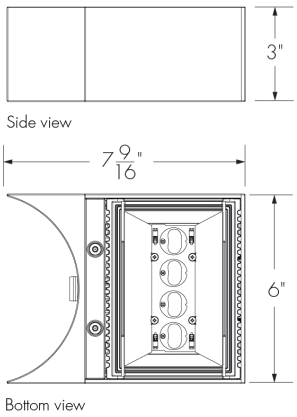
W1H2, SPA6N, SPA8N and SPA8TN



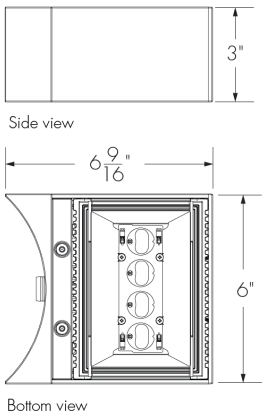
SPA6TN



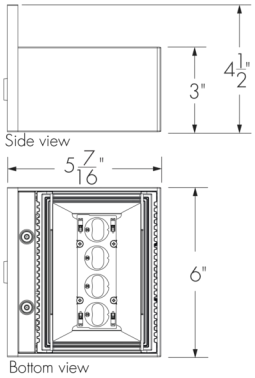
RPA6N And RPA6TN



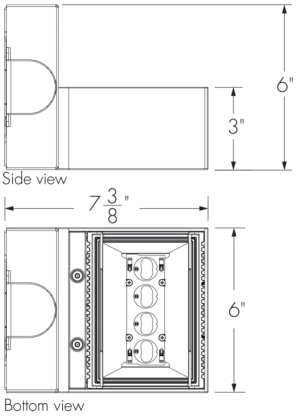
RPA8N And RPA8TN



W1H4



W1HSJB



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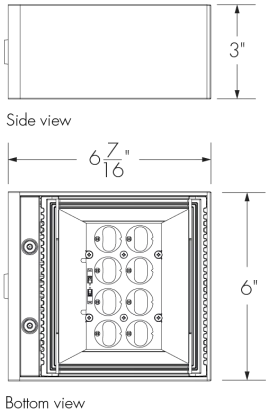
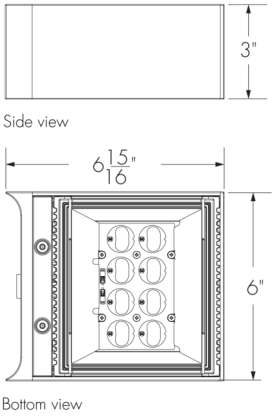
XS03, XS10, XS15, XS20 And XS25 Output (Board With 8 LEDs)

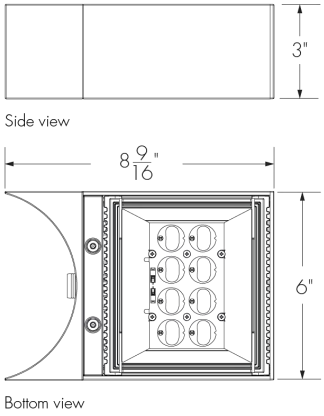
W1H2, SPA6N, SPA8N and SPA8TN



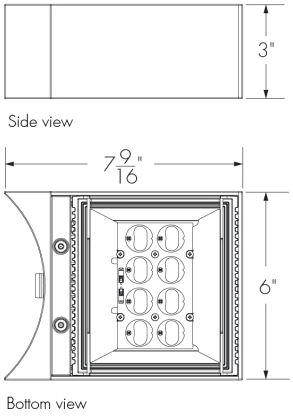
SPA6TN



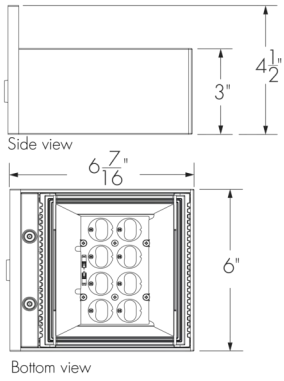
RPA6N And RPA6TN



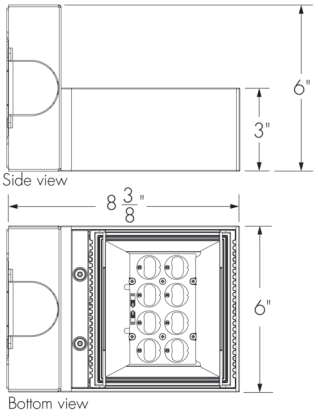
RPA8N And RPA8TN



W1H4



W1HSJB



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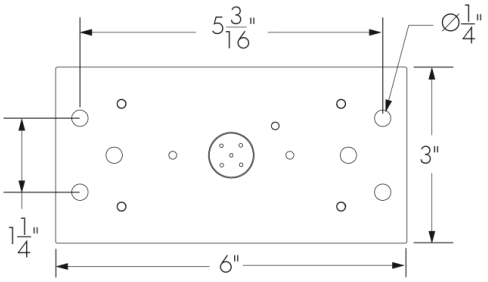
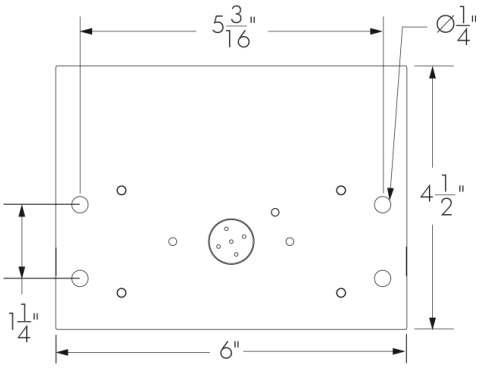
Mounting Details

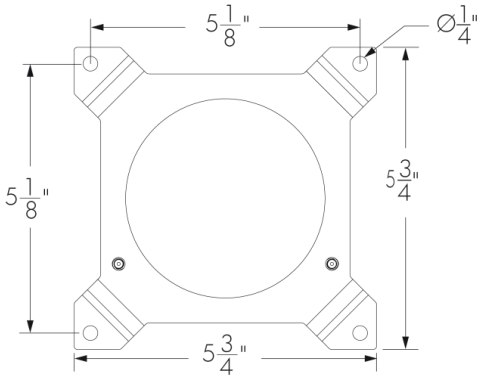
BLDN-WM-W1H2 Mounting Plate Details



BLDN-WM-W1H4 Mounting Plate Details



BLDN-WM-W1HSJB Mounting Plate Details



The WM-W1HSJB mounting is designed for installation on a round exterior (weatherproof) surface junction box (Ø4 in diameter and 1 5/8 in deep) that accommodates up to 3/4" NPT trade size conduit. For all other types of junction boxes, consult the factory.

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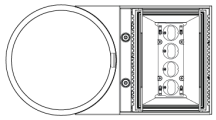
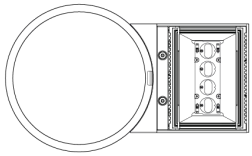
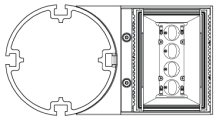
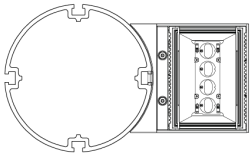
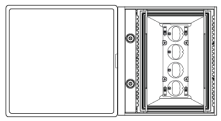
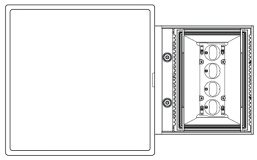
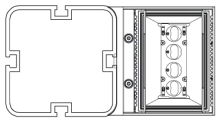
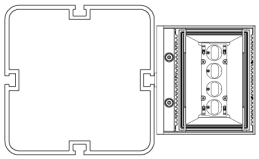
BLDN-SD Pole Mounting Option

	Straight and muffler poles		Lumentech pole	
	6in	8in	6in	8in
Round shape	RPA6N 	RPA8N 	RPA6TN 	RPA8TN 
Square shape	SPA6N 	SPA8N 	SPA6TN 	SPA8TN 

BLDN-SD with 4 LEDs shown.
Available configurations:

S1E Single pole-top
S2E Double pole-top
S1X Variable Height Mounting Arm

*Consult factory for other configurations.

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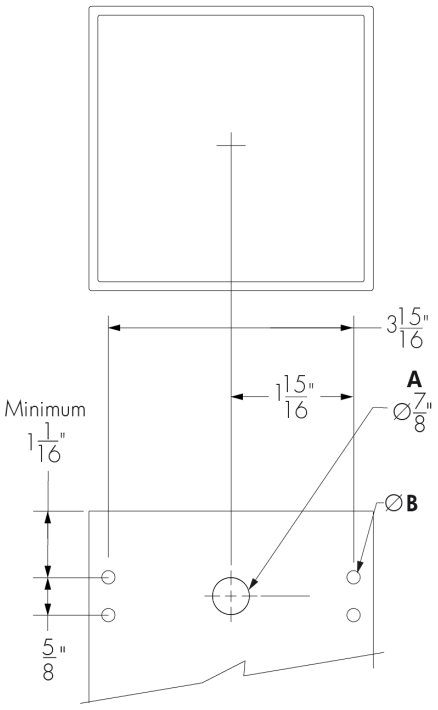
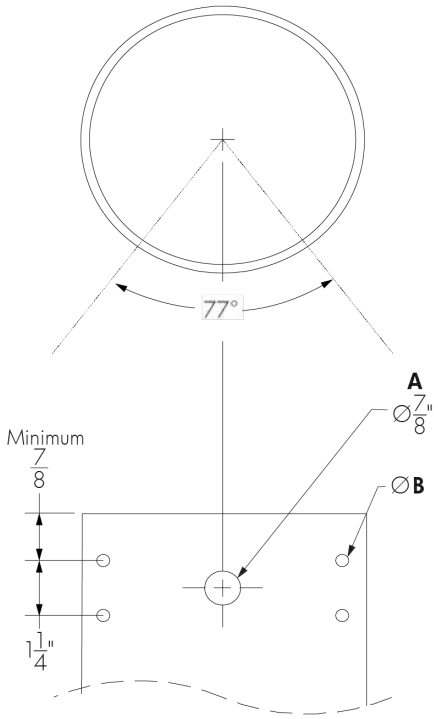
BLDN-SD Poles Drilling Patterns

SPA6N, SPA6TN, SPA8N and SPA8TN



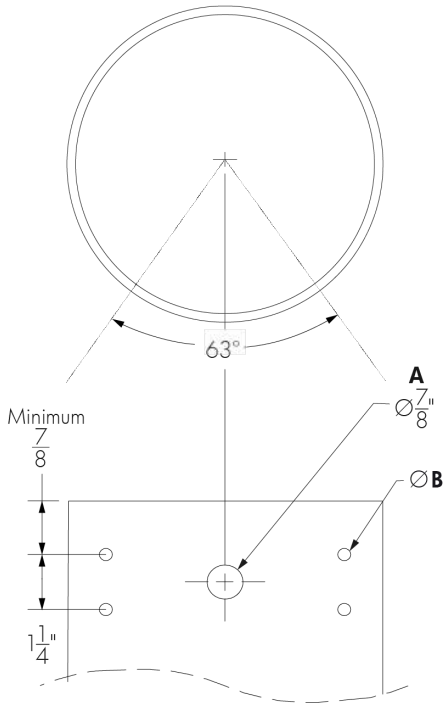
6 in or 8 in Square pole mount.

RPA6N And RPA6TN



6 in Ø round pole mounting.

RPA8N And RPA8TN



8 in Ø round pole mounting.

A - Wire feeding location

B - **S1E and S2E pole configuration**

9/32 in drilling holes. Nylon nuts (x4) and screws (4x) 1/4-20 x 1.25 in provided by lumenpulse.

S1X pole configuration

1/4-20 threaded holes. Screws (4x) 1/4-20 x 1.25 in provided by lumenpulse.

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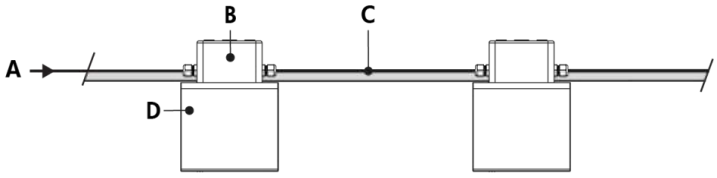
Typical Wiring Diagrams

Wiring Color Code

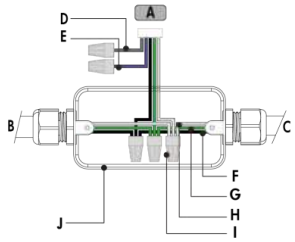
Color	Black	White	Green	Purple	Gray
Use	Line	Line/Neutral	Ground	0 -10V+	0 -10V -

On/Off Control (NO)



A - Power input (120-277V)
B - Junction box (by others)
C - Power wiring (by others)
D - Lumenblade Nano Wall Mount

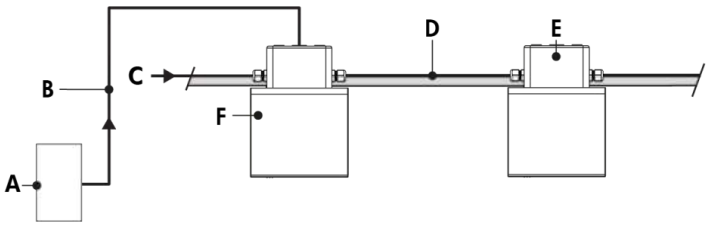
On/Off Control (NO) - Wiring Detail



A - To fixture
B - Power input or from previous fixture
C - To next fixture
D - Not required
E - Not required
F - Line
G - Ground
H - Neutral
I - Wire-nuts
J - Junction box (by others)

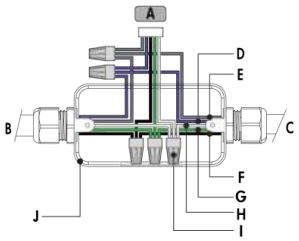
- Consult factory for specific applications and maximum fixture count/cable length recommendations.

0-10V Dimming (DIM)



A - Dimmer (by others)
B - Data wiring (by others)
C - Power input (120-277V, wiring by others)
D - Conduit (by others)
E - Junction box (by others)
F - Lumenblade Nano Wall mount

0-10V Dimming (DIM) - Wiring Detail



A - To fixture
B - Power input or from previous fixture
C - To next fixture
D - 0-10V +
E - 0-10V -
F - Line
G - Ground
H - Neutral
I - Wire-nuts
J - Junction box (by others)

- Consult factory for specific applications and maximum fixture count/cable length recommendations.
- 0-10V mA ratings: passive dimmer (Current Sink): 3mA per fixture, active dimmer (Current Source): 0.5mA per fixture.
- 1% minimum dimming value.

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How to Order

Housing	Mounting	Voltage	Lens [5]	Output (Nominal Lumens) [9]	Color and Color Temperature	Color Rendering	Distributions	Optical Option	Finish	Control	Option	Mounting Adaptor
BLDN Lumenblade Nano	**SD** Side Mounting [1] **WM** Wall Mounting [2] [3] [4]	**120** 120 volts **208** 208 volts **240** 240 volts **277** 277 volts	**CSL** Clearsite Lens [6] **FSL** Frostsite Lens [7] **HFSL** Half-Frosted Site Lens [4] [8]	**N02** 200lm (4 LEDs) [6] [10] [11] **N03** 300lm (4 LEDs) **N05** 500lm (4 LEDs) **N07** 700lm (4 LEDs) **N10** 1000lm (4 LEDs) **XS03** 300lm (8 LEDs) [6] [10] [11] **XS10** 1000lm (8 LEDs) **XS15** 1500lm (8 LEDs) **XS20** 2000lm (8 LEDs) **XS25** 2500lm (8 LEDs)	**AMB** Amber [6] [11] [12] [13] **22K** 2200K [14] **27K** 2700K [15] **30K** 3000K **35K** 3500K **40K** 4000K **57K** 5700K [16]	**CRI 70** CRI 70+ [17] **CRI 80** CRI 80+ [18] **CRI 90** CRI 90+ [19]	**2** Type II **2BLS** Type II Backlight Shield **3** Type III **3BLS** Type III Backlight Shield **4** Type IV **4BLS** Type IV Backlight Shield **5** Type V **5S** Type V Square	**LV** Louver [6] [20] [21]	**BK** Black Sandtex® **BRZ** Bronze Sandtex® **SI** Silver Sandtex® **BKTX** Textured Black **BRZTX** Textured Bronze Non-Metallic **GRATX** Textured Medium Gray **GRNTX** Textured Green **WHTX** Textured White **CC** Custom Color & Finish [22] [23] [24]	**DIM** 0-10V Dimming [25]	**VRBO** Vibration Rated for Bridge and Overpass [26] [27] [28] **CRC** Corrosion-resistant coating [29] [30]	**RPA6N** Round Pole Adaptor for Ø6 in Pole **SPA6N** Square Pole Adaptor for Ø6 in Pole **RPA8N** Round Pole Adaptor for Ø8 in Pole **SPA8N** Square Pole Adaptor for Ø8 in Pole **RPA6TN** Round Pole Adaptor for Lumentech Ø6 in Pole **SPA6TN** Square Pole Adaptor for Lumentech Ø6 in Pole **RPA8TN** Round Pole Adaptor for Lumentech Ø8 in Pole **SPA8TN** Square Pole Adaptor for Lumentech Ø8 in Pole **W1H2** Horizontal Wall Mount Adaptor for 2 in x 4 in Recessed Junction Box **W1H4** Horizontal Wall Mounting Adaptor for 4 in x 4 in Recessed Junction Box **W1HSJB** Horizontal Wall Mounting Adaptor for Ø4 in Round Exterior Surface Junction Box [31] [32]

Notes:

1. Available with all pole mounting options.
2. Available with W1H2, WIH4 and W1HSJB adaptors only.
3. When combined with CSL lens, only AMB color temperature is available.
4. Available with Type 2, 3 and 4 distributions only.
5. Standard IK06 rating for glass lens. IK10 rated polycarbonate lens available, please consult factory.
6. Not available with type 5 distribution.
7. Available with type 3 and 5 distributions only.
8. Available for N03, N05, N07 and N10 outputs only.
9. Lumen output will vary according to the lens and distribution specified for the fixture. Please consult the photometric information section of the specification sheet for more details.
10. Available with AMB color temperature only.
11. Not available for FSL and HFSL lens.
12. Available with N02 and XS03 outputs only.
13. Backlight shield distributions not available if combined with WM option.
14. Available for CRI 80 only.
15. Available for CRI 80 and CRI 90 only.
16. Available for CRI 70 and CRI 80 only.
17. Binning within a 3-step McAdam ellipse, with the exception of 5700K.
18. Binning within a 2-step MacAdam ellipse, with the exception of 2200K and 5700K.
19. Binning within a 2-step MacAdam ellipse.
20. Available with CSL and HFSL lenses only.
21. Factory installed, not field changeable.
22. Specify RAL number followed by "TX" for textured finish (ex: RAL9007TX) or STX for Sandtex finish (ex: RAL9007STX). Textured or Sandtex finishes are recommended for the durability of all products. If a finish is not specified with the RAL number (ex: RAL9007), a glossy finish will be provided. Please consult factory for other RAL textures and glosses, or to match alternate color charts. Final color matching results may vary.
23. Longer lead times can be expected for custom RAL color finishes.
24. Setup charges apply for RAL colors. Consult factory for details.
25. DIM control can be used as NO (On/Off control) if no data is required.
26. Vibration tested in accordance with ANSI 136.31 2018 for bridge and overpass applications at 5Gv.
27. Specify only if a bridge or overpass application is required.
28. Not available for W1HSJB mounting adaptor.
29. Use only when exposed to salt spray. This option is not required for normal outdoor exposure.
30. Setup charges apply. Consult factory for details.
31. The WM-W1HSJB mounting is designed for installation on a round exterior (weatherproof) surface junction box (Ø4 in diameter and 1 5/8 in deep). For all other types of junction box, consult the factory.
32. Not available with VRBO option.

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LUMINIS®

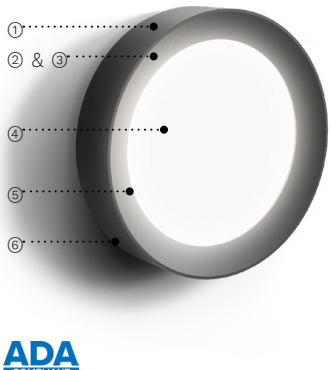
Type C

Catalog Number:
SN800C-L1L11-30K-VOLTAGE-CONDUIT-PHOTOCELL-LOUVERS-FINISH-XX

SN800/SN800C
SCENA
WALL/CEILING

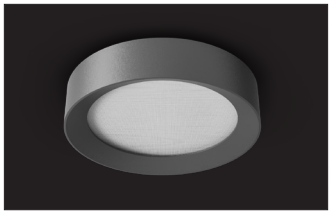
PROJECT NAME: QUANTITY: TYPE:

ORDERING CODE:



ADA COMPLIANT

① Corrosion resistant diecast aluminum housing.
② Integrated standard 0-10V driver.
③ Light guide LED technology for uniform lambertian light distribution.
④ Impact resistant patterned tempered glass.
⑤ Sealed enclosure with durable gaskets.
⑥ All hardware in stainless steel.


SN800C


SN800

MATERIALS

Scena is made of aluminum diecast offering exceptional precision and durability. The main housing is perfectly sealed with durable gaskets. The integrated LED light module and 0-10V driver are protected by a patterned tempered glass. With a distinctive look and perceptible quality, Scena is designed for uniform lighting performance.

ELECTRICAL DRIVER

Standard driver is 0-10V dimming-ready (min. dim 5% / dim-to-off)* with: 120-277 multivolt compatibility, operating temperature range of -40°C/-40°F to 85°C/185°F*, over current and output short circuit protection.

LED LIGHT ENGINE

Offered in 2700K, 3000K, 3500K & 4000K / 80CRI.
70% LED lumen maintenance at 60,000 hours (L70/B50) based on IESNA LM-80-08 LED extrapolated life, calculated per IESNA TM-21-21.

FINISH

Five-stage preparation process includes preheating of cast aluminum parts for air extraction. Polyester powder coating is applied through an electrostatic process, and oven cured for long term finish.

CERTIFICATION

UL certified to Canadian and U.S. safety standards. Certified for use in wet locations. Rated IP65 / IK10. Photometric testing performed by an independent laboratory in accordance with IES LM-79-08 standards at 25°C. Actual performance may differ as a result of end-user environment and application.

WARRANTY

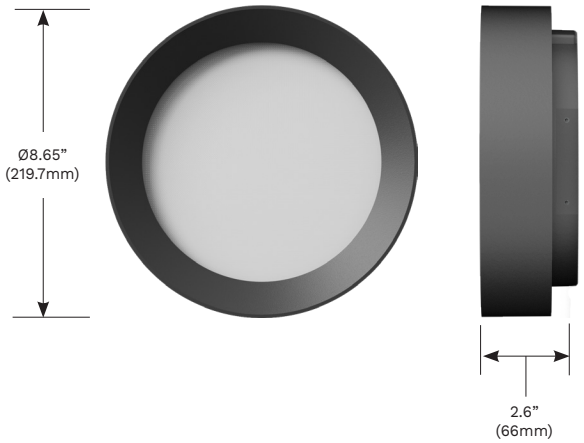
5-year limited warranty. This is the only warranty provided and no other statements in this specification sheet create any warranty of any kind. All other express and implied warranties are disclaimed. Complete warranty terms located at: https://www.luminis.com/technical/warranty/

MOUNTING

The mounting plate is designed to fit on a 4" (102mm) octagonal electrical box using 3.5" (89mm) C/C mounting holes. Fixture must be installed on a wall or a finished ceiling for exterior applications and/or when exposed to inclement weather.

MEASUREMENTS

Maximum weight: 3.8 lbs (1.7 kg)



* L1L23 light output dims to min. 1% / dim-to-off and has an operating temperature of -20°C/-4°F to 50°C/122°F

LUMINIS.COM
Toll free: (866) 586-4647 | Fax: (514) 683-8872 | Email: info@luminis.com
260 Labrosse, Pointe-Claire (QC) Canada H9R 5L5

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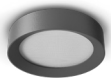
ORDERING CODE

*SERIES	*LIGHT OUTPUT	*CCT	*VOLTAGE	CONDUIT COVER
SN800  **SN800C** 	**L1L11** 1189 lm / 14w **L1L23** 2306 lm / 29w **Delivered lumens calculated at 4000K/80CRI. Typical power consumption. Refer to LCF table for outputs at other CCTs.**	**27K** 2700K **30K** 3000K **35K** 3500K **40K** 4000K	**120** 120V **277** 277V **MVOLT** 120V-277V	**SWK** Decorative cover for 3/4" conduit junction box

PHOTOCELL	LOUVERS	*FINISH	ENVIRONMENT
PH Photocell	**CB** Cross blade louvers	**BKT** Jet black **BZT** Bronze **CHT** Champagne **DGT** Gun metal **GRT** Titanium gray **MST** Matte silver **SGT** Steel gray **WHT** Snow white **CMC** Custom matched color[1] **RAL** RAL color[2]	**MG** Marine grade paint[3] **NT** Natatorium suitable[4]

NOTES
*- Denotes a required field
1- Contact factory to coordinate custom matching color.
2- Specify RAL number.
3- Marine grade paint for harsh, coastal environment and exposure to salt water. Additional delay required.
4- Available only in WHT and BKT.

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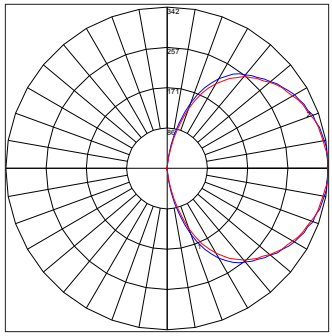
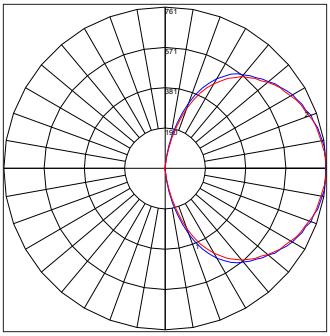
TYPICAL PHOTOMETRY SUMMARY

SN800-L1L11



Total Lms: 1189 Lumens
Total Input Watts: 14 W
Efficacy: 85 Lumens/Watt
CCT/CRI: 4000K/80
Maximum Candela: 342.45 @ 0°H/92.5°V
BUG Rating: B0-U3-G2

SN800-L1L23



Total Lms: 2306 Lumens
Total Input Watts: 29 W
Efficacy: 79.5 Lumens/Watt
CCT/CRI: 4000K/80
Maximum Candela: 761 @ 0°H/92.5°V
BUG Rating: B0-U5-G3

LUMEN CONVERSION FACTOR (LCF)		
CCT	CRI	LCF
2700K	80	0.92
3000K	80	0.94
3500K	80	0.98
4000K	80	1.00

All Photometry shown use the 80CRI 4000K LEDs.
Please visit our web site www.luminis.com for complete I.E.S. file.

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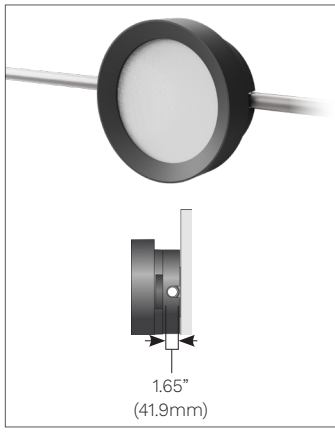
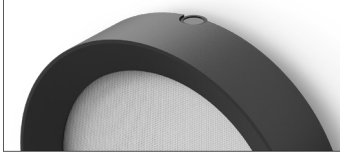
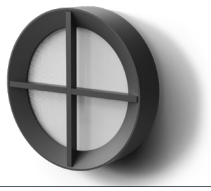
OPTION DETAILS



SWK
Surface (wall or ceiling) mounting option for Ø4” weatherproof junction box (3/4” conduit trade size). Weatherproof junction box, conduit and connectors by others. The SWK option adds 1.65" to the total depth of the product. (Not ADA compliant).



PH
Button-size photocell mounted on top casted housing. Instant turn-on, standard 5-10 second turn-off time delay.



CB
Decorative cross blades. (LCF 0.93)

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Neighborhood Meeting Certification

I, Bo Kennedy, P.E. hereby certify that a neighborhood meeting was held on October 16th, 2024 at 20 Van Aken Way, Portland, ME 04102 -Halo at the Point at 5:30 PM for the proposed project located at 125 Thompson's Point Road, Portland, ME 04102.

I also certify that on October 4th, 2024, notices were mailed to the following:

1. All addresses on the mailing list provided by the Planning Division which includes property owners within 500 feet of the proposed development (1,000 feet for subdivisions within an industrial zone or industrial zone changes).

2. Residents on the “interested parties” list.

Signed,

Bo Kennedy

2024.10.30

Attachments

1. Copy of the notice sent
2. Sign-in sheet
3. Record of feedback

PLACEMAKER PARTNERS, LLC
18 Van Aken Way
Portland, ME 04102

October 4, 2024

Neighborhood Meeting Invitation

Subject: Multi-Family Residential – Major Site Plan Applicant CPI Management, LLC (Cathartes)

Dear Neighbor:

Please join us for a neighborhood meeting to discuss our plans for a proposed 255 Unit Residential Development to be located at 125 Thompson's Point Road. The proposed Multi-Family Residential Building with structured parking and outdoor living amenities will be located in the northwestern most portion of The Forefront at Thompson's Point Subdivision lots 17 thru 19, an area anecdotally referred to as the "panhandle". Cathartes, a prominent developer in the northeast with a driven focus on quality of life, has entered into an agreement with Forefront Partners I, LP to bring a vibrant and transformative residential development to Thompson's Point as contemplated in the approved Master Development Plan.

Meeting Location: **20 Van Aken Way – Halo at the Point – Portland, ME 04101**
Meeting Date: **October 16th, 2024**
Meeting Time: **5:30 PM**

(The City code requires that property owners within 500 feet (1000 feet for proposed industrial subdivisions and industrial zone changes) of the proposed development and residents on an "interested parties list", be invited to participate in a neighborhood meeting. A sign-in sheet will be circulated, and minutes of the meeting will be taken. Both the sign-in sheet and minutes will be submitted to the Planning Board.)

If you have any questions, please call 207-747-5288 Ext 5.

Sincerely,

PLACEMAKER PARTNERS, LLC

Bo Kennedy, P.E.
Project Manager/Engineer

Note:
Under the City of Portland land use code, an applicant for a major site plan, master development plan, subdivision of over five lots, or zoning map amendment is required to hold a neighborhood meeting within 30 days of an application being deemed complete and no less than seven calendar days before a public hearing. Should you wish to offer additional comments on this proposed development, you may forward them by email to planning@portlandmaine.gov or by mail to the Planning and Urban Development Department, Planning Division, 4th Floor, 389 Congress Street Portland, ME 04101.

G:\Development Projects\Thompson's Point\Panhandle\Site Permitting and Engineering\Permitting\Major Site Plan Application - Panhandle Resi\Neighborhood Meeting\Neighborhood Meeting Notice.docx

Neighborhood Meeting Sign-In Sheet

Date: October 16, 2024
Meeting Location: 20 VAN AKEN WAY - HALO at THE POINT
Project Name/Location: Multi-Family Residential - 125 Thompson's Point Road

Developer and Consultant Team in Attendance:

Name	Email
Bo Kennedy - Placemaker Partners, LLC	Bo@placemakerpartners.com
Rob Simmons, Cathartes	robs@cathartes.com
Pat Bowler, Cathartes	patb@cathartes.com
Matt Phillips, Carroll Associates	mphillips@carroll-assoc.com
Robert Del Savio, Embarc Designs	rdelsavio@embarcdesign.com

Members of the Public in Attendance:

Name	Email
DANA KNAPP	dknappe Concordcantlines.com
Francisco Lopez	francisco.lopez119@gmail.com
Chris Thompson	Parallax Partners@gmail.com
Jed Troubh	Jtroubh@gmail.com

Minutes from Neighborhood Meeting
Major Site Plan Application (PL-003090-2024)

Cathartes / Forefront Partners Residential Project

Date: **October 16, 2024**

Start Time: **5:30pm EST**
End Time: **6:15 pm EST**

Location: **Halo at the Point,20 Van Aken Way, Thompson's Point, Portland ME 04102**

Meeting was called to order at 5:35pm by Bo Kennedy, P.E., of Placemaker Partners (BK), who represents the applicant.

BK reminded participants to please sign in.

There were two members of the public. One was a neighbor who lives on Powsland Street and is a member of the Libbytown Neighborhood Association. The other was the station manager for Concord Coach Lines.

BK introduced himself and the project team at Cathartes (residential developer/applicant), Embarc (architect) and Carroll Associates (landscape architect), and invited attendees to interrupt at any time with questions or requests for clarification.

BK presented a thorough overview of project, beginning with the aerial view of entire campus and noting proximity to the Portland Transportation Center, Portland Trails, and the Libbytown neighborhood.

BK then presented the residential project site plan, first focusing on orientation, access, and vehicular/pedestrian circulation, noting that it is a 255-unit multi-family residential building with common space and amenities on first floor and a 463-car parking garage with 24 EV charging stalls and adjacent surface parking.

BK gave a detailed overview of the project's common areas/amenity spaces, fire/emergency access lanes, and trail areas.

BK then introduced Matt Phillips from Carroll Associates (MP).

MP walked the attendees through the landscape plan, focusing especially on the attention to planting plan and buffer treatment, and describing the relation of landscape plan design elements to project components, particularly the entry areas, exterior programming areas, and

adjacencies to the trail. He noted that the site is to be heavily planted, in addition to the already extensive growth on the westerly and northwesterly portions of the site, and underscored the developer's attempt to create a thoughtful design that integrates the building with the natural landscape and also with the urban campus it is connected to.

At this point, the design team received the first question from the residential neighbor (Neighbor), who asked if there would be a fence.

MP replied that there will be fenced areas following the trail and grade change areas, and along the rail corridor on northerly border.

The Neighbor asked about the height of the fence along the northerly property line.

BK replied that the fence would be a typical 6' fence.

The Concord Coach employee asked what type of fence would be used.

BK answered that it would be chain link; and further noted that there is significant vegetation along north and northwest portions of the site, including the Central Maine Power corridor which he pointed to on the aerial, explaining that this forested area will stay intact.

Embarc then presented the building plans and elevations, and emphasized the guiding design principle being to break down the mass of the building, get away from the look of an unbroken wall façade and work to create a more dynamic façade that feels more welcoming and integrated with the site.

Embarc shared the rendered elevations, noting that the building is a 6-story structure as well as the outdoor walkway areas and amenity spaces, front entrance/dropoff views, and the elevation including the front and corner of the parking structure. Finally, they shared the view of the building from the water on southerly edge, and samples of building material choices.

The Neighbor offered up several questions that had been generated by Libbytown residents and shared through the Libbytown Neighborhood Association.

These were as follows:

1. Is the garage the same height as the building?

   Embarc answered in the affirmative.

2. Will neighbors only see garage?

   Embarc noted that one elevation of the garage would be visible from the north, and further explained that this would be seen as an integrated façade together with the

northerly and northwesterly facades of the building. He referred to a rendering view by way of example, noting that the view, which will also be buffered by vegetation, will not be a stark look at the wall of a parking garage.

3. Why is the garage so large? A more pedestrian and bike-centric approach would be nice.

   BK noted that the project includes significant indoor and outdoor space for bike storage, and it is anticipated that many residents will take advantage of this. He also noted that the parking spaces provided by the residential project in excess of those required for the use of residents will also be available for their invited guests and will be part of the managed parking supply of the Thompson's Point campus.

4. Is there a plan for a hotel?

   BK replied that the hotel is on track to break ground in 2024. He then took a few minutes to pull up the master existing campus plan and walk the audience through the hotel orientation and basic scope.

5. Are there options to make the building more green by having solar?

   Embarc replied that the roof is indeed being designed to handle solar.

6. Will there be condos?

   BK replied that there are no condos, only apartments.

7. Most of the people in the neighborhood are comfortable with wanting more residential density. There's the recent Avesta project nearby, which was generally well-received by the neighborhood. And I should have prefaced my comments by saying that I personally love the idea of more residential, and am in support of the project.

8. What will you do if a train is crossing and emergency services need to access the site?

   BK noted that as this is a public rail crossing as designated by MaineDOT, the crossing is rarely blocked, and when it is, it is usually for no more than a few minutes (compared with a private crossing, where there can be virtually no limit on length of time for a crossing to be blocked). The representative from Concord Coach explained that freight train passage through the crossing is very infrequent (once/twice weekly) and that Amtrak service operates such that trains stop at the platform to the east of the crossing. BK further outlined the ways in which the crossing was designed for emergency vehicles to still get through via the center lane, showing how even when the crossing gates drop, they do not obstruct the travel lanes. He noted that the public crossing had been designed and approved with the full buildout of the master plan in mind, in coordination with city, state, and federal rail and public safety guidelines.

9. I think it's a cool project! That's the full list of questions I had from folks in the neighborhood. Actually, just one more: what is the timing of construction start?

   BK replied that the project aims to break ground next fall.

10. Actually, just one more. What is the apartment mix?

    Embarc walked through the mix of apartment types (studio, one- and two-bedroom, and some three-bedroom).

At this point, there were no further questions or comments and the meeting was adjourned.

PLACEMAKER PARTNERS, LLC
18 Van Aken Way
Portland, ME 04102

December 23, 2024

Ms. Natasha Kypfer, Senior Planner
Planning and Development Department
City of Portland, Maine
389 Congress Street
Portland, Maine 04101-3509

Subject: **The Forefront at Thompson's Point – 125 Thompson's Point Rd** (PL-003090-2024)
Major Site Plan Application – Review Comment Letter of Response # 1

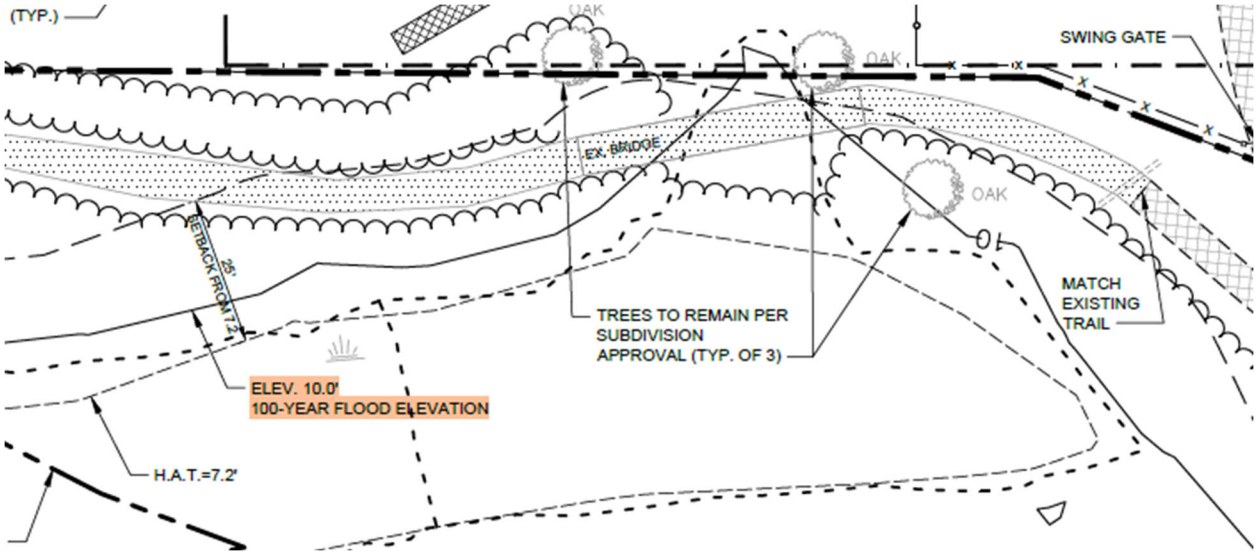
Dear Natasha:

We have received and reviewed staff and peer review comments submitted to date and offer our responses to these comments. For ease of reference, we have repeated each comment in *italics* with our response following.

GENERAL COMMENTS FROM PLANNING STAFF

Comment 1:
Please add the AE flood zone on the current FEMA map as an overlay on the site plan.

Response:
The AE Flood Zone is currently shown on site plans as shown below. Zone AE flood elevation for the Thompson's Point Area has been listed on FEMA mapping as Elevation 10.0 until the most recent updated effective date 6/20/2024. Enclosed (Attachment A) with this letter is a current FIRMETTE map downloaded 11/21/2024 and shows a Zone AE flood elevation of 9.0 based on NAVD88 vertical datum. When converted to the project datum, Elevation 9.0 (NAVD88 vertical datum) converts to elevation 9.79 (NGVD29 vertical datum). Whereas this updated elevation is lower (than 10.0), a more conservative assumption, and easier to depict in plan, the applicant would prefer to use the 10 ft contour as the assumed flood elevation. A note has been added to the existing conditions plan to document the origin of these elevations.



Comment 2:
Please update the title of the supporting narrative to Major Site Plan, instead of Minor (Att. B).

Response:
This Attachment has been updated and reloaded to the CSS Portal and city's eplan.

Comment 3:
A number of permits have been received throughout the development of the Master Development Plan from State and Federal agencies and it is unclear what is relevant to this phase and which permits may still be active. Submit a summary of what permits are relevant specifically to this project, including the agency, permit, the date of original issue, dates of expirations, and dates of extensions or notifications as applicable. For example, it is noted that an Army Corps of Engineers self-verification form was included that was submitted for work to be completed for 2023 into 2024, which will likely need to be resubmitted unless the Army Corps has noted that it will remain valid.

Response:
The project summary of applicable permits is noted as follows and listed on the cover sheet C-1.0.

Permit	Agency	Date of Original Issue	Date of Updated Approval
Master Development Plan	City of Portland	2014-03-11	2020-04-02
Subdivision Plan	City of Portland	2016-01-12	2020-04-02
NRPA Individual Permit	Maine DEP	2012-07-01	2023-06-15
Site Location of Development	Maine DEP	2012-06-05	2016-01-01 (Overall) Updated Each Site Plan Application
Maine VRAP - NAAL	Maine DEP	2012-03-06	2019-12-17
General Permit	ACOE	2012-08-24	2023-10-24
Traffic Movement Permit	MDOT	2012-06-13	2024-03-01

- Master Development Plan approval remains in effect with active development pursuant to letter from Director of Planning Authority. An updated Master Plan with this project reflected has been submitted for review by the Planning Authority. As this multi-family project complies with the approved Master Plan, any individual reviews will occur as a separate application.
- Subdivision Plans have been recorded in the Cumberland County Registry of Deeds and modified by minor amendments as development requires. This project requires minor amendments to Sectional Subdivision Plats 2 & 4 to consolidate lots 17-19. The updated subdivision plats have been submitted for review and approval.
- NRPA Individual Permit approval covers the multi-family proposed stormwater discharges in the shoreland zone. The final plan will be provided to the MeDEP as part of the Maine Construction General Permit 14-day notification prior to the start of construction.
- The Site Location of Development permit update for this project is being reviewed and approved by the City of Portland as part of their delegated review authority.
- Maine VRAP letter is an ongoing plan that the owner will comply with to maintain all the beneficial coverages the No Action Assurance Letter provides. The active work plan never expires and does not require modification for this project.
- The ACOE General permit covers the proposed wetland fill associated with the proposed stormwater outfalls for this phase of the project. This permit was just updated in late 2023 and is authorized for work until October 14, 2025, and can be extended for a year afterwards with contract

to commence work. The signed Maine General Permit conditions are enclosed with this letter in Attachment B and included in the revised Attachment D of the application submission.

- Traffic Movement Permit is within the active permit extension granted on March 10, 2024 and extends through March 1, 2027.

REVIEW COMMENTS – TRANSPORTATION (SECTION 14.6.1) STANDARDS:

Comment 1:
Staff would like to review the trip generation calculations for all of the uses, regardless if previously approved from a documentation perspective. However, one initial comment on the trip generation estimate is as follows:

- *The Brewery & Sit-Down Restaurant (14,644 SF) noted in the table should match the area used in the trip generation calculation (4,624 SF).*

Response:
Trip generation for the "Brewery & Sit-Down Restaurant" was based on previously accepted "Bissell Brewery & Restaurant" methodology, where the restaurant trip generation is based on LUC 932 – High Turnover (Sit Down) Restaurant (4,624 SF), and trip generation for the brewery portion (10,020 SF) is based on the 7 employees. An updated Trip Generation and Parking Demand Summary is included with this letter.

Additionally, Gorrill Palmer has prepared a "Traffic Supplemental Package" which includes the backup documentation supporting the Trip Generation and Parking Demand Summary. This package is included in Attachment C of this letter.

Comment 2 – Access and Circulation :

- *Show limits of removal and replacement of sidewalk/pavement for Utility trenching on site plan.*
- *Update application documents to include current Technical Manual details or reference to each of the City standard details (figure # and name). CAD files can be obtained upon request.*
- *Update the plan set to replace the detectable warning ramps in ROW at drive entrance to align with Standard Detail I-7 of the Technical Manual.*
- *Update the plan set to include dimensions for all interior and exterior parking areas and roadways.*
- *Submit sight distance measurements for the access road intersection with Thompson's Point Road.*

Response:

- The limits of sidewalk and roadway trench repair have been shown on sheet C-3.1A Site Layout Plan Without Easements. This plan has been uploaded to the City's eplan project site.
- The project plans have been updated to include the relevant city details required by the Technical Manual.
- The Site Layout Plan has a call-out for detectable warning panels per the city's detail I-7. The Detectable Warning Panel Detail B on sheet C-8.1 Curbing and Sidewalk Details has been replaced with the city's detail shown on Figure I-7.
- Plan Sheet C-3.1 Site Layout Plan shows typical and specific layout dimensions for all exterior parking spaces and roadways. A revised Plan Sheet A1.1-A1.4 Floor Plan Views show typical dimensions for parking spaces inside the garage structure. These 4 sheets have been uploaded to the project eplan.
- Sight distances have been added to the plan view sheet C-3.1 Site Layout Plan and noted herein to be as follows: Looking left 334 ft -Horizontal Obstruction; Looking right – 542' Horizontal Obstruction

Comment 3 -Parking :

- *Update project documents to list a consistent number of proposed parking spaces for the parking garage structure.*

- *The applicant has conducted a parking analysis for the proposed residential use. City Staff find the estimate of 334 parking spaces per ITE methods to be reasonable, but would also request that the applicant provide a parking management plan if the proposed parking spaces are to be shared with other uses on Thompson's Point.*
- *The applicant also conducted a parking demand analysis for the entire Thompson's Point site, without an outdoor concert/event. The estimate is based upon a mix of methodologies: methods from ITE, client supplied information, and customized calculations. Similar to the trip generation comment above, all back up information shall be provided for documentation purposes. Staff would further note that a parking supply analysis should also be provided with this submission.*

Response:

- All plan view labels have been updated to the correct number of parking spaces in the garage. There are four hundred sixty-three (463) proposed spaces in the garage. Plan Sheets C-3.1A, 3.1B, 4.0, 5.0, 5.2, & 6.0 have been updated for consistency with the project documents.
- The parking demand analysis included in Gorrill Palmer's design memo is derived from the ITE Parking Generation Manual and was taken into careful consideration when evaluating the maximum parking demand for the residential project. The applicant has evaluated and scrutinized their project parking needs based their long history of residential project delivery and management. The proposed garage parking supply breaks down as follows:
    - 463 Total Parking Stalls
        - 377 Residential Stalls (Gated Access 2nd-6th Floors)
        - 86 Managed Stalls (Gated Access 1st Floor)

  The applicant will enter into a private parking agreement with Forefront Partners I, LP or its assigns ("Forefront") to allow for the use of 110 total managed parking stalls (86 garage spaces & 24 surface spaces). The 110 designated spaces will be used at Forefront's discretion as part of the managed parking supply for the Thompson's Point Campus and primarily considered for uses such as, but not limited to, valet parking and employee parking.
- Pursuant to the reviewer's request, the backup to the parking demand study is included in the supplied "Supplemental Package" Dated December 12th, 2024. A Parking Supply Summary Table has been added to sheet C-3.0 Overall Campus Plan and demonstrates that the parking supply meets the maximum parking demand with events in Brick South and Halo.

Comment 4 - TDM:
In satisfying this standard, the applicant shall update their Transportation Demand Management Plan and incorporate data, as well as updated data, on concerts and other significant events that occur on the Thompson's Point campus, so that the City can better understand current parking demand and assess whether the mitigation strategies in place are sufficient.

Response:
See enclosed letter in Attachment D with a summarized update to the Forefront's TDM regular reporting and implemented strategies. All reports, numerical updates, and survey data is on file with the city as part of our annual reporting requirements.

REVIEW COMMENTS - ENVIRONMENTAL QUALITY STANDARDS (SECTION 14.6.2) :

Comment 1 – Landscape Preservation:

Submit a tree survey for the site that meets the standards of Section 4.3.1. of the Technical Manual.

Response:
On November 14, 2024, the project civil engineer and landscape architect performed a site visit to inventory existing trees 10" and greater DBH on the subject property. The trees that qualify were identified and their location, size, and species have been added to the site plans. The enclosed figure (Attachment E) shows the trees larger than 10" on the property and which will be preserved.

Comment 2 – Site Landscape and Buffers:
Identify what street tree alternatives are proposed to meet the standards of Section 4.6.4. of the Technical Manual.

Response:
The Technical Manual requires that "multi-family residential developments shall provide a minimum of one tree per unit, planted in the City right of way and/or along private roadways unless otherwise approved and spaced twenty-five (25) to thirty-five (35) feet on center". This results in 255 trees being required. There is not enough frontage to achieve this nor do the existing conditions allow for any street tree planting in the right-of-way due to the high density of underground utilities that are located in that zone. In the past the Arborist has allowed us to take credit for any trees that could be reasonably seen from the right-of-way to count towards the project street tree requirement. We presume that standard still applies, in which case we would propose to provide 17 trees around the driveway and arrival/entry to count, thus needing to provide a fee in lieu for 238 trees, for a total of $95,200, paid into the Tree Fund by the applicant.

Comment 2 – WQ, SWM and Erosion Control:

- *The project is required to comply with MaineDEP Chapter 500 and City of Portland Technical Manual Section 5 standards for stormwater management, including to be reviewed for a Site Location of Development (SLOD) Permit. As was noted as part of the MDP, this can be reviewed by the City of Portland, but requires evaluation of the site as a whole. This would modify how the amount of required treatment is evaluated, and it is expected based on what information has been provided that the project will meet the requirements for SLOD.*
    - *Basic Standards – The Applicant has provided plans and details as required for erosion and sedimentation controls.*
        - *Double rows of sediment barrier should be provided adjacent to any resources, including coastal wetlands.*
        - *Temporary sediment barrier will also be required downstream of any outfall installations during construction in addition to any of the permanent erosion control measures that have been shown.*
    - *General/Redevelopment Standards – The Applicant has provided a detailed description of stormwater treatment for this project, and has related it to the overall site. Based on the information provided, it appears that the project will meet the required thresholds for the State for Stormwater and Site requirements, and the City's thresholds for redevelopment as well. As noted above, the project should provide documentation for the Site Location of Development Permit. Comments on the proposed stormwater systems are provided separately below as well.*
- *Flooding Standards – The Applicant has noted that the Flooding Standard has previously been waived due to the site's discharge to a tidal water body. This remains valid for this phase of the project.*
- *We did not see structure information, including rims and inverts, for stormwater or utility structures included on any of the plans provided. This should be provided as part of the site plan submission.*

- *The site grading should be checked with the proposed stormwater systems. With variations in fill over the tops of the stormwater storage systems, and the need for emergency vehicular access over one of the systems, the layout and inverts of the systems and connecting structures should be reviewed to ensure there are no concerns with cover (either too much or too little). This will require providing invert information for the associated manholes as well.*
- *The Applicant should review the proposed HydroCAD model, specifically, the way that the diversion structures are modeled may not accurately represent what is happening on the site. The models include a 1.4" vertical orifice/grate as part of the model, but this is not shown on the diversion manhole details. In addition, the way the model is routed, with all flow primary, it does not appear to show how flow is diverted into the Jellyfish filters. In addition, the model should be checked to make sure that it matches with other features on the plans, including pipe materials, inverts, and the number of chambers within the storage systems.*
- *The Applicant has noted that the intent of the Inspection and Maintenance Manual has remained the same since approval in June 2012. The Applicant should confirm that the systems proposed as part of this phase of work are specifically included in their O&M plan, and these systems should be added to the Stormwater Maintenance Agreement.*
- *Any floor drains located within the lower levels of the parking garage should be directed through an oil-water separator and be discharged into the sanitary sewer system. It is unclear if any such internal drains are being proposed. The stormwater management plans clearly show that stormwater runoff from the uncovered top parking level will be directed into the storm drain system, which makes sense.*

Response:

The Forefront development received SLOD approval in 2014 with the MDP and Subdivision approvals. The SLOD has been updated and revised with each Site Plan Application reviewed by the city. This Major Site Plan application includes information required for the new development area as well as the cumulative evaluation of the entire campus to date.

- Basic Standards: Plan Sheet C-6.0 Erosion Control and Construction Management Plan shows multiple rows of temporary sediment barrier on all slopes and in larger tributary areas. The project details and plan notes require additional measures as required by the contractor, engineer of record, or third-party inspector in order to meet the MeDEP Basic Standards. Plan Sheet C-6.0 has been updated to show a temporary Sediment Barrier on the down-stream side.
- General Standards: Attachment J – Supplemental Stormwater Memo for Multi-Family Residential submitted with the application provides the information demonstrating how the project and campus continues to meet the General Standards requirements of the SLOD.
- Flooding Standard: The applicant concurs.
- The structure and pipe information for the storm drainage and utility systems have been shown on plan sheets C-11.0 and C-12.0 thru C-12.2. Plan sheets have been uploaded to the eplan website.
- The site grading has been checked in relationship to the subsurface chamber systems and the cover depth is detailed on plan sheet C-7.1 Stormwater Details – Subsurface Water Quality Volume Storage Details. Additional details have been added to make the cover restrictions clearer.
- Detailed orifice information has been added to the details on plan sheet C-7.0 Stormwater Details – Jellyfish Systems to reflect the HydroCAD model and stormwater quality volume drawdown requirements
- The proposed stormwater systems for this phase of the project are located on multiple lots across the campus. These existing systems are being maintained in accordance with the

aforementioned Stormwater O&M manual. A copy of the Manual is on file with the city and recorded in the Cumberland County Registry of Deeds as an attachment to the Stormwater agreement between Forefront Partners I, LP and The City of Portland.

- The review is correct that the intent of runoff from garage roof deck is that it be drained to the stormwater management systems. The floor drains to the lower levels of the garage are plumbed to the sanitary sewer system as shown on the plan sheet C-4.0 Utility Plan. The city's oil/grit separator detail on Figure II-20 of the Technical Manual has been added to the project plan sheet C-8.4 Stormwater and Sanitary Sewer Details and C-4.0 Utility Plan.

REVIEW COMMENTS - INFRASTRUCTURE AND COMMUNITY SAFETY STANDARDS (SECTION 14.6.3) :

Comment 1 -Public Safety and Fire Prevention:
Submit a feasibility analysis of establishing a fire lane from Hobart Street and Powsland Street that meets the standards of Section 3 of the Technical Manual. Based on the materials submitted, additional information and/or implementation of a fire lane may be requested by City Staff.

Response:
This suggestion is infeasible, and further review is not warranted. Forefront worked hand in hand with city and state agencies to fully and exhaustively vet adequate access and public safety infrastructure appropriate to support the full build out of the Master Development Plan and overall Subdivision. In partnership with the City of Portland, State of Maine, and Federal government, all supporting infrastructure was installed in totality in 2015 in anticipation of the complete build out of the Master Development Plan and in satisfaction of all its appurtenant requirements.

Comment 2- Public Utilities :

- *Submit a written response documenting if consideration has been made in installing backflow preventers on the private sanitary lines.*
- *Submit a written response documenting the feasibility of relocating the two transformers to a less obtrusive location, including, but not limited to plan left of the parking structure in the landscaped area.*
- *When available, submit copies of ability to serve letters from utility providers.*

Response:

- The applicant has reviewed the existing city infrastructure and believes the private sewer lines are elevated enough that backflow prevention is not needed. The building is substantially higher than the 100-yr flood elevation and well above the overflow weir discharging to the CSO outfall line. The system should flow into the gravity public sanitary sewer system as it typically does around the city.
- The proposed transformer location has been carefully selected to maximize distance (and consequently visibility) from the street and front entrance while keeping the length of secondaries to the utility room as close as feasibly possible. Additionally, Central Maine Power (CMP) does not permit transformers to be located behind parking without alternative vehicular access to with-in 15 ft. The transformers will have vegetative screening between them and site access.
- Forefront has received an Ability To Serve ("ATS") letters from all utility agencies for the overall development. However, the applicant has submitted project specific ATS letters from Unitil (gas) and CMP (power) in the previously submitted Attachment K – Utility Correspondence. The applicant has been notified an ABS letter from PWD (water and sewer) is imminent and will be forwarded to the city upon receipt.

REVIEW COMMENTS - SITE DESIGN STANDARDS (SECTION 14.6.4) :

Comment 1 – NOISE AND VIBRATION :
When available, provide an updated roof plan that includes selected HVAC equipment with screening details.

Response:
The plan sheet A1.4 Roof Plan shows that HVAC equipment is centrally located on the roof and either screened from view by a parapet or located far enough away from the roof edge that a parapet is not needed to block the view of equipment from the entry to the site. Three site line studies demonstrate this point and are shown on sheet A1.7 Site Lines to Mechanical Equipment. This sheet has been uploaded to the eplan portal.

The majority of the roof top mounted HVAC equipment, which includes electric heat pumps for each dwelling unit, are low in height and average between 57" above the roof. A select number of units will be 69" above the roof. There will be no cooling towers, chillers or generators that could create unwarranted noise to emanate from the site.

Comment 2 – Design Standards:
Provide revisions based on the attached Design Review Memo, dated October 28, 2024.

Excerpt of October 28, 2024 Letter
Comment 2a – Master Development Plan:
Staff suggests that the applicant consider an increase to the proposed building height, as shown in figure 1, to add vertical scale towards the center of the proposed building footprint.

Response:
A taller building would place it under a different building code category and require a change in construction type, which would significantly increase costs and make the project financially unfeasible. Maintaining the current height is essential to keeping the project viable.

Comment 2b – Urban Commercial Business Zone – Standard 1a:
Staff recommends a reduction in angled parking spaces to provide prioritization of the pedestrian facilities into the primary building entrance. To encourage the drop-off court as a pedestrian plaza that only allow infrequent vehicular drop-off that is more conducive with a transit-oriented and walkable development.

Response:
The visitor parking is essential for prospective tenants and visitors, as it provides the convenience and accessibility needed to support leasing operations and the overall success of the development. Removing these spaces could negatively impact the project's ability to attract and retain tenants, which is critical to its long-term viability.

Comment 2c – Urban Commercial Business Zone – Standard 1b:
Staff recommends that the applicant provide additional ground-floor activation and pedestrian oriented uses (eg. articulated building entries or active use) to achieve an architectural presence and focus at the street.

Response:
We explored numerous layouts for the building footprint but were unable to position the building closer to the street due to the bottleneck design, which made it challenging to accommodate the

access drive and navigate the numerous utility easements. Additionally, positioning the building's leasing and amenity spaces more centrally was essential for the success of the project, as it provides direct access to the courtyards and ensures better proximity to all units, creating a more functional and cohesive design for residents.

Comment 2d – Urban Commercial Business Zone – Standard 1c:
Staff suggests the applicant create a more pedestrian scaled façade and building orientation towards the Thompson Point roadway. Staff recommends a more cohesive arrangement of exterior façade materials that respond to the existing character of buildings, particularly at the street-facing facades of Brick North & South buildings. Staff suggest a replacement of exterior material at the ground level facing the street for brick and detailing around fenestrations to provide greater articulation at the pedestrian scale.

Response:
When developing the architectural language and material palette for the proposed building, the design team carefully considered the distance, use types, and forms of the existing brick buildings on Thompson's Point. While Brick North and South possess historic merit and architectural quality, replicating their materials on a new building of a significantly different typology and scale did not seem appropriate. For example, despite its proximity to Brick North and South, the Children's Museum is clad in metal panels and represents a stylistic departure from the historic structures. Similarly, our approach aims to respect the context while ensuring the building's materials and design are aligned with its contemporary use and scale.

Comment 2e – Urban Commercial Business Zone – Standard 1d:
Staff finds that the structured parking will be visible from abutting properties at the north and recommends that the applicant provide additional screening as appropriate (eg. architectural perforation, vertical landscaping or other façade-fixed material).

Response:
While the garage will have limited visibility due to its location behind the train tracks, the electrical sub-station, and the wooded areas along the rail corridor which naturally obscure views from the neighborhood to the northwest, we have nevertheless designed what we consider to be an attractive façade for the garage which is complementary to the design of the surrounding residential wings of the building. Furthermore, we believe that many of the screening options available tend to magnify the visual presence of the structure rather than mitigate it, making them unsuitable for this context.

Comment 2f – Urban Commercial Business Zone – Standard 1d:
In addition, Staff finds the head-in parking spaces after the garage entrance to be unnecessary and recommends this driveway extension function for emergency access only with either a change of surface material (eg. grasscrete) or narrowing of drive aisle with mountable curb. Narrowing the drive aisle may allow for additional screening adjacent to the parking garage façade to reduce the visual impact to abutting properties with views towards Thompson Point.

Response:
We feel the head-in parking along the garage is critical for not only the project but the strategic overall parking management plan. These spaces contribute to the necessary overall managed parking supply. These spaces do not fit in the proposed garage structure and maximize the development area with a necessary use. The roadway width and pavement surface design are both required by the City of Portland Technical Manual for parking areas, Central Maine Power access easement agreement, and the City of Portland Fire Department safety review.

Comment 2g – Multi- Family :
Staff observes building form variation with roof line expression at several building wings and suggest that the applicant explore additional building height that increases building massing height towards the center of the proposed building footprint.

Response:
A taller building would place it under a different building code category and require a change in construction type, which would significantly increase costs and make the project financially unfeasible. Maintaining the current height is essential to keeping the project viable.

Comment 2h – Multi- Family :
Staff suggest that the applicant consider greater pedestrian activation at the transition space between the sidewalk and building façade fronting the street that includes an articulated building entry for residents, in addition to potential outdoor space programming (eg. retail use component, outdoor plaza and pedestrian amenities within close proximity to the street).

Response:
The challenges with making substantive revisions to the building layout are addressed in our response to Comment 2(c) above.

Comment 2i – Multi- Family :
Staff recommends a pathway connection directly from the Thompson Point roadway to the existing Portland Trail shoreline path.

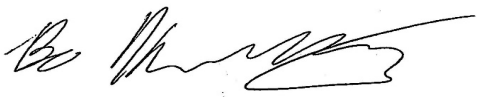
Response:
The applicant proposes a stone dust trail connection to from the Portland Trails "Thompson's Point Trail" to Thompson's Point Road from the Portland Trails trailhead along the northerly side of the proposed access driveway at the north end of development Lot 5 as shown on the revised plan sheet C-3.1 Site Layout Plan.

End of Comments.

If you have any questions regarding these materials, please contact this office.

Sincerely,

PLACEMAKER PARTNERS, LLC



Bo Kennedy, P.E.
Project Manager/Engineer
Attachments
c: Rob Simmons, Cathartes
Matt Grooms, City of Portland Planning
Chris Thompson, Forefront Partners I, LP
Jed Troubh, Forefront Partners, I, LP

ATTACHMENT A
FIRMETTE -FEMA FLOOD MAP

National Flood Hazard Layer FIRMette

FEMA

70°17'56"W 43°39'15"N



70°17'19"W 43°38'49"N

0 250 500 1,000 1,500 2,000 Feet

1:6,000

Basemap Imagery Source: USGS National Map 2023

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 / 17.5 Cross Sections with 1% Annual Chance / Water Surface Elevation
- Coastal Transect
- Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 11/21/2024 at 5:21 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

ATTACHMENT B
ACOE Maine General Permit Conditions

Applicant: General Public, State of Maine

Effective Date: October 14, 2020
Expiration Date: October 14, 2025

DEPARTMENT OF THE ARMY
GENERAL PERMITS FOR
THE STATE OF MAINE

The New England District of the U.S. Army Corps of Engineers (Corps) hereby issues 23 General Permits (GPs), listed below, for activities subject to Corps jurisdiction in waters of the United States within the boundaries of the State of Maine including tribal lands, and in adjacent ocean waters to the seaward limit of the outer continental shelf. These GPs are issued in accordance with Corps regulations at 33 CFR 320 – 332 and specifically 33 CFR 325.2(e)(2). These GPs will protect the aquatic environment and the public interest while effectively authorizing activities that have no more than minimal individual and cumulative adverse environmental effects.

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I. CORPS JURISDICTION

1. Permits are required from the Corps for the following work:

a. The construction of any structure in, over, or under any navigable water of the U.S. (see 33 CFR 328), the excavating or dredging from or depositing of material in such waters, or the accomplishment of any other work affecting the course, location, condition, or capacity of such waters. The Corps regulates these activities under Section 10 of the Rivers and Harbors Act of 1899 (see 33 CFR 322);

b. The discharge of dredged or fill material and certain discharges associated with excavation into waters of the U.S. including wetlands. The Corps regulates these activities under Section 404 of the Clean Water Act (see 33 CFR 323); and

c. The transportation of dredged material for the purpose of disposal in the ocean. The Corps regulates these activities under Section 103 of the Marine Protection, Research and Sanctuaries Act of 1972 (see 33 CFR 324).

2. Related laws: Section 408 of the Rivers and Harbors Act of 1899, Section 401 of the Clean Water Act, Section 402 of the Clean Water Act, Section 307(c) of the Coastal Zone Management Act of 1972, Section 106 of the National Historic Preservation Act of 1966, Section 7 of the Endangered Species Act, the Fish and Wildlife Coordination Act of 1956, the Magnuson-Stevens Fishery Conservation and Management Act, Section 302 of the Marine Protection, Research and Sanctuaries Act of 1972, and Section 7(a) of the Wild and Scenic Rivers Act.

II. GENERAL CRITERIA

1. In order for activities to qualify for these General Permits (GPs), they shall meet the GPs terms and eligibility criteria on pages 1-4, all applicable general conditions (GCs) in Section IV, and terms of the Maine General Permits in Section V. Any activity not specifically listed may still be eligible for authorization under these GPs; prospective permittees are advised to contact the Corps for specific eligibility determination.

2. Under these GPs, activities may qualify for the following:

- **SELF-VERIFICATION (SV)**: Notification to the Corps is required at least two weeks before work commences; the Corps will acknowledge receipt and GP eligibility of the SV activity in writing.
- **PRE-CONSTRUCTION NOTIFICATION (PCN)**: Notification to and written verification from the Corps is required. *No work under PCN may proceed until written verification from the Corps is received.*

The thresholds for activities eligible for SV and PCN are defined in the general conditions in Section IV and Maine General Permits in Section V.

3. Prospective permittees shall review:

a. Section I to determine if the activity requires Corps authorization.

b. Sections III , IV, and V to determine if the activity is eligible for authorization under these GPs, and specifically whether it is eligible for SV, or whether a PCN is required.

4. Prospective permittees are encouraged to contact the Corps with questions at any time (U.S. Army Corps of Engineers, Maine Project Office, 442 Civic Center Drive, Suite 350, Augusta, Maine 04330, ph. 207-623-8367). Pre-application meetings, whether arranged by the Corps or requested by a prospective permittee, are encouraged to facilitate the review of projects. Pre-application meetings and/or site visits help streamline the authorization process by alerting the prospective permittee to potentially time-consuming factors that are likely to arise during the evaluation of their project (e.g. avoidance, minimization and compensatory mitigation requirements, historic properties, endangered species, essential fish habitat, vernal pools, and dredging of contaminated sediments).

5. Permittees shall ensure compliance with all applicable GCs in Section IV and GPs in Section V. Non-compliance with these GPs and GCs may subject the permittee to criminal, civil, or administrative criminal penalties, and/or an ordered restoration, and/or the permit may be modified, suspended or revoked by the Corps.

III. PROCEDURES

1. State Approvals. Applicants are responsible for applying for and obtaining any required state or local approvals. Federal and state jurisdiction and review criteria may differ in some instances. State permits may be required for specific projects regardless of the GP category.

In order for authorizations under these GPs to be valid, when any of the following state approvals or statutorily-required reviews is also required, the approvals shall be obtained prior to the commencement of work in Corps jurisdiction:

- Maine Department of Environmental Protection (DEP): Natural Resources Protection Act (NRPA) permit, including permit-by-rule (PBR) and general permit authorizations; Site Location of Development Act permit; Maine Waterway Development and Conservation Act permit; and Maine Hazardous Waste, Septage, and Solid Waste Management Act license.
- Maine Department of Agriculture, Conservation and Forestry: Land Use Planning Commission (LUPC) permit.
- Maine Department of Marine Resources: Aquaculture Leases and Licenses.
- Maine Department of Agriculture, Conservation and Forestry, Bureau of Parks and Lands, Submerged Lands: Submerged Lands Lease.

2. How to Obtain/Apply for Corps Authorization.

a. **Self-Verification (SV)**: Prospective permittees shall confirm that the activity meets all the applicable terms and conditions of SV. Consultation with the Corps and/or other relevant federal and state agencies may be necessary to ensure compliance with the applicable general conditions (GCs) and related federal laws such as the National Historic Preservation Act (GC 15), the Endangered Species Act (GC 16), the Magnuson-Stevens Fishery Conservation and Management Act (GC 17), and the Wild and Scenic Rivers Act (GC 13). Activities that are eligible for SV are authorized under these GPs provided the prospective permittee has:

i. Confirmed that the activity meets all applicable terms and conditions of SV.

ii. Provided notifications to the State Historic Preservation Officer (SHPO) (the SHPO in the State of Maine is the Maine Historic Preservation Commission, or MHPC) and all five federally-recognized tribes in the State of Maine (Tribal Historic Preservation Officers, or THPOs) listed in Section VIII before submitting the SV to the Corps in order to be reviewed for the presence of historic, archeological, architectural, or tribal resources in the action area that the activity may affect (see GC 15). Prospective permittees are not required to wait for a response to their notifications before submitting the SV to the Corps.

iii. At least two weeks before work is to commence, submitted to the Corps a Self-Verification Notification Form (SVNF, page 36) with all of the following attachments: location map, project plans, and an Official Species List of federally threatened and endangered species that may occur in the activity's action area and the email address of the person who generated the list (see GC 16).

NOTE: A copy of a state permit application form may be an acceptable surrogate for the SVNF itself; however, the applicant shall not rely on the state permitting agency to provide the Corps a copy of their state permit application.

b. **Pre-Construction Notification (PCN)**: Notification to, and written verification from the Corps is required. For activities that do not qualify for SV or where otherwise required by the terms and conditions of the GPs, the prospective permittee shall submit a PCN and obtain written verification from the Corps before starting work in Corps jurisdiction. The Corps will coordinate review of all PCN activities with other federal and state agencies, as appropriate. The Corps will attempt to issue written verification of the PCN within 60 days of receiving a complete application.

All prospective permittees for PCN activities shall follow the instructions on found on pages 37 – 42, and in particular:

i. Submit directly to the Corps application form *ENG Form 4345* (pages 40 – 42), or the surrogate state permit application form as noted above.

ii. Provide project information outlined on pages 37 – 42 (Content of a Pre-Construction Notification).
iii. Submit an Official Species List of federally threatened and endangered species that may occur in the activity's action area and the email address of the person who generated the list (GC 16).
iv. Provide notifications to the SHPO (MHPC) and all five THPOs in the State of Maine listed in Section VIII before submitting the PCN to the Corps in order to be reviewed for the presence of historic, archeological, architectural, or tribal resources in the action area that the activity may affect (see GC 15). The PCN shall include documentation that MHPC and all of the THPOs were notified (a copy of the prospective permittee's cover letter or emails to MHPC and the THPOs is acceptable). Prospective permittees are not required to wait for a response to their notifications before submitting a PCN to the Corps.

c. **Individual Permit (IP):** Projects that are not eligible for these GPs require an IP (33 CFR 325.5(b)) and prospective permittees shall submit an application directly to the Corps. These GPs do not affect the Corps IP review process or activities exempt from Corps regulation. For general information regarding IPs prospective permittees are encouraged to contact the Corps. ***In addition, the Corps retains discretionary authority on a case-by-case basis to elevate GP-eligible activities to an IP based on concerns for the aquatic environment or for any other factor of the public interest (33 CFR 320.4(a)). Whenever the Corps notifies a prospective permittee that an IP is required, no work in Corps jurisdiction may be conducted until the Corps issues the required authorization in writing indicating that the work may proceed.***

d. **Emergency Situations:** Contact the Corps immediately in the event of an emergency situation for information on the verification process. Emergency situations are limited to sudden, unexpected occurrences that could potentially result in an unacceptable hazard to life, a significant loss of property, or an immediate, unforeseen, and significant economic hardship if corrective action requiring a permit is not undertaken within a time period less than the normal time needed to process an application under standard procedures. Emergency work is subject to the same terms and conditions of these GPs as non-emergency work, and similarly, must qualify for authorization under these GPs; otherwise an IP is required. The Corps will work with all applicable agencies to expedite verification according to established procedures in emergency situations.

IV. GENERAL CONDITIONS

An activity is authorized under the General Permits (GPs) only if that activity and the permittee satisfy all of the applicable GPs terms and following general conditions (GCs):

1. Federal Jurisdiction.
2. Minimal Direct, Secondary and Cumulative Effects.
3. Other Permits.
4. Water Quality and Coastal Zone Management.
5. Fills Within 100-Year Floodplains.
6. Discretionary Authority.
7. Single and Complete Project.
8. Use of Multiple General Permits.
9. Mitigation (Avoidance, Minimization, and Compensatory Mitigation).
10. Corps Projects and Property.
11. Navigation.
12. National Lands.
13. Wild and Scenic Rivers.
14. St. John/St. Croix Rivers.
15. Historic Properties.
16. Federal Threatened and Endangered Species.
17. Essential Fish Habitat.
18. Aquatic Life Movements and Management of Water Flows.
19. Spawning, Breeding, and Migratory Areas.
20. Vernal Pools.
21. Restoration of Special Aquatic Sites (Including Wetland Areas).
22. Invasive and Other Unacceptable Species.
23. Soil Erosion, Sediment, and Turbidity Controls.
24. Time-of-Year Work Windows/Restrictions.
25. Pile Driving and Pile Removal in Navigable Waters.
26. Temporary Fill.
27. Heavy Equipment in Wetlands or Mudflats.
28. Bank and Shoreline Stabilization Including Living Shorelines.
29. Stream Work and Crossings, and Wetland Crossings.
30. Utility Line Installation and Removal.
31. Storage of Seasonal Structures.
32. Aquaculture.
33. Permit(s)/Authorization Letter On-Site.
34. Inspections.
35. Maintenance.
36. Federal Liability.
37. Property Rights.
38. Previously Authorized Activities.
39. Transfer of GP Verifications.
40. Modification, Suspension, and Revocation.
41. Special Conditions.
42. False or Incomplete Information.
43. Abandonment.
44. Enforcement Cases.
45. Duration of Authorization.

1. Federal Jurisdiction.

a. Applicability of these GPs shall be evaluated with reference to federal jurisdictional boundaries (e.g. mean high water mark, high tide line, ordinary high water mark, and wetland boundary). Activities shall be evaluated with reference to "waters of the U.S." under the Clean Water Act (33 CFR 328) and "navigable waters of the U.S." under Section 10 of the Rivers and Harbors Act of 1899 (33 CFR 329). Prospective permittees are responsible for ensuring that the boundaries used satisfy the federal criteria defined at 33 CFR 328 – 229. These sections prescribe the policy, practice and procedures to be used in determining the extent of the Corps jurisdiction. Note: Waters of the U.S. includes all waters pursuant to 33 CFR 328.3(a), and in adjacent wetlands as that term is defined in 33 CFR 328.3(c).

b. Permittees shall identify on project plans wetlands, other special aquatic sites (SAS) including vegetated shallows (or submerged aquatic vegetation, SAV) and mudflats, and other waters, such as lakes and ponds, and perennial and intermittent streams on the project site. Wetlands shall be delineated in accordance with the Corps of Engineers Wetlands Delineation Manual and the most recent regional supplement pertaining to the State of Maine. GP-eligible activities may utilize wetland determinations conducted by State of Maine staff in-lieu of a wetland delineation. For activities located in Essential Fish Habitat (GC 17), permittees shall also identify on project plans natural rocky habitats and shellfish areas in order to satisfy the Magnuson-Stevens Fishery Conservation and Management Act.

2. Minimal Direct, Secondary and Cumulative Effects. To be eligible and subsequently authorized by these GPs, an activity shall result in no more than minimal individual and cumulative effects on the aquatic environment as determined by the Corps in accordance with the criteria listed within these GPs and GCs. This may require project modifications involving avoidance, minimization, or compensatory mitigation for unavoidable impacts to ensure that the net adverse effects of an activity are no more than minimal.

3. Other Permits. Permittees shall obtain other Federal, State, or local authorizations as required by law. Permittees are responsible for applying for and obtaining all required State of Maine or local approvals including a Flood Hazard Development Permit issued by the town/city. Work that is not regulated by the State of Maine, but is subject to Corps jurisdiction, may still be eligible for authorization under these GPs.

4. Water Quality and Coastal Zone Management.

a. Permittees shall satisfy any conditions imposed by the State of Maine and EPA, where applicable, in their Clean Water Act Section 401 Water Quality Certification (WQC) for these GPs, or in any Individual Section 401 WQC. See Section VIII for state-specific contact info and to determine if any action is required to obtain a 401 WQC. The Corps may require additional water quality management measures to ensure that the authorized activity does not cause or contribute to a violation of water quality standards. All projects authorized by these GPs shall be designed, constructed and operated to minimize or eliminate the discharge of pollutants.

b. Permittees shall satisfy any additional conditions imposed by the State of Maine in their Coastal Zone Management (CZM) Act of 1972 consistency concurrences for these GPs, or in any Individual CZM consistency concurrences. The Corps may require additional measures to ensure that the authorized activity is consistent with state coastal zone management requirements.

5. Fills Within 100-Year Floodplains. The activity shall comply with applicable Federal Emergency Management Agency (FEMA) approved State of Maine or municipal floodplain management requirements. Permittees should contact FEMA and/or the State of Maine Floodplain Management Program regarding floodplain management requirements (see Section VIII for Federal and state-specific contact info).

6. Discretionary Authority. Notwithstanding compliance with the terms and conditions of these GPs, the Corps retains discretionary authority to require a PCN or IP review based on concerns for the aquatic environment or for any other factor of the public interest (see 33 CFR 320.4(a)). This authority is invoked on a case-by-case basis whenever the Corps determines that the potential consequences of the proposal warrant a higher level of review based on the concerns stated above. This authority may be invoked for projects that may contribute to cumulative environmental impacts that are more than minimal or if there is a special resource or concern associated with a particular project.

7. Single and Complete Project. The term "single and complete project" is defined at 33 CFR 330.2(i) as the total project proposed or accomplished by one owner/developer or partnership or other association of owners/developers. These GPs shall not be used for piecemeal work and shall be applied to single and complete projects and as such, the same GP shall not be used more than once for the same single and complete project.

a. For non-linear projects, a single and complete project shall have independent utility. Portions of a multi-phase project that depend upon other phases of the project do not have independent utility. Phases of a project that would be constructed even if the other phases were not built can be considered as separate single and complete projects with independent utility.

b. Unless the Corps determines the activity has independent utility, all components of a single project and/or all planned phases of a multi-phased project (e.g., subdivisions should include all work such as roads, utilities, and lot development) shall be treated together as constituting one single and complete project. If any component of a single and complete project requires a PCN, the entire single and complete project shall be reviewed under PCN.

c. For linear projects such as power lines or pipelines with multiple crossings, a "single and complete project" is all crossings of a single water of the U.S. (i.e. single waterbody) at a specific location. For linear projects crossing a single waterbody several times at separate and distant locations, each crossing is considered a single and complete project. However, individual channels in a braided stream or river, or individual arms of a large, irregularly-shaped wetland or lake, etc., are not separate waterbodies, and crossings of such features cannot be considered separately.

8. Use of Multiple General Permits. The use of more than one GP for a single and complete project is prohibited, except when the acreage loss of waters of the U.S. authorized by the GPs does not exceed the acreage limit of the GPs with the highest specified acreage limit. For example, if a road crossing over waters is constructed under GP 10, with an associated utility line crossing authorized by GP 9, if the maximum acreage loss of waters of the U.S. for the total project is ≥3 acres it shall be evaluated as an IP.

9. Mitigation (Avoidance, Minimization, and Compensatory Mitigation).

a. Activities shall be designed and constructed to avoid and minimize adverse effects, both temporary and permanent, to waters of the U.S. to the maximum extent practicable to ensure that adverse effects to the aquatic environment are no more than minimal.

b. Compensatory mitigation for unavoidable impacts to waters of the U.S., including direct, secondary and temporal loss, will generally be required for permanent impacts that exceed the SV limits (SV limits are detailed in Section V), and may be required for temporary impacts that exceed the SV limits, to offset unavoidable impacts which remain after all appropriate and practicable avoidance and minimization has been achieved and to ensure that the adverse effects to the aquatic environment are no more than minimal. Proactive restoration projects or temporary impact work with no secondary effects may generally be excluded from this requirement.

c. Mitigation proposals shall follow the guidelines found in the Compensatory Mitigation for Losses of Aquatic Resources; Final Rule April 10, 2008; 33 CFR 332 (which can be found at: *www.nae.usace.army.mil/Missions/Regulatory/Mitigation* under "Compensatory Mitigation for Losses of Aquatic Resources, 33 CFR 332 (Compensatory Mitigation Rule)") and any other regulation. Permittees considering the use of a monetary payment *in-lieu* of permittee-responsible mitigation as compensation for unavoidable impacts to waters of the U.S. in the State of Maine may utilize the Maine Natural Resources Conservation Program (MNRCP). Information regarding this compensatory program can be found at: *www.mnrcp.org* For unavoidable jurisdictional impacts affecting federally-endangered Atlantic salmon and/or its critical habitat, permittees may be required to compensate for the impacts by utilizing the Maine Atlantic Salmon Restoration and Conservation Program. Information regarding this *in-lieu-fee* compensatory program can be found at: *www.maine.gov/dmr/science-research/searun/programs/ilffacts.html*

10. Corps Projects and Property.

a. Corps projects and property can be found at: *www.nae.usace.army.mil/Missions/Civil-Works*

b. In addition to any authorization under these GPs, prospective permittees shall contact the Corps Real Estate Division at (978) 318-8585 for work occurring on or potentially affecting Corps properties and/or Corps-controlled easements to initiate reviews and determine what real estate instruments are necessary to perform work. Permittees may not commence work on Corps properties and/or Corps-controlled easements until they

have received any required Corps real estate documents evidencing site-specific permission to work.

c. Any proposed temporary or permanent modification or use of a Federal project (including but not limited to a levee, dike, floodwall, channel, anchorage, breakwater, seawall, bulkhead, jetty, wharf, pier, or other work built or maintained but not necessarily owned by the United States), which may obstruct or impair the usefulness of the Federal project in any manner, is not eligible for SV and requires review and approval by the Corps pursuant to 33 USC 408 (Section 408).

d. A PCN is required for all work in, over, under, or within a distance of three times the authorized depth of a Corps Federal Navigation Project (FNP) and may require permission under Section 408.

e. Any structure or work that extends closer to the horizontal limits of any FNP than a distance of three times the project's authorized depth shall be subject to removal at the owner's expense prior to any future Corps dredging or the performance of periodic hydrographic surveys.

f. Where a Section 408 permission is applicable, written verification for the PCN will not be issued prior to the decision on the Section 408 permission request.

11. Navigation

a. There shall be no unreasonable interference with general navigation by the existence or use of the activity authorized herein, and no attempt shall be made by the permittee to prevent the full and free use by the public of all navigable waters at or adjacent to the activity authorized herein.

b. Work in, over, under, or within a distance of three times the authorized depth of an FNP shall specifically comply with GC 10.

c. Any safety lights and/or signals prescribed by the U.S. Coast Guard, State of Maine or municipality, through regulations or otherwise, shall be installed and maintained at the permittee's expense on authorized facilities in navigable waters of the U.S.

d. The permittee understands and agrees that, if future operations by the U.S. require the removal, relocation, or other alteration, of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from the Corps, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the U.S. No claim shall be made against the U.S. on account of any such removal or alteration.

12. National Lands. Activities that impinge upon the value of any National Lands or Federal Properties including but not limited to a National Wildlife Refuge, National Forest, or any area administered by the National Park Service , U.S. Fish and Wildlife Service or U.S. Forest Service are not eligible for SV and require PCN.

13. Wild and Scenic Rivers.

a. The following activities in designated rivers of the National Wild and Scenic River (NWSR) System, or in a river designated by Congress as a "study river" for possible inclusion in the system, require a PCN unless the National Park Service has determined in writing to the prospective permittee that the proposed work will not adversely affect the NWSR designation or study status:

i. Activities that occur in NWSR segments, in and 0.25 miles up or downstream of NWSR segments, or in tributaries within 0.25 miles of NWSR segments.
ii. Activities that occur in wetlands within 0.25 miles of NWSR segments.
iii. Activities that have the potential to alter free-flowing characteristics in NWSR segments.

b. As of October 14, 2020, National Wild and Scenic Rivers and congressional study rivers in Maine include: the Allagash River beginning at Telos Dam continuing to Allagash checkpoint at Eliza Hole Rapids, approximately 3 miles upstream of the confluence with the St. John River (length = 92 92.5 miles); and 11.25 miles of the York River, in the State of Maine, from its headwaters at York Pond to the mouth of the river at York Harbor, plus tributaries (the York River is currently under study).

14. St. John/St. Croix Rivers. A PCN is required for any work within the Saint John and Saint Croix River basins that requires approval of the International Joint Commission. In addition, a PCN is required if any temporary or permanent use, obstruction or diversion of international boundary waters could affect the natural flow or levels of waters on the Canadian side of the line; or if any construction or maintenance of remedial works,

protective works, dams, or other obstructions in waters downstream from boundary waters could raise the natural level of water on the Canadian side of the boundary.

15. Historic Properties.

a. No undertaking shall cause effects (as defined at 33 CFR 325 Appendix C and 36 CFR 800) on properties listed on, determined to be eligible for listing on, or potentially eligible for listing on the National Register of Historic Places, including previously unknown historic properties within the permit area, unless the Corps or another federal action agency has satisfied the consultation requirements of Section 106 of the National Historic Preservation Act (NHPA). The majority of historic properties are not listed on the National Register of Historic Places and may require identification and evaluation by qualified historic preservation and/or archeological consultants in coordination with the Corps and the State Historic Preservation Officer (SHPO) (the SHPO in the State of Maine is the Maine Historic Preservation Commission, MHPC) and/or the five federally-recognized tribes in the State of Maine (Tribal Historic Preservation Officers, or THPOs). The MHPC, the THPOs, and the National Register of Historic Places can assist with locating information on:

i. Previously identified historic properties; and

ii. Areas with potential for the presence of historic resources, which may require identification and evaluation by qualified historic preservation and/or archaeological consultants in consultation with the Corps and MHPC and/or the THPO(s).

b. For activities eligible for these GPs, permittees shall ensure that the activity will not cause effects as stated above in 15(a). In order to comply with this condition, both SV and PCN prospective permittees shall notify MHPC and all five THPOs for their identification of historic properties. MHPC and the THPOs will generally respond within 30 days of receiving the notification if they believe that the activity may have an adverse effect to historic properties. A PCN is required if an activity may have an adverse effect to historic properties. The PCN shall be submitted as soon as possible if a proposed activity may cause effects as stated above in 15(a) a to ensure that the Corps is aware of any potential effects of the proposed activity on any historic property to ensure all Section 106 requirements are met.

c. All PCNs shall:

i. Show notification to MHPC and all five THPOs for their identification of historic properties;

ii. State which historic properties may be affected by the proposed work or include a vicinity map indicating the location of the historic properties or the potential for the presence of historic properties; and

iii. Include any available documentation from MHPC or the THPO(s) indicating that there are or are not historic properties affected.

d. The requirements to comply with Section 106 of the NHPA may be satisfied by a Programmatic Agreement (PA) or Programmatic Consultation (PC) with the Corps, New England District or another federal agency. New England District PAs and PCs are found at *www.nae.usace.army.mil/Missions/Regulatory*

e. If the permittee discovers any previously unknown historic, cultural or archeological remains and artifacts while accomplishing the activity authorized by these permits, the permittee shall immediately notify the district engineer of what was found, and avoid construction activities that may affect the remains and artifacts until the required coordination has been completed. The district engineer will initiate the Federal, Tribal and state coordination required to determine if the items or remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.

f. Federal agencies should follow their own procedures for complying with the requirements of Section 106 of the NHPA. Federal permittees shall provide the Corps with the appropriate documentation to demonstrate compliance with those requirements.

g. Federal and non-federal applicants should coordinate with the Corps before conducting any onsite archeological work (reconnaissance, surveys, recovery, etc.) requested by MHPC or the THPOs, as the Corps will determine the Permit Area for the consideration of historic properties based on 33 CFR 325 Appendix C. This is to ensure that work done is in accordance with Corps requirements.

16. Federal Threatened and Endangered Species.

a. No activity is authorized by these GPs which:

i. Is likely to directly or indirectly jeopardize the continued existence of a threatened or endangered species or a species proposed for such designation, as identified under the Federal Endangered Species Act (ESA), or which will directly or indirectly destroy or adversely modify the critical habitat or proposed critical habitat of such species;

ii. "May affect" a listed species or critical habitat, unless Section 7 consultation addressing the effects of the proposed activity has been completed;

iii. Is "likely to adversely affect" a listed species or critical habitat unless Section 7 consultation has been completed by the Corps or another lead action agency in coordination with the Corps under the provisions of a Programmatic Agreement (PA) or Programmatic Consultation (PC); or

iv. Violates the ESA.

b. All prospective permittees shall attach to their SVNF or PCN an Official Species List obtained from the U.S. Fish and Wildlife Service's Information for Planning and Consultation (IPaC) found at: *https://ecos.fws.gov/ipac* and provide the email address of the person who generated the list.

c. For proposed activities in tidal waters, prospective permittees should also refer to the National Oceanic and Atmospheric Administration (NOAA) Fisheries' Section 7 Mapper for federally-listed species found at: *https://noaa.maps.arcgis.com/apps/webappviewer/index.html*

d. A PCN is required if a threatened or endangered species, a species proposed for listing as threatened or endangered, or designated or proposed critical habitat (all hereinafter referred to as "listed species or habitat"), as identified under the ESA, may be affected by the proposed work. An activity may remain eligible for SV if the only listed species affected is the northern long-eared bat (*Myotis septrionalis*), and only after Section 7 consultation has been completed by the Corps under the 4(d) Rule Streamlined Consultation.

e. Federal agencies shall follow their own procedures for complying with the requirements of the ESA while ensuring that the Corps and any other federal action agencies are included in the consultation process.

f. Non-federal representatives designated by the Corps to conduct informal consultation or prepare a biological assessment shall follow the requirements in the designation document(s) and the ESA. Non-federal representatives shall also provide the Corps with the appropriate documentation to demonstrate compliance with those requirements. The Corps will review the documentation and determine whether it is sufficient to address ESA compliance for the GP activity, or whether additional ESA consultation is necessary.

g. The requirements to comply with Section 7 of the ESA may be satisfied by a Programmatic Agreement (PA) or Programmatic Consultation (PC) with the Corps, New England District or another federal agency. New England District PAs and PCs are found at: *www.nae.usace.army.mil/Missions/Regulatory*

17. Essential Fish Habitat (EFH).

a. PCN activities in tidal waters and the following rivers and streams, including all tributaries to the extent that they are currently or were historically accessible for salmon migration, shall be reviewed for the potential to adversely affect EFH (activities meeting SV criteria have been determined to result in no more than minimal adverse effects to EFH and therefore need no additional review):

Androscoggin River	Aroostook River	Boyden River	Dennys River
Ducktrap River	East Machias River	Hobart Stream	Kennebec River
Machias River	Narraguagus River	Orland River	Passagassawaukeag River
Patten Stream	Penobscot River	Pleasant River	Presumpscot River
Saco River	Sheepscot River	St. Croix River	Tunk Stream
Union River			

b. Prospective permittees may be required to describe and identify potential adverse effects to EFH and should refer to the NOAA Fisheries' EFH Mapper found at: *www.fisheries.noaa.gov/resource/map/essential-fish-habitat-mapper*

c. The requirements to comply with the Magnuson-Stevens Fishery Conservation and Management Act may be satisfied by a Programmatic Agreement (PA) or Programmatic Consultation (PC) with the Corps, New England District or another federal agency. New England District PAs and PCs are found at: *www.nae.usace.army.mil/Missions/Regulatory*

18. Aquatic Life Movements and Management of Water Flows.

a. No activity may substantially disrupt the necessary life cycle movements of those species of aquatic life indigenous to the waterbody, including those species that normally migrate through the area, unless the activity's primary purpose is to impound water. Unless otherwise stated, activities permanently impounding water in a stream require a PCN to ensure impacts to aquatic life species are avoided and minimized. All permanent and temporary crossings of waterbodies and wetlands shall be:

i. Suitably spanned, bridged, culverted, or otherwise designed and constructed to maintain low flows to sustain the movement of those aquatic species; and

ii. Properly aligned and constructed to prevent bank erosion or streambed scour both adjacent to and inside the crossing.

b. To avoid adverse impacts on aquatic organisms, the low flow channel/thalweg shall remain unobstructed during periods of low flow, except when it is necessary to perform the authorized work.

c. For work in tidal waters, in-stream controls (e.g. cofferdams) should be installed in such a way as to not obstruct fish passage.

d. To the maximum extent practicable, the preconstruction course, condition, capacity, and location of open waters must be maintained for each activity, including stream channelization, storm water management activities, and temporary and permanent road crossings, except as provided below. The activity must be constructed to withstand expected high flows. The activity shall not restrict or impede the passage of normal or high flows, unless the primary purpose of the activity is to impound water or manage high flows. The activity may alter the pre-construction course, condition, capacity, and location of open waters if it benefits the aquatic environment (e.g. stream restoration or relocation activities).

e. Activities that temporarily or permanently adversely impact upstream or downstream flood conditions require a PCN.

19. Spawning, Breeding, and Migratory Areas.

a. Jurisdictional activities in waters of the U.S. such as certain excavations, discharges of dredged or fill material, and/or suspended sediment producing activities that provide value as fish migratory areas, fish and shellfish spawning or nursery areas, or amphibian and migratory bird breeding areas, during spawning or breeding seasons shall be avoided and minimized to the maximum extent practicable.

b. Jurisdictional activities in waters of the U.S. that provide value as breeding areas for migratory birds must be avoided to the maximum extent practicable. The permittee is responsible for ensuring their action complies with the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act. The permittee is responsible for contacting the U.S. Fish and Wildlife's Maine Field Office (see Section VIII for contact info) to determine applicable measures to reduce impacts to migratory birds or eagles, including whether "incidental take" permits are necessary and available under the Migratory Bird Treaty Act or Bald and Golden Eagle Protection Act for a particular activity.

20. Vernal Pools.

a. A PCN is required if a discharge of dredged or fill material is proposed within a vernal pool depression located within waters of the U.S.

b. GC 20(a) above does not apply to projects that are within a municipality that meets the provisions of a Corps-approved vernal pool Special Area Management Plan (SAMP) and are otherwise eligible for SV, and the applicant meets the requirements to utilize the vernal pool SAMP.

21. Restoration of Special Aquatic Sites (Including Wetland Areas).

a. In areas of authorized temporary disturbance, if trees are cut they shall be cut at or above ground level and not uprooted in order to prevent disruption to the wetland soil structure and to allow stump sprouts to revegetate the work area, unless otherwise authorized.

b. The introduction or spread of invasive plant species in disturbed areas shall be controlled. If construction mats are to be used in areas of invasive plant species, they shall be thoroughly cleaned before re-use.

c. Wetland areas where permanent disturbance is not authorized shall be restored to their original condition and elevation. Original condition means protection and/or removal of existing soil and vegetation, and replacement back to the original location such that the original soil layering and vegetation schemes are

approximately the same, unless otherwise authorized. Restoration shall typically commence no later than the completion of construction.

d. Upon completion of construction, all areas of authorized disturbed wetland area shall be stabilized with a wetland seed mix containing only plant species native to New England and shall not contain any species listed in the "Invasive and Other Unacceptable Plant Species" Appendix K in the "New England District Compensatory Mitigation Guidance" found at: *www.nae.usace.army.mil/Missions/Regulatory/Mitigation*

22. Invasive and Other Unacceptable Species.

a. The introduction or spread of invasive or other unacceptable plant or animal species on the project site or areas adjacent to the project site caused by the site work shall be avoided to the maximum extent practicable. For example, construction mats and equipment shall be thoroughly cleaned and free of vegetation and soil before and after use. The introduction or spread of invasive plant or animal species on the project site caused by the site work shall be controlled.

b. No cultivars, invasive or other unacceptable plant species may be used for any mitigation, bioengineering, vegetative bank stabilization or any other work authorized by these GPs. However, non-native species and cultivars may be used when it is appropriate and specified in a written verification, such as using *Secale cereale* (Annual Rye) to quickly stabilize a site. All PCNs shall justify the use of non-native species or cultivars.

c. For the purposes of these GPs, plant species that are considered invasive and unacceptable are provided in Appendix K "Invasive and Other Unacceptable Plant Species" of the most recent "New England District Compensatory Mitigation Guidance" and is found at: *www.nae.usace.army.mil/Missions/Regulatory/Mitigation* The June 2009 "U.S. Army Corps of Engineers Invasive Species Policy" provides policy, goals and objectives and is located at *www.nae.usace.army.mil/Missions/Regulatory/Invasive-Species* If an Invasive Species Control/Management Plan has been prepared it should be included with any SV or PCN.

23. Soil Erosion, Sediment, and Turbidity Controls.

a. Adequate sedimentation and erosion control management measures, practices and devices, such as phased construction, installation of sediment control barriers (i.e. silt fence, vegetated filter strips, geotextile silt fences, erosion control mixes, hay bales or other devices) downhill of all exposed areas, retention of existing vegetated buffers, application of temporary mulching during construction, and permanent seeding and stabilization shall be installed and properly maintained to reduce erosion and retain sediment on-site during and after construction. They shall be capable of preventing erosion; of collecting sediment, suspended and floating materials; and of filtering fine sediment.

b. Temporary sediment control barriers shall be removed upon completion of work, but not until all disturbed areas are permanently stabilized. The sediment collected by these sediment barriers shall be removed and placed at an upland location and stabilized to prevent its later erosion into a waterway or wetland.

c. All exposed soil and other fills shall be permanently stabilized at the earliest practicable date.

24. Time-of-Year Work (TOY) Windows/Restrictions. In-water work shall be conducted during the following TOY work windows (work allowed) under SV and any in-water work proposed during the following TOY restrictions (no work) shall be reviewed under PCN (and shall contain written justification for deviation from the work allowed windows). The term "in-water work" does not include conditions where the work site is "in-the-dry" (e.g. intertidal areas exposed at low tide). The term also does not include work contained in a cofferdam so long as the cofferdam was installed and subsequently removed within the work allowed window.

	TOY Restriction (***no work***)	TOY Work Window (***work allowed***)
Non-tidal waters	Oct. 1st to Jul. 14th	Jul. 15th to Sep. 30th
Tidal waters	Apr. 10th to Nov. 7th	Nov. 8th to Apr. 9th

Alternate work windows proposed under PCN will generally be coordinated with the U.S. Fish and Wildlife Service, National Marine Fisheries Service, Maine Department of Inland Fisheries and Wildlife, and/or Maine Department of Marine Resources and resulting written verifications may include species-specific work allowed windows.

25. Pile Driving and Pile Removal in Navigable Waters.

a. Derelict, degraded, or abandoned piles and sheet piles in the project area shall be removed in their entirety as practicable and properly disposed of in an upland location and not in wetlands. In areas of fine-grained substrates, piles/sheets shall be removed by direct, vibratory, or clamshell pull method in order to minimize potential turbidity and sedimentation impacts. If removal is not practicable, said piles/sheets shall be cut off or driven to a depth of at least one foot below substrate.

b. Work involving pile installation and/or removal should adhere to one of the five methods below:

i. "In-the-dry", or

ii. In-water between Nov. 8th to Apr. 9th, or

iii. Drilled and pinned to ledge, or

iv. Vibratory hammers used to install any size and quantity of wood, concrete, or steel, or impact hammers limited to one hammer and <50 piles installed/day with the following: wood piles of any diameter, concrete piles ≤18-inches diameter, steel piles ≤12-inches diameter if: (1) the hammer is ≤3,000 pounds and a wood cushion or equivalent is used between the hammer and steel pile, or (2) a soft start is used. Soft starts require an initial set of three strikes from the impact hammer at 40% energy, followed by a 1-minute waiting period between subsequent three-strike sets. The soft-start procedure shall be conducted any time hammering ceases for more than 30 minutes.

26. Temporary Fill.

a. Temporary fills, including but not limited to construction mats and corduroy roads shall be entirely removed as soon as they are no longer needed to construct the authorized work. Temporary fill shall be placed in its original location or disposed of at an upland site and suitably contained to prevent its subsequent erosion into waters of the U.S.

b. All temporary fill and disturbed soils shall be stabilized to prevent its eroding into waters of the U.S. where it is not authorized. Work shall include phased or staged development to ensure only areas under active development are exposed and to allow for stabilization practices as soon as practicable. Temporary fill shall be placed in a manner that will prevent it from being eroded by expected high flows.

c. Unconfined temporary fill authorized for discharge into waters of the U.S. shall consist of material that minimizes impacts to water quality (e.g. washed stone, stone, etc.).

d. Appropriate measures shall be taken to maintain normal downstream flows and minimize flooding to the maximum extent practicable when temporary structures, work, and discharges of dredged or fill material, including cofferdams, are necessary for construction activities, access fills, or dewatering of construction sites. Materials shall be placed in a location and manner that does not adversely impact surface or subsurface water flow into or out of the wetland. Temporary fill authorized for discharge into wetlands shall be placed on geotextile fabric or other appropriate material laid on the pre-construction wetland grade where practicable to minimize impacts and to facilitate restoration to the original grade. Construction mats are excluded from this requirement.

e. Construction debris and/or deteriorated materials shall not be placed or otherwise located in waters of the U.S.

27. **Heavy Equipment in Wetlands or Mudflats.** Operating heavy equipment (drill rigs, fixed cranes, etc.) within wetlands shall be minimized, and to the maximum extent practicable such equipment shall not be stored, maintained or repaired in wetlands. Where construction requires heavy equipment operation in wetlands, the equipment shall: a) have low ground pressure (typically <3 psi); b) be placed on swamp/construction/timber mats (herein referred to as "mats") that are adequate to support the equipment in such a way as to minimize disturbance of wetland soil and vegetation; or c) be operated on adequately dry or frozen wetlands such that shear pressure does not cause subsidence of the wetlands immediately beneath equipment and upheaval of adjacent wetlands. Mats are to be placed in the wetland from the upland or from equipment positioned on mats if already working within a wetland. Other support structures that are capable of safely supporting equipment may be used with written Corps authorization. Similarly, the permittee may request written authorization from the Corps to waive use of mats during frozen or dry conditions. Construction mats should be managed in accordance with construction mat best management practices (BMPs) found at:
www.nae.usace.army.mil/Missions/Regulatory/State-General-Permits/Maine-General-Permit

28. Bank and Shoreline Stabilization Including Living Shorelines.

a. Projects involving construction of or repair, replacement, and maintenance of bank or shoreline stabilization structures including living shorelines within Corps jurisdiction shall be designed to minimize environmental effects, effects to neighboring properties, scour, etc. to the maximum extent practicable.

b. Prospective permittees shall design and construct these stabilization projects using this sequential avoidance and minimization process: avoidance of aquatic resource impacts, diversion of overland flow, vegetative stabilization, living shorelines, stone-sloped surfaces, and walls/bulkheads. New vertical walls/bulkheads shall only be used in situations where reflected wave energy can be tolerated. Prospective permittees proposing new vertical walls/bulkheads shall provide written justification demonstrating why other methods of stabilization are not practicable and how the surrounding area would be affected by the resulting reflected wave energy.

Additional conditions to meet SV eligibility criteria for *non-tidal* bank and shoreline stabilization activities:

a. Fill shall be ≤500 linear feet in total length as measured below the plane of the ordinary high water mark (OHWM), includes total if more than one stream bank.
b. Fill placed below the plane of the OHWM shall be ≤1 cubic yard per linear foot.
c. Fill shall not be angled steeper than 1H:1V.
d. No discharge of fill in special aquatic sites other than wetlands.
e. Stone revetment shall be comprised of angular material.
f. No material shall be of the type, or placed in any location, or in any manner, to impair surface water flow into or out of any water of the U.S.
g. No material shall be placed in a manner that will be eroded by normal or expected high flows (properly anchored trees and treetops may be used in low energy areas).
h. The activity shall not be a stream channelization activity.

Additional conditions to meet SV eligibility criteria for *tidal* bank and shoreline stabilization activities:

a. All in-water work shall be conducted "in-the-dry".
b. Fill shall be ≤500 linear feet in total length as measured below the plane of the high tide line (HTL) and shall be ≤200 linear feet in total length as measured below the plane of the mean high water mark (MHWM), includes total for more than one bank. Vertical structures shall be ≤200 linear feet in total length as measured below the plane of the MHWM and shall be ≤18 inches waterward of the existing vertical face.
c. Fill placed below the plane of the HTL shall be ≤1 cubic yard per linear foot.
d. Stone revetment shall be comprised of angular material.
e. Shall not impact special aquatic sites (SAS, incl. submerged aquatic vegetation, SAV), impacts to natural rocky habitats are ≤100 square feet, and impacts to intertidal and shellfish areas are ≤1,000 square feet).
f. No structures/fill shall be steeper than 1H:1V.
g. No new groins, breakwaters, or jetties.

29. Stream Work and Crossings, and Wetland Crossings.

a. A PCN is required for all new and replacement crossings in navigable waters.

b. In order to effectively size and configure crossings in navigable waters, new and replacement crossings shall consider factors including but not limited to: local tidal elevations over the range of tidal heights, basin topography and bathymetry, existing and proposed road elevations. Flood risk tolerance, conditions of habitat and natural community types present, and sea level rise during the useful life of the crossing.

c. A PCN is required for activities that result in unavoidable impacts to wetlands in excess of SV thresholds.

d. In-stream work and crossings and wetland crossings shall adhere to all applicable GCs including but not limited to:

i. GC 16 (Federally Threatened and Endangered Species)
ii. GC 17 (Essential Fish Habitat)
iii. GC 18 (Aquatic Life Movements and Management of Water Flows)

iv. GC 23 (Soil Erosion, Sediment and Turbidity Controls)
v. GC 24 (Time-of-Year Work Windows/Restrictions)
vi. GC 26 (Temporary Fill)
vii. GC 28 (Bank Stabilization)

e. Slip Lining. Work resulting in a decreased width, height, or diameter of an existing crossing (e.g. slip lining and invert lining) is discouraged and requires PCN. Written justification shall be provided for this activity.

f. Culvert Extensions. A PCN is required for any extension to an existing culvert.

g. Scour protection or armoring of the inlet and/or outlet of a crossing shall not disrupt normal flow patterns or substantially disrupt the necessary life cycle movements of those species of aquatic life indigenous to the waterbody, including those species that normally migrate through the area (see GC 18).

h. The permittee shall maintain the work authorized herein in good condition and in conformance with the terms and general conditions of this permit to facilitate aquatic life passage as stated in GC 18. Culverts that develop "hanging" inlets or outlets, result in bed washout, or a stream that doesn't match the characteristics of the substrate in the natural stream channel such as mobility, slope, stability confinement will require maintenance or repair to comply with this GC (this does not apply to temporary stream crossings).

Additional conditions to meet SV eligibility criteria for Stream Work and Crossings:

a. Crossings shall be designed and constructed using the techniques and principles outlined in Stream Simulation, Stream Smart, Habitat Connectivity Design.
b. Crossings shall be designed to be at least 1.2 times bankfull width. Any footings, abutments, and/or abutment armoring shall also be at least 1.2 times bankfull width.
c. Crossings shall have a natural bottom substrate under or within the structure matching the characteristics of the substrate in the natural stream channel. Crossings shall be designed and constructed with appropriate streambed forms and streambed characteristics so that water depths and velocities are comparable to those found in the adjacent natural channel at a variety of flows.
d. Crossings shall include a bank on both sides of the stream matching the horizontal profile of the existing stream and banks in order to allow terrestrial passage for wildlife and to prevent undermining of the footings as applicable.
e. Closed bottom culverts shall be embedded at least 25 percent of the maximum height of the culvert.
f. No unconfined fill or excavation in flowing waters is allowed. In-stream construction work shall be conducted "in-the-dry" under no-flow conditions or by using cofferdams, temporary flume pipes, culverts, etc. Downstream flows shall be maintained during in-stream construction. It is recommended that project plans include pertinent details for working in-the-dry and maintaining downstream flows.
g. Conditions (a) thru (e) immediately above do not apply to temporary stream crossings; however, in addition to conditions (f) immediately above, temporary stream crossings shall adhere to the following:
    i. Be placed on geotextile fabric or other material where practicable to ensure restoration to the original grade. Soil may not be used to construct or stabilize these structures and rock shall be large enough to allow for easy removal without disrupting the streambed.
    ii. Be designed and maintained to withstand and pass high flows. Water height shall be no higher than the top of the culvert's inlet. A minimum culvert diameter of two feet is required to pass debris. Culverts shall be aligned to prevent bank erosion or streambed scour.
    iii. Be equipped with energy dissipating devices installed downstream if necessary to prevent scour.
    iv. Be designed and maintained to prevent soil from entering the waterbody.
    v. Be removed upon the completion of work. Impacts to the streambed or banks requires restoration to their original condition using the methods in (a) above.

PCN Conditions for Stream Work and Crossings:

a. Crossings are recommended to meet the conditions for SV; written justification shall be provided for any deviation from SV conditions.

b. Crossings shall be designed using the least intrusive and environmentally damaging method following this sequential minimization process: 1) spans with no stream impacts, 2) spans with stream impacts, and 3) embedded culverts with Stream Simulation, Stream Smart, or Habitat Connectivity.

Additional Conditions for Wetland Crossings:

a. New and replacement wetland crossings that are permanent shall be constructed in such a manner as to preserve hydraulic and ecological connectivity, at its present level, between the wetlands on either side of the road. Crossing structures commonly include but are not limited to spans and culverts. To meet this condition, spans or culverts should be placed at least every 50 feet with an opening at least 2 feet high and 3 feet wide at ground level. Closed bottom culverts should be embedded at least 6 inches and should have a natural bottom substrate within the structure. Alternative crossing designs that preserve wetland hydraulic and ecological connectivity (e.g. "rock sandwiches) may also be considered.

b. Any work that results in flooding, or impacts to wetland drainage from the upgradient side of the wetland crossing does not qualify for SV.

c. In the case of non-compliance, the permittee shall take necessary measures to correct wetland damage due to lack of hydraulic and ecological connectivity.

30. Utility Line Installation and Removal.

a. Utility lines in jurisdictional waters should be installed subsurface and shall be maintained in such a way so that they remain subsurface. If it is necessary to discharge dredged or filled material to keep such utility lines buried or restore them to their original subsurface condition, a PCN and written verification from the Corps may be required (e.g., in the case of side casting into wetlands from utility trenches).

b. For subsurface utility lines the bottom and side slope cover associated with the initial installation under Federal Navigation Projects (FNPs) is a technical determination. The depth requirement varies based on geotechnical (composition of bottom materials and layering), hydraulic (current, or wave induced scour depth), navigation (propeller induced scour depth and ships' anchor penetration), maintenance dredging (penetration of barge spuds), construction factors (energy from blasting potentially transmitted to utility crossings), physical conditions (exposed open water conditions or sheltered/harbor conditions), and the proposed location of the utility crossing within any FNP or within navigable waters, including areas dredged by others. On a case-by-case basis, the Corps will determine the depth and cover requirements for each proposed utility crossing. Additional conditions to the GP will be attached to address pre and post installation requirements. In waterways that do not have existing FNPs, this depth should be taken as two feet below the existing bottom or maximum depth of proposed dredging, as applicable.

c. Aerial utility lines crossing navigable waters require PCN and shall meet minimum clearances per 33 CFR 322.5(i).

d. For horizontal directional drilling work, returns of drilling fluids to the surface (i.e., frac-outs) are not authorized and require restoration to the maximum extent practicable in accordance with the terms and conditions of these GPs. The permittee and its contractor shall have onsite and shall implement the procedures detailed in a frac-out contingency plan for monitoring drilling operations and for the immediate containment, control and recovery/removal of drilling fluids released into the environment should a discharge of material occur during drilling operations.

e. For new installations within waters of the U.S., any abandoned or inactive utility lines should be removed and faulty lines (e.g., leaking hazardous substances, petroleum products, etc.) shall be removed or repaired to the extent practicable. A PCN is required if they are to remain in place, e.g., to protect sensitive areas or ensure safety.

f. No work shall drain a water of the U.S. by providing a conduit for water on or below the surface. Trench plugs installed along pipelines may be effective.

g. Trenches should be backfilled with native sediment immediately after completion of work.

h. Pre-construction elevations should be re-established. Any additional material needed to accomplish this should be of consistent type and grain-size as the existing substrate sediment.

i. Utility line activities in non-tidal waters adjacent to special aquatic sites, and all work in tidal waters should utilize horizontal directional drilling as practicable.

31. Storage of Seasonal Structures. Seasonal or recreational structures such as pier sections, floats, aquaculture structures, etc. that are removed from the waterway for a portion of the year shall be stored in an upland location and not in wetlands, tidal wetlands, their substrate, or on mudflats. These seasonal structures may be stored on the fixed, pile-supported portion of a structure that is waterward of the mean high water mark or the ordinary high water mark, e.g. the storage of a ramp or gangway on the pile-supported pier. Seasonal storage of structures in navigable waters, e.g., in a protected cove, requires prior Corps approval and local harbormaster approval.

32. Aquaculture. Activities involving the cultivation of Atlantic salmon and other salmonids, or other federally-listed threatened or endangered species are not eligible for authorization under these GPs. All other aquaculture activities shall adhere to all applicable GCs including but not limited to:

a. GC 3 (Other Permits) In particular, permittees shall maintain a current State of Maine Department of Marine Resources lease or license.
b. GC 10 (Corps Projects and Property)
c. GC 11 (Navigation)
d. GC 16 (Federal Threatened and Endangered Species)
e. GC 17 (Essential Fish Habitat)
f. GC 18 (Aquatic Life Movements and Management of Water Flows)
g. GC 31 (Storage of Seasonal Structures)

Additional conditions to meet SV eligibility criteria for Tidal Aquaculture:

a. Shall not exceed 400 square feet in area.
b. Shall receive signed approval from Harbormaster or appropriate Town Official.
c. Shall not include enclosures or impoundments.
d. Shall not be located in or within a distance of three times the authorized depth of a FNP.
e. Shall not be located in or impinge upon the value of National Lands and Federal Properties including but not limited to National Parks and National Wildlife Refuges.
f. Shall not impact special aquatic sites (SAS, incl. submerged aquatic vegetation, SAV), impacts to natural rocky habitats are ≤100 square feet, and impacts to intertidal and shellfish areas are ≤1,000 square feet.
g. No structures, cages, gear, or shell hash shall be located in/within 25 feet of SAV.
h. All gear, except for mooring tackle, when not in use on the site shall be stored in an upland location above the mean high water mark and not on wetland (incl. salt marsh).

33. Permit(s)/Authorization Letter On-Site. The permittee shall ensure that a copy of the terms and conditions of these GPs and any accompanying authorization letter with attached plans are at the site of the work authorized by these GPs whenever work is being performed and that all construction personnel performing work which may affect waters of the U.S. are fully aware of the accompanying terms and conditions. The entire permit authorization shall be made a part of any and all contracts and subcontracts for work that affects areas of Corps jurisdiction at the site of the work authorized by these GPs. This shall be achieved by including the entire permit authorization in the specifications for work. The term "entire permit authorization" means all terms and conditions of the GPs, the GPs, and the authorization letter (including its drawings, plans, appendices and other attachments) and subsequent permit modifications as applicable. If the authorization letter is issued after the construction specifications, but before receipt of bids or quotes, the entire permit authorization shall be included as an addendum to the specifications. If the authorization letter is issued after receipt of bids or quotes, the entire permit authorization shall be included in the contract or subcontract. Although the permittee may assign various aspects of the work to different contractors or subcontractors, all contractors and subcontractors shall be obligated by contract to comply with all environmental protection provisions contained within the entire GP authorization, and no contract or subcontract shall require or allow unauthorized work in areas of Corps jurisdiction.

34. Inspections. The permittee shall allow the Corps to make periodic inspections at any time deemed necessary in order to ensure that the work is eligible for authorization under these GPs, is being, or has been performed in accordance with the terms and conditions of these GPs. To facilitate these inspections, the permittee shall

complete and return to the Corps the Work-Start Notification Form and the Compliance Certification Form when either is provided with an authorization letter. The Corps may also require post-construction engineering drawings and/or photographs for completed work or post-dredging survey drawings for any dredging work to verify compliance.

35. Maintenance. The permittee shall maintain the activity authorized by these GPs in good condition and in conformance with the terms and condition of these permits. This does not include maintenance dredging, related disposal, or beach nourishment projects, which are subject to review thresholds for GP 5 on page 30, unless specified in written authorization from the Corps.

36. Federal Liability. In issuing these permits, the Federal Government does not assume any liability for the following:

a. Damages to the permitted project or uses thereof as a result of other permitted or unpermitted activities or from natural causes;

b. Damages to the permitted project or uses thereof as a result of current or future activities undertaken by or on behalf of the U.S. in the public interest;

c. Damages to persons, property, or to other permitted or unpermitted activities or structures caused by the activity authorized by this permit;

d. Design or construction deficiencies associated with the permitted work; or

e. Damage claims associated with any future modification, suspension, or revocation of this permit.

37. Property Rights. Per 33 CFR 320.4(g)(6), these GPs do not convey any property rights, either in real estate or material, or any exclusive privileges, nor does it authorize any injury to property or invasion of rights or any infringement of federal, state, or local laws or regulations.

38. Previously Authorized Activities.

a. Projects that received prior authorization from the Corps (via Category 1 or 2) and that completed authorized work under the previous nationwide permits, programmatic permits, regional general permits or letters of permission, shall remain authorized in accordance with the original terms and conditions of those authorizations, including their terms, general conditions, expiration date, and any special conditions provided in a written verification.

b. Activities authorized pursuant to 33 CFR Part 330.3 ("Activities occurring before certain dates") are not affected by these GPs.

c. Any work not commenced, not under contract to commence, nor completed that was originally authorized by the Corps under the GP in effect between October 13, 2015 and October 13, 2020 remains authorized subject to the terms and general conditions of this GP along with any special conditions included in written authorizations. Exception: if previously authorized work has not commenced or not under contract to commence and a new federally-listed threatened or endangered species may be affected, the Corps shall consult with the U.S. Fish and Wildlife Service or NOAA Fisheries prior to re-authorizing the work under these GPs. Requests for re-authorization shall include an Official Species List per GC 16.

39. Transfer of GP Verifications. If the permittee sells the property associated with a GP verification, the permittee may transfer the GP verification to the new owner by submitting a letter to the Corps to validate the transfer. A copy of the GP verification shall be attached to the letter, the letter shall contain the name, address, phone number and email of the transferee (new owner), shall include the following statement and signature, and be mailed to: U.S. Army Corps of Engineers, Maine Project Office, 442 Civic Center Drive, Suite 350, Augusta, Maine 04330:

> "When the structures or work authorized by these GPs are still in existence at the time the property is transferred, the terms and conditions of these GPs, including any special conditions, will continue to be binding on the new owner(s) of the property."
>
> _____
> Transferee Printed Name
>
> _____
> Transferee Signature Date

40. Modification, Suspension, and Revocation. These GPs and any individual authorization issued thereof may be either modified, suspended, or revoked, in whole or in part, pursuant to the policies and procedures of 33 CFR 325.7, and any such action shall not be the basis for any claim for damages against the U.S.

41. Special Conditions. The Corps may independently or in coordination with federal resource agencies impose special conditions on a project authorized pursuant to these GPs that are determined necessary to minimize adverse navigational and/or environmental effects, or based on any other factor of the public interest. Failure to comply with all terms and conditions of the authorization, including special conditions, constitutes a permit violation and may subject the permittee to criminal, civil or administrative penalties and/or an ordered restoration.

42. False or Incomplete Information. If the Corps makes a determination regarding the eligibility of a project under these GPs and subsequently discovers that it has relied on false, incomplete or inaccurate information provided by the permittee, the Corps may determine that the GP authorization is not valid; modify, suspend or revoke the authorization; and the U.S. Government may institute legal proceedings.

43. Abandonment. If the permittee decides to abandon the activity authorized under these GPs, unless such abandonment is merely the transfer of property to a third party, he/she may be required to restore the area to the satisfaction of the Corps.

44. Enforcement cases. These GPs do not apply to any existing or proposed activity in Corps jurisdiction associated with an ongoing Corps or EPA enforcement action, until such time as the enforcement action is resolved or the Corps or EPA, as appropriate, determines that the activity may proceed independently without compromising the enforcement action.

45. Duration of Authorization.

a. These GPs expire on October 14, 2025 unless otherwise specifically indicated in an individual authorization letter. Activities authorized under these GPs that have either commenced or are under contract to commence in reliance upon this authorization will have an additional year from the expiration date to complete the work. The permittee must be able to document to the Corps' satisfaction that the activity commenced or was under contract to commence by the expiration date of these GPs. If work is not completed within the one year extended timeframe, the permittee must contact the Corps. The Corps may issue a new authorization, provided the activity meets the applicable terms and conditions of the Maine GPs that are in effect at the time.

b. Activities authorized under these GPs will remain authorized until these GPs expire, unless discretionary authority has been exercised on a case-by-case basis to modify, suspend, or revoke the authorization in accordance with 33 CFR 325.2(e)(2). Activities completed under the SV or PCN authorizations of these GPs will continue to be authorized after its expiration date.

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Tammy R. Turley
Chief, Regulatory Division

V. MAINE GENERAL PERMITS

An activity is authorized under General Permits 1 through 23 listed below only if that activity and the permittee satisfy all of the applicable GP terms and general conditions. Any activity not specifically listed may still be eligible for authorization under these GPs; prospective permittees are advised to contact the Corps for specific eligibility determination.

1. Repair, Replacement, and Maintenance of Authorized Structures and Fills;
Repair, rehabilitation, or replacement of any previously authorized, currently serviceable structure, or fill and minor expansions thereof.

2. Moorings
New moorings and mooring fields, the relocation of previously authorized moorings, expansions, boundary reconfigurations or modifications of previously authorized mooring fields, conversion of mooring types (e.g. private to rental), and maintenance and replacement of moorings. Moored floats, lobster cars, rafts, and similar float structures are not included in this GP.

3. Structures, Floats and Lifts
New, expansions, reconfigurations or modifications of structures for navigational access in waters of the U.S. including but not limited to temporary/seasonal or permanent pile and crib-supported piers, floats, stairs, shore outhauls, and boat and float lifts/ways. Floats may include lobster cars, work floats, moored floats, swim floats, and shellfish upweller floats.

4. Aids to Navigation, and Temporary Recreational Structures
Aids to navigation and regulatory markers which are approved by and installed in accordance with the requirements of the U.S. Coast Guard (see 33 CFR, chapter I, subchapter C, part 66) and temporary buoys, markers, small floating docks, and similar structures placed for recreational use during specific events such as fireworks displays, water skiing competitions, and boat races or seasonal use.

5. Dredging, Disposal of Dredged Material, Beach Nourishment, and Rock Removal and Relocation
New, maintenance, and improvement dredging, including: a) Disposal of dredged material at a confinedaquatic disposal, beach nourishment, near shore, designated open water or ocean water disposal site(s), provided the Corps finds the dredged material to be suitable for such disposal; (b) Beach nourishment not associated with dredging; (c) Rock removal and relocation for navigation.

6. U.S. Coast Guard Approved Bridges and Causeways
Discharges of dredged or fill material incidental to the construction and modification of bridges across navigable waters of the U.S., including cofferdams abutments, foundation seals, piers, approach fills, and temporary construction and access fills provided that the USCG authorizes the construction of the bridge structure under Section 9 of the Rivers and Harbors Act of 1899 or other applicable laws.

7. Bank and Shoreline Stabilization Including Living Shorelines
Bank stabilization activities necessary for erosion protection along the banks of lakes, ponds, streams, and marine/tidal waters. Includes bulkheads, seawalls, riprap, revetments or slope protection & similar structures as well as vegetative planting, soil bioengineering or alternative techniques that are a combination of the two (i.e. living shorelines), specifically for the purpose of shoreline protection.

8. Residential, Commercial and Institutional Developments, and Recreational Facilities
Discharges of dredged or fill material into waters of the U.S for the construction or expansion of: residences and residential subdivisions; commercial and institutional buildings or subdivisions; and recreational facilities; and attendant features including but not limited to roads, parking lots, garages, stormwater management facilities, yards, and utilities.

9. Utility Line Activities
Activities required for (a) the construction, maintenance, relocation, repair, & removal of utility lines, including outfall and intake structures, and the associated excavation, backfill, or bedding for utility lines; (b) the construction, maintenance or expansion of utility line substation facilities associated with a power/utility line in non-tidal waters; and (c) the construction and maintenance of foundations for overhead utility line towers, poles, and anchors provided the foundations are the minimum size necessary and separate footings for each tower leg (rather than a larger single pad) are used where feasible. This GP authorizes the construction of access roads to facilitate construction of the above activities provided the activity, in combination with all other activities included in one single and complete project.

10. Linear Transportation Projects
Activities required for the construction, expansion, modification, or improvement of linear transportation projects (e.g., driveways, roads, highways, railways, trails, airport runways, and taxiways) and attendant features.

11. Mining Activities
Temporary or permanent discharges of dredged or fill material into waters of the U.S. for mining activities.

12. Boat Ramps and Marine Railways
Temporary or permanent discharges of dredged or fill material, excavation and other work in waters of the U.S. required for the construction of temporary or permanent boat ramps and marine railways.

13. Land and Water-Based Renewable Energy Generation Facilities and Hydropower Projects
Structures and work and discharges of dredged or fill material into waters of the U.S. for the construction, expansion, modification or removal of: (a) land-based renewable energy production facilities (e.g. solar and wind) and their attendant features; (b) water-based wind or hydrokinetic renewable energy generation pilot projects and their attendant features; and (c) discharges of dredged or fill materialassociated with hydropower projects. Attendant features may include, but are not limited to, land-based collection and distribution facilities, control facilities, and parking lots.

14. Reshaping Existing Drainage Ditches and Mosquito Management
Discharges to modify the cross-sectional configuration of currently serviceable drainage ditches constructed in waters of the U.S., for the purpose of improving water quality by regrading the drainage ditch with gentler slopes, which can reduce erosion, increase growth of vegetation, and increase uptake of nutrients and other substances by vegetation. Also authorized are mosquito reduction activities.

15. Response Operations for Oil or Hazardous Substances
Activities conducted in response to a discharge or release of oil and hazardous substances that are subject to the National Oil and Hazardous Substances Pollution Contingency Plan (40 CFR 300) including containment, cleanup, and mitigation efforts, provided activities are done under either (i) The Spill Prevent, Control & Countermeasure Plan require by 40 CFR 112.3; (ii) The direction or oversight of the Federal on-site coordinator designated by 40 CFR 300; or (iii) Any approved existing State, regional or local contingency plan provided that the Regional Response Team (if one exists in the area) concurs with the proposed response efforts or does not object to the response effort. Activities required for the cleanup of oil releases in waters of the U.S. from electrical equipment that are governed by EPA's polychlorinated biphenyl (PCB) spill response regulations at 40 CFR 761. Booms placed in tidal waters. Use of temporary structures & fills for spill response training exercises.

16. Cleanup of Hazardous and Toxic Waste
Specific activities to effect the containment, stabilization or removal of hazardous or toxic waste materials, including court ordered remedial action plans or related settlements which are performed, ordered or sponsored by a government agency with established legal or regulatory authority.

17. Scientific Measurement Devices
Scientific devices for measuring and recording scientific data, such as staff gauges, tide and current gauges, meteorological stations, water recording and biological observation devices, water quality testing and improvement devices, and similar structures.

18. Survey Activities
Survey activities such as soil borings, core sampling, seismic exploratory operations, plugging of seismic shot holes and other exploratory-type bore holes, exploratory trenching and historic resources surveys (but not recovery).

19. Agricultural Activities
Regulated discharges of dredged or fill material in non-tidal waters of the U.S. for agricultural activities, including the construction of building pads for farm buildings. Authorized activities include: (a) installation, placement, or construction of drainage tiles, ditches, or levees; mechanized land clearing; land leveling; the relocation of existing serviceable drainage ditches; and similar activities; (b) construction of farm ponds, excluding perennial streams, provided the farm pond is used solely for agricultural purposes; and (c) discharges of dredged or fill material to relocate existing serviceable drainage ditches constructed in non-tidal streams.

20. Fish and Wildlife Harvesting, Enhancement, and Attraction Devices
Activities in waters of the U.S. associated with fish and wildlife harvesting devices including pound nets, crab and lobster traps, crab dredging, eel pots, duck blinds, and clam and oyster digging, fish aggregating devices, and small fish attraction devices such as open water fish concentrators (sea kites, etc.). This GP does not include aquaculture activities.

21. Habitat Restoration, Establishment and Enhancement Activities
Activities in waters of the U.S. associated with the restoration, enhancement and establishment of non-tidal and tidal wetlands and riparian areas, including invasive, non-native or nuisance species control; the restoration and enhancement of non-tidal streams and other non-tidal open waters; the relocation of non-tidal waters, including non-tidal streams & associated wetlands for reestablishment of a natural stream morphology and reconnection of the floodplain; the restoration and enhancement of shellfish, finfish and wildlife; and the rehabilitation or enhancement of tidal streams, tidal wetlands and tidal open waters; provided those activities result in net increases in aquatic resource functions and services. Also included are shellfish enhancement measures including but not limited to “brushing”, clam pots, boxes, and netting.

22. Stream and Wetland Work and Crossings
Activities required for the construction, expansion, modification, or improvement of linear transportation projects that cross waters of the U.S. (e.g., driveways, roads, highways, railways, trails, airport runways, and taxiways) and attendant features. Crossing structures include, but are not limited to temporary or permanent jurisdictional spans, bridges, culverts, and fords. Any stream channel modification is limited to the minimum necessary to construct or protect the project; such modifications must be in the immediate vicinity of the project.

23. Aquaculture
The installation of buoys, floats, racks, trays, nets, lines or other structures in waters of the U.S. for the containment and cultivation of fish, shellfish and seaweed/kelp. Also authorized are anchored upweller floats, small-scale shellfish hatchery seawater intake/discharge structures, and discharges of dredged or fill material associated with cultivation such as the placement of cultch or spatted-shell on bottom.

USER NOTE: All Self-Verification and Pre-Construction Notification activities shall comply with all applicable terms (pages 1 - 4), General Conditions (pages 5 - 19), and additional terms below.

GENERAL PERMITS FOR THE STATE OF MAINE		
A. INLAND WATERS AND WETLANDS	Inland Waters and Wetlands are defined as waters that are regulated under Section 404 of the Clean Water Act, including rivers, streams, lakes, ponds, and wetlands, and ***excludes Section 10 Navigable Waters of the U.S.*** The jurisdictional boundaries are the ordinary high water mark (OHWM) in the absence of adjacent wetlands; beyond the OHWM to the limit of adjacent wetlands when adjacent wetlands are present; and the wetland limit when only wetlands are present. For the purposes of these GPs and designated activities, fill placed in the area between the mean high water mark (MHWM) and the high tide line (HTL), and in the bordering and contiguous wetlands to tidal waters are reviewed in the Navigable Waters section below beginning on page 28.	
	Activities not meeting the Self-Verification terms below require Pre-Construction Notification and activities not meeting the Pre-Construction Notification terms below require an application for an Individual Permit (IP).	
GENERAL PERMIT #	**SELF-VERIFICATION (SV)**	**PRE-CONSTRUCTION NOTIFICATION (PCN)**
1. Repair, Replacement, and Maintenance of Authorized Structures and Fills *(for stream crossings see GP 22)*	Repair, replacement, and maintenance of existing, currently serviceable, authorized fills with no expansion or change in use, provided: • Conditions of the original authorization apply. • Minor deviations in fill design allowed. • The repair, rehabilitation, or replacement of those structures or fills destroyed or damaged by storms, floods, fire or other discrete events is authorized, provided the work is commenced, or is under contract to commence, within two years of the date of their destruction or damage. • Drawdown of impoundments for dam/levee repair does not exceed 18 months and one growing season (Apr-Sept).	Repair, replacement, and maintenance of existing authorized fills not eligible for SV, provided: • <3 acres of permanent and/or temporary inland waterway and/or wetland fill, and associated secondary impacts.
2. Moorings	Not Applicable – these activities in non-navigable inland waters do not require Corps authorization.	Not Applicable – these activities in non-navigable inland waters do not require Corps authorization.
3. Structures, Floats, and Lifts	Pile-supported structures, floats and lifts located in non-navigable inland waters do not require Corps authorization. Solid fill or crib-supported structures with <15,000 SF of permanent and/or temporary inland waterway and/or wetland fill, and associated secondary impacts.	Fill activities associated with structures, floats, and lifts not eligible for SV, provided: • <3 acres of permanent and/or temporary inland waterway and/or wetland fill, and associated secondary impacts.
4. Aids to Navigation and Temporary Recreational Structures	Not Applicable – these activities in non-navigable inland waters do not require Corps authorization.	Not Applicable – these activities in non-navigable inland waters do not require Corps authorization.
5. Dredging, Disposal of Dredged Material, Beach Nourishment, and Rock Removal and Relocation	Those activities with <15,000 SF of permanent and/or temporary inland waterway and/or wetland fill, and associated secondary impacts, provided: • No stream channelization, relocation, or loss of streambed including impoundments or discharges of tailings into streams.	Those activities not eligible for SV, provided: • <3 acres of permanent and/or temporary inland waterway and/or wetland fill, and associated secondary impacts.

	SELF-VERIFICATION (SV)	PRE-CONSTRUCTION NOTIFICATION (PCN)
6. U.S. Coast Guard Approved Bridges and Causeways	Not applicable in inland waters and wetlands; see B. Navigable Waters on page 31 below.	Not applicable in inland waters and wetlands; see B. Navigable Waters on page 31 below.
7. Bank and Shoreline Stabilization Including Living Shorelines (see also GC 28)	Bank and shoreline stabilization activities with <15,000 SF of permanent and/or temporary inland waterway and/or wetland fill, and associated secondary impacts, provided: • Fill is ≤500 LF in total length as measured below the plane of the OHWM, includes total if more than one stream bank. • Fill placed below the plane of the OHWM is ≤1 CY per linear foot. • There is no discharge in special aquatic sites other than wetlands. • Revetment is comprised of angular material. • In-stream work is limited to Jul. 15th to Sep. 30th • No structures angled steeper than 1H:1V.	Bank and shoreline stabilization activities not eligible for SV, provided: • <3 acres of permanent and/or temporary inland waterway and/or wetland fill, and associated secondary impacts.
8. Residential, Commercial and Institutional Developments, and Recreational Facilities	Those developments and facilities with <15,000 SF of permanent and/or temporary inland waterway and/or wetland fill, and associated secondary impacts. Fill area includes all temporary and permanent fill, and regulated discharges associated with excavation. Provided: • The historic fill and proposed fill area <15,000 SF specifically complies with GC 5 Single and Complete Projects. • No work in special aquatic sites other than wetlands.	Those developments and facilities not eligible for SV, provided: • <3 acres of permanent and/or temporary inland waterway and/or wetland fill, and associated secondary impacts. *Mechanical clearing of areas within Corps jurisdiction without grubbing or other soil disturbance >3 acres as a secondary impact may still be eligible for PCN at the discretion of the Corps.*
9. Utility Line Activities (see also GC 30)	Utility line activities with <15,000 SF of permanent and/or temporary inland waterway and/or wetland fill (excluding mats), and associated secondary impacts, provided: • There is no permanent change in pre-construction contours in waters in the U.S. • Material resulting from trench excavation is temporarily side cast into waters of the U.S. for <3 months and is placed in such a manner that is not dispersed by current or other forces. • The line does not run parallel to, or along a streambed. • No stream channelization, relocation, or loss of streambed including impoundments. • There is no discharge in special aquatic sites other than wetlands. • Construction mats of any area necessary to conduct activities provided mats are removed as soon as work is completed and shall be in place no longer than one single growing season. • In-stream work is limited to Jul. 15th to Sep. 30th • In-water work is conducted in-the-dry. • Intake structures that are dry hydrants used exclusively for firefighting activities with no stream impoundments. • Construction mats of any area necessary to conduct activities provided mats are removed as soon as work is completed and shall be in place no longer than one single growing season.	Utility line activities not eligible for SV, provided: • <3 acres of permanent and/or temporary inland waterway and/or wetland fill, and associated secondary impacts. *Mechanical clearing of areas within Corps jurisdiction without grubbing or other soil disturbance >3 acres as a secondary impact may still be eligible for PCN at the discretion of the Corps.*

	SELF-VERIFICATION (SV)	PRE-CONSTRUCTION NOTIFICATION (PCN)
10. Linear Transportation Projects *(for stream crossings refer to GP 22)*	Linear transportation activities with <15,000 SF of permanent and/or temporary inland waterway and/or wetland fill (excl. mats), and associated secondary impacts, provided: • The historic fill and proposed fill area <15,000 SF specifically complies with GC 5 Single and Complete Projects. • There is no discharge in special aquatic sites other than wetlands. • Construction mats of any area necessary to conduct activities provided mats are removed as soon as work is completed and shall be in place no longer than one single growing season.	Linear transportation activities not eligible for SV, provided: • <3 acres of permanent and/or temporary inland waterway and/or wetland fill, and associated secondary impacts. *Mechanical clearing of areas within Corps jurisdiction without grubbing or other soil disturbance >3 acres as a secondary impact may still be eligible for PCN at the discretion of the Corps.*
11. Mining Activities	Mining activities with <15,000 SF of permanent and/or temporary inland waterway and/or wetland fill, and associated secondary impacts, provided: • No stream channelization, relocation, or loss of streambed including impoundments.	Mining activities not eligible for SV, provided: • <3 acres of permanent and/or temporary inland waterway and/or wetland fill, and associated secondary impacts.
12. Boat Ramps	Boat ramps with <15,000 SF of permanent and/or temporary inland waterway and/or wetland fill, and associated secondary impacts, and temporary fills.	Boat ramps not eligible for SV, provided: • <3 acres of permanent and/or temporary inland waterway and/or wetland fill, and associated secondary impacts.
13. Land and Water-Based Renewable Energy Generation Facilities and Hydropower Projects	Those facilities and projects with <15,000 SF of permanent and/or temporary inland waterway and/or wetland fill, and associated secondary impacts, provided: • No stream channelization, relocation, or loss of streambed including impoundments. • No new water-based facilities are eligible.	Those facilities and projects not eligible for SV, provided: • <3 acres of permanent and/or temporary inland waterway and/or wetland fill, and associated secondary impacts. *Mechanical clearing of areas within Corps jurisdiction without grubbing or other soil disturbance >3 acres as a secondary impact may still be eligible for PCN at the discretion of the Corps.*
14. Reshaping Existing Ditches and Mosquito Management	Not applicable in inland waters and wetlands; see B. Navigable Waters on page 33 below.	Not applicable in inland waters and wetlands; see B. Navigable Waters on page 33 below.
15. Response Operations for Oil or Hazardous Substances	The SVNF or a surrogate state reporting form may be submitted after-the-fact for response operations. This GP also authorizes the use of temporary structures and fills in waters of the U.S. for spill response training exercises with <15,000 SF of permanent and/or temporary inland waterway and/or wetland fill, and associated secondary impacts (*SVNF is required prior to the activity*).	Those response operations not eligible for SV, provided: • <3 acres of permanent and/or temporary inland waterway and/or wetland fill, and associated secondary impacts.

	SELF-VERIFICATION (SV)	PRE-CONSTRUCTION NOTIFICATION (PCN)
16. Cleanup of Hazardous and Toxic Waste	Those cleanup activities with <15,000 SF of permanent and/or temporary inland waterway and/or wetland fill, and associated secondary impacts, provided: • No stream channelization, relocation, or loss of streambed including impoundments. • The activity does not involve establishing new disposal sites or expanding existing sites used for the disposal of hazardous or toxic waste.	Those cleanup activities not eligible for SV, provided: • <3 acres of permanent and/or temporary inland waterway and/or wetland fill, and associated secondary impacts. • The activity does not involve establishing new sites for the disposal of hazardous or toxic waste.
17. Scientific Measurements Devices	Those devices with <15,000 SF of permanent and/or temporary inland waterway and/or wetland fill, and associated secondary impacts, provided: • No biological sampling devices. • Devices do not restrict or concentrate movement of aquatic organisms. • Upon completion of use, the devices and any associated fills shall be removed in their entirety.	Those devices not eligible for SV, provided: • <3 acres of permanent and/or temporary inland waterway and/or wetland fill, and associated secondary impacts.
18. Survey Activities	Those survey activities with <15,000 SF of permanent and/or temporary inland waterway and/or wetland fill, and associated secondary impacts, provided: • Exploratory trenches are restored in accordance with GC 21. • No discharge of excavated material from test wells for oil and gas exploration (the plugging of such wells is authorized).	Those survey activities not eligible for SV, provided: • <3 acres of permanent and/or temporary inland waterway and/or wetland fill, and associated secondary impacts.
19. Agricultural Activities	Those agricultural activities subject to Corps jurisdiction with <15,000 SF of permanent and/or temporary inland waterway and/or wetland fill, and associated secondary impacts, provided: • No stream channelization, relocation, or loss of streambed including impoundments.	Those agricultural activities subject to Corps jurisdiction not eligible for SV, provided: • <3 acres of permanent and/or temporary inland waterway and/or wetland fill, and associated secondary impacts.
20. Fish and Wildlife Harvesting, Enhancement and Attraction Devices and Activities	Not applicable in inland waters and wetlands; see B. Navigable Waters on page 34 below.	Not applicable in inland waters and wetlands; see B. Navigable Waters on page 34 below.
21. Habitat Restoration, Establishment, and Enhancement	Those activities with <15,000 SF of permanent and/or temporary inland waterway and/or wetland fill, and associated secondary impacts, provided: • No water impoundments allowed. • No conversion of a stream to wetland or vice versa, a wetland to a pond or uplands, or one wetland type to another. • No dam removal.	Those activities not eligible for SV, provided: • <3 acres of permanent and/or temporary inland waterway and/or wetland fill, and associated secondary impacts.

	SELF-VERIFICATION (SV)	PRE-CONSTRUCTION NOTIFICATION (PCN)
22. Stream and Wetland Work and Crossings (see also GC 29)	Stream work and crossings with <15,000 SF of permanent and/or temporary inland waterway and/or wetland fill, and associated secondary impacts, provided: • No work in designated or proposed critical habitat for endangered species. • Crossings are designed and constructed using the techniques and principles outlined in Stream Simulation, Stream Smart, or Habitat Connectivity Design. • Crossings are designed to be 1.2 times bankfull width. • Crossings have a natural bottom substrate. • Crossings include a bank on both sides of the channel. • Closed bottom culverts are embedded at least 25% of the maximum width of the culvert. • In-stream work is limited to Jul. 15th to Sep. 30th • In-stream work is conducted "in-the-dry". • No slip lining. • No culvert extensions. • No stream channelization, relocation, or loss of streambed including impoundments. Wetland work and crossings, provided: • No flooding or impacts to wetland drainage from the upgradient side of the crossing.	Stream and Wetland Work and Crossings not eligible for SV, provided: • <3 acres of permanent and/or temporary inland waterway and/or wetland fill, and associated secondary impacts.
23. Aquaculture (see also GC 32)	Aquaculture activities with <15,000 SF of permanent and/or temporary inland waterway and/or wetland fill, and associated secondary impacts, provided: • No water impoundments allowed. • No conversion of i) a stream to wetland or vice versa, a wetland to a pond or uplands, and ii) one wetland type to another.	Aquaculture activities not eligible for SV, provided: • <3 acres of permanent and/or temporary inland waterway and/or wetland fill, and associated secondary impacts.

USER NOTE: All Self-Verification and Pre-Construction Notification activities shall comply with all applicable terms (pages 1 - 4), General Conditions (pages 5 - 19), and additional terms below.

B. NAVIGABLE WATERS	**Navigable Waters of the U.S. are defined as** those waters that are subject to the ebb and flow of the tide in addition to the non-tidal portions of the following federally-designated waters in Maine (the Kennebec River to Moosehead Lake, the Penobscot River to the confluence of the East and West Branch at Medway and, Lake Umbagog within the State of Maine) (Section 10 Rivers and Harbors Act of 1899). The jurisdictional limits are the mean high water mark (MHWM) in tidal waters and the ordinary high water mark (OHWM) in non-tidal portions of the federally-designated navigable rivers. For the purposes of these GPs, fill placed in the area between the mean high water mark (MHWM) and the high tide line (HTL), and in the bordering and contiguous wetlands to tidal waters are also reviewed in this Navigable Waters section.	
	Activities not meeting the Self-Verification terms below require Pre-Construction Notification and activities not meeting the Pre-Construction Notification terms below require an application for an Individual Permit.	
GENERAL PERMIT #	**SELF-VERIFICATION**	**PRE-CONSTRUCTION NOTIFICATION**
1. Repair, Replacement, and Maintenance of Authorized Structures and Fills **See GC 25 for pile driving and removal conditions.*	Repair, replacement, or maintenance of previously authorized, currently serviceable structures or fills, provided: • Conditions of the original authorization apply. • No expansion or change in use. Shall be rebuilt in same footprint, however minor deviations in design allowed. • The repair, rehabilitation, or replacement of those structures or fills destroyed or damaged by storms, floods, fire or other discrete events is authorized, provided that work is commenced, or is under contract to commence, within two years of the date of their destruction or damage. • In-water work is conducted "in-the-dry" (see GC 24). • No impacts to special aquatic sites (SAS) (incl. submerged aquatic vegetation, SAV), impacts to natural rocky habitat ≤100 SF, and impacts to intertidal area ≤1,000 SF • Slope stabilization is ≤500 LF in total length as measured below the plane of the HTL and is ≤200 LF in total length as measured below the plane of the MHWM or OHWM. Vertical structures are ≤200 LF in total length as measured below the plane of the MHWM or OHWM and are ≤18 inches waterward of existing face. • Dam and flood control, or levee work does not alter water levels or flood elevations. • Discharge of accumulated bottom sediments from or through a dam is not more than *de minimus*. • Tide gate work has a Corps-approved operation and maintenance plan and no effect to hydraulic regime, or tide gates that solely convey stormwater and/or Maine National Pollutant Discharge Elimination System-permitted discharges.	Repair, replacement, or maintenance of previously authorized structures or fills not eligible for SV, provided: • ≤0.5 acre temporary or permanent impacts, fill, excavation, and/or secondary impacts. • Temporary and/or permanent fill or excavation in SAV <1,000 SF • Permanent fill or excavation in other SAS <4,300 SF

	SELF-VERIFICATION (SV)	PRE-CONSTRUCTION NOTIFICATION (PCN)
2. Moorings	Private, non-commercial, non-rental, single-boat moorings, provided: • Authorized by the local harbormaster/town. • Not associated with any boating facility (e.g. marinas). • Not located within a Federal Navigational Project (other than in a Federal Anchorage) or within a distance of three times the authorized depth of a Federal Navigation Project. Moorings in a Federal Anchorage must not be associated with a boating facility and must not be for rent. • No interference with navigation. • Mooring is not located in SAS (incl. SAV) or intertidal areas. Minor relocation of previously authorized moorings, provided: • Authorized by the local harbormaster/town. • Relocation is not within a Federal Navigational Project (other than in a Federal Anchorage) or within a distance of three times the authorized depth of a Federal Navigation Project. • No interference with navigation. • Relocated mooring is not located in SAS (incl. SAV) or intertidal areas. **SV Moorings above do not require a SVNF.*	Moorings not eligible for SV and don't require an IP. This includes private moorings with no harbormaster or means of local approval or moorings associated with a boating facility (e.g. marina). *Locating new moorings in SAS (incl. SAV) shall be avoided to the maximum extent practicable. If SAS cannot be avoided, consideration shall be given to alternative mooring systems that prevents mooring chains from resting or dragging on the bottom substrate at all tides.* An IP is required for moorings located within the horizontal limits, or with moored vessels that extend into the horizontal limits of a Federal Navigation Project (other than in a Federal Anchorage).
3. Structures, Floats, and Lifts *Cont'd below on page 30*	Reconfiguration of such existing authorized structures with all intertidal work conducted "in-the-dry" (see GC 24). Minor relocation of previously authorized floats provided: • Relocation is not into a Federal Navigation Project or within a distance of three times the authorized depth of a Federal Navigation Project (other than a Federal Anchorage). • No interference with navigation. • Not relocated in or within 25 feet of SAV. • Seasonal floats are stored above the MHWM and not on wetland (incl. salt marsh). New private, non-commercial ramp and float structures attached to land (no piers) or new floats provided: • Not located in or within a distance of three times the authorized depth of a Federal Navigation Project. • No interference with navigation. • No structure extends across >25% of the waterway width at mean low water. • Not located in or within 25 feet of SAV. • Ramp is <150 LF over salt marsh waterward of the MHWM and is ≥1:1 height:width ratio over salt marsh.	New structures, floats, and/or lifts including floatways/skidways, built to access waterway (both seasonal and permanent). Includes pile-supported, solid fill-supported, and crib-supported structures. Also includes expansions to existing authorized boating facilities (e.g. marinas). Provided: • <1 acre temporary or permanent impacts, fill, excavation, and/or secondary impacts. • Temporary and/or permanent fill or excavation in SAV <1,000 SF • Permanent fill or excavation in other SAS <4,300 SF **See GC 25 for pile driving and pile removal conditions.* Compliance with the following is recommended: • *Lowermost part of floats are ≥18 inches above the substrate during all tides.* • *Structures are ≥1:1 height:width ratio over salt marsh.* • *Structures and floats are not located in or within 25 feet of SAV.* • *Moored vessels are not positioned over SAV.* • *Structures attached to land are located ≥ 25 feet from the property line (The Corps may require a letter of no objection from the abutter if located within 25 feet of the property line.)*

	SELF-VERIFICATION (SV)	PRE-CONSTRUCTION NOTIFICATION (PCN)
Cont'd from page 29	• Ramp and floats attached to land are located ≥25 feet from the property line. • Seasonal ramp and floats are stored above the HTL and not on wetland (incl. salt marsh). Compliance with the following is recommended: • *Lowermost part of floats is ≥18 inches above the substrate during all tides.*	• *No structure extends across >25% of the waterway width at mean low water.* • *Not located within a distance of three times the authorized depth of a Corps Federal Navigation Project.* An IP is required for structures, floats, and/or lifts including floatways/skidways, located in such that they and/or vessels docked or moored at them are within the horizontal limits of a Corps Federal Navigation Project. An IP is also required for structures and floats associated with a new or previously unauthorized boating facility (e.g. marinas).
4. Aids to Navigation and Temporary Recreational Structures	Aids to navigation and regulatory markers which are approved by and installed in accordance with the requirements of the U.S. Coast Guard. (See 33 CFR 66, Chapter I, subchapter C). **These SV Aids do not require a SVNF.* Temporary buoys, markers, floats, etc. for recreational use during specific events, provided: • They are removed within 30 days after the specific event has concluded. • No interference with navigation. • No impact to SAV.	Aids and temporary structures not eligible for SV.
5. Dredging, Disposal of Dredged Material, Beach Nourishment, and Rock Removal and Relocation	Maintenance dredging of <1,000 CY for navigational purposes with upland disposal including return water from upland contained disposal area, provided: • Proper siltation controls are used. • No expansion of footprint. • No dredging in or within a distance of three times the authorized depth of a Federal Navigation Project. • Dredging operation is limited to Nov. 8th to Apr. 9th (it is recommended that in areas populated by winter flounder, dredging should cease by March 15th). • No impacts to SAS (incl. SAV), impacts to natural rocky habitat ≤100 SF, and impacts to intertidal area ≤1,000 SF • No dredging within 25 feet of SAV. • No dredging in or within 100 feet of shellfish areas. • No blasting. • No dredging in designated or proposed critical habitat for endangered species.	Maintenance dredging not eligible for SV and new dredging <25,000 CY Includes return water from upland contained disposal areas. Disposal includes: • Upland. • Beach nourishment (above MHW line) of any area provided the dredging's primary purpose is navigation or the sand is from an upland source. • Open water & confined aquatic disposal if Corps finds the material suitable. Beach nourishment associated with dredging when the primary purpose is not navigation requires at least a PCN. Temporary and/or permanent fill or excavation in SAV <1,000 SF and Permanent fill or excavation in other SAS <4,300 SF

	SELF-VERIFICATION (SV)	PRE-CONSTRUCTION NOTIFICATION (PCN)
6. U.S. Coast Guard Approved Bridges and Causeways	Discharges of dredged or fill material associated with U.S. Coast Guard Approved Bridges and Causeways, provided: • In-water work is conducted "in-the-dry" (see GC 24). • Discharge of dredged or fill material <15,000 SF • No impacts to SAS (incl. SAV), impacts to natural rocky habitat ≤100 SF, and impacts to intertidal area ≤1,000 SF Compliance with the following is recommended: • *Discharge of dredged or fill material should not occur within 100 feet of SAV or within 25 feet of natural rocky habitat or other SAS.* *Note: new causeways and approach fills are not eligible for SV.*	Discharges of dredged or fill material associated with U.S. Coast Guard Approved Bridges and Causeways not eligible for SV, provided: • <1 acre temporary or permanent impacts, fill, excavation, and/or secondary impacts. • Temporary and/or permanent fill or excavation in SAV <1,000 SF • Permanent fill or excavation in other SAS <4,300 SF
7. Bank and Shoreline Stabilization Including Living Shorelines (see also GC 28)	Bank and shoreline stabilization activities, provided: • In-water work is conducted "in-the-dry" (see GC 24). • Fill is ≤500 LF in total length as measured below the plane of the HTL and is ≤200 LF in total length as measured below the plane of the MHWM or OHWM (includes total for more than one bank). Replacement vertical structures are ≤200 LF in total length as measured below the plane of the MHWM or OHWM and are ≤18 inches waterward of existing face. • Fill placed below HTL is ≤1 CY per linear foot. • Stone revetment is comprised of angular material. • No fills angled steeper than 1H:1V. • No impacts to SAS (incl. SAV), impacts to natural rocky habitat ≤100 SF, and impacts to intertidal or shellfish areas ≤1,000 SF • No new groins, breakwaters, or jetties.	Bank and shoreline stabilization activities not eligible for SV, provided: • <1 acre temporary or permanent impacts, fill, excavation, and/or secondary impacts, provided: • Temporary and/or permanent fill or excavation in SAV <1,000 SF • Permanent fill or excavation in other SAS <4,300 SF
8. Residential, Commercial and Institutional Developments, and Recreational Facilities	Not Eligible	Residential, commercial and institutional developments and recreational facilities, provided: • <1 acre temporary or permanent impacts, fill, excavation, and/or secondary impacts, provided: • Temporary and/or permanent fill or excavation in SAV <1,000 SF • Permanent fill or excavation in other SAS <4,300 SF Conversions of previously authorized pile-supported buildings over navigable waters to residences, offices, or other non-water dependent uses require PCN. Floating house boats or businesses on floats require PCN.

	SELF-VERIFICATION (SV)	PRE-CONSTRUCTION NOTIFICATION (PCN)
9. Utility Line Activities (see also GC 30)	Repair, replacement, or maintenance of previously authorized, currently serviceable utilities with no expansion or change in use, provided: • Conditions of the original authorization apply. • In-water work limited to Nov. 8th to Apr. 9th. • Trenching or filling confined to existing footprint and <100 LF; trenches shall be backfilled immediately. • Jet-plow, fluidization, or other direct burial methods confined to existing footprint and <200 LF • No impacts to SAS (incl. SAV), impacts to natural rocky habitat ≤100 SF, and impacts to intertidal or shellfish areas ≤1,000 SF • No work in designated or proposed critical habitat for endangered species. New work in, over, or under navigable waters including new outfalls and any intake structure work requires PCN. Aerial utility lines over navigable waters requires PCN.	Those utility activities not eligible for SV, provided: • <1 acre temporary or permanent impacts, fill, excavation, and/or secondary impacts. • Temporary and/or permanent fill or excavation in SAV <1,000 SF • Permanent fill or excavation in other SAS <4,300 SF
10. Linear Transportation Projects *(for stream crossings refer to GPs 6 and 22)*	Not Eligible	Linear transportation projects, provided: • <1 acre temporary or permanent impacts, fill, excavation, and/or secondary impacts. • Temporary and/or permanent fill or excavation in SAV <1,000 SF • Permanent fill or excavation in other SAS <4,300 SF
11. Mining Activities	Not Eligible	Not Eligible
12. Boat Ramps and Marine Railways	No new boat ramps or marine railways. In-water work is conducted "in-the-dry" (see GC 24). No impacts to SAS (incl. SAV), impacts to natural rocky habitat ≤100 SF, and impacts to intertidal or shellfish areas ≤1,000 SF Boat ramp and marine railway work not eligible for maintenance (i.e. not currently serviceable) may be replaced "in-kind" with minor deviations provided: • Work is confined to the intertidal zone. • No impacts to SAS (incl. SAV), impacts to natural rocky habitat ≤100 SF, and impacts to intertidal or shellfish areas ≤1,000 SF	Those ramps and railways not eligible for SV, provided: • <1 acre temporary or permanent impacts, fill, excavation, and/or secondary impacts, provided: • Temporary and/or permanent fill or excavation in SAV <1,000 SF • Permanent fill or excavation in other SAS <4,300 SF

	SELF-VERIFICATION (SV)	PRE-CONSTRUCTION NOTIFICATION (PCN)
13. Land and Water-Based Renewable Energy Generation Facilities and Hydropower Projects	Not Eligible	Work associated with those facilities and projects, provided: • <1 acre temporary or permanent impacts, fill, excavation, and/or secondary impacts. • Temporary and/or permanent fill or excavation in SAV <1,000 SF • Permanent fill or excavation in other SAS <4,300 SF For each single and complete project, no more than 10 generation units (e.g., wind turbines or hydrokinetic devices) may be authorized. No new impoundments.
14. Reshaping Existing Ditches and Mosquito Management	≤500 LF of drainage ditch will be modified. The reshaping of the ditch cannot increase drainage capacity beyond the original as-built capacity nor can it expand the area drained by the ditch as originally constructed (i.e., the capacity of the ditch shall be the same as originally constructed and it cannot drain additional wetlands or other waters of the U.S.). No new ditches or relocation of drainage ditches constructed in waters of the U.S.; the location of the centerline of the reshaped drainage ditch shall be approximately the same as the location of the centerline of the original drainage ditch. No impacts to SAS (incl. SAV), impacts to natural rocky habitat ≤100 SF, and impacts to intertidal or shellfish areas ≤1,000 SF	Those activities not eligible for SV, provided: • <1 acre temporary or permanent impacts, fill, excavation, and/or secondary impacts. • Temporary and/or permanent fill or excavation in SAV <1,000 SF • Permanent fill or excavation in other SAS <4,300 SF
15. Response Operations for Oil or Hazardous Substances	The SVNF or a surrogate state reporting form may be submitted after-the-fact for spill response activities. This GP also authorizes the use of temporary structures and fills in waters of the U.S. for spill response training exercises (*SVNF is required prior to the activity*), provided: • No impacts to SAS (incl. SAV), impacts to natural rocky habitat ≤100 SF, impacts to intertidal or shellfish areas ≤1,000 SF, and impacts to tidal resources <0.5 acre	Those response operations not eligible for SV, provided: • <1 acre temporary or permanent impacts, fill, excavation, and/or secondary impacts. • Temporary and/or permanent fill or excavation in SAV <1,000 SF • Permanent fill or excavation in other SAS <4,300 SF
16. Cleanup of Hazardous and Toxic Waste	Only booms placed for hazardous and toxic waste containment and absorption and prevention are eligible for SV. *A SVNF is not required for these eligible containment booms.*	Cleanup activities not eligible for SV, provided: • <1 acre temporary or permanent impacts, fill, excavation, and/or secondary impacts. • Temporary and/or permanent fill or excavation in SAV <1,000 SF • Permanent fill or excavation in other SAS <4,300 SF An IP is require for the establishment of new disposal sites or expanding existing sites used for the disposal of hazardous or toxic waste.

	SELF-VERIFICATION (SV)	PRE-CONSTRUCTION NOTIFICATION (PCN)
17. Scientific Measurements Devices	Those scientific measurements devices, provided: • Devices do not restrict or concentrate movement of aquatic organisms. • No interference with navigation. • No blasting. • No biological sampling devices. • No impacts to SAS (incl. SAV), impacts to natural rocky habitat ≤100 SF, impacts to intertidal areas ≤1,000 SF, and impacts to tidal resources ≤0.5 acre • Upon completion of use, the devices and any associated structures or fills are removed in their entirety.	Those scientific measurements devices not eligible for SV, provided: • <1 acre temporary or permanent impacts, fill, excavation, and/or secondary impacts. • Temporary and/or permanent fill or excavation in SAV <1,000 SF • Permanent fill or excavation in other SAS <4,300 SF
18. Survey Activities	Those survey activities, provided: • No blasting. • No interference with navigation. • No seismic exploratory operations. • No oil and gas exploration. • No trenching or other silt-producing activities. • No fill for roads or construction pads. • No impacts to SAS (incl. SAV), impacts to natural rocky habitat ≤100 SF, impacts to intertidal areas ≤1,000 SF, and impacts to tidal resources <0.5 acre • No blasting. • No biological sampling devices. *A SVNF is not required for required sediment sampling for Corps-regulated dredge proposals.*	Those survey activities not eligible for SV, provided: • <1 acre temporary or permanent impacts, fill, excavation, and/or secondary impacts. • Temporary and/or permanent fill or excavation in SAV <1,000 SF • Permanent fill or excavation in other SAS <4,300 SF
19. Agricultural Activities	Not Eligible	Not Eligible
20. Fish and Wildlife Harvesting, Enhancement and Attraction Devices and Activities *(for aquaculture refer to GP 23)*	Those devices and activities, provided: • No impacts to SAS (incl. SAV), impacts to natural rocky habitat ≤100 SF, impacts to intertidal areas ≤1,000 SF, and impacts to tidal resources ≤0.5 acre • No interference with navigation. • No artificial reefs or enclosures • No impoundments or semi-impoundments for the culture or holding of motile species such as lobster, or the use of covered oyster trays or clam racks. • Structures and shell hash should not be located within 25 feet of SAV. • All gear, except for mooring tackle, when not in use on the site is stored in an upland location above the MHWM and not on wetland (incl. salt marsh). *A SVNF is not required for these eligible devices and activities.*	Those devices and activities not eligible for SV, provided: • <1 acre temporary or permanent impacts, fill, excavation, and/or secondary impacts. • Temporary and/or permanent fill or excavation in SAV <1,000 SF • Permanent fill or excavation in other SAS <4,300 SF Impoundments or semi-impoundments of waters of the U.S. for the culture or holding of motile species such as lobster and new fish weirs with an impounded area <0.5 acre

	SELF-VERIFICATION (SV)	PRE-CONSTRUCTION NOTIFICATION (PCN)
21. Habitat Restoration, Establishment, and Enhancement	Those activities, provided: • No impacts to SAS (incl. SAV), impacts to natural rocky habitat ≤100 SF, impacts to intertidal areas ≤1,000 SF, and impacts to tidal resources <0.5 acre • No thin layer deposition for salt marsh restoration. • SAS planting and transplanting is <100 SF • No artificial or living reefs. • The activity is authorized in writing by a local, state, or non-Corps federal environmental agency. Water impoundments require PCN. • No conversion of i) a stream to wetland or vice versa, wetland to a pond or uplands, and ii) one wetland type to another. • No dam removal.	Those activities not eligible for SV provided those activities are proactive and result in net increases in aquatic resource functions and services.
22. Stream and Wetland Work and Crossings (see also GC 29) (*see GP 6 for bridges & causeways*)	Not Eligible	Those crossings of tidal navigable water not including bridges and causeways, provided: • <1 acre temporary or permanent impacts, fill, excavation, and/or secondary impacts. • Temporary and/or permanent fill or excavation in SAV <1,000 SF • Permanent fill or excavation in other SAS <4,300 SF
23. Aquaculture* (see also GC 32)	Shellfish and marine algae installations that do not exceed 400 SF in area, provided: • Signed approval from Harbormaster or appropriate Town Official. • No enclosures or impoundments. • Not located in or within a distance of three times the authorized depth of a Federal Navigation Project. • Not located in or impinge upon the value of any National Lands or Federal Properties. • No impacts to SAS (incl. SAV), impacts to natural rocky habitat ≤100 SF, and impacts to intertidal and shellfish areas ≤1,000 SF • No structures, cages, gear, or shell hash located in/within 25 feet of SAV. • All gear, except for mooring tackle, when not in use on the site is stored in an upland location above the MHWM and not on wetland (incl. salt marsh).	Shellfish, finfish, and marine algae aquaculture (with the exception of Atlantic salmon and any other salmonid, or other federally-listed endangered or threatened species), or other aquaculture facilities with no more than minimal individual and cumulative impacts to environmental resources or navigation. This is inclusive but not limited to cages, nets, bags, racks, long lines, fences, posts, poles, predator screening, etc. ***State of Maine Aquaculture guidelines are provided at: *www.maine.gov/dmr/aquaculture/index.html***

US Army Corps of Engineers ®
New England District

Section VI: Self-Verification Notification Form

(for all tidal and non-tidal projects in Maine subject to Corps jurisdiction)

At least two weeks before work commences, complete all fields (write "none" if applicable) below or use the fillable form found at www.nae.usace.army.mil/Missions/Regulatory/State-General-Permits/Maine-General-Permit/ The two-week lead time is not required for emergency situations. **Send this form, an Official Species List, and project plans to the following email address: cenae-r-me@usace.army.mil**

Maine Project Office
U.S. Army Corps of Engineers
442 Civic Center Drive, Suite 350
Augusta, Maine 04330

State Permit #: _____
Date of State Permit: _____
State Project Manager: _____

Permittee: _____

Address, City, State, Zip: _____

Email, Phone: _____

Agent: _____

Address, City, State, Zip: _____

Email, Phone: _____

Contractor: _____

Address, City, State, Zip: _____

Email, Phone: _____

Project Name: _____

Address, City, State, Zip: _____

Lat °N, Long °W: _____ Tax Map/Lot: _____

Waterway Name: _____

Description of Work: _____

Proposed Starting Date: _____ Proposed Finish Date: _____

Area of wetland impact (SF): Permanent: _____ Temporary: _____
Area of waterway impact (SF): Permanent: _____ Temporary: _____

Work will be done under the following Section V General Permits (circle all that apply):

I. Inland Waters and wetlands: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23
II. Navigable Waters: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23

Have MHPC and all five federally-recognized tribes in Maine been notified of the proposed work? _____Yes _____No

Your signature below, as permittee, indicates that you accept and agree to comply with the terms, eligibility criteria, and general conditions for Self-Verification under the Maine General Permit.

Permittee Signature: _____ Date: _____

US Army Corps
of Engineers ®
New England District

Section VII: Content of a Pre-Construction Notification

In addition to the following required information, the applicant must provide additional information as the Corps deems essential to make a public interest determination including, where applicable, a determination of compliance with the Section 404(b)(1) guidelines or ocean dumping criteria. Such additional information may include environmental data and information on alternate methods and sites as may be necessary for the preparation of the required environmental documentation. For a more comprehensive checklist, go to *www.nae.usace.army.mil/missions/regulatory* >> Forms >> Application and Plan Guideline Checklist. Please check with the Corps for project-specific requirements.

Information required for all projects:

- □ DIGITAL SUBMISSIONS ARE ENCOURAGED (email PCN to **cenae-r-me@usace.army.mil**)
- □ Completed Corps application form (ENG Form 4345 attached below or found electronically at *www.usace.army.mil/Missions/Civil-Works/Regulatory-Program-and-Permits/Obtain-a-Permit*) or appropriate state application form. Forms may need to be supplemented to include the information noted below.
- □ Proof of notification to MHPC and all five federally-recognized tribes (see Section VIII for contact info).
- □ Official Species List for any federally-listed endangered or threatened species and email address of the person who generated the list.
- □ Drawings, sketches, or plans (detailed engineering plans and specifications are not required) that are legible, reproducible (color is encouraged, but features must be distinguishable in black and white), no larger than 8.5”x11”, with bar scale (plans overlaid on aerial photos are discouraged). Wetland area impact sheets shall have the highest resolution possible to show work within Corps jurisdiction (do not just reduce project overview or cut large-scale plan into quadrant sheets). Provide locus map and a plan overview of the entire property with a key index to the individual impact sheets. A locus map be on a section of color USGS topographic map.
- □ Include:
  - □ All direct, secondary, permanent and temporary effects the project would cause, including the anticipated amount of impacts to waters of the U.S. expected to result from the activity, in acres, linear feet, or other appropriate unit of measure.
  - □ Any historic permanent fill associated with each single and complete project.
  - □ Cross-section views of all wetland and waterway fill areas and wetland replication areas.
  - □ Document on project plans wetlands, other special aquatic sites (SAS) including vegetated shallows (or submerged aquatic vegetation, SAV) and mudflats, natural rocky habitat, shellfish areas, vernal pools, and other waters, such as lakes and ponds, and perennial, and intermittent streams on the project site (GC1).
  - □ MLW line, MHW mark, and HTL elevations in tidal waters. Show OHWM elevation in lakes and non-tidal streams.
  - □ **Existing and proposed conditions.**
- □ Volume, type, and source of fill material to be discharged into waters and wetlands, including the area(s) (in square feet or acres) of fill in wetlands, below OHWM in inland waters and below the HTL in coastal waters.
- □ If applicable, a restoration plan showing how all temporary fills and structures will be removed and the area restored to pre-project conditions (see GC 21).

Information that may be required:

- □ Photographs of wetland/waterway to be impacted. Photos at low tide are preferred for work in tidal waters.
- □ For drawings, sketches, or plans:
  - □ The vertical datum for all coastal projects and projects in towns bordering coastal waters shall be in U.S. survey feet and referenced to MLLW and include current tidal epoch, with a reference chart showing conversion factor to the North American Vertical Datum of 1988. Do not use local datum. See *www.nae.usace.army.mil/missions/regulatory* >> Forms and Publications >>Vertical Datum - FEMA (Jul 2007);
  - □ The horizontal state plane coordinates shall be shown on plan and elevation views and shall be in the North American Datum of 1983 (NAD83) State Plane Coordinate System in U.S. survey feet.
- □ For the construction of a filled area or pile or float-supported platform, the use of, and specific structures to be erected on, the fill or platform.
- □ For the discharge of dredged or fill material into waters of the U.S. or the transportation of dredged material for the purpose of disposing of it in ocean waters, the source of the material; the purpose of the discharge, a description of the type, composition and quantity of the material; the method of transportation and disposal of the material; and the location of the disposal site.
- □ For the discharge of dredged or fill material into waters of the U.S., include a statement describing how impacts to waters of the U.S. are to be avoided and minimized. Include either a statement describing how impacts to waters of the U.S. are to be compensated for or a statement explaining why compensatory mitigation should not be required for the proposed impacts.
- □ Purpose and need for the proposed activity;
- □ Limits and coordinates of any Federal Navigation Project in the vicinity of the project area.
- □ Limits and coordinates of any proposed mooring field, reconfiguration zone or aquaculture activity. Provide coordinates for all corners;
- □ Schedule of construction/activity;
- □ Names and addresses of adjoining property owners;
- □ Location and dimensions of adjacent structures;
- □ Alternatives analysis;
- □ Wetland delineation data sheets;
- □ List of authorizations required by other federal, interstate, state, or local agencies for the work, including all approvals received or denials already made.
- □ Identification and description of potential impacts to Essential Fish Habitat (see GC 17).
- □ Identification of potential discharges of pollutants to waters, including potential impacts to impaired waters, in the project area.
- □ Invasive Species Control Plan (see GC 22). For sample control plans, see *www.nae.usace.army.mil/Missions/Regulatory/Invasive-Species*
- □ Wildlife Action Plan (WAP) maps. Contact the Maine Department of Inland Fisheries & Wildlife (Section VIII) or online at *www.maine.gov/ifw/wildlife/conservation/action_plan.html*

Information for dredging projects that may be required:

- □ Sediment testing, including physical (e.g., grain-size analysis), chemical and biological testing. For projects proposing open water disposal, applicants must contact the Corps as early as possible regarding sampling and testing protocols. Sampling and testing of sediments without such contact should not occur and if done, would be at the applicant's risk.
- □ The area in square feet and volume of material to be dredged below mean high water.
- □ Existing and proposed water depths.
- □ Type of dredging equipment to be used.
- □ Nature of material (e.g., silty sand).
- □ Any existing sediment grain size and bulk sediment chemistry data for the proposed or any nearby projects.
- □ Information on the location and nature of municipal or industrial discharges and occurrence of any contaminant spills in or near the project area.
- □ Shellfish survey.
- □ Location of the disposal site (include locus sheet).
- □ Identification and description of any potential impacts to Essential Fish Habitat.
- □ Delineation of submerged aquatic vegetation (e.g., eelgrass beds).

Information for tidal crossing projects that may be required:

- □ A graphic longitudinal elevation profile plot of the tidal stream channel thalweg, both up and downstream of the proposed project site. Thalweg elevations shall extend from the crossing to beyond the zone of scour, channel widening, or other channel alteration resulting from the present or pre-existing crossings. The profile plot should include labeled elevations for the:
  - □ crossing invert and top of the inlet and outlet
  - □ roadbed crown
  - □ lowest and highest recorded tides at the site
  - □ reference datums, such as MLLW, MHHW, and astronomical high tide
  - □ hydraulic controls and nearest crossings that could influence or be influenced by the proposed crossing
- □ A graphic plot of continuous tidal water levels recorded up and downstream, simultaneously, of the proposed crossing for an entire lunar cycle. The water level plot should include labeled elevations for the:
  - □ crossing invert and crossing top at the inlet and outlet
  - □ roadbed crown
  - □ reference datums, such as MLLW, MHHW, and astronomical high tide
- □ A map showing projected extents of maximum flooding within the area influenced by the crossing under current conditions and as a result of sea level rise. The present minimum sea level rise scenario suggested for planning purposes by the Maine Climate Council Scientific and Technical Subcommittee is the Intermediate Scenario, which projects an increase of 3.0-4.6 feet by 2100.

Information for aquaculture projects that may be required:

- □ Maine Aquaculture guidelines and joint Corps/Maine DMR applications may be found at: *www.maine.gov/dmr/aquaculture/index.htm*
- □ In addition to the information required above, applications should also include:
  - □ Results of coordination with Harbor Master and U.S. Coast Guard
  - □ Whether canopy predator nets are being used.

U.S. Army Corps of Engineers (USACE)

APPLICATION FOR DEPARTMENT OF THE ARMY PERMIT

33 CFR 325. The proponent agency is CECW-CO-R.

Form Approved - OMB No. 0710-0003 Expires: 02-28-2022

The public reporting burden for this collection of information, OMB Control Number 0710-0003, is estimated to average 11 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or burden reduction suggestions to the Department of Defense, Washington Headquarters Services, at whs.mc-alex.esd.mbx.dd-dod-information-collections@mail.mil. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number. PLEASE DO NOT RETURN YOUR APPLICATION TO THE ABOVE EMAIL.

PRIVACY ACT STATEMENT

Authorities: Rivers and Harbors Act, Section 10, 33 USC 403; Clean Water Act, Section 404, 33 USC 1344; Marine Protection, Research, and Sanctuaries Act, Section 103, 33 USC 1413; Regulatory Programs of the Corps of Engineers; Final Rule 33 CFR 320-332. Principal Purpose: Information provided on this form will be used in evaluating the application for a permit. Routine Uses: This information may be shared with the Department of Justice and other federal, state, and local government agencies, and the public and may be made available as part of a public notice as required by Federal law. Submission of requested information is voluntary, however, if information is not provided the permit application cannot be evaluated nor can a permit be issued. One set of original drawings or good reproducible copies which show the location and character of the proposed activity must be attached to this application (see sample drawings and/or instructions) and be submitted to the District Engineer having jurisdiction over the location of the proposed activity. An application that is not completed in full will be returned. System of Record Notice (SORN). The information received is entered into our permit tracking database and a SORN has been completed (SORN #A1145b) and may be accessed at the following website: http://dpcld.defense.gov/Privacy/SORNsIndex/DOD-wide-SORN-Article-View/Article/570115/a1145b-ce.aspx

(ITEMS 1 THRU 4 TO BE FILLED BY THE CORPS)

1. APPLICATION NO.	2. FIELD OFFICE CODE	3. DATE RECEIVED	4. DATE APPLICATION COMPLETE

(ITEMS BELOW TO BE FILLED BY APPLICANT)

5. APPLICANT'S NAME	8. AUTHORIZED AGENT'S NAME AND TITLE (agent is not required)
First - Middle - Last -	First - Middle - Last -
Company -	Company -
E-mail Address -	E-mail Address -
6. APPLICANT'S ADDRESS:	9. AGENT'S ADDRESS:
Address-	Address-
City - State - Zip - Country -	City - State - Zip - Country -
7. APPLICANT'S PHONE NOs. w/AREA CODE	10. AGENTS PHONE NOs. w/AREA CODE
a. Residence b. Business c. Fax	a. Residence b. Business c. Fax

STATEMENT OF AUTHORIZATION

11. I hereby authorize,_____to act in my behalf as my agent in the processing of this application and to furnish, upon request, supplemental information in support of this permit application.

_____ _____

SIGNATURE OF APPLICANT DATE

NAME, LOCATION, AND DESCRIPTION OF PROJECT OR ACTIVITY

12. PROJECT NAME OR TITLE (see instructions)

13. NAME OF WATERBODY, IF KNOWN (if applicable)	14. PROJECT STREET ADDRESS (if applicable)
	Address
15. LOCATION OF PROJECT	City - State- Zip-
Latitude: °N Longitude: °W	

16. OTHER LOCATION DESCRIPTIONS, IF KNOWN (see instructions)

State Tax Parcel ID Municipality

Section - Township - Range -

17. DIRECTIONS TO THE SITE

18. Nature of Activity (Description of project, include all features)

19. Project Purpose (Describe the reason or purpose of the project, see instructions)

USE BLOCKS 20-23 IF DREDGED AND/OR FILL MATERIAL IS TO BE DISCHARGED

20. Reason(s) for Discharge

21. Type(s) of Material Being Discharged and the Amount of Each Type in Cubic Yards:

Type Amount in Cubic Yards	Type Amount in Cubic Yards	Type Amount in Cubic Yards

22. Surface Area in Acres of Wetlands or Other Waters Filled (see instructions)

Acres

or

Linear Feet

23. Description of Avoidance, Minimization, and Compensation (see instructions)

24. Is Any Portion of the Work Already Complete? ☐ Yes ☐ No IF YES, DESCRIBE THE COMPLETED WORK

25. Addresses of Adjoining Property Owners, Lessees, Etc., Whose Property Adjoins the Waterbody (if more than can be entered here, please attach a supplemental list).

a. Address-

City - State - Zip -

b. Address-

City - State - Zip -

c. Address-

City - State - Zip -

d. Address-

City - State - Zip -

e. Address-

City - State - Zip -

26. List of Other Certificates or Approvals/Denials received from other Federal, State, or Local Agencies for Work Described in This Application.

AGENCY	TYPE APPROVAL*	IDENTIFICATION NUMBER	DATE APPLIED	DATE APPROVED	DATE DENIED

* Would include but is not restricted to zoning, building, and flood plain permits

27. Application is hereby made for permit or permits to authorize the work described in this application. I certify that this information in this application is complete and accurate. I further certify that I possess the authority to undertake the work described herein or am acting as the duly authorized agent of the applicant.

SIGNATURE OF APPLICANT | DATE | SIGNATURE OF AGENT | DATE

The Application must be signed by the person who desires to undertake the proposed activity (applicant) or it may be signed by a duly authorized agent if the statement in block 11 has been filled out and signed.

18 U.S.C. Section 1001 provides that: Whoever, in any manner within the jurisdiction of any department or agency of the United States knowingly and willfully falsifies, conceals, or covers up any trick, scheme, or disguises a material fact or makes any false, fictitious or fraudulent statements or representations or makes or uses any false writing or document knowing same to contain any false, fictitious or fraudulent statements or entry, shall be fined not more than $10,000 or imprisoned not more than five years or both.

Section VIII: Agency Contacts

1. Federal

U.S. Army Corps of Engineers
Maine Project Office
442 Civic Center Drive, Suite 350
Augusta, Maine 04330
(207) 623-8367; (207) 623-8206 (fax)
Email: cenae-r-me@usace.army.mil

U.S. Environmental Protection Agency
5 Post Office Square
Suite 100 (OEP05–2)
Boston, Massachusetts 02109-3912
(617) 918-1589

U.S. Fish and Wildlife Service
Maine Field Office
P.O. Box A
East Orland, Maine 04431
(207) 469-7300; (207) 902-1588 (fax)
(Federal endangered species)

National Marine Fisheries Service
Maine Field Office
17 Godfrey Drive, Suite 1
Orono, Maine 04473
(207) 866-7379; (207) 866-7342 (fax)
(Federal endangered species)

FEMA Region 1
Federal Insurance and Mitigation Division
99 High Street 6th Floor
Boston, Massachusetts 02110
(floodplains)

Federal Emergency Management Agency
99 High Street
Boston, Massachusetts 02110
(877) 336-2734
(Floodplain Management)

National Marine Fisheries Service
55 Great Republic Drive
Gloucester, Massachusetts 01930
(978) 281-9102; (978) 281-9301 (fax)
(Federal endangered species & EFH)

National Park Service
North Atlantic Region
15 State Street
Boston, Massachusetts 02109
(617) 223-5203
(Wild and Scenic Rivers)

Commander (dpb)
First Coast Guard District
One South Street - Battery Building
New York, New York 10004-1466
(212) 668-7021; (212) 668-7967 (fax)
(bridge permits)

2. State of Maine

a. Department of Environmental Protection (*State permits & Water Quality Certifications*)

Augusta Regional Office
17 State House Station
Augusta, Maine 04333
(207) 287-7688

Southern Maine Regional Office
312 Canco Road
Portland, Maine 04103
(201) 822-6300

Eastern Maine Regional Office
106 Hogan Road
Bangor, Maine 04401
(207) 941-4570

Northern Maine Regional Office
1235 Central Drive
Presque Isle, Maine 04769
(207) 764-0477

b. Department of Agriculture, Conservation and Forestry

i. Maine Land Use Planning Commission (LUPC) (*State permits & Water Quality Certifications for the unorganized areas of the State*)

Augusta Office
22 State House Station
Augusta, Maine 04333-0022
(207) 287-2631; (207) 287-7439 (fax)

Greenville Regional Office
43 Lakeview Drive
P.O. Box 1107
Greenville, Maine 04441
(207) 695-2466; (207) 695-2380 (fax)

Western Region Office
932 U.S. Route 2
East Wilton, Maine 04992
(207) 670-7492; (207) 287-7439 (fax)

Downeast Regional Office
106 Hogan Road, Suite 8
Bangor, Maine 04401
(207) 215-4685; (207) 941-4222 (fax)

Ashland Regional Office
45 Radar Road
Ashland, Maine 04732-3600
(207) 435-7963; (207) 435-7184 (fax)

Eastern Region Office
191 Main Street
East Millinocket, Maine 04430
(207) 399-2176; (207) 746-2243 (fax)

ii. Maine Coastal Program

21 State House Station
Augusta, Maine 04333
(207) 707-2324; (207) 624-6024 (fax)
(CZM consistency determinations)

iii. Division of Parks and Public Lands

22 State House Station
Augusta, Maine 04333
(207) 287-3061; (207) 287-6170 (fax)
(submerged lands leases)

iv. Maine Floodplain Management Program

17 Elkins Lane
Augusta, Maine 04333
(207) 287-8063
(floodplains)

c. Department of Marine Resources

21 State House Station
Augusta, Maine 04333
(207) 633-9500; (207) 624-6024 (fax)
(aquaculture leases/licenses)

3. Historic Properties

a. State Historic Preservation Officer (SHPO)

Kirk F. Mohney, Director
Maine Historic Preservation Commission
65 State House Station
Augusta, Maine 04333-0065
(207) 287-2132; (207) 287-2335 (fax)

b. Tribal Historic Preservation Officers (THPOs)

Houlton Band of Maliseet Indians
88 Bell Road
Littleton, Maine 04730
(207) 532-4273, x215; (207) 532-6883 (fax)
istjohn@maliseets.com

Aroostook Band of Micmacs
7 Northern Road
Presque Isle, Maine 04769
(207) 764-1972; (207) 764-7667 (fax)
jdennis@micmac-nsn.gov

Passamaquoddy Tribe of Indians
Pleasant Point Reservation
P.O. Box 343
Perry, Maine 04667
(207) 853-2600; (207) 853-6039 (fax)
soctomah@gmail.com

Penobscot Nation
Cultural and Historic Preservation Dept.
12 Wabanaki Way
Indian Island, Maine 04468
(207) 817-7471
chris.sockalexis@penobscotnation.org

Passamaquoddy Tribe of Indians
Indian Township Reservation
P.O. Box 301
Princeton, Maine 04668
(207) 796-2301; (207) 796-5256 (fax)
soctomah@gmail.com

Section IX: Definitions

Action Area: The "Endangered Species Consultation Handbook – Procedures for Conducting Consultation and Conference Activities Under Section 7 of the ESA," defines action area as "all areas to be affected directly or indirectly by the federal action and not merely the immediate area involved in the action. [50 CFR 402.02]."

Agricultural Activities: The Clean Water Act exempts certain discharges associated with normal farming, ranching, and forestry activities such as plowing, cultivating, minor drainage, and harvesting for the production of food, fiber, and forest products, or upland soil and water conservation practices (Section 404(f)(1)(A)). Prospective permittees are strongly advised to contact the Corps for a determination of whether their activity is exempt or requires a permit.

Attendant Features: Occurring with or as a result of; accompanying.

Aquatic Habitat Restoration, Establishment and Enhancement: The Corps will decide if a project qualifies and must determine in consultation with federal and state agencies that the net effects are beneficial. The Corps may refer to Nationwide Permit 27 published in the January 6, 2017 Federal Register. Activities authorized here may include, but are not limited to: the removal of accumulated sediments; the installation, removal, and maintenance of small water control structures, dikes, and berms; the installation of current deflectors; the enhancement, restoration, or establishment of riffle and pool stream structure; the placement of in-stream habitat structures; modifications of the stream bed and/or banks to restore or establish stream meanders; the backfilling of artificial channels and drainage ditches; the removal of existing drainage structures; the construction of small nesting islands in inland waters**;** the construction of open water areas; the construction of native shellfish species habitat over unvegetated bottom for the purpose of habitat protection or restoration in tidal waters; shellfish seeding; activities needed to reestablish vegetation, including plowing or discing for seed bed preparation and the planting of appropriate wetland species; mechanized land clearing to remove non-native invasive, exotic, or nuisance vegetation; and other related activities. Only native plant species shall be planted at the site.

Biodegradable: A material that decomposes into elements found in nature within a reasonably short period of time and will not leave a residue of plastic or a petroleum derivative in the environment after degradation. Examples of biodegradable materials include jute, sisal, cotton, straw, burlap, coconut husk fiber (coir) or excelsior. In contrast, degradable plastics break down into plastic fragments that remain in the environment after degradation.

Boating facilities: These provide, rent or sell mooring space, such as marinas, yacht clubs, boat yards, dockominiums, town facilities, land/home owners, etc. Not classified as boating facilities are piers shared between two abutting properties or town mooring fields that charge an equitable user fee based on the actual costs incurred.

Bordering and Contiguous Wetlands: A bordering wetland is immediately next to its adjacent waterbody and may lie at, or below, the ordinary high water mark (mean high water mark in navigable waters) of that waterbody and is directly influenced by its hydrologic regime. Contiguous wetlands extend landward from their adjacent waterbody to a point where a natural or manmade discontinuity exists. Contiguous wetlands include bordering wetlands as well as wetlands that are situated immediately above the ordinary high water mark and above the normal hydrologic influence of their adjacent waterbody.

Brushing: The placement of tree boughs, wooden lath structure, or small-mesh fencing on mudflats, or any bottom disturbance (e.g., discing, plowing, raking, etc.), to enhance recruitment of shellfish.

Buffer Zone: The buffer zone of an FNP is equal to three times the authorized depth of the FNP.

Construction mats: Constructions, swamp and timber mats (herein referred to as "construction mats") are generic terms used to describe structures that distribute equipment weight to prevent wetland damage while facilitating passage and providing work platforms for workers and equipment. They are comprised of sheets or mats made from a variety of materials in various sizes. A timber mat consists of large timbers bolted or cabled together. Corduroy roads, which are not considered to be construction mats, are cut trees and/or saplings with the

crowns and branches removed, and the trunks lined up next to one another. Corduroy roads are typically installed as permanent structures. Like construction mats, they are considered as fill whether they are installed temporarily or permanently.

Cumulative effects: See "Direct, secondary, and cumulative effects."

Currently Serviceable: Useable as-is or with some maintenance, but not so degraded as to essential require reconstruction.

Direct, secondary, and cumulative effects:
Direct Effects: The loss of aquatic ecosystem within the footprint of the discharge of dredged or fill material. Direct effects are caused by the action and occur at the same time and place.
Secondary Effects: These are effects on an aquatic ecosystem that are associated with a discharge of dredged or fill materials, but do not result from the actual placement of the dredged or fill material. Information about secondary effects on aquatic ecosystems shall be considered prior to the time final Section 404 action is taken by permitting authorities. Some examples of secondary effects on an aquatic ecosystem are a) aquatic areas drained, flooded, fragmented, or mechanically cleared, b) fluctuating water levels in all impoundment and downstream associated with the operation of a dam, c) septic tank leaching and surface runoff from residential or commercial developments on fill, and d) leachate and runoff from a sanitary landfill located in waters of the U.S. See 40 CFR 230.11(h).
Cumulative Effects: The changes in an aquatic ecosystem that are attributable to the collective effect of a number of individual 1) discharges of dredged or fill material, or 2) structures. Although the impact of a particular discharge may constitute a minor change in itself, the cumulative effect of numerous such piecemeal changes can result in a major impairment of the water resources and interfere with the productivity and water quality of existing aquatic ecosystems. See 40 CFR 230(g).

Dredging:
Maintenance Dredging: Includes areas and depths previously authorized by the Corps and dredged.
The Corps may require proof of authorization. Maintenance dredging typically refers to the routine removal of accumulated sediment from channel beds to maintain the design depths of navigation channels, harbors, marinas, boat launches and port facilities. Routine maintenance dredging is conducted regularly for navigational purposes (typically at least once every ten years) and does not include any expansion of the previously dredged area or depth. The Corps may review a maintenance dredging activity as new dredging if sufficient time has elapsed to allow for the colonization of SAS, shellfish, etc. The main characteristics of maintenance dredging projects are variable quantities of material; soft, uncompacted soil; contaminant content possible; thin layers of material; occurring in navigation channels and harbors; repetitive activity
New Dredging: Dredging of an area or to a depth that has never been authorized by the Corps or dredged.

Dredged material & discharge of dredged material: These are defined at 323.2(c) and (d). The term dredged material means material that is excavated or dredged from waters of the U.S.

Essential Fish Habitat (EFH): This is broadly defined to include those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity.

Fill material & discharge of fill material: These are defined at 323.2(e) and (f). The term fill material is defined as material placed in waters of the U.S. where the material has the effect of either replacing any portion of a water of the U.S. with dry land or changing the bottom elevation of any portion of a water of the U.S.

Fill area: Fill area includes all temporary and permanent fill (including mats), and regulated discharges associated with excavation.

Federal navigation projects (FNPs): These areas are maintained by the Corps; authorized, constructed and maintained on the premise that they will be accessible and available to all on equal terms; and are comprised of Federal Anchorages, Federal Channels and Federal Turning Basins. The buffer zone is equal to three times the authorized depth of a FNP. More information on the following FNPs is provided at *www.nae.usace.army.mil/missions/navigation.aspx* >> Navigation Projects.

Flume: An open artificial water channel, in the form of a gravity chute that leads water from a diversion dam or weir completely aside a natural flow. A flume can be used to measure the rate of flow.

Frac out: During normal drilling operations, drilling fluid travels up the borehole into a pit. When the borehole becomes obstructed or the pressure becomes too great inside the borehole, the ground fractures and fluid escapes to the surface.

Habitat Connectivity Design: projects designed and constructed for consistency with natural stream dimensions, profiles, and dynamics, in accordance with the following technical references: U.S. Forest Service guide (Forest Service Stream-Simulation Working Group 2008), augmented by documents published by the states of Washington (Barnard et al. 2013), Vermont (Bates and Kirn 2009) and California (Love and Bates 2009).

Independent utility: A test to determine what constitutes a single and complete non-linear project in the Corps regulatory program. A project is considered to have independent utility if it would be constructed absent the construction of other projects in the project area. Portions of a multi-phase project that depend upon other phases of the project do not have independent utility. Phases of a project that would be constructed even if the other phases were not built can be considered as separate single and complete projects with independent utility.

Individual Permit: A Department of the Army authorization that is issued following a case-by-case evaluation of a specific structure or work in accordance with the procedures of 33 CFR 322, or a specific project involving the proposed discharge(s) in accordance with the procedures of 33 CFR 323, and in accordance with the procedures of 33 CFR 325 and a determination that the proposed discharge is in the public interest pursuant to 33 CFR 320.

Living Shoreline: Living shorelines stabilize banks and shores in coastal waters along shores with small fetch and gentle slopes that are subject to low-to mid-energy waves. A living shoreline has a footprint that is made up mostly of native material. It incorporates vegetation or other living, natural "soft" elements alone or in combination with some type of harder shoreline structure (e.g., oyster or mussel reefs or rock sills) for added protection and stability. Living shorelines shall maintain the natural continuity of the land-water interface, and retain or enhance shoreline ecological processes. Living shorelines must have a substantial biological component, either tidal or lacustrine fringe wetlands or oyster or mussel reef structures.

Maintenance:

a. The repair, rehabilitation, or replacement of any previously authorized, currently serviceable structure or fill, or of any currently serviceable structure or fill authorized by 33 CFR 330.3 – "Activities occurring before certain dates," provided that the structure or fill is not to be put to uses differing from those uses specified or contemplated for it in the original permit or the most recently authorized modification.

- Minor deviations in the structure's configuration or filled area, including those due to changes in materials, construction techniques, or current construction codes or safety standards that are necessary to make repair, rehabilitation, or replacement are authorized.
- Currently serviceable means useable as is or with some maintenance, but not so degraded as to essentially require reconstruction.
- No seaward expansion for bulkheads or any other fill activity is considered SV maintenance.
- Only structures or fills that were previously authorized and are in compliance with the terms and condition of the original authorization can be maintained as a non-regulated activity under 33 CFR 323.4(a)(2), or in accordance with the SV or PCN thresholds in Section V.

b. The state's maintenance provisions may differ from the Corps and may require reporting and written authorization from the state.

c. Contact the Corps to determine whether stream crossing replacements require a PCN.

d. Exempted Maintenance. In accordance with 33 CFR 323.4(a)(2), any discharge of dredged or fill material that may result from any of the following activities is not prohibited by or otherwise subject to regulation under Section 404 of the CWA: "Maintenance, including emergency reconstruction of recently damaged parts, of currently serviceable structures such as dikes, dams, levees, groins, riprap, breakwaters, causeways, bridge abutments or approaches, and transportation structures. Maintenance does not include any modification that changes the character, scope, or size of the original fill design."

The following definition is also applicable:

Minor deviations: Deviations in the structure's configuration or filled area, including those due to changes in materials, construction techniques, or current construction codes or safety standards, which are necessary to make repair, rehabilitation, or replacement are permitted, provided the adverse environ-mental effects resulting from such repair, rehabilitation, or replacement are minimal.

Marina reconfiguration zone: A Corps-authorized area in which permittees may rearrange pile-supported structures and floats without additional authorizations. A reconfiguration zone does not grant exclusive privileges to an area or an increase in structure or float area.

Natural Rocky Habitats: Natural rocky habitats are intertidal and subtidal substrates composed of pebble-gravel, cobble, boulder, or rock ledge and outcrops. Manufactured stone (e.g. cut or engineered rip-rap) is not considered a natural rocky habitat. Natural rocky habitats are either found as pavement (consolidated pebble-gravel, cobble, or boulder areas) or as a mixture with fines (i.e. clay and sand) and other substrates.

Navigable waters of the U.S.: See Waters of the U.S. below.

Overall project: See "single and complete linear project" below.

Practicable: Available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes.

Permanent impacts: Permanent impacts means waters of the U.S. that are permanently affected by filling, flooding, excavation, or drainage because of the regulated activity. Permanent impacts include permanent discharges of dredged or fill material that change an aquatic area to dry land, increase the bottom elevation of a waterbody, or change the use of a waterbody.

Pre-construction notification (PCN): A request submitted by a prospective permittee to the Corps for confirmation that a particular activity is authorized by this GP. The request may be a permit application, letter, or similar document that includes information about the proposed work and its anticipated environmental effects. Pre-construction notification may be required by the terms and conditions of these GPs. A PCN may be voluntarily submitted in cases where PCN is not required and the project proponent wants confirmation that the activity is authorized under this GP.

Re-establishment: The manipulation of the physical, chemical, or biological characteristics of a site with the goal of returning natural/ historic functions to a former aquatic resource. Re-establishment results in rebuilding a former aquatic resource and results in again in aquatic resource area and functions.

Rehabilitation: The manipulation of the physical, chemical, or biological characteristics of a site with the goal of repairing natural/historic functions to a degraded aquatic resource. Rehabilitation results in a gain in aquatic resource function, but does not result in a gain in aquatic resource area. Restoration: The manipulation of the physical, chemical, or biological characteristics of a site with the goal of returning natural/historic functions to a former or degraded aquatic resource. For the purpose of tracking net gains in aquatic resource area, restoration is divided into two categories: re-establishment and rehabilitation.

Restoration: The manipulation of the physical, chemical, or biological characteristics of a site with the goal of returning natural/historic functions to a former or degraded aquatic resource. For the purpose of tracking net gains in aquatic resource area, restoration is divided into two categories: re-establishment and rehabilitation.

Riffle and pool complexes: Riffle and pool complexes are special aquatic sites under the 404(b)(1) Guidelines. Riffle and pool complexes sometimes characterize steep gradient sections of streams. Such stream sections are recognizable by their hydraulic characteristics. The rapid movement of water over a course substrate in riffles results in a rough flow, a turbulent surface, and high dissolved oxygen levels in the water. Pools are deeper areas associated with riffles. A slower stream velocity, a streaming flow, a smooth surface, and a finer substrate characterize pools.

Secondary effects: See "Direct, secondary, and cumulative effects."

Shellfish Areas: Areas that currently support molluscan shellfish. Information regarding these locations can be obtained from the State of Maine GeoLibrary Data Catalog at: *www.maine.gov/geolib/catalog.html*

Shellfish seeding: The placement of shellfish seed and/or suitable substrate to increase shellfish production. Shellfish seed consists of immature individual shellfish or individual shellfish attached to shells or shell fragments (i.e., spat on shell). Suitable substrate may consist of shellfish shells, shell fragments, or other appropriate materials placed into waters for shellfish habitat.

Single and complete linear project: A linear project is a project constructed for the purpose of getting people, goods, or services from a point of origin to a terminal point, which often involves multiple crossings of one or more waterbodies at separate and distant locations. The term "single and complete project" is defined as that portion of the total linear project proposed or accomplished by one owner/developer or partnership or other association of owners/developers that includes all crossings of a single water of the U.S. (i.e., a single waterbody) at a specific location. For linear projects crossing a single or multiple waterbodies several times at separate and distant locations, each crossing is considered a single and complete project for the purposes of this GP. However, individual channels in a braided stream or river, or individual arms of a large, irregularly shaped wetland or lake, etc., are not separate waterbodies, and crossings of such features cannot be considered separately.
The overall project, for purposes of this GP, includes all regulated activities that are reasonably related and necessary to accomplish the project purpose.

Single and complete non-linear project: For non-linear projects, the term "single and complete project" is defined at 33 CFR 330.2(i) as the total project proposed or accomplished by one owner/developer or partnership or other association of owners/developers. For non-linear projects, the single and complete project shall have independent utility (see definition).

Special aquatic sites (SAS): These are defined at 40 CFR 230 Subpart E. They include sanctuaries and refuges, wetlands, mud flats, vegetated shallows (submerged aquatic vegetation, SAV), coral reefs, and riffle and pool complexes.

Stream: The term "stream" in the document means rivers, streams, brooks, etc.

Stream bed: The substrate of the stream channel between the ordinary high water marks. The substrate may be bedrock or inorganic particles that range in size from clay to boulders. Wetlands contiguous to the stream bed, but outside of the ordinary high water marks, are not considered part of the stream bed.

Stream channelization: The manipulation of a stream's course, condition, capacity, or location that causes more than minimal interruption of normal stream processes. A channelized stream remains a water of the United States.

Stream Simulation: A method for designing and building road-stream crossings intended to permit free and unrestricted movements of any aquatic species. Reference:
https://www.nae.usace.army.mil/Missions/Regulatory/Stream-and-River-Continuity/

Stream Smart Design: projects designed to allow the stream to act like a stream by passing fish and wildlife as well as the higher flows that come with large infrequent storms while protecting the stability of the road and public safety. Stream Smart Design follows the "Four S's": The culvert must SPAN the stream, allowing for passage of aquatic and terrestrial wildlife. The culvert has to be SET at the right elevation. The SLOPE of the culvert must match the stream. There must be SUBSTRATE (natural sediment) in the crossing. Reference:
www1.maine.gov/mdot/publications/docs/brochures/pocket_guide_stream_smart_web.pdf

Temporary impacts: Temporary impacts include waters of the U.S. that are temporarily filled, flooded, excavated, drained or mechanically cleared because of the regulated activity.

Temporal loss: The time lag between the loss of aquatic resource functions caused by the permitted impacts and the replacement of aquatic resource functions at the compensatory mitigation site(s) (33 CFR 332.2).

Utility line: Any pipe or pipeline for the transportation of any gaseous, liquid, liquescent, or slurry substance, for any purpose, and any cable, line, or wire for the transmission for any purpose of electrical energy, telephone, and telegraph messages, and radio and television communication. The term 'utility line' does not include activities that drain a water of the U.S., such as drainage tile or French drains, but it does apply to pipes conveying drainage from another area.

Vegetated shallows/Submerged Aquatic Vegetation (SAV): Permanently inundated areas that under normal circumstances support communities of rooted aquatic vegetation, such as eelgrass in marine systems as well as a number of freshwater species in rivers and lakes. Note: Eelgrass surveys should be conducted be conducted between May and October unless otherwise directed.

Vernal pools (VPs): The State of Maine, Department of Environmental Protection has specific protections for VPs. For the purposes of these GPs, VPs are depressional wetland basins that typically go dry in most years and may contain inlets or outlets, typically of intermittent flow. Vernal pools range in both size and depth depending upon landscape position and parent material(s). In most years, VPs support one or more of the following obligate indicator species: wood frogs (*Rana sylvatica*), spotted salamanders (*Ambystoma maculatum*), blue-spotted salamanders (*Ambystoma laterale*), and fairy shrimp (*Eubranchipus* sp.). However, they should preclude sustainable populations of predatory fish.

Water dependency: activity requiring access or proximity to or siting within a special aquatic site (SAS) to fulfill its basic project purpose.

Water diversions: Water diversions are activities such as bypass pumping (e.g., "dam and pump") or water withdrawals. Temporary flume pipes, culverts or cofferdams where normal flows are maintained within the stream boundary's confines aren't water diversions. "Normal flows" are defined as no change in flow from pre-project conditions.

Weir: A barrier across a river designed to alter the flow characteristics. In most cases, weirs take the form of a barrier, smaller than most conventional dams, across a river that causes water to pool behind the structure (not unlike a dam) and allows water to flow over the top. Weirs are commonly used to alter the flow regime of the river, prevent flooding, measure discharge and help render a river navigable.

Waters of the United States (U.S.)

Waters of the U.S.: The term waters of the U.S. and all other terms relating to the geographic scope of jurisdiction are defined at 33 CFR 328. Also see Section 502(7) of the Federal CWA [33 USC 1352(7)]. Waters of the U.S. include jurisdictional wetlands. Not all waters and wetlands are jurisdictional. Contact the Corps with any questions regarding jurisdiction.

Navigable waters: Refer to 33 CFR 329. These waters include the following federally-designated navigable waters in New England. This list represents only those waterbodies for which affirmative determinations have been made; absence from this list shall not be taken as an indication that the waterbody is not navigable: In Maine, navigable waters are those waters that are subject to the ebb and flow of the tide in addition to the non-tidal portions of the following federally-designated waters in Maine (the Kennebec River to Moosehead Lake, the Penobscot River to the confluence of the East and West Branch at Medway and, Lake Umbagog within the State of Maine).

Non-tidal wetland: A non-tidal wetland is a wetland that is not subject to the ebb and flow of tidal waters. Non-tidal wetlands contiguous to tidal waters are located landward of the high tide line (i.e., spring high tide line).

Tidal wetland: A tidal wetland is a jurisdictional wetland that is inundated by tidal waters. Tidal waters rise and fall in a predictable and measurable rhythm or cycle due to the gravitational pulls of the moon and sun. Tidal waters end where the rise and fall of the water surface can no longer be practically measured in a predictable rhythm due to masking by other waters, wind, or other effects. Tidal wetlands are located channelward of the high tideline.

ATTACHMENT C
TRAFFIC SUPPLEMENTAL PACKAGE

GORRILL PALMER
An LJB Engineering Company

300 Southborough Drive, Suite 200, South Portland, ME 04106
(207) 772-2515|GorrillPalmer.com

Trip Generation and Parking Demand Summary
Thompson's Point
September 2024 – (Revised 12-10-24)

Date: September 4, 2024 (Revised 12-10-24)
Subject: Updated Trip Generation and Parking Demand
Thompson's Point
To: Bo Kennedy, Placemaker Partners, LLC
From: Randy Dunton / Kyle Brennan, Gorrill Palmer (JN 4346)

Gorrill Palmer (GP) has prepared this updated trip generation and parking demand summary for the Thompson's Point development in Portland, Maine. The full build out of the project received a MaineDOT Traffic Movement Permit (TMP) in 2012 (Reg. 01-00155-A-N) for 734 trip ends during the AM peak hour and 1,091 trip ends during the PM peak hour. The Traffic Movement Permit received an extension in 2024 out to March 1, 2027. The documentation for the extension is attached. The project is being constructed in phases and each phase must be evaluated to ensure that the total site trip generation does not exceed the permitted trip generation. The following is a summary of the forecast trip generation and parking demand for the existing and previously approved uses, and the proposed residential development on site. A site plan is attached showing the location of each building.

Existing and Previously Evaluated Trip Generation Summary

The trip generation for the existing Thompson's Point site is based on discussions with Bo Kennedy, project manager/engineer for the site. The trip generation was calculated using the same methodology as that used in previous trip generation evaluations for the site, including using the Institute of Transportation Engineers' publication, *Trip Generation*, 7th Edition, except where otherwise noted, and applying a 10% reduction to the total site trip generation to account for other modes of transportation and shared uses on the site. The following table summarizes the trip generation for the existing site:

Existing and Approved Site Trip Generation

Building	Description	Size	AM Peak Hour	PM Peak Hour
Building A Brick North				
	Halo (Event Space) – Previously approved	400 attendees	16	31
	Office Space – 7 Emp.	7 Employees	7	7
	Brewery & Sit-Down Restaurant – LUC 932 + 7 Emp.	14,644 sf (4,624 sf Rest. & 10,020 sf Brewery)	7	49 (42+7)
	Brewery Tap Room – LUC 932 + 5 Emp.	5,284 sf	16 (11+5)	16 (11+5)
	Color Me Mine – Previously Approved	2,136 sf	2	6
	International Cryptozoology Museum – Previously approved (doubled in size)	1919 sf	2	2
	Leisure Time Cocktails – LUC 975	1725 sf	N/A	20

	Coffee Roasting – Assumed (Employee only)	675 sf	1	1
	Brick North Total		**51**	**132**
Building C Brick South				
	Event/Assembly Space – Previously approved	2,500 Seats	100	195
	Annex	7,384 sf	--*	--*
	Brick South Total		**100**	**195**
Building F1				
	Warehouse – Previously approved	14,200 sf	11	9
	Building F1 Total		**11**	**9**
Building F2				
	Artist Studio Space – Previously approved	1,940 sf	3	4
	Building F2 Total		**3**	**4**
Building L				
	Office Space – Previously forecasted potential future development	4,000 sf	7	9
	Event Space – Previously forecasted potential future development	100 Attendees	4	8
	Existing Storage – Previously forecasted potential future development	1,760 sf	0**	0**
	Existing Office Space (Credit)	4,000 sf	(-7)	(-9)
	Building L Total		**4**	**8**
Building B2				
	Concession Building – Previously approved	960 sf	4	4
	Building B2		**4**	**4**
Building D				
	Proposed Hotel (2024 Construction Start) – Previously proposed development	148 Rooms	68	87
	Hotel Total		**68**	**87**
Building I Children's Museum and Theatre of Maine (CMTM)				
	CMTM– Previously approved	29,096 sf	33	33
	Children's Museum Total		**33**	**33**
Existing Subtotal			**274**	**472**

*Maximum of 2,500 people in the building for events. Highest trip generation would be an event in the Event space, not the Annex.
**Trip generation assumed to be negligible.

Since initially approved, there have been some minor changes to the uses. The "Rosemont Market" (2,724 sf) and Brewery & Sit-Down Restaurant (11,920 sf) have been combined and identified as "Brewery & Sit-Down Restaurant" (14,644 sf). For the purposes of this evaluation, the previously individual square footages have been combined. Trip generation for the "Brewery & Sit-Down Restaurant" was based on previously accepted "Bissell Brewery & Restaurant" methodology, where the restaurant trip generation is based on LUC 932 – High Turnover (Sit Down) Restaurant (4,624 SF) and trip generation for the brewery portion

(10,020 SF) is based on the 7 employees.

The previously approved coffee shop "Rwanda Bean" (2,400 sf) has been split with "Leisure Time Cocktails". "Rwanda Bean" (675 sf) is still occupying part of the space for coffee roasting, but the remaining space is now occupied by "Leisure Time Cocktails" (1725 sf).

The previously approved "Big Room Studios" (3,461 sf) has been replaced with an "Office Space". The square footage of the area is the same, but because the office space only has 7 employees, trip generation was based on employee trips.

The previously approved "Distillery" (5,284 sf) has been replaced with a "Brewery Tap Room" (5,284 sf). For the purposes of this evaluation due to similar use the previously approved individual square footage and trip generation will be used for the "Brewery Tap Room". Trip generation for the "Brewery Tap Room" is based on 1,200 SF of restaurant space (LUC 932) and 4,084 SF of brewery space (5 employees).

The previously approved "International Cryptozoology Museum" (993 sf) has doubled in size. Due to the "International Cryptozoology Museum" (1919 sf) doubling in size the trip generation will double from the previous report.

The site has moved onto its next phase of development, which includes Building's L, B2, and D. Building's L and B2 were identified as proposed development in the previous report. Building D was identified as potential future development in the previous report. Building's L, B2, and D will contribute 76 & 99 trip ends in the AM & PM peak hours respectively.

As shown in the table, the existing site is forecast to generate 274 trip ends during the AM peak hour and 472 trip ends during the PM peak hour.

Proposed Site Trip Generation

Our understanding is that the site is now moving into its next phase of development, which will include a 255-unit six story apartment building (identified as Building G on the enclosed site plan).

Trip generation for the proposed use has been based on the following:

- 255 Units of Residential Development – New Construction

The trip generation for the proposed use was calculated using the updated Institute of Transportation Engineers' publication, *Trip Generation*, 11th Edition (LUC 221 – Mid-Rise Apartment). It should be noted that LUC 221 provides two different trip generations, "not close to rail transit" and "close to rail transit". It is our understanding that ITE refers "close to rail transit" as more local transit, such as subways. The Amtrak located near Thompson's point, in our opinion, does not meet the intent for "close to rail transit". The following table summarizes the trip generation for the proposed uses:

Forecast Trip Generation

Building	Description	Size	AM Peak Hour	PM Peak Hour
Building G Residential				
	Apartments – LUC 221	255 Units	101	100
Forecast Trip Generation			**101**	**100**

As shown in the table, the proposed residential use is forecast to generate an additional 101 trip ends and 100 trip ends during the AM and PM peak hours of the adjacent street, respectively.

Site Trip Generation

The trip generation for the existing site has been combined with the trip generation for the proposed new and remodeled buildings to yield the total site trip generation.

Total Site Trip Generation Summary

Site	Building	AM Peak Hour	PM Peak Hour
Existing			
	Building A – Mixed Used (Brick North)	51	137
	Building C – Events (Brick South)	100	195
	Building F1 – Warehouse	11	9
	Building F2 – Artist Studio	3	4
	Building L – Office	4	8
	Building B2 – Concessions	4	4
	Building D – Hotel	68	87
	Building I – Children's Museum and Theatre of Maine	33	33
	Existing Total	**274**	**472**
Proposed			
	Market Rate Apartments	101	100
	Forecast Total	**101**	**100**
Site Subtotal		**375**	**572**
Reduction (10%) for Bus / Train / Shared Use		(-37)	(-57)
Proposed Site Trip Generation		**338**	**515**
Permitted Trip Ends		734	1091
Difference Between Permitted and Proposed Site		**396**	**576**

As shown in the table, the site inclusive of the proposed residential development is forecast to generate 338 trip ends during the AM peak hour and 515 trip ends during the PM peak hour. This yields an overall trip generation that is 396 trip ends **less** than the permitted trip generation during the AM peak hour and 576 trip ends **less** than the permitted trip generation during the PM peak hour.

Parking Demand

Proposed Apartments: Parking for the new apartments is based on the ITE Parking Generation Manual, 5th Edition. The parking demand rate (1.31 spaces/unit) is based on Land Use Code (LUC) 221 – Multifamily

Housing (Mid-Rise). Because of the nature of the housing use, the peak parking demand (334 spaces) occurs overnight with the lowest parking demand (164 spaces) occurring during the day (1:00 – 2:00 PM). This complements the other uses on site well, since they will have the highest demand around noon time, with little to no demand (approximately 26-70 spaces) overnight.

Overall Site: The overall site parking demand is based on a combination of shared and designated parking methodologies. The shared methodology (majority of the site) assumes there are parking spaces not designated for specific uses and can be shared between the uses. There are some spaces on site such as the panhandle/residential garage that are proposed to use designated parking and be specifically residential or non-public Thompson's Point managed supply spaces. The attached parking demand calculations show the detailed time of day distribution for each use and the forecast demand. Based on the calculations the peak parking demand is between 6:00 PM and 10:00 PM for the overall site. The peak parking demand (without an event in Brick South or Halo) is 475 spaces and is anticipated to occur at 10:00 PM, of which 405 is the parking demand for the hotel and apartments which have designated spaces. Excluding the hotel and apartments, the peak parking demand is 165 spaces and occurs around noon. As identified in the approval for the master development plan, when special events of a certain attendance threshold occur, additional parking measures will be implemented on an as needed basis.

Conclusions

The following is a summary of the conclusions:

1. The site (including existing and proposed uses) is forecast to generate a total of 338 trip ends during the AM peak hour and 515 trip ends. This trip generation is 396 trip ends less than the permitted trip generation during the AM peak hour and 576 trip ends less than the permitted trip generation during the PM peak hour.

2. The peak parking demand for the proposed apartments (334 spaces) occurs overnight after 10:00 PM, when there is little to no demand from the other on-site uses, with the exception of the hotel demand (110 spaces). Excluding the hotel and apartments, the overall site parking demand peaks around noon, when the hotel and apartments are near their lowest parking demand.

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GORRILL PALMER
An LJB Engineering Company

300 Southborough Drive, Suite 200, South Portland, ME 04106
(207) 772-2515|GorrillPalmer.com

Supplemental Package
12-10-2024

The following attachments are provided as previous information that has been submitted to the City in support of the Thompson's Point development.

A. TMP Extension – Dated 3/1/24 & 3/12/24
B. Trip Generation Evaluation & Summary – June 2022
C. Trip Generation and Parking Demand Summary – April 2020
D. MaineDOT Traffic Movement Permit - Thompson's Point Development Company Inc. – Signed 6/13/12

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Attachment A

TMP Extension – Dated 3/1/24 & 3/12/24

Planning and Urban Development
Christine Grimando, AICP
Director

City of portland

Applicant:	Chris Thompson Forefront Partners I, LP 501 Danforth Street Portland, Maine 04102
Project Location:	1 Thompson's Point Rd. Portland, Maine 04102
Parcel #	201 A005001
Project:	Thompson's Point/Mixed-use Development
Identification #:	Reg. 01-00155-A-N
Permit Category:	200 Plus PCE
Traffic Engineer:	Thomas Gorrill/Randy Dunton Gorrill-Palmer Consulting Engineers 300 Southborough Dr., #200 South Portland, ME 04106

Pursuant to the provision of 23 M.R.S.A. § 704-A and Chapter 305 of the Maine Department of Transportation's (MaineDOT) Regulations, the City of Portland and MaineDOT have determined that a one-time extension of the Traffic Movement Permit issued for Thompson's Point is warranted. The permit will be considered expired if construction of the project has not been completed by March 1, 2027, unless a modification is approved prior to this date.

In the event the permit expires prior to construction being completed by the end of the one-time extension date, the Applicant shall submit a new permit, with information pertaining to Sections 1 thru 6 of the General Submission Requirements and a Notice of Intent to File, as outlined in Chapter 305, and address any changes in facts since the initial analysis and approval. Consistent with Section 8 of Chapter 305, in the event the Applicant completes all mitigation required for the Development, but cannot complete the Project within the one-time extension date, the Developer will be required to submit a TMP Modification that includes any programmatic changes to the Development for review and approval. An applicant may be required to provide additional mitigation of permitted trips as a result of changes to the Development program increase beyond the initial approval. Additionally, the Developer may be required to attend a Scoping Meeting, unless the Maine Department of Transportation waives this requirement.

All required terms and mitigation of the original TMP approval remain in effect.

Christine Grimando, AICP
Director, Department of Planning & Urban Development
City of Portland

Date: March 1, 2024

Stephen Landry, P.E.
State Traffic Engineer
Maine Department of Transportation

Date: 3/12/24

GORRILL PALMER
An LJB Engineering Company

Attachment B

Trip Generation Evaluation & Summary – June 2022

GORRILL PALMER

707 Sable Oaks Drive, Suite 30
South Portland, Maine 04106
207.772.2515

Trip Generation Evaluation & Summary
Thompson's Point
June 13, 2022

Date: June 13, 2022
Subject: Updated Trip Generation
Thompson's Point
To: Bo Kennedy, P.E. - Placemaker Partners, LLC
From: Randy Dunton, P.E., PTOE

Gorrill Palmer (GP) has prepared this updated trip generation summary for the Thompson's Point development in Portland, Maine. The full build out of the project received a MaineDOT Traffic Movement Permit (TMP) in 2012 (Reg. 01-00155-A-N) for 734 trip ends during the AM peak hour and 1,091 trip ends during the PM peak hour. The project is being constructed in phases and each phase must be evaluated to ensure that the total site trip generation does not exceed the permitted trip generation. The following is a summary of the forecast trip generation for the existing and previously approved uses, currently proposed and potential future development and the total site trip generation. A Thompsons Point Campus Directory is attached showing the location of each building for the existing conditions. Exact location of proposed and potential future buildings is still being refined.

Existing Trip Generation Summary

The trip generation for the existing Thompson's Point site has been based on discussions with your office and previously approved uses. Where relevant, trip generation that was previously approved was maintained in this evaluation. Trip generation for change in tenants permitted under current approvals is based on ITE Trip Generation, 11th Edition or through observations at the site. As previously approved for this site, a 10% reduction has been applied to the total site trip generation to account for other modes of transportation and shared uses on the site. The following tables summarize the trip generation for the existing site:

Table 1 – Existing Site – Trip Generation

Building	Description	Size	AM Peak Hour	PM Peak Hour
Brick North				
	Rosemont Market – Based on observations	2,724 sf	0	29
	Rwanda Bean – Based on observations	2,400 sf	18	21
	Halo (Event Space) – 3.5 people / car – Night Event	400 attendees	16	31
	Big Room Studios – LUC 712	3,461 sf	6	7
	Bissell Brewery & Restaurant – LUC 932 + 7 Emp.	11,920 sf	25 (18+7)	24 (17+7)
	Distillery – LUC 932 + 5 Emp.	5,284 sf	16 (11+5)	16 (11+5)
	Color Me Mine – previously approved	2,136 sf	2	6
	International Cryptozoology Museum - assumed	993 sf	1	1
	Brick North Total		**84**	**135**

Brick South				
	Event/Assembly Space – 3.5 people / car – Night Event	2,500 Seats	100	195
	Annex	7,384 sf	--*	--*
	Brick South Total		**100**	**195**
Building F1				
	Warehouse – LUC 110	14,200 sf	11	9
	Building F1 Total		**11**	**9**
Building F2				
	Proposed Artist Studio – LUC 712	1,940 sf	3	4
	Building F2 Total		**3**	**4**
Satellite Building				
	Children's Museum – provided by Museum – previously approved	29,096 sf	33	33
	Satellite Building Total		**33**	**33**
	Existing Site Subtotal		**228**	**376**
	Reduction for Existing Site Shared Trips		**(-23)**	**(-38)**
Total			**205**	**338**

*Maximum of 2,500 people in the building for events. Highest trip generation would be an event in the Event space, not the Annex.

Since initially approved, there has been some minor changes to the uses. The "Locally Sauced (formerly Big J's Chicken) and the Bissell "Brewery" have been combined and identified above as "Bissell Brewery & Restaurant". For the purposes of this evaluation, the previously approved individual square footages and trip generations have been combined.

The previously approved Cellardoor "Winery" (5,890 sf) has been replaced with a Rosemont Market with wine bar (2,724 SF) and a Rwanda Bean (2,400 SF). The difference between the square footages is a bathroom area that is shared between the two uses. The Rosemont Market and Rwanda Bean are described in more detail as follows:

Rosemont Market – this is a boutique type store with approximately 12 seats in the café area and 15 seats at the wine bar. The store hours during a weekday are 10AM – 8PM for the store & café area and 2PM-8PM for the wine bar. Since the use is unique, it does not fit into a typical ITE category for the purpose of determining trip generation. Since the use is not open during the AM peak hour of adjacent street traffic, the trip generation for the AM peak hour was assumed to be none. To estimate the PM peak hour of adjacent street traffic, the use was counted on Thursday, April 21, 2022 from 4PM – 6PM. Both of the accesses to the facility were observed, and it was estimated who may have arrived in their own car. Based on our observations, the peak hour occurred from 4PM – 5PM with an estimated total of 11 vehicles entering and 18 vehicles exiting, for a total of 29 vehicles.

Rwanda Bean – similar to the market, this is a boutique type store with approximately 25 seats, with areas for both cooking goods and a relatively large area for the roasting and packaging of the coffee. The store hours during a weekday are 8AM – 4PM. Since the use is unique, it does not fit into a typical ITE category. The use was counted on Thursday, April 21, 2022 from 7AM – 9AM and again from 3:30PM – 4:30 PM. Similar to the market, all of the accesses to the facility were observed, and it was estimated who may have arrived in their own car. Based on our observations, the AM peak hour occurred from 8AM – 9AM. There was only one hour counted for the PM since they close at 4PM. Based on our observations, the AM experienced a total of 18 vehicles (11 entering and 7 exiting) and the PM experienced a total of 21 vehicles (11 entering and 10 exiting). Even though the PM adjacent street peak hour typically occurs between 4PM – 6PM, to be conservative we used the 3:30PM – 4;30PM counts.

As shown in the table, the existing site subtotal is forecast to generate 228 trip ends during the AM peak hour and 376 trip ends during the PM peak hour. Based on observations at the site, there are significant shared trips between the activities on site (such as Children's Museum) and the food establishments such as Rwanda Bean & Rosemont Market. Additional significant shared trips would also be expected between activities on site and Bissell Brewery & Restaurant and potentially the Distillery. Although a 10% reduction is applied to the site as a whole, that 10% also includes those taking other modes of transportation, so only a portion of that reduction is shared trips. Given the significant shared use that has been observed on site, an additional 10% was subtracted from the existing site traffic to reflect the existing shared use. Therefore, the resulting trip generation for the existing site is forecast to be 205 trip ends during the AM peak hour and 338 trips ends during the PM peak hour.

Proposed Site Trip Generation

Our understanding is that the site is now moving into its next phase of development, which will include an approximately 148 room hotel and a concession building (Building B2). A smaller Hotel (125 room) was included in the original TMP with a trip generation of 70 and 74 trips ends during the AM & PM peak hours of adjacent street traffic respectively. We understand that the final number of rooms is still being refined and may be something less than the 148.

The currently proposed concession building is intended to supplement existing uses on site and not generate significant trips from off-site. For the purposes of this evaluation, we have considered trip generation to be 4 employees during both the AM and PM peak hours.

The following Table 2 summarizes the forecast trip generation for the hotel and concession building.

Table 2 - Currently Proposed Development - Trip Generation

Building	Description	Size	AM Peak Hour	PM Peak Hour
Hotel				
	Hotel – LUC 310	148 Rooms	68	87
	Hotel Total		**68**	**87**
Building B2				
	Concession Building	960 sf	4	4
	Building B2 Total		**4**	**4**
Currently Proposed Development Trip Generation			**72**	**91**

As shown in the Table 2, the proposed uses are forecast to generate an additional 72 trip ends and 91 trip ends during the AM and PM peak hours of the adjacent street, respectively.

Potential Future Development Trip Generation

In addition to the existing and currently proposed development, there is potential future development that could occur on-site and bring the site to its full potential as envisioned in the Master Development Plan. Those potential future uses were also described in the previous May 14, 2020 evaluation and are repeated here:

"Building K – New Construction

- *Proposed Inn: 61 rooms + potential 22 room expansion*
- *The Inn is proposed to include a bar that is intended to serve primarily hotel guests and potentially guests of other Thompson's Point uses. However, it is not anticipated to draw significant outside traffic, so the trip generation for the bar is forecast to be negligible."*

"Building L – Renovation
- *Existing Office: 4,000 sf*
- *Existing Storage: 1,760 sf*
- *Proposed Office: 5,760 sf"*

The 344 apartments that are currently identified as potential future development were originally approved in the "Revised Master Plan" as J1-(160 units), J2-(160 units) and 24 units on the top of the hotel. The trip generation for the apartments is based on the ITE Trip Generation 11th Edition for Land Use Code 221 – Multifamily Housing (Mid-Rise) – between 4 & 10 stories.

The following table summarizes the trip generation for the potential future development uses:

Table 3 - Potential Future Development - Trip Generation

Building	Description	Size	AM Peak Hour	PM Peak Hour
Building K				
	Inn – LUC 310	61 Rooms	28	36
	Inn Expansion – LUC 310	22 Rooms	10	13
	Building K Total		**38**	**49**
Building L				
	Proposed Office – LUC 712	4,000 sf	7	9
	Proposed Event Space	100 attendees	4	8
	Existing Office (Credit)	4,000 sf	(-7)	(-9)
	Existing Storage	1,760 sf	0*	0*
	Building L Total		**4**	**8**
Apartments				
	Market Rate Apartments – LUC 221	344 Units	127	134
	Apartments		**127**	**134**
Potential Future Development Trip Generation			**169**	**191**

*Trip generation assumed to be negligible.

Site Trip Generation

The trip generation for the existing site has been combined with the trip generation for the currently proposed development and the potential future development to yield the site trip generation upon full development of the uses identified herein. The total site trip generation has been compared to the permitted trip generation to identify remaining available permitted trips for other approved uses within the master plan.

Table 4 - Total Site Trip Generation Summary

Condition	AM Peak Hour	PM Peak Hour
Existing Site	205	338
Currently Proposed Development	72	91
Potential Future Development	169	191
Site Subtotal	446	620
Reduction (10%) for Bus / Train / Shared Use	(-45)	(-62)
Revised Site Trip Generation	**401**	**558**
Permitted Trip Ends (2012 TMP – Reg. 01-00155-A-N)	734	1091
Difference Between Permitted and Proposed Site	**333**	**533**

As shown in Table 4, the total site uses after consideration of other modes of transportation are forecast to generate 401 trip ends during the AM peak hour and 558 trip ends during the PM peak hour. This yields an overall site trip generation that is 333 trip ends less than the permitted trip generation during the AM peak hour and 533 trip ends less than the permitted trip generation during the PM peak hour.

Attachments:
- Campus Directory
- Trip Generation

u:\3948_thompson's point_portland\n traffic\final trip gen evaluation-06-13-22.docx

LEGEND

1. PORTLAND TRANSPORTION CENTER
2. PORTLAND TRAILS - Multi-Use
   Connection to Fore River Parkway and Sewall Street
3. PORTLAND TRAILS - Fore River Trailhead
4. BRICK NORTH - Mixed Use
   - 4A. Halo At The Point - Event Space
   - 4B. Big Room Studios
   - 4C. Color Me Mine
   - 4D. Stroudwater Distillery
   - 4E. International Cryptozoology Museum
   - 4F. Bissell Brothers Kitchen
   - 4G. Bissell Brothers Brewing
   - 4H. Rosemont Market & Wine Bar
   - 4I. Rwanda Bean Coffee
5. THE GROVE
   Featuring "Tree Of 40 Fruit"
6. CHILDREN'S MUSEUM & THEATRE OF MAINE
7. BRICK SOUTH - Event Venue
   - 7A. Brick South Beer Garden
8. DEPOT PAVILION & CONCESSIONS
   - 8A. Seasonal Warming Hut & Bar
   - 8B. Portland Trails Parklet
   - 8C. Outdoor Event Lawn
9. METRO BUS STOP
   - 9A. SHELTER



PAY & DISPLAY KIOSK
Enforcement Rules In Effect 24/7

PASSPORT PARKING ZONE # 1213
Enforcement Rules In Effect 24/7

THOMPSON'S POINT

THOMPSON'S POINT CAMPUS DIRECTORY

PORTLAND, ME

Page 1681

Big Room Studios

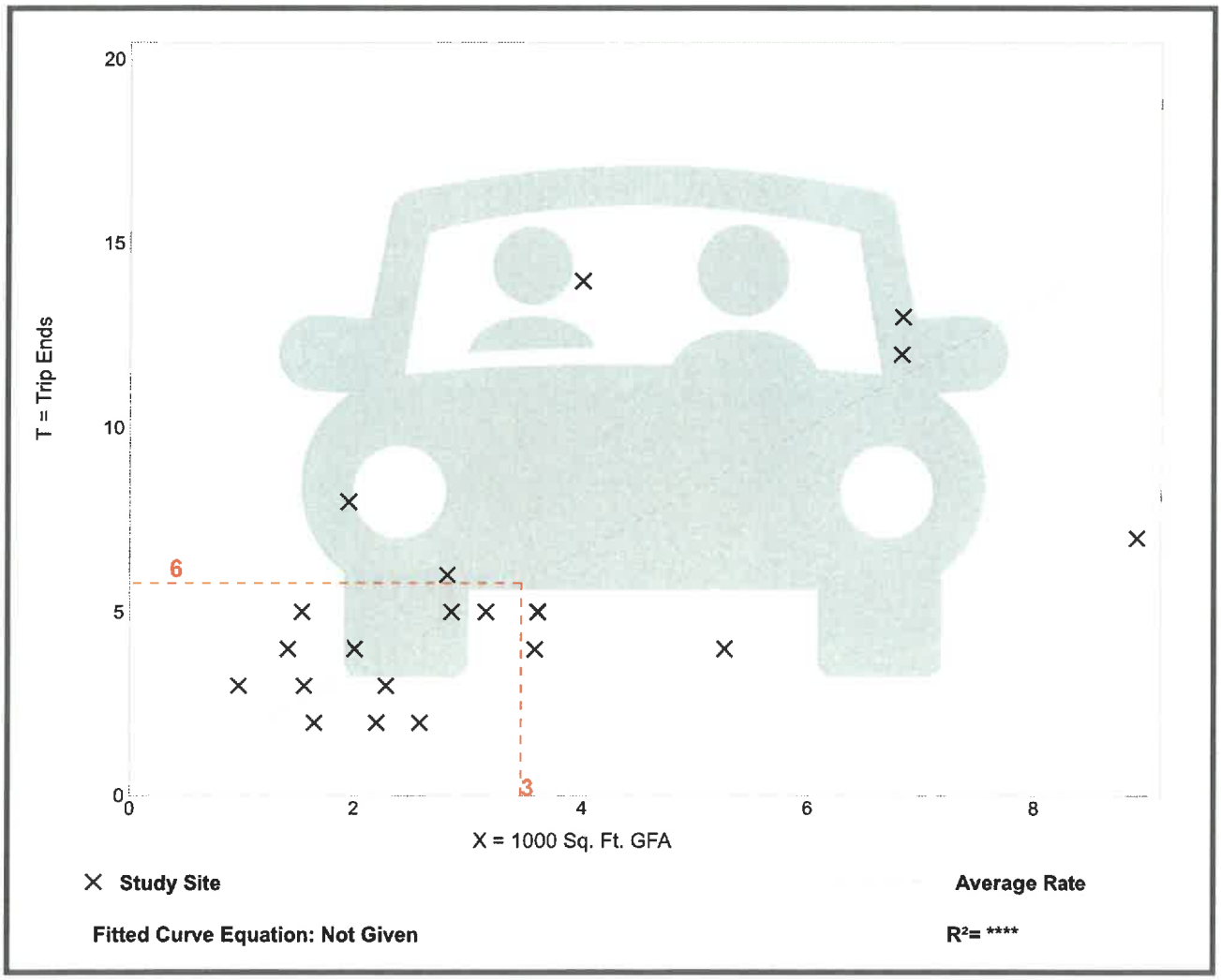
Small Office Building
(712)

Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 21
Avg. 1000 Sq. Ft. GFA: 3
Directional Distribution: 82% entering, 18% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
1.67	0.76 - 4.12	0.88

Data Plot and Equation



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Big Room Studios

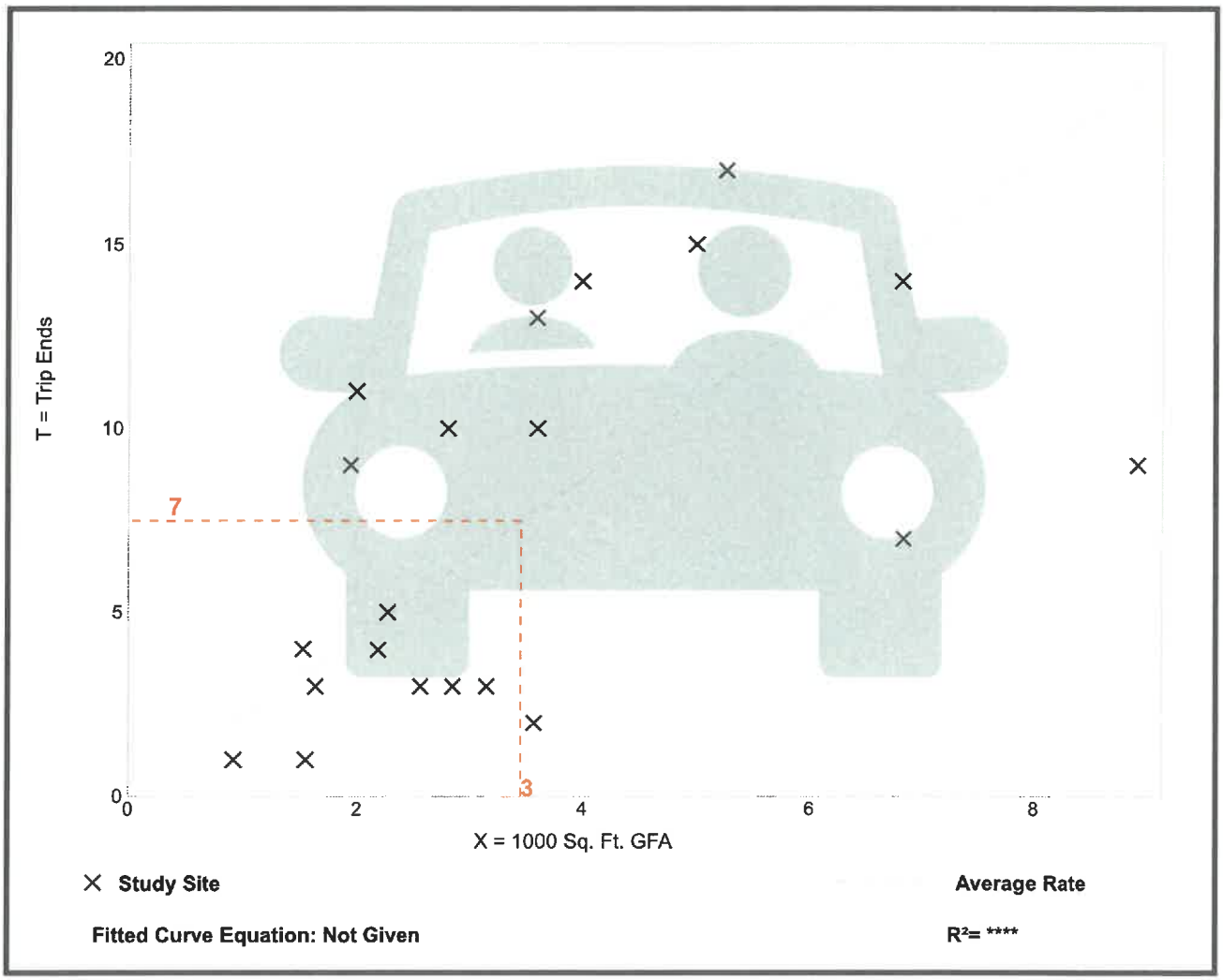
Small Office Building
(712)

Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 21
Avg. 1000 Sq. Ft. GFA: 3
Directional Distribution: 34% entering, 66% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
2.16	0.56 - 5.50	1.26

Data Plot and Equation



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Bissell
(1900# + 7 Emp)

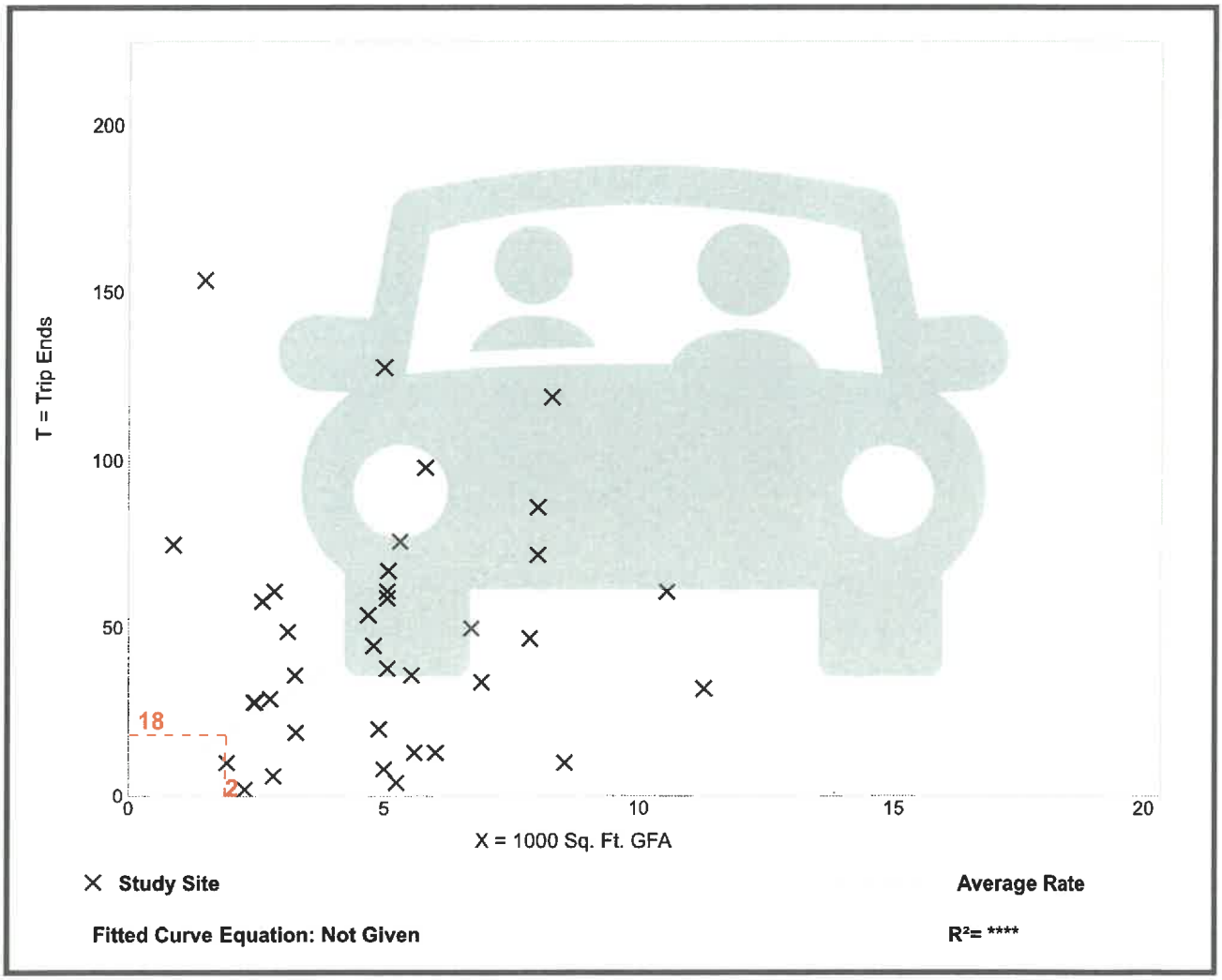
High-Turnover (Sit-Down) Restaurant
(932)

Vehicle Trip Ends vs:	**1000 Sq. Ft. GFA**
On a:	**Weekday,**
	Peak Hour of Adjacent Street Traffic,
	One Hour Between 7 and 9 a.m.
Setting/Location:	**General Urban/Suburban**
Number of Studies:	37
Avg. 1000 Sq. Ft. GFA:	5
Directional Distribution:	55% entering, 45% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
9.57	0.76 - 102.39	11.61

Data Plot and Equation



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Bissell
(1900# + 7 Emp)

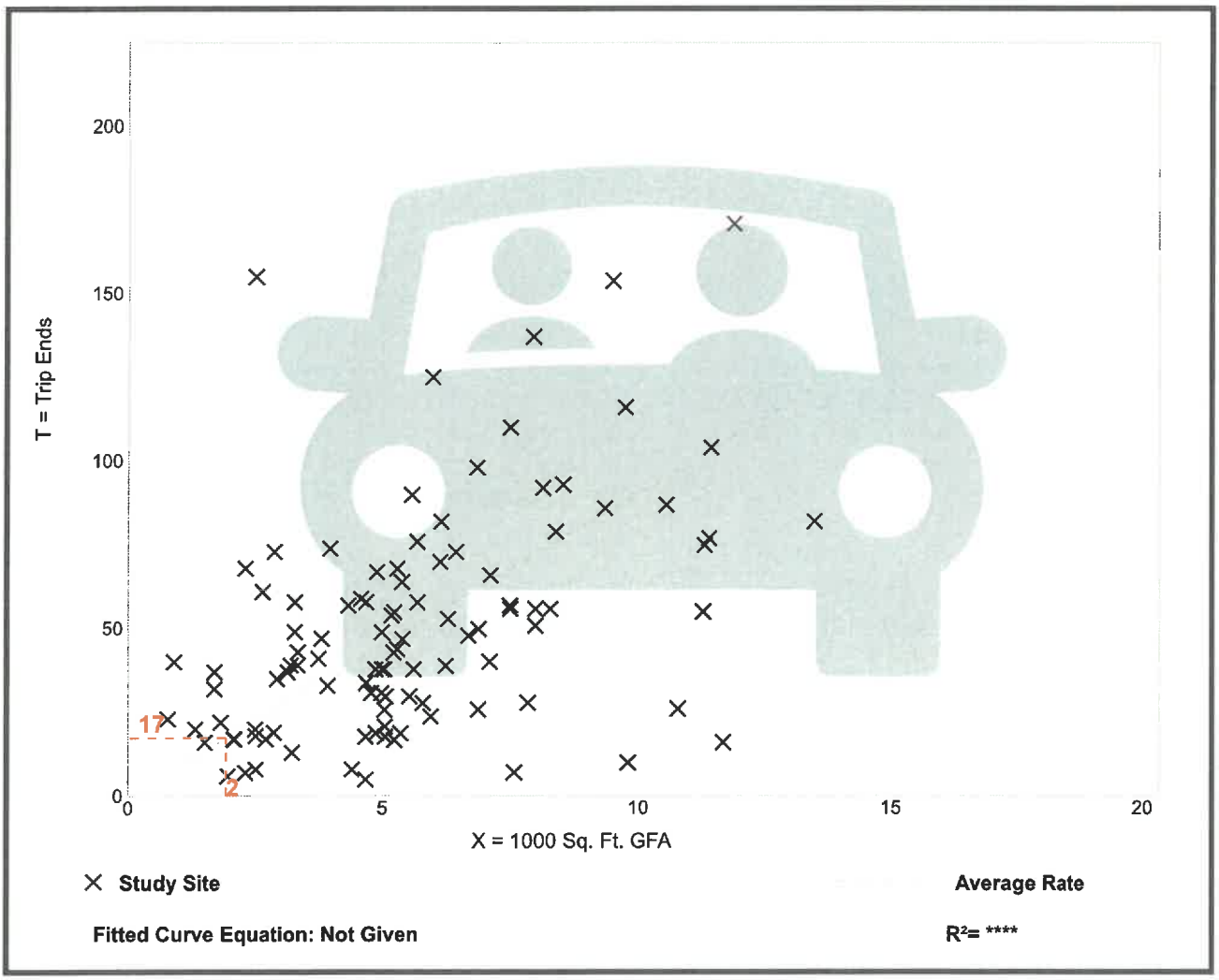
High-Turnover (Sit-Down) Restaurant
(932)

Vehicle Trip Ends vs:	**1000 Sq. Ft. GFA**
On a:	**Weekday,**
	Peak Hour of Adjacent Street Traffic,
	One Hour Between 4 and 6 p.m.
Setting/Location:	**General Urban/Suburban**
Number of Studies:	104
Avg. 1000 Sq. Ft. GFA:	6
Directional Distribution:	61% entering, 39% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
9.05	0.92 - 62.00	6.18

Data Plot and Equation



Distillery
(1200# +5)

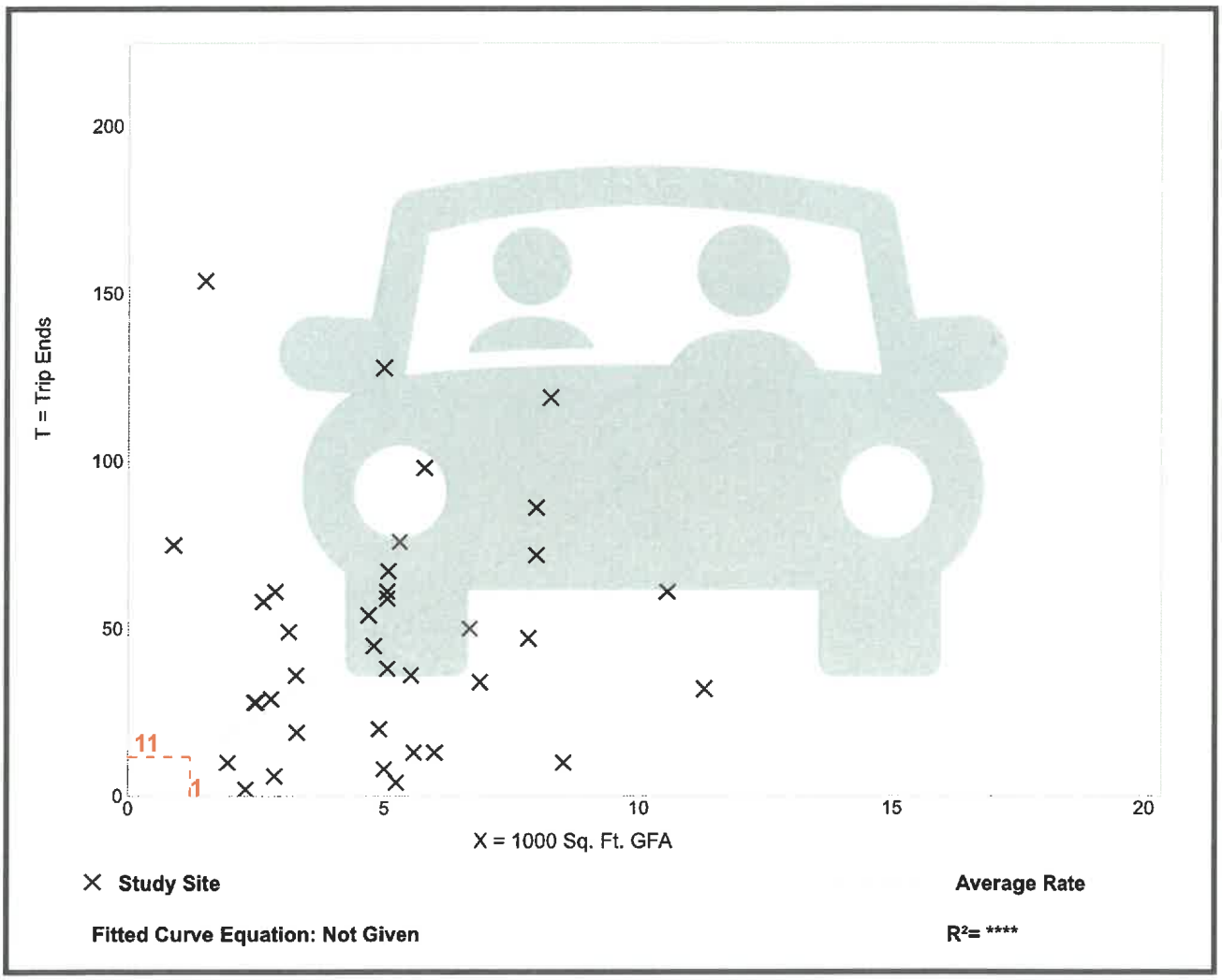
High-Turnover (Sit-Down) Restaurant
(932)

Vehicle Trip Ends vs:	**1000 Sq. Ft. GFA**
On a:	**Weekday,**
	Peak Hour of Adjacent Street Traffic,
	One Hour Between 7 and 9 a.m.
Setting/Location:	**General Urban/Suburban**
Number of Studies:	37
Avg. 1000 Sq. Ft. GFA:	5
Directional Distribution:	55% entering, 45% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
9.57	0.76 - 102.39	11.61

Data Plot and Equation



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Distillery
(1200# +5)

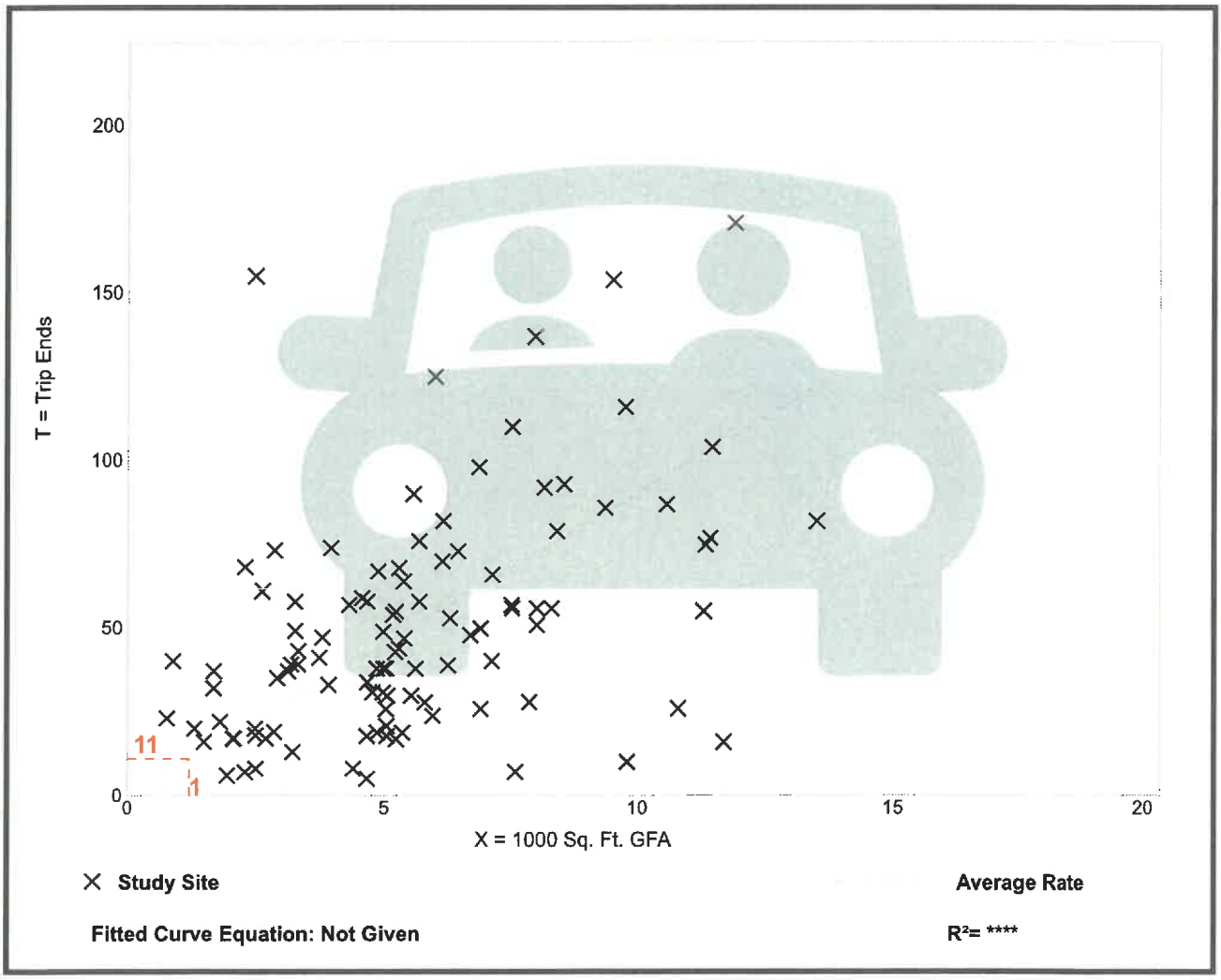
High-Turnover (Sit-Down) Restaurant
(932)

Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 104
Avg. 1000 Sq. Ft. GFA: 6
Directional Distribution: 61% entering, 39% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
9.05	0.92 - 62.00	6.18

Data Plot and Equation



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Building F1

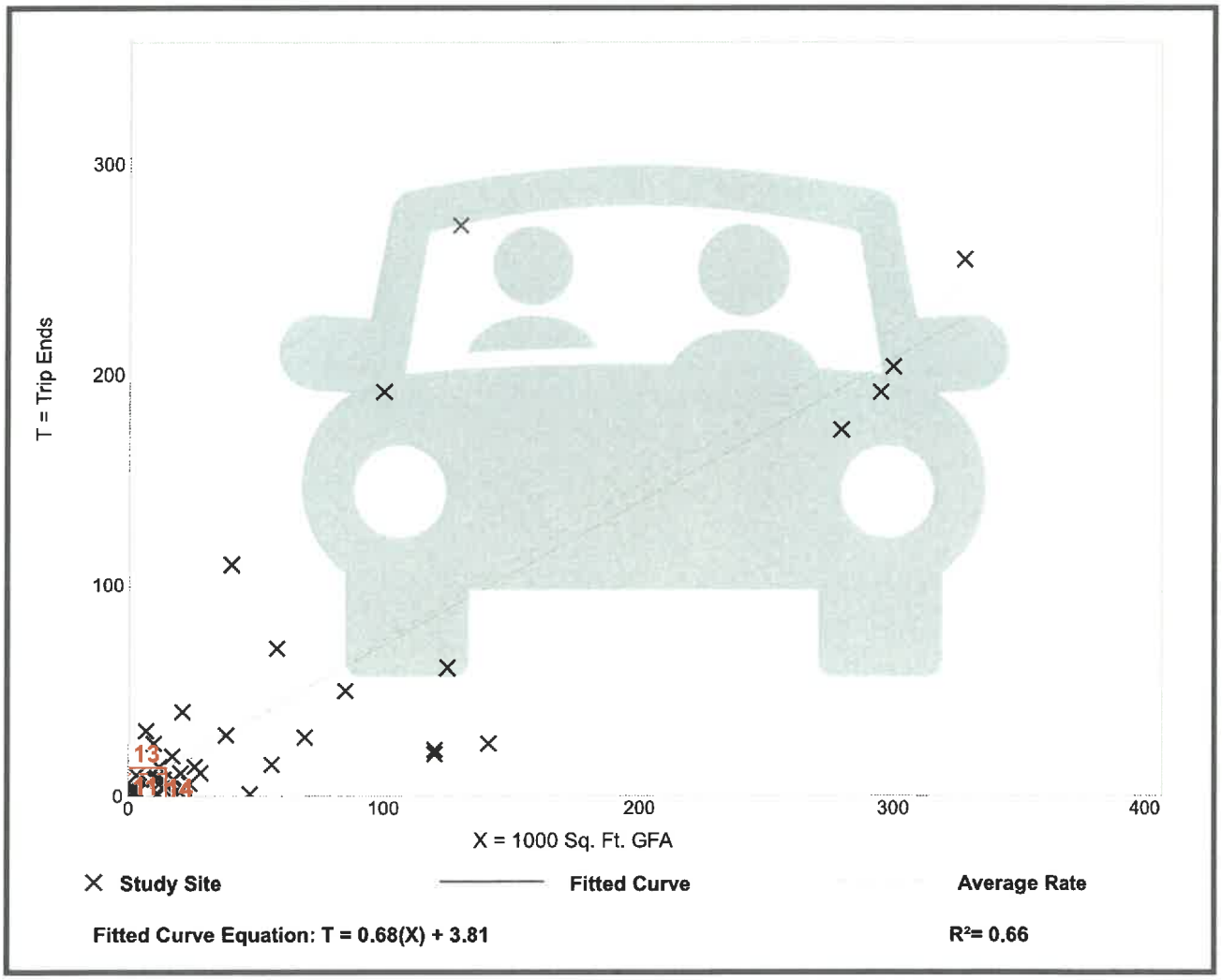
General Light Industrial
(110)

Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 41
Avg. 1000 Sq. Ft. GFA: 65
Directional Distribution: 88% entering, 12% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
0.74	0.02 - 4.46	0.61

Data Plot and Equation



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Building F1

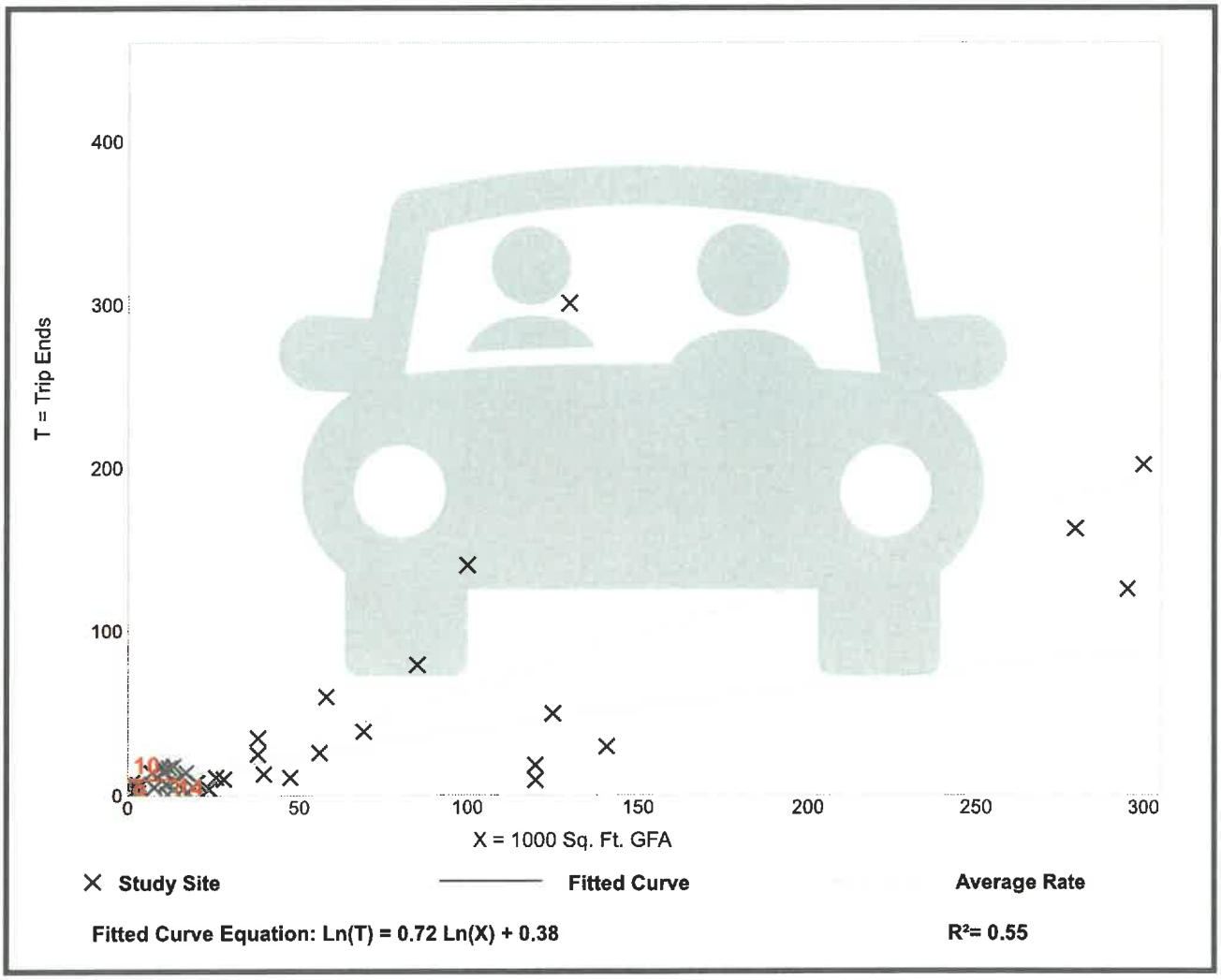
General Light Industrial
(110)

Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 40
Avg. 1000 Sq. Ft. GFA: 58
Directional Distribution: 14% entering, 86% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
0.65	0.07 - 7.02	0.56

Data Plot and Equation



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Building F2

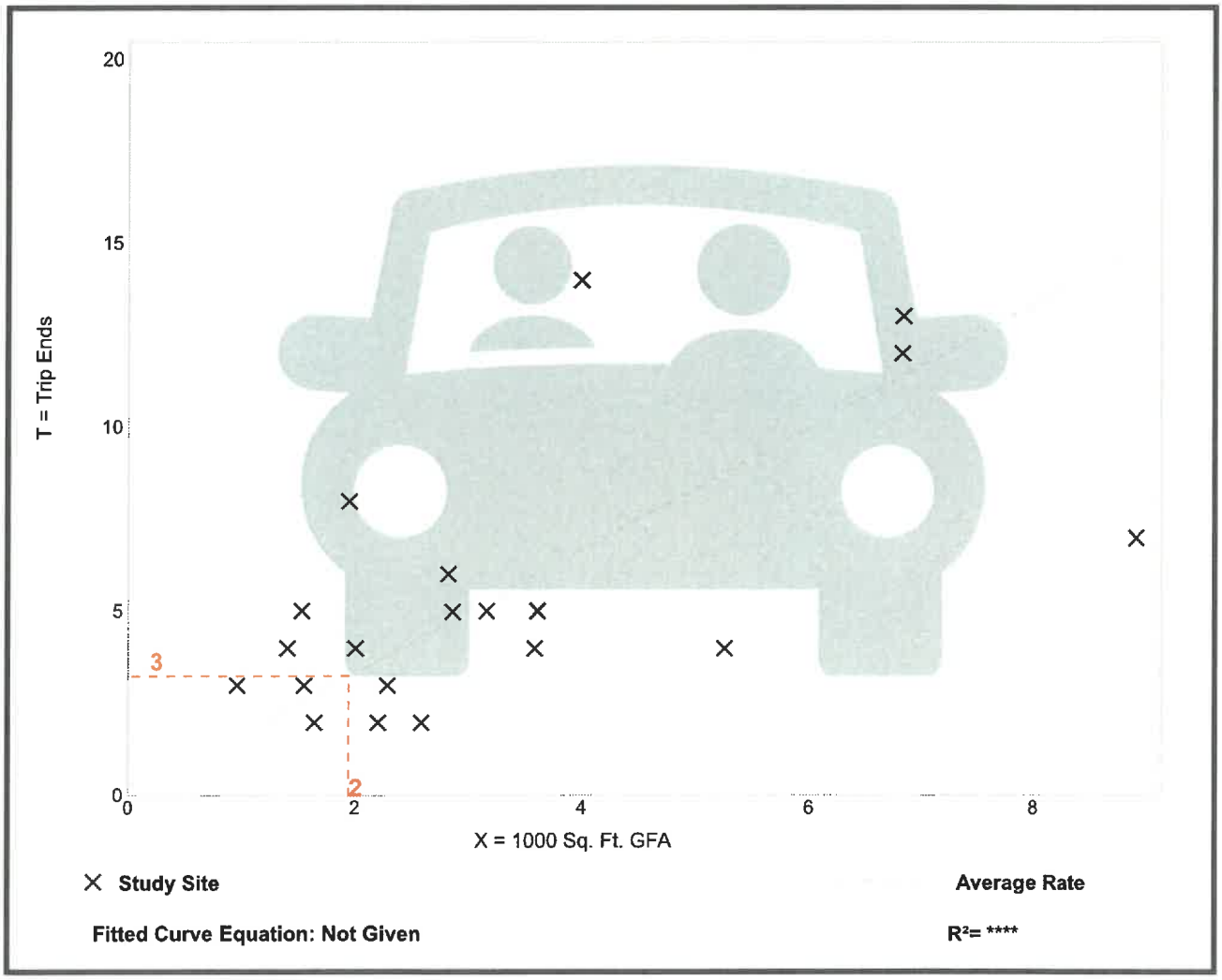
Small Office Building
(712)

Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 21
Avg. 1000 Sq. Ft. GFA: 3
Directional Distribution: 82% entering, 18% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
1.67	0.76 - 4.12	0.88

Data Plot and Equation



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Building F2

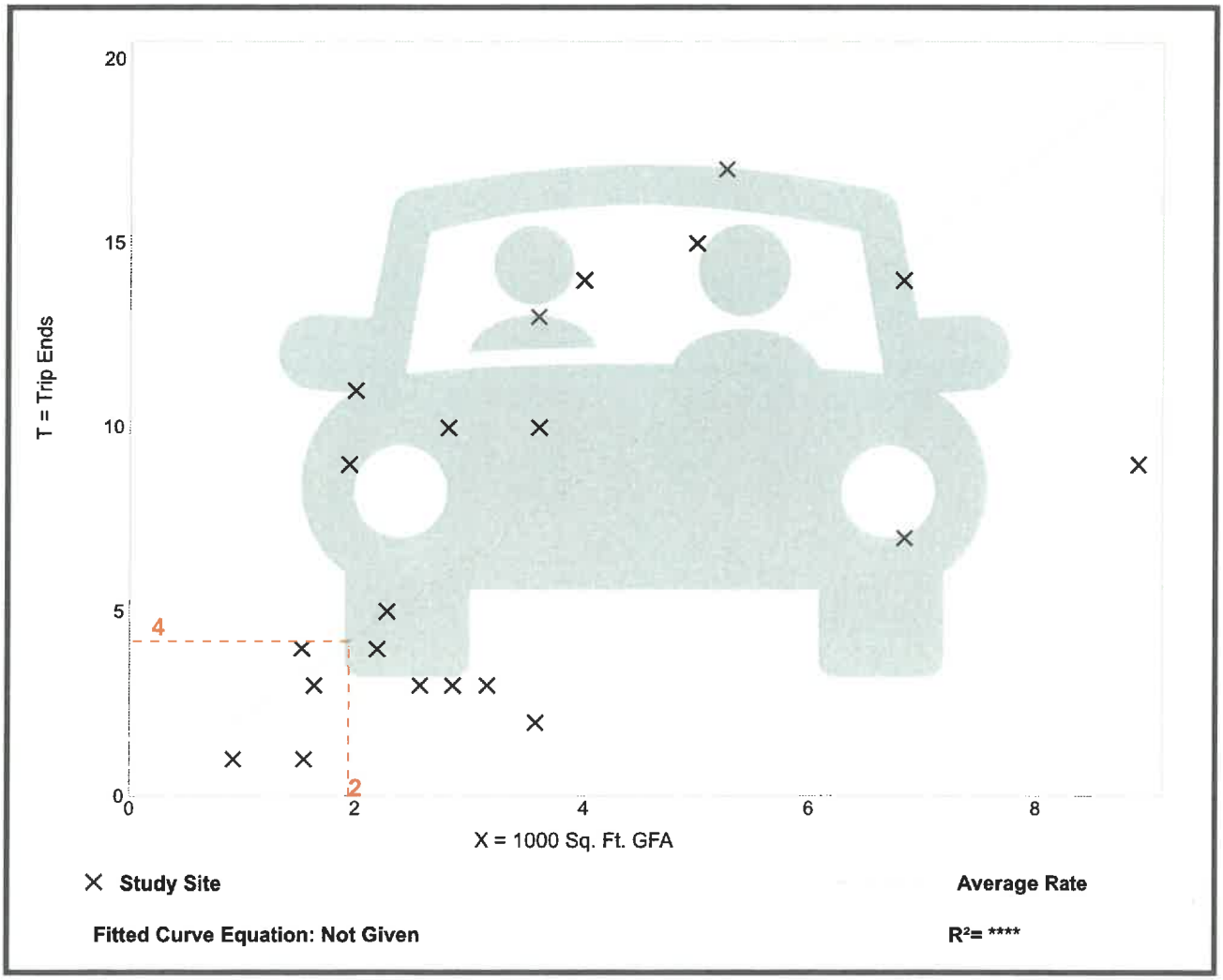
Small Office Building
(712)

Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 21
Avg. 1000 Sq. Ft. GFA: 3
Directional Distribution: 34% entering, 66% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
2.16	0.56 - 5.50	1.26

Data Plot and Equation



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Building D & K

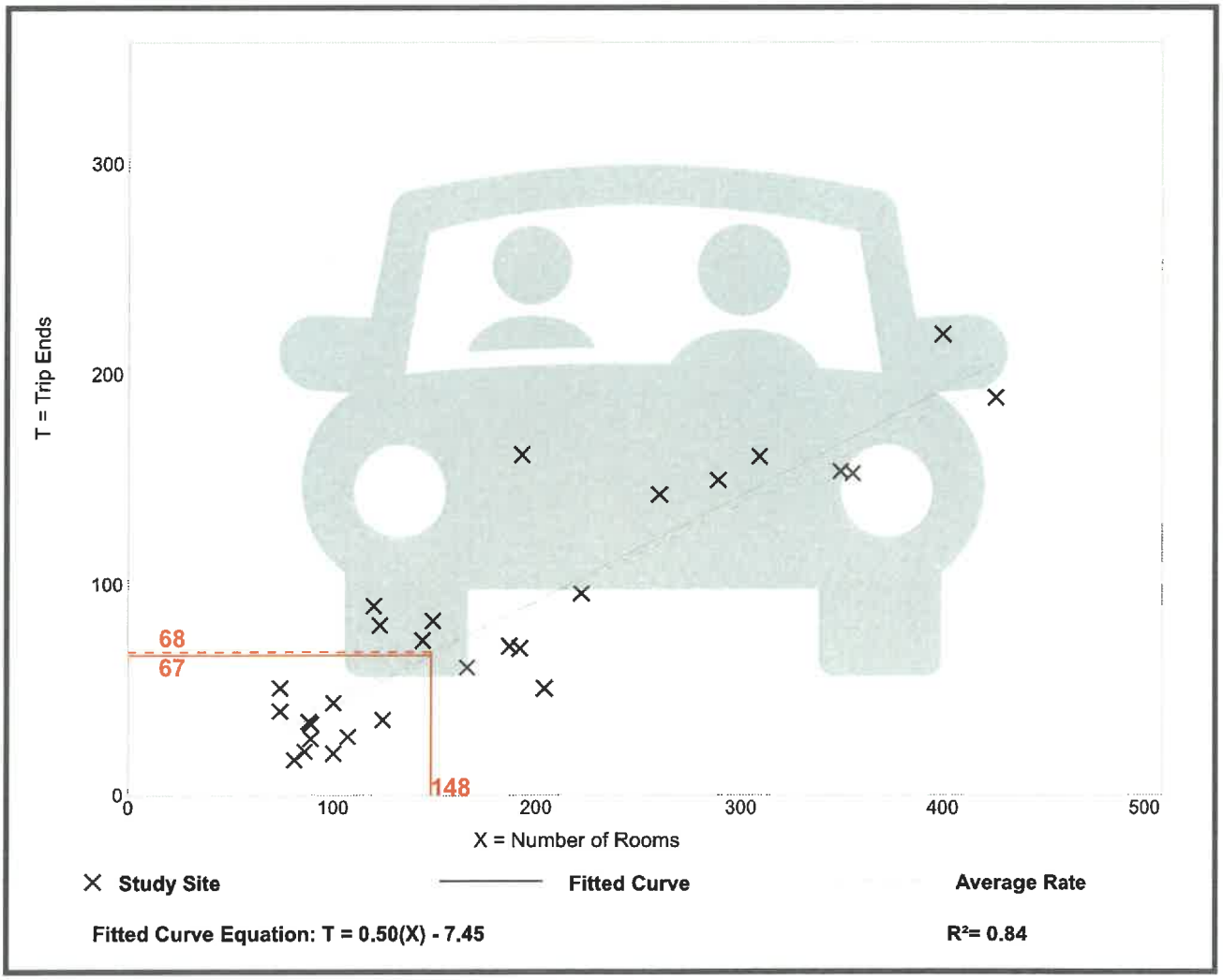
Hotel
(310)

Vehicle Trip Ends vs:	**Rooms**
On a:	**Weekday,**
	Peak Hour of Adjacent Street Traffic,
	One Hour Between 7 and 9 a.m.
Setting/Location:	**General Urban/Suburban**
Number of Studies:	28
Avg. Num. of Rooms:	182
Directional Distribution:	56% entering, 44% exiting

Vehicle Trip Generation per Room

Average Rate	Range of Rates	Standard Deviation
0.46	0.20 - 0.84	0.14

Data Plot and Equation



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Building D & K

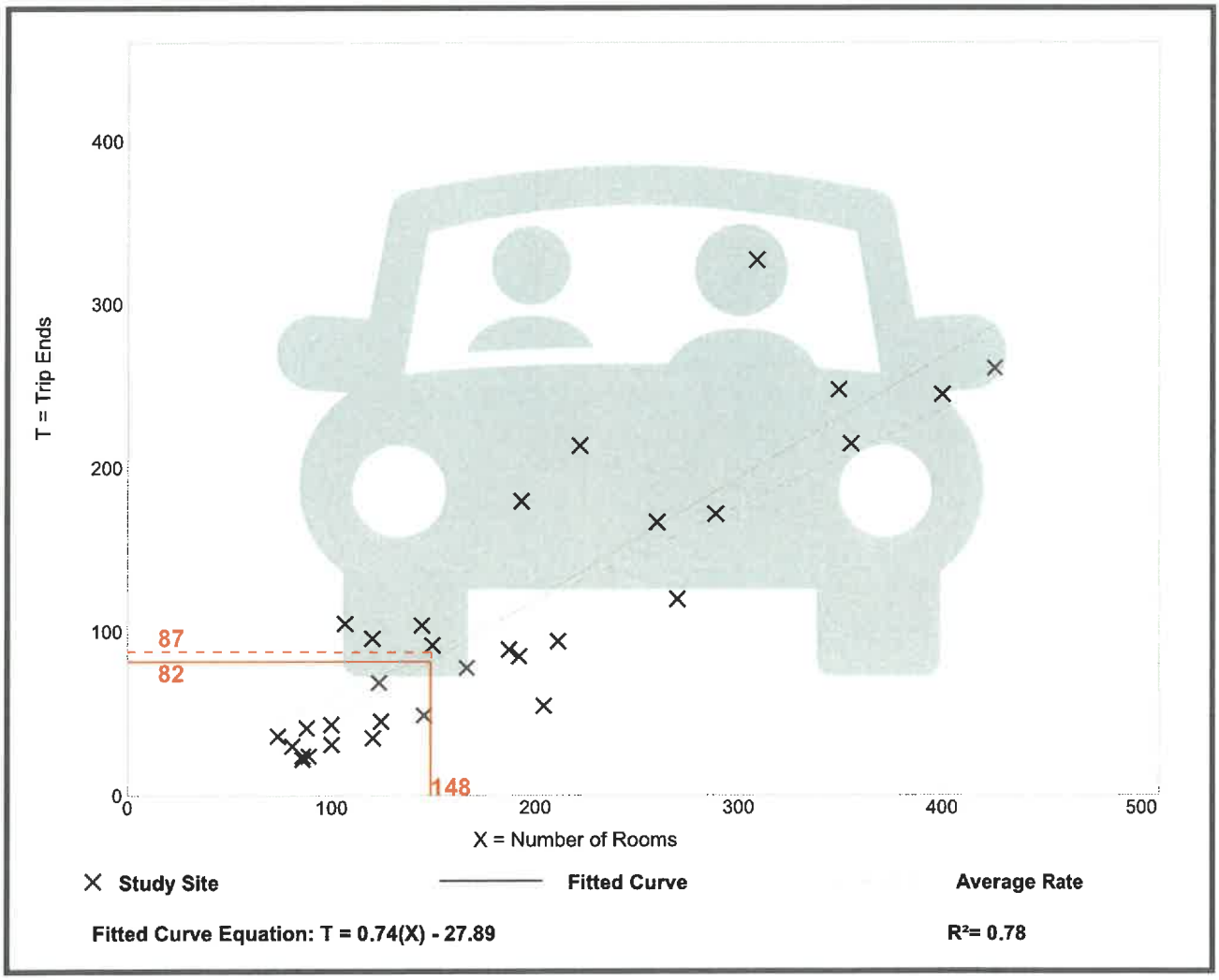
Hotel
(310)

Vehicle Trip Ends vs:	**Rooms**
On a:	**Weekday,**
	Peak Hour of Adjacent Street Traffic,
	One Hour Between 4 and 6 p.m.
Setting/Location:	**General Urban/Suburban**
Number of Studies:	31
Avg. Num. of Rooms:	186
Directional Distribution:	51% entering, 49% exiting

Vehicle Trip Generation per Room

Average Rate	Range of Rates	Standard Deviation
0.59	0.26 - 1.06	0.22

Data Plot and Equation



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Apartments

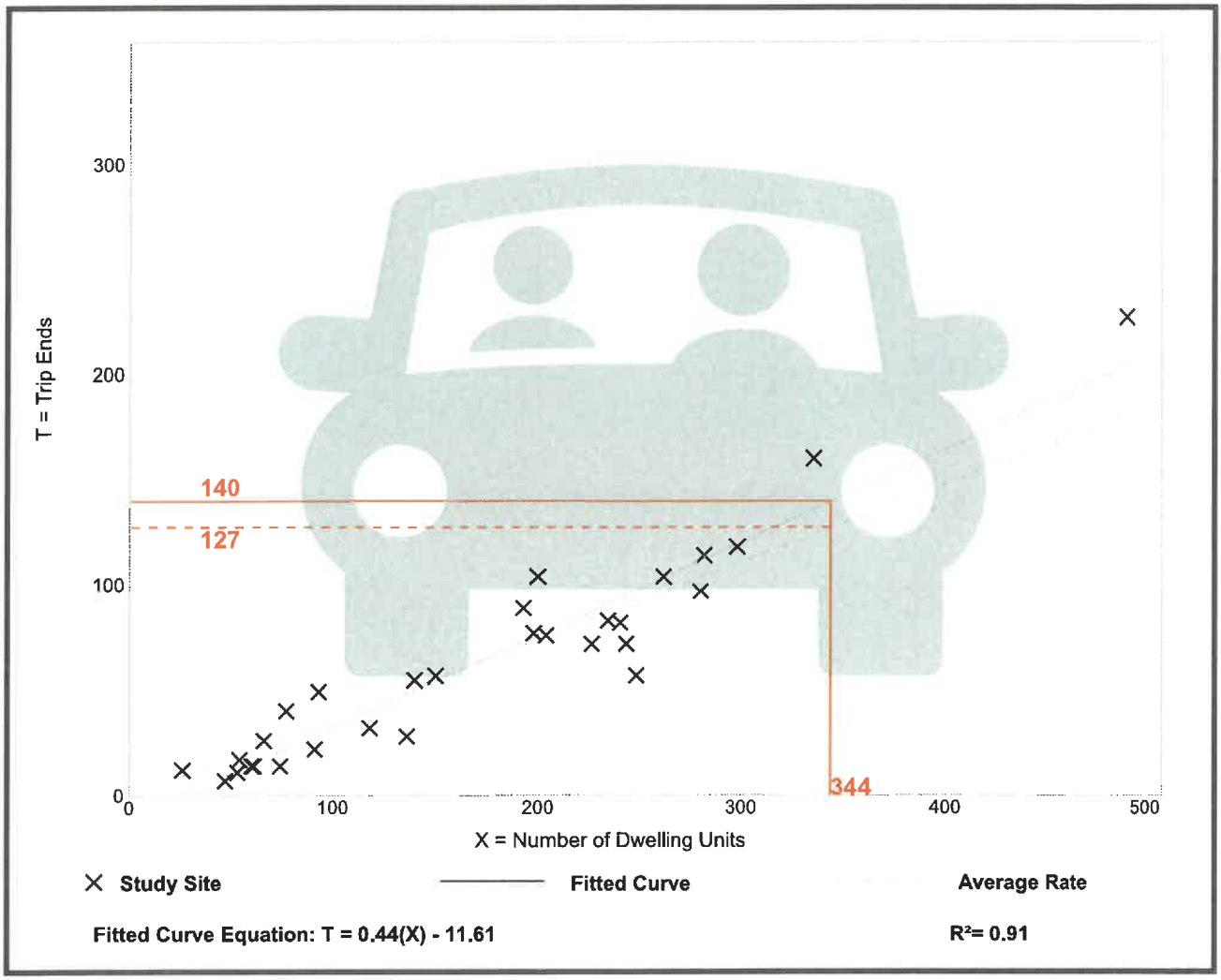
Multifamily Housing (Mid-Rise)
Not Close to Rail Transit (221)

Vehicle Trip Ends vs: **Dwelling Units**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 30
Avg. Num. of Dwelling Units: 173
Directional Distribution: 23% entering, 77% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.37	0.15 - 0.53	0.09

Data Plot and Equation



Trip Gen Manual, 11th Edition • Institute of Transportation Engineers

Apartments

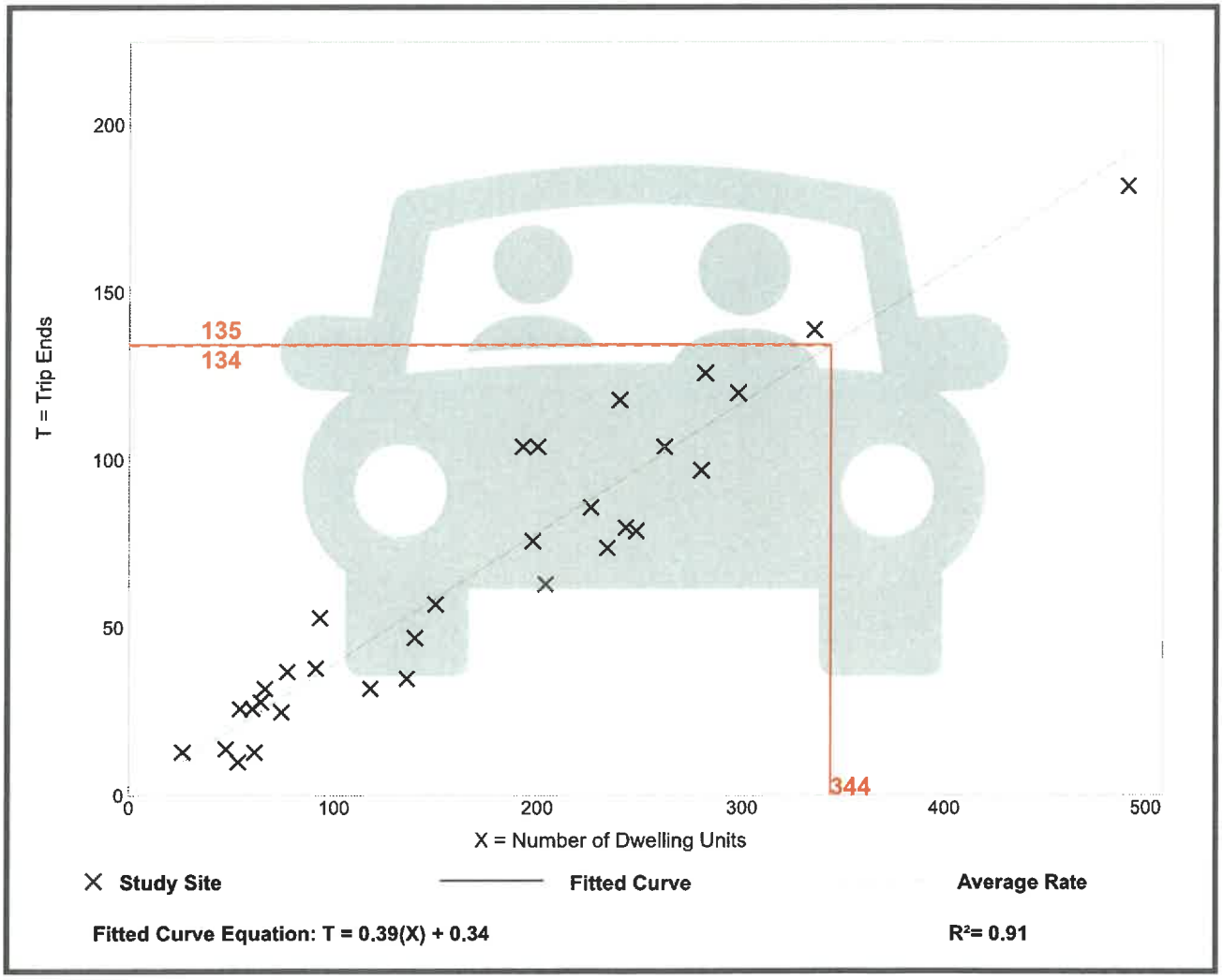
Multifamily Housing (Mid-Rise)
Not Close to Rail Transit (221)

Vehicle Trip Ends vs: **Dwelling Units**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 31
Avg. Num. of Dwelling Units: 169
Directional Distribution: 61% entering, 39% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.39	0.19 - 0.57	0.08

Data Plot and Equation



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Attachment C

Trip Generation and Parking Demand Summary – April 2020

GORRILL PALMER

707 Sable Oaks Drive, Suite 30
South Portland, Maine 04106
207.772.2515

Trip Generation and Parking Demand Summary
Thompson's Point
April 2020

Date: May 14, 2020
Subject: Updated Trip Generation and Parking Demand
Thompson's Point
To: Bo Kennedy, Placemaker Partners, LLC
From: Randy Dunton / Emily Leighton, Gorrill Palmer (JN 3646)

Gorrill Palmer (GP) has prepared this updated trip generation and parking demand summary for the Thompson's Point development in Portland, Maine. The full build out of the project received a MaineDOT Traffic Movement Permit (TMP) in 2012 (Reg. 01-00155-A-N) for 734 trip ends during the AM peak hour and 1,091 trip ends during the PM peak hour. The project is being constructed in phases and each phase must be evaluated to ensure that the total site trip generation does not exceed the permitted trip generation. The following is a summary of the forecast trip generation and parking demand for the existing and previously approved uses, the proposed Buildings K and F1, the renovation of Buildings L and F2, and the proposed Building B2 that replaces existing mobile stations. A site plan is attached showing the location of each building. Additionally, the following includes a comparison of the total trip generation to the permitted trip generation.

Existing and Previously Evaluated Trip Generation Summary

The trip generation for the existing Thompson's Point site has been based on information provided by Bo Kennedy in an email dated August 22, 2017. The trip generation was calculated using the same methodology as that used in previous trip generation evaluations for the site, including using the Institute of Transportation Engineers' publication, *Trip Generation*, 7th Edition and applying a 10% reduction to the total site trip generation to account for other modes of transportation and shared uses on the site. The following table summarizes the trip generation for the existing site:

Existing Site Trip Generation

Building	Description	Size	AM Peak Hour	PM Peak Hour
Brick North				
	Winery	5,890 sf	4	16
	Halo (Event Space)	400 attendees	16	31
	Big Room Studios	3,461 sf	13	20
	Locally Sauced (formerly Big J's Chicken)	1,852 sf	21	20
	Brewery	10,068 sf	7	7
	Distillery	5,284 sf	4	4
	Color Me Mine	2,136 sf	2	6
	International Cryptozoology Museum	993 sf	1	1
	Brick North Total		**68**	**105**

Brick South				
	Event/Assembly Space	2,500 Seats	100	195
	Annex	7,384 sf	--*	--*
	Brick South Total		**100**	**195**
Hotel				
	Hotel	148 Rooms	83	87
	Proposed Total		**83**	**87**
Under Construction				
	Children's Museum	29,096 sf	33	33
	Under Construction Total		**33**	**33**
Approved Subtotal			**284**	**420**

*Maximum of 2,500 people in the building for events. Highest trip generation would be an event in the Event space, not the Annex.

As shown in the table, the existing site is forecast to generate 284 trip ends during the AM peak hour and 420 trip ends during the PM peak hour.

Proposed Site Trip Generation

The trip generation for the proposed uses has been based on the following:

- Building K – New Construction
  - Proposed Inn: 61 rooms + potential 22 room expansion
- Building F1 – New Construction
  - Proposed Warehouse: 14,200 sf
- Building L – Renovation
  - Existing Office: 4,000 sf
  - Existing Storage: 1,760 sf
  - Proposed Office: 4,000 sf
  - Proposed Event Space: 1,760 sf / 100 attendees maximum
- Building F2 – Renovation
  - Existing Garage Workspace: 1,940 sf
  - Proposed Artist Studio Space: 1,940 sf
- Building B2 – Replacement of Temporary Structures
  - Existing: Seasonal concession stands
  - Proposed Concession Building: 2,800 sf

The trip generation has also been based on the following assumptions:

- Building K:
  - The Inn is proposed to include a bar that is intended to serve primarily guests of the inn and potentially guests of other Thompson's Point uses. However, it is not anticipated to draw significant outside traffic, so the trip generation for the bar is forecast to be negligible.
- Building F2:
  - The proposed artist studio space in Building F2 is anticipated to operate most similarly to a shared office space, although this is likely a conservative assumption, since all users are not expected to enter and exit the site during the AM and PM peak hours and are more likely to be distributed throughout the day. It may be used as meeting or assembly space for less than 100 people, however the trip generation as an event space would be less than the trip generation forecast as an office.

- Building B2:
    - This building replaces existing temporary facilities and is intended to supplement existing uses on site. The proposed building will be open daily independently of the licensed seasonal uses. The building as proposed is consistent, albeit slightly smaller, than the building included in the approved Master Development Plan. For the purposes of trip generation and parking demand, it has been assumed that this use will often serve as a supplemental use to the existing activity on site, that will generate its own site traffic and parking demand.

The trip generation for the proposed uses was calculated using the same methodology as that used to calculate the trip generation in the original master plan. It should be noted that MaineDOT allows trip generation credit to be taken for existing uses on the site that have been operational within the last 10 years, so the trip generation for the existing building uses has been subtracted from the trip generation for the proposed building uses. The following table summarizes the trip generation for the proposed uses:

Proposed Site Addition Trip Generation

Building	Description	Size	AM Peak Hour	PM Peak Hour
Building K				
	Inn	61 Rooms	34	36
	Inn Expansion	22 Rooms	12	13
	Building K Total		**46**	**49**
Building F1				
	Warehouse	14,200 sf	6	7
	Building F1 Total		**6**	**7**
Building F2				
	Proposed Artist Studio	1,940 sf	8	8
	Existing Garage Space (Credit)	1,940 sf	(-6)	(-7)
	Building F2 Total		**2**	**1**
Building L				
	Proposed Office	4,000 sf	14	13
	Proposed Event Space	100 attendees	4	8
	Existing Office (Credit)	4,000 sf	(-14)	(-13)
	Existing Storage	1,760 sf	0*	0*
	Building L Total		**0**	**0**
Building B2				
	Concession Building	2,800 sf	32	31
	Building B2 Total		**32**	**31**
Proposed Addition Trip Generation			**90**	**96**

*Trip generation assumed to be negligible.

As shown in the table, the proposed uses are forecast to generate an additional 90 trip ends and 96 trip ends during the AM and PM peak hours of the adjacent street, respectively.

Site Trip Generation

The trip generation for the existing site has been combined with the trip generation for the proposed new and remodeled buildings to yield the site trip generation. The total site trip generation after the construction of the Inn has been compared to the permitted trip generation to identify the remaining available permitted trips.

Site Trip Generation Summary

Site	Building	AM Peak Hour	PM Peak Hour
Existing			
	Brick North	68	105
	Brick South	100	195
	Hotel	83	87
	Children's Museum	33	33
	Existing Total	**284**	**420**
Proposed			
	Building K (Including Future Expansion)	46	49
	Building F1	6	7
	Building F2	2	1
	Building L	4	8
	Building B2	32	31
	Proposed Total	**90**	**96**
Proposed Site Subtotal		**374**	**516**
Reduction (10%) for Bus / Train / Shared Use		(-37)	(-52)
Proposed Site Trip Generation		**337**	**464**
Permitted Trip Ends		734	1091
Difference Between Permitted and Proposed Site		**397**	**627**

As shown in the table the proposed site uses are forecast to generate 337 trip ends during the AM peak hour and 464 trip ends during the PM peak hour. This yields an overall trip generation that is 397 trip ends less than the permitted trip generation during the AM peak hour and 627 trip ends less than the permitted trip generation during the PM peak hour.

Parking Demand

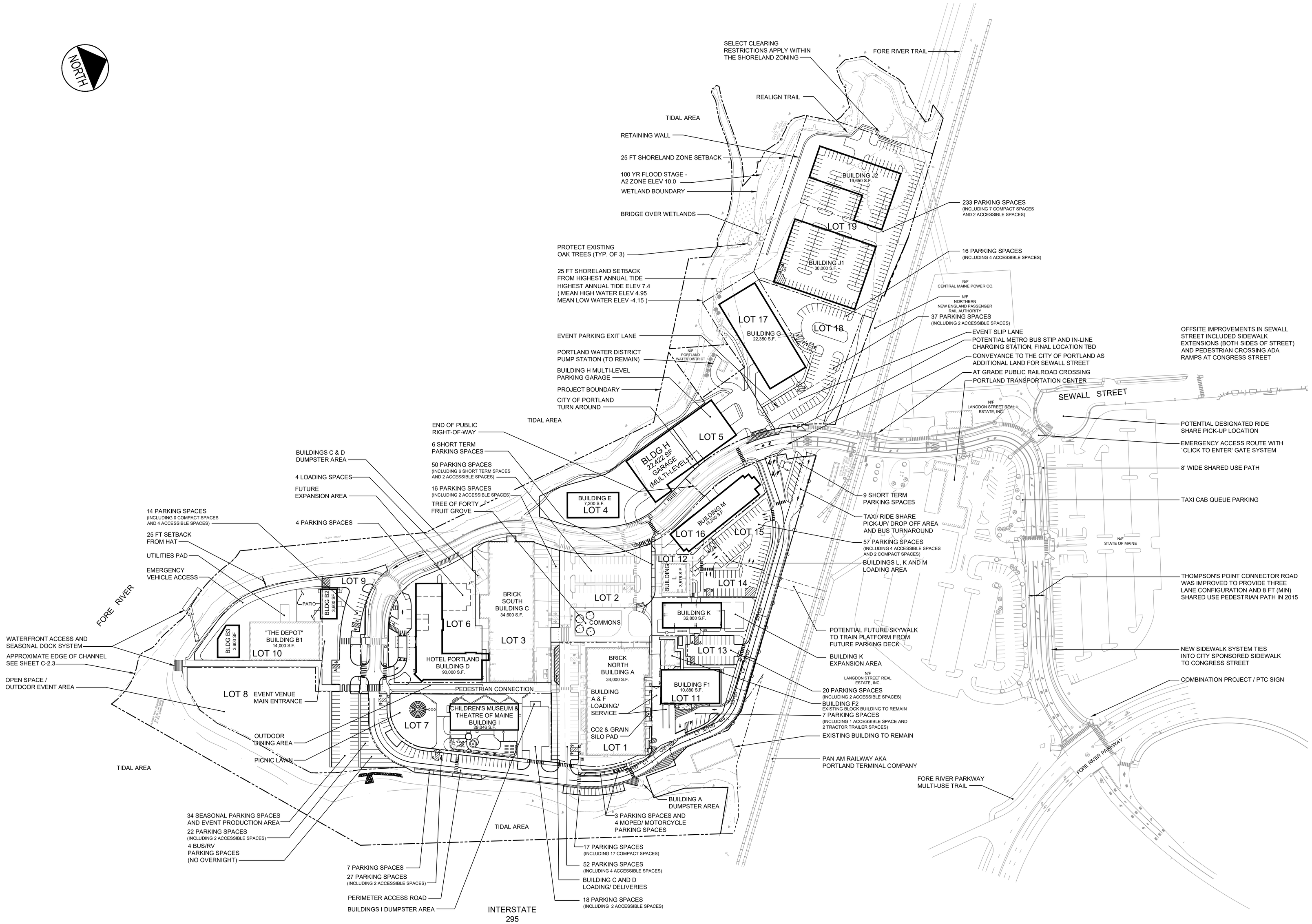
The parking demand for the site with the proposed additions added has been calculated using the same methodology as that used in the Master Development Plan. The parking demand is based on shared parking methodology, which assumes that parking spaces are not designated for specific uses or businesses, and can be used by any vehicles visiting the site. This methodology is very beneficial for mixed use developments with complementary uses such as office, whose parking demand is higher during the day, and hotel, whose parking demand is higher overnight. The attached parking demand calculations show the detailed time of day distribution for each use and the forecast shared demand. Based on the calculations the peak parking demand for the site (without an event in Brick South or Halo) is 193 spaces and is anticipated to occur at 5:00 PM. As identified in the approval for the master development plan, when special events of a certain attendance threshold occur, additional parking measures will be implemented on an as needed basis.

Conclusions

The following is a summary of the conclusions:

1. The site (including existing and proposed uses) is forecast to generate a total of 337 trip ends during the AM peak hour and 464 trip ends. This trip generation is 397 trip ends less than the permitted trip generation during the AM peak hour and 627 trip ends less than the permitted trip generation during the PM peak hour.

2. The peak parking demand for the site after the additional development is forecast to be 193 parking spaces and is forecast to occur at 5:00 PM.



PRELIMINARY – NOT FOR CONSTRUCTION

REV	DATE	DESCRIPTION
1	10/09/2019	UPDATES TO BUILDINGS F, K AND B

REVISIONS

XX.XX.XX
P.E. BO KENNEDY
LIC. #11994

PROJECT
THE FOREFRONT AT THOMPSON'S POINT
MASTER PLAN

SHEET TITLE
OVERALL MASTER PLAN

CLIENT
FOREFRONT PARTNERS I, LP

PLACEMAKER PARTNERS, LLC
501 DANFORTH STREET
PORTLAND, ME 04102
bo@placemakerpartners.com

DRAWN: DB	DATE: MARCH 2018
DESIGNED: BEK	SCALE: 1" = 80'
FILE NAME: MASTER_SITE LAYOUT.dwg	
SHEET C-3.0	

JN: 3646
Project Description: Thompson's Point Update
Project Location: Portland, Maine
Date: 3/17/2020
Calculated By: EAL
Checked By:

Gorrill Palmer
707 Sable Oaks Drive
Suite 30
South Portland, Maine 04106

Hotel - Inn Building K
Land Use Code (LUC) 310

Rooms: 61

Average Rate

Time Period	ITE Trip Rate	Sample Size	Trip Ends	Directional Split*		Directional Distribution		R^2
				IN	OUT	IN	OUT	
Weekday	T = 8.17 (X)	10	498	50%	50%	249	249	-
AM Peak Adjacent Street	T = 0.56 (X)	20	34	60%	40%	20	14	-
PM Peak Adjacent Street	T = 0.59 (X)	25	36	55%	45%	20	16	-
AM Peak Hour of Generator	T = 0.52 (X)	32	32	55%	45%	17	15	-
PM Peak Hour of Generator	T = 0.61 (X)	35	37	60%	40%	22	15	-
Saturday	T = 8.19 (X)	8	500	50%	50%	250	250	-
Saturday Peak Hour of Gen.	T = 0.72 (X)	9	44	55%	45%	24	20	-

* Percentages rounded to nearest 5%

Fitted Curve Equation

Time Period	ITE Trip Rate	Sample Size	Trip Ends	Directional Split*		Directional Distribution		R^2
				IN	OUT	IN	OUT	
Weekday	T = 8.95 (X) - 373.16	10	173	50%	50%	87	86	0.98
AM Peak Hour of Adjacent Street Traffic	Ln(T) = 1.24 Ln(X) - 2.00	20	22	60%	40%	13	9	0.75
PM Peak Hour of Adjacent Street Traffic	--	25	--	55%	45%	--	--	--
AM Peak Hour of Generator	Ln(T) = 0.87 Ln(X) + 0.02	32	36	55%	45%	20	16	0.54
PM Peak Hour of Generator	Ln(T) = 1.00 Ln(X) - 0.58	35	34	60%	40%	20	14	0.64
Saturday	T = 9.62 (X) - 294.56	8	292	50%	50%	146	146	0.93
Saturday Peak Hour of Gen.	T = 0.69 (X) + 4.32	9	46	55%	45%	25	21	0.80

* Percentages rounded to nearest 5%

JN: 3646
Project Description: Thompson's Point Update
Project Location: Portland, Maine
Date: 3/17/2020
Calculated By: EAL
Checked By:

Gorrill Palmer
707 Sable Oaks Drive
Suite 30
South Portland, Maine 04106

Hotel - Inn Building K Expansion
Land Use Code (LUC) 310

Rooms: 22

Average Rate

Time Period	ITE Trip Rate	Sample Size	Trip Ends	Directional Split*		Directional Distribution		R^2
				IN	OUT	IN	OUT	
Weekday	T = 8.17 (X)	10	180	50%	50%	90	90	-
AM Peak Adjacent Street	T = 0.56 (X)	20	12	60%	40%	7	5	-
PM Peak Adjacent Street	T = 0.59 (X)	25	13	55%	45%	7	6	-
AM Peak Hour of Generator	T = 0.52 (X)	32	11	55%	45%	6	5	-
PM Peak Hour of Generator	T = 0.61 (X)	35	13	60%	40%	8	5	-
Saturday	T = 8.19 (X)	8	180	50%	50%	90	90	-
Saturday Peak Hour of Gen.	T = 0.72 (X)	9	16	55%	45%	9	7	-

* Percentages rounded to nearest 5%

Fitted Curve Equation

Time Period	ITE Trip Rate	Sample Size	Trip Ends	Directional Split*		Directional Distribution		R^2
				IN	OUT	IN	OUT	
Weekday	T = 8.95 (X) - 373.16	10	-176	50%	50%	-88	-88	0.98
AM Peak Hour of Adjacent Street Traffic	Ln(T) = 1.24 Ln(X) - 2.00	20	6	60%	40%	4	2	0.75
PM Peak Hour of Adjacent Street Traffic	--	25	--	55%	45%	--	--	--
AM Peak Hour of Generator	Ln(T) = 0.87 Ln(X) + 0.02	32	15	55%	45%	8	7	0.54
PM Peak Hour of Generator	Ln(T) = 1.00 Ln(X) - 0.58	35	12	60%	40%	7	5	0.64
Saturday	T = 9.62 (X) - 294.56	8	-83	50%	50%	-42	-41	0.93
Saturday Peak Hour of Gen.	T = 0.69 (X) + 4.32	9	20	55%	45%	11	9	0.80

* Percentages rounded to nearest 5%

JN: 3646
Project Description: Thompson's Point Update
Project Location: Portland, Maine
Date: 3/17/2020

Gorrill Palmer
707 Sable Oaks Drive
Suite 30
South Portland, Maine 04106

Warehousing - Building F1
Land Use Code (LUC) 150

Gross Floor Area (ft^2): 14,200

Fitted Curve

Time Period	ITE Trip Rate	Trip Ends	Sample Size	Directional Split* IN	Directional Split* OUT	Directional Distribution IN	Directional Distribution OUT	R^2
Weekday	T = 3.68 (X) + 350.27	403	16	50%	50%	202	201	0.82
AM Peak Adjacent Street	Ln(T) = 0.71 Ln(X) + 1.15	21	19	80%	20%	17	4	0.79
PM Peak Adjacent Street	Ln(T) = 0.79 Ln(X) + 0.54	14	26	25%	75%	4	10	0.75
AM Peak of Generator	T = 0.39(X) + 63.12	69	19	60%	40%	41	28	0.86
PM Peak of Generator	T = 0.46(X) + 53.12	60	18	10%	90%	6	54	0.88
Saturday	---	---	2	50%	50%	---	---	---
Saturday Peak Hour of Gen.	---	---	2	65%	35%	---	---	---

*Percentages rounded to nearest 5%

Average Rate

Time Period	ITE Trip Rate	Trip Ends	Sample Size	Directional Split* IN	Directional Split* OUT	Directional Distribution IN	Directional Distribution OUT	R^2
Weekday	T = 4.96 (X)	70	16	50%	50%	35	35	---
AM Peak Adjacent Street	T = 0.45 (X)	6	19	80%	20%	5	1	---
PM Peak Adjacent Street	T = 0.47 (X)	7	26	25%	75%	2	5	---
AM Peak of Generator	**T = 0.57 (X)**	**8**	**19**	**60%**	**40%**	**5**	**3**	**---**
PM Peak of Generator	**T = 0.61 (X)**	**9**	**18**	**10%**	**90%**	**1**	**8**	**---**
Saturday	**T = 1.22 (X)**	**17**	**2**	**50%**	**50%**	**9**	**8**	**---**
Saturday Peak Hour of Gen.	**T = 0.12 (X)**	**2**	**2**	**65%**	**35%**	**1**	**1**	**---**

*Percentages rounded to nearest 5%

JN: 3646
Project Description: Thompson's Point Update
Project Location: Portland, Maine
Date: 3/17/2020

Gorrill Palmer
707 Sable Oaks Drive
Suite 30
South Portland, Maine 04106

General Office Building - Building L
Land Use Code (LUC) 710

Square Feet 4,000

Trip Ends Based on Fitted Curve Equation

Time Period	ITE Trip Rate	Trip Ends	Number of Studies	Directional Split *		Directional Distribution		R^2
				IN	OUT	IN	OUT	
Weekday	Ln (T) = 0.77 Ln (X) + 3.65	112	78	50%	50%	56	56	0.80
AM Peak Hour	**Ln (T) = 0.80 Ln (X) + 1.55**	**14**	**217**	**90%**	**10%**	**13**	**1**	**0.83**
PM Peak Hour	**T = 1.12 (X) + 78.81**	**83**	**235**	**15%**	**85%**	**12**	**71**	**0.82**
Saturday	T = 2.14 (X) + 18.47	27	17	50%	50%	14	13	0.66
Peak Hour of Generator	Ln (T) = 0.81 Ln (X) - 0.12	3	10	55%	45%	2	1	0.59

* Percentages rounded to nearest 5%

Trip Ends Based on Average Rate

Time Period	ITE Trip Rate	Trip Ends	Number of Studies	Directional Split *		Directional Distribution		R^2
				IN	OUT	IN	OUT	
Weekday	T = 11.01 (X)	44	78	50%	50%	22	22	---
AM Peak Hour	T = 1.55 (X)	6	217	90%	10%	5	1	---
PM Peak Hour	T = 1.49 (X)	6	235	15%	85%	1	5	---
Saturday	T = 2.37 (X)	9	17	50%	50%	5	4	---
Saturday Peak Hour of Gen.	**T = 0.41 (X)**	**2**	**10**	**50%**	**50%**	**1**	**1**	**---**

* Percentages rounded to nearest 5%

PM Peak Hour:	T = 1.49/1.55 (AM Peak)	13		15%	85%	2	11	0.82

JN: 3646
Project Description: Thompson's Point Update
Project Location: Portland, Maine
Date: 3/17/2020

Gorrill Palmer
707 Sable Oaks Drive
Suite 30
South Portland, Maine 04106

General Office Building - Building F2
Land Use Code (LUC) 710

Square Feet 1,940

Trip Ends Based on Fitted Curve Equation

Time Period	ITE Trip Rate	Trip Ends	Number of Studies	Directional Split *		Directional Distribution		R^2
				IN	OUT	IN	OUT	
Weekday	Ln (T) = 0.77 Ln (X) + 3.65	64	78	50%	50%	32	32	0.80
AM Peak Hour	**Ln (T) = 0.80 Ln (X) + 1.55**	**8**	**217**	**90%**	**10%**	**7**	**1**	**0.83**
PM Peak Hour	**T = 1.12 (X) + 78.81**	**81**	**235**	**15%**	**85%**	**12**	**69**	**0.82**
Saturday	T = 2.14 (X) + 18.47	23	17	50%	50%	12	11	0.66
Peak Hour of Generator	Ln (T) = 0.81 Ln (X) - 0.12	2	10	55%	45%	1	1	0.59

* Percentages rounded to nearest 5%

Trip Ends Based on Average Rate

Time Period	ITE Trip Rate	Trip Ends	Number of Studies	Directional Split *		Directional Distribution		R^2
				IN	OUT	IN	OUT	
Weekday	T = 11.01 (X)	21	78	50%	50%	11	10	---
AM Peak Hour	T = 1.55 (X)	3	217	90%	10%	3	0	---
PM Peak Hour	T = 1.49 (X)	3	235	15%	85%	0	3	---
Saturday	T = 2.37 (X)	5	17	50%	50%	3	2	---
Saturday Peak Hour of Gen.	**T = 0.41 (X)**	**1**	**10**	**50%**	**50%**	**1**	**0**	**---**

* Percentages rounded to nearest 5%

PM Peak Hour:	T = 1.49/1.55 (AM Peak)	8		15%	85%	1	7	0.82

JN:	3646	Gorrill Palmer
Project Description:	Thompson's Point Update	707 Sable Oaks Drive
Project Location:	Portland, Maine	Suite 30
Date:	3/17/2020	South Portland, Maine 04106

Auto Service - Existing Garage F2
Land Use Code (LUC) 942

: Gross Leasable Floor Area (ft^2): 1,940

Trip Ends Based on Fitted Curve Equation

Time Period	ITE Trip Rate	Trip Ends	Directional Split *		Directional Distribution	
			IN	OUT	IN	OUT
PM Peak Adjacent Street	Ln(T) = 0.94 Ln(X) + 1.33	7	50%	50%	4	3

* Percentages rounded to nearest 5%

Trip Ends Based on Average Rate

Time Period	ITE Trip Rate	Trip Ends	Directional Split *		Directional Distribution	
			IN	OUT	IN	OUT
AM Peak Adjacent Street	T = 2.94 (X)	6	65%	35%	4	2
PM Peak Adjacent Street	T = 3.38 (X)	7	50%	50%	3	4
AM Peak of Generator	T = 3.22 (X)	6	60%	40%	4	0
PM Peak of Generator	T = 4.01 (X)	8	50%	50%	4	0

* Percentages rounded to nearest 5%

JN: 3646
Project Description: TP
Project Location: Portland, Maine
Date: May 5, 2020

Gorrill Palmer
707 Sable Oaks Drive
Suite 30
South Portland, Maine 04106

High Turnover (Sit Down) Restaurant
Land Use Code (LUC) 932

Gross Floor Area (ft^2): 2,800

Time Period	ITE Trip Rate (Average Rate)	# of Sources	Trip Ends	Directional Split		Directional Distribution		R^2
				IN	OUT	IN	OUT	
Weekday	T = 127.15 (X)	14	356	50%	50%	178	178	N/A
AM Peak Adjacent Street	T = 11.52 (X)	18	**32**	50%	50%	16	16	N/A
PM Peak Adjacent Street	T = 10.92 (X)	38	**31**	60%	40%	19	12	N/A
AM Peak of Generator	**T = 13.53 (X)**	**21**	**38**	**50%**	**50%**	**19**	**19**	**N/A**
PM Peak of Generator	**T = 18.80 (X)**	**27**	**53**	**55%**	**45%**	**29**	**24**	**N/A**
Saturday	T = 158.37 (X)	2	443	50%	50%	222	221	N/A
Saturday Peak Hour of Gen.	T = 20.00 (X)	3	**56**	65%	35%	36	20	N/A

	Previously Approved																		Currently Proposed																					
Building Letter	Brick North																Total for Brick North	Brick South		Building D				Building K		Building F1		Building F2		Building L						Building B2		Total	Total without Brick South Event	Total without Brick South Event or Halo Event
	Winery (Specialty Retail (5))		Halo (Event Space)		Big Room Studios (Office)		Locally Sauced (Restaurant (3))		Manufacturing (4)		Manufacturing (4)		Specialty Retail (1)		Cultural Center			Event Space (2)		Hotel		Childrens Museum		Inn		Light Industrial / Warehouse (4)		Office		Office		Event Space		Concession Building (Restaurant)				
Rate	200	1 / 200 sf	3.5	3.5 persons per vehicle		1/400 sf	13.56	13.56/1000	1.020	1.02 / 1000 sf	1.020	1.02 / 1000 sf	200	1 / 200 sf	1.34	Based on Client Info		3.5	3.5 persons per vehicle	1	1 per 4 guests	1.34	Based on Client Info	1	1 per 4 guests	1.19	1.19/1000 sf	400	1/400 sf	400	1/400 sf	3.5	3.5 persons per vehicle	6.5	6.5 / 10			
Monthly Adjustment				1										1		1			1	1	1		1			1					1		1.000				
SQF or Unit	5890	5,890 sf	400	400 people	3461	3,461 sf	1852	1,852 sf	10068	10,068 sf	5890	5,890 sf	2136	2,136 sf	0.993	993 sf		2500	2500 person	148	148 Rooms	40.00	40,000 sf	83	83 Rooms	14200	14,200 sf	1.94	1,940 sf	4.00	4,000 sf	100	100 person	2.80	2800 sf			
6:00AM	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0	0.00	0	1.00	37	0.00	0	1.00	21	1.00	17	0.00	0	0.00	0	0.00	0	0.00	0	75	75	75
7:00AM	0.00	0	0.01	1	0.20	2	0.10	3	0.55	6	0.55	3	0.20	2	0.48	1	17	0.01	4	1.00	37	0.48	26	1.00	21	1.00	17	0.20	1	0.20	2	0.01	0	0.10	2	125	122	121
8:00AM	0.00	0	0.01	1	0.64	6	0.10	3	0.69	7	0.69	4	0.64	7	0.50	1	27	0.01	4	1.00	37	0.50	27	1.00	21	1.00	17	0.64	3	0.64	6	0.01	0	0.10	2	144	140	140
9:00AM	0.00	0	0.01	1	0.93	8	0.20	5	0.74	8	0.74	4	0.93	10	0.44	1	36	0.01	4	0.75	28	0.44	24	0.75	16	1.00	17	0.93	5	0.93	9	0.01	0	0.20	4	141	138	137
10:00AM	0.20	6	0.01	1	1.00	9	0.30	8	0.75	8	0.75	5	1.00	11	0.50	1	46	0.01	4	0.50	19	0.50	27	0.50	10	1.00	17	1.00	5	1.00	10	0.01	0	0.30	5	143	139	139
11:00AM	0.64	19	0.01	1	1.00	9	0.90	23	0.75	8	0.75	5	1.00	11	0.52	1	75	0.01	7	0.40	15	0.52	28	0.40	8	1.00	17	1.00	5	1.00	10	0.01	0	0.90	16	181	174	173
12:00PM	0.90	27	0.01	1	0.90	8	1.00	25	0.73	7	0.73	4	0.90	10	0.55	1	83	0.01	7	0.35	13	0.55	29	0.35	7	1.00	17	0.90	4	0.90	9	0.01	0	1.00	18	188	181	180
1:00PM	0.93	27	0.01	1	0.90	8	0.90	23	0.97	10	0.97	6	0.90	10	0.63	1	85	0.01	7	0.35	13	0.63	34	0.35	7	1.00	17	0.90	4	0.90	9	0.01	0	0.90	16	193	186	185
2:00PM	1.00	29	0.02	2	1.00	9	0.65	16	1.00	10	1.00	6	1.00	11	0.77	1	84	0.02	11	0.35	13	0.77	41	0.35	7	1.00	17	1.00	5	1.00	10	0.02	0	0.65	12	200	190	188
3:00PM	1.00	29	0.03	3	1.00	9	0.35	9	0.95	10	0.95	6	1.00	11	0.96	1	78	0.03	21	0.40	15	0.96	51	0.40	8	1.00	17	1.00	5	1.00	10	0.03	1	0.35	6	213	191	188
4:00PM	0.93	27	0.10	11	0.93	8	0.35	9	0.77	8	0.77	5	0.93	10	1.00	1	79	0.10	71	0.50	19	1.00	54	0.50	10	1.00	17	0.93	5	0.93	9	0.10	3	0.35	6	273	202	190
5:00PM	0.64	19	0.55	63	0.64	6	0.60	15	0.62	6	0.62	4	0.64	7	0.89	1	120	0.55	393	0.60	22	0.89	48	0.60	12	1.00	17	0.64	3	0.64	6	0.55	16	0.60	11	649	256	193
6:00PM	0.20	6	0.85	97	0.20	2	0.90	23	0.00	0	0.00	0	0.20	2	0.69	1	130	0.85	607	0.70	26	0.69	37	0.70	15	1.00	17	0.20	1	0.20	2	0.85	24	0.90	16	876	268	171
7:00PM	0.00	0	1.00	114	0.10	1	1.00	25	0.00	0	0.00	0	0.00	0	0.43	1	141	1.00	714	0.80	30	0.43	23	0.80	17	1.00	17	0.10	0	0.10	1	1.00	29	1.00	18	990	275	161
8:00PM	0.00	0	1.00	114	0.10	1	1.00	25	0.00	0	0.00	0	0.00	0	0.00	0	140	1.00	714	0.90	33	0.00	0	0.90	19	1.00	17	0.10	0	0.10	1	1.00	29	1.00	18	972	257	143
9:00PM	0.00	0	1.00	114	0.10	1	1.00	25	0.00	0	0.00	0	0.00	0	0.00	0	140	1.00	714	0.95	35	0.00	0	0.95	20	1.00	17	0.10	0	0.10	1	1.00	29	1.00	18	975	260	146
10:00PM	0.00	0	1.00	114	0.10	1	0.75	19	0.00	0	0.00	0	0.00	0	0.00	0	134	1.00	714	1.00	37	0.00	0	1.00	21	1.00	17	0.10	0	0.10	1	1.00	29	0.75	14	967	252	138

1. Specialty Retail = Color Me Mine
2. Assumes Evening Event
3. Restaurant changes from 6.5/1,000 SF to 10/1,000SF at 4:00 PM
4. Factors based on previously approved parking demand rates for Industrial Uses
5. Factors adjusted to reflect a 11:00AM opening time

Attachment D

MaineDOT Traffic Movement Permit - Thompson's Point Development Company Inc. – Signed 6/13/12

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
16 STATE HOUSE STATION
AUGUSTA, MAINE 04333-0016

Paul R. LePage
GOVERNOR

David Bernhardt
COMMISSIONER

Applicant:	Thompson's Point Development Company Inc.
Project Location:	Thompson's Point Rd, Portland, ME Portland Tax Map 201Lot(s) 8, 9 and 10 and Map 202 Lots 2, 4 and 5
Project:	Mixed use Development
Identification #:	Reg. 01-00155-A-N
Permit Category:	200 Plus PCE
Traffic Engineer:	Thomas Gorrill Gorrill-Palmer Consulting Engineers PO Box 1237 15 Shaker Rd. Gray, ME 04039

Pursuant to the provision of 23 M.R.S.A. § 704-A and Chapter 305 of the Department's Regulations, the Maine Department of Transportation (MaineDOT) has considered the application of Thompson's Point Development Company Inc with supportive data, agency review and other related materials on file.

PROJECT DESCRIPTION

The applicant proposes to construct a 97,697 sf event center/convention hall/exhibit hall; 32,000 sf concert hall plus outdoor venue for up to 4,800 attendees; 378,000 sf of office space; 4,000 sf of medical office space; 20,000 sf gym and rehabilitation center; 125 room hotel; 6,000 sf of restaurant space (high-turnover sit down). The site is forecast to generate 734 AM and 1,091 PM weekday peak hour trip ends.

Findings

Based on a review of the files and related information, MaineDOT approves the Traffic Movement Permit Application of Thompson's Point Development Company Inc. subject to the following conditions:

MITIGATION

On-Site Mitigation

All Site Entrances

All entrances shall have overhead illumination provided, if not existing, to illuminate the intersections per MaineDOT standards at a minimum. Overhead lighting shall have an average of

0.6 to 1.0 foot candles, with the maximum to minimum lighting ratio of not more than 10:1 and an average to minimum light level of not more than 4:1.

Thompson's Point Road

Thompson's Point Road shall be widened to accommodate an 8 foot shared bike/pedestrian path, a 3 foot wide grass esplanade, a 3 foot shoulder with granite curb, an 11 foot wide outbound lane, and 11 foot wide flush concrete median, an 11 foot wide inbound lane and a 3 foot shoulder with granite curb. This section will be constructed from the site driveway to the Fore River Parkway. The 250 feet of flush median closest to Fore River Parkway shall be designated as an exclusive left turn lane outbound. The shared bike/pedestrian path shall have a crossing built at the Sewall Street cul de sac and the path extended to the existing sidewalk on Sewall Street. Another pedestrian crossing shall be installed where the current pedestrian crossing is at the bus/train station. Both crossings shall have solar powered/radio interconnected pedestrian activated rectangular rapid flashing beacon lights installed.

Thompson's Point Development

No sporting events or concerts shall begin between 4 pm and 7pm Monday through Friday.

During large sporting and concert events, the applicant shall ensure that there are flaggers and uniformed police officers present to ensure that there will be two inbound lanes prior to the event and two exit lanes after the event. Flaggers/uniformed police officers shall be stationed to ensure that pedestrians are able to cross at either of the two crosswalks, at the Transportation Center Entrance to let busses in or out and also at the transportation center parking lot entrances to ensure that transportation center patrons leaving the parking lots are merged into the out-bound flow. Uniformed police officers shall be present after an event to direct traffic at the Thompson's Point Road/Fore River Parkway intersection. Retro-reflective traffic cones shall be used by the development to create the reversible lane. Flaggers will direct vehicles into the proper lanes.

Off-Site Mitigation

Fore River Parkway/Thompson's Point Road/I-295 Exit 5A off-ramp

The Southbound off ramp at Exit 5 A shall be reconstructed to have a separate 13 foot wide left turn lane and 13 foot wide through lane. The widths include the

required curb offset. The left lane shall extend back 200 feet. Install Queue detector at the ramp gore area to act as pre-emption for the signal should the queue spill back that far.

Modify traffic signal timing and phasing accordingly.

Fore River Parkway/Congress St/I-295 Exit 5 B off-ramp

Widen the southbound off-ramp to accommodate a 5 foot wide right shoulder, two 12 foot wide right turn lanes and a 2 foot curb offset for a distance of 125 feet with an appropriate taper. Install Queue detector at the ramp gore area to act as pre-emption for the signal should the queue spill back that far.

Re-stripe Congress Street Westbound to accommodate a longer westbound left turn lane, extend back to the end of the island (to the slip lane from Park Ave to Congress St).

Modify traffic signal timing and phasing accordingly.

Congress St/Stevens Ave

Restripe Steven's Avenue to an exclusive left and a shared left/thru/right and modify traffic signal timing and phasing accordingly.

The developer shall pay an impact fee in the amount of $15,000 for inlaid thermoplastic paint skips, retro-reflective back plates and overhead lane usage signage. This money will be put towards improvements funded by PIN 19078.00.

Congress St/Westbrook St

The developer shall pay an impact fee in the amount of $15,000 for inlaid thermoplastic paint skips, retro-reflective back plates and overhead lane usage signage. This money will be put towards improvements funded by PIN 19078.00.

Congress/Frost St

The developer shall pay an impact fee in the amount of $15,000 for inlaid thermoplastic paint skips, retro-reflective back plates and overhead lane usage signage. This money will be put towards improvements funded by PIN 19078.00.

Transportation Demand Management

In lieu of additional mitigation, Transportation Demand Management shall be used to offset the traffic impacts on the roadway network. The City has implemented a Transportation Oriented Development Tax Increment Financing District for the Thompson's Point Development. This development would benefit from some increased transit connections to the airport and Old Port, funding for handicap accessible taxis or for increase in parking at the Transportation Center.

Overall

A. Provide all necessary auxiliary signs, striping and pavement markings to implement the improvements described herein according to State of Maine and/or National standards.

B. All plantings and signs (existing and/or proposed; permanent and/or temporary) shall be placed and maintained such that they do not block available sight distances and do not violate the State's "Installations and Obstructions" law. No signage or plantings shall be allowed within the "clear zone" if they constitute a deadly fixed object as determined by MaineDOT. All signs shall meet MRSA Title 23, Chapter 21, Section 1914: "On-Premise Signs".

C. If any of the supporting data or representations for which this permit is based changes in any way or is found to be incorrect / inaccurate, the applicant shall request in writing from MaineDOT a decision of what impacts those changes will have on the permit. The applicant will then be required to submit those changes for review and approval and additional mitigation as a result of those changes may be required at the expense of the applicant.

D. Because the proposed project affects the state highway and drainage systems and requires improvement to that system, the applicant must obtain approval of the design plans and coordinate work through MaineDOT's State Traffic Engineer, who can be reached at (207)-624-3620 in Augusta.

By:

Stephen Landry, P.E.
Assistant State Traffic Engineer

Date: 6/13/12

ATTACHMENT D
TDM Update Letter

December 13, 2024

From: Bo Kennedy, PE
PlaceMaker Partners, LLC

To: Natasha Kypfer
Senior Planner
City of Portland

CC: Rob Simmons
Cathartes

RE: PL – 003090-2024
Thompson's Point Transportation Demand Management update

Dear Natasha,

Pursuant to the City's Project Review Letter (11/06/2024), please find below our response to the portions of the letter concerning Thompson's Point's Transportation Demand Management Plan.

Comment #1 (pp. 2-3):

> *A TDM Plan is required for this project, as it exceeds the thresholds detailed in LUC Section 14.6.1.E.1. The project has an approved Thompson's Point campus-wide Transportation Demand Management Plan (TMD) for managing and reducing traffic trips and parking demand in place as part of the Master Development Plan (MDP). The provided Attachment P summarizes TMD initiatives and references previously prepared TDM strategy reports which was approved in 2011, and subsequently updated in 2015 and 2018.*
>
> *[…]*
>
> *In satisfying this standard, the applicant shall update their Transportation Demand Management Plan and incorporate data, as well as updated data, on concerts and other significant events that occur on the Thompson's Point campus, so that the City can better understand current parking demand and assess whether mitigation strategies in place are sufficient.*

Response:

In addition to the updates to the 2011 plan noted above (2015 and 2018 respectively), Thompson's Point provided data reports to the City regularly until the reporting requirement

was suspended during COVID. In the absence of these regular reports, although it was not requested by the City, Thompson's Point took the proactive step of submitting a TDM update narrative report in July 2021 summarizing the previous two years of activity on campus.

That 2021 update included mention of Thompson's Point having received a "Best Workplaces for Commuters" designation from the National Center for Transit Research and the US Environmental Protection Agency in 2019 – one of only two sites in the state at the time to have received this designation.

Subsequently, in May 2022, the City launched their streamlined formal online reporting system.

We provided regular and consistent reports and updates using that system since that time. This data captures all Thompson's Point activities, from regular tenant visitors to events and concerts.

We also maintain a TDM survey on our website. In addition to being available to the public at any time, we also send this link out to various event clients where applicable.

https://www.thompsonspoint.com/tdm

Following the 2024 summer concert season, our concert partners at the State Theatre circulated this survey link to their ticketholders.

We have included the data and results as Exhibit A.

In our previous submittal (Attachment P to same), we provided TDM details for the proposed residential project. One of the factors that led Cathartes to select Thompson's Point as a partner for their project is Thompson's Point's history of commitment to smart urban growth and neighborhood building and transit planning; as a Transit Oriented Development which has been awarded Best Workplaces for Commuters status, the opportunities for use of METRO, Portland Trails for walking and biking, Amtrak, Concord Coach, and various carpool/rideshare mobilizations has been a compelling feature for them and their future residents and guests. Cathartes also intends to participate individually as well as at the broader site-wide level in any efforts to encourage their staff to carpool, bike, walk, and ride METRO to work.

To further elaborate on the plans outlined in Attachment P, Cathartes plans to follow the proposed timeline in terms of its TDM measures:

<u>Convene kickoff meeting with TDM coordinator to review strategies:</u>

- 6 months after groundbreaking

<u>Team meeting with CMTM staff and TDM coordinator:</u>

- 1 month before opening

Provide tenant and staff surveys:

- 12 months after opening

Establish Initial Residential "Micro TDM":

- 18 months after opening

Evaluate Initial Micro TDM and report to City:

- 36 months after opening

We hope that this update meets your needs, and we thank you again for your detailed review and thorough comments.

If you have any questions or would like more information, please do not hesitate to contact me.

Sincerely,

Bo Kennedy

Bo Kennedy, P.E.
Placemaker Partners, LLC

Exhibit A: Thompson's Point TDM Survey (concert patrons – 2024 season)

Summary of Thompson's Point Voluntary TDM Survey Results

When I travel to Thompson's Point, I typically do so by way of...1ST OPTION	AMTRAK	BICYCLE	CARPOOL	RIDESHARE	SOV	WALKING			TOTAL RESPONSES
RESPONSES	2	11	8	1	19	7			48
PERCENTAGE	4.17%	22.92%	16.67%	2.08%	39.58%	14.58%			
Which of the following alternatives to single occupancy vehicle(SOV) use are you most likely to take advantage of? 1ST CHOICE	AMTRAK	BICYCLE	CARPOOL	RIDESHARE	BIKE RENTAL	WALKING	METRO	MOTORCYCLE	TOTAL RESPONSES
RESPONSES	4	7	14	7	1	11	2	1	47
PERCENTAGE	8.51%	14.89%	29.79%	14.89%	2.13%	23.40%	4.26%	2.13%	
Which of the following initiatives would best assist in encouraging your use of alternative forms of transportation to and from Thompson's Point? 1ST CHOICE	ADDITIONAL ADA PARKING	ADDITIONAL BIKE LOCK LOCATIONS	ADDITIONAL BIKE RENTAL LOCATIONS	ADDITIONAL MOTO/SCOOTER SPACES	EXTENDED AMTRAK HOURS/TRAINS	EXTENDED METRO HOURS/BUSSES	INDOOR BIKE LOCK LOCATIONS		TOTAL RESPONSES
RESPONSES	2	10	4	1	10	7	1		35
PERCENTAGE	5.71%	28.57%	11.43%	2.86%	28.57%	20.00%	2.86%		

ATTACHMENT E
Tree Survey Figure

TREE SURVEY KEY

- ESTABLISHED SHORELAND ZONE (25' SETBACK FROM H.A.T.)
- ORIGINAL SHORELAND ZONE (REVISED BY PERMIT) (250' SETBACK)
- TREE: 10" DIA. AT 54" ABOVE GRADE TO BE PROTECTED
- TREE: 10" DIA. AT 54" ABOVE GRADE TO BE REMOVED

NORTH

28" OAK
13" OAK
16" OAK
12" OAK
15" OAK
12" OAK
14" OAK
22" WILLOW
10" OAK
31" OAK
14" OAK
11" OAK
30" OAK
36" OAK
6' POPLAR
6' POPLAR
4" DECD
6" DECD

ELEV. 10.0'
100-YEAR FLOOD
ELEVATION

HAT=7.2'
SEE NOTE 11 ON SEBAGO
TECHNICS TOPOGRAPHIC
SURVEY PLAN DATED 8/4/2022

1,429'± (DEED: MEAN HIGH WATER)

H.A.T.=7.2'

WETLAND
BOUNDARY (TYP.)

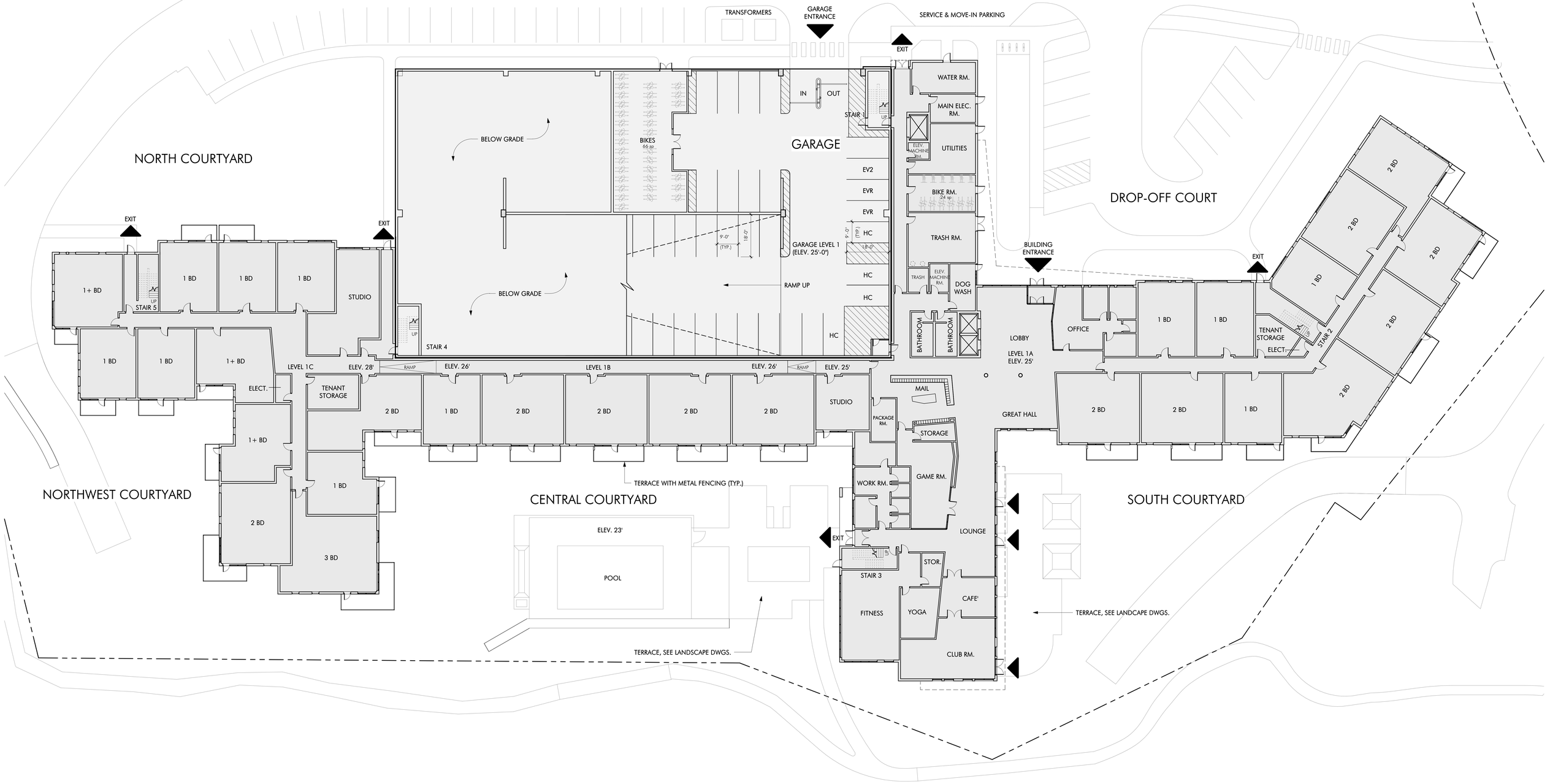
PLACEMAKER PARTNERS, LLC
18 VAN AKEN WAY
PORTLAND, ME 04102
bo@placemakerpartners.com

DRAWN:	DB	DATE:	11.14.2024
DESIGNED:	BEK	SCALE:	1" = 40'
CHECKED:	BEK		

MULTI-FAMILY RESIDENTIAL BUILDING (G)
THE FOREFRONT AT THOMPSON'S POINT

TREE SURVEY

EXHIBIT NO.:
A



ABBREVIATIONS

HC	ACCESSIBLE PARKING SPACE
HV/EV	ACCESSIBLE SPACE EQUIPPED WITH CHARGING STATION
EV1	LEVEL 1 ELECTRIC VEHICLE CHARGING STATION
EV2	LEVEL 2 ELECTRIC VEHICLE CHARGING STATION
EVR	EV READY SPACE

PARKING GARAGE ALLOCATION MATRIX

TOTAL SPACES	463
MANAGED SPACES	86
LEVEL 1 EV SPACES	0
LEVEL 2 EV SPACES	1
EV READY SPACES	2
RESIDENTIAL SPACES	377
LEVEL 1 EV SPACES	14
LEVEL 2 EV SPACES	9
EV READY SPACES	23
ACCESSIBLE SPACES	24
COMPACT SPACES	70

TOTAL GROSS SQUARE FOOTAGE

TOTAL GSF OF BUILDING	305,170 GSF
TOTAL GSF OF GARAGE	152,656 GSF

UNIT MATRIX

TYPE	# OF UNITS	UNIT %	AVERAGE SF/UNIT
STUDIO	22	8.6%	657 SF
1 BED	101	39.6%	782 SF
1+ BED	23	9%	918 SF
2 BED	92	36%	1,093 SF
3 BED	17	6.8%	1,358 SF
TOTAL	255		

EMBARC | CATHARTES

GROUND FLOOR PLAN - LEVEL 1

SCALE: 1/16" = 1'-0"

△ REV 1 12/17/24: ADDED TYP. PARKING STALL DIMS

0 8 16 32

THOMPSON'S POINT
11 THOMPSON'S POINT RD
PORTLAND, ME 04102
09/06/2024

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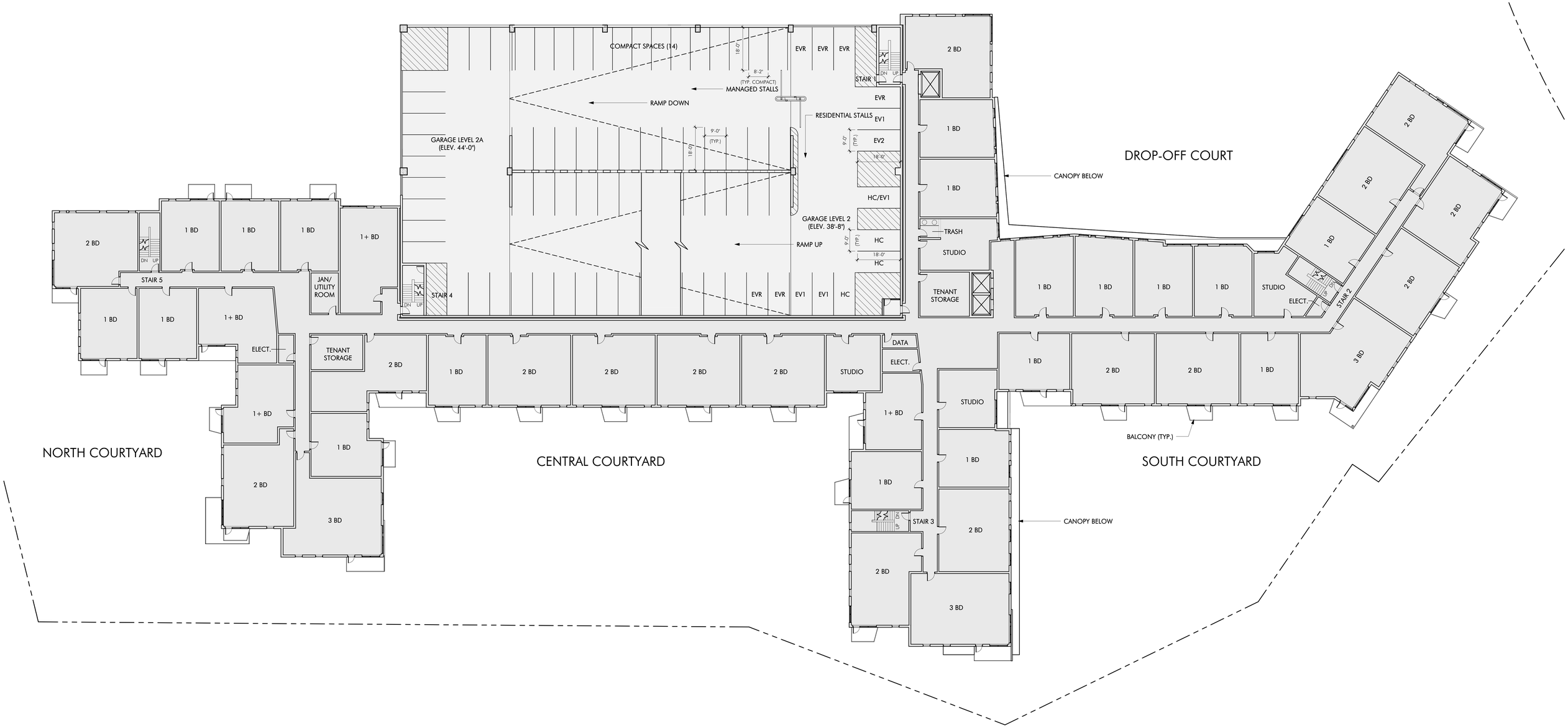

ABBREVIATIONS

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EV1	LEVEL 1 ELECTRIC VEHICLE CHARGING STATION
EV2	LEVEL 2 ELECTRIC VEHICLE CHARGING STATION
EVR	EV READY SPACE

PARKING GARAGE ALLOCATION MATRIX

TOTAL SPACES	463
MANAGED SPACES	86
LEVEL 1 EV SPACES	0
LEVEL 2 EV SPACES	1
EV READY SPACES	2
RESIDENTIAL SPACES	377
LEVEL 1 EV SPACES	14
LEVEL 2 EV SPACES	9
EV READY SPACES	23
ACCESSIBLE SPACES	24
COMPACT SPACES	70

TOTAL GROSS SQUARE FOOTAGE

TOTAL GSF OF BUILDING	305,170 GSF
TOTAL GSF OF GARAGE	152,656 GSF

UNIT MATRIX

TYPE	# OF UNITS	UNIT %	AVERAGE SF/UNIT
STUDIO	22	8.6%	657 SF
1 BED	101	39.6%	782 SF
1+ BED	23	9%	918 SF
2 BED	92	36%	1,093 SF
3 BED	17	6.8%	1,358 SF
TOTAL	255		

EMBARC | CATHARTES

SECOND FLOOR PLAN - LEVEL 2

SCALE: 1/16" = 1'-0"

△ REV 1 12/17/24: ADDED TYP. PARKING STALL DIMS & PARKING GATE

0 8 16 32

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PORTLAND, ME 04102
09/06/2024

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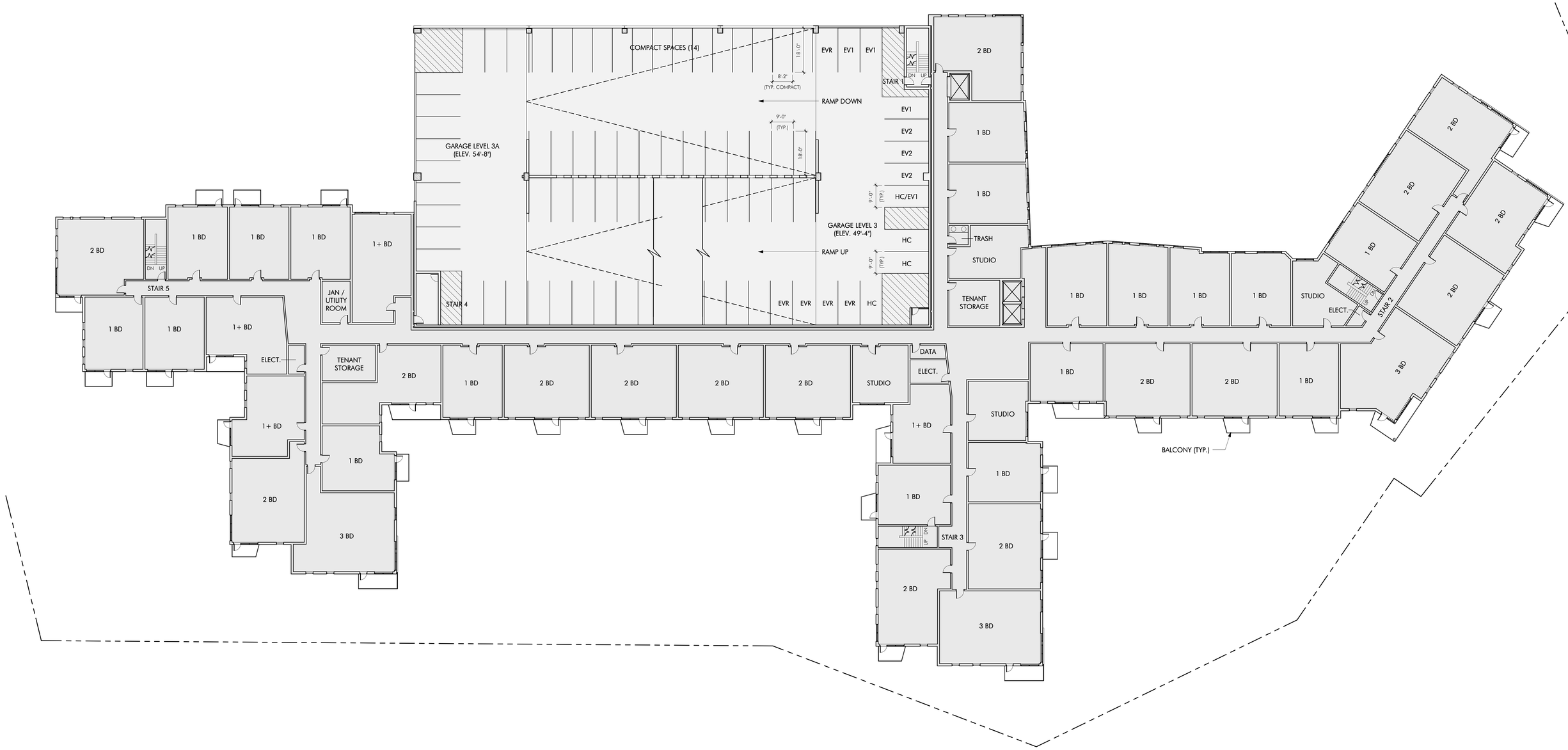

ABBREVIATIONS

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EV1	LEVEL 1 ELECTRIC VEHICLE CHARGING STATION
EV2	LEVEL 2 ELECTRIC VEHICLE CHARGING STATION
EVR	EV READY SPACE

PARKING GARAGE ALLOCATION MATRIX

TOTAL SPACES	463
MANAGED SPACES	86
LEVEL 1 EV SPACES	0
LEVEL 2 EV SPACES	1
EV READY SPACES	2
RESIDENTIAL SPACES	377
LEVEL 1 EV SPACES	14
LEVEL 2 EV SPACES	9
EV READY SPACES	23
ACCESSIBLE SPACES	24
COMPACT SPACES	70

TOTAL GROSS SQUARE FOOTAGE

TOTAL GSF OF BUILDING	305,170 GSF
TOTAL GSF OF GARAGE	152,656 GSF

UNIT MATRIX

TYPE	# OF UNITS	UNIT %	AVERAGE SF/UNIT
STUDIO	22	8.6%	657 SF
1 BED	101	39.6%	782 SF
1+ BED	23	9%	918 SF
2 BED	92	36%	1,093 SF
3 BED	17	6.8%	1,358 SF
TOTAL	255		

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TYPICAL FLOOR PLAN - LEVEL 3 - 6

SCALE: 1/16" = 1'-0"

△ REV 1 12/17/24: ADDED TYP. PARKING STALL DIMS

0' 8' 16' 32'

THOMPSON'S POINT
11 THOMPSON'S POINT RD
PORTLAND, ME 04102
09/06/2024

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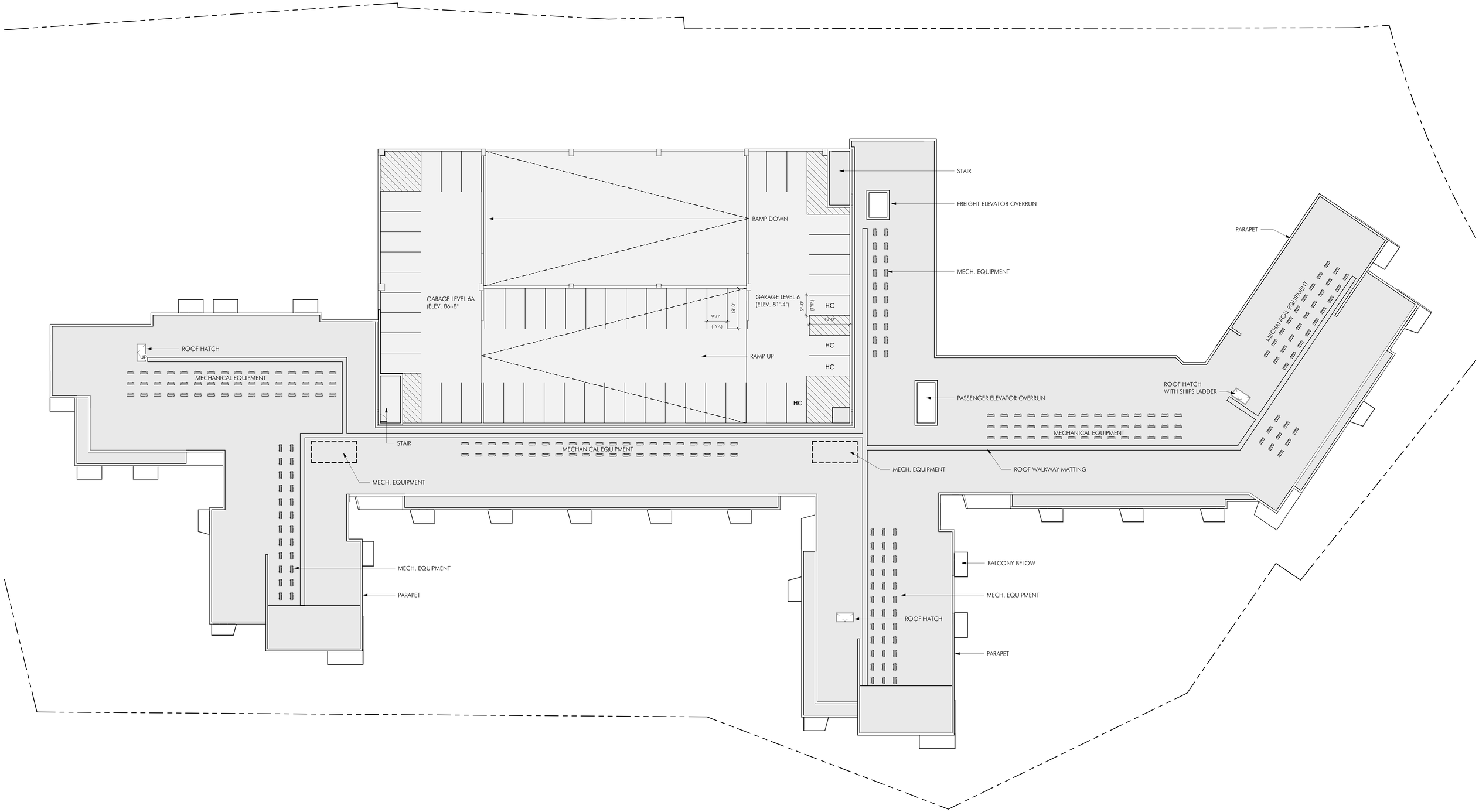

ABBREVIATIONS

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EV1	LEVEL 1 ELECTRIC VEHICLE CHARGING STATION
EV2	LEVEL 2 ELECTRIC VEHICLE CHARGING STATION
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PARKING GARAGE ALLOCATION MATRIX

TOTAL SPACES	463
MANAGED SPACES	86
LEVEL 1 EV SPACES	0
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RESIDENTIAL SPACES	377
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TOTAL GROSS SQUARE FOOTAGE

TOTAL GSF OF BUILDING	305,170 GSF
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UNIT MATRIX

TYPE	# OF UNITS	UNIT %	AVERAGE SF/UNIT
STUDIO	22	8.6%	657 SF
1 BED	101	39.6%	782 SF
1+ BED	23	9%	918 SF
2 BED	92	36%	1,093 SF
3 BED	17	6.8%	1,358 SF
TOTAL	255		

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ROOF PLAN

SCALE: 1/16" = 1'-0"

△ REV 1 12/17/24: ADDED TYP. PARKING STALL DIMS

0 8 16 32

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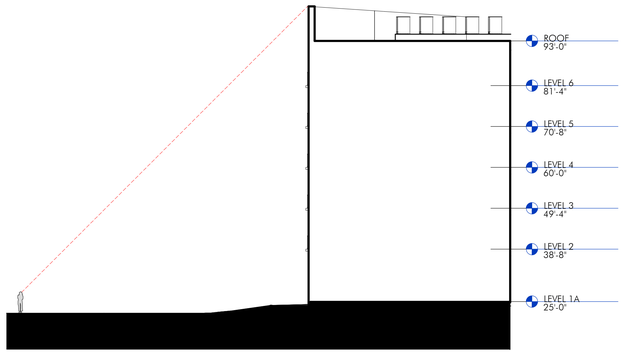


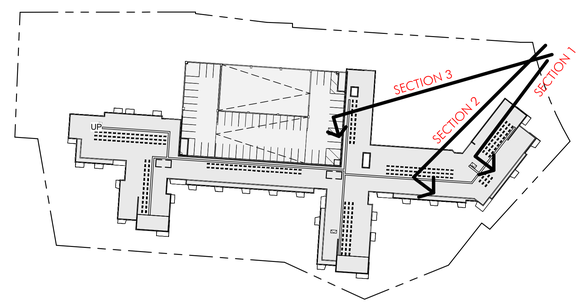
1 SECTION-3-ROOF TOP EQUIPMENT
1/16" = 1'-0"



2 SECTION-2-ROOF TOP EQUIPMENT
1/16" = 1'-0"



3 SECTION-1- ROOF TOP EQUIPMENT
1/16" = 1'-0"



4 KEY PLAN FOR SITE LINE STUDIES
1" = 80'-0"

EMBARC

SITE LINE STUDIES OF ROOF TOP MECHANICAL UNITS

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11 THOMPSON'S POINT RD
PORTLAND, ME 04102

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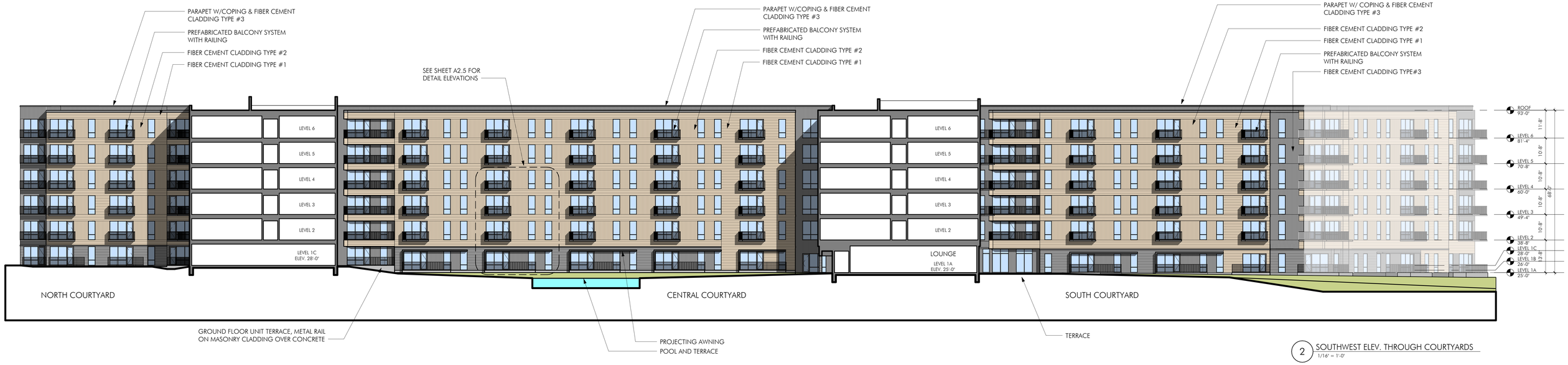
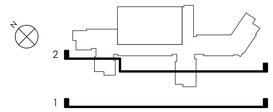
1 SOUTHWEST ELEVATION
1/16" = 1'-0"



2 SOUTHWEST ELEV. THROUGH COURTYARDS
1/16" = 1'-0"



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SOUTH ELEVATIONS

SCALE: 1/16" = 1'-0"

0 8 16 32

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PORTLAND, ME 04102
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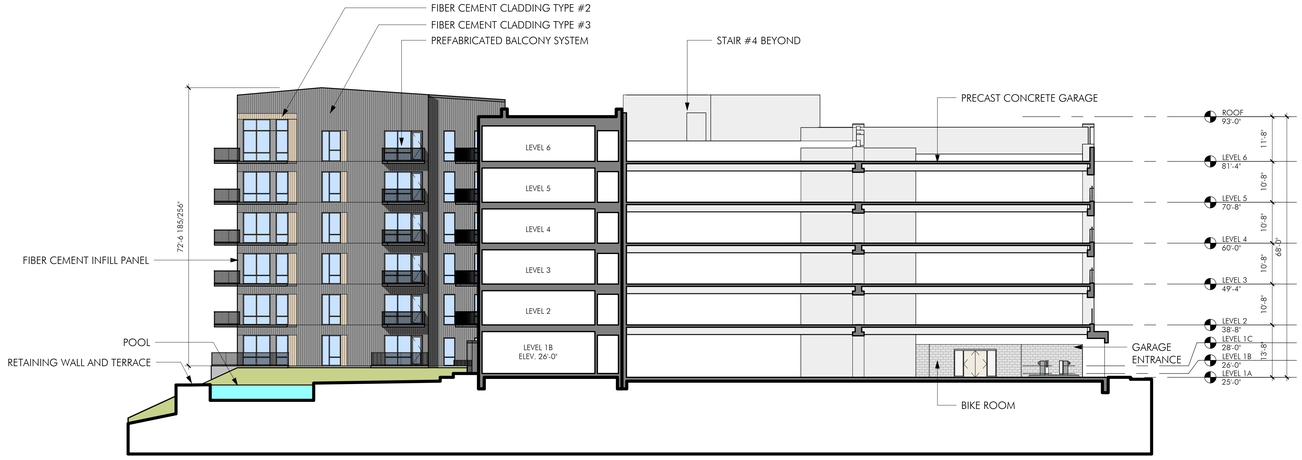
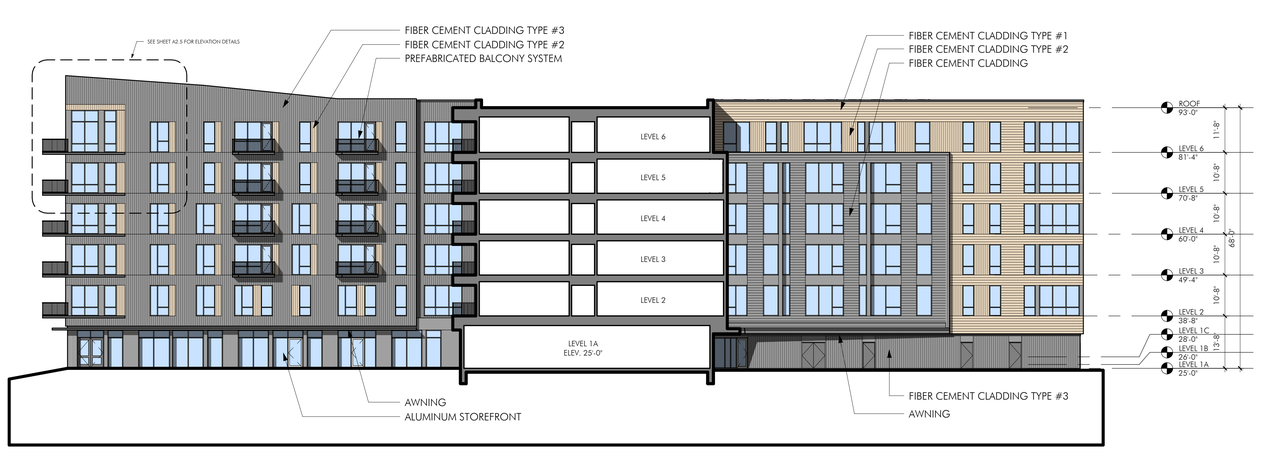
1 NORTHWEST ELEVATION
1/16" = 1'-0"



3 SECTION THROUGH GARAGE FACING WEST
1/16" = 1'-0"



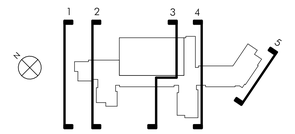
2 NORTHWEST SECTION
1/16" = 1'-0"



4 SECTION THROUGH ENTRANCE LOBBY FACING WEST
1/16" = 1'-0"



5 ELEVATION OF EAST WING FACING NORTH
1/16" = 1'-0"



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EAST & WEST ELEVATIONS AND BUILDING SECTIONS

SCALE: 1/16" = 1'-0"

0 8 16 32

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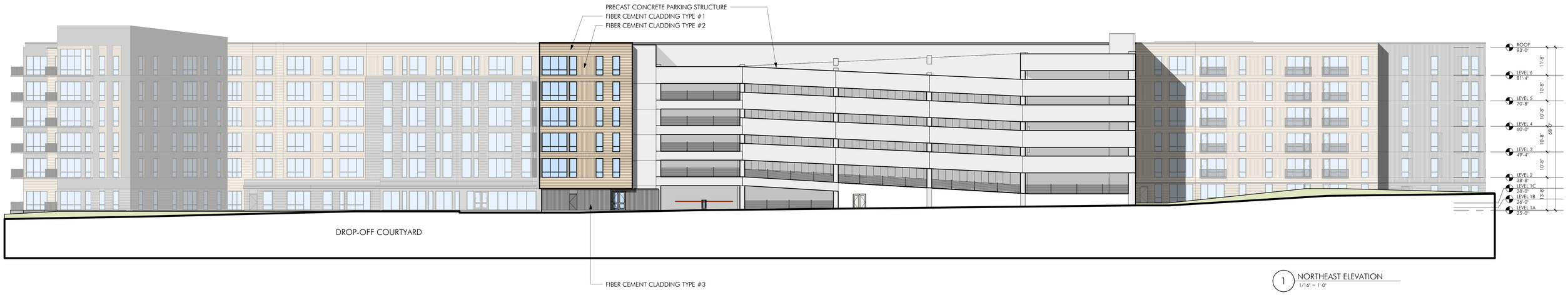
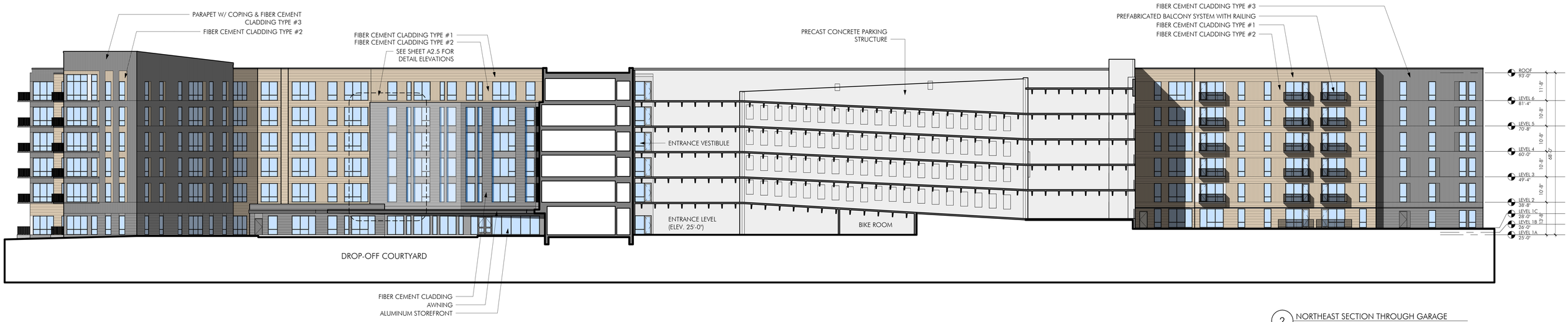
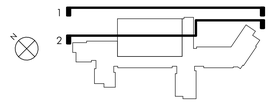


1 NORTHEAST ELEVATION
1/16" = 1'-0"



2 NORTHEAST SECTION THROUGH GARAGE
1/16" = 1'-0"



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NORTH ELEVATIONS & GARAGE SECTION

SCALE: 1/16" = 1'-0"

0 8 16 32

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09/06/2024

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1. VIEW OF DROP-OFF COURT



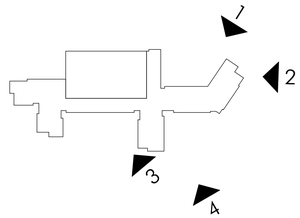
2. VIEW OF SOUTHEAST CORNER



3. VIEW OF CENTRAL COURTYARD



4. VIEW FROM WATERFRONT



EMBARC | CATHARTES

THREE-DIMENSIONAL VIEWS OF BUILDING

0 8 16 32

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PORTLAND, ME 04102
09/06/2024

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DETAIL OF SHORT BUILDING WINGS



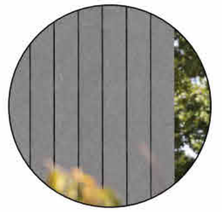
MATERIAL IMAGE SHOWING CONTRASTING FIBER CEMENT CLADDING TYPE #3 WITH FIBER CEMENT CLADDING TYPE #2 INFILL PANELS AT WINDOWS



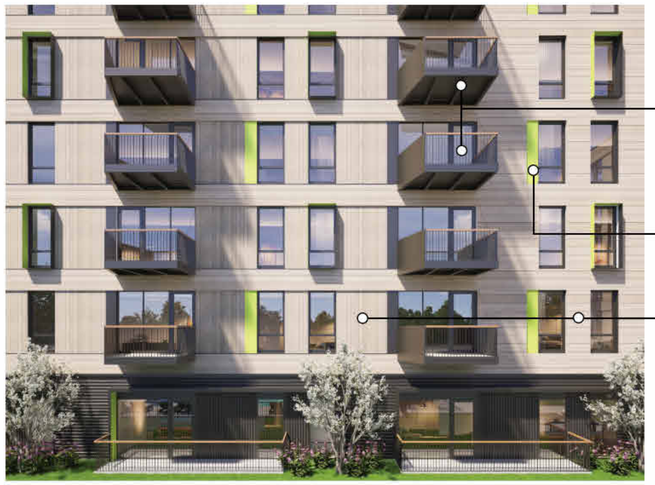
MATERIAL IMAGE SHOWING FIBER CEMENT CLADDING TYPE #3 & WIDE FIBER CEMENT INFILL PANELS BETWEEN WINDOWS



TYPICAL FIBER CEMENT CLADDING TYPE #3



TYPICAL FIBER CEMENT CLADDING TYPE #3



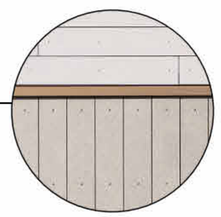
DETAIL OF TYPICAL COURTYARD ELEVATIONS



PREFABRICATED STEEL BALCONY & RAILING WITH DIAGONAL TENSION RODS



COLORED FIBER CEMENT ACCENT PANELS



FIBER CEMENT CLADDING TYPE #1 & #2



CLADDING TYPE # 1 AT CORNER BALCONIES



DETAIL OF DROP-OFF COURTYARD



FIBER CEMENT PANELS



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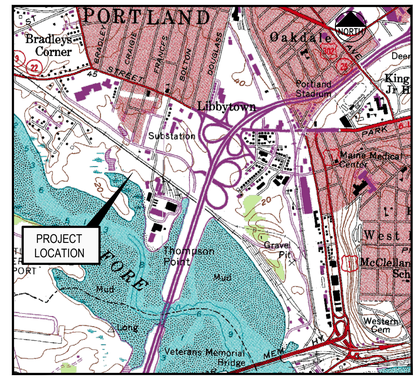
SITE DEVELOPMENT PLANS
FOR
MULTI-FAMILY RESIDENTIAL BUILDING (G)
THE FOREFRONT AT THOMPSON'S POINT
PORTLAND, MAINE
IN SUPPORT OF A MAJOR SITE PLAN APPLICATION
AUGUST 2024



LOCATION MAP
N.T.S.

APPLICANT \ FUTURE OWNER:
CPI MANAGEMENT, LLC (CATHARTES)
11 PORTWALK PLACE
PORTSMOUTH, NH 03801
ATTN: ROB SIMMONS
617.840.4778
ROBS@CATHARTES.COM

CURRENT OWNER:
FOREFRONT PARTNERS, I. LP
18 VAN AKEN WAY
PORTLAND, MAINE 04102
ATTN: CHRIS THOMPSON, PhD
207.747.5288
PARALLAXPARTNERS@GMAIL.COM

AGENT:
PLACEMAKER PARTNERS, LLC
18 VAN AKEN WAY
PORTLAND, MAINE 04102
ATTN: BO KENNEDY,P.E.
207.747.5288
BO@PLACEMAKERPARTNERS.COM

PROJECT PARCEL SITE

ZONING: B-5 URBAN COMMERCIAL MIXED USE ZONE

PORTLAND TAX ASSESSOR'S MAP & LOT NUMBERS:

MAP	BLOCK	LOTS
201	A	5

PARCEL 17 - SECTIONAL 4 SUBDIVISION PLAT OF THE FOREFRONT AT THOMPSON'S POINT SUBDIVISION

SITE ADDRESS:
125 THOMPSON'S POINT ROAD, PORTLAND , ME 04102

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C-2.1	DEMOLITION AND REMOVALS PLAN
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A2.1	SOUTH ELEVATIONS
A2.2	EAST & WEST ELEVATIONS AND BUILDING SECTIONS
A2.3	NORTH ELEVATIONS & GARAGE SECTION
A2.4	THREE-DIMENSIONAL VIEWS OF BUILDING
A2.5	BUILDING MATERIALS

*NOT INCLUDED IN THIS PLAN SET. THESE SHEETS WILL BE PREPARED AND INCLUDED AT A LATER DATE

UTILITIES

WATER
ATTN: ROBERT BARTELS
PORTLAND WATER DISTRICT
22 DOUGLAS STREET
P.O. BOX 3533
PORTLAND, MAINE 04104
207.761.8310

SEWER
ATTN: BEN PEARSON, P.E.
CITY OF PORTLAND
PUBLIC SERVICES ENGINEERING DEPT.
212 CANCO ROAD, SUITE B
PORTLAND, MAINE 04103
207.874.8830

POWER
ATTN: JAMIE COUGH
CENTRAL MAINE POWER
162 CANCO ROAD
PORTLAND, MAINE 04103
207.791.1023

TELEPHONE
ATTN: DARREN DIPIETRANTONIO
CONSOLIDATED COMMUNICATIONS
207.235.4209
www.consolidated.com

CABLE
ATTN: MARK PELLITIER
SPECTRUM
118 JOHNSON ROAD
PORTLAND, MAINE 04102
877.546.0962

INTERNET:
ATTN: JAMES HARDER
FIRST LIGHT
207-513-2820
jharder@firstlight.net

ATTN: DARREN DIPIETRANTONIO
CONSOLIDATED COMMUNICATIONS
207.235.4209
www.consolidated.com

NATURAL GAS
ATTN: SCOTT CARPENTER
UNITIL / FORMERLY NORTHERN UTILITIES
1075 FOREST AVENUE
PORTLAND, MAINE 04103
207.541.2543
email: carpenters@unitil.com

CALL BEFORE YOU DIG:
1.888.DIGSAFE (1.888.344.7233)
DIG SAFE MAINE

PERMITS / APPROVALS (APPLICABLE TO FULL DEVELOPMENT)

LOCAL	GOVERNING BODY	STATUS
SITE PLAN, SHORELAND ZONING AND SUBDIVISION REVIEW	CITY OF PORTLAND PLANNING AUTHORITY CITY HALL 389 CONGRESS STREET PORTLAND, MAINE 04101 207.874.8722 CONTACT: CHRISTINE GRIMANDO	REFER TO "PLAN REFERENCES" THIS SHEET
BUILDING AND DEMOLITION PERMITS	CITY OF PORTLAND CODE ENFORCEMENT OFFICE CITY HALL 389 CONGRESS STREET PORTLAND, MAINE 04101 207.874.8703	TO BE FILED PRIOR TO CONSTRUCTION BY CONTRACTOR FOR THIS PROJECT
MASTER DEVELOPMENT PLAN	CITY OF PORTLAND PLANNING AUTHORITY CITY HALL 389 CONGRESS STREET PORTLAND, MAINE 04101 207.874.8722 CONTACT: CHRISTINE GRIMANDO	APPROVED MARCH 2014

STATE	GOVERNING BODY	STATUS
SITE LOCATION OF DEVELOPMENT	CITY OF PORTLAND PLANNING AUTHORITY DELEGATED AUTHORITY CITY HALL, 389 CONGRESS STREET 207.874.8722 CONTACT: CHRISTINE GRIMANDO	APPROVED JUNE 5, 2012 UNDER CITY'S DELEGATED AUTHORITY AMENDED JANUARY 2016
NATURAL RESOURCES PROTECTION ACT (NRPA) / MAINE CONSTRUCTION GENERAL PERMIT	MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION 312 CANCO ROAD PORTLAND, MAINE 04103 207.822.6300 CONTACT: MARYBETH RICHARDSON	APPROVED JULY 2012 ORDER #L-25672-2G-A-N / L-25672-FS-B-N APPROVED JUNE 2014 UPDATED JUNE 15, 2023
MAINE DOT TRAFFIC MOVEMENT PERMIT	MAINE DEPARTMENT OF TRANSPORTATION STATE HOUSE STATION 16 AUGUSTA, MAINE 04333 207.624.3620 CONTACT: STEVE LANDRY	APPROVED JUNE 13, 2012 REG. 01-00155-A-N EXTENDED MARCH 1, 2024
MAINE VOLUNTARY RESPONSE ACTION PLAN (VRAP)	MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION 312 CANCO ROAD PORTLAND, MAINE 04103 207.623.8367 CONTACT: NICK HODGKINS	NO ACTION ASSURANCE LETTER ISSUED MARCH 6, 2013
PUBLIC RAIL CROSSING PETITION	MAINE DEPARTMENT OF TRANSPORTATION STATE HOUSE STATION 16 AUGUSTA, MAINE 04333	DECISION #364 - APRIL 3, 2012

FEDERAL	GOVERNING BODY	STATUS
U.S. ARMY CORPS OF ENGINEERS SECTION 404 PERMIT	U.S. ARMY CORPS OF ENGINEERS RR2 BOX 1855 MANCHESTER, MAINE 04351 207.623.8367 CONTACT: JANA JACOBSON	APPROVED AUGUST 24, 2012 CORP PERMIT #NAE-2012-00992 AMENDED APRIL 16, 2014 UPDATED OCTOBER 24, 2024

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PLAN REFERENCES:

TITLE	DATE APPROVED BY CITY
1. THE FOREFRONT AT THOMPSON'S POINT LEVEL III SITE PLAN	JUNE 5, 2012
2. THE FOREFRONT AT THOMPSON'S POINT LEVEL III SITE PLAN AMENDMENT	JUNE 19, 2013
3. BRICK NORTH BUILDING AT THE FOREFRONT AT THOMPSON'S POINT LEVEL III SITE PLAN	DECEMBER 17, 2013
4. THE FOREFRONT AT THOMPSON'S POINT MASTER PLAN	MARCH 11, 2014 (EXTENDED TO MARCH 11, 2024)
5. THE DEPOT BUILDING LEVEL II SITE PLAN	JUNE 10, 2014
6. BRICK NORTH BUILDING AT THE FOREFRONT AT THOMPSON'S POINT LEVEL III SITE PLAN AMENDMENT (PHASE 1A)	DECEMBER 4, 2014
7. SUBDIVISION APPLICATION	JANUARY 12, 2016 (AMENDED APRIL 2020)
8. BRICK NORTH AND SOUTH BUILDINGS - LEVEL III SITE PLAN	JANUARY 12, 2016
9. LEVEL II SITE PLAN -SECTIONAL 2 ROADWAY	JUNE 5, 2017
10. LEVEL III - CHILDREN'S MUSEUM & THEATRE OF MAINE (PHASE II) AND ROADWAY EXTENSION (PHASE I)	NOVEMBER 14, 2017
11. LEVEL III - HOTEL PORTLAND	JULY 8, 2017 (EXTENDED TO JULY 18, 2022)
12. LEVEL II - WAREHOUSE AND LIGHT INDUSTRIAL	SEPTEMBER 28, 2020
13. MINOR SITE PLAN - BUILDING B2 (FOOD AND BEVERAGE)	MAY 26, 2023

I HEREBY ACKNOWLEDGE THAT THESE PLANS AND SPECIFICATIONS WERE PREPARED UNDER MY DIRECT SUPERVISION, AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MAINE AND THAT I AM COMPETENT TO PREPARE THIS DOCUMENT.

ALL PERMITS ARE ANTICIPATED TO HAVE CONDITIONS ATTENDANT WITH THEIR APPROVAL. THE CONTRACTOR SHALL REVIEW ALL PERMITS AND THE CONDITIONS ATTENDANT WITH APPROVALS PRIOR TO THE START OF THE WORK. UNLESS OTHERWISE STIPULATED BY THE CONTRACT DOCUMENTS, THE CONTRACTOR IS REQUIRED TO COMPLY AND FULFILL ALL CONDITIONS OF APPROVAL.

REV	DATE	DESCRIPTION
2	12/23/2024	REVISED TO ADDRESS CITY COMMENTS
1	9/6/2024	MAJOR SITE PLAN APPLICATION

REVISIONS

STATE OF MAINE — BO KENNEDY — No. 11994 — LICENSED PROFESSIONAL ENGINEER — 12/23/2024

P.E. BO KENNEDY
LIC. #11994

PROJECT
THE FOREFRONT AT THOMPSON'S POINT
MULTI-FAMILY RESIDENTIAL BUILDING (G)

SHEET TITLE
COVER SHEET

CLIENT
CPI MANAGEMENT, LLC
(CATHARTES)

PLACEMAKER PARTNERS, LLC
18 VAN AKEN WAY
PORTLAND, ME 04102
bo@placemakerpartners.com

DRAWN: DB	DATE: AUGUST 2024
DESIGNED: BEK	SCALE: N.T.S.
FILE NAME: PANHANDLE-COV.dwg	
SHEET C-1.0	

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GENERAL NOTES

1. IN ADDITION TO THESE PLANS AND NOTES, THE CONTRACTOR SHALL REFER TO AND ADHERE TO CONTRACT DOCUMENTS WHICH INCLUDE BUT ARE NOT LIMITED TO ALL LOCAL, STATE, AND FEDERAL PERMITS APPLICABLE TO THE THOMPSON'S POINT SITE IN ADDITION TO ALL LOT 6 DEVELOPMENT PERMITS, THE MAINE DEP VRAP WORK PLAN, LEED SILVER DOCUMENT RECORDING, AND MAINE DEPARTMENT OF TRANSPORTATION SPECIFICATIONS.

2. THIS PROJECT WILL BE SUBJECT TO THE TERMS AND CONDITIONS OF ALL PERMITS ISSUED BY THE MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION, MAINE DEPARTMENT OF TRANSPORTATION, THE U.S DEPARTMENT OF THE ARMY CORPS OF ENGINEERS, LOCAL UTILITY COMPANIES AND THE CITY OF PORTLAND.

3. THE CONTRACTOR SHALL REFER TO THE ARCHITECTURAL PLANS FOR EXACT LOCATIONS AND DIMENSIONS OF THE ENTRANCE, PAVING, PRECISE BUILDING DIMENSIONS, AND EXACT BUILDING UTILITY ENTRANCE POINTS. ENTRANCES IN MOST LOCATIONS REQUIRE STRUCTURAL SLABS. REFER TO THE ARCHITECTURAL AND STRUCTURAL DRAWINGS FOR INFORMATION ON THE STRUCTURAL SLAB ENTRANCES.

4. ALL REQUIRED AND NECESSARY INSPECTIONS AND OR CERTIFICATIONS REQUIRED BY CODES AND/OR UTILITY SERVICE COMPANIES SHALL BE PERFORMED PRIOR TO ANNOUNCED BUILDING POSSESSIONS AND THE FINAL SERVICE CONNECTIONS.

5. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR THE ELEVATION OF THE EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THIS INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AND DIG SAFE AT LEAST 72 HOURS PRIOR TO ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS, AT ITS SOLE COST.

6. MAINTENANCE OF EROSION CONTROL MEASURES IS OF PARAMOUNT IMPORTANCE TO THE APPLICANT AND THE CONTRACTOR IS RESPONSIBLE FOR COMPLYING WITH ALL EROSION CONTROL MEASURES SHOWN ON THE PLANS. ADDITIONAL EROSION CONTROL MEASURES SHALL BE INSTALLED IF DEEMED NECESSARY BY ONSITE INSPECTIONS OF THE OWNER, THEIR REPRESENTATIVES, OR THE CITY, AT NO ADDITIONAL COST TO THE OWNER.

7. ALL MATERIAL SCHEDULES SHOWN ON THE PLANS ARE FOR GENERAL INFORMATION ONLY. THE CONTRACTOR SHALL PREPARE HIS OWN MATERIAL SCHEDULES BASED UPON HIS PLAN REVIEW. ALL SCHEDULES SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO ORDERING MATERIALS OR PERFORMING WORK.

8. ALL MATERIALS AND CONSTRUCTION METHODS SHALL CONFORM TO THE PROJECT SPECIFICATIONS, THE CITY OF PORTLAND AND SERVICING UTILITY REQUIREMENTS, IN CASES WHERE THESE CONFLICT THE MOST STRINGENT SHALL APPLY AT NO EXTRA COST TO THE OWNER.

9. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING RECORD DRAWINGS THROUGHOUT THE PROJECT AND PROVIDING THE OWNER WITH A SET OF ELECTRONIC FINAL RECORD DRAWINGS WHEN THE PROJECT IS COMPLETE.

10. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING ACCESS TO THOMPSON'S POINT AND ALL ADJACENT PROPERTIES INCLUDING THE RAILROAD R.O.W. AT ALL TIMES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TEMPORARY MARKINGS, SIGNAGE AND INCIDENTALS TO MAINTAIN SAFE VEHICLE AND PEDESTRIAN ACCESS THROUGH OUT THE LIFE OF THE PROJECT. THE CONTRACTOR SHALL NOTIFY THE PORTLAND PUBLIC SAFETY DIVISION ROUTINELY REGARDING TEMPORARY IMPACT OR CHANGES TO EMERGENCY SITE ACCESS CONDITIONS.

SITE LAYOUT NOTES

1. ALL HANDICAP PARKING SPACES ARE TO RECEIVE HANDICAP SIGNS AND PAVEMENT MARKINGS AS ILLUSTRATED ON THE DETAIL SHEETS.

2. BITUMINOUS CONCRETE CURB, SLIPFORM CONCRETE CURB AND GRANITE CURB SHALL MEET THE REQUIREMENTS OF MDOT 702.001, 703.07 AND 609.04.

3. ALL DIMENSIONING, UNLESS NOTED OTHERWISE, IS TO THE FACE OF CURB OR THE FACE OF THE BUILDING.

4. EXCEPT WHERE INDICATED OTHERWISE, THE PAVEMENT IS TO BE STANDARD DUTY PAVEMENT. SEE DRAWINGS C-3.5 SURFACE TREATMENT PLAN FOR PAVEMENT TYPE.

5. ALL TRAFFIC CONTROL SIGNS INDICATED ON THE SITE LAYOUT PLAN ARE TO MEET ALL REQUIREMENTS & STANDARDS OF THE MAINE DEPARTMENT OF TRANSPORTATION, AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITIONS AND THE AMERICANS WITH DISABILITIES ACT REQUIREMENTS.

6. STRIPE PARKING AREAS, DRIVES AND ROADWAY AS SHOWN, INCLUDING PARKING SPACES, STOP BARS, CROSSWALKS, HANDICAP SYMBOLS, PAINTED ISLANDS AND FIRE LANES. (ALL MARKINGS EXCEPT MEDIAN ISLANDS AND CENTERLINES TO BE CONSTRUCTED USING WHITE TRAFFIC PAINT). ALL TRAFFIC PAINT SHALL MEET THE REQUIREMENTS OF AASHTO M248 TYPE "F". MEDIAN ISLANDS AND CENTERLINES TO BE CONSTRUCTED USING YELLOW TRAFFIC PAINT.

7. SEE DETAILS FOR PARKING STALL DIMENSIONS, HANDICAP SYMBOLS, SIGNS AND SIGN POSTS.

8. STOP BARS SHALL BE 12" WIDE.

9. PAINTED ISLANDS SHALL BE 4" WIDE DIAGONAL LINES @ 3'-0" O.C. BORDERED BY 4" WIDE LINES.

GRADING & DRAINAGE NOTES:

1. ALL STORM DRAIN PIPE SHALL BE SMOOTH BORE INTERIOR PROVIDING A MANNINGS ROUGHNESS COEFFICIENT OF N = 0.012 OR LESS.

2. PROVIDE TURF REINFORCEMENT IN AREAS INDICATED ON THE PLANS.

3. AS "AS-BUILT" CERTIFICATION AND PLANS OF THE STORMWATER DRAINAGE SYSTEM IS REQUIRED PRIOR TO THE OWNER ACCEPTING ANY BUILDINGS AND PROPERTY. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT ANY DEVIATION FROM THE PLANS MAY DELAY THE ACCEPTANCE OF THE PROJECT, WITH CONTRACTOR RESPONSIBLE FOR ANY ASSOCIATED COSTS.

4. A DETAILED O&M MANUAL FOR STORMWATER MANAGEMENT SYSTEMS IS (WILL BE) FILED WITH THE CITY OF PORTLAND DURING THE PERMIT REVIEW PROCESS. A SPECIFIC MANUAL HAS BEEN PREPARED FOR O&M OF THE DRAINAGE SYSTEM.

5. SEE EXISTING CONDITIONS FOR BENCHMARK INFORMATION.

6. SEE GRADING, DRAINAGE AND EROSION/SEDIMENT CONTROL FOR PROPOSED GRADING AND EROSION CONTROL MEASURES.

7. ALL DISTURBED AREAS NOT TO BE PAVED, SODDED OR OTHERWISE TREATED SHALL RECEIVE 6" LOAM, SEED, FERTILIZER AND MULCH.

8. COMPACTION REQUIREMENTS:

LOCATION	MINIMUM COMPACTION*
SUBBASE AND BASE GRAVEL BELOW PAVED OR CONCRETE AREAS	95%
SUBGRADE FILL BELOW PAVED AREAS	90%
TRENCH BEDDING MATERIAL AND SAND BLANKET BACKFILL	95%
BELOW LOAM AND SEED AREAS	90%
STRUCTURAL FILL WITHIN PROPOSED BUILDING AREA	95%
SELECT FILL ADJACENT BUILDING FOUNDATIONS, EXTERIOR FOUNDATIONS AND WITHIN 8 INCHES OF THE SLAB-ON-GRADE	95%

*ALL PERCENTAGES OF COMPACTION SHALL BE OF THE MAXIMUM DRY DENSITY AT THE OPTIMUM MOISTURE CONTENT AS DETERMINED AND CONTROLLED IN ACCORDANCE WITH ASTM-D-1557.

9. ADJUST ALL MANHOLES, CATCH BASINS, CURB BOXES, ETC. WITHIN LIMITS OF WORK TO FINISH GRADE.

10. CONTRACTOR SHALL PROVIDE A FINISH PAVEMENT SURFACE FREE OF LOW SPOTS AND PONDING AREAS. CRITICAL AREAS INCLUDE BUILDING ENTRANCE AND EXIT RAMPS ADJACENT TO THE BUILDING AND ALONG NEW CURBED AREAS.

11. PROVIDE STABILIZATION OR SEPARATION GEOTEXTILE FABRIC OVER UNSTABLE SOILS AS DIRECTED BY THE OWNER'S REPRESENTATIVE AND IN ACCORDANCE WITH THE FINAL GEOTECHNICAL RECOMMENDATIONS.

12. NATIVE SOILS RANGE FROM GRANULAR TO CLAYEY AND SILTY. CARE MUST BE EXERCISED TO LIMIT DISTURBANCE OF THE BEARING SOILS. THE NATIVE CLAYEY OR SILTY SOILS SHOULD NOT BE PROOF-ROLLED. SHOULD THE SUBGRADE BECOME YIELDING OR DIFFICULT TO WORK, DISTURBED AREAS SHOULD BE EXCAVATED AND BACKFILLED WITH COMPACTED SELECT FILL OR CRUSHED STONE AT NO EXTRA EXPENSE TO THE OWNER. ALL SUBGRADE PREPARATION IS SUBJECT TO THE RECOMMENDATIONS OF THE PROJECT GEOTECHNICAL ENGINEER.

LOCAL APPROVALS, WAIVERS AND VARIANCES

THE CONSTRUCTION PLANS ARE TO BE SUBMITTED TO THE CITY OF PORTLAND FOR THEIR REVIEW, APPROVAL AND RECORDS PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.

UTILITY NOTES

1. ALL REQUIRED UTILITIES SERVING THE PROJECT SHALL BE COORDINATED AND CONSTRUCTED BY THE DIVISION SITE CONTRACTOR TO WITHIN 5 FEET OF THE BUILDINGS, AT A LOCATION COORDINATED WITH THE MEP CONTRACTOR(S) AND THE BUILDING PLANS. SITE WORK WITHIN 5 FEET OF UNDERSLAB UTILITIES SHALL CONSIST OF TRENCHING AND BACKFILLING. ACTUAL UTILITY INSTALLATION SHALL BE BY THE MEP CONTRACTOR. ALL REQUIRED CONNECTION FEES SHALL BE PAID BY THE OWNER.

2. THE CONTRACTOR SHALL COORDINATE THE INSTALLATION OF AND/OR RELOCATION OF OVERHEAD AND UNDERGROUND TELEPHONE WITH FAIRPOINT COMMUNICATIONS. CONTRACTOR SHALL BE RESPONSIBLE FOR CONDUITS, PULL WIRES, TRENCHING AND BACKFILLING NECESSARY TO COMPLETE THE WORK.

3. ALL SANITARY SEWER WORK SHALL MEET THE STANDARDS OF THE MAINE STATE PLUMBING CODE AND CITY OF PORTLAND PUBLIC SERVICES DIVISION.

4. THE CONTRACTOR SHALL COORDINATE THE INSTALLATION OF ELECTRIC SERVICE WITH CENTRAL MAINE POWER.

5. COORDINATE ALL UTILITY WORK WITH THE APPROPRIATE UTILITY COMPANY. ALL UTILITY WORK SHALL CONFORM TO THE STANDARDS OF THE UTILITY COMPANY AND PROJECT SPECIFICATIONS, WHICHEVER IS MORE STRINGENT.

6. THE LOCATIONS OF THE NEW UTILITY SERVICES AND CONNECTIONS SHALL BE COORDINATED WITH THE SERVING UTILITY COMPANY, PROJECT ARCHITECTS AND MEP DESIGNERS.

7. UNDERGROUND ELECTRICAL, CONDUIT MATERIAL AND INSTALLATION SHALL CONFORM TO UTILITY COMPANY STANDARDS AND PROJECT SPECIFICATIONS, WHICH EVER IS MORE STRINGENT.

8. ADJUST ALL MANHOLES, CATCH BASINS, CURB BOXES, ETC. WITHIN LIMITS OR WORK TO FINISH GRADE.

9. ALL UNDERGROUND CONDUITS SHALL HAVE NYLON PULL ROPES TO FACILITATE PULLING CABLES.

10. THE CONTRACTOR SHALL OBTAIN, AND COMPLY WITH ALL REQUIRED PERMITS, ARRANGE FOR ALL INSPECTIONS, AND SUBMIT COPIES OF ACCEPTANCE CERTIFICATES TO THE OWNER PRIOR TO COMPLETION OF THE PROJECT.

11. THE CONTRACTOR SHALL PROVIDE AND INSTALL ALL BOXES, FITTINGS, CONNECTORS, COVER PLATES AND OTHER MISCELLANEOUS ITEMS NOT NECESSARILY DETAILED ON THE DRAWINGS TO RENDER INSTALLATION OF UTILITIES COMPLETE AND OPERATIONAL, AT NO EXTRA EXPENSE TO THE OWNER.

12. A 10 FOOT MINIMUM EDGE TO EDGE HORIZONTAL SEPARATION SHALL BE PROVIDED BETWEEN ALL WATER AND SANITARY SEWER LINES. AN 18 INCH OUTSIDE TO OUTSIDE VERTICAL SEPARATION SHALL BE PROVIDED AT ALL WATER AND SANITARY SEWER CROSSINGS.

13. THE CONTRACTOR SHALL PHASE UTILITY CONSTRUCTION AND PROVIDE TEMPORARY SERVICES AS REQUIRED TO PROVIDE CONTINUOUS SERVICE TO THE JOB SITE, SUBURBAN PROPANE AND NNEPRA TEMPORARY SERVICES SHALL COMPLY WITH ALL FEDERAL, STATE, LOCAL AND UTILITY COMPANY STANDARDS. COORDINATE ALL TEMPORARY SERVICES WITH UTILITY COMPANY, OWNER AND AFFECTED BUSINESSES.

LANDSCAPE NOTES

(SUBJECT TO COORDINATION WITH LANDSCAPE DRAWINGS. IN CASE OF CONFLICT BETWEEN THIS SECTION AND THE LANDSCAPE DRAWINGS, THE LANDSCAPING DRAWINGS SHALL GOVERN)

1. ALL PLANTS SHALL BE NURSERY GROWN AND WORKMANSHIP SHALL CONFORM TO THE AMERICAN ASSOCIATION OF NURSERYMEN, STANDARDS AND SHALL BE SUBJECT TO THE APPROVAL OF THE OWNERS REPRESENTATIVE BEFORE AND AFTER PLANTING.

2. PLANTS SHALL BE GUARANTEED FOR A PERIOD OF ONE (1) YEAR AFTER INSPECTION AND ACCEPTANCE, AND SHALL HAVE AT LEAST 80% HEALTHY GROWTH AT THE END OF THE GUARANTEED PERIOD.

3. ALL DISTURBED AREAS NOT TO BE PAVED OR OTHERWISE TREATED SHALL RECEIVE 6" LOAM AND SEED AND 6" CLEAN COMMON BORROW AS DEFINED IN VRAP WORK PLAN BY CREDERE ASSOCIATES, DATED MARCH 6, 2013.

4. THREE (3) INCH BARK MULCH IS TO BE USED AROUND THE TREE AND SHRUB PLANTING AS SPECIFIED IN THE DETAILS. WHERE BARK MULCH IS USED IN A CURBED ISLAND, THE BARK SHALL MEET THE TIP INSIDE EDGE OF THE CURB. ALL OTHER AREAS SHALL RECEIVE 6" LOAM AND SEED.

5. THE CONTRACTOR SHALL SUPPLY ALL PLANT MATERIALS IN QUANTITIES SUFFICIENT TO COMPLETE THE PLANTING AS SHOWN.

6. PARKING AREA PLANTED ISLANDS TO HAVE A MINIMUM OF 6" TOPSOIL. REMOVE ALL CONSTRUCTION DEBRIS BEFORE TOPSOILING. TOPSOIL SHALL BE PLACED TO TOP OF CURB.

7. ALL PLANT MATERIAL SHALL BE APPROVED BY THE OWNER OR THE OWNERS REPRESENTATIVE PRIOR TO ARRIVAL ON THE SITE.

8. PLANT MATERIAL SHALL BEAR THE SAME RELATIONSHIP TO FINISHED GRADE AS TO THE ORIGINAL PLANTING GRADE PRIOR TO DIGGING.

9. THE CONTRACTOR SHALL LOCATE, VERIFY, AND MARK ALL EXISTING AND NEWLY INSTALLED UNDERGROUND UTILITIES PRIOR TO ANY LAWN WORK OR PLANTING. ANY CONFLICTS WHICH MIGHT OCCUR BETWEEN PLANTINGS AND UTILITIES SHALL BE IMMEDIATELY REPORTED TO THE OWNER SO THAT ALTERNATE PLANTING LOCATIONS CAN BE DETERMINED.

10. NO SUBSTITUTION OF PLANT MATERIALS SHALL BE ALLOWED WITHOUT THE PRIOR WRITTEN APPROVAL OF THE OWNER.

11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL PLANTING AND LAWNS AGAINST DAMAGE FROM ONGOING CONSTRUCTION. THIS PROTECTION SHALL BEGIN AT THE TIME THE PLANT IS INSTALLED AND CONTINUE UNTIL THE FORMAL ACCEPTANCE OF ALL THE PLANTINGS.

12. SEE PLANTING DETAILS FOR WEED BARRIER INFORMATION.

13. ALL PLANTING LOCATED AT THE ENTRANCE TO THE PROJECT OR AT INTERSECTIONS WITHIN THE SITE WILL BE MAINTAINED AND WILL NOT EXCEED 3 FEET IN HEIGHT WITHIN A TRIANGLE FORMED 25' INTO THE DRIVEWAY AND 25' ALONG THE TRAVEL WAY.

EROSION CONTROL NOTES:

1. PRIOR TO BEGINNING ANY LAND DISTURBING ACTIVITIES, CLEARING AND GRADING LIMITS SHALL BE STAKED BY THE CONTRACTOR BASED ON THE LIMITS OF GRADING SHOWN ON THE DRAWINGS AND ACCEPTED BY THE OWNER'S REPRESENTATIVE IN THE FIELD. AFTER THE CLEARING AND GRADING LIMITS HAVE BEEN ACCEPTED, THE CONTRACTOR SHALL INSTALL THE PERIMETER SILT FENCES, SEDIMENT BARRIERS AND THE CONSTRUCTION ENTRANCES ASSOCIATED WITH THE PROJECT.

2. ALL GROUND AREAS GRADED FOR CONSTRUCTION SHALL BE GRADED, LOAMED, SEEDED AND MULCHED AS SOON AS POSSIBLE. TEMPRORARY/PERMANENT SEED MIXTURES SHALL CONFORM TO THE SEEDING PLAN CONTAINED IN THE EROSION CONTROL PROJECT PREPARED FOR THIS PROJECT.

3. PRIOR TO PAVING, THE CONTRACTOR SHALL REMOVE SILT FROM ALL STORM LINES AND APPURTANCES.

4. ALL STORM DRAIN INLETS AND OUTLETS NOT IN PAVED AREAS ARE TO RECEIVE RIPRAP PROTECTION APRONS DURING CONSTRUCTION.

5. SILT FENCES SHALL BE INSPECTED, REPAIRED AND CLEANED AS NOTED IN THE EROSION CONTROL NOTES SHOWN ON THE EROSION CONTROL DETAIL SHEET.

6. THE CONTRACTOR SHALL REPAIR AND ADD STONE TO THE CONSTRUCTION ENTRANCE AS IT BECOMES SATURATED WITH MUD TO ENSURE THAT IT FUNCTIONS TO CAPTURE MUD FROM THE TIRES OF CONSTRUCTION VEHICLES DURING CONSTRUCTION. THE PURPOSE OF THE CONSTRUCTION ENTRANCE IS TO KEEP ADJACENT STREETS CLEAR OF DIRT AND MUD. SWEEPING OF THE ROADWAYS SHALL BE PERFORMED BY THE CONTRACTOR ON AN AS NEEDED BASIS, BUT AT A MINIMUM ONCE A WEEK.

7. SILT REMOVED FROM AROUND INLETS AND BEHIND THE SILT FENCES SHALL BE PLACED ON A TOPSOIL STOCKPILE AND MIXED INTO TOPSOIL FOR USE IN LANDSCAPING OPERATIONS.

8. LAND DISTURBING ACTIVITIES SHALL BE ACCOMPLISHED IN A MANNER AND SEQUENCE WHICH CAUSE THE LEAST PRACTICAL UNPROTECTED DENUDED AREAS ON THE SITE DURING CONSTRUCTION.

9. THE CONTRACTOR IS CAUTIONED THAT FAILURE TO COMPLY WITH THE SEQUENCE OF CONSTRUCTION, EROSION/SEDIMENT CONTROL PLAN, AND OTHER PERMIT REQUIREMENTS MAY RESULT IN MONETARY PENALTIES AS ENFORCED BY THE MEDEP OR LOCAL AGENCIES. THE CONTRACTOR SHALL BE ASSESSED ALL SUCH PENALTIES AT NO COST TO THE OWNER OR PERMITTEE.

10. A FULL EROSION/SEDIMENTATION CONTROL PLAN ACCOMPANIES THIS DRAWING SET AND IS ALSO CONTAINED IN THE DIV 312513 SPECIFICATIONS.

11. PROVIDE INLET PROTECTION BARRIERS AROUND ALL EXISTING AND PROPOSED STORM DRAINAGE INLETS AS SHOWN AND MAINTAIN FOR THE DURATION OF THE PROJECT UNTIL PAVEMENT HAS BEEN INSTALLED.

12. INSPECT EROSION AND SEDIMENT CONTROL DEVICES AFTER EACH RAIN STORM OF 0.25 INCHES OR GREATER. REPAIR/MODIFY PROTECTION AS NECESSARY TO MAXIMIZE EFFICIENCY FILTER. REPLACE ALL FILTERS WHEN SEDIMENT IS 1/3 OF THE STRUCTURE HEIGHT.

13. INSTALL CURLEX EROSION CONTROL MAT OR EQUAL ON ALL SLOPES STEEPER THAN 3:1.

14. THE CONTRACTOR SHALL INSTALL ALL EROSION CONTROL MEASURES IN ACCORDANCE WITH THE "MAINE EROSION AND SEDIMENT CONTROL HANDBOOK FOR CONSTRUCTION: BEST MANAGEMENT PRACTICES, CUMBERLAND COUNTY SOIL AND WATER CONSERVATION DISTRICT AND MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION, MARCH 2003".

LEGEND

EXISTING	PROPOSED
BOUNDARY LINE/R.O.W.	BARRIER FREE SYMBOL
ABUTTER LINE/R.O.W.	SIGN
DEED LINE/ROW	SIGN LABEL
TIE LINE	GUIDERAIL - METAL
EASEMENT	GUIDERAIL - TIMBER
FLOODPLAIN	FENCE - CHAINLINK
CENTERLINE	FENCE - WOOD
IRON PIPE/ROD	BUILDING / BUILDING ACCESS
BENCHMARK	PROPERTY LINE
BUILDING	RETAINING WALL
WETLANDS	PEDESTRIAN CROSSWALK
EDGE WETLAND	TRAFFIC ARROWS
ROCK OUTCROP	BOLLARD
SIGN	VERTICAL GRANITE CURB
EDGE PAVEMENT	SLOPED GRANITE CURB
GRAVEL ROAD	CATCH BASIN
EDGE WATER	CONTOUR LABEL
CONTOURS (122 — 120)	DRAIN MANHOLE
SPOT GRADE (×30.20)	RIPRAP INLET APRON
CHAIN LINK FENCE	RIPRAP OUTLET APRON
DECIDUOUS TREE	SLOPE DESIGNATION (2 / 1 = 2:1)
CONIFEROUS TREE	SPOT GRADE (×8.33)
GUARDRAIL	SPOT GRADE AT CURB (TC = TOP / BC = BOTTOM) (×TC 96.50 8.50 BC 8.00)
WATER GATE VALVE	WATER MARK
HYDRANT	UNDERDRAIN (10"UD)
SEWER MH	STORM DRAIN (SD9)
CATCH BASIN	TREE LINE OR LIMIT OF CLEARING
DRAINAGE MH	CURB STOP
UNIDENTIFIED MH	HYDRANT
OVERHEAD UTILITY (OHU)	LIGHT POLE WITH FIXTURE(S)
ELECTRIC METER BOX (EM)	WALL MOUNT LIGHT
LIGHT POLE	SANITARY SEWER MANHOLE
UTILITY POLE	TEST PIT
GUY	TRANSFORMER PAD (T)
RIPRAP	UTILITY POLE
BOULDER	VALVE
SCHEDULE B — SECTION 2 EXCEPTIONS (15)	SANITARY SEWER (SAN9)
	WATER MAIN (6"W)
	GAS MAIN (2"G)
	UNDERGROUND ELECTRIC (UGE)
	OVERHEAD ELECTRIC (OHE)
	PEDESTRIAN FLASHER (P)

PRELIMINARY — NOT FOR CONSTRUCTION

REV	DATE	DESCRIPTION
1	9/6/2024	MAJOR SITE PLAN APPLICATION

REVISIONS

STATE OF MAINE — BO KENNEDY — No. 11994 — LICENSED PROFESSIONAL ENGINEER — 9/6/2024

P.E. BO KENNEDY
LIC. #11994

PROJECT
THE FOREFRONT AT THOMPSON'S POINT
MULTI-FAMILY RESIDENTIAL BUILDING (G)

SHEET TITLE
GENERAL NOTES AND LEGEND

CLIENT
CPI MANAGEMENT, LLC (CATHARTES)

PLACEMAKER PARTNERS, LLC
18 VAN AKEN WAY
PORTLAND, ME 04102
bo@placemakerpartners.com

DRAWN:	BEK
DESIGNED:	BEK
FILE NAME:	PANHANDLE-GEN.dwg
SHEET	C-1.2
DATE:	AUGUST 2024
SCALE:	N.T.S.

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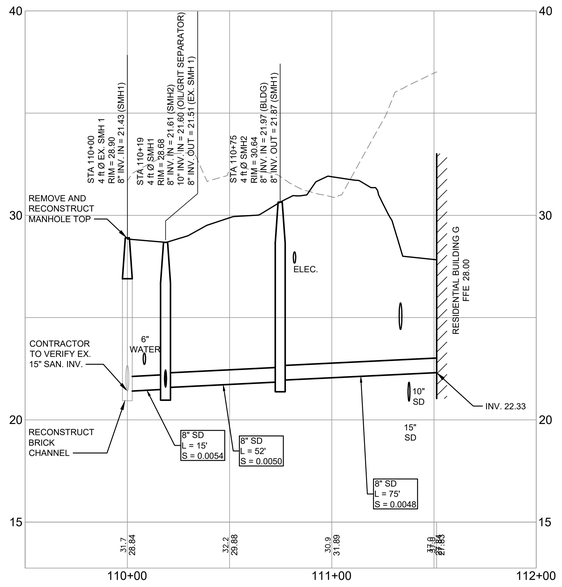
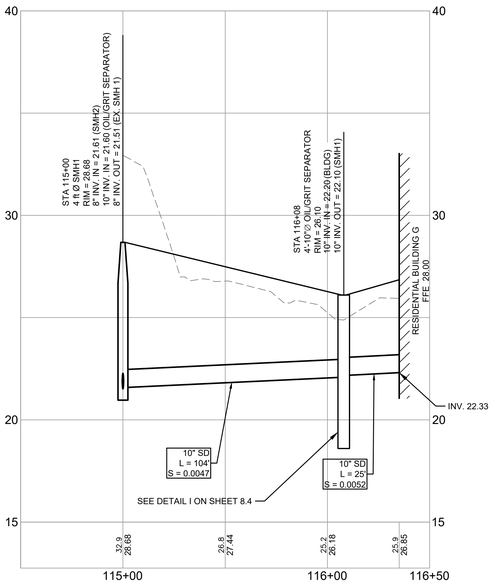


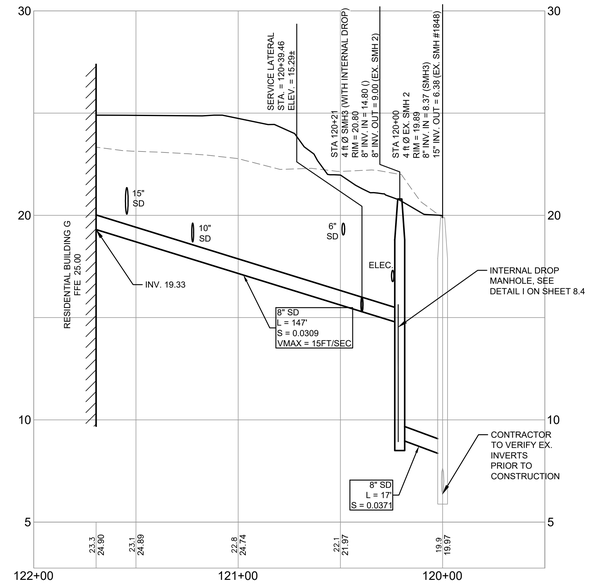
SANITARY SEWER PROFILE `A'

SCALE: H 1" = 30'
V 1" = 3'.



SANITARY SEWER PROFILE `B'

SCALE: H 1" = 30'
V 1" = 3'.

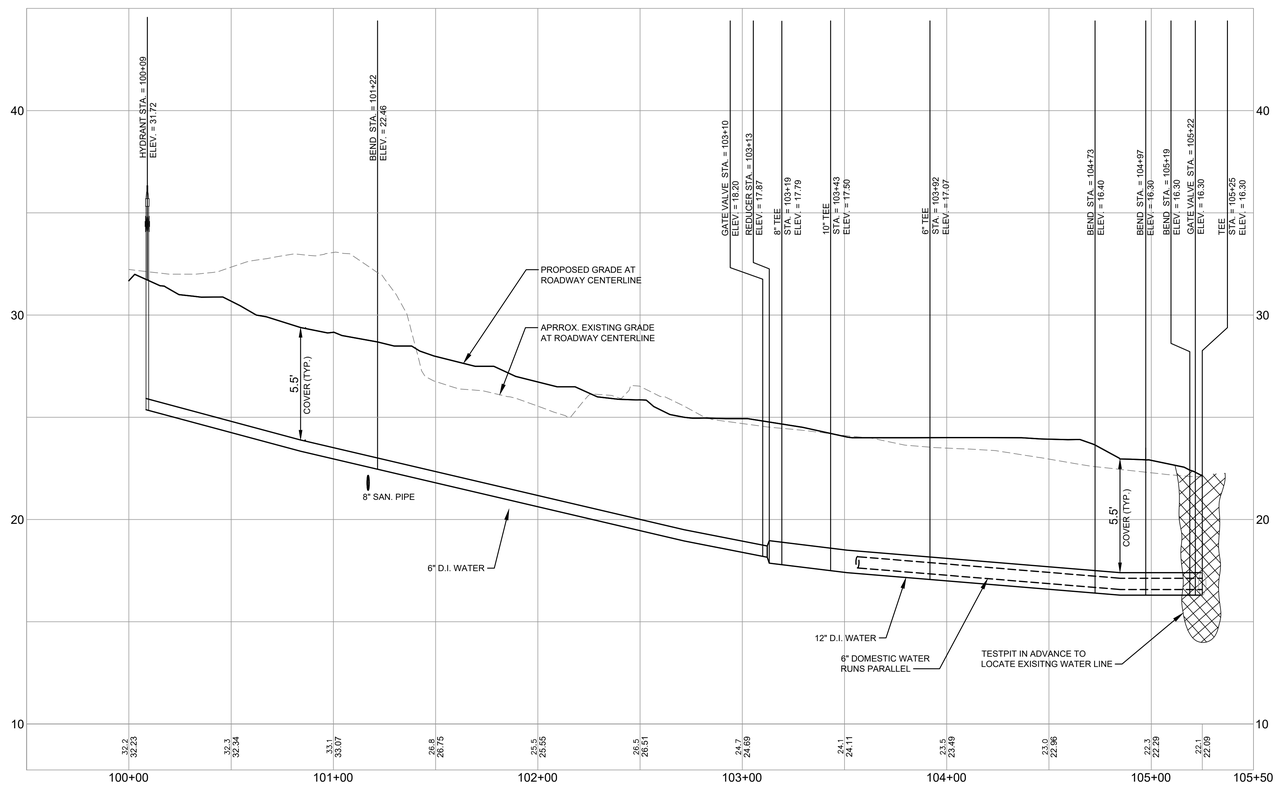


SANITARY SEWER PROFILE `C'

SCALE: H 1" = 30'
V 1" = 3'.

ORIENTATION SKETCH

SCALE: 1" = 50'



WATER LINE PROFILE `A'

SCALE: H 1" = 30'
V 1" = 3'.

PRELIMINARY – NOT FOR CONSTRUCTION

REV	DATE	DESCRIPTION
2	12/23/2024	REVISED TO ADDRESS CITY COMMENTS
1	9/6/2024	MAJOR SITE PLAN APPLICATION

REVISIONS

STATE OF MAINE — BO KENNEDY No. 11994 — LICENSED PROFESSIONAL ENGINEER — 12/23/2024

P.E. BO KENNEDY
LIC. #11994

PROJECT
THE FOREFRONT AT THOMPSON'S POINT
MULTI-FAMILY RESIDENTIAL BUILDING (G)

SHEET TITLE
SANITARY SEWER AND WATER LINE PROFILES

CLIENT
CPI MANAGEMENT, LLC (CATHARTES)

PLACEMAKER PARTNERS, LLC
18 VAN AKEN WAY
PORTLAND, ME 04102
bo@placemakerpartners.com

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SHEET	C-11.0
DATE:	AUGUST 2024
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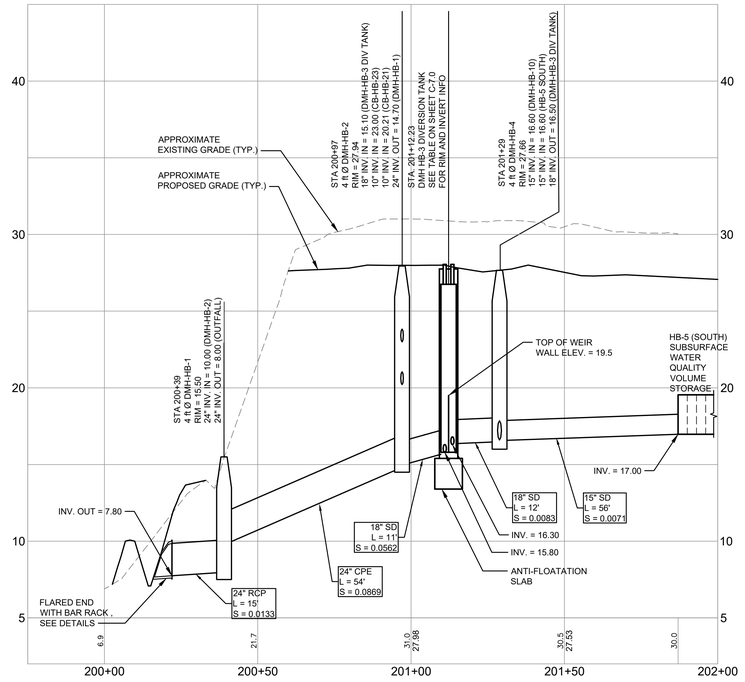
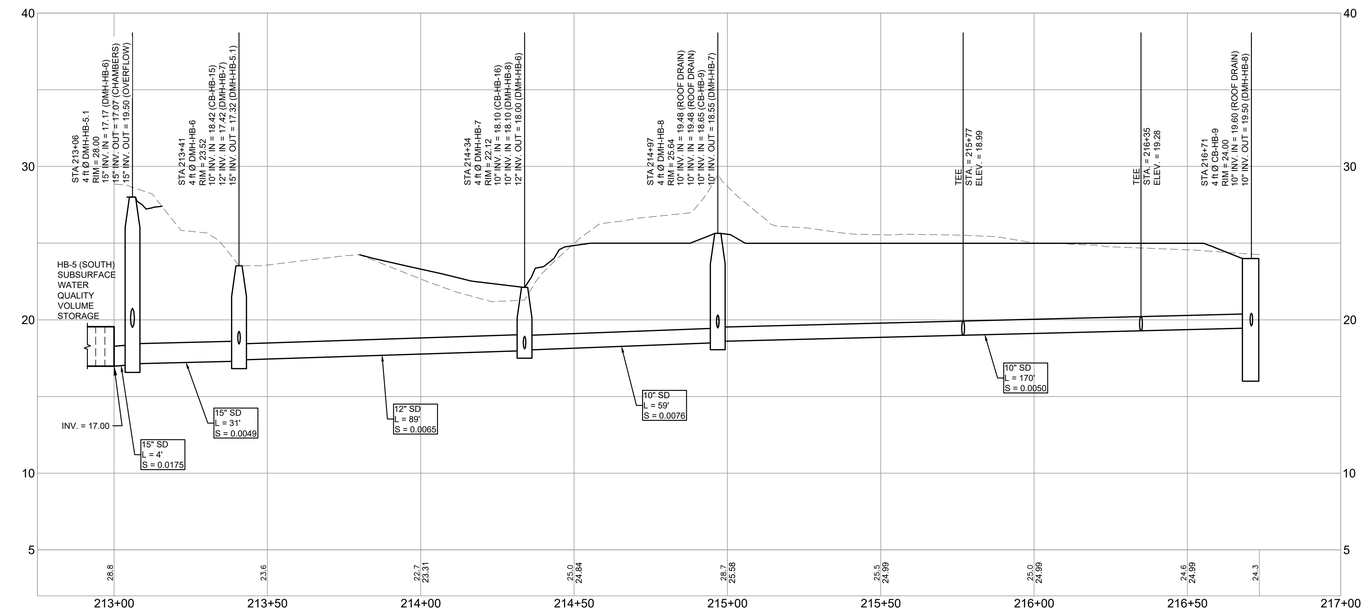


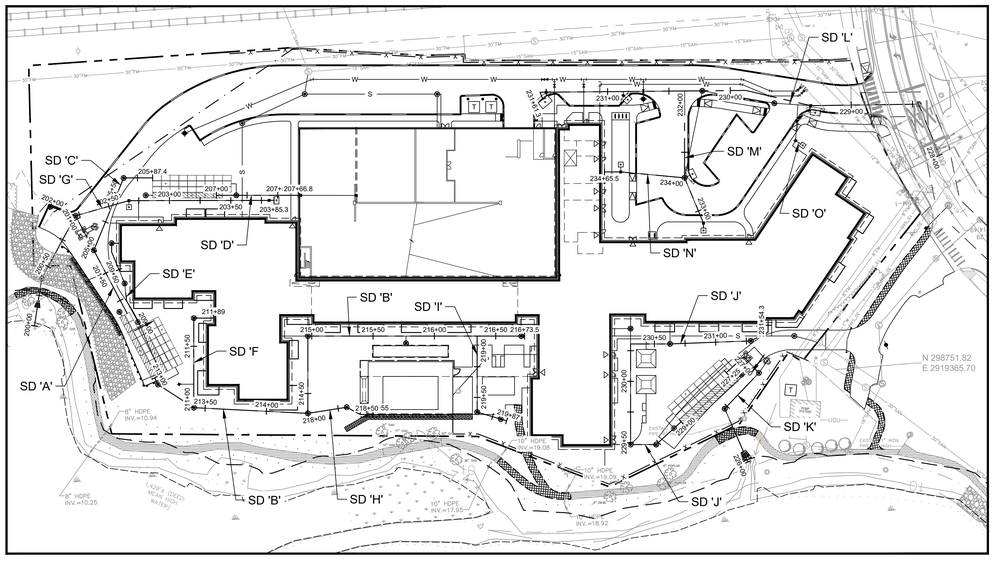
STORM DRAIN PROFILE 'A'

SCALE: H 1" = 20'
V 1" = 4'.



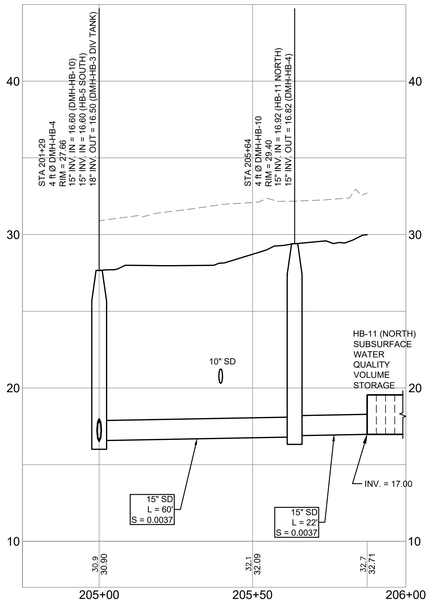
STORM DRAIN PROFILE 'B'

SCALE: H 1" = 20'
V 1" = 4'.



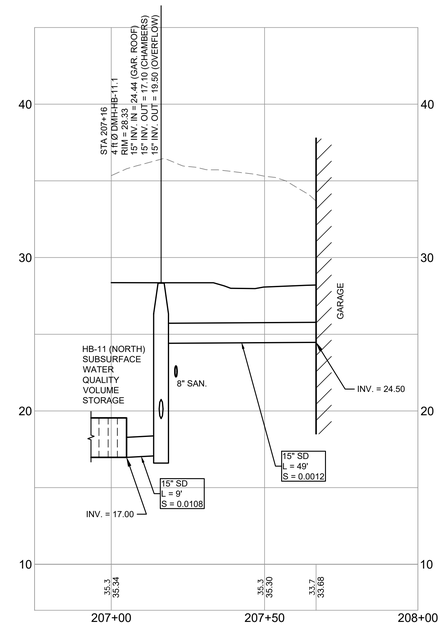
ORIENTATION SKETCH

SCALE: 1" = 50'



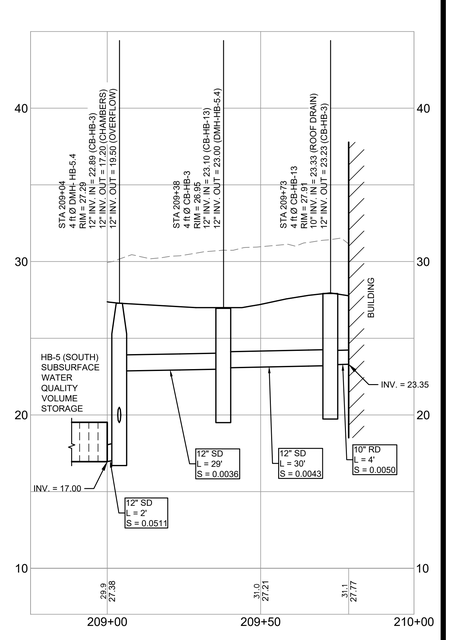
STORM DRAIN PROFILE 'C'

SCALE: H 1" = 20'
V 1" = 4'.



STORM DRAIN PROFILE 'D'

SCALE: H 1" = 20'
V 1" = 4'.



STORM DRAIN PROFILE 'E'

SCALE: H 1" = 20'
V 1" = 4'.

PRELIMINARY – NOT FOR CONSTRUCTION

REV	DATE	DESCRIPTION
2	12/23/2024	REVISED TO ADDRESS CITY COMMENTS
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REVISIONS

STATE OF MAINE — BO KENNEDY No. 11994 — LICENSED PROFESSIONAL ENGINEER — 12/23/2024

P.E. BO KENNEDY
LIC. #11994

PROJECT
THE FOREFRONT AT THOMPSON'S POINT
MULTI-FAMILY RESIDENTIAL BUILDING (G)

SHEET TITLE
STORM DRAIN PROFILES - 1

CLIENT
CPI MANAGEMENT, LLC
(CATHARTES)

PLACEMAKER PARTNERS, LLC
18 VAN AKEN WAY
PORTLAND, ME 04102
bo@placemakerpartners.com

DRAWN:	DB	DATE:	AUGUST 2024
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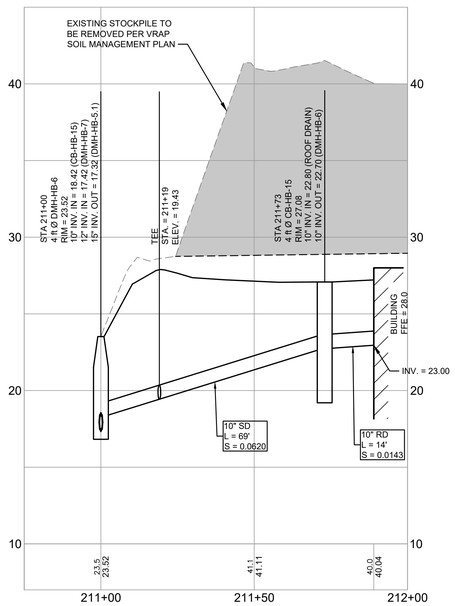
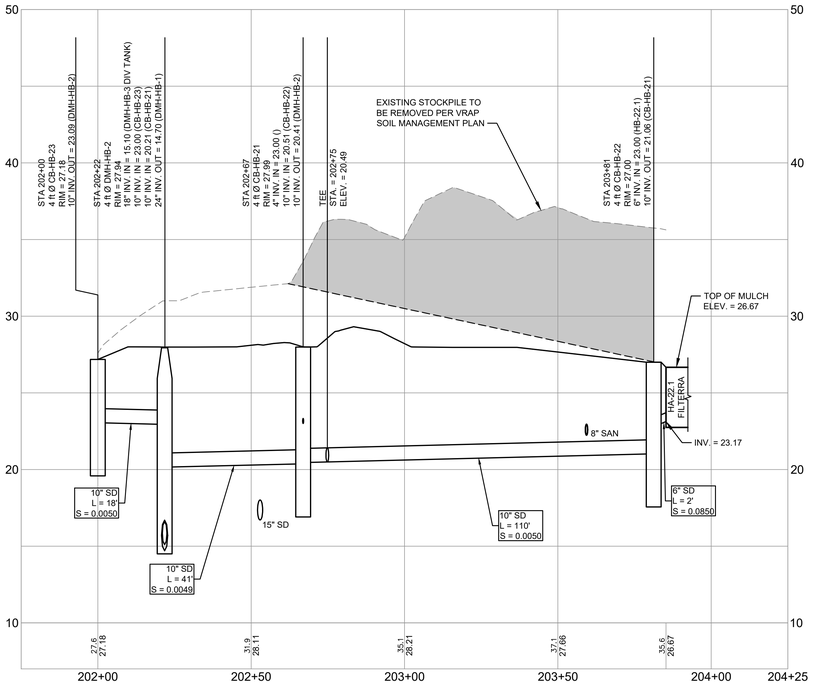


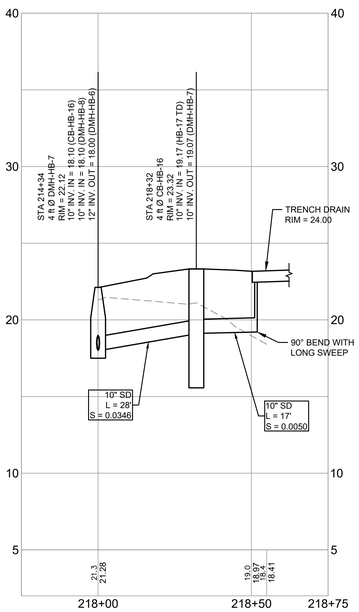
STORM DRAIN PROFILE 'F'

SCALE: H 1" = 20'
V 1" = 4'.



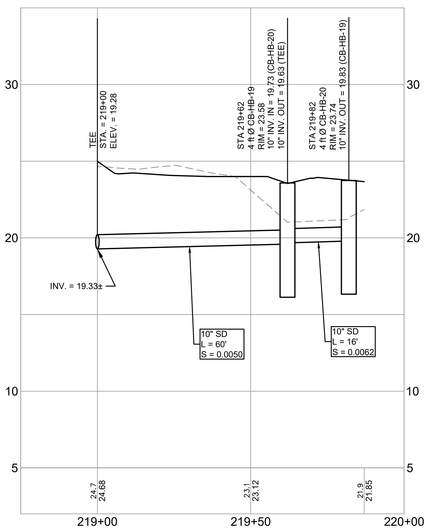
STORM DRAIN PROFILE 'G'

SCALE: H 1" = 20'
V 1" = 4'.



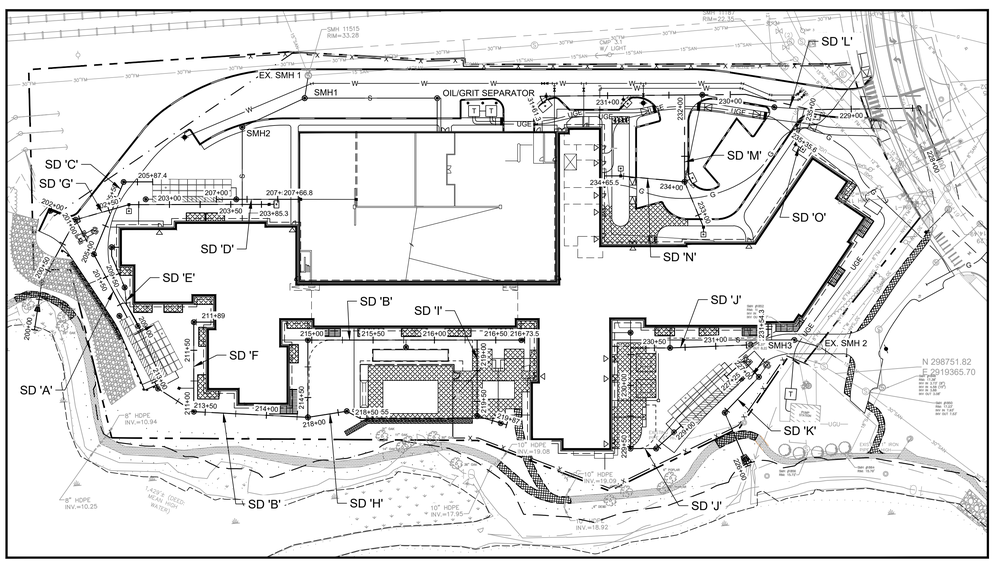
STORM DRAIN PROFILE 'H'

SCALE: H 1" = 20'
V 1" = 4'.



STORM DRAIN PROFILE 'I'

SCALE: H 1" = 20'
V 1" = 4'.



ORIENTATION SKETCH

SCALE: 1" = 50'

PRELIMINARY – NOT FOR CONSTRUCTION

REV	DATE	DESCRIPTION
2	12/23/2024	REVISED TO ADDRESS CITY COMMENTS
1	9/6/2024	MAJOR SITE PLAN APPLICATION

REVISIONS

STATE OF MAINE — BO KENNEDY No. 11904 — LICENSED PROFESSIONAL ENGINEER — 12/23/2024

P.E. BO KENNEDY
LIC. #11994

PROJECT
THE FOREFRONT AT THOMPSON'S POINT
MULTI-FAMILY RESIDENTIAL BUILDING (G)

SHEET TITLE
STORM DRAIN PROFILES - 2

CLIENT
CPI MANAGEMENT, LLC
(CATHARTES)

PLACEMAKER PARTNERS, LLC
18 VAN AKEN WAY
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bo@placemakerpartners.com

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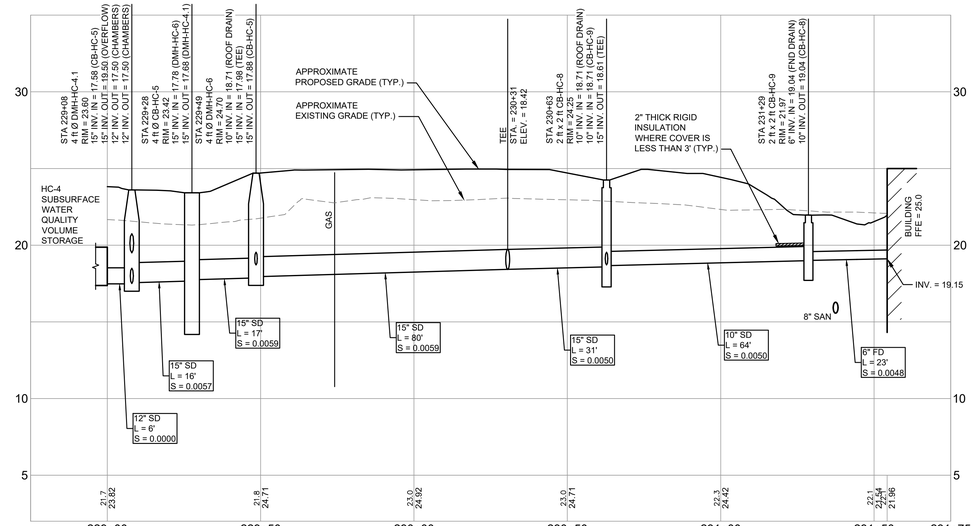
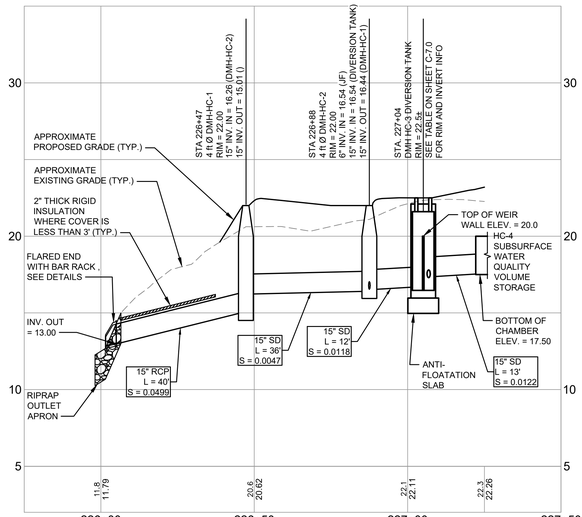


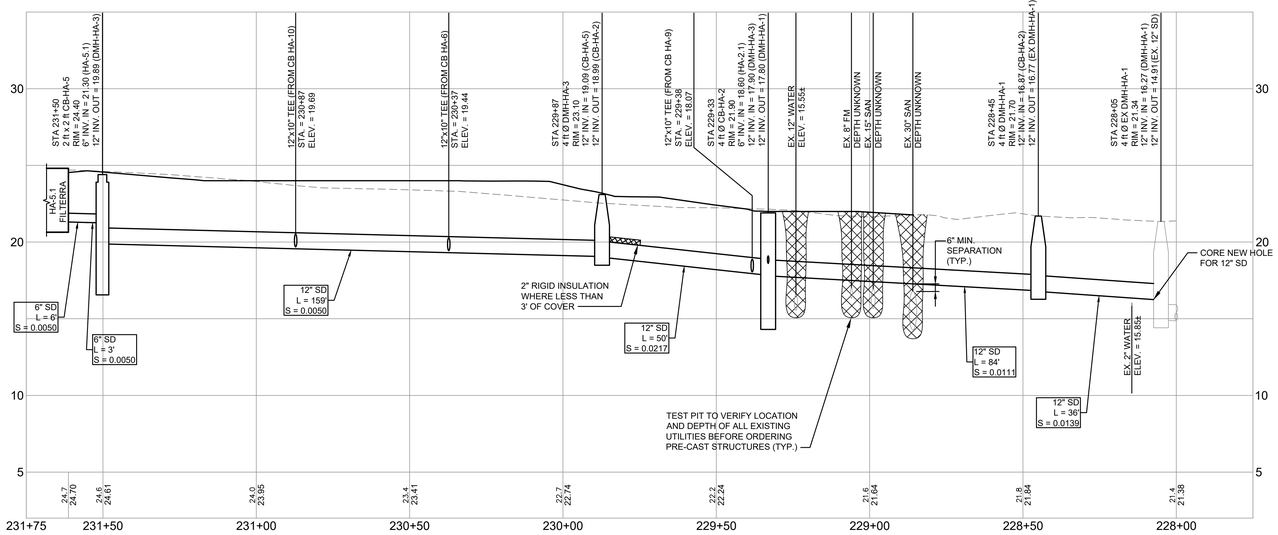
STORM DRAIN PROFILE 'J'

SCALE: H 1" = 20'
V 1" = 4'.



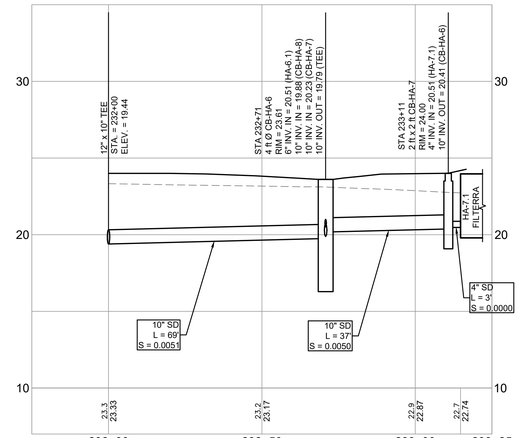
STORM DRAIN PROFILE 'K'

SCALE: H 1" = 20'
V 1" = 4'.



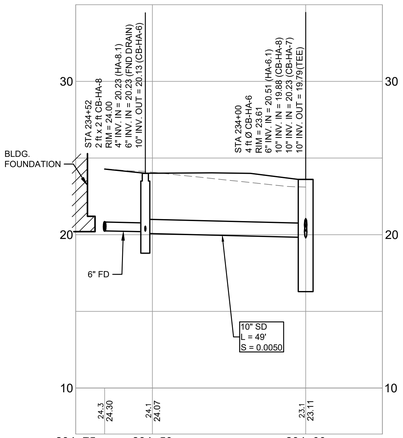
STORM DRAIN PROFILE 'L'

SCALE: H 1" = 20'
V 1" = 4'.



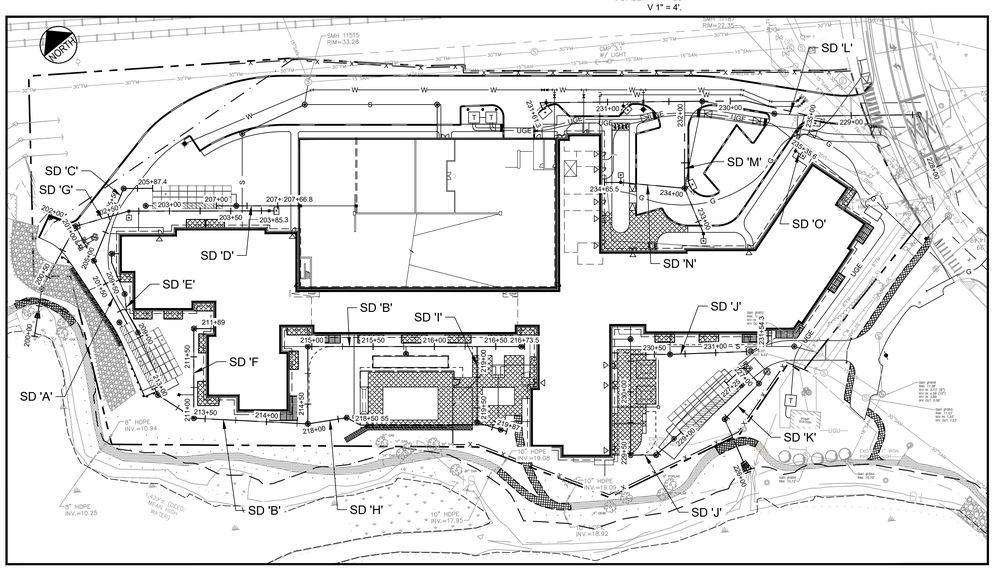
STORM DRAIN PROFILE 'M'

SCALE: H 1" = 20'
V 1" = 4'.



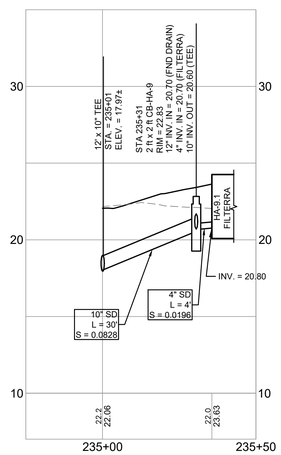
STORM DRAIN PROFILE 'N'

SCALE: H 1" = 20'
V 1" = 4'.



ORIENTATION SKETCH

SCALE: 1" = 50'



STORM DRAIN PROFILE 'O'

SCALE: H 1" = 20'
V 1" = 4'.

PRELIMINARY – NOT FOR CONSTRUCTION

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REVISIONS

STATE OF MAINE · BO KENNEDY · No. 11994 · LICENSED PROFESSIONAL ENGINEER
12/23/2024
P.E. BO KENNEDY
LIC. #11994

PROJECT
THE FOREFRONT AT THOMPSON'S POINT
MULTI-FAMILY RESIDENTIAL BUILDING (G)

SHEET TITLE
STORM DRAIN PROFILES - 3

CLIENT
CPI MANAGEMENT, LLC
(CATHARTES)

PLACEMAKER PARTNERS, LLC
18 VAN AKEN WAY
PORTLAND, ME 04102
bo@placemakerpartners.com

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PLAN REFERENCES:

1. BOUNDARY AND TOPOGRAPHIC DATA PROVIDED BY SEBAGO TECHNICS AS SHOWN ON A PLAN TITLED ALTA/ACSM LAND TITLE SURVEY OF 1 THOMPSON'S POINT, DATED MAY 27, 2011 AND LAST REVISED ON NOVEMBER 23, 2011. THIS PLAN HAS BEEN UPDATED TO REFLECT A NEW TOPOGRAPHIC SURVEY COMPLETED BY SEBAGO TECHNICS ON AUGUST 4, 2022.
2. GEOTECHNICAL EXPLORATION BORINGS AND TEST PIT LOCATIONS NOT SHOWN. AVAILABLE UPON REQUEST.
3. ADDITIONAL UTILITY DATA TAKEN FROM CITY AND UTILITY COMPANY RECORD DRAWINGS. AS WELL AS OBSERVATIONS BY PLACEMAKER PARTNERS, LLC PERSONNEL DURING SITE VISITS.
4. THIS PLAN HAS BEEN PREPARED BY PLACEMAKER PARTNERS, LLC THROUGH SOURCES NOTED ABOVE AND FIELD OBSERVATIONS OF ABOVE GROUND FEATURES. PLACEMAKER PARTNERS, LLC DOES NOT CERTIFY ITS ACCURACY AND NOTES CHANGES MAY HAVE OCCURRED SINCE THIS PLAN WAS APPROVED. ALL CONTRACTORS SHALL BE RESPONSIBLE FOR FIELD VERIFYING ALL CONDITIONS PRIOR TO CONTRACT SIGNING.
5. FEMA 100 YEAR FLOOD ELEVATION AE AS PUBLISHED IN 2023 IS NOTED TO BE ELEVATION 9 FEET, NAVD 1988 VERTICAL DATUM. THESE PLANS ARE BASED ON VERTICAL DATUM NGVD 1929. ELEVATION 9 FEET CONVERTS TO 9.76 FEET AND THEREFORE SLIGHTLY LOWER THAN THE ELEVATION 10 FEET SHOWN HERE IN. ELEVATION 10 FEET IS SHOWN FOR CLARITY AS PREVIOUSLY ASSUMED BASED ON PAST FEMA PUBLISHINGS.

GRAPHIC SCALE

20 0 10 20 40

(IN FEET)

1 inch = 20 ft.

PRELIMINARY – NOT FOR CONSTRUCTION

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REVISIONS

STATE OF MAINE BO KENNEDY No. 11994 LICENSED PROFESSIONAL ENGINEER 12/23/2024

P.E. BO KENNEDY

LIC. #11994

PROJECT
THE FOREFRONT AT THOMPSON'S POINT
MULTI-FAMILY RESIDENTIAL BUILDING (G)

SHEET TITLE
EXISTING CONDITIONS PLAN

CLIENT
CPI MANAGEMENT, LLC (CATHARTES)

PLACEMAKER PARTNERS, LLC
18 VAN AKEN WAY
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bo@placemakerpartners.com

DRAWN: DB	DATE: AUGUST 2024
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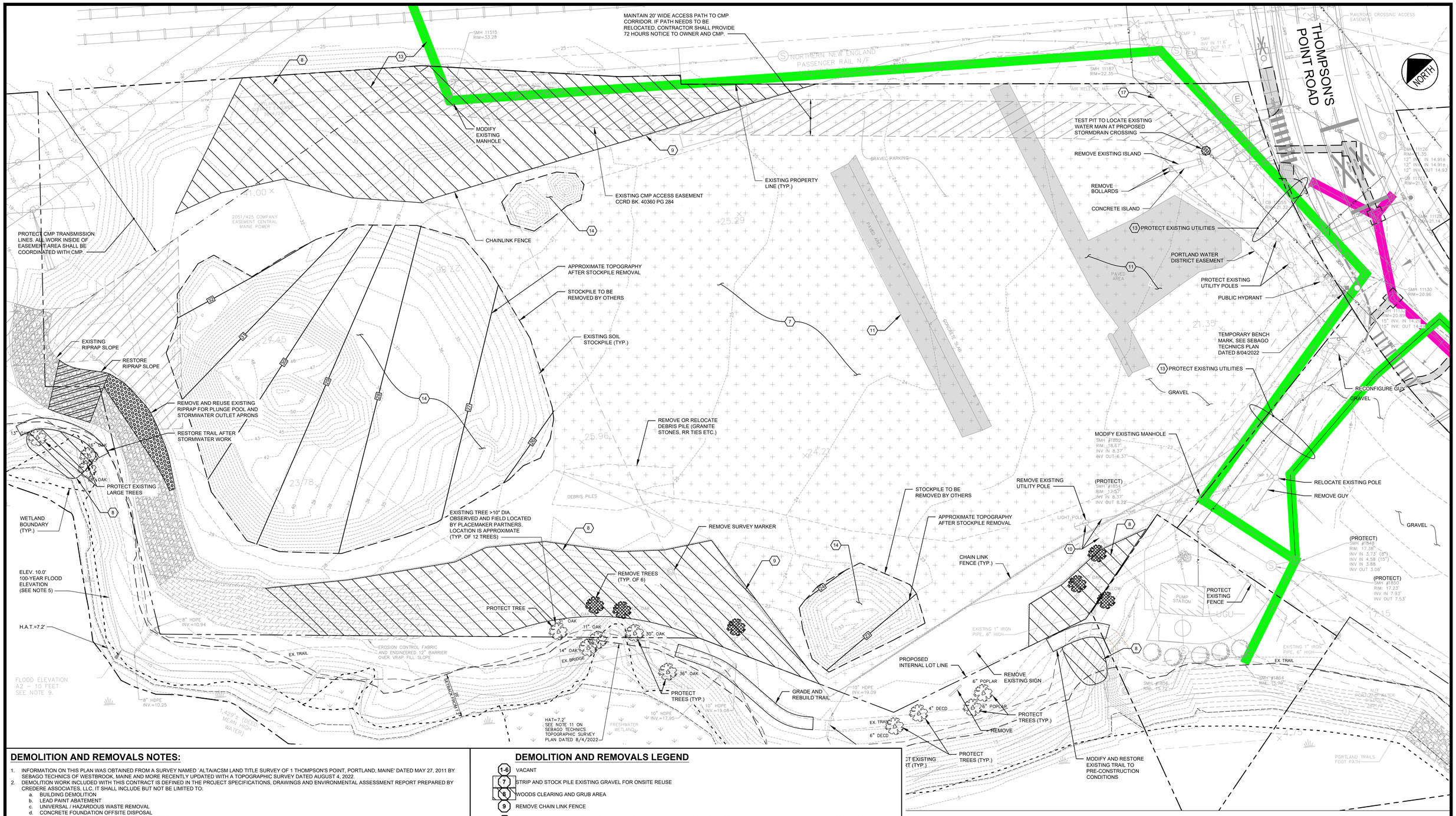

DEMOLITION AND REMOVALS NOTES:

1. INFORMATION ON THIS PLAN WAS OBTAINED FROM A SURVEY NAMED "ALTA/ACSM LAND TITLE SURVEY OF 1 THOMPSON'S POINT, PORTLAND, MAINE" DATED MAY 27, 2011 BY SEBAGO TECHNICS OF WESTBROOK, MAINE AND MORE RECENTLY UPDATED WITH A TOPOGRAPHIC SURVEY DATED AUGUST 4, 2022.
2. DEMOLITION WORK INCLUDED WITH THIS CONTRACT IS DEFINED IN THE PROJECT SPECIFICATIONS, DRAWINGS AND ENVIRONMENTAL ASSESSMENT REPORT PREPARED BY CREDERE ASSOCIATES, LLC. IT SHALL INCLUDE BUT NOT BE LIMITED TO:
   a. BUILDING DEMOLITION
   b. LEAD PAINT ABATEMENT
   c. UNIVERSAL / HAZARDOUS WASTE REMOVAL
   d. CONCRETE FOUNDATION OFFSITE DISPOSAL
   e. UTILITY DISCONNECTION AT EACH RAZED BUILDING
   f. INSTALLATION OF EROSION AND SEDIMENT CONTROLS
   g. DUST CONTROL
3. THE CONTRACTOR SHALL REMOVE CONCRETE FOUNDATIONS TO A MINIMUM OF 2 FEET BELOW GRADE AND TRANSPORTED OFFSITE FOR DISPOSAL. FOUNDATION HOLES SHALL BE LEFT WITH OSHA COMPLIANT SIDEWALLS WITH A SLOPE NOT MORE THAN 3:1.
4. THE CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE TEMPORARY FACILITIES INCLUDING AN OFFICE TRAILER AND BATHROOM FACILITIES.
5. THE CONTRACTOR MUST OBTAIN ALL PERMITS REQUIRED BY THE CITY OF PORTLAND TO PERFORM CONTRACTED WORK INCLUDING BUT NOT LIMITED TO A CITY CONNECTION PERMIT (UTILITIES IN THE RIGHT-OF-WAY) PRIOR TO THE START OF WORK.
6. EROSION, SEDIMENT AND DUST CONTROL IS OF PARAMOUNT IMPORTANCE TO THE OWNER AND A CRITICAL COMPONENT OF THE PERMIT DOCUMENTS. THE CONTRACTOR SHALL BE RESPONSIBLE TO REFER TO THE PROJECT DOCUMENTS FOR ALL REQUIREMENTS AS DETAILED IN THE ENVIRONMENTAL ASSESSMENT REPORT AND ITS APPENDED REPORTS PREPARED BY CREDERE ASSOCIATES, LLC. THE DEMOLITION CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE OF ALL EROSION AND SEDIMENT MEASURES UNTIL CLOSE OUT OF THE DEMOLITION CONTRACT.
7. THE CONTRACTOR IS REQUIRED TO SUBMIT A WRITTEN LOGISTICS PLAN A MIN. OF 48 HOURS PRIOR TO THE MOBILIZATION OF EQUIPMENT TO THE SITE. THE PLAN SHALL DETAIL LAYDOWN AREAS, ACCESS AREAS, STOCKPILE AREAS, SCHEDULE, ETC. THE OWNER RESERVES THE RIGHT TO MODIFY THE LOGISTICS PLAN TO BE CONSISTENT WITH THE PROJECT DOCUMENTS AT NO ADDITIONAL COST TO THE OWNER. THE PLAN SHALL BE CONSISTANT WITH THE APPROVED CONSTRUCTION MANAGEMENT PLAN.
8. THE CONTRACTOR SHALL HANDLE ALL DISTURBED SOILS IN ACCORDANCE WITH THE SOIL MANAGEMENT PLAN PREPARED BY CREDERE ASSOCIATES, LLC.
9. THE CONTRACTOR IS RESPONSIBLE FOR ALL DOCUMENTATION APPLICABLE TO THE GROUNDWATER AND SOIL REMOVAL AND DISPOSAL ACTIVITIES AS DETAILED IN THE GROUNDWATER MANAGEMENT PLAN AND SOIL MANAGEMENT PLAN BY CREDERE ASSOCIATES, LLC. AT NO EXTRA EXPENSE TO THE OWNER.
10. THE CONTRACTOR SHALL REMOVE, DISPOSE AND DOCUMENT ALL UNIVERSAL AND HAZARDOUS WASTE, LEAD-BASED PAINT AND SUB SLAB SOIL IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS INCLUDING THE PHASE II ENVIRONMENTAL ASSESSMENT REPORT AND MEDEP VRAP PLAN.
11. THE PROJECT SITE INCLUDES ONGOING TENANT ACTIVITIES, INCLUDING BUT NOT LIMITED TO RETAIL, EVENTS, OFFICE, AND NNEPRA, THAT SHALL REMAIN THROUGHOUT THE COURSE OF DEMOLITION AND CONSTRUCTION. CONSTRUCTION WORK SHALL BE CONDUCTED IN A MANNER TO MINIMIZE DISRUPTION TO THESE OPERATIONS.
12. SITE ACCESS TO THE CAMPUS, NNEPRA, CMP AND THE PORTLAND WATER DISTRICT MUST BE MAINTAINED AT ALL TIMES.
13. SITE ACCESS IS CURRENTLY THROUGH A PUBLIC RAILROAD CROSSING. NO EXTRA PAYMENT WILL BE MADE FOR TEMPORARY SHUTDOWNS RESULTING FROM RAILROAD OPERATIONS.
14. THE CONTRACTOR SHALL MAINTAIN CLEAR FIRE LANES ACCESS THE SITE THROUGHOUT THE DURATION OF WORK.
15. APPROXIMATE LOCATION OF HISTORICAL BUILDING PREVIOUSLY RAZED AS SHOWN ON THE SANBORN MAPS ATTACHED TO THE CREDERE ASSOCIATES ENVIRONMENTAL ASSESSMENT REPORT. THE CONTRACTOR SHOULD BE AWARE THAT REMNANTS OF THESE BUILDINGS MAY STILL BE PRESENT WHEN ENCOUNTERED DURING WORK OF THIS CONTRACT. WORK ASSOCIATED WITH REMOVAL OF BURIED FOUNDATIONS, SLABS OR OLD UTILITIES AND BACK FILL WITH CLEAN GRANULAR BORROW (MDOT 703.19) OF EXISTING VOIDS OR AS A RESULT OF REMOVAL SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT AND COMPLETED AT NO ADDITIONAL COST TO THE OWNER.
16. THE PORTLAND FIRE DEPARTMENT SHOULD BE NOTIFIED PRIOR TO ANY SHUTDOWN OF ONSITE WATER MAINS AND HYDRANTS. IT IS THE OWNER'S INTENT TO MAINTAIN THE HYDRANT SERVICES UPON COMPLETION OF THE DEMOLITION PHASE ACTIVITIES SO THE CONTRACTOR SHALL INCLUDE ALL NECESSARY MEASURES TO SATISFY THIS REQUIREMENT.
17. THE CONTRACTOR SHALL MAINTAIN RECORD DRAWINGS; DOCUMENTING ALL UTILITY STUBS LOCATION, DEPTH, SIZE, TYPE AND CONDITION USING MEANS AND METHODS FOR CAPTURING DATA FOR DISPLAY IN AUTOCAD FORMAT.

DEMOLITION AND REMOVALS LEGEND

1-6 VACANT

7 STRIP AND STOCK PILE EXISTING GRAVEL FOR ONSITE REUSE

8 WOODS CLEARING AND GRUB AREA

9 REMOVE CHAIN LINK FENCE

10 CENTRAL MAINE POWER TO REMOVE UTILITY POLES AND OVERHEAD OR UNDERGROUND UTILITY WIRES AT A TIME WHEN TEMPORARY OR PERMANENT POWER CAN TAKE IT'S PLACE. ADJACENT PROPERTY OWNERS SUCH AS (BRICK NORTH, BRICK SOUTH, CMTM AND DEPOT) AND ON SITE TENANTS SHALL HAVE ACCESS TO POWER AT ALL TIMES. THE CONTRACTOR IS REQUIRED TO COORDINATE WITH THE UTILITY COMPANIES TO DISCONNECT POWER AT A TIME APPROVED BY THE OWNER.

11 EXISTING BITUMINOUS ASPHALT OR CONCRETE SURFACE TO BE REMOVED. THE CONTRACTOR MAY PROCESS (<4" DIA.) AND BLEND WITH GRAVEL FOR USE AS SUBBASE GRAVEL MATERIAL.

12 CONCRETE SLABS AND FOUNDATIONS TO BE DEMOLISHED - SALVAGEABLE MATERIAL INCLUDING BRICK AND CONCRETE BLOCK MAY BE PROCESSED ONSITE BUT MUST BE PROPERLY DISPOSED OF OFFSITE.FOUNDATIONS TO BE REMOVED A MINIMUM OF 2 FEET BELOW EXISTING GRADE. ALL UTILITY SERVICES SHALL BE CUT AND CAPPED 10'-0" FROM THE BUILDING WITH A WITNESS STAKE CLEARLY MARKED. THE CONTRACTOR IS RESPONSIBLE TO IDENTIFY AND DISCONNECT ALL UTILITIES CONNECTED TO THE BUILDING. SOME UTILITY CONNECTIONS MAY NOT BE SHOWN ON THIS PLAN AND SHALL BE DISCONNECTED AT NO ADDITIONAL COST TO THE OWNER. CONTRACTOR SHALL PROVIDE AN ALLOWANCE AND A PER CUBIC YARD PRICE TO REMOVE AND DISPOSE OF MATERIAL IN APPROVED OFF-SITE FACILITY. ALL TRUCKING SLIP VOLUMES SHALL BE TRACKED AND APPROVED BY OWNER OR ITS ASSIGNED REPRESENTATIVE PRIOR TO INVOICING.

13 EXISTING SANITARY SEWER OR STORM DRAINAGE STRUCTURE TO BE PROTECTED OR ALTERED

14 REMOVE SOIL STOCKPILE

15 EXISTING SANITARY SEWER OR DRAINAGE STRUCTURES AND PIPING TO BE REMOVED. ALL EXISTING SERVICE LEADERS SHALL REMAIN IN SERVICE UNTIL TEMPORARY OR PERMANENT SERVICE IS PROVIDED.

16 EXISTING WATER SUPPLY SYSTEM TO BE REMOVED INCLUDING ALL VALVES, SUPPLY MAINS, SERVICES AND BLOW OFFS TO THE LIMITS SHOWN ON PLANS.

17 PROTECT EXISTING WATER SUPPLY SYSTEM

EXISTING STORM DRAIN SEWER LINE WHICH IS BELIEVED TO DISCHARGE DIRECTLY TO THE FORE RIVER. ALL GROUNDWATER DISCHARGED TO THESE LINES SHALL BE TREATED IN ACCORDANCE WITH "SECTION 4.3 COLLECTION, TREATMENT, AND ON-SITE DISPOSAL" OF THE "GROUNDWATER MANAGEMENT PLAN" PREPARED BY CREDERE ASSOCIATES, LLC

EXISTING SANITARY SEWER LINES WHICH ARE TRIBUTARY TO THE PORTLAND WATER DISTRICT PUMP STATION. ALL GROUNDWATER DISCHARGED TO THESE LINES SHALL BE TREATED IN ACCORDANCE WITH "SECTION 4.2 COLLECTION AND DISPOSAL AT TREATMENT FACILITY OF THE GROUNDWATER MANAGEMENT PLAN PREPARED BY CREDERE ASSOCIATES, LLC. THE WATER DISCHARGED TO THIS SYSTEM WILL BE SUBJECT TO A MONETARY FEE PER VOLUME OF WATER AS SET FORTH BY THE CITY OF PORTLAND FOR ANY WATER DISCHARGED TO THIS SYSTEM DURING A RAIN EVENT WHEN THE COMBINED SYSTEM OVERFLOW LINE HAS BEEN ACTIVATED THE CONTRACTOR SHALL BE RESPONSIBLE TO TREAT THE DISCHARGE IN ACCORDANCE WITH SECTION 4.3 OF THE GROUNDWATER MANAGEMENT PLAN AND DIVERTED TO THE EXISTING STORM DRAIN SYSTEM.

NOTE TO CONTRACTOR:

1. THE CAMPUS IS A PUBLICLY ACTIVE SITE WITH OPEN BUSINESS ABUTTERS AND ON SITE TENANTS WITH RIGHTS TO ACCESS AND OPERATE THEIR FACILITIES AT ALL TIMES. THE CONTRACTOR SHALL MAINTAIN REASONABLE VEHICULAR AND PEDESTRIAN ACCESS TO, BUT NOT LIMITED TO THE FOLLOWING:
   ALL EXISTING BUILDINGS, HYDRANTS / FIRE PROTECTION APPURTENANCES, AND PUBLIC RIGHT-OF-WAY.
2. THIS PLAN MAY REQUIRE THE REMOVAL OR ALTERING OF EXISTING UTILITY SERVICES (ELECTRIC, COMMUNICATION, SANITARY SEWER, WATER AND DRAINAGE). ALL EXISTING USERS SHALL BE PROVIDED WITH TEMPORARY OR PERMANENT UTILITY CONNECTIONS PRIOR TO REMOVAL OR DISCONNECTION OF ANY UTILITY LINE WITH NO ADDITIONAL COST TO THE OWNER. THE CONTRACTOR SHALL COORDINATE ALL SHUT DOWNS WITH OWNER AND USERS 72 HOURS IN ADVANCE WITH A PLAN TO PROVIDE A REPLACEMENT SERVICE.

GRAPHIC SCALE
30 0 10 20 40
(IN FEET)
1 inch = 20 ft.

PRELIMINARY – NOT FOR CONSTRUCTION

REV	DATE	DESCRIPTION
2	12/23/2024	REVISED TO ADDRESS CITY COMMENTS
1	9/6/2024	MAJOR SITE PLAN APPLICATION

REVISIONS

STATE OF MAINE — BO KENNEDY — No. 11994 — LICENSED PROFESSIONAL ENGINEER — 12/23/2024

P.E. BO KENNEDY
LIC. #11994

PROJECT
THE FOREFRONT AT THOMPSON'S POINT
MULTI-FAMILY RESIDENTIAL BUILDING (G)

SHEET TITLE
DEMOLITION AND REMOVALS PLAN

CLIENT
CPI MANAGEMENT, LLC
(CATHARTES)

PLACEMAKER PARTNERS, LLC
18 VAN AKEN WAY
PORTLAND, ME 04102
bo@placemakerpartners.com

DRAWN: DB	DATE: AUGUST 2024
DESIGNED: BEK	SCALE: 1" = 20'
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SHEET	C-2.1

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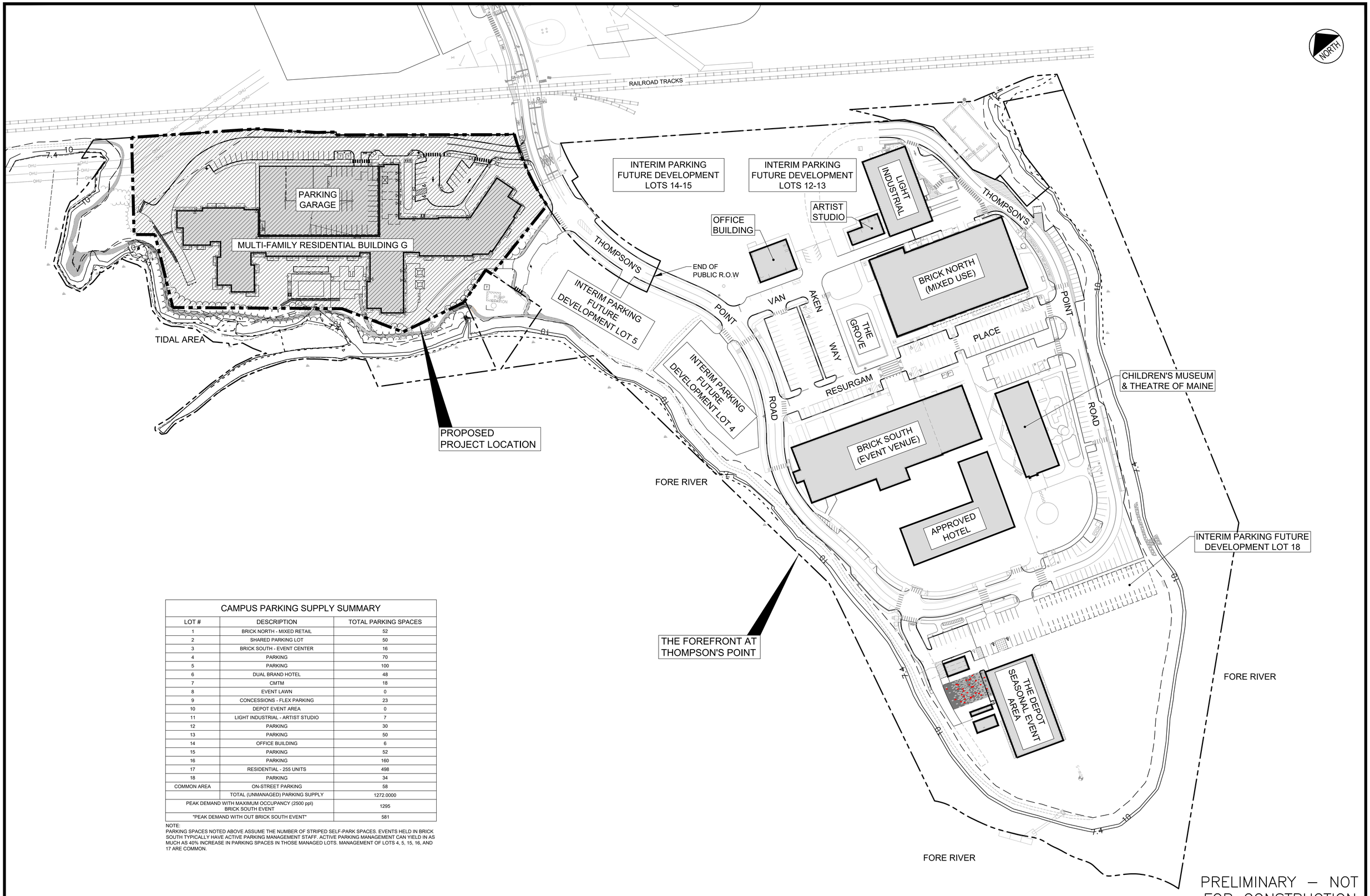

CAMPUS PARKING SUPPLY SUMMARY		
LOT #	DESCRIPTION	TOTAL PARKING SPACES
1	BRICK NORTH - MIXED RETAIL	52
2	SHARED PARKING LOT	50
3	BRICK SOUTH - EVENT CENTER	16
4	PARKING	70
5	PARKING	100
6	DUAL BRAND HOTEL	48
7	CMTM	18
8	EVENT LAWN	0
9	CONCESSIONS - FLEX PARKING	23
10	DEPOT EVENT AREA	0
11	LIGHT INDUSTRIAL - ARTIST STUDIO	7
12	PARKING	30
13	PARKING	50
14	OFFICE BUILDING	6
15	PARKING	52
16	PARKING	160
17	RESIDENTIAL - 255 UNITS	498
18	PARKING	34
COMMON AREA	ON-STREET PARKING	58
	TOTAL (UNMANAGED) PARKING SUPPLY	1272.0000
PEAK DEMAND WITH MAXIMUM OCCUPANCY (2500 ppl) BRICK SOUTH EVENT		1295
"PEAK DEMAND WITH OUT BRICK SOUTH EVENT"		581

NOTE:
PARKING SPACES NOTED ABOVE ASSUME THE NUMBER OF STRIPED SELF-PARK SPACES. EVENTS HELD IN BRICK SOUTH TYPICALLY HAVE ACTIVE PARKING MANAGEMENT STAFF. ACTIVE PARKING MANAGEMENT CAN YIELD IN AS MUCH AS 40% INCREASE IN PARKING SPACES IN THOSE MANAGED LOTS. MANAGEMENT OF LOTS 4, 5, 15, 16, AND 17 ARE COMMON.

GRAPHIC SCALE
60 0 30 60 120
(IN FEET)
1 inch = 60 ft.

PRELIMINARY – NOT FOR CONSTRUCTION

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REVISIONS

STATE OF MAINE BO KENNEDY No. 11994 LICENSED PROFESSIONAL ENGINEER 12/23/2024
P.E. BO KENNEDY
LIC. #11994

PROJECT
THE FOREFRONT AT THOMPSON'S POINT
MULTI-FAMILY RESIDENTIAL BUILDING (G)
SHEET TITLE
OVERALL CAMPUS PLAN
CLIENT
CPI MANAGEMENT, LLC (CATHARTES)

PLACEMAKER PARTNERS, LLC
18 VAN AKEN WAY
PORTLAND, ME 04102
bo@placemakerpartners.com

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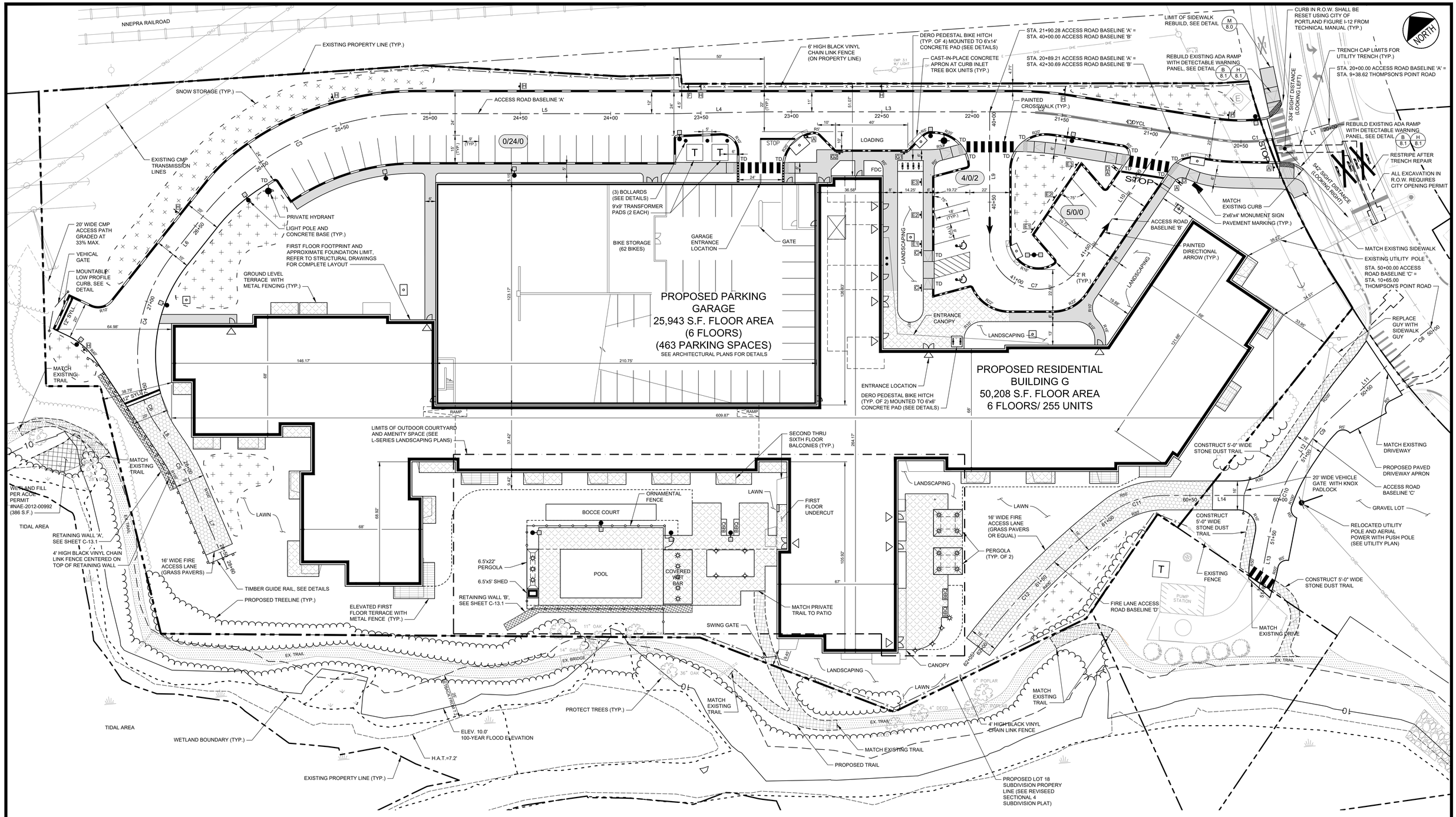

LINE TABLE: ALIGNMENTS			
ID	LENGTH	DIRECTION
L1	19.82	N67° 07' 13.69"W
L2	81.63	N41° 34' 16.03"W
L3	137.46	N50° 35' 12.29"W
L4	50.01	N51° 44' 07.61"W
L5	143.04	N50° 35' 17.74"W
L6	27.00	S77° 52' 32.58"W
L7	52.84	S16° 18' 38.84"W
L8	17.11	S05° 28' 11.42"W
L9	71.28	S39° 24' 37.14"W
L10	90.67	N73° 33' 06.38"E
L11	60.27	S86° 19' 56.56"W
L12	11.91	S73° 28' 29.09"W
L13	34.54	S50° 26' 14.46"W
L14	64.65	N50° 35' 22.86"W

CURVE TABLE: ALIGNMENTS						
ID	RADIUS	ARC LENGTH	DELTA	TANGENT	PC STATION	PT STATION
C1	100.00	44.59	025° 33'	22.67	20+19.82	20+64.42
C2	200.00	31.47	009° 01'	15.77	21+46.05	21+77.52
C3	150.02	134.94	051° 32'	72.42	25+08.03	26+42.97
C4	90.00	82.02	052° 13'	44.11	26+69.97	27+51.99
C5	108.00	20.43	010° 50'	10.25	27+86.72	28+07.16
C6	50.00	17.62	020° 11'	8.90	27+51.99	27+69.61
C7	27.00	68.73	145° 52'	87.92	40+71.28	41+40.01
C8	150.00	16.84	006° 26'	8.43	50+00	50+16.84
C9	58.00	13.02	012° 51'	6.54	50+77.11	50+90.13
C10	108.00	43.42	023° 02'	22.01	51+02.04	51+45.46
C11	48.00	31.74	037° 54'	16.48	60+64.65	60+96.39
C12	408.00	108.61	015° 15'	54.63	60+96.39	62+05

PAVEMENT LEGEND*

- STANDARD DUTY PAVEMENT
- BITUMINOUS PAVEMENT SIDEWALK
- HARDSCAPE - FINAL SURFACE MATERIAL TBD
- SNOW STORAGE
- PROPOSED TRAIL
- EXISTING TRAIL

*SEE SHEET C-8.0 FOR SECTION BUILDUP DETAILS

CURB LEGEND

- SLIP FORM CONCRETE CURB (SLOPED DIRIGO - SEE DETAILS)
- MAINEDOT TYPE 1 VERTICAL GRANITE CURB
- MAINEDOT TYPE 1 VERTICAL GRANITE CURB - FLUSH
- MOUNTABLE LOW PROFILE CURB
- TD — TIP DOWN

SIGN LEGEND

	STOP	RESERVED PARKING	RESERVED PARKING (VAN ACCESSIBLE)	DO NOT ENTER	VISITOR PARKING	VISITOR PARKING	VISITOR PARKING	DEAD END	SHORT TERM LOADING ONLY	SHORT TERM LOADING ONLY	NO PARKING FIRE LANE
MUTCD SIZE	R1-1 24"x24"	R7-8 12"x18"	R7-8 12"x18" R7-8P 12"x6"	R5-1 30"x30"	R7-BR 12"x18"	R7-BLR 12"x18"	R7-BL 12"x18"	W14-1 24"x24"	R7-BR 12"x18"	R7-BL 12"x18"	12"x18"
PLAN LABEL	A	B	C	D	E1	E2	E3	F	G1	G2	H

20 / 5 / 2 PARKING SPACE - STANDARD / COMPACT / ACCESSIBLE

PAVEMENT MARKING LEGEND

4" DYCL 4" WIDTH DOUBLE YELLOW CENTERLINE
4" SYLL 4" WIDTH SOLID YELLOW LANE LINE
4" SWLL 4" WIDTH SOLID WHITE LANE LINE
STOP 12" WIDTH SOLID WHITE STOP LINE

ALL PARKING STALLS TO BE 4" WIDTH SINGLE SOLID WHITE LINE EXCEPT AS SHOWN ON SITE LAYOUT PLAN.

ALL SIGNAGE AND STRIPING SHALL CONFORM TO THE STANDARDS FOR SIZE, HEIGHT, LOCATION, COLOR, INSTALLATION AND REFLECTIVITY SET FORTH IN THE CURRENT VERSION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).

SITE LAYOUT NOTES

1. ALL BARRIER FREE PARKING SPACES ARE TO RECEIVE BARRIER FREE SIGNS AND PAVEMENT MARKINGS AS ILLUSTRATED ON THE DETAIL SHEETS.
2. ALL CURBING MATERIALS WILL BE SELECTED BY THE OWNER. THE DIMENSIONS PROVIDED ON THE PLAN ARE TO FACE OF CURB. ALL CURBING TYPES ARE DETAILED IN THE PROJECT DETAIL SHEETS.
3. ALL DIMENSIONING, UNLESS NOTED OTHERWISE, IS TO THE FACE OF CURB, THE EDGE OF PAVEMENT OR THE FACE OF THE BUILDING.
4. EXCEPT WHERE INDICATED OTHERWISE, THE PAVEMENT IS TO BE STANDARD DUTY PAVEMENT.

BARRIER LEGEND

- x — BLACK VINYL CHAIN LINK FENCE (REFER TO SITE PLAN FOR HEIGHT)
- TIMBER GUIDE RAIL
- ORNAMENTAL FENCE

GRAPHIC SCALE
20 0 10 20 40
(IN FEET)
1 inch = 20 ft.

DETAIL REFERENCE

B 8.1* — DETAIL DESIGNATION; PLAN SHEET NUMBER

PRELIMINARY – NOT FOR CONSTRUCTION

REV	DATE	DESCRIPTION
2	12/23/2024	REVISED TO ADDRESS CITY COMMENTS
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REVISIONS

STATE OF MAINE — BO KENNEDY No. 11994 — LICENSED PROFESSIONAL ENGINEER — 12/23/2024

P.E. BO KENNEDY
LIC. #11994

PROJECT: THE FOREFRONT AT THOMPSON'S POINT MULTI-FAMILY RESIDENTIAL BUILDING (G)
SHEET TITLE: SITE LAYOUT PLAN WITHOUT EASEMENTS
CLIENT: CPI MANAGEMENT, LLC (CATHARTES)

PLACEMAKER PARTNERS, LLC
18 VAN AKEN WAY
PORTLAND, ME 04102
bo@placemakerpartners.com

DRAWN: DB	DATE: AUGUST 2024
DESIGNED: BEK	SCALE: 1" = 20'
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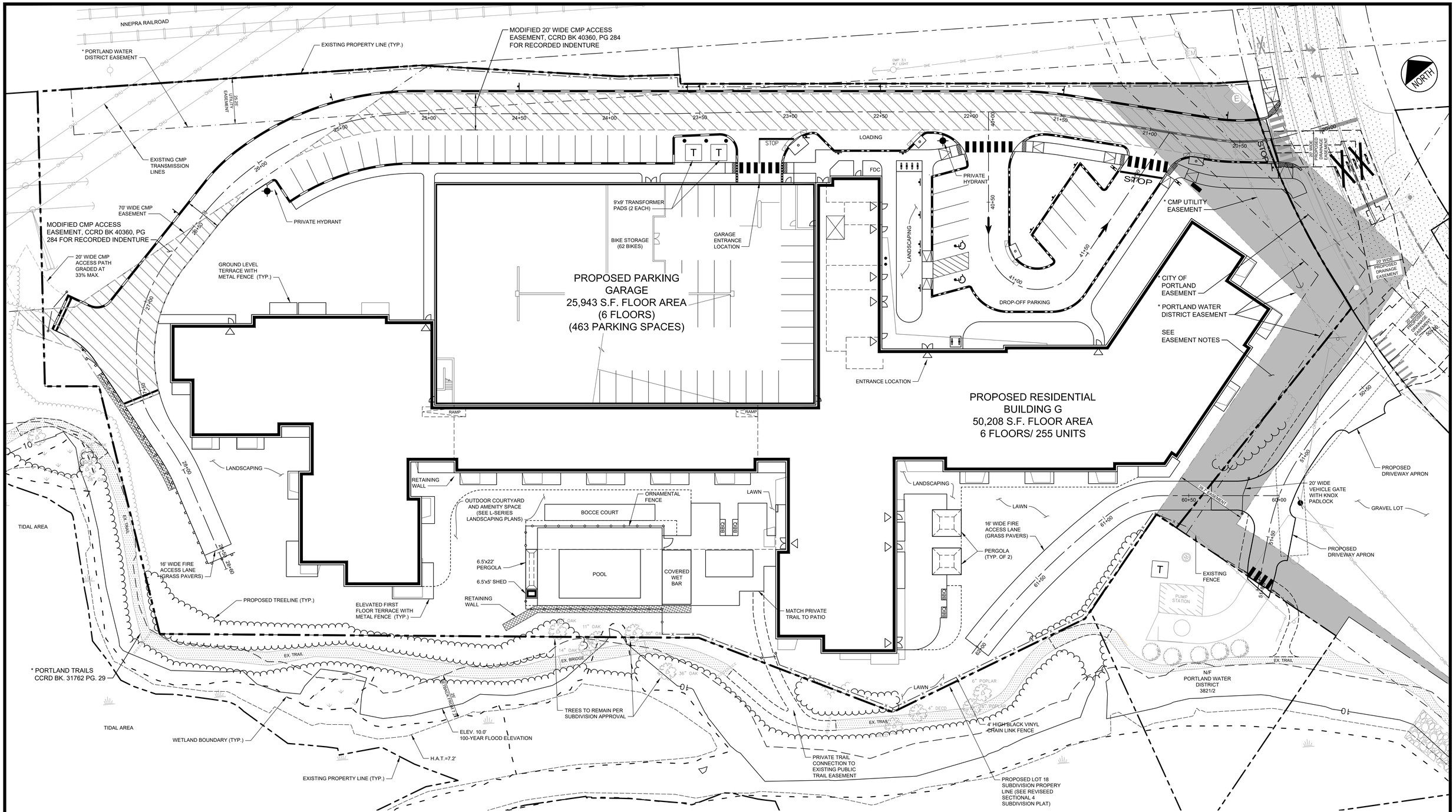

NOTES

1. FOR SITE PLAN LAYOUT AND NOTES, SEE SHEET C-3.1A.

* EASEMENT NOTES

1. FOR FULL LIST OF EASEMENTS RECORDED IN CUMBERLAND COUNTY REGISTRY OF DEEDS (CCRD) REFERENCES, SEE SHEET C-2.0A SUBDIVISION PLAN EASEMENTS AND ENCUMBRANCES PLAN BOOK 223, PAGE 133.
2. EASEMENT LABELS ON THIS PLAN HAVE BEEN SIMPLIFIED FOR CLARIY.

PRELIMINARY – NOT FOR CONSTRUCTION

GRAPHIC SCALE

20 0 10 20 40

(IN FEET)
1 inch = 20 ft.

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2	12/23/2024	REVISED TO ADDRESS CITY COMMENTS
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REVISIONS

STATE OF MAINE BO KENNEDY No. 11904 LICENSED PROFESSIONAL ENGINEER 12/23/2024

P.E. BO KENNEDY
LIC. #11904

PROJECT
THE FOREFRONT AT THOMPSON'S POINT
MULTI-FAMILY RESIDENTIAL BUILDING (G)

SHEET TITLE
SITE LAYOUT PLAN WITH EASEMENTS

CLIENT
CPI MANAGEMENT, LLC (CATHARTES)

PLACEMAKER PARTNERS, LLC
18 VAN AKEN WAY
PORTLAND, ME 04102
bo@placemakerpartners.com

DRAWN: DB	DATE: AUGUST 2024
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SHEET C-3.1B	

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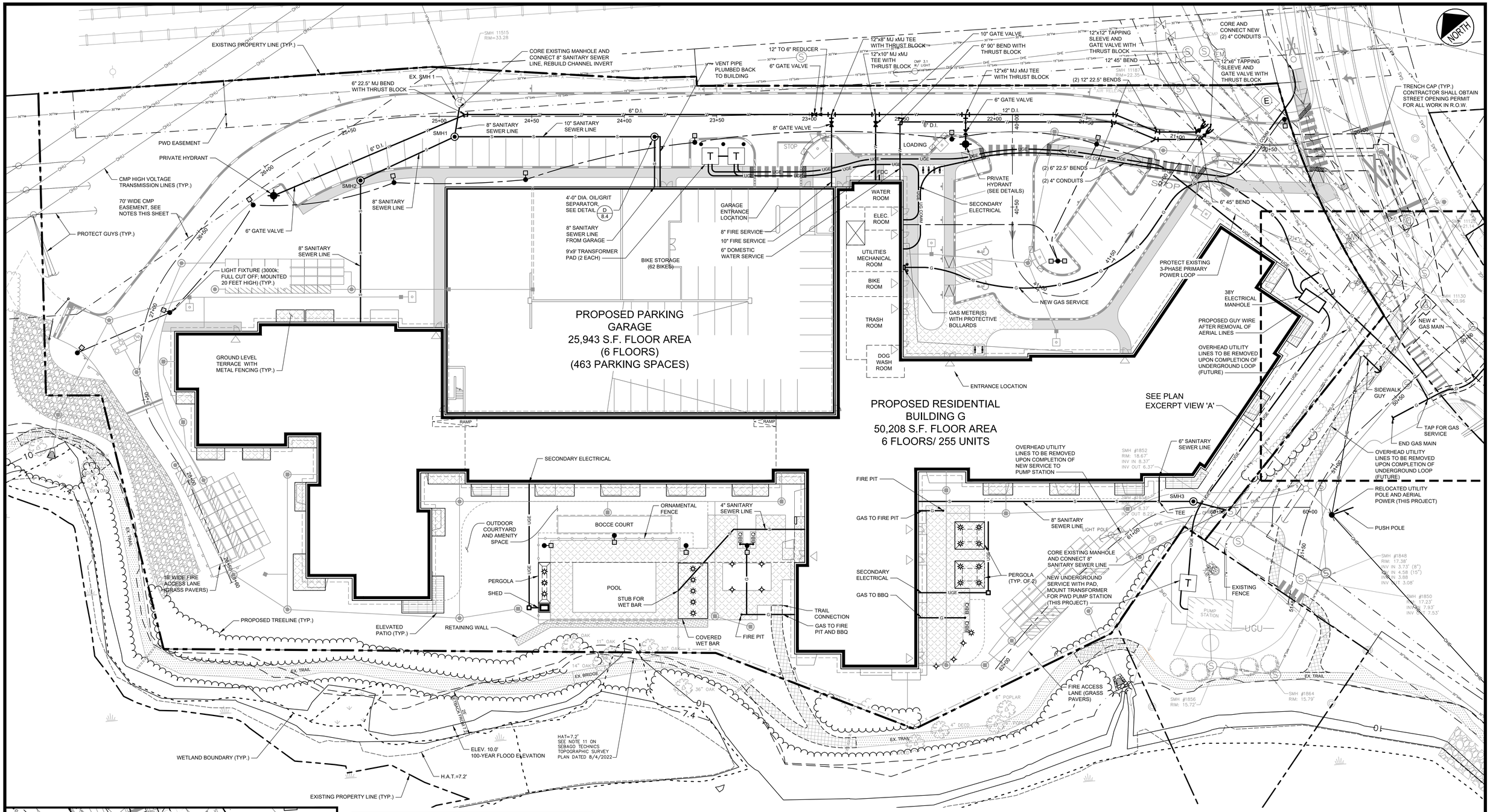

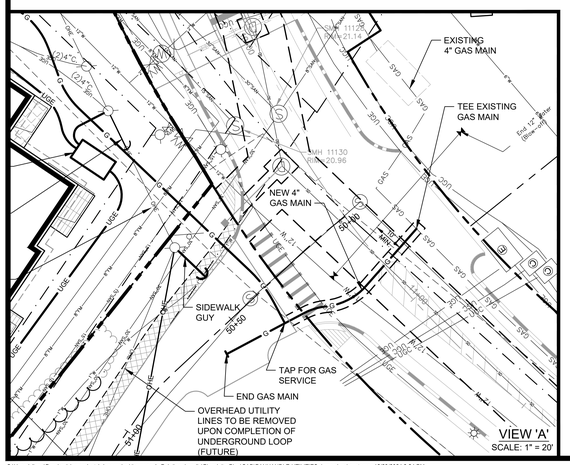

CONDUIT LEGEND

- A
- B
- C
- D
- E
- F
- G
- H
- I
- J

TO BE PROVIDED ON CONSTRUCTION DRAWINGS

UTILITY CONSTRUCTION NOTES:

1. SITE CONTRACTOR TO BRING 8" AND 10" FIRE SERVICES TO FLANGE INSIDE BUILDING. COORDINATE WITH GENERAL CONTRACTOR FOR EXACT PENETRATION LOCATION.
2. SITE CONTRACTOR SHALL BRING ALL UTILITIES (EXCEPT FIRE) TO WITHIN 10 FEET OF BUILDING AND CONNECT TO STUBS INSTALLED BY PLUMBER OR LEAVE CAPPED WITH WITNESS STAKE AND ELEVATION LABELED ON STAKE FOR PLUMBER TO CONTINUE.
3. CONTRACTOR SHALL TAKE NOTICE ALL WORK IN TRANSMISSION CORRIDOR SHALL BE COORDINATED WITH CMP AND FOLLOW ALL SAFETY PRECAUTIONS WITH REGARDS TO PROTECTING HIGH VOLTAGE TRANSMISSION LINES. ALL STRUCTURAL ELEMENTS ARE SPECIFICALLY PROHIBITED FROM EASEMENT AREA INCLUDING BUT NOT LIMITED TO LIGHT POLES, BUILDINGS, HYDRANTS, ETC.

GRAPHIC SCALE

20 0 0 10 20 40

(IN FEET)
1 inch = 20 ft.

PRELIMINARY – NOT FOR CONSTRUCTION

REV	DATE	DESCRIPTION
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1	9/6/2024	MAJOR SITE PLAN APPLICATION

REVISIONS

STATE OF MAINE BO KENNEDY No. 11904 LICENSED PROFESSIONAL ENGINEER 12/23/2024

P.E. BO KENNEDY
LIC. #11994

PROJECT
THE FOREFRONT AT THOMPSON'S POINT
MULTI-FAMILY RESIDENTIAL BUILDING (G)

SHEET TITLE
UTILITY PLAN

CLIENT
CPI MANAGEMENT, LLC
(CATHARTES)

PLACEMAKER PARTNERS, LLC
18 VAN AKEN WAY
PORTLAND, ME 04102
bo@placemakerpartners.com

DRAWN: DB	DATE: AUGUST 2024
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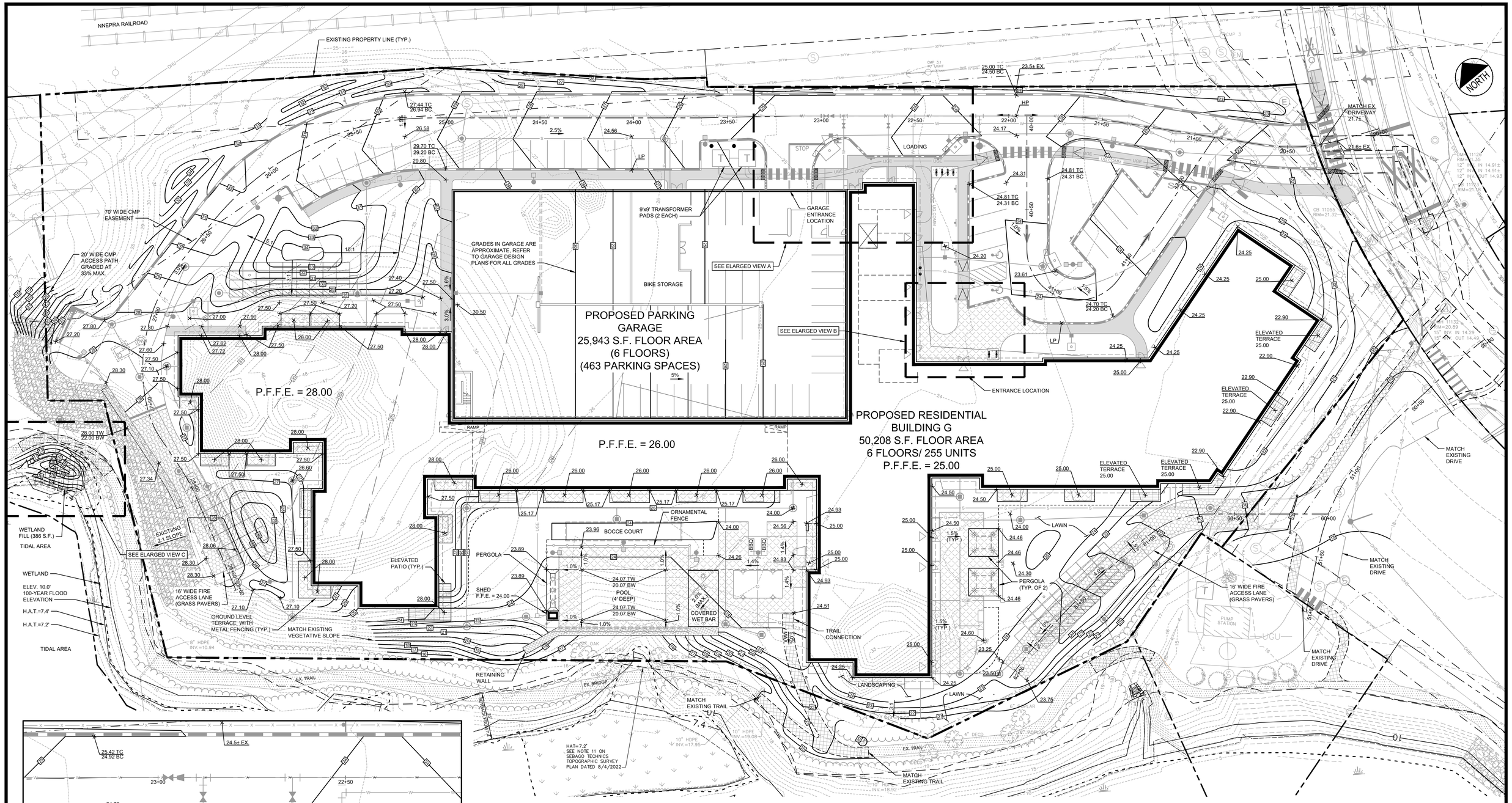
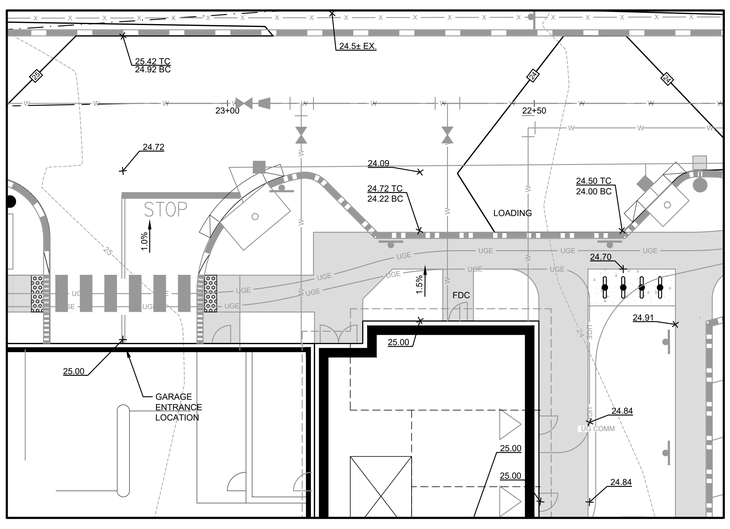
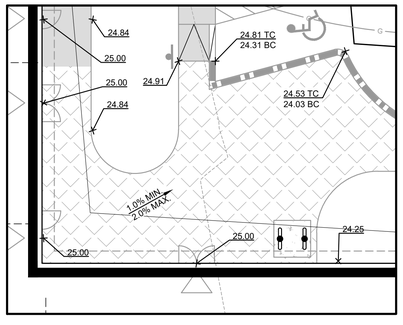
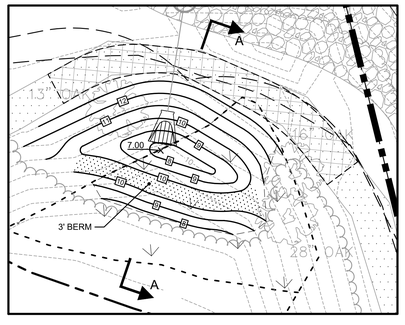




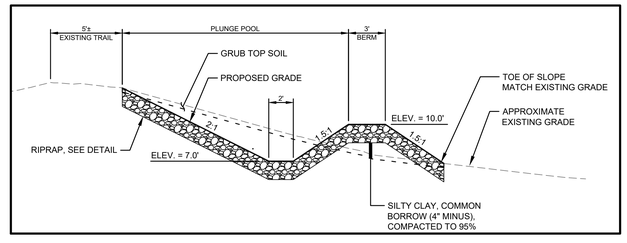
EXPANDED VIEW A
SCALE: 1"= 10'



EXPANDED VIEW B
SCALE: 1"= 10'



EXPANDED VIEW C
SCALE: 1"= 10'



CROSS SECTION A-A
NOT TO SCALE

GRAPHIC SCALE
30 0 10 20 40
(IN FEET)
1 inch = 20 ft.

PRELIMINARY – NOT FOR CONSTRUCTION

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P.E. BO KENNEDY
LIC. #11994

PROJECT
THE FOREFRONT AT THOMPSON'S POINT
MULTI-FAMILY RESIDENTIAL BUILDING (G)

SHEET TITLE
GRADING PLAN

CLIENT
CPI MANAGEMENT, LLC
(CATHARTES)

PLACEMAKER PARTNERS, LLC
18 VAN AKEN WAY
PORTLAND, ME 04102
bo@placemakerpartners.com

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NOTES:

1. PHASE (SWM ZONE B2) WILL TEMPORARILY DISCHARGE TO EXISTING STORM DRAIN DISCHARGE. STORM DRAIN SIZED TO BE TREATED AND DISCHARGED AT ZONE B OUTFALL WHEN FUTURE PHASE IS DEVELOPED.

LEGEND

- STORMWATER MANAGEMENT AREA BOUNDARY
- SUBCATCHMENT BOUNDARY
- LOT 7 DEVELOPMENT STORM WATER MANAGEMENT AREA INTERNALLY DRAINS TO SEPARATE SUBSURFACE STORAGE AND TREATMENT INFRASTRUCTURE. DISCHARGES TO ZONE F0 DISCHARGE
- DRAINAGE DISCHARGE OUTFALL
- D15B — SUBCATCHMENT DESIGNATION
- SUBSURFACE CHAMBER SYSTEM ISOLATOR ROW WITH INSPECTION PORTS

NORTH

TIDAL AREA

ZONE HB
DISCHARGE HB-0
WITH RCP FLARED END
AND BAR RACK
INV. = 7.8

RIPRAP ENERGY DISPERSION PLUNGE POOL

ZONE HB
HB-5 SUBSURFACE
WATER QUALITY
STORAGE

ZONE HB
HB-3.1 JELLYFISH
TREATMENT UNIT
(JF-4-2-1)
HB-3 8'x10' OVERFLOW
DIVERSION MANHOLE

LANDSCAPED SLOPE TO SHEET FLOW DIRECTLY TO FORE RIVER

LANDSCAPED SLOPE TO SHEET FLOW DIRECTLY TO FORE RIVER

ZONE HB
HB-11 SUBSURFACE
WATER QUALITY
STORAGE

STORMWATER MANAGEMENT ZONE HB
(DEVELOPMENT OF THIS SWM ZONE REDEVELOPED UNDER THIS PROJECT PHASE)

STORMWATER MANAGEMENT ZONE HC
(DEVELOPMENT OF THIS SWM ZONE REDEVELOPED UNDER THIS PROJECT PHASE)

STORMWATER MANAGEMENT ZONE HA
(DEVELOPMENT OF THIS SWM ZONE REDEVELOPED UNDER THIS PROJECT PHASE)

LANDSCAPED SLOPE TO SHEET FLOW DIRECTLY TO FORE RIVER

ZONE HC
HC-4 SUBSURFACE
WATER QUALITY
STORAGE

RIPRAP ENERGY DISPERSION OUTLET APRON AND CHANNEL PROTECTION

ZONE HC
DISCHARGE HC_
WITH RCP FLARED END
AND BAR RACK
INV. = 13.0

ZONE HC
HC-3.1 JELLYFISH
TREATMENT UNIT
(JF-4-2-1)
HC-3 8'x10' OVERFLOW
DIVERSION MANHOLE

ZONE HA
HA-5.1 6'x10' FILTERRA TB
ZONE HA
HA-8.1 4'x4' FILTERRA TB
ZONE HA
HA-7.1 4'x4' FILTERRA TB
ZONE HA
HA-4.1 4'x6' FILTERRA TB
ZONE HA
HA-6.1 4'x8' FILTERRA TB
ZONE HA
HA-9.1 4'x4' FILTERRA TB
ZONE HA
HA-2.1 4'x8' FILTERRA TB
ZONE HA
DISCHARGE HA-15
DISCHARGE TO CITY
STORM DRAINAGE
SYSTEM AND 36"
OUTFALL D9.0

ZONE D
D21 - (2) 4'x6' FILTERRA TB

FUTURE STORMWATER MANAGEMENT ZONE E
(AREA NOT REDEVELOPED AS OF THE DATE OF THIS PLAN)

ZONE D
D20 - (2) 6'x6' FILTERRA TB

STORMWATER MANAGEMENT ZONE D

ZONE D
D9.0 - SUBSURFACE
WATER QUALITY
STORAGE
(78) SC-740 CHAMBERS

ZONE D
D9.5 - JELLYFISH
TREATMENT UNIT (J4-2-1)
D19 - 8'x10' OVERFLOW
DIVERSION MANHOLE

ZONE D
D18 - (2) 4'x6' FILTERRA TB

ZONE D
D19 - 4'x6'
FILTERRA TB WITH
INTERNAL BY-PASS

ZONE D
D9.0 DISCHARGE 36"
WITH RCP FLARED
END AND BAR RACK
INV. 7.40

ZONE D
D27 - FOCAL POINT
FILTER (FUTURE)
AREA = 96 S.F.

ZONE D
D25 13'x7' FILTERRA TB
PEDESTRIAN GRATE
AND GRASS PLANTING

ZONE D
D24 6'x6' FILTERRA TB

STORMWATER MANAGEMENT ZONE D

APPROVED STORMWATER MANAGEMENT ZONE C
(TO BE CONSTRUCTED)

B2-14

BUILDING B1

LANDSCAPED SLOPE TO SHEET FLOW DIRECTLY TO FORE RIVER

STORMWATER MANAGEMENT ZONE B2

BUILDING B2

FORE RIVER

100-YEAR FLOOD STAGE
ZONE, ELEV. 10.0
EXT. ELEV. 7.4

HIGHEST ANNUAL TIDE, ELEV. 9.6

STONE DRIP EDGE FILTER TREATMENT

TEMPORARY CONNECTION TO EXISTING STORM DRAIN. STORM DRAIN TO BE CONNECTED TO SWM ZONE B IN FUTURE PHASE

EXISTING SD DISCHARGE

ZONE C
C6-SUBSURFACE WATER
QUALITY STORAGE (66)
SC-740 CHAMBER

STORMWATER MANAGEMENT ZONE B

CONNECT SWM ZONE B2 TO STORM DRAIN STUB IN FUTURE PHASE

FUTURE EXPANDED STORMWATER MANAGEMENT ZONE B2
(AREA NOT REDEVELOPED AS OF THE DATE OF THIS PLAN)

ZONE B
B3 - 7'x13' FILTERRA

ZONE B AND C
DISCHARGE B0 36"
WITH RCP FLARED
END AND BAR RACK
INV. 8.60

ZONE F
CMTM STORM WATER
MANAGEMENT (SEE
SYSTEM NOTES)

ZONE F
F13 - SUBSURFACE WATER
QUALITY STORAGE
(61) SC-740 CHAMBERS

ZONE F
F12 - JELLYFISH
TREATMENT UNIT
(JF-4-2-1)
F11 - 6'x12' OVERFLOW
DIVERSION MANHOLE

ZONE F
F14- 6'x6' FILTERRA TB

ZONE F AND G
DISCHARGE F0 36"
WITH RCP FLARED
END AND BAR RACK
INV. 10.0

ZONE F
F15 - 6'x10'
FILTERRA TB

LANDSCAPED SLOPE TO SHEET FLOW DIRECTLY TO FORE RIVER

FUTURE STORMWATER MANAGEMENT ZONE D
(AREA NOT REDEVELOPED AS OF THE DATE OF THIS PLAN)

FUTURE STORMWATER MANAGEMENT ZONE D AND G
(AREA NOT REDEVELOPED AS OF THE DATE OF THIS PLAN)

STORMWATER MANAGEMENT ZONE G

ZONE G
G10.1 - 8'x4' FILTERRA TB

ZONE G
G9 - HOODED OUTLET
WITH DEEP SUMP

ZONE G
G8 - HOODED OUTLET
WITH DEEP SUMP

ZONE G
G7 - HOODED OUTLET
WITH DEEP SUMP

Z6.1 - HOODED OUTLET
WITH DEEP SUMP

BUILDING G
BUILDING L
BUILDING F2
BUILDING F1
BUILDING A
BUILDING I
BUILDING C
BUILDING D
BUILDING B

HB-5 HB-21 HB-7 HB-22 HB-17 HB-19 HB-20 HB-9 HC-4 HC-3 HC-6 HA-5 HA-4 HA-8 HA-6 HA-7 HA-2 HA-10 HA-CITY
H-R5 H-R4 H-GR H-R3 H-R2 H-R1
B2-15 B2-20 B2-12 B2-20R
C15BR C13R D15BR F6R F5R F3R D25R D27R D24R G12R
F1 F2 F3 F4 F5 F6 F7 F8 F9 F10 F11 F12 F13 F14 F15 F16 F17

GRAPHIC SCALE
60 0 30 60 120
(IN FEET)
1 inch = 60 ft.

PRELIMINARY – NOT FOR CONSTRUCTION

REV	DATE	DESCRIPTION
2	12/23/2024	REVISED TO ADDRESS CITY COMMENTS
1	9/6/2024	MAJOR SITE PLAN APPLICATION

REVISIONS

STATE OF MAINE — BO KENNEDY No. 11994 — PROFESSIONAL ENGINEER — LICENSED — 12/23/2024
P.E. BO KENNEDY
LIC. #11994

PROJECT: THE FOREFRONT AT THOMPSON'S POINT
MULTI-FAMILY RESIDENTIAL BUILDING (G)

SHEET TITLE: INTERIM OVERALL STORMWATER MANAGEMENT PLAN

CLIENT: CPI MANAGEMENT, LLC (CATHARTES)

PLACEMAKER PARTNERS, LLC
18 VAN AKEN WAY
PORTLAND, ME 04102
bo@placemakerpartners.com

DRAWN: DB	DATE: AUGUST 2024
DESIGNED: BEK	SCALE: 1" = 60'
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SHEET	C-5.1

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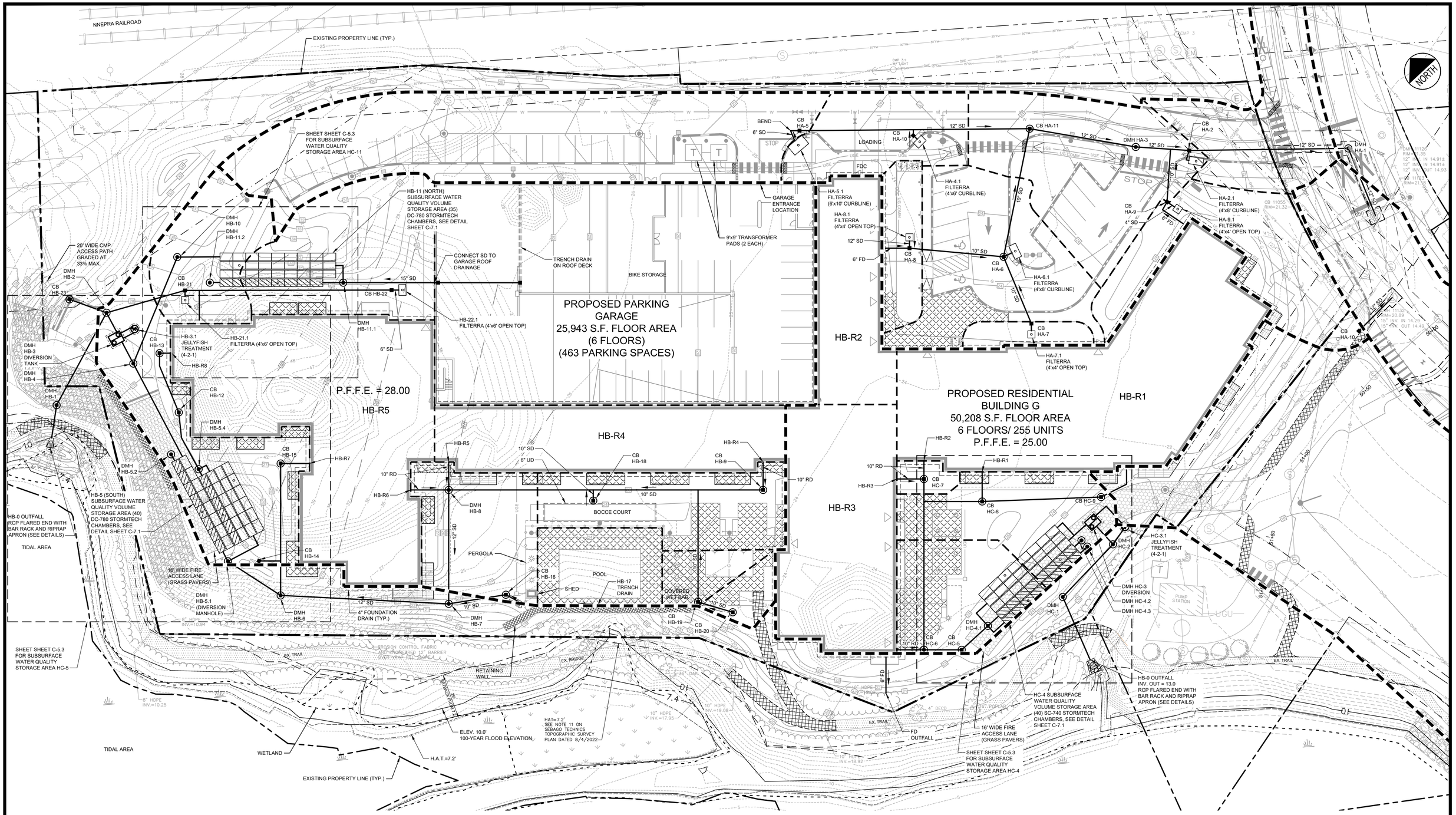

NOTE:
SEE SHEET C-5.2 FOR ZONE C AND D2 TABULAR STORMWATER QUALITY MANAGEMENT COMPUTATIONS.

PRELIMINARY – NOT FOR CONSTRUCTION

GRAPHIC SCALE
20 0 10 20 40
(IN FEET)
1 inch = 20 ft.

REV	DATE	DESCRIPTION
2	12/23/2024	REVISED TO ADDRESS CITY COMMENTS
1	9/6/2024	MAJOR SITE PLAN APPLICATION

REVISIONS

STATE OF MAINE — BO KENNEDY No. 11994 — LICENSED PROFESSIONAL ENGINEER — 12/23/2024

P.E. BO KENNEDY
LIC. #11994

PROJECT
THE FOREFRONT AT THOMPSON'S POINT
MULTI-FAMILY RESIDENTIAL BUILDING (G)

SHEET TITLE
STORMWATER MANAGEMENT PLAN - 1

CLIENT
CPI MANAGEMENT, LLC (CATHARTES)

PLACEMAKER PARTNERS, LLC
18 VAN AKEN WAY
PORTLAND, ME 04102
bo@placemakerpartners.com

DRAWN:	BB
DATE:	AUGUST 2024
DESIGNED:	BEK
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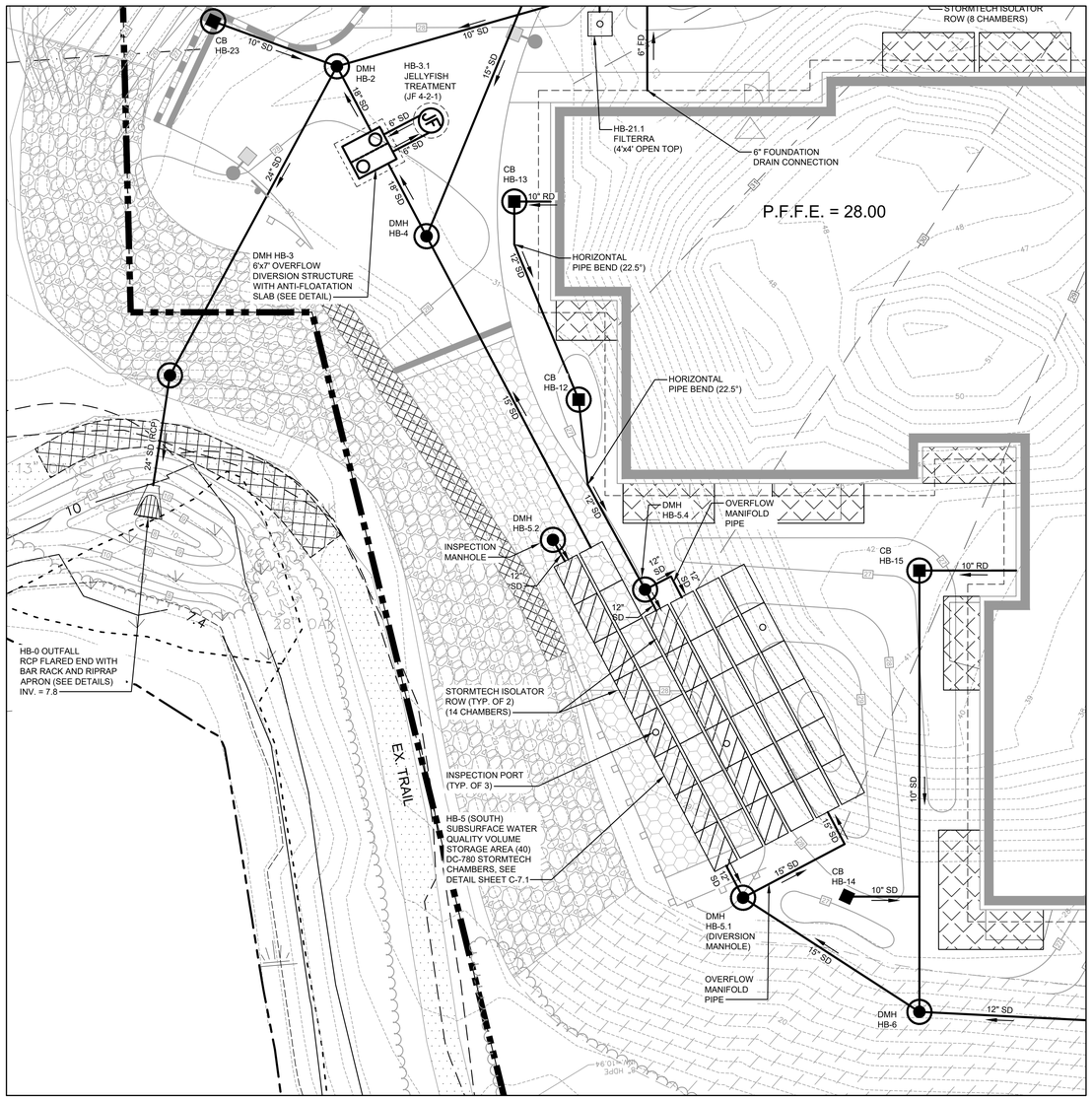
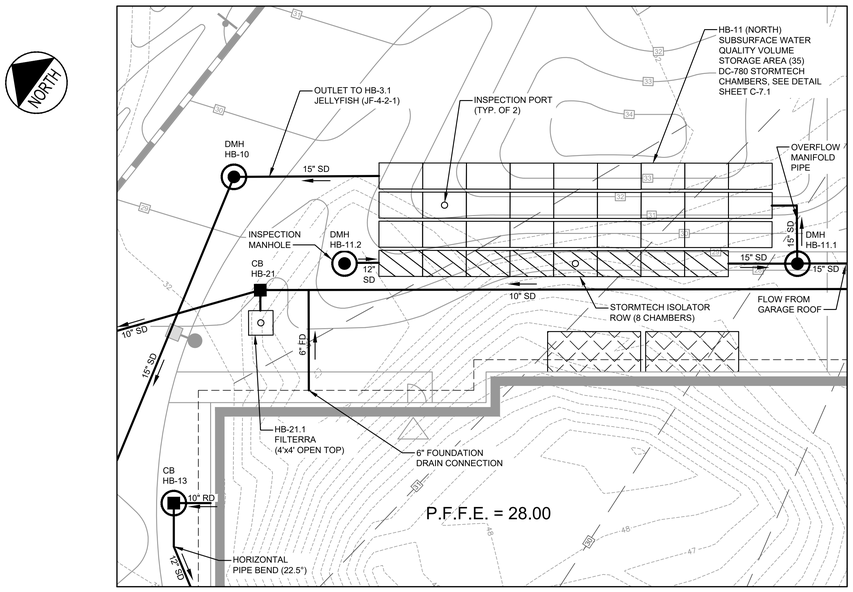
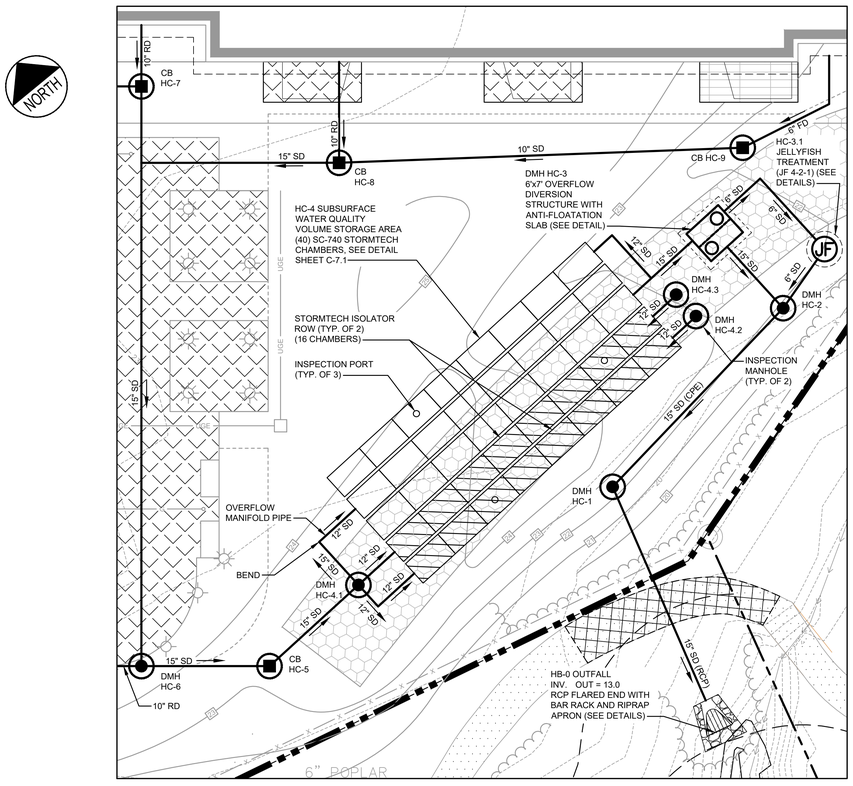


SUBSURFACE WATER QUALITY STORAGE AREA HB-5
ENLARGED VIEW
SCALE: 1"=10'



SUBSURFACE WATER QUALITY STORAGE AREA HB-11
ENLARGED VIEW
SCALE: 1"=10'



SUBSURFACE WATER QUALITY STORAGE AREA HC-4
ENLARGED VIEW
SCALE: 1"=10'

PRELIMINARY – NOT FOR CONSTRUCTION

GRAPHIC SCALE
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(IN FEET)
1 inch = 10 ft.

REV	DATE	DESCRIPTION
2	12/23/2024	REVISED TO ADDRESS CITY COMMENTS
1	9/6/2024	MAJOR SITE PLAN APPLICATION

REVISIONS

STATE OF MAINE · BO KENNEDY No. 11994 · LICENSED PROFESSIONAL ENGINEER · 12/23/2024

P.E. BO KENNEDY
LIC. #11994

PROJECT
THE FOREFRONT AT THOMPSON'S POINT
MULTI-FAMILY RESIDENTIAL BUILDING (G)

SHEET TITLE
STORMWATER MANAGEMENT PLAN - 2

CLIENT
CPI MANAGEMENT, LLC (CATHARTES)

PLACEMAKER PARTNERS, LLC
18 VAN AKEN WAY
PORTLAND, ME 04102
bo@placemakerpartners.com

DRAWN:	BB
DESIGNED:	BEK
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DATE:	AUGUST 2024
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SHEET	C-5.3

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Summary of Water Quality Treatment - Lot 17 (BLDG G - Multi-Family Residential)

Zone	Inlet ID	Impervious Area (sf)	Pervious Area (sf)	Total Area (sf)	Total Area (Acres) [1]	Required Water Quality Volume (CF) [2]	Existing Developed Area Mitigation Credits (SF) [9]	Treatment Approach [6]	Filter Size Area Required [8] (SF)	Jellyfish Unit Provided [5]	1 Yr 24-hr Storm Event Peak Flow Rate (cfs) [3]	Required Isolator Row Chambers (Stormtech SC-740 (JF)) [4]	Provided Filter Bed (SF)/Water Quality Volume (CF) [7]	Isolator Row Chambers (Stormtech SC-740) Provided (EA) [6]
Zone Ha Developed Area	Ha-9	0.00	1,607.00	1,607.00	0.04	53.57	0.00	filterra w open top	< 0.1 ac 1-(4x4)	N/A	0.02	N/A	N/A	N/A
	Ha-2	6,683.00	1,473.00	8,156.00	0.19	606.02	0.00	filterra - Curbline w/ top slab	< 0.202 ac 1-(4x8)	N/A	0.43	N/A	N/A	N/A
	Ha-6	6,585.00	847.00	7,432.00	0.17	576.98	0.00	filterra - Curbline w/ top slab	< 0.202 ac 1-(4x8)	N/A	0.41	N/A	N/A	N/A
	Ha-7	0.00	1,036.00	1,036.00	0.02	34.53	0.00	filterra w open top	< 0.1 ac 1-(4x4)	N/A	0.01	N/A	N/A	N/A
	Ha-8	667.00	1,147.00	1,814.00	0.04	93.82	0.00	filterra w open top	< 0.1 ac 1-(4x4)	N/A	0.06	N/A	N/A	N/A
	Ha-4	4,748.00	814.00	5,562.00	0.13	422.80	0.00	filterra - Curbline w/ top slab	< 0.151 ac 1-(4x6)	N/A	0.30	N/A	N/A	N/A
	Ha-5	12,313.40	1,513.60	13,827.00	0.32	1076.57	0.00	filterra - Curbline w/ top slab	< 0.378 ac 1 - (6x10)	N/A	0.77	N/A	N/A	N/A
	Zone Ha - Total	**30,996.40**	**8,437.60**	**39,434.00**	**0.91**	**2,864.29**	**0.00**	Filterra Tree Box Filter	-	-	2.00	N/A	N/A	N/A
Zone Hb Developed Area	Hb-R5 north (split in half for different Isolator rows)	7,222.00	0.00	7,222.00	0.17	601.83	0.00	Contech Jellyfish Filter	N/A	JF4 2-1	0.44	2.21	3,042.00	6.00
	Hb-13	1,469.00	259.00	1,728.00	0.04	131.05	0.00				0.09	0.47		
	Hb-12	1,209.00	346.00	1,555.00	0.04	112.28	0.00				0.08	0.39		
	Hb-5 Isolator south 1 Subtotal	**9,900.00**	**605.00**	**10,505.00**	**0.24**	**845.17**	**0.00**				**0.61**	**3.06**		
	Hb-R5 South (split in half for different Isolator rows)	7,222.00	0.00	7,222.00	0.17	601.83	0.00				0.44	2.21		8.00
	Hb-14	225.00	724.00	949.00	0.02	42.88	0.00				0.02	0.12		
	Hb-15	1,146.00	2,657.00	3,803.00	0.09	184.07	0.00				0.10	0.52		
	Hb-R4	7,038.00	0.00	7,038.00	0.16	586.50	0.00				0.43	2.15		
	Hb-16	586.00	3,935.00	4,521.00	0.10	180.00	0.00				0.09	0.43		
	Hb-17	3,056.00	179.00	3,235.00	0.07	260.63	0.00				0.19	0.94		
	Hb-18	716.00	1,298.00	2,014.00	0.05	102.93	0.00				0.06	0.30		
	Hb-9	1,246.00	1,622.00	2,868.00	0.07	157.90	0.00				0.10	0.48		
	Hb-19	1,093.00	461.00	1,554.00	0.04	106.45	0.00				0.07	0.36		
	Hb-20	601.00	506.00	1,107.00	0.03	66.95	0.00				0.04	0.22		
	Hb-5 Isolator South 2 Subtotal	**22,929.00**	**11,382.00**	**34,311.00**	**0.79**	**2,290.15**	**0.00**				**1.55**	**7.73**		
	Hb-5 South Storage Subtotal	**32,829.00**	**11,987.00**	**44,816.00**	**1.03**	**3,135.32**	**0.00**				**2.16**	**10.79**		**14.00**
	Hb-GR	25,934.00	0.00	25,934.00	0.60	2161.17	0.00				1.58	7.92	2,699.00	8.00
	Hb-11 North Storage/Isolator Subtotal	**25,934.00**	**0.00**	**25,934.00**	**0.60**	**2,161.17**	**0.00**				**1.58**	**7.92**		
	Hb-3.1 Jellyfish Total	**58,763.00**	**11,987.00**	**70,750.00**	**1.62**	**5,296.48**	**0.00**				**3.74**	**18.71**	**5,741.00**	**22.00**
Zone Hc Developed Area	Hb-21	1,522.00	2,257.00	3,779.00	0.09	202.07	0.00	filterra w open top	< 0.1 ac 1-(4x4)	N/A	0.12	N/A	N/A	N/A
	Hb-22	682.00	6,048.00	6,730.00	0.15	258.43	0.00	filterra w open top	< 0.151 ac 1-(4x6)	N/A	0.12	N/A	N/A	N/A
	Hb-Filterra Subtotal	**2,204.00**	**8,305.00**	**10,509.00**	**0.24**	**460.50**	**0.00**	Filterra Tree Box Filter	-	-	0.24			
	Hc-R1	15,256.00	0.00	15,256.00	0.35	1271.33	0.00	Contech Jellyfish Filter	N/A	JF4 2-1	0.93	4.66	2938	**16**
	Hc-R2	4,904.00	0.00	4,904.00	0.11	408.67	0.00				0.30	1.50		
	Hc-R3	8,572.00	0.00	8,572.00	0.20	714.33	0.00				0.52	2.62		
	Hc-5	2,495.00	1,852.00	4,347.00	0.10	269.65	0.00				0.18	0.88		
	Hc-7	1,587.00	2,781.00	4,368.00	0.10	224.95	0.00				0.13	0.66		
	Hc-6	0.00	460.00	460.00	0.01	15.33	0.00				0.01	0.03		
	Hc-4 Storage/Isolator Subtotal	**32,814.00**	**5,093.00**	**37,907.00**	**0.87**	**2,904.27**	**0.00**				**2.07**	**10.35**		
Zone H Developed Area Treated Subtotals	Ha + Hb + Hc	**124,777.40**	**33,822.60**	**158,600.00**	**3.64**	**11,525.54**	**0.00**	Proprietary Filter Devices	See above	See above	See above	See above	See above	See above
Tributary to Hb Outfall Untreated	Hb-23	520.00	262.00	782.00	0.02	52.07	0.00	None	N/A	N/A	N/A	N/A	N/A	N/A
Tributary to ROW SD Untreated	Ha-10	317.00	5,778.00	6,095.00	0.14	219.02	0.00	None	N/A	N/A	N/A	N/A	N/A	N/A
Tributary to Ha Offsite City CB Untreated	Ha-City	1,296.60	768.40	2,065.00	0.05	133.66	0.00	None	N/A	N/A	N/A	N/A	N/A	N/A
	Disturbed Perimeter Area (H27)	1,904.00	26,834.00	28,738.00	0.66	1053.13	0.00	None	N/A	N/A	N/A	N/A	N/A	N/A
Zone H Developed Area UnTreated Subtotals		**4,037.60**	**33,642.40**	**37,680.00**	**0.87**	**1,457.88**	**0.00**	None	N/A	N/A	N/A	N/A	N/A	N/A
Zone H Developed Area Subtotals		**128,815.00**	**67,465.00**	**196,280.00**	**4.51**	**12,983.42**	**0.00**	**N/A**	N/A	N/A	N/A	N/A	N/A	N/A
Zone H Existing Buildings	N/A	0.00	0.00	0.00	0.00	0.00	0.00	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Zone H Existing Building Subtotal		**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Zone H Developed Area Totals	-	**128,815.00**	**67,465.00**	**196,280.00**	**4.51**	**12,983.42**	**0.00**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**

Developed Area Breakdown (This project phase only)		
A.) Total New Developed Area Treated (SF)	158,600.00	**3.64**
B.) Total New Developed Area untreated (SF)	37,680.00	**0.87**
C.) Total New Developed Area (SF) = A+B	196,280.00	**4.51**
D.) Existing Developed Area Treated (SF)	0.00	**0.00**
E.) Adjusted Existing Developed Area Treated (SF)	0.00	**0.00**
F.) Total Net Developed Area Treated (SF) = A+E	158,600.00	**3.64**

Impervious Area Breakdown		
G.) Total New Impervious Area treated (SF)	124,777.40	**2.86**
H.) Total New Impervious Area untreated (SF)	4,037.60	**0.09**
I.) Total New Impervious Area (SF) = G+H	128,815.00	**2.96**
J.) Existing Impervious Area Treated (SF)	0.00	**0.00**
K.) Adjusted Existing Impervious Area Treated (SF)	0.00	**0.00**
L.) Total Net Impervious Area Treated (SF) = G+K	124,777.40	**2.86**

atment Breakdown	Required	This Phase Only Provided
% of Net	80.00%	80.80%
npervious Area Treated = L/I	95.00%	96.87%

Add concessions to the below totals

Developed Area Breakdown (Cumulative Campus Development To-Date)		
A.) Total New Developed Area Treated (SF)	494,298.00	**11.35**
B.) Total New Developed Area untreated (SF)	129,587.00	**2.97**
C.) Total New Developed Area (SF) = A+B	623,885.00	**14.32**
D.) Existing Developed Area Treated (SF)	72,596.00	**1.67**
E.) Adjusted Existing Developed Area Treated (SF)	43,557.40	**1.00**
F.) Total Net Developed Area Treated (SF) = A+E	537,855.40	**12.35**
Impervious Area Breakdown		
G.) Total New Impervious Area treated (SF)	376,461.74	**8.64**
H.) Total New Impervious Area untreated (SF)	63,280.60	**1.45**
I.) Total New Impervious Area (SF) = G+H	439,742.34	**10.10**
J.) Existing Impervious Area Treated (SF)	72,596.00	**1.67**
K.) Adjusted Existing Impervious Area Treated (SF)	43,557.40	**1.00**
L.) Total Net Impervious Area Treated (SF) = G+K	420,019.14	**9.64**

atment Breakdown	Required	Cumulative Campus Provided
% of Net	80.00%	86.21%
npervious Area Treated = L/I	95.00%	95.51%

Development Projects Included in Cumulative Review (inorder of input):

Brick North and Brick South (Lots 1, 2, 3)
West Loop Rd (Common)
Hotel Portland (Lot 6)
East Loop Rd (Common)
CMTM (Lot 7)
Warehouse (Lot 11)
Concessions (Lot 9)
Multi-Family (Lot 17)

NOTES AND ASSUMPTIONS:

dated Sept 2024.
Sections 7.4, 7.5 and 7.6 of the Maine DEP Volume III BMP's Technical Design Manual. The volume is computed to be 1" times the method. The rainfall intensities are derived from the Cumberland chamber system. All isolator rows have been computed per a 7/29/2016 letter from State of Maine to Stormtech re: Pretreatment computed based on Contech Sizing requirements. The water quality provided it has been approved by the Maine DEP Chapter 500 delegated computed using 61.38 CF of storage per chamber based on Storm Tech 8.Vacant
9. According to Chapter 500 Maine DEP stormwater rules Dated 2015; the department allows applicants to take credit for the treatment of existing impervious areas on site. For existing roofs the credit can be calculated by multiplying the total treated area by 0.6. The overall project was approved using this methodology.
10. The MEDEP will now accept a Filterra tree box filter as a stand alone treatment unit and does not require an Isolator Row for eligible projects. This project meets the eligibility criteria noted in a letter dated June 27th, 2014 from the MEDEP and updated February 2, 2017.

PRELIMINARY – NOT FOR CONSTRUCTION

REV	DATE	DESCRIPTION
1	9/6/2024	MAJOR SITE PLAN APPLICATION
		REVISIONS

STATE OF MAINE BO KENNEDY No. 11994 LICENSED PROFESSIONAL ENGINEER 9/6/2024
P.E. BO KENNEDY
LIC. #11994

PROJECT
THE FOREFRONT AT THOMPSON'S POINT
MULTI-FAMILY RESIDENTIAL BUILDING (G)

SHEET TITLE
STORMWATER MANAGEMENT PLAN - 3

CLIENT
CPI MANAGEMENT, LLC (CATHARTES)

PLACEMAKER PARTNERS, LLC
18 VAN AKEN WAY
PORTLAND, ME 04102
bo@placemakerpartners.com

DRAWN:	DB
DATE:	AUGUST 2024
DESIGNED:	BEK
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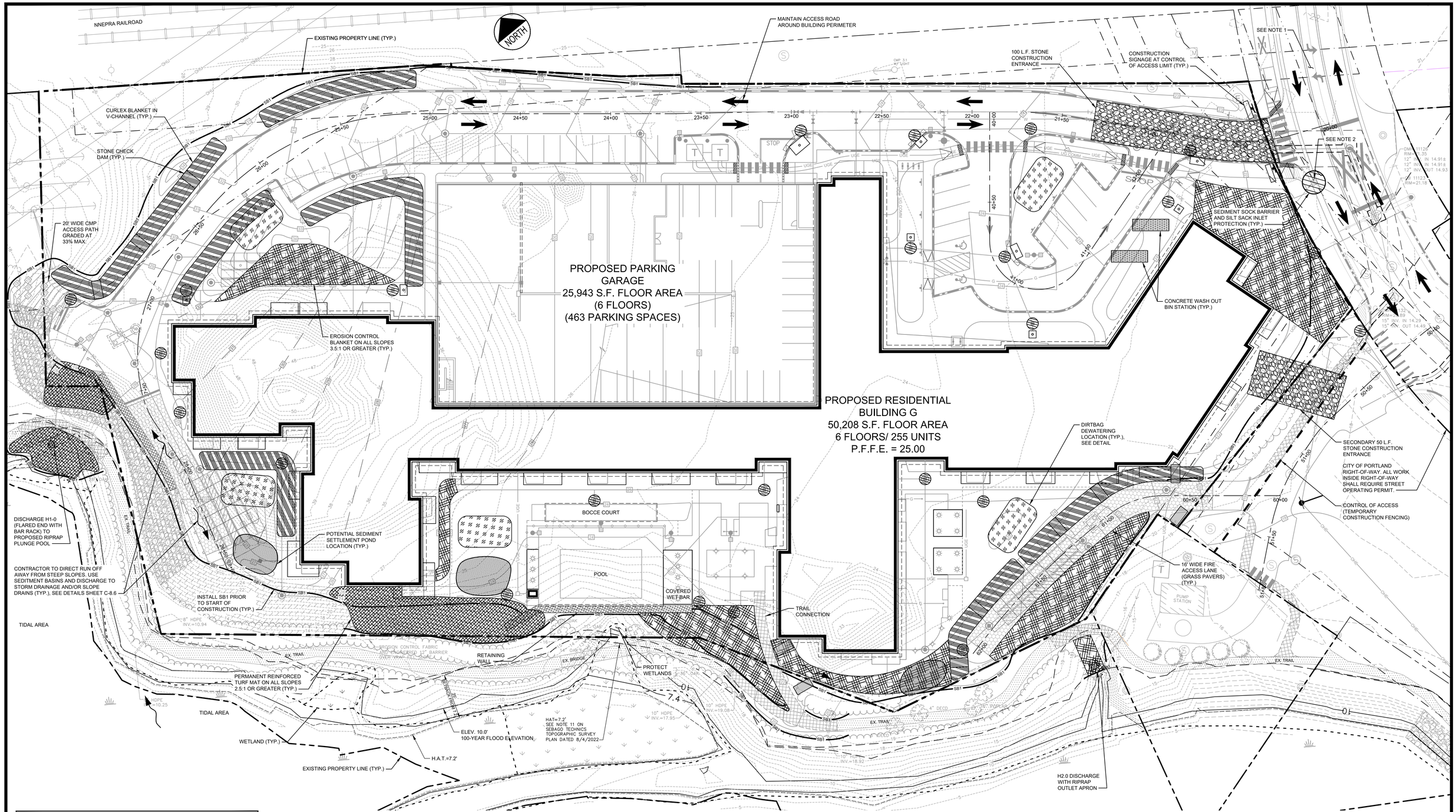

LEGEND

- INLET PROTECTION (STONE OR HAY SEDIMENT BARRIER)
- FILTERRA INLET PROTECTION (PER MANUFACTURERS REQUIREMENTS)
- RIPRAP OUTLET PROTECTION
- CURLEX BLANKET
- PERMANENT REINFORCED TURF MAT
- EROSION CONTROL BLANKET
- WASH DOWN AREA
- STONE CONSTRUCTION ENTRANCE
- DIRTBAG DEWATERING
- POTENTIAL SEDIMENT SETTLEMENT POND
- STONE CHECK DAM

Summary of Storm Water Discharges

Discharge ID	Approximate Drainage Area (Ac)	Full Build Out 25 Yr Peak Flow (CFS)	Outlet Pipe Size (In)	Description	*Minimum Required Riprap D50 (IN)
HB-0	1.86	8.89	24	RCP Flared End W/ Bar Rack, Riprap Slope Apron	12
HC-0	0.87	4.62	15	RCP Flared End W/ Bar Rack, Riprap Slope Apron	12

* D50 is a median rock size. Riprap should be a well graded mix of angular rock from about 1.5 to 0.25 times the size of the D50. The contractor shall protect existing riprap slope or replace rock to the meet the minimum required D50 stone size.

SCHEDULE OF SILT BARRIER REQUIREMENTS

SILT BARRIER	TYPE PURPOSE	TIME OF INSTALLATION
SB1 TYPE 1 SILT BARRIER	TO TRAP SEDIMENT ALONG THE GRADING EDGE WHERE THE NEW CONTOURS NEARLY PARALLEL THE EXISTING CONTOURS	AT INITIAL SITE PREPARATION; PRIOR TO OTHER WORK

NOTES:

1. EXISTING PAVEMENT TO REMAIN AS TRACKING PAD. SWEEP CLEAN DAILY OR MORE FREQUENTLY AS REQUIRED TO PREVENT TRACKING SEDIMENT ALONG THOMPSON'S POINT ROAD. SHOULD SEDIMENT BE TRACKED OFFSITE, CONTRACTOR IS RESPONSIBLE FOR SWEEPING/CLEARING PAVEMENT AS NECESSARY TO PROTECT EXISTING STORMWATER COLLECTION INLETS. CONTRACTOR MAY BE REQUIRED TO INSTALL WASHING STATION OR OTHER TRACKING PREVENTATIVE MEASURE AT NO ADDITIONAL COST TO OWNER.
2. DISCHARGE OF EXCAVATION DEWATERING MAY BE DIRECTED TO EXISTING DRAINAGE STRUCTURES IF ALL TREATMENT REQUIREMENTS ARE MET. REFER TO ENVIRONMENTAL ASSESSMENT REPORT BY CREDERE ASSOCIATES, LLC AND PROJECT SPECIFICATIONS FOR ALL DEWATERING REQUIREMENTS.
3. ALL RUNOFF FROM DISTURBED AREAS SHALL BE DIRECTED TO A FILTERING DEVICE DESIGNATED TO LIMIT TURBIDITY IN ALL DISCHARGE TO THE FORE RIVER. THE FILTERING DEVICE MAY BE BUT IS NOT LIMITED TO SAND FILTERS, EROSION CONTROL MIX, STRAW WHATTLES, FLOCCULATION CHEMICALS, DIRT GLUE AND SILT FENCE.
4. ALL CATCH BASINS TO HAVE 4" UNDERDRAIN PER DETAIL 'L' ON SHEET C-8.5.
5. ALL SUBSURFACE DETENTION AREAS ARE NOT TO BE PLACED "ON-LINE" UNTIL TRIBUTARY AREA IS STABILIZED WITH PAVEMENT OR 75% VEGETATION COVERAGE
6. STOCKPILES TO BE TEMPORARILY SEEDED AND MULCHED AS REQUIRED BY THE PROJECT SPECIFICATIONS.
7. THE CONTRACTOR SHALL TREAT DISTURBED AREAS AND CONSTRUCTION HAUL PATH WITH DUST CONTROL BMPS TO LIMIT ALL FUGITIVE DUST.
8. ALL EXCESS COMMON BORROW SHALL BE PLACE IN DESIGNATED STOCKPILE ON PANHANDLE DETAILS INCLUDED IN SEPARATE PLAN SET BY REFERENCE.

GRAPHIC SCALE

20 0 10 20 40

(IN FEET)

1 inch = 20 ft.

PRELIMINARY – NOT FOR CONSTRUCTION

REV	DATE	DESCRIPTION
2	12/23/2024	REVISED TO ADDRESS CITY COMMENTS
1	9/6/2024	MAJOR SITE PLAN APPLICATION

REVISIONS

STATE OF MAINE — BO KENNEDY No. 11994 — LICENSED PROFESSIONAL ENGINEER — 12/23/2024

P.E. BO KENNEDY

LIC. #11994

PROJECT
THE FOREFRONT AT THOMPSON'S POINT
MULTI-FAMILY RESIDENTIAL BUILDING (G)

SHEET TITLE
EROSION CONTROL AND CONSTRUCTION MANAGEMENT PLAN

CLIENT CPI MANAGEMENT, LLC (CATHARTES)

PLACEMAKER PARTNERS, LLC
18 VAN AKEN WAY
PORTLAND, ME 04102
bo@placemakerpartners.com

DRAWN: DB	DATE: AUGUST 2024
DESIGNED: BEK	SCALE: 1" = 20'
FILE NAME: PANHANDLE-EROSION.dwg	
SHEET C-6.0	

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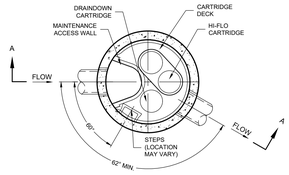
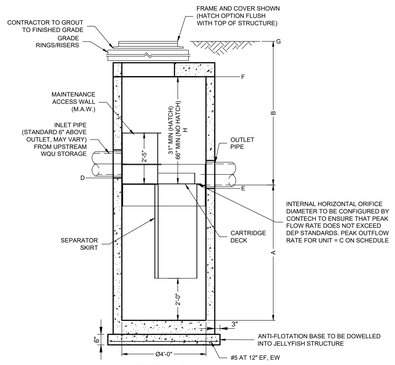


PLAN VIEW



SECTION A-A



FRAME AND COVER
(DIAMETER VARIES)
N.T.S.



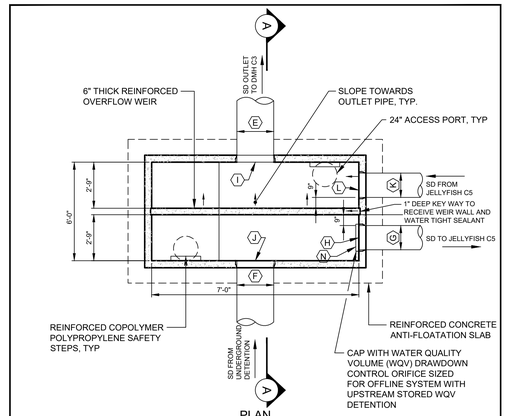
HATCH
(Ø36" CAST INTO SLAB)
N.T.S.

JELLYFISH DESIGN NOTES				
JELLYFISH TREATMENT CAPACITY IS A FUNCTION OF THE CARTRIDGE SELECTION AND THE NUMBER OF CARTRIDGES. THE STANDARD MANHOLE STYLE IS SHOWN. Ø48" MANHOLE JELLYFISH PEAK TREATMENT CAPACITY IS 0.45 CFS. IF THE SITE CONDITIONS EXCEED 0.45 CFS AN UPSTREAM BYPASS STRUCTURE IS REQUIRED.				
CARTRIDGE SELECTION				
CARTRIDGE DEPTH	54"	40"	27"	15"
OUTLET INVERT TO STRUCTURE INVERT (A)	6'-5"	5'-3"	4'-2"	3'-2"
FLOW RATE HIGH-FLO / DRAINDOWN (cfs) (per cart)	0.18 / 0.09	0.13 / 0.065	0.09 / 0.045	0.05 / 0.025
MAX. CARTS HIGH-FLO / DRAINDOWN	2 / 1			

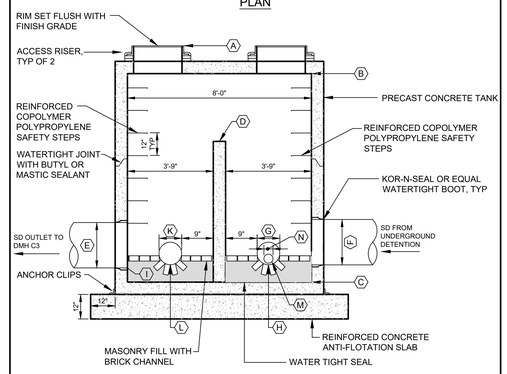
THIS PROJECT

SEE SCHEDULE IN DETAIL `D'

(A) JELLYFISH JF4 STANDARD DETAIL
N.T.S.



PLAN



SECTION A-A

NOTES:
1. ALL CONCRETE TO HAVE A MINIMUM OF 4,000 PSI COMPRESSIVE STRENGTH AT 28 DAYS
2. DESIGN LOAD FOR H-20 WHEEL LOAD
3. STRUCTURE TO CONFORM TO ASTM-C478 SPECIFICATIONS
4. SET STRUCTURE ON 12" THICK CRUSHED STONE

OVERFLOW DIVERSION STRUCTURE SCHEDULE			
	ITEM DESCRIPTION	ZONE HB	ZONE HC
(A)	APPROXIMATE RIM ELEVATION	28.00 - 28.10	22.40 - 22.50
(B)	TOP OF INSIDE OF TANK	26.75	21.50
(C)	BOTTOM OF INSIDE OF TANK	15.20	16.27
(D)	TOP OF WEIR WALL	19.50	20.00
(E)	DIAMETER OF OVERFLOW OUTLET PIPE	18"	15"
(F)	DIAMETER OF INLET PIPE	18"	15"
(G)	DIAMETER OF OUTLET PIPE TO JELLYFISH	6"	6"
(H)	INV OF OUTLET PIPE TO JELLYFISH	16.30	17.30
(I)	INV OF OVERFLOW OUTLET PIPE	15.70	16.60
(J)	INV OF INLET PIPE	16.40	17.40
(K)	DIAMETER OF OUTLET PIPE FROM JELLYFISH	6"	N/A *
(L)	INVERT OF OUTLET PIPE FROM JELLYFISH	15.80	N/A *
(M)	INVERT OF WQV DRAWDOWN CONTROL ORIFICE	16.30	17.30
(N)	DIAMETER OF WQV DRAWDOWN CONTROL ORIFICE	1.4"	0.97"

* INLET PIPE ROUTED TO DOWNSTREAM MANHOLE

(C) OVERFLOW DIVERSION STRUCTURE
N.T.S.

ZONE H DATA REQUIREMENTS				
STRUCTURE ID			HB-3.1	HC-3.1
WATER QUALITY FLOW RATE (cfs)			0.092	0.044
PEAK FLOW RATE (cfs)			8.76	6.78
RETURN PERIOD OF PEAK FLOW (yrs)			25	25
# OF CARTRIDGES REQUIRED (HF / DD)			2 / 1	2 / 1
CARTRIDGE SIZE			54"	54"
PIPE DATA:	I.E.	MATERIAL	DIAMETER	DIAMETER
INLET PIPE #1	*	HDPE	6"	6"
INLET PIPE #2	*	-	N/A	N/A
OUTLET PIPE	*	HDPE	6"	6"
RIM ELEVATION			27.80	22.00
ANTI-FLOTATION SOIL			WIDTH	HEIGHT
			1'	13.75

NOTES/SPECIAL REQUIREMENTS:
MAINE DEP REQUIRES UPSTREAM WQU TO DRAIN IN 24-48 HOURS.
CONTECH RESPONSIBLE FOR SIZING INTERNAL ORIFICE TO CONTROL PEAK WATER QUALITY OUTFLOW TO REQUIRED RATE
* PER ENGINEER OF RECORD

(B) JELLYFISH TREATMENT UNIT DATA REQUIREMENTS
N.T.S.

JELLYFISH UNIT SCHEDULE		
Schedule ID	Zone	Zone
Schedule	HB	HC
A-Outlet Inv. to Bottom of Structure (ft)	6.50	6.50
B-Finished Grade to Outlet Inv.	10.70	5.30
C-Required Outflow (cfs)	0.092	0.044
D-Inlet Inv. From Water Quality Storage	16.30	17.30
E-Outlet Inv.	15.80	16.70
F-Underside of Slab	26.13	20.33
G-Rim Elevation	27.8	22.00
H-Underside of Slab to Outlet Inv. (ft)	10.33	3.63
Hatch Required or 36" Casting?	36" CASTING	HATCH

(D) JELLYFISH UNIT SCHEDULE
N.T.S.

PRELIMINARY – NOT FOR CONSTRUCTION

REV	DATE	DESCRIPTION
2	12/23/2024	REVISED TO ADDRESS CITY COMMENTS
1	9/6/2024	MAJOR SITE PLAN APPLICATION

REVISIONS

STATE OF MAINE — BO KENNEDY No. 11994 — LICENSED PROFESSIONAL ENGINEER — 12/23/2024

P.E. BO KENNEDY
LIC. #11994

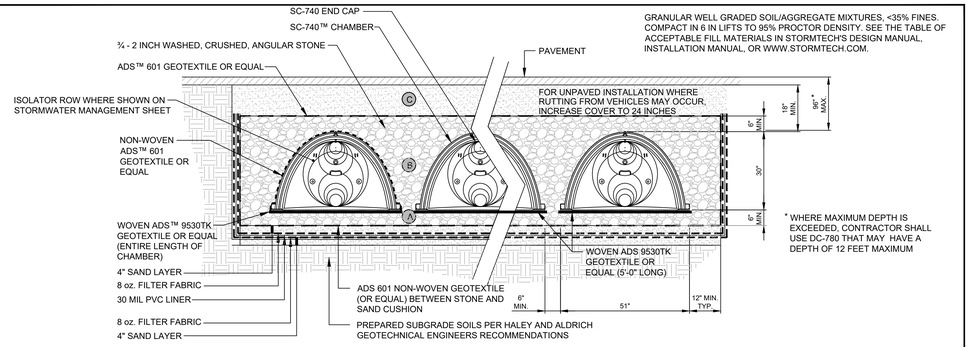
PROJECT
THE FOREFRONT AT THOMPSON'S POINT
MULTI-FAMILY RESIDENTIAL BUILDING (G)

SHEET TITLE
STORMWATER DETAILS - JELLYFISH SYSTEMS

CLIENT
CPI MANAGEMENT, LLC (CATHARTES)

PLACEMAKER PARTNERS, LLC
18 VAN AKEN WAY
PORTLAND, ME 04102
bo@placemakerpartners.com

DRAWN:	DB
DESIGNED:	BEK
FILE NAME:	PANHANDLE-DET.dwg
DATE:	AUGUST 2024
SCALE:	N.T.S.
SHEET	C-7.0



(A) SC-740 TYPICAL DETENTION SYSTEM CROSS SECTION

N.T.S.

*SEE STORMTECH'S DESIGN MANUAL

FOR STORMTECH® INFORMATION CALL 1-888-892-2694

ACCEPTABLE FILL MATERIALS
STORMTECH® SC-740™ CHAMBER SYSTEMS

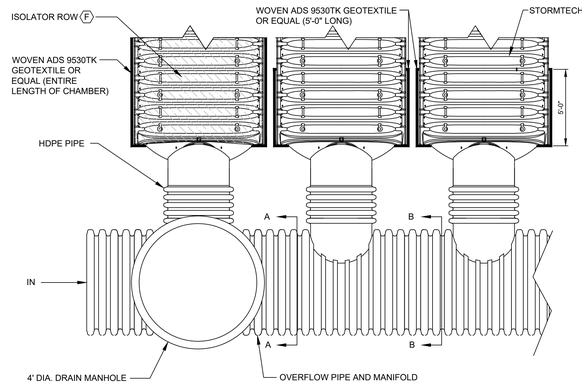
MATERIAL LOCATION	DESCRIPTION	AASHTO M43 DESIGNATION	AASHTO M145 DESIGNATION	COMPACTION/DENSITY REQUIREMENT
FILL MATERIAL FROM 18" TO GRADE ABOVE CHAMBERS	ANY SOIL/ROCK MATERIALS, NATIVE SOILS OR PER ENGINEER'S PLANS. CHECK PLANS FOR PAVEMENT SUBGRADE REQUIREMENTS.	N/A	N/A	PREPARE PER ENGINEER'S PLANS. PAVED INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND PREPARATION REQUIREMENTS.
(C) FILL MATERIAL FOR 6" TO 18" ELEVATION ABOVE CHAMBERS (24" FOR UNPAVED INSTALLATIONS)	GRANULAR WELL-GRADED SOIL/AGGREGATE MIXTURES, <35% FINES.	3, 357, 4, 467, 5, 56, 57, 6, 67, 68, 7, 78, 8, 89, 9, 10	A-1 A-2 A-3	COMPACT IN 6" LIFTS TO A MINIMUM 95% STANDARD PROCTOR DENSITY. ROLLER GROSS VEHICLE WEIGHT NOT TO EXCEED 12,000 LBS. DYNAMIC FORCE NOT TO EXCEED 20,000 LBS.
(B) EMBEDMENT STONE SURROUNDING AND TO A 6" ELEVATION ABOVE CHAMBERS	WASHED ANGULAR STONE WITH THE MAJORITY OF PARTICLES BETWEEN ¾ - 2 INCH	3, 357, 4, 467, 5, 56, 57	N/A	NO COMPACTION REQUIRED
(A) FOUNDATION STONE BELOW CHAMBERS	WASHED ANGULAR STONE WITH THE MAJORITY OF PARTICLES BETWEEN ¾ - 2 INCH	3, 357, 4, 467, 5, 56, 57	N/A	PLATE COMPACT OR ROLL TO ACHIEVE A 95% STANDARD PROCTOR DENSITY

PLEASE NOTE: THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE WASHED CRUSHED ANGULAR. FOR EXAMPLE, THE STONE MUST BE SPECIFIED AS WASHED, CRUSHED, ANGULAR NO. 4 STONE.

NOTES:
1. THE INSTALLATION OF STORMTECH® CHAMBERS SHALL BE IN ACCORDANCE WITH THE LATEST STORMTECH® INSTALLATION INSTRUCTIONS
2. THE CONTRACTOR IS ADVISED TO REVIEW AND UNDERSTAND THE INSTALLATION INSTRUCTIONS PRIOR TO BEGINNING SYSTEM INSTALLATION. CALL **1.888.892.2694** OR VISIT **WWW.STORMTECH.COM** TO RECEIVE A COPY OF THE LATEST STORMTECH® INSTALLATION INSTRUCTIONS.

(B) STORMTECH® ACCEPTABLE FILL MATERIALS

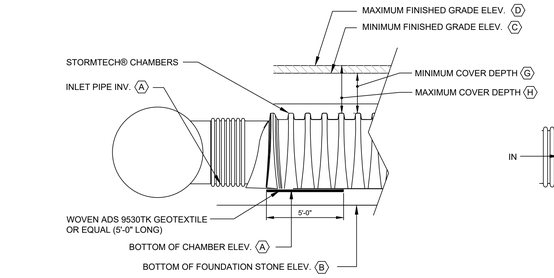
N.T.S.



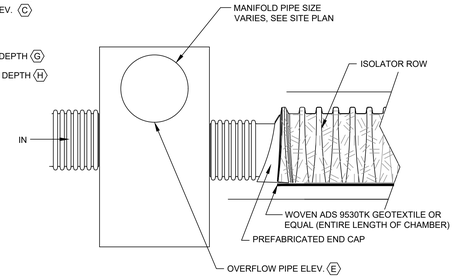
STORMTECH ELEVATIONS SCHEDULE

	ITEM DESCRIPTION	ZONE HB (NORTH)	ZONE HB (SOUTH)	ZONE HC
(A)	BOTTOM OF CHAMBERS	17.00	17.00	17.50
(B)	BOTTOM OF FOUNDATION STONE	16.50	16.50	17.00
(C)	APPROX. MIN. FINISHED GRADE ELEV.	27.50	27.50	22.90
(D)	APPROX. MAX. FINISHED GRADE ELEV.	30.50	30.50	24.25
(E)	OVERFLOW PIPE ELEV.	19.50	19.50	20.00
(F)	NUMBER OF ISOLATOR CHAMBERS	8	14	16
(G)	MINIMUM COVER DEPTH	8'	8'	2.9'
(H)	MAXIMUM COVER DEPTH	11' *	11' *	4.25'

* WHERE SYSTEM DEPTH EXCEEDS 96", CONTRACTOR MUST USE DC-780 CHAMBERS. MAXIMUM DEPTH FOR SC-740 CHAMBERS IS 96" (8'-0)



SECTION B-B

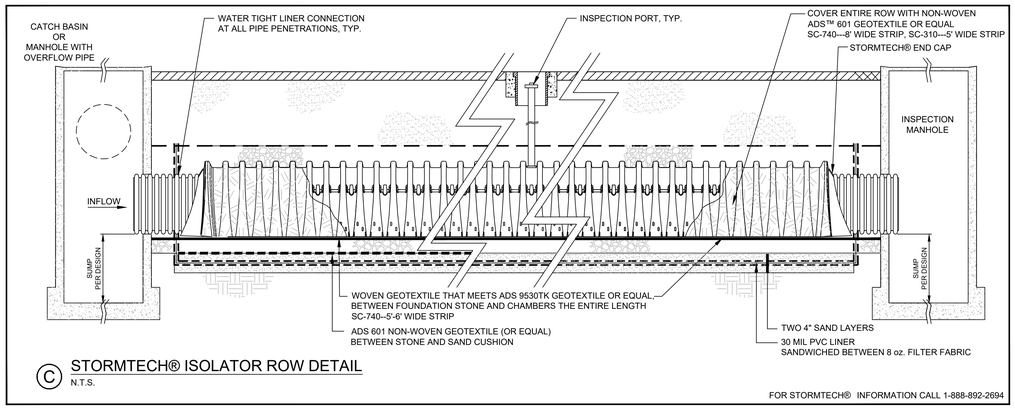


SECTION A-A

(F) STORMTECH® ELEVATIONS

N.T.S.

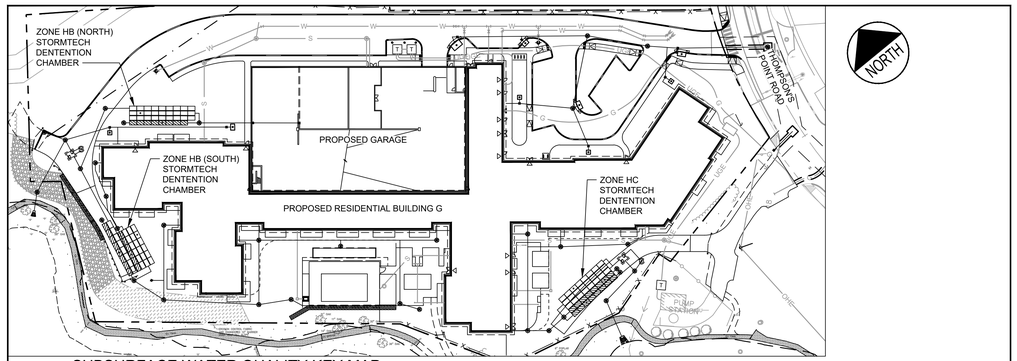
FOR STORMTECH® INFORMATION CALL 1-888-892-2694



(C) STORMTECH® ISOLATOR ROW DETAIL

N.T.S.

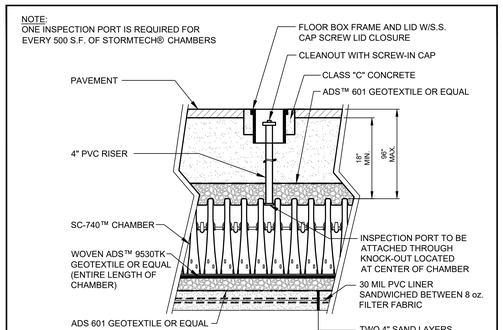
FOR STORMTECH® INFORMATION CALL 1-888-892-2694



(G) SUBSURFACE WATER QUALITY KEY MAP

N.T.S.

NOTE:
ONE INSPECTION PORT IS REQUIRED FOR EVERY 500 S.F. OF STORMTECH® CHAMBERS



(D) STORMTECH® ISOLATOR INSPECTION PORT DETAIL

N.T.S.

FOR STORMTECH® INFORMATION CALL 1-888-892-2694

PRELIMINARY – NOT FOR CONSTRUCTION

THE DETAILS SHOWN HERE ARE CONSISTENT WITH DEVELOPMENT ON THOMPSON'S POINT AND APPROVED AS PART OF THE MASTER DEVELOPMENT PERMIT, OVERALL AND SECTIONAL SUBDIVISION PERMITS, AND LEVEL I, II, III SITE APPLICATION PERMITS PRECEDING JANUARY 2023. THE CITY OF PORTLAND, MAINE UPDATED PARTS OF THE TECHNICAL MANUAL AS RECENTLY AS NOVEMBER 22, 2022. THE CONTRACTOR SHALL FOLLOW THESE DETAILS AS APPROVED EXCEPTING WHEREAS THE CITY OF PORTLAND TECHNICAL MANUAL DETAILS HAVE BEEN UPDATED AND CONFLICT; THE CONTRACTOR SHALL FOLLOW THE MORE STRINGENT MINIMUM DIMENSIONAL REQUIREMENTS.

REV	DATE	DESCRIPTION
2	12/23/2024	REVISED TO ADDRESS CITY COMMENTS
1	9/6/2024	MAJOR SITE PLAN APPLICATION

REVISIONS

STATE OF MAINE — BO KENNEDY No. 11994 — LICENSED PROFESSIONAL ENGINEER — 12/23/2024

P.E. BO KENNEDY

LIC. #11994

PROJECT: THE FOREFRONT AT THOMPSON'S POINT MULTI-FAMILY RESIDENTIAL BUILDING (G)

SHEET TITLE: STORMWATER DETAILS - SUBSURFACE WATER QUALITY VOLUME STORAGE DETAILS

CLIENT: CPI MANAGEMENT, LLC (CATHARTES)

PLACEMAKER PARTNERS, LLC
18 VAN AKEN WAY
PORTLAND, ME 04102
bo@placemakerpartners.com

DRAWN:	DB	DATE:	AUGUST 2024
DESIGNED:	BEK	SCALE:	N.T.S.
FILE NAME:	PANHANDLE-DET.dwg		
SHEET	C-7.1		

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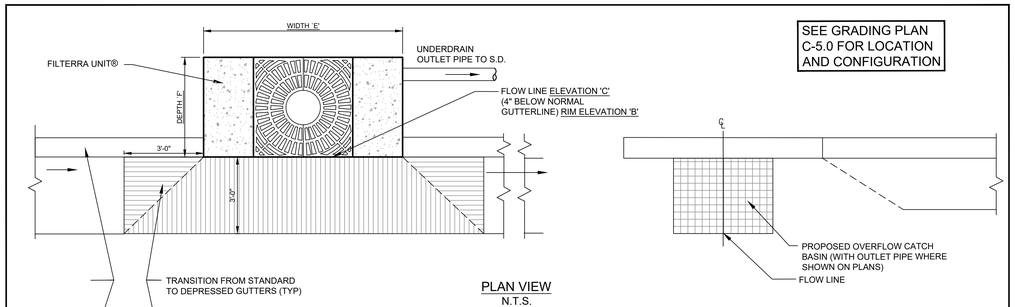
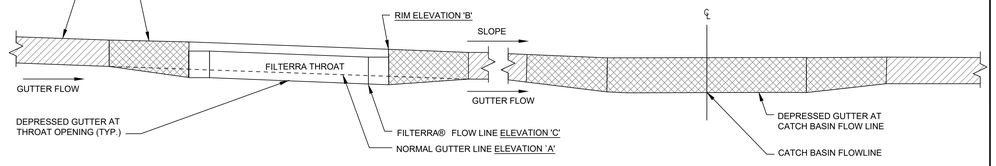
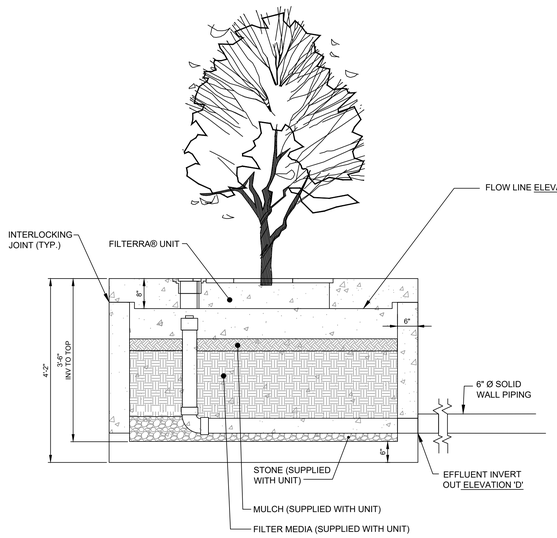
SEE GRADING PLAN
C-5.0 FOR LOCATION
AND CONFIGURATION



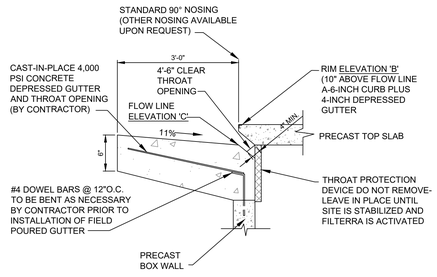
PLAN VIEW
N.T.S.



ELEVATION VIEW
N.T.S.



CROSS SECTION
N.T.S.



STANDARD FILTERRA THROAT OPENING
SECTION A-A
N.T.S.

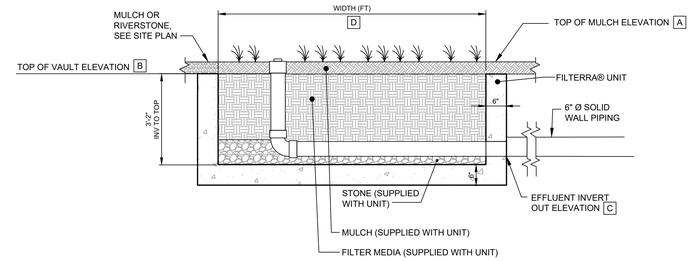
CONSTRUCTION OVERSIGHT NOTES:
FILTERRA UNITS SHALL ONLY BE ACTIVATED BY THE SUPPLIER. ACTIVATION INCLUDES THE INSTALLATION OF THE PLANTS AND MULCH LAYERS. ACTIVATION CANNOT BEGIN UNTIL THE PROJECT SITE IS FULLY STABILIZED AND CLEANED (FULL LANDSCAPING, GRASS COVER, FINAL PAVING AND SWEEPING COMPLETE). THE ONLY BOARDS WHICH SHOULD BE REMOVED ARE THE 2X4 WOODEN PLANKS SET BETWEEN THE FILTERRA BOX AND TOP SLAB. ALL REMAINING BOARDS SHALL REMAIN IN TACT DURING INSTALLATION AND WILL BE REMOVED DURING ACTIVATION OF THE UNIT BY AN AUTHORIZED FILTERRA REPRESENTATIVE.

ALL MANUFACTURED SYSTEMS SHALL BE INSPECTED BY A PROFESSIONAL ENGINEER APPROVED BY THE MANUFACTURER AND SHALL CONSIST OF AN APPROPRIATE NUMBER OF SITE VISITS TO THE SITE TO INSPECT SUBGRADE PREPARATION, GENERAL CONSTRUCTION, STONE PLACEMENT, CHAMBER PLACEMENT, FABRIC LAYMENT, AND STORMWATER OVERFLOW BYPASS CONSTRUCTION FROM INITIAL GROUND DISTURBANCE TO FINAL STABILIZATION.

Ⓐ FILTERRA® UNIT
N.T.S.

FILTERRA® UNIT SCHEDULE

	ITEM DESCRIPTION	ZONE HA			
		FILTERRA HA-2.1	FILTERRA HA- 4.1	FILTERRA HA- 5.1	FILTERRA HA- 6.1
Ⓐ	NORMAL GUTTER LINE ELEV.	21.90	23.70	24.40	24.11
Ⓑ	RIM ELEV.	22.40	24.20	24.90	22.40
Ⓒ	INLET FLOW LINE ELEV.	21.57	23.37	21.57	23.28
Ⓓ	OUTLET SD INV.	18.90	20.7	21.40	21.40
Ⓔ	FILTERRA WIDTH	8 FEET	6 FEET	10 FEET	8 FEET
Ⓕ	FILTERRA DEPTH	4 FEET	4 FEET	6 FEET	4 FEET



CROSS SECTION
N.T.S.

FILTERRA® BIOSCAPES SCHEDULE

	ITEM DESCRIPTION				ZONE HB	
		FILTERRA HA- 7.1	FILTERRA HA- 8.1	FILTERRA HA- 9.1	FILTERRA HB- 21.1	FILTERRA HB- 22.1
A	TOP OF MULCH	23.75	23.75	23.50	26.67	26.67
B	TOP OF CONCRETE	23.50	23.50	23.25	26.34	26.34
C	OUTLET SD INV.	20.33	20.33	20.08	23.17	23.17
D	FILTERRA WIDTH	4 FEET	4 FEET	4 FEET	4 FEET	4 FEET
E	FILTERRA DEPTH	4 FEET	4 FEET	4 FEET	4 FEET	4 FEET

Ⓑ BIO RETENTION BOX - FILTERRA BIOSCAPES ZONES HA AND HB
N.T.S.

NOTE:
THE APPLICANT RESERVES THE RIGHT TO OFFER AN `OR EQUAL' ALTERNATIVE TO THE FILTERRA® UNIT, SUBJECT TO REVIEW AND APPROVAL BY THE CITY OF PORTLAND REPRESENTATIVES

PRELIMINARY – NOT FOR CONSTRUCTION

THE DETAILS SHOWN HERE ARE CONSISTENT WITH DEVELOPMENT ON THOMPSON'S POINT AND APPROVED AS PART OF THE MASTER DEVELOPMENT PERMIT, OVERALL AND SECTIONAL SUBDIVISION PERMITS, AND LEVEL I, II, III SITE APPLICATION PERMITS PRECEDING JANUARY 2023. THE CITY OF PORTLAND, MAINE UPDATED PARTS OF THE TECHNICAL MANUAL AS RECENTLY AS NOVEMBER 22, 2022. THE CONTRACTOR SHALL FOLLOW THESE DETAILS AS APPROVED EXCEPTING WHEREAS THE CITY OF PORTLAND TECHNICAL MANUAL DETAILS HAVE BEEN UPDATED AND CONFLICT; THE CONTRACTOR SHALL FOLLOW THE MORE STRINGENT MINIMUM DIMENSIONAL REQUIREMENTS.

REV	DATE	DESCRIPTION
2	12/23/2024	REVISED TO ADDRESS CITY COMMENTS
1	9/6/2024	MAJOR SITE PLAN APPLICATION

REVISIONS

STATE OF MAINE — BO KENNEDY No. 11994 — LICENSED PROFESSIONAL ENGINEER
12/23/2024
P.E. BO KENNEDY
LIC. #11994

PROJECT
THE FOREFRONT AT THOMPSON'S POINT
MULTI-FAMILY RESIDENTIAL BUILDING (G)

SHEET TITLE
STORMWATER DETAILS
FILTERRA UNITS

CLIENT
CPI MANAGEMENT, LLC
(CATHARTES)

PLACEMAKER PARTNERS, LLC
18 VAN AKEN WAY
PORTLAND, ME 04102
bo@placemakerpartners.com

DRAWN:	DB	DATE:	AUGUST 2024
DESIGNED:	BEK	SCALE:	N.T.S.
FILE NAME:	PANHANDLE-DET.dwg		
SHEET	C-7.2		

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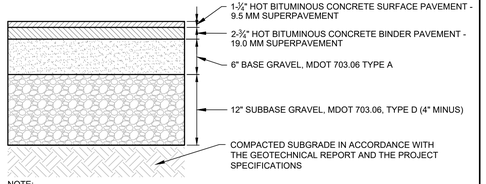
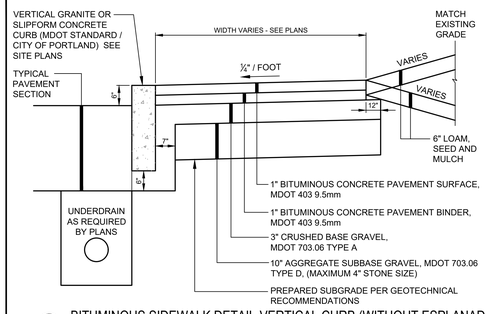
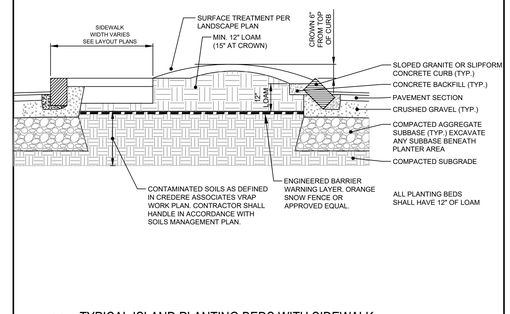


NOTE:
CONTRACTOR SHALL BE REQUIRED TO PROTECT ALL BEARING SOILS FROM EXCESSIVE DISTURBANCE. SHOULD SUBGRADE BECOME YIELDING OR DIFFICULT TO WORK, DISTURBED AREAS SHOULD BE EXCAVATED AND COMPACTED WITH SELECT GRANULAR FILL OR CRUSHED STONE AT NO EXTRA EXPENSE TO THE OWNER. WOVEN GEOTEXTILE TENSILE FABRIC (MIRAFI 600X OR EQUAL) SHALL BE PLACED OVER UNSUITABLE SUBGRADE AS DIRECTED PRIOR TO OR DURING CONSTRUCTION BY THE OWNER'S REPRESENTATIVE, AT NO EXTRA EXPENSE TO THE OWNER.

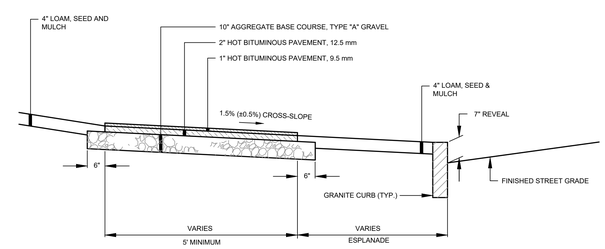
Ⓐ LIGHT DUTY BITUMINOUS CONCRETE PAVEMENT SECTION
N.T.S. SEE NOTE 1 BELOW



Ⓔ BITUMINOUS SIDEWALK DETAIL-VERTICAL CURB (WITHOUT ESPLANADE)
N.T.S. SEE NOTE 1 BELOW



Ⓘ TYPICAL ISLAND PLANTING BEDS WITH SIDEWALK
N.T.S. SEE NOTE 1 BELOW

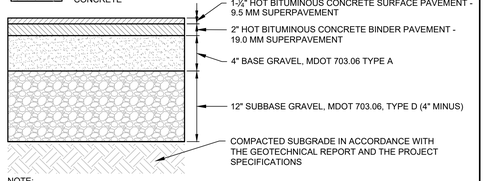


Ⓜ BITUMINOUS SIDEWALK IN CITY R.O.W.
N.T.S.

PAVEMENT TYPE IS DEPICTED ON DRAWING C3.0 SURFACE TREATMENT

STANDARD DUTY BITUMINOUS CONCRETE
HEAVY DUTY BITUMINOUS CONCRETE
PORTLAND CEMENT CONCRETE

NOTES:
1. APPLY TACK COAT BETWEEN BINDER AND SURFACE COURSES.
2. ALL MATERIALS SHALL CONFORM TO MDOT SPECIFICATIONS, LATEST REVISION COMPACTION OF ALL MATERIALS TO BE IN ACCORDANCE WITH THE SPECIFICATIONS AND GEOTECHNICAL REPORTS PREPARED BY THE GEOTECHNICAL ENGINEER WHICHEVER IS MORE STRINGENT



NOTE:
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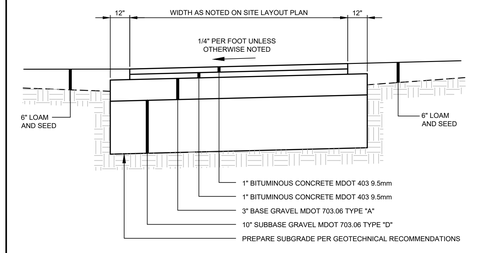
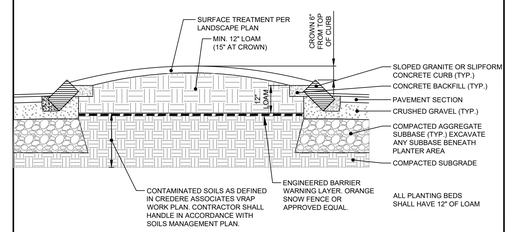
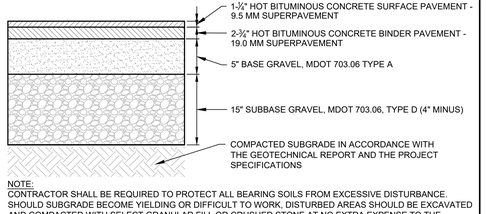
Ⓑ STANDARD DUTY BITUMINOUS CONCRETE PAVEMENT SECTION
N.T.S. SEE NOTE 1 BELOW



Ⓕ NON-CURBED AREAS BITUMINOUS SIDEWALK/WALKWAY DETAIL
N.T.S. SEE NOTE 1 BELOW



Ⓙ TYPICAL ISLAND PLANTING BEDS WITHOUT SIDEWALK
N.T.S. SEE NOTE 1 BELOW



NOTE:
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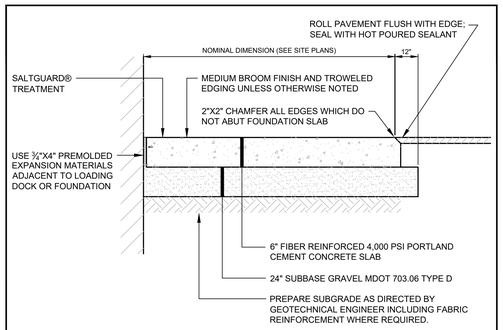
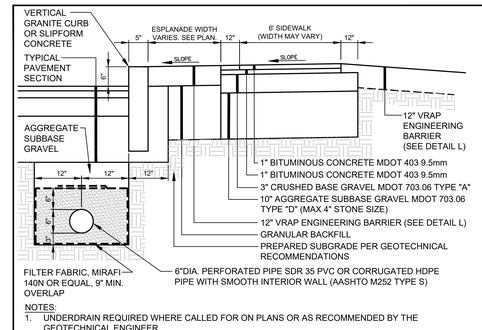
Ⓒ HEAVY DUTY BITUMINOUS CONCRETE PAVEMENT SECTION
N.T.S. SEE NOTE 1 BELOW



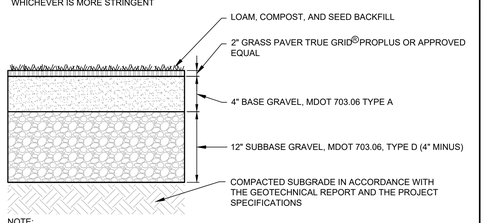
Ⓖ CONCRETE SLAB DETAIL
N.T.S. SEE NOTE 1 BELOW



NOTES:
1. UNDERDRAIN REQUIRED WHERE CALLED FOR ON PLANS OR AS RECOMMENDED BY THE GEOTECHNICAL ENGINEER
2. UNDERDRAIN PIPE ELEVATIONS SHALL BE AT LEAST 42" BELOW GUTTER GRADE
3. PERFORATIONS IN UNDERDRAIN SHALL BE ORIENTATED DOWN

Ⓚ BITUMINOUS SIDEWALK DETAIL-CURBED AREAS (WITH ESPLANADE)
N.T.S. SEE NOTE 1 FOR PRIVATE PROPERTY
SEE DETAIL M FOR SIDEWALK IN CITY R.O.W.

NOTES:
1. ALL MATERIALS SHALL CONFORM TO MDOT SPECIFICATIONS, LATEST REVISION COMPACTION OF ALL MATERIALS TO BE IN ACCORDANCE WITH THE SPECIFICATIONS AND GEOTECHNICAL REPORTS PREPARED BY THE GEOTECHNICAL ENGINEER WHICHEVER IS MORE STRINGENT



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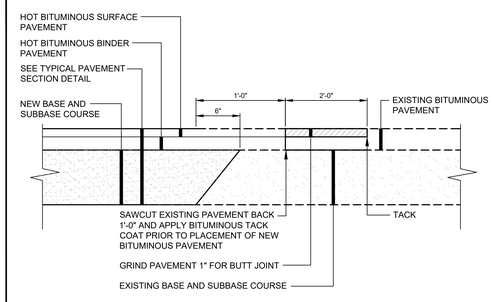
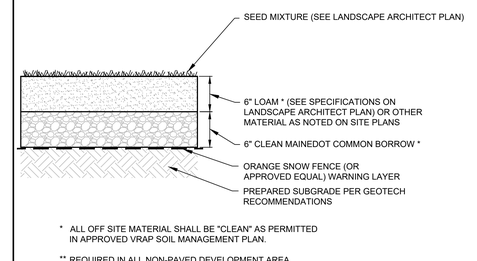
Ⓓ GRASS PAVER - FIRE LANE
N.T.S.



Ⓗ PAVEMENT SAWCUT DETAIL
N.T.S.



* ALL OFF SITE MATERIAL SHALL BE "CLEAN" AS PERMITTED IN APPROVED VRAP SOIL MANAGEMENT PLAN.

** REQUIRED IN ALL NON-PAVED DEVELOPMENT AREA.

Ⓛ VRAP NON-PAVED ENGINEERING BARRIER **
N.T.S.

PRELIMINARY – NOT FOR CONSTRUCTION

NOTE:
1. DETAIL HAS BEEN DESIGNED TO MEET THE ENGINEERED BARRIER SPECIFICATIONS NOTED IN MEDEP VRAP WORK PLAN.

THE DETAILS SHOWN HERE ARE CONSISTENT WITH DEVELOPMENT ON THOMPSON'S POINT AND APPROVED AS PART OF THE MASTER DEVELOPMENT PERMIT, OVERALL AND SECTIONAL SUBDIVISION PERMITS, AND LEVEL I, II, III SITE APPLICATION PERMITS PRECEDING JANUARY 2023. THE CITY OF PORTLAND, MAINE UPDATED PARTS OF THE TECHNICAL MANUAL AS RECENTLY AS NOVEMBER 22, 2022. THE CONTRACTOR SHALL FOLLOW THESE DETAILS AS APPROVED EXCEPTING WHEREAS THE CITY OF PORTLAND TECHNICAL MANUAL DETAILS HAVE BEEN UPDATED AND CONFLICT; THE CONTRACTOR SHALL FOLLOW THE MORE STRINGENT MINIMUM DIMENSIONAL REQUIREMENTS.

REV	DATE	DESCRIPTION
2	12/23/2024	REVISED TO ADDRESS CITY COMMENTS
1	9/6/2024	MAJOR SITE PLAN APPLICATION

REVISIONS

STATE OF MAINE — BO KENNEDY — No. 11994 — LICENSED PROFESSIONAL ENGINEER — 12/23/2024

P.E. BO KENNEDY
LIC. #11994

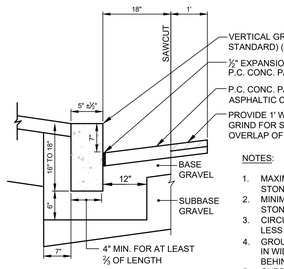
PROJECT
THE FOREFRONT AT THOMPSON'S POINT
MULTI-FAMILY RESIDENTIAL BUILDING (G)

SHEET TITLE
PAVEMENT SECTIONS AND SIDEWALK DETAILS

CLIENT
CPI MANAGEMENT, LLC (CATHARTES)

PLACEMAKER PARTNERS, LLC
18 VAN AKEN WAY
PORTLAND, ME 04102
bo@placemakerpartners.com

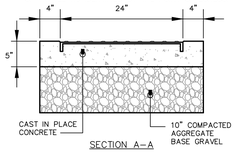
DRAWN:	DB
DESIGNED:	BEK
FILE NAME:	PANHANDLE-DET.dwg
DATE:	AUGUST 2024
SCALE:	N.T.S.
SHEET	C-8.0



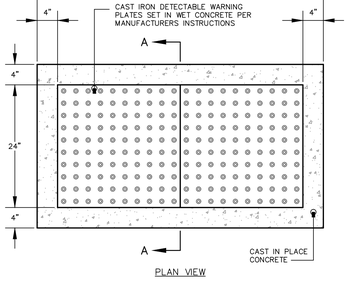
NOTES:
1. MAXIMUM LENGTH OF STRAIGHT CURB STONES = 8'
2. MINIMUM LENGTH OF STRAIGHT CURB STONES = 4'
3. CIRCULAR CURB REQUIRED FOR RADIUS LESS THAN 50'
4. GROUT OR CAULK ALL CURB JOINTS OVER ¼" IN WIDTH. INSTALL STRIP OF FILTER FABRIC BEHIND EACH CURB JOINT.
5. CURB REVEAL SHALL BE 7" IN MDOT OR CITY RIGHT-OF-WAY. ALL OTHER AREAS SHALL HAVE 6" CURB REVEAL.

Ⓐ VERTICAL GRANITE CURB DETAIL
N.T.S.

NOTES:
1. ALL DETECTABLE WARNING PLATES SHALL BE UNCOATED CAST IRON. FOLLOW MANUFACTURER'S INSTRUCTIONS FOR INSTALLATION.
2. CAST IN PLACE CONCRETE SHALL MEET SPECIFICATIONS FOR MDOT CLASS A STRUCTURAL CONCRETE, MINIMUM COMPRESSIVE STRENGTH 4,000 PSI. THE EXPOSED CONCRETE BORDER SHALL RECEIVE A UNIFORM BROOM FINISH PERPENDICULAR TO THE FLOW OF PEDESTRIAN TRAFFIC.
3. TRUNCATED DOMES SHALL BE ALIGNED IN ROWS, PARALLEL AND PERPENDICULAR TO THE PREDOMINANT DIRECTION OF TRAVEL. TRUNCATED DOME BRICKS AND GRANITE PAVERS ARE NOT ALLOWED.
4. SIZE: THE DETECTABLE WARNING PLATES SHALL EXTEND 24 INCHES MINIMUM IN THE DIRECTION OF TRAVEL AND THE FULL WIDTH OF THE CURB RAMP, LANDING, OR BLENDED TRANSITION TO THE STREET.
5. ORIENTATION: THE DETECTABLE WARNING PANEL SHALL BE LOCATED SO THAT THE EDGE NEAREST THE CURB LINE IS 6 INCHES MINIMUM AND 8 INCHES MAXIMUM FROM THE CURB LINE. THE PANEL SHALL BE ORIENTED TO THE DIRECTION OF TRAVEL AS IDENTIFIED BY THE POINT OF EGRESS.

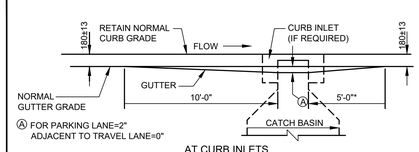


SECTION A–A

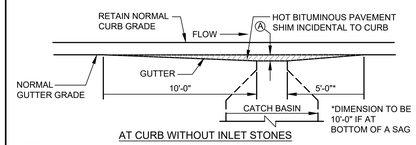


PLAN VIEW

Ⓑ DETECTABLE WARNING PANEL
N.T.S.



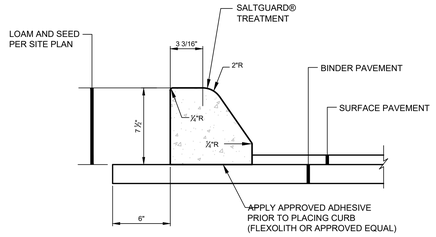
AT CURB INLETS



AT CURB WITHOUT INLET STONES

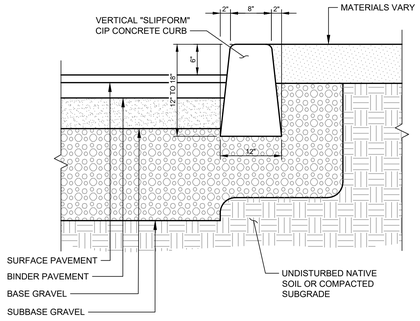
NOTE:
GRATES SHALL BE INSTALLED ON GRADIENT OF THE GUTTER AND BE DEPRESSED 50mm BELOW THE NORMAL GUTTER GRADE UNLESS THIS DEPRESSION INTERFERES WITH TRAFFIC.

Ⓓ GUTTER GRADE TRANSITION AT CATCH BASIN
N.T.S.

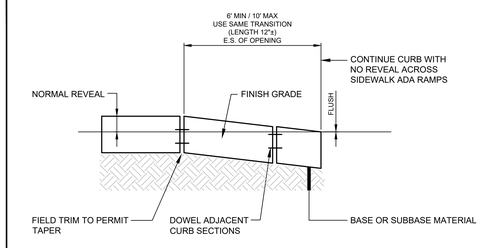


NOTE:
USE NEAR VERTICAL MOLD WHEN ADJACENT TO SIDEWALK

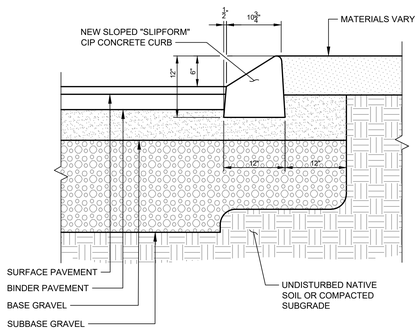
Ⓔ SLIPFORM CONCRETE CURB DETAIL - SLOPED MOLD
N.T.S.



Ⓕ DIRIGO VERTICAL SLIPFORM CONCRETE CURB ON GRAVEL
N.T.S.

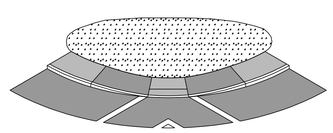


Ⓒ SLOPE OF GRANITE CURB AT ADA RAMPS AND DRIVEWAYS
N.T.S.



Ⓖ " x 12" SLOPED SLIPFORM CURB
N.T.S.

GENERAL NOTES
1. DESIGN OF ACCESSIBLE RAMPS AND ASSOCIATED FACILITIES ARE GOVERNED BY THE 2010 AMERICANS WITH DISABILITIES ACT (ADA) STANDARDS FOR ACCESSIBLE DESIGN, WHICH IS DETAILED IN DOJ SECTION 28 CFR 35.151. ADDITIONAL GUIDANCE AND INFORMATION CAN BE FOUND IN THE PROPOSED PUBLIC RIGHTS-OF-WAY ACCESSIBILITY GUIDELINES PUBLISHED BY THE U.S. ACCESS BOARD, IN ANY CASE WHERE THE DESIGN REQUIREMENTS ARE MORE STRINGENT BETWEEN ADA STANDARDS AND CITY REQUIREMENTS, THE ADA STANDARDS SHALL GOVERN.
2. SIDEWALKS SHALL BE CONSTRUCTED IN BRICK, CONCRETE, OR BITUMINOUS, ACCORDING TO THE SIDEWALK & DRIVEWAY APRON MATERIALS POLICY, UNLESS DIRECTED OTHERWISE BY THE CITY ENGINEER.
3. SIDEWALKS AND RAMPS SHALL BE BUILT ACCORDING TO THE FOLLOWING DIMENSIONS AND GRADES:
   SIDEWALK RUNNING SLOPE: MATCH ADJACENT STREET GRADE
   SIDEWALK CROSS SLOPE: 1.0% MINIMUM, 2.0% MAXIMUM
   SIDEWALK WIDTH: 5'-0" MINIMUM, WIDER PREFERRED
   ESPLANADE (WHERE PROVIDED) 2'-0" MINIMUM, 4'-0" OR GREATER PREFERRED IF LANDSCAPED.
4. TWO CURB RAMPS ARE REQUIRED AT EACH SIDEWALK CORNER. EACH CURB RAMP SHALL CONNECT THE PEDESTRIAN ACCESS ROUTE AT EACH PEDESTRIAN STREET CROSSING. IN ALTERATIONS WHERE PHYSICAL CONSTRAINTS PREVENT TWO CURB RAMPS FROM BEING INSTALLED AT A STREET CORNER, A SINGLE PEDESTRIAN CURB RAMP MAY BE PERMITTED.
5. OPPOSING CURB RAMPS AT A SINGLE CROSSING SHALL ALIGN TO PROVIDE A STRAIGHT PATH OF TRAVEL FROM THE TOP OF THE RAMP TO THE CURB RAMP ON THE OPPOSITE SIDE OF THE ROADWAY TO THE MAXIMUM EXTENT FEASIBLE.
6. ALL SIDEWALKS AND RAMPS SHALL DRAIN TOWARD THE STREET, DRIVEWAY, OR PARKING AREA, WITH A MAXIMUM CROSS SLOPE OF 2.0%.
7. LEVEL LANDINGS (NO GREATER THAN 2.0% SLOPE IN ANY DIRECTION) AT THE BOTTOM OF PERPENDICULAR RAMPS SHALL BE WHOLLY CONTAINED WITHIN MARKED CROSSWALKS.
8. PONDING SHALL NOT BE PERMITTED WITHIN THE CURB RAMP LIMITS. RAMPS SHALL NOT ALTER ROADWAY DRAINAGE PATTERNS.
9. TRANSITION FROM RAMPS TO WALKS OR STREET SURFACE SHALL BE FLUSH AND FREE OF ABRUPT CHANGES. PAVEMENT AT THE STREET SURFACE SHALL BE MILLED AND REPAVED TO ACHIEVE FLUSH CONDITION.
10. CURB RAMP AND FORM WORK SLOPES SHALL BE CHECKED WITH A DIGITAL LEVEL OF AN APPROPRIATE LENGTH. NO PORTION OF A RAMP RUN SHALL EXCEED THE MAXIMUM SLOPE REQUIREMENT.
11. THE COUNTER SLOPE WITHIN 2' OF THE CURB RAMP SHALL BE 5% MAXIMUM. IN ALTERATIONS, IF THE COUNTER SLOPE OF 5% MAXIMUM CANNOT BE ACHIEVED, THE SLOPE ELEVATION MAY BE ADJUSTED SO THAT THE COMBINED COUNTER SLOPE AND RAMP SLOPE DO NOT EXCEED 13.3%
12. VERTICAL DROP-OFF EDGES TO RAMPS SHALL NOT BE BUILT UNLESS THE RAMP ABUTS AN ESPLANADE OR OTHER AREA NOT TO BE USED BY PEDESTRIANS.
13. AT MARKED CROSSWALKS, THE FULL WIDTH OF THE RAMP OR LANDING SHALL BE CONTAINED WITHIN THE PAVEMENT MARKINGS.
14. DETECTABLE WARNING PANELS SHALL BE PROVIDED ON ALL RAMPS AS PER FIGURE I–7 OF THESE STANDARD DETAILS.
15. RAMP FLARES SHOULD BE LOCATED OUTSIDE THE DIRECT LINE OF TRAVEL MOST LIKELY TO BE FOLLOWED BY THE VISUALLY IMPAIRED.
16. SIGNS, POLES, PLANTERS, MAILBOXES, ETC. SHALL NOT BE LOCATED WHERE THEY WILL INTERFERE WITH THE USE OF SIDEWALK RAMPS.
17. SIDEWALK RAMPS SHALL NOT BE LOCATED WHERE USERS MUST CROSS DROP INLET GRATES, MANHOLE COVERS, OR OTHER ACCESS LIDS. IF THIS CANNOT BE AVOIDED, THEN GRATE DESIGN AND PLACEMENT SHALL CONFORM TO ADA REQUIREMENTS.
18. THE PUBLIC SIDEWALK CURB RAMP STANDARDS DEPICTED HERE MAY NOT BE APPROPRIATE FOR ALL LOCATIONS. FIELD CONDITIONS AT INDIVIDUAL LOCATIONS MAY REQUIRE SPECIFIC DESIGNS. RAMP DESIGNS THAT ARE COMPLIANT WITH ADA BUT NOT LISTED IN THESE DETAILS MAY BE APPROVED BY THE CITY ENGINEER.
19. DESIGNS MUST BE CONSISTENT WITH THE PROVISIONS OF THESE DETAILS AND TO ADA GUIDELINES TO THE MAXIMUM EXTENT FEASIBLE ON ALTERATION PROJECTS, AND WHEN STRUCTURALLY PRACTICABLE ON NEW CONSTRUCTION PROJECTS AS REQUIRED BY THE ADA ACCESSIBILITY GUIDELINES.
20. MAXIMUMS AND MINIMUMS DO NOT HAVE TOLERANCES AND ARE NOT TO BE EXCEEDED OR UNMET.
21. THE STANDARD TURNING SPACE (LEVEL LANDING) IS 4'–0" X 4'–0" SLOPING NO MORE THAN 2.0% WHERE THE TURNING SPACE SHALL BE 4'–0" MINIMUM BY 5'–0" MINIMUM. THE 5'–0" DIMENSION SHALL BE PROVIDED IN THE DIRECTION OF THE RAMP RUN.
22. DETECTABLE WARNINGS SHALL BE INSTALLED AT ALL SIGNED OR SIGNALIZED INTERSECTIONS. THEY SHALL HAVE A TRUNCATED DOME SURFACE. THE DOMES SHALL BE IN A SQUARE PATTERN AND ALIGNED WITH PEDESTRIAN TRAFFIC WHERE POSSIBLE.
23. DETECTABLE WARNINGS SHALL SPAN THE WIDTH OF THE PEDESTRIAN RAMP. SEE STANDARD DETAIL FIGURE I–7.
24. ALL DETECTABLE WARNING FIELDS PLACED AT THE SAME INTERSECTION SHALL BE MADE UP OF THE SAME UNIFORM MATERIAL TYPE. DETECTABLE WARNINGS SHALL BE CONTRASTING IN COLOR TO THE ADJACENT WALKWAY.
25. A RAMP WITH A RUNNING SLOPE LESS THAN SLOPE IS DEFINED AS A "BLENDED TRANSITION". BLENDED TRANSITIONS DO NOT REQUIRE A LEVEL LANDING AT THE TOP OF THE RAMP.
26. THE RAMP LENGTH SHALL NOT EXCEED 15 FEET. ADJUST RAMP LENGTH OR SLOPE AS NEEDED TO PROVIDE ACCESS TO THE MAXIMUM EXTENT FEASIBLE.
27. ALL CURB RAMP JOINTS AND GRADE BREAKS SHALL BE FLUSH.
28. RAMP GRADE BREAKS SHALL BE PERPENDICULAR TO THE RUNNING SLOPE.
29. THERE SHALL BE A MINIMUM OF 12" AGGREGATE SUBBASE COURSE – GRAVEL UNDER THE SIDEWALK SURFACE ON PEDESTRIAN RAMPS.
30. DRAINAGE STRUCTURES, UTILITY POLES, TRAFFIC SIGNAL EQUIPMENT OR OTHER OBSTRUCTIONS SHALL NOT BE INSTALLED IN THE CURB RAMP OR TURNING SPACE AREAS.
31. BEFORE RETROFITTING RAMPS, THE CONTRACTOR SHALL VERIFY REMOVAL LIMITS ARE SUFFICIENT TO PROVIDE POSITIVE DRAINAGE, MAINTAIN EXISTING DRAINAGE PATTERNS AND AVOID PONDING IN THE FINAL CONFIGURATION.
32. A TEMPORARY PEDESTRIAN ACCESS ROUTE SHALL BE PROVIDED WHENEVER THE EXISTING PEDESTRIAN ACCESS ROUTE IN THE PUBLIC RIGHT OF WAY IS BLOCKED BY CONSTRUCTION, ALTERATION, MAINTENANCE OR OTHER TEMPORARY CONDITIONS. REFER TO MUTCD FOR GUIDANCE.



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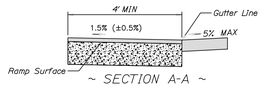
(NOT TO SCALE)



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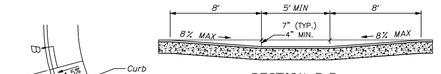

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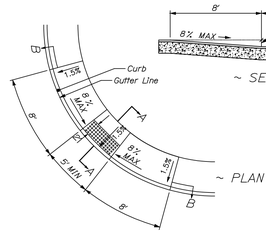
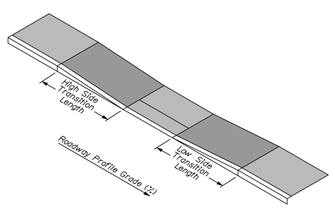


~ PLAN VIEW ~

NOTES:
1. THIS LESS DESIRABLE DESIGN SHOULD NOT BE USED UNLESS REQUIRED BY DESIGN CONSTRAINTS. IT DOES NOT PROVIDE DIRECTIONAL CUES.
2. A MINIMUM CURB REVEAL OF 4" IS REQUIRED AT THE APEX OF THE CURB RADIUS.
3. MINIMUM TERMINAL CURB LENGTH SHALL BE 4 FEET.
4. SIDEWALK MATERIAL PER CITY SIDEWALK MATERIAL POLICY.

APEX RAMP – SIDEWALKS LESS THAN 6.5' WIDE
WITH NO ESPLANADE
I–6C

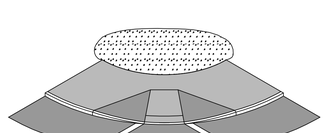


PEDESTRIAN RAMP LENGTH TABLE						
CURB REVEAL (INCHES)		7	6	5	4	3
	ROADWAY PROFILE GRADE	MINIMUM TRANSITION LENGTH REQUIRED (FEET)				
LOW SIDE TRANSITION LENGTH	-7% AND LOWER	4.0	4.0	4.0	4.0	4.0
	-6%	8.0	4.0	4.0	4.0	4.0
	-5%	8.0	4.0	4.0	4.0	4.0
	-4%	8.0	8.0	4.0	4.0	4.0
	-3%	8.0	8.0	4.0	4.0	4.0
	-2%	8.0	8.0	8.0	4.0	4.0
	-1%	8.0	8.0	8.0	4.0	4.0
	0%	8.0	8.0	8.0	8.0	4.0
HIGH SIDE TRANSITION LENGTH	1%	8.0	8.0	8.0	8.0	4.0
	2%	10.0	8.0	8.0	8.0	4.0
	3%	12.0	10.0	8.0	8.0	8.0
	4%	14.0	12.0	10.0	8.0	8.0
	5%	15.0	15.0	14.0	10.0	8.0
	6%	15.0	15.0	15.0	15.0	12.0
	7% AND HIGHER	15.0	15.0	15.0	15.0	15.0

NOTE:
CHOOSE ROADWAY PROFILE GRADE BY ROUNDING UP FOR POSITIVE GRADES AND DOWN FOR NEGATIVE GRADES. ROUND TO THE NEAREST WHOLE INTEGER. IF CONSTRAINTS PREVENT PLACEMENT OF THE RAMP LENGTH REQUIRED BY THE TABLE, PLACE THE MAXIMUM LENGTH POSSIBLE AND CHECK THE SLOPE. IF ABOVE THE MAXIMUM ALLOWABLE SLOPE, CONSIDER DESIGN MODIFICATIONS BEFORE CONSIDERING TECHNICAL INFEASIBILITY.

RAMP LENGTH TABLE FOR SIDEWALK RAMPS
I–6F

Ⓗ BARRIER FREE RAMP DETAILS
N.T.S.



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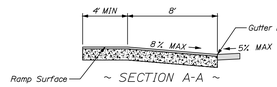
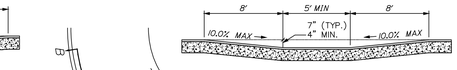
(NOT TO SCALE)



~ SECTION A-A ~

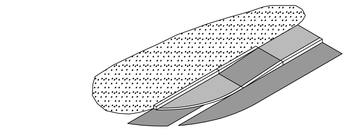


~ SECTION B-B ~

~ PLAN VIEW ~

NOTES:
1. THIS LESS DESIRABLE DESIGN SHOULD NOT BE USED UNLESS REQUIRED BY DESIGN CONSTRAINTS. IT DOES NOT PROVIDE DIRECTIONAL CUES.
2. A MINIMUM CURB REVEAL OF 4" IS REQUIRED AT THE APEX OF THE CURB RADIUS.
3. MINIMUM TERMINAL CURB LENGTH SHALL BE 4 FEET.
4. SIDEWALK MATERIAL PER CITY SIDEWALK MATERIAL POLICY.

APEX RAMP – SIDEWALK GREATER THAN 6.5' WIDE
WITH OR WITHOUT ESPLANADE
I–6D



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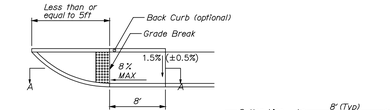
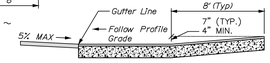
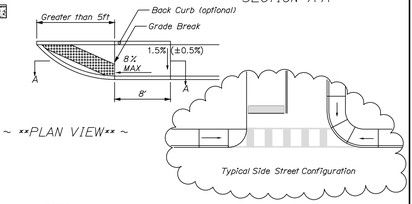
(NOT TO SCALE)



~ *PLAN VIEW* ~



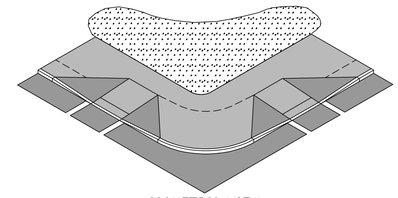
~ SECTION A-A ~



~ **PLAN VIEW** ~

NOTES:
1. FOR USE ONLY WHEN NO SIDEWALK IS PRESENT ON THE SIDE ROAD.
2. USE *THIS* DETECTABLE WARNING PLACEMENT IF THE DISTANCE FROM THE GRADE BREAK TO THE GUTTERLINE IS LESS THAN OR EQUAL TO 5 FEET.
2. USE **THIS** DETECTABLE WARNING PLACEMENT IF THE DISTANCE FROM THE GRADE BREAK TO THE GUTTERLINE IS GREATER THAN 5 FEET.
3. SIDEWALK MATERIAL PER CITY SIDEWALK MATERIAL POLICY.

SIDE STREET RAMP
WITH OR WITHOUT ESPLANADE
I–6E



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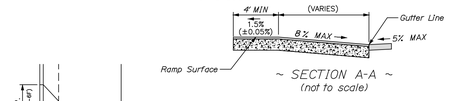

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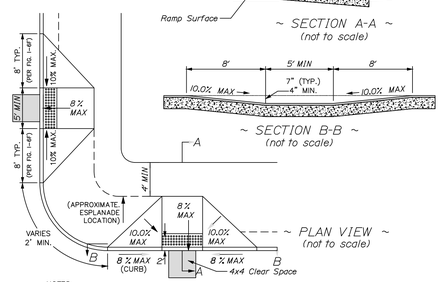

~ PLAN VIEW ~
(not to scale)

NOTES:
1. THIS DESIGN IS THE PREFERRED OPTION WHEN THE SIDEWALK WIDTH IS GREATER THAN 6.5'. USE OTHER OPTIONS ONLY WHEN REQUIRED BY DESIGN CONSTRAINTS.
2. A MINIMUM CURB REVEAL OF 4" IS REQUIRED AT THE APEX OF THE CURB RADIUS.
3. MINIMUM TERMINAL CURB LENGTH SHALL BE 4 FEET.
4. SIDEWALK MATERIAL PER CITY SIDEWALK MATERIAL POLICY.

PERPENDICULAR ADA RAMP – SIDEWALK WIDTH GREATER THAN 6.5' WIDE
WITH OR WITHOUT ESPLANADE
I–6G

PRELIMINARY – NOT FOR CONSTRUCTION

THE DETAILS SHOWN HERE ARE CONSISTENT WITH DEVELOPMENT ON THOMPSON'S POINT AND APPROVED AS PART OF THE MASTER DEVELOPMENT PERMIT, OVERALL AND SECTIONAL SUBDIVISION PERMITS, AND LEVEL I, II, III SITE APPLICATION PERMITS PRECEDING JANUARY 2023. THE CITY OF PORTLAND, MAINE UPDATED PARTS OF THE TECHNICAL MANUAL AS RECENTLY AS NOVEMBER 22, 2022. THE CONTRACTOR SHALL FOLLOW THESE DETAILS AS APPROVED EXCEPTING WHEREAS THE CITY OF PORTLAND TECHNICAL MANUAL DETAILS HAVE BEEN UPDATED AND CONFLICT; THE CONTRACTOR SHALL FOLLOW THE MORE STRINGENT MINIMUM DIMENSIONAL REQUIREMENTS.

REV	DATE	DESCRIPTION
2	12/23/2024	REVISED TO ADDRESS CITY COMMENTS
1	9/6/2024	MAJOR SITE PLAN APPLICATION

REVISIONS

STATE OF MAINE · BO KENNEDY · No. 11994 · LICENSED PROFESSIONAL ENGINEER · 12/23/2024

P.E. BO KENNEDY
LIC. #11994

PROJECT
THE FOREFRONT AT THOMPSON'S POINT
MULTI-FAMILY RESIDENTIAL BUILDING (G)

SHEET TITLE
CURBING AND SIDEWALK DETAILS

CLIENT
CPI MANAGEMENT, LLC (CATHARTES)

PLACEMAKER PARTNERS, LLC
18 VAN AKEN WAY
PORTLAND, ME 04102
bo@placemakerpartners.com

DRAWN: DB	DATE: AUGUST 2024
DESIGNED: BEK	SCALE: N.T.S.
FILE NAME: PANHANDLE-DET.dwg	
SHEET	C-8.1

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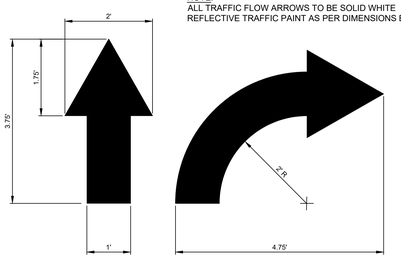

A TRAFFIC FLOW ARROW DETAIL
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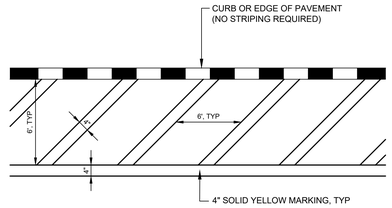

E CHEVRON STRIPING DETAIL
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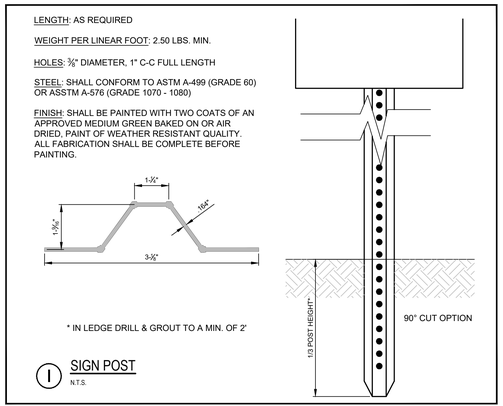

I SIGN POST
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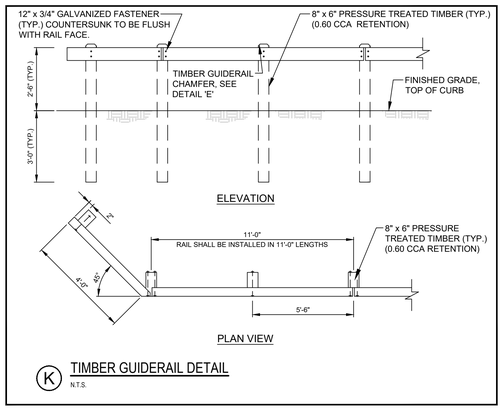

K TIMBER GUIDERAIL DETAIL
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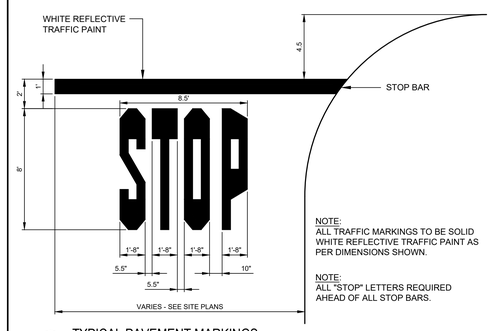

B TYPICAL PAVEMENT MARKINGS
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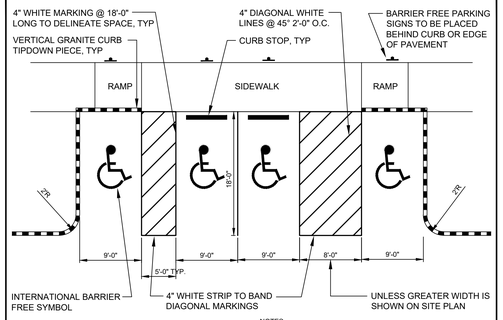
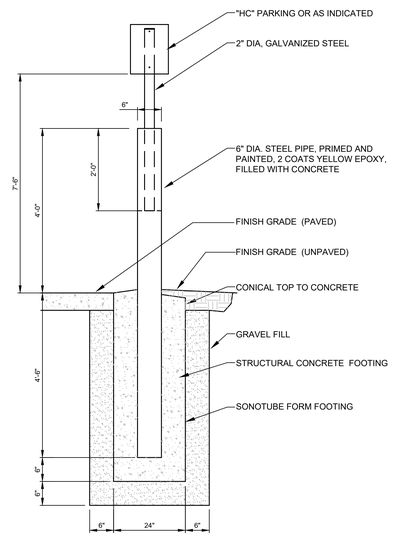


F ADA PARKING LOT STRIPING
N.T.S.

NOTES:
1. ONE IN EIGHT BARRIER FREE SPACES MUST BE VAN ASSESSABLE. THIS HAS BEEN PROVIDED FOR ON THE SITE LAYOUT PLAN.
2. BARRIER FREE GRAPHIC SYMBOL (PAINTED WHITE) TO BE CENTERED IN PARKING STALL. SYMBOL TO BE PAINTED ON BLUE NON-SKID BACKGROUND.



J BARRIER FREE PARKING SIGN
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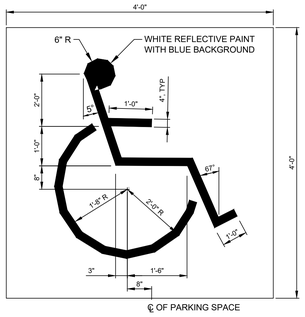
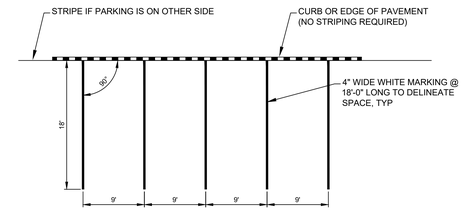


C INTERNATIONAL BARRIER FREE SYMBOL
N.T.S.



G STANDARD PARKING STALL STRIPING
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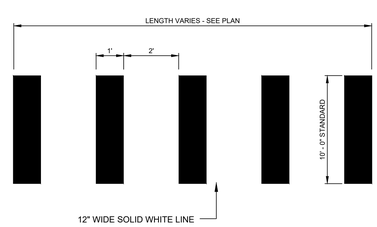
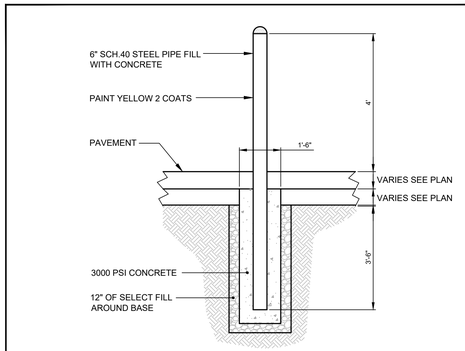


D CROSSWALK STRIPING DETAIL
N.T.S.



H GUARD POST/BOLLARD DETAIL
N.T.S.

PRELIMINARY – NOT FOR CONSTRUCTION

THE DETAILS SHOWN HERE ARE CONSISTENT WITH DEVELOPMENT ON THOMPSON'S POINT AND APPROVED AS PART OF THE MASTER DEVELOPMENT PERMIT, OVERALL AND SECTIONAL SUBDIVISION PERMITS, AND LEVEL I, II, III SITE APPLICATION PERMITS PRECEDING JANUARY 2023. THE CITY OF PORTLAND, MAINE UPDATED PARTS OF THE TECHNICAL MANUAL AS RECENTLY AS NOVEMBER 22, 2022. THE CONTRACTOR SHALL FOLLOW THESE DETAILS AS APPROVED EXCEPTING WHEREAS THE CITY OF PORTLAND TECHNICAL MANUAL DETAILS HAVE BEEN UPDATED AND CONFLICT; THE CONTRACTOR SHALL FOLLOW THE MORE STRINGENT MINIMUM DIMENSIONAL REQUIREMENTS.

REV	DATE	DESCRIPTION
2	12/23/2024	REVISED TO ADDRESS CITY COMMENTS
1	9/6/2024	MAJOR SITE PLAN APPLICATION

REVISIONS

STATE OF MAINE — BO KENNEDY No. 11994 — LICENSED PROFESSIONAL ENGINEER — 12/23/2024

P.E. BO KENNEDY
LIC. #11994

PROJECT
THE FOREFRONT AT THOMPSON'S POINT
MULTI-FAMILY RESIDENTIAL BUILDING (G)

SHEET TITLE
PARKING AND TRAFFIC CONTROL DETAILS

CLIENT
CPI MANAGEMENT, LLC (CATHARTES)

PLACEMAKER PARTNERS, LLC
18 VAN AKEN WAY
PORTLAND, ME 04102
bo@placemakerpartners.com

DRAWN: DB	DATE: AUGUST 2024
DESIGNED: BEK	SCALE: N.T.S.
FILE NAME: PANHANDLE-DET.dwg	
SHEET	C-8.2

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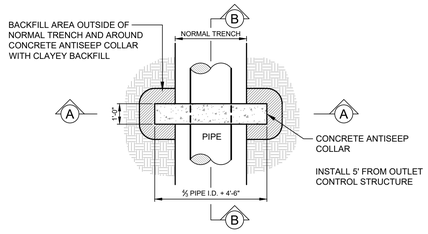
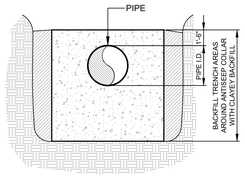
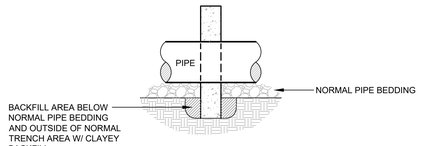


PLAN

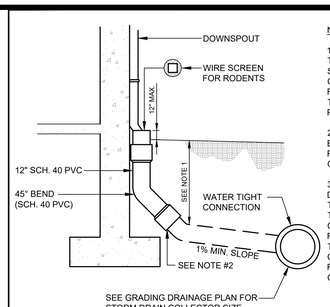


SECTION A-A



SECTION B-B

(A) ANTISEEP COLLAR
N.T.S.



NOTES:

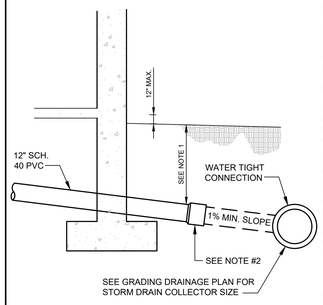
1. FOR ALL DEPTHS OF COVER LESS THAN TWO (2) FEET, PIPE MUST BE SCHEDULE 40 PVC. FOR DEPTHS OF COVER GREATER THAN TWO (2) FEET, FLEXIBLE PIPE MAY BE USED. REFER TO SPECIFICATIONS FOR ALLOWABLE PIPE TYPES.

2. A WATERTIGHT CONNECTION SHALL BE MAINTAINED WITH ANY TRANSITION FROM SCHEDULE 40 PVC PIPE TO ANY OTHER PIPE TYPE.

3. THE DOWNSPOUT COLLECTOR DRAIN SHALL BE INSTALLED BEFORE THE DOWNSPOUTS ARE INSTALLED ON THE BUILDING. SITE WORK CONTRACTOR SHALL BE RESPONSIBLE FOR ALL WORK TO AND INCLUDING THE RODENT SCREEN. BUILDING CONTRACTOR SHALL BE RESPONSIBLE FOR THE CONNECTION AT THE POINT OF THE RODENT SCREEN.

NOTE:
ARCHITECT MAY ELECT TO USE INTERNAL ROOF DRAINS - REFER TO ARCHITECTURAL PLANS

(C) ROOF DRAIN DETAIL - EXTERIOR DOWNSPOUT
N.T.S.



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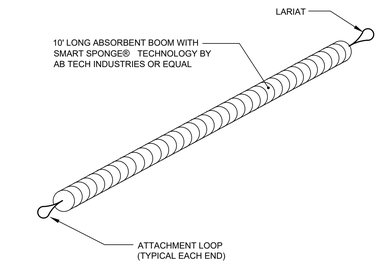
1. FOR ALL DEPTHS OF COVER LESS THAN TWO (2) FEET, PIPE MUST BE SCHEDULE 40 PVC. FOR DEPTHS OF COVER GREATER THAN TWO (2) FEET, FLEXIBLE PIPE MAY BE USED. REFER TO SPECIFICATIONS FOR ALLOWABLE PIPE TYPES.

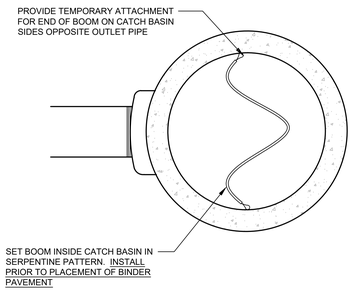
2. A WATERTIGHT CONNECTION SHALL BE MAINTAINED WITH ANY TRANSITION FROM SCHEDULE 40 PVC PIPE TO ANY OTHER PIPE TYPE.

3. THE DOWNSPOUT COLLECTOR DRAIN SHALL BE INSTALLED BEFORE THE DOWNSPOUTS ARE INSTALLED ON THE BUILDING. SITE WORK CONTRACTOR SHALL BE RESPONSIBLE FOR ALL WORK TO AND INCLUDING THE RODENT SCREEN. BUILDING CONTRACTOR SHALL BE RESPONSIBLE FOR THE CONNECTION AT THE POINT OF THE RODENT SCREEN.

NOTE:
ARCHITECT MAY ELECT TO USE INTERNAL ROOF DRAINS - REFER TO ARCHITECTURAL PLANS

(D) ROOF DRAIN DETAIL - INTERIOR ROOF LEADER
N.T.S.





PLAN VIEW LOOKING INTO CATCH BASIN

NOTES:
1. REQUIRED FOR ALL CATCH BASINS WHICH RECEIVE RUNOFF FROM PAVED AREAS.
2. REFER TO EROSION CONTROL REPORT FOR ADDITIONAL INFORMATION.
3. CONTRACTOR MAY SELECT OTHER TYPE OF EQUIVALENT OIL ABSORBENT PRODUCTS.
4. SUBMITTALS ARE REQUIRED FOR THESE ITEMS.

(B) TEMPORARY WATER QUALITY MEASURE INSIDE OF CATCH BASINS
N.T.S.

PRELIMINARY – NOT FOR CONSTRUCTION

THE DETAILS SHOWN HERE ARE CONSISTENT WITH DEVELOPMENT ON THOMPSON'S POINT AND APPROVED AS PART OF THE MASTER DEVELOPMENT PERMIT, OVERALL AND SECTIONAL SUBDIVISION PERMITS, AND LEVEL I, II, III SITE APPLICATION PERMITS PRECEDING JANUARY 2023. THE CITY OF PORTLAND, MAINE UPDATED PARTS OF THE TECHNICAL MANUAL AS RECENTLY AS NOVEMBER 22, 2022. THE CONTRACTOR SHALL FOLLOW THESE DETAILS AS APPROVED EXCEPTING WHEREAS THE CITY OF PORTLAND TECHNICAL MANUAL DETAILS HAVE BEEN UPDATED AND CONFLICT; THE CONTRACTOR SHALL FOLLOW THE MORE STRINGENT MINIMUM DIMENSIONAL REQUIREMENTS.

REV	DATE	DESCRIPTION
2	12/23/2024	REVISED TO ADDRESS CITY COMMENTS
1	9/6/2024	MAJOR SITE PLAN APPLICATION

REVISIONS

STATE OF MAINE — BO KENNEDY No. 11994 — LICENSED PROFESSIONAL ENGINEER — 12/23/2024

P.E. BO KENNEDY
LIC. #11994

PROJECT
THE FOREFRONT AT THOMPSON'S POINT
MULTI-FAMILY RESIDENTIAL BUILDING (G)

SHEET TITLE
STORMWATER DETAILS

CLIENT
CPI MANAGEMENT, LLC
(CATHARTES)

PLACEMAKER PARTNERS, LLC
18 VAN AKEN WAY
PORTLAND, ME 04102
bo@placemakerpartners.com

DRAWN: DB	DATE: AUGUST 2024
DESIGNED: BEK	SCALE: N.T.S.
FILE NAME: PANHANDLE-DET.dwg	
SHEET	C-8.3

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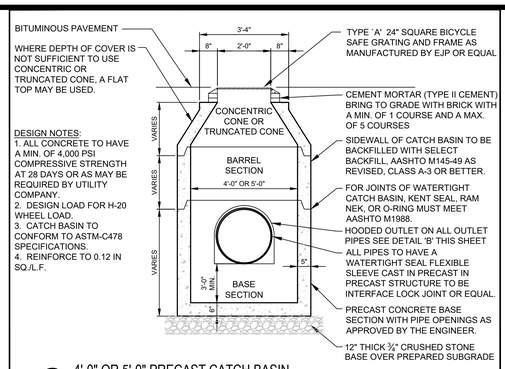
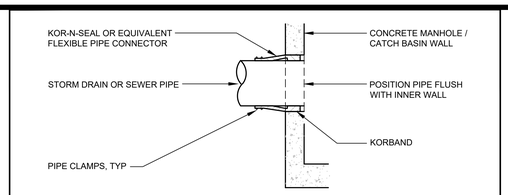


A 4'-0" OR 5'-0" PRECAST CATCH BASIN
N.T.S.

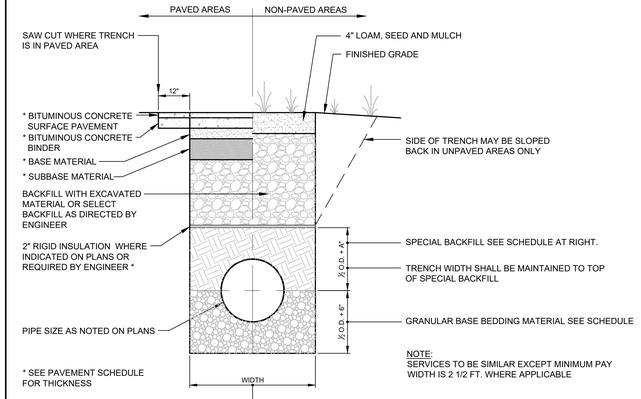


NOTES:
1. A FLEXIBLE PIPE TO MANHOLE CONNECTOR SHALL BE EMPLOYED IN THE CONNECTION OF ALL PIPE TO MANHOLE JUNCTIONS.
2. THE CONNECTOR SHALL BE KOR-N-SEAL AS MANUFACTURED BY NPC SYSTEMS, INC., OF MILFORD, NH OR EQUAL.
3. THE CONNECTOR SHALL BE THE SOLE ELEMENT RELIED ON TO ASSURE A FLEXIBLE WATERTIGHT SEAL OF THE PIPE TO MANHOLE. NO ADHESIVES OR LUBRICANTS SHALL BE EMPLOYED IN THE INSTALLATION OF THE CONNECTOR TO THE MANHOLE. THE RUBBER FOR THE CONNECTOR SHALL COMPLY TO ASTM C443 AND ASTM C923 AND CONSIST OF EPDM AND ELASTOMERS KNOWN TO BE RESISTANT TO OZONE, WEATHER ELEMENTS, CHEMICALS, INCLUDING ACIDS, ALKALIS, ANIMAL AND VEGETABLE FATS, OILS AND PETROLEUM PRODUCTS FROM SPILLS.
4. ALL STAINLESS STEEL ELEMENTS OF THE CONNECTOR SHALL BE TOTALLY NON-MAGNETIC SERIES 304 STAINLESS, EXCLUDING THE WORM SCREW USED FOR TIGHTENING THE STEEL BAND AROUND THE PIPE WHICH SHALL BE SERIES 305 STAINLESS. THE WORM SCREW USED FOR TIGHTENING THE STEEL BAND SHALL BE TORQUED BY A BREAK-AWAY TORQUE WRENCH AVAILABLE FROM THE PRECAST MANHOLE SUPPLIER, AND SET AT 60/70 in/lbs..
5. THE CONNECTOR SHALL BE INSTALLED IN THE MANHOLE WALL BY ACTIVATING THE EXPANDING MECHANISM IN STRICT ACCORDANCE WITH THE RECOMMENDATION OF THE CONNECTOR MANUFACTURER.
6. THE CONNECTOR SHALL BE OF A SIZE SPECIFICALLY DESIGNED FOR THE PIPE MATERIAL AND SIZE BEING UTILIZED ON THE PROJECT.
7. ALL CONNECTORS WHICH ARE CAPPED AWAITING PIPE INSTALLATION AT A LATER DATE MUST BE RESTRAINED.

E PIPE CONNECTION TO PRECAST CONCRETE SANITARY SEWER AND STORM DRAINAGE STRUCTURE
N.T.S.

MAXIMUM ALLOWABLE TRENCH WIDTHS FOR SEWERS	
PIPE SIZE 10" OR LESS	MAXIMUM WIDTH
12 TO 15	4'-0"
18	4'-6"
24	5'-6"
30	6'-0"
36	6'-9"
42	7'-3"
48	8'-0"

SHEETING, IF REQUIRED, SHALL BE CUT OFF 2'-0" BELOW FINISH GRADE.



H TYPICAL SEWER, WATER MAIN, AND STORM DRAIN TRENCH SECTION
N.T.S.

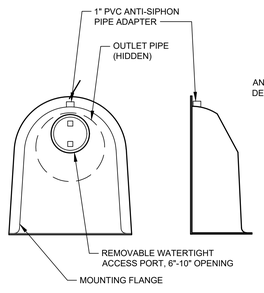
SCHEDULE OF BASE BACKFILL FOR NON-SANITARY INSTALLATIONS				
TYPE OF PIPE	BEDDING MATERIAL	SPECIAL BACKFILL	SPECIAL BACKFILL COVER "A" (IN)	SELECT BACKFILL
CONCRETE	3/4" CRUSHED STONE	GRANULAR AASHTO M145-49 A-3 OR BETTER	12	GRANULAR AASHTO M145-49 A-3 OR BETTER
PVC OR CORRUGATED POLYETHYLENE	3/4" CRUSHED STONE	GRANULAR AASHTO M145-49 A-3 OR BETTER	6	GRANULAR AASHTO M145-49 A-3 OR BETTER
CMP	3/4" CRUSHED STONE	GRANULAR AASHTO M145-49 A-3 OR BETTER	6	GRANULAR AASHTO M145-49 A-3 OR BETTER
DUCTILE IRON	GRANULAR AASHTO M145-49 A-3 OR BETTER	GRANULAR AASHTO M145-49 A-3 OR BETTER	6	GRANULAR AASHTO M145-49 A-3 OR BETTER

SCHEDULE OF BASE BACKFILL FOR SANITARY INSTALLATIONS				
TYPE OF PIPE	BEDDING MATERIAL	SPECIAL BACKFILL	SPECIAL BACKFILL COVER "A" (IN)	SELECT BACKFILL
PVC PRESSURE	3/4" CRUSHED STONE	3/4" CRUSHED STONE	6	GRANULAR AASHTO M145-49 A-3 OR BETTER
PVC GRAVITY	3/4" CRUSHED STONE	GRANULAR AASHTO M145-49 A-3 OR BETTER	6	GRANULAR AASHTO M145-49 A-3 OR BETTER
DUCTILE IRON	3/4" CRUSHED STONE	3/4" CRUSHED STONE	6	GRANULAR AASHTO M145-49 A-3 OR BETTER

NOTES:

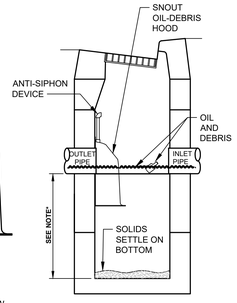
1. ALL HOODS AND TRAPS FOR CATCH BASINS AND WATER QUALITY STRUCTURES SHALL BE AS MANUFACTURED BY:
   BEST MANAGEMENT PRODUCTS, INC.
   9 MATHEWS DRIVE, UNIT A1-A2.
   EAST HADDAM, CT 06423
   TOLL FREE: (800) 504-8008 OR (888) 434-0277, FAX: (877) 434-3197
   WEB SITE: www.bmpinc.com
   OR PRE-APPROVED EQUAL
2. ALL HOODS SHALL BE CONSTRUCTED OF A GLASS REINFORCED RESIN COMPOSITE WITH ISO GEL COAT EXTERIOR FINISH WITH A MINIMUM 0.125" LAMINATE THICKNESS.
3. ALL HOODS SHALL BE EQUIPPED WITH A WATERTIGHT ACCESS PORT, A MOUNTING FLANGE, AND AN ANTI-SIPHON VENT PIPE AND ELBOW AS DRAWN. (SEE CONFIGURATION DETAIL)
4. THE SIZE AND POSITION OF THE HOOD SHALL BE DETERMINED BY OUTLET PIPE SIZE AS PER MANUFACTURER'S RECOMMENDATION (SNOUT SIZE ALWAYS LARGER THAN PIPE SIZE).
5. THE BOTTOM OF THE HOOD SHALL EXTEND DOWNWARD A MINIMUM DISTANCE EQUAL TO 1/2 THE OUTLET PIPE DIAMETER WITH A MINIMUM DISTANCE OF 6" FOR PIPES <12" I.D.
6. THE ANTI-SIPHON VENT SHALL EXTEND ABOVE HOOD BY MINIMUM OF 3" AND A MAXIMUM OF 12" ACCORDING TO STRUCTURE CONFIGURATION.
7. THE SURFACE OF THE STRUCTURE WHERE THE HOOD IS MOUNTED SHALL BE FINISHED SMOOTH AND FREE OF LOOSE MATERIAL AND PIPE SHALL BE FINISHED FLUSH TO WALL.
8. ALL STRUCTURE JOINTS SHALL BE WATERTIGHT.
9. THE HOOD SHALL BE SECURELY ATTACHED TO STRUCTURE WALL WITH 3/8" STAINLESS STEEL BOLTS AND OIL-RESISTANT GASKET AS SUPPLIED BY MANUFACTURER. (SEE INSTALLATION DETAIL)
10. INSTALLATION INSTRUCTIONS SHALL BE FURNISHED WITH MANUFACTURER SUPPLIED INSTALLATION KIT.
    INSTALLATION KIT SHALL INCLUDE:
    A. INSTALLATION INSTRUCTIONS
    B. PVC ANTI-SIPHON VENT PIPE AND ADAPTER
    C. OIL-RESISTANT CRUSHED CELL FOAM GASKET WITH PSA BACKING
    D. 3/8" STAINLESS STEEL BOLTS
    E. ANCHOR SHIELDS

CONFIGURATION DETAIL



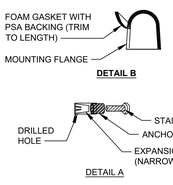
FRONT VIEW SIDE VIEW

TYPICAL INSTALLATION

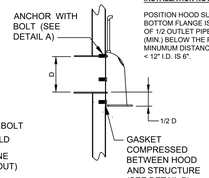


*NOTE:
SUMP DEPTH OF 36" MIN. FOR UP TO 12" ID PIPE. OUTLET. FOR PIPES 15" ID AND ABOVE SUMP DEPTH OF 2.5 TO 3 TIMES PIPE ID RECOMMENDED (E.G. 5' DEEP FOR 24" PIPE)

SNOUT OIL-WATER-DEBRIS SEPARATOR



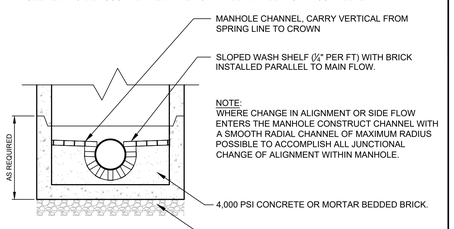
INSTALLATION DETAIL



INSTALLATION NOTE:
POSITION HOOD SUCH THAT BOTTOM FLANGE IS A DISTANCE OF 1/2 OUTLET PIPE DIAMETER (MIN.) BELOW THE PIPE INVERT. MINIMUM DISTANCE FOR PIPES < 12" I.D. IS 6".

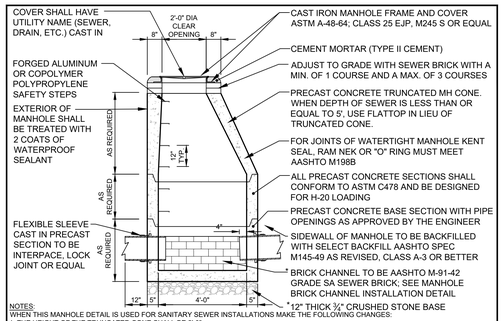
B HOODED OUTLET DETAIL
N.T.S.

NOTE:
MANHOLE TEST TO BE ACCOMPLISHED AFTER CHANNEL INSTALLATION IS COMPLETE.



NOTES:
1. BRICK CHANNEL TO BE AASHTO M-91-42 GRADE AS SEWER BRICK OR, IF APPROVED BY ENGINEER, A PREFABRICATED FIBERLINER 2000 CHANNEL, AS MANUFACTURED BY GDT, INC, ESSEX, CT OR EQUAL MAY BE USED.
2. SLOPE CHANNEL DOWN FROM INLET TO OUTLET.
3. TOOL ALL JOINTS IN CHANNEL AND ON TABLE.

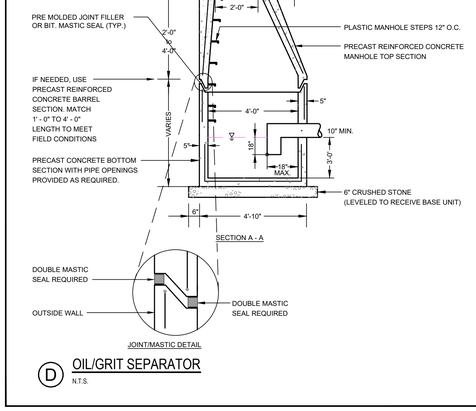
F STORM AND SANITARY MANHOLE CHANNEL DETAIL
N.T.S.



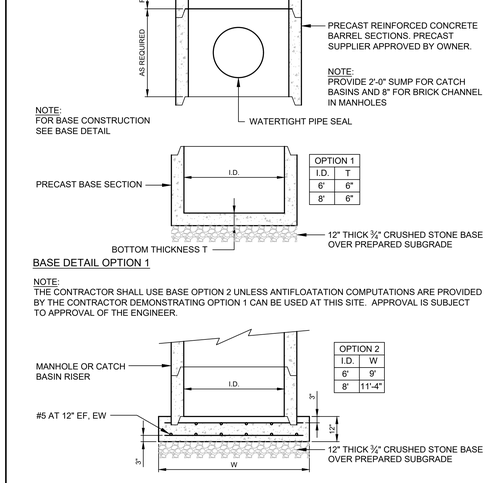
NOTES:
WHEN THIS MANHOLE DETAIL IS USED FOR SANITARY SEWER INSTALLATIONS MAKE THE FOLLOWING CHANGES:
1. THE HEIGHT OF THE TRUNCATED CONE SHALL BE 2'-0"
2. A POLYFROST BARRIER CONSISTING OF A MIN. OF 4 LAYERS, (EACH 6 MIL) SHALL BE PLACED AROUND THE STRUCTURE FROM THE SURFACE TO 5'-0 MIN. BELOW GRADE.
3. THE BACKFILL AROUND THE MANHOLE SHALL BE COMPACTED GRAVEL, A MIN. OF 24" OUTSIDE THE STRUCTURE.
4. THE CASTING SHALL BE GASKETED.

C 4'-0" PRECAST SANITARY SEWER AND STORM DRAIN MANHOLE
N.T.S.

NOTES:
- FOR USE IN PARTIALLY OR TOTALLY ENCLOSED PARKING GARAGES, AUTOMOTIVE REPAIR FACILITIES OR ANY OTHER PROPOSED STRUCTURE WHERE DEEMED APPROPRIATE BY THE CITY ENGINEER.
- DISCHARGE SHALL BE TO SANITARY SEWER.
- A VENT PIPE MAY BE REQUIRED THAT HAS A VERTICAL OUTLET OFF TO THE SIDE OF THE STRUCTURE.
- AN OIL ABSORBENT BOOM IS REQUIRED TO BE PLACED WITHIN THE MANHOLE ON THE WATER SURFACE AND REPLACED AT A MINIMUM ANNUALLY.



D OIL/GRIT SEPARATOR
N.T.S.



I.D.	C	T
6'	8"	6"
8'	8"	8"

OPTION 1	
I.D.	T
6'	6"
8'	6"

BASE DETAIL OPTION 1

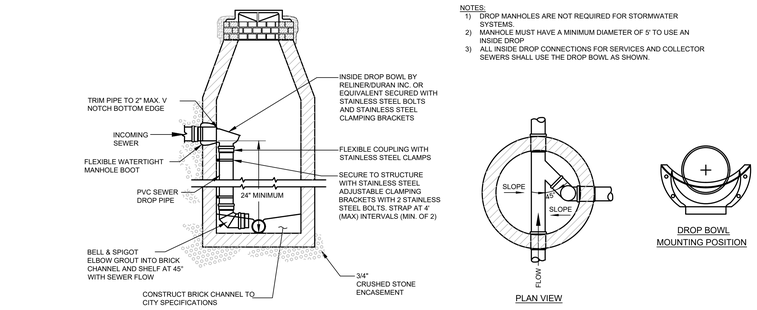
NOTE:
THE CONTRACTOR SHALL USE BASE OPTION 2 UNLESS ANTIFLOATATION COMPUTATIONS ARE PROVIDED BY THE CONTRACTOR DEMONSTRATING OPTION 1 CAN BE USED AT THIS SITE. APPROVAL IS SUBJECT TO APPROVAL OF THE ENGINEER.

OPTION 2	
I.D.	W
6'	9'
8'	11'-4"

BASE DETAIL OPTION 2

DESIGN NOTES
1. ALL CONCRETE TO HAVE A MIN. 4,000 PSI COMPRESSIVE STRENGTH AT 28 DAYS
2. DESIGN FOR H-20 WHEEL LOADING
3. CATCH BASIN TO CONFORM TO ASTM-C478 SPECIFICATIONS
4. REINFORCE TO .12 IN. SQ./L.F.

G LARGE DIAMETER STORM DRAIN MANHOLE & CATCH BASIN WITH FLAT TOP
N.T.S.



NOTES:
1) DROP MANHOLES ARE NOT REQUIRED FOR STORMWATER SYSTEMS.
2) MANHOLE MUST HAVE A MINIMUM DIAMETER OF 5' TO USE AN INSIDE DROP.
3) ALL INSIDE DROP CONNECTIONS FOR SERVICES AND COLLECTOR SEWERS SHALL USE THE DROP BOWL AS SHOWN.

I INSIDE DROP MANHOLE
N.T.S.

PRELIMINARY – NOT FOR CONSTRUCTION

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REVISIONS

STATE OF MAINE — BO KENNEDY — No. 11994 — LICENSED PROFESSIONAL ENGINEER — 12/23/2024

P.E. BO KENNEDY
LIC. #11994

PROJECT
THE FOREFRONT AT THOMPSON'S POINT
MULTI-FAMILY RESIDENTIAL BUILDING (G)

SHEET TITLE
STORMWATER AND SANITARY SEWER DETAILS

CLIENT
CPI MANAGEMENT, LLC
(CATHARTES)

PLACEMAKER PARTNERS, LLC
18 VAN AKEN WAY
PORTLAND, ME 04102
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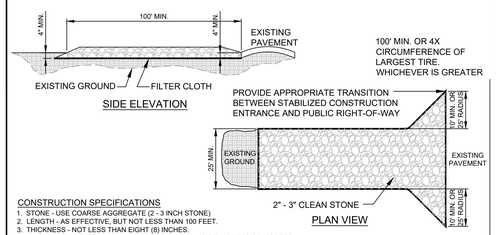


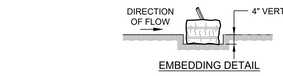
SIDE ELEVATION

PLAN VIEW

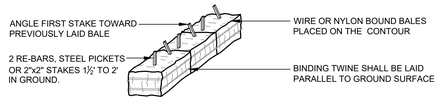
CONSTRUCTION SPECIFICATIONS

1. STONE - USE COARSE AGGREGATE (2 - 3 INCH STONE).
2. LENGTH - AS EFFECTIVE, BUT NOT LESS THAN 100 FEET.
3. THICKNESS - NOT LESS THAN EIGHT (8) INCHES.
4. WIDTH - NOT LESS THAN FULL WIDTH OF ALL POINTS OF INGRESS OR EGRESS.
5. WASHING - WHEN NECESSARY, WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE WHICH DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING ANY STORM DRAIN, DITCH, OR WATERCOURSE THROUGH USE OF SAND BAGS, GRAVEL, BOARDS OR OTHER APPROVED METHODS.
6. MAINTENANCE - THE ENTRANCES SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.
7. 12' X 24' METAL GRATE MAY BE USED. GRATE SHALL BE 25' AWAY FROM PAVEMENT AND APPROPRIATE SEDIMENT CONTROL TRAPPING DEVICE SHALL BE USED AT GRATE OUTLET POINT.

A STABILIZED CONSTRUCTION ENTRANCE
N.T.S.



EMBEDDING DETAIL



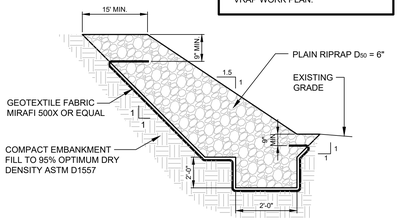
ANCHORING DETAIL

CONSTRUCTION SPECIFICATIONS

1. BALES SHALL BE PLACED IN A ROW WITH ENDS TIGHTLY ABUTTING THE ADJACENT BALES.
2. EACH BALE SHALL BE EMBEDDED IN THE SOIL A MINIMUM OF 4".
3. BALES SHALL BE SECURELY ANCHORED IN PLACE BY STAKES OR RE-BARS DRIVEN THROUGH THE BALES. THE FIRST STAKE IN EACH BALE SHALL BE ANGLED TOWARD PREVIOUSLY LAID BALE TO FORCE BALES TOGETHER.
4. INSPECTION SHALL BE FREQUENT AND REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.
5. BALES SHALL BE REMOVED WHEN THEY HAVE SERVED THEIR USEFULNESS SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.

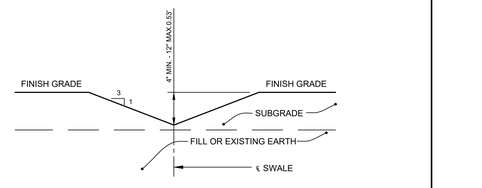
E STRAW OR HAY BALE BARRIER
N.T.S.

NOTE:
1. DETAIL HAS BEEN DESIGNED TO MEET THE ENGINEERED BARRIER SPECIFICATIONS NOTED IN MEDEP VRAP WORK PLAN.

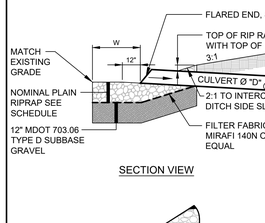


NOTE:
INSTALL RIPRAP SLOPE PROTECTION AS DIRECTED BY THE OWNER'S REPRESENTATIVE OR GEOTECHNICAL ENGINEER IF REQUIRED, DUE TO DISCOVERED FIELD CONDITIONS, AT NO EXTRA EXPENSE TO THE OWNER.

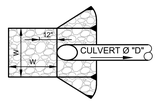
H RIPRAP SLOPE PROTECTION DETAIL
N.T.S.



M TYPICAL TEMPORARY DRAINAGE SWALE DETAIL
N.T.S.



SECTION VIEW



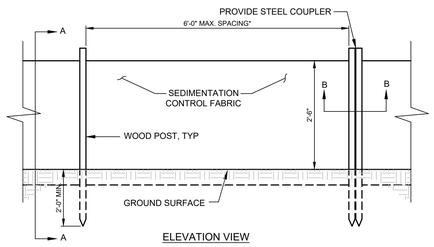
PLAN VIEW

SCHEDULE

CULVERT DIAMETER (D)	WIDTH (W)	STONE D_{50}	RIPRAP THICKNESS
12"	2'	6"	14"
15"	4'	6"	14"
18"	4'	6"	14"
24"	6'	6"	14"
36"	8'	12"	27"
42"	10'	12"	27"
48"	12'	12"	27"

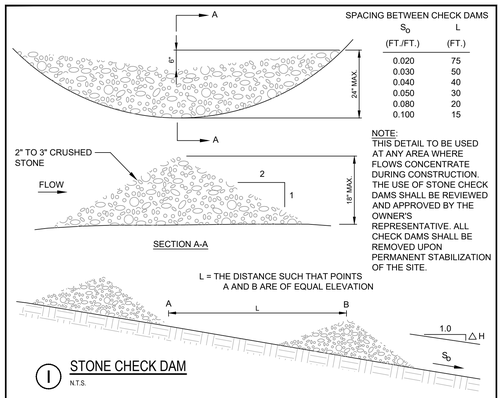
NOTE:
RIPRAP GRADATION AND PLACEMENT - THE RIPRAP GRADATION SHALL BE A WELL-GRADED MIX FROM ABOUT 1.5 TIMES THE D SIZE TO ABOUT 25 PERCENT OF THE D SIZE. THE RIPRAP STONES SHALL BE CAREFULLY PLACED WORKING FROM THE TOE OF THE SLOPE UPWARD. THE STONES SHOULD BE LOWERED TO THE SLOPE AND NOT BE ALLOWED TO DROP MORE THAN 12 INCHES ONTO THE GEOTEXTILE. THE FINISHED SURFACE SHALL BE A RELATIVELY SMOOTH UNIFORMLY SLOPED SURFACE.

B PIPE/CULVERT INLET APRON
N.T.S.



ELEVATION VIEW

*NOTE:
THE SILT FENCE SHOULD HAVE A MAXIMUM STAKING DISTANCE OF 6' UNLESS THE FENCE IS SUPPORTED BY WIRE FENCE REINFORCEMENT A MAXIMUM 14 GAUGE AND WITH A MINIMUM MESH SPACING OF 6".



S_0 (FT./FT.)	L (FT.)
0.020	75
0.030	50
0.040	40
0.050	30
0.080	20
0.100	15

NOTE:
THIS DETAIL TO BE USED AT ANY AREA WHERE FLOWS CONCENTRATE DURING CONSTRUCTION. THE USE OF STONE CHECK DAMS SHALL BE REVIEWED AND APPROVED BY THE OWNER'S REPRESENTATIVE. ALL CHECK DAMS SHALL BE REMOVED UPON PERMANENT STABILIZATION OF THE SITE.

I STONE CHECK DAM
N.T.S.

SILTSACK®
SPECIFICATIONS

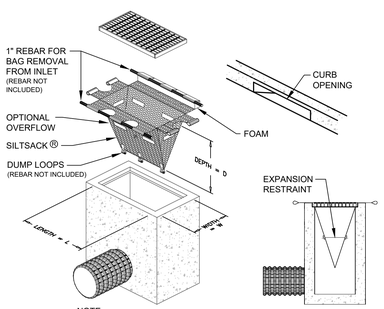
NOTE:
THE SILTSACK® WILL BE MANUFACTURED FROM A WOVEN POLYPROPYLENE FABRIC THAT MEETS OR EXCEEDS THE FOLLOWING SPECIFICATIONS.

REGULAR FLOW SILTSACK®
(FOR SIDE SLOPE USE)
(FOR AREAS OF LOW TO MODERATE PRECIPITATION AND RUN-OFF)

PROPERTIES	TEST METHOD	UNITS
GRAB TENSILE STRENGTH	ASTM D-4632	300 LBS
GRAB TENSILE ELONGATION	ASTM D-4632	20%
PUNCTURE	ASTM D-4833	120 LBS
MULLEN BURST	ASTM D-3786	800 PSI
TRAPEZOID TEAR	ASTM D-4533	120 LBS
UV RESISTANCE	ASTM D-4355	80%
APPARENT OPENING SIZE	ASTM D-4751	40 US SIEVE
FLOW RATE	ASTM D-4491	40 GAL/MIN/SQ FT
PERMITTIVITY	ASTM D-4491	0.55 SEC -1

HI-FLOW SILTSACK®
(FOR USE IN LOW POINTS/SAGS)
(FOR AREAS OF MODERATE TO HEAVY PRECIPITATION AND RUN-OFF)

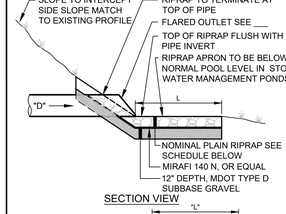
PROPERTIES	TEST METHOD	UNITS
GRAB TENSILE STRENGTH	ASTM D-4632	265 LBS
GRAB TENSILE ELONGATION	ASTM D-4632	20%
PUNCTURE	ASTM D-4833	135 LBS
MULLEN BURST	ASTM D-3786	420 PSI
TRAPEZOID TEAR	ASTM D-4533	45 LBS
UV RESISTANCE	ASTM D-4355	90%
APPARENT OPENING SIZE	ASTM D-4751	20 US SIEVE
FLOW RATE	ASTM D-4491	200 GAL/MIN/SQ FT
PERMITTIVITY	ASTM D-4491	1.5 SEC -1



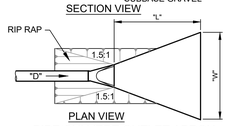
NOTE:
REQUIRED FOR ALL INLETS

SIDE VIEW INSTALLED
INSTALLATION DETAIL

N SILTSACK® DETAIL AND SPECIFICATIONS
N.T.S.



SECTION VIEW



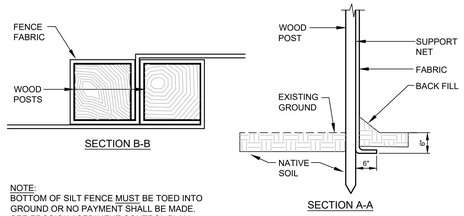
PLAN VIEW

SCHEDULE

CULVERT DIAMETER (D)	WIDTH (W)	LENGTH (L)	STONE D_{50}	RIPRAP THICKNESS
12"	8'	10'	6"	14"
15"	8'	10'	6"	14"
18"	10'	14'	6"	14"
24"	12'	16'	9"	21"
30"	12'	16'	12"	27"
36"	20'	24'	12"	27"
42"	24'	26'	12"	27"
48"	28'	32'	12"	27"

NOTE:
RIPRAP GRADATION AND PLACEMENT - THE RIPRAP GRADATION SHALL BE A WELL-GRADED MIX FROM ABOUT 1.5 TIMES THE D SIZE TO ABOUT 25 PERCENT OF THE D SIZE. THE RIPRAP STONES SHALL BE CAREFULLY PLACED WORKING FROM THE TOE OF THE SLOPE UPWARD. THE STONES SHOULD BE LOWERED TO THE SLOPE AND NOT BE ALLOWED TO DROP MORE THAN 12 INCHES ONTO THE GEOTEXTILE. THE FINISHED SURFACE SHALL BE A RELATIVELY SMOOTH UNIFORMLY SLOPED SURFACE.

C PIPE/CULVERT OUTLET APRON
N.T.S.

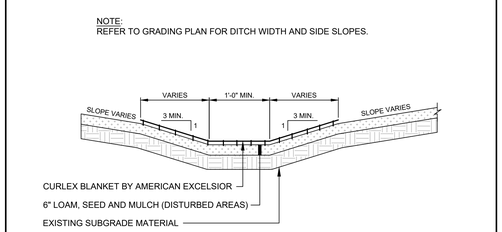


SECTION B-B

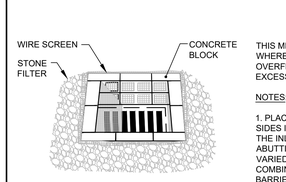
SECTION A-A

NOTE:
BOTTOM OF SILT FENCE MUST BE TOED INTO GROUND OR NO PAYMENT SHALL BE MADE. SEE EROSION / SEDIMENT CONTROL PLAN DRAWINGS FOR SILT FENCE INSTALLATION SCHEDULE.

F SILTATION FENCE DETAIL
N.T.S.



J VEGETATED DRAINAGE SWALE
N.T.S.



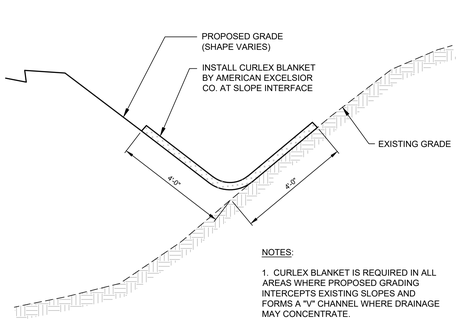
SPECIFIC APPLICATION

THIS METHOD OF INLET PROTECTION IS APPLICABLE WHERE HEAVY FLOWS ARE EXPECTED AND WHERE AN OVERFLOW CAPACITY IS NECESSARY TO PREVENT EXCESSIVE PONDING AROUND THE STRUCTURE.

NOTES:

1. PLACE CONCRETE BLOCKS LENGTHWISE ON THEIR SIDES IN A SINGLE ROW AROUND THE PERIMETER OF THE INLET, WITH THE ENDS OF ADJACENT BLOCKS ABUTTING. THE HEIGHT OF THE BARRIER CAN BE VARIED, DEPENDING ON DESIGN NEEDS, BY STACKING COMBINATIONS OF 4", 8" AND 12" WIDE BLOCKS. THE BARRIER OF BLOCKS SHALL BE AT LEAST 12 INCHES HIGH, AND NO GREATER THAN 24" HIGH.
2. WIRE MESH SHALL BE PLACED OVER THE OUTSIDE VERTICAL FACE (WEBBING) OF THE CONCRETE BLOCKS TO PREVENT STONE FROM BEING WASHED THROUGH THE HOLES IN THE BLOCKS. HARDWARE CLOTH OR COMPARABLE WIRE MESH WITH ½" OPENINGS SHALL BE USED.
3. STONE SHALL BE PILED AGAINST THE WIRE TO THE TOP OF THE BLOCK BARRIER, AS SHOWN IN DETAIL. THE STONE FILTER SHALL BE ¾" CRUSHED STONE.
4. IF THE STONE FILTER BECOMES CLOGGED WITH SEDIMENT SO THAT IT NO LONGER ADEQUATELY PERFORMS ITS FUNCTION, THE STONE MUST BE PULLED AWAY FROM THE BLOCKS, CLEANED AND REPLACED.
5. PREMANUFACTURED SILT-SACKS™ MAY BE USED AS AN EQUIVALENT TO STONE SEDIMENT BARRIERS.

D STONE SEDIMENT BARRIER
N.T.S.

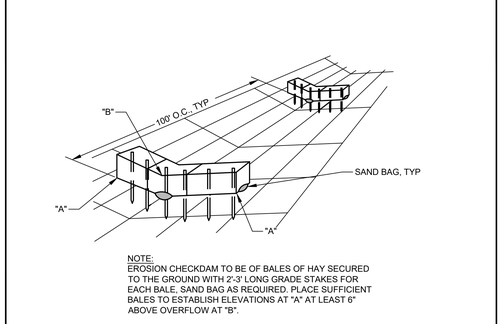


NOTES:

1. CURLEX BLANKET IS REQUIRED IN ALL AREAS WHERE PROPOSED GRADING INTERCEPTS EXISTING SLOPES AND FORMS A "V" CHANNEL WHERE DRAINAGE MAY CONCENTRATE.

2. STAPLE SIZE AND DISTRIBUTION PER MANUFACTURERS SPECIFICATION.

G CURLEX BLANKET DETAIL
N.T.S.



NOTE:
EROSION CHECKDAM TO BE OF BALES OF HAY SECURED TO THE GROUND WITH 2'-3' LONG GRADE STAKES FOR EACH BALE. SAND BAG AS REQUIRED. PLACE SUFFICIENT BALES TO ESTABLISH ELEVATIONS AT "A" AT LEAST 6" ABOVE OVERFLOW AT "B".

K HAYBALE CHECKDAM DETAIL
N.T.S.

PRELIMINARY – NOT FOR CONSTRUCTION

THE DETAILS SHOWN HERE ARE CONSISTENT WITH DEVELOPMENT ON THOMPSON'S POINT AND APPROVED AS PART OF THE MASTER DEVELOPMENT PERMIT, OVERALL AND SECTIONAL SUBDIVISION PERMITS, AND LEVEL I, II, III SITE APPLICATION PERMITS PRECEDING JANUARY 2023. THE CITY OF PORTLAND, MAINE UPDATED PARTS OF THE TECHNICAL MANUAL AS RECENTLY AS NOVEMBER 22, 2022. THE CONTRACTOR SHALL FOLLOW THESE DETAILS AS APPROVED EXCEPTING WHEREAS THE CITY OF PORTLAND TECHNICAL MANUAL DETAILS HAVE BEEN UPDATED AND CONFLICT; THE CONTRACTOR SHALL FOLLOW THE MORE STRINGENT MINIMUM DIMENSIONAL REQUIREMENTS.

REV	DATE	DESCRIPTION
1	9/6/2024	MAJOR SITE PLAN APPLICATION

REVISIONS

STATE OF MAINE — BO KENNEDY — No. 11994 — LICENSED PROFESSIONAL ENGINEER — 9/6/2024

P.E. BO KENNEDY
LIC. #11994

PROJECT
THE FOREFRONT AT THOMPSON'S POINT
MULTI-FAMILY RESIDENTIAL BUILDING (G)

SHEET TITLE
EROSION AND SEDIMENT CONTROL DETAILS

CLIENT
CPI MANAGEMENT, LLC (CATHARTES)

PLACEMAKER PARTNERS, LLC
18 VAN AKEN WAY
PORTLAND, ME 04102
bo@placemakerpartners.com

DRAWN: DB	DATE: AUGUST 2024
DESIGNED: BEK	SCALE: N.T.S.
FILE NAME: PANHANDLE-DET.dwg	
SHEET	C-8.5

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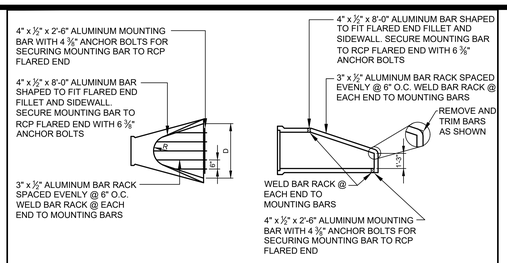
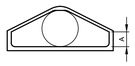
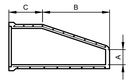


PLAN VIEW - TYP EACH PIPE

SECTION



END VIEW



SECTION

DIA.	A	B	C	D	E	R
18"	9"	2'-3"	3'-10"	3'-0"	2½"	11"
24"	9½"	3'-7½"	2'-6"	4'-0"	3"	14"
30"	12"	4'-6"	1'-7¾"	5'-0"	3½"	15"
36"	15"	5'-3"	2'-10¾"	6'-0"	4"	1'-8"
42"	21"	5'-3"	2'-11"	6'-6"	4½"	22"
48"	24"	6'-0"	2'-2"	7'-0"	5"	22"
54"	27"	5'-5"	2'-11"	7'-6"	5½"	24"
60"	30"	5'-0"	3'-3"	8'-0"	6"	24"

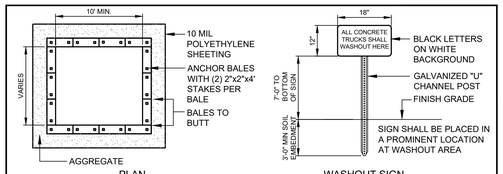
NOTE:
JOINTS MAY BE FURNISHED WITH EITHER BELL AND SPIGOT OR TONGUE AND GROOVE ENDS.

* BAR RACKS ARE ONLY REQUIRED ON PIPES 18" AND OVER IN SIZE.

* USE FIELD MITER FOR CULVERTS WITH A DIAMETER OF LESS THAN 18"

REQUIRED FOR ALL INLETS/OUTLETS FOR PIPE OVER 18" DIAMETER.

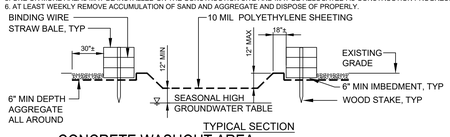
A RCP FLARED END WITH BAR RACK DETAIL
N.T.S.



PLAN

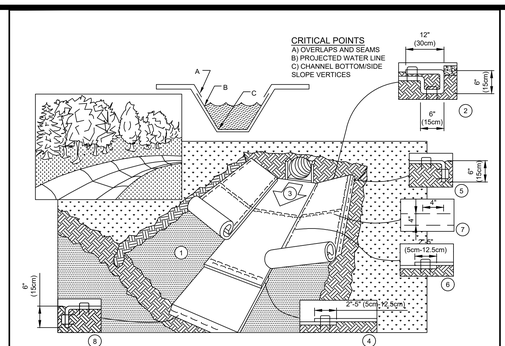
WASHOUT SIGN

NOTES:
1. CONTAINMENT MUST BE STRUCTURALLY SOUND AND LEAK FREE AND CONTAIN ALL LIQUID WASTES.
2. CONTAINMENT DEVICES MUST BE OF SUFFICIENT QUANTITY OR VOLUME TO COMPLETELY CONTAIN THE LIQUID WASTES GENERATED.
3. WASHOUT MUST BE CLEANED OR NEW FACILITIES CONSTRUCTED AND READY TO USE ONCE WASHOUT IS 75% FULL.
4. WASHOUT AREA(S) SHALL BE INSTALLED IN A LOCATION EASILY ACCESSIBLE BY CONCRETE TRUCKS.
5. ONE OR MORE AREAS MAY BE INSTALLED ON THE CONSTRUCTION SITE AND MAY BE RELOCATED AS CONSTRUCTION PROGRESSES.
6. AT LEAST WEEKLY REMOVE ACCUMULATION OF SAND AND AGGREGATE AND DISPOSE OF PROPERLY.



TYPICAL SECTION

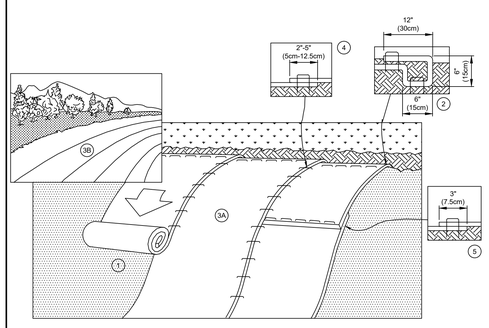
B CONCRETE WASHOUT AREA
N.T.S.



1. PREPARE SOIL BEFORE INSTALLING BLANKETS, INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED.
2. BEGIN AT THE TOP OF THE CHANNEL BY ANCHORING THE BLANKET IN A 6" (15CM) DEEP X 6" (15CM) WIDE TRENCH WITH APPROXIMATELY 12" (30CM) OF BLANKET EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE BLANKET WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" (30CM) APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" (30CM) PORTION OF BLANKET BACK OVER SEED AND COMPACTED SOIL. SECURE BLANKET OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" (30CM) APART ACROSS THE WIDTH OF THE BLANKET.
3. ROLL CENTER BLANKET IN DIRECTION OF WATER FLOW IN BOTTOM OF CHANNEL. BLANKETS WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL BLANKETS MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE. WHEN USING THE DOT SYSTEM, STAPLES/STAKES SHOULD BE PLACED THROUGH EACH OF THE COLORED DOTS CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN.
4. PLACE CONSECUTIVE BLANKETS END OVER END (SHINGLE STYLE) WITH A 4"-6" (10CM-15CM) OVERLAP. USE A DOUBLE ROW OF STAPLES STAGGERED 4" (10CM) APART AND 4" (10CM) ON CENTER TO SECURE BLANKETS.
5. FULL LENGTH EDGE OF BLANKETS AT TOP OF SIDE SLOPES MUST BE ANCHORED WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" (30CM) APART IN A 6" (15CM) DEEP X 6" (15CM) WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.
6. ADJACENT BLANKETS MUST BE OVERLAPPED APPROXIMATELY 2"-5" (5CM-12.5CM)(DEPENDING ON BLANKET SIZE) AND STAPLED.
7. IN HIGH FLOW CHANNEL APPLICATIONS, A STAPLE CHECK SLOT IS RECOMMENDED AT 30' TO 40' (9M-12M) INTERVALS. USE A DOUBLE ROW OF STAPLES STAGGERED 4" (10CM) APART AND 4" (10CM) ON CENTER OVER ENTIRE WIDTH OF THE CHANNEL.
8. THE TERMINAL END OF BLANKETS MUST BE ANCHORED WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" (30CM) APART IN A 6" (15CM) DEEP X 6" (15CM) WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.

NOTE:
* HORIZONTAL STAPLE SPACING SHOULD BE ALTERED IF NECESSARY TO ALLOW STAPLES TO SECURE THE CRITICAL POINTS ALONG THE CHANNEL SURFACE.
** IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" (15cm) MAY BE NECESSARY TO PROPERLY ANCHOR THE BLANKETS.

EROSION CONTROL BLANKET DETAIL FOR CHANNEL INSTALLATION

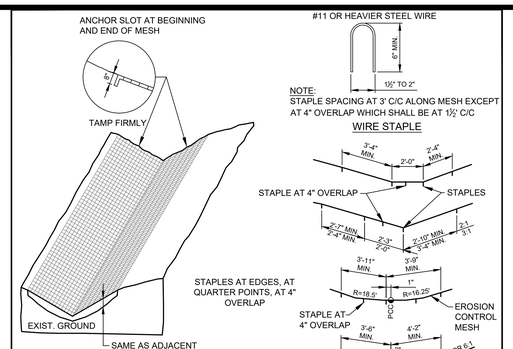


1. PREPARE SOIL BEFORE INSTALLING BLANKETS, INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED. NOTE: WHEN USING CELL-O-SEED DO NOT SEED PREPARED AREA. CELL-O-SEED MUST BE INSTALLED WITH PAPER SIDE DOWN.
2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE BLANKET IN A 6" (15cm) WIDE TRENCH WITH APPROXIMATELY 12" (30cm) OF BLANKET EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE BLANKET WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" (30cm) APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" (30cm) PORTION OF THE BLANKET BACK OVER SEED AND COMPACTED SOIL. SECURE BLANKET OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" (30cm) APART ACROSS THE WIDTH OF THE BLANKET.
3. ROLL THE BLANKETS (A.) DOWN OR (B.) HORIZONTALLY ACROSS THE SLOPE. BLANKETS WILL UNROLL WITH THE APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL BLANKETS MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE. WHEN USING OPTIONAL DOT SYSTEM, STAPLES/STAKES SHOULD BE PLACED THROUGH EACH OF THE COLORED DOTS CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN.
4. THE EDGES OF PARALLEL BLANKETS MUST BE STAPLED WITH APPROXIMATELY 2"-5" (5cm-12.5cm) OVERLAP DEPENDING ON BLANKET TYPE. TO ENSURE PROPER SEAM ALIGNMENT, PLACE THE EDGE OF THE OVERLAPPING BLANKET (BLANKET BEING INSTALLED ON TOP) EVEN WITH THE COLORED SEAM STITCH ON THE PREVIOUSLY INSTALLED BLANKET.
5. CONSECUTIVE BLANKETS SPLICED DOWN THE SLOPE MUST BE PLACED END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 3" (7.5cm) OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" (30cm) APART ACROSS ENTIRE BLANKET WIDTH.

EROSIONAL CONTROL BLANKET DETAIL FOR SLOPE INSTALLATION

D EROSION CONTROL BLANKET
N.T.S.

NOTE: IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" (15cm) MAT BE NECESSARY TO PROPERLY ANCHOR THE BLANKETS.



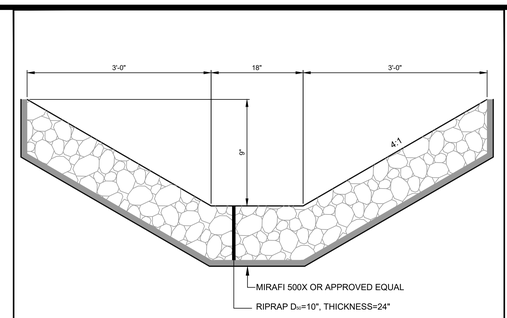
NOTE:
STAPLE SPACING AT 3' C/C ALONG MESH EXCEPT AT 4" OVERLAP WHICH SHALL BE AT 1½' C/C

WIRE STAPLE

STAPLES AT EDGES, AT QUARTER POINTS, AT 4" OVERLAP

CIRCULAR DITCHES

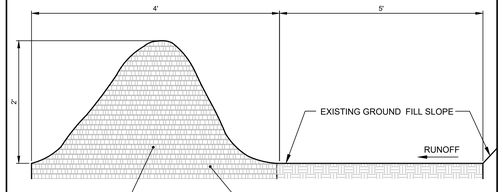
F EROSION CONTROL MESH
N.T.S.



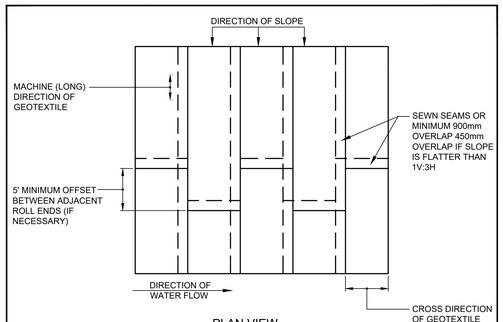
EXTEND CHANNEL INTO RECEIVING VEGETATED CHANNEL AND CONTINUE DOWNSTREAM 30'

J RIPRAP CHANNEL DETAIL
N.T.S.

NOTES:
1. THE WOOD WASTE COMPOST/BARK MIX SHALL CONFORM TO THE FOLLOWING STANDARDS:
   A. MOISTURE CONTENT - 30-60%
   B. pH - 5.0-8.0
   C. SCREEN SIZE - 100% LESS THAN 3", MAX. 70% LESS THAN 1"
   D. NO LESS THAN 40% ORGANIC MATERIAL (DRY WEIGHT) BY LOSS OF IGNITION
   F. NO STONES LARGER THAN 2" IN DIAMETER
2. THE COMPOST BERM SHALL BE PLACED, UNCOMPACTED, ALONG A RELATIVELY LEVEL CONTOUR.
3. THE WOOD WASTE COMPOST/BARK FILTER BERM MAY BE USED IN LIEU OF SILTATION FENCE, AT THE TOE OF SHALLOW SLOPES, ON FROZEN GROUND, LEDGE OUT CROPS, VERY ROOTED FORESTED AREA OR AT THE EDGE OF GRAVEL PARKING AREAS.
4. BERMS SHALL REMAIN IN PLACE UNTIL UPSTREAM AREA IS COMPLETED OR 70% CATCH OF VEGETATION IS ATTAINED. BERMS SHALL BE REMOVED BY SPREADING SUCH THAT THE NATIVE EARTH CAN BE SEEN BELOW.



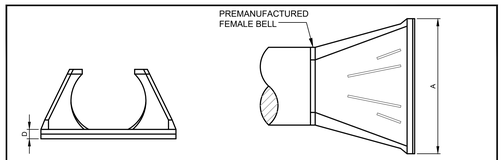
G WOOD WASTE COMPOST/BARK FILTER BERM DETAIL
N.T.S.



PLAN VIEW

GEOTEXTILE PLACEMENT FOR PROTECTION OF SLOPES ADJACENT TO STREAMS AND TIDAL AREAS

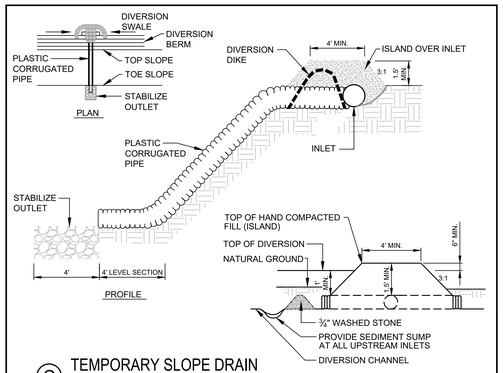
K
N.T.S.



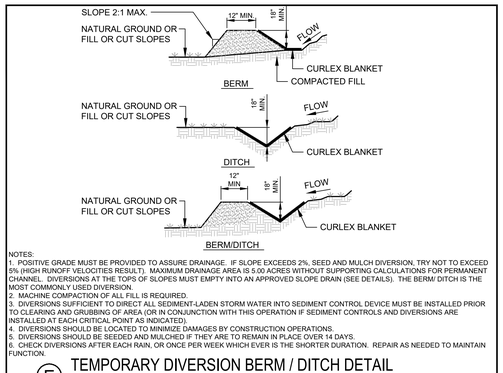
FLARED PIPE DIMENSION SCHEDULE			
	PIPE DIAMETER		
DIMENSION	10" / 12"	15"	18"
A	42"	41"	49"
B	14.5"	19"	22"
C	33"	34"	43"
D	6"	6"	6"

THE FLARED INLET IS TO BE CONSTRUCTED OF HDPE WITH EXTRA CARBON FOR UV RESISTANCE OR GALVANIZED CORRUGATED METAL

H FLARED INLETS FOR 10" TO 18" PIPES
N.T.S.

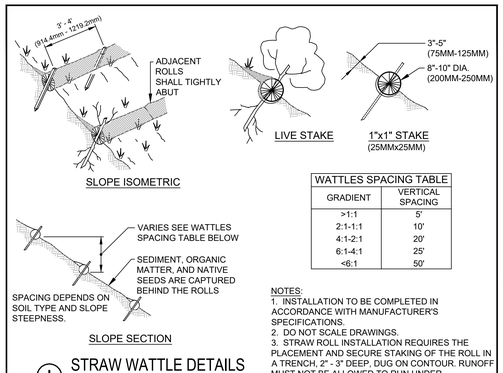


C TEMPORARY SLOPE DRAIN
N.T.S.



NOTES:
1. POSITIVE GRADE MUST BE PROVIDED TO ASSURE DRAINAGE. IF SLOPE EXCEEDS 2%, SEED AND MULCH DIVERSION. TRY NOT TO EXCEED 5% (HIGH RUNOFF VELOCITIES RESULT). MAXIMUM DRAINAGE AREA IS 5.00 ACRES WITHOUT SUPPORTING CALCULATIONS FOR PERMANENT CHANNEL. DIVERSIONS AT THE TOPS OF SLOPES MUST EMPTY INTO AN APPROVED SLOPE DRAIN (SEE DETAILS). THE BERM/ DITCH IS THE MOST COMMONLY USED DIVERSION.
2. MACHINE COMPACTION OF ALL FILL IS REQUIRED.
3. DIVERSIONS SUFFICIENT TO DIRECT ALL SEDIMENT-LADEN STORM WATER INTO SEDIMENT CONTROL DEVICE MUST BE INSTALLED PRIOR TO CLEARING AND GRUBBING OF AREA (OR IN CONJUNCTION WITH THIS OPERATION IF SEDIMENT CONTROLS AND DIVERSIONS ARE INSTALLED AT EACH CRITICAL POINT AS INDICATED).
4. DIVERSIONS SHOULD BE LOCATED TO MINIMIZE DAMAGES BY CONSTRUCTION OPERATIONS.
5. DIVERSIONS SHOULD BE SEEDED AND MULCHED IF THEY ARE TO REMAIN IN PLACE OVER 14 DAYS.
6. CHECK DIVERSIONS AFTER EACH RAIN, OR ONCE PER WEEK WHICH EVER IS THE SHORTER DURATION. REPAIR AS NEEDED TO MAINTAIN FUNCTION.

E TEMPORARY DIVERSION BERM / DITCH DETAIL
N.T.S.



SLOPE ISOMETRIC

WATTLES SPACING TABLE	
GRADIENT	VERTICAL SPACING
>1:1	5'
2:1-1:1	10'
4:1-2:1	20'
6:1-4:1	25'
<6:1	50'

SLOPE SECTION

NOTES:
1. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
2. DO NOT SCALE DRAWINGS.
3. STRAW ROLL INSTALLATION REQUIRES THE PLACEMENT AND SECURE STAKING OF THE ROLL IN A TRENCH, 2" - 3" DEEP, DUG ON CONTOUR. RUNOFF MUST NOT BE ALLOWED TO RUN UNDER
4. DRIVE STAKE SO THAT 2"-3" REMAINS EXPOSED

I STRAW WATTLE DETAILS
N.T.S.

PRELIMINARY – NOT FOR CONSTRUCTION

THE DETAILS SHOWN HERE ARE CONSISTENT WITH DEVELOPMENT ON THOMPSON'S POINT AND APPROVED AS PART OF THE MASTER DEVELOPMENT PERMIT, OVERALL AND SECTIONAL SUBDIVISION PERMITS, AND LEVEL I, II, III SITE APPLICATION PERMITS PRECEDING JANUARY 2023. THE CITY OF PORTLAND, MAINE UPDATED PARTS OF THE TECHNICAL MANUAL AS RECENTLY AS NOVEMBER 22, 2022. THE CONTRACTOR SHALL FOLLOW THESE DETAILS AS APPROVED EXCEPTING WHEREAS THE CITY OF PORTLAND TECHNICAL MANUAL DETAILS HAVE BEEN UPDATED AND CONFLICT; THE CONTRACTOR SHALL FOLLOW THE MORE STRINGENT MINIMUM DIMENSIONAL REQUIREMENTS.

REV	DATE	DESCRIPTION
1	9/6/2024	MAJOR SITE PLAN APPLICATION

REVISIONS

STATE OF MAINE — BO KENNEDY — No. 11904 — REGISTERED PROFESSIONAL ENGINEER — 9/6/2024

P.E. BO KENNEDY
LIC. #11994

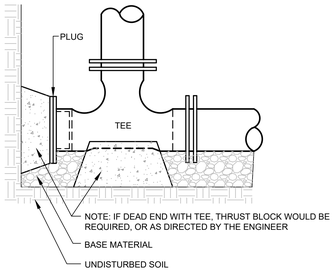
PROJECT
THE FOREFRONT AT THOMPSON'S POINT
MULTI-FAMILY RESIDENTIAL BUILDING (G)

SHEET TITLE
EROSION AND SEDIMENT CONTROL DETAILS

CLIENT
CPI MANAGEMENT, LLC
(CATHARTES)

PLACEMAKER PARTNERS, LLC
18 VAN AKEN WAY
PORTLAND, ME 04102
bo@placemakerpartners.com

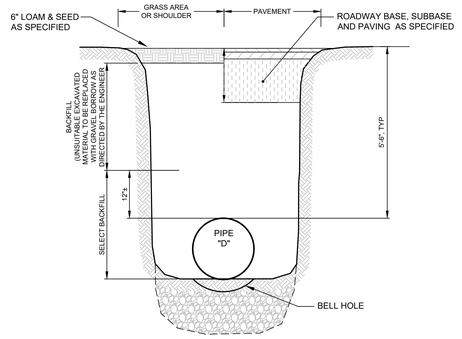
DRAWN: DB	DATE: AUGUST 2024
DESIGNED: BEK	SCALE: N.T.S.
FILE NAME: PANHANDLE-DET.dwg	
SHEET	C-8.6



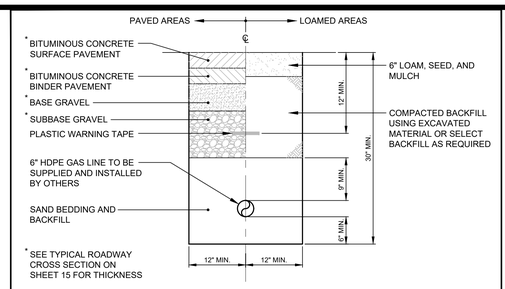
USE GRIPRINGS^{TM} AT ALL RESTRAINED JOINTS

SEE NOTE 3 IN THRUST BLOCK NOTES DETAIL (B)

(D) STANDARD TEE BLOCKING DETAIL
N.T.S.



(G) STANDARD WATER MAIN BY PWD SECTION THRU EARTH TRENCH
N.T.S.



NOTE:
THE CONTRACTOR IS RESPONSIBLE FOR EXCAVATION AND BACKFILL OF UNDERGROUND GAS LINE TRENCH. IN ADDITION, THE CONTRACTOR IS RESPONSIBLE FOR THE COORDINATION WITH GAS SUPPLIER FOR THE INSTALLATION OF THE GAS LINE. CONTRACTOR SHALL BE RESPONSIBLE FOR INITIAL REVIEW AND CONSTRUCTION COSTS FOR GAS LINE INSTALLATION; UPON FINAL DETERMINATION OF COSTS BY THE UTILITY COMPANY, CONTRACTOR SHALL BILL OWNER FOR ACTUAL COST.

(J) UNDERGROUND GAS LINE TRENCH DETAIL
N.T.S.

1. INSTALL POLY BARRIER BETWEEN PIPE AND ALL THRUST BLOCKS.

2. ANY MODIFICATION TO THRUST BLOCK SIZING OR PIPE RESTRAINT REVISIONS SHALL BE APPROVED IN WRITING BY THE ENGINEER PRIOR TO IMPLEMENTATION IN THE FIELD.

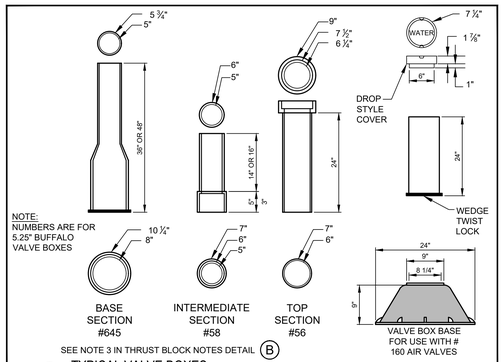
3. ANY WORK RELATING TO WATER PIPING OR DETAILS SHALL BE IN ACCORDANCE WITH THE PORTLAND WATER DISTRICT SPECIFICATIONS.

4. ALL RESTRAINED JOINTS MUST HAVE GRIPRING$_{TM}$

BEARING SURFACE REQUIRED IN SQUARE FEET

PIPE SIZE	1/32 BEND	1/16 BEND	1/8 BEND	1/4 BEND	TEES/CAPS
6"/8"	5.0	5.0	5.0	6.5	5.0
12"	11.5	11.5	11.5	20.0	22.0

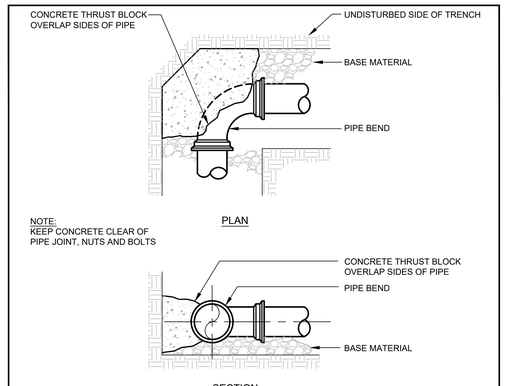
(B) THRUST BLOCK NOTES
N.T.S.



NOTE:
NUMBERS ARE FOR 5.25" BUFFALO VALVE BOXES

SEE NOTE 3 IN THRUST BLOCK NOTES DETAIL (B)

(E) TYPICAL VALVE BOXES
N.T.S.



PLAN

NOTE:
KEEP CONCRETE CLEAR OF PIPE JOINT, NUTS AND BOLTS

SECTION

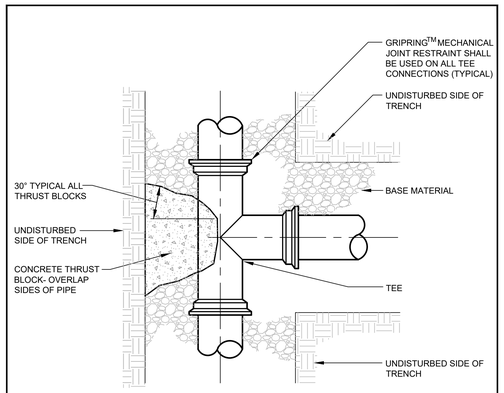
THRUST/RETAINER GLAND SCHEDULE		
¼ BEND	(90°)	USE POURED-IN-PLACE THRUST BLOCK WITH GRIPRING^{TM} MECHANICAL JOINT RESTRAINT
⅛ BEND	(45°)	THRUST BLOCK w/ GRIPRING^{TM}
1/16 BEND	(22 ½°)	THRUST BLOCK w/ GRIPRING^{TM}
1/32 BEND	(11 ¼°)	THRUST BLOCK w/ GRIPRING^{TM}

THE ABOVE SCHEDULE IS SUBJECT TO THE APPROVAL OF THE ON-SITE INSPECTOR DUE TO SOILS AND WORKING PRESSURES IN THE AREA.

NOTES:

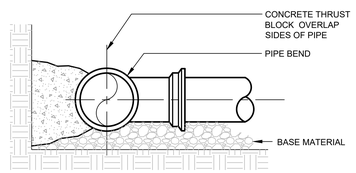
1. THE PORTLAND WATER DISTRICT MAY HAVE INSPECTION FEES AND REQUIRE OBSERVATION OF ALL PIPING INSTALLATION BEFORE BURIAL. REFER TO SPECIFICATIONS.
2. FOR WATER MAIN LAYOUT SEE DRAWINGS C-4.0
3. FOR WATER MAIN PROFILE SEE CONSTRUCTION DRAWINGS C-11.0
4. FOR WATER MAIN TRENCH SEE DETAILS ON THIS SHEET
5. REFER TO PORTLAND WATER DISTRICT SPECIFICATIONS FOR TESTING AND CHLORINATION REQUIREMENTS.
6. ALL HYDRANTS AND VALVES TO BE EPOXY COATED, NUTS AND BOLTS TO BE STAINLESS STEEL.
7. SERVICE RODS FOR DOMESTIC SERVICE OR AIR VALVES TO BE STAINLESS STEEL.

(C) TYPICAL THRUST BLOCK PLACEMENT BENDS
N.T.S.



PLAN

NOTE:
KEEP CONCRETE CLEAR OF PIPE JOINT, NUTS AND BOLTS



SECTION

(F) TYPICAL THRUST BLOCK PLACEMENT ON TEES
N.T.S.

PRELIMINARY – NOT FOR CONSTRUCTION

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REV	DATE	DESCRIPTION
2	12/23/2024	REVISED TO ADDRESS CITY COMMENTS
1	9/6/2024	MAJOR SITE PLAN APPLICATION

REVISIONS

STATE OF MAINE — BO KENNEDY No. 11994 — LICENSED PROFESSIONAL ENGINEER — 12/23/2024

P.E. BO KENNEDY
LIC. #11994

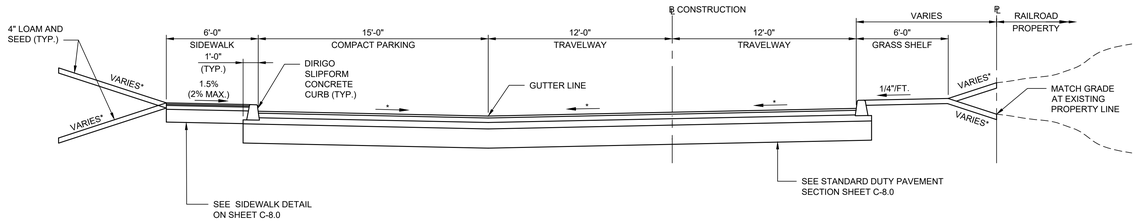
PROJECT
THE FOREFRONT AT THOMPSON'S POINT
MULTI-FAMILY RESIDENTIAL BUILDING (G)

SHEET TITLE
WATER AND GAS SERVICE DETAILS

CLIENT
CPI MANAGEMENT, LLC (CATHARTES)

PLACEMAKER PARTNERS, LLC
18 VAN AKEN WAY
PORTLAND, ME 04102
bo@placemakerpartners.com

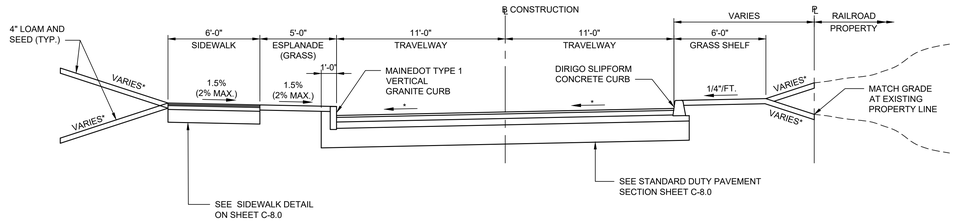
DRAWN: DB	DATE: AUGUST 2024
DESIGNED: BEK	SCALE: N.T.S.
FILE NAME: PANHANDLE-DET.dwg	
SHEET	C-8.7



* SEE GRADING PLAN FOR SLOPE

TYPICAL ROADWAY SECTION
STA. 23+60 TO STA. 26+00

NOT TO SCALE



* SEE GRADING PLAN FOR SLOPE

TYPICAL ROADWAY SECTION
STA. 20+25 TO STA. 23+60

NOT TO SCALE

PRELIMINARY – NOT FOR CONSTRUCTION

REV	DATE	DESCRIPTION
1	9/6/2024	MAJOR SITE PLAN APPLICATION

REVISIONS

STATE OF MAINE — BO KENNEDY No. 11994 — LICENSED PROFESSIONAL ENGINEER — 9/6/2024

P.E. BO KENNEDY DB
LIC. #11994

PROJECT
THE FOREFRONT AT THOMPSON'S POINT
MULTI-FAMILY RESIDENTIAL BUILDING (G)

SHEET TITLE
TYPICAL SECTIONS

CLIENT
CPI MANAGEMENT, LLC
(CATHARTES)

PLACEMAKER PARTNERS, LLC
18 VAN AKEN WAY
PORTLAND, ME 04102
bo@placemakerpartners.com

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DESIGNED: BEK	SCALE: N.T.S.
FILE NAME: PANHANDLE-TYPSECT.dwg	
SHEET	C-8.8

3. CODE SUMMARY PER NFPA 1 AND FIRE DEPT. TECHNICAL STANDARDS FOR PROPOSED MULTI-FMILY HOUSING

FIRE/BUILDING CODES:

-THE BUILDING WILL BE DESIGNED IN ACCORDANCE WITH THE CITY BUILDING CODE, AS WELL AS ALL APPLICABLE LOCAL, STATE, AND FEDERAL CODES/LAWS. THE BUILDING WILL BE FULLY SPRINKLERED IN ACCORDANCE WITH NFPA 13, AND WILL HAVE FIRE DETECTION/ALARM SYSTEMS AS DICTATED BY NFPA 72 AND THE UNDERLYING CODES.

TECHNICAL STANDARD 3.2 - FIRE HYDRANTS:

-THERE IS (1) MUNICIPAL FIRE HYDRANT AND (2) PROPOSED PRIVATE HYDRANT LOCATED WITHIN 500 FEET RADIUS OF THE BUILDING. PLEASE SEE THE ATTACHED FIRE SAFETY COMPLIANCE PLAN C-9.0.

TECHNICAL STANDARD 3.3 - SINGLE AND TWO FAMILY RESIDENTIAL DEVELOPMENT:

-MULTI-FAMILY BUILDING WILL BE FULLY SPRINKLERED

TECHNICAL STANDARD 3.4 - SITE ACCESS STANDARDS:

3.4.1. - PRIVATE ROAD PROVIDES TURNAROUND DESIGNED TO ACCOMODATE 45' LADDER TRUCK

3.4.2. - FIRE DEPARTMENT ACCESS IS PROVIDED VIA THOMPSON'S POINT ACCESS ROAD AND A PRIVATE DRIVE FOR ACCESS TO 2 SIDES OF THE BUILDING.

3.4.3. - ZONING DOES NOT REQUIRE BUILDING SETBACKS

3.4.4. - FIRE DEPARTMENT ACCESS ROADS EXTEND TO WITHIN 50' OF ENTRANCES TO BUILDING

3.4.5. - ALL SITE ACCESS PROVIDES NO LESS THAN 9 FEET IN CLEARANCE HEIGHT.

3.4.6. - ALL ELEVATORS WILL ACCOMMODATE AN 80 X 24 STRETCHER.

3.4.7. - THE STREET NUMBERING AND 911 ADDRESS HAS BEEN REVIEWED AND APPROVED BY THE CITY OF PORTLAND PUBLIC WORKS.

3.4.8. - THE BUILDING WILL DISPLAY THE ASSIGNED STREET NUMBERS. ANTICIPATED 911 ADDRESS IS 125 THOMPSON'S POINT ROAD.

TECHNICAL STANDARD 3.5 - STANDARDS FOR EMERGENCY ACCESS LANES AND GATES:

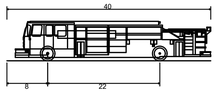
ALL ACCESS ROADS EXCEED 16' IN WIDTH AND ROAD RADIUS CAN ACCOMMODATE A 45' LONG FIRE TRUCK

TECHNICAL STANDARD 3.6 - SUBDIVISION STANDARDS:

APPROVED SUBDIVISION WITH 1 ACCESS ROAD

TECHNICAL STANDARDS 3.7 THROUGH 3.11 - STANDARDS FOR BLASTING AND REGULATION OF EXPLOSIVES:

-GEOTECHNICAL EXPLORATIONS WERE PERFORMED AND THE SUBSURFACE CONDITION DOES NOT CONTAIN BEDROCK. BASED ON THE FINDINGS, LARGE BLAST OPERATIONS ARE NOT ANTICIPATED.



Pumper Fire Truck	
Overall Length	40.000ft
Overall Width	8.167ft
Overall Body Height	7.745ft
Min Body Ground Clearance	0.656ft
Track Width	8.167ft
Lock-to-lock time	5.00s
Max Wheel Angle	45.00°

FIRE TRUCK VEHICLE PROFILE
N.T.S

EMERGENCY EVACUATION CONGREGATION AREAS

NORTH

26' WIDE SWING GATE WITH CLICK TO ENTER ACCESS

FIRE TRUCK TURNING MOVEMENT SIMULATION (10 MPH) VEHICLE: 40' FIRE TRUCK, SEE PROFILE

GARAGE ENTRANCE LOCATION

PROPOSED PRIVATE HYDRANT

6' CLEAR RADIUS AROUND HYDRANT (TYP.)

KNOX BOX (TYP.)

BIKE STORAGE (62 BIKES)

FIRE DEPARTMENT CONNECTION

PROPOSED PARKING GARAGE
25,943 S.F. FLOOR AREA
(6 FLOORS)
(463 PARKING SPACES)

WATER ROOM

ELEC. ROOM

UTILITIES MECHANICAL ROOM

BIKE ROOM

TRASH ROOM

DOG WASH ROOM

ANNUNCIATOR PANEL

ENTRANCE LOCATION

DROP-OFF PARKING

PROPOSED PRIVATE HYDRANT

EXISTING PUBLIC HYDRANT
STATIC PRESSURE PSI 112±
RESIDUAL PRESSURE TESTED 102 PSI ±

100' (TYP.)

250' (TYP.)

PROPOSED RESIDENTIAL BUILDING G
50,208 S.F. FLOOR AREA
6 FLOORS/ 255 UNITS

RETAINING WALL

18' WIDE FIRE ACCESS LANE (GRASS PAVERS)

BOCCE COURT

6.5'x22' PERGOLA

6.5'x5' SHED

POOL

COVERED WET BAR

PERGOLA (TYP. OF 2)

16' WIDE FIRE ACCESS LANE (GRASS PAVERS OR EQUAL)

PUMP STATION

GRAVEL LOT

EX. TRAIL

EX. BRIDGE

EROSION CONTROL FABRIC

WATER WAY CROSSING BARRIER

HAT=7.2'

PRELIMINARY – NOT FOR CONSTRUCTION

GRAPHIC SCALE
20 0 10 20 40
(IN FEET)
1 inch = 20 ft.

REV	DATE	DESCRIPTION
2	12/23/2024	REVISED TO ADDRESS CITY COMMENTS
1	9/6/2024	MAJOR SITE PLAN APPLICATION

REVISIONS

STATE OF MAINE — BO KENNEDY No. 11994 — LICENSED PROFESSIONAL ENGINEER — 12/23/2024

P.E. BO KENNEDY
LIC. #11994

PROJECT
THE FOREFRONT AT THOMPSON'S POINT
MULTI-FAMILY RESIDENTIAL BUILDING (G)

SHEET TITLE
FIRE SAFETY PLAN

CLIENT
CPI MANAGEMENT, LLC
(CATHARTES)

PLACEMAKER PARTNERS, LLC
18 VAN AKEN WAY
PORTLAND, ME 04102
bo@placemakerpartners.com

DRAWN: DB	DATE: AUGUST 2024
DESIGNED: BEK	SCALE: 1" = 20'
FILE NAME: PANHANDLE-FIRE SAFETY.dwg	
SHEET C-9.0	

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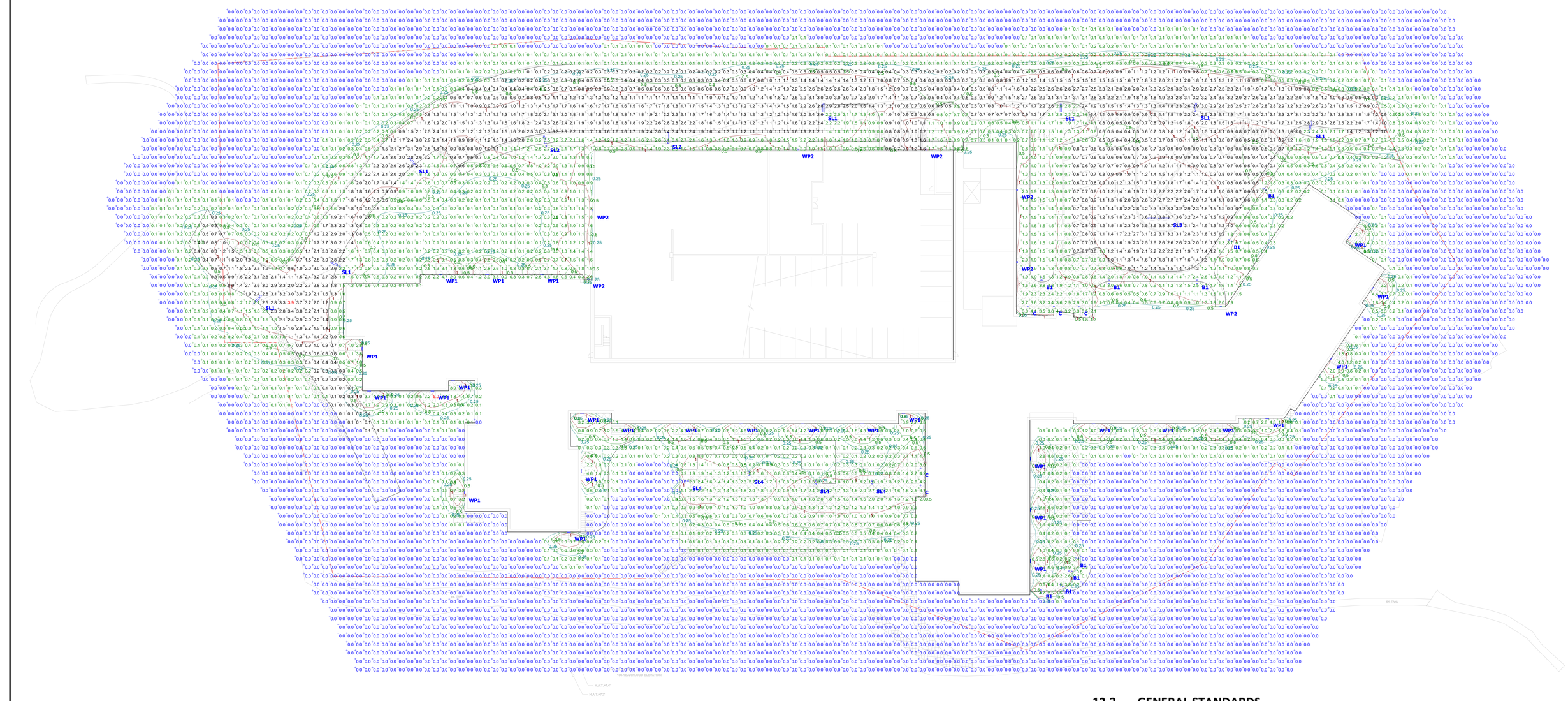


Plan View
Scale - 1" = 20ft

DISCLAIMER:

-THESE DRAWINGS ARE FOR CONCEPTUAL PURPOSES ONLY AND ARE NOT INTENDED FOR CONSTRUCTION. VALUES REPRESENTED ARE AN APPROXIMATION GENERATED FROM MANUFACTURERS PHOTOMETRIC IN-HOUSE OR INDEPENDANT LAB TEST WITH DATA SUPPLIED BY LAMP MANUFACTURERS.

SCHEDULE

Symbol	Label	Quantity	Manufacturer	Catalog Number	Description	Lumens Per Lamp	Light Loss Factor	Wattage
	B1	9	Lumenpulse	BLDB-TM1-VOLTAGE-CSL-N03-30K-CRI 80-3--FINISH-CONTROL	Lumenblade Bollard - Single - Clearsite Lens - 300LM - 3000K - 80 CRI - Type 3	199	0.9	3
	SL1	7	Lumenpulse	BLDM-SD-120/277-CSL-M80-30K-CRI 80-2	Lumenblade - Side - Clearsite Lens - 8000LM - 3000K - 80 CRI - Type 2	6281	0.9	80
	SL2	2	Lumenpulse	BLDM-SD-120/277-CSL-M80-30K-CRI 80-3	Lumenblade - Side - Clearsite Lens - 8000LM - 3000K - 80 CRI - Type 3	6786	0.9	80
	SL3	1	Lumenpulse	BLDM-SD-120/277-CSL-M100-30K-CRI 80-4	Lumenblade - Side - Clearsite Lens - 10000LM - 3000K - 80 CRI - Type 4	7738	0.9	230
	SL4	4	Lumenpulse	BLDC-TM1-VOLTAGE-10FT-CSL-XS25-30K-CRI 80-4-FINISH-CONTROL	Lumenblade Coulmn - Clearsite Lens - 2500LM - 3000K - 80 CRI - Type 4	1727	0.9	30
	WP1	27	Brownlee Lighting Inc	7075-12-TW-H08-30K	Outdoor Linear Wall Mount with Forward Throw Diffuser	858	0.9	9.43
	WP2	7	Lumenpulse	BLDN-WM-VOLTAGE-CSL-XS25-30K-CRI 80-3-FINISH-CONTROL	Lumenblade Nano - Clearsite Lens - 2500LM - 3000K - 80 CRI - Type 3	2294	0.9	30
	C	5	LUMINIS	SN800C-L1L11-30K-VOLTAGE-CONDUIT-PHOTOCELL-LOUVERS-FINISH-XX	Scena - Ceiling Round 8.5in	1180	0.9	13.9

12.3. GENERAL STANDARDS

Outdoor lighting standards listed below apply to all new developments.

1. Uniformity: As measured in foot candles at grade, maximum to minimum illumination levels shall not exceed a ratio of twenty (20) to one (1.)

2. Illumination Levels: Minimum, Maximum, and Average illumination levels for areas intended to be lighted, as measured at grade, shall be:

Minimum	0.2 foot candles (fc)
Maximum	5.0 foot candles (fc)
Average	1.25 foot candles (fc)

NOTES:

-REFLECTANCES ASSUMED:
WALL: 50
GROUND: 20

- MOUNTING HEIGHTS:
SL1/2/3: 20'-0"
SL4: 10'-0"
WP1: 8'-0"
WP2: 15'-0"
C: 10'-0"

- TASK HEIGHT: 0" ABOVE GRADE
- CALCULATION POINT SPACING: 5'X5' OC

STATISTICS

DESCRIPTION	SYMBOL	AVG.	MAX	MIN.	MAX/MIN	AVG/MIN
Pavement	+	1.4 fc	3.9 fc	0.0 fc	N/A	N/A
Full Calc Zone	+	0.4 fc	5.0 fc	0.0 fc	N/A	N/A

Thompson Point
09-13-2024

Designer Benjamin P. Rowe
Date 09/06/2024
Scale Not to Scale
Drawing No.
Summary
1 of 1

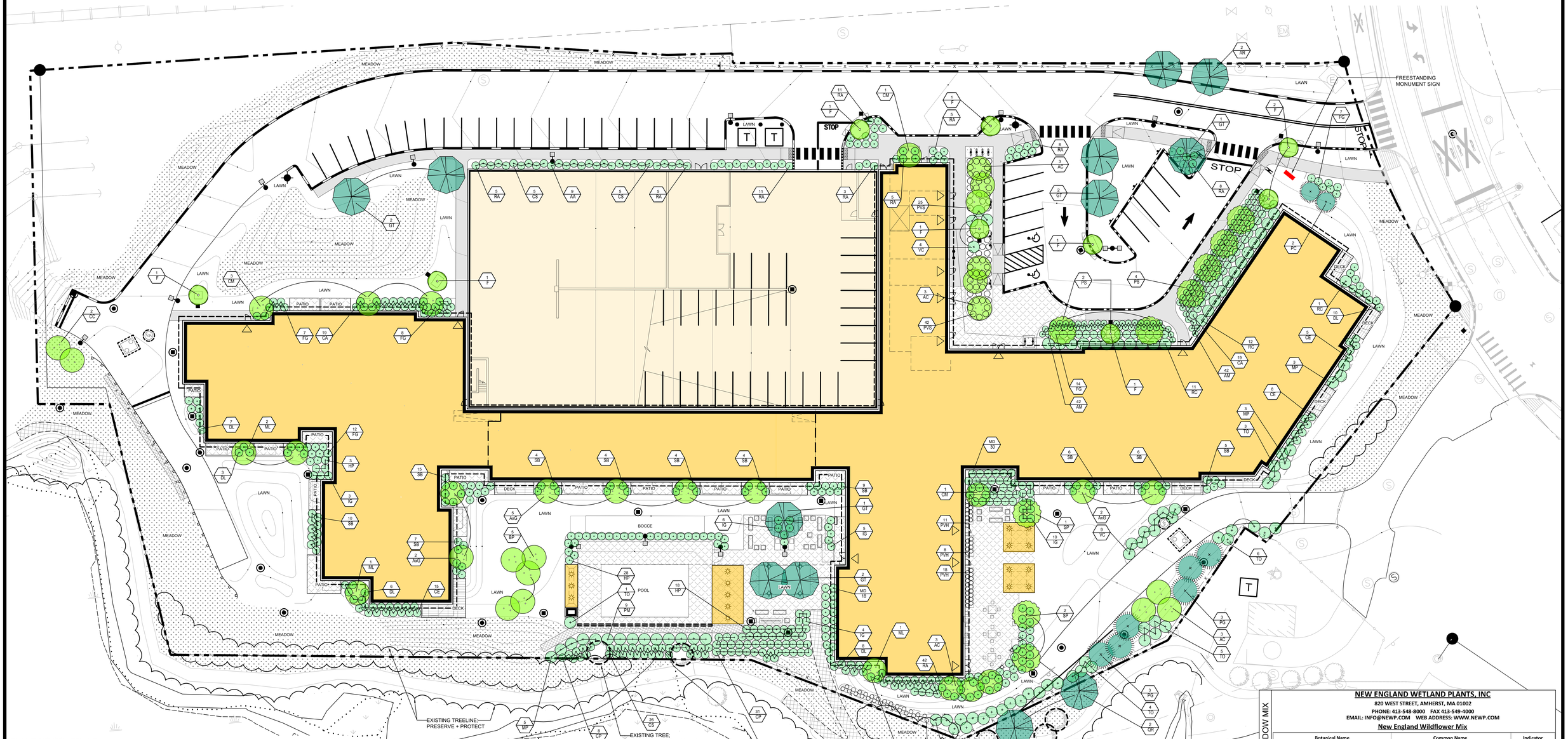
PLANTING NOTES:

1. CONTRACTOR SHALL BEGIN MAINTENANCE IMMEDIATELY AFTER PLANTING AND SHALL CONTINUE UNTIL FINAL ACCEPTANCE. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MEANS AND METHODS OF WATERING AND MAINTENANCE.
2. CONTRACTOR SHALL SUPPLY PLANTS IN QUANTITIES SUFFICIENT TO COMPLETE WORK SHOWN ON THE PLAN. ANY DISCREPANCY BETWEEN THE QUANTITIES SHOWN IN THE PLANT SCHEDULE AND THOSE REQUIRED ON THE PLAN SHALL NOT ENTITLE THE CONTRACTOR TO ADDITIONAL RENUMERATION. ANY DISCREPANCIES SHALL BE CLARIFIED WITH THE LANDSCAPE ARCHITECT PRIOR TO ORDERING PLANT MATERIAL.
3. ALL MATERIALS SHALL CONFORM TO SPECIFICATIONS OF THE AMERICAN STANDARDS FOR NURSERY STOCK (LATEST EDITION) AS SET FORTH BY THE AMERICAN ASSOCIATION OF NURSERYMEN.
4. ALL PLANTS SHALL BEAR THE SAME RELATIONSHIP TO FINISH GRADE AS THE ORIGINAL GRADES BEFORE DIGGING.
5. THE LANDSCAPE CONTRACTOR SHALL GUARANTEE ALL PLANT MATERIALS FOR ONE (1) FULL YEAR FROM DATE OF SUBSTANTIAL COMPLETION.
6. ALL PLANT MATERIALS ARE SUBJECT TO THE APPROVAL OF THE LANDSCAPE ARCHITECT AT THE NURSERY AND AT THE SITE.
7. ALL PLANT BEDS SHALL MEET MINIMUM TOPSOIL REQUIREMENTS (SEE SPECIFICATIONS).
8. NO PLANT MATERIAL SHALL BE INSTALLED UNTIL GRUBBING, BED PREPARATION, AND FINISH GRADING HAS BEEN COMPLETED IN THE IMMEDIATE AREA.
9. ALL PLANTS BEDS AND TREE WELLS SHALL HAVE A MINIMUM OF 3" OF UNIFORMLY DISTRIBUTED, DARK, SHREDDED BARK MULCH.
10. CONTRACTOR SHALL SUBMIT SOIL SAMPLE AND TEST OF TOPSOIL TO LANDSCAPE ARCHITECT PRIOR TO INSTALLATION. SOIL ADMIXTURE SHALL BE ADDED TO EXISTING SOIL (BY CONTRACTOR) IF DEEMED NECESSARY BY SOIL TEST RESULTS.
11. ROUGH GRADING AND BED PREPARATION SHALL BE APPROVED BY LANDSCAPE ARCHITECT PRIOR TO PLANT INSTALLATION. CONTRACTOR SHALL NOTIFY LANDSCAPE ARCHITECT 48 HOURS PRIOR TO REQUIRED SITE VISIT.
12. ALL PLANTS SHALL BE BALLED AND WRAPPED OR CONTAINER GROWN AS SPECIFIED. ALL ROOT WRAPPING AND CONTAINER MATERIAL MADE OF SYNTHETICS OR PLASTICS SHALL BE REMOVED AT THE TIME OF PLANTING.
13. ALL BROAD LEAF EVERGREEN PLANTS SHALL BE SPRAYED WITH AN ANTI-DESSICANT AT THE BEGINNING OF THEIR FIRST WINTER.
14. ALL PLANTS SHALL BE INSTALLED AS PER DETAILS AND THE CONTRACT SPECIFICATIONS. THE LANDSCAPE CONTRACTOR SHALL REFER TO THE CONTRACT SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
15. ALL PLANTS SHALL BE WATERED BY THE CONTRACTOR, AS NECESSARY TO INSURE HEALTH UNTIL FINAL ACCEPTANCE.
16. CONTRACTOR SHALL STAKE TREES IF DEEMED NECESSARY BY THE LANDSCAPE ARCHITECT.
17. THE LANDSCAPE CONTRACTOR SHALL PROVIDE PREPARED SOIL PLANTING MIX AS PER THE CONTRACT SPECIFICATIONS.
18. THE LANDSCAPE CONTRACTOR SHALL REFER TO THE PLANT LIST AND PLANTING SPECIFICATIONS FOR SEASONAL REQUIREMENTS AND OTHER RESTRICTIONS RELATED TO THE TIME AND SEASON OF PLANTING.
19. PLANTING SOIL MIX: 1 PART COMPOST, 8 PARTS TOPSOIL, 3 PARTS HUMUS.
    TOPSOIL: FERTILE, FRIABLE, NATURAL TOPSOIL OF LOAMY CHARACTER, WITHOUT ADMIXTURE OF SUBSOIL MATERIAL, FREE FROM CLAY, LUMPS, COARSE SANDS, STONES, PLANTS, ROOTS, STICKS, AND OTHER FOREIGN MATERIALS GREATER THAN 1" IN ANY DIMENSION, PH RANGE 5.0-7.0 , AND SHALL CONTAIN NOT LESS THAN 6% ORGANIC MATTER BY WEIGHT. SANDY LOAM OR LOAM SOIL AS DEFINED BY THE USDA SOIL CONSERVATION SERVICE, AND HAVE THE FOLLOWING MECHANICAL ANALYSIS:

TEXTURAL CLASS	% OF TOTAL WEIGHT	AVERAGE %
SAND (0.05- 2.0 MM)	45 TO 75%	60%
SILT (0.002- 0.05 MM)	15 TO 35%	25%
CLAY (< 0.002 MM)	5 TO 25%	15%

20. LAWN SEED MIX: "YARDSCAPING / BAYSCAPING MIX" BY ALLEN STERLING LOTHROP, FALMOUTH, MAINE

NAME	PROPORTION BY WEIGHT	% GERMINATION
CREEPING RED FESCUE (ENDOPHYTE ENHANCED)	40%	80
TRIFECTA PERENNIAL RYEGRASS (ENDOPHYTE ENHANCED)	30%	80
KENBLUE KENTUCKY BLUEGRASS	20%	85
CHEWINGS FESCUE	10%	90



PLANTING SCHEDULE

SHRUBS

QTY	SYM	BOTANICAL NAME	COMMON NAME	SIZE	REMARKS	NATIVE
9	AA	*Aronia arbutifolia 'Brilliantissima'*	Red Chokeberry	3' ht / #7	Cont.	X
118	AM	*Aronia melanocarpa 'Ground Hug'*	Black Chokeberry	#5	Cont.	X
37	CA	*Clethra alnifolia 'Hummingbird'*	Sweet Pepperbush	#5	Cont.	X
48	CE	*Ceanothus americanus*	New Jersey Tea	#5	Cont.	X
39	CP	*Comptonia peregrina*	Sweetfern	#5	Cont.	X
36	CS	*Cornus sericea 'Farrow'*	Red Twig Dogwood	3' ht / #7	Cont.	X
34	DL	*Diervilla lonicera*	Northern Bush Honeysuckle	#5	Cont.	X
48	FG	*Fothergilla gardenii*	Dwarf Bottlebrush Bush	#5	Cont.	
49	HP	*Hydrangea paniculata' Little Lime'*	Hydrangea	#5	Cont.	
28	IG	*Ilex glabra 'Shamrock'*	Inkberry	#7	Cont.	X
48	MD	*Microbiota decussata 'Celtic Pride'*	Siberian Carpet Cypress	#5	Cont.	
23	MP	*Myrica pensilyvanica 'Bobee'*	Northern Bayberry	#5	Cont.	X
9	PM	*Prunus maritima*	Beach Plum	4' ht.	B+B	X
64	PVH	*Panicum virgatum 'Heavy Metal'*	Switchgrass	#3	Cont.	X
64	PVS	*Panicum virgatum 'Shenandoah*	Switchgrass	#3	Cont.	X
103	RA	*Rhus aromatica 'Gro-Low'*	Fragrant Sumac	#5	Cont.	X
24	RC	*Rhododendron catawba 'Album'*	Rhododendron	3' ht.	B+B	
74	SB	*Spirea x bumalda 'Anthony Waterer'*	Spirea	#5	Cont., full	
13	VC	*Viburnum cassinoides*	Witherod	3' ht.	B+B	X

PLANTING SCHEDULE

TREES

QTY	SYM	BOTANICAL NAME	COMMON NAME	SIZE	REMARKS	NATIVE
12	AC	*Amelanchier canadensis*	Shadbush	8-10' ht.	Multi-stem	X
8	AxG	*Amelanchier x grandiflora 'Robin Hill'*	Serviceberry	2.5-3" cal.	Single stem	
2	AR	*Acer rubrum 'Karpick' or 'Bowhall'*	Red Maple	2.5-3" cal.		X
5	BP	*Betula papyrifera 'Renaissance Oasis'*	Paper Birch	10-12' ht.	Multi-stem	X
2	CC	*Crataegus crusgalli 'Crusader'*	Hawthorn	2.5-3" cal.		X
5	CM	Cornus mas 'Golden Glory'	Corneliancherry Dogwood	2.5-3" cal.		
9	F	TBD / Filterra unit tree	-	-	To be supplied by Contech	
8	GT	*Gleditsia triacanthos 'Shademaster'*	Honeylocust	2.5-3" cal.		
4	ML	*Magnolia loebneri 'Leonard Messel'*	Magnolia	2.5-3" cal.	Single stem	
2	PC	*Pinus cembra*	Swisstone Pine	8-10' ht.		
6	PG	Picea glauca	White Spruce	8-10' ht.		X
6	PS	*Prunus sargentii 'Pink Flair'*	Cherry	2.5-3" cal.		
2	QR	*Quercus rubra*	Red Oak	2.5-3" cal.		X
3	SP	Stewartia pseudocamellia	Stewartia	2.5-3" cal.		
19	TO	Thuja occidentalis 'Smaragd'	Arborvitae	5-6' ht.		X

MEADOW MIX

NEW ENGLAND WETLAND PLANTS, INC
820 WEST STREET, AMHERST, MA 01002
PHONE: 413-548-8000 FAX 413-549-4000
EMAIL: INFO@NEWP.COM WEB ADDRESS: WWW.NEWP.COM

New England Wildflower Mix

Botanical Name	Common Name	Indicator
Schizachyrium scoparium	Little Bluestem	FACU
Sorghastrum nutans	Indian Grass	UPL
Chamaecrista fasciculata	Partridge Pea	FACU
Elymus virginicus	Virginia Wild Rye	FACW-
Elymus canadensis	Canada Wild Rye	FACU+
Festuca rubra	Red Fescue	FACU
Asclepias tuberosa	Butterfly Milkweed	NI
Vernonia noveboracensis	New York Ironweed	FACW+
Oenothera biennis	Evening Primrose	FACU-
Aster novae-angliae (Symphyotrichum novae-anglia	New England Aster	FACW-
Rudbeckia hirta	Black Eyed Susan	FACU-
Solidago juncea	Early Goldenrod	
Eupatorium fistulosum (Eutrochium fistulosum)	Hollow-Stem Joe Pye Weed	FACW
Aster lateriflorus (Symphyotrichum lateriflorum)	Starved/Calico Aster	FACW

REV	DATE	DESCRIPTION
1	2024.08.23	SITE PLAN APPLICATION

REVISIONS

NOT FOR CONSTRUCTION 08.23.2024

PATRICK CARROLL
LIC. # 127

PROJECT: THE FOREFRONT AT THOMPSONS POINT RESIDENTIAL BUILDING - G

SHEET TITLE: LANDSCAPE PLAN

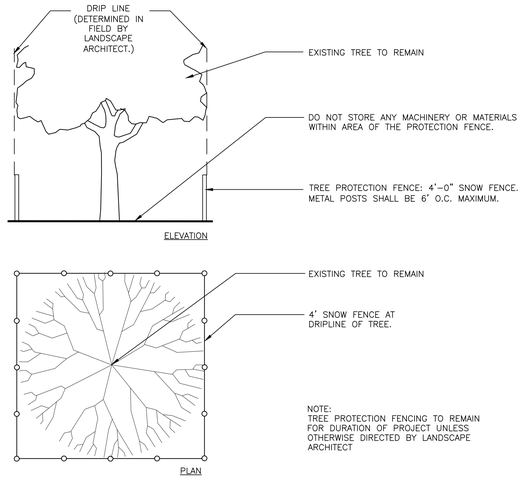
CLIENT: FOREFRONT PARTNERS, LP

CARROLL ASSOCIATES

DRAWN:	MAP	DATE:	AUG 2024
DESIGNED:	MAP	SCALE:	-
CHECKED:	PC	JOB NO.	-
FILE NAME:			

SHEET L-100

Y:\ACAD FOLDERS- CURRENT PROJECTS\Thompsons Point\RESIDENTIAL\CA-RESI LANDSCAPE PLAN 082024.dwg mphillips 8/23/2024 1:55 PM



1 TREE PROTECTION
SCALE:1 1/2"=1'-0"

TOPSOIL: FERTILE, FRIABLE, NATURAL TOPSOIL OF LOAMY CHARACTER, WITHOUT ADMIXTURE OF SUBSOIL MATERIAL, FREE FROM CLAY, LUMPS, COARSE SANDS, STONES, PLANTS, ROOTS, STICKS, AND OTHER FOREIGN MATERIALS GREATER THAN 1" IN ANY DIMENSION, PH RANGE 5.0–7.0 , AND SHALL CONTAIN NOT LESS THAN 6% ORGANIC MATTER BY WEIGHT. SANDY LOAM OR LOAM SOIL AS DEFINED BY THE USDA SOIL CONSERVATION SERVICE, AND HAVE THE FOLLOWING MECHANICAL ANALYSIS:

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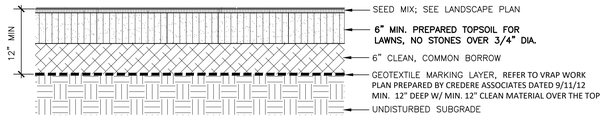
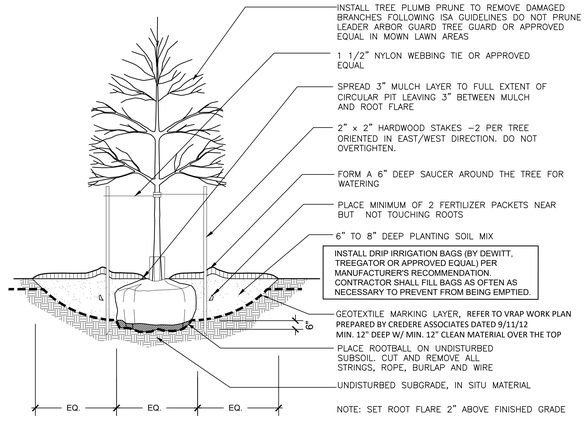
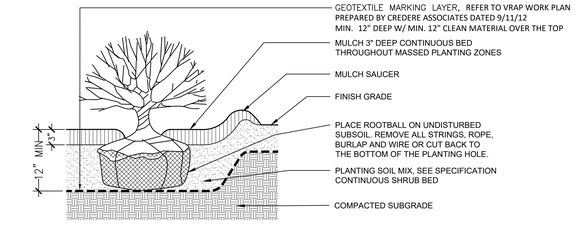


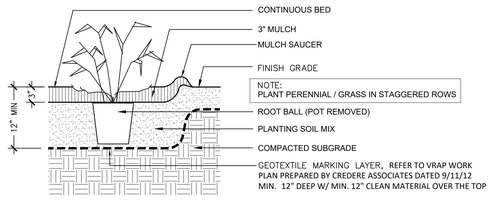
2 SEEDED OR SODDED LAWN
SCALE:1"=1'-0"



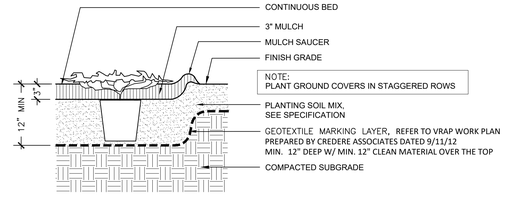
3 DECIDUOUS TREE IN LAWN OR ESPLANADE
SCALE:1"=1'-0"



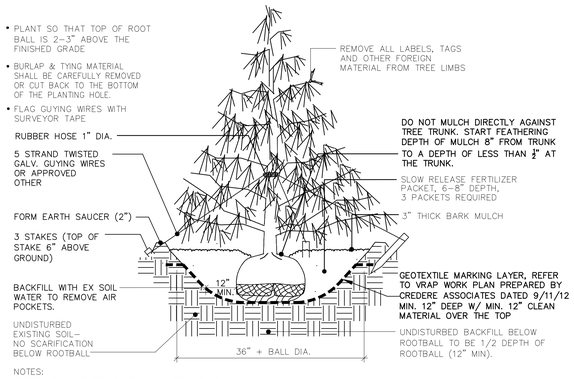
4 SHRUB PLANTING
SCALE: 3/4"=1'-0"



5 ORNAMENTAL GRASS / PERENNIAL PLANTING
SCALE:1"=1'-0"



6 GROUND COVER PLANTING
SCALE:1"=1'-0"



7 EVERGREEN TREE
SCALE:1"=1'-0"

REV	DATE	DESCRIPTION
1	2024.08.23	SITE PLAN APPLICATION

REVISIONS

NOT FOR CONSTRUCTION 08.23.2024

PATRICK CARROLL
LIC. # 127

PROJECT
THE FOREFRONT AT THOMPSONS POINT
RESIDENTIAL BUILDING - G

SHEET TITLE
LANDSCAPE DETAILS

CLIENT
FOREFRONT PARTNERS, LP

CARROLL ASSOCIATES

DRAWN:	MAP	DATE:	AUG 2024
DESIGNED:	MAP	SCALE:	-
CHECKED:	PC	JOB NO.	-
FILE NAME:			

SHEET L-200

NORTH

SELECT CLEARING RESTRICTIONS APPLY WITHIN THE SHORELAND ZONING
FORE RIVER TRAIL
EMERGENCY TURNAROUND
EXISTING TRAIL
TIDAL AREA
25 FT SHORELAND ZONE SETBACK
100 YR FLOOD STAGE - A2 ZONE ELEV 10.0
WETLAND BOUNDARY
EXISTING BRIDGE OVER WETLANDS
PROTECT EXISTING OAK TREES (TYP. OF 3)
25 FT SHORELAND SETBACK FROM HIGHEST ANNUAL TIDE
HIGHEST ANNUAL TIDE ELEV 7.2
(MEAN HIGH WATER ELEV 4.95
MEAN LOW WATER ELEV -4.15)
FIRE LANE
PORTLAND WATER DISTRICT PUMP STATION (TO REMAIN)
BUILDING H MULTI-LEVEL PARKING GARAGE
PROJECT BOUNDARY
CITY OF PORTLAND TURN AROUND
TIDAL AREA
END OF PUBLIC RIGHT-OF-WAY
6 SHORT TERM PARKING SPACES
50 PARKING SPACES (INCLUDING 6 SHORT TERM SPACES AND 2 ACCESSIBLE SPACES)
16 PARKING SPACES (INCLUDING 2 ACCESSIBLE SPACES)
TREE OF FORTY FRUIT GROVE
BUILDINGS C & D DUMPSTER AREA
4 LOADING SPACES
4 PARKING SPACES
EV CHARGING
BUILDING B2 DUMSTER AREA
CONCESSIONS BUILDING
SMALL PAVILION
OUTDOOR DINING AREA
RESTROOM BUILDING
25 FT SETBACK FROM HAT
UTILITIES SHED
EMERGENCY VEHICLE ACCESS
WATERFRONT ACCESS AND SEASONAL DOCK SYSTEM
APPROXIMATE EDGE OF CHANNEL SEE SHEET C-2.3
OPEN SPACE / OUTDOOR EVENT AREA
TIDAL AREA
EVENT VENUE MAIN ENTRANCE
23 PARKING SPACES (INCLUDING 0 COMPACT SPACES AND 4 ACCESSIBLE SPACES)
OUTDOOR DINING AREA
PICNIC LAWN
34 SEASONAL PARKING SPACES AND EVENT PRODUCTION AREA
22 PARKING SPACES (INCLUDING 2 ACCESSIBLE SPACES)
4 BUS/RV PARKING SPACES (NO OVERNIGHT)
7 PARKING SPACES
27 PARKING SPACES (INCLUDING 2 ACCESSIBLE SPACES)
PERIMETER ACCESS ROAD
BUILDINGS I DUMPSTER AREA
INTERSTATE 295
TIDAL AREA
17 PARKING SPACES (INCLUDING 17 COMPACT SPACES)
52 PARKING SPACES (INCLUDING 4 ACCESSIBLE SPACES)
BUILDING C AND D LOADING/ DELIVERIES
18 PARKING SPACES (INCLUDING 2 ACCESSIBLE SPACES)
BUILDING A DUMPSTER AREA
METRO BUS STOP AND SHELTER
463 STRUCTURED PARKING SPACES (INCLUDING 70 COMPACT SPACES, EV CHARGING, AND 24 ACCESSIBLE SPACES)
24 PARKING SPACES (COMPACT)
11 PARKING SPACES (INCLUDING 2 ACCESSIBLE SPACES)
COVERED PARKING
N/F CENTRAL MAINE POWER CO.
N/F NORTHERN NEW ENGLAND PASSENGER RAIL AUTHORITY
CONVEYANCE TO THE CITY OF PORTLAND AS ADDITIONAL LAND FOR SEWALL STREET
AT GRADE PUBLIC RAILROAD CROSSING
PORTLAND TRANSPORTATION CENTER
OFFSITE IMPROVEMENTS IN SEWALL STREET INCLUDED SIDEWALK EXTENSIONS (BOTH SIDES OF STREET) AND PEDESTRIAN CROSSING ADA RAMPS AT CONGRESS STREET
SEWALL STREET
N/F LANGDON STREET REAL ESTATE, INC.
POTENTIAL DESIGNATED RIDE SHARE PICK-UP LOCATION
EMERGENCY ACCESS ROUTE WITH 'CLICK TO ENTER' GATE SYSTEM
8' WIDE SHARED USE PATH
TAXI CAB QUEUE PARKING
6 SHORT TERM PARKING SPACES
TAXI/ RIDE SHARE PICK-UP/ DROP OFF AREA AND BUS TURNAROUND
PARKING GARAGE (TBD) PARKING SPACES (INCLUDING (TBD) ACCESSIBLE SPACES AND (TBD) COMPACT SPACES) WITH OFFICE ABOVE
N/F STATE OF MAINE
THOMPSON'S POINT CONNECTOR ROAD WAS IMPROVED TO PROVIDE THREE LANE CONFIGURATION AND 8 FT (MIN) SHARED USE PEDESTRIAN PATH IN 2015
POTENTIAL FUTURE SKYWALK TO TRAIN PLATFORM FROM FUTURE PARKING DECK
INN B
NEW SIDEWALK SYSTEM TIES INTO CITY SPONSORED SIDEWALK TO CONGRESS STREET
N/F LANGDON STREET REAL ESTATE, INC.
COMBINATION PROJECT / PTC SIGN
20 PARKING SPACES (INCLUDING 2 ACCESSIBLE SPACES)
BUILDING F2 EXISTING BLOCK BUILDING TO REMAIN
7 PARKING SPACES (INCLUDING 1 ACCESSIBLE SPACE AND 2 TRACTOR TRAILER SPACES)
EXISTING BUILDING TO REMAIN
PAN AM RAILWAY AKA PORTLAND TERMINAL COMPANY
FORE RIVER PARKWAY MULTI-USE TRAIL
FORE RIVER PARKWAY
FORE RIVER
LOT 1
LOT 2
LOT 3
LOT 4
LOT 5
LOT 6
LOT 7
LOT 8
LOT 9
LOT 10
LOT 11
LOT 12
LOT 13
LOT 14
LOT 15
LOT 16
LOT 17
LOT 18
RESIDENTIAL
BUILDING E
BUILDING M 30,000 S.F.
BUILDING J 3,575 S.F.
BUILDING K 13,645 S.F.
BRICK SOUTH BUILDING C 34,600 S.F.
BRICK NORTH BUILDING A 34,000 S.F.
COMMONS
FOREFRONT HOTEL (BUILDING D)
(16,086± SF BUILDING FOOTPRINT (80,430± SF GROSS AREA) (148 ROOMS)
PROPOSED RESIDENTIAL BUILDING 50,208 S.F. FOOTPRINT 6 FLOORS 255 UNITS
BUILDING A & F LOADING/ SERVICE
CO2 & GRAIN SILO PAD
BUILDING F1 11,384 S.F. BUILDING FOOTPRINT 14,160 S.F. GROSS BUILDING WITH MEZZ.
"THE DEPOT" BUILDING B1 14,000 S.F.
BLDG B2
BLDG B3 3,000 S.F.
CHILDREN'S MUSEUM & THEATRE OF MAINE BUILDING I 29,046 S.F.
PEDESTRIAN CONNECTION
N/F PORTLAND WATER DISTRICT

PRELIMINARY – NOT FOR CONSTRUCTION

REV	DATE	DESCRIPTION
3	9/06/2024	UPDATES TO BUILDINGS G SITE PLAN
2	7/07/2020	UPDATES TO BUILDINGS B2 & F
1	10/09/2019	UPDATES TO BUILDINGS F, K AND B

REVISIONS

STATE OF MAINE BO KENNEDY No. 11994 LICENSED PROFESSIONAL ENGINEER 9/6/2024
P.E. BO KENNEDY
LIC. #11994

PROJECT
THE FOREFRONT AT THOMPSON'S POINT MASTER PLAN

SHEET TITLE
OVERALL MASTER PLAN

CLIENT
FOREFRONT PARTNERS I, LP

PLACEMAKER PARTNERS, LLC
501 DANFORTH STREET
PORTLAND, ME 04102
bo@placemakerpartners.com

DRAWN:	DB
DESIGNED:	BEK
FILE NAME:	MASTER_SITE LAYOUT.dwg
DATE:	MARCH 2018
SCALE:	1" = 80'
SHEET	C-3.0

NORTH

SELECT CLEARING RESTRICTIONS APPLY WITHIN THE SHORELAND ZONING
FORE RIVER TRAIL
EMERGENCY TURNAROUND
EXISTING TRAIL
TIDAL AREA
25 FT SHORELAND ZONE SETBACK
100 YR FLOOD STAGE - A2 ZONE ELEV 10.0
WETLAND BOUNDARY
EXISTING BRIDGE OVER WETLANDS
PROTECT EXISTING OAK TREES (TYP. OF 3)
25 FT SHORELAND SETBACK FROM HIGHEST ANNUAL TIDE
HIGHEST ANNUAL TIDE ELEV 7.2
(MEAN HIGH WATER ELEV 4.95
MEAN LOW WATER ELEV -4.15)
FIRE LANE
PORTLAND WATER DISTRICT PUMP STATION (TO REMAIN)
BUILDING H MULTI-LEVEL PARKING GARAGE
PROJECT BOUNDARY
CITY OF PORTLAND TURN AROUND
TIDAL AREA
END OF PUBLIC RIGHT-OF-WAY
6 SHORT TERM PARKING SPACES
50 PARKING SPACES (INCLUDING 6 SHORT TERM SPACES AND 2 ACCESSIBLE SPACES)
16 PARKING SPACES (INCLUDING 2 ACCESSIBLE SPACES)
TREE OF FORTY FRUIT GROVE
BUILDINGS C & D DUMPSTER AREA
4 LOADING SPACES
4 PARKING SPACES
EV CHARGING
BUILDING B2 DUMSTER AREA
CONCESSIONS BUILDING
SMALL PAVILION
OUTDOOR DINING AREA
RESTROOM BUILDING
25 FT SETBACK FROM HAT
UTILITIES SHED
EMERGENCY VEHICLE ACCESS
WATERFRONT ACCESS AND SEASONAL DOCK SYSTEM
APPROXIMATE EDGE OF CHANNEL SEE SHEET C-2.3
OPEN SPACE / OUTDOOR EVENT AREA
TIDAL AREA
EVENT VENUE MAIN ENTRANCE
23 PARKING SPACES (INCLUDING 0 COMPACT SPACES AND 4 ACCESSIBLE SPACES)
OUTDOOR DINING AREA
PICNIC LAWN
34 SEASONAL PARKING SPACES AND EVENT PRODUCTION AREA
22 PARKING SPACES (INCLUDING 2 ACCESSIBLE SPACES)
4 BUS/RV PARKING SPACES (NO OVERNIGHT)
7 PARKING SPACES
27 PARKING SPACES (INCLUDING 2 ACCESSIBLE SPACES)
PERIMETER ACCESS ROAD
BUILDINGS I DUMPSTER AREA
INTERSTATE 295
TIDAL AREA
17 PARKING SPACES (INCLUDING 17 COMPACT SPACES)
52 PARKING SPACES (INCLUDING 4 ACCESSIBLE SPACES)
BUILDING C AND D LOADING/ DELIVERIES
18 PARKING SPACES (INCLUDING 2 ACCESSIBLE SPACES)
METRO BUS STOP AND SHELTER
BUILDING A DUMPSTER AREA
POTENTIAL FUTURE SKYWALK TO TRAIN PLATFORM FROM FUTURE PARKING DECK
INN B
20 PARKING SPACES (INCLUDING 2 ACCESSIBLE SPACES)
BUILDING F2 EXISTING BLOCK BUILDING TO REMAIN
7 PARKING SPACES (INCLUDING 1 ACCESSIBLE SPACE AND 2 TRACTOR TRAILER SPACES)
EXISTING BUILDING TO REMAIN
PAN AM RAILWAY AKA PORTLAND TERMINAL COMPANY
463 STRUCTURED PARKING SPACES (INCLUDING 70 COMPACT SPACES, EV CHARGING, AND 24 ACCESSIBLE SPACES)
24 PARKING SPACES (COMPACT)
11 PARKING SPACES (INCLUDING 2 ACCESSIBLE SPACES)
N/F CENTRAL MAINE POWER CO.
N/F NORTHERN NEW ENGLAND PASSENGER RAIL AUTHORITY
CONVEYANCE TO THE CITY OF PORTLAND AS ADDITIONAL LAND FOR SEWALL STREET
AT GRADE PUBLIC RAILROAD CROSSING
PORTLAND TRANSPORTATION CENTER
N/F LANGDON STREET REAL ESTATE, INC.
6 SHORT TERM PARKING SPACES
TAXI/ RIDE SHARE PICK-UP/ DROP OFF AREA AND BUS TURNAROUND
PARKING GARAGE (TBD) PARKING SPACES (INCLUDING (TBD) ACCESSIBLE SPACES AND (TBD) COMPACT SPACES) WITH OFFICE ABOVE
N/F LANGDON STREET REAL ESTATE, INC.
OFFSITE IMPROVEMENTS IN SEWALL STREET INCLUDED SIDEWALK EXTENSIONS (BOTH SIDES OF STREET) AND PEDESTRIAN CROSSING ADA RAMPS AT CONGRESS STREET
SEWALL STREET
POTENTIAL DESIGNATED RIDE SHARE PICK-UP LOCATION
EMERGENCY ACCESS ROUTE WITH 'CLICK TO ENTER' GATE SYSTEM
8' WIDE SHARED USE PATH
TAXI CAB QUEUE PARKING
N/F STATE OF MAINE
THOMPSON'S POINT CONNECTOR ROAD WAS IMPROVED TO PROVIDE THREE LANE CONFIGURATION AND 8 FT (MIN) SHARED USE PEDESTRIAN PATH IN 2015
NEW SIDEWALK SYSTEM TIES INTO CITY SPONSORED SIDEWALK TO CONGRESS STREET
COMBINATION PROJECT / PTC SIGN
FORE RIVER PARKWAY
FORE RIVER PARKWAY MULTI-USE TRAIL
FORE RIVER
PEDESTRIAN CONNECTION
COMMONS
BUILDING E LOT 4
BUILDING M 30,000 S.F. LOT 16
LOT 15
LOT 14
BUILDING L 3,575 S.F.
LOT 2
BUILDING K 13,645 S.F.
LOT 13
LOT 12
BUILDING F1 11,384 S.F. BUILDING FOOTPRINT 14,160 S.F. GROSS BUILDING WITH MEZZ.
LOT 11
LOT 1
BRICK SOUTH BUILDING C 34,600 S.F.
LOT 3
BRICK NORTH BUILDING A 34,000 S.F.
BUILDING A & F LOADING/ SERVICE
CO2 & GRAIN SILO PAD
FOREFRONT HOTEL (BUILDING D)
(16,086± SF BUILDING FOOTPRINT (80,430± SF GROSS AREA) (148 ROOMS)
LOT 6
CHILDREN'S MUSEUM & THEATRE OF MAINE BUILDING I 29,046 S.F.
LOT 7
LOT 18
LOT 8
LOT 10
"THE DEPOT" BUILDING B1 14,000 S.F.
BLDG B3 2,600 S.F.
LOT 9
BLDG B2
BLDG J2 19,350 SF
BLDG J1 50,000 SF
COVERED PARKING
LOT 17
BLDG G 22,350 SF
PROPOSED BUILDING G RESIDENTIAL BUILDING 50,298 G.S.F. AREA 6 FLOORS 50 UNITS
LOT 5
RESIDENTIAL
N/F PORTLAND WATER DISTRICT
BUILDING H MULTI-LEVEL PARKING GARAGE
LANGDON STREET REAL ESTATE, INC.
N/F STATE OF MAINE
LANGDON STREET REAL ESTATE, INC.

PRELIMINARY – NOT FOR CONSTRUCTION

REV	DATE	DESCRIPTION
3	9/06/2024	UPDATES TO BUILDINGS G SITE PLAN
2	7/07/2020	UPDATES TO BUILDINGS B2 & F
1	10/09/2019	UPDATES TO BUILDINGS F, K AND B

REVISIONS

STATE OF MAINE BO KENNEDY No. 11994 LICENSED PROFESSIONAL ENGINEER 9/6/2024

P.E. BO KENNEDY
LIC. #11994

PROJECT
THE FOREFRONT AT THOMPSON'S POINT MASTER PLAN

SHEET TITLE
OVERALL MASTER PLAN

CLIENT
FOREFRONT PARTNERS I, LP

PLACEMAKER PARTNERS, LLC
501 DANFORTH STREET
PORTLAND, ME 04102
bo@placemakerpartners.com

DRAWN: DB	DATE: MARCH 2018
DESIGNED: BEK	SCALE: 1" = 80'
FILE NAME: MASTER_SITE LAYOUT.dwg	
SHEET C-3.0	

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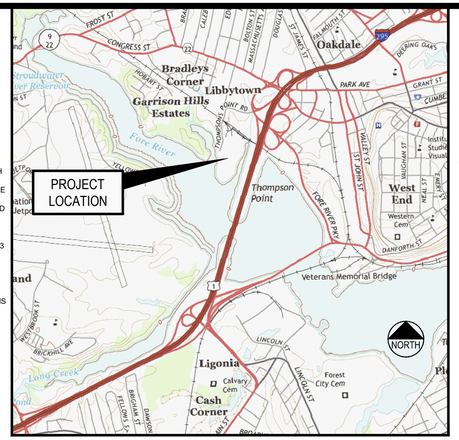
PLAN NOTES:

1. OWNER OF RECORD - FOREFRONT PARTNERS I, LP 501 DANFORTH STREET PORTLAND, MAINE 04102 CCRD BOOK: 30781, PAGE: 282
   OWNER OF RECORD - LOT 1 FOREFRONT BRICK NORTH, LLC 501 DANFORTH STREET PORTLAND, MAINE 04102 CCRD BOOK: 32199, PAGE: 247
   OWNER OF RECORD - LOT 3 FOREFRONT BRICK SOUTH, LLC 501 DANFORTH STREET PORTLAND, MAINE 04102 CCRD BOOK: 33619, PAGE: 253
   OWNER OF RECORD - LOT 7 CHILDREN'S MUSEUM AND THEATRE OF MAINE 142 FREE STREET PORTLAND, MAINE 04101 CCRD BOOK: 34533, PAGE: 1
2. LOCUS IS SHOWN AS LOTS 5, 8 & 10 ON PORTLAND ASSESSOR'S MAP 201 AND LOTS 1 & 4, MAP 202.
3. BEARINGS ARE BASED ON GRID NORTH MAINE STATE PLANE COORDINATE SYSTEM, WEST ZONE 1802, NAD83.
4. THIS SUBDIVISION PLAN IS PART OF A DEVELOPMENT PLAN SET FOR DEVELOPMENT OF LAND AT THOMPSON'S POINT. A DEVELOPMENT PLAN SET TITLED "THE FORE FRONT AT THOMPSON'S POINT" PREPARED BY FAY, SPOFFORD & THORNDIKE, INC. APPROVED BY THE PLANNING BOARD ON JANUARY 12, 2016. THE PLAN TITLED "CITY OF PORTLAND PLANNING BOARD SUBDIVISION APPROVAL FOR SECTIONAL RECORDING OF PHASE 1A" RECORDED ON MARCH 10, 2015 BOOK 215 PAGE 75 AT CCRD IS SUPERSEDED WITH THIS PLAN. SEE COMPLETE PLAN SET APPROVED JANUARY 12, 2016 FOR ALL PERTINENT EXISTING CONDITIONS, EXISTING AND PROPOSED ACTIVITIES, DRAINAGE SYSTEM AND PROPOSED IMPROVEMENTS.
5. SEE DECLARATION OF EASEMENTS, COVENANTS AND RESTRICTIONS AS DECLARED BY FOREFRONT PARTNERS I, LP AS DECLARANT AND RECORDED IN THE CUMBERLAND COUNTY REGISTRY OF DEEDS, IN 33608-1 AND AMENDED 37125-46; WHICH DECLARATION SETS FORTH THE PROTECTIVE COVENANTS, RESTRICTIONS, COMMON EASEMENTS AND THE ENFORCEMENT THEREOF, PROVIDES FOR INGRESS AND EGRESS ACCESS TO ALL OF THE LOTS IN THE SUBDIVISION AND A COMMON SCHEME OF THE MAINTENANCE AND IMPROVEMENT TO SAID COMMON AREA.
6. BOUNDARY AND TOPOGRAPHIC DATA PROVIDED BY SEBAGO TECHNICS, INC. AS SHOWN ON A PLAN TITLED "ALTA/ACSM LAND TITLE SURVEY OF 1 THOMPSON'S POINT", DATED MAY 27, 2011, NOVEMBER 23, 2011 AND LAST REVISED ON MAY 19, 2016.
7. VERTICAL DATUM BASED ON DRAWING PREPARED BY SEBAGO TECHNICS, INC. DATED MAY 27, 2011 AND LAST REVISED ON MAY 19, 2016. GENERAL NOTE 27 (NGVD 29).
8. CONVEYANCE TO MDOT AS ADDITIONAL LAND FOR SEWALL STREET PER MDOT FILE NO. 3-593 AND RECORDED IN BOOK 32803 PAGE 199 (SEWALL STREET EXTENSION PART I) AND BOOK 30781 PAGE 288 (SEWALL STREET EXTENSION PART II) AT CCRD AND SUBSEQUENTLY ACCEPTED BY THE CITY OF PORTLAND CITY COUNCIL AND RECORDED IN CCRD BOOK 37499 PAGE 240. THE CITY ACCEPTANCE OF A PUBLIC WAY IS REFERENCED AS: CITY COUNCIL ORDER 131-20/21.
9. REFER TO "SUBDIVISION PLAN EASEMENTS AND ENCUMBRANCES SHEET 2.0A" RECORDED IN CCRD (CCRD BOOK 223, PAGE 133).
10. "COMMON AREAS" ARE THE AREAS DEFINED AS SUCH IN THE DECLARATION OF EASEMENTS, COVENANTS AND RESTRICTIONS REFERRED TO IN NOTE 5 ABOVE, AND THE USE OF WHICH IS GOVERNED BY THE TERMS OF SAID DECLARATION.

SECTIONAL RECORDING NOTES:

1. THIS PLAN WAS APPROVED BY THE CITY OF PORTLAND PLANNING BOARD ON JANUARY 12, 2016, WITH AN AMENDMENT APPROVED BY THE CITY OF PORTLAND PLANNING AUTHORITY ON OCTOBER 19, 2017 AND MOST RECENTLY AMENDED ON SEPTEMBER 20, 2018. THIS PLAN IS INTENDED TO SUPPLEMENT THE PREVIOUSLY RECORDED "AMENDED SUBDIVISION PLAN - SECTIONAL 1 RECORDING PLAT" RECORDED ON NOVEMBER 21, 2018, BOOK 218, PAGE 501 OR SUBSEQUENT REVISION THERETO.
2. LOTS 1-5, 7, 10, 11-13 AND 17-19 HAVE BEEN PREVIOUSLY APPROVED (SEE SPECIAL CONDITIONS OF PLANNING BOARD APPROVAL NOTES ON THIS SHEET) AND SHOWN ON THIS PLAN FOR REFERENCE PURPOSES ONLY, BUT WILL NOT BE CREATED UNTIL A FUTURE SECTIONAL RECORDING PLAT.
3. FUTURE PHASE INFRASTRUCTURE OR OTHER WORK WILL REQUIRE A SEPARATE RECORDING PLAT AND POSTING OF A FURTHER PERFORMANCE GUARANTEE.



LOCATION MAP
N.T.S.

100 0 50 100 200
(IN FEET)
1 inch = 100 ft.

SPECIAL CONDITIONS OF PLANNING BOARD APPROVAL DATED JAN. 12, 2016

On January 12, 2016, the Planning Board considered a Level III Site Plan and Subdivision application for an amended subdivision plan consisting of 19 lots, an amended Site Location of Development Act approval, a Level III site plan for the renovation of an existing building (Brick South) for use as a flexible 2,500 person event/assembly space with associated parking, utilities and stormwater management within the 34,000 square foot building. Included in this site plan is coordination with a previous approval of Brick North and adjacent site work. Both the site plan and subdivision application are applications towards fulfillment of the previously approved Master Development Plan for this site. The Planning Board reviewed the proposal for conformance with the standards of the: Shoreland Zoning Regulations, Floodplain Management Regulations, Traffic Movement Permit, Subdivision Ordinance and Site Plan Ordinance, including the Site Development of Location Act. The Planning Board voted 5-0 (Elizabeth Boepple absent) to approve the application with the following waivers and condition(s) as presented below.

WAIVERS

On the basis of the application, plans, reports and other information submitted by the applicant, findings and recommendations, contained in the Planning Board Report for the public hearing on January 12, 2015 for applications #2015-133 and #2015-159 relevant to Portland's Technical and Design Standards and other regulations, and the testimony presented at the Planning Board hearing, the Planning Board voted 5-0 (Boepple absent) to waive the following Technical Manual standards regarding City street design:

1. 1. 7 .2.1, requiring a perpendicular driveway connection to the street, to allow for an alternative angle for the proposed Parking Garage Entrance (Lot 14/Building F 1).
2. 1.7.2.9, requiring that vehicular circulation to be contained off-site and to not utilize the adjacent street system, to allow for anticipated delivery truck maneuvers.
3. 10.8, requiring a minimum aggregate base course thickness of 3 inches for collector roads, to allow for alternative road design specifications as noted on Sheet C7-0 ..
4. Figure I-2 (Collector Street Cross-Section), requiring continuous sidewalks on both sides of the collector road to allow for sidewalk not to be built on an easterly portion of the road, as shown on the Site Layout Plan, sheet C-3.0, for the purposes of the Level III site plan (2015-159) subject to a condition of approval for completion of full sidewalk design as shown on Sheet C-3.0, *Overall Site Plan* is (2015-133) at a future phase.
5. Figure I-2 (Collector Street Cross-Section), requiring a minimum roadway width of 40 feet for collector roads, to allow for a variable width of 30-39 feet.
6. Figure 1-2 (Collector Street Cross-Section), requiring a minimum esplanade width of 5feet for collector roads, to allow for a 4ft wide esplanade.

SUBDIVISION REVIEW

The Planning Board voted 5-0 (Boepple absent) that the plan is in conformance with the subdivision standards of the Land Use Code and the Site Location of Development Act, subject to the following condition(s) of approval:

1. The applicant shall finalize the subdivision plat for review and approval by Corporation Counsel, the Department of Public Works, and the Planning Authority. The subdivision plats shall note all conditions of public access, all relevant easements including any for city vehicle access and turning, language regarding rights of lot ingress/egress/egress, and final street turnaround easement location and design in accordance with City of Portland Technical Manual section 1.3.
2. Prior to the issuance of certificates of occupancy, the applicant shall provide a revised Declaration of Easements, Covenants and Restrictions document for review and approval by Corporation Counsel;
3. Street Lighting: The proposed street lights on the 1st segment of the public portion of the Sewell Street extension are to be privately owned, metered and maintained by the Forefront at Thompson's Point. The City shall grant a license for such a purpose at the time of street acceptance.

SPECIAL CONDITIONS OF PLANNING AUTHORITY APPROVAL DATED JUNE 26, 2017

THE SECTIONAL 2 RECORDING PLAN WILL BE RECORDED IN THE CUMBERLAND COUNTY REGISTRY OF DEEDS PRIOR TO A CERTIFICATE OF OCCUPANCY PERMIT BEING ISSUED FOR NEW CONSTRUCTION ON LOT 7.

APPROVED LOT TO BE RECORDED UNDER SUBSEQUENT SECTIONAL RECORDING PLAT SEE SECTIONAL RECORDING NOTE 2

LAND TO BE RETAINED BY FOREFRONT PARTNERS I, LP. EXCLUDED FROM SUBDIVISION OF LAND FOR CONVEYANCE TO NNEPRA (0.028 AC)

LINE TABLE		
ID	LENGTH	DIRECTION
L200	45.94'	S71° 14' 38"E
L201	18.00'	N18° 45' 22"E
L202	133.17'	S71° 14' 38"E
L203	25.82'	N18° 43' 30"E
L204	108.01'	S71° 04' 04"E
L205	205.48'	S19° 05' 13"W
L206	13.00'	S19° 05' 13"W
L207	123.52'	N70° 54' 47"W
L211	15.26'	N99° 46' 00"W
L212	62.25'	S70° 54' 33"E
L213	103.66'	S15° 43' 23"W
L214	58.40'	S12° 23' 05"W
L215	45.58'	S19° 05' 13"W
L216	67.85'	S45° 39' 41"W
L217	51.35'	S50° 01' 16"W
L218	53.26'	S48° 02' 03"W
L219	70.16'	S45° 02' 19"W
L220	50.04'	S56° 40' 21"W
L221	58.03'	S79° 09' 24"W
L222	46.67'	N70° 54' 47"W
L223	293.39'	N19° 04' 39"E

LINE TABLE		
ID	LENGTH	DIRECTION
L224	56.07'	S70° 43' 32"E
L225	120.98'	N19° 14' 37"E
L226	13.34'	N89° 55' 04"E
L227	44.13'	S70° 43' 32"E
L228	11.00'	S19° 16' 28"W
L229	113.22'	S70° 43' 32"E
L230	88.00'	S19° 14' 37"W
L231	54.05'	N70° 43' 32"W
L232	90.51'	N70° 43' 32"W
L233	30.00'	S19° 16' 28"W
L234	96.46'	N70° 43' 32"W
L235	30.36'	N10° 27' 43"E
L236	102.57'	N12° 40' 14"E
L237	45.44'	N00° 04' 56"W
L238	88.06'	N26° 03' 09"E
L241	62.74'	N00° 49' 03"W
L242	23.87'	N26° 07' 33"W
L243	176.82'	N07° 10' 00"E
L244	185.06'	S70° 43' 32"E
L245	9.62'	S19° 05' 13"W
L208 THRU L210, L239 AND L240 NOT USED		

CURVE TABLE				
ID	RADIUS	LENGTH	DELTA	CHORD LENGTH / BEARING
C200	130.00'	158.84'	070° 00' 28"	149.14' / N35° 54' 33"W
C201	529.00'	81.82'	008° 51' 41"	81.73' / N05° 20' 09"W
C202	113.00'	149.73'	075° 55' 05"	139.01' / N71° 07' 41"E
C203	129.85'	118.20'	052° 09' 19"	114.16' / S44° 38' 52"E

REGISTRY BLOCK

STATE OF MAINE

CUMBERLAND COUNTY REGISTRY OF DEEDS

RECEIVED _____, 20_____

AT _____h _____m _____M. AND RECORDED IN

PLAN BOOK _____PAGE _____

ATTEST _____REGISTRAR

LOT ID	AREA (SF)	AREA (AC)
COMMON AREA	463,482	10.64
RETAINED LAND TO BE SUBDIVIDED AT A LATER DATE (FUTURE LOTS 17-19)	203,626	4.67
RETAINED LAND TO BE SUBDIVIDED AT A LATER DATE (PORTIONS OF FUTURE LOTS 11-16)	7,620	0.17
1	63,335	1.45
2	44,355	1.02
3	58,807	1.35
4	41,410	0.95
5	24,240	0.56
7	48,958	1.12
10	38,373	0.88
SECTION 1 SUB TOTAL	319,478	7.33
6	48,762	1.12
8	48,307	1.11
9	28,397	0.65
18	24,731	0.57
SECTION 2 SUB TOTAL	150,196	3.45
TOTAL	1,144,402	26.27
RETAINED LAND CONVEYED TO NNEPRA (CCRD BK 33910 PG 328)	30,092	0.69

SECTIONAL RECORDING 1 PREVIOUSLY RECORDED

SECTIONAL RECORDING 2 RECORDED ON THIS PLAN

CITY OF PORTLAND PLANNING AUTHORITY AMENDMENT TO CITY OF PORTLAND PLANNING BOARD SUBDIVISION APPROVAL FOR SECTIONAL 2 RECORDING PLAT AS RECORDED ON JUNE 27, 2023 IN PLAN BK 223, PG 190

DIRECTOR _____ DATE _____

LEGEND

- LIMIT OF UTILITY INFRASTRUCTURE IMPROVEMENTS INCLUDED WITH SECTIONAL RECORDING
- EXISTING PROPERTY LINE
- PROPOSED PROPERTY LINE (PART OF SECTIONAL 2 RECORDING)
- PROPOSED PROPERTY LINE (PART OF FUTURE SECTIONAL RECORDING)
- PROPOSED EASEMENT LINE
- EXISTING EASEMENT LINE
- 25' SETBACK FROM HIGHEST ANNUAL TIDE ELEVATION 7.4
- PIN TO BE SET

SURVEYOR'S STATEMENT

THIS SURVEY WAS PERFORMED UNDER MY DIRECT SUPERVISION AND TO THE BEST OF MY KNOWLEDGE AND BELIEF, IT WAS DONE IN ACCORDANCE WITH CHAPTER 90, PART 1 (PROFESSIONAL STANDARDS OF PRACTICE) AND PART 2 (TECHNICAL STANDARDS OF PRACTICE) OF THE MAINE BOARD OF LICENSURE FOR PROFESSIONAL LAND SURVEYORS.

THE SEALING OF THIS PLAN BY SEBAGO TECHNICS, INC. IS FOR THE EXTERNAL BOUNDARIES AND THE REVIEW OF THE INTERNAL BOUNDARIES AS DEPICTED HEREON ONLY.

MONUMENTS DEPICTED HEREON ARE PROPOSED TO BE SET, NO MONUMENTATION HAS BEEN SET AT THIS TIME.

CHRISTOPHER D. LAMOTTE, MAINE PLS 2591 DATE

REV	DATE	DESCRIPTION
10	08.09.2024	DIVIDED LOT 8 AS PART OF LOT 17-19 CONSOLIDATION
9	06.16.2023	DEMINIMIS CHANGE TO LINE TABLE
8	11.21.2022	REVISED LOT 6
7	03.19.2020	MINOR REVISIONS TO LOTS 8-16 TO REFLECT SITE PLAN APPLICATION
6	06.28.18	REVISED PER INTERNAL REVIEW
5	05.31.18	AMENDED SUBDIVISION PLAT FOR CHANGES TO SUBURBAN
4	05.04.17	AMENDED SUBDIVISION SUBMISSION TO CITY
3	09.16.16	FINAL SUBDIVISION PLANS
2	11.09.15	FINAL PLANS REVISED PER CITY COMMENTS
1	08.13.15	FINAL SUBDIVISION APPLICATION SUBMISSION

CHRISTOPHER D. LAMOTTE, MAINE PLS 2591 — REVISIONS

STATE OF MAINE · BO KENNEDY · No. 11994 · LICENSED PROFESSIONAL ENGINEER

BO KENNEDY, P.E. #11994 — 06.16.2023

PROJECT: THOMPSON'S POINT ROAD PORTLAND, MAINE 04101 THE FOREFRONT AT THOMPSON'S POINT

SHEET TITLE: 2ND AMENDED SUBDIVISION PLAN SECTIONAL 2 RECORDING PLAT

OWNER: FOREFRONT PARTNERS I, LP 501 DANFORTH ST, PORTLAND, MAINE 04101

PLACEMAKER PARTNERS, LLC
501 DANFORTH STREET
PORTLAND, ME 04102
bo@placemakerpartners.com

DRAWN:	DB	DATE:	MAY 2018
DESIGNED:	BEK	SCALE:	AS NOTED
CHECKED:	BEK	JOB NO.	195350044
FILE NAME:	2982.05-SUB SUBDIVISION SECTIONALS		
SHEET	C-2.2		

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PLAN NOTES:

1. OWNER OF RECORD:
FOREFRONT PARTNERS I, LP
501 DANFORTH STREET
PORTLAND, MAINE 04102
CCRD BOOK: 30781, PAGE: 282

OWNER OF RECORD - LOT 1
FOREFRONT BRICK NORTH, LLC
501 DANFORTH STREET
PORTLAND, MAINE 04102
CCRD BOOK: 32199, PAGE: 247

OWNER OF RECORD - LOT 3
FOREFRONT BRICK SOUTH, LLC
501 DANFORTH STREET
PORTLAND, MAINE 04102
CCRD BOOK: 33619, PAGE: 253

OWNER OF RECORD - LOT 7
CHILDREN'S MUSEUM AND THEATRE OF MAINE
142 FREE STREET
PORTLAND, MAINE 04101
CCRD BOOK: 34533, PAGE: 1

OWNER OF RECORD - LOT 6
PORTLAND POINT HOTEL, LLC
10 CABOT ROAD, SUITE 209
MEDFORD, MA.

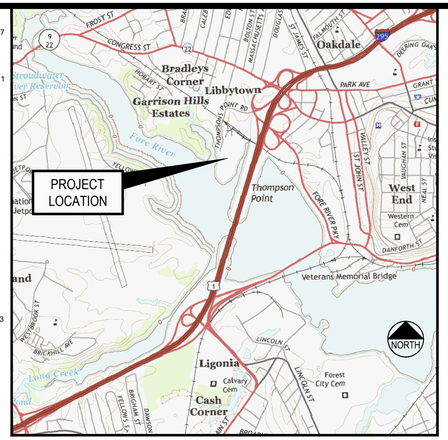
OWNER OF RECORD - LOT 9,10
FOREFRONT POINT, LLC
18 VAN AKEN WAY
PORTLAND, MAINE 04102

OWNER OF RECORD - LOT 11
FOREFRONT COMMONS WAREHOUSE, LLC
18 VAN AKEN WAY
PORTLAND, MAINE 04102

2. LOCUS IS SHOWN AS LOTS 5, 8 & 10 ON PORTLAND ASSESSOR'S MAP 201 AND LOTS 1 & 4, MAP 202.
3. BEARINGS ARE BASED ON GRID NORTH MAINE STATE PLANE COORDINATE SYSTEM, WEST ZONE 1802, NAD83.
4. THIS SUBDIVISION PLAN IS PART OF A DEVELOPMENT PLAN SET FOR DEVELOPMENT OF LAND AT THOMPSON'S POINT. A DEVELOPMENT PLAN SET TITLED "THE FORE FRONT AT THOMPSON'S POINT" PREPARED BY FAY, SPOFFORD & THORNDIKE, INC. APPROVED BY THE PLANNING BOARD ON JANUARY 12, 2016. THE PLAN TITLED "CITY OF PORTLAND PLANNING BOARD SUBDIVISION APPROVAL FOR SECTIONAL RECORDING OF PHASE 1A" RECORDED ON MARCH 10, 2015 BOOK 215 PAGE 75 AT CCRD IS SUPERSEDED WITH THIS PLAN. SEE COMPLETE PLAN SET APPROVED JANUARY 12, 2016 FOR ALL PERTINENT EXISTING CONDITIONS, EXISTING AND PROPOSED ACTIVITIES, DRAINAGE SYSTEM AND PROPOSED IMPROVEMENTS.
5. SEE DECLARATION OF EASEMENTS, COVENANTS AND RESTRICTIONS AS DECLARED BY FOREFRONT PARTNERS I, LP AS DECLARANT AND TO BE RECORDED IN THE CUMBERLAND COUNTY REGISTRY OF DEEDS, AND DATED OF NEAR OR EVEN DATE TO THE RECORDING OF THIS SECTIONAL 1 RECORDING PLAT; WHICH DECLARATION SETS FORTH THE PROTECTIVE COVENANTS, RESTRICTIONS, COMMON EASEMENTS AND THE ENFORCEMENT THEREOF. PROVIDES FOR INGRESS AND EGRESS ACCESS TO ALL OF THE LOTS IN THE SUBDIVISION AND A COMMON SCHEME OF THE MAINTENANCE AND IMPROVEMENT TO SAID COMMON AREA.
6. BOUNDARY AND TOPOGRAPHIC DATA PROVIDED BY SEBAGO TECHNICS, INC. AS SHOWN ON A PLAN TITLED "ALTA/ACSM LAND TITLE SURVEY OF 1 THOMPSON'S POINT", DATED MAY 27, 2011, NOVEMBER 23, 2011 AND LAST REVISED ON MAY 19, 2016.
7. VERTICAL DATUM BASED ON DRAWING PREPARED BY SEBAGO TECHNICS, INC. DATED MAY 27, 2011 AND LAST REVISED ON MAY 19, 2016. GENERAL NOTE 27 (NGVD 29).
8. CONVEYANCE TO MDOT AS ADDITIONAL LAND FOR SEWALL STREET PER MDOT FILE NO. 3-593 AND RECORDED IN BOOK 32803 PAGE 199 (SEWALL STREET EXTENSION PART **I**) AND BOOK 30781 PAGE 288 (SEWALL STREET EXTENSION PART **II**) AT CCRD AND SUBSEQUENTLY ACCEPTED BY THE CITY OF PORTLAND CITY COUNCIL AND RECORDED IN CCRD BOOK 37499 PAGE 240. THE CITY ACCEPTANCE OF A PUBLIC WAY IS REFERENCED AS: CITY COUNCIL ORDER 131-20/21.
9. REFER TO "SUBDIVISION PLAN EASEMENTS AND ENCUMBRANCES SHEET 2.0A" RECORDED IN CCRD (CCRD BOOK 223, PAGE 133).
10. "COMMON AREAS" ARE THE AREAS DEFINED AS SUCH IN THE DECLARATION OF EASEMENTS, COVENANTS AND RESTRICTIONS REFERRED TO IN NOTE 5 ABOVE, AND THE USE OF WHICH IS GOVERNED BY THE TERMS OF SAID DECLARATION.

SECTIONAL RECORDING NOTES:

1. THIS PLAN WAS APPROVED BY THE CITY OF PORTLAND PLANNING BOARD ON JANUARY 12, 2016. THIS PLAN IS INTENDED TO SUPPLEMENT THE PREVIOUSLY RECORDED SUBDIVISION PLAN - SECTIONAL 1 RECORDING PLAT, SUBDIVISION PLAN - SECTIONAL 2 RECORDING PLAT AND SUBDIVISION PLAN - SECTIONAL 3 RECORDING PLAT.



LOCATION MAP
N.T.S.

SPECIAL CONDITIONS OF PLANNING BOARD APPROVAL DATED JAN. 12, 2016

On January 12, 2016, the Planning Board considered a Level III Site Plan and Subdivision application for an amended subdivision plan consisting of 19 lots, an amended Site Location of Development Act approval, a Level III site plan for the renovation of an existing building (Brick South) for use as a flexible 2,500 person event/assembly space with associated parking, utilities and stormwater management within the 34,000 square foot building. Included in this site plan is coordination with a previous approval of Brick North and adjacent site work. Both the site plan and subdivision application are applications towards fulfillment of the previously approved Master Development Plan for this site. The Planning Board reviewed the proposal for conformance with the standards of the: Shoreland Zoning Regulations, Floodplain Management Regulations, Traffic Movement Permit, Subdivision Ordinance and Site Plan Ordinance, including the Site Development of Location Act. The Planning Board voted 5-0 (Elizabeth Boepple absent) to approve the application with the following waivers and condition(s) as presented below.

WAIVERS

On the basis of the application, plans, reports and other information submitted by the applicant, findings and recommendations, contained in the Planning Board Report for the public hearing on January 12, 2015 for applications #2015-133 and #2015-159 relevant to Portland's Technical and Design Standards and other regulations, and the testimony presented at the Planning Board hearing, the Planning Board voted 5-0 (Boepple absent) to waive the following Technical Manual standards regarding City street design:

1. 1. 7 .2.1, requiring a perpendicular driveway connection to the street, to allow for an alternative angle for the proposed Parking Garage Entrance (Lot 14/Building F 1).
2. 1.7.2.9, requiring that vehicular circulation to be contained off-site and to not utilize the adjacent street system, to allow for anticipated delivery truck maneuvers.
3. 10 .8, requiring a minimum aggregate base course thickness of 3 inches for collector roads, to allow for alternative road design specifications as noted on Sheet C7-0 ..
4. Figure I-2 (Collector Street Cross-Section), requiring continuous sidewalks on both sides of the collector road to allow for sidewalk not to be built on an easterly portion of the road, as shown on the Site Layout Plan, sheet C-3.0, for the purposes of the Level III site plan (2015-159) subject to a condition of approval for completion of full sidewalk design as shown on Sheet C-3.0, *Overall Site Plan* is (2015-133) at a future phase.
5. Figure I-2 (Collector Street Cross-Section), requiring a minimum roadway width of 40 feet for collector roads, to allow for a variable width of 30-39 feet.
6. Figure 1-2 (Collector Street Cross-Section), requiring a minimum esplanade width of 5feet for collector roads, to allow for a 4ft wide esplanade.

SUBDIVISION REVIEW

The Planning Board voted 5-0 (Boepple absent) that the plan is in conformance with the subdivision standards of the Land Use Code and the Site Location of Development Act, subject to the following condition(s) of approval:

1. The applicant shall finalize the subdivision plat for review and approval by Corporation Counsel, the Department of Public Works, and the Planning Authority. The subdivision plats shall note all conditions of public access, all relevant easements including any for city vehicle access and turning, language regarding rights of lot ingress/egress/regress, and final street turnaround easement location and design in accordance with City of Portland Technical Manual section 1.3.
2. Prior to the issuance of certificates of occupancy, the applicant shall provide a revised Declaration of Easements, Covenants and Restrictions document for review and approval by Corporation Counsel;
3. Street Lighting: The proposed street lights on the 1st segment of the public portion of the Sewell Street extension are to be privately owned, metered and maintained by the Forefront at Thompson's Point. The City shall grant a license for such a purpose at the time of street acceptance.

LINE TABLE		
ID	LENGTH	DIRECTION
L401	155.37'	S77° 58' 14"W
L402	13.27'	N16° 30' 59"W
L403	69.31'	S73° 29' 01"W
L404	118.99'	N76° 31' 09"W
L405	115.04'	N29° 39' 20"W
L406	298.32'	N50° 10' 32"W
L407	132.36'	N25° 39' 32"E
L408	36.86'	N50° 55' 09"W
L409	171.51'	N37° 58' 14"E
L410	217.81'	S54° 29' 34"E
L411	109.87'	S47° 24' 13"E
L412	33.52'	S52° 01' 46"E
L413	5.00'	S35° 30' 26"W
L414	297.80'	S50° 39' 19"E
L415	16.01'	S54° 25' 45"E

CURVE TABLE				
ID	RADIUS	LENGTH	DELTA	CHORD LENGTH / BEARING
C400	401.96'	128.17'	018° 16' 13"	127.63' / S15° 20' 31"W
C401	390.00'	10.51'	001° 32' 38"	10.51' / N08° 34' 34"E

REGISTRY BLOCK

STATE OF MAINE
CUMBERLAND COUNTY REGISTRY OF DEEDS
RECEIVED _____, 20_____
AT _____h _____m _____M. AND RECORDED IN
PLAN BOOK _____PAGE _____
ATTEST _____REGISTRAR

	LOT ID	AREA (SF)	AREA (AC)
7	COMMON AREA	502,635	11.54
SECTIONAL RECORDING 1 PREVIOUSLY RECORDED	1	63,335	1.45
	2	44,355	1.02
	3	58,807	1.35
	4	41,410	0.95
	5	24,240	0.56
	7	48,958	1.12
	10	38372.8359	0.88
1	SECTION 1 SUB TOTAL	319,478	7.33
SECTIONAL RECORDING 2 PREVIOUSLY RECORDED	6	48,762	1.12
	8	48,307	1.11
	9	28,397	0.65
	18	24,731	0.57
	SECTION 2 SUB TOTAL	150,196	3.45
SECTIONAL RECORDING 3 PREVIOUSLY RECORDED	11	32,771	0.75
	12	27,630	0.63
	13	9,246	0.21
	14	14,914	0.34
	15	14,734	0.34
	16	21,986	0.50
	SECTION 3 SUB TOTAL	121,281	2.78
SECTIONAL RECORDING 4 RECORDED ON THIS PLAN	17	203,610	4.67
	SECTION 4 SUB TOTAL	203,610	4.67
	TOTAL	1,297,201	29.78

CITY OF PORTLAND PLANNING AUTHORITY AMENDMENT TO CITY OF PORTLAND PLANNING BOARD SUBDIVISION APPROVAL FOR SECTIONAL 4 RECORDING PLAT

DIRECTOR _____ DATE _____

LEGEND

- LIMIT OF UTILITY INFRASTRUCTURE IMPROVEMENTS INCLUDED WITH SECTIONAL RECORDING
- EXISTING PROPERTY LINE
- PROPOSED PROPERTY LINE (PART OF SECTIONAL 4 RECORDING)
- PROPOSED EASEMENT LINE
- EXISTING EASEMENT LINE
- 25' SETBACK FROM HIGHEST ANNUAL TIDE ELEVATION 7.4
- PIN TO BE SET

SURVEYOR'S STATEMENT

THIS SURVEY WAS PERFORMED UNDER MY DIRECT SUPERVISION AND TO THE BEST OF MY KNOWLEDGE AND BELIEF, IT WAS DONE IN ACCORDANCE WITH CHAPTER 90, PART 1 (PROFESSIONAL STANDARDS OF PRACTICE) AND PART 2 (TECHNICAL STANDARDS OF PRACTICE) OF THE MAINE BOARD OF LICENSURE FOR PROFESSIONAL LAND SURVEYORS.

THE SEALING OF THIS PLAN BY SEBAGO TECHNICS, INC. IS FOR THE EXTERNAL BOUNDARIES AND THE REVIEW OF THE INTERNAL BOUNDARIES AS DEPICTED HEREON ONLY.

MONUMENTS DEPICTED HEREON ARE PROPOSED TO BE SET, NO MONUMENTATION HAS BEEN SET AT THIS TIME.

CHRISTOPHER D. LAMOTTE, MAINE PLS 2591 DATE

CHRISTOPHER D. LAMOTTE
MAINE PLS 2591

REV	DATE	DESCRIPTION
8	08.09.2024	CONSOLIDATED LOTS 17 THROUGH 19
7	03.19.2020	MINOR REVISIONS TO LOTS 8-16 TO REFLECT SITE PLAN APPLICATION
6	06.28.18	REVISED PER INTERNAL REVIEW
5	05.31.18	AMENDED SUBDIVISION PLAT FOR CHANGES TO SUBURBAN
3	09.16.16	FINAL SUBDIVISION PLANS
2	11.09.15	FINAL PLANS REVISED PER CITY COMMENTS
1	08.13.15	FINAL SUBDIVISION APPLICATION SUBMISSION

REVISIONS

STATE OF MAINE BO KENNEDY No. 11994 LICENSED PROFESSIONAL ENGINEER
03.19.2020
P.E. BO KENNEDY
LIC. #11994

PROJECT
THE FOREFRONT AT THOMPSON'S POINT

SHEET TITLE
AMENDED SUBDIVISION PLAN SECTIONAL 4 RECORDING PLAT

OWNER
FOREFRONT PARTNERS I, LP
501 DANFORTH ST, PORTLAND, MAINE 04101

PLACEMAKER PARTNERS, LLC
501 DANFORTH STREET
PORTLAND, ME 04102
bo@placemakerpartners.com

DRAWN:	DB	DATE:	MAY 2018
DESIGNED:	BEK	SCALE:	AS NOTED
CHECKED:	BEK	JOB NO.	195350044
FILE NAME:	2982.05-SUB SUBDIVISION		
SHEET	C-2.4		

C:\Users\diana\Dropbox\DCS-Projects\Placemaker\Thompson's Point\Subdivision - Master Plan\Plans\Site Plan\CAD\2982.05-SUB SUBDIVISION SECTIONALS.dwg diana 9/6/2024 8:36 AM

Planning and Urban Development
Matthew Grooms, AICP
Deputy Director

To: Chair Mazer and Members of the Planning Board
From: Matthew Grooms, Deputy Director
Date: January 14, 2024
Re: Planning Board 2024 Accomplishments

The following is a summary of the Planning Board's accomplishments over the course of 24 meetings held during the 2024 calendar year, including two special meetings. On October 8, 2024, the Planning Board unanimously voted to recommend ReCode, a years-long effort to comprehensively update the City's Land Use Code to implement *Portland's Plan 2030*, which was adopted by the City Council, and which went into effect on December 4, 2024. Other highlights of the Board's accomplishments are listed below.

1. PLANNING BOARD MAJOR SITE PLAN APPROVALS:

A total of 24 Major Site Plan applications were approved in 2024, including 13 residential projects, and nine non-residential projects resulting in:

- Total Housing Units Approved: 393
- Total Affordable Housing Units: 268
- Total Jill C. Duson Housing Trust Fund Contributions: $1,200,976.75
- Total Hotel Rooms: 133
- Total EV Charging Infrastructure: 99
- Bicycle Spaces: 335
- New On-Site Street Trees: 91
- Tree Fund Contributions: $118,800

Major Site Plan applications approved in 2024 advanced **393 new homes**, including **268 affordable units**, collected **$1,200,976.75 in Jill C. Duson Housing Trust Fund** contributions and furthered the city's sustainability goals by approving the planting of **91 new street trees**, installation of **99 EV charging stations**, and **335 bicycle racks**. Moreover, the Planning Board approved several non-residential projects, including the first phase of the Roux Institute's new campus at the former B&M Baked Beans site at 1 Bean Pot Circle, the construction of a new 21,000 square foot clubhouse at Hadlock Field in support of the Portland Seadogs Minor League Baseball Team, and multiple developments that support the City's working waterfront, including 60,000 square feet of new boat storage/maintenance space at 400 Commercial

Street and 100 W Commercial Street, and the development of a Reefer Racking system at the International Marine Terminal at 2 W Commercial Street

Residential approvals by zone:

Zone	Total Projects	Total Residential Units
R-6	7	122
B-2	3	138
B-3	3	133
Total	13	393

A. Notable Residential Approvals:

186 Woodford Street

On February March 26, 2024, the Planning Board unanimously approved a Major Site Plan and Subdivision application for the proposed redevelopment of the Woodford's Congregational Church property located at 186 Woodford Street by Community Housing of Maine (CHOM). The redevelopment occurred following the rezoning of the property from B-1 Neighborhood Business, B-2 Community Business, and R-5 Residential to B-2 Community Business, which occurred in late 2023. The approved development subdivided the property into three separate parcels, maintaining the Woodford Congregational Church and existing community-oriented uses (A Company of Girls, Maine Council of Churches, Project Feed, and Stages Youth Theater), and establishes a new building lot over existing surface parking. The proposal would involve the redevelopment of the Parish House into a new 40-unit attached building, and the construction of a new 42-unit housing development. The development is entirely age and affordability restricted. In July of 2024, the Planning Board approved an amendment to increase the unit count by one, for a total of 83 units.

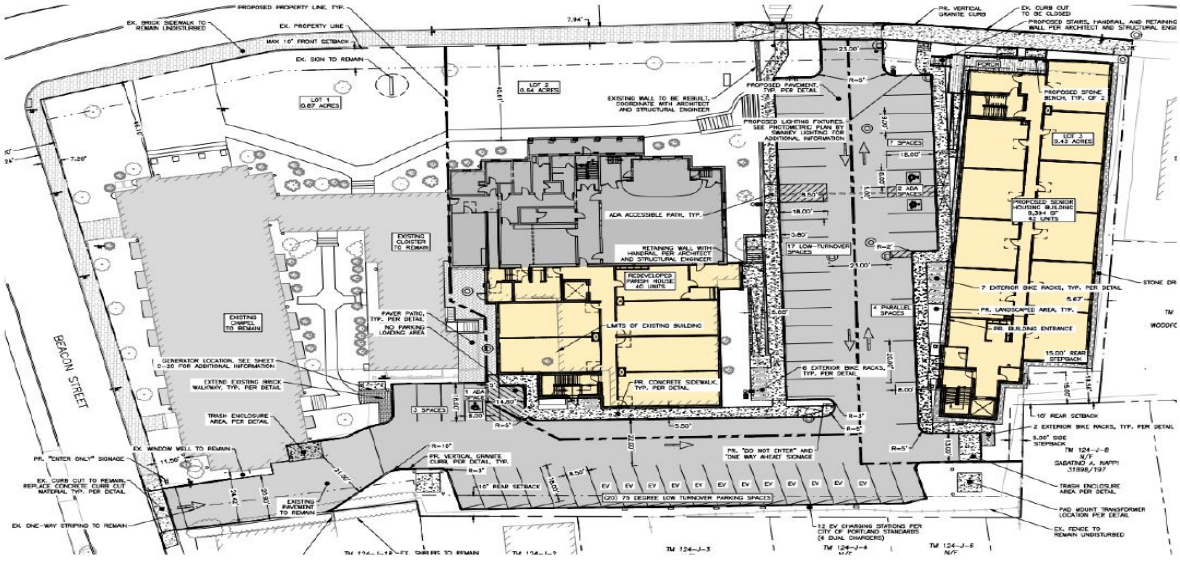


Figure 1: Approved site plan

331 Cumberland Avenue

On August 13, 2024, the Planning Board unanimously approved the major site plan application submitted by Youth and Family Outreach, a proposal to develop a new 60-unit, six-story affordable housing project at the current site of Youth and Family Outreach, located at 331 Cumberland Avenue. A similar application had previously been approved by the Planning Board on September 15, 2020, however that approval ultimately lapsed. This proposal expands the scope of the project to encompass the historic Preble Street Chapel, which would be demolished under this proposal. The first level of the development would include facilities, including classrooms, therapy rooms, a kitchen, and playground, for Youth and Family Outreach, an existing childcare facility.



Figure 2: Rendering of the development from Cumberland Avenue

B. Small-Scale Infill Development or Redevelopment

56 Cumberland Avenue

On February 27, 2024, the Planning Board unanimously approved a major site plan for the construction of a five-unit residential condominium at 56 Cumberland Avenue, a small-infill site on Munjoy Hill, the site of a small surface parking area servicing the property at 54 Cumberland Avenue.



Figure 3: Rendering of the proposed development from Cumberland Avenue

64 Pine Street

On May 14, 2024, the Planning Board unanimously approved a major site plan to facilitate the development of a new four-story mixed-use commercial and residential development with nine condominium units, on the former site of the Aurora Provisions market in the West End Neighborhood, located at 64 Pine Street. The project features a unique mechanized parking system, and a roof deck for use by residents.



Figure 4: Rendering of the development from Pine Street

C. Residential Conversion

509 Forest Avenue

On January 23, 2024, the Planning Board unanimously approved a major site plan for the conversion of a 73,750 square foot commercial and office building located at 509 Forest Avenue, proximate to Woodfords Corner, into a 38-unit residential building, with 10 workforce units and 28 market rate units. The development maintains several commercial tenant spaces at ground-level, and will restore the façade of the building to its original appearance.



Figure 5: Pre-development appearance as compared with post-development appearance

D. Waterfront Development

100 W. Commercial Street

On November 12, 2024, the Planning Board unanimously approved Phase 6 of the Canal Landing development at 100 W. Commercial Street, along Portland's Industrialized Western Waterfront. The proposal would involve the construction of a 45,000 square foot, 72-foot marine vessel warehouse and maintenance facility.



Figure 6: Rendering of the proposed development from W. Commercial Street

E. Institutional Development

1 Bean Pot Circle (Roux Institute)

On June 11, 2024, the Planning Board the major site plan and site location of development (SLOD) application for Phase 1 of the Roux Institute's campus, located at the former B&M Baked Beans property, located at 1 Bean Pot Circle. The project would involve the construction of a new 238,000 square foot post-secondary education building with on-site restaurant, identified as the Learning, Research & Collaboration building); construction of a 241,950 square foot mixed-use building with parking structure with capacity for up to 610 vehicles, and a 7,500 square foot daycare facility; and the adaptive reuse of the 58,000 square foot Cannery building. This development was envisioned in the Roux Institute's Institutional Development Plan (IDP), adopted by the Planning Board in late 2022. Upon completion, the development would result in the creation of a new public open space and trail along the waterfront and within the core campus area, along with newly planned pedestrian and bicycle connections to East Deering, Back Cove, and Portland's Peninsula.



Figure 7: Rendering of the campus from the Eastern Promenade

2. PLANNING BOARD CONDITIONAL USE APPROVALS:

A total of three Conditional Use applications were approved in 2024, resulting in:

- Hotel inclusionary zoning review for the conversion of the upper floors of the property at 245 Commercial Street from office to a 50-room hotel.
- Conversion of 3,985 square foot garage space into a warehouse for use by Bow Street Beverage.
- Conversion of an auto repair space at 1901 Forest Avenue into an automobile dealership.

3. ZONING AMENDMENTS:

ReCode

On October 8, 2024, the Planning Board unanimously recommended to the City Council adoption of ReCode Phase 2, which was later adopted by the Council on November 4, 2024, and went into effect on

December 4, 2024. ReCode was a years-long effort to comprehensively update the City's land use code to implement Portland's Plan 2030 and better equip the City to address critical needs in areas such as housing, design, preservation, conservation and climate resiliency, the working waterfront, energy, and transportation. Notable amendments include significant changes to the City's zoning map, with the creation of new residential districts and new transit-oriented development (TOD) districts; increases to allowable building heights across commercial zones, and in particular across downtown Portland; simplification of zoning dimensional standards across most residential and commercial zones to create more conformity across historically platted lots, and allow more flexibility around new construction; and the establishment of new residential forms, such as conservation residential developments and cottage courts, that promote walkability and integration with existing neighborhood patterns. The code rewrite was reviewed extensively by the Board, and in 2024, the Board held three separate workshops on ReCode, in addition to the public hearing. Planning staff also hosted a two-day public studio on June 4th and 5th at Canal Plaza, where interested parties were able to learn more about the proposed changes, speak with City staff, and provide direct input on the proposals.

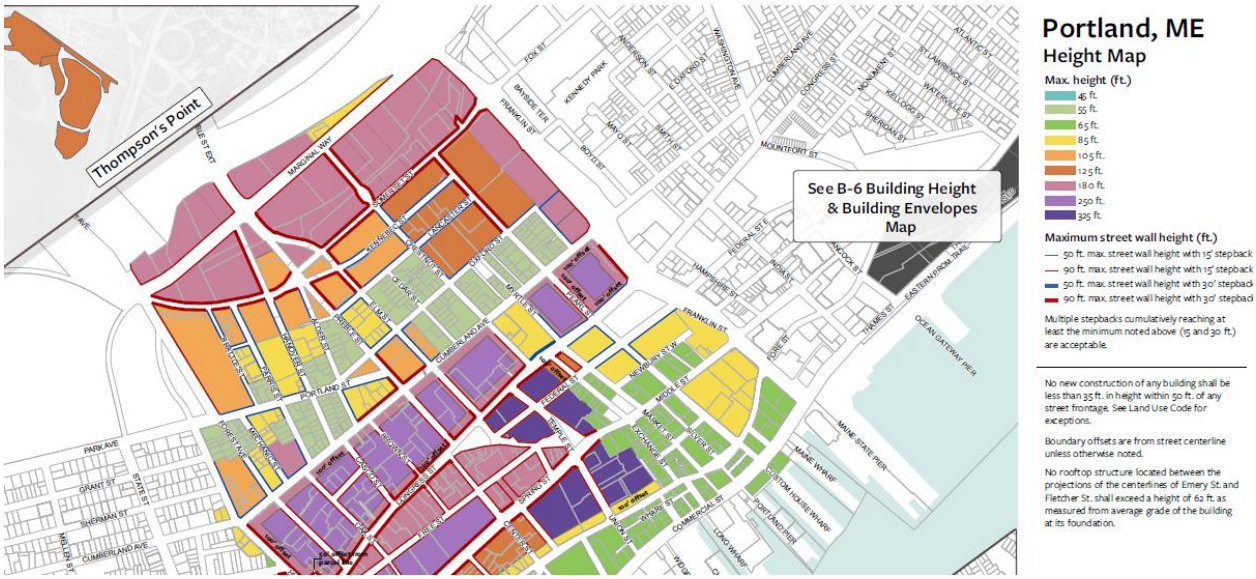


Figure 8: Adopted Downtown Height Map

On December 10, 2024, the Board voted to adopt updated technical regulations in association with ReCode, including low impact development (LID) requirements, and updated stormwater management requirements, which are intended to minimize the ecological and hydrological impact of new development going forward.

19 Willis Street (formerly 33 Montreal Street)
Level III Site Plan and Subdivision
PL-000807-2019 | CBL: 015 B022
37 Montreal Street LLC, Applicant

Submitted to:	Portland Planning Board	**Prepared By:**	Matthew Grooms
Public Hearing Date:	December 10, 2024	**Date:**	December 6, 2024

I. INTRODUCTION

On September 30, 2024, the State of Maine Superior Court remanded Application PL-000807-2019 back to the Planning Board to make additional findings of fact regarding how the project complies with City land-use regulations around building height, setbacks, and the City's design review requirements. On November 12, 2024, the Planning Board voted to reopen the evidentiary record for Application PL-000807-2019 to permit the presentation of additional evidence from the applicant, the city and through public comment, limited only to information that is relevant to the three issues that were in front of the court, specifically, 1) the calculation of the height of the building, 2) whether the development meets the applicable setbacks and 3) whether the development complies with Section 14-526(d)(5)(b).

II. SUPPLEMENTAL INFORMATION

In order to supplement the record, the City has provided the approval record for multiple additional site plan applications, for other projects located either in close proximity to the development at 19 Willis Street, or similarly within the R-6 Residential zone, as further evidence clarifying the application of regulations around height measurement, setback measurement, and historic preservation advisory review.

III. 19 WILLIS STREET - PLANNING BOARD RECORD

A. Workshop (September 24, 2019)
B. Public Hearing (December 14, 2021)
C. Public Hearing for First Remand (November 14, 2023)

IV. REPORT ATTACHMENTS

A. Attachment 1 – Order of Remand – October 8, 2024
B. 218 Washington Ave (PEZ 2016-280, PEZ 2016-281) Approval, Report, and Plans
C. 102 State Street (PL-001840-2021) Approval, Report, and Plans
D. 155 Sheridan Street (PEZ 2017-073) Approval, Report, and Plans
E. 15 Crescent Street (PL-002466-2023) Approval, Report, and Plans
F. 10 Hammond Street (PL-000418-2018) Approval, Report, and Plans
G. 331 Cumberland Avenue (PL-002948-2024) Approval, Report, and Advisory Review.

RECEIVED
OCT 8 2024
By

STATE OF MAINE
CUMBERLAND, ss.

SUPERIOR COURT
CIVIL ACTION
DOCKET NO. AP-24-03

PETER L. MURRAY, et al.

Petitioners,

v.

CITY OF PORTLAND

Respondent,

and

37 MONTREAL, LLC

Party-in-Interest

REMAND ORDER

Before the Court is Peter L. Murray, Deborah D. Murray, Carol Connor, Michael Hoover, and Jean McManamy's (collectively "Petitioners") fully briefed Rule 80B Complaint for Review of Governmental Action. The Rule 80B briefs of Party-in-Interest 37 Montreal, LLC ("37 Montreal") and the City of Portland (the "City") (collectively "Respondents") are also before the Court. The narrow issue is whether the City of Portland Planning Board (the "Planning Board"), made sufficient factual findings on remand from the Law Court to permit meaningful judicial review. After reviewing the parties' well-written briefs and hearing oral argument, the Court concludes that the Planning Board's supplemental findings are insufficient for meaningful judicial review. For the following reasons, the Court retains jurisdiction and remands the matter to the Planning Board to make clear factual findings regarding the height, setback, and design-review requirements.

CLERK'S OFFICE
OCT 8 2024

I. BACKGROUND

This Rule 80B appeal concerns the Planning Board's decision to reapprove a four-story apartment complex (the "Project")[1], following remand by the Law Court in *Murray v. City of Portland*, 2023 ME 57, 301 A.3d 777. (Supplemental Record ("Supp. R.") 1.) The facts of this case prior to remand are more fully detailed in the Law Court's Order, familiarity with which is presumed. *See Murray*, 2023 ME 57, ¶¶ 3-12, 301 A.3d 777. Nonetheless, a brief recapitulation of the relevant factual background and procedural history following remand is warranted.

On August 12, 2019, 37 Montreal filed its initial application for Level III Site Plan, Subdivision and Inclusionary Zoning Conditional Use. (Administrative Record ("R.") 1.) The Planning Board held a public workshop on September 24, 2019. (R. 273.) At the workshop, the Planning Board accepted public comments and provided initial feedback. (R. 273.) Public comments focused primarily on the Project's scale, overbearing size, and compatibility with the neighborhood. (R. 335-350.)

In April 2021, 37 Montreal filed new plans with the Planning Board. (R. 200-210.) A public hearing was scheduled to address the new plans on July 13, 2021. (R. 199.) Petitioners, along with several other Munjoy Hill residents, submitted written statements echoing earlier objections to the Project. (R. 335-340, 342-345, 347.) The objections asserted the Project violated the maximum height for structures within the MHNCOD, did not adhere to applicable setback requirements, and did not conform to the architectural character of the neighborhood. (R. 335-340, 342-345, 347.)

[1] The Project involves combining two pre-existing lots on a parcel of land to develop a four-story apartment complex. (R. 273.) The apartment complex will be located at 19 Willis Street, Portland, Maine. (R. 273.) The Project is in Portland's R-6 zoning district and the Munjoy Hill Neighborhood Conservation Overlay District ("MHNCOD"). (R. 314.)

In November and early December 2021, 37 Montreal submitted final plans for the Project. (R. 2-129.) On December 14, 2021, the Planning Board held a final public hearing. (R. 728-787.) The meeting closed with a unanimous vote by six (6) members of the Planning Board approving the Project. (R. 782-786.) On January 15, 2022, Petitioners filed a timely appeal with the Superior Court pursuant to M.R. Civ. P. 80B. *See Peter Murray, et al. v. City of Portland, et al.*, Docket No. AP-22-03.

On August 1, 2022, this Court entered an Order denying Petitioner's 80B Appeal and denying Respondent's Motion to Supplement the Administrative Record. *See* Docket No. AP-22-03. Petitioners appealed to the Law Court. The Law Court concluded that the Planning Board's decision did not contain sufficient findings required for meaningful judicial review. *Murray*, 2023 ME 57, ¶ 15, 301 A.3d 777. The *Murray* Court stated, "the Planning Board did not explain its conclusions or reasoning related to the proposed development's height or setbacks" and did not "mention or discuss the historic-preservation design-review requirement". *Id.* The Law Court vacated judgment and remanded to this Court with instructions to remand to the Planning Board to make the required findings. *Id.* ¶ 19. Accordingly, this Court remanded to the Planning Board. *See* Docket No. AP-22-03.

On November 22, 2023, Planning Board staff prepared a report (the "Report") to address the issues on remand. (Supp. R. 10-17.) The Planning Board held a hearing on November 28, 2023 ("November 2023 Hearing"). (Supp. R. 59.) At the November 2023 Hearing, the Planning Board adopted statements contained in the Report regarding the height, setback, and design-review requirements as supplemental findings ("Supplemental Decision"). (Supp. R. 1.) The Supplemental Decision incorporated by reference the findings in the Report. (Supp. R. 1.) On

December 12, 2023, the Planning Board formally adopted the Supplemental Decision, and the Project was once again approved. (Supp. R. 1-5, 88-90.)

On January 9, 2024, Petitioners timely filed the current Rule 80B appeal. On February 20, 2024, Petitioners filed their Rule 80B Brief. On March 18, 2024, both 37 Montreal and the City filed their 80B Briefs. On March 29, 2024, Petitioners filed a Reply Brief. On August 22, 2024, this Court held oral argument on the matter.

II. STANDARD OF REVIEW

When the Superior Court acts in an appellate capacity pursuant to Maine Rules of Civil Procedure 80B, the court reviews the operative decision of a municipality for errors of law, abuse of discretion, or findings not supported by substantial evidence in the record. *Grant v. Town of Belgrade*, 2019 ME 160, ¶ 8, 221 A.3d 112 (quoting *Gensheimer v. Town of Phippsburg*, 2005 ME 22, ¶¶ 7, 16 868 A.2d 161). "Substantial evidence exists when a reasonable mind would rely on that evidence as sufficient support for a conclusion." *Ouellette v. Saco River Corridor Comm'n*, 2022 ME 42, ¶ 20, 278 A.3d 1183 (quoting *Doane v. Dep't of Health & Hum. Servs.*, 2021 ME 28, ¶ 38, 250 A.3d 1101). The court may not substitute its judgment for that of a board. *Hill v. Town of Wells*, 2021 ME 38, ¶ 8, 254, A.3d 1161. The party seeking to vacate the decision bears the burden of persuasion on appeal. *Olson v. Town of Yarmouth*, 2018 ME 27, ¶ 11, 179 A.3d 920.

III. DISCUSSION

In this 80B appeal, Petitioners argue that the Planning Board: (1) failed to correctly interpret and apply the height and setback requirements of the Portland City Land Use Code (the "Code"); (2) did not comply with the historic preservation design-review requirement; and (3) failed to make sufficient findings supported by substantial record evidence on remand. Because

the Court concludes the Planning Board's supplemental findings are insufficient, the Court will only address the sufficiency of the record.

A. Sufficency of the Record

Petitioners assert that the Planning Board's findings on remand are insufficient. In short, Petitioner's argue that the Report set forth findings in advance of the hearing that were adopted by the Planning Board without critical analysis, deliberation, or discussion.[2] Respondents contend the Planning Board adopted additional findings of fact sufficient to support its conclusions to allow for meaningful judicial review.

On remand, the Planning Board was required to make findings of fact adequate for judicial review. *See Christian Fellowship & Renewal Ctr. V. Town of Limington*, 2001 ME 16, ¶¶ 15-16, 769 A.2d 834. "Every final decision of the planning board...shall include written findings of fact and shall specify the reason or reasons for such decision." Portland, Me., Code § 14-27(b) (Aug. 7, 1989). "[M]eaningful judicial review of a decision requires that the decision contain findings of fact sufficient to apprise the reviewing court of the decision's basis and that those findings be based on substantial evidence in the record." *LaMarre v. Town of China*, 2021 ME 45, ¶ 6, 259 A.3d 764. The Law court has explained that:

> "In the absence of such findings, a reviewing court cannot effectively determine if an agency's decision is supported by the evidence, and there is a danger of judicial usurpation of administrative functions. Adequate findings also assure more careful administrative considerations, help parties plan cases for rehearing or judicial review and keep agencies within their jurisdiction." *Chapel Rd. Assocs. V. Town of Wells*, 2001 ME 178, ¶ 10, 787 A.2d 137 (citations and quotation marks omitted).

When there is no reviewable decision, the matter must be remanded. *LaMarre*, 2021 ME 45, ¶ 10, 259 A.3d 764; *see also Chapel Rd. Assocs.*, 2001 ME 178, ¶ 13, 787 A.2d 137 (explaining the

[2] Petitioners do not argue that the Planning Board needs to physically draft the findings. Rather, Petitioners assert that the Planning Board must deliberate and clearly articulate findings that form the basis of their conclusions.

remedy for an agency's failure to make sufficient and clear findings is remand for findings that permit meaningful judicial review).

i. Maximum Height Requirements

At the November 2023 Hearing, the Planning Board began by addressing the height requirement. (Supp. R. 75.) The Planning Board adopted a statement in the Report that says, "the City's longstanding practice has been to calculate allowable height on the mainland from average finished grade."[3] (Supp. R. 13, 81.) The Report lacks factual support for this conclusion—the Report does not illustrate any examples of this historical precedent. (Supp. R. 12-13.) During the November 2023 Hearing, the Planning Board made a vague reference to calculating grade for a building project on Fore Street and a project on Hancock Street in this manner. (Supp. R. 80.) These references lack specificity and are not clear findings that support the conclusion that this is the City's "longstanding practice." (Supp. R. 80.) Similarly, Planning Board member Ms. Stanely's statement, "this is how we have historically always treated the measurement of grade that's come up over and over and over again and we have consistently used this method" is not an adequate finding of fact on the issue. (Supp. R. 76.)

Simply put, the Planning Board's conclusion the City has a "longstanding practice" to calculate height with this method is not tied to a sufficient factual basis in the record.[4] The

[3] The Code defines the height of a building as "[t]he vertical measurement from grade, or the predevelopment grade on the islands, to the highest point" of the building. Portland, Me. Code § 14-47 (Feb. 20, 2019). The dispute here is whether height is to be measured from the natural, unfinished grade or from the finished grade created by imported fill.

[4] As this Court noted during oral argument, there is a due process concern lingering in the background. Members of the public who oppose a project are entitled to due process throughout a planning board's permit application review and hearing processes under both the United States and Maine Constitutions. *See Duffy v. Town of Berwick*, 2013 ME 105, ¶¶ 15-17, 82 A.3d 148; *see also* U.S. Const. amend. XIV § 1; *see also* Me. Const. art. I, § 6–A; *see also Lane Constr. Corp. v. Town of Washington*, 2008 ME 45, ¶¶ 28–29, 942 A.2d 1202 (recognizing the procedural due process rights of a project's opponents before a municipal planning board). In terms of fundamental due process, if a consideration of a governmental organization is based on "longstanding" historical practice, but that

Planning Board adopted statements in the Report as supplemental findings without engaging in substantive deliberation to flesh out the factual basis for their conclusion that the Project conforms to the height requirement. At this juncture, the record does not set forth findings that establish the clear collective judgment of the Planning Board on the height requirement issue. Therefore, the Court concludes that the record lacks sufficient factual support to apprise the Court of the rational basis for the decision regarding the height requirement and is thus not susceptible to meaningful judicial review. *See LaMarre*, 2021 ME 45, ¶ 6, 259 A.3d 764.

ii. Setback Requirements

The Planning Board next addressed the setback requirements at the November 2023 Hearing. (Supp. R. 81-82.) Again, the Planning Board adopted statements in the Report as supplemental findings. (Supp. R. 82-83.) The Report states, "certain miscellaneous auxiliary structures such as retaining walls that are not part of the foundational support for the building . . . are not considered 'conforming structures' which need to be setback from the street or lot line and are therefore exempt from setback dimensional requirements." (Supp. R. 14.) This assertion appears in the Report without adequate factual support. At the November 2023 Hearing, the Planning Board did not engage in substantive deliberation to provide a factual basis for the conclusion that retaining walls are not structures. (Supp. R. 81-82.)

The Court concludes that judicial review is hampered by a lack of findings to support the conclusion that retaining walls are not "structures" and that the Project conforms to the setback requirements. This issue could be considered a mixed question of law and fact. Thus, the Court

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practice is not memorialized anywhere, there is cause for concern that an individual dealing with the agency will not know how to conduct themselves in a way that conforms to that practice.

remands to the Planning Board to establish a clear factual and analytical basis regarding why a retaining wall does not fit within the definition of structure.

iii. Historic Preservation Board

The Law Court noted that the Planning Board's initial decision did not mention or discuss the historic-preservation design-review requirement. *See Murray*, 2023 ME 57, ¶ 15, 301 A.3d 777. Land Use Code Section 14-526(d)(5)(b) provides in pertinent part:

> When any proposed development is within one hundred feet of any designated historic district . . . . such development shall be generally compatible with the major character defining elements of the landmark or portion of the district in the immediate vicinity of the proposed development . . . . To aid the planning board in its deliberations, historic preservation staff shall provide a written analysis of the proposed development's immediate context, identifying the major character-defining elements and any established building patterns that characterize the context.

At the November 2023 Hearing, the Planning Board adopted a statement in the Report that says, "Deb Andrews' participation in the design-review memorandum met the clear intent of giving [the Planning Board] the analysis that the ordinance required to be provided by someone from HP." (Supp. R. 15, 83-84.) The Planning Board did not engage in substantive deliberation or discussion regarding the factual basis for concluding that the memorandum met the requirements of Section 14-526(d)(5)(b). (Supp. R. 83-84). Section 14-526(d)(5)(b) specifically provides that the historic preservation written analysis is intended *to aid the planning board in deliberations.* The Planning Board did not deliberate or make factual findings that the Project was compatible with the character of the neighborhood. (Supp. R. 83-84.) Because the record is devoid of clear factual findings on these issues, there are insufficient facts to apprise the Court of the rational basis for the Planning Board's conclusions. *See LaMarre*, 2021 ME 45, ¶ 6, 259 A.3d 764.

B. Remand to the Planning Board

There are two options when the Superior Court is confronted with an inadequate record. *Sanborn v. Town of Eliot*, 425 A.2d 629, 631 (Me. 1981). "First, the court may set aside the decision and require a new hearing." *Id.* Second, the court can "remand to the Board for further findings to develop the record within a stated time period, while explicitly retaining jurisdiction in order to demonstrate that the decision is not a final judgment." *Id.* The first course strikes the Court as inappropriate because the Law Court remanded to the Planning Board to make sufficient findings of fact. *See Murray*, 2023 ME 57, ¶ 19, 301 A.3d 777. Accordingly, this Court will retain jurisdiction and remand the matter to the Planning Board to deliberate and make clear factual findings on the record regarding the height, setback, and design-review requirements.

IV. CONCLUSION

In sum, the Planning Board's findings should be the result of a deliberative process that clearly sets forth the factual basis for its reasoning and conclusions. The Court concludes that there is a defect in the record because there are insufficient facts to permit meaningful judicial review.

Entry Is:

The matter is remanded to the Planning Board to make sufficient findings of fact regarding the height, setback, and design-review requirements. The Planning Board must make clear findings to support its reasoning and conclusions.

The Court assumes the Planning Board will be able to address this matter and return the case to the Court within 90 days of entry of this Remand Order. The parties will report to the Court if the case has not returned within 90 days. Upon filing the supplemental record reflecting the Planning Board's action on remand and any further filings made by the parties during remand, the

following further briefing schedule applies: (a) Petitioners may file a supplemental brief within 20 days of the filing the supplemental record; (b) Respondents may file supplemental briefs within 40 days of filing of the supplemental record; and (c) Petitioners may file a reply brief within 50 days of the filing of the supplemental record. The Court retains jurisdiction, meaning there is no need to commence a new Rule 80B action.

Pursuant to M.R. Civ. P. 79(a), the Clerk is directed to incorporate this Remand Order by reference in the docket.

Dated: 9/30/24

John O'Neil Jr.
Justice, Maine Superior Court

Entered on the Docket: 10/3/24

CITY OF PORTLAND, MAINE
PLANNING BOARD

Elizabeth Boepple, Chair
Sean Dundon, Vice Chair
David Eaton
Brandon Mazer
Carol Morrissette
Maggie Stanley
Lisa Whited

October 11, 2017

218-220 Washington Avenue LLC
199 Elderberry Road
South Portland, ME 04106

Sebago Technics fao Will Conway
75 John Roberts Road
South Portland, ME 04106

Project Name:	Forty-five unit residential Condominium Building
Project ID:	Project #2016-280 (Subdivision & Site Plan)
	Project #2016-281 (Conditional Use Inclusionary Zoning)
Address:	218 Washington Avenue CBL: 010 A015001
Applicant:	218-220 Washington Avenue LLC
Planner:	Jean Fraser

Dear Sirs:

On October 10, 2017 the Planning Board considered the proposal for a four story building comprising 45 condominium dwelling units at 218 Washington Avenue. The Planning Board reviewed the proposal for conformance with the standards of the Inclusionary Zoning, Subdivision and Site Plan Ordinances, as well as the B-1b Neighborhood Business Zone Standards. The Planning Board voted unanimously 5-0 (Boepple absent; Morrissette recused) to approve the application with the following waiver and conditions as presented below.

A. WAIVER

On the basis of the application, plans, reports and other information submitted by the applicant; findings and recommendations contained in the Planning Board Report for the public hearing on October 10, 2017 for application 2016-280 (218 Washington Avenue) relevant to Portland's technical and design standards and other regulations; and the testimony presented at the Planning Board hearing:

> The Planning Board voted unanimously (5-0, Boepple absent; Morrissette recused) that it finds, based upon the consulting traffic engineer's review *(*Attachment 2*)*, that extraordinary conditions exist or undue hardship may result from strict compliance with the Technical Manual Section 1.7.2.7 *Location and spacing of driveways.* The Planning Board waives the *Technical Manual* standard (Technical Manual Section 1.7.2.7) to allow the driveway serving the new development to be located as shown in the Site Plans in Plan P5 and as described in Attachment F.

B. INCLUSIONARY ZONING – CONDITIONAL USE

On the basis of the application, plans, reports and other information submitted by the applicant; findings and recommendations contained in the Planning Board Report for the public hearing on October 10, 2017 for application 2016-281 (218 Washington Avenue) relevant to the Conditional Use as authorized by Division 30, Section 14-487 Ensuring Workforce Housing; and the testimony presented at the Planning Board hearing:

> The Planning Board voted unanimously (5-0 Boepple absent; Morrissette recused) that it finds that the Conditional Use is in conformance with the standards of the land use code and approves the application, subject to the following condition of approval:

i. That the Applicant shall pay a fee of $461,250 into the City's Housing Trust Fund prior to the issuance of a Certificate of Occupancy.

C. SUBDIVISION

On the basis of the application, plans, reports and other information submitted by the applicant; findings and recommendations contained in the Planning Board report for the public hearing on October 10, 2017 for application 2016-280 (218 Washington Avenue) relevant to the subdivision regulations; and the testimony presented at the Planning Board hearing:

The Planning Board voted unanimously (5-0 Boepple absent; Morrissette recused) that it finds that the plan is in conformance with the subdivision standards of the land use code and approves the application, subject to the following conditions of approval, which must be met prior to the signing of the plat unless stated otherwise:

i. The applicant shall submit a final subdivision plat for review and approval by Corporation Counsel, the Department of Public Works, and the Planning Authority; and

ii. That the applicant shall develop and submit, for review and approval by the City Arborist prior to signature of the plat, a plan for the ongoing and future control of the invasive species that are along the site boundary and likely to spread within the site if not controlled. The invasive species found at the site include "Multi-flora Rose" and "Japanese Knotweed", both of which are on the State of Maine Invasive Plant List and subject of recent State legislation to control. This plan, once approved, shall be referenced on the subdivision plat and in the condominium documents; and

iii. The subdivision plat and Condominium Association documents shall include reference to the plan for the control of invasive species and clarify responsibilities for the future control of invasive species, use and appearance of the rooftop decks, snow storage, and maintenance of landscaping and sylva cells in the ROW; and

iv. The Condominium Association documents shall be finalized to the satisfaction of the Associate Corporation Counsel and Planning Authority; and

v. The applicant shall obtain licenses for the planted areas that encroach into the City's ROW prior to the issuance of a building permit; and

vi. That this decision represents a finding by the Planning Board that the application satisfies the requirements of the City Code. It is approved on the basis of the information provided by the applicant in the record regarding his/her ownership of the property. The applicant has the burden of ensuring that he/she has a legal right to use the property. This approval in no way relieves the applicant of this burden. Nor does this approval constitute a resolution in favor of the applicant on any issues regarding property boundaries, easement rights, ownership or other similar title issues. The applicant is advised to resolve such disputes before expending money in reliance on this approval.

D. SITE PLAN

On the basis of the application, plans, reports and other information submitted by the applicant, findings and recommendations contained in Planning Board report for the public hearing on October 10, 2017 for application 2016-280 (218 Washington Avenue) relevant to the Site Plan Ordinance and other regulations and the testimony presented at the Planning Board hearing:

The Planning Board voted unanimously (5-0 Boepple absent; Morrissette recused) that it finds that the plan is in conformance with the site plan standards of the land use code, subject to the following conditions:

i. That the applicant shall submit, for review and approval by the Department of Public Works and the Planning Authority prior to the issuance of a building permit, a revised Utility Plan and Stormwater Management Plan that clarifies the way the stormwater from the development site will be managed in Anderson Street. The applicant has been advised during the review that the existing storm drain in Anderson Street does not have capacity to accept additional flows from the proposed project and that Anderson Street is a moratorium street with a recently installed gas main that will constrain the

stormwater connections. The applicant shall be responsible for all work in Anderson Street required to provide an acceptable stormwater discharge system and for all associated moratorium street fees; and

ii. That the applicant and all assigns shall comply with the conditions of Chapter 32 stormwater including Article III, post-construction storm water management, which specifies the annual inspections and reporting requirements. The developer/contractor/subcontractor must comply with conditions of the submitted construction stormwater management plan and sediment and erosion control plan prepared by Sebago Technics and dated June 2017 based on City standards and State guidelines. A Maintenance Agreement for the stormwater drainage system shall be approved by Corporation Counsel and the Department of Public Works, and submitted, signed and recorded prior to the issuance of a Certificate of Occupancy with a copy to the Department of Public Works; and

iii. That the Construction Management Plan shall be revised for review and approval by the Department of Public Works and the Planning Authority prior to the issuance of a building permit, to address the comments from the Traffic Engineer dated 10.5.2017, the Peer Engineer comments dated 10.6.2017, and the Transportation Program Manager comments dated 10.6.2017; and

iv. That the following plans shall be revised and submitted for review and approval by the Planning Authority prior to the issuance of a building permit:
   a. Site Plan (Plan P5) to revise the parking space layout to show 45 parking spaces (or the applicant may submit proposals for meeting the B1b zone requirements in other ways as allowed in the land use ordinance, also for review and approval prior to the issuance of a building permit);
   b. Detail Plans sheet 10 (Plan 8) and Landscaping Plan sheet 8 (Plan 9) to address the comments of the Transportation Program Manager dated 10.6.2017 and to show that the Street Lamps are Bayside medium in black and part of the projects cost and construction;
   c. Landscaping Plan (Plan 9) to address the planting comments of the City Arborist dated 6.28.2017.

v. That the lighting plan shall be revised for review and approval by the Planning Authority prior to the issuance of a building permit, to show adequate lighting in the vicinity of the parking garage entrance/door; and

vi. That a plan showing the location and screening of all HVAC and other mechanical equipment on the roof shall be submitted for review and approval by the Planning Authority prior to ordering of the equipment; and

vii. That the applicant has demonstrated that site constraints prevent the planting of all of the 45 required street trees (one per unit for multi-family development) in the right-of-way, and therefore the applicant shall contribute $14,400 for 36 street trees to Portland's tree fund. This figure will be reduced by the cost of the nine sylva cells, subject to the applicant submitting evidence of the costs to the Planning Authority and City Arborist; and

viii. That the building design shall be revised to address the Planning Board comments and reviewed and approved by the Planning Authority.

The approval is based on the submitted plans and the findings related to Inclusionary Zoning, Subdivision and Site Plan review standards as contained in Planning Report for applications #2016-280 and #2016-281 which is attached.

STANDARD CONDITIONS OF APPROVAL

Please Note: The following standard conditions of approval and requirements apply to all approved site plans:

1. **Subdivision Recording Plat** A revised recording plat, listing all conditions of subdivision approval, must be submitted to the Planning and Urban Development Department for review. Once approved, the plat shall be signed by the Planning Board prior to the issuance of a performance guarantee. The performance guarantee must be issued, prior to the release of the recording plat, for recording at the Cumberland County Registry of Deeds.

2. **Subdivision Waivers** Pursuant to 30-A MRSA section 4406(B)(1), any waiver must be specified on the subdivision plan or outlined in a notice. The plan or notice must be recorded in the Cumberland County Registry of Deeds within 90 days of the final subdivision approval.
3. **Develop Site According to Plan** The site shall be developed and maintained as depicted on the site plan and in the written submission of the applicant. Modification of any approved site plan or alteration of a parcel which was the subject of site plan approval after May 20, 1974, shall require the prior approval of a revised site plan by the Planning Board or Planning Authority pursuant to the terms of Chapter 14, Land Use, of the Portland City Code.

4. **Separate Building Permits Are Required** This approval does not constitute approval of building plans, which must be reviewed and approved by the City of Portland's Permitting and Inspections Department.

5. **Site Plan Expiration** The site plan approval will be deemed to have expired unless work has commenced within one (1) year of the approval or within a time period up to three (3) years from the approval date as agreed upon in writing by the City and the applicant. Requests to extend approvals must be received before the one (1) year expiration date.

6. **Performance Guarantee and Inspection Fees** A performance guarantee covering the site improvements, inspection fee payment of 2.0% of the guarantee amount and five (5) final sets of plans must be submitted to and approved by the Planning and Urban Development Department and Public Works Department prior to the release of a building permit, street opening permit or certificate of occupancy for site plans. If you need to make any modifications to the approved plans, you must submit a revised site plan application for staff review and approval.

7. **Defect Guarantee** A defect guarantee, consisting of 10% of the performance guarantee, must be posted before the performance guarantee will be released.

8. **Preconstruction Meeting** Prior to the release of a building permit or site construction, a pre-construction meeting shall be held at the project site. This meeting will be held with the contractor, Development Review Coordinator, Public Works representative and owner to review the construction schedule and critical aspects of the site work. At that time, the Development Review Coordinator will confirm that the contractor is working from the approved site plan. The site/building contractor shall provide three (3) copies of a detailed construction schedule to the attending City representatives. It shall be the contractor's responsibility to arrange a mutually agreeable time for the pre-construction meeting.

9. **Department of Public Works Permits** If work or obstructions will occur within the public right-of-way, such as utilities, curb, sidewalk , driveway construction, site deliveries and equipment siting, a Street Opening and/or Occupancy Permit (s) is required for your site. Please contact the Department of Public Works Permit Clerk at 874-8300, ext. 8828. (Only excavators licensed by the City of Portland are eligible.)

10. **As-Built Final Plans** Final sets of as-built plans shall be submitted digitally to the Planning and Urban Development Department, on a CD or DVD, in AutoCAD format (*,dwg), release AutoCAD 2005 or greater.

11. **Mylar Copies** Mylar copies of the as-built drawings for the public streets and other public infrastructure in the subdivision must be submitted to Public Works prior to the issuance of a certificate of occupancy.

The Development Review Coordinator must be notified five (5) working days prior to the date required for final site inspection. The Development Review Coordinator can be reached at the Planning and Urban Development Department at 874-8632. All site plan requirements must be completed and approved by the Development Review Coordinator prior to issuance of a Certificate of Occupancy. Please schedule any property closing with these requirements in mind.

If there are any questions, please contact Jean Fraser at (207) 874-8728.

Sincerely,

Sean T. Dundon

Sean Dundon, Vice Chair
Portland Planning Board

Attachments:
1. Traffic Engineer dated 10.5.2017 (extract)
2. Peer Engineer comments dated 10.6.2017
3. Transportation Program Manager comments dated 10.6.2017
4. City Arborist comments dated 6.28.2017 (extract)
5. Planning Board Report
6. City Code, Chapter 32
7. Sample Stormwater Maintenance Agreement
8. Performance Guarantee Packet

Electronic Distribution:

cc: Jeff Levine, AICP, Director of Planning and Urban Development
Stuart G. O'Brien, City Planning Director, Planning and Urban Development
Barbara Barhydt, Development Review Services Manager, Planning and Urban Development
Jean Fraser, Planner, Planning and Urban Development
Philip DiPierro, DRC, Planning and Urban Development
Mike Russell, Director of Permitting and Inspections
Ann Machado, Zoning Administrator, Permitting and Inspections
Jonathan Rioux, Deputy Director, Permitting and Inspections
Jeanie Bourke, Plan Reviewer/CEO, Permitting and Inspections
Chris Branch, Director of Public Works
Katherine Earley, Engineering Manager, Public Works
Keith Gray, Senior Engineer, Public Works
Doug Roncarati, Stormwater Coordinator, Public Works
Jane Ward, Engineering, Public Works
Rhonda Zazzara, Construction Engineering Coordinator, Public Works
Jeff Tarling, City Arborist, Public Works
Jeremiah Bartlett, Transportation Systems Engineer, Public Works
William Scott, Chief Surveyor, Public Works
Keith Gautreau, Fire
Mike Thompson, Fire
Danielle West-Chuhta, Corporation Counsel
Jennifer Thompson, Corporation Counsel
Victoria Volent, Housing Program Manager, Housing and Community Development
Thomas Errico, P.E., TY Lin Associates
Lauren Swett, P.E., Woodard and Curran
Christopher Huff, Assessor

PLANNING BOARD REPORT
PORTLAND, MAINE

Forty-five unit residential Condominium Building
218 Washington Avenue
Subdivision, Level III Site Plan
and Conditional Use Inclusionary Zoning

218-220 Washington Avenue LLC, Applicant

Project #2016-280 (Subdivision & Site Plan)
Project #2016-281 (Conditional Use Inclusionary Zoning)
CBL: 010 A015001

Submitted to: Portland Planning Board Public Hearing Date: October 10th, 2017	Prepared by: Jean Fraser, Planner Date: October 5th, 2017

I. INTRODUCTION

The applicant has requested a hearing on their project for a 4 story building of 45 condominium dwelling units on Washington Avenue at 218 Washington Avenue on the west side of Washington Avenue near the slip road onto I-295. The mix of dwelling units will be 21 one-bedroom units and 24 two-bedroom units, slightly changed from the original proposal for 22 one-bedroom units and 23 two-bedroom units. The project is located in the B1b zone on a steeply sloping site that overlooks Back Cove; it is within 100 feet of the Eastern Promenade Historic Landscape District.



The proposal is also subject to the Inclusionary Zoning (IZ) ordinance and the initial proposal was to provide on site workforce housing units (Attachment W). The applicant has since decided to make a fee-in-lieu payment into the Housing Fund as confirmed in an email dated 10.6.17 (also in Attachment W).

The proposals were originally submitted in December 2016. Following the resolution of right, title and interest questions, the Planning Board held two Workshops in May and July, 2017 where the Board raised concerns about the buffering of the retaining wall; the roof design, and the appearance when viewed from above.

This Hearing was noticed to 94 neighbors and interested parties, and the public notice appeared in the *Portland Press-Herald* on October 2nd and 3rd, 2017. The applicant held a Neighborhood Meeting on January 4th, 2017 and the notes are included in Attachment U. At the Workshops the Planning Division received three letters of objection from the attorney acting for the abutter at 202 Washington (PC 1, 2 and 5); a comment (PC3) raising concerns about the design and scale of the building; and a comment (PC4) suggesting a different approach to the shared bike/pedestrian path along the frontage. No additional public comments have been received.

Applicant: 218-220 Washington Avenue LLC (represented by Maietta)
Agent and Engineer: Sebago Technics (Will Conway)
Architect: Archetype (Bill Hopkins)

Required reviews and requested waivers:

Applicant's Proposal	Applicable Standards
New structure of 45 dwelling units	Subdivision Review
Multifamily building of 69,459 sq ft	Level III Site Plan Review and B-1b Design Review
New structure of 45 dwelling units	Inclusionary Zoning Section 14-484
Waiver Requests	**Applicable Standards**
Location and spacing of driveways- To allow driveway spacing to be 145 ft from the Eastern Promenade intersection and 45 feet from the adjacent parcel's driveway. Staff Comments: Staff supports both waivers as the proposed driveway is a far as possible from the Eastern Promenade intersection (Att. 2)	Technical Manual Section 1.7.2.7 Location and spacing of driveways *shall be determined as follows*: *Along arterial, collector and local streets, minimum acceptable spacing between double or multiple driveways for driveways on adjacent lots or on the same parcel shall meet the criteria of 100 feet, and corner clearance to a nearby intersection (arterial or collector streets) should be 150 feet.*

II. PROJECT DATA

SUBJECT	*DATA*
Total area of the site	28,382 sq ft
Total Disturbed Area	22,532 sq ft
Existing Zoning	B1b
Existing Use	Small 2-family residential building and otherwise vacant
Proposed Use	Residential; 45 condo units
Impervious Surface Area **--Existing** **--Proposed** **--Net Change**	 2,375 sq ft 22,532 sq ft 20,157 sq ft
Building Footprint **--Existing** **--Proposed** **--Net Change**	 1,100 sq ft 13,751 sq ft 12,651 sq ft
Building Floor Area **--Existing** **--Proposed** **-Net Change**	 2,200 sq ft 69,459 sq ft 67,259 sq ft
Proposed Bedroom Mix **-One-Bedroom Units** **-Two-Bedroom Units** **-Three-Bedroom Units**	 21 One-Bedroom Units 24 Two-Bedroom Units 0 Three-Bedroom Units (Located as follows: • 1st floor- 12 units; 7 one-bedroom; 5 two-bedrooms • 2nd floor- 12 units; 6 one-bedroom; 6 two-bedrooms • 3rd floor- 12 units; 6 one-bedroom; 6 two-bedrooms • 4th floor- 9 units; 2 one-bedroom; 7 two-bedrooms) Total units- 45 units Total bedrooms: 69 bedrooms
Parking Spaces	45 under building (3 existing)
Bicycle parking Spaces	18 (none existing)
Estimated Cost of the project:	$5,850,000

III. EXISTING CONDITIONS

The development site is made up of three parcels previously in different ownerships, including one parcel that contains a two family home that will be demolished as part of the project [see right].



This section of Washington Avenue abuts the IL-b zone that runs along Anderson Street, to the west and below the site. To the north is land owned by the MDOT as part of the I-295 buffer; at this location the buffer is wide so that the land may not be permanently needed for I295 purposes.

To the east is the intersection of the Washington Avenue slip road connecting to I295, and the Eastern Prom which winds down from the east End School and Back Cove overlook. Only a small part of the open area to the east is part of the historic landscape and the rest is parkland. To the south is a two family residential property.

The site contains some mature vegetation on the northern half, but from the house (to be demolished) to the rear and south is mainly scrub and invasive species.



Building to be demolished is at right of this photo

The site includes a 20 foot wide section of relatively flat area nearest to Washington Avenue and then drops steeply by about 25 feet to the rear property line (see the Boundary Survey in Plan 2). This presents constraints on the development and construction techniques, which are discussed in greater detail as part of the review.

The site, along with other properties along Washington Avenue, benefits from long views over Back Cove.

IV PLANNING BOARD WORKSHOP DISCUSSION AND PUBLIC COMMENT

There have been two Planning Board Workshops on this project. At the first meeting in May the Board expressed concern about:

- the need to buffer the high retaining walls from nearby residents;
- whether the first floor could have some other use to better activate the street;
- incorporation of a unbroken flat roof; and
- potential prominence of the mechanicals on the roof.

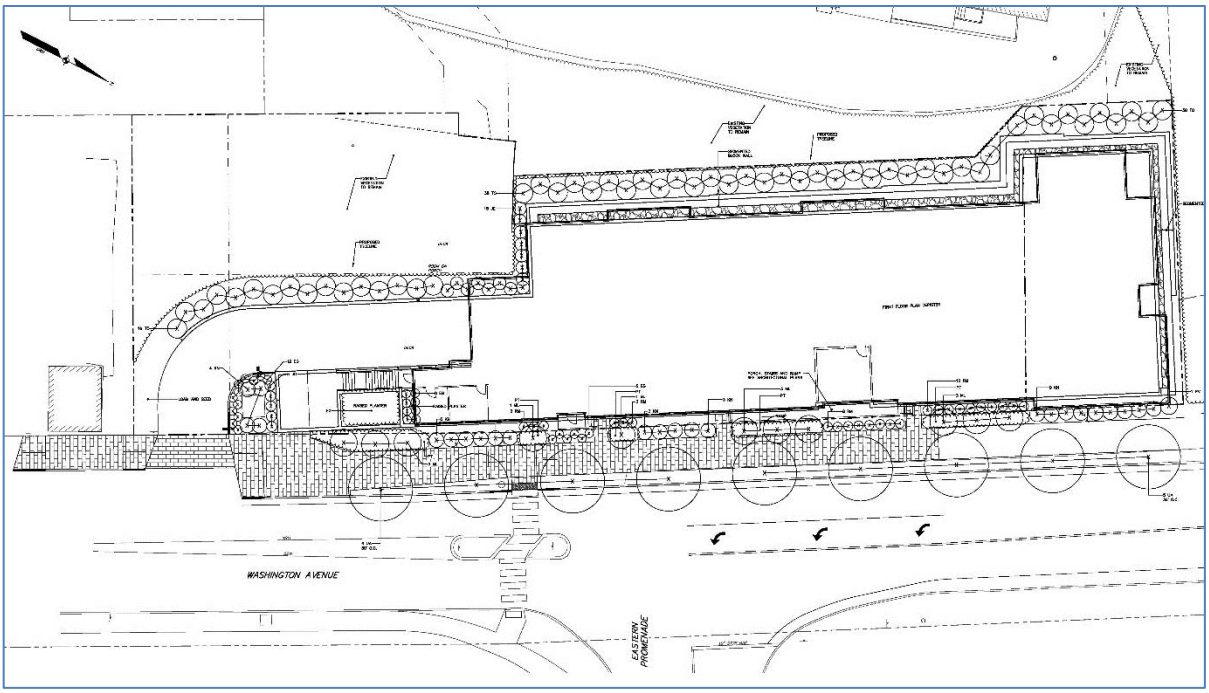
At the July Workshop the applicant presented revised the proposals to address these comments and the Board generally considered that the "scenic beauty" subdivision standard had been met but concerned about the roof design and requested the applicant to reconsider the way the doghouses on the roof were integrated. The Board

also identified the need for the condominium documents to control the use/appearance of roof top decks as they were so prominent.

The public comments included one comment (PC3) that also raised concerns about the scale and design of the proposed building. Three of the five public comments were from the neighbor's attorney regarding the question of right, title and interest and that question is discussed below in Section VI a. The other public comment (PC4) suggested an approach to the sidewalk and bicycle path along the frontage that was supported by staff and now incorporated into the final proposals.

V. PROPOSED DEVELOPMENT

The proposals, including elevations and perspectives, are shown in the Plan set and described in the applicant's submittal. This extract (Plan P9) shows the building footprint and landscaping:



The final proposals include:

- 45 condo units (one and two bedroom);
- Main access from Washington Avenue;
- Lower level parking for 45 vehicles accessed from drive off of Washington Avenue;
- High retaining wall ranging from about 8 to 23 feet in height;
- Planting along the Washington Avenue frontage along with 9 street trees with sylva cells;
- Planting buffers for all of the retaining wall facing west
- An unimproved ("preserved") area of grass and low vegetation below the retaining wall towards the south and west;
- Restriping of Washington Avenue to create a left-turn lane for vehicles coming up from I-295 and turning into the Eastern Promenade;
- Bike path and sidewalk along the frontage, and bike access ramp withinthe sidewalk on the other side of Washington to create an access to the bike path for cyclists travelling northbound.

The final proposals have relocated the retaining wall (around the drive access) nearer to Washington Avenue so it can be lower and also be set back from the negative easement area. This allows for buffer/screen planting all along the face of the wall - see revised plans and renderings in the plan set.

The elevations and the treatment of the roofline (as viewed from the west) has developed over the course of the review as shown below:



As presented to May 9 PB Workshop



Submitted for July 11 PB Workshop



Submitted for October 10 PB Hearing

The Floor Plans have also been submitted along with a total of 11 renderings illustrating how the building would appear from both near and distant views (Plans P16 and P17).

VI STAFF REVIEW

A. RIGHT, TITLE AND INTEREST

The applicant has submitted the deeds in respect of to the northern part of the site, and provided a Purchase and Sale Agreement for the parcel that makes up the southern part of the site (Attachment B). In addition, this property benefits from easements or land transfers with adjoining property owners along Anderson Street (referred to in Attachment E and included in Attachment B).

The southern parcel is of most concern as it includes a residential building that will be demolished to allow for the construction of a retaining wall (up to about 15 feet high in places) that supports the access drive into the garage under the condos. The remainder of the parcel is constrained by a "Boundary Agreement" with an "Amendment to Boundary Agreement" (see applicant's submittal Attachment B, last two documents). This agreement stems from the fact that this area has been the subject of several development concepts in the past, and it became apparent during those earlier reviews that the boundary surveys for the two adjoining properties (202 Washington and 218 Washington) overlapped. Prior to proceeding with any development reviews of the former plans, the city requested that clear right title and interest be presented. The current Boundary Agreement (with Amendment) is the result of private negotiations.

The submitted right, title and interest was reviewed by Corporation Counsel and determined to meet the site plan requirement for evidence of "Right, Title and Interest" and suggested that in view of the questions that had been raised by the neighbor (three letters of objection from the attorney representing the neighbor at 202 Washington Avenue (PC 1, 2 and 5)) that a suggested condition of approval clarify that the Planning Board review does not include a determination on this matter. The applicant's attorney submitted their opinion in Attachment B.

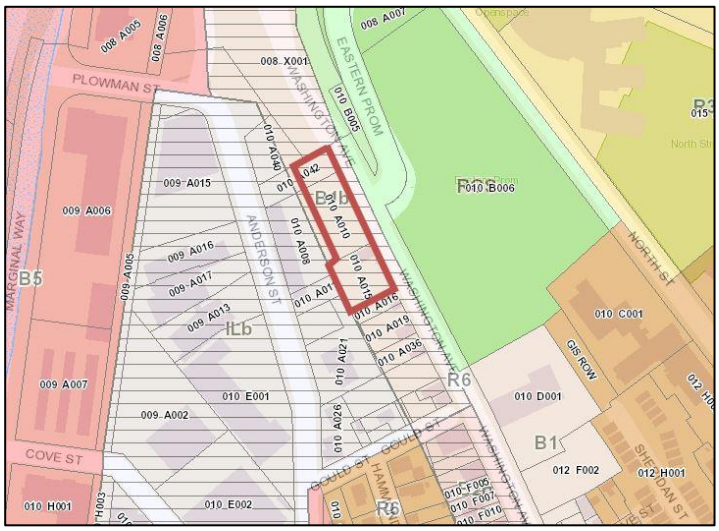
Below is a summary of the boundary agreement limitations:

- Perpetual maintenance easement 30 feet in width along the common boundary, which allows for an access drive to be constructed (not a building) and requires a maintenance access along the boundary. The proposed drive access is at grade near Washington Avenue;

- "Negative Easement" that prohibits buildings or improvements within 50 feet of the NE boundary with Washington Avenue. The current proposals show "Existing vegetation to remain" (Plan 9).

B. ZONING ASSESSMENT

The proposed building is located in the B1b zone which allows for a building height of 45 feet; the proposed building is 45 feet as from the average grade. It appears to be about slightly less than 45 feet high as measured from the level of Washington Avenue (see P14).



The proposal meets all of the other dimensional requirements of the B1b zone.

The Design Standards specify "*In B-1b zone buildings shall be multi-storied with mixed uses."* However, the over-riding B1b ordinance states "*a) The following uses* [which includes residential] *are permitted in the B-1 zone and on the ground floor level of buildings in the B-1b zone."* (Attachment 7) Therefore under the zoning the proposed all-residential development is in compliance.

The applicant previously showed 45 parking spaces in the parking level underneath the residential units which met the zoning requirement of one space per unit (45 spaces). The final Site Plans (Plan P5) show a total of 43 parking spaces, including one compact space and 2 handicapped spaces. The previous plan had included tandem spaces which was questioned by the Traffic Engineering reviewer and have now been omitted. However, the parking provision does not meet the zoning requirement and a suggested condition of approval requests that the parking layout be revised to show 45 parking spaces or otherwise meet the B1b parking standards that would allow for other ways to address the parking space shortfall.

C. SUBDIVISION STANDARDS

14-496. Subdivision Plat Requirements: The applicant has submitted a draft plat (Plan P3) which is generally acceptable but needs to add references related to the suggested conditions of approval.

14-497. General Requirements (a) Review Criteria

Water, Air Pollution and Soil Erosion

The applicant has submitted the capacity letter from the Portland Water District (Attachment N.). The applicant revised the stormwater management system to address previous comments concerning the depth of the system, and further revisions are specified in a suggested condition to ensure that the stormwater system can be connected to the City's system in Anderson Street (Attachment 3).

Traffic

The applicant has submitted a Traffic Study that provides a trip generation estimate that shows a Traffic Movement Permit is not required (Attachment J). The Traffic Engineering reviewer concurs with this assessment and requested a revised lane layout (for a left turn lane) that has been incorporated into the proposals and a suggested

condition requests final details and confirms that the applicant is responsible for the costs of implementing the new lane layout. (Attachment 2).

Parking
As noted above, the parking layout does not provide enough parking spaces to meet the zoning requirement and will need to be revised. The Traffic Engineer considers the general layout to be acceptable based on additional information regarding how all of the internal vehicle movements can occur without any need for vehicles to back out of the site (Attachment 2).

Sanitary Sewer/Soils
The application has been reviewed by the Peer Engineering Reviewer (Attachment 3) and is generally acceptable, and the wastewater capacity letter has been received (Attachment N).

Storm water
The applicant has submitted an updated Stormwater and Erosion Control Plan (Attachment L) that proposes to manage stormwater impacts by utilizing a StormTech chamber system with an underdrained subsurface sand filter to control peak runoff and provide treatment. The updated Plan addresses the earlier comments of the Peer Engineering Reviewer except that the applicant has not finalized the proposals for overcoming some of the challenges in connecting into the City's system in Anderson Street (Attachment 3). Discussions between the applicant's engineers and the City's Department of Public Works are taking place and the suggested condition allows for this to be finalized.

Scenic Beauty
At the July PB Workshop this standard was discussed and the Board indicated that it had been addressed in principle but raised several design questions that needed further consideration, including concerns about the appearance of the rooftop mechanicals since they would be viewed from above. The applicant has addressed this question to some extent and a detailed discussion is included under the Site Plan Design review. A suggested condition relates to the mitigation of the rooftop mechanical equipment.



The applicant was requested to provide additional renderings showing how the proposed building would appear from different vantage points both close to and more distant from the site. The applicant has submitted 11 perspectives as included in Plans 16 and 17, including the one to the right which is from a point near North Street. This section of open space is not within the designated Historic Landscape.

Comprehensive Plan
The project is consistent with the Housing Goals and Policies of the Comprehensive Plan.

D. SITE PLAN STANDARDS - 14-526 Site Plan Standards

1. Transportation Standards

Traffic - Access, Circulation, Loading and Servicing
The proposals retain an existing curbcut (currently used for parking of several vehicles) to provide the access drive to the parking level. The Traffic Engineering Reviewer has noted that the access does not meet the City's Technical Standards regarding driveway separation and corner clearance and supports waivers that reflect the existing condition and that the access drive has been located as far away as possible from the corner.(Att. 2).

Sidewalks
The final proposals incorporate the treatment of the ROW along Washington Avenue that staff had suggested which integrates a wide sidewalk, a wide bike path, 9 street trees and streetlighting. The applicant has also provided a way for cyclists heading northwest to transition from Washington Avenue to the bike path along the frontage of the site via a new ramp in the opposite sidewalk and this is welcomed. This is a particularly complex design and the final proposals are broadly acceptable subject to revision of details as outlined in the Transportation Program Managers comments (Attachment 6) as referenced in a suggested condition of approval.

Construction Management Plan
A Construction Management Plan has been updated to address the City's CMP template (Attachment I), but several reviewers have concerns regarding the safety of pedestrian and bicycle movements; the management of truck deliveries and contractor parking; impact on existing lights and signage; and the final details for the construction of the retaining walls on such a steeply sloping site (Attachments 2,3 and 6).

A suggested condition of approval requests that the applicant revise the Construction Management Plan to address all of these review comments.

Public Transit Access
The project would need to address the ordinance requirements as part of the final submissions, which may require provision of a bus transit shelter. At this time it is understood that METRO do not wish to have a shelter on Washington Avenue opposite the proposed development. The proposed work to improve the cycling infrastructure at this location may be considered as a substitute improvement.

Parking: The proposed parking provision is discussed under Sections VI B *Zoning* and C *Subdivision Standards*.

Snow Storage
This may apply to the garage access drive and should be addressed in the Condominium Documents.

Transportation Demand Management: The project is not subject to these ordinance provisions.

2. Environmental Quality Standards

Landscape Preservation / Site Landscaping and Screening
During the review the applicant addressed previous concerns regarding the buffering of the high retaining walls; this is generally acceptable though the City Arborist has made several minor suggestions that are incorporated in the motion for the Board to consider (Attachment 4).

The City Arborist particularly identified a key requirement, relating to the area within the negative easement, to prevent the encroachment of invasive plants. A suggested condition of approval requires the development of a plan (for the control of invasive species) for review and approval prior to the issuance of a building permit that would also be referenced in the condominium Documents.

Street Trees
The applicant has proposed 9 street trees (based on the Landscape Plan in Plan P9) and requested to make a contribution in respect of 23 street trees. Staff consider that the contribution should cover 36 street trees and this would be a contribution of $14,400. The applicant has proposed sylva cells for the nine proposed street trees, and per the Technical Standards the cost of the sylva cells can be put toward the street tree contribution. A suggested condition of approval sets out this arrangement for meeting the street tree requirement.

Water quality, Stormwater Management and Erosion Control - see above under VI C *Subdivision Standards.*

3. Public Infrastructure and Community Safety Standards

Public Safety
The Crime Prevention through Environmental Design (CPTED) standards in the site plan ordinance address the principles of natural surveillance, access control and territorial reinforcement so that the design of developments enhance the security of public and private spaces and reduce the potential for crime.

The proposals indicate a garage door at the entrance to the garage and do not appear to represent any particular concern. The final submissions include a lighting plan that covers the driveay but not the area near the garage door. Staff suggest that further lighting is required at that location and this is the subject of a suggested condition.

Fire Prevention and Public Utilities: The Fire Department has not identified any concerns regarding the final proposal.

4. Site Design Standards

Massing, Ventilation and Wind Impact and Shadows: Generally addressed in the Design Review.

Historic Resources: Although technically within 100 feet of the Historic Landscape of the Eastern Promenade. The historic part is the "toe" on the far side of the intersection, and does not include the park area immediately opposite the site on Washington Avvene. The Historic Preservation Program Manager has indicated that there is no direct impact and therefore no need for any further review.

Exterior Lighting incl Street Lighting
The applicant has submitted the specifications and a photometric for the site lighting and staff consider some revisions are necessary to meet CPTED objectives.

Street Lights: Reviewers have noted that the project will need to install new street lights along the frontage in the ROW (at the applicant's cost). The lights would need to meet the Technical Standards for street lighting and match the lights installed elsewhere along Washington Avenue (Bayside medium, black). The comments from the Transportation Program Manager (Attachment 6) and the associated suggested condition confirm the requirement.

Noise and Vibration
The applicant has confirmed that the exact HVAC equipment has not been chosen at this time and requests that is information be provided prior to the issuance of a full building permit. The site plan ordinance requires:

> (i) All heating, ventilation and air conditioning equipment (HVAC), air handling units (AHU), emergency generators, and similar equipment shall meet applicable state and federal emissions requirements and shall comply with the following:
>
> (a) Be located to the interior of the site, away from abutting residential properties;
>
> (b) Be screened from view from any public street and from adjacent sites by structure walls, evergreen landscaping, fencing, masonry wall or a combination thereof.

The elevations (Plan P14) suggest that some HVAC will be on the roof and a suggested condition of approval requires the submission of a detailed plan showing what and where the HVAC will be located and how it will be screened.

E. DESIGN STANDARDS

Zoning: The site is located within the B1b Zone and the City's Urban Designer has concluded that the project is generally in compliance with the somewhat limited design standards that apply in this zone (see Att. 1). The Design comments include the following update regarding the applicant's revisions to the roof design/doghouse and materials since the July Workshop:

- The applicant revised the elevations by varying the roofline and changing the cornice detail per Planning Board comment. In addition, the stair overruns were revised with glazing to minimize their visibility from views above and below. Staff finds these changes to have some mitigating impact but the overruns are still prevalent from long views. The roofline variation appears arbitrary except in the case of the central stair tower – staff supports raising the parapet walls to mask the rooftop appurtenance and to create a more consistent roofline.

- Planning Board members suggested incorporating more masonry into the design to ground the building and break up the use of fiber cement board. However, no significant changes to the materials are indicated in the revised drawings.

Please see the discussion under *Zoning* regarding the issue of multiuse on the first floor.

The local context is B1b and ILb zones with open space on the other side of Washington Avenue. There are longer distance views of the building from North Street and nearby parkland and from across Back Cove (illustrated in Plan 17) but there are no specific design standards that particularly apply to this issue (though the *Subdivision Standards* re Scenic Beauty does apply - see VI C above).

Multi-family and Other Housing Types Design Standard - This design standard also applies to the proposal, is outlined below with associated staff review comments:

(i) ***TWO-FAMILY, SPECIAL NEEDS INDEPENDENT LIVING UNITS, MULTIPLE-FAMILY, LODGING HOUSES, BED AND BREAKFASTS, AND EMERGENCY SHELTERS:***

(1) ***STANDARDS.*** *Two-family, special needs independent living units, multiple-family, lodging houses, bed and breakfasts, and emergency shelters shall meet the following standards:*

a. Proposed structures and related site improvements shall meet the following standards:

1. The exterior design of the proposed structures, including architectural style, facade materials, roof pitch, building form and height, window pattern and spacing, porches and entryways, cornerboard and trim details, and facade variation in projecting or recessed building elements, shall be designed to complement and enhance the nearest residential neighborhood. The design of exterior facades shall provide positive visual interest by incorporating appropriate architectural elements;

a. The proposed development shall respect the existing relationship of buildings to public streets. New development shall be integrated with the existing city fabric and streetscape including building placement, landscaping, lawn areas, porch and entrance areas, fencing, and other streetscape elements;

Staff comment: as noted in the Urban Design Review comments (Attachment 1), there is little surrounding built context; the neighborhood is largely composed of industrial, business and open space uses. The perspective below and three others are included in Plan 16 and illustrate how the project may appear locally.



3. Open space on the site for all two-family, special needs independent living unit, bed and breakfast and multiple-family development shall be integrated into the development site. Such open space in a special needs independent living unit or a multiple-family development shall be designed to complement and enhance the building form and development proposed on the site. Open space functions may include but are not limited to buffers and screening from streets and

neighboring properties, yard space for residents, play areas, and planting strips along the perimeter of proposed buildings;

Staff comment: The final project includes balconies and the site is adjacent to the parkland between Washington Avenue and North Street. The negative easement prevents a specific open space area being created on the site.

4. The design of proposed dwellings shall provide ample windows to enhance opportunities for sunlight and air in each dwelling in principal living areas and shall also provide sufficient storage areas;

Staff comment: This standard appears to be met.

5. The scale and surface area of parking, driveways and paved areas are arranged and landscaped to properly screen vehicles from adjacent properties and streets;

Staff comment: The parking is located underneath the units.

F. WORKFORCE HOUSING CONDITIONAL USE (INCLUSIONARY ZONING)

This project is subject to the Inclusionary Zoning ordinance that ensures the provision of workforce housing. A development of ten or more units of housing in the City is required to provide on-site workforce housing units or make an in-lieu payment to the City's Housing Trust.

As applied to this project the applicant could provide 4 deed-restricted units on site, 4 deed-restricted units off site, or $461,250 fee-in-lieu to the Housing Trust. If the provision of on-site units is chosen, the number of bedrooms also must be at least 10% of the totand has confirmed that this meets the minimum requirements of Section 14-487 (Attachment al number of bedrooms included in the project.

The applicant had recently confirmed (see Attachment W and floor plans) that they had chosen to meet the IZ requirement by providing 4 units on site. Just as this report was being finalized the applicant decided to make an in-lieu payment to the Housing Trust instead, and an e-mail confirmation of the $461,250 payment is included in Attachment W. (Pleasenote that the note on the floor plans regarding workforce housing has now been superceeded).

The Housing Program Manager has reviewed the latest proposal and confirms that the proposal meets the requirements of Section 14-487 (Attachment 5).

VII STAFF RECOMMENDATION

Subject to the proposed motions and conditions of approval listed below, Planning Division staff recommends that the Planning Board approve the proposed residential development at 218 Washington Avenue.

VIII PROPOSED MOTIONS

A. WAIVERS

On the basis of the application, plans, reports and other information submitted by the applicant; findings and recommendations contained in the Planning Board Report for the public hearing on October 10, 2017 for application 2016-280 (218 Washington Avenue) relevant to Portland's technical and design standards and other regulations; and the testimony presented at the Planning Board hearing:

1. The Planning Board [**finds/does not find]**, based upon the consulting traffic engineer's review *(*Attachment 2*)*, that extraordinary conditions exist or undue hardship may result from strict compliance with the Technical Manual Section 1.7.2.7 *Location and spacing of driveways.* The Planning Board **[waives/does not waive]** the *Technical Manual* standard (Technical Manual Section 1.7.2.7) to allow the driveway serving the new development to be located as shown in the Site Plans in Plan P5 and as described in Attachment F.

B. INCLUSIONARY ZONING – CONDITIONAL USE

On the basis of the application, plans, reports and other information submitted by the applicant; findings and recommendations contained in the Planning Board Report for the public hearing on October 10, 2017 for application 2016-281 (218 Washington Avenue) relevant to the Conditional Use as authorized by Division 30, Section 14-487 Ensuring Workforce Housing; and the testimony presented at the Planning Board hearing:

The Planning Board finds that the Conditional Use **is/is not** in conformance with the standards of the land use code and **approves/does not approve** the application, subject to the following conditions of approval:

i. That the Applicant shall pay a fee of $461,250 into the City's Housing Trust Fund prior to the issuance of a Certificate of Occupancy.

C. SUBDIVISION

On the basis of the application, plans, reports and other information submitted by the applicant; findings and recommendations contained in the Planning Board report for the public hearing on October 10, 2017 for application 2016-280 (218 Washington Avenue) relevant to the subdivision regulations; and the testimony presented at the Planning Board hearing:

The Planning Board finds that the plan **is/is not** in conformance with the subdivision standards of the land use code and **approves/does not approve** the application, subject to the following conditions of approval, which must be met prior to the signing of the plat unless stated otherwise:

i. The applicant shall submit a final subdivision plat for review and approval by Corporation Counsel, the Department of Public Works, and the Planning Authority; and

ii. That the applicant shall develop and submit, for review and approval by the City Arborist prior to signature of the plat, a plan for the ongoing and future control of the invasive species that are along the site boundary and likely to spread within the site if not controlled. The invasive species found at the site include "Multi-flora Rose" and "Japanese Knotweed", both of which are on the State of Maine Invasive Plant List and subject of recent State legislation to control. This plan, once approved, shall be referenced on the subdivision plat and in the condominium documents; and

iii. The subdivision plat and Condominium Association documents shall include reference to the plan for the control of invasive species and clarify responsibilities for the future control of invasive species, use and appearance of the rooftop decks, snow storage, and maintenance of landscaping and sylva cells in the ROW; and

iv. The Condominium Association documents shall be finalized to the satisfaction of the Associate Corporation Counsel and Planning Authority.

v. The applicant shall obtain licenses for the planted areas that encroach into the City's ROW prior to the issuance of a building permit.

vi. That this decision represents a finding by the Planning Board that the application satisfies the requirements of the City Code. It is approved on the basis of the information provided by the applicant in the record regarding his/her ownership of the property. The applicant has the burden of ensuring that he/she has a legal right to use the property. This approval in no way relieves the applicant of this burden. Nor does this approval constitute a resolution in favor of the applicant on any issues regarding property boundaries, easement rights, ownership or other similar title issues. The applicant is advised to resolve such disputes before expending money in reliance on this approval.

D. SITE PLAN

On the basis of the application, plans, reports and other information submitted by the applicant, findings and recommendations contained in Planning Board report for the public hearing on October 10, 2017 for application 2016-280 (218 Washington Avenue) relevant to the Site Plan Ordinance and other regulations and the testimony presented at the Planning Board hearing:

The Planning Board finds that the plan **is / is not** in conformance with the site plan standards of the land use code, subject to the following conditions:

i. That the applicant shall submit, for review and approval by the Department of Public Works and the Planning Authority prior to the issuance of a building permit, a revised Utility Plan and Stormwater Management Plan that clarifies the way the stormwater from the development site will be managed in Anderson Street. The applicant has been advised during the review that the existing storm drain in Anderson Street does not have capacity to accept additional flows from the proposed project and that Anderson Street is a moratorium street with a recently installed gas main that will constrain the stormwater connections. The applicant shall be responsible for all work in Anderson Street required to provide an acceptable stormwater discharge system and for all associated moratorium street fees; and

ii. That the applicant and all assigns shall comply with the conditions of Chapter 32 stormwater including Article III, post-construction storm water management, which specifies the annual inspections and reporting requirements. The developer/contractor/subcontractor must comply with conditions of the submitted construction stormwater management plan and sediment and erosion control plan prepared by Sebago Technics and dated June 2017 based on City standards and State guidelines. A Maintenance Agreement for the stormwater drainage system shall be approved by Corporation Counsel and the Department of Public Works, and submitted, signed and recorded prior to the issuance of a Certificate of Occupancy with a copy to the Department of Public Works; and

iii. That the Construction Management Plan shall be revised for review and approval by the Department of Public Works and the Planning Authority prior to the issuance of a building permit, to address the comments from the Traffic Engineer dated 10.5.2017, the Peer Engineer comments dated 10.6.2017, and the Transportation Program Manager comments dated 10.6.2017; and

iv. That the following plans shall be revised and submitted for review and approval by the Planning Authority prior to the issuance of a building permit:
    a. Site Plan (Plan P5) to revise the parking space layout to show 45 parking spaces (or the applicant may submit proposals for meeting the B1b zone requirements in other ways as allowed in the land use ordinance, also for review and approval prior to the issuance of a building permit);
    b. Detail Plans sheet 10 (Plan 8) and Landscaping Plan sheet 8 (Plan 9) to address the comments of the Transportation Program Manager dated 10.6.2017 and to show that the Street Lamps are Bayside medium in black and part of the projects cost and construction;
    c. Landscaping Plan (Plan 9) to address the planting comments of the City Arborist dated 6.28.2017.

v. That the lighting plan shall be revised for review and approval by the Planning Authority prior to the issuance of a building permit, to show adequate lighting in the vicinity of the parking garage entrance/door; and

vi. That a plan showing the location and screening of all HVAC and other mechanical equipment on the roof shall be submitted for review and approval by the Planning Authority prior to ordering of the equipment; and

vii. That the applicant has demonstrated that site constraints prevent the planting of all of the 45 required street trees (one per unit for multi-family development) in the right-of-way, and therefore the applicant shall contribute $14400 for 36 street trees to Portland's tree fund. This figure will be reduced by the cost of the nine sylva cells, subject to the applicant submitting evidence of the costs to the Planning Authority and City Arborist.

ATTACHMENTS:

Attachments to Staff Report

1. Design Review - Final comments
2. Traffic Engineering Preliminary Review comments
3. Peer Engineer final review comments
4. City Arborist comments
5. Housing Program Manager review of Conditional Use IZ
6. Transportation Program Manager
7. B1b Use requirements re ground floor

Public Comments

PC1 Attorney Schofield on behalf 202 Washington 1.19.17
PC2 Attorney Schofield on behalf 202 Washington 5.9.17
PC3 K Snyder 5.9.17
PC4 C MilNeil
PC5 Attorney Schofield on behalf 202 Washington 7.10.17

Applicant's Submittal

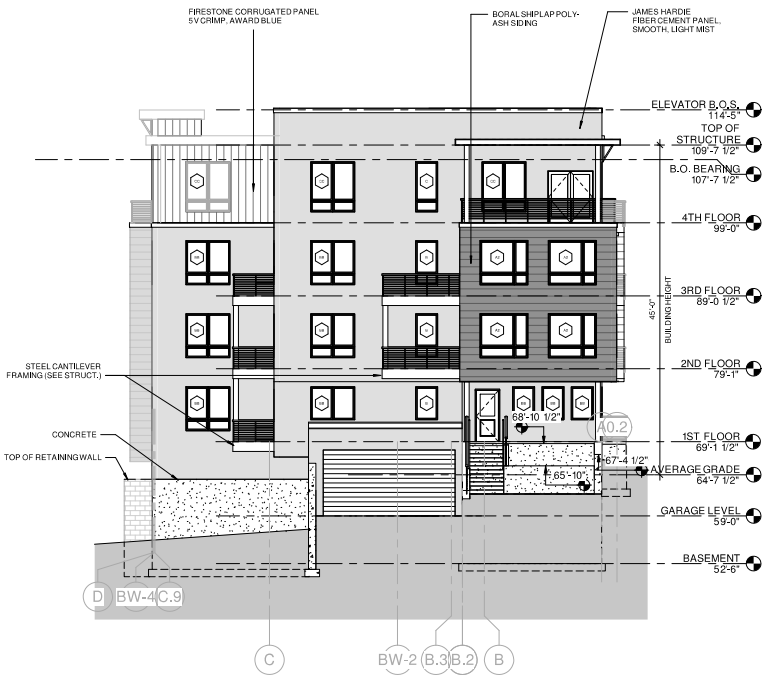
A. Application (Site Plan/subdivision)
B. Right, title and Interest (updated for final)
C. State & Federal Approvals
D. Zoning analysis
E. Easements
F. Waiver requests (updated for final)
G. Financial and Technical Capacity
H. Boundary survey
I. Construction management Plan (updated for final)
J. Traffic Study
K. Natural Features
L. Stormwater Management Plan
M. City Master plans
N. Utilities (updated for final (docs)
O. Solid Waste
P. Fire
Q. Design Review
R. HVAC
S. Lighting Specs (updated for final)
T. Retaining Wall Specs (updated for final)
U. Neighborhood Meeting
V. Narrative re Multi-Family Design Standards
W. Workforce Housing application and plans

Since July Workshop

X. Parking access templates
Y. Response to Comments
Z. Condominium documents

Plans

P1 Cover sheet
P2 Boundary Survey & Existing Conditions
P3 Draft Plat
P4 Demolition Plans
P5 Site Plans (2 sheets)
P6 Utility Plan
P7 Grading Plans (2 sheets)
P8 Details (4 sheets)
P9 Landscaping Plan
P10 Watershed Plans (2 sheets)
P11 Site Context (2 sheets)
P12 Site Section
P13 Floor Plans
P14 Elevations (2 sheets)
P15 Context Aerials (2 sheets)
P16 Renderings- Local Views (6 sheets)
P17 Renderings- Distant Views (3 views)



1 | EAST ELEVATION
1/8" = 1'-0"



2 | WEST ELEVATION
1/8" = 1'-0"

FOR REFERENCE

LICENSED ARCHITECT
WILLIAM K. HOPKINS
No. 1050
STATE OF MAINE

Prepared For:
218-220
Washington Ave,
LLC
199 Elderberry Drive, South Portland,
Maine 04106

Consultant:

Architect:
ARCHETYPE
architects
48 Union Wharf Portland, Maine 04101
(207) 772-6022 ARCHETYPE@ARCHETYPEPA.COM

Project:
218 WASHINGTON
Maine
04106

Revisions:
1 | 8-18-2020 | Issued for Permit

Scale:
1/8" = 1'-0"

Date:
8-14-2020

EAST & WEST
ELEVATION

CITY OF PORTLAND
APPROVED SITE PLAN
Subject to Conditions of Approval
and Standard Conditions
DATE of APPROVAL 10/10/2017 as amended 10/9/2020
PLANNER James Deeleman
PROJECT NO. 2016-280 & 2016-281

A2.00



1 NORTH ELEVATION
1" = 10'-0"

FOR REFERENCE

Prepared For:
218-220 Washington Ave, LLC
199 Elderberry Drive, South Portland, Maine 04106

Consultant:

Architect:
ARCHETYPE architects
48 Union Wharf Portland, Maine 04101
(207) 772-5023 ARCHETYPE@ARCHETYPEPA.COM

Project:
218 WASHINGTON
Maine 04106

Revisions:

Scale: 1" = 10'-0"

Date: 04-2020

NORTH ELEVATION

A2.01

CITY OF PORTLAND
APPROVED SITE PLAN
Subject to Conditions of Approval and Standard Conditions

DATE of APPROVAL 10/10/2017 as amended 10/8/2020
PLANNER James Wellman
PROJECT NO. 2016-280 & 2018-281



1 SOUTH ELEVATION
3/32" = 1'-0"

FOR REFERENCE

LICENSED ARCHITECT
WILLIAM K. HOCKING
No. 1050
STATE OF MAINE

Prepared For:
218-220
Washington Ave,
LLC
199 Elderberry Drive, South Portland,
Maine 04106

Consultant:

Architect:
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Project:
218 WASHINGTON
Maine
04106

Revisions:

Scale:
3/32" = 1'-0"

Date:
09-04-2020

SOUTH ELEVATION

CITY OF PORTLAND
APPROVED SITE PLAN
Subject to Conditions of Approval
and Standard Conditions
DATE of APPROVAL 10/10/2017 Amended 10/9/2020
PLANNER James Dealaman
PROJECT NO. 2016-280 & 2016-281

A2.02

CITY OF PORTLAND, MAINE

PLANNING BOARD

Maggie Stanley, Chair
Brandon Mazer, Vice Chair
Justin Barker
Marpheen Chann
Sean Murphy
David Silk
Austin Smith

March 10, 2022

Erin Cooperrider
NewHeight Group
217 Commercial Street
Portland, ME 04101

Peter Heil
Acorn Engineering
65 Hanover Street
Portland, ME 04101

Project Name: Winter Street Townhomes
Address: 102 State Street
Applicant: NewHeight Redfern, LLC

Project ID: PL-001840-2021
CBL: 45D-001
Planner: Charles Tetelman

Dear Ms. Cooperrider and Mr. Heil:

On March 8, 2022, the Planning Board approved a Major Site Plan application to facilitate the construction of a four-story residential development (27,558 sq. ft.) including nine townhouse-style condominium units along Winter Street in the B-3 Downtown Business zone. The decision is based upon the application, documents, and plans as submitted. The Planning Board reviewed the proposal for conformance with the standards of the Site Plan Ordinance. The Planning Board unanimously voted 6-0 (Barker absent) to approve the application with the following conditions:

Site Plan Review

The Planning Board finds that the plan is in conformance with the site plan standards (Section 14.6) of the Land Use Code subject to the following conditions:

PRIOR TO APPLYING FOR A BUILDING PERMIT

1. The applicant shall submit a final plan set that reflects the underground electric utility layout recommendations from Central Maine Power for review and approval by the Planning Authority and Department of Public Works.

PRIOR TO ISSUANCE OF A BUILDING PERMIT

2. The applicant shall submit all Ability to Serve letters for review and approval by the Planning Authority and Department of Public Works.
3. The applicant shall submit a final Construction Management Plan for review and approval by the Planning Authority and the Department of Public Works.

PRIOR TO ISSUANCE OF A CERTIFICATE OF OCCUPANCY

4. The applicant shall submit a Homeowner's Association agreement and documentation for review and approval by Corporation Counsel and the Planning Authority.

The approval is based on the submitted plans and findings related to the site plan review standards as contained in the Planning Board report dated March 4, 2022 for application PL-001840-2021 which is attached.

Standard Procedures

Note: The following standard procedures and requirements apply to all approved site plans:

1. Site Plan Expiration: The site plan approval will be deemed to have expired unless work has commenced within one (1) year of the approval or within a time period up to three (3) years from the approval date as agreed upon in writing by the City and the applicant. Requests to extend approvals must be received before the one (1) year expiration date.

2. Separate Building Permits Are Required: This approval does not constitute approval of building plans, which must be reviewed and approved by the City of Portland's Permitting and Inspections Department.

3. Performance Guarantee and Inspection Fees: A performance guarantee covering the site improvements and an inspection fee payment of 2.0% of the guarantee amount and three (3) final sets of plans must be submitted to and approved by the Planning and Urban Development Department and Public Works Department prior to the release of a building permit, street opening permit or certificate of occupancy for site plans.

4. Construction Management Plans: The applicant, contractor and subcontractors are required to conform to the approved Construction Management Plan, and all conditions contained within the project's approval, for the entire duration of the project. Any amendments to the approved Construction Management Plan shall be reviewed and approved by the Department of Public Works prior to the execution. The Planning Authority and the Department of Public Works have the right to seek revisions to an approved Construction Management Plan. The applicant shall coordinate the project's construction schedule with the timing of nearby construction activities to avoid cumulative impacts on a neighborhood and prevent unsafe vehicle and pedestrian movements. Accordingly, nearby construction activities could involve a delay in the commencement of construction.

5. Preconstruction Meeting: Prior to the release of a building permit and scheduling of a preconstruction meeting, a hard copy set of approved plans shall be submitted to the Development Review Coordinator. A pre-construction meeting shall be held at the project site with the contractor, Development Review Coordinator, Public Works representative, and owner to review the construction schedule and critical aspects of the site work. At that time, the

Development Review Coordinator will confirm that the contractor is working from the approved site plan and the approved Construction Management Plan. The site/building contractor shall provide one (1) copy of a detailed construction schedule to the attending City representative. It shall be the contractor's responsibility to arrange a mutually agreeable time for the pre-construction meeting.

6. Department of Public Works Permits: If work or obstructions will occur within the public right-of-way, such as utilities, curb, sidewalk, driveway construction, site deliveries and equipment siting, a Street Opening and/or Occupancy Permits are required for your site. Please contact the Department of Public Works Permit Clerk at (207) 874-8300, ext. 8828 (only excavators licensed by the City of Portland are eligible).

7. Develop Site According to Plan: The site shall be developed and maintained as depicted on the site plan and in the written submission of the applicant. Any modifications of an approved site plan or alteration of a parcel, or of any approved exterior elevations, which were the subject of site plan approval after May 20, 1974, shall require the prior approval of an amended site plan by the Planning Board or Planning Authority pursuant to the terms of Chapter 14, Land Use, of the Portland City Code.

8. Stormwater Management: The owner/operator of an approved stormwater management system, and all assigns shall comply with the conditions of Chapter 32, Stormwater including Article III, Post Construction Stormwater Management, which specifies the annual inspections and reporting requirements.

   A maintenance agreement for the stormwater drainage system, as attached, or in substantially the same form, shall be submitted for review by Corporation Counsel. Once approved, the document shall be signed and recorded at the Cumberland County Registry of Deeds prior to the issuance of a building permit. Final copies shall be submitted to both the Department of Planning and Urban Development and the Department of Public Works.

9. Defect Guarantee: A defect guarantee, consisting of 10% of the performance guarantee, must be posted before the performance guarantee will be released.

10. As-Built Final Plans: Final sets of as-built plans shall be submitted digitally to the Planning and Urban Development Department, on a CD or DVD, in AutoCAD format (.dwg), release AutoCAD 2005 or greater.

11. Impact Fees: New development or changes of use that result in net new residential dwelling units, non- residential building square footage, or water meters, are subject to the City of Portland's impact fee ordinance (Chapter 14, Article XVII). Impact fees are calculated at the time of building permit and must be paid prior to the certificate of occupancy. For more information, visit https://www.portlandmaine.gov/2409/Impact-Fees.

The Development Review Coordinator must be notified **five (5) working days** prior to the date required for final site inspection. The Development Review Coordinator can be reached at the Planning and Urban Development Department at (207) 874-8901. All site plan requirements must be completed and approved by the Development Review Coordinator prior to issuance of a Certificate of Occupancy. **Please schedule any property closing with these requirements in mind.**

If there are any questions, please contact Charles Tetelman at (207) 874-8724 or via ctetelman@portlandmaine.gov.

Sincerely,



Maggie Stanley, Chair

Attachments:

1. Planning Board Staff Report, March 4, 2022
2. Portland City Code: Chapter 32
3. Sample Stormwater Maintenance Agreement
4. Performance Guarantee Packet

PLANNING BOARD REPORT
PORTLAND, MAINE

Winter Street Townhomes
102 State Street
Major Site Plan
PL-001840-2021
NewHeight Redfern, LLC

Submitted to:	Portland Planning Board	**Prepared By:**	Charles Tetelman
Public Hearing Date:	March 8, 2022	**Date:**	March 4, 2022

I. INTRODUCTION

NewHeight Redfern, LLC has submitted a Major Site Plan application to facilitate the development of a four-story residential development including nine townhouse-style condominium units along the Winter Street portion of the lot. This application is being referred to the Planning Board for compliance with the City of Portland's Land Use Code Site Plan Standards, Section 14.6.

The Planning and Urban Development Department mailed 269 notices advertising this meeting to property owners within 500 feet of the site. A legal advertisement ran in the February 25, 2022 and February 26, 2022 editions of the *Portland Press Herald*.

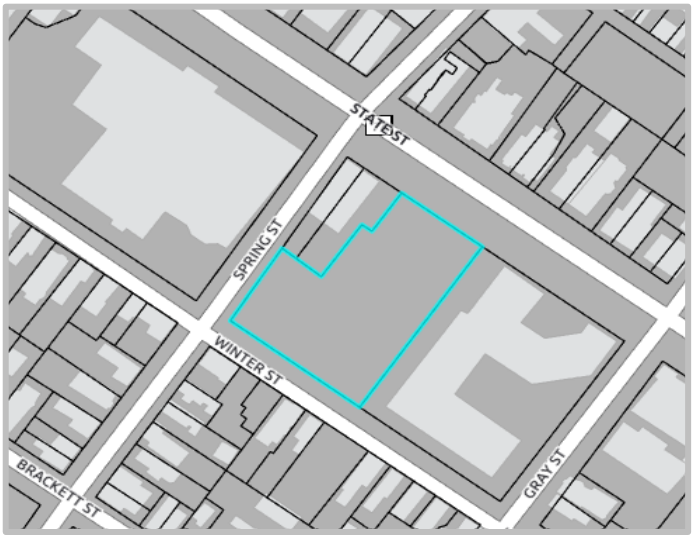


Figure 1: Location of 102 State Street

The Planning Board held a workshop on February 8, 2022.

Applicant:	NewHeight Redfern, LLC
Applicant Representatives:	Acorn Engineering, Inc.

II. REQUIRED REVIEWS

Review	*Applicable Standards*
Site Plan	Section 14.6
West End Historic District	Certificate of Appropriateness (for approval by Historic Preservation Board)

III. PROJECT DATA

Existing Zoning	B-3 Downtown Business
Property Size	45,025 sq. ft.
Existing Use	Parking Lot
Proposed Use	Residential

	Existing	*Proposed*	*Net Change*
Building Footprint	0	9,493 sq. ft.	+9,493 sq. ft.
Building Floor Area	0	27,558 sq. ft.	+27,558 sq. ft.

Impervious Surface Area	41,928 sq. ft.	40,985 sq. ft.	-943 sq. ft.
Parking Spaces	144	18	-126

IV. BACKGROUND

In 2021, the City Council approved a zoning map amendment that rezoned the 102 State Street property and surrounding blocks from R-6 to B-3 (Council Order 164-20/21), along with changes to the Downtown Height Overlay Map (Council Order 165-20/21) to facilitate the redevelopment of the former Northern Light Mercy Hospital campus. In 2021, the Planning Board approved the adaptive reuse of the existing building at 144 State Street (PL-001259-2020) which included residential units, commercial retail space, and self-storage space. Community Housing of Maine and the Portland Housing Authority received approval to build two new residential buildings at 73 and 91 Winter Street (PL-001371-2020).

V. EXISTING CONDITIONS AND SURROUNDING AREA

The location of the proposed project is within the B-3 zone, in the West End neighborhood. Most of the West End is zoned R-4 and R-6; however, there is some variety throughout. Pine and Congress streets are mapped with mixed-use B-1 and B-3 zones, respectively. The surrounding neighborhood context includes State Street, a wide, historic thoroughfare identified as a priority corridor in the City's Comprehensive Plan that has wide sidewalks and established street trees lined with a variety of building types. The buildings fronting State Street range from residential, retail, and places of assembly to historic mansions converted to other uses including a funeral home, the Portland Club, and offices. The character of Spring and Winter streets is predominantly small-to-mid scale residential, with some exceptions. Immediately to the east of the proposed project is 100 State Street, a six-story tower in the park style multi-family building constructed in 1979. As mentioned above, major housing projects have been approved for the former Northern Light Mercy Hospital building and two new residential buildings at 73 and 91 Winter Street that will bring a mix of affordable and market-rate units to the neighboring properties.

Portland's main thoroughfare, Congress Street, is approximately two blocks north and provides a variety of



Figure 2: Winter Street view of the proposed site

mixed-use residential and commercial buildings. Both Congress Street and the West End are characterized by vibrant historic districts – the Congress Street Historic District and the West End Historic District. The proposed projects falls within the bounds of the West End Historic District and is subject to review under the Historic Preservation Ordinance (see below for more information).

The site is directly along METRO Route 8 and is within a ten minute walk to most Routes running along Congress Street and High Street (nearest transfer point located at the corner of Congress Street and Forest Ave.).

VI. PROPOSED DEVELOPMENT

The proposed project will split the parcel Chart 45, Block D, Lot 1 to create two new parcels (Lot 1 28,288 sq. ft. and Lot 2 20,737 sq. ft.) located along State Street and Winter Street. The site currently consists of a surface parking lot with entrances along Spring Street and Winter Street. The proposed Major Site Plan application would facilitate the development of a four-story residential building (9,493 sq. ft. footprint) with nine proposed units (27,558 sq. ft. total floor area) in the Winter Street Lot. The proposed development will have a street wall height of approximately 33 feet, rising to 43 feet on the fourth floor, with an approximately 37 foot setback (creating space for a roof deck). Each unit will be allocated two parking spots in the garage totaling 18 parking spaces.



Figure 3: Proposed Building Elevations along Winter Street

With the proposed building extending across the entire frontage of Winter Street, the existing entrance to the parking lot along Winter Street will be eliminated and the Spring Street entrance will be the sole entrance for both lots. The applicant is seeking to relocate the electric lines along Winter Street underground and have proposed eight street trees along the Winter Street and Spring Street bounds of the townhome lot. There are no major alterations to the State Street lot as part of this application and will remain as parking. However, the applicant has included some minor utility work along State Street to allow for future development of the parcel. Other minor changes include grading, restriping, and the removal of the ADA parking spots next to the Spring Street entrance (the applicant noted these spots would have to be located closer to any future structure in the lot).

VII. PREVIOUS WORKSHOPS

The Planning Board held a workshop for this project on February 8, 2022. At the meeting, the Planning Board discussed the proposed landscaping focusing on the street trees. There were concerns that similar projects in the neighborhood had street trees not survive after the required one year warranty from the developers. Members were curious if the street tree layout alongside the underground electric would lead to difficult street tree conditions. In response to these concerns the applicant worked with the Department of Public Works and the City Arborist to find an optimal solution that bolsters street tree survivability (more information below).

The Planning Board noted that this project, as it relates to nearby developments, contributed to the overall diversity of new housing developments in Portland.

VIII. RIGHT, TITLE, & INTEREST

The applicant submitted a deed transferring two parcels (102 and 144 State Street) from Northern Light Mercy Hospital to NewHeight Redfern, LLC (Attachment C).

IX. FINANCIAL & TECHNICAL CAPACITY

The applicant submitted a letter dated December 1, 2021 from Machias Savings Bank Senior Vice President Francine V. Cam which demonstrates that the applicant NewHeight Redfern, LLC has adequate financial capacity to complete the proposed project (Attachments G + H).

X. ZONING ANALYSIS

The proposed project is located in the B-3 Downtown Business zone and the proposed use (residential) is an allowed use within the zone. The B-3 zone allows a variety of uses including residential, medical clinics, schools, commercial retail & office, restaurants, and hotels. The table below shows the relevant dimensional standards required as described in Table 7-E Mixed-Use Zone Dimensional Standards:

	Required	Proposed
Minimum Street Frontage	15 ft.	126 ft.
Front Setback Maximum	5 ft.	7 ft.*
Step Back	30 ft. State | >35 ft. Winter	37.7 ft.
Height	85 ft. State | 45 ft. Winter	48.4 ft. | 37.7 ft.
Maximum Impervious Area	100%	91%
Off Street Parking Spaces	9	18

*B-3 Build-to Line: The project proposes to have seven-foot front yard setbacks and therefore is subject to the standards for increasing the setback beyond the build-to-line found in the B-3 Downtown Design Guidelines (within the *City of Portland Design Manual*).

City Staff requested an analysis demonstrating to the Planning Board that the introduction of additional setbacks at the street level meet the B-3 Downtown Design Guidelines (Attachment R). The applicant noted that "substantial and viable accessible open space" is provided to the premises that contribute to the overall neighborhood. Furthermore, they mentioned that the additional setback did not detract from the Winter Street street wall and is consistent to the neighborhood character. City Staff find their analysis adequate and that the additional setback meets the standards set forth in the *City of Portland Design Manual*.

XI. SITE PLAN STANDARDS (Section 14.6)

The proposed development has been reviewed by staff for conformance with the relevant review standards of the City of Portland's Site Plan Ordinance, Section 14.6. Staff comments are below:

1. Transportation Standards (Section 14.6.1)

A. Impact on surrounding street systems

The proposed project would not be expected to have a significant traffic or safety impact to the adjacent roadway system. The existing parking lot contains 144 parking spaces utilized for medical and commercial office space. In addition, the applicant proposes to remove the existing site entrance on Winter Street. In addition, the applicant proposes to reduce the total number of parking spaces on the lot and provide two parking spaces for each condo unit built into the first floor of each townhome, which minimizes the need for on-street parking spaces for residents.

B. Access and circulation

The applicant is proposing to eliminate the existing entrance to the parking lot along Winter Street making the Spring Street entrance the only way to access both lots. The townhomes can be accessed via street level entrances along Winter Street and from the rear of the building (internal site access). The applicant is proposing to reconstruct the sidewalks along the frontages including Winter Street and Spring Street.

C. Public transit access
METRO Route 8 runs along the State Street side of the site and there is a bus stop directly adjacent to the site on Spring Street. The site is within a few blocks of other METRO routes and within a 15 minute walk to the transfer station located on the corner of Congress Street and Forest Ave.

D. Parking
The applicant proposes to reduce the total number of parking spaces on the lot and provide two parking spaces for each condo unit built into the first floor, which minimizes the need for on-street parking spaces for residents. The applicant exceeded 10% of the minimum requirement of one space per unit for multi-family housing and provided a Parking Demand Memo (Attachment E). The memo discusses demand for multiple spaces in similar units. According to the applicant, additional parking spaces within the townhomes will reduce the need for on-street parking.

City Staff discussed with the applicant about potential locations for bicycle parking on the exterior of the site either on Spring Street or Winter Street. After considering changes to the underground electric utilities and street tree layouts, the applicant deemed that the exterior bicycle racks would be difficult to fit along the sidewalks. City Staff concluded that the proposed bicycle parking in the garage of each unit would meet the bicycle parking requirement.

E. Transportation demand management (TDM)
A TDM plan is not required.

2. Environmental Quality Standards (Section 14.6.2)

A. Preservation of significant natural features
The site is an existing surface parking lot and there are no significant natural features on site.

B. Landscape preservation
One existing tree is proposed to be preserved on site. The remainder of the site is currently a surface parking lot with little to no vegetation on site.

C. Site landscaping and buffers
The applicant is proposing to underground the electric utility along Winter Street and add eight street trees along Winter Street and Spring Street. The applicant is keeping existing street trees and landscaping along State Street. The applicant worked with the City Arborist to select appropriate street tree species, using City standard NEENA tree grates, and employing additional base frame systems.

Following comments from the Planning Board, the applicant team has included a Street Tree Maintenance Plan (Attachment T) to be maintained by the Winter Street Town Homes HOA.

The applicant noted that loading and servicing areas, trash and recycling, and roof/ground-mounted utility structures will be located in areas away from the public and screened.

D. Water quality/storm water management/erosion control
The existing site is a surface parking lot and the applicant is proposing only minor grading work on the interior of the lot to accommodate construction. The applicant provided a report stating the project as designed is not anticipated to cause flooding or erosion problems on site, with abutting properties, nor within the right-of-way (Attachment K).

The applicant's proposal includes a proprietary modular wetland system to provide water quality treatment and stormwater attenuation which will serve both the State Street lot and the Winter Street lot. City Staff find that the water quality treatment and stormwater management on site are adequate and meet City Standards.

3. Public Infrastructure and Community Safety Standards (Section 14.6.3)

A. Consistency with City Master Plans
The proposed project is in keeping with the stated goals of Portland Plan 2030 regarding housing and the policy of creating complete neighborhoods. The project takes advantage of a central, downtown location near transit and walkable services.

Livable City: Housing – local goals met by this project:
-Increase, preserve, and modify the overall supply of housing city-wide to meet the needs, preferences, and financial capabilities of all Portland residents.
-Encourage additional contextually appropriate housing density in and proximate to neighborhood centers, concentrations of services, and transit nodes and corridors as a means of supporting complete neighborhoods.
-Pursue policies to enable people who work in Portland to have the option to live in Portland.

A Healthy City: Environment – local goals met by this project:
-Adopt sustainable land use and transportation policies that support connectivity, walkable neighborhoods, and multi-modal transportation.

An Enduring City: Historic Resources – local goals met by this project
- Stabilize and enhance historic areas of the city by ensuring quality investment in existing structures and compatible infill development.
- Ensure an appropriate balance of continuity and change as Portland grows and evolves.

B. Public safety and fire prevention
The applicant has incorporated a variety of Crime Prevention through Environmental Design (CPTED) standards into the site design. The site limits public spaces beyond street frontages and public right of ways. The townhomes will all have a garage providing separation from the parking spaces located in the 102 State Street lot.

Emergency vehicles will be able to readily access the townhome sites directly on Winter Street and will be able to access the rear of the buildings through an entrance along Spring Street.

C. Availability and capacity of public utilities
The applicant has reached out to all utility providers and requested ability to serve letters to be provided to the City once received.

The applicant is proposing to underground the electric utilities along Winter Street. The applicant worked with the Department of Public Works and have made changes to the utility plan (Attachment Plan 18). Most of the underground electrical conduits have been moved closer to the edge of the Winter Street Right of Way bordering the site project line to provide additional separation between the conduit duct bank and the proposed street trees. The City Arborist confirmed that this utility layout would provide enough space for required ADA access width and ensure street tree health.

4. Site Design Standards (Section 14.6.4)

A. Massing, ventilation, and wind impact

The architects provided an Architectural Design Narrative (Attachment N) that noted the design reflected the scale and textures of buildings along Winter Street to mirror the surrounding buildings and residential neighborhood. The buildings all have access along Winter Street and the roof top is setback approximately 37 feet before rising up to a maximum height of approximately 43 feet.

HVAC units are in two potential locations: 1) behind the units adjacent to the garages and below the rear decks and 2) on the top story wall (not on the roof), which is setback approximately 30 feet from Winter Street and out of view from Winter Street (approved by Historic Preservation Board).

B. Shadows

The project is not adjacent to any public park or open space. The height of the structure is comparable to surrounding buildings along Winter Street and within the wider neighborhood and no shadow impacts are anticipated.

C. Snow and ice loading

The structures will not distribute snow and ice onto adjacent properties. The proposed snow area is shown on the Site Plan (Attachment Plan 17).

D. View corridors

This project is not located in any designated view corridors.

E. Historic resources

The proposed project is located in the West End Historic District and the Historic Preservation Board has approved a Certificate of Appropriateness (Attachment 1).

F. Exterior lighting

The applicant has provided a photometric plan (Attachment M) which meets the requirements of Section 12 of the Technical Manual.

Existing street lighting within the public right of way is proposed to remain as existing.

G. Noise and vibration

N/A

H. Signage and wayfinding

N/A

I. Zoning-related design standards

As a project located in the West End Historic District, the project is required to comply with the historic preservation standards and received a Certificate of Appropriateness. City Staff provided a more detailed review of the Historic Preservation Board's determination at the Historic Preservation Board Public Hearing on February 16, 2022 (Attachment 1).

The applicant noted the City of Portland Design Manual allows for standards for increasing the maximum front setback. The proposed design has a setback of seven feet to allow for ADA access to the front doors. The applicant also believes the additional setback would provide more space for landscaping thus enhancing the street view of the development (see analysis above).

XII. NEIGHBORHOOD MEETING & PUBLIC COMMENT

On January 27, 2022, the applicants held a virtual neighborhood meeting with 13 attendees and six members of the applicant team (Attachment S). The applicant introduced the project and guided the neighborhood attendees through the project scope and design. There were a handful of questions regarding future development of the 102 State St. parcel and the applicant clarified that there were no further plans at the moment but there would be future conversations. The attendees also asked clarifying questions regarding sidewalks, underground electric, and street tree maintenance.

As of the writing of this report, one public comment has been submitted to the Planning & Urban Development Department (Attachment PC 1).

XIII. STAFF RECOMMENDATION

Subject to the proposed motions and conditions of approval listed below, Planning Department staff recommends to the Planning Board that the proposed project, PL-001840-2021, to construct nine four-story townhomes along Winter Street meets the applicable standards of Portland's Land Use Code.

XIV. PROPOSED MOTIONS

A. SITE PLAN REVIEW

On the basis of the application, plans, reports and other information for the public hearing on March 8, 2022 for application PL-001840-2021 relevant to the site plan regulations; and the testimony presented at the Planning Board hearing, the Planning Board [**finds/does not find**] that the plan is in conformance with the site plan standards of the Land Use Code subject to the following conditions of approval:

PRIOR TO APPLYING FOR A BUILDING PERMIT

1. The applicant shall submit a final plan set that reflects the underground electric utility layout recommendations from Central Maine Power for review and approval by the Planning Authority and Department of Public Works.

PRIOR TO ISSUANCE OF A BUILDING PERMIT

2. The applicant shall submit all Ability to Serve letters for review and approval by the Planning Authority and Department of Public Works
3. The applicant shall submit a final Construction Management Plan for review and approval by the Planning Authority and the Department of Public Works.

PRIOR TO ISSUANCE OF A CERTIFICATE OF OCCUPANCY

4. The applicant shall submit a Homeowner's Association agreement and documentation for review and approval by Corporation Counsel and the Planning Authority.

XV. ATTACHMENTS

REPORT ATTACHMENTS

1. Historic Preservation Certificate of Appropriateness 2.16.22

APPLICANT SUBMITTAL

A. Cover Letter
B. Site Plan Checklist
C. Right, Title, Interest
D. Zoning Assessment
E. Parking Demand Memo
F. Waivers
G. Financial Capacity
H. Technical Capacity
I. Conformity With Land Use Ordinance
J. Stormwater Management Plan
K. Erosion & Sediment Control Report
L. Fire Department Letter
M. Lighting
N. Architectural Design Narrative
O. Utilities
P. Construction Management Plan
Q. Solid Waste Disposal
R. Comment Response Letter 3.22.22
S. Neighborhood Meeting Certification
T. Tree Maintenance Plan

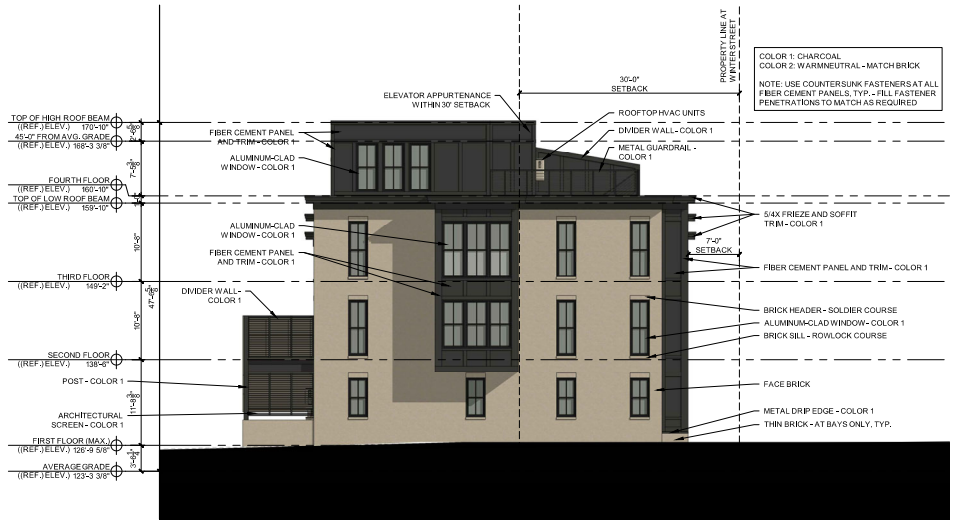
DRAWINGS

Plan 1. First Floor Plan
Plan 2. Second Floor Plan
Plan 3. Third Floor Plan
Plan 4. Roof Plan
Plan 5. Elevations
Plan 6. Elevations II
Plan 7. Perspective Views
Plan 8. Sections
Plan 9. Wall Sections
Plan 10. Privacy Screen Details
Plan 11. Typical Unit
Plan 12. Window Schedule
Plan 13. Architectural Renderings
Plan 14. Cover Sheet & Legend
Plan 15. General Notes
Plan 16. Construction Management Plan
Plan 17. Site Plan
Plan 18. Utility Plan
Plan 19. Grading Plan
Plan 20. Site Details 1
Plan 21. Site Details 2

Plan 22. Utility Details 1
Plan 23. Utility Details 2
Plan 24. Utility Details 3
Plan 25. Drainage Details
Plan 26. Erosion & Sediment Control Notes
Plan 27. Existing Conditions Plan
Plan 28. Landscaping Plan
Plan 29. Materials Plan
Plan 30. Planing Plan
Plan 31. Landscape Details 1
Plan 32. Landscape Details 2
Plan 33. Landscaping Renderings
Plan 34. Photometric Plan
Plan 35. Plat
Plan 36. Street View Plan
Plan 37. Typical Unit Plan

PUBLIC COMMENT

PC 1. GR – 3.3.22



2 WEST ELEVATION
1/8" = 1'-0"



1 SOUTH ELEVATION
1/8" = 1'-0"

CITY OF PORTLAND
APPROVED SITE PLAN
Subject to Conditions of Approval and Standard Conditions

DATE of APPROVAL March 8, 2022
PLANNER Charles Tetelman
PROJECT NO. PL-001840-2021

© 2021 RYAN SENATORE ARCHITECTURE

WINTER STREET TOWNHOMES

WINTER STREET
PORTLAND, MAINE

RSA
RYAN SENATORE ARCHITECTURE
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PORTLAND, MAINE 04101
O: 207-747-6159
C: 207-650-8414
senatorearchitecture.com

CONSULTANTS:

PROGRESS PRINT ONLY
Not for Construction
FEBRUARY 24, 2022

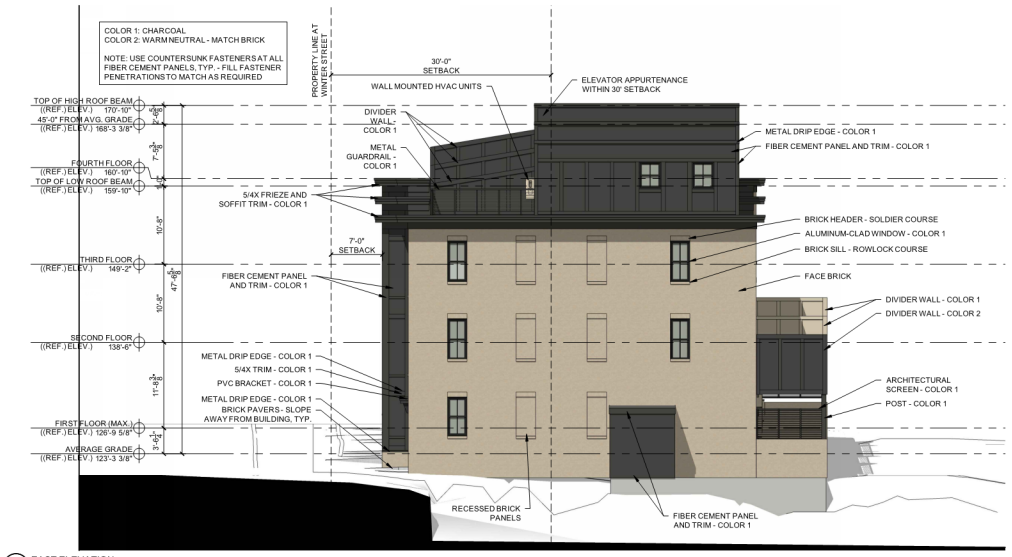
REVISIONS:

CITY OF PORTLAND
APPROVED SITE PLAN
Subject to Conditions of Approval and Standard Conditions
DATE of APPROVAL March 8, 2022
PLANNER Charles Tetelman
PROJECT NO. PL-001840-2021

DRAWN BY: RJS, ES
CHECKED BY: RJS
SCALE: AS NOTED

SHEET TITLE:
ELEVATIONS FOR PLANNING BOARD

A2-0A



2 EAST ELEVATION
1/8" = 1'-0"



1 NORTH ELEVATION
1/8" = 1'-0"

CITY OF PORTLAND
APPROVED SITE PLAN
Subject to Conditions of Approval and Standard Conditions

DATE of APPROVAL March 8, 2022
PLANNER Charles Tetelman
PROJECT NO. PL-001840-2021

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CONSULTANTS:

REVISIONS:
PROGRESS PRINT ONLY Not for Construction FEBRUARY 24, 2022

CITY OF PORTLAND
APPROVED SITE PLAN
Subject to Conditions of Approval and Standard Conditions
DATE of APPROVAL March 8, 2022
PLANNER Charles Tetelman
PROJECT NO. PL-001840-2021

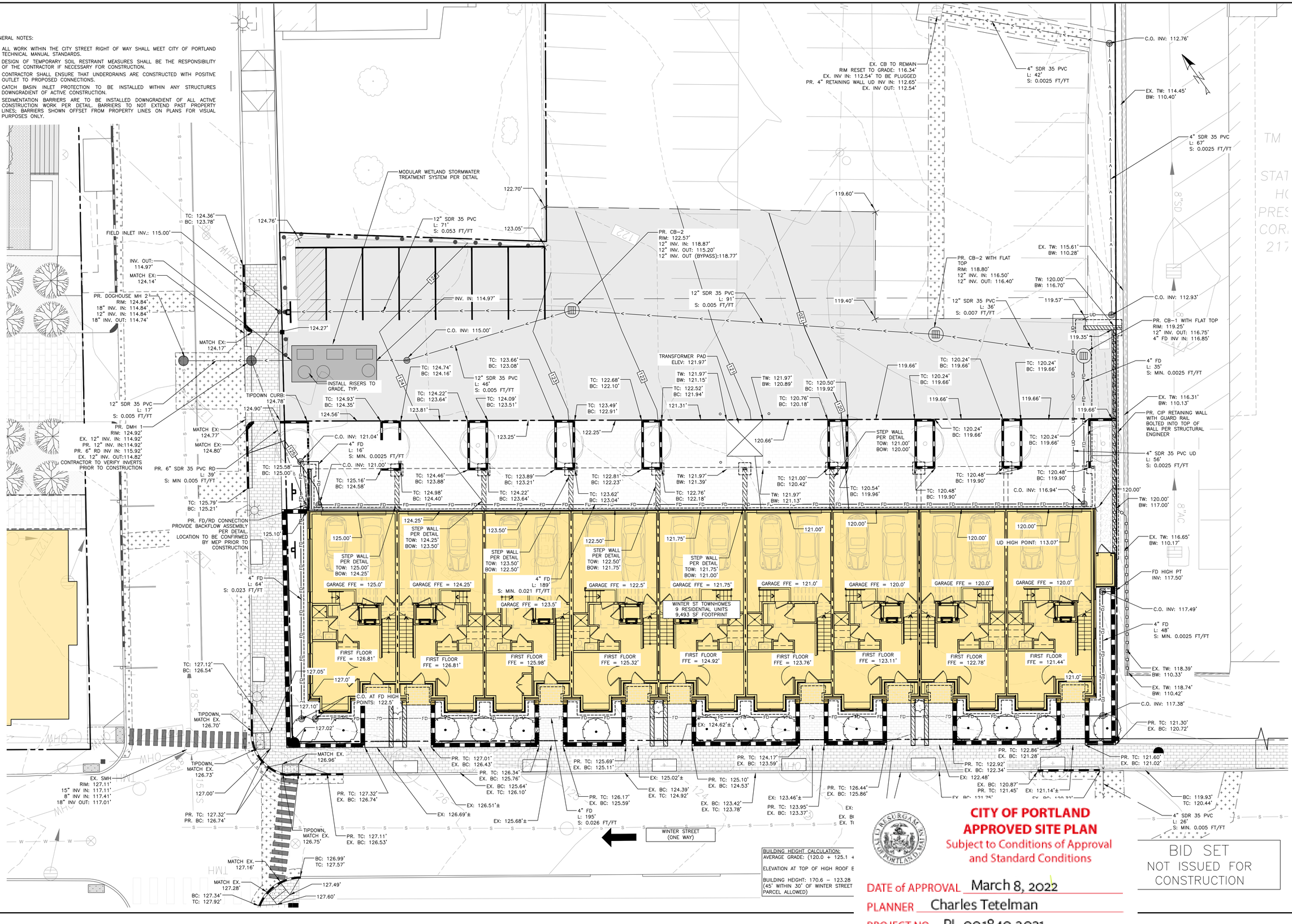
DRAWN BY: RJS, ES
CHECKED BY: RJS
SCALE: AS NOTED

SHEET TITLE:
ELEVATIONS FOR PLANNING BOARD

A2-1A

GENERAL NOTES:

1. ALL WORK WITHIN THE CITY STREET RIGHT OF WAY SHALL MEET CITY OF PORTLAND TECHNICAL MANUAL STANDARDS.
2. DESIGN OF TEMPORARY SOIL RESTRAINT MEASURES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR IF NECESSARY FOR CONSTRUCTION.
3. CONTRACTOR SHALL ENSURE THAT UNDERDRAINS ARE CONSTRUCTED WITH POSITIVE OUTLET TO PROPOSED CONNECTIONS.
4. CATCH BASIN INLET PROTECTION TO BE INSTALLED WITHIN ANY STRUCTURES DOWNGRADIENT OF ACTIVE CONSTRUCTION.
5. SEDIMENTATION BARRIERS ARE TO BE INSTALLED DOWNGRADIENT OF ALL ACTIVE CONSTRUCTION WORK PER DETAIL. BARRIERS TO NOT EXTEND PAST PROPERTY LINES; BARRIERS SHOWN OFFSET FROM PROPERTY LINES ON PLANS FOR VISUAL PURPOSES ONLY.



ISSUED FOR	BY DATE
SITE PLAN SUBMISSION	PFH 12/3/21
PARKING LAYOUT	PFH 1/31/22
COMMENT RESPONSE	PFH 3/2/22
BID SET	PFH 3/15/22

DRAWING NAME: GRADING & DRAINAGE PLAN

PROJECT NAME: WINTER STREET TOWNHOMES PORTLAND, MAINE

CLIENT: NEWHEIGHT REDFERN, LLC 167 NEWBURY STREET, SUITE 503 PORTLAND, ME, 04101

ACORN ENGINEERING, INC.

THESE PLANS, IN PART OR IN WHOLE, AND/OR ELECTRONIC FORMS THEREOF, ARE NOT TO BE USED IN WHOLE OR IN PART BY ANY PERSON OR ENTITY FOR ANY PURPOSE OR PROJECT WITHOUT THE WRITTEN AUTHORIZATION OF ACORN ENGINEERING, INC. ANY UNAUTHORIZED USE OF THESE PLANS AND/OR ELECTRONIC FORMS THEREOF WILL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO ACORN ENGINEERING, INC.

ACORN ENGINEERING, INC. 30A CENTER STREET, MILFORD, MAINE 04461 (207) 775-2655

CITY OF PORTLAND
APPROVED SITE PLAN
Subject to Conditions of Approval and Standard Conditions

DATE OF APPROVAL March 8, 2022
PLANNER Charles Tetelman
PROJECT NO. PL-001840-2021

DESIGNED BY: MKT
DRAWN BY: MKT
CHECKED BY: PFH

STATE OF MAINE PETER F. HEIL 15318 LICENSED PROFESSIONAL ENGINEER

CITY OF PORTLAND
APPROVED SITE PLAN
Subject to Conditions of Approval and Standard Conditions

DATE of APPROVAL March 8, 2022
PLANNER Charles Tetelman
PROJECT NO. PL-001840-2021

BID SET
NOT ISSUED FOR CONSTRUCTION

DRAWING NO.
C-30

CITY OF PORTLAND, MAINE
PLANNING BOARD

Elizabeth Boepple, Chair
Sean Dundon, Vice Chair
David Eaton
Brandon Mazer
Carol Morrissette
Maggie Stanley
Lisa Whited

September 27, 2017

Bernie Saulnier
BD Sheridan, LLC
1266 Furnace Brook Parkway
Quincy, MA 02169

Will Savage, P.E.
Acorn Engineering, INC
158 Danforth Street
Portland, ME 04102

Project Name:	Nineteen-Unit Condominium	Project ID:	2017-073, 2017-115
Address:	155 Sheridan	CBL:	012 Q012
Applicant:	Bernie Saulnier		
Planner:	Matthew Grooms		

Dear Mr. Saulnier and Mr. Savage

On September 12, 2017, the Planning Board approved the Level III Site Plan/Subdivision application and the Conditional Use application for inclusionary zoning for the nineteen-unit residential condominium project located at 155 Sheridan Street in the R-6 Residential District and Fort Sumner Park Overlay Zone. This project includes demolition of an existing single-family structure and extensive regrading of the site so as to accommodate the proposed four-story building. Other site improvements include the construction of a pile and lag retaining wall around the exterior of the proposed building with site landscaping along the property's frontage and along the rear portion of the retaining wall. The Planning Board reviewed the proposal for conformance with the standards of the Site Plan Ordinance, Subdivision Ordinance, Stormwater Permit and Divisions 7 (R-6 and R-6A Residential Zones inclusive of the Fort Sumner Park Overlay Zone), and 20 (Off-Street Parking) of the Land Use Code. The Board also reviewed the Conditional Use application to Ensure Workforce Housing under Division 30 (Affordable Housing) of the Land Use Code. The Planning Board voted 6-0 (Chair Boepple absent) to approve the application with the following waiver(s) and condition(s) as presented below:

WAIVERS

1. The Planning Board voted unanimously 6-0 (Boepple absent) to waive the Section 14-526(c)(3)(b) standard of the Site Plan Ordinance requiring electrical service to be placed underground unless otherwise specified for industrial uses, or determined to be unfeasible due to extreme cost subject to the following conditions:
    a. The proposed overhead utilities shall conform to the standards of the Fort Sumner Park Overlay Zone; and

b. The final proposed overhead configuration shall be reviewed and approved by the Fire Department, Department of Public Works and Planning Authority.

2. The Planning Board voted unanimously 6-0 (Boepple absent) to waive the Section 14-499(h) standard of the Subdivision Ordinance requiring that all utility lines be placed underground unless otherwise approved by the Planning Board subject to the following conditions:

    a. The proposed overhead utilities shall conform to the standards of the Fort Sumner Park Overlay Zone; and

    b. The final proposed overhead configuration shall be reviewed and approved by the Fire Department, Department of Public Works and Planning Authority.

SUBDIVISION REVIEW

The Planning Board voted 6-0 (Boepple absent) that the plan is in conformance with the subdivision standards of the Land Use Code subject to the following condition(s) of approval:

1. Requiring that draft Condominium Association documents addressing Planning Board feedback regarding maintenance of the green roof and be finalized to the satisfaction of Corporation Counsel; and

2. A final subdivision plan and recording plat shall be reviewed and approved by the Department of Public Works and the Planning Authority.

SITE PLAN REVIEW

The Planning Board voted 6-0 (Boepple absent) that the plan is in conformance with the site plan standards of the Land Use Code subject to the following condition(s) of approval:

1. The applicant shall provide a revised construction management plan that incorporates a sidewalk detour to the west side of Sheridan Street. Two temporary crosswalks will be required which shall both be ADA accessible. The southerly temporary crosswalk shall be located at the location of the Fort Sumner path as requested by the city's consulting traffic engineer;

2. That the applicant shall provide a stormwater maintenance agreement for the stormwater drainage system, shall be submitted, signed, and recorded prior to the issuance of a building permit with a copy to the Department of Public Works;

3. The applicant shall provide an updated landscaping plan which provides additional buffering of the project site from Fort Sumner Park as detailed in the comments raised in the City Arborist's email dated September 1, 2017 or otherwise approved by the City Arborist;

4. A contribution of $4,000 in lieu of ten street trees to the Tree Fund, which staff recommends be utilized for landscaping improvements to the lower slope of Fort Sumner Park;

5. The applicant shall work with the Department of Public Works to revise their proposed stormdrain connection per comment 2 of Woodard and Curran's memo dated August 29, 2017; and

6. After submitting plans for review and approval by the Planning Authority, the Applicant shall construct a sidewalk meeting city standards in front of Fort Sumner Park creating a continuous

sidewalk along the east side of Sheridan Street, as well as install a crosswalk connecting the Marion Street pedestrian pathway with this new sidewalk. The applicant is entitled to recoup up to $9,400 in project costs for the sidewalk construction from contributions related to the conditions of approval of the project at 88 Walnut Street (2017-099), specifically the grant of waiver of Section14-498 8(a) included in that project's approval.

The approval is based on the submitted plans and the findings related to site plan review standards as contained in the Planning Report for application (2017-063) which is attached.

CONDITIONAL USE FOR ENSURING WORKFORCE HOUSING
The Planning Board voted 6-0 (Boepple absent) that the plan is in conformance with the conditional use standards of the Land Use Code, subject to the following condition(s) of approval:

1. That the Applicant shall provide one unit of on-site workforce housing restricted to households earning up to 120% of the Area Median Income (AMI) per the submitted application prior; and

2. The applicant shall enter into an Affordable Housing Agreement (AHA) with the City. This agreement shall outline the details of the affordability restrictions placed on Workforce Units and will be filed as covenant to the property's deed with the Cumberland Country Registry of Deeds before a Certificate of Occupancy shall be issued.

STANDARD CONDITIONS OF APPROVAL
Please Note: The following standard conditions of approval and requirements apply to all approved site plans:

1. **Subdivision Recording Plat** A revised recording plat, listing all conditions of subdivision approval, must be submitted to the Planning and Urban Development Department for review. Once approved, the plat shall be signed by the Planning Board prior to the issuance of a performance guarantee. The performance guarantee must be issued, prior to the release of the recording plat, for recording at the Cumberland County Registry of Deeds.

2. **Subdivision Waivers** Pursuant to 30-A MRSA section 4406(B)(1), any waiver must be specified on the subdivision plan or outlined in a notice. The plan or notice must be recorded in the Cumberland County Registry of Deeds within 90 days of the final subdivision approval.

3. **Develop Site According to Plan** The site shall be developed and maintained as depicted on the site plan and in the written submission of the applicant. Modification of any approved site plan or alteration of a parcel which was the subject of site plan approval after May 20, 1974, shall require the prior approval of a revised site plan by the Planning Board or Planning Authority pursuant to the terms of Chapter 14, Land Use, of the Portland City Code.

4. **Separate Building Permits Are Required** This approval does not constitute approval of building plans, which must be reviewed and approved by the City of Portland's Permitting and Inspections Department.

5. **Site Plan Expiration** The site plan approval will be deemed to have expired unless work has commenced within one (1) year of the approval or within a time period up to three (3) years from the approval date as agreed upon in writing by the City and the applicant. Requests to extend approvals must be received before the one (1) year expiration date.

6. **Storm Water Management Condition of Approval** The developer/contractor/subcontractor must comply with conditions of the construction stormwater management plan and sediment and erosion control plan based on City standards and state guidelines.

   The owner/operator of the approved stormwater management system, and all assigns. shall comply with the conditions of Chapter 32 Stormwater including Article III, Post Construction Stormwater Management, which specifies the annual inspections and reporting requirements.

   A maintenance agreement for the stormwater drainage system, as attached, or in substantially the same form, shall be submitted for review by Corporation Counsel. Once approved, the document shall be signed and recorded at the Cumberland County Registry of Deeds prior to the issuance of a building permit. Please submit final copies to both the Department of Planning and Urban Development and the Department of Public Works.

7. **Performance Guarantee and Inspection Fees** A performance guarantee covering the site improvements, inspection fee payment of 2.0% of the guarantee amount and seven (7) final sets of plans must be submitted to and approved by the Planning and Urban Development Department and Public Works Department prior to the release of a building permit, street opening permit or certificate of occupancy for site plans. If you need to make any modifications to the approved plans, you must submit a revised site plan application for staff review and approval.

8. **Defect Guarantee** A defect guarantee, consisting of 10% of the performance guarantee, must be posted before the performance guarantee will be released.

9. **Preconstruction Meeting** Prior to the release of a building permit or site construction, a pre-construction meeting shall be held at the project site. This meeting will be held with the contractor, Development Review Coordinator, Public Works representative and owner to review the construction schedule and critical aspects of the site work. At that time, the Development Review Coordinator will confirm that the contractor is working from the approved site plan. The site/building contractor shall provide three (3) copies of a detailed construction schedule to the attending City representatives. It shall be the contractor's responsibility to arrange a mutually agreeable time for the pre-construction meeting.

10. **Department of Public Works Permits** If work will occur within the public right-of-way such as utilities, curb, sidewalk and driveway construction, a street opening permit(s) is required for your site. Please contact Carol Merritt at 874-8300, ext. 8828. (Only excavators licensed by the City of Portland are eligible.)

11. **As-Built Final Plans** Final sets of as-built plans shall be submitted digitally to the Planning and Urban Development Department, on a CD or DVD, in AutoCAD format (*,dwg), release AutoCAD 2005 or greater.

12. **Mylar Copies** Mylar copies of the as-built drawings for the public streets and other public infrastructure in the subdivision must be submitted to Public Works prior to the issuance of a certificate of occupancy.

The Development Review Coordinator must be notified five (5) working days prior to the date required for final site inspection. The Development Review Coordinator can be reached at the Planning and Urban

Development Department at 874-8632. All site plan requirements must be completed and approved by the Development Review Coordinator prior to issuance of a Certificate of Occupancy. Please schedule any property closing with these requirements in mind.

If there are any questions, please contact Matthew Grooms at (207) 874-8725

Sincerely,



Elizabeth Boepple, Chair
Portland Planning Board

Attachments:
1. Staff Review Memo (6.30/17)
2. Woodard and Curran Memo (8.29.17)
3. T.Y. Lin Email (8.30.17)
4. City Arborist Review Comments (9.1.17)
5. DPW Review Memo (9.1.17)
6. Housing Program Manager Memo (9.5.17)
7. Final Design Review Memo (9.6.17)
8. Planning Board Report
9. Portland City Code: Chapter 32
10. Sample Stormwater Maintenance Agreement
11. Performance Guarantee Packet

Electronic Distribution:

cc: Jeff Levine, AICP, Director of Planning and Urban Development
Stuart G. O'Brien, City Planning Director, Planning and Urban Development
Barbara Barhydt, Development Review Services Manager, Planning and Urban Development
Matthew Grooms, Planner, Planning and Urban Development
Philip DiPierro, DRC, Planning and Urban Development
Mike Russell, Director of Permitting and Inspections
Ann Machado, Zoning Administrator, Permitting and Inspections
Jonathan Rioux, Deputy Director, Permitting and Inspections
Jeanie Bourke, Plan Reviewer/CEO, Permitting and Inspections
Chris Branch, Director of Public Works
Katherine Earley, Engineering Manager, Public Works
Keith Gray, Senior Engineer, Public Works
Doug Roncarati, Stormwater Coordinator, Public Works
Jane Ward, Engineering, Public Works
Rhonda Zazzara, Construction Engineering Coordinator, Public Works
Jeff Tarling, City Arborist, Public Works
Jeremiah Bartlett, Transportation Systems Engineer, Public Works
William Scott, Chief Surveyor, Public Works
Keith Gautreau, Fire
Danielle West-Chuhta, Corporation Counsel
Victoria Volent, Housing Program Manager, Housing and Community Development

Thomas Errico, P.E., TY Lin Associates
Lauren Swett, P.E., Woodard and Curran
Christopher Huff, Assessor

PLANNING BOARD REPORT
PORTLAND, MAINE

19-Unit Condominium Development
155 Sheridan Street
Level III Site Plan and Subdivision Plan and Conditional Use Application for Inclusionary Zoning

Submitted to: Portland Planning Board	Prepared by: Matthew Grooms, Planner
Date: September 8, 2017	CBL: 012-Q-010, 012-Q-012
Public Hearing Date: September 12, 2017	Project #: 2017-073, 2017-115

I. INTRODUCTION

BD Sheridan, LLC requests a Level III site plan, subdivision and conditional use review for a four-story, 34,555 SF housing development on Sheridan Street in the East End. The proposed development consists of nineteen residential units including one on-site workforce housing unit with ground-floor structured parking for nineteen vehicles on a property located immediately north of Fort Sumner Park. The site is currently occupied by a one and a half story single-family home.



Figure 1: Project Site (Note: Existing Single-Family House to be Demolished)

This development is being referred to the Planning Board for compliance with the site plan and subdivision standards of the land use code. The applicant has submitted a final site plan for review by the Planning Board. As this project is located within the Fort Sumner Park Overlay Zone, this project was required to go before the Parks Commission for an advisory review to the Planning Board. The Parks Commission met on September 7, 2017, and unanimously recommended approval of the proposed project.

A total of 374 notices were sent to property owners within 500 feet of the site and a legal ad ran on September 4, and 5 2017.

Applicant: BD Sheridan, LLC
Consultants: Will Savage, Acorn Engineering, INC; Rex Croteau, Titcomb Associates; Ryan Senatore, Ryan Senatore Architecture; Tom Jewell; Olivia Dawson; Patrick Venne

II. REQUIRED REVIEWS

Waiver Requests	***Applicable Standards***
Overhead utilities – To retrofit existing overhead utility lines to serve this site and meet fire department access requirements and the standards of the Fort Sumner Park Overlay Zone Staff Comments: The review staff recommends waiving this standard if the formal cost estimate for underground utilities is greater than $150,000 based upon CMP's non-binding initial estimate.	Site Plan Ordinance, Section 14-526(c)(3)(b) - Electrical service shall be underground unless otherwise specified for industrial uses, or if it is determined to be unfeasible due to extreme cost, the need to retrofit properties not owned by the applicant or complexity of revising existing overhead facilities. Subdivision Ordinance, Section 14-499(h) - All utility lines shall be placed underground unless otherwise approved by the Planning Board.

Review	***Applicable Standards***
Subdivision	*Section 14-497*
Site Plan	*Section 14-526*

III. PROJECT DATA

Existing Zoning	R-6, Fort Sumner Park Overlay
Existing Use	Single-Family Home
Proposed Use	Residential
Proposed Development Program	19 units, 19 parking spaces
Parcel Size	18,140 SF

	Existing	*Proposed*	*Net Change*
Building Footprint	640 SF	9,708 SF	9,068 SF
Building Floor Area	1,280 SF	34,555 SF	33,275 SF
Impervious Surface Area	1,287 SF	*11,070 SF*	*9,783 SF*
Parking Spaces (on site)	1	19	18
Bicycle Parking Spaces	0	8	8
Estimated Cost of Project	$5,000,000		

IV. EXISTING CONDITIONS

The applicant proposes to develop on a 18,140 SF site on the east side of Sheridan Street immediately north of Fort Sumner Park. The site is steeply sloped, with a maximum grade differential of 43 feet from west to east along the southerly property line. Surrounding uses include both single-family homes and multi-family developments, with several nearby projects having been completed in recent years; 152-156 Sheridan Street (2014) located immediately across the street and 135 Sheridan Street (2006) located just to the south. Fort Sumner Park, located immediately to the south, is accessible via footpath from Sheridan Street. The city has recently completed work to stabilize the toe of this slope.

The site lies in the R-6 zone within the Fort Sumner Park Overlay Zone, intended to protect the panorama from Fort Sumner Park. The properties across Sheridan Street are zoned B-2b.

V. PROPOSED DEVELOPMENT

The applicant proposes to develop nineteen residential condominiums on this site, including five two-bedroom units and fourteen one-bedroom units on the second through fourth floor. One, one-bedroom unit of comparable size and appointment is set aside for workforce housing. As currently depicted, the units would range in size from 836 SF to 1,438 SF, and all would have either a balcony or patio with small yard. Extensive site grading is planned. In order to maintain the cut slope, a permanent soldier pile and lagging wall is proposed along the south, east and north portions of the site with a maximum exposed height of 24 feet.



Figure 2: Proposed Site with Zoning Information with Topography

The proposed building is set back five feet from Sheridan Street and is four stories tall with its northern most extent being reduced to three stories in order to satisfy the requirements of the Fort Sumner Park Overlay Zone. The exterior façade consists of a mixture of composite lap siding with a cedar shingle appearance and composite siding panel. Building articulation and massing is further managed by means of projecting bays, street-facing balconies, an entrance canopy and a ranged color palette. Three pedestrian entrances are proposed along the west (street-facing) façade with a further 18' foot wide vehicular entrance and associated new curb cut also being provided off Sheridan Street. The

first and primary entrance is located in the center of the west façade and provides access to the mail room, parking area and one of two building stairwells. The two secondary entrances are located at either end of the building's west façade, with one entrance adjacent to the proposed garage entrance, and the other at the southwest corner of the building which provides direct pedestrian access to the building's elevator and second stairwell.

Given the extensive grade differential, the applicant is proposing to regrade large portions of the site and has submitted a geotechnical report in support of the necessary site work. In accordance with the Fort Sumner Park Overlay Zone, the applicant has provided a fifteen-foot setback along the southerly property line adjacent with the park property and building elevations demonstrating that all portions of the proposed roof structure including appurtenances fall within the limits set by the overlay zone. In order to further mitigate the impacts of a building in this location as it relates to the panorama from Fort Sumner Park, the applicant is proposing to construct a green (vegetated) roof in order to soften the appearance of the building from the park. The green roof would not be accessible to residents of the development, and during the workshop on July 11th, the Planning Board suggested that the roof be maintained by an independent contractor hired by the condominium association. According to the applicant, maintenance of this feature is covered under both the stormwater maintenance agreement and condominium documents for this project.

The first floor of the proposed building will consist of structured parking for nineteen vehicles including one compact parking space as well as a resident lobby, mail room, solid waste storage, mechanical closets and elevator. The upper floors will consist of nineteen one and two-bedroom residential units, ranging from 836 SF to 1,438 SF. Each unit is provided with either a patio or a balcony. There is an additional common roof deck available to residents located on the fourth floor and similarly residents have private access to Fort Sumner Park via a proposed pathway accessible by an entrance located on the fourth floor.

Additional site improvements include the reconstruction of the sidewalk along Sheridan Street and dedication of one foot of the applicant's frontage along a portion of their property as a public access easement in order to widen the sidewalk. According to the applicant's engineer, this would provide sufficient space for the proposed street trees and adequate pedestrian passing access. The developer intends to install landscaping along both the property's street frontage and along the rear property line. A total of four Armstrong Red Maples are proposed as street trees with eight additional Dwarf Alberta Spruce and perennial beds proposed along the front façade of the building. At the northern extent of the building, a CMP compliant 6-foot cedar stockade fence is proposed to screen the proposed transformer pad and at the southern extent of the building, one Downy Service Berry is proposed to soften the appearance of the retaining walls per suggestions raised by the Planning Board at the July 11th workshop. At the rear of the property, 55 Virginia Rose, which is a thorny bush, are proposed to run along the top perimeter of the pile and slag retaining wall as both a visual buffer and natural deterrent to site access from North Street. A five-foot chain link fence will also be installed along the top of the retaining wall for additional safety. No street lights are proposed.

VI. DISCUSSION OF WAIVER REQUEST FOR OVERHEAD UTILITIES

Both the site plan ordinance and subdivision ordinance contain language which require developers to install electrical service lines underground for new development. The site plan ordinance under Section 14-526(c)(2)(3)(b) states:

> *Electrical service shall be underground unless otherwise specified for industrial uses, or if it is determined to be unfeasible due to extreme cost, the need to retrofit properties not owned by the applicant or complexity of revising existing overhead facilities.*

The subdivision ordinance, under Section 14-499(h) states:

> *All utility lines shall be placed underground unless otherwise approved by the Planning Board.*

In response to preliminary plan review comments from Planning, the Department of Public Works and Fire Department requesting that utility lines be placed underground, the applicant met with and discussed cost estimates with Central Maine Power for the placement of electrical service lines underground. It was initially determined to be cost prohibitive, which prompted the developer to pursue an alternative option in which the lines would be located on elevated poles and moved away from the building by means of alley arms. Given that this alternative does not

meet city standards as stated above and is not a preferred alternative for the fire department, city staff have solicited additional information to inform the recommendation to the Planning Board.

On August 17, 2017, staff met with the applicant's engineer, architect and attorney to discuss the cost of this improvement and standards under the site plan and subdivision ordinance as listed above. Staff asked that the applicant meet with CMP and determine a formal cost estimate for both options so as to weigh a waiver request. This meeting was followed up by a site visit on August 24th attended by members of staff, the applicant's engineer and architect, and Paul Duperre from Central Maine Power. At this meeting, Mr. Duperre provided a rough approximation of the cost and layout of the two alternatives, stating that a formal cost estimate would take six weeks to prepare.

According to Mr. Duperre, the cost of an overhead configuration with raised poles and alley arms would likely be around $70,000, based upon a similar configuration installed on India Street. This proposal would involve relocating poles 20 and 21 away from the proposed building's frontage and raising the poles approximately seven feet in elevation. The non-binding estimate for the underground configuration would be between $120,000 and $140,000. This proposal would involve relocation of pole 21 from the east side of Sheridan Street to the west side, and removal of existing poles 20 and 22, currently along the building's frontage and to the north of the project site, with the installation of two underground vaults along the property's frontage. This proposal would involve work to be completed within Sheridan Street (*Plans 31 and 32*).

The overhead configuration is considered acceptable though not preferable from a life/safety perspective and would meet fire department standards for building access. Keith Gautreau, Assistant Fire Chief, has indicated his preference to see the lines installed underground. This consideration is being addressed as a waiver request, and is further being reviewed as a condition for approval, subject to the final cost estimate provided by CMP.

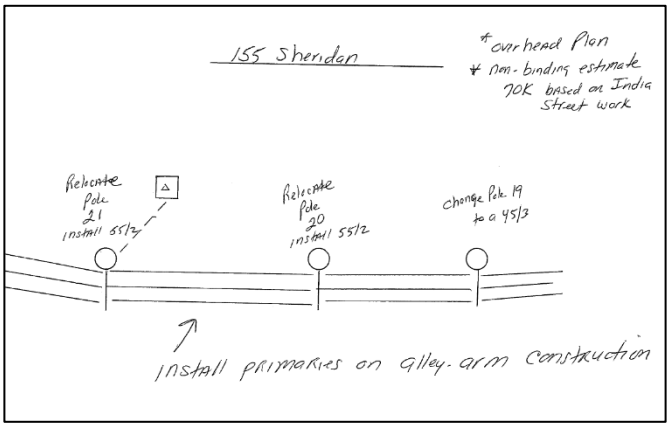


Figure 3: Proposed Overhead Configuration

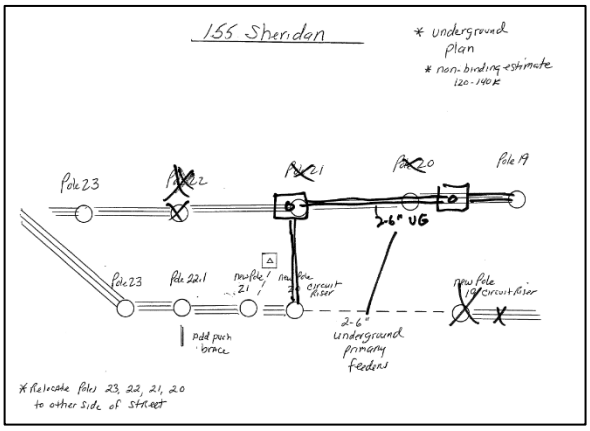


Figure 4: Proposed Underground Configuration



Figure 3: West Elevation Demonstrating Compliance with Fort Sumner Park Overlay



Figure 6: Building Rendering Looking South

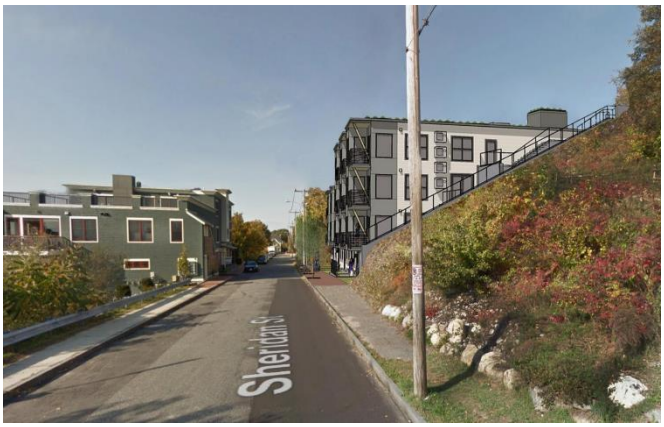
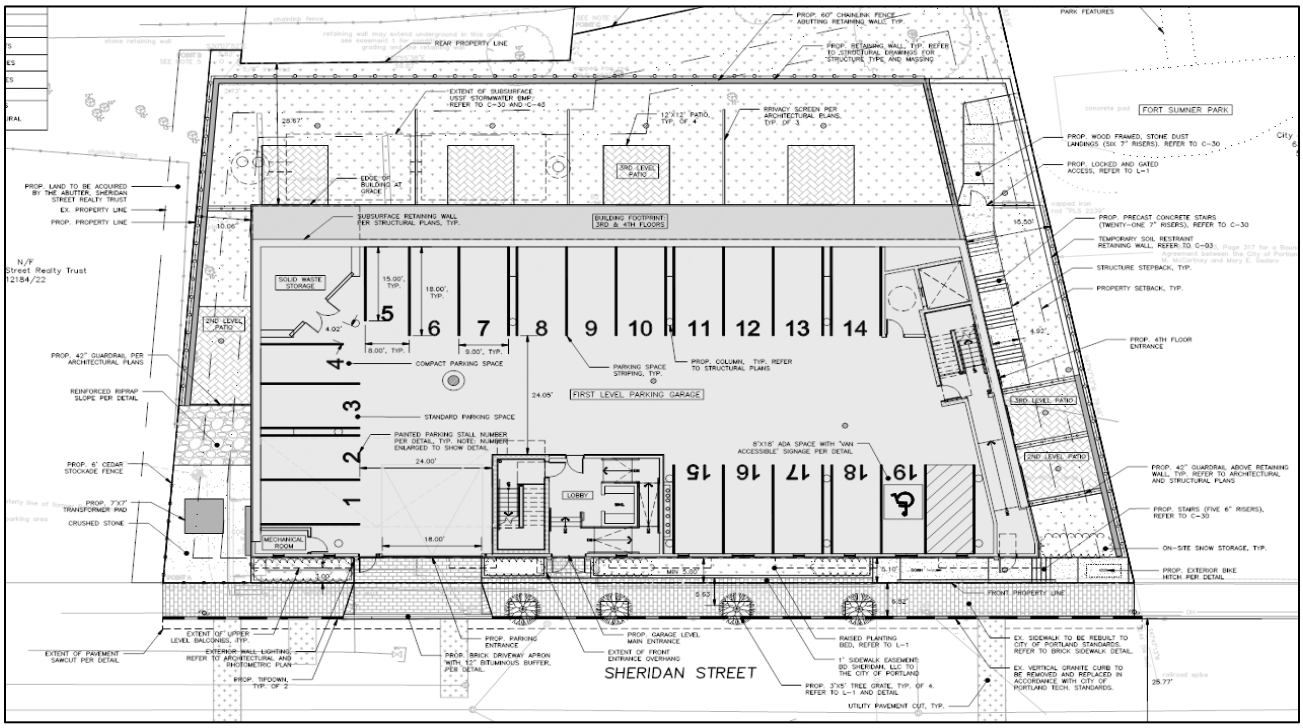


Figure 7: Building Rendering Looking North


SHERIDAN STREET
FIRST LEVEL PARKING GARAGE
LOBBY
MECHANICAL ROOM
SOLID WASTE STORAGE
FORT SUMNER PARK
PROP. 60" CHAINLINK FENCE ABUTTING RETAINING WALL, TYP.
PROP. RETAINING WALL, TYP. REFER TO STRUCTURAL DRAWINGS FOR STRUCTURE TYPE AND MASSING
REAR PROPERTY LINE
EXTENT OF SUBSURFACE UNDERGROUND STORMWATER SYSTEM, REFER TO C-30 AND C-40
PRIVACY SCREEN PER ARCHITECTURAL PLANS, TYP. OF 3
PROP. WOOD FRAMED, STONE DUST LANDINGS (SIX 7" RISERS), REFER TO C-30
PROP. LOCKED AND GATED ACCESS, REFER TO L-1
PROP. PRECAST CONCRETE STAIRS (TWENTY-ONE 7" RISERS), REFER TO C-30
TEMPORARY SOIL RESTRAINT RETAINING WALL, REFER TO C-03
STRUCTURE SETBACK, TYP.
PROPERTY SETBACK, TYP.
PROP. 4TH FLOOR ENTRANCE
PROP. LAND TO BE ACQUIRED BY THE ABUTTER, SHERIDAN STREET REALTY TRUST
EX. PROPERTY LINE
PROP. PROPERTY LINE
N/F Street Realty Trust 12184/22
SUBSURFACE RETAINING WALL PER STRUCTURAL PLANS, TYP.
BUILDING FOOTPRINT 3RD & 4TH FLOORS
EDGE OF BUILDING AT GRADE
3RD LEVEL PATIO
2ND LEVEL PATIO
12'X12' PATIO, TYP. OF 4
PROP. 42" GUARDRAIL PER ARCHITECTURAL PLANS
REINFORCED RIPRAP SLOPE PER DETAIL
PROP. 6' CEDAR STOCKADE FENCE
PROP. 7'X7' TRANSFORMER PAD
CRUSHED STONE
COMPACT PARKING SPACE
STANDARD PARKING SPACE
PAINTED PARKING STALL NUMBER PER DETAIL, TYP. NOTE: NUMBER ENLARGED TO SHOW DETAIL
PARKING SPACE STRIPING, TYP.
PROP. COLUMN, TYP. REFER TO STRUCTURAL PLANS
8'X18' ADA SPACE WITH VAN ACCESSIBLE SIGNAGE PER DETAIL
PROP. 42" GUARDRAIL ABOVE RETAINING WALL, TYP. REFER TO ARCHITECTURAL AND STRUCTURAL PLANS
PROP. STAIRS (FIVE 6" RISERS), REFER TO C-30
ON-SITE SNOW STORAGE, TYP.
PROP. EXTERIOR BIKE HITCH PER DETAIL
FRONT PROPERTY LINE
EXTENT OF PAVEMENT SAWCUT PER DETAIL
EXTENT OF UPPER LEVEL BALCONIES, TYP.
EXTERIOR WALL LIGHTING, REFER TO ARCHITECTURAL AND PHOTOMETRIC PLAN
PROP. TIPDOWN, TYP. OF 2
PROP. PARKING ENTRANCE
PROP. BRICK DRIVEWAY APRON WITH 12" BITUMINOUS BUFFER, PER DETAIL
PROP. GARAGE LEVEL MAIN ENTRANCE
EXTENT OF FRONT ENTRANCE OVERHANG
RAISED PLANTING BED, REFER TO L-1
1' SIDEWALK EASEMENT TO THE CITY OF PORTLAND
PROP. 3'X5' TREE GRATE, TYP. OF 4, REFER TO L-1 AND DETAIL
UTILITY POLE
UTILITY POLE
UTILITY POLE

provide off-site improvements. In regards to the other raised concerns, these issues are addressed in the applicant's construction management plan which has been reviewed by the city's consulting traffic engineer, Tom Errico and Senior Engineer with DPW, Keith Gray.

The applicant did hold a neighborhood meeting on June 21st at the East End School, attended by 12 individuals. Questions asked at this meeting were in regards to the parking, the proposed work-force housing unit, the construction management process, site stabilization, view impacts from Fort Sumner Park, the proposed green roof and project timeline (*Attachment Y*). Comments are discussed below where relevant.

VII. PARKS COMMISSION ADVISORY REVIEW

On September 7, 2017, the Parks Commission voted unanimously to recommend approval of the project at 155 Sheridan Street to the Planning Board. The applicant provided a comprehensive overview including compliance with the standards of the Fort Sumner Park Overlay Zone, and revisions based upon both staff and Planning Board feedback. The Commission's recommendation to the Planning Board included a suggestion that the applicant work with other proposed developments occurring in the vicinity, notably the project at 88 Walnut Street, to provide monetary contributions for off-site improvements, specifically extension of the sidewalk along the east side of Sheridan Street by 200 feet to south across the Fort Sumner Park property, and installation of a cross-walk at the Marion Street intersection. No public testimony was received during this meeting.

Staff has not formally requested contributions from the applicant for off-site improvements, though the Parks Commission recommendation may be pursued by the Planning Board as a possible condition for approval.

VIII. RIGHT, TITLE, & INTEREST

The applicant has provided a deed demonstrating ownership of the subject property, which, as described above, consists of two separate parcels. *(Attachment C).*

VIII. FINANCIAL & TECHNICAL CAPACITY

The estimated cost of the development is $5 million. The applicant has submitted a letter from Northern Bank & Trust Company indicating that BD Sheridan, LLC has the financial capacity to fund the project *(Attachment G).*

IX. ZONING ANALYSIS

BD Sheridan, LLC is proposing a nineteen-unit multi-family development located entirely within the R-6 Residential zoning district and within the Fort Sumner Park Overlay District. This structure meets the maximum and minimum setback requirements, including the required fifteen-foot setback from Fort Sumner Park. Building height within the R-6 is limited to 45' feet above average grade with further limitations imposed by the Fort Sumner Park Overlay Zone, which limits the absolute height of the building, including roof forms and rooftop mechanical equipment, to 160.27' feet above mean sea level, with a further reduction of one vertical foot for each 25' feet radially away from the identified apex point within Fort Sumner Park. The average building height is approximately 43.75' feet above grade, with the proposed elevator override being located just under the maximum allowable height under the Fort Sumner Park Overlay Zone. Proposed landscaped open space exceeds 20% of the property as is required, and the lot contains a total of 954 square feet per unit, whereas the requirements is for a minimum of 750 square feet.

At this time, overhead utilities are proposed along the property's frontage. In order to provide for adequate Fire Department access, the installation of taller utility poles utilizing alley arms would be necessary. Per both the site plan and subdivision ordinance, new projects are required to install underground utilities, though this requirement may be waived by the Planning Board if the installation of underground utilities proves cost prohibitive. In the event that overhead utilities are permitted, the applicant has stated that overhead lines will fully comply with the standards of the Fort Sumner Park Overlay. This has been drafted as condition for approval.

The standards of the Fort Sumner Park Overlay Zone require that projects located within the zone go before the Parks Commission for an advisory review to the Planning Board. A preliminary presentation was made to the Parks Commission on July 6, 2017, with a follow-up advisory meeting held on September 7, 2017. The Parks Commission voted unanimously to recommend this project for approval by the Planning Board.

The project as proposed meets the standards of both the R-6 Residential district and the Fort Sumner Park Overlay Zone.

X. SUBDIVISION REVIEW (14-497(a). Review Criteria; 14-198. Technical and Design Standards; & 14-499. Required Improvements)

The final plans have been reviewed by staff for conformance with the relevant review standards of the City of Portland's subdivision ordinance. Staff comments are below.

1. Water, Air Pollution

The site is currently occupied by a single-family structure and is largely vegetated, and steeply sloped to the east. An impervious area of 11,070 square feet is proposed. The applicant has submitted stormwater management plans which have been reviewed and approved by the city's consulting storm water engineer, Lauren Swett, P.E. of Woodard and Curran. No detrimental air quality impacts are anticipated.

2 & 3. Adequacy of Water Supply

The applicant has supplied a letter from the Portland Water District dated August 2, 2017 which states that there is adequate capacity to serve this project. (*Attachment M*)

4. Soil Erosion

As noted above, the site is sloped such that the grade changes by approximately 43 feet from west to east. There will be a retaining wall around the exterior of the property, where the site abuts residential buildings on the west side of North Street. Vegetation currently covers most of the slope. The submittal includes a geotechnical report which found that no blasting would be required as part of this development. Piles will be driven into the ground for support of the pile and lag retaining wall. The applicant states that the building will be constructed as a slab-on-grade with development with a soldier pile and lagging wall retaining the cut slope along the easterly property line *(Attachment Q).*

5. Impacts on Existing or Proposed Highways and Public Roads

The applicant has supplied a Traffic Impact Study which projects that this development would result in fewer than 10 new peak hour trips, and further states that Sheridan Street currently has the capacity to handle this traffic. The project has been reviewed by Mr. Thomas Errico, consulting traffic engineer, who has indicated that he generally finds it acceptable *(Attachment 3).*If approved, proposed underground utilities would require work within the public Right-of-Way to install an underground primary feeder across Sheridan Street.

6. Sanitary Sewer/Stormwater

The applicant has submitted a wastewater capacity application to the Department of Public Works which was approved by the Department of Public Works on July 19, 2017 *(Attachment M).*

An underdrained subsurface sand filter (USSF) is proposed as a stormwater mitigation measure. Catch basins are to be installed around the exterior of the property with stormdrains directing discharge to the northwest corner of the site where it will connect with a storm sewer in Sheridan Street.

7. Solid Waste

The applicant states that a private contractor would be used for waste management purposes. Temporary storage of trash and recyclables in an interior trash room is proposed.

8. Scenic Beauty

The applicant proposes to remove existing vegetation on the site and replace it with a three-story structure. As with many projects in this area, the proposal takes advantage of existing views from Sheridan Street looking westward over Back Cove and the city skyline. It should be noted that the view from Fort Sumner Park, which sits uphill from the site with a grade change of approximately 40 feet, should remain relatively unchanged. A rendering of the development as seen from Fort Sumner Park has been provided. (*Attachment Plan 28*)

9. Comprehensive Plan

The project is highly compatible with Comprehensive Plan goals and policies, specifically the city's identified local goals as stated:

1. Increase, preserve and modify the overall supply of housing City-wide to meet the needs, preferences and financial capabilities of all Portland households;
2. Encourage additional contextually appropriate housing density in and proximate to neighborhood centers, concentrations of services, and transit nodes and corridors as a means of supporting complete neighborhoods;
3. Pursue policies to enable people who work in Portland to have the option to live in Portland;
4. Encourage quality, sustainable design in new housing development.

This project provides significant additional housing in a location that is readily accessible and nearby to a variety of services, amenities and public transit. Additionally, this project is contextually sensitive in its construction, specifically as it related to nearby Fort Sumner Park, and meets the city's standards for workforce housing.

10. Financial and Technical Capacity

As noted above, the applicant has submitted a letter from Northern Bank & Trust Company indicating that BD Sheridan, LLC has the financial capacity to fund the project *(Attachment G).*

11. Wetland Impacts

There are no anticipated impacts to wetlands.

12. Groundwater Impacts

There are no anticipated impacts to groundwater supplies.

13. Flood-Prone Area

The project is not located in a flood-prone area.

Technical and Design Standards and Required Improvements

Generally, many of the technical and design standards of *Section 14-498* do not apply in this case. The application incorporates most of the required improvements outlined in *Section 14-499.* A subdivision plan and recording plat will be required demonstrating compliance with these standards. Street trees are required per both the subdivision ordinance *(Section 14-499(f))* and the site plan ordinance *(Section 14-526.2.b(iii)*), both of which refer to the city's Technical Manual, which sets a standard of one street tree/unit for multi-family developments. Based on this standard, nineteen street trees are required and four street trees are proposed. In speaking with the applicant, it is understood that street tree contribution will be made a condition for approval.

XII. SITE PLAN REVIEW

The preliminary plans for the Sheridan Street Apartments have been reviewed by staff for conformance with the relevant review standards of the City of Portland's site plan ordinance. Staff comments are below.

1. Transportation Standards

a. Impact on Surrounding Street Systems

The applicant has stated that less than 10 peak hour trips will be generated by the proposed development. Mr. Errico has reviewed the submittal and reports that he finds it generally acceptable *(Attachment 3).*

b. Access and Circulation

The preliminary plans include a new curb cut on Sheridan Street, with a garage door providing access to an interior parking area. Pedestrian access is proposed via two doors on the Sheridan Street frontage, one at each end of the building. The applicant proposes to reconstruct the existing sidewalk and replace concrete with brick pavers. Tom Errico, the city's consulting traffic engineer, has reviewed the plans and offers the following comments (*Attachment 3*):

1. In an attempt to maintain on-street parking and avoid the use of barriers in the street, the City requests that the applicant provide a draft construction management plan (for review and approval) that

incorporates a sidewalk detour to the west side of Sheridan Street. Two temporary crosswalks will be required and shall be ADA accessible. The southerly temporary crosswalk shall be located at the location of the Fort Sumner path.

c. Public Transit Access
The proposed development is not located along a public transit route and is not of sufficient size to require transit access.

d. Parking
Division 20 of the land use ordinance requires one parking space/unit for residential development located on the peninsula (*Section 14-332(a)3*) with the requirement for the first three spaces within the R-6 zone being waived. At this ratio, the project requires a minimum of sixteen parking spaces. As noted above, these are proposed in an interior parking area, with door-controlled access from Sheridan Street.

Per the preliminary submittal, bike parking is proposed for eight bicycles. While this meets the city's standard of two spaces for every five dwelling units per *Section 14-526(a)4.b*). Bicycle racks shall be located in an interior storage room on the second floor of the development and as well outside of the southerly most pedestrian entrance to the building.

e. Transportation Demand Management
A transportation demand management plan is not required.

2. Environmental Quality Standards

a. Preservation of Significant Natural Features
There are no known significant natural features on the site.

b. Landscaping and Landscape Preservation
The preliminary plans show eight Dwarf Alberta Spruce along the property's frontage, set amongst ornamental grasses and perennial planting beds. Along Sheridan Street, the applicant is proposing four Armstrong Red Maple street trees. Virginia Roses are proposed towards the rear of the property atop the proposed retaining wall, intended to visually buffer the site from adjacent residential properties and act as a deterrent to site access from North Street.

Jeff Tarling, the City Arborist, has stated that plantings along the property frontage should be placed in raised granite boxes, and has indicated that the narrow width of the sidewalk with proposed street trees does not provide sufficient maneuvering for pedestrian access and wintertime sidewalk plows. He notes that few if any street trees are present elsewhere along Sheridan Street due to narrow sidewalks. He recommends contribution to the Tree Fund in lieu of providing street trees on-site. Mr. Tarling further suggests that additional plantings be provided along the rear and sides of the property in order to further buffer the project from North Street and Fort Sumner Park.

Given the unique context of the project in close proximity to Fort Sumner Park, Mr. Tarling has stated a desire to see additional contributions made towards the improvement of the park property:

1. *The 155 Sheridan Street project has many site related challenges given the lay of the land and the desired building density. Trees and landscape, greenery do not appear to be primary in the overall design intent, unfortunately. Unlike the condo project next door that contributed to the lower Fort Sumner Park lower Sheridan Street trail access and public landscape we do not see similar attempts here, although it could benefit the overall streetscape.*

   Requesting a small contingent landscape budget to address post development needs once the project is complete. This is an unusual request but perhaps the best approach given the uncertainty of how the project will appear

In line with Section 14-526(b)(2)(b)(iii) Street Trees, Planning staff recommends that the applicant either provide a contribution in lieu of providing on-site street trees, or propose landscaping improvement to the lower slope of Fort Sumner Park.

c. Water Quality/Storm Water Management/Erosion Control

The project's water quality, storm water management and erosion control plans were peer reviewed by the city's consulting project engineer, Lauren Swett, P.E. of Woodard and Curran. She has reviewed the revised plans submitted following the initial workshop and finds that the applicant has addressed all but one comment.

1. *The applicant is proposing a direct connection to the stormdrain in Sheridan Street. Based on the referenced note, it appears that the proposed stormdrain pipe will be 8" connecting to an existing 12" pipe. The applicant should confirm with Public Works that an Inserta Tee connection will be allowed for these pipe sizes, and that a new manhole will not be required.*

Bradley Roland, Senior Project Engineer with the Department of Public Works reviewed the proposed connection and offered the following comment:

1. *An 8" insert-a-tee on a 12" pipe in my opinion will not work. Historically we have not allowed insert-a-tee's on any pipe less than 15". And an insert-a-tee that is more than half the diameter of the receiving pipe is just wrong.*

   By technical manual (2.6.7) building sewers and drains over 8" require a manhole. Also by technical manual (2.3.4) service laterals shall not connect to either stormwater or sewer manholes. I would suggest to the applicant that they cut out a portion of the existing 12" storm drain and install a 12"x8" Wye with two Fernco couplings. They can then tie their storm drain into the 8" side of the Wye.

Resolution of this comment has been drafted as a condition for approval.

3. Public Infrastructure and Community Safety Standards

a. Consistency with Related Master Plans

As noted above, the project is generally consistent with related master plans.

b. Public Safety and Fire Prevention

Keith Gautreau, Deputy Fire Chief, has reviewed the final plans submitted for this project and has indicated that his initial comments were addressed with the applicant's resubmittal and that he has no further comments. As noted above, Mr. Gautreau did state that his preference was to see all utilities placed underground, though he finds the proposed raised utility poles with alley arms acceptable from a public safety and fire prevention perspective.

c. Availability and Capacity of Public Utilities

The applicant proposes to extend an existing 6" water line across Sheridan Street that would divert into a 4" domestic line and 6" fire line and connect at the southwest corner of the proposed building. A connection to an existing 12" sanitary sewer line, which flows north towards Walnut Street, is proposed from the northwest corner of the building. The applicant proposes underground electric from a new pole to be located at the northwest corner of the building.

The applicant has supplied all requisite 'ability to serve' letters for electrical service, water and wastewater that there are sufficient utilities, in particular, sewer and water capacity, to service the residential units on the site.

At this time, the Board shall consider a waiver request to allow for the reconfiguration of overhead utilities to serve this development. The waiver should be considered on the basis of extreme financial burden based around the formal cost-estimate as provided by CMP.

4. Site Design Standards

a. Massing, Ventilation, and Wind Impact

The maximum building height in the R-6 zone is 45 feet. The preliminary elevations show a building height of 43.75' feet from the Sheridan Street grade. The proposed building is similar in massing to other recently approved multi-family developments along Sheridan Street, including the property immediately across the street.

b. Shadows

No shadow impacts on publicly accessible open spaces are anticipated.

c. Snow and Ice Loading

There are no anticipated detrimental snow or ice loading impacts.

d. View Corridors

The site is located within the Fort Sumner Park Overlay Zone, and as such must conform with standards intended to protect the vista from Fort Sumner Park. This proposal meets those standards and shall not obstruct the existing panorama. Proposed overhead utilities, if approved as a waiver, would be required to comply with the standards of the Fort Sumner Park Overlay.

e. Historic Resources

Fort Sumner Park is adjacent to this site; however this site as well as the park are not a designated historic district or landmark. Similarly, the project site is not a known archaeological site.

f. Exterior Lighting

Details regarding exterior lighting including photometric plan have been provided and found to meet applicable city standards for light trespass and design.

g. Noise and Vibration

Information on the HVAC and mechanical equipment has been provided.

h. Signage and Wayfinding

No signage or wayfinding is proposed at this time.

i. Zoning-Related Design Standards

The city's site plan ordinance states that "residential developments…shall integrate with and respect the character of surrounding residential development in terms of architectural form, landscaping and open space, façade materials, roof pitch, massing and height as demonstrated by compliance with all applicable design standards as listed in the Design Manual" (*Section 14-526(d)9.a(v)*). The Design Manual includes standards and guidelines for the R-6 zone, however, in this case, the standards for multiple family developments as the standards of the R-6 zone specifically apply to small developments on lots of less than 10,000 square feet. The multi-family design standards section of the Design Manual provides standards related to site context, interface with the public realm, building orientation, building articulation, garages and building materials.

The applicant has provided final building elevations and renderings, which were reviewed by city staff during a design review attended by Caitlin Cameron, Urban Designer; Christine Grimando, Senior Planner; Matthew Grooms, Planner. These renderings show a façade constructed with a mixture of composite siding panel and composite lap siding with cedar shingle appearance. In order to provide building articulation, the applicant has proposed regularly spaced projecting bays, material and color changes, and other elements to break up the façade such as balconies and projecting canopies. The building possesses extensive fenestration, including at the ground level. Given that this building will be highly proximate to Fort Sumner Park, the

applicant has proposed the installation of a green roof to soften the visual impact. The city's urban designer stated that comments were addressed with the applicant's resubmittal with the exception of material placement configurations chosen by the architect which accentuate the building's façade over the principal entrance. This, according to the city's Urban Designer is an unnecessary addition as the entrance is already framed by projecting bay windows and accentuated by a canopy. Ms. Cameron states that the rhythm and consistency of the design is a more important consideration than accentuation of the principal entrance (*Attachment 7*)

XIII. INCLUSIONARY ZONING CONDITIONAL USE

The city's Housing Program Manager, Victoria Volent, reviewed the Conditional Use for Affordable Housing application at 155 Sheridan Street. Conditional Use is authorized by Division 30, Section 14-487, Ensuring Workforce Housing, to secure the creation of Workforce Housing Units as part of new residential projects that propose 10 or more units. The ordinance requires a minimum of 10% of the project to be restricted for Workforce Households and that the number of bedrooms required under Section 14-487(e)3 be at least 10% of the total number of bedrooms made available as part of the project. The project located at 155 Sheridan Street proposes the creation of 19 condominium units with one unit being set aside as workforce housing in order to satisfy the standards of Division 30. According to the attached memo, provided by Ms. Volent, the proposed unit shall be restricted to households earning up to 120% of the Area Median Income (AMI). It is requested that the applicant enter into an Affordable Housing Agreement (AHA) with the City prior to issuance of a building permit (*Attachment 6*).

XIV. PROPOSED MOTIONS

A. CONDITIONAL USE

On the basis of the application, plans, reports and other information submitted by the applicant; findings and recommendations contained in the Planning Board Report for the public hearing on September 12, 2017 for application 2017-115 relevant to the Conditional Use as authorized by Division 30, Section 14-487 Ensuring Workforce Housing; and the testimony presented at the Planning Board Hearing, the Planning Board finds the proposed conditional use for workforce housing [**does** or **does not**] meet the standards of Section 14-484 with the following conditions:

1. That the Applicant shall provide one unit of on-site workforce housing restricted to households earning up to 120% of the Area Median Income (AMI) per the submitted application prior.
2. The applicant shall enter into an Affordable Housing Agreement (AHA) with the City. This agreement shall outline the details of the affordability restrictions placed on Workforce Units and will be filed as covenant to the property's deed with the Cumberland Country Registry of Deeds before a Certificate of Occupancy shall be issued.

B. WAIVERS

On the basis of the application, plans, reports and other information submitted by the applicant; findings and recommendations contained in the planning board report for the public hearing on September 12, 2017 for application 2017-073 relevant to Portland's site plan ordinance and subdivision ordinance and other regulations; and the testimony presented at the Planning Board hearing:

1. The Planning Board [**finds/does not find]**, based upon the Department of Public Works and Planning Department's review, that extraordinary conditions exist or undue hardship may result from strict compliance with the Site Plan standard *(Section 14-526(c)(3)(b))* which requires that electrical service be placed underground unless otherwise specified for industrial uses, or if it is determined to be unfeasible due to extreme cost. The Planning Board **[waives/does not waive]** the Site Plan standard *(Section 14-526(c)(3)(b))* to allow overhead utilities subject to the following conditions:

    a. The cost of installing underground utilities exceeds $150,000 based upon CMP's initial non-binding cost-estimate; and
    b. If greater than $150,000 to install underground utilities, the cost delta between providing underground and overhead utilities exceeds $50,000; and

c. The proposed overhead utility lines conform to the standards of the Fort Sumner Park Overlay zone; and
d. The final proposed overhead configuration shall be reviewed and approved by the Fire Department, Department of Public Works and Planning Authority.

2. The Planning Board [**finds/does not find]**, based upon the Department of Public Works and Planning Department's review, that extraordinary conditions exist or undue hardship may result from strict compliance with the Subdivision standard *(Section 14-499(h))* which requires that all utility lines be placed underground unless otherwise approved by the Planning Board. The Planning Board [**waives/does not waive]** the Subdivision standard *(Section 14-499(h))* to allow overhead utilities subject to the following conditions:

a. The cost of installing underground utilities exceeds $150,000 based upon CMP's initial non-binding cost-estimate; and
b. If greater than $150,000 to install underground utilities, the cost delta between providing underground and overhead utilities exceeds $50,000; and
c. The proposed overhead utility lines conform to the standards of the Fort Sumner Park Overlay zone; and
d. The final proposed overhead configuration shall be reviewed and approved by the Fire Department, Department of Public Works and Planning Authority.

B. SUBDIVSION

On the basis of the application, plans, reports and other information submitted by the applicant; findings and recommendations contained in the planning board report for the public hearing on September 12, 2017 for application 2017-073 relevant to the subdivision regulations; and the testimony presented at the planning board hearing, the Planning Board finds that the plan **[is/is not]** in conformance with the subdivision standards of the land use code, subject to the following conditions of approval, which must be met prior to the signing of the plat:

1. Requiring that draft Condominium Association documents addressing Planning Board feedback regarding maintenance of the green roof and be finalized to the satisfaction of Corporation Counsel; and

2. A final subdivision plan and recording plat shall be reviewed and approved by the Department of Public Works and the Planning Authority.

C. DEVELOPMENT REVIEW

On the basis of the application, plans, reports and other information submitted by the applicant; findings and recommendations contained in the Planning Board Report for the public hearing on September 12, 2017 for application 2017-073 relevant to the site plan regulations; and the testimony presented at the planning board hearing, the Planning Board finds that the plan **[is/is not]** in conformance with the site plan standards of the land use code, subject to the following conditions of approval that must be met prior to the issuance of a building permit, unless otherwise stated:

1. The applicant shall provide a revised construction management plan that incorporates a sidewalk detour to the west side of Sheridan Street. Two temporary crosswalks will be required which shall both be ADA accessible. The southerly temporary crosswalk shall be located at the location of the Fort Sumner path as requested by the city's consulting traffic engineer; and

2. That the applicant shall provide a stormwater maintenance agreement for the stormwater drainage system, shall be submitted, signed, and recorded prior to the issuance of a building permit with a copy to the Department of Public Works; and

3. The applicant shall provide an updated landscaping plan which addresses the comments raised in the City Arborist's email dated September 1, 2017 or otherwise approved by the City Arborist; and

4. A contribution of nineteen street trees or an equivalent alternative shall be provided prior to the issuance of a Certificate of Occupancy. This contribution shall be reviewed and approved by the City Arborist; and

5. The applicant shall work with the Department of Public Works to revise their proposed stormdrain connection per comment 2 of Woodard and Curran's memo dated August 29, 2017.

XIV. ATTACHMENTS

PLANNING BOARD REPORT ATTACHMENTS

1. Staff Review Memo (6.30.17)
2. Woodard and Curran Memo (8.29.17)
3. T.Y. Lin Email (8.30.17)
4. City Arborist Comments (9.1.17)
5. DPW Comments (9.1.17)
6. Housing Program Manager Memo (9.5.17)
7. Final Design Review Memo (9.6.17)
8. Public Comment
    a. Jaimie Parker (8.21.17)

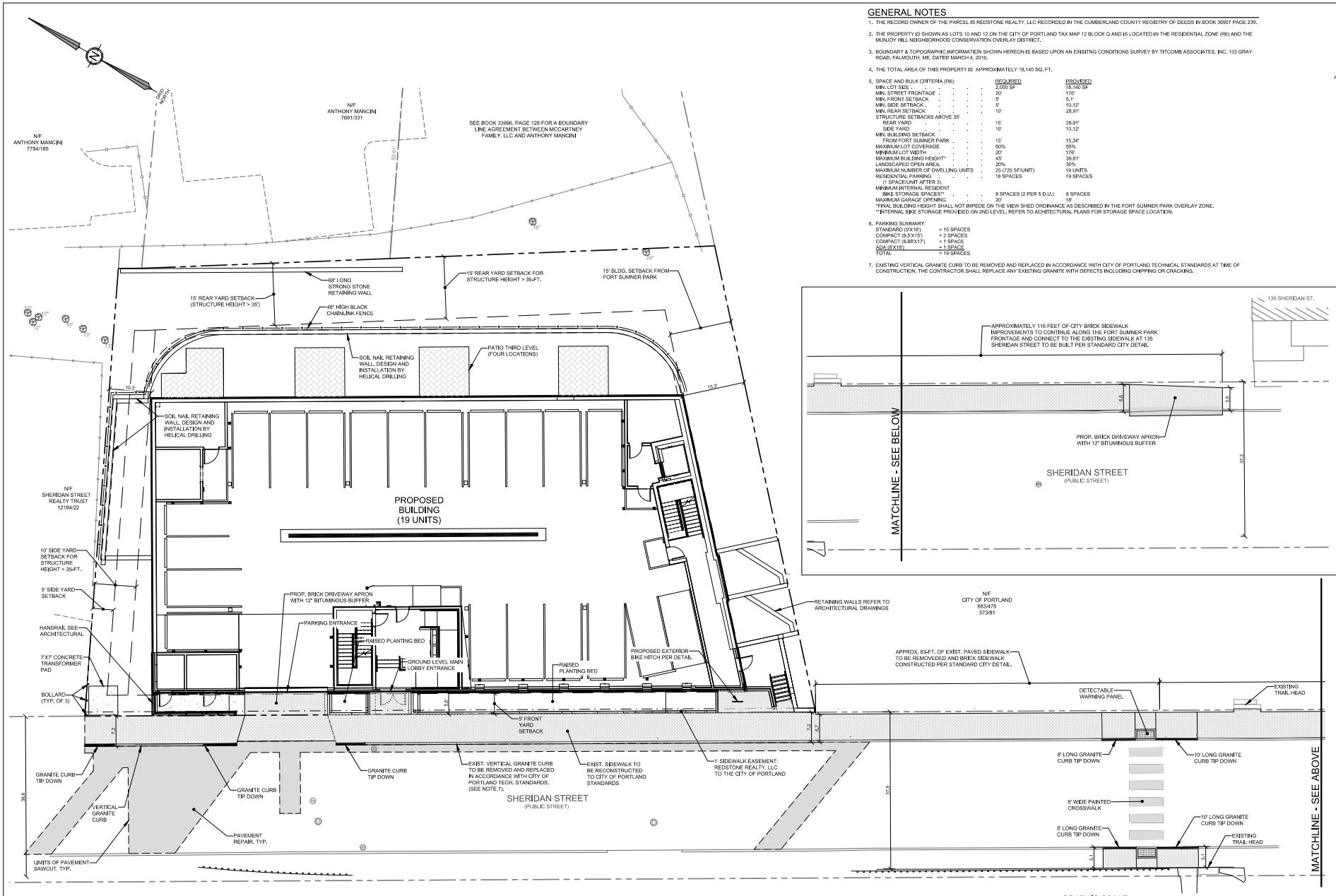
APPLICANT'S SUBMITTALS

A. Cover Letter
B. Level III Site Plan Application
C. Right Title and Interest
D. Conformity with Applicable Zoning Standards
E. Summary of Easements
F. Written Request for Waivers
G. Evidence of Financial Capacity
H. Stormwater Report
I. Stormwater Maintenance Agreement
J. Erosion Control Report
K. Fire Department Letter
L. Solid Waste
M. Utility Cover
N. Construction Management Plan
O. Tree Report
P. Traffic Impact Study
Q. Geotechnical Report
R. Architectural Design Narrative
S. Lighting Cut Sheets
T. Architectural Design Comment Responses
U. Structural Design Concept
V. Inclusionary Zoning Cover Letter
W. Inclusionary Zoning Application
X. Conformity with Applicable Conditional Use Standards
Y. Neighborhood Meeting
Z. Comment Response Letter

C. PLANS

Plan 1 Cover Sheet & Legend

Plan 2 General Notes
Plan 3 Existing Conditions Plan
Plan 4 Demolition, Construction Management Plan & Erosion Control Plan
Plan 5 Site Plan
Plan 6 Landscape Plan
Plan 7 Utility Plan
Plan 8 Grading & Drainage Plan
Plan 9 Site Details I
Plan 10 Site Details II
Plan 11 Utility Details
Plan 12 Drainage Details
Plan 13 Stormwater Details
Plan 14 Erosion Control Notes
Plan 15 Erosion Control Details
Plan 16 First Floor Plan
Plan 17 Second Floor Plan
Plan 18 Third Floor Plan
Plan 19 Fourth Floor Plan
Plan 20 Section View
Plan 21 West Elevation
Plan 22 South Elevation
Plan 23 East Elevation
Plan 24 North Elevation
Plan 25 Rendering – View Looking South
Plan 26 Rendering – View Looking North
Plan 27 Rendeirng – View from Washington Ave
Plan 28 Rendering – View from Fort Sumner Park Apex
Plan 29 Photometric Plan
Plan 30 Subdivision Plan
Plan 31 Overhead Proposal CMP
Plan 32 Underground Proposal CMP



GENERAL NOTES

1. THE RECORD OWNER OF THE PARCEL IS REDSTONE REALTY, LLC RECORDED IN THE CUMBERLAND COUNTY REGISTRY OF DEEDS IN BOOK 36907 PAGE 239.
2. THE PROPERTY IS SHOWN AS LOTS 10 AND 12 ON THE CITY OF PORTLAND TAX MAP 12 BLOCK Q AND IS LOCATED IN THE RESIDENTIAL ZONE (R6) AND THE MUNJOY HILL NEIGHBORHOOD CONSERVATION OVERLAY DISTRICT.
3. BOUNDARY & TOPOGRAPHIC INFORMATION SHOWN HEREON IS BASED UPON AN EXISITNG CONDITIONS SURVEY BY TITCOMB ASSOCIATES, INC. 133 GRAY ROAD, FALMOUTH, ME. DATED MARCH 4, 2016.
4. THE TOTAL AREA OF THIS PROPERTY IS APPROXIMATELY 18,140 SQ. FT.
5. SPACE AND BULK CRITERIA (R6):

	REQUIRED	PROVIDED
MIN. LOT SIZE	2,000 SF	18,140 SF
MIN. STREET FRONTAGE	20'	176'
MIN. FRONT SETBACK	5'	5.1'
MIN. SIDE SETBACK	5'	10.12'
MIN. REAR SETBACK	10'	28.91'
STRUCTURE SETBACKS ABOVE 35'		
REAR YARD	15'	28.91'
SIDE YARD	10'	10.12'
MIN. BUILDING SETBACK FROM FORT SUMNER PARK	15'	15.34'
MAXIMUM LOT COVERAGE	60%	55%
MINIMUM LOT WIDTH	20'	176'
MAXIMUM BUILDING HEIGHT*	45'	39.81'
LANDSCAPED OPEN AREA	20%	30%
MAXIMUM NUMBER OF DWELLING UNITS	25 (725 SF/UNIT)	19 UNITS
RESIDENTIAL PARKING (1 SPACE/UNIT AFTER 3)	16 SPACES	19 SPACES
MINIMUM INTERNAL RESIDENT BIKE STORAGE SPACES**	8 SPACES (2 PER 5 D.U.)	8 SPACES
MAXIMUM GARAGE OPENING	20'	18'

*FINAL BUILDING HEIGHT SHALL NOT IMPEDE ON THE VIEW SHED ORDINANCE AS DESCRIBED IN THE FORT SUMNER PARK OVERLAY ZONE.
**INTERNAL BIKE STORAGE PROVIDED ON 2ND LEVEL. REFER TO ACHITECTURAL PLANS FOR STORAGE SPACE LOCATION.

6. PARKING SUMMARY:

STANDARD (9'X18')	= 15 SPACES
COMPACT (8.5'X15')	= 2 SPACES
COMPACT (8.88'X17')	= 1 SPACE
ADA (8'X18')	= 1 SPACE
TOTAL	= 19 SPACES

7. EXISTING VERTICAL GRANITE CURB TO BE REMOVED AND REPLACED IN ACCORDANCE WITH CITY OF PORTLAND TECHNICAL STANDARDS AT TIME OF CONSTRUCTION. THE CONTRACTOR SHALL REPLACE ANY EXISTING GRANITE WITH DEFECTS INCLUDING CHIPPING OR CRACKING.

STATE OF MAINE
RICHARD L. MEEK
No. 10668
REGISTERED PROFESSIONAL ENGINEER

DATE: 12/08/2023
P.E.: RICHARD MEEK #10668

NO.	DATE	REVISIONS	APP'D BY
1	09/29/2023	ISSUE AMENDED SITE PLAN	
2	12/08/2023	REVISED TO ADDRESS CITY REVIEW COMMENTS	

ADDRESS: 417 CANCO ROAD, SUITE 201, PORTLAND, ME 04103
PHONE: (207) 828-5111
WEB SITE: www.terradynconsultants.com
TERRADYN CONSULTANTS, LLC
Civil Engineering | Land Surveying | Geomatics
Stormwater Design | Land Planning | Environmental Permitting

PERMIT DRAWING
NOT FOR CONSTRUCTION

PROJECT: 155 SHERIDAN STREET
SHERIDAN ST., PORTLAND, ME
SHEET TITLE: SITE LAYOUT PLAN
CLIENT: SUMNER HEIGHTS REALTY CORP.
8 DOAKS LANE
MARBLEHEAD, MA 01945
J:\Work\Project Folder - Documents\2021 Jobs\21-135 Sheridan Street\CAD\Permitting\21-135.dwg

DATE: 12/08/2023

CITY OF PORTLAND
APPROVED SITE PLAN
Subject to Conditions of Approval and Standard Conditions

Date of Approval: 1/5/2024
Planner: Matthew Grooms
Project ID: PL-002899-2023 Minor Site Plan Amendment (135 Sheridan St.)

CITY OF PORTLAND, MAINE

PLANNING BOARD

Brandon Mazer, Chair
Justin Barker, Vice Chair
Marpheen Chann
Sean Murphy
David Silk
Austin Smith
Maggie Stanley

December 19, 2023

Josh Trombley
Developers Collaborative
631 Stevens Ave
Portland, Maine 04103

Adrienne Fine
Terradyn Consultants, LLC
565 Congress Street, Suite 310
Portland, Maine 04101

Project Name:	Major Site Plan	**Project ID:**	PL-002466-2023
Address:	15 Crescent Street	**CBL:**	053 F006001
Applicant:	Adrienne Fine		
Planner:	Sean King, Urban Designer		

Dear Josh Trombley and Adrienne Fine:

On December 12, 2023, the Planning Board approved a major site plan application for a 3,873 square foot multi-family residential building in the R-6 Residential zone. The decision is based upon the application, documents and plans as submitted. The Planning Board reviewed the proposal for conformance with the standards of the Site Plan Ordinance, Ch. 14, Article 14, Section 14.6. based on the information provided to the Board in the application, plans, and reports through testimony and other information submitted by the applicant, the Planning Board adopted the findings, conclusions and recommendations contained in the Planning Board Report for the public hearing on December 12, 2023, which is attached hereto and incorporated herein by reference. Based upon those findings, conclusions and recommendations, the Planning Board found that the application met all relevant standards and voted 5-0 (Barker absent, Silk recused) to approve the application with the following conditions as presented below.

Site Plan Review

On the basis of the application, plans, reports and other information submitted by the Applicant; findings and recommendations contained in the Planning Board Report for the public hearing on December 12, 2023 for application # PL-002466-2023 relevant to the site plan regulations; and the testimony presented at the Planning Board hearing, the Planning Board voted 5-0 (Barker absent, Silk recused) to find that the plan is in conformance with the site plan standards of the Land Use Code.

Standard Procedures

Note: The following standard procedures and requirements apply to all approved site plans:

1. Site Plan Expiration The site plan approval will be deemed to have expired unless work has commenced within one (1) year of the approval or within a time period up to three (3) years from the approval date as agreed upon in writing by the City and the applicant. Requests to extend approvals must be received before the one (1) year expiration date.

2. Separate Building Permits Are Required This approval does not constitute approval of building plans, which must be reviewed and approved by the City of Portland's Permitting and Inspections Department.

3. Performance Guarantee and Inspection Fees A performance guarantee covering the site improvements and an inspection fee payment of 2.0% of the guarantee amount and three (3) final sets of plans must be submitted to and approved by the Planning and Urban Development Department and Public Works Department prior to the release of a building permit, street opening permit or certificate of occupancy for site plans.

4. Construction Management Plans The applicant, contractor and subcontractors are required to conform to the approved Construction Management Plan, and all conditions contained within the project's approval, for the entire duration of the project. Any amendments to the approved Construction Management Plan shall be reviewed and approved by the Department of Public Works prior to the execution. The Planning Authority and the Department of Public Works have the right to seek revisions to an approved Construction Management Plan. The applicant shall coordinate the project's construction schedule with the timing of nearby construction activities to avoid cumulative impacts on a neighborhood and prevent unsafe vehicle and pedestrian movements. Accordingly, nearby construction activities could involve a delay in the commencement of construction.

5. Preconstruction Meeting Prior to the release of a building permit and scheduling of a preconstruction meeting, a hard copy set of approved plans shall be submitted to the Development Review Coordinator. A pre-construction meeting shall be held at the project site with the contractor, Development Review Coordinator, Public Works representative, and owner to review the construction schedule and critical aspects of the site work. At that time, the Development Review Coordinator will confirm that the contractor is working from the approved site plan and the approved Construction Management Plan. The site/building contractor shall provide one (1) copy of a detailed construction schedule to the attending City representative. It shall be the contractor's responsibility to arrange a mutually agreeable time for the pre-construction meeting.

6. Department of Public Works Permits If work or obstructions will occur within the public right-of-way, such as utilities, curb, sidewalk, driveway construction, site deliveries and equipment siting, a Street Opening and/or Occupancy Permits are required for your site. Please contact the Department of Public Works Permit Clerk at (207) 874-8300, ext. 8828. (Only excavators licensed by the City of Portland are eligible.)

7. Develop Site According to Plan The site shall be developed and maintained as depicted on the site plan and in the written submission of the applicant. Any modifications of an approved site plan or alteration of a parcel, or of any approved exterior elevations, which were the subject of site plan approval after May 20, 1974, shall require the prior approval of an amended site plan by

the Planning Board or Planning Authority pursuant to the terms of Chapter 14, Land Use, of the Portland City Code.

8. Stormwater Management The owner/operator of an approved stormwater management system, and all assigns shall comply with the conditions of Chapter 32, Stormwater including Article III, Post Construction Stormwater Management, which specifies the annual inspections and reporting requirements.

   A maintenance agreement for the stormwater drainage system, as attached, or in substantially the same form, shall be submitted for review by Corporation Counsel. Once approved, the document shall be signed and recorded at the Cumberland County Registry of Deeds prior to the issuance of a building permit. Final copies shall be submitted to both the Department of Planning and Urban Development and the Department of Public Works.

9. Defect Guarantee A defect guarantee, consisting of 10% of the performance guarantee, must be posted before the performance guarantee will be released.

10. As-Built Final Plans Final sets of as-built plans shall be submitted digitally to the Planning and Urban Development Department, on a CD or DVD, in AutoCAD format (.dwg), release AutoCAD 2005 or greater. Please provide one hard copy of the mylar.

11. Mylar Copies Mylar copies of the as-built drawings for the public streets and other public infrastructure in the subdivision must be submitted to Public Works prior to the issuance of a certificate of occupancy.

12. Impact Fees New development or changes of use that result in net new residential dwelling units, non- residential building square footage, or water meters, are subject to the City of Portland's impact fee ordinance (Chapter 14, Article XVII). Impact fees are calculated at the time of building permit and must be paid prior to the certificate of occupancy. For more information, visit https://www.portlandmaine.gov/2409/Impact-Fees

The Development Review Coordinator must be notified five (5) working days prior to the date required for final site inspection. The Development Review Coordinator can be reached at the Planning and Urban Development Department at drc@portlandmaine.gov or (207)874-8984. All site plan requirements must be completed and approved by the Development Review Coordinator prior to issuance of a Certificate of Occupancy. Please schedule any property closing with these requirements in mind.

If there are any questions, please contact Sean King at (207)874-8901 or via email at sking@portlandmaine.gov.

Sincerely,



Brandon Mazer, Planning Board Chair

Attachments:

1. Planning Board Report
2. Portland City Code: Chapter 32
3. Sample Stormwater Maintenance Agreement
4. Performance Guarantee Packet

Site Plan Development
15 Crescent Street
Major Site Plan Application (PL-002466-2023)
Developers Collaborative, Applicant

Submitted to:	Portland Planning Board	**Prepared By:**	Sean King, Urban Designer
Public Hearing Date:	December 12, 2023	**Date:**	December 8, 2023

I. INTRODUCTION

Developers Collaborative and Crescent Heights LLC has submitted a Major Site Plan application to facilitate the construction of a multi-family building containing five residential units, along with covered and surface parking at 15 Crescent Street in the West End neighborhood. This application is being referred to the Planning Board for compliance with the City of Portland's Land Use Code Site Plan Standards, Section 14.1.

The Planning and Urban Development Department mailed 146 notices advertising this meeting to property owners within 500 feet of the site. A legal advertisement ran in the December 2 and 3, 2023 editions of the *Portland Press Herald*.

Applicant:	Josh Trombley, Developers Collaborative
Applicant Representatives:	Adrienne Fine, Terradyn Consulting; Ryan Senatore, Ryan Senatore Architecture, LLC; Randy Loubier, Owen Haskell Inc.



Figure 1: Aerial of development site looking north

II. REQUIRED REVIEWS

Review	*Applicable Standards*
Site Plan	Section 14.6
Design Review	City of Portland Design Manual (k) Small residential lot development located in the R-6 zone

III. PROJECT DATA

Existing Zoning	R-6
Property Size	4,278 Square feet
Existing Use	Vacant lot
Proposed Use	Residential
Proposed Development Program	Multi-family building totaling 5 residential units

	Existing	*Required*	*Proposed*	*Net Change*
Building Footprint	None	n/a	1,508 square feet	+1,508 square feet
Building Floor Area	None	n/a	3,873 square feet	+3,873 square feet
Impervious Surface Area	None	n/a	3,217 square feet	+3,217 square feet
Residential Units	None	n/a	5	+5
Parking Spaces	None	2	5	+5
Bicycle Parking Spaces	None	2	2	+2
EV Charging Stations	None	1	1	+1

IV. EXISTING CONDITIONS AND SURROUNDING AREA

The subject property is located at 15 Crescent Street (CBL 053 F006001) in the West End neighborhood. The subject property is currently vacant at 4,278 square feet in total lot area with steep terrain that slopes down towards the north. The surrounding land uses are primarily residential, including single-family, and multi-family buildings ranging in height between two and four stories. Additionally, the site is adjacent to the Maine Medical Center campus. Commercial uses, including retail and restaurants are located along Congress Street.

The Western Promenade, an 18-acre park with sweeping western views, trails, playground and community garden is located approximately 0.2 miles to the south. METRO provides transit service along Congress Street with METRO Route 1, 9A stop located at the corner of Bramhall Street and Congress Street.

V. PROPOSED DEVELOPMENT

The proposed Major Site Plan application would facilitate the development of a multi-family building, containing five-residential units with frontage on Crescent Street. The applicant proposes providing one parking space per residential unit for a total of five parking spaces, including two surface parking spaces and three covered parking spaces located under the proposed building. All parking would be accessed from an 18-foot wide curb cut along Crescent Street. The development would include one EV charger located at a covered parking space.

The proposed project would include two street trees along Crescent Street. The Applicant proposes to preserve existing trees to the greatest extent possible and reduce negative impacts on adjacent trees located on abutting properties. The development plan proposes a drainage mat to reduce the negative impacts of erosion on the steep terrain.

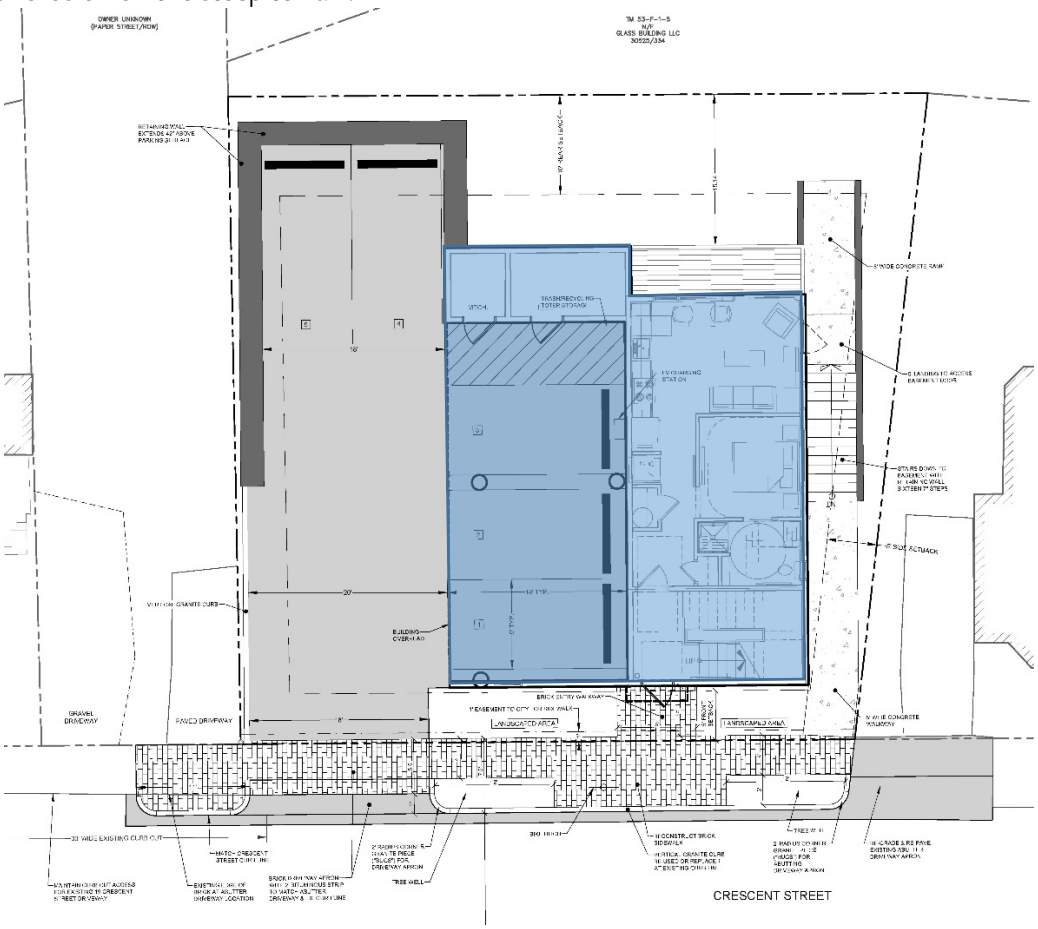


Figure 2: Proposed development site plan (Building area shown in blue)



Figure 3: Proposed Crescent Street renderings (left – view west, right – view east)

VI. RIGHT, TITLE, & INTEREST

The owner of the property is Crescent Heights LLC by deed recorded in the Cumberland County Registry of Deeds in books 26288 page 49 (Applicant Submittal B). The property is being developed in cooperation with Developers Collaborative.

The Applicant's existing conditions survey (Plan 3) indicates an adjacent "owner unknown" parcel west of the property that the City's Department of Public Works acknowledges is not aware of any City right, title, or interest at present. Furthermore, the Applicant has not provided the appropriate right, title, or interest to use the parcel for the construction of the proposed retaining wall.

As the City is not aware of any right, title or interest at present, no license agreement can be granted to the Applicant for the adjacent "owner unknown" parcel. The Applicant has resubmitted plans for the location of the retaining wall to not encroach on the adjacent parcel during construction (Plan 7, 8, 26).

VII. FINANCIAL & TECHNICAL CAPACITY

The Applicant has submitted a letter of financial capacity (Applicant Submittal T) and supporting information related to the technical capacity (Applicant Submittal O) for the Applicant team.

VIII. ZONING ANALYSIS

The site is located within the R-6 (Residential) zone. Relevant sections of the R-6 purpose statements include:

- ***R-6**: To set aside areas on the peninsula for housing characterized primarily by multi-family dwellings at a high density providing a wide range of housing for differing types of households; to conserve the existing housing stock and residential character of neighborhoods by controlling the scale and external impacts of professional offices and other nonresidential uses; and to encourage new housing development consistent with the compact lot development pattern typically found on the peninsula.*

As submitted, the Major Site Plan is found to be consistent with the R-6 zoning requirements. Multi-family residential is a permitted use in the R-6 zone (Table 6-A Permitted Uses in Residential Zones) and is permitted at a lot area per dwelling unit of 725 square feet. Additionally, the proposed project is consistent with the R-6 dimensional standards per §7.3 Dimensional Standards, (Table 7-A Residential Zone Dimensional Standards). A zoning analysis of the proposed project is provided in the table below:

R-6 Residential Zone	*Permitted*	*Proposed*	*Conformance*
Lot Area (min.)	2,000 Square feet	4,278 Square feet	Met
Lot area per dwelling unit (min.)	725 Square feet	855 Square feet	Met
Lot coverage (max.)	60%	37.3%	Met
Street Frontage (min.)	20 feet	61 feet	Met
Lot Width (min.)	20 feet	65 feet	Met
Front Setback (min.)	5 feet	5.5 feet	Met
Rear Setback (min.)	10 feet	15.3 feet	Met
Side setback (min.)	5 feet	5 feet	Met
Stepbacks (above 35 feet when property line abuts a residential zone) (min.)	10 feet from side property line and 15 feet from rear property line	10 feet side, 15 feet rear	Met

Structure Height (max.)	45 feet	40.65 feet	Met
Landscaped open space ratio (min.)	20%	24.8%	Met

The Applicant submitted a weighted average calculation (Applicant Submittal Q) as 119.75' which is shown in the proposed architectural elevations (Plan 22) that the City's Zoning Administrator finds acceptable.

IX. SITE PLAN REVIEW STANDARDS (Section 14.6)

The proposed development has been reviewed by Staff for conformance with the relevant review standards of the City of Portland's Site Plan Ordinance, Section 14.6. Staff comments are below.

1. Transportation Standards (Section 14.6.1)

A. Impact on surrounding street systems

The applicant has proposed public right-of-way improvements including reconstructing granite curbing, brick sidewalk, and driveway apron in place. The applicant has revised plans to include City details per City's technical manual section 1, dimensions and spot elevations for the reconstruction within the public right of way.

B. Access and circulation

The proposed development would access parking on the site by a new driveway with a width of 18 feet at Crescent Street that meets the City's technical manual section 1.5.1.B for minor driveways (serving less than 10 residential units). The Applicant has indicated that pedestrians will access the building entrance from Crescent Street by a walkway directly from the public sidewalk.

The City's Consulting Traffic Engineer has reviewed the Applicant's submitted turning templates and finds them to be acceptable based on the low turnover of parked vehicles for residents and low residential one-way traffic on Crescent St.

C. Public transit access

Not applicable. There is an existing Greater Portland METRO local service Route 1, 9A transit stop on Congress Street, and the proposed development does not exceed 20 dwelling units. Therefore, the project is not required to provide a transit shelter.

D. Parking

In general, a residential development is required to provide one parking space per dwelling unit unless a project is eligible for parking exceptions as listed in Table 19-B of the Land Use Code. No exceptions are being sought for this application. The proposed project meets the minimum parking with the first three units exempt for a total requirement of two parking spaces, the applicant seeks to provide five parking spaces on site.

The project is meeting the minimum bicycle parking requirement, which requires that two spaces be provided for every five units. As there are a total of five residential units being proposed, a minimum of two bicycle parking spaces is required, with one bike hitch proposed along Crescent Street.

The applicant has indicated that one parking space in the garage would include a new electrical vehicle (EV) charger to meet the minimum EV charger requirements of one EV charger (5 parking spaces times .2 = 1) per Section 1.14 of the City of Portland Technical Manual.

E. Transportation demand management (TDM)
Not applicable. A TDM plan is not required as the proposed development is a residential use.

2. Environmental Quality Standards (Section 14.6.2)

A. Preservation of significant natural features
The site is currently vacant and does not consist of significant natural features including wetlands, vernal pools or other protected wildlife habitats.

B. Landscape preservation
The existing conditions and demolition plan (Plan 5) indicates existing trees with a diameter at breast height (dbh) that vary from 2" – 36" that would require preservation under City's technical manual section 4 Landscaping and Landscape Preservation standards.

The Applicant has provided tree species information that indicates areas of vegetation being preserved in accordance with section 4.3.1 of the technical manual.

C. Site landscaping and buffers
The creation of five residential units requires either the planting of five street trees or an acceptable alternative under Technical Manual section 4.6.4. The Applicant has proposed to provide two native deciduous trees in tree wells within the public right of way, in addition to three native evergreen trees located at the rear of the property with the City Arborist's discretion as an acceptable street tree alternative per Section 14.6.2 of the Land Use Code.

D. Water quality/storm water management/erosion control
The project is required to provide for stormwater management in accordance with Maine DEP Chapter 500 and City of Portland Technical Manual Section 5 standards for stormwater management.

The Applicant has submitted a stormwater management report, a grading and drainage plan to indicate erosion and sedimentation control measures and stormwater treatment for the proposed development. The Applicant is proposing an r-tank infiltration system under the proposed driveway on private property that the City's Consulting Stormwater Reviewer finds is appropriately designed to meet stormwater management requirements.

3. Public Infrastructure and Community Safety Standards (Section 14.6.3)

A. Consistency with City Master Plans
One Climate Future identifies strategies relevant to the proposed development including encouraging transit-oriented infill development to support travel by walking, biking, and public transportation as well as increasing the housing stock in areas proximate to jobs and public transit. Furthermore, One Climate Future prioritizes infill development through redevelopment over greenfield development to ensure the protection of the state's forest, wetlands, and healthy soils.

B. Public safety and fire prevention
The City's Fire Marshall has reviewed the application materials and finds that the proposed plan to allow firetruck access at Crescent Street is acceptable.

C. Availability and capacity of public utilities

The Department of Public Works has provided a wastewater capacity authorization letter to serve the anticipated wastewater flows (Report Attachment R). The Applicant has provided the ability to serve letter from the CMP as the electrical utility provider (Report Attachment S).

4. Site Design Standards (Section 14.6.4)

A. Massing, ventilation, and wind impact

The proposed three-story multi-family building with five dwelling units meets the R-6 setback requirements and therefore will not adversely impact abutting structures or properties.

B. Shadows

No shadow study is required as the proposed development plan and building height is consistent with adjacent properties and the proposed project will not impact any publicly accessible open spaces.

C. Snow and ice loading

The Applicant's Site Layout Plan (Plan 7) indicates that the Applicant will be responsible for removing snow from the site.

D. View corridors

There are no designated view corridors within the project vicinity. This standard is not applicable.

E. Historic resources

The proposed development is not within a locally designated historic district or within 100 feet to require an advisory Staff review by the Historic Preservation program.

F. Exterior lighting

The applicant has submitted a photometric lighting plan and proposed lighting fixture cut sheets that meet section 12.5 in the City of Portland's Technical Manual. The Applicant's photometric lighting schedule does not exceed the 3000K Correlated Color Temperature (CCT) per Section 12.5 in the City of Portland's Technical Manual.

G. Noise and vibration

The Applicant has proposed that HVAC and/or other equipment for noise and vibration are located at the roof level. The Applicant has resubmitted a roof plan, elevations and renderings that indicate the location of the proposed HVAC toward the center of the roof that Staff finds is not a visual nuisance as perceived from public streets.

H. Signage and wayfinding

Not applicable, there is no signage beyond property addressing.

I. Zoning-related design standards

The proposed development plan is subject to the site design standards, Land Use Code section 14.6.4.I Design standards per the City of Portland Design Manual under section (k.) Small residential lot development located in the R-6 zone.

The Applicant has resubmitted architectural plans and elevations that indicate adjustments to the exterior material selection, façade and fenestration arrangement that Staff finds appropriate.

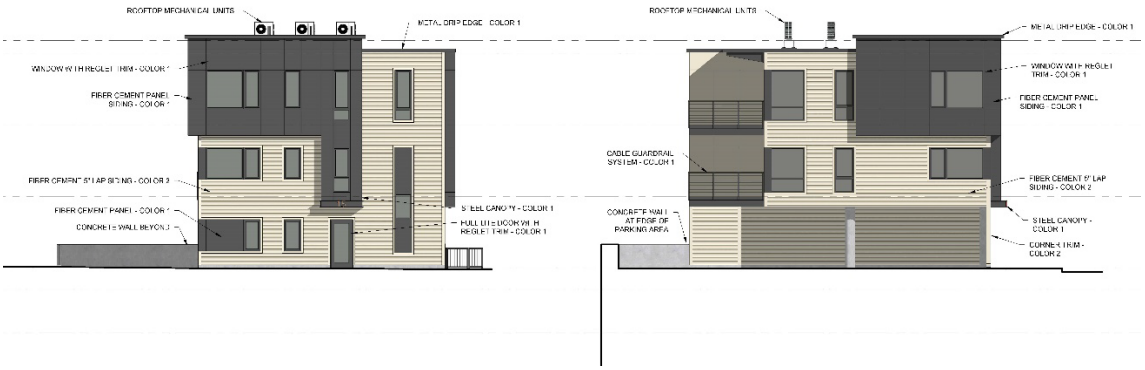


Figure 4: South elevation (Crescent Street frontage) & West elevation (facing abutting property)

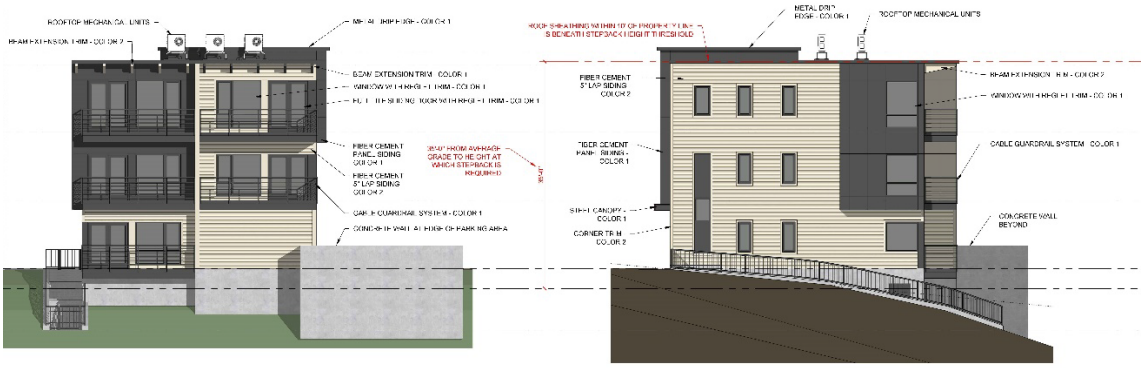


Figure 5: North elevation (facing rear of property) & East elevation (facing abutting property)

X. NEIGHBORHOOD MEETING & PUBLIC COMMENT

The Applicant held a neighborhood meeting on May 16, 2023 (Applicant Submittal U). Invitations for the in-person meeting were sent to properties within 500 feet of the proposed development. There were no attendees. Written public comments (PC 1) are included for the Planning Board.

XI. PROPOSED MOTIONS

A. SITE PLAN REVIEW

On the basis of the application, plans, reports and other information submitted by the Applicant; findings and recommendations contained in the Planning Board Report for the public hearing on December 12, 2023 for application # PL-002466-2023 relevant to the site plan regulations; and the testimony presented at the Planning Board hearing, the Planning Board [**finds/does not find**] that the plan is in conformance with the site plan standards of the Land Use Code.

B. PLANNING BOARD DECISION

On the basis of the findings, conclusions and recommendations contained in the Planning Board report for the public hearing on December 12, 2023 related to application PL-002466-2023 for 15 Crescent Street, which is attached to the draft approval letter and incorporated therein, the Planning Board [**adopts/does not adopt**] the approval letter as drafted as the Planning Board's

decision for application PL-002466, and authorizes the Planning Board Chair to sign the approval letter as drafted.

XII. ATTACHMENTS

PUBLIC COMMENTS

PC 1 Sarah Erwin – 05-17-2023
PC 2 George Rheault – 12-08-2023

REPORT ATTACHMENTS

Att. 1 City review comment letter – 06-21-2023
Att. 2 City review comment letter – 09-28-2023
Att. 3 City review comment letter – 11-09-2023
Att. 4 Design review memo – 05-24-2023
Att. 5 Design review memo – 09-29-2023
Att. 6 City's DPW - Transportation review comments
Att. 7 City's DPW – RTI review comments
Att. 8 City's Consulting Traffic Engineer
Att. 9 Draft Approval Letter

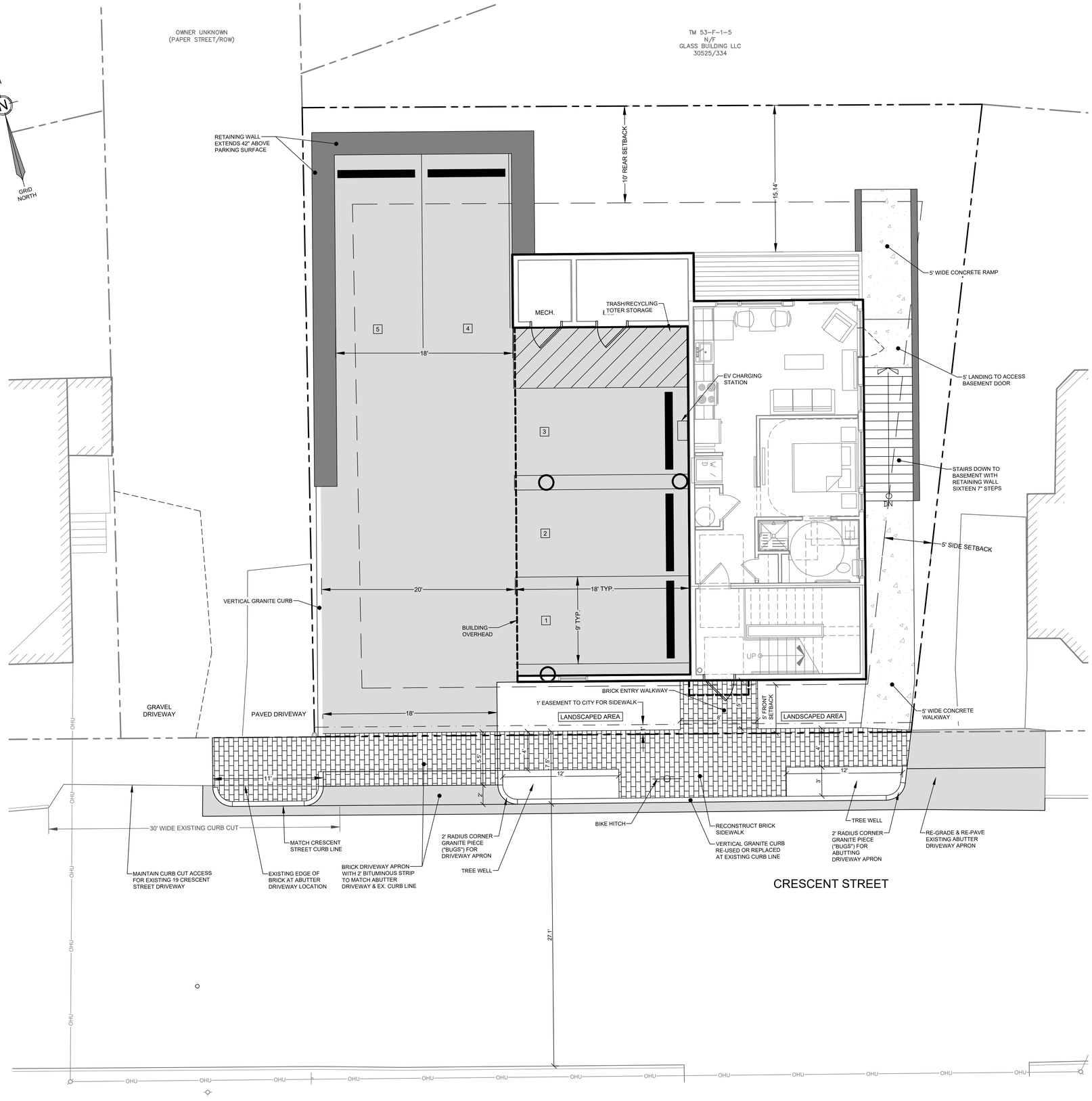
APPLICANT SUBMITTAL

A. Development description
B. Right, Title & Interest
C. State and Federal permits
D. Land ordinance review
E. Easements or other burdens
F. Natural features
G. Stormwater Management
H. Consistency with City Master Plans
I. Utilities
J. Fire Safety
K. Conformity with applicable design standards
L. Verification of proposed HVAC equipment
M. Zoning analysis table
N. Comment response letter – 09-12-2023
O. Comment response letter – 10-31-2023
P. Comment response letter – 11-17-2023
Q. Average grade calculations
R. Wastewater capacity authorization
S. Ability to serve letter CMP
T. Financial capacity letter
U. Neighborhood meeting certification package
V. Notice of public meeting certificate

PLANS AND DRAWINGS

Plan 1. Cover

Plan 2. General Notes
Plan 3. Survey
Plan 4. Recording Plat
Plan 5. Existing Conditions & Demolition Plan
Plan 6. Construction Management Plan
Plan 7. Site Plan
Plan 8. Grading and Drainage Plan
Plan 9. Erosion Sedimentation Control Notes and Details
Plan 10. Slope Stabilization
Plan 11. Utility Plan
Plan 12. Photometric Plans
Plan 13. Photometric Plan
Plan 14. Site Details
Plan 15. Utility and drainage details
Plan 15. Turning template
Plan 16. Landscape Plan
Plan 17. Architect Basement Foundation plan
Plan 18. First floor plan
Plan 19. Second floor plan
Plan 20. Third floor plan
Plan 21. Roof plan
Plan 22. Elevations
Plan 23. Renderings
Plan 24. Sections
Plan 25. North Retaining Wall
Plan 26. West Retaining Wall



GRAPHIC SCALE

5 0 2.5 5 10 20

(IN FEET)
1 inch =5 ft.

GENERAL NOTES:

1. THE RECORD OWNER OF THE PARCEL IS CRESCENT HEIGHTS LLC, BY DEED RECORDED IN THE CUMBERLAND COUNTY REGISTRY OF DEEDS IN BOOK 26288, PAGE 49.
2. THE PROPERTY IS SHOWN AS LOT 53-F-6 ON THE CITY OF PORTLAND GIS MAP AND IS LOCATED IN THE R6 ZONING DISTRICT.
3. SPACE AND BULK CRITERIA:

RESIDENTIAL ZONE 6	REQUIRED	PROPOSED
MIN. LOT SIZE:	2,000 SF.	4,278 SF.
MIN. STREET FRONTAGE:	20 FT.	61 FT.
MIN. FRONT YARD:	5 FT.	>5 FT.
MIN. SIDE YARD:	5 FT.	>5 FT.
MIN. REAR YARD:	10 FT.	15 FT.
MAX. BUILDING HEIGHT:	45 FT.	35 FT.
MAX. LOT COVERAGE	60 %	37 %
MIN LANDSCAPED OPEN SPACE RATIO	20 %	25 %

4. BUILDING FOUNDATION SHALL BE LAID OUT BY SURVEYOR LICENSED IN THE STATE OF MAINE PRIOR TO CONSTRUCTION.
5. TOTAL AREA OF PARCEL: 0.098 Ac.
6. BOUNDARY AND EXISTING CONDITIONS INFORMATION SHOWN HEREON IS BASED UPON THE PLAN ENTITLED "BOUNDARY & TOPOGRAPHIC SURVEY AT 15 CRESCENT STREET, PORTLAND, MAINE MADE FOR DC MANAGEMENT, 100 COMMERCIAL STREET, PORTLAND, MAINE" BY OWEN HASKELL, INC., DATED JULY 28, 2020.
7. BEARINGS ARE BASED ON STATE PLANE COORDINATE SYSTEM, MAINE WEST ZONE, NAD83 PER CITY CONTROL.
8. ELEVATIONS ARE BASED ON "M" MONUMENT AT THE NORTHEAST CORNER OF HILL AND BRAMHALL ST. ELEVATION=133.54' CITY DATUM.
9. CONDITION OF APPROVAL: SNOW REMOVAL FROM THE PROPERTY IS REQUIRED.

STATE OF MAINE
ADRIENNE R. FINE
No. 14252
REGISTERED PROFESSIONAL ENGINEER

DATE: 12.06.2023
P.E.: ADRIENNE R. FINE

NO.	DATE	REVISIONS	APP'D BY
4	12.06.2023	REVISED WEST RETAINING WALL	ARF
3	11.17.2023	REVISED PER STAFF COMMENTS	ARF
2	10.25.2023	REVISED PER STAFF COMMENTS	ARF
1	09.12.2023	REVISED PER STAFF COMMENTS	ARF

565 CONGRESS STREET
SUITE 201
PORTLAND, ME 04102
OFFICE: (207) 926-5111 FAX: (207) 221-1317
www.terradyn consultants.com
41 CAMPUS DRIVE
SUITE 301
NEW GLOUCESTER, ME 04260
TERRADYN CONSULTANTS, LLC
Civil Engineering | Land Planning | Stormwater Design | Environmental Permitting

PERMIT DRAWING
NOT FOR CONSTRUCTION

PROJECT:
CRESCENT STREET RESIDENCES
15 CRESCENT STREET, PORTLAND

SHEET TITLE:
SITE LAYOUT PLAN

CLIENT:
DEVELOPERS COLLABORATIVE
631 STEVENS AVENUE, SUITE 203
PORTLAND, ME 04103

DATE: 02.14.2023
SCALE: 1" = 5'

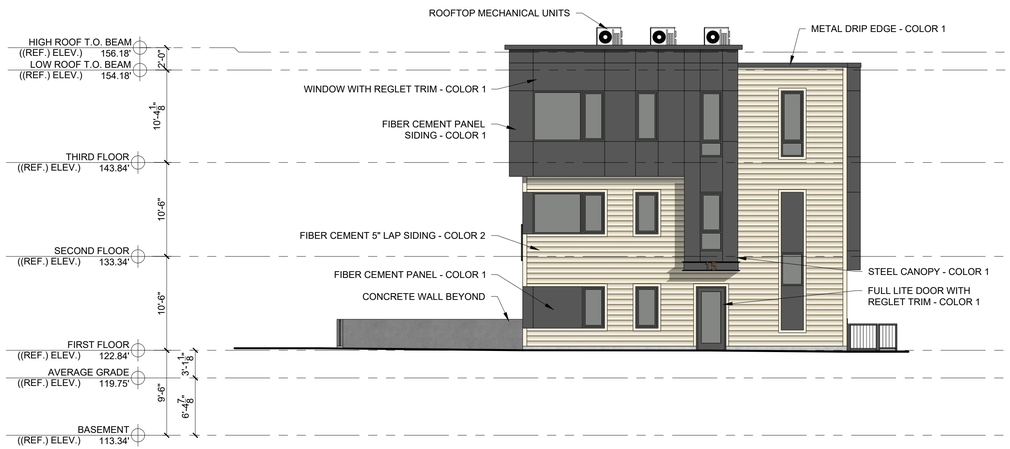
CITY OF PORTLAND
APPROVED SITE PLAN
Subject to Conditions of
Approval and Standard Conditions

Date of Approval: 12/12/2023
Planner: Sean King
Project ID: PL-002466-2023.Major Site Plan (15 Crescent St.)

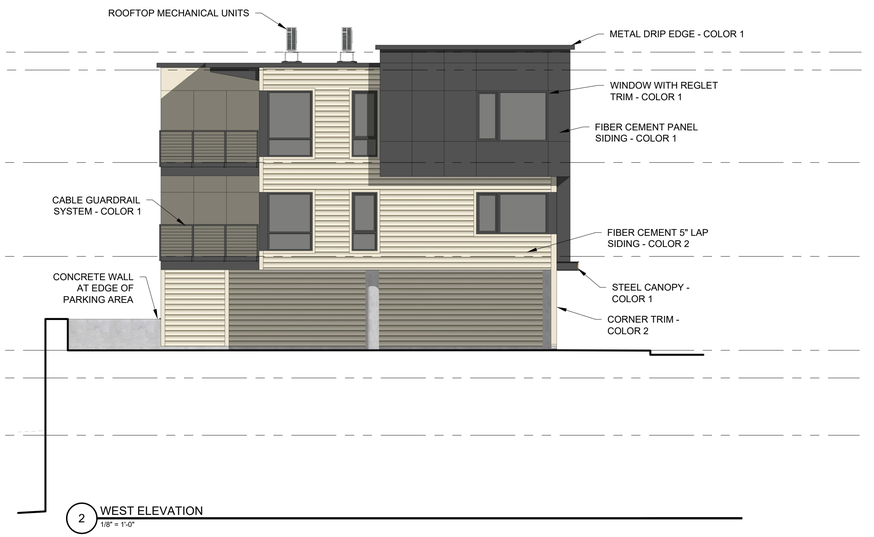
RESIDENCES AT 15 CRESCENT STREET

PORTLAND, MAINE

NOVEMBER 17, 2023



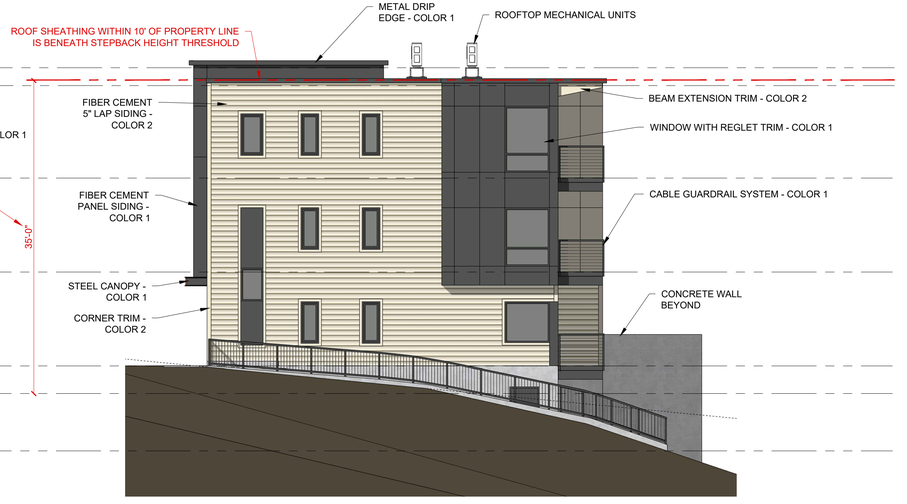
1 SOUTH ELEVATION (CRESCENT STREET FRONTAGE)
1/8" = 1'-0"



2 WEST ELEVATION
1/8" = 1'-0"



3 NORTH ELEVATION
1/8" = 1'-0"



4 EAST ELEVATION
1/8" = 1'-0"

PROGRESS PRINT ONLY
Not for Construction

RYAN SENATORE **ARCHITECTURE**

TERRADYN CONSULTANTS, LLC

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info@terradynconsultants.com
www.terradynconsultants.com

Average Grade Calculations
15 Crescent Street

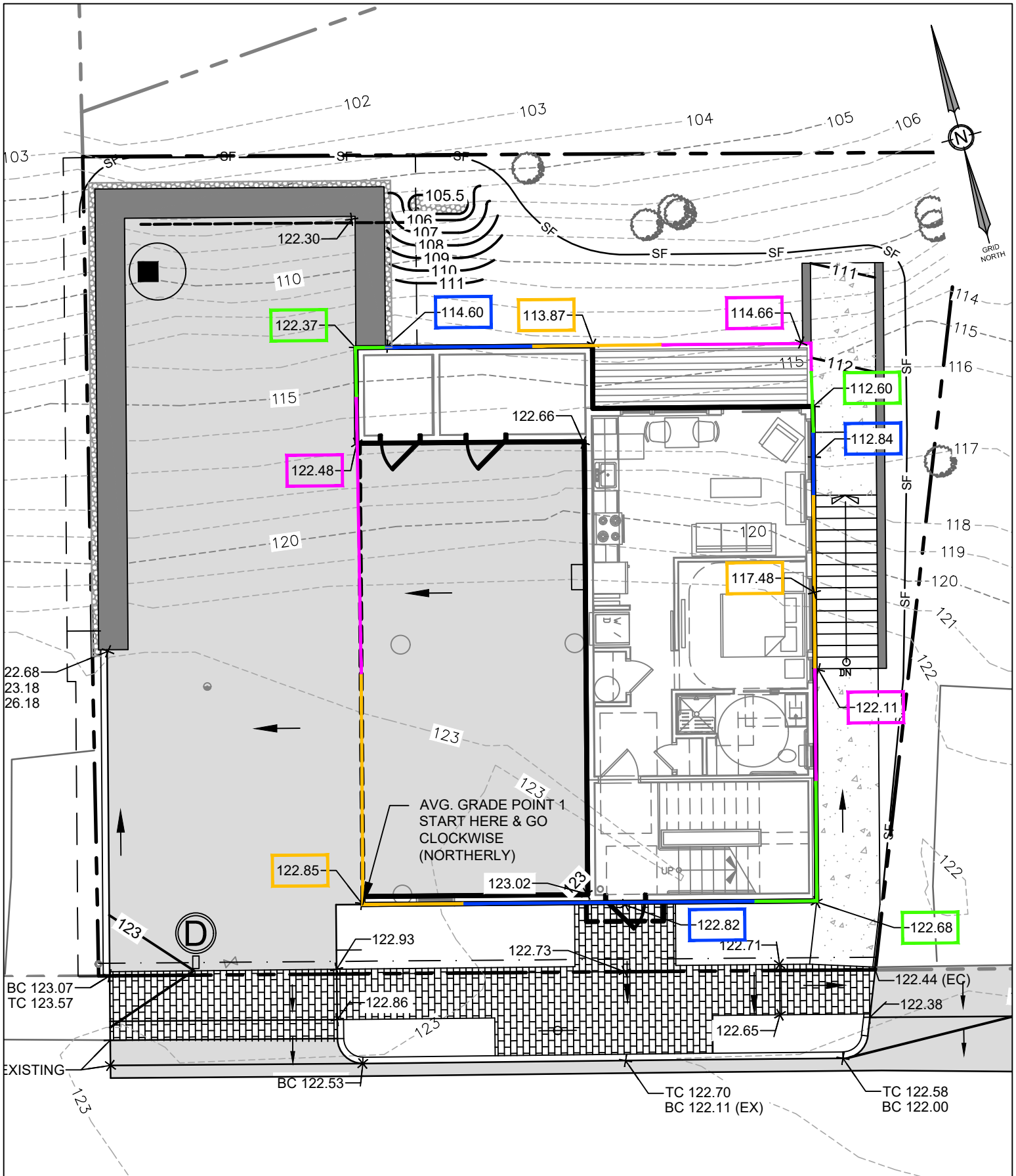
We received multiple comments on the average grade calculations for 15 Crescent Street during the project review in June through November 2023. The original average grade provided on the architectural plans submitted in April 2023 of 121' was calculated using a weighted average around the proposed building. In September 2023 it was requested by zoning that we provide the four building corner proposed grades and calculate the average grade from those four corners. This average grade was calculated at 120.13' based on the spot grades shown at the building corners. After receiving emailed comments on 11/9/23 and having a follow up meeting on 11/13/23 we have updated our average weighted grade calculation and summarized it below. Enclosed is a figure showing the average weighted grade calculation.

Weighted Average Grade

The proposed weighted average grade was calculated using three to four points along each of the four exterior building faces. The elevations used are the proposed ground elevations at the building wall. Each point was representative of an approximately 5' to 25' length of the building. The grades used in this calculation are slightly different than those used in April to obtain 121' due to updated survey information and changes to the design plans. The weighted average calculation is provided below with colors corresponding to the figure:

Point	Length	Grade	
1	26.00	122.85	3194.10
2	22.00	122.48	2694.56
3	6.25	122.37	764.81
4	11.68	114.60	1338.53
5	10.25	113.87	1167.17
6	14.00	114.66	1605.24
7	4.84	112.60	544.98
8	5.00	112.84	564.20
9	13.75	117.48	1615.35
10	9.00	122.11	1098.99
11	14.50	122.68	1778.86
12	23.00	122.82	2824.86
SUM	160.27		19191.65
Weighted Average		**119.75**	

The proposed weighted average grade was calculated to be **119.75'**. This allows for a 35' building height reaching elevation 154.75' before requiring a stepback. The proposed building height is at 154.18' to top of roof beam, resulting in a building height of 34.43'.



AVERAGE GRADE CALCULATION	TERRADYN CONSULTANTS, LLC 207.926.5111 • info@terradynconsultants.com • www.terradynconsultants.com	PROJECT NO. 1948	SHEET 1
PROJECT: CRESCENT STREET RESIDENCES 15 CRESCENT STREET, PORTLAND, MAINE	PINELAND 41 CAMPUS DRIVE, SUITE 301 NEW GLOUCESTER, ME 04260 PORTLAND 565 CONGRESS STREET, SUITE 201 PORTLAND, ME 04101	DATE 11/13/2023	OF 1
PREPARED FOR: DEVELOPERS COLLABORATIVE. 631 STEVENS AVENUE, SUITE 203 PORTLAND, MAINE 04103		SCALE 1"=10'	

CITY OF PORTLAND, MAINE

PLANNING BOARD

Sean Dundon, Chair
Brandon Mazer, Vice Chair
David Eaton
David Silk
Austin Smith
Maggie Stanley
Bob Dunfey

April 11, 2019

Kevin O'Rourke
Hammond House, LLC
94 South Street
Yarmouth, ME 04096

Will Savage, P.E.
Acorn Engineering
158 Danforth Street
Portland, ME 04104

Project Name:	Hammond House Condominiums	Project ID:	PL-000418-2018
Address:	10 Hammond Street	CBL:	012-C-004, 012-C-006, 012-C-011
Applicant:	Hammond House, LLC		
Planner:	Matthew Grooms		

Dear Mr. O'Rourke and Mr. Savage:

On April 9, 2019, the Planning Board considered a Level III Site Plan, Subdivision and Conditional Use (Inclusionary Zoning) application for a new three-story, sixteen (16) unit condominium project with fifteen (15) off-street parking spaces and associated site improvements. The Planning Board reviewed the proposal for conformance with the standards of the Site Plan and Subdivision Ordinance and Conditional Use standards for Inclusionary Zoning (Sec. 14-487). The Planning Board approved the application with the following waivers and conditions as presented below:

Waivers

1. Driveway Aisle Width: The Planning Board voted 6-0 (Dundon absent) to waive the Technical Standard (Sec. 1.7), requiring two-way driveway width of between twenty (20) and twenty-four (24) feet for multi-family development with ten (10) or more spaces, to permit a driveway width of eighteen (18) feet.
2. Driveway Separation: The Planning Board voted 6-0 (Dundon absent) to waive the Technical Standard (Sec. 1.7.2.7) requiring driveway separation of 100 feet for streets within 25mph zone, to permit a driveway separation of less than 100 feet.

Inclusionary Zoning Conditional Use Review
The Planning Board voted 6-0 (Dundon absent) that the plan is in conformance with the conditional use standards for Workforce Housing (Sec. 14-484), subject to the following condition of approval, to be met prior to issuance of a Certificate of Occupancy:

1. A financial contribution of $169,744 shall be paid into the City's Housing Trust Fund as a fee-in-lieu to satisfy the inclusionary zoning requirements for a sixteen (16) unit residential building. In the event that the unit count changes, the contribution to be collected shall be recalculated and confirmed by the Housing Program Manager prior to contribution of the fee-in-lieu.

Subdivision Review
The Planning Board voted 6-0 (Dundon absent) that the plan is in conformance with the subdivision standards of the Land Use Code, subject to the following conditions of approval that shall be met in accordance with the following schedule:

PRIOR TO THE SUBMISSION OF THE PLAT FOR PLANNING BOARD SIGNATURE

1. The subdivision plat shall be finalized to the satisfaction of the Planning Authority, Corporation Counsel and Department of Public Works and include clear descriptions of the number, location, type and size of all subdivided units, along with relevant notes and conditions.

PRIOR TO ISSUANCE OF A BUILDING PERMIT

2. The signed subdivision plat shall be recorded at the Cumberland County Registry of Deeds.

PRIOR TO ISSUANCE OF A CERTIFICATE OF OCCUPANCY

3. Condominium documents shall be finalized to the satisfaction of the Planning Authority and Corporation Counsel before being recorded.

Site Plan Review
The Planning Board voted 5-1 (Silk opposed, Dundon absent,) that the plan is in conformance with the site plan standards of the Land Use Code, subject to the following conditions of approval that shall be met in accordance with the following schedule:

PRIOR TO APPLYING FOR A BUILDING PERMIT

1. Roof plan and building elevations shall be updated to extend screening around all sides of proposed roof-mounted mechanical equipment so as to screen from all public streets, or relocate mechanical equipment off of the roof towards the rear or side of the property and screen in accordance with site plan and technical manual standards.

2. Applicant shall coordinate with the Planning Authority and Department of Public Works to install the proposed storm drain connection to Fox Street prior to scheduled repaving of Fox Street, to occur between July and September of 2019.

3. Site Plan and associated details shall be revised as necessary to show that all proposed crosswalks and landings feature ADA compliant ramps with detectable warning panels. The site plan shall show structures in the right-of-way that may affect crosswalk placement including manholes and utility poles.

4. The retaining wall and cedar fence in the vicinity of where the driveway meets the sidewalk, should be stepped down to maximize sight distances for pedestrians and vehicles.

5. A geotechnical exploration in the proposed infiltration area at the rear of the site shall be completed and shared with the Planning Authority, demonstrating that the slope can accommodate the proposed system.

6. The applicant has submitted a sample roof design based upon Planning Board feedback at the March 26, 2019 workshop. In the event that this design is agreed to during the public hearing, the applicant shall submit updated building elevations that are consistent with the recommendation made by the Planning Board.

PRIOR TO ISSUANCE OF A BUILDING PERMIT

7. The applicant shall submit for review and approval by the Planning Authority, Department of Public Works and Corporation Counsel, a stormwater maintenance agreement for the proposed development.

8. A financial contribution totaling $5,600, to be paid into the city's street tree fund, shall be provided for the required fourteen (14) street trees not provided on-site. The applicant may also choose to pursue a street tree alternative as listed in the City's site plan ordinance.

9. The applicant shall submit a revised construction management plan that addresses off-street contractor parking for review and approval by DPW and the Planning Authority.

PRIOR TO ISSUANCE OF A CERTIFICATE OF OCCUPANCY

10. The applicant shall comply with Fire Department comments requiring:
    a. The main entrance of the building must be the address for the property. This should be consistent with 911, tax assessor, Inspections Division and future mailing address.
    b. The new building shall not affect the egress, escape or required fire department access for the neighboring building(s)
    c. The street address shall be marked on the structure and shall be approved by the City E-911 Addressing Officer.

The approval is based on the submitted plans and the findings related to site plan review standards as contained in the Planning Report for application (PL-000418-2018) which is attached.

Standard Conditions of Approval

Please Note: The following standard conditions of approval and requirements apply to all approved site plans and shall be met in accordance with the following schedule:

PRIOR TO ISSUANCE OF A BUILDING PERMIT

1. Subdivision Recording Plat A revised recording plat, listing all conditions of subdivision approval, must be submitted to the Planning and Urban Development Department for review. Once approved, the plat shall be signed by the Planning Board prior to the issuance of a performance guarantee. The performance guarantee must be issued, prior to the release of the recording plat, for recording at the Cumberland County Registry of Deeds.

2. Separate Building Permits Are Required This approval does not constitute approval of building plans, which must be reviewed and approved by the City of Portland's Permitting and Inspections Department.

3. Performance Guarantee and Inspection Fees A performance guarantee covering the site improvements, inspection fee payment of 2.0% of the guarantee amount and one (1) final set of plans must be submitted to and approved by the Planning and Urban Development Department and Public Works Department prior to the release of a building permit, street opening permit or certificate of occupancy for site plans. If you need to make any modifications to the approved plans, you must submit a revised site plan application for staff review and approval.

4. Preconstruction Meeting Prior to the release of a building permit or site construction, a pre-construction meeting shall be held at the project site. This meeting will be held with the contractor, Development Review Coordinator, Public Works representative and owner to review the construction schedule and critical aspects of the site work. At that time, the Development Review Coordinator will confirm that the contractor is working from the approved site plan. The site/building contractor shall provide three (3) copies of a detailed construction schedule to the attending City representatives. It shall be the contractor's responsibility to arrange a mutually agreeable time for the pre-construction meeting.

5. Construction Management Plans The applicant, contractor and subcontractors are required to conform to the approved Construction Management Plan, and all conditions contained within the project's approval, for the entire duration of the project. Any amendments to the approved Construction Management Plan shall be reviewed and approved by the Department of Public Works prior to the execution. The Planning Authority and the Department of Public Works have the right to seek revisions to an approved Construction Management Plan. The applicant shall coordinate the project's construction schedule with the timing of nearby construction activities to avoid cumulative impacts on a neighborhood and prevent unsafe vehicle and pedestrian movements. Accordingly, nearby construction activities could involve a delay in the commencement of construction.

6. Department of Public Works Permits If work or obstructions will occur within the public right-of-way, such as utilities, curb, sidewalk, driveway construction, site deliveries and equipment siting, a Street Opening and/or Occupancy Permit(s) is required for your site. Please contact the Department of Public Works Permit Clerk at 874-8300, ext. 8828. (Only excavators licensed by the City of Portland are eligible.)

PRIOR TO ISSUANCE OF A CERTIFICATE OF OCCUPANCY

7. Develop Site According to Plan The site shall be developed and maintained as depicted on the site plan and in the written submission of the applicant. Modification of any approved site plan or alteration of a parcel which was the subject of site plan approval after May 20, 1974, shall require the prior approval of a revised site plan by the Planning Board or Planning Authority pursuant to the terms of Chapter 14, Land Use, of the Portland City Code.

8. Design Review of Exterior Elevations If the project is subject to design review, then the exterior elevations shall be constructed and maintained as depicted on the approved elevation drawings and in the written submission of the applicant. Modification of any approved exterior elevations shall require the approval of the revised plans by the Planning Board or Planning Authority pursuant to the terms of Chapter 14, Land Use of the Portland City Code.

9. Impact Fees New development or changes of use that result in net new residential dwelling units, non-residential building square footage, or water meters, are subject to the City of Portland's impact fee ordinance (Chapter 14, Article XVII). Impact fees are calculated at the time of building permit and must be paid prior to the certificate of occupancy. For more information, visit https://www.portlandmaine.gov/2409/Impact-Fees

10. Defect Guarantee A defect guarantee, consisting of 10% of the performance guarantee, must be posted before the performance guarantee will be released.

11. As-Built Final Plans Final sets of as-built plans shall be submitted digitally to the Planning and Urban Development Department, on a CD or DVD, in AutoCAD format (*,dwg), release AutoCAD 2005 or greater.

12. Mylar Copies Mylar copies of the as-built drawings for the public streets and other public infrastructure in the subdivision must be submitted to Public Works prior to the issuance of a certificate of occupancy.

GENERAL CONDITIONS OF APPROVAL

13. Subdivision Waivers Pursuant to 30-A MRSA section 4406(B)(1), any waiver must be specified on the subdivision plan or outlined in a notice. The plan or notice must be recorded in the Cumberland County Registry of Deeds within two (2) years of the final subdivision approval.

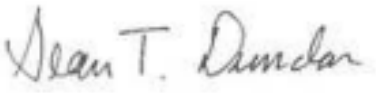
14. Site Plan Expiration The site plan approval will be deemed to have expired unless work has commenced within one (1) year of the approval or within a time period up to three (3) years from the approval date as agreed upon in writing by the City and the applicant. Requests to extend approvals must be received before the one (1) year expiration date.

15. Subdivision Expiration The subdivision approval is valid for up to three (3) years from the date of Planning Board approval.

The Development Review Coordinator must be notified five (5) working days prior to the date required for final site inspection. The Development Review Coordinator can be reached at the Planning and Urban Development Department at 874-8632. All site plan requirements must be completed and approved by the Development Review Coordinator prior to issuance of a Certificate of Occupancy. Please schedule any property closing with these requirements in mind.

If there are any questions, please contact Matthew Grooms at (207) 874-8725

Sincerely,



Sean Dundon, Chair
Portland Planning Board

Attachments:
1. Planning Board Report
2. Portland City Code: Chapter 32
3. Sample Stormwater Maintenance Agreement
4. Performance Guarantee Packet

PLANNING BOARD REPORT
PORTLAND, MAINE

Hammond House Condominiums
10 Hammond Street
Level III Site Plan, Subdivision, IZ Conditional Use
PL-000418-2018
Hammond House, LLC, Applicant

Submitted to: Portland Planning Board Public Hearing Date: April 9, 2019	Prepared by: Matthew Grooms Date: April 5, 2019

I. INTRODUCTION

Hammond House, LLC has submitted a Level III Site Plan, Subdivision and Conditional Use application for a new sixteen-unit residential condominium on a 15,433 square foot parcel located at 10 Hammond Street in the East Bayside Neighborhood. This street consists largely of one- and two-family homes, with fewer multi-family properties in the neighborhood and is located within the R-6 Residential Zone, outside of the Munjoy Hill Neighborhood Conservation Overlay zone. The proposed development involves demolition of two single-family structures and construction of a new three-story building with subsurface structured parking.

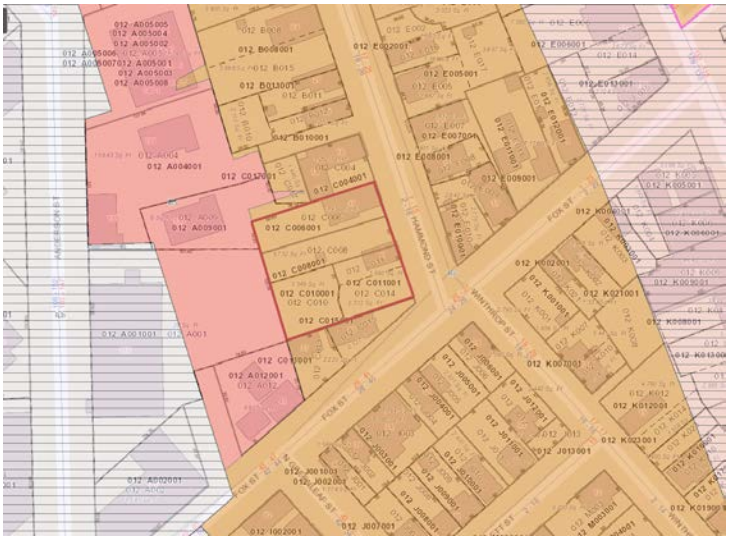


Figure 1: Subject parcel and zoning information

Two Planning Board Workshops have been held to discuss this project, the first on February 26, 2019 to discuss the project generally and the second, on March 26, 2019 to focus on building design. Please see the discussion below under Section VII. Planning Board Workshops for more information.

A total of 157 notices were sent to property owners within 500 feet of the site and a legal ad ran in the March 29th and 30th 2019 editions of the Portland Press Herald.

Applicant: Kevin O'Rourke, Hammond House, LLC
Consultants: Will Savage, P.E., Acorn Engineering; Sam Level, Acorn Engineering; Ryan Senatore, Ryan Senatore Architecture; Richard Eaton, R.W. Eaton Associates.

II. REQUIRED REVIEWS

Waiver Requests	*Applicable Standards*
Driveway Aisle width – 18' feet Staff Comments: The City's Traffic Engineer supports a waiver from the City's Technical Standards for driveway width given low traffic volumes and traffic characteristics of Hammond Street.	Technical Manual, *Section 1.7.2.3,* requiring a minimum driveway aisle width of 20 feet for two-way ingress and egress
Driveway Separation – Reduce to less than 100' feet Staff Comments: The City's Traffic Engineer supports a waiver from the City's Technical Standards for Driveway Separation, based upon the need to provide maximum	Technical Manual, *Section 1.7.2.7.* requiring 100' feet of separation between driveways for a 25 mph road.

separation between the driveway and Fox Street, and low traffic volumes along Hammond Street and from the proposed development.	
Review	***Applicable Standards***
Site Plan	*Section 14-526*
Subdivision	*Section 14-497*
Inclusionary Zoning (IZ)	*Section 14-474, Section 14-487*

III. PROJECT DATA

Existing Zoning	R-6 Residential
Existing Use	Single-Family (2 units)
Proposed Use	16 Residential Units
- Bedroom Mix	3 three-bedroom units, 7 two-bedroom units, 6 one-bedroom units
Parcel Size	15,433 SF

	Existing	*Proposed*	*Net Change*
Building Footprint	2,260 SF	8,276 SF	6,016 SF
Building Floor Area	4,000 SF	32,242 SF	28,242 SF
Impervious Surface Area	4,009 SF	11,565 SF	7,556 SF
Parking Spaces	4	16	12
Bicycle Parking Spaces	0	6	6
Estimated Cost of Project	Unknown		

IV. EXISTING CONDITIONS

The proposed development site occupies two single-family properties, totaling just over one-third of an acre, located at the northwest corner of the Hammond Street and Fox Street intersection. The existing one and a half story single-family structures date to the latter half of the 19th Century (1850 and 1880 respectively) and are not protected under local or state historic preservation designations.



Figure 2: Existing conditions of site at Hammond Street frontage.

At present, approximately one-quarter of the site is impervious surface, with significant vegetation being located along the property boundaries and towards the rear of the site away from Hammond Street. The property generally slopes down from east to west with an average grade of 12%. The project area presently drains the entirety of its runoff on to the abutting property to the west (117 Anderson Street – the Portland Housing Authority's Maintenance Facility).

In looking at the broader context, Hammond Street and surrounding areas of East Bayside feature a higher proportion of single-family structures as compared with other areas of Portland's peninsula, with a generally smaller scale of development. Existing structures are typically between one and two stories, though there are several three-story buildings within a block radius of the development site. Hammond street features regularly spaced street trees, a nine (9) foot concrete sidewalk, and overhead utility poles with cobra head light fixtures along the east side of Hammond Street.

V. PROPOSED DEVELOPMENT

The development is proposed as a new three-story, sixteen-unit residential condominium, composed of a mixture of one-, two- and three-bedroom units with subsurface structured parking for thirteen (13) vehicles, including one handicap space, and two (2) exterior parking spaces. The building is just under forty (40) feet tall and eighty (80) feet wide with a depth of approximately one-hundred (100) feet. The development emphasizes pedestrian access and activity at street level, with front entrance and unit patios fronting Hammond Street. Vehicular access is

deemphasized by shifting the garage entrance towards the rear of the site, that is accessible via an eighteen (18) foot driveway located along the northerly property boundary. The use of a driveway is consistent with other developments along Hammond Street. The project also features closure of two (2) existing curb cuts, for a net reduction of one (1).

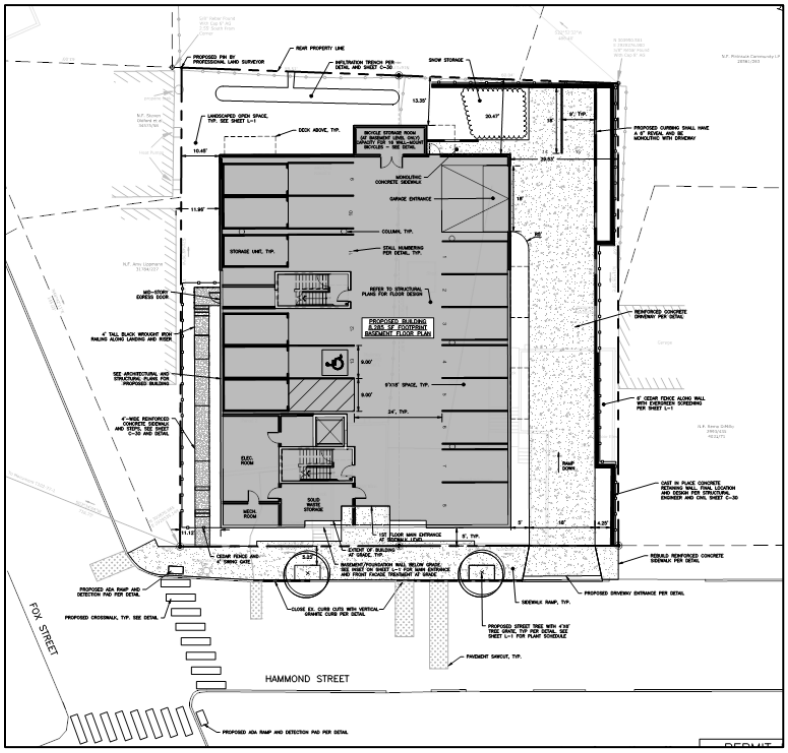


Figure 3: Proposed site plan

As mentioned in the existing conditions section, the development site is approximately 25% developed, with significant open space and vegetation. While much of that existing area is to be developed, and vegetation is to be removed, existing vegetation located within the building setback areas will be preserved where possible, and will be significantly augmented through additional plantings. A mixture of native ornamental grasses, perennials, shrubs and trees are proposed along the building's exterior, at the rear of the site and along the driveway edge for additional buffering, and along the property frontage. Based upon the width of the property's frontage, two street trees are being provided to partially satisfy the city's street tree requirement. A retaining wall and six (6) foot cedar fence is proposed along the northerly property boundary to provide additional noise and visual buffering between the neighboring property.

Utilities to the site are provided via existing infrastructure located beneath Hammond Street, with new connections consisting of a four (4) inch water service, six (6) inch fire service and six (6) inch sanitary sewer connection. Electrical service is provided underground from an existing CMP pole located at the northwest corner of Fox and Hammond Street. Site lighting is provided by six (6) full cutoff wall pack fixtures, with a maximum light trespass of 0.1 foot-candles onto adjacent properties. Lighting is provided at the main entrance, along the pedestrian accessway to the garage and along the driveway.

In regards to stormwater management, the proposed development significantly increases the amount of on-site impervious surface and is therefore required to meet Maine DEP Chapter 500 stormwater standards for stormwater quality and quantity control. The development proposes water quality treatment for no less than 95% of the new impervious area and 80% of the developed area, which shall be met through the use of an underdrained subsurface sand filter (USSF) and StormTech Isolator Row. According to the applicant, the proposed system will exceed both city and state requirements for stormwater quality treatment. The system is also designed to contain runoff for up to a 25-year storm event and promote infiltration, which satisfies the flooding standard. The post development condition would significantly reduce the amount of runoff impacting down gradient property owners.

VI. PUBLIC COMMENT AND NEIGHBORHOOD MEETING

As of the writing of this report, fourteen (14) written comments have been received by the Planning Division. The concerns raised by abutters were primarily focused on building design, particularly the height and massing of the proposed building as it compares with the largely one- and two- story buildings found elsewhere along Hammond Street and in the vicinity. Other concerns raised included the affordability of new units, the limited consideration of the impacts of climate change, the appropriate balance between off-street and on-street parking and a closer look at city allowances for rooftop appurtenances.

City staff also met with Cynthia Cochran, Vice President of the East Bayside Neighborhood Organization, to discuss the project in more detail and answer questions compiled by neighbors. At this meeting, Ms. Cochran raised concerns that the scale and form of the building were incompatible with nearby properties and that the project did not meet design standards as listed under alternative design review for projects in the R-6 zone. She also raised concerns regarding impacts to the on-street parking supply, vehicle speeding along Fox Street, the lack of a crosswalk across Fox Street in the vicinity of this project, and impacts to vehicle and pedestrian sight lines resulting from illegally

parked vehicles along Fox Street. One additional point raised was the lack of integration of projects of this scale into the surrounding neighborhood, as projects with four (4) or more units tend to be more inwardly focused.

In response to these concerns, the staff would note that design review comments for both the first and second iteration of the building's design have focused on the massing and scale of the building, particularly as it related to the façade visible from Fox Street, proposed rooftop features, and pedestrian scale features along Hammond Street and at the building entrance. The design review process requires that development relate in terms of scale and massing to nearby development, but does not require that a new development replicate existing development. Given that this scale of development is permitted by right in the R-6 zone, the staff are instead suggesting that the design of the building continue to be revised so as to be more complementary of and integrated within its context. Please see the design review memo for more information (Attachment 1).

The applicant held a neighborhood meeting on January 15, 2019 attended by twenty-five (25) members of the public. At this meeting, members of the public asked questions regarding process, project parameters, the likelihood of blasting, status of the condominium documents, construction management. Those in attendance also raised concerns regarding the scale of the proposed building and felt that it would overwhelm nearby properties. Responses to these questions and concerns can be found in the attached neighborhood meeting minutes (Attachment Y).

At both Planning Board workshops, considerable testimony was provided by members of the public, who generally have been concerned that the project is out of context within its neighborhood, and that the design standards for the R-6 zone are not being met for this project. Numerous suggestions for scaling down the design or better integrating the building have been raised, and further questions have been raised regarding staff's finding that the project meets applicable design standards.

VII. PLANNING BOARD WORKSHOPS

A. FIRST WORKSHOP - FEBRUARY 26, 2019

The Planning Board held a workshop to discuss the proposed development at 10 Hammond Street on February 26, 2019. At that meeting, the Board strongly encouraged the applicant to revisit site design as well as building scale and massing and stressed that the development felt too large in relation to surrounding properties. Board members identified roof-top appurtenances as needing to be evaluated for visual impact and offered suggestions for the overall project design to respond to the concerns raised about massing and context, including:



Figure 4: Front facade elevation (iteration 1) showing roof decks and stair towers.

- Break the building into two separate buildings
- Reduce the amount of on-site parking to cut down on size and site impacts
- Use vegetation to more significantly screen the development
- Revise the design of bays along Hammond Street to further break up the building

The Board also observed that the building felt institutional, due in part to the sculpture, concept signage and entrance design. Aside from design related comments, the Board also asked that the applicant evaluate the viability of their stormwater system given the steep slope at the rear of the property, with the concern being that the infiltration unit may destabilize the slope. Additional erosion control may be warranted to counter that concern. Other requests included the provision of condominium documents and a reconsideration of landscape choices.

B. RESPONSE TO FIRST WORKSHOP

In response to feedback from the Planning Board and staff, the applicant's design team significantly redesigned the building to enhance compatibility with smaller scale development in the vicinity. Caitlin Cameron, Urban Designer and

Matthew Grooms, Planner, met with the architect and developer on March 11th to discuss proposed changes, and found them to be significantly responsive to Board and public feedback, while maintaining the scope of the project. Below is a list of changes that were incorporated in order to relate the building to its neighborhood.

- Roof top decks and stairwells, which added significantly to the massing of the proposed structure, were removed, reducing effective height of the building by approximately ten (10) feet.
- Main entrance was recessed in order to scale the front façade.
- The main stair and elevator were moved deeper into the building and away from the front façade, which eliminated the elevator override that previously was a prominent feature of the front façade, and added additional living space along the street.
- Sculpture was removed and replaced with ground-level planters to better identify separation of private and public space.
- A quasi front porch, added through canopy and columns, was proposed, further contextualizing the building with other multi-family properties in the vicinity.
- Façade materials were simplified and made more uniform. Material colors were lightened and strategically chosen to downplay the scale of the building.
- Bays were added to the front façade to scale the building's width and pay tribute to triple decker typology.
- A more traditional cornice detail was provided that is more contextual.
- Recessed decks were provided at the mid-point of side facades, which break up the scale of the building.
- Cornice was brought down one story and material color changed at 3rd floor on Fox Street façade to scale building.

C. SECOND WORKSHOP – MARCH 26, 2019

The Planning Board held a second workshop on March 26, 2019 where they focused specifically on building design changes and generally found the revisions to be responsive to feedback provided at the first workshop. While noting that the project was considerably larger than other development in the immediate vicinity, they noted that the project was permitted under zoning as currently written and asked the City's Urban Designer, Caitlin Cameron, to explain how the project met design standards for the R-6 zone, which require compliance with standards A-1 through A-3 of Appendix 7 of the design manual. Those standards are as follows:

- STANDARD A-1 - Scale and Form - Relate the scale and form of the new building to those found in residential buildings within a two-block radius of the site, that contribute to and are compatible with the predominant character-defining architectural features of the neighborhood. Special attention shall be given to the existing building forms on both sides of the street within the block of the proposed site.

- STANDARD A-2 - Composition of Principal Facades - Relate the composition of the new building façade, including rhythm, size, orientation and proportion of window and door openings, to the facades of residential buildings within a two-block radius of the site that contribute to and are compatible with the predominant character-defining architectural features of the neighborhood. Special attention shall be given to the existing facades on both side of the street within the block of the proposed site.

- STANDARD A-3 - Relationship to the Street - Respect the rhythm, spacing, and orientation of residential structures along a street within a two-block radius of the site that contribute to and are compatible with the predominant character-defining architectural features of the neighborhood. Special attention shall be given to the existing streetscape on both side of the street within the block of the proposed site.

Ms. Cameron explained that the design standards do not require a project to mimic or repeat existing form and scale, but instead relate a development through design choices to the existing context within a two-block radius. For example, with this project, bays, canopies and articulation elements such as recesses were introduced that break up the massing of the building. Material choices were simplified in line with other nearby multi-family development, and both color choices and roof forms were used to deemphasize the third floor of the building, particularly along the Fox Street façade, to mitigate the building's scale and massing.

Members of the Board asked that long views of the building be provided through renderings from up towards Washington Avenue, to better understand the visual impact of roof-mounted mechanical equipment. The applicant was also asked to consider minor revisions to the roof form to further differentiate the front half of the building from the rear half (where the third-floor material palette changes). At this workshop, it was agreed that the project was ready to go to a public hearing.

D. RESPONSE TO SECOND WORKSHOP

Following the second workshop, the applicant made a few minor revisions to their plan and building design and provided some additional information and renderings as requested by the Board and staff. These changes include:

- Renderings showing long views of building from uphill on Fox Street and downhill on Fox Street. While helpful, these views are not sufficiently distant. Based on these views, staff have drafted a condition of approval that roof-mounted mechanical equipment be screened from all sides, or conversely, be located at the rear of the site and not be roof-mounted.
- Provided additional information on front yard planters, which are now seat wall planters. These better integrate the site into the neighborhood, while not providing physical benches, which are not supported due to their institutional nature.
- Varied roof study provided. Board members requested that more be done to the building to mitigate the flatness and scale of the building, especially related to Fox Street. The submission includes a study of roof form variation where the height is differentiated between the grey and white portions of the building. While the study has been provided, the applicant does not want to pursue this direction for cost and construction complexity reasons.
- Screening of rooftop mechanicals. Partial screening has been provided to shield views of roof-mounted mechanical equipment from uphill vantage points. Based on renderings provided, staff have drafted a condition of approval that would require screening from all sides.



Figure 5: Roof Study showing roof form variations and screening of mechanicals

VIII. RIGHT, TITLE, & INTEREST AND FINANCIAL & TECHNICAL CAPACITY

a. The owner of the property is Kevin O'Rourke, Hammond House, LLC. The applicant has provided a copy of the warranty deed, recorded at the Cumberland County Registry of Deeds (Book 6420, Page 257), which demonstrates their right, title and interest in the property. (Attachment C)

b. As evidence to demonstrate sufficient financial and technical capacity, the applicant has provided a letter from Camden National Bank indicating that between the applicant's funds and bank financing, that applicant has sufficient financial capacity to complete the proposed project. Similarly, information has been provided on the development team demonstrating the capacity to design and construct the project. (Attachment G)

IX. ZONING ANALYSIS

A. DIMENSIONAL AND USE REQUIREMENTS

The proposed project is a three-story residential condominium with sixteen (16) units and fifteen (15) off-street parking spaces. The property is located within the R-6 Residential zone, outside of the Munjoy Hill Neighborhood Conservation Overlay District.

The proposed use, a multi-family residential development, is a permitted use within the R-6 and the project as proposed is fully compliant with all dimensional requirements as shown in the table below.

	Required	Proposed
Lot Size	2,000 SF	15,433 SF
Area Per Dwelling Unit	725 SF	965 SF
Minimum Street Frontage	20' FT	120' FT
Front Yard Minimum	0 (Abutter Average)	5.12' FT
Front Yard Maximum	N/A	5.12' FT
Rear Yard	10' FT	13.35' FT
Side Yard	5' FT	29.5' FT (Right), 10.5' FT (Left)
Maximum Lot Coverage	60%	56%
Maximum Height	45' FT	39.8' FT
Open Space	20%	25%
Maximum Impervious Surface	80%	75%
Off-Street Parking	13 (1 space/unit, first 3 not required)	15

The proposed height of the building is compliant with the standards of the R-6 zone. At the first workshop, staff highlighted the quantity and dimension of rooftop appurtenances, which extended the height of the building to approximately fifty (50) feet above average grade. These have since been removed per staff and Board feedback. Following the second workshop, the roof form was revised further to mitigate the massing of the building and deemphasize its height along Fox Street.

Based upon the elevation change within the vicinity of this site, it is anticipated that there will be long views of the building from multiple vantage points. To compensate for this, a screening element has been incorporated into the roof to screen roof-mounted mechanical equipment.

B. CONDITIONAL USE – INCLUSIONARY ZONING

As required by the City's Inclusionary Zoning Ordinance, residential developments with ten (10) or more units are required to provide a minimum of ten percent (10%) of the dwelling units as Workforce Housing units, and the units themselves must contain in total, ten percent (10%) of the total bedroom count for the entire development. The City's Housing Program Manager, Victoria Volent, has reviewed the application and offers the following comments (Attachment 6):

- The project located at 10 Hammond Street proposes the creation of 16 condominium units. The applicant has chosen to fulfill the inclusionary zoning requirements by paying a fee-in-lieu. The proposed project would thus be required to pay a total fee of $169,744 into the City's Housing Trust Fund in-lieu of creation of actual housing units for workforce households. As such, the project has met the minimum requirements set forth in Section 14-487.

  Staff recommends the agreed upon fee-in-lieu of $169,744 be paid into the City's Housing Trust Fund prior to issuance of the Certificate of Occupancy for 10 Hammond Street. Should at a later date any change in total unit count be considered, a revised proportional fee-in-lieu payment will also be required.

X. DEVELOPMENT REVIEW

A. SITE PLAN SUBMISSION REQUIREMENTS (Section 14-527) and SUBDIVISION PLAT AND RECORDING PLAT REQUIREMENTS (Section 14-496)

The applicant has submitted a recording plat. The final plat will need to be revised to reflect any waivers and

conditions of approval that relate to the subdivision plan. Any waivers granted must be recorded at the Registry of Deeds within two years of a Planning Board decision.

B. SUBDIVISION (Section 14-496)

The proposed development has been reviewed by staff for conformance with the relevant review standards of Portland's Subdivision Ordinance and applicable regulations. Staff comments are listed below.

1. *Will Not Result in Undue Water and Air Pollution (Section 14-497 (a) 1), and Will Not Result in Undue Soil Erosion (Section 14-497 (a) 4)*
   Lauren Swett, P.E. with Woodard and Curran Engineering, has reviewed the erosion and sediment control plans and details, and inspection and maintenance requirements for the project. In preliminary review comments, it was noted that additional erosion control measures may be necessary at the rear of the property due to the significant slope.

   Regarding the infiltration trench proposed at the rear of the property, Ms. Swett had commented that a geotechnical investigation would be required to determine that the soils were sufficiently capable of accommodating the trench at capacity. A geotechnical report has since been provided, and Ms. Swett offers the following comment (Attachment 5):

   - I've reviewed the geotechnical memo that was provided on the infiltration trench. I agree with their approach and their analysis that the infiltration system would have minimal impact on a representative slope.

     They note that they will be doing an exploration in the actual infiltration area in the future to verify their assumptions and analysis. It would be good to clarify when that investigation work is proposed (i.e. before/during construction construction), and a condition based on that timing added to provide the results to the City.

     I also understand that there was discussion about changing the emergency overflow from a narrow channel to a wider outlet, more like a level spreader to spread the water out over the slope. I agree with that. As designed, there is less flow going to this area, and this overflow would only be used in the case that there's an extreme condition, like a really intense storm or if the infiltration system somehow failed (i.e. plugged with sediment) and that was the only place for water to exit the system. Eliminating the narrow channel, and allowing for a wider flow from the system in that extreme condition should work to reduce the risk to the slope during an overflow.

2. *Sufficient Water Available (Section 14-497 (a) 2 and 3)*
   The project will be served by a new 4-inch domestic service and 6-inch fire service drawn from the existing water main in Stevens Avenue. An 'Ability to Serve' letter was provided by the Portland Water District.

3. *Will Not Cause Unreasonable Traffic Congestion (Section 14-497 (a) 5)*
   The proposed project closes two curb cuts and shifts the driveway to the north. The proposed driveway would measure eighteen (18) feet in width and would provide both ingress and egress to the site. The proposed relocation of the driveway provides greater separation between the driveway and intersection. Tom Errico, P.E. with T.Y. Lin reviewed the proposal's details including access, parking, construction management plan and vehicle circulation, and has provided the following comments (Attachment 2):

   - The Applicant has noted that acceptable sight distance will be provided. A condition of approval should include details that requires the property line fence to be designed to maximize sight distance to both vehicles and pedestrians.
   - The driveway location is based on maximizing the distance from Fox Street and building design. Given these factors and low traffic volumes on Hammond Street and from the development, I support a waiver from City Standards.

4. *Will Provide for Adequate Sanitary Sewer and Stormwater Disposal (Section 14-497 (a) 6), and Will Not Cause an Unreasonable Burden on Municipal Solid Waste and Sewage (Section 14-497 (a) 7)*
   The applicant is proposing a new six (6) inch sanitary sewer service connection into the existing sewer main beneath Hammond Street. The Department of Public Works has reviewed the proposal and found it to be acceptable.

5. *Comprehensive Plan (Section 14-497 (a) 9)*
The development has been designed to be consistent with the City's Master Plan, adopted in June of 2017.

B. SITE PLAN STANDARDS (Section 14-526)

The proposed development has been reviewed by staff for conformance with the relevant review standards of Portland's site plan ordinance and applicable regulations. Staff comments are listed below.

1. *Transportation Standards*

a. Impact on Surrounding Street Systems and Access and Circulation- see Subdivision discussion regarding traffic congestion and site circulation above.

b. Sidewalks

The applicant is proposing to close two existing curb cuts, and repair the concrete sidewalk along the property's frontage to match the existing condition. A crosswalk is proposed across Hammond Street at the intersection of Hammond and Fox Street. A detectable warning panel is proposed on the west side of the street, though no improvements are proposed at the opposite corner. Staff have drafted a condition of approval that requires the applicant to redesign the landing on the opposite side of Hammond Street to be ADA compliant.

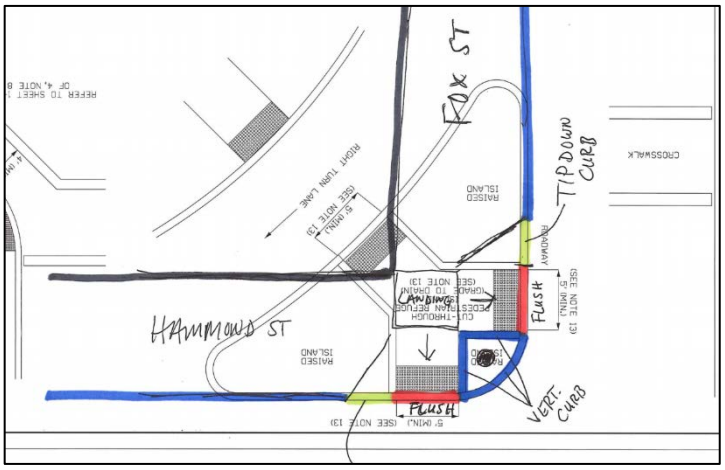


Figure 6: Concept ramp design recommended by staff.

Based upon public input and Section 14-526(a)(1) of the City's site plan standards, the staff have requested that a crosswalk be provided across Fox Street in the vicinity of the project due to projected impacts. The standard specifically states, in regards to impacts on surrounding street systems, that a site makes provisions for, "*vehicular loading and unloading and parking and for vehicular and pedestrian circulation on the site and onto adjacent public streets and ways*". Given the scale and scope of the project, the anticipated impacts are significant enough to warrant this off-site improvement.

In response, the applicant has agreed to construct a crosswalk across Fox Street from the east side of Hammond Street to the corner of Fox and Winthrop Street. This design, while feasible, requires a particular design due to the location of an existing utility pole on the Hammond Street side. A sketch of that design is shown below. A condition of approval has been drafted that ADA compliant ramps be provided at all landings.

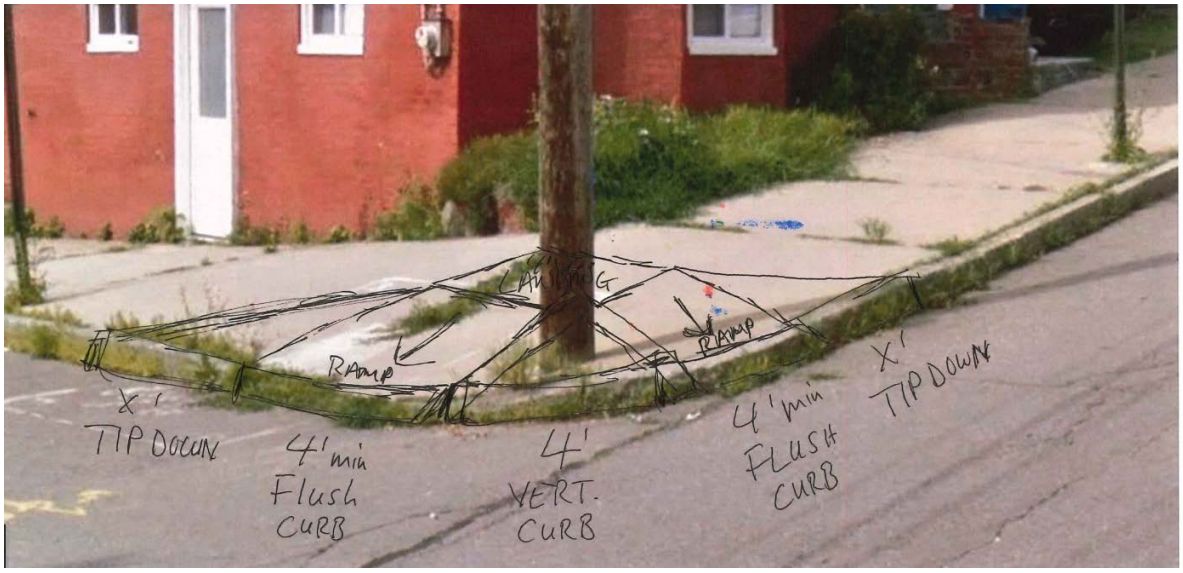


Figure 7: Design of ramp in context.

c. Public Transit Access
The public transit requirements do not apply to this project.

d. Parking
Fifteen (16) parking spaces are being proposed, including two (2) spaces located outside of the subsurface structured parking, at the end of the driveway. The proposed parking meets city zoning requirements for off-street parking.

e. Bicycle Parking
The proposal includes a bicycle storage room with space for more than five (5) bicycles which meets the site plan standard requiring a minimum of two bicycle parking spaces for every five dwelling units.

2. *Environmental Quality Standards*

a. Preservation of Significant Natural Features
There are no known significant natural features on the site.

b. Landscaping and Landscape Preservation
A landscaping plan was submitted as part of the application. The plan shows two street trees, a variety of shrubs and trees as buffer plantings along the northerly and westerly property boundaries, and shrubs, perennials and ornamental grasses along the building's exterior and adjacent to on-site walkways and driveways. Along the northerly property boundary, a retaining wall and cedar fence is proposed for both site stabilization and additional site buffering.

Jeff Tarling, the City Arborist, in preliminary comments, stated that the plantings had ornamental value but limited buffering value, and provided some recommendations for tree species and planting locations. Those suggestions were incorporated into the updated landscape plan, which has been found to be acceptable.

Based upon the city's street tree requirements, a total of sixteen (16) trees are required, spaced thirty (30) to forty-five (45) feet apart. A condition of approval has been drafted requiring either a fee in lieu for that contribution, or an alternative proposal in line with the city's site plan ordinance.

c. Water Quality, Storm Water Management and Erosion Control
Once developed, on-site impervious surface will increase from 4,009 square feet, to 11,565 square feet, a net increase of greater than 1,000 square feet, which necessitates compliance with the city's requirements for stormwater quality and quantity management.

Lauren Swett has reviewed the applicants plans and project details, and offers the following comments (Attachment 5):

- In accordance with Maine DEP Chapter 500 Regulations and Section 5 of the City's Technical Manual, the Applicant is required to meet the Basic, General and Flooding Standards for Stormwater Management. The applicant has proposed erosion and sedimentation control features to meet the Basic Standard, and an underdrained subsurface sand filter and infiltration trench to meet the General and Flooding Standards. The applicant has addressed all comments related to stormwater management requirements for the project.

3. *Public Infrastructure and Community Safety Standards*

a. Public Safety and Fire Prevention

Mike Thompson, Division Chief of the Fire Prevention and Community Outreach Division, has reviewed the submitted plans and found them to be acceptable, noting the following points which are being drafted as a condition of approval (Attachment 2):

- The main entrance of the building must be the address for the property. This should be consistent with 911, tax assessor, Inspections Division and future mailing address.
- The new building shall not affect the egress, escape or required fire department access for the neighboring building(s)
- The street address shall be marked on the structure and shall be approved by the City E-911 Addressing Officer.

b. Availability and Adequate Capacity of Public Utilities

The project will be served by Central Maine Power, the Portland Water District, City Department of Public Works. Evidence of utility capacity has been provided for all proposed utilities.

4. *Site Design Standards*

a. Snow and Ice Loading

Based upon the roof design, it is not anticipated that snow or ice loading will be a concern to pedestrians within the public right-of-way or on the applicant's property.

b. View Corridors

This site is not within a Protected View Corridor as per the "View Corridor Protection Plan" approved by the Portland City Council in 2001.

c. Historic Resources

The site is not located within a historic district or within 100 feet of a historic district, landmark or landscape and as a result, this project is not required to be reviewed by Historic Preservation.

d. Exterior Lighting

The applicant has submitted a lighting and photometric plan. The plan shows exterior, building mounted wall packs near the entrance, pedestrian walkway and driveway. All exterior site lighting including lighting of building entrances will be full cutoff with no light emitted above the horizontal plane and light trespass falls within the allowable limits as stipulated under Section 12 of the Technical Manual.

e. Noise and Vibration

Exterior mechanical equipment is to be roof-mounted, and centrally located on top of the building to minimize visibility from adjacent properties and public spaces. It is not anticipated that this equipment will result in adverse conditions related to noise and vibration.

f. Signage and Wayfinding

This standard does not apply to the proposal.

g. Zoning Related Design Standards

A design review (Attachment 1) according to the City of Portland Design Manual Standards was performed for the revised proposal for new construction of a multi-family dwelling at 10 Hammond

Street. The review was performed by Caitlin Cameron, Urban Designer, Shukria Wiar, Planner, and Matthew Grooms, Planner. The project was reviewed against the R-6 Small Infill Development Design Principles & Standards (Appendix 7 of the Design Manual) as well as the Two-Family, Special Needs Independent Living Units, Multiple-Family, Lodging Houses, Bed and Breakfasts, and Emergency Shelters (Section I of the Design Manual).



Figure 8: Front Elevation with varied roof form

Given that the design of the building has not been altered significantly since the second workshop, the conclusions of the design review remain unchanged.

Design Review Criteria:

The project was reviewed with the Alternative Design Review which has the following criteria:

- Proposed design is consistent with all of the Principle Statements.
- The majority of the Standards within each Principle are met.
- The guiding principle for new construction under the alternative design review is to be compatible with the surrounding buildings in a two-block radius in terms of size, scale, materials, and siting, as well as the general character of the neighborhood, thus Standards A-1 through A-3 shall be met.
- The design plan is prepared by an architect registered in the State of Maine.

Findings of the Design Review:

The proposed design **passes** all of the criteria of the R6 Alternate Design Review – please refer to comments below:

- Staff find that the applicant has adequately responded to the comments and concerns from the Planning Board and public comment.
- The revisions include:
  - Simplification of the roof form to a compatible, simple flat roof with overhanging eaves (removal of stair towers and roof decks)
  - Massing and material variation and articulation elements introduced on street-facing facades to create scale and mass more similar to the traditional built patterns.
  - Massing, material, and articulation variation introduced on the Fox Street-facing elevation to mitigate the scale impacts and relate to the composition patterns found in the context.

XI. STAFF RECOMMENDATION

Subject to the proposed motions and conditional of approval listed below, Planning Division staff recommends that the Planning Board approve the proposed sixteen (16) unit condominium project and associated site improvements and parking. The applicant has modified the proposals significantly to address the site plan, subdivision and conditional use standards for inclusionary zoning.

XII. PROPOSED MOTIONS FOR THE BOARD TO CONSIDER

A. WAIVERS

On the basis of the application, plans, reports and other information submitted by the applicant, findings and recommendations contained in the Planning Board Report for the public hearing on April 9, 2019 for application # PL-000418-2018 (10 Hammond Street) relevant to the Site Plan Standards of the Land Use Code and Portland's Technical and Design Standards, and other regulations, and the testimony presented at the Planning Board hearing:

1. Driveway Aisle Width
   The Planning Board [**finds / does not find**] based upon the Traffic Engineer's Review, that extraordinary conditions exist or undue hardship may result from strict compliance with the Technical Manual standard (Section 1.7) which requires that, for multi-family residential development with ten (10) or more parking spaces, two-way driveway width be between twenty (20) and twenty-four (24) feet in width, that substantial justice and the public interest are secured with the proposed variation in this standard, and that variation is consistent with the intent of the ordinance. The Planning Board [**waives/ does not waive**] the Technical Manual standard Section 1.7 to allow a driveway width of eighteen (18) feet.

2. Driveway Separation
   The Planning Board [**finds/does not find**], based upon the Traffic Engineer's review, that extraordinary conditions exist or undue hardship may result from strict compliance with the Technical Manual standard (Section 1.7.2.7) which requires a minimum driveway spacing of 100 feet where the speed limit is 25 mph or less, that substantial justice and the public interest are secured with the proposed variation in this standard, and that the variation is consistent with the intent of the ordinance. The Planning Board [**waives/does not waive**] the Technical Manual standard (Section 1.7.2.7) to reduce driveway separation to below 100 feet.

B. CONDITIONAL USE

On the basis of the application, plans, reports and other information submitted by the applicant, findings and recommendations contained in the Planning Board Report for the public hearing on April 9, 2019 for application #PL-000418-2018 (10 Hammond Street) relevant to Portland's Conditional Use Standards and other regulations, and the testimony presented at the Planning Board hearing, the Planning Board [**finds/does not find**] the proposed conditional use for workforce housing meets the standards of Section 14-484 with the following condition, to be met prior to issuance of a Certificate of Occupancy:

1. A financial contribution of $169,744 shall be paid into the City's Housing Trust Fund as a fee-in-lieu to satisfy the inclusionary zoning requirements for a sixteen (16) unit residential building. If the number of units. In the event that the unit count changes, the contribution to be collected shall be recalculated and confirmed by the Housing Program Manager prior to contribution of the fee-in-lieu.

C. SUBDIVISION REVIEW

On the basis of the application, plans, reports and other information submitted by the applicant, findings and recommendations contained in the Planning Board Report for the public hearing on April 9, 2019 for application # PL-000418-2018 (10 Hammond Street) relevant to the subdivision regulations, and the testimony presented at the Planning Board hearing, the Planning Board [finds/does not find] that the plan is in conformance with the subdivision standards of the land use code subject to the following conditions of approval:

PRIOR TO THE SUBMISSION OF THE PLAT FOR PLANNING BOARD SIGNATURE

1. The subdivision plat shall be finalized to the satisfaction of the Planning Authority, Corporation Counsel and Department of Public Works and include clear descriptions of the number, location, type and size of all subdivided units, along with relevant notes and conditions.

PRIOR TO ISSUANCE OF A BUILDING PERMIT

2. The signed subdivision plat shall be recorded at the Cumberland County Registry of Deeds.

PRIOR TO ISSUANCE OF A CERTIFICATE OF OCCUPANCY

3. Condominium documents shall be finalized to the satisfaction of the Planning Authority and Corporation Counsel before being recorded.

D. SITE PLAN REVIEW

On the basis of the application, plans, reports and other information submitted by the applicant; findings and recommendations contained in the Planning Board Report for the public hearing on April 9, 2019 for application # PL-000418-2019 (10 Hammond Street) relevant to the site plan regulations; and the testimony presented at the Planning Board hearing, the Planning Board [finds/does not find] that the plan is in conformance with the site plan standards of the land use code, subject to the following conditions of approval:

PRIOR TO APPLYING FOR A BUILDING PERMIT

2. Roof plan and building elevations shall be updated to extend screening around all sides of proposed roof-mounted mechanical equipment so as to screen from all vantage points, or relocate mechanical equipment off of the roof towards the rear or side of the property and screen in accordance with site plan and technical manual standards.
3. Applicant shall coordinate with the Planning Authority and Department of Public Works to install the proposed storm drain connection to Fox Street prior to scheduled repaving of Fox Street, to occur between July and September of 2019.
4. Site Plan and associated details shall be revised as necessary to show that all proposed crosswalks and landings feature ADA compliant ramps with detectable warning panels. The site plan shall show structures in the right-of-way that may affect crosswalk placement including manholes and utility poles.
5. The retaining wall and cedar fence in the vicinity of where the driveway meets the sidewalk, should be stepped down to maximize sight distances for pedestrians and vehicles.
6. A geotechnical exploration in the proposed infiltration area at the rear of the site shall be completed and shared with the Planning Authority, demonstrating that the slope can accommodate the proposed system.
7. The applicant has submitted a sample roof design based upon Planning Board feedback at the March 26, 2019 workshop. In the event that this design is agreed to during the public hearing, the applicant shall submit updated building elevations that are consistent with the recommendation made by the Planning Board.

PRIOR TO ISSUANCE OF A BUILDING PERMIT

8. The applicant shall submit for review and approval by the Planning Authority, Department of Public Works and Corporation Counsel, a stormwater maintenance agreement for the proposed development.
9. A financial contribution totaling $5,600, to be paid into the city's street tree fund, shall be provided for the required fourteen (14) street trees not provided on-site. The applicant may also choose to pursue a street tree alternative as listed in the City's site plan ordinance.

PRIOR TO ISSUANCE OF A CERTIFICATE OF OCCUPANCY

10. The applicant shall comply with Fire Department comments requiring:
    a. The main entrance of the building must be the address for the property. This should be consistent with 911, tax assessor, Inspections Division and future mailing address.
    b. The new building shall not affect the egress, escape or required fire department access for the neighboring building(s)
    c. The street address shall be marked on the structure and shall be approved by the City E-911 Addressing Officer.

XIII. ATTACHMENTS

PLANNING BOARD REPORT ATTACHMENTS

1. Design Review
2. Planning, Fire and Civil Engineering Comments
3. Crosswalk Comments and Sketch
4. Final DPW Comments
5. Final Stormwater Comments
6. Inclusionary Zoning Review Comments
7. Public Comment
    a. Jason Wentworth (1.3.19)
    b. Jonathan Garland (1.4.19)
    c. Jessica Lockhart (1.5.19)
    d. Catharine Clay (2.26.19)
    e. Carolyn Treat (2.26.19)
    f. Donna Gartland (2.26.19)

g. Joanna Shaw (2.27.19)
h. Jonathan Gartland (2.28.19)
i. Jonathan Gartland (3.25.19)
j. Carolyn Treat (3.25.19)
k. Seth Brayton (3.26.19)
l. Cynthia Cochran (3.26.19)
m. Karen Snyder (3.27.19)
n. Christian MilNiel (3.28.19)

APPLICANT'S SUBMITTALS

A. Cover Letter
B. Application Form
C. Right, Title & Interest
D. Zoning Assessment
E. Easements
F. Waivers
G. Financial Capacity
H. Technical Capacity
I. Conformity with Land Use Ordinance
J. Stormwater Management Report
K. Erosion and Sedimentation Control Report
L. Fire Department Letter
M. Wastewater Capacity
N. Lighting
O. Architectural Design Narrative
P. Utility Cover
Q. Construction Management Report
R. Solid Waste Disposal
S. Stormwater Maintenance Agreement
T. Certification Letter
U. Comment Response Letter
V. Design Review Response Letter
W. Sign in Sheet
X. Neighborhood Meeting Notice
Y. Neighborhood Meeting Minutes
Z. Architectural Design Narrative
AA. Declaration of Condominium
BB. Design Narrative V.3
CC. Geotechnical Letter

PLANS

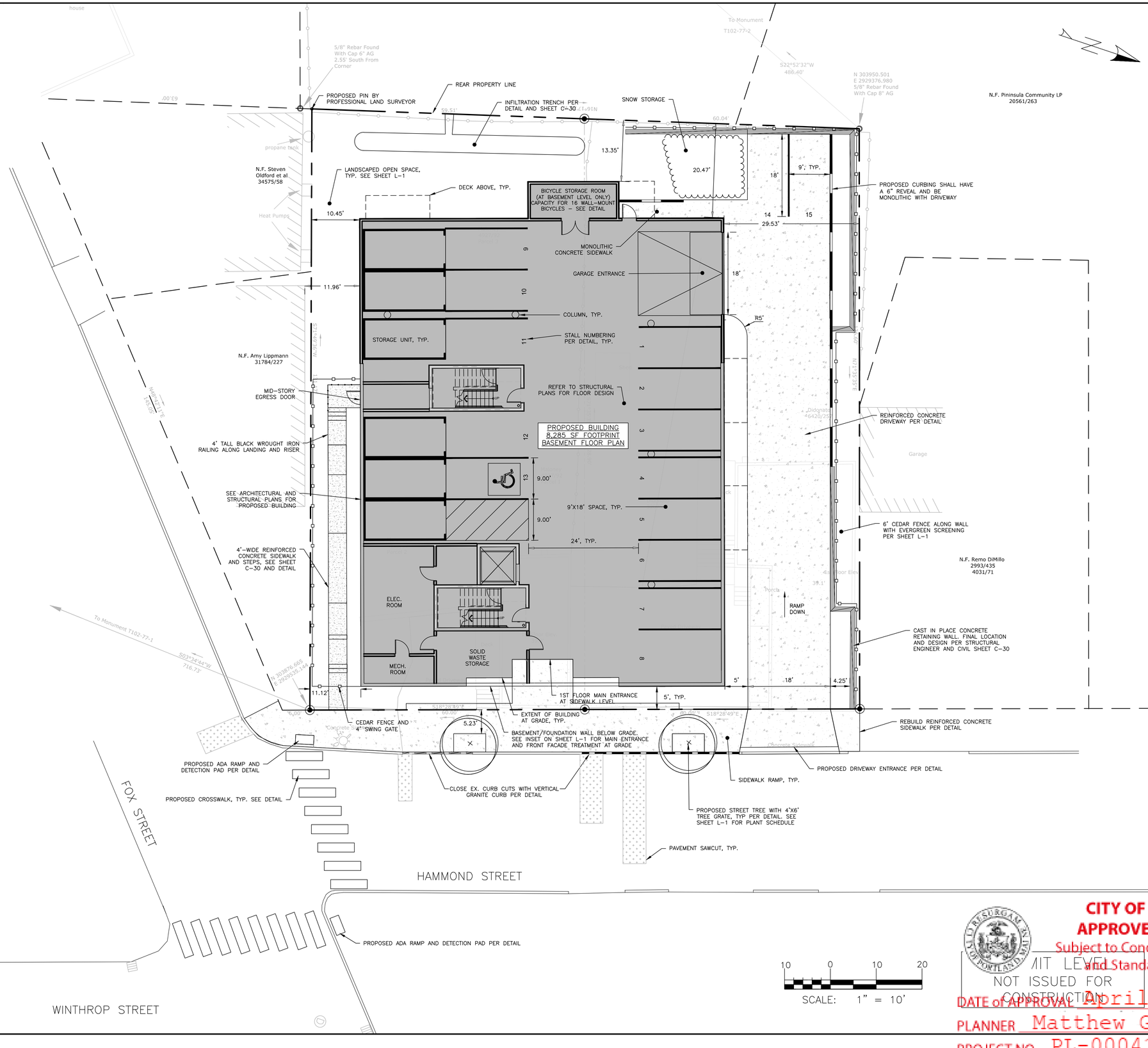
Plan 1. Cover Sheet
Plan 2. General Notes
Plan 3. Existing Conditions Plan
Plan 4. Demolition, Construction Management
Plan 5. Site Plan
Plan 6. Landscape Plan
Plan 7. Utility Plan
Plan 8. Grading & Drainage Plan
Plan 9. Site Details I
Plan 10. Site Details II
Plan 11. Landscape Details
Plan 12. Utility Details I
Plan 13. Utility Details II
Plan 14. Drainage Details
Plan 15. USSF Details
Plan 16. Erosion & Sedimentation Control Notes
Plan 17. Garage Floor Plan
Plan 18. First Floor Plan

Plan 19. Second Floor Plan
Plan 20. Third Floor Plan
Plan 21. Roof Plan
Plan 22. Front Elevation
Plan 23. Rear Elevations
Plan 24. South Elevation
Plan 25. North Elevation
Plan 26. Contextual Rendering from Hammond
Plan 27. Contextual Rendering from Winthrop
Plan 28. Building Renderings
Plan 29. Subdivision Plat
Plan 30. Contextual Rendering from 30 Fox Street
Plan 31. Contextual Rendering from Downhill Fox Street
Plan 32. Contextual Rendering from Uphill Fox Street
Plan 33. Seat Wall Detail
Plan 34. Varied Roof Study – Fox Street
Plan 35. Varied Roof Study – Front
Plan 36. Varied Roof Study - Rear

GENERAL NOTES:

1. STRIPING AS INDICATED ON SITE PLAN SHALL BE 4" WIDE. STRIPING ON A CONCRETE MATERIAL SHALL BE YELLOW UNLESS OTHERWISE NOTED.
2. CURB TO BE REMOVED, STOCKPILED AND RESET IN ACCORDANCE WITH DETAIL. BROKEN CURB SHALL BE PROPERLY DISPOSED OF AND SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.
3. PUBLIC CURBING SHALL BE GRANITE AND PRIVATE CURBING SHALL BE CONCRETE CURB MONOLITHIC WITH THE DRIVEWAY AND WALKWAY.

SPACE AND BULK STANDARDS		
ZONE: R6	REQUIRED	PROPOSED
MINIMUM LOT SIZE	2,000 SF	15,433 SF
MINIMUM STREET FRONTAGE	20'	120'
MINIMUM FRONT YARD SETBACK	NONE (ABUTTER AVG.)	5.12'
MINIMUM SIDE YARD SETBACK	5'	10.45'
MINIMUM REAR YARD SETBACK	10'	13.35'
STRUCTURE STEPBACKS (SIDE YARD ABOVE 35')	10'	> 10'
STRUCTURE STEPBACKS (REAR YARD ABOVE 35')	15'	> 15'
MAXIMUM LOT COVERAGE	60%	56%*
MINIMUM LOT WIDTH	20'	120'
MAXIMUM BUILDING HEIGHT	45'	39.81' (SEE C-30)
MINIMUM LANDSCAPED OPEN AREA	20%	25%
MAXIMUM NUMBER OF DWELLING UNITS	725 SF/UNIT = 21	16
RESIDENTIAL PARKING	1 SPACE PER UNIT AFTER 3 UNITS = 13 SPACES	15
MINIMUM INTERNAL RESIDENT BICYCLE STORAGE SPACES	2 SPACES/5 D.U. = 6	> 6
MAXIMUM GARAGE OPENING	20'	18'
*INCLUDES DECK AREA		



ISSUED FOR	BY DATE
FINAL APP.	WHS 11/26/18
BUILDING REV.	WHS 3/15/19

DRAWING NAME: SITE PLAN

PROJECT NAME: HAMMOND HOUSE REDEVELOPMENT

CLIENT: HAMMOND HOUSE, LLC
94 SOUTH STREET, YARMOUTH, ME 04096

ACORN ENGINEERING, INC.

THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM ACORN ENGINEERING, INC. AND ANY REUSE OF THIS PLAN OR OTHERWISE, SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO ACORN ENGINEERING, INC.

ACORN ENGINEERING, INC.
65 HANOVER STREET, PORTLAND, MAINE 04101
(207) 775-2655

FILE:	1112_CIVIL
JN:	1112
SCALE:	1"=10'
DESIGNED BY:	SJL
DRAWN BY:	SJL
CHECKED BY:	WHS

STATE OF MAINE WILLIAM H. SAVAGE No. 11410 REGISTERED PROFESSIONAL ENGINEER 3/15/19

CITY OF PORTLAND
APPROVED SITE PLAN
Subject to Conditions of Approval and Standard Conditions

DRAWING NO. C-10

PERMIT LEVEL
NOT ISSUED FOR CONSTRUCTION

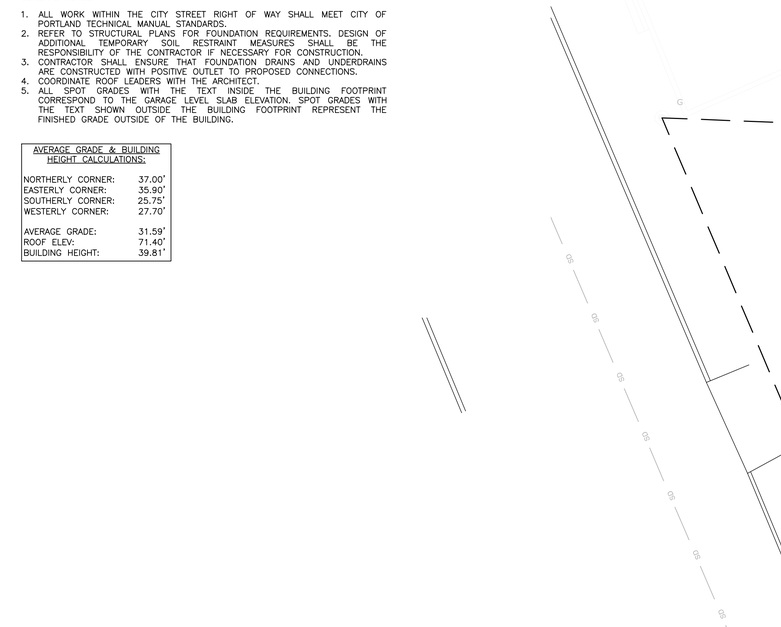
DATE of APPROVAL April 9, 2019
PLANNER Matthew Grooms
PROJECT NO. PL-000418-2018

GENERAL NOTES:

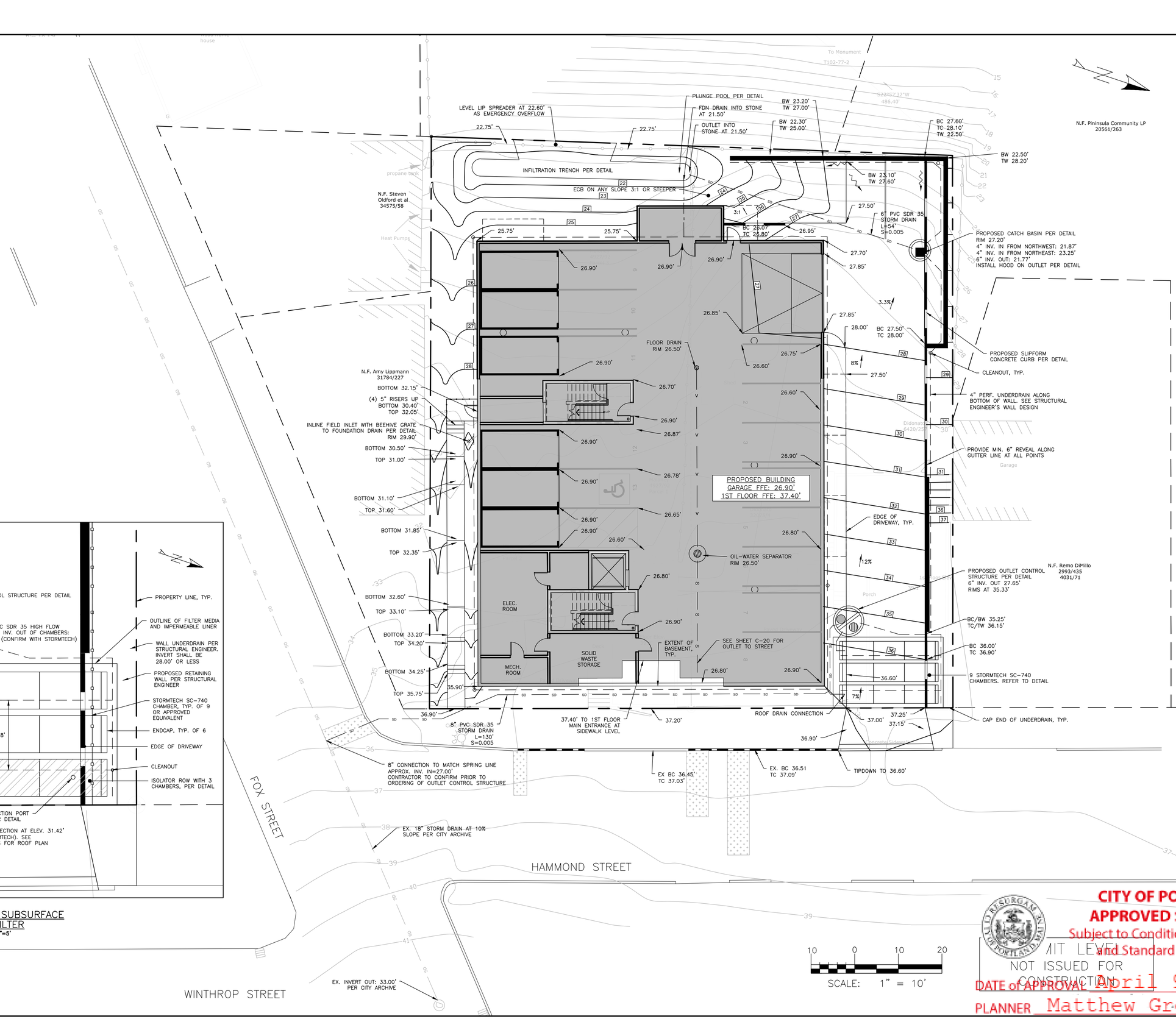
1. ALL WORK WITHIN THE CITY STREET RIGHT OF WAY SHALL MEET CITY OF PORTLAND TECHNICAL MANUAL STANDARDS.
2. REFER TO STRUCTURAL PLANS FOR FOUNDATION REQUIREMENTS. DESIGN OF ADDITIONAL TEMPORARY SOIL RESTRAINT MEASURES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR IF NECESSARY FOR CONSTRUCTION.
3. CONTRACTOR SHALL ENSURE THAT FOUNDATION DRAINS AND UNDERDRAINS ARE CONSTRUCTED WITH POSITIVE OUTLET TO PROPOSED CONNECTIONS.
4. COORDINATE ROOF LEADERS WITH THE ARCHITECT.
5. ALL SPOT GRADES WITH THE TEXT INSIDE THE BUILDING FOOTPRINT CORRESPOND TO THE GARAGE LEVEL SLAB ELEVATION. SPOT GRADES WITH THE TEXT SHOWN OUTSIDE THE BUILDING FOOTPRINT REPRESENT THE FINISHED GRADE OUTSIDE OF THE BUILDING.

AVERAGE GRADE & BUILDING HEIGHT CALCULATIONS:

NORTHERLY CORNER:	37.00'
EASTERLY CORNER:	35.90'
SOUTHERLY CORNER:	25.75'
WESTERLY CORNER:	27.70'
AVERAGE GRADE:	31.59'
ROOF ELEV:	71.40'
BUILDING HEIGHT:	39.81'



UNDERDRAINED SUBSURFACE SAND FILTER
SCALE: 1"=5'



ISSUED FOR	BY DATE
FINAL APP.	WHS 11/28/18
LLS	WHS 4/3/19

DRAWING NAME: GRADING & DRAINAGE PLAN

PROJECT NAME: HAMMOND HOUSE REDEVELOPMENT

CLIENT: HAMMOND HOUSE, LLC
94 SOUTH STREET, YARMOUTH, ME 04096

ACORN ENGINEERING, INC.
ACORN ENGINEERING, INC.
65 HANOVER ST. PORTLAND, MAINE 04101
(207) 775-2655

THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM ACORN ENGINEERING, INC. AND ANY MODIFICATIONS MADE BY ANY PERSON OR OTHERWISE, SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO ACORN ENGINEERING, INC.

FILE:	1112_CIVIL
JN:	1112
SCALE:	1"=10'
DESIGNED BY:	SJL
DRAWN BY:	SJL
CHECKED BY:	WHS

STATE OF MAINE — WILLIAM H. SAVAGE — No. 11418 — REGISTERED PROFESSIONAL ENGINEER — 4/3/19

CITY OF PORTLAND
APPROVED SITE PLAN
Subject to Conditions of Approval and Standard Conditions

PERMIT LEVEL
NOT ISSUED FOR CONSTRUCTION

DRAWING NO. C-30

DATE of APPROVAL April 9, 2019
PLANNER Matthew Grooms
PROJECT NO. PL-000418-2018



1 EAST ELEVATION
1/4" = 1'-0"

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HAMMOND HOUSE
10 HAMMOND STREET
PORTLAND, MAINE

RSA
RYAN SENATORE
ARCHITECTURE
500 CONGRESS STREET
PORTLAND, MAINE 04101
207-650-6414
senatorearchitecture.com

CONSULTANTS:

REVISIONS:
PROGRESS PRINT ONLY
Not for Construction
MARCH 29, 2019

DATE:	
PROJECT No.	1846
DRAWN BY:	RRT, RJS
CHECKED BY:	RJS
SCALE:	AS NOTED

SHEET TITLE:
EAST
ELEVATION

CITY OF PORTLAND
APPROVED SITE PLAN
Subject to Conditions of Approval
and Standard Conditions

DATE of APPROVAL April 9, 2019
PLANNER Matthew Grooms
PROJECT NO. PL-000418-2018

A2-0



1 WEST ELEVA TION
1/4" = 1'-0"

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HA MMOND HOUSE

10 HA MMOND STREET
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RSA
RYA NSENA TORE
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senatorearchitecture.com

CONSULTA NTS:

REVISIONS:

PROGRESS PRINT ONLY
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MARCH 29, 2019

DA TE:
PROJECT No. 1846
DRA WN BY: RRT, RJS
CHECKED BY: RJS
SCA LE: A S NOTED

SHEET TITLE:
WEST
ELEVA TION

CITY OF PORTLAND
APPROVED SITE PLAN
Subject to Conditions of Approval
and Standard Conditions

A2-1

DA TE of APPROVAL April 9, 2019
PLA NNER Matthew Grooms
PROJECT NO. PL-000418-2018



1 SOUTH ELEVATION
1/4" = 1'-0"

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CONSULTANTS:

REVISIONS:

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MARCH 29, 2019

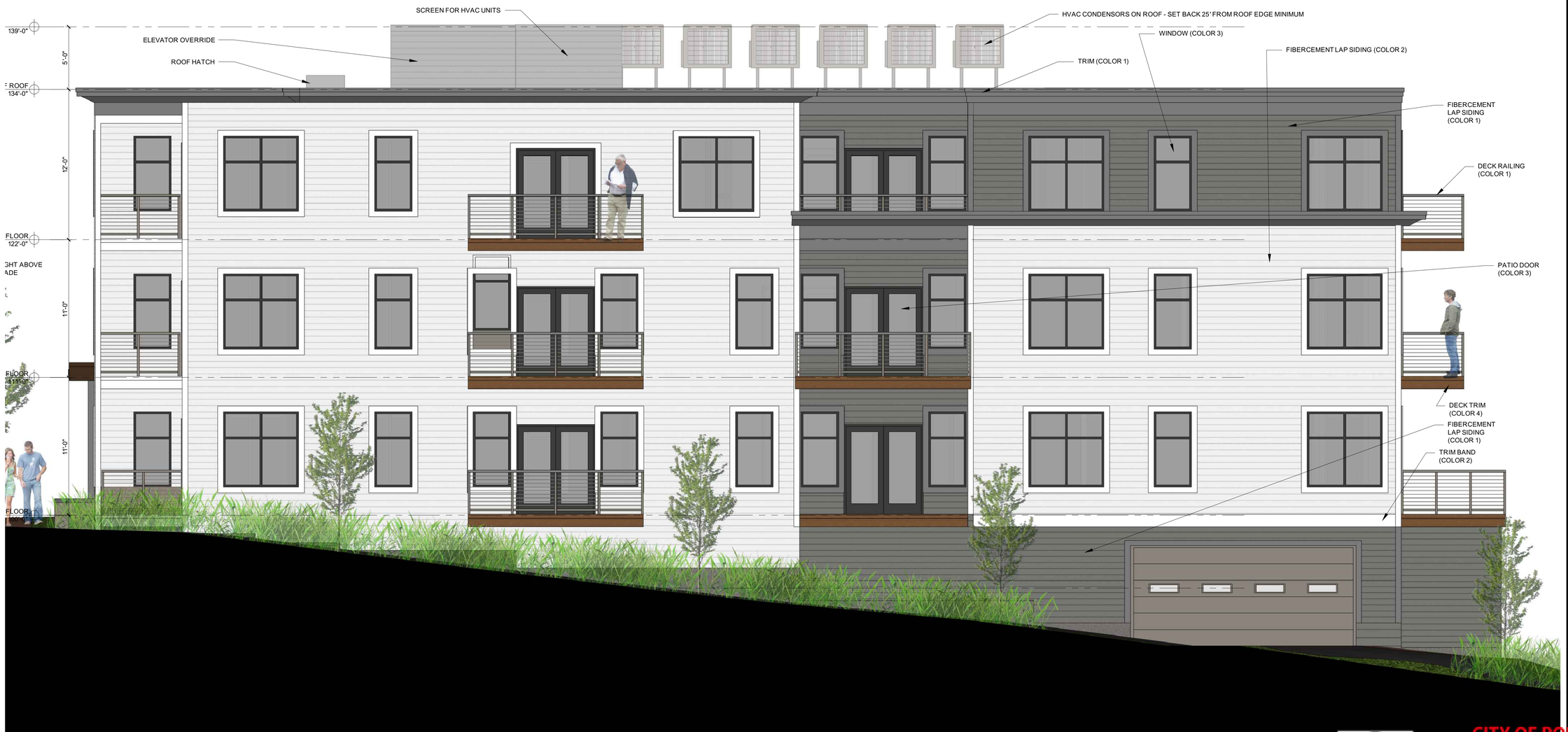
DATE:	
PROJECT No.	1846
DRAWN BY:	RRT, RJS
CHECKED BY:	RJS
SCALE:	AS NOTED

SHEET TITLE:
SOUTH ELEVATION

CITY OF PORTLAND
APPROVED SITE PLAN
Subject to Conditions of Approval and Standard Conditions

A2-3

DATE of APPROVAL April 9, 2019
PLANNER Matthew Grooms
PROJECT NO. PL-000418-2018



1 NORTH ELEVATION
1/4" = 1'-0"

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RSA
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senatorearchitecture.com

CONSULTANTS:

REVISIONS:
PROGRESS PRINT ONLY
Not for Construction
MARCH 29, 2019

DATE:

PROJECT No.	1846
DRAWN BY:	RRT, RJS
CHECKED BY:	RJS
SCALE:	AS NOTED

SHEET TITLE:
NORTH
ELEVATION

CITY OF PORTLAND
APPROVED SITE PLAN
Subject to Conditions of Approval
and Standard Conditions

A2-2

DATE of APPROVAL April 9, 2019
PLANNER Matthew Grooms
PROJECT NO. PL-000418-2018

CITY OF PORTLAND, MAINE

PLANNING BOARD

Brandon Mazer, Chair
Justin Barker, Vice Chair
Marpheen Chann
Sean Murphy
David Silk
Austin Smith
Maggie Stanley

August 14, 2024

Steven Bushey
300 Southborough Dr.
Suite 200
South Portland, ME 04106

Project Name:	Major Site Plan	**Project ID:**	PL-002938-2024
Address:	331 Cumberland Avenue	**CBL:**	003 K010
Applicant:	Youth & Family Outreach Gorrill Palmer Engineering		
Planner:	Eric Freeman		

Dear Steve,

On August 13, 2024, the Planning Board approved a major site plan application for a six story mixed-use building with 60 residential units and new facilities for Youth & Family Outreach along with associated site and streetscape improvements at 331 Cumberland Avenue in the B-3 Downtown Business zone. The decision is based upon the application, documents and plans as submitted. The Planning Board reviewed the proposal for conformance with the standards of the Site Plan Ordinance, Ch. 14, Article 14, Section 14.6. based on the information provided to the Board in the application, plans, and reports through testimony and other information submitted by the applicant, the Planning Board adopted the findings, conclusions and recommendations contained in the Planning Board Report for the public hearing on August 13, 2024, which is attached hereto and incorporated herein by reference. Based upon those findings, conclusions and recommendations, the Planning Board found that the application met all relevant standards and voted (4-0) to approve the application with the following conditions as presented below.

Site Plan Review

On the basis of the application, plans, reports and other information submitted by the Applicant; findings and recommendations contained in the Planning Board Report for the public hearing on August 13, 2024 for application # PL-002938-2024 relevant to the site plan regulations; and the testimony presented at the

Planning Board hearing, the Planning Board voted (4-0) to find that the plan is in conformance with the site plan standards of the Land Use Code, subject to the following conditions of approval:

PRIOR TO APPLYING FOR A BUILDING PERMIT

1. The applicant shall coordinate with the Planning Authority to address the City of Portland's design review memo, dated August 9, 2024, to the satisfaction of the Planning Authority.

2. The applicant shall provide draft condominium documents for review and approval by the Planning Authority and Corporation Counsel.

3. The applicant shall provide revised stormwater discharge calculations to be reviewed and approved by the Department of Public Works and that any further stormwater or utility comments have been addressed to the satisfaction of the Planning Authority and the Department of Public Works.

4. The applicant shall revise their Transportation Demand Management (TDM) plan to be in compliance with TDM standards laid out in section 17.3 of the Technical Manual.

5. The applicant shall ensure that all stormwater management and utility plans have been reviewed and approved by the Department of Public Works and that all outstanding comments have been addressed to the satisfaction of the Planning Authority and the Department of Public Works.

PRIOR TO ISSUANCE OF A BUILDING PERMIT

6. The applicant shall provide a draft stormwater maintenance agreement for review and acceptance by Corporation Counsel and the Department of Public Works.

PRIOR TO ISSUANCE OF A CERTIFICATE OF OCCUPANCY

7. The applicant shall contribute $20,800 to the City's Tree Fund, in lieu of planting 54 of the 60 required street trees.

8. The applicant shall provide the Planning Authority with a written agreement between Youth & Family Outreach and the entity managing the on-site residences, which expressly permits residents the option to utilize the exterior play area during off-hours as a community amenity space.

Standard Procedures

Note: The following standard procedures and requirements apply to all approved site plans:

1. Site Plan Expiration The site plan approval will be deemed to have expired unless work has commenced within one (1) year of the approval or within a time period up to three (3) years from the approval date as agreed upon in writing by the City and the applicant. Requests to extend approvals must be received before the one (1) year expiration date.

2. Separate Building Permits Are Required This approval does not constitute approval of building plans, which must be reviewed and approved by the City of Portland's Permitting and Inspections Department.

3. Performance Guarantee and Inspection Fees A performance guarantee covering the site improvements and an inspection fee payment of 2.0% of the guarantee amount and three (3) final sets of plans must be submitted to and approved by the Planning and Urban Development Department and Public Works Department prior to the release of a building permit, street opening permit or certificate of occupancy for site plans.

4. Construction Management Plans The applicant, contractor and subcontractors are required to conform to the approved Construction Management Plan, and all conditions contained within the project's approval, for the entire duration of the project. Any amendments to the approved Construction Management Plan shall be reviewed and approved by the Department of Public Works prior to the execution. The Planning Authority and the Department of Public Works have the right to seek revisions to an approved Construction Management Plan. The applicant shall coordinate the project's construction schedule with the timing of nearby construction activities to avoid cumulative impacts on a neighborhood and prevent unsafe vehicle and pedestrian movements. Accordingly, nearby construction activities could involve a delay in the commencement of construction.

5. Preconstruction Meeting Prior to the release of a building permit and scheduling of a preconstruction meeting, a hard copy set of approved plans shall be submitted to the Development Review Coordinator. A pre-construction meeting shall be held at the project site with the contractor, Development Review Coordinator, Public Works representative, and owner to review the construction schedule and critical aspects of the site work. At that time, the Development Review Coordinator will confirm that the contractor is working from the approved site plan and the approved Construction Management Plan. The site/building contractor shall provide one (1) copy of a detailed construction schedule to the attending City representative. It shall be the contractor's responsibility to arrange a mutually agreeable time for the pre-construction meeting.

6. Department of Public Works Permits If work or obstructions will occur within the public right-of-way, such as utilities, curb, sidewalk, driveway construction, site deliveries and equipment siting, a Street Opening and/or Occupancy Permits are required for your site. Please contact the Department of Public Works Permit Clerk at (207) 874-8300, ext. 8828. (Only excavators licensed by the City of Portland are eligible.)

7. Develop Site According to Plan The site shall be developed and maintained as depicted on the site plan and in the written submission of the applicant. Any modifications of an approved site plan or alteration of a parcel, or of any approved exterior elevations, which were the subject of site plan approval after May 20, 1974, shall require the prior approval of an amended site plan by the Planning Board or Planning Authority pursuant to the terms of Chapter 14, Land Use, of the Portland City Code.

8. Stormwater Management The owner/operator of an approved stormwater management system, and all assigns shall comply with the conditions of Chapter 32, Stormwater including Article III, Post Construction Stormwater Management, which specifies the annual inspections and reporting requirements.

   A maintenance agreement for the stormwater drainage system, as attached, or in substantially the same form, shall be submitted for review by Corporation Counsel. Once approved, the document shall be signed and recorded at the Cumberland County Registry of Deeds prior to the issuance of a building permit. Final copies shall be submitted to both the Department of Planning and Urban Development and the Department of Public Works.

9. Defect Guarantee A defect guarantee, consisting of 10% of the performance guarantee, must be posted before the performance guarantee will be released.

10. As-Built Final Plans Final sets of as-built plans shall be submitted digitally to the Planning and Urban Development Department, on a CD or DVD, in AutoCAD format (.dwg), release AutoCAD 2005 or greater. Please provide one hard copy of the mylar.

11. Mylar Copies Mylar copies of the as-built drawings for the public streets and other public infrastructure in the subdivision must be submitted to Public Works prior to the issuance of a certificate of occupancy.

12. Impact Fees New development or changes of use that result in net new residential dwelling units, non- residential building square footage, or water meters, are subject to the City of Portland's impact fee ordinance (Chapter 14, Article XVII). Impact fees are calculated at the time of building permit and must be paid prior to the certificate of occupancy. For more information, visit https://www.portlandmaine.gov/2409/Impact-Fees

The Development Review Coordinator must be notified five (5) working days prior to the date required for final site inspection. The Development Review Coordinator can be reached at the Planning and Urban Development Department at drc@portlandmaine.gov or (207)874-8984. All site plan requirements must be completed and approved by the Development Review Coordinator prior to issuance of a Certificate of Occupancy. Please schedule any property closing with these requirements in mind.

If there are any questions, please contact Eric Freeman at (207)874-8724 or via email at efreeman@portlandmaine.gov

Sincerely,

Brandon Mazer

Brandon Mazer, Planning Board Chair

Attachments:

1. Planning Board Report
2. Portland City Code: Chapter 32
3. Sample Stormwater Maintenance Agreement
4. Performance Guarantee Packet

331 Cumberland Avenue
Major Site Plan Application
PL-002938-2024
Youth & Family Outreach, Applicant

Submitted to:	Portland Planning Board	**Prepared By:**	Eric Freeman
Public Hearing Date:	August 13, 2024	**Date:**	August 9, 2024

I. INTRODUCTION

Youth & Family Outreach have submitted a Major Site Plan application to construct a new six-story, mixed-use building at 331 Cumberland Avenue in the B-3 zone. This building would include new facilities for Youth & Family Outreach on the first two floors and 60 residential units. This application is being referred to the Planning Board for compliance with the City of Portland's Land Use Code Site Plan Standards, Section 14.6.

The Planning and Urban Development Department mailed 105 notices advertising this meeting to property owners within 500 feet of the site. A legal advertisement ran in the August 3rd, and August 6th 2024 editions of the Portland Press Herald.

Applicant: Developers Collaborative, Youth & Family Outreach
Applicant Representatives: Gorrill Palmer, Invivid Architecture



Figure 1: The proposed building as seen from Cumberland Avenue

II. REQUIRED REVIEWS

Review	*Applicable Standards*
Site Plan	Section 14.6
B-3 Multifamily Residential Design Standards	Design Manual Section 14.6.4

III. PROJECT DATA

Existing Zoning	B-3 Downtown Business
Property Size	19,592 SF
Existing Use	Youth & Family Outreach facility, empty restaurant space, Surface parking
Proposed Development Program	6-story, mixed-use building with new Youth & Family Outreach facilities and 60 housing units with residential amenities.

IV. EXISTING CONDITIONS AND SURROUNDING AREA

The existing site is bounded by Cumberland Avenue to the south, Preble Street to the east and Portland Street to the north. A five-story multifamily building abuts the site immediately to the west and the Cumberland Avenue Garage abuts the site to the east across Preble Street. The Preble Street emergency center, Elaine's Way abuts the site to the north across Portland Street. The site is in a transitional area between downtown and Bayside, and the surrounding area consists primarily of mixed-use commercial and residential buildings as well as social services facilities.

There are currently two buildings on this site which would be removed as part of this application; The Preble Street Chapel building located at the corner of Cumberland and Preble Street which is currently occupied by Youth & Family Outreach (YFO) and the former Maria's Restaurant building, which is unoccupied. There is a small surface parking lot behind the former restaurant building along Portland Street. The site also features several trees as well as a small playground area operated by YFO.

The Planning Board previously approved an application submitted by the Portland Housing Development Corporation to redevelop a portion of this parcel on September 15, 2020 (PL-001140-2020). That approval has since expired.

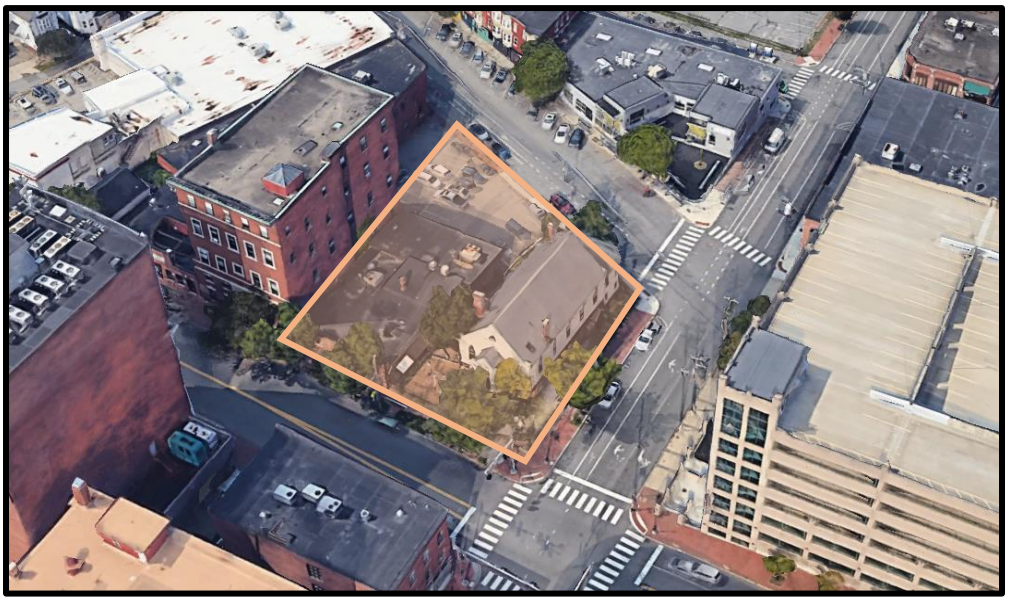


Figure 2: The existing site and surrounding context

V. PROPOSED DEVELOPMENT

The proposed development involves the demolition of the existing Maria's Restaurant building and the Preble Street Chapel to facilitate the construction of a six-story, 60-unit mixed-use building with on-site resident amenities and community space. The first floor will be partially occupied by Youth and Family Outreach (YFO) and will serve as the primary residential entrance, which will front on to Portland Street. The remainder of the first floor would be occupied by four residential units and residential amenities, including bike storage, trash room, laundry and a fitness room. YFO would occupy the entire second floor with staff offices, classrooms, therapy rooms and a kitchen. YFO's primary entrance would be located on the second floor at the corner of Cumberland Avenue and Preble Street. YFO students would be able to directly access an expanded playground area that is proposed to front Cumberland Avenue. The playground would feature landscaping, benches and playground equipment, and would be separated from the street with a decorative fence.

Floors three through six would be entirely residential, with a mixture of studio, 1-bedroom, 2-bedroom and 3-bedroom units. Of the 60 proposed units, 48 would be affordable units, with the remaining 12 being market-rate. An outdoor patio area on the sixth floor will be accessible to all residents.

This application would involve reconstruction of sidewalk along the site's Cumberland, Preble and Portland Street frontages with brick on Cumberland Avenue and Preble Street and concrete pavers on Portland Street. This application also involves pavement repair work on Cumberland Avenue in order to accommodate new utility connections. No on-site parking is proposed.

A total of eight new trees are proposed to be planted, including two new street trees along Preble Street and six new shade trees within the playground area fronting Cumberland Avenue.

This application will utilize existing water, sewer and gas utilities servicing the site from Cumberland Avenue and Preble Street.



Figure 3: Cumberland Avenue Elevation



Figure 4: Portland Street Elevation

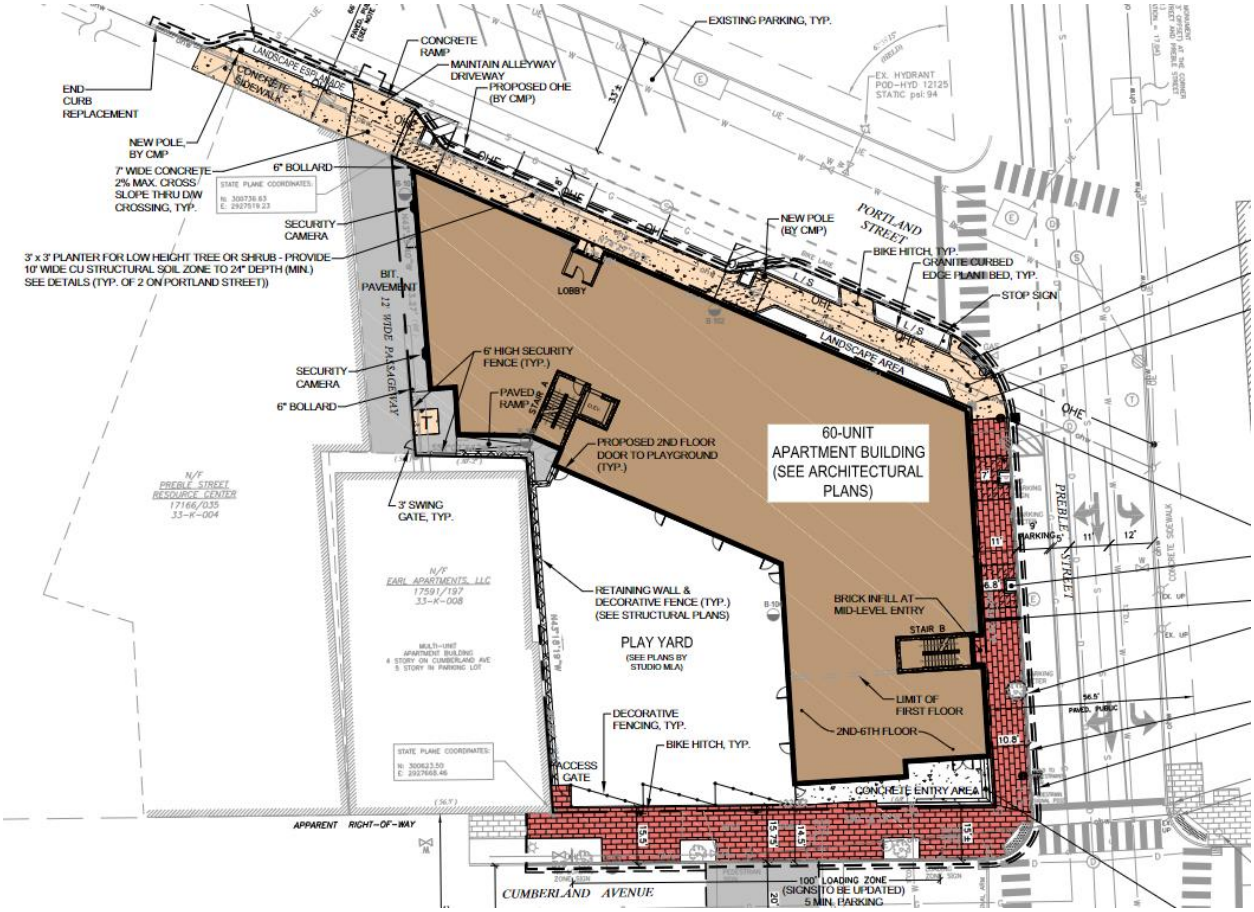


Figure 5: Site Plan

VI. RIGHT, TITLE, & INTEREST

The applicant has demonstrated sufficient right, title and interest to the two parcels involved in this application by deeds associated with these parcels are recorded in the Cumberland County Registry of Deeds in book 35266 pages 282-285.

Full Right, Title and Interest documentation is included as Attachments E and F. Given the long history of the site and the succession of deeds associated with this property, additional clarification was requested garding the applicant's Right, Title and Interest.
A written legal opinion from Curtis Thaxter Attorneys detailing the three deeds associated with this application can be found as Attachment G. This opinion demonstrated that the applicant has sufficient right, title and interest to redevelop these parcels in the manner proposed. This opinion was reviewed and accepted by Corporation Council. (Attachment S3.) Corporation Counsel confirms that that the information provided demonstrates adequate right, title and interest to proceed with the development as proposed.

FINANCIAL & TECHNICAL CAPACITY

The applicant intends to submit this application to MaineHousing in order to be considered for an allocation award for Low Income Housing Tax Credits (LIHTC). The applicant has provided a letter of

Financial Capacity demonstrating that Youth & family Outreach has financial capacity to construct this application as presented. Full financial capacity documentation is included as attachment C.

Gorrill Palmer and Invivid Architecture have demonstrated capacity and experience working on commercial and residential projects of a similar scale. Full technical capacity documentation is included as attachment D

VII. ZONING ANALYSIS

The subject properties lie within the B-3 Downtown Business zone. The proposed use is permitted by right within the B-3 zone. Relevant sections of the B-3 purpose statement include:

B-3: *To maintain and enhance the role of the downtown as the business and commercial center of the region; to enhance and promote the orderly expansion of retail and service businesses downtown, satisfying the related needs of the city's resident, working, and visitor populations; to encourage increased housing opportunity downtown for a diverse residential population; to enhance the pedestrian environment through the encouragement of intensive mixed-use activities"*

This application is a mixed-use project providing 60 housing units and new childcare facilities for Youth & Family Outreach. The proposed development fits within the context and intent of the B-3 zone.

	Required	Proposed
Lot Size	None	19,592 SF
Maximum Height (ft)	85 ft.	74 ft.
Minimum Street Frontage	15 ft.	122 ft.
Maximum Front Setback	5 ft.	2 ft.
Lot Coverage	Up to 100%	82%
Off-street parking spaces	None	None

The applicant is proposing an increased front setback along Cumberland Avenue. This increased setback is allowable as stated in Section 2 of the B-3 Downtown Design Standards.

Standards for increasing setback beyond street build-to line:

A proposed development may exceed maximum setbacks as required in section 14-220(c) only where the applicant demonstrates to the Planning Board that the introduction of increased building setbacks at the street level:

I. *Provides substantial and viable publicly accessible open space or other amenity at the street level that supports and reinforces pedestrian activity and interest. Such amenities may include without limitation plazas, outdoor eating spaces and cafes, or wider sidewalk circulation areas in locations of substantial pedestrian congestion*

II. Does not substantially detract from the prevailing street wall character by introducing such ad ditional setback at critical building locations such as prominent form-defining corners, or create a sense of discontinuity in particularly consistent or continuous set tings

III. Does not detract from existing publicly accessible open space by creating an excessive a mount of open space in one (1) area or by diminishing the viability or liveliness of that exi sting open space; and

IV. The area of setback is of high quality and character of design and of acceptable orientation to solar access and wind impacts as to be attractive to pedestrian activity.

Staff are supportive of the increased front Setback given the architectural treatment of the fencing along the street wall and the planting of new street trees along the playground frontage and feel that the proposed design is in conformance with the relevant design standards.

V. SITE PLAN STANDARDS (Section 14.6)

The proposed development has been reviewed by staff for conformance with the relevant review standards of the City of Portland's Site Plan Ordinance, Section 14.6. Staff comments are below.

1. Transportation Standards (Section 14.6.1)

A. Impact on surrounding street systems

This application proposes to install a new curb extension at the corner of Portland Street and Preble Street, which would remove three existing on-street parking spaces. This curb extension would include landscaping and space for new utility poles. Another smaller curb extension is proposed west of the proposed building along Portland Street, to facilitate the installation of a new utility pole, which would remove one on-street parking space. The project is not anticipated to create any significant impact to surrounding streets and no off-site parking has been allocated for use by residents or YFO staff. The existing five-minute loading zone along Cumberland Avenue will be extended westward and increase the number of pick-up / drop-off spaces from two to five. Parking along Preble and Portland Streets will remain signed as two-hour parking.

Staff consider this standard to be met.

B. Access and circulation

The applicant proposes to reconstruct sidewalks along Cumberland Avenue, Preble Street and Portland Street using brick pavers. Sidewalks are proposed to be rebuilt to City standards. Crosswalks would also be reconstructed at the intersection of Portland Street and Preble Street, and at the intersection of Preble Street and Cumberland Avenue.

The proposed building would have two primary entrances. The primary residential entrance would be located on the first floor along Portland Street, while the primary entrance for Youth & Family Outreach would be located on the second floor fronting Cumberland Avenue. The playground area would be enclosed and would only be accessible from the YFO facility on the second floor. Pick-up and drop-off activities for Youth & Family Outreach will occur on Cumberland Avenue. It is anticipated that the loading and servicing for the residential portions of the proposed building would primarily occur within the alleyway area accessed from Portland Street. The proposed

project is consistent with typical access and circulation for an urban infill development and Staff consider this standard to be met.

C. Public transit access
This standard is not applicable to this application.

D. Parking
There is no on-site parking proposed as part of this application. This project is within ¼ mile of fixed-route transit and is thus not required to provide any on-site vehicular parking pending the completion of a Transportation Demand Management (TDM) Plan. Bicycle parking is provided on-site in a secure room on the ground floor with 42 proposed bicycle spaces, which exceeds the required 24 bicycle parking spaces.

E. Transportation demand management (TDM)
The proposed building is over 50,000 Square feet of floor area and is required to provide a Transportation Demand Management plan. The applicant has provided a full TDM plan which outlines the following strategies:

- Staggered pick-up and drop-off times for YFO childcare services to manage loading along Cumberland Avenue.
- Signage in the common ground level residential corridor and the 1st floor YFO entrance identifying nearby public transit locations as well as mapping for pedestrian/bicycle routes on the peninsula.
- A bike room with space for up to 42 bikes. Exceeding the standard for bicycle parking.

In order for this TDM plan to meet the requirements outlined in section 17.3 of the Technical Manual, the applicant will be required to designate a TDM coordinator, outline mode share targets and provide a full reporting regimen.

The full TDM plan is included as Attachment M.

2. Environmental Quality Standards (Section 14.6.2)

A. Preservation of significant natural features
This site is within the built urban environment. There are no known significant natural features on this site.

B. Landscape preservation
The existing site consists largely of developed area and impervious surface. The applicant will preserve three existing mature street trees along Cumberland Avenue and Preble Street. There are several smaller trees located at the back of the existing chapel along Portland Street which are in poor health, and which are planned to be removed. This application is within the B-3 zone, and given that there are no required building setbacks within this zone, there is no requirement for existing trees to be preserved. Staff consider this standard to be met.

C. Site landscaping and buffers

The site's interior playground area will be planted with a mixture of new canopy trees, shrubs, and accent plantings. A total of eight new trees are being proposed, including two new street trees along Preble Street and three along Cumberland Avenue, and six canopy trees in the playground area which are not in close enough proximity to the Public Right of Way to be considered street trees.

The remaining street trees will be provided through a contribution to the City of Portland tree fund. Additional landscaping would be provided within the new curb extension at the corner of Preble and Portland Streets. Additionally, one new planter will installed on Portland Street. Staff consider this standard to be met.



Figure 4: Playground landscaping plan

D. Water quality/storm water management/erosion control

The project will not create more than 1,000 Square Feet of additional impervious surface, therefore DEP Ch. 500 General Standards do not apply.

Per Section 5 of the City of Portland Technical Manual, Major Site plan applications are required to include Stormwater Management Plans. This site will feature on-site stormwater detention and treatment which will discharge into the existing 10" Cumberland Avenue sewer.

Staff have included a Condition of Approval regarding further coordination between the applicant and the Department of Public Works on stormwater detention and discharge. Staff consider this standard to be met.

3. Public Infrastructure and Community Safety Standards (Section 14.6.3)

A. Consistency with City Master Plans
There are no long-range plans that apply to this project.

B. Public safety and fire prevention
Youth & Family Outreach has operated at this location for many years and has designed the site with security measures including video surveillance and keyed-door access. The project has been reviewed by the City's Fire Marshall with respect to the public safety and fire prevention requirements, and has been found to meet these requirements. There are existing fire hydrants located on Cumberland Avenue within 500 feet of the development, as required by Section 3.2 of the Technical Manual.

The alleyway along the Portland Street frontage will feature security lighting as well as 24-hour video surveillance. A security fence with a keyed gate will be located at the rear of the alley to separate utilities and rear building access from the street. Staff consider this standard to be met.

C. Availability and capacity of public utilities
The proposed building's sprinkler and domestic water systems will be serviced via an existing 8" water main in Cumberland Avenue. The Fire Department connection will be located along the south side of the building on Portland Street. The applicant has provided an ability to serve letter from the Portland Water District and a wastewater capacity authorization from the Department of Public Works. A domestic sewer connection is proposed to tie into an existing 10" sewer line in Portland Street. The building will be served by Natural gas coming from Cumberland Ave. Staff consider this standard to be met.

4. Site Design Standards (Section 14.6.4)

A. Massing, ventilation, and wind impact
The proposed building is 74 ft. in height which is below the maximum allowable height of 85 ft. The proposed building is similar in scale to surrounding buildings. Given the building's size and location there are no anticipated impacts with respect to building massing, ventilation, or wind, associated with this application. Staff consider this standard to be met.

B. Shadows
The proposed building is similar in height and scale to surrounding buildings. No adverse shadow impacts are anticipated with this application. Staff consider this standard to be met.

C. Snow and ice loading
The proposed building is not in a location where falling snow or ice would impact abutting properties. All street frontages are currently maintained and cleared of snow by the Department of Public Works. Staff consider this standard to be met.

D. View corridors
This standard is not applicable to this application.

E. Historic resources
The proposed building lies within 100 feet of the Congress Street Historic District and was subject to a Historic Preservation Advisory Review, which occurred as part of the design review of the application, and is detailed in the attached design review memo (Attachment S2.)

This application does propose the demolition of the Preble Street Chapel, which was constructed in 1851 and renovated in 1899. This building, as noted above is not located within an historic district, and is not a locally designated historic landmark, and is therefore not protected from demolition. At its June 12, 2024 meeting, the Portland Historic Preservation Board discussed a motion brought forward by a Board member to consider designating the Preble Street Chapel as a landmark. Following Board discussion, no other Board member chose to second the proposed motion and the nomination was withdrawn. Staff consider this standard to be met.

F. Exterior lighting
The proposed development includes full cutoff / dark sky compliant light fixtures to minimize light spillover onto adjacent property. As proposed, the site would feature small amounts of security lighting, particularly in the access corridor accessed via Portland Street.

A full photometric plan was included. Proposed lighting fixtures outlined in the photometric plan meet the standards outlined in Section 12 of the Technical Manual.
Due to the site's location, no significant light impact is anticipated for adjacent properties.

A photometric plan is included as attachment 43.

Staff consider this standard to be met.

G. Noise and vibration
HVAC, air handling units, and other necessary equipment will be installed on the building rooftop and clustered at the center of the building to mitigate visual impacts from street level. Although no architectural utility screening is proposed, the location of the building and the central clustering of rooftop equipment is expected to mitigate noise and visual impacts from surrounding Rights-of-Way.

Staff consider this standard to be met.

H. Signage and wayfinding
The applicant will install new parking signage along Portland Street, Preble Street and Cumberland Avenue. No internal site signage is proposed as part of this application. Staff consider this standard to be met.

I. Zoning-related design standards
This application is subject for review according to the B-3 and multi-family residential housing design standards from the City of Portland *Design Manual* as defined in the land use code section

14.6.4.l. The project is also within 100' of a historic district and is subject to an advisory design review by Historic Preservation staff.

A full Design Review Memo is included as attachment S2.

VI. NEIGHBORHOOD MEETING & PUBLIC COMMENT

The applicant held a neighborhood meeting on June, 26 2024 at 5:30 Pm. The in-person meeting was held in the Community Room at 409 Cumberland Avenue.. Seven members of the public were in attendance. Public comment centered on the demolition of the chapel, YFO operations, traffic, parking and building design. A full sign-in sheet and meeting minutes are included as attachment S.

Additional written public comment has focused on Right Title & Interest, view corridors, property value impacts, construction management impacts and site landscaping.

VII. STAFF RECOMMENDATION

Subject to the proposed motions and conditions of approval listed below, Planning & Urban Development Department staff recommends that the Planning Board find that the proposed Youth & Family Outreach childcare facility with 60 residential units and associated site improvements at 331 Cumberland Avenue (PL-002938-2024) meets the applicable standards of Portland's Land Use Code.

VIII. PROPOSED MOTIONS

A. SITE PLAN REVIEW

On the basis of the application, plans, reports and other information submitted by the applicant; findings and recommendations contained in the Planning Board Report for the public hearing on August 13, 2024 for application # PL-002938-2024 at 331 Cumberland Avenue relevant to the site plan regulations; and the testimony presented at the Planning Board hearing, the Planning Board [finds/does not find] that the plan is in conformance with the site plan standards of the land use code, subject to the following conditions of approval:

PRIOR TO APPLYING FOR A BUILDING PERMIT

1. The applicant shall provide revised stormwater and discharge calculations to be revised and approved by the Department of Public Works and that any further stormwater or utility comments have been addressed to the satisfaction of the Planning Authority and the Department of Public Works.

2. The applicant shall revise their Transportation Demand Management (TDM) plan to be in compliance TDM standards laid out in section 17.3 of the Technical Manual.

3. The Applicant shall submit a draft maintenance agreement for review and consideration by the Department of Public Works pertaining to the maintenance of landscaping and plantings within the Public Right-of-Way on Portland Street.

PRIOR TO ISSUANCE OF A BUILDING PERMIT

4. The applicant shall provide a draft stormwater maintenance agreement for review and acceptance by Corporation Counsel and the Department of Public Works.

PRIOR TO ISSUANCE OF A CERTIFICATE OF OCCUPANCY

5. The applicant shall contribute $20,800 to the City's Tree Fund, in lieu of planting 52 of the 60 required street trees.

6. The applicant shall provide the Planning Authority with a written agreement between Youth and Family Outreach and the entity managing the on-site residences, which expressly permits residents the option to utilize the exterior play area during off-hours, as a community amenity space.

B. PLANNING BOARD DECISION

On the basis of the findings, conclusions and recommendations contained in the Planning Board Report for the public hearing on August 13, 2024 for application # PL-002938-2024 at 331 Cumberland Avenue which is attached to the draft approval letter and incorporated therein, the Planning Board **[adopts / does not adopt]** the approval letter as drafted as the Planning Boar's decision for application PL-002938-2024 and authorizes the Planning Board Chair to sign the approval letter as drafted.

ATTACHMENTS

Public Comment

P1-P4. Rehault, George

Staff Materials

S1. Design Review – 6.5.2024
S2. Design Review – 8.9.2024
S3. Youth & Family Outreach RTI Legal Opinion from Corporation Council.

Applicants Submittal

A. Cover Letter
B. Major Site Plan Checklist
C. Financial Capacity
D. Technical Capacity
E. Deeds
F. 1851 Deed
G. Right, Title and Interest Summary Legal Opinion
H. Site Plan Standards
I. Transportation Standards
J. Public Safety Standards
K. Environmental Standards
L. Construction Management Plan
M. Transportation Demand Management
N. Zoning Analysis
O. Ability to Serve Letters
P. Wastewater Capacity Authorization

Q. Applicant Response to Comments 7.16.2024
R. Applicant Response to Comments 8.2.2024
S. Neighborhood Meeting Certification
T. YFO Parking Analysis

Plans
1. COVER
2. GENERAL NOTES
3. BOUNDARY & EX COND SURVEY
4. EXISTING CONDITION & REMOVALS PLAN
5. SITE LAYOUT PLAN
6. Landscape Plan
7.Playground Plan
8. UTILITY PLAN
9. GRADING DRAINAGE EROSION PLAN
10. Cumberland Ave - Renderings
11-16. Building Elevations
17. First Floor Plan
18.Second Floor Plan
19. Third Floor Plan
20. Fourth Floor Plan
21. Fifth Floor Plan
22. Sixth Floor Plan
23. Roof Plan
24. First Floor Condominium Plan
25. Second Floor Condominium Plan
26. Third Floor Condominium Plan
27. Fourth Floor Condominium Plan
28. Fifth Floor Condominium Plan
29. Sixth Floor Condominium Plan
30. Condominium Section
31. Building Sections
32. PORTLAND STREET BUMPOUTS
33. CUMBERLAND AVE ENLARGEMENT
34. RECORDING PLAT
35. SITE & MISC DETAILS
36. SITE & MISC DETAILS
37. SITE & MISC DETAILS
38. SITE & MISC DETAILS
39. FERGUSON DETAILS-R-TANK
40. FERGUSON DETAILS-R-TANK
41. Existing Conditions
42. Tree Images
43. Photometric Plan
44. Lighting Details (1)
45. Lighting Details (2)

Subject:	331 Cumberland Avenue – Major Site Plan Review
Zone:	B3
Date of Review:	June 5, 2024 Design Review
Reviewer(s):	Sean King (Urban Designer), Eric Freeman (Planner), Evan Schueckler (Historic Preservation Manager)
Project ID:	PL-002938-2024

I. INTRODUCTION

The project at 331 Cumberland Avenue for the proposed 60-unit residential condominiums and day care facility is subject for review according to the B-3 and multi-family residential housing design standards from the City of Portland *Design Manual* as defined in the land use code section 14.6.4.l.

The project is also within 100' of a historic landmark and is subject to an advisory design review by Historic Preservation staff.

The built context of the surrounding area contains a variety of building types, architectural styles and mix of uses that vary in height and close proximity to the street typically found throughout Portland's downtown district. Numerous locally designated historical landmarks are within 2-blocks of the proposed development, including the Lancaster Block at 472 Congress Street located at Monument Square Plaza. that exhibit a consistency of architectural ornamentation, materiality and fenestration pattern for a mixed-use building facing the street.

II. HISTORIC PRESERVATION ADVISORY REVIEW

III. DESIGN REVIEW COMMENTS: red text denotes standards not met and require resubmission.

The project at 331 Cumberland Avenue shall meet the following standards based on the B-3 Downtown Business Zone design standards in the City of Portland Design Manual, ***Land Use Code Section 14.6.4.l Design standards.***

§(b)(1)a.1. Relationship of pedestrian environment:

- *§(b)(1)a.1.i. General: The exterior design of portions of buildings within the first thirty-five (35) feet of height shall enhance the character, attractiveness, comfort, security, and usability of the street level pedestrian environment. Factors to be considered include the design, placement, character and quality of the following:* Not Met

  Staff comment: The property is located in the B-3 Downtown Business zone within close proximity to adjacent mixed-use and residential zones with a variety of building typologies and lot

sizes that contribute to the character of the neighborhood. Staff requests that the Applicant relate more closely to the neighborhood context and exterior materiality at the first 35-feet of the building, particularly along Portland Street and Preble Street. Staff recommends incorporating brick to the base façade of the building and adjust the building placement to provide transitional areas that allow for separation between the residential units located on the ground level from the Portland Street & Preble Street sidewalk.

- *§(b)(1)a.1.i.1) Storefronts and building facades, including such factors as relationship to adjacent or nearby structures or open space, pedestrian character, materials and detailing, transparency (having a visible transmittance (VT) of .7 or higher) and contemporary design:* Not Met

  Staff comment: The proposed building has a contemporary design to include exterior materials that are commonly utilized in larger scale mixed-use residential structures throughout Downtown. Staff has concerns about durability of the fibercement at the building's base and recommends a substitution for brick to create greater articulation for the pedestrian environment.

  In addition, staff has concerns about the ground-level residential units along Portland Street and Preble Street due to adjacency of units below grade to be negatively impacted by car headlights and the public sidewalk. Staff suggests a more communal use (such as the Community Room) be located at the corner of Portland Street and Preble Street along with consideration for a transitional space or material to screen residential units at the sidewalk.

  Staff is requesting that the Applicant provide window transparency (VT of .7 or higher) and any window treatment that would provide privacy for residential units along Portland Street & Preble Street.

- *§(b)(1)a.1.i.2) Building entrances, including such factors as compatibility with the building's façade, prominence along the street, access to the street, and accessibility for physically handicapped or for those with special needs:* Not Met

  Staff comment: The primary building entrance along Cumberland Avenue is recessed to create an alcove that Staff finds a safety and security concern. Staff recommends placing the building entrance at Cumberland Avenue closer to the street to allow for the door access directly at the street.

- *§(b)(1)a.1.i.3) Blank facades; and* Met

  Staff comment: Staff finds the street facing façades to provide adequate fenestration, massing variation and material changes to reduce large expanses of blank facades.

- *§(b)(1)a.1.i.4) Special features, such as selective use of such features as building arcades and skywalks or elevated walkways:*

  Staff comment: Not applicable. The proposed development does not propose any special features to require a review of this design standard.

- *§(b)(1)b. Pedestrian Activities District (PAD)*

  Staff comment: Not applicable. The site is not located within the PAD overlay district.

- *§(b)(1)c. Pedestrian Activities District (PAD) encouragement areas shall be designed and constructed to be reasonably capable of being converted to accommodate uses permitted in the PAD overlay zone in accordance with the factors set forth in subsection b. of this section.* **Met**

  Staff comment: Not applicable. The site is not located within a PAD encouragement area.

- *§(b)(1)d. Sidewalk areas and open space: The design of publicly accessible sidewalk areas and open space shall complement the general pattern of the downtown pedestrian environment, conform to special City of Portland streetscape programs described in the Technical Manual, and enhance the attractiveness, comfort, security, and usability of the pedestrian environment. Factors to be considered include the design, placement, character, durability, and quality of the following:*

  1. *Sidewalk, crosswalk, and street paving materials;* **Not Met**

  Staff comment: The proposed development plan indicates to reconstruct brick sidewalk along the property frontages on Cumberland Ave, Preble Street & Portland Street that Staff finds appropriate in this location. Existing crosswalks to adjacent public sidewalks provide current level of pedestrian service that will remain. The Applicant has proposed a bump out in the curbing along Portland Street, Staff recommends to add street trees, lighting and shrub plantings as appropriate as a contribution to the pedestrian character in this location.

  2. *Landscaping, planters, irrigation, and tree guards and grates;* **Not Met**

  Staff comment: The Applicant is required to provide street trees along the property frontages along Cumberland Ave., Preble Street & Portland Street under Technical Manual Section 4. The development plan indicates preservation of existing trees in the esplanade along Cumberland Ave and one tree along Preble Street to protect and remain in place. Staff recommends coordination with proposed utilities to minimize impacts to existing trees and root system for adequate tree preservation. Staff suggests adding street trees along Portland Street by means of adjusting the building placement to create a transitional space (≥ 5 feet) to allow for curbed planters and street trees while providing some separation between the proposed ground-level residential units and sidewalk.

  3. *Lighting;* **Not Met**

  Staff comment: The Applicant has submitted lighting plan and proposed lighting fixtures that does not include lighting within the public right of way required under *Technical Manual Section 10. Municipal Street Lighting Standards*. Staff requests the Applicant locate new light fixtures along Portland Street and Preble Street that are withinin the Peninsula zone under Figure X-4 & Figure X-7A and specify the Peninsula Medium Street light pole and fixture under Figure X-7B found under *Technical Manual Section 10. Municipal Street Lighting Standards*.

4. *Pedestrian amenities such as benches and other seating, trash receptacles, kiosks, bus shelters, artwork, directional and informational signage, fountains, and other special features; and* Not Met

Staff comment: The development plan does not indicate any pedestrian amenities along the property frontages, Staff recommends the Applicant identify areas within the public right-of-way that could adequately provide for seating, trash receptacles, bus shelter and/or informational signage as an identified Gateway under section VIII of the City's Design Manual.

Staff recommends that the Applicant consider a publicly accessible linear plaza with outdoor seating, shade trees, planters and expansion of the brick sidewalk to accommodate for safe passage along the public sidewalk.

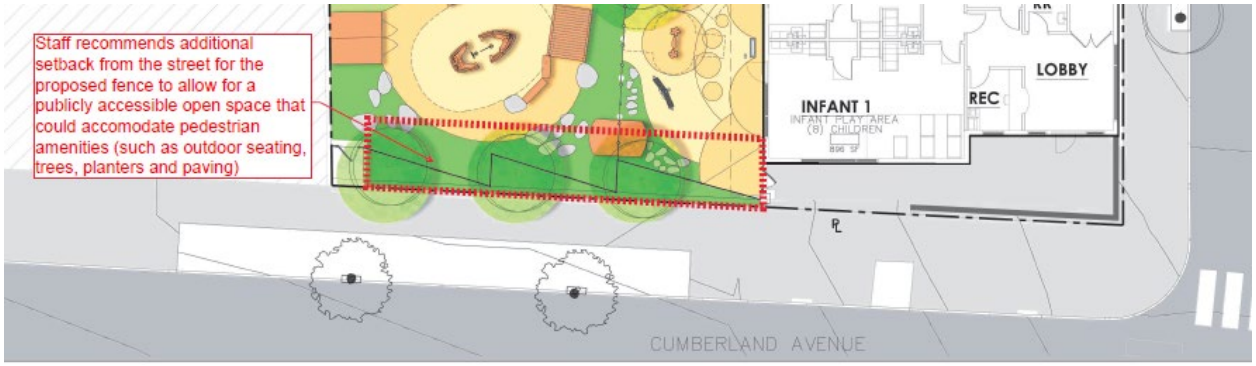


Figure 1 – Staff diagram onto Drawing L101, dated 05-02-2024

5. *Sidewalk vendors and sidewalk cafes.* Not Applicable

Staff comment: The development plan does not propose a use conducive for sidewalk vendors, café furnishings or retail, Staff recommends permanent pedestrian amenities within or adjacent to the public sidewalk.

- *§(b)(1)e. Relationship to existing development:*
  1. *General: Proposed development shall respect, enhance, and be integrated with the existing character of the general pattern of development in the downtown, surrounding building environment and streetscape, as described and illustrated in the Downtown Urban Design Guidelines (Appendix 1). Factors to be considered include the relationship to the following existing patterns:*

  i. Street walls and building setbacks; Not Met

Staff comment: The prevailing street wall and building setbacks are primarily located directly onto the street at the build-to line. Staff observes several building precedents along Cumberland Ave. that recess the primary building entry to allow for door swing while maintaining a building placement directly adjacent to the public right-of-way.

The development plan incorporates a generous front setback at the ground floor at Cumberland Ave. for the Infant 1 room and primary entry that is deeply recessed with a

partition wall that mitigates the grade change at the corner. Staff finds the partition wall along Cumberland Avenue does not fit within the surrounding context and recommends the Applicant enclose the proposed alcove with storefront windows facing the street and a primary door entry perpendicular to the property frontage.

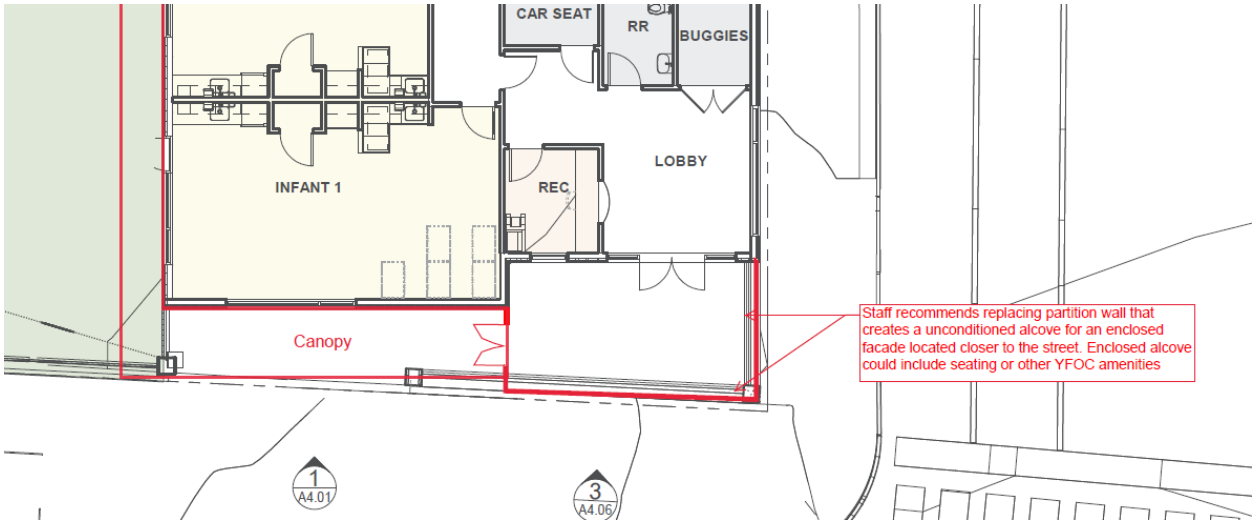


Figure 2 – Staff diagram onto Drawing A1.02, dated 05-03-2024

ii. *Open space;* Not Met

Staff comment: Staff finds the proposed privately accessible open space for the Youth and Family Outreach is located appropriately to prioritize the property's corner with the new building. Staff is recommending a publicly accessible linear park directly adjacent to the Cumberland Ave sidewalk to provide for pedestrian amenities, see design standard *§(b)(1)d.4.Pedestrian amenities & Figure 1* for additional information.

iii. *Building form, scale and massing;* Not Met

Staff comment: The proposed building is segmented by a base that transitions to a lower level as the site slopes down towards Portland Street from Cumberland Ave. The building delineates the base from the upper floors with a stepback along the majority of street facing facades, with the exemption of the building massing at the corner as a distinct building expression that Staff finds appropriate. Staff is recommending additional massing treatments to further reduce the building massing along Portland Street and Preble Street with particular attention towards this corner. Staff suggest that the Applicant consider recessed balconies and/or window bay projections to allow residents the opportunity for additional light, air and private open space into the units.

iv. *Façade proportion and composition;* Met

Staff comment: The proposed building design begins to identify a composition with a base, middle and top, however Staff recommends additional consistency with the surrounding buildings for neighborhood context. Staff has concerns about the proposed wood-look

fibercement paneling at the first two stories along Portland Street & Preble Street as an introduced exterior material at the ground-level to the neighborhood. Staff recommends a brick façade treatment that responds more closely to the context as a durable, textured exterior material.

The middle portion of the building is stepback from the lower two levels and provides a mostly symmetrical fenestration pattern and rhythm both vertically and horizontally that Staff finds appropriate.

The top portion of the building does not have a clear termination, with the exception of the corner projection at Cumberland Ave with the vertical parapet roofline extension. Staff recommends a cornice articulation above the top level that is more consistent with larger buildings found in the neighborhood and suggests the additional roofline articulation at the corners that express the property as a defined gateway into the City center.

v. Pedestrian circulation and building entrances; **Not Met**

Staff comment: The proposed development plan identifies a primary entrance as recessed, oriented towards Cumberland Avenue and delineated from the upper levels by a horizontal canopy to wrap around the building's internal playscape for the day care facility proposed to occupy the second floor. Staff has safety concerns for the recessed alcove created by the proposed partition wall along the property frontage and recommends the addition of conditioned space to the build-to line along Cumberland. See design review standard *§(b)(1)e. Relationship to existing development: i. Street walls and building setbacks & Figure 2* for Staff recommendations.

The primary entrance for the residential units is located at Portland Street and is recessed with an overhead canopy. Staff request that the Applicant clarify the location of the double door shown on first floor plan and recommends the door entry is within close proximity to the build-to street line. In addition, Staff recommends addition articulation for residents that may include addressing signage, change in exterior material and/or additional expression of the overhead canopy.

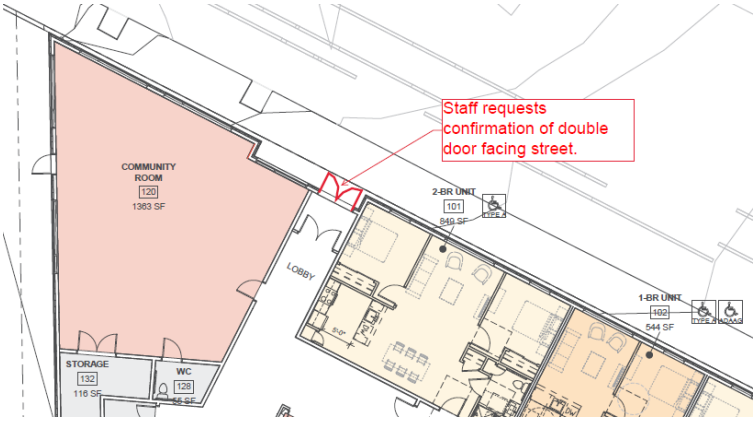


Figure 3 – Staff diagram onto Drawing A1.01, dated 05-03-2024

*vi. Parking, **Not Applicable***

Staff comment: The proposed development plan removes the existing surface parking and driveway at Portland Street into the property site and does not propose any parking within the property.

***2.** Standards for increasing setback beyond street build-to line: A proposed development may exceed maximum setbacks:* Not Met

Staff comment: The proposed development plan proposes to demolition the existing buildings on site to create an Elle-shaped building placed primarily along the property frontages, with the exception of the private open space along Cumberland Avenue intended for the day care facility as a playspace. Under this design standard, a proposed development may exceed the maximum setback based on an evaluation of open space and amenity; prevailing character and continuity; support for existing open space; quality and orientation. Staff finds the setback along Cumberland Ave creates minimal publicly accessible open space and recommends the Applicant add pedestrian amenities (such as permanent outdoor seating, trees in planters, and special surface treatments) as a linear open space would support open space within this location.

***3.** Roof top appurtenances: All mechanical equipment, ventilating and air conditioning and other building systems, elevators, stairways, radio or television masts or equipment, or other rooftop elements not intended for human occupancy shall be fully enclosed in a manner consistent with the character, shape and materials of the principal building,* Not Met

Staff comment: The Applicant is requested to submit a roof level plan that indicates all proposed mechanical equipment and other building systems to require screening that is integrated into the building design.

- *§(b)(1)f. Shadow impact on open space: The location, massing and orientation of portions of buildings in excess of sixty-five (65) feet in height shall be such that substantial shadow impacts on public plazas, parks, and other publicly accessible open space are avoided. **Not Applicable***

  Staff comment: Portions of the proposed building along Portland Street exceed 65 feet in height however will not impact any public open spaces as there are none within the immediate vicinity.

- *§(b)(1)g. Wind impacts:* The location, massing, orientation and architectural design of a new building or a building addition shall be such that no significant adverse wind impacts are created. Met

  Staff comment: The proposed building design utilizes a variety of features to break down the building's mass and height with stepback at the upper floors and variation in the façade planes to help mitigate the potential impact of winds.

- *§(b)(1)h. Setbacks for existing structures: The location and design of proposed structures shall not create a detrimental impact on the structural integrity or the safety of adjacent structures or the occupants thereof;* Met

  Staff comment: The proposed development plan does not pose a detrimental impact on the structural integrity of any adjacent structures as it is standalone on a parcel bounded by public streets and sufficient separation from abutting buildings. Existing structures to be demolished to construct the proposed Ell-shaped building.

- *§(b)(1)i. Building tops: Buildings or structures which exceed one hundred fifty (150) feet in height shall be designed so as to provide a distinctive top to the building which visually conveys a sense of interest and vertical termination to the building.* Not Applicable

  Staff comment: Not applicable, building does not exceed 150 feet in height

MULTIPLE-FAMILY STANDARDS. Multiple-family shall meet the following standards:

1. *The exterior design of the proposed structure, shall be designed to complement and enhance the nearest residential neighborhood.* Not Met

   Staff comment: The property is located in the B-3 Downtown Business zone within close proximity to adjacent mixed-use and residential zones with a variety of building typologies and lot sizes that contribute to the character of the neighborhood. Staff requests that the Applicant provide further articulation along the ground level at Portland Street and Preble Street and recommends the Applicant incorporate brick into the base of the building to complement the character and quality of exterior materials found in the neighborhood.

2. *The proposed development shall respect the existing relationship of buildings to public streets.* Met

   Staff comment: The proposed building is located within close proximity to the street that responds to the surrounding context of building located at the street.

3. *Open space on the site for all multiple-family development shall be integrated into the development site.* Not Met

   Staff comment: The development plan indicates a generous play yard that appears to only be accessed by the day care facility during operating hours. Open space for the proposed 60 residential units is not provided and is required under this design standard for multi-family developments. Staff recommends that the Applicant incorporate communal outdoor open space, where appropriate within the building footprint (such as shared rooftop amenity, roof area created by stepback at third floor or end of internal corridor at each floor) or within ground plane areas (such as transitional area along Portland Street, linear park along Cumberland Avenue or at shared passageway easement at Portland Street) – See additional Staff recommendations under design standard *§(b)(1)d. Sidewalk areas and open space.*

In addition, the Applicant is requested to provide private open space for the residential units (such as recessed or projecting balconies) as an alternative to meet open space for multi-family developments.

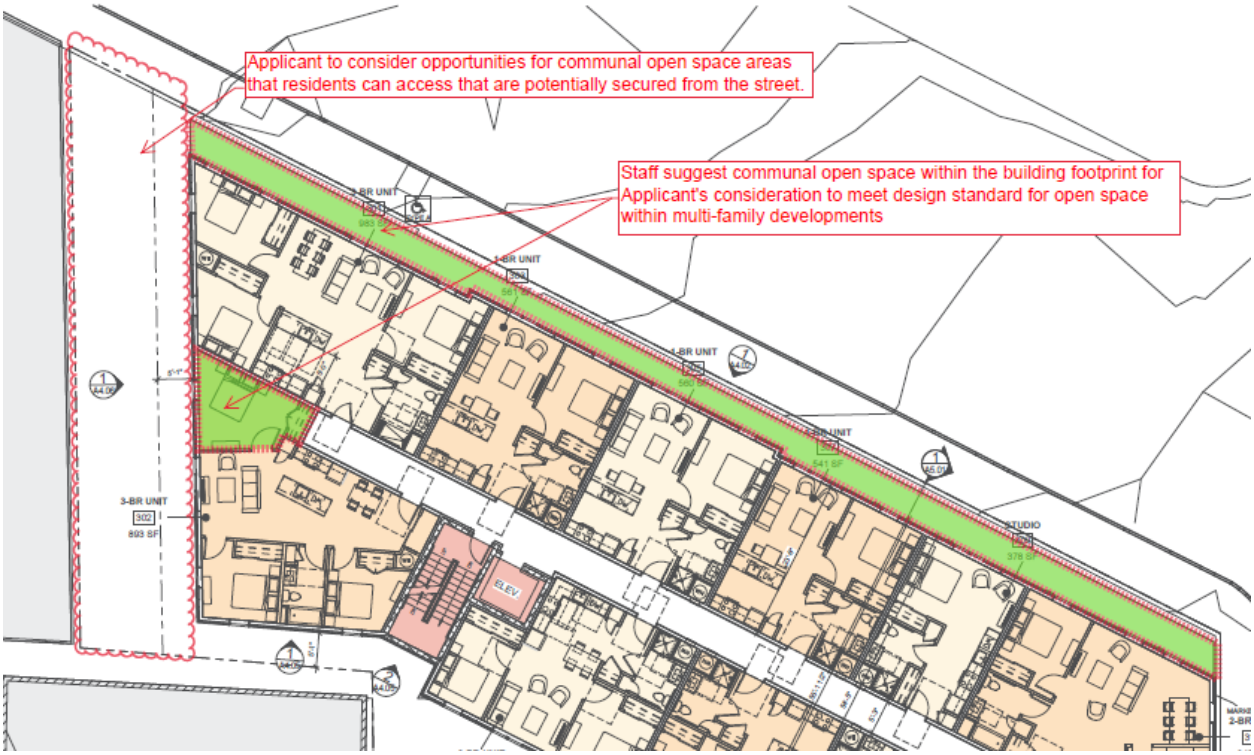


Figure 4 – Staff diagram onto Drawing A1.03, dated 05-03-2024

4. *The design of proposed dwellings shall provide ample windows to enhance opportunities for sunlight and air in each dwelling in principle living areas and shall also provide sufficient storage areas.* **Met**

   Staff comment: Sufficient windows and interior unit storage provided at each residential unit.

5. *The scale and surface area of parking and driveways and paved areas are arranged and landscape to properly screen vehicles from adjacent properties and streets.* **Not Applicable**

   Staff comment: Not applicable, no surface parking or driveways into the property are proposed.

6. *Multiple-family dwellings shall not be converted to lodging houses unless all units in building have been vacant for at least one (1) year.* **Not Applicable**

   Staff comment: Not applicable, the proposed development plan does not propose a conversion to lodging houses as the existing structures are to be demolished.

Planning and Urban Development
Evan Schueckler
Historic Preservation Program Manager

To:	Chair Mazer & Members of the Planning Board
From:	Evan Schueckler, Historic Preservation Program Manager Kevin Kraft, Planning and Urban Development Director
Date:	January 10, 2025
Re:	Historic Preservation Advisory Review - 19 Willis Street (formerly 33 Montreal Street)
Project ID:	PL-000807-2019
CBL:	Cbl 015 b022
Meeting Date:	January 14, 2025

Introduction:

Section 14-526(c)(5)(b) requires "development adjacent to designated landmarks, historic districts or historic landscape districts: when any part of a proposed development is within one hundred (100) feet of any designated landmark, historic district, or historic landscape district, such development shall be generally compatible with the major character-defining elements of the landmark or portion of the district in the immediate vicinity of the proposed development. Character defining elements of landmarks and historic districts are identified in the historic resources inventory and respective historic district designation reports. For the purposes of this provision, "compatible" design shall be defined as design which respects the established building patterns and visual characteristics that exist in a given setting and, at the same time, is a distinct product of its own time. To aid the planning board in its deliberations, historic preservation staff shall provide a written analysis of the proposed development's immediate context, identifying the major character-defining elements and any established building patterns that characterize the context."

Historic Preservation Staff Written Analysis:

As required by Section 14-526(c)(5)(b) the City of Portland Planning & Urban Development Departments, Historic Preservation staff has prepared the following written analysis of the proposed development's immediate context, identifying the major character-defining elements, and any established building patterns that characterize the context.

389 Congress Street, Portland, Maine 04101 | ph: 207.874.8719 | evans@portlandmaine.gov

Munjoy Hill Historic District

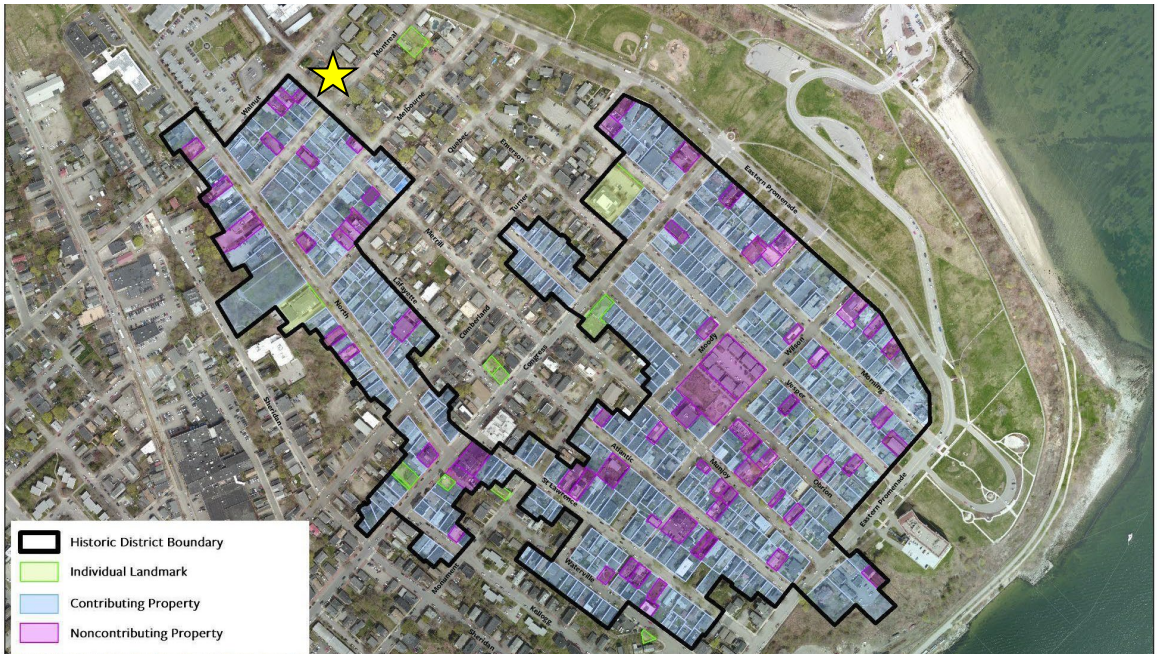


Figure 1: Map of the Munjoy Hill Historic District showing location of 19 Willis Street with yellow star.

The Munjoy Hill Historic District was adopted by the City Council on April 12, 2021 and went into effect on May 12, 2021.

Munjoy Hill is a dense historic neighborhood with a blend of vernacular, working-class architecture and a number of grand, high-style houses which primarily face onto the Eastern Promenade. There are also a small number of commercial and institutional buildings scattered throughout.

Early in Portland's development, Munjoy Hill was sparsely populated with only a few houses located at the western base of the hill, closer to the waterfront. Other than the area occupied by the Portland Observatory and its attendant structures (constructed in 1807), the majority of the Hill was privately maintained as open-space for the pasturing of cows. The original Tukey's Bridge, constructed in 1796, connected the eastern end of the Portland peninsula to the mainland and prompted the laying out of Washington Avenue. Development on the hill remained slow-going early in the nineteenth century. Regardless, in 1836 the City of Portland purchased the lands along the edge of the peninsula that would eventually become the Eastern promenade in response to the increasing development. The earliest houses, of which only a few survive, were generally very modest one- to two-story wood-frame capes.



Figure 2: An example of an early, though somewhat altered, cape type house, which would have been common in the early- to mid-nineteenth century (7 Lafayette Street).

Development picked-up pace in the mid-nineteenth century with the founding of the Atlantic and St. Lawrence Railroad in 1845 and the Portland Company in 1847. Jobs at the Portland Company in particular, at the base of Munjoy Hill and along the waterfront, created the need for working-class housing in close proximity. The undeveloped tracts on Munjoy Hill provided ample space for that growth. Homes from the mid nineteenth century were often built in the vernacular Greek Revival style, featuring highly symmetrical façades and austere classically-inspired details.



Figure 3: An example of a more ornate asymmetrical gable-fronted Greek Revival (8 Sherbrook Street).

In the aftermath of the Great Fire of 1866, Portland found itself in dire need of additional housing and significant development occurred on Munjoy Hill. This was fueled by subdivision of the remaining large tracts of land and the arrival of horse-drawn (and later electric) streetcars, which made the easternmost ends of the peninsula easily accessible to downtown Portland. In this late-nineteenth century era, the scale of buildings increased, with many two- to three-family Italianate and Second Empire structures being built. This dense mode of development was further fueled by an influx of immigrants in the early-twentieth century. The demand for housing led to the advent of the now ubiquitous triple-deckers which dominate Munjoy Hill. These large frame structures can be found dressed in various architectural styles that were popular from the 1880s into the 1910s.



Figure 4: A typical street showing examples of triple-deckers and Italianate duplexes (82, 84, 86, & 88 Beckett).

This same era also saw increased interest in the expansive views and beauty of the Eastern Promenade by Portland's wealthiest residents. A number of grand single-family homes were built along the Promenade in the Italianate, Second Empire, Shingle, and Queen Anne styles. This development in the very early-twentieth century solidified the Eastern Promenade streetscape as we know it today.



Figure 5: An example of grant Queen Anne style house facing onto the Eastern Promenade (140 Eastern Promenade).

Munjoy Hill has a long history of development and features highly varied architectural expressions across buildings. Many buildings also feature historical alterations, as past owners tried to update Capes or Greek Revival houses with Italianate or Queen Anne details, creating varied and dynamic layers of history. Regardless of this diversity, there are a handful of unifying features within the district. Construction is primarily of wood frame over brick or stone foundations, with only a handful of primarily brick structures. Structures are typically independent, but constructed densely, with tight driveways and side yards. Front yards are typically extremely shallow, with proximity to the sidewalk being prioritized even on large lots. Projecting bay windows or entry porches are often used to create additional variety along the sidewalk. Vertically-oriented windows are placed irregularly to reflect interior programs, but are typically aligned from floor-to-floor. Stacked bay windows are extremely common at the street-facing façade, while stacked porches are common at the rear.

Immediate Context:

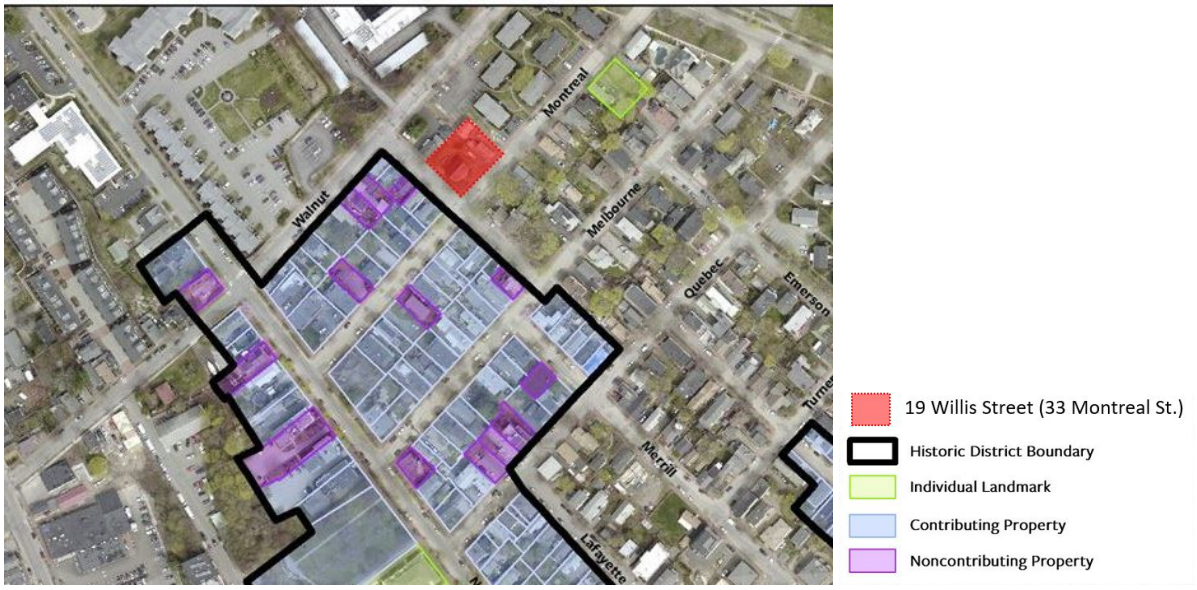


Figure 6: The immediate context of the Munjoy Hill Historic District, in the vicinity of the proposed development at 19 Willis Street.

The portion of the Munjoy Hill Historic District adjacent to the proposed development, the west side of Willis Street and Montreal Street east of Willis Street, reflects the same eclecticism and architectural diversity found throughout the whole district. Buildings vary from one-and-a-half stories in height up to three stories, ranging from modest single-family homes to larger multi-family buildings. Architectural styles and ornaments reflect the full span of the district's historical development.

The designation materials for the Munjoy Hill Historic District include descriptions of the architectural character of a number of streets. The one for Willis Street states:

> "Willis Street is predominated by one-and-a-half story Italianate dwellings and two-and-a half story Greek Revivals with gable ends to the street. There is one two story hip roof dwelling on the street as well. Many of the larger scale buildings take up a larger percentage of their lots than the neighboring smaller scale buildings. Both the smaller scale dwellings and the larger buildings are two or three bays wide. All the dwellings rest on a brick foundation. The dwellings are generally set at or near the sidewalk. While most have front entrances on the street with high stoops or front porches, two dwellings have side entrances. The dwellings between Montreal and Walnut Streets are on small lots and parking, where provided, is generally accommodated in narrow driveways to the side of a

dwelling. The dwellings between Montreal and Melbourne Street are on larger or multiple lots with off street parking in the side yards."



Figure 7: The properties along Willis Street within the Munjoy Hill Historic District.

The architectural description of Montreal Street states:

"Montreal Street is eclectic with a variety of scales and styles of homes on various lot widths. Some homes feature large side yards utilized as green space or surface parking. Dwellings range from one story to three stories. While predominately Italianate or Second Empire in style, the buildings include examples of the Greek Revival style, a bungalow, and vernacular construction. Roof forms are variable, reflecting the street's eclectic character.

> While the front gable end is the predominate roof form, examples of the mansard, flat, hip, and side gable are also present. Most dwellings are one-and-a-half story and two or three bays wide, often with a projecting bay or front porch. Most dwellings rest on a brick foundation. The dwellings are generally set at or near the sidewalk, except for No. 37 Montreal Street and properties built in the second half of the 20th century. Entrances are generally on the street façade, although there are examples of primary entrances on the side facade. Parking, where provided, is accommodated in narrow driveways to the side of a dwelling. The MacArthur Gardens apartment buildings (1947) are an anomaly to the street's historic development pattern with buildings set back from the street in a green space and perimeter parking at the sidewalk on Montreal Street."

Among the buildings in the immediate context are 52, 63, and 64 Montreal Street which are excellent examples of the densely-built triple-deckers typical of Munjoy Hill's late 19-centruy and early twentieth century development. Below are descriptions of these three contributing buildings.

52 Montreal Street has features generally associated with the form, and its most prominent architectural elements are overhanging eaves, a three-story bay window on the façade, and a covered entry porch, which features both old and new stylistic elements. The dwelling has vinyl siding and replacement 1/1 vinyl sash windows. The façade is two bays wide, with the full-height anted bay window at the right. The window is continuous, with no cornices or paneling separating the levels. The covered porch features inset panels in addition to the turned supports and frieze. The main entry door has a large light with smaller panes at the top and bottom. The building rises sheer with no stepbacks. The roof is flat.

63 Montreal Street exhibits characteristics generally associated with the tripledecker form, including deeply overhanging eaves with wide friezes below, multiple three-story bay windows, and a covered entry porch. Like many triple-deckers, the building does not have many ornamental details. The building is two by eight bays wide, and has replacement siding and 1/1 vinyl sash windows. Two main entrances in the façade's first bay provide access to separate units. The covered porch's side-facing steps curve toward the road at the base. The porch has simple square railings, balusters, and supports. The first bay of the western elevation features a secondary entrance with an additional small covered porch. The building rises sheer, with no stepbacks and the roof is flat.

64 Montreal Street's most prominent architectural features are widely overhanging eaves, two multi-story bay windows on the façade, and a covered entry porch. Like many triple-deckers, the

building does not have many ornamental details. However, the porch's wide staircase, paired supports with panel insets, cornice, and frieze create a grander entrance than many similar dwellings. The two, paneled main entry doors appear to be original, and provide access to separate units. The doors share a paneled surround that extends the width of the porch. This element is likely a recent addition. There is a three-story bay window in the right bay, and an additional two-story bay window over the porch (meaning each terminate at the building's overhanging cornice). An unusual detail is that, rather than following the canted line of the bay windows, the cornice follows a straight line across the full width of the building, creating sharp corners and deeper overhangs than similar triple-deckers in the area. The dwelling is two bays wide and seven bays deep, with an additional, three-story canted bay window on the western elevation. The roof is flat and the building rises sheer with no stepbacks.



52 Montreal Street - Contributing | 63 Montreal Street - Contributing | 64 Montreal Street - Contributing

Figure 8: The three triple-deckers found in the immediate context of the proposed development.

Proposed Development

While the proposed development at 19 Willis Street is larger than the historic buildings of the Munjoy Hill Historic District, its design includes a number of elements that are pulled from several nearby contributing buildings, in particular the triple-decker apartment buildings that are common to the district, and relating the proposed building to the surrounding context.

The overall form of the building, rising sheer from along Willis and Montreal Streets is typical of many buildings in the context. Buildings in the district are typically located close to the street, and front yards are modest where they exist at all. Most buildings, especially the larger structures, rise sheer without stepbacks or other articulation to break-up their height. The proposed structure also features a flat roof articulated by a projecting cornice, a common feature of the larger multi-unit buildings in the context.



Figure 9: The Willis Street elevation of the proposed development.



Figure 10: View of the proposed development looking south west along Montreal Street

The articulation and fenestration of the building is also in keeping with patterns seen in the Munjoy Hill Historic District. The front façade, along Willis Street, in particular is punctuated by three stacked bays that break-up the length of the façade. Projecting stacked bays are a common feature of the double- and triple-deckers found in the surrounding context. While historic structures typically feature angled bays, the proposed construction features square bays which

help to differentiate the construction as a product of its own time. Windows in other areas of the building are vertically-oriented and stacked at regular intervals, another common feature of nearby contributing buildings in the historic district.

The proposed development also features a series of stacked balconies at the rear, off of Montreal Street. Stacked rear porches were a common feature of houses throughout the historic district, especially on denser apartment buildings such as the triple-deckers where these porches provided each unit with a modest outdoor space. A small number of contributing buildings even feature stacked front porches.

The overall material palette is also in keeping with typical patterns of frame buildings in the historic context. The structure is proposed to be clad in shingle siding, with flat trim at the cornice, and some flat panels around openings. Shingle is a common historic cladding material, in particular within the more working-class and vernacular context of the Munjoy Hill Historic District. The use of flat trim and panels around windows, bays, doors, and cornices is also a typical feature of many contributing structures. The proposed development does use simplified trim details, which again helps to identify the structure as a product of its own time.

389 Congress Street, Portland, Maine 04101 | c: 207.272.7885 | evans@portlandmaine.gov

9 December 2024

Portland Planning Board
389 Congress Street
Portland, ME 04101

Re: PL-000807-2019

Members of the Planning Board,

My name is Julie Ann Larry, and I am an architectural historian. For the last thirty years I have researched, surveyed, and analyzed historic buildings and neighborhoods as part of preservation planning projects for municipal, non-profit, private and government clients throughout New England. When the Munjoy Hill Historic District (MHHD) was established by the Portland City Council in April 2021, I was Greater Portland Landmarks' Director of Advocacy and contributed research and survey work to the City's documentation of the overall neighborhood during the designation process.

Although the proposed Project is not located within the boundaries of the MHHD as adopted, because the Project is located within 100 feet of a City of Portland Historic District, it was mandatory that the Planning Board give special consideration to the effect of the Project on the nearby Historic District. Section 14-526(d)(5)(b) of the Portland City Code specifically required that:

...*Character-defining elements of such development shall be generally compatible with the major character-defining elements of the landmark or portion of the district in the immediate vicinity of the proposed development*....

The historically designated buildings within the proposed development's immediate context follow a similar development pattern and are primarily small in scale and massing. The homes share similar character defining elements. On Willis and Montreal Streets dwellings are one-and-a-half or two-story dwellings, most with gable roofs. City Assessor records indicated the dwellings range from 19-22 feet in width. A designated local landmark at 12 Montreal Street is a 1½-story gable-roof house that is 18 feet in width. These dwellings generally have symmetrical fenestration patterns and simple trim details, with slightly more decorative emphasis around their primary entrances.

While the proposed building design also features a symmetrical fenestration patten and emphasis at its primary entrance, its width of approximately 90 feet and height of 45 feet at Willis Street are substantially greater than its immediate neighbors, especially those that have been historically designated as either a landmark or as contributing buildings in the MHHD. In my professional opinion its character-defining elements are not generally compatible with the major character-defining elements of the designated properties in the immediate vicinity (see attached map) of the proposed development as required by Section 14-526(d)(5)(b).

Thank you for your consideration,

Julie Ann Larry

Julie Ann Larry
Senior Architectural Historian
Black Diamond Consultants
47 Enterprise Drive
Gardiner, ME 04345





42 Montreal St.



41 Montreal St.



20 Willis St.



22 Willis St.



24 Willis St.



28 Willis St.



12 Montreal St.

Brandon Mazer, Chair
Justin Barker, Vice Chair
Maggie Stanley
Marpheen Chann
Sean Murphy
David Silk
Austin Smith

DRAFT FOR DISCUSSION

PORTLAND PLANNING BOARD
SUPPLEMENTAL FINDINGS OF FACT AND CONCLUSIONS

Level III Site Plan and Subdivision
Applicant: 27 Montreal Street, LLC
Property: 19 Willis Street, CBL: 015 B015001; 015 B022001
Application PL-000807-2019

INTRODUCTION

On September 30, 2024, the Cumberland County Superior Court issued an order remanding this matter to the Planning Board to "make sufficient findings of fact regarding the height, setback, and design-review requirements."

In response to the September 30, 2024 remand order, on November 12, 2024, the Planning Board voted to reopen the evidentiary record for application PL-000807-2019 to allow the presentation of additional evidence from the applicant, the City and from members of the public, limited only to information that is relevant to the three issues that were in front of the court, specifically: 1) the calculation of the height of the building, 2) whether the development meets the applicable setbacks, and 3) whether the development complies with Section 14-526(d)(5)(b).

The Planning Board held a public hearing on December 10, 2024. Prior to deliberating, all Board members indicated that they had reviewed and were familiar with the existing record for this matter.

At the December 10, 2024 public hearing, the Planning Board heard testimony from Matthew Grooms, the City's Deputy Director of Planning and Urban Development, then Ann Muchado, the City's Zoning Administrator, and Tim Wells, agent for 37 Montreal Street LLC. The Planning Board also heard comments from six (6) members of the public, including Peter Murray, Michael Hoover, Danielle Hannity, Beth Boepple, Julianne Leary, and George Rheault.

The Board deliberated this matter for over sixty (60) minutes following the close of the evidentiary record on December 10, 2024. Following deliberations, the Board voted 7-0 to table the application until January

14, 2025 to allow the City additional time to submit a memorandum to the Board pursuant to Section 14-526(d)(5)(b).

The Board reconvened on January 14, 2025 and received a report from the City dated _____.

Based on the entire record before the Board in this matter, the Board makes the following findings and conclusions.

SUPPLEMENTAL FINDINGS OF FACT AND CONCLUSIONS

The Board reviewed all of the existing materials in the record and the additional information submitted by the applicant, City staff and members of the public at the public hearings on December 10, 2024 and on January 14, 2025. After careful review and consideration of all of the material and testimony provided, and thoughtful deliberation among the Board members, the Board makes the following findings of fact and conclusions which are intended to supplement and not supplant or otherwise disturb the existing findings and conclusions the Planning Board adopted on December 14, 2021 as augmented on December 12, 2023.

Maximum Height Requirements

1. Section 14-47 of the applicable Land Use Code defined "building height" has "[t]he vertical measurement from grade, or the predevelopment grade on the islands, to the highest point of the roof beams in flat roofs."

2. "Grade" was not otherwise defined in Section 14-47 or elsewhere in the Land Use Code.[1]

3. "Pre-development grade," which was applicable on the City's islands, was defined in Section 14-47 as "average grade, existing on October 1, 2000 at the corners of the foundation of the proposed structure."

4. The Planning Board must then determine how to interpret "grade" as it relates to this project which is on the mainland.

5. The Board is first informed by the plain language of the ordinance which distinguishes between "grade" and "pre-development grade." The Board further finds it reasonable that "pre-development grade" is specifically called out because it is exclusively applicable to the islands and does not apply to development on the mainland. Therefore, it makes practical sense that grade on the mainland shall be interpreted to be "post-development grade," or after the proposed development occurs.

[1] As Kevin Kraft, Director of Planning and Urban Development noted at the hearing, Section 7.2 of Chapter 14 of the City's Code of Ordinances (December 4, 2024) now includes a definition of "Grade, average" which is "[t]he average of elevation measurements at consistent intervals of no less than three and no more than ten feet around the entire perimeter of a structure. Measurements shall be taken at the foundation of the structure where it meets the grade after construction."

6. The Board further finds that based on the use of "average grade" in the definition of "pre-development grade," it is reasonable that post-development grade also be an average measurement.

7. The Board is also informed by the unrebutted and compelling testimony of Ann Muchado, the City's zoning administrator. Ms. Muchado has been employed by the City of Portland in the zoning administration since 2005. Based on Ms. Muchado's testimony, the Planning Board finds that, for the purpose of determining the height of a building, since at least 2005, the City's has determined grade for the purposes of measuring the height of a proposed building on the mainland by calculating average grade after construction.

8. Based on Ms. Muchado's testimony, the Planning Board further finds that since at least 2005 two methods have been used to calculate the average grade. The first method is to calculate average grade using the grade measurements at the four corners of the building. The second method is to average the grade at set intervals around the base of the building. These measurements are all taken from the base of the building after construction and may include measurements from imported fill that has been added in order to make the building level and structurally sound on what otherwise would be an uneven surface.

9. The Planning Board also recognizes that it has consistently applied one of these two methodologies to prior applications. For instance, as highlighted during Ms. Muchado's testimony, the Planning Board recently approved a 45-unit, multi-family development at 218 Washington Street which measured average grade at the principal corners of the building post development. Another example was a 9-unit multi-family development approved in 2022 at 102 State Street which calculated average grade at the post-development grade at the principal corners of the building.

10. The Planning Board finds the above-described methodology is a reasonable and commonsense approach to interpreting grade as it relates to development on the mainland which is supported by the plain language of the ordinance and the City's longstanding practice.

11. The Board is sensitive to potential due process concerns raised by the Superior Court in its remand order, but finds that the City and Planning Board's consistent and longstanding practice has provided reasonable notice to potential applicants and members of the public. Each of the Planning Board's twice-monthly meetings are open to the public and the materials before the Board are all available on the City's website or at City Hall. Video recordings of all the meetings are likewise available online. The Board is assured that there are a sufficient number of applications, staff memorandums and approval letters, including but not limited to the specific examples highlighted during Ms. Machado's presentation, that have applied this methodology over the past two decades to provide adequate notice to inform a potential applicant and the public as to how the Planning Board will approach this issue. The Board also recognizes that this ambiguity has been remedied by the 2024 amendments to the Land Use Code.

12. The Board reviewed its December 14, 2021 and December 12, 2023 approval letters which incorporated findings from the staff reports dated December 10, 2021 and November 22, 2023 and, after further deliberations and discussion, the Board finds that its existing written findings

have not been changed by any new evidence received at the public hearing on December 10, 2024 or January 14, 2025. The Board finds that the conclusion that it reached originally on December 14, 2021, as supplemented on December 12, 2023, has only been reinforced by the additional evidence the Board has received in this matter and therefore, the findings and conclusions therein are undisturbed and only supplemented by the findings contained above.

13. As shown on the applicant's plan labeled C2.1, the average grade for this proposed project was calculated by averaging 23 grade points around the base of the building which resulted in an average grade of 138'- 1". The top of the roof beam of the proposed building is 182'-6.25" resulting in a height of 44'-5.25" The Board concludes that the project is less than 45 feet tall and therefore meets the maximum height requirement for the MHNCOD.

Board member _____ motioned, and Board member_____ seconded a motion to adopt the above factual findings and conclusions to supplement the Planning Board's existing findings and conclusions contained in its December 14, 2021 and December 12, 2023 approval letters and conclude, based on all of those findings, that the applicant met the applicable maximum height requirement for the MHNCOD.

The Planning Board voted _____ (_____).

Setback Requirements

1. The Planning Board recognizes the following definitions are embedded in Section 14-47 of the version of the Land Use Ordinance applicable to this project:

   Setback – The required distance and the land resulting therefrom between a street line and the closest possible line of conforming structure.

   Structure – Anything constructed or erected of more than one (1) member which requires a fixed location on the ground or attached to something having a fixed location on the ground.

2. Those definitions are not in isolation, however. There are also dimensional guidelines specific to each zone embedded in the ordinance that inform the Planning Board's application of the setback requirements. For instance, the MHNCOD dimensional guidelines related to setbacks which were set forth in Section 14-140.5(c) outline the applicable side and street setback requirements in the MHNCOD. The table in Section 14-140.5(c) speaks to setbacks exclusively in relation to "buildings," not "structures," and setback dimensions are directly impacted by the height of a building. For example, buildings up to 35 feet tall are subject to the underlying zone dimensional requirements for side setbacks while buildings over 35 feet tall are subject to more specific dimensional standards.

3. Similarly, the R-6 zone dimensional setback requirements set forth in Section 14-139 reference measurements from an "accessory structure" or "principal structure."

4. The Board finds that the specific guidelines relevant to setbacks in the MHNCOD and R-6 are more instructive than the standalone definition of "setback" when determining how the setback

requirements shall be applied to this site plan application. The Board finds that the setback dimensional standards are therefore not applicable to *all* structures.

5. The Board finds that a retaining wall that is holding back earth is not a "building" or a "principal" or "accessory" structure as contemplated in the Land Use Code.

6. The Planning Board further recognizes, as informed by the compelling and unrebutted testimony of Ms. Muchado, that since at least 2005, not all structures, as strictly defined in Section 14-47, have been required by City staff or the Planning Board to meet setbacks. For example, fences, flagpoles and retaining walls that might otherwise meet the strict definition of a "structure" have historically been exempt from setback requirements.[2] Retaining walls specifically have not been subject to setback requirements since at least 2005. This has been the case whether the retaining wall was used as structural support for the building or if it was separate from the building.

7. Some recent examples of site plans approved by the Planning Board with retaining walls within the setbacks include a 19-unit multi-family development at 165 Sheridan Street with a retaining wall within the setback, two (2) feet from a side and rear property line. Another example the Planning Board reviewed and approved in 2019 is a 16-unit development at 10 Hammond Street with a retaining wall at or just within the property line of the property line, notwithstanding a 5 feet side and 15 feet rear setback.

8. Ms. Muchado testified that she is unaware of a circumstance where the City has required an applicant to construct retaining walls to meet applicable setback requirements. The Board finds that the City has consistently applied this practice since at least 2005.

9. The Planning Board agrees with Ms. Muchado that the purpose of a retaining wall is to hold back soil on a steep slope and to stabilize the soil in order to build a structure. Oftentimes, retaining walls need to be right on the property line in order to serve this important purpose and prevent the ground underneath a structure from collapsing.

10. The Planning Board interprets and applies the City ordinance reasonably, considering its purpose and structure and in a way that avoids absurd or illogical results. The Planning Board finds that if retaining walls were subject to setbacks it would create an absurd result in the City because it would make many lots, particularly small and sloped or uneven lots, very difficult or impossible to develop.

14. The Board is once again sensitive to potential due process concerns raised by the Superior Court in its remand order, but finds that the City and Planning Board's consistent and longstanding practice has provided reasonable notice to potential applicants and members of the public. Each of the Board's twice-monthly meetings are open to the public and all of the materials that come before the Board are all available on the City's website. The Board finds that there are a sufficient number of applications, staff memorandums and approval letters, including but not limited to the

2 As Kevin Kraft, Director of Planning and Urban Development noted at the December 10, 2024 hearing, this practice has been codified in Section 7.2 of Chapter 14 of the City's Code of Ordinances (December 4, 2024) ("Setbacks do not apply to fences, retaining walls, raised garden beds and other similar structures.")

specific examples highlighted during Ms. Muchado's presentation, that have applied this methodology over the past two decades and provide adequate notice to inform a potential applicant and the public as to how the Planning Board will approach this issue. The Board also recognizes that this ambiguity has been remedied by the 2024 amendments to the Land Use Code.

11. The Board reviewed its December 14, 2021 and December 12, 2023 approval letters which incorporated findings from the staff reports dated December 10, 2021 and November 22, 2023 and, after further deliberations and discussion, the Board finds that its existing written findings have not been disturbed by any new evidence received at the public hearing on December 10, 2024 or January 14, 2025. The Board finds that the conclusion that it reached originally on December 14, 2021, as supplemented on December 12, 2023, has only been reinforced by the additional evidence the Board has received in this matter and therefore, the findings and conclusions therein are undisturbed but only supplemented by the findings contained above.

12. According to the applicant's submitted proposed site plan drawing C1.0, the proposed building would have a minimum front setback of 5 feet, minimum side yard setbacks of approximately 10.3 feet, a minimum side setback on a side street of 5 feet, and a minimum rear yard setback of approximately 31.5 feet.

13. The Board concludes that the applicant's project meets the applicable setback requirements for buildings located in the R-6 zone and MHNCOD.

Board member_____ moved, and Board member _____seconded the motion to adopt the above factual findings and conclusions with regard to the applicable setback requirements which shall serve to supplement the Planning Board's existing findings and conclusions contained in its December 14, 2021 and December 12, 2023 approval letters and conclude that the applicant's proposed project meets the applicable setback requirements of the MHNCOD and R-6 Zone.

The Planning Board voted _____ (_____).

Historic Preservation and Land Use Code Section 14-526(d)(5)(b)

1. According to Land Use Code Section 14-526(d)(5)(b), [3] when any part of a proposed development is within 100 feet of a designated landmark, historic district, or historic landscape district, such development shall be generally compatible with the major character-defining elements of the portion of the district in the immediate vicinity of the proposed development.

2. Section 14-526(d)(5)(b) further provides that "historic preservation staff shall provide a written analysis of the proposed development's immediate context, identifying the major character-

[3] This provision has since been repealed.

defining elements and any established building patterns that characterize the context" . . ."to aid the planning board in its deliberations."

[To be supplemented during the January 14, 2025 meeting]

_____ motioned, and_____ seconded a motion to adopt the above factual findings which shall serve to supplement the Planning Board's existing findings and conclusions contained in its December 14, 2021 and December 12, 2023 approval letters and conclude that the Planning **HAS/HAS NOT** been provided with a written analysis that meets Land Use Code Section 14-526(d)(s)(b), and that memorandum aided the Planning Board in its deliberations and based on the information in the record, the Board finds that the proposed project **IS/IS NOT** compatible with the major character-defining features of the surrounding neighborhood.

The Planning Board voted _____.

CONCLUSION

It is the intention of the Planning Board that these additional findings shall serve to supplement and not supplant or otherwise disturb the remaining findings and conclusions of the Planning Board contained in the original December 14, 2021 approval of this project, as amended by the supplemental findings and conclusions incorporated in the December 12, 2023 approval letter.

_____motioned, and _____ seconded a motion to affirm the approval of this project and confirm that the totality of the three motions adopting additional findings of fact are intended to supplement the original approval that was granted by the Planning Board on December 14, 2021, as amended on December 12, 2023.

The Planning Board voted _____ (_____).

_____
Brandon Mazer, Planning Board Chair

Dated:_____

331 Veranda Street
Major Site Plan Application
PL-002766-2023
Martin's Point Healthcare, Applicant

Submitted to:	Portland Planning Board	**Prepared By:**	Eric Freeman
Public Hearing Date:	January 14, 2025	**Date:**	January 8, 2025

I. INTRODUCTION

Martin's Point Healthcare has submitted a Major Site Plan application to construct a 50,000 square foot administrative office building with 92 new parking spaces and associated site improvements at 331 Veranda Street in the Residence-Professional zone. This application is being referred to the Planning Board for compliance with the City of Portland's Land Use Code Site Plan Standards, Section 13.6.

The Planning and Urban Development Department mailed 55 notices advertising this meeting to property owners within 500 feet of the site. A legal advertisement ran in the January 2, 2025 and January 3, 2025 edition of the Portland Press Herald.

Applicant: Martin's Point Healthcare
Applicant Representatives: Sebago Technics, SMRT Architects



Figure 1: Rendering of the proposed building

II. REQUIRED REVIEWS

Review	*Applicable Standards*
Site Plan	Section 13.6
Shoreland Zone	Article 11

III. PROJECT DATA

Existing Zoning	B-5
Property Size	533,0000 sf
Existing Use	Impervious asphalt, maintenance buildings, grassed area
Proposed Development Program	50,000 sf medical office building with structured parking, landscaping and public trail

Waver Requests	*Applicable Standards*
1. Flooding Standards	***Technical Manual Section*** 5.2.3 *The applicant has requested a waiver of the flooding standard within Technical Manual Section 5.2.3 due to the fact that this application discharges directly into a tidal body of water.*
2. Dimensional Standards	Dimensional Standards: 7.6.4.B.3 & Table 7-C *Per 7.6.4.B.3, the Planning Board may approve a different front setback or build-to zone for irregularly shaped lots provided that the front setback or build-to zone is met to the maximum extent practicable.* *The lot is irregularly shaped and the placement of the proposed building is highly constrained by geography and the location of existing buildings.* *The applicant is requesting a waiver for a reduction to the minimum & maximum build-to requirements for the B-5 zone.*

IV. EXISTING CONDITIONS AND SURROUNDING AREA

The existing site is located at the northeastern edge of Martin's Point, immediately adjacent to Building 6 on the Martin's Point Healthcare campus. The existing campus consists of the historic Marine Hospital building and several additional buildings hosting patient facilities and staff offices. The Campus is accessed from a signalized intersection at Veranda Street. The site of this application lies at the northeastern edge of the campus, with the development site featuring a mixture of both impervious and vegetated surfaces, with impervious areas largely being located on the eastern side of the parcel, closer to Veranda Street. The site

also contains a mixture of mature and semi-mature trees of varying types, wild grasses, and bushes.

There are two existing buildings on the site; The former two-story Cerebral Palsy facility and a small maintenance building. Both structures would be removed to accommodate the new administrative office building.



Figure 2: The existing site

V. APPLICABLE REGULATIONS FOR SITE PLAN REVIEW

This application was eligible to be reviewed under the prior version of the City's Land Use Code, as this application was initially submitted on December 22, 2023 and reviewed by the Planning Board at a workshop held on April 9, 2024, which occurred prior to the adoption of ReCode Phase II, effective December 5, 2024. Projects with pending proceeding status, are governed by the ordinances and regulations in effect when such status is conferred. For a major site plan, this occurs at the first Planning Board meeting, which took place on April 9, 2024. For this particular application, the applicant has elected to resubmit their project materials to be reviewed under the City's updated land use code, in order to take advantage of a zoning map amendment that occurred as part of ReCode, which rezoned the Martin's Point property from R-P Residence Professional to B-5 Urban Commercial. Given this, this application no longer holds pending proceeding status, and is to be reviewed under the City's current land use regulations.

VI. APRIL 9, 2024 PLANNING BOARD WORKSHOP

The Planning Board held a workshop for this application on April 9, 2024. Board discussion focused primarily on:

- Shoreland Zoning
  The board requested the applicant provide additional information on this application's compliance with shoreland zoning and setback requirements within the RP zone

  This site has since been rezoned to B-5. This application now meets shoreland setbacks of the B-5 zone, which are reduced from 75 feet to 25 feet.

- Public Transportation Access
  The board encouraged the applicant to coordinate with METRO to explore improvements to transit service to the Martin's Point Campus

  The applicant met with Planning Staff and METRO to discuss on-site transit infrastructure or service improvements. METRO did not advocate for the installation of a transit shelter at this location due to right-of-way constraints. Route 7 service will remain unchanged.

VII. PROPOSED DEVELOPMENT

The proposed development involves the construction of a four-story, 50,000 square foot administrative office building with two levels of structured parking topped with two stories of office space, to be used exclusively by Martin's Point administrative staff, with no on-site patient services. The building would have a floorplate of approximately 25,000 square feet. The new building (referred to as building 7) would be connected to the existing building 6 via an elevated walkway. Due to the grade change on the site, the elevated walkway would connect the upper level of the new building with the upper campus and the Marine Hospital entryway. The elevated walkway would cross over the existing parking garage entrance of building 6, and above the proposed pedestrian pathway located between building 6 and the proposed building 7.

The proposed structured parking would be accessed via a right-in, right-out driveway entrance off of Veranda Street, which would serve as a secondary entrance to the Martin's Point campus. Vehicle traffic exiting the campus towards I-295, or entering the campus from the direction of Falmouth would utilize the existing signalized intersection approximately 500 feet to the south. Vehicular circulation within the Martin's Point campus would be modified to allow for full access to and from the new structured parking area. This application also involves the reconfiguration of traffic patterns within the upper campus and the Courtyard in front of the Marine Hospital.

New publicly accessible pedestrian connections are proposed along the eastern edge of the property to connect new surface parking areas with the existing Martin's Point trail. The trail itself is proposed to be regraded to create ADA-compliant grades. New landscaping will include replanted trees, flower beds and native bushes.

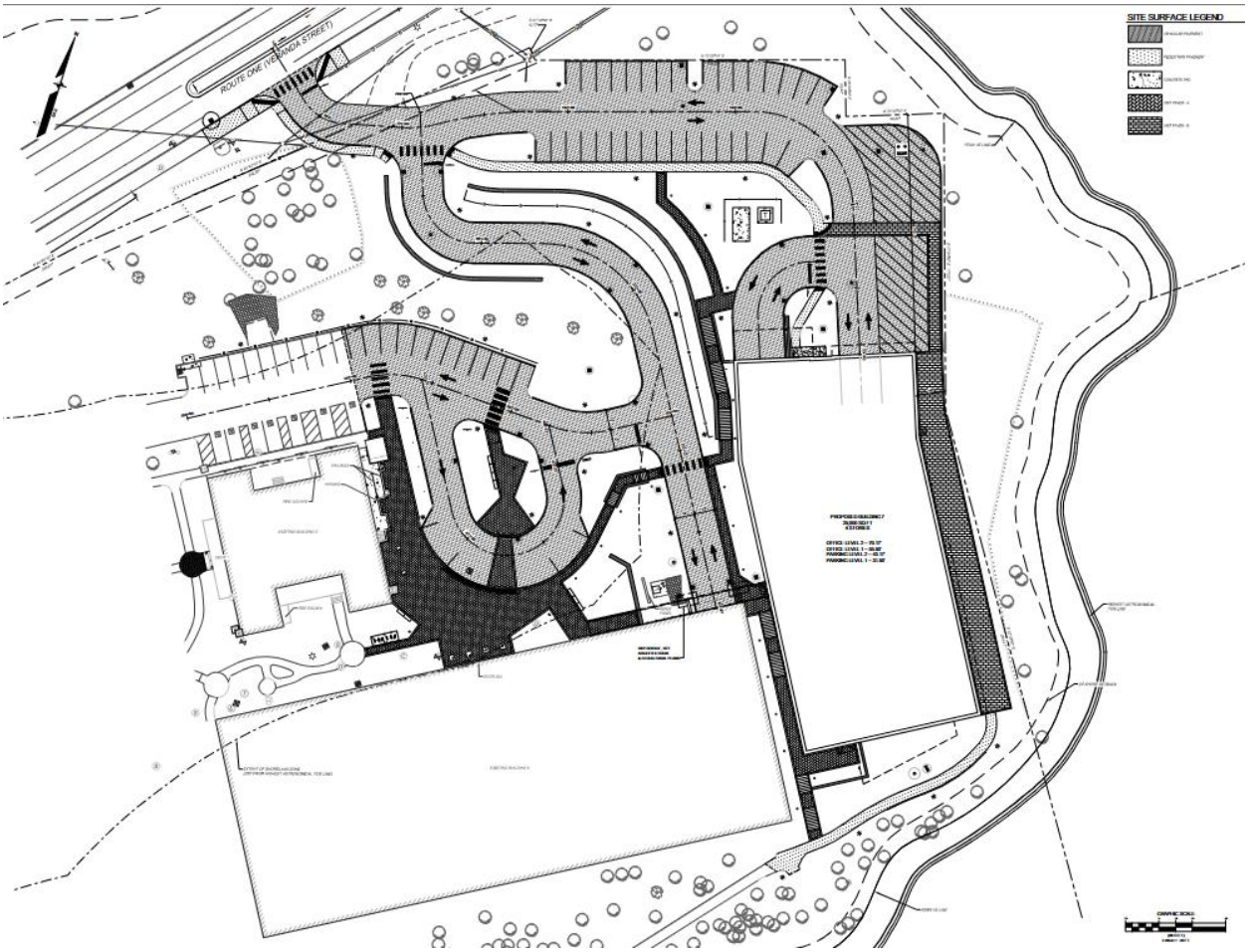


Figure 3: Proposed Site Plan

VIII. RIGHT, TITLE, & INTEREST

The applicant has demonstrated sufficient right, title and interest to all parcels involved in this application. The record owner of the parcel is Martin's Point Health Care, Inc., as recorded in the Cumberland County Registry of Deeds (CCRD):

- CCRD Book 29771/Page 60
- CCRD Book 24070/Page 323
- CCRD Book 11581/Page 337 (HTTA: Penobscot Bay Medical Associates, Inc.)
- CCRD Book 4898/Page 199 (HTTA: Penobscot Bay Medical Associates)

Full Right, Title and Interest documentation is included as Attachment B

IX. FINANCIAL & TECHNICAL CAPACITY

The project will be developed and financed by Martins Point Health Care, which verifies financial capacity by letter in this section. Per PC Construction, the schematic design estimate of the probable cost for the

overall project is approximately $39,900,000 (Attachment H).

Sebago Technics and SMRT Architects have demonstrated technical capacity and experience working on projects of a similar scale throughout Maine. (Attachment I)

X. ZONING ANALYSIS

The subject properties lie within the B-5 Urban Commercial zone and within the Shoreland zone. The proposed use is a use that is permitted by right within the B-5 zone, and the project is also subject to shoreland and floodplain regulations under Articles 11 and 12 of the City's land use code.

	Required	Proposed
Lot Size	None	533,000 sf
Maximum Height (ft)	75 ft.	44' -10"
Build-to-Zone	0-10 ft.	
Build-to Percentage (%)	80%	< 80%
Blank Wall Area	20 ft	
Shoreland Setback	25 ft	16.5 ft

The development as proposed does not meet the City's newly established build-to-percentage requirements, which require that structures within the B-5 zone, include a minimum of 80% of the building's front façade within the zone's build-to-zone, measured as the area within 10 feet of the property line closest to Veranda Street. The nearest corner of the proposed building is approximately 215 linear feet from this property line. The applicant is therefore requesting a waiver of the build-to-percentage requirement as permitted under Sec. 7.6.4.B.3, which allows the Planning Board to approve a different setback or build-to-zone requirement provided that the front setback is met to the extent practicable.

The applicant notes that the site is irregularly shaped, and that the building's proposed location is strongly influenced by the location of other buildings on the Martin's Point Campus, the desire to maintain visibility of the historic Marine Hospital from multiple different vantage points, the location of existing curb cuts along Veranda Street, site grades, and existing trail access towards the north of the property. Given these factors, City staff are supportive of the waiver as requested.

XI. SITE PLAN STANDARDS (Section 13.6)

The proposed development has been reviewed by staff for conformance with the relevant review standards of the City of Portland's Site Plan Ordinance, Section 13.6. Staff comments are below.

1. Transportation Standards (Section 13.6.1)
   A. Impact on surrounding street systems

   This application involves changes to internal vehicular and pedestrian circulation within the Martin's Point Campus. Per discussions with Maine DOT and City Staff, the existing unsignalized driveway to building 7 will be reconfigured as a right-in / right-out access point. Primary campus access will be via the signalized intersection located approximately 500 feet to the south at the intersection of Veranda Street and Marine Hospital Road, which will be upgraded.

   This project will include regrading for connection and compliance with ADA standards at the right-in/right-out access point. Approximately 20 linear feet of the existing Veranda Street sidewalk will be regraded and reconstructed to be ADA-compliant and to accommodate planned driveway

alterations. This application involves changes to internal vehicular circulation within the Martin's Point campus, including the removal of the circular drop-off area in front of the Marine Hospital and building 6.

Staff consider this standard to be met as impacts to the surrounding street systems are being adequately mitigated through the above-listed improvements.

B. Access and circulation

Building 7 will be connected to existing campus buildings via continuous internal walkways and sidewalks. The existing Martin's Point trail will be regraded to allow for ADA compliant grades. The trail will be directly connected to the publicly accessible patio running along the eastern side of the proposed building and will connect through the front drive aisle and surface parking area to Veranda Street. Additional pedestrian improvements include the creation of a new publicly accessible staircase and walkway between building 6 and the proposed building 7. This walkway would directly connect the Martin's Point trail with the upper campus.

Staff consider this standard to be met.

C. Public transit access

Martin's Point Healthcare campus is served by Metro Route 7 with a stop on Veranda Street. Per discussions with METRO Staff, the installation of a transit shelter to serve the Martin's Point campus is not feasible due to grading and right-of-way constraints.

D. Parking

Per Sec. 18.1.2, no off-street vehicle parking is required for new development within the City, and Table 18-A establishes a maximum off-street parking requirement of one space per 200 square feet of floor area for general offices. The office portion of the proposed building totals 50,000 square feet, which would allow up to a total of 250 parking spaces, and the applicant is proposing to develop 92 spaces off-street parking spaces within two levels of structured parking, and to redevelop 45 existing surface parking spaces, for a total proposed parking count of 137 spaces, which is permissible.

Outdoor bicycle parking is provided at the upper level of the campus. Additional enclosed bicycle storage is proposed within the garage levels. A total of 22 level-2 chargers are planned within the parking garage with electrical conduits available for future EV charging spaces if needed. This application also involves the reconfiguration of existing surface parking and vehicular circulation within the existing campus.

A loading and servicing bay for delivery vehicles on the front facade of the building will be accessed via an area of striped pavement that will be flush with the garage drive aisle and the entrance to the pedestrian patio.

Staff consider this standard to be met.

E. Transportation demand management (TDM)
The applicant has submitted a complete TDM plan as required in Section 13.6.1 (E) Proposed TDM strategies include:

- Encouraging flexible and remote work for employees to reduce the total number of daily vehicular commuters.

- A partnership with GO MAINE to offer carpooling and vanpooling.

- Ongoing education and outreach regarding available transportation alternatives.

The City is requesting that the applicant revise their TDM plan to encompass all employee-related trips within the Martin's Point campus, so as to better understand how the proposed demand management strategies are functioning across the entire campus. This has been drafted as a condition of approval for the Board's consideration.

2. Environmental Quality Standards (Section 13.6.2)

A. Preservation of significant natural features
This project is subject to the City's newly adopted low impact development (LID) requirements, which were adopted as part of ReCode, and augmented through the adoption of a revised technical manual in December of 2024. City staff have reviewed the updated materials against the LID standards, as contained within Section 3 of the Technical Manual, based upon the materials that were submitted to the City, following the adoption of ReCode, which pre-dated the adoption of the City's LID requirements. While the project as proposed appears to comply with these requirements, the City would request that the applicant provide a written narrative outlining the project's compliance with these standards, and complete an assessment of project using the City's low-impact development scoring tool. The submission of this narrative and completed assessment has been drafted as a condition of approval for the Board's consideration. In the event that the project is found not to comply with these requirements, the applicant would be required to submit an updated site demonstrating compliance.

This application involves the removal of approximately 61 trees of 4" DBH or greater within the shoreland zone, which is the minimum size of vegetation subject to shoreland zone requirements around the clearing or removal of vegetation, Sec. 11.4.3. Nineteen of these trees are 10" DBH or greater.

B. Site landscaping and buffers
Three new street trees are proposed along Veranda Street. The exact locations of these plantings will be coordinated with the Department of Public Works and the City Arborist.
Loading and service areas are adequately screened from public view particularly from Veranda Street.
Proposed landscaping involves replanting a variety of trees identified in Technical Manual Section 4, Figure IV-1. Proposed shrubs, perennials and grasses are predominantly native species. A full landscaping plan has been included as attachment 24. The site landscaping and buffering requirements were updated as part of ReCode, with updated requirements around the provision of

canopy trees, at a ratio of one shade tree per 5,000 square feet of lot area, and one tree per 750 square feet of paved parking areas, to be located within landscaped islands within parking areas. The updated code also requires that hardscaped areas comply with newly established solar reflectivity index limits. In order to comply with this standard, the City is requesting that the applicant update their site plan standards assessment and site plan as necessary to demonstrate compliance with these requirements. Updates to these materials has been drafted as a condition of approval for the Board's consideration.



Figure 4: The pedestrian walkway between buildings 6 and 7.

C. Water quality/storm water management/erosion control

The project is required to provide for stormwater management in accordance with Maine DEP Chapter 500 and City of Portland Technical Manual Section 5 standards for stormwater management. The Applicant has submitted a stormwater management report and a grading and drainage plan to indicate erosion and sedimentation control measures and stormwater treatment for the proposed development. This project is classified as a redevelopment project under the existing General Standards and as such the applicant is required to treat 95% of new impervious area and 80% of all developed area where greater than 5,000 sf of non-roof impervious area is being redeveloped.

This application proposes the use of a jellyfish filter for on-site stormwater treatment. Drainage from covered parking areas will discharge through an oil-water separator to the sewer.

Based on the size of the proposed development and the information contained within the stormwater management report, this application will require a Site Location of Development Permit.

The project has requested a waiver of the flooding standard in the stormwater management report, which the City staff are recommending, due to the fact that the project directly discharges into a tidal body of water.

Staff consider this standard to be met.

3. Public Infrastructure and Community Safety Standards (Section 13.6.3)

A. Consistency with City Master Plans
There are no long-range plans that apply to this project.

B. Public safety and fire prevention
A life safety plan and fire suppression plan was included as part of this application. The Applicant has ensured that emergency vehicles have adequate access to the rear of the building via the paved walkway on the northeastern side of the proposed building. Emergency Vehicle turning templates were also provided.

Staff consider this standard to be met.

C. Availability and capacity of public utilities
This application involves underground electrical utilities extending from existing on-site infrastructure. Sewer connectivity will be provided by a new 6″ service line with an exterior pump station. The Applicant has provided a wastewater capacity authorization letter and final ability to serve letters will be provided when they become available.

4. Site Design Standards (Section 13.6.4)

A. Massing, ventilation, and wind impact
The proposed building is 44'-10″ in height. Given the grade change within the Martins Point campus, the roofline of the proposed building would be level with the existing Building 6. As the building is nearly identical in scale to surrounding buildings, there are no anticipated impacts with respect to building massing, ventilation, or wind, associated with this application.

Staff consider this standard to be met.

B. Shadows
No adverse shadow impacts are anticipated with this application, and the building as designed is not subject to the City's shadow standards, based upon the height of the building, which is less than 45 feet.

Staff consider this standard to be met.

C. Snow and ice loading
The proposed building is not in a location where falling snow or ice could fall onto abutting properties or rights-of-way. The applicant has detailed snow storage locations on included plans. A snow melt system will be incorporated into the garage ramps

Staff consider this standard to be met

D. View corridors

The proposed building is similar in height and scale to the existing building 6. There are no view corridor impacts anticipated with this application and the project is not located within an established view corridor.

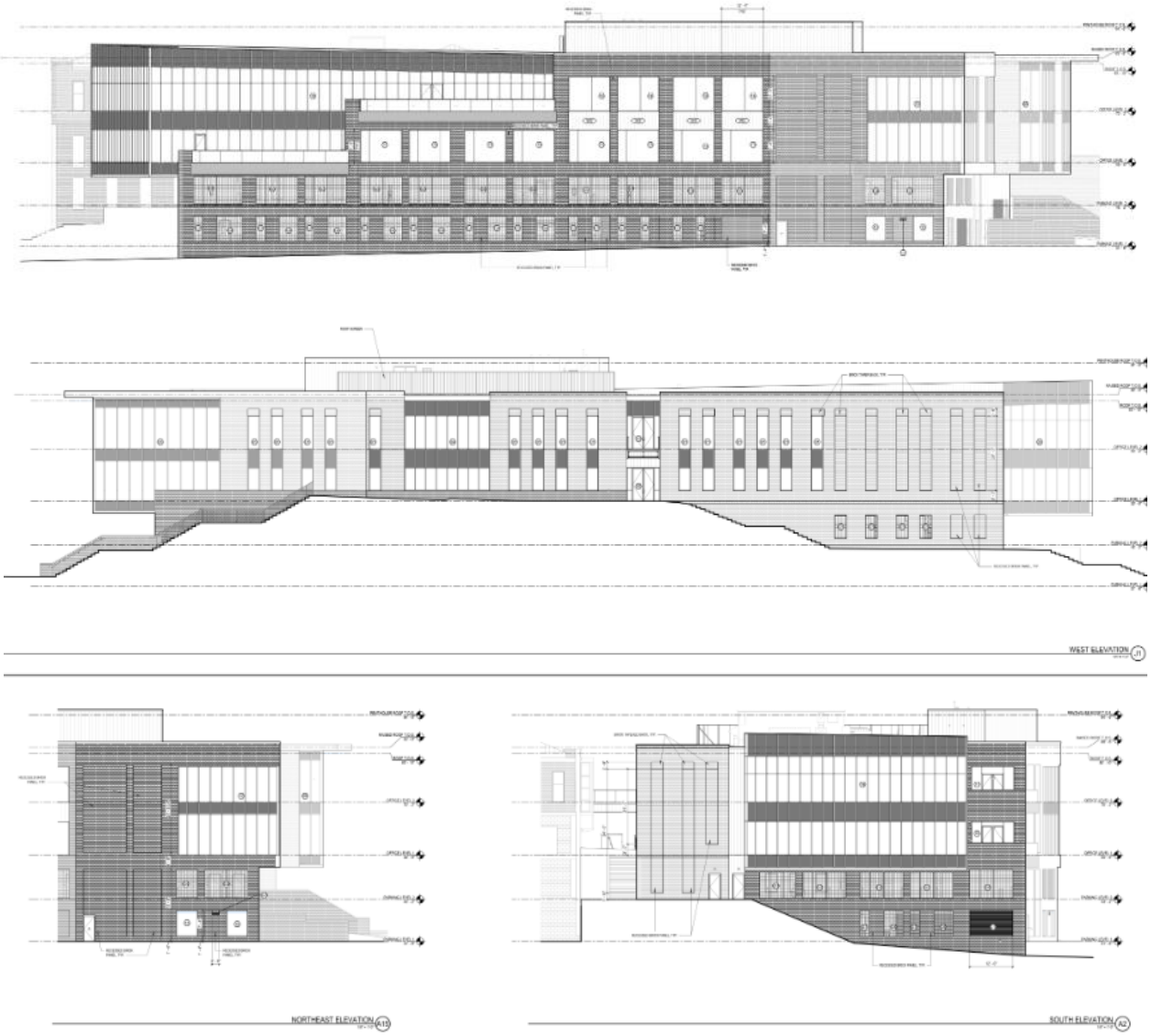


Figure 5: Building elevations

E. Historic resources

This application is not within a historic district, but is within close proximity to the Marine Hospital, which is a designated historic landmark. Under the updated land use code, advisory review by Historic Preservation staff is no longer required for new development located within 100 feet of a historic district or landmark. The full Historic Preservation administrative review is included within the Design Review as Attachment S1

Staff consider this standard to be met

F. Exterior lighting

This application includes improvements to street lighting along Veranda Street. Pole mounted lighting will be installed along pedestrian walkways and along the public terraced area. On-site lighting will consist of full-cut-off LED fixtures. At this time there is no architectural or specialty lighting planned. Proposed lighting fixtures outlined in the photometric plan meet the standards outlined in Section 8 of the Technical Manual.
Due to the site's location, no significant light impact is anticipated for adjacent properties.

Staff consider this standard to be met

G. Noise and vibration

HVAC, air handling units, and other necessary equipment will be installed on the building rooftop. Modular water boilers will be located in the mechanical penthouse. A new emergency generator will be placed on an exterior pad and screened from direct views. A mechanical system for the proposed building has not yet been selected. Given the location of the building within an existing medical campus, the placement of HVAC, generators and other equipment is not anticipated to interference with abutting residential properties.

Staff consider this standard to be met.

H. Signage and wayfinding

On-site directional traffic signage is provided for safety and ese of navigation within the Martin's Point campus. The applicant's sign schedule has not been fully reviewed. A full sign schedule is included as attachment AA

I. Zoning-related design standards

This application is subject to design standards outlined in section (d) of the City of Portland design manual. A design review has been included as Attachment S3.

XII. SHORELAND ZONING SITE PLAN STANDARDS (Section 11.5.1)

The standards written below consist of nine supplemental site plan standards, that are to be applied to applications triggering site plan review.

A. The proposal will maintain safe and healthful conditions.

This application involves improvements to a portion of an existing medical campus facility and will create new public spaces along the waterfront.

B. The proposal will not result in water pollution, erosion, or sedimentation to surface waters.

The project as designed is fully compliant with the Maine DEP Ch. 500 Basic Erosion and Sedimentation Control requirements, along with the Maine DEP. Ch. 500 General Standard, which requires that a project treat 95% of all new impervious area and no less than 80% of all developed

area, which includes pervious development.

C. The proposal will adequately provide for the disposal of all wastewater
Wastewater will be discharged into the Veranda Street sewer via a new 6" service line.

D. The proposal will not have an adverse impact on spawning grounds, fish, aquatic life, bird, or other wildlife habitat.
A portion of the Martin's Point Health Care campus is adjacent to recognized tidal waterfowl and wading bird habitat without specific documented occurrences per the Maine Department of Inland Fisheries and Wildlife Environmental Review Tool updated in 2022. Development and construction activity is not proposed within the resource or within 50 feet of the shoreline. By letter dated March 25, 2022, the Maine Natural Areas Program indicates the absence of documented rare botanical features and that there is a low probability that rare or botanical features occur at this project location; see attachments in this section

The site review response letter from the Maine Department of Inland Fisheries and Wildlife is included as attachment O

E. The proposal will conserve shore cover and visual, as well as actual, points of access to inland and coastal waters.
This application involves the removal of several trees within the 25' shoreland setback but given the scale and massing of the proposed building within the existing Martin's Point campus it is not anticipated that it will have an undue visual impact from the water. The applicant intends to preserve all trees within the shoreland zone.

F. The proposal will protect archaeological and historic Resources.

The City's site plan ordinance requires that, in instances where archaeological resources and/or historic resources are identified during the course of construction, that the developer take specific steps, in accordance with Sec. 13.6.4.E.2, to protect the identified resource.

G. The proposal will not adversely affect existing commercial fishing or maritime activities.
There are no commercial fishing or marine activities in the vicinity of this application

H. The proposal will avoid problems associated with flood plain development and use.
Portions of the overall MPHC campus are located within special flood hazard areas as delineated on the FEMA Flood Insurance Rate Map, Portland, Cumberland County, 2300510008B, effective date 7/17/1986 with the 100-year flood; base flood elevations of 27- feet (NGVD29). This application will also require a flood hazard permit.

I. The proposal is in conformance with the standards set forth in this article.
The proposal is in conformance with all the subsections that pertain in section 11.4.

XIII. SITE LOCATION OF DEVELOPMENT STANDARDS (TECHINICAL MANUAL SECTION 14.3)

The standards written below consist of eight supplemental site plan standards that are to be applied to applications triggering Site Location of Development Review.

1. Financial and Technical Capacity
Please refer to the site plan review above. This application meets this standard.

2. Traffic movement
This application is not anticipated to generate more than 100 peak hour trips. This application meets this standard.

3. No adverse effect on the natural environment
Placement of proposed buildings and impervious surfaces have been designed to minimize impact on existing natural features. The applicant has detailed areas of the site which will remain undisturbed. The applicant has developed a construction management plan to ensure that natural features, particularly within the shoreland zone, are not impacted during construction. This application meets this standard.

4. Soil Types
Borings conducted on site encountered native sands, glacial till and bedrock at varying depths no greater than 12 feet. These soil types are conducive to supporting development of this scale. Given the shallow nature of the bedrock on site, small-scale blasting or mechanical hole ramming will be required. This application meets this standard.

5. Ground Water
Borings revealed saturated soils at depths ranging from 4 to 9 feet. No natural aquifers or significant freshwater features were found on-site and there is no known risk of this application impacting freshwater aquifers. This application meets the standard.

6. Infrastructure
Refer to site plan review above. City Staff have confirmed that utility connections adequately meet the needs of the proposed development and will not have an adverse effect on connecting utility services. This application meets this standard

7. Flooding
This application is eligible for a waiver from the flooding standard as defined in Chapter 500, Section 4(F) because runoff from the project site discharges directly to a tidal body of water. This application meets this standard.

8. Stormwater Management and Erosion & Sedimentation Control
Refer to site plan review above. This This application is classified as a redevelopment project under the existing General Standards and as such the applicant is required to treat 95% of new impervious area and 80% of all developed area where greater than 5,000 sf of non-roof impervious

area is being redeveloped. The applicant is meeting this standard.

XIV. NEIGHBORHOOD MEETING & PUBLIC COMMENT

The applicant held a neighborhood meeting on March 29, 2024 at 3Pm. The in-person meeting was held at the Sebago Technics office located at 75 John Roberts Rd. in South Portland. A virtual meeting option was also provided via zoom. One (1) member of the public was in attendance.

XV. STAFF RECOMMENDATION

Subject to the proposed motions and conditions of approval listed below, Planning & Urban Development Department staff recommends that the Planning Board find that the Major Site Plan and Conditional Use application at 331 Veranda Street (PL-002766-2023) meets the applicable standards of Portland's Land Use Code.

XVI. PROPOSED MOTIONS

A. WAIVERS

On the basis of the application, plans, reports and other information submitted by the applicant, findings and recommendations contained in the Planning Board Report for the public hearing held on January 14, 2025 for application PL-002766-2023 for 331 Veranda Street relevant to the Site Plan Standards of the Land Use Code and Portland's Technical and Design Standards, and other regulations, and testimony presented at the Planning Board public hearing:

1. Build-to Zone and Build-to Percentage Requirement
   The Planning Board [finds/does not find] based upon the Planning Staff's review that extraordinary conditions exist or undue hardship may result from strict compliance with the zoning dimensional requirement related to the B-5 build-to-zone and build-to percentage listed in Ch. 14, Table 7-C, which requires that new development in the B-5 include 80% of a building's front façade within the build-to zone, and that substantial justice and the public interest are secured with the proposed variation in this standard, and that variation is consistent with the intent of the ordinance as detailed in Sec. 7.6.5.B. The Planning Board [waives/does not waive] the B-5 dimensional standard for build-to zone and build-to percentage listed in Table 7-C.

2. Environmental Quality Standards
   The Planning Board [finds/does not find] based upon the Planning Staff's review that extraordinary conditions exist or undue hardship may result from strict compliance with Technical Manual 5.2.3, which states that applications must adhere to flooding standards outlined in Chapter 500 of the Maine Department of Environmental Protection's Stormwater Management Regulations, that substantial justice and the public interest are secured with the proposed variation in this standard, and that variation is consistent with the intent of the ordinance. The Planning Board [waives/does not waive] Technical Manual Section 5.2.3 to allow a discharge directly into a tidal body of water.

B. SITE PLAN REVIEW

On the basis of the application, plans, reports and other information submitted by the applicant; findings and recommendations contained in the Planning Board Report for the public hearing on January 14, 2025 for application # PL-002766-2023 at 331 Veranda Street relevant to the site plan

regulations; and the testimony presented at the Planning Board hearing, the Planning Board [finds/does not find] that the plan is in conformance with the site plan standards of the land use code, subject to the following conditions of approval:

PRIOR TO APPLYING FOR A BUILDING PERMIT

1. The applicant shall provide an updated site plan standards assessment detailing the project's compliance with updated site plan standards, Section 13.6, and updated technical standards incorporated by reference. As necessary, the applicant shall update the site plan to comply with updated site plan review requirements, particularly around site landscaping, climate resilience, and low impact development. Updated materials shall be reviewed and approved by the Planning Authority.
2. The applicant shall provide ability to serve letters from the Portland Water District and Central Maine Power.
3. The applicant shall address outstanding comments provided by the Department of Public Works.

C. SITE PLAN REVIEW

On the basis of the application, plans, reports and other information submitted by the applicant; findings and recommendations contained in the Planning Board Report for the public hearing on January 14, 2025 for application # PL-002766-2023 at 331 Veranda Street relevant to the Site Location of Development (SLOD) standards as contained in Section 11 of the Technical Manual; and the testimony presented at the Planning Board hearing, the Planning Board [finds/does not find] that the plan is in conformance with the Site Location of Development standards.

I. PLANNING BOARD DECISION

On the basis of the findings, conclusions and recommendations contained in the Planning Board report for the public hearing on January 14, 2025 related to application PL-002766-2023 for 331 Veranda Street, which is attached to the draft approval letter and incorporated therein, the Planning Board [adopts/does not adopt] the approval letter as drafted as the Planning Board's decision for application PL-002766-2023 and authorizes the Planning Board Chair to sign the approval letter as drafted.

ATTACHMENTS

Staff Materials

1. Design & Historic Preservation review – (5.6.24)
3. Bruce Hyman Transportation Demand Comments (1.8.24)

Applicant Submittal

A-Checklist
B. Right Title and Interest
C. Evidence of State and Federal Approvals
D. Zoning Assess

E. Site Plan Standards
F. Existing and Proposed Easements
G. Waivers
H. Financial
I. Technical Capacity
J. Street Impact
K. Access and Circulation
L. Public Transit
M. Off-Street Parking
N. Transportation Demand Management
O. Preservation of Significant Natural Features
P.-Landscape Preservation
Q. Site Landscaping and Buffers
R. Water Quality and Stormwater Management
S. Site Location of Development Application
T. Consistency w City Master Plan
U. Pub Safety and Fire Prevention
V. Public Utilities
W. Applicant Comment Response (11.14.24)
X. Shadows
Y. Snow and Ice Loading
Z. View Corridors
AA. Historic Resources
BB. Ext Lighting
CC. Noise and Vibration
DD. Signage and Wayfinding
EE. Zoning Design Standards
FF. Construction Management Plan
GG. Low Impact Development Scorecard
HH. Low Impact Development Narrative

Drawings:
1. COVER PLAN
2. NOTES AND LEGEND
3. INDEX PLAN
4. DEMOLITION PLAN
5.OVERALL SITE PLAN
6. UPPER DRIVE SITE PLAN
7. LOWER DRIVE SITE PLAN
8. VERANDA STREET SITE PLAN
9. REAR PATH SITE PLAN
10. EROSION CONTROL PLAN
11. OVERALL GRADING PLAN
12. UPPER DRIVE GRADING PLAN

13. LOWER DRIVE GRADING PLAN
14. VERANDA STREET GRADING PLAN
15. REAR PATH GRADING PLAN
17. UPPER DRIVE PLAN AND PROFILE
18. OVERALL UTILITY PLAN
19. UPPER DRIVE UTILITY PLAN
20. LOWER DRIVE UTILITY PLAN
21. VERANDA STREET UTILITY PLAN
22. REAR PATH UTILITY PLAN
23. UTILITY CONTEXT PLAN
24. LANDSCAPE PLAN OVERALL
25. OVERALL LANDSCAPE PLAN
26. UPPER DRIVE LANDSCAPE PLAN
27. LOWER DRIVE LANDSCAPE PLAN
28. VERANDA STREET LANDSCAPE PLAN
29.REAR PATH LANDSCAPE PLAN
30. LOOKOUT LANDSCAPE PLAN
31. EROSION CONTROL NOTES
32. Facility Plan-Parking Level 1
33. Facility Plan Parking Level 2
34. Facility Plan Office Level 1
35. Facility Plan Office Level 2.
36. EXTERIOR ELEVATIONS
37. EXTERIOR ELEVATIONS
38. Upper Drive Plaza Rendering
39. Building 6 Walkway Rendering
40. Overall Campus Rendering
41. Lower Drive Landcape Rendering
42. Lower Drive Parking Rendering
42. Office Level 1 Exit Rendering
43. Rear Walkway Rendering
44. Aerial Rendering
45. Skybridge Rendering
46. Pedestrian Connection Rendering
47. Rear Path Rendering
48. Stylized Site Plan
49. Details 1
50. Details 2
51. Details 3
52. Details 4
53. Details 5
54. Details 6

55. PREDEVELOPMENT STORMWATER MANAGEMENT
56. POSTDEVELOPMENT STORMWATER MANAGEMENT
57. TREE PRESERVATION AND REMOVAL PLAN
58. EXISTING CONDITIONS PLAN 1
59. EXISTING CONDITIONS PLAN 2
60. EXISTING CONDITIONS PLAN 3
61. BOUNDARY SURVEY 1
62. BOUNDARY SURVEY 2
63. HEIGHT ANALYSIS
64. TRAIL EASEMENT PLAN

Design Review
Planning and Urban Development Department

City of portland

Subject:	331 Veranda Street
Zone:	R-P Residential Professional
Date of Review:	May 6, 2024
Reviewer(s):	Sean King (Urban Designer), Evan Schueckler (Historic Preservation Project Manager), Eric Freeman (Planner)
Project ID:	PL-002766-2023

I. INTRODUCTION

The project was reviewed against the R-P Residential Professional Zone Standards from the City of Portland Design Manual. Any proposal required to obtain a certificate of appropriateness under Portland's historic preservation ordinance is exempt from the R-6 design review standard.

II. DESIGN REVIEW COMMENTS: **bold** text denotes recent updates met, red text denotes standards not met to require resubmission.

R-P RESIDENTIAL PROFESSIONAL ZONE
(1) STANDARD. For development within the R-P zone where there is a consistent established architectural style or character to the existing structures in the immediate vicinity in which the development is proposed, that the concurrently visible architectural style or character of the proposed development would not be incongruous to that established style or character.

Staff comments: The proposed development plan and office building is located at the Martin's Point Health Care campus, situated on a peninsula of land with ocean views and steep topography. The existing campus is comprised of a sprawling arrangement of low-storied administration buildings, the health care center with a parking structure and the U.S. Marine Hospital as a designated National Register Landmark. Similar materials such as brick, stone, paneled glass and metal roofing and accents with strong symmetrical arrangements are utilized throughout the campus.

The proposed office building is an exaggerated two–three stories with cantilevered glass curtain wall projections that terminate at each end. Large expansive glass curtain walls are integrated into brick and stone facades that Staff finds appropriate to relate to the established campus buildings. **The Applicant has indicated exterior materials within the renderings to include the use of brick, stone, and curtain wall glass that expand and mimic the campus context. In addition, the Applicant has responded to Staff's clarification comments related to the termination and detailing above windows with corbelling brick and roofline termination with a continuous aluminum metal panel that Staff finds appropriate.**

Building entries are minimally articulated to avoid distinction for patient or public use, the primary building entry is located at the building's center to take advantage of the site's topography along with the proposed elevated walkway that connects administrative staff to Building 6 that Staff finds appropriate.

III. HISTORIC PRESERVATION ADVISORY REVIEW

Article 14.6.4.E-2, states that developments within 100 feet of any landmark, historic district or historic landscape district shall be generally compatible with the major character-defining elements of the portions of the landmark and historic districts in the immediate vicinity of the proposed development. This requirement is informally referred to as the Historic Preservation Advisory Review. In conducting this advisory review, a member of the Historic Preservation staff participates in the design review with the Urban Designer and Assigned Planner.

Character-defining elements of landmarks and historic districts are identified in the historic resources inventory and respective historic district designation reports, which can be found here: https://www.portlandmaine.gov/665/Historic-Districts.

For the purposes of this provision, "compatible" design shall be defined as design which respects the established building patterns and visual characteristics that exist in a given setting and, at the same time, is a distinct product of its own time. Historic Preservation staff has provided a written analysis of the proposed development's immediate context, identifying the major character-defining elements and any established building patterns that characterize the context.

The Marine Hospital (at Martin's Point):
The Marine Hospital at Martin's Point is an Individual Portland Landmark, designated in 1990. The structure was built between 1855 and 1859, following the design of Ammi B. Young, Supervisory Architect of the United State Treasury. It was designed in the Italianate style to function as the first purpose-built home for Portland's federally enabled Marine Hospital which had existed in the city since 1805. The building is constructed out of brick with a granite foundation and trim and extensive use of structural and ornamental cast iron, in particular at the front and side triple-height porches. The building features accentuated corners with large granite quoins, a strong horizontal string course above the first floor, and is capped by a heavy bracketed cornice. Windows are arranged regularly around the building, and overall it features a highly symmetrical H-shaped plan with central front and rear entrances. These entrances are prominent given their centered position and the grouped openings stacked above them.

Att S2

Eric Freeman <efreeman@portlandmaine.gov>

PL-002766-2023: 331 Veranda Street TDM Plan (Dated 11/14/24)

1 message

Bruce Hyman <bhyman@portlandmaine.gov> Wed, Jan 8, 2025 at 3:15 PM
To: Eric Freeman <efreeman@portlandmaine.gov>
Cc: Matt Grooms <mgrooms@portlandmaine.gov>

Good afternoon, Eric,

I've had the chance to review the submitted TDM Plan for 331 Veranda Street/Martin's Point Healthcare (dated 11/14/24).

I have the following comments:

- The applicant is to use the latest requirements for TDM Plans included in the 2022 Technical Manual (found at www.portlandmaine.gov/721/TDM-Parking) - the 2022 update changed several aspects of what is to be included in TDM Plans and is a helpful framework to organize the information presented in the Plan by its different sections
- The TDM Plan is to apply to the entirety of the campus, focusing on Martin's Point Healthcare staff/employees only (no need to include patients or visitors)
- The transportation narrative (Section 17.3.1) should document the number of Martin's Point Healthcare staff/employees assigned to the site currently and the number anticipated with the new office building expansion
- The TDM baseline data section (Section 17.3.3) should document the existing trip generation levels and parking supply and the resulting trip generation levels and parking supply with the addition of the office building and parking garage. The section should also estimate the existing modal split of trip-making by staff/employees to the site.
- In the Set TDM Targets section (Section 17.3.4) short term (3-5 year) and long term mode split targets should be established. For instance, your current plan sets a trip reduction target (5%) that you could translate into a mode split reduction target, adding in similar considerations for the staff/employees at the existing medical office uses.
- The TDM Strategies section (Section 17.3.5) should be reviewed for their likely effectiveness to meet the mode split targets over time.
- A new section related to Monitoring and Reporting (Section 17.3.6) should cover the reporting and monitoring regime proposed, including the survey information (page 3) and acknowledging the standardized annual reporting deadline of May 15th beginning one year after occupancy of the new office building.

Please don't hesitate to contact me if you or the applicant have any questions.

Bruce
--
Bruce Hyman
Transportation Program Manager
City of Portland
Department of Planning and Urban Development
389 Congress Street, 4th Floor
Portland, Maine 04101
(207) 874-8717 phone
bhyman@portlandmaine.gov

27: HISTORIC RESOURCES (14.6.4(E))

1. The proposed project is not located in a designated historic or historic landscape district; therefore, a Certificate of Appropriateness is not required.

2. Proposed improvements on the Martins Point campus are located within close proximity to the Marine Hospital (Building 5), which is listed on the National Register of Historic Places. By email received December 29, 2023, the Maine Historic Preservation Commission (MHPC) determined that the Building 7 redevelopment project is approved; see attached correspondence from Mike Johnson, MHPC.

Stefanie Nichols

From: Johnson, Mike D <Mike.D.Johnson@maine.gov>
Sent: Friday, December 29, 2023 8:30 AM
To: Stefanie Nichols
Subject: RE: [External] Maine Historic Preservation - Martin's Point -Portland Follow-Up

Thank you Stefanie,

Based on the site conditions and the plans and renderings provided by Sebago Technics, we have determined that the proposed Martin's Point redevelopment is in accordance with the terms of the Marine Hospital deeded covenant and is approved.

Please feel free to contact me if you have any questions.
Mike

Mike Johnson
Historic Rehabilitation Tax Credit Coordinator
Grants & Easements Coordinator
Maine Historic Preservation Commission
State House Station 65
55 Capitol Street
Augusta, ME 04333
207-287-2949

From: Stefanie Nichols <snichols@sebagotechnics.com>
Sent: Tuesday, December 19, 2023 11:31 AM
To: Johnson, Mike D <Mike.D.Johnson@maine.gov>
Cc: Kira Harmon <kharmon@sebagotechnics.com>; Kylie Mason <kmason@sebagotechnics.com>
Subject: RE: Maine Historic Preservation - Martin's Point -Portland Follow-Up

EXTERNAL: This email originated from outside of the State of Maine Mail System. Do not click links or open attachments unless you recognize the sender and know the content is safe.
Good morning Mike,

Please find the winter conditions plans as viewed from the bridge, as requested. Kira is working on the bird's eye model for MHPC.

Best, Stef

From: Stefanie Nichols
Sent: Tuesday, December 12, 2023 4:43 PM
To: 'Johnson, Mike D' <Mike.D.Johnson@maine.gov>
Cc: Kira Harmon <kharmon@sebagotechnics.com>
Subject: RE: [External] Martin's Point -Portland Follow-Up

Mike,

Yes. This email request is copied to Kira Harmon, Sebago's virtual design manager overseeing all in-house 3D modeling/graphics services.

Best, Stefanie

From: Johnson, Mike D <Mike.D.Johnson@maine.gov>
Sent: Tuesday, December 12, 2023 3:08 PM
To: Stefanie Nichols <snichols@sebagotechnics.com>
Subject: RE: [External] Martin's Point -Portland Follow-Up

Thanks Stefanie,

Can you send me a couple renderings showing what this would look like in the winter?

Thanks,
Mike

Mike Johnson
Historic Rehabilitation Tax Credit Coordinator
Grants & Easements Coordinator
Maine Historic Preservation Commission
State House Station 65
55 Capitol Street
Augusta, ME 04333
207-287-2949

From: Stefanie Nichols <snichols@sebagotechnics.com>
Sent: Tuesday, December 5, 2023 1:53 PM
To: Johnson, Mike D <Mike.D.Johnson@maine.gov>
Subject: Martin's Point -Portland Follow-Up

EXTERNAL: This email originated from outside of the State of Maine Mail System. Do not click links or open attachments unless you recognize the sender and know the content is safe.
Good afternoon Mike,

Martins Point is progressing with the Building 7 development plan discussed last year. I offer recent site plans and the requested supplemental information addressing the proposed visual massing as viewed from the bridge. We are pleased to offer the attached information based on the current design for MHPC consideration. Sebago will have a bird's eye graphic showing the campus building relationship available before Christmas. Federal permitting is not anticipated for the proposed site improvements.

We look forward to hearing from you.

Best, Stefanie


SEBAGO
TECHNICS


SEBAGO
TECHNICS



28: EXTERIOR LIGHTING (14.6.4(F))

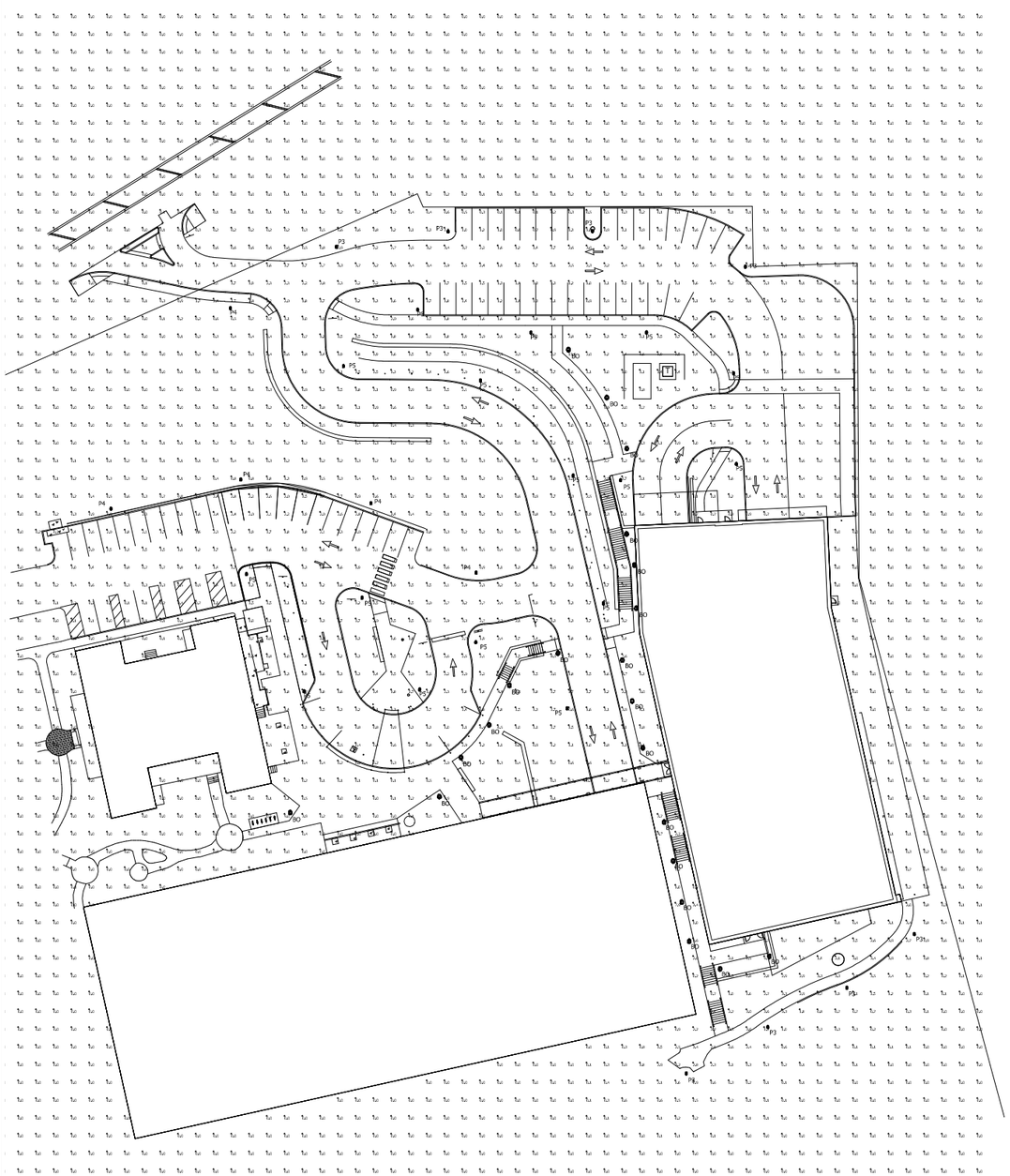
1. Site lighting.
   a. The building architect professionally prepared and coordinated the proposed site lighting for the new administrative headquarters. We understand that the lighting will consist of full-cut-off LED fixtures at a level adequate for safety but not excessive or at a level that contributes to light pollution. All lighting will be in conformance with the lighting standards of the Technical Manual.

   b. Due to the secluded site location, light from the proposed improvements at Building 7 will not adversely impact residential properties.

2. Architectural specialty lighting.
   a./b. If proposed, architectural or specialty lighting will conform to the lighting standards of the Technical Manual.

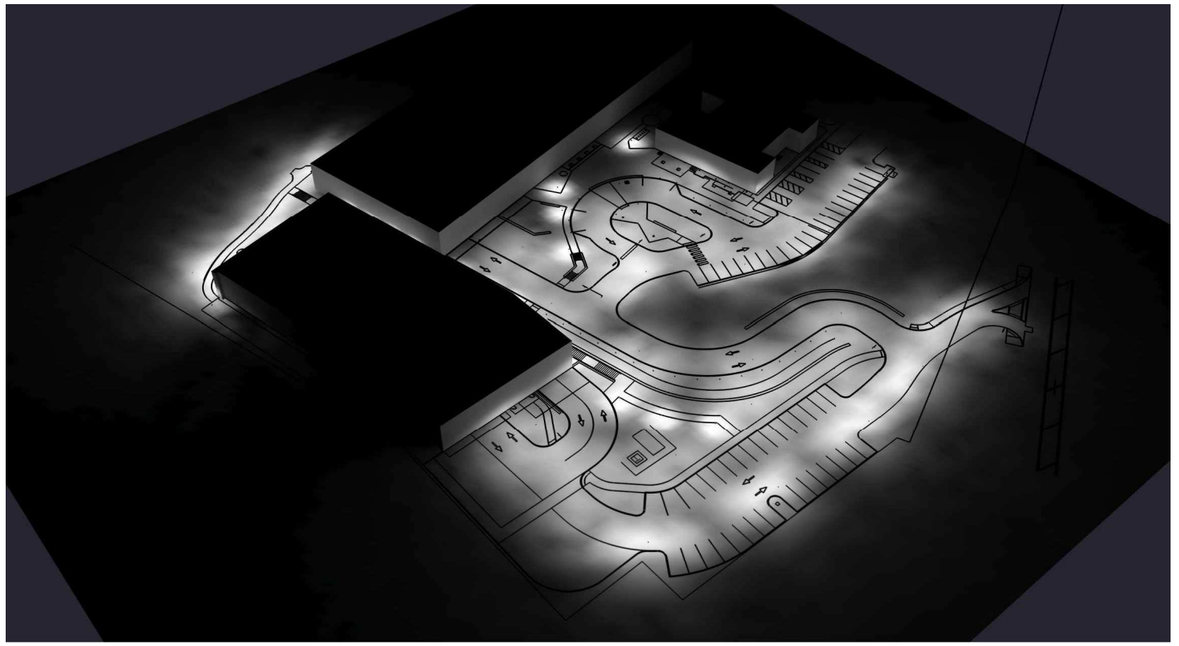
3. Street lighting.
   The proposed Martins Point Building 7 improvements are on Veranda Street, and site access will occur over existing lighted curb cuts at Marine Hospital Drive and Building 7 right-in/right-out drive.

In this section, reference is made to the updated light fixture cut sheets and photometric plan prepared by Swaney Lighting, Inc.



Luminaire Schedule							
Symbol	Qty	Label	Mounting Height	LLF	Lum. Lumens	Lum. Watts	Description
⊕	21	BO	3' - 6" AFG	0.900	1735	25	PROB-Y5-2030
⊕	8	P3	15' - 0" AFG	0.900	5545	60	PROV2-36L-510-3K7-3
⊕	5	P4	15' - 0" AFG	0.900	5593	60	PROV2-36L-510-3K7-4W
⊕	16	P5	15' - 0" AFG	0.900	5638	60	PROV2-36L-510-3K7-5W

Calculation Summary							
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
Overall Area	Illuminance	Fc	0.50	13.4	0.0	N.A.	N.A.
Paved Area	Illuminance	Fc	1.37	6.0	0.0	N.A.	N.A.
Property Line	Illuminance	Fc	0.11	2.2	0.0	N.A.	N.A.



GRAPHIC SCALE

40 0 20 40 80 160

(IN FEET)

1 inch = 40 - FT.

1. THIS LIGHTING DESIGN IS BASED ON LIMITED INFORMATION SUPPLIED BY OTHERS TO CURRENT. SITE DETAILS PROVIDED HEREON ARE REPRODUCED ONLY AS A VISUALIZATION AID. FIELD DEVIATIONS MAY SIGNIFICANTLY AFFECT PREDICTED PERFORMANCE. PRIOR TO INSTALLATION, CRITICAL SITE INFORMATION (POLE LOCATIONS, ORIENTATION, MOUNTING HEIGHT, ETC.) SHOULD BE COORDINATED WITH THE CONTRACTOR AND/OR SPECIFIER RESPONSIBLE FOR THE PROJECT.
2. LUMINAIRE DATA IS TESTED TO INDUSTRY STANDARDS UNDER LABORATORY CONDITIONS. OPERATING VOLTAGE AND NORMAL MANUFACTURING TOLERANCES OF LAMP, BALLAST, AND LUMINAIRE MAY AFFECT FIELD RESULTS.
3. CONFORMANCE TO FACILITY CODE AND OTHER LOCAL REQUIREMENTS IS THE RESPONSIBILITY OF THE OWNER AND/OR THE OWNER'S REPRESENTATIVE.

TITLE:

MARTIN'S POINT HEALTHCARE
PORTLAND, ME
SITE PHOTOMETRIC PLAN

REVISED FROM DRAWING NUMBER(S):	
R1: 12/19/23	R5: 11/07/24
R2: 10/14/24	R6: 11/12/24
R3: 10/17/24	
R4: 11/06/24	

Current

DN BY: DHK	DATE: 12/19/23	CHK BY: N/A	
REV. BY: DHK	DATE: 11/12/24	SCALE: AS NOTED	
QUOTE: N/A	DRAWING / DESIGN NO.: A232407R6		

Transmittal

Swaney Lighting
PO Box 1597
Scarborough ME 04070
Phone: (207) 883-7100
From: Therese Freeman X-103

Project **MARTIN'S POINT VERANDA CAMPUS**
Quote# SLA23-57244
Location PORTLAND ME
Contact:

ATTACHED WE ARE SENDING YOU 1 COPY OF THE FOLLOWING ITEM:

☐ Drawings	☐ Specifications	Other:
☐ Prints	☐ Information	
☐ Plans	☒ Submittals	

THESE ARE TRANSMITTED FOR:

☐ Prior Approval	☒ Resubmittal for Approval	☐ Record
☐ Approval	☐ Corrections	Bids due on:
☐ Approval as Submitted	☐ Your Use	Other:
☐ Approval as Noted	☐ Review and Comment	

Type	MFG	Part
BO	Architectural Area Lighting	PROB-Y5-2030-DBT-RD-NO BOLTS-WIRED120-277V
P3	Architectural Area Lighting	PROV2-36L-510-3K7-3-DBT-STND_MNT-UNV
P3	Architectural Area Lighting	RSSA15-40A-OT-DBT
P4	Architectural Area Lighting	PROV2-36L-510-3K7-4W-DBT-STND_MNT-UNV
P4	Architectural Area Lighting	RSSA15-40A-OT-DBT
P5	Architectural Area Lighting	PROV2-36L-510-3K7-5W-DBT-STND_MNT-UNV
P5	Architectural Area Lighting	RSSA15-40A-OT-DBT

architectural arealighting

PROB
BOLLARD

DATE: | LOCATION:

TYPE: | PROJECT:

CATALOG #:

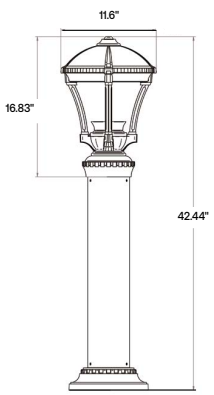
Providence® Bollard

FEATURES

- Reliable uniform illumination
- True IES Type 2, 3, 4, and 5 distributions
- 3000K , 4000K, 5000K CCT
- 0-10V dimmable
- 20kV/10kA surge suppression
- Thermal protection

3000K and warmer CCTs only





	Weight
PROB	27 lbs / 12 kg

SPECIFICATIONS

HOUSING

- Luminaire shall have discrete optical and gear compartments that do not share any physical housings
- All housing components shall be die-cast aluminum, sealed with continuous silicone rubber gaskets
- Standard configurations shall have a clear flat tempered glass lens
- All internal and external hardware shall be stainless steel
- Optical bezel finish shall match the luminaire housing
- Luminaire finish shall consist of a five stage pretreatment regimen with a polymer primer sealer, oven dry off, and top coated with a thermoset super TGIC polyester powder coat finish
- Luminaire finish shall meet the AAMA 605.2 performance specification which includes passing a 3000 hour salt spray test for corrosion resistance

LED/OPTICS

- LEDs shall be mounted to a metal printed circuit board assembly (MCPCB) with a uniform conformal coating over the panel surface and electrical features
- LED optics shall be clear injection molded PMMA acrylic
- MCPCB and optic shall be sealed to a die-cast anodized aluminum heat sink with an injection molded silicone rubber gasket. IP66

INSTALLATION

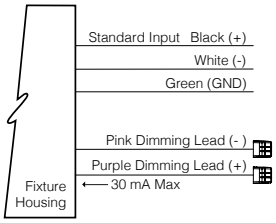
- Fixture shall slip over two 12" x 10" x 2" anchor bolts supported by hex nuts and washers to level fixture. Provision for water drainage at footing is recommended
- One-piece cast aluminum arms accept the standard 3" slip fitter on the Providence fixture
- Arms are prewired with quick disconnects
- Wall mounted arms do not include wall mounting hardware
- Pole mounted arms use 3/8-16 hardware bolts for attaching to the pole
- Driver assembly shall be mounted to a prewired internal tray with quick disconnects for removal
- Luminaire shall have tool-less service access to the gear compartment. Driver and surge suppressor shall be mounted to a prewired tray with quick disconnects that may be removed from the gear compartment

ELECTRICAL

- Luminaires shall have integral surge protection that shall be U.L. recognized and have a surge current rating of 10,000 Amps using the industry standard 8/20uSec wave and surge rating of 372J
- Drivers shall be U.L recognized with an inrush current maximum of <20.0 Amps maximum at 230VAC
- Drivers shall not be compatible with current sourcing dimmers, consult factory for current list of known compatible dimming systems, approved dimmers include Lutron Diva AVTV, Lutron Nova NFTV and NTFTV

ELECTRICAL (CONTINUED)

- Luminaires not configured with an optional control system shall be provided with 0-10V purple and pink dimming leads



CERTIFICATIONS

- Luminaire shall be listed with ETL for outdoor, wet location use, UL1598, UL 8750 and Canadian CSA Std. C22.2 no.250
- IDA approved, 3000K and warmer CCTs only

WARRANTY

- 5 year warranty

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PROB
BOLLARD

DATE: LOCATION:

TYPE: PROJECT:

CATALOG #:

ORDERING GUIDE

Example: PROB-Y2-2040-LDL-BLT

CATALOG #

Model		Distribution		Lumen Package		Color	
PROB	Providence Bollard LED	**Y2**	Type 2	**2030**	3000K CCT, 25 watts	**BLS**	Black Gloss Smooth
		Y3	Type 3	**2040**	4000K CCT, 25 watts	**BLT**	Black Matte Textured
		Y4	Type 4	**2050**	5000K CCT, 25 watts	**DBS**	Dark Bronze Gloss Smooth
		Y5	Type 5	**3030**	3000K CCT, 43 watts	**DBT**	Dark Bronze Matte Textured
				3040	4000K CCT, 43 watts	**GTT**	Graphite Matte Texture
				3050	5000K CCT, 43 watts	**LGS**	Light Grey Gloss Smooth
						LGT	Light Grey Matte Textured
						PSS	Platinum Silver Gloss Smooth
						VGT	Verde Green Matte Textured
						WHS	White Gloss Smooth
						WHT	White Matte Textured
						CC	Custom Color [1]

Options		Mounting	
FS1	Fusing	**FL**	Fluted Shaft 5" DIA.
DSC	Dark Sky Cap	**RD**	Round Shaft 5" DIA.
PFC	Brass Painted Finial	**PM**	Pier Mount
BPS	Brass Painted Struts		
LDL	Lightly Diffused Lens		

Notes:
1 Consult factory for custom color, marine and corrosive finish

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PROB

BOLLARD

DATE: LOCATION:

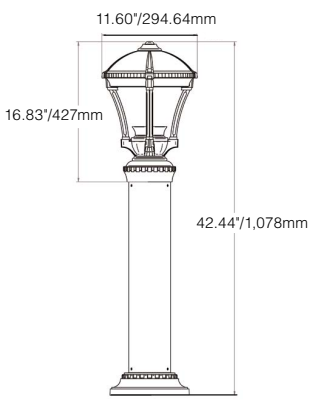
TYPE: PROJECT:

CATALOG #:

DELIVERED LUMENS

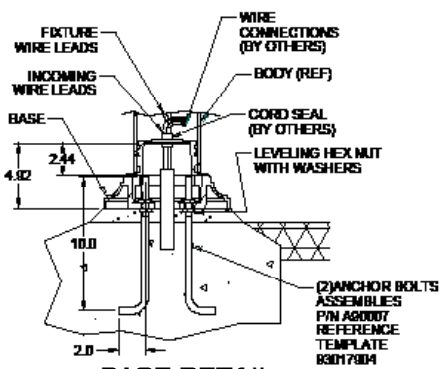
Light Engine	Lensing	Distribution	Ordering Code	Average System Watts	3000K 70CRI					4000K 70CRI					5000K 70CRI				
					Lumen	Bug Rating			Efficancy (Lm/W)	Lumen	Bug Rating			Efficancy (Lm/W)	Lumen	Bug Rating			Efficancy (Lm/W)
						B	U	G			B	U	G			B	U	G	
					2030					2040					2050				
2000 Series	Clear Lens (Standard)	Type 2	Y2	25	1792	1	0	1	71	1957	1	0	1	78	1951	1	0	1	78
		Type 3	Y3		1830	1	0	1	73	1970	1	0	1	78	1958	1	0	1	78
		Type 4	Y4		1793	1	0	1	71	1957	1	0	1	78	1960	1	0	1	78
		Type 5	Y5		1735	1	0	1	65	1894	1	0	1	76	1989	1	0	1	76
	Lightly Diffused Lens	Type 2	Y2 LDL		1216	1	1	1	49	1361	1	1	1	54	1387	0	1	1	56
		Type 3	Y3 LDL		1216	1	1	1	50	1361	1	1	1	56	1386	1	1	1	57
		Type 4	Y4 LDL		1170	1	2	1	47	1309	1	2	1	52	1334	1	2	1	53
		Type 5	Y5 LDL		1139	1	1	1	46	1275	1	1	1	51	1299	1	1	1	52
					3030					3040					3050				
3000 Series	Clear Lens (Standard)	Type 2	Y2	43	2975	1	0	1	69	3247	1	0	1	76	3238	1	0	1	75
		Type 3	Y3		3038	1	1	1	70	3270	1	0	1	76	3261	1	0	1	75
		Type 4	Y4		2988	1	0	1	69	3262	1	0	1	76	3253	1	0	1	75
		Type 5	Y5		2892	2	0	1	67	3157	2	0	1	73	3148	2	0	1	73
	Lightly Diffused Lens	Type 2	Y2 LDL		2092	1	1	1	49	2342	1	1	1	54	2386	1	1	1	56
		Type 3	Y3 LDL		2091	1	1	1	50	2341	1	1	1	56	2385	1	1	1	57
		Type 4	Y4 LDL		2012	1	2	1	47	2252	1	2	1	52	2295	1	2	1	53
		Type 5	Y5 LDL		1959	1	1	1	46	2193	1	1	1	51	2234	1	1	1	52

DIMENSIONS

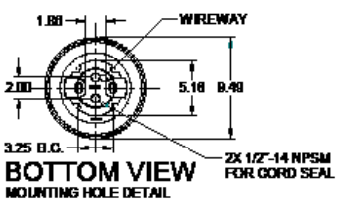


BOTTOM VIEW





BASE DETAIL



BOTTOM VIEW
MOUNTING HOLE DETAIL

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PROB
BOLLARD

DATE: LOCATION:

TYPE: PROJECT:

CATALOG #:

LED COLOR

Value	Ordering Code		
	XX30	XX40	XX50
CCT Average	3000K	4000K	5000K
CRI Minimum	70	70	70
S/P Ratio	1.22	1.5	1.8

ELECTRICAL CHARACTERISTICS

Configuration	Driver									Inrush Current Peak				Dimming	
Ordering Code	LED Current (mA)	System Wattage (W)	Line Voltage		Amps AC		Min. Power Factor	Max THD (%)	Operating Temp. Range	120V		277V		Dimming Range (V)	Source/ Sink Current (mA)
			VAC	HZ	120	277				Ipeak (A)		Ipeak (A)			
20XX	255	25	120-277	50/60	0.21	0.09	>0.9	20	-40°C To +55°C	21	160 uS	49	160 uS	10% TO 10)%	1mA
30XX	400	42			0.35	0.15									

TM-21 LIFETIME CALCULATION (500MA)

Optical System	Ordering Code	Ambient Environment °C		Projected Lumen Maintenance (Khrs)			Reported L70
			15	25	50	60 (TM-21)	100	
MicroCore	32LED	15	100%	99%	99%	98%	97%	>96Khrs.
		25	99%	99%	98%	97%	95%	
		40	98%	97%	94%	93%	89%	

Consult factory for Amber, Turtle Friendly, Gulf Coast and Observatory applications.

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PROV2

ARCHITECTURAL AREA/SITE

DATE: LOCATION:

TYPE: PROJECT:

CATALOG #:

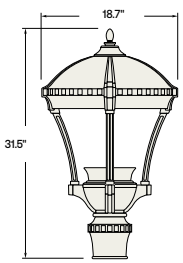
FEATURES

- Reliable, uniform, glare free illumination
- Types 1, 2, 3, 4W, 5Q, and 5W distributions
- Amber, 3000K, 4000K, 5000K CCT
- 0-10V dimming ready
- Integral Surge protection: 10k in parallel, 20k in series
- Upgrade Kits

PROVIDENCE®



3000K and warmer CCTs only



	WEIGHT	EPA
PROV2	29 lbs / 13.15 kg	1.33

SPECIFICATIONS

CONSTRUCTION

- All housing components aluminum 360 alloy, sealed with continuous silicone rubber gaskets
- Standard configurations do not require a flat lens, optional lenses are tempered glass
- All internal and external hardware is stainless steel
- Finish: fade and abrasion resistant, electrostatically applied, thermally cured, triglycidal isocyanurate (TGIC) polyester powdercoat
- Optical bezel finish to match the luminaire housing

LED/OPTICS

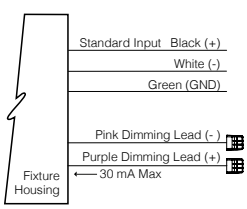
- Optical cartridge system consisting of a die cast heat sink, LED engine, TIR optics, gasket and bezel plate
- Optics are held in place without the use of adhesives
- Molded silicone gasket ensures a weather-proof seal around each individual LED.
- Features individual LED optical control based on high performance TIR optical designs
- House Side Shield is available on Standard and Clear Lens options except any Type 5 distribution. House Side Shield is not available for any distribution using a Diffused Lens

INSTALLATION

- Fixtures must be grounded in accordance with national, state and/or local electrical codes. Failure to do so may result in serious personal injury

ELECTRICAL

- Luminaires have UL recognized integral surge protection, and have a surge current rating of 10,000 Amps using the industry standard 8/20uSec wave and surge rating of 372J
- Drivers are UL recognized with an inrush current maximum of <20.0 Amps maximum at 230VAC
- 100%-1% dimming range. Fixture will be wired for low voltage 0-10V dimming control



- Driver and surge suppressor are mounted to a prewired tray with quick disconnects that may be removed from the gear compartment
- Surge protection: 10,000k in parallel, 20,000k in series

CONTROLS

- Egress adapter(s) will slip over a 4"/100mm DIA. pole with the luminaire or arm slipping over the adapter to add a total of 4.5"/114mm to the overall height. Adapter(s) are prewired, independently rotatable 359°, and have a cast access cover with an integral lens and lanyard
- Egress adapter will require an auxiliary 120 volt supply for operation of an integral MR16 lamp in the event of emergency. The lamp may be aimed and locked into position with an adjustment range of 15°-45°. Adapter will have a socket that accepts miniature bi-pin MR16 lamps up to 50 watts, lamp by others
- Photocell adapter includes a 7-Pin internal twist lock receptacle. Photocell by others

CERTIFICATIONS

- ETL listed under UL 1598 and CSA C22.2 No. 250.0-08 for wet locations

WARRANTY

- 5 year warranty

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PROV2

ARCHITECTURAL AREA/SITE

DATE: LOCATION:

TYPE: PROJECT:

CATALOG #:

ORDERING GUIDE

Example: PROV2-36L-325-3K7-4W-BL-SLA1-DF-HS-AD5-UNV

CATALOG #

ORDERING GUIDE

HOUSING

PROV2

Housing	LED Quantity	Lumen output	CCT/CRI	Distribution	Finish
PROV2 Providence Medium 2.0	**36L** 36 LED	**295** 450mA Microcore Equivalent	**AMB** Amber-595nm Peak [1]	**1** Type I	**BLS** Black Gloss Smooth
		325 325mA, 4500 Lumens	**3K7** 3000K, 70 CRI	**2** Type II	**BLT** Black Matte Textured
		510 510mA, 6500 Lumens	**4K7** 4000K, 70 CRI	**3** Type III	**DBS** Dark Bronze Gloss Smooth
		525 700mA Microcore Equivalent	**5K7** 5000K, 70 CRI	**4W** Type IV Wide	**DBT** Dark Bronze Matte Textured
		615 615mA, 7500 Lumens	Contact factory for options listed below	**5Q** Type V Square	**GTT** Graphite Matte Textured
			27K8 2700K, 80 CRI	**5W** Type V Wide	**LGS** Light Grey Gloss Smooth
			80 or 90 CRI for standard color temperatures		**LGT** Light Grey Matte Textured
					PSS Platinum Silver Gloss Smooth
					VGT Verde Green Matte Textured
					WHS White Gloss Smooth
					WHT White Matte Textured
					Color Option
					CC [4] Custom Color

Mounting		Optional Lens		Options		Mounting Options		Voltage
Pole Mount		**CL**	Clear Lens	**HS**	House Side Shield [3,5]	**AD5**	Adaptor-5" OD Pole	**UNV** 120-277V
STND_MNT [6]	Standard Mount	**DL**	Diffused Lens [2]	**PFN**	Brass Colored Finish	**PCA-C**	Photocontrol Adapter Contemporary	
PT23	2 3/8" tenon			**SPK**	Cast Spikes	**PCA-T**	Rotatable photocell housing. The housing slips over a 4"/100mm o.d. pole.a fixture slips over the 4"/100mm O.D. tenon. Includes an internal twist lock receptacle, and an access cover with integral lens and stainless steel tether. Adds 5"/125mm to the overall height of the pole/fixtureassembly. Prewire don the load side and line side for easy installation. Photocell by others	
PT3	3" tenon			**BPS**	Brass Colored Struts			
PT4	4" tenon			**SF**	Single Fuse (120, 277)			
Arm Mount				**DF**	Double Fuse (208, 240)	**EPA-C**	Egress Adapter Contemporary	
SLA1	4" pole or tenon							
TRA5U-4	4" pole or tenon							
TRA6U-4	4" pole or tenon							
TRA8U-4	4" pole or tenon							
TRA55-4	4" pole or tenon							
TRA5U-5	5" pole or tenon							
TRA6U-5	5" pole or tenon							
TRA8U-5	5" pole or tenon							
TRA55-5	5" pole or tenon							
TRA56-5	5" pole or tenon							
Wall Mount								
WMA55	Wall Mount							
WMA56	Wall Mount							
Pier Mount								
PM1	Pier Mount 1							
PM2	Pier Mount 2							
PM3	Pier Mount 3							

Notes:

1 Turtle Friendly

2 Diffused Lens is available only with T3 and T5W distribution

3 House side Shield is available only with T1, T2, T3 and T4W distributions

4 Consult factory for custom color, marine and corrosive finish options

5 Contact Factory for additional glare shield options

6 Slide over 4" OD Pole

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DELIVERED LUMENS

The table below shows the delivered lumens for the various lumen outputs and beam distributions. Use this chart in connection with the lumen factor (LF) capability to deliver any output required.

LED #	Drive Current	Lumen Package	Lens	Distribution	3000K 70CRI					4000K 70CRI					5000K 70CRI				
					Lumen	Bug Rating			Efficancy (Lm/W)	Lumen	Bug Rating			Efficancy (Lm/W)	Lumen	Bug Rating			Efficancy (Lm/W)
36	295	450mA Microcore Equivalent	None	1	3807	1	0	1	111.6	3960	1	0	1	116.1	4128	1	0	1	121.0
				2	3596	1	0	1	105.4	3740	1	0	1	109.7	3899	1	0	1	114.3
				3	3471	1	0	1	101.8	3611	1	0	1	105.9	3764	1	0	1	110.4
				4W	3501	1	0	1	102.7	3642	1	0	1	106.8	3796	1	0	1	111.3
				1-HS	2355	0	0	1	69.1	2450	0	0	1	71.8	2554	0	0	1	74.9
				2-HS	2049	0	0	1	60.1	2132	0	0	1	62.5	2222	0	0	1	65.2
				3-HS	1981	0	0	1	58.1	2061	0	0	1	60.4	2148	0	0	1	63.0
				4W-HS	2044	0	0	1	59.9	2126	0	0	1	62.3	2216	0	0	1	65.0
				5Q	3818	2	0	1	112.0	3971	2	0	1	116.5	4140	2	0	1	121.4
				5W	3529	2	0	1	103.5	3670	2	0	1	107.6	3826	2	0	1	112.2
			Clear	1-CL	3242	1	0	1	95.0	3373	1	0	1	98.8	3516	1	0	1	103.0
				2-CL	3062	1	0	1	89.7	3186	1	0	1	93.3	3321	1	0	1	97.3
				3-CL	2957	1	0	1	86.6	3075	1	0	1	90.1	3206	1	0	1	93.9
				4W-CL	2982	1	0	1	87.4	3102	1	0	1	90.9	3233	1	0	1	94.7
				1-CL-HS	2006	0	0	1	58.8	2087	0	0	1	61.1	2175	0	0	1	63.7
				2-CL-HS	1746	0	0	1	51.1	1816	0	0	1	53.2	1893	0	0	1	55.5
				3-CL-HS	1688	0	0	1	49.4	1755	0	0	1	51.4	1830	0	0	1	53.6
				4W-CL-HS	1740	0	0	1	51.0	1810	0	0	1	53.0	1887	0	0	1	55.3
				5Q-CL	3252	2	0	1	95.3	3382	2	0	1	99.1	3526	2	0	1	103.3
				5W-CL	3005	2	0	1	88.1	3126	2	0	1	91.6	3259	2	0	1	95.5
			Diffused	3-DL	2243	1	0	1	65.8	2334	1	0	1	68.4	2433	1	0	1	71.3
				5W-DL	2280	1	0	1	66.9	2372	1	0	1	69.6	2473	1	0	1	72.5
	325	4500	None	1	4147	1	0	1	110	4313	1	0	1	114	4496	1	0	1	118.9
				2	3917	1	0	1	104	4074	1	0	1	108	4247	1	0	1	112.3
				3	3781	1	0	1	100	3933	1	0	1	104	4100	1	0	1	108.4
				4W	3813	1	0	1	101	3967	1	0	2	105	4135	1	0	2	109.3
				1-HS	2566	0	0	1	68	2669	0	0	1	71	2782	0	0	1	73.6
				2-HS	2232	0	0	1	59	2322	0	0	1	61	2421	0	0	1	64.0
				3-HS	2158	0	0	1	57	2245	0	0	1	59	2340	0	0	1	61.9
				4W-HS	2226	0	0	1	59	2315	0	0	1	61	2414	0	0	1	63.8
				5Q	4158	2	0	1	110	4326	2	0	1	114	4509	2	0	1	119.2
				5W	3844	2	0	1	102	3998	2	0	1	106	4168	3	0	1	110.2
			Clear	1-CL	3532	1	0	1	93.4	3674	1	0	1	97.1	3829	1	0	1	101.3
				2-CL	3336	1	0	1	88.2	3470	1	0	1	91.7	3617	1	0	1	95.6
				3-CL	3220	1	0	1	85.2	3350	1	0	1	88.6	3492	1	0	1	92.3
				4W-CL	3248	1	0	1	85.9	3379	1	0	1	89.3	3522	1	0	1	93.1
				1-CL-HS	2185	0	0	1	57.8	2273	0	0	1	60.1	2369	0	0	1	62.6
				2-CL-HS	1901	0	0	1	50.3	1978	0	0	1	52.3	2062	0	0	1	54.5
				3-CL-HS	1838	0	0	1	48.6	1912	0	0	1	50.6	1993	0	0	1	52.7
				4W-CL-HS	1896	0	0	1	50.1	1972	0	0	1	52.1	2056	0	0	1	54.4
				5Q-CL	3542	2	0	1	93.6	3684	2	0	1	97.4	3840	2	0	1	101.5
				5W-CL	3274	2	0	1	86.6	3405	2	0	1	90.0	3550	2	0	1	93.9
			Diffused	3-DL	2459	1	0	1	65.0	2558	1	0	1	67.7	2666	1	0	1	70.7
				5W-DL	2469	1	0	1	65.3	2568	1	0	1	67.9	2677	1	0	1	70.9

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DELIVERED LUMENS (CONTINUED)

The table below shows the delivered lumens for the various lumen outputs and beam distributions. Use this chart in connection with the lumen factor (LF) capability to deliver any output required.

LED #	Drive Current	Lumen Package	Lens	Distribution	3000K 70CRI					4000K 70CRI					5000K 70CRI				
					Lumen	Bug Rating			Efficancy (Lm/W)	Lumen	Bug Rating			Efficancy (Lm/W)	Lumen	Bug Rating			Efficancy (Lm/W)
36	510	6500	None	1	6081	1	0	1	104.1	6326	1	0	1	108	6594	1	0	1	113
				2	5744	1	0	1	98.3	5975	1	0	1	102	6228	1	0	1	107
				3	5545	1	0	2	94.9	5768	1	0	2	99	6013	1	0	2	103
				4W	5593	1	0	2	95.7	5818	1	0	2	100	6064	1	0	2	104
				1-HS	3763	0	0	1	64.4	3914	0	0	1	67	4080	0	0	1	70
				2-HS	3274	0	0	1	56.1	3406	0	0	1	58	3550	0	0	1	61
				3-HS	3165	0	0	1	54.2	3292	0	0	1	56	3432	0	0	1	59
				4W-HS	3265	0	0	1	55.9	3396	0	0	1	58	3540	0	0	1	61
				5Q	6099	2	0	1	104.4	6344	2	0	1	109	6613	3	0	1	113
				5W	5637	3	0	1	96.5	5864	3	0	1	100	6112	3	0	1	105
			Clear	1-CL	5180	1	0	1	88.7	5388	1	0	1	92.2	5616	1	0	1	96.2
				2-CL	4892	1	0	1	83.8	5089	1	0	1	87.1	5305	1	0	1	90.8
				3-CL	4723	1	0	1	80.9	4913	1	0	1	84.1	5121	1	0	1	87.7
				4W-CL	4763	1	0	2	81.6	4955	1	0	2	84.8	5165	1	0	2	88.4
				1-CL-HS	3205	0	0	1	54.9	3334	0	0	1	57.1	3475	0	0	1	59.5
				2-CL-HS	2788	0	0	1	47.7	2901	0	0	1	49.7	3024	0	0	1	51.8
				3-CL-HS	2696	0	0	1	46.2	2804	0	0	1	48.0	2923	0	0	1	50.0
				4W-CL-HS	2780	0	0	1	47.6	2892	0	0	1	49.5	3015	0	0	1	51.6
				5Q-CL	5194	2	0	1	88.9	5403	2	0	1	92.5	5632	2	0	1	96.4
				5W-CL	4801	3	0	1	82.2	4994	3	0	1	85.5	5206	3	0	1	89.1
			Diffused	3-DL	3584	1	0	1	61.4	3728	1	0	1	63.8	3886	1	0	1	66.5
				5W-DL	3615	2	0	1	61.9	3760	2	0	1	64.4	3919	2	0	1	67.1
	525	700mA Microcore Equivalent	None	1	6235	1	0	1	103.6	6486	1	0	1	107.7	6761	1	0	1	112.3
				2	5889	1	0	1	97.8	6126	1	0	1	101.8	6386	1	0	1	106.1
				3	5686	1	0	2	94.4	5914	1	0	2	98.2	6165	1	0	2	102.4
				4W	5734	1	0	2	95.3	5965	1	0	2	99.1	6218	1	0	2	103.3
				1-HS	3858	0	0	1	64.1	4013	0	0	1	66.7	4183	0	0	1	69.5
				2-HS	3357	0	0	1	55.8	3492	0	0	1	58.0	3640	0	0	1	60.5
				3-HS	3245	0	0	1	53.9	3376	0	0	1	56.1	3519	0	0	1	58.5
				4W-HS	3347	0	0	1	55.6	3482	0	0	1	57.8	3629	1	0	1	60.3
				5Q	6253	2	0	1	103.9	6504	2	0	1	108.0	6780	3	0	1	112.6
				5W	5779	3	0	1	96.0	6012	3	0	1	99.9	6267	3	0	1	104.1
			Clear	1-CL	5311	1	0	1	88.2	5524	1	0	1	91.8	5758	1	0	1	95.7
				2-CL	5016	1	0	1	83.3	5218	1	0	1	86.7	5439	1	0	1	90.3
				3-CL	4842	1	0	1	80.4	5037	1	0	2	83.7	5251	1	0	2	87.2
				4W-CL	4884	1	0	2	81.1	5080	1	0	2	84.4	5296	1	0	2	88.0
				1-CL-HS	3286	0	0	1	54.6	3418	0	0	1	56.8	3563	0	0	1	59.2
				2-CL-HS	2859	0	0	1	47.5	2974	0	0	1	49.4	3100	0	0	1	51.5
				3-CL-HS	2764	0	0	1	45.9	2875	0	0	1	47.8	2997	0	0	1	49.8
				4W-CL-HS	2851	0	0	1	47.4	2965	0	0	1	49.3	3091	0	0	1	51.3
				5Q-CL	5326	2	0	1	88.5	5540	2	0	1	92.0	5775	2	0	1	95.9
				5W-CL	4922	3	0	1	81.8	5120	3	0	1	85.1	5337	3	0	1	88.7
			Diffused	3-DL	3675	1	0	1	61.0	3822	1	0	1	63.5	3984	1	0	1	66.2
				5W-DL	3735	2	0	1	62.0	3885	2	0	1	64.5	4050	2	0	1	67.3

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					Lumen	Bug Rating			Efficancy (Lm/W)	Lumen	Bug Rating			Efficancy (Lm/W)	Lumen	Bug Rating			Efficancy (Lm/W)
36	615	7500	None	1	7118	1	0	1	101.3	7404	1	0	1	105.4	7718	1	0	1	109.9
				2	6723	1	0	1	95.7	6994	1	0	2	99.6	7290	1	0	2	103.8
				3	6491	1	0	2	92.4	6752	1	0	2	96.1	7038	1	0	2	100.2
				4W	6546	1	0	2	93.2	6809	1	0	2	96.9	7098	1	0	2	101.0
				1-HS	4404	0	0	1	62.7	4581	0	0	1	65.2	4775	0	0	1	68.0
				2-HS	3832	0	0	1	54.5	3986	0	0	1	56.7	4155	0	0	1	59.1
				3-HS	3705	0	0	1	52.7	3854	0	0	1	54.9	4017	0	0	1	57.2
				4W-HS	3821	1	0	1	54.4	3975	1	0	1	56.6	4143	1	0	1	59.0
				5Q	7138	3	0	1	101.6	7425	3	0	1	105.7	7740	3	0	1	110.2
				5W	6598	3	0	1	93.9	6863	3	0	1	97.7	7154	3	0	1	101.8
			Clear	1-CL	6063	1	0	1	86.3	6306	1	0	1	89.8	6574	1	0	1	93.6
				2-CL	5726	1	0	1	81.5	5956	1	0	1	84.8	6209	1	0	1	88.4
				3-CL	5528	1	0	1	78.7	5750	1	0	1	81.9	5994	1	0	2	85.3
				4W-CL	5575	1	0	2	79.4	5800	1	0	2	82.6	6045	1	0	2	86.1
				1-CL-HS	3751	0	0	1	53.4	3902	0	0	1	55.5	4067	0	0	1	57.9
				2-CL-HS	3264	0	0	1	46.5	3395	0	0	1	48.3	3539	0	0	1	50.4
				3-CL-HS	3155	0	0	1	44.9	3282	0	0	1	46.7	3421	0	0	1	48.7
				4W-CL-HS	3254	0	0	1	46.3	3385	0	0	1	48.2	3529	0	0	1	50.2
				5Q-CL	6080	2	0	1	86.5	6324	2	0	1	90.0	6592	2	0	1	93.8
				5W-CL	5619	3	0	1	80.0	5845	3	0	1	83.2	6093	3	0	1	86.7
			Diffused	3-DL	4195	1	0	1	59.7	4364	1	0	1	62.1	4549	1	0	1	64.7
				5W-DL	4264	2	0	1	60.7	4436	2	0	1	63.1	4624	2	0	1	65.8

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PHOTOMETRY

PROV2-36L-615-4K7-1

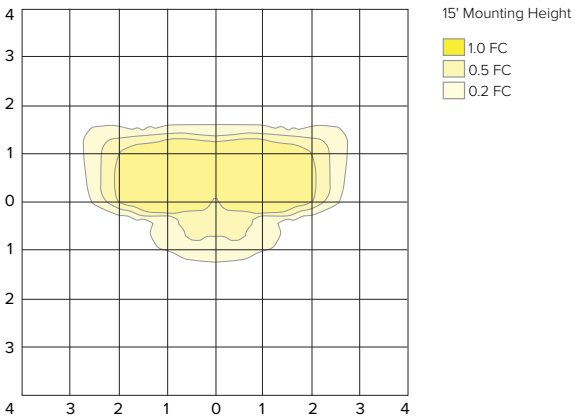
LUMINAIRE DATA

Description	**4000 Kelvin, 70CRI**
Delivered Lumens	**7405**
Watts	**70.25**
Efficacy	**105.4**
IES Type	**II**
BUG Rating	**B1-U0-G1**
Mounting Height	**15 ft**
Grid Scale	**15 ft**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	6403	86%
Downward House Side	1002	14%
Downward Total	7405	100%
Upward Street Side	0	0%
Upward House Side	0	0%
Upward Total	0	0%
Total Flux	7405	100%

ISOFOOT CANDLE PLOT



PROV2-36L-615-4K7-2

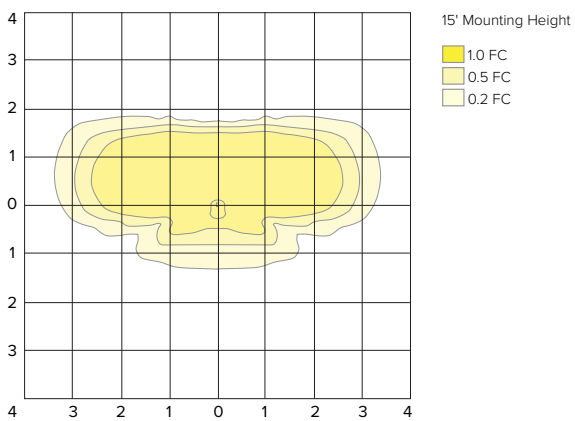
LUMINAIRE DATA

Description	**4000 Kelvin, 70CRI**
Delivered Lumens	**6994**
Watts	**70.25**
Efficacy	**99.6**
IES Type	**II**
BUG Rating	**B1-U0-G2**
Mounting Height	**15 ft**
Grid Scale	**15 ft**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	5665	81%
Downward House Side	1329	19%
Downward Total	6994	100%
Upward Street Side	0	0%
Upward House Side	0	0%
Upward Total	0	0%
Total Flux	6994	100%

ISOFOOT CANDLE PLOT



PROV2-36L-615-4K7-3

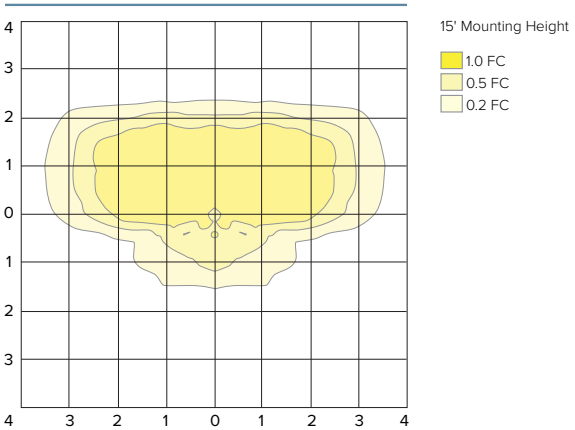
LUMINAIRE DATA

Description	**4000 Kelvin, 70CRI**
Delivered Lumens	**6752**
Watts	**70.25**
Efficacy	**96.1**
IES Type	**III**
BUG Rating	**B1-U0-G2**
Mounting Height	**15 ft**
Grid Scale	**15 ft**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	5552	82%
Downward House Side	1200	18%
Downward Total	6752	100%
Upward Street Side	0	0%
Upward House Side	0	0%
Upward Total	0	0%
Total Flux	6752	100%

ISOFOOT CANDLE PLOT



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PROV2
ARCHITECTURAL AREA/SITE

DATE: LOCATION:

TYPE: PROJECT:

CATALOG #:

PHOTOMETRY

PROV2-36L-615-4K7-4W

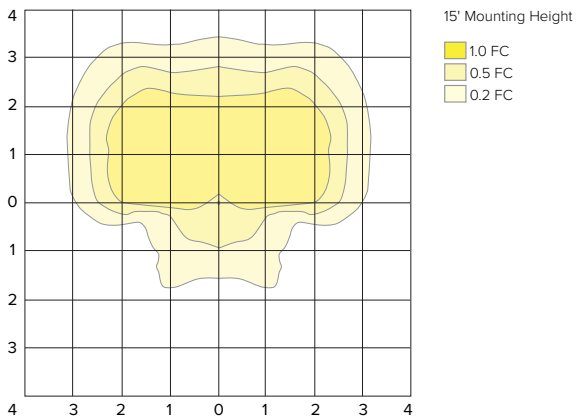
LUMINAIRE DATA

Description	**4000 Kelvin, 70CRI**
Delivered Lumens	**6809**
Watts	**70.25**
Efficacy	**96.9**
IES Type	**IV Wide**
BUG Rating	**B1-U0-G2**
Mounting Height	**15 ft**
Grid Scale	**15 ft**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	5802	85%
Downward House Side	1007	15%
Downward Total	6809	100%
Upward Street Side	0	0%
Upward House Side	0	0%
Upward Total	0	0%
Total Flux	6809	100%

ISOFOOT CANDLE PLOT



PROV2-36L-615-4K7-5Q

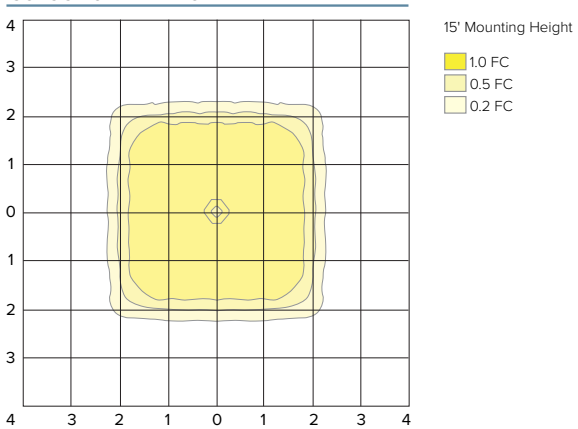
LUMINAIRE DATA

Description	**4000 Kelvin, 70CRI**
Delivered Lumens	**7425**
Watts	**70.25**
Efficacy	**105.7**
IES Type	**VS**
BUG Rating	**B3-U0-G1**
Mounting Height	**15 ft**
Grid Scale	**15 ft**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	3713	50%
Downward House Side	3713	50%
Downward Total	7425	100%
Upward Street Side	0	0%
Upward House Side	0	0%
Upward Total	0	0%
Total Flux	7425	100%

ISOFOOT CANDLE PLOT



PROV2-36L-615-4K7-5W

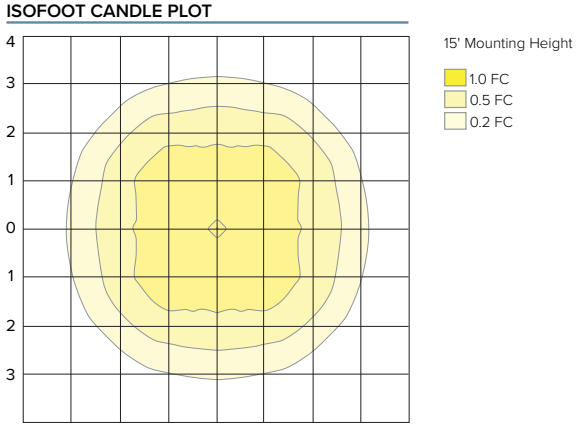
LUMINAIRE DATA

Description	**4000 Kelvin, 70CRI**
Delivered Lumens	**6863**
Watts	**70.25**
Efficacy	**97.7**
IES Type	**VS**
BUG Rating	**B3-U0-G1**
Mounting Height	**15 ft**
Grid Scale	**15 ft**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	3432	50%
Downward House Side	3432	50%
Downward Total	6863	100%
Upward Street Side	0	0%
Upward House Side	0	0%
Upward Total	0	0%
Total Flux	6863	100%

ISOFOOT CANDLE PLOT



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PROV2

ARCHITECTURAL AREA/SITE

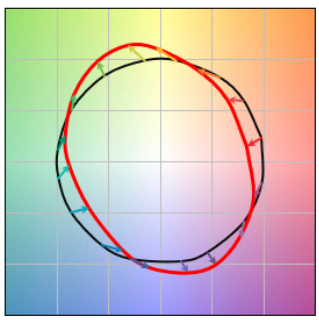
DATE: LOCATION:

TYPE: PROJECT:

CATALOG #:

TM-30 DATA

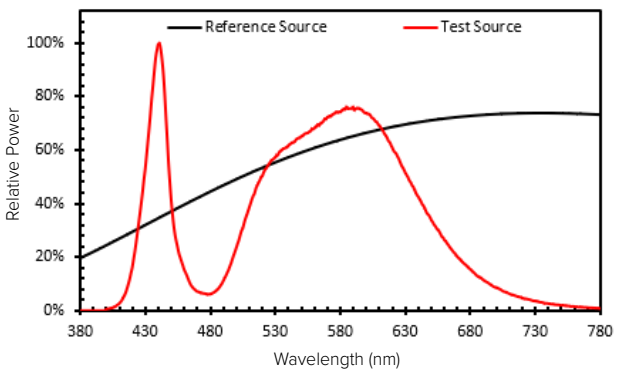
COLOR VECTOR GRAPHIC



TEST SOURCE

MBM TEST RESULTS	
CCT (K)	3947
CIE Ra	72
Duv	0.0004
x	0.3831
y	0.3793
Rf	68
Rg	99

SPECTRAL POWER DISTRIBUTION COMPARISON



ELECTRICAL DATA

Electrical											Dimming				
Light Engine	System Current	System Watts	Line Voltage		Amps AC				Min. Power Factor	Max THD (%)	Dimming Range	Source current out of 0-10V		Absolute voltage range on 0-10V (+)	
			VAC	HZ	120	208	240	277				Min	Max	Min	Max
36	295 mA	34.1	120-277	50/60	0.28	0.16	0.14	0.12	>0.9	20	10% to 100%	0mA	1mA	0V	10V
	325 mA	37.8			0.32	0.18	0.16	0.14							
	510 mA	58.4			0.49	0.28	0.24	0.21							
	525 mA	60.2			0.50	0.29	0.25	0.22							
	615 mA	70.3			0.59	0.34	0.29	0.25							

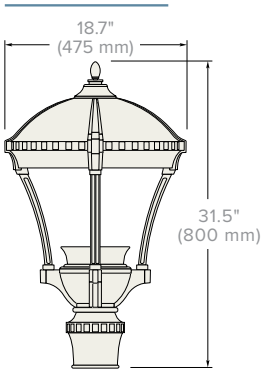
TM-21 LIFETIME CALCULATION - PROJECTED LUMEN MAINTENANCE (25°C / 77°F)						
HOURS	0	25,000	36,000	50,000	100,000	REPORTED L70
Projected Lumen Maintenance	100%	98.0%	96.9%	95.4%	90.5%	> 60,000

AMBER MULTIPLIER	
CCT	MULTIPLIER
5000K	1
AM	0.1727

2700K MULTIPLIER	
CCT	MULTIPLIER
5000K	1
2700K	0.897

LENS OPTION MULTIPLIER	
CLEAR LENS	DIFFUSED LENS
0.8517	0.6462

DIMENSIONS



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RSS-A Series Poles

ROUND STRAIGHT STEEL

DATE:	LOCATION:
TYPE:	PROJECT:
CATALOG #:	

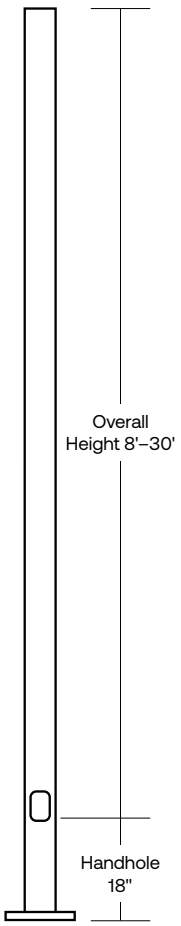
SPECIFICATIONS

CONSTRUCTION

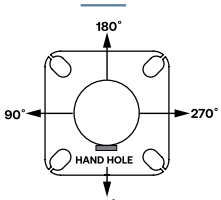
- Shaft: One-piece straight steel with round cross section, Minimum yield of 46,000 psi (ASTM-A500, Grade C); Longitudinal weld seam to appear flush in shaft wall; Steel base plate with axial bolt circle slots welded flush to pole shaft having minimum yield of 36,000 psi (ASTM A36)
- Base cover: Two-piece square aluminum base cover included standard
- Pole cap: Pole shaft supplied with removable cover when applicable; Tenon and post-top configurations also available
- Hand hole: Rectangular 3x5 steel hand hole frame (2.38" x 4.38" opening); Mounting provisions for grounding lug located behind gasketed cover
- Anchor bolts: Four galvanized anchor bolts provided per pole with minimum yield of 55,000 psi (ASTM F1554). Galvanized hardware with two washers and two nuts per bolt for leveling
  - Anchor bolt part numbers: 3/4 x 30 x 3 — TAB-30-M38
    1 x 36 x 4 — TAB-36-M38
- Durable thermoset polyester powder coat paint finish with nominal 3.0 mil thickness
- Powder paint prime applied over “white metal” steel substrate cleaned via mechanical shot blast method
- Decorative finish coat available in multiple standard colors; Custom colors available; RAL number preferable

INSTALLATION

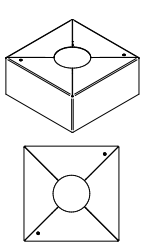
- Lighting installations for side and top mounting of luminaires with effective projected area (EPA) not exceeding maximum allowable loading of the specified pole in its installed geographic location



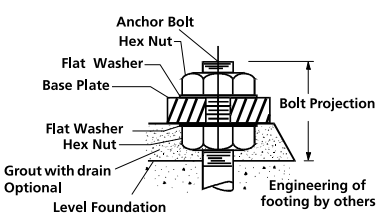
BASE



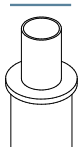
BASE COVER



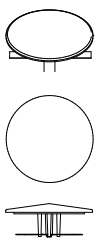
BASE DETAIL



TENON



POLE CAP



Current

currentlighting.com/aal

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RSS-A Series Poles

ROUND STRAIGHT STEEL

DATE: | LOCATION:

TYPE: | PROJECT:

CATALOG #:

ORDERING INFORMATION

Example: RSS-A–25–50–B–2L–DBT–UL

RSS-A –

Series	Height	Shaft	Thickness	Mounting	Finish	Options
RSS-A Round Straight Steel Pole AAL	Reference page 3 Ordering matrix **15**	Reference page 3 Ordering matrix **40**	Reference page 3 Ordering matrix **A** - .125" Wall B - .188" Wall C - .250" Wall	**1** Single arm mount **2** Two fixtures at 180° **2L** Two fixtures at 90° **3T** Three fixtures at 90° **3Y** Three fixtures at 120° **4** Four fixtures at 90° **TA** Tenon (2.375" OD) **TB** Tenon (2.875" OD) **TC** Tenon (3.5" OD) **OT** Open Top (includes pole cap)	**BLT** Black Matte Textured **BLS** Black Gloss Smooth **DBT** Dark Bronze Matte Textured **DBS** Dark Bronze Gloss Smooth **GTT** Graphite Matte Textured **LGT** Light Grey Matte Textured **LGS** Light Grey Gloss Smooth **PSS** Platinum Silver Smooth **WHT** White Matte Textured **WHS** White Gloss Smooth **VGT** Verde Green Textured **Color Option** **CC**[1] Custom Color	**GFI**[2] 20 Amp GFCI Receptacle and Cover **EHH**[2] Extra Handhole **C05**[2] .5" Coupling **C07**[2] .75" Coupling **C20**[2] 2" Coupling **MPB**[2] Mid-pole Luminaire Bracket **VM2**[3] 2nd mode vibration dampener **LAB** Less Anchor Bolts **UL** UL Certified **RBC** Round Base Cover

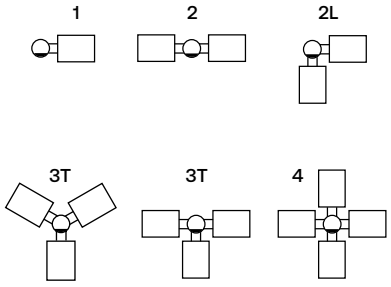
Accessories (Order Separately)

- ☐ **VM2S08** Field-installed 2nd mode vibration dampener - 8 ft
- ☐ **VM2S12** Field-installed 2nd mode vibration dampener - 12 ft
- ☐ **VM2S16** Field-installed 2nd mode vibration dampener - 16 ft
- ☐ **VM2S20** Field-installed 2nd mode vibration dampener - 20 ft
- ☐ **VM2S25** Field-installed 2nd mode vibration dampener - 25 ft

1 Custom colors available; RAL number preferable
2 Specify option location using logic found on page 3 (Option Orientation)
3 There will be a weld witness mark on the side of the pole with the Factory installed VM2

MOUNTING ORIENTATION

○ ◄—— Denotes handhole location



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RSS-A Series Poles

ROUND STRAIGHT STEEL

DATE: | LOCATION:

TYPE: | PROJECT:

CATALOG #:

ORDERING INFORMATION (CONTINUED)

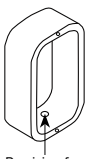
CATALOG NUMBER	HEIGHT		NOMINAL SHAFT DIMENSIONS	WALL THICKNESS	BOLT CIRCLE (SUGGESTED)	BOLT CIRCLE (RANGE)	BASE PLATE SQUARE	BASE PLATE THICKNESS	ANCHOR BOLT SIZE	BOLT PROJECTION	POLE WEIGHT
	FEET	METERS									
RSS-A-10-40-A	10	3	4" round	0.125"	9"	7.5" - 10"	9"	0.75"	3/4" x 30" x 3"	3.5"	52
RSS-A-12-40-A	12	3.7	4" round	0.125"	9"	7.5" - 10"	9"	0.75"	3/4" x 30" x 3"	3.5"	62
RSS-A-14-40-A	14	4.3	4" round	0.125"	9"	7.5" - 10"	9"	0.75"	3/4" x 30" x 3"	3.5"	72
Cut to 15' RSS-A-16-40-A	16	4.9	4" round	0.125"	9"	7.5" - 10"	9"	0.75"	3/4" x 30" x 3"	3.5"	83
RSS-A-18-40-A	18	5.5	4" round	0.125"	9"	7.5" - 10"	9"	0.75"	3/4" x 30" x 3"	3.5"	93
RSS-A-20-40-A	20	6.1	4" round	0.125"	9"	7.5" - 10"	9"	0.75"	3/4" x 30" x 3"	3.5"	103
RSS-A-10-40-B	10	3	4" round	0.188"	9"	7.5" - 10"	9"	0.75"	3/4" x 30" x 3"	3.5"	77
RSS-A-12-40-B	12	3.7	4" round	0.188"	9"	7.5" - 10"	9"	0.75"	3/4" x 30" x 3"	3.5"	92
RSS-A-14-40-B	14	4.3	4" round	0.188"	9"	7.5" - 10"	9"	0.75"	3/4" x 30" x 3"	3.5"	107
RSS-A-16-40-B	16	4.9	4" round	0.188"	9"	7.5" - 10"	9"	0.75"	3/4" x 30" x 3"	3.5"	122
RSS-A-18-40-B	18	5.5	4" round	0.188"	9"	7.5" - 10"	9"	0.75"	3/4" x 30" x 3"	3.5"	138
RSS-A-20-40-B	20	6.1	4" round	0.188"	9"	7.5" - 10"	9"	0.75"	3/4" x 30" x 3"	3.5"	153
RSS-A-10-50-B	10	3	5" round	0.188"	10"	8.0" - 11"	10.25"	1"	1" x 36" x 4"	4.5"	97
RSS-A-12-50-B	12	3.7	5" round	0.188"	10"	8.0" - 11"	10.25"	1"	1" x 36" x 4"	4.5"	116
RSS-A-14-50-B	14	4.3	5" round	0.188"	10"	8.0" - 11"	10.25"	1"	1" x 36" x 4"	4.5"	135
RSS-A-16-50-B	16	4.9	5" round	0.188"	10"	8.0" - 11"	10.25"	1"	1" x 36" x 4"	4.5"	155
RSS-A-18-50-B	18	5.5	5" round	0.188"	10"	8.0" - 11"	10.25"	1"	1" x 36" x 4"	4.5"	174
RSS-A-20-50-B	20	6.1	5" round	0.188"	10"	8.0" - 11"	10.25"	1"	1" x 36" x 4"	4.5"	194
RSS-A-25-50-B	25	7.6	5" round	0.188"	10"	8.0" - 11"	10.25"	1"	1" x 36" x 4"	4.5"	242
RSS-A-20-60-C	20	6.1	6" round	0.250"	10"	9.0" - 11"	10.25"	1"	1" x 36" x 4"	4.5"	307
RSS-A-25-60-C	25	7.6	6" round	0.250"	10"	9.0" - 11"	10.25"	1"	1" x 36" x 4"	4.5"	384
RSS-A-30-60-C	30	9.1	6" round	0.250"	10"	9.0" - 11"	10.25"	1"	1" x 36" x 4"	4.5"	461

Notes:

- Factory supplied template must be used when setting anchor bolts. Current will deny any claim for incorrect anchorage placement resulting from failure to use factory supplied template and anchor bolts.
- For more information about pole vibration and vibration dampeners, please consult factory.
- Unwrap poles immediately upon receipt to avoid condensation build up and possible corrosion.

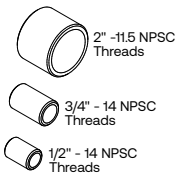
[1] There will be a weld witness mark on the side of the pole with the Factory installed VM2.

EHH
Extra handhole

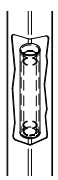


Provision for Grounding

C05 / C07 / C20
Coupling



VM2[1]
2nd mode vibration dampener



Factory installed, internal dampener designed to alter pole resonance to reduce movement and material fatigue caused by 2nd mode vibration.

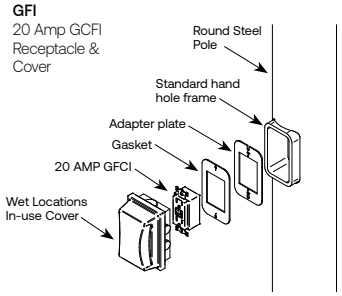
VM2SXX
Field-installed 2nd mode vibration dampener



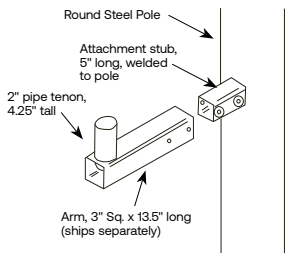
VM2S08 – 8'
VM2S12 – 12'
VM2S16 – 16'
VM2S20 – 20'
VM2S24 – 24'

Field installed, internal dampener designed to alter pole resonance to reduce movement and material fatigue caused by 2nd mode vibration.

GFI
20 Amp GCFI Receptacle & Cover



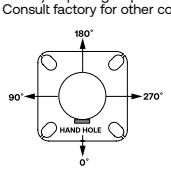
MPB
Mid Pole Bracket

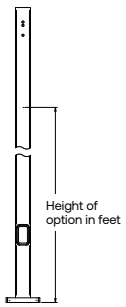


Option Orientation

Follow the logic below when ordering location specific options. For each option, include its orientation (in degrees) and its height (in feet).

Example: Option C05 should be ordered as: RSS-B-20-40-A-TA-DBT-C05-0-15 (.5" coupling on the handhole/arm side of pole, 15' up from the pole base) 1' spacing required between option. Consult factory for other configurations.





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RSS-A Series Poles

ROUND STRAIGHT STEEL

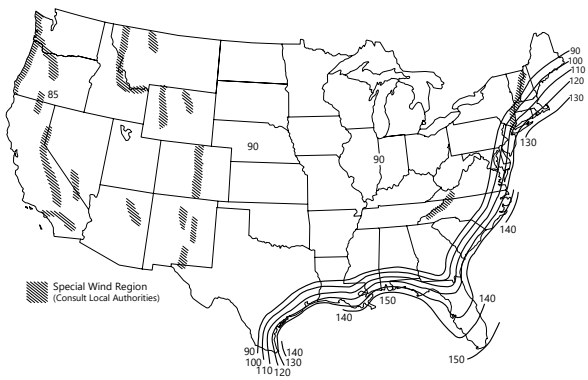
DATE: | LOCATION:

TYPE: | PROJECT:

CATALOG #:

WIND MAPS

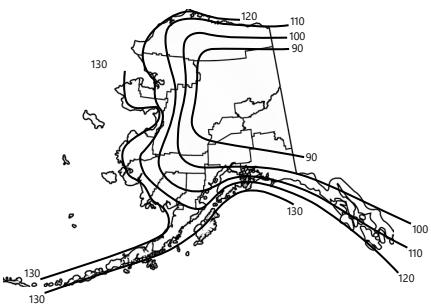
ASCE7-05 WIND MAP



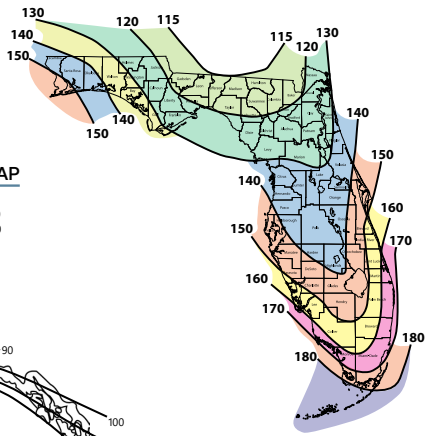
HAWAII – 105 mph
PUERTO RICO – 145 mph

*Printed with permission from ASCE

ALASKA REGION WIND MAP



FLORIDA REGION WIND MAP



Florida region wind map above is based upon 3-second gust winds and the 2017 Florida Building Code.

ASCE 7-05 wind map EPA Load Rating - 3 second gust wind speeds (Use for all locations except Florida)

Catalog Number	85	90	100	110	120	105	145
RSS-A-10-40-A	21.0	18.7	15.0	12.2	10.1	13.5	6.8
RSS-A-12-40-A	16.8	14.8	11.8	9.5	7.7	10.5	5.1
RSS-A-14-40-A	13.6	12.0	9.4	7.4	5.9	8.3	3.9
RSS-A-16-40-A	11.1	9.7	7.5	5.8	4.5	6.6	2.9
RSS-A-18-40-A	9.0	7.8	5.8	4.4	3.3	5.1	2.0
RSS-A-20-40-A	7.2	6.2	4.5	3.1	2.2	3.8	1.2
RSS-A-10-40-B	25.0	25.0	22.4	18.4	15.3	20.2	10.4
RSS-A-12-40-B	25.0	22.3	17.9	14.5	12.0	16.1	8.1
RSS-A-14-40-B	20.6	18.3	14.6	11.7	9.6	13.0	6.4
RSS-A-16-40-B	17.2	15.2	12.0	9.5	7.7	10.7	5.1
RSS-A-18-40-B	14.3	12.6	9.8	7.6	6.1	8.6	3.9
RSS-A-20-40-B	11.8	10.3	7.9	6.0	4.7	6.9	2.9
RSS-A-10-50-B	25.0	25.0	25.0	25.0	25.0	25.0	17.7
RSS-A-12-50-B	25.0	25.0	25.0	24.8	20.8	25.0	14.3
RSS-A-14-50-B	25.0	25.0	24.7	20.5	17.2	22.4	11.7
RSS-A-16-50-B	25.0	25.0	20.7	17.1	14.3	18.8	9.7
RSS-A-18-50-B	24.5	21.6	17.3	14.3	11.9	15.7	8.0
RSS-A-20-50-B	20.6	18.1	14.4	11.8	9.8	13.0	6.5
RSS-A-25-50-B	13.6	11.7	9.1	7.3	6.0	8.1	3.8
RSS-A-20-60-C	25.0	25.0	25.0	25.0	21.5	25.0	14.8
RSS-A-25-60-C	25.0	25.0	21.9	18.0	15.0	19.8	10.1
RSS-A-30-60-C	21.8	19.4	15.6	12.7	10.6	14.1	6.9

Florida Building Code 2017 EPA Load Rating - 3 second gust wind speeds (Use for Florida only)

Catalog Number	115	120	130	140	150	160	170	180
RSS-A-10-40-A	25.0	23.5	20.0	17.0	14.5	12.5	11.0	10.0
RSS-A-12-40-A	21.0	19.0	16.0	13.5	11.5	9.5	9.0	8.0
RSS-A-14-40-A	17.5	15.7	13.0	10.8	9.0	7.5	7.0	6.5
RSS-A-16-40-A	14.2	13.0	10.5	8.5	7.0	5.8	5.0	4.5
RSS-A-18-40-A	11.6	10.4	8.2	6.8	5.4	4.4	4.0	3.6
RSS-A-20-40-A	9.5	8.4	6.5	5.2	4.0	3.0	2.8	2.5
RSS-A-10-40-B	25.0	25.0	25.0	22.0	19.0	16.5	15.2	13.4
RSS-A-12-40-B	25.0	25.0	20.8	17.6	15.1	13.0	12.0	10.6
RSS-A-14-40-B	22.5	20.4	17.2	14.4	12.2	10.4	10.0	8.8
RSS-A-16-40-B	18.9	17.0	14.1	11.7	9.8	8.2	7.5	7.0
RSS-A-18-40-B	15.6	14.1	11.5	9.4	7.7	6.4	6.0	5.7
RSS-A-20-40-B	13.0	11.6	9.3	7.5	6.0	4.8	4.0	3.5
RSS-A-10-50-B	25.0	25.0	25.0	25.0	25.0	23.6	20.8	18.4
RSS-A-12-50-B	25.0	25.0	25.0	25.0	22.2	19.3	16.8	14.8
RSS-A-14-50-B	25.0	25.0	23.9	21.5	18.4	15.9	13.8	12.1
RSS-A-16-50-B	25.0	23.8	19.6	18.0	15.4	13.2	11.4	9.9
RSS-A-18-50-B	21.8	19.6	16.1	15.1	12.8	10.8	9.3	8.0
RSS-A-20-50-B	18.2	16.4	14.1	12.7	10.7	9.0	7.7	6.5
RSS-A-25-50-B	11.7	10.2	9.4	8.4	6.8	5.6	4.5	3.7
RSS-A-20-60-C	25.0	25.0	25.0	22.1	18.8	16.1	13.9	12.0
RSS-A-25-60-C	24.7	22.4	18.4	15.3	12.8	10.8	9.1	7.6
RSS-A-30-60-C	18.2	16.3	13.2	10.7	8.7	7.0	5.7	4.5

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RSS-A Series Poles

ROUND STRAIGHT STEEL

DATE:	LOCATION:
TYPE:	PROJECT:
CATALOG #:	

NOTES

Wind-speed Website disclaimer:
Current has no connection to the linked website and makes no representations as to its accuracy. While the information presented on this third party website provides a useful starting point for analyzing wind conditions, Current has not verified any of the information on this third party website and assumes no responsibility or liability for its accuracy. The material presented in the windspeed website should not be used or relied upon for any specific application without competent examination and verification of its accuracy, suitability and applicability by engineers or other licensed professionals. Current does not intend that the use of this information replace the sound judgment of such competent professionals, having experience and knowledge in the field of practice, nor to substitute for the standard of care required of such professionals in interpreting and applying the results of the windspeed report provided by this website. Users of the information from this third party website assume all liability arising from such use. Use of the output of these referenced websites do not imply approval by the governing building code bodies responsible for building code approval and interpretation for the building site described by latitude/longitude location in the windspeed report. http://windspeed.atcouncil.org

- Allowable EPA, to determine max pole loading weight, multiply allowable EPA by 30 lbs.
- The tables for allowable pole EPA are based on the ASCE 7-05 Wind Map or the Florida Region Wind Map for the 2010 Florida Building Code. The Wind Maps are intended only as a general guide and cannot be used in conjunction with other maps. Always consult local authorities to determine maximum wind velocities, gusting and unique wind conditions for each specific application
- Allowable pole EPA for jobsite wind conditions must be equal to or greater than the total EPA for fixtures, arms, and accessories to be assembled to the pole. Responsibility lies with the specifier for correct pole selection. Installation of poles without luminaires or attachment of any unauthorized accessories to poles is discouraged and shall void the manufacturer's warranty
- Wind speeds and listed EPAs are for ground mounted installations. Poles mounted on structures (such as bridges and buildings) must consider vibration and coefficient of height factors beyond this general guide; Consult local and federal standards
- Wind Induced Vibration brought on by steady, unidirectional winds and other unpredictable aerodynamic forces are not included in wind velocity ratings. Consult Current Lighting's Pole Vibration Application Guide for environmental risk factors and design considerations.
- Extreme Wind Events like, Hurricanes, Typhoons, Cyclones, or Tornadoes may expose poles to flying debris, wind shear or other detrimental effects not included in wind velocity ratings

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PROV2

ARCHITECTURAL AREA/SITE

DATE: LOCATION:

TYPE: PROJECT:

CATALOG #:

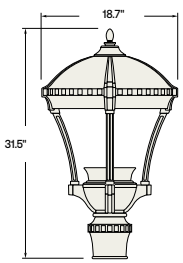
FEATURES

- Reliable, uniform, glare free illumination
- Types 1, 2, 3, 4W, 5Q, and 5W distributions
- Amber, 3000K, 4000K, 5000K CCT
- 0-10V dimming ready
- Integral Surge protection: 10k in parallel, 20k in series
- Upgrade Kits

PROVIDENCE®



3000K and warmer CCTs only



	WEIGHT	EPA
PROV2	29 lbs / 13.15 kg	1.33

SPECIFICATIONS

CONSTRUCTION

- All housing components aluminum 360 alloy, sealed with continuous silicone rubber gaskets
- Standard configurations do not require a flat lens, optional lenses are tempered glass
- All internal and external hardware is stainless steel
- Finish: fade and abrasion resistant, electrostatically applied, thermally cured, triglycidal isocyanurate (TGIC) polyester powdercoat
- Optical bezel finish to match the luminaire housing

LED/OPTICS

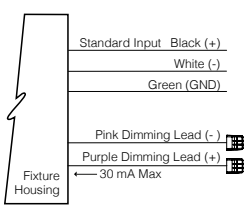
- Optical cartridge system consisting of a die cast heat sink, LED engine, TIR optics, gasket and bezel plate
- Optics are held in place without the use of adhesives
- Molded silicone gasket ensures a weather-proof seal around each individual LED.
- Features individual LED optical control based on high performance TIR optical designs
- House Side Shield is available on Standard and Clear Lens options except any Type 5 distribution. House Side Shield is not available for any distribution using a Diffused Lens

INSTALLATION

- Fixtures must be grounded in accordance with national, state and/or local electrical codes. Failure to do so may result in serious personal injury

ELECTRICAL

- Luminaires have UL recognized integral surge protection, and have a surge current rating of 10,000 Amps using the industry standard 8/20uSec wave and surge rating of 372J
- Drivers are UL recognized with an inrush current maximum of <20.0 Amps maximum at 230VAC
- 100%-1% dimming range. Fixture will be wired for low voltage 0-10V dimming control



- Driver and surge suppressor are mounted to a prewired tray with quick disconnects that may be removed from the gear compartment
- Surge protection: 10,000k in parallel, 20,000k in series

CONTROLS

- Egress adapter(s) will slip over a 4"/100mm DIA. pole with the luminaire or arm slipping over the adapter to add a total of 4.5"/114mm to the overall height. Adapter(s) are prewired, independently rotatable 359°, and have a cast access cover with an integral lens and lanyard
- Egress adapter will require an auxiliary 120 volt supply for operation of an integral MR16 lamp in the event of emergency. The lamp may be aimed and locked into position with an adjustment range of 15°-45°. Adapter will have a socket that accepts miniature bi-pin MR16 lamps up to 50 watts, lamp by others
- Photocell adapter includes a 7-Pin internal twist lock receptacle. Photocell by others

CERTIFICATIONS

- ETL listed under UL 1598 and CSA C22.2 No. 250.0-08 for wet locations

WARRANTY

- 5 year warranty

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PROV2

ARCHITECTURAL AREA/SITE

DATE: LOCATION:

TYPE: PROJECT:

CATALOG #:

ORDERING GUIDE

Example: PROV2-36L-325-3K7-4W-BL-SLA1-DF-HS-AD5-UNV

CATALOG #

ORDERING GUIDE

HOUSING

PROV2

Housing	LED Quantity	Lumen output	CCT/CRI	Distribution	Finish
PROV2 Providence Medium 2.0	**36L** 36 LED	**295** 450mA Microcore Equivalent	**AMB** Amber-595nm Peak [1]	**1** Type I	**BLS** Black Gloss Smooth
		325 325mA, 4500 Lumens	**3K7** 3000K, 70 CRI	**2** Type II	**BLT** Black Matte Textured
		510 510mA, 6500 Lumens	**4K7** 4000K, 70 CRI	**3** Type III	**DBS** Dark Bronze Gloss Smooth
		525 700mA Microcore Equivalent	**5K7** 5000K, 70 CRI	**4W** Type IV Wide	**DBT** Dark Bronze Matte Textured
		615 615mA, 7500 Lumens	Contact factory for options listed below	**5Q** Type V Square	**GTT** Graphite Matte Textured
			27K8 2700K, 80 CRI	**5W** Type V Wide	**LGS** Light Grey Gloss Smooth
			80 or 90 CRI for standard color temperatures		**LGT** Light Grey Matte Textured
					PSS Platinum Silver Gloss Smooth
					VGT Verde Green Matte Textured
					WHS White Gloss Smooth
					WHT White Matte Textured
					Color Option
					CC [4] Custom Color

Mounting		Optional Lens		Options		Mounting Options		Voltage
Pole Mount		**CL**	Clear Lens	**HS**	House Side Shield [3,5]	**AD5**	Adaptor-5" OD Pole	**UNV** 120-277V
STND_MNT [6]	Standard Mount	**DL**	Diffused Lens [2]	**PFN**	Brass Colored Finish	**PCA-C**	Photocontrol Adapter Contemporary	
PT23	2 3/8" tenon			**SPK**	Cast Spikes	**PCA-T**	Rotatable photocell housing. The housing slips over a 4"/100mm o.d. pole.a fixture slips over the 4"/100mm O.D. tenon. Includes an internal twist lock receptacle, and an access cover with integral lens and stainless steel tether. Adds 5"/125mm to the overall height of the pole/fixtureassembly. Prewire don the load side and line side for easy installation. Photocell by others	
PT3	3" tenon			**BPS**	Brass Colored Struts			
PT4	4" tenon			**SF**	Single Fuse (120, 277)			
Arm Mount				**DF**	Double Fuse (208, 240)	**EPA-C**	Egress Adapter Contemporary	
SLA1	4" pole or tenon							
TRA5U-4	4" pole or tenon							
TRA6U-4	4" pole or tenon							
TRA8U-4	4" pole or tenon							
TRA55-4	4" pole or tenon							
TRA5U-5	5" pole or tenon							
TRA6U-5	5" pole or tenon							
TRA8U-5	5" pole or tenon							
TRA55-5	5" pole or tenon							
TRA56-5	5" pole or tenon							
Wall Mount								
WMA55	Wall Mount							
WMA56	Wall Mount							
Pier Mount								
PM1	Pier Mount 1							
PM2	Pier Mount 2							
PM3	Pier Mount 3							

Notes:

1 Turtle Friendly

2 Diffused Lens is available only with T3 and T5W distribution

3 House side Shield is available only with T1, T2, T3 and T4W distributions

4 Consult factory for custom color, marine and corrosive finish options

5 Contact Factory for additional glare shield options

6 Slide over 4" OD Pole

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PROV2

ARCHITECTURAL AREA/SITE

DATE: LOCATION:

TYPE: PROJECT:

CATALOG #:

DELIVERED LUMENS

The table below shows the delivered lumens for the various lumen outputs and beam distributions. Use this chart in connection with the lumen factor (LF) capability to deliver any output required.

LED #	Drive Current	Lumen Package	Lens	Distribution	3000K 70CRI					4000K 70CRI					5000K 70CRI				
					Lumen	Bug Rating			Efficancy (Lm/W)	Lumen	Bug Rating			Efficancy (Lm/W)	Lumen	Bug Rating			Efficancy (Lm/W)
36	295	450mA Microcore Equivalent	None	1	3807	1	0	1	111.6	3960	1	0	1	116.1	4128	1	0	1	121.0
				2	3596	1	0	1	105.4	3740	1	0	1	109.7	3899	1	0	1	114.3
				3	3471	1	0	1	101.8	3611	1	0	1	105.9	3764	1	0	1	110.4
				4W	3501	1	0	1	102.7	3642	1	0	1	106.8	3796	1	0	1	111.3
				1-HS	2355	0	0	1	69.1	2450	0	0	1	71.8	2554	0	0	1	74.9
				2-HS	2049	0	0	1	60.1	2132	0	0	1	62.5	2222	0	0	1	65.2
				3-HS	1981	0	0	1	58.1	2061	0	0	1	60.4	2148	0	0	1	63.0
				4W-HS	2044	0	0	1	59.9	2126	0	0	1	62.3	2216	0	0	1	65.0
				5Q	3818	2	0	1	112.0	3971	2	0	1	116.5	4140	2	0	1	121.4
				5W	3529	2	0	1	103.5	3670	2	0	1	107.6	3826	2	0	1	112.2
			Clear	1-CL	3242	1	0	1	95.0	3373	1	0	1	98.8	3516	1	0	1	103.0
				2-CL	3062	1	0	1	89.7	3186	1	0	1	93.3	3321	1	0	1	97.3
				3-CL	2957	1	0	1	86.6	3075	1	0	1	90.1	3206	1	0	1	93.9
				4W-CL	2982	1	0	1	87.4	3102	1	0	1	90.9	3233	1	0	1	94.7
				1-CL-HS	2006	0	0	1	58.8	2087	0	0	1	61.1	2175	0	0	1	63.7
				2-CL-HS	1746	0	0	1	51.1	1816	0	0	1	53.2	1893	0	0	1	55.5
				3-CL-HS	1688	0	0	1	49.4	1755	0	0	1	51.4	1830	0	0	1	53.6
				4W-CL-HS	1740	0	0	1	51.0	1810	0	0	1	53.0	1887	0	0	1	55.3
				5Q-CL	3252	2	0	1	95.3	3382	2	0	1	99.1	3526	2	0	1	103.3
				5W-CL	3005	2	0	1	88.1	3126	2	0	1	91.6	3259	2	0	1	95.5
			Diffused	3-DL	2243	1	0	1	65.8	2334	1	0	1	68.4	2433	1	0	1	71.3
				5W-DL	2280	1	0	1	66.9	2372	1	0	1	69.6	2473	1	0	1	72.5
	325	4500	None	1	4147	1	0	1	110	4313	1	0	1	114	4496	1	0	1	118.9
				2	3917	1	0	1	104	4074	1	0	1	108	4247	1	0	1	112.3
				3	3781	1	0	1	100	3933	1	0	1	104	4100	1	0	1	108.4
				4W	3813	1	0	1	101	3967	1	0	2	105	4135	1	0	2	109.3
				1-HS	2566	0	0	1	68	2669	0	0	1	71	2782	0	0	1	73.6
				2-HS	2232	0	0	1	59	2322	0	0	1	61	2421	0	0	1	64.0
				3-HS	2158	0	0	1	57	2245	0	0	1	59	2340	0	0	1	61.9
				4W-HS	2226	0	0	1	59	2315	0	0	1	61	2414	0	0	1	63.8
				5Q	4158	2	0	1	110	4326	2	0	1	114	4509	2	0	1	119.2
				5W	3844	2	0	1	102	3998	2	0	1	106	4168	3	0	1	110.2
			Clear	1-CL	3532	1	0	1	93.4	3674	1	0	1	97.1	3829	1	0	1	101.3
				2-CL	3336	1	0	1	88.2	3470	1	0	1	91.7	3617	1	0	1	95.6
				3-CL	3220	1	0	1	85.2	3350	1	0	1	88.6	3492	1	0	1	92.3
				4W-CL	3248	1	0	1	85.9	3379	1	0	1	89.3	3522	1	0	1	93.1
				1-CL-HS	2185	0	0	1	57.8	2273	0	0	1	60.1	2369	0	0	1	62.6
				2-CL-HS	1901	0	0	1	50.3	1978	0	0	1	52.3	2062	0	0	1	54.5
				3-CL-HS	1838	0	0	1	48.6	1912	0	0	1	50.6	1993	0	0	1	52.7
				4W-CL-HS	1896	0	0	1	50.1	1972	0	0	1	52.1	2056	0	0	1	54.4
				5Q-CL	3542	2	0	1	93.6	3684	2	0	1	97.4	3840	2	0	1	101.5
				5W-CL	3274	2	0	1	86.6	3405	2	0	1	90.0	3550	2	0	1	93.9
			Diffused	3-DL	2459	1	0	1	65.0	2558	1	0	1	67.7	2666	1	0	1	70.7
				5W-DL	2469	1	0	1	65.3	2568	1	0	1	67.9	2677	1	0	1	70.9

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PROV2
ARCHITECTURAL AREA/SITE

DATE: LOCATION:

TYPE: PROJECT:

CATALOG #:

DELIVERED LUMENS (CONTINUED)

The table below shows the delivered lumens for the various lumen outputs and beam distributions. Use this chart in connection with the lumen factor (LF) capability to deliver any output required.

LED #	Drive Current	Lumen Package	Lens	Distribution	3000K 70CRI					4000K 70CRI					5000K 70CRI				
					Lumen	Bug Rating			Efficancy (Lm/W)	Lumen	Bug Rating			Efficancy (Lm/W)	Lumen	Bug Rating			Efficancy (Lm/W)
36	510	6500	None	1	6081	1	0	1	104.1	6326	1	0	1	108	6594	1	0	1	113
				2	5744	1	0	1	98.3	5975	1	0	1	102	6228	1	0	1	107
				3	5545	1	0	2	94.9	5768	1	0	2	99	6013	1	0	2	103
				4W	5593	1	0	2	95.7	5818	1	0	2	100	6064	1	0	2	104
				1-HS	3763	0	0	1	64.4	3914	0	0	1	67	4080	0	0	1	70
				2-HS	3274	0	0	1	56.1	3406	0	0	1	58	3550	0	0	1	61
				3-HS	3165	0	0	1	54.2	3292	0	0	1	56	3432	0	0	1	59
				4W-HS	3265	0	0	1	55.9	3396	0	0	1	58	3540	0	0	1	61
				5Q	6099	2	0	1	104.4	6344	2	0	1	109	6613	3	0	1	113
				5W	5637	3	0	1	96.5	5864	3	0	1	100	6112	3	0	1	105
			Clear	1-CL	5180	1	0	1	88.7	5388	1	0	1	92.2	5616	1	0	1	96.2
				2-CL	4892	1	0	1	83.8	5089	1	0	1	87.1	5305	1	0	1	90.8
				3-CL	4723	1	0	1	80.9	4913	1	0	1	84.1	5121	1	0	1	87.7
				4W-CL	4763	1	0	2	81.6	4955	1	0	2	84.8	5165	1	0	2	88.4
				1-CL-HS	3205	0	0	1	54.9	3334	0	0	1	57.1	3475	0	0	1	59.5
				2-CL-HS	2788	0	0	1	47.7	2901	0	0	1	49.7	3024	0	0	1	51.8
				3-CL-HS	2696	0	0	1	46.2	2804	0	0	1	48.0	2923	0	0	1	50.0
				4W-CL-HS	2780	0	0	1	47.6	2892	0	0	1	49.5	3015	0	0	1	51.6
				5Q-CL	5194	2	0	1	88.9	5403	2	0	1	92.5	5632	2	0	1	96.4
				5W-CL	4801	3	0	1	82.2	4994	3	0	1	85.5	5206	3	0	1	89.1
			Diffused	3-DL	3584	1	0	1	61.4	3728	1	0	1	63.8	3886	1	0	1	66.5
				5W-DL	3615	2	0	1	61.9	3760	2	0	1	64.4	3919	2	0	1	67.1
	525	700mA Microcore Equivalent	None	1	6235	1	0	1	103.6	6486	1	0	1	107.7	6761	1	0	1	112.3
				2	5889	1	0	1	97.8	6126	1	0	1	101.8	6386	1	0	1	106.1
				3	5686	1	0	2	94.4	5914	1	0	2	98.2	6165	1	0	2	102.4
				4W	5734	1	0	2	95.3	5965	1	0	2	99.1	6218	1	0	2	103.3
				1-HS	3858	0	0	1	64.1	4013	0	0	1	66.7	4183	0	0	1	69.5
				2-HS	3357	0	0	1	55.8	3492	0	0	1	58.0	3640	0	0	1	60.5
				3-HS	3245	0	0	1	53.9	3376	0	0	1	56.1	3519	0	0	1	58.5
				4W-HS	3347	0	0	1	55.6	3482	0	0	1	57.8	3629	1	0	1	60.3
				5Q	6253	2	0	1	103.9	6504	2	0	1	108.0	6780	3	0	1	112.6
				5W	5779	3	0	1	96.0	6012	3	0	1	99.9	6267	3	0	1	104.1
			Clear	1-CL	5311	1	0	1	88.2	5524	1	0	1	91.8	5758	1	0	1	95.7
				2-CL	5016	1	0	1	83.3	5218	1	0	1	86.7	5439	1	0	1	90.3
				3-CL	4842	1	0	1	80.4	5037	1	0	2	83.7	5251	1	0	2	87.2
				4W-CL	4884	1	0	2	81.1	5080	1	0	2	84.4	5296	1	0	2	88.0
				1-CL-HS	3286	0	0	1	54.6	3418	0	0	1	56.8	3563	0	0	1	59.2
				2-CL-HS	2859	0	0	1	47.5	2974	0	0	1	49.4	3100	0	0	1	51.5
				3-CL-HS	2764	0	0	1	45.9	2875	0	0	1	47.8	2997	0	0	1	49.8
				4W-CL-HS	2851	0	0	1	47.4	2965	0	0	1	49.3	3091	0	0	1	51.3
				5Q-CL	5326	2	0	1	88.5	5540	2	0	1	92.0	5775	2	0	1	95.9
				5W-CL	4922	3	0	1	81.8	5120	3	0	1	85.1	5337	3	0	1	88.7
			Diffused	3-DL	3675	1	0	1	61.0	3822	1	0	1	63.5	3984	1	0	1	66.2
				5W-DL	3735	2	0	1	62.0	3885	2	0	1	64.5	4050	2	0	1	67.3

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TYPE: PROJECT:

CATALOG #:

DELIVERED LUMENS (CONTINUED)

The table below shows the delivered lumens for the various lumen outputs and beam distributions. Use this chart in connection with the lumen factor (LF) capability to deliver any output required.

LED #	Drive Current	Lumen Package	Lens	Distribution	3000K 70CRI					4000K 70CRI					5000K 70CRI				
					Lumen	Bug Rating			Efficancy (Lm/W)	Lumen	Bug Rating			Efficancy (Lm/W)	Lumen	Bug Rating			Efficancy (Lm/W)
36	615	7500	None	1	7118	1	0	1	101.3	7404	1	0	1	105.4	7718	1	0	1	109.9
				2	6723	1	0	1	95.7	6994	1	0	2	99.6	7290	1	0	2	103.8
				3	6491	1	0	2	92.4	6752	1	0	2	96.1	7038	1	0	2	100.2
				4W	6546	1	0	2	93.2	6809	1	0	2	96.9	7098	1	0	2	101.0
				1-HS	4404	0	0	1	62.7	4581	0	0	1	65.2	4775	0	0	1	68.0
				2-HS	3832	0	0	1	54.5	3986	0	0	1	56.7	4155	0	0	1	59.1
				3-HS	3705	0	0	1	52.7	3854	0	0	1	54.9	4017	0	0	1	57.2
				4W-HS	3821	1	0	1	54.4	3975	1	0	1	56.6	4143	1	0	1	59.0
				5Q	7138	3	0	1	101.6	7425	3	0	1	105.7	7740	3	0	1	110.2
				5W	6598	3	0	1	93.9	6863	3	0	1	97.7	7154	3	0	1	101.8
			Clear	1-CL	6063	1	0	1	86.3	6306	1	0	1	89.8	6574	1	0	1	93.6
				2-CL	5726	1	0	1	81.5	5956	1	0	1	84.8	6209	1	0	1	88.4
				3-CL	5528	1	0	1	78.7	5750	1	0	1	81.9	5994	1	0	2	85.3
				4W-CL	5575	1	0	2	79.4	5800	1	0	2	82.6	6045	1	0	2	86.1
				1-CL-HS	3751	0	0	1	53.4	3902	0	0	1	55.5	4067	0	0	1	57.9
				2-CL-HS	3264	0	0	1	46.5	3395	0	0	1	48.3	3539	0	0	1	50.4
				3-CL-HS	3155	0	0	1	44.9	3282	0	0	1	46.7	3421	0	0	1	48.7
				4W-CL-HS	3254	0	0	1	46.3	3385	0	0	1	48.2	3529	0	0	1	50.2
				5Q-CL	6080	2	0	1	86.5	6324	2	0	1	90.0	6592	2	0	1	93.8
				5W-CL	5619	3	0	1	80.0	5845	3	0	1	83.2	6093	3	0	1	86.7
			Diffused	3-DL	4195	1	0	1	59.7	4364	1	0	1	62.1	4549	1	0	1	64.7
				5W-DL	4264	2	0	1	60.7	4436	2	0	1	63.1	4624	2	0	1	65.8

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PROV2
ARCHITECTURAL AREA/SITE

DATE: LOCATION:

TYPE: PROJECT:

CATALOG #:

PHOTOMETRY

PROV2-36L-615-4K7-1

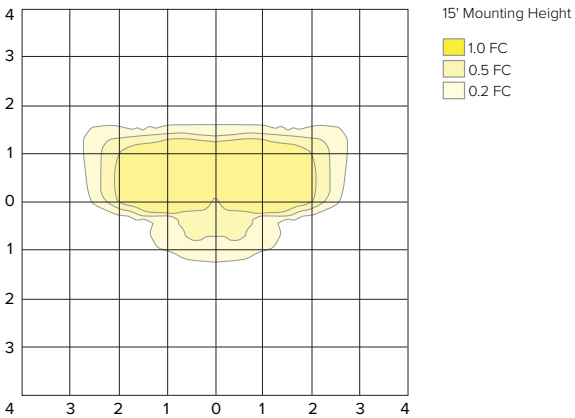
LUMINAIRE DATA

Description	**4000 Kelvin, 70CRI**
Delivered Lumens	**7405**
Watts	**70.25**
Efficacy	**105.4**
IES Type	**II**
BUG Rating	**B1-U0-G1**
Mounting Height	**15 ft**
Grid Scale	**15 ft**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	6403	86%
Downward House Side	1002	14%
Downward Total	7405	100%
Upward Street Side	0	0%
Upward House Side	0	0%
Upward Total	0	0%
Total Flux	7405	100%

ISOFOOT CANDLE PLOT



PROV2-36L-615-4K7-2

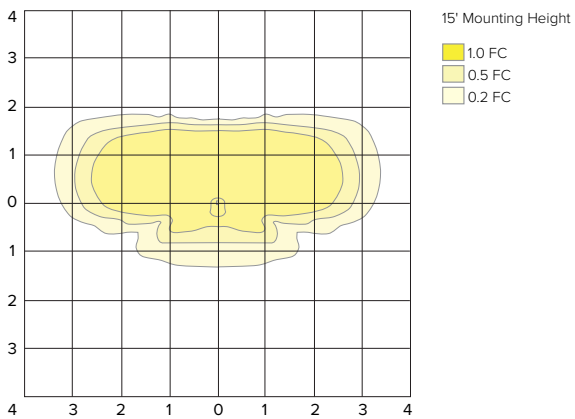
LUMINAIRE DATA

Description	**4000 Kelvin, 70CRI**
Delivered Lumens	**6994**
Watts	**70.25**
Efficacy	**99.6**
IES Type	**II**
BUG Rating	**B1-U0-G2**
Mounting Height	**15 ft**
Grid Scale	**15 ft**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	5665	81%
Downward House Side	1329	19%
Downward Total	6994	100%
Upward Street Side	0	0%
Upward House Side	0	0%
Upward Total	0	0%
Total Flux	6994	100%

ISOFOOT CANDLE PLOT



PROV2-36L-615-4K7-3

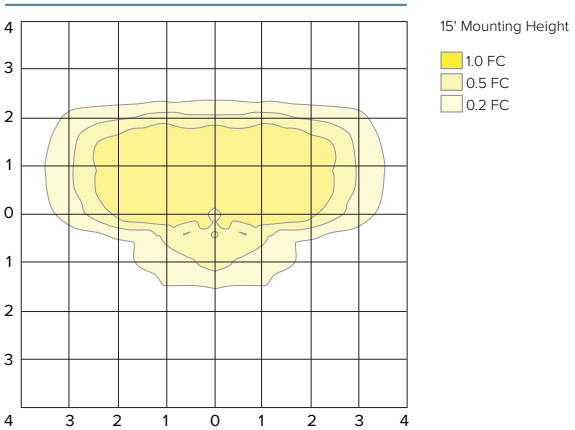
LUMINAIRE DATA

Description	**4000 Kelvin, 70CRI**
Delivered Lumens	**6752**
Watts	**70.25**
Efficacy	**96.1**
IES Type	**III**
BUG Rating	**B1-U0-G2**
Mounting Height	**15 ft**
Grid Scale	**15 ft**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	5552	82%
Downward House Side	1200	18%
Downward Total	6752	100%
Upward Street Side	0	0%
Upward House Side	0	0%
Upward Total	0	0%
Total Flux	6752	100%

ISOFOOT CANDLE PLOT



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ARCHITECTURAL AREA/SITE

DATE: LOCATION:

TYPE: PROJECT:

CATALOG #:

PHOTOMETRY

PROV2-36L-615-4K7-4W

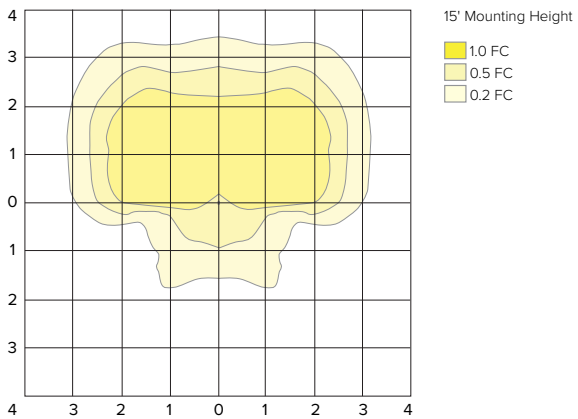
LUMINAIRE DATA

Description	**4000 Kelvin, 70CRI**
Delivered Lumens	**6809**
Watts	**70.25**
Efficacy	**96.9**
IES Type	**IV Wide**
BUG Rating	**B1-U0-G2**
Mounting Height	**15 ft**
Grid Scale	**15 ft**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	5802	85%
Downward House Side	1007	15%
Downward Total	6809	100%
Upward Street Side	0	0%
Upward House Side	0	0%
Upward Total	0	0%
Total Flux	6809	100%

ISOFOOT CANDLE PLOT



PROV2-36L-615-4K7-5Q

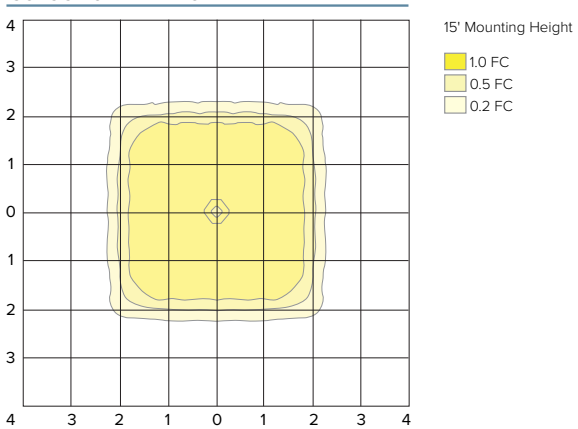
LUMINAIRE DATA

Description	**4000 Kelvin, 70CRI**
Delivered Lumens	**7425**
Watts	**70.25**
Efficacy	**105.7**
IES Type	**VS**
BUG Rating	**B3-U0-G1**
Mounting Height	**15 ft**
Grid Scale	**15 ft**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	3713	50%
Downward House Side	3713	50%
Downward Total	7425	100%
Upward Street Side	0	0%
Upward House Side	0	0%
Upward Total	0	0%
Total Flux	7425	100%

ISOFOOT CANDLE PLOT



PROV2-36L-615-4K7-5W

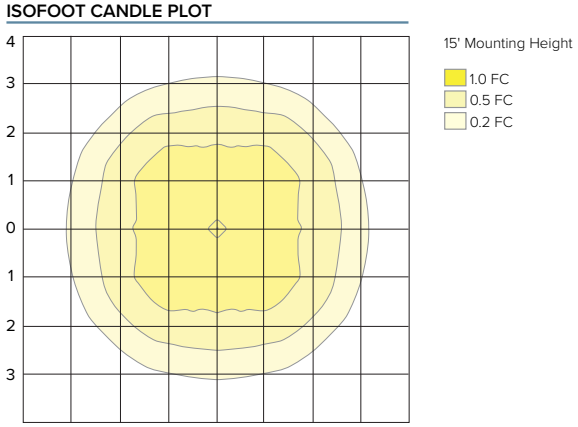
LUMINAIRE DATA

Description	**4000 Kelvin, 70CRI**
Delivered Lumens	**6863**
Watts	**70.25**
Efficacy	**97.7**
IES Type	**VS**
BUG Rating	**B3-U0-G1**
Mounting Height	**15 ft**
Grid Scale	**15 ft**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	3432	50%
Downward House Side	3432	50%
Downward Total	6863	100%
Upward Street Side	0	0%
Upward House Side	0	0%
Upward Total	0	0%
Total Flux	6863	100%

ISOFOOT CANDLE PLOT



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PROV2

ARCHITECTURAL AREA/SITE

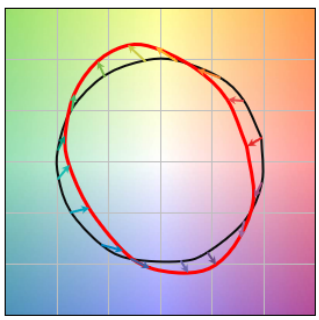
DATE: LOCATION:

TYPE: PROJECT:

CATALOG #:

TM-30 DATA

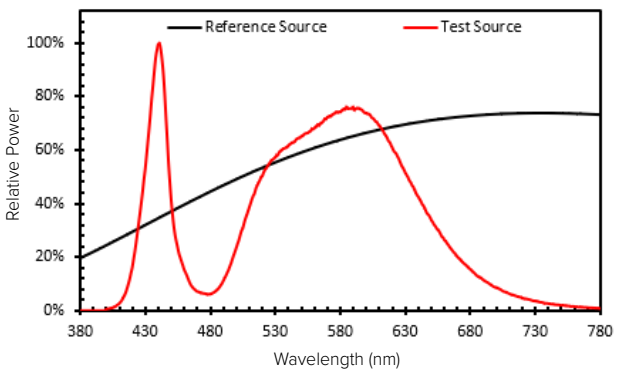
COLOR VECTOR GRAPHIC



TEST SOURCE

MBM TEST RESULTS	
CCT (K)	3947
CIE Ra	72
Duv	0.0004
x	0.3831
y	0.3793
Rf	68
Rg	99

SPECTRAL POWER DISTRIBUTION COMPARISON



ELECTRICAL DATA

Electrical											Dimming				
Light Engine	System Current	System Watts	Line Voltage		Amps AC				Min. Power Factor	Max THD (%)	Dimming Range	Source current out of 0-10V		Absolute voltage range on 0-10V (+)	
			VAC	HZ	120	208	240	277				Min	Max	Min	Max
36	295 mA	34.1	120-277	50/60	0.28	0.16	0.14	0.12	>0.9	20	10% to 100%	0mA	1mA	0V	10V
	325 mA	37.8			0.32	0.18	0.16	0.14							
	510 mA	58.4			0.49	0.28	0.24	0.21							
	525 mA	60.2			0.50	0.29	0.25	0.22							
	615 mA	70.3			0.59	0.34	0.29	0.25							

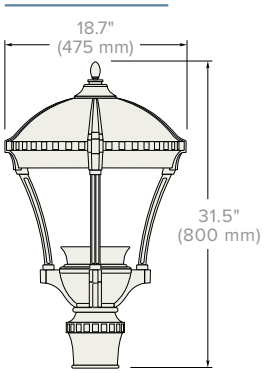
TM-21 LIFETIME CALCULATION - PROJECTED LUMEN MAINTENANCE (25°C / 77°F)						
HOURS	0	25,000	36,000	50,000	100,000	REPORTED L70
Projected Lumen Maintenance	100%	98.0%	96.9%	95.4%	90.5%	> 60,000

AMBER MULTIPLIER	
CCT	MULTIPLIER
5000K	1
AM	0.1727

2700K MULTIPLIER	
CCT	MULTIPLIER
5000K	1
2700K	0.897

LENS OPTION MULTIPLIER	
CLEAR LENS	DIFFUSED LENS
0.8517	0.6462

DIMENSIONS



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RSS-A Series Poles

ROUND STRAIGHT STEEL

DATE:	LOCATION:
TYPE:	PROJECT:
CATALOG #:	

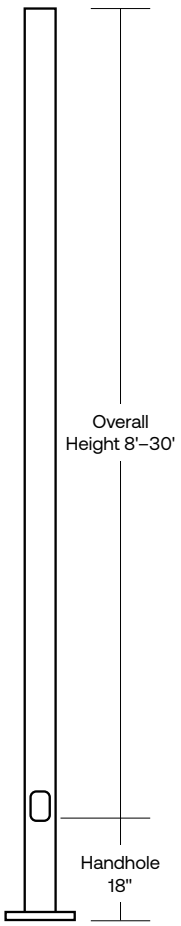
SPECIFICATIONS

CONSTRUCTION

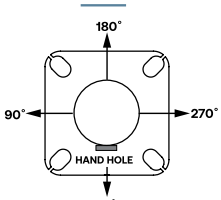
- Shaft: One-piece straight steel with round cross section, Minimum yield of 46,000 psi (ASTM-A500, Grade C); Longitudinal weld seam to appear flush in shaft wall; Steel base plate with axial bolt circle slots welded flush to pole shaft having minimum yield of 36,000 psi (ASTM A36)
- Base cover: Two-piece square aluminum base cover included standard
- Pole cap: Pole shaft supplied with removable cover when applicable; Tenon and post-top configurations also available
- Hand hole: Rectangular 3x5 steel hand hole frame (2.38" x 4.38" opening); Mounting provisions for grounding lug located behind gasketed cover
- Anchor bolts: Four galvanized anchor bolts provided per pole with minimum yield of 55,000 psi (ASTM F1554). Galvanized hardware with two washers and two nuts per bolt for leveling
  - Anchor bolt part numbers: 3/4 x 30 x 3 — TAB-30-M38
    1 x 36 x 4 — TAB-36-M38
- Durable thermoset polyester powder coat paint finish with nominal 3.0 mil thickness
- Powder paint prime applied over “white metal” steel substrate cleaned via mechanical shot blast method
- Decorative finish coat available in multiple standard colors; Custom colors available; RAL number preferable

INSTALLATION

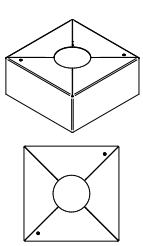
- Lighting installations for side and top mounting of luminaires with effective projected area (EPA) not exceeding maximum allowable loading of the specified pole in its installed geographic location



BASE



BASE COVER



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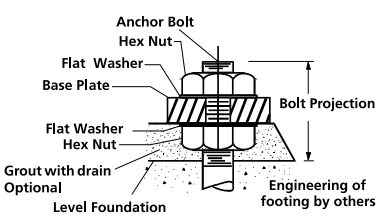
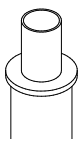
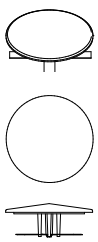


TENON



POLE CAP



Current

currentlighting.com/aal

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RSS-A Series Poles

ROUND STRAIGHT STEEL

DATE: | LOCATION:

TYPE: | PROJECT:

CATALOG #:

ORDERING INFORMATION

Example: RSS-A–25–50–B–2L–DBT–UL

RSS-A –

Series	Height	Shaft	Thickness	Mounting	Finish	Options
RSS-A Round Straight Steel Pole AAL	Reference page 3 Ordering matrix **15**	Reference page 3 Ordering matrix **40**	Reference page 3 Ordering matrix **A** - .125" Wall B - .188" Wall C - .250" Wall	**1** Single arm mount **2** Two fixtures at 180° **2L** Two fixtures at 90° **3T** Three fixtures at 90° **3Y** Three fixtures at 120° **4** Four fixtures at 90° **TA** Tenon (2.375" OD) **TB** Tenon (2.875" OD) **TC** Tenon (3.5" OD) **OT** Open Top (includes pole cap)	**BLT** Black Matte Textured **BLS** Black Gloss Smooth **DBT** Dark Bronze Matte Textured **DBS** Dark Bronze Gloss Smooth **GTT** Graphite Matte Textured **LGT** Light Grey Matte Textured **LGS** Light Grey Gloss Smooth **PSS** Platinum Silver Smooth **WHT** White Matte Textured **WHS** White Gloss Smooth **VGT** Verde Green Textured **Color Option** **CC**[1] Custom Color	**GFI**[2] 20 Amp GFCI Receptacle and Cover **EHH**[2] Extra Handhole **C05**[2] .5" Coupling **C07**[2] .75" Coupling **C20**[2] 2" Coupling **MPB**[2] Mid-pole Luminaire Bracket **VM2**[3] 2nd mode vibration dampener **LAB** Less Anchor Bolts **UL** UL Certified **RBC** Round Base Cover

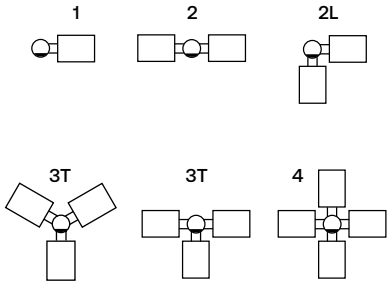
Accessories (Order Separately)

- ☐ **VM2S08** Field-installed 2nd mode vibration dampener - 8 ft
- ☐ **VM2S12** Field-installed 2nd mode vibration dampener - 12 ft
- ☐ **VM2S16** Field-installed 2nd mode vibration dampener - 16 ft
- ☐ **VM2S20** Field-installed 2nd mode vibration dampener - 20 ft
- ☐ **VM2S25** Field-installed 2nd mode vibration dampener - 25 ft

1 Custom colors available; RAL number preferable
2 Specify option location using logic found on page 3 (Option Orientation)
3 There will be a weld witness mark on the side of the pole with the Factory installed VM2

MOUNTING ORIENTATION

○ ◄—— Denotes handhole location



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RSS-A Series Poles

ROUND STRAIGHT STEEL

DATE: | LOCATION:

TYPE: | PROJECT:

CATALOG #:

ORDERING INFORMATION (CONTINUED)

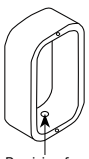
CATALOG NUMBER	HEIGHT		NOMINAL SHAFT DIMENSIONS	WALL THICKNESS	BOLT CIRCLE (SUGGESTED)	BOLT CIRCLE (RANGE)	BASE PLATE SQUARE	BASE PLATE THICKNESS	ANCHOR BOLT SIZE	BOLT PROJECTION	POLE WEIGHT
	FEET	METERS									
RSS-A-10-40-A	10	3	4" round	0.125"	9"	7.5" - 10"	9"	0.75"	3/4" x 30" x 3"	3.5"	52
RSS-A-12-40-A	12	3.7	4" round	0.125"	9"	7.5" - 10"	9"	0.75"	3/4" x 30" x 3"	3.5"	62
RSS-A-14-40-A	14	4.3	4" round	0.125"	9"	7.5" - 10"	9"	0.75"	3/4" x 30" x 3"	3.5"	72
Cut to 15' RSS-A-16-40-A	16	4.9	4" round	0.125"	9"	7.5" - 10"	9"	0.75"	3/4" x 30" x 3"	3.5"	83
RSS-A-18-40-A	18	5.5	4" round	0.125"	9"	7.5" - 10"	9"	0.75"	3/4" x 30" x 3"	3.5"	93
RSS-A-20-40-A	20	6.1	4" round	0.125"	9"	7.5" - 10"	9"	0.75"	3/4" x 30" x 3"	3.5"	103
RSS-A-10-40-B	10	3	4" round	0.188"	9"	7.5" - 10"	9"	0.75"	3/4" x 30" x 3"	3.5"	77
RSS-A-12-40-B	12	3.7	4" round	0.188"	9"	7.5" - 10"	9"	0.75"	3/4" x 30" x 3"	3.5"	92
RSS-A-14-40-B	14	4.3	4" round	0.188"	9"	7.5" - 10"	9"	0.75"	3/4" x 30" x 3"	3.5"	107
RSS-A-16-40-B	16	4.9	4" round	0.188"	9"	7.5" - 10"	9"	0.75"	3/4" x 30" x 3"	3.5"	122
RSS-A-18-40-B	18	5.5	4" round	0.188"	9"	7.5" - 10"	9"	0.75"	3/4" x 30" x 3"	3.5"	138
RSS-A-20-40-B	20	6.1	4" round	0.188"	9"	7.5" - 10"	9"	0.75"	3/4" x 30" x 3"	3.5"	153
RSS-A-10-50-B	10	3	5" round	0.188"	10"	8.0" - 11"	10.25"	1"	1" x 36" x 4"	4.5"	97
RSS-A-12-50-B	12	3.7	5" round	0.188"	10"	8.0" - 11"	10.25"	1"	1" x 36" x 4"	4.5"	116
RSS-A-14-50-B	14	4.3	5" round	0.188"	10"	8.0" - 11"	10.25"	1"	1" x 36" x 4"	4.5"	135
RSS-A-16-50-B	16	4.9	5" round	0.188"	10"	8.0" - 11"	10.25"	1"	1" x 36" x 4"	4.5"	155
RSS-A-18-50-B	18	5.5	5" round	0.188"	10"	8.0" - 11"	10.25"	1"	1" x 36" x 4"	4.5"	174
RSS-A-20-50-B	20	6.1	5" round	0.188"	10"	8.0" - 11"	10.25"	1"	1" x 36" x 4"	4.5"	194
RSS-A-25-50-B	25	7.6	5" round	0.188"	10"	8.0" - 11"	10.25"	1"	1" x 36" x 4"	4.5"	242
RSS-A-20-60-C	20	6.1	6" round	0.250"	10"	9.0" - 11"	10.25"	1"	1" x 36" x 4"	4.5"	307
RSS-A-25-60-C	25	7.6	6" round	0.250"	10"	9.0" - 11"	10.25"	1"	1" x 36" x 4"	4.5"	384
RSS-A-30-60-C	30	9.1	6" round	0.250"	10"	9.0" - 11"	10.25"	1"	1" x 36" x 4"	4.5"	461

Notes:

- Factory supplied template must be used when setting anchor bolts. Current will deny any claim for incorrect anchorage placement resulting from failure to use factory supplied template and anchor bolts.
- For more information about pole vibration and vibration dampeners, please consult factory.
- Unwrap poles immediately upon receipt to avoid condensation build up and possible corrosion.

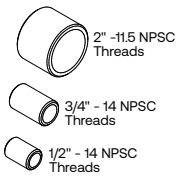
[1] There will be a weld witness mark on the side of the pole with the Factory installed VM2.

EHH
Extra handhole

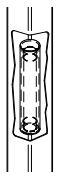


Provision for Grounding

C05 / C07 / C20
Coupling



VM2[1]
2nd mode vibration dampener



Factory installed, internal dampener designed to alter pole resonance to reduce movement and material fatigue caused by 2nd mode vibration.

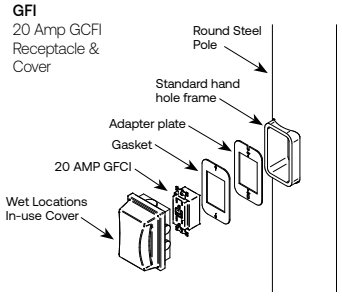
VM2SXX
Field-installed 2nd mode vibration dampener



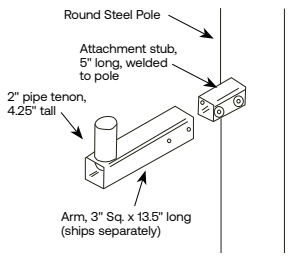
VM2S08 – 8'
VM2S12 – 12'
VM2S16 – 16'
VM2S20 – 20'
VM2S24 – 24'

Field installed, internal dampener designed to alter pole resonance to reduce movement and material fatigue caused by 2nd mode vibration.

GFI
20 Amp GCFI Receptacle & Cover



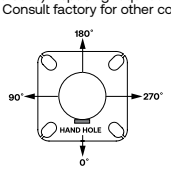
MPB
Mid Pole Bracket

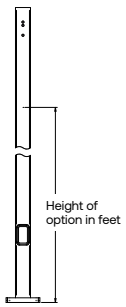


Option Orientation

Follow the logic below when ordering location specific options. For each option, include its orientation (in degrees) and its height (in feet).

Example: Option C05 should be ordered as: RSS-B-20-40-A-TA-DBT-C05-0-15 (.5" coupling on the handhole/arm side of pole, 15' up from the pole base) 1' spacing required between option. Consult factory for other configurations.





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RSS-A Series Poles

ROUND STRAIGHT STEEL

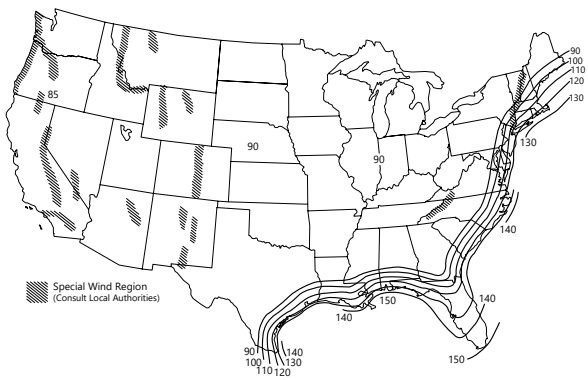
DATE: | LOCATION:

TYPE: | PROJECT:

CATALOG #:

WIND MAPS

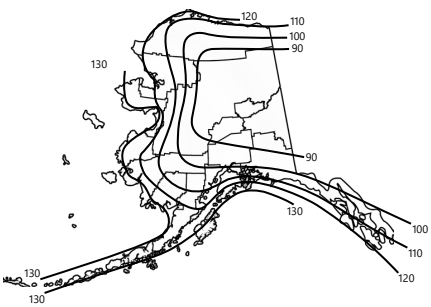
ASCE7-05 WIND MAP



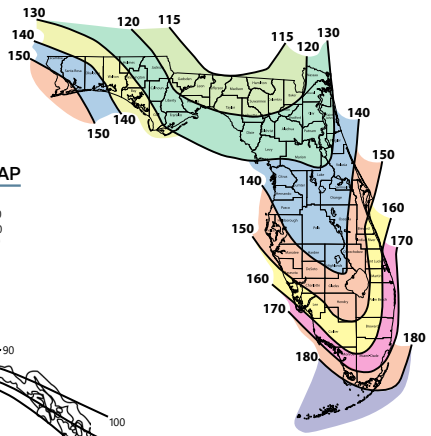
HAWAII – 105 mph
PUERTO RICO – 145 mph

*Printed with permission from ASCE

ALASKA REGION WIND MAP



FLORIDA REGION WIND MAP



Florida region wind map above is based upon 3-second gust winds and the 2017 Florida Building Code.

ASCE 7-05 wind map EPA Load Rating - 3 second gust wind speeds (Use for all locations except Florida)

Catalog Number	85	90	100	110	120	105	145
RSS-A-10-40-A	21.0	18.7	15.0	12.2	10.1	13.5	6.8
RSS-A-12-40-A	16.8	14.8	11.8	9.5	7.7	10.5	5.1
RSS-A-14-40-A	13.6	12.0	9.4	7.4	5.9	8.3	3.9
RSS-A-16-40-A	11.1	9.7	7.5	5.8	4.5	6.6	2.9
RSS-A-18-40-A	9.0	7.8	5.8	4.4	3.3	5.1	2.0
RSS-A-20-40-A	7.2	6.2	4.5	3.1	2.2	3.8	1.2
RSS-A-10-40-B	25.0	25.0	22.4	18.4	15.3	20.2	10.4
RSS-A-12-40-B	25.0	22.3	17.9	14.5	12.0	16.1	8.1
RSS-A-14-40-B	20.6	18.3	14.6	11.7	9.6	13.0	6.4
RSS-A-16-40-B	17.2	15.2	12.0	9.5	7.7	10.7	5.1
RSS-A-18-40-B	14.3	12.6	9.8	7.6	6.1	8.6	3.9
RSS-A-20-40-B	11.8	10.3	7.9	6.0	4.7	6.9	2.9
RSS-A-10-50-B	25.0	25.0	25.0	25.0	25.0	25.0	17.7
RSS-A-12-50-B	25.0	25.0	25.0	24.8	20.8	25.0	14.3
RSS-A-14-50-B	25.0	25.0	24.7	20.5	17.2	22.4	11.7
RSS-A-16-50-B	25.0	25.0	20.7	17.1	14.3	18.8	9.7
RSS-A-18-50-B	24.5	21.6	17.3	14.3	11.9	15.7	8.0
RSS-A-20-50-B	20.6	18.1	14.4	11.8	9.8	13.0	6.5
RSS-A-25-50-B	13.6	11.7	9.1	7.3	6.0	8.1	3.8
RSS-A-20-60-C	25.0	25.0	25.0	25.0	21.5	25.0	14.8
RSS-A-25-60-C	25.0	25.0	21.9	18.0	15.0	19.8	10.1
RSS-A-30-60-C	21.8	19.4	15.6	12.7	10.6	14.1	6.9

Florida Building Code 2017 EPA Load Rating - 3 second gust wind speeds (Use for Florida only)

Catalog Number	115	120	130	140	150	160	170	180
RSS-A-10-40-A	25.0	23.5	20.0	17.0	14.5	12.5	11.0	10.0
RSS-A-12-40-A	21.0	19.0	16.0	13.5	11.5	9.5	9.0	8.0
RSS-A-14-40-A	17.5	15.7	13.0	10.8	9.0	7.5	7.0	6.5
RSS-A-16-40-A	14.2	13.0	10.5	8.5	7.0	5.8	5.0	4.5
RSS-A-18-40-A	11.6	10.4	8.2	6.8	5.4	4.4	4.0	3.6
RSS-A-20-40-A	9.5	8.4	6.5	5.2	4.0	3.0	2.8	2.5
RSS-A-10-40-B	25.0	25.0	25.0	22.0	19.0	16.5	15.2	13.4
RSS-A-12-40-B	25.0	25.0	20.8	17.6	15.1	13.0	12.0	10.6
RSS-A-14-40-B	22.5	20.4	17.2	14.4	12.2	10.4	10.0	8.8
RSS-A-16-40-B	18.9	17.0	14.1	11.7	9.8	8.2	7.5	7.0
RSS-A-18-40-B	15.6	14.1	11.5	9.4	7.7	6.4	6.0	5.7
RSS-A-20-40-B	13.0	11.6	9.3	7.5	6.0	4.8	4.0	3.5
RSS-A-10-50-B	25.0	25.0	25.0	25.0	25.0	23.6	20.8	18.4
RSS-A-12-50-B	25.0	25.0	25.0	25.0	22.2	19.3	16.8	14.8
RSS-A-14-50-B	25.0	25.0	23.9	21.5	18.4	15.9	13.8	12.1
RSS-A-16-50-B	25.0	23.8	19.6	18.0	15.4	13.2	11.4	9.9
RSS-A-18-50-B	21.8	19.6	16.1	15.1	12.8	10.8	9.3	8.0
RSS-A-20-50-B	18.2	16.4	14.1	12.7	10.7	9.0	7.7	6.5
RSS-A-25-50-B	11.7	10.2	9.4	8.4	6.8	5.6	4.5	3.7
RSS-A-20-60-C	25.0	25.0	25.0	22.1	18.8	16.1	13.9	12.0
RSS-A-25-60-C	24.7	22.4	18.4	15.3	12.8	10.8	9.1	7.6
RSS-A-30-60-C	18.2	16.3	13.2	10.7	8.7	7.0	5.7	4.5

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RSS-A Series Poles

ROUND STRAIGHT STEEL

DATE:	LOCATION:
TYPE:	PROJECT:
CATALOG #:	

NOTES

Wind-speed Website disclaimer:
Current has no connection to the linked website and makes no representations as to its accuracy. While the information presented on this third party website provides a useful starting point for analyzing wind conditions, Current has not verified any of the information on this third party website and assumes no responsibility or liability for its accuracy. The material presented in the windspeed website should not be used or relied upon for any specific application without competent examination and verification of its accuracy, suitability and applicability by engineers or other licensed professionals. Current does not intend that the use of this information replace the sound judgment of such competent professionals, having experience and knowledge in the field of practice, nor to substitute for the standard of care required of such professionals in interpreting and applying the results of the windspeed report provided by this website. Users of the information from this third party website assume all liability arising from such use. Use of the output of these referenced websites do not imply approval by the governing building code bodies responsible for building code approval and interpretation for the building site described by latitude/longitude location in the windspeed report. http://windspeed.atcouncil.org

- Allowable EPA, to determine max pole loading weight, multiply allowable EPA by 30 lbs.
- The tables for allowable pole EPA are based on the ASCE 7-05 Wind Map or the Florida Region Wind Map for the 2010 Florida Building Code. The Wind Maps are intended only as a general guide and cannot be used in conjunction with other maps. Always consult local authorities to determine maximum wind velocities, gusting and unique wind conditions for each specific application
- Allowable pole EPA for jobsite wind conditions must be equal to or greater than the total EPA for fixtures, arms, and accessories to be assembled to the pole. Responsibility lies with the specifier for correct pole selection. Installation of poles without luminaires or attachment of any unauthorized accessories to poles is discouraged and shall void the manufacturer's warranty
- Wind speeds and listed EPAs are for ground mounted installations. Poles mounted on structures (such as bridges and buildings) must consider vibration and coefficient of height factors beyond this general guide; Consult local and federal standards
- Wind Induced Vibration brought on by steady, unidirectional winds and other unpredictable aerodynamic forces are not included in wind velocity ratings. Consult Current Lighting's Pole Vibration Application Guide for environmental risk factors and design considerations.
- Extreme Wind Events like, Hurricanes, Typhoons, Cyclones, or Tornadoes may expose poles to flying debris, wind shear or other detrimental effects not included in wind velocity ratings

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PROV2

ARCHITECTURAL AREA/SITE

DATE: LOCATION:

TYPE: PROJECT:

CATALOG #:

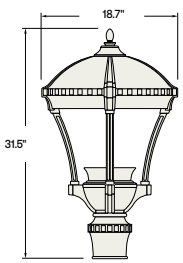
FEATURES

- Reliable, uniform, glare free illumination
- Types 1, 2, 3, 4W, 5Q, and 5W distributions
- Amber, 3000K, 4000K, 5000K CCT
- 0-10V dimming ready
- Integral Surge protection: 10k in parallel, 20k in series
- Upgrade Kits

PROVIDENCE®



3000K and warmer CCTs only



	WEIGHT	EPA
PROV2	29 lbs / 13.15 kg	1.33

SPECIFICATIONS

CONSTRUCTION

- All housing components aluminum 360 alloy, sealed with continuous silicone rubber gaskets
- Standard configurations do not require a flat lens, optional lenses are tempered glass
- All internal and external hardware is stainless steel
- Finish: fade and abrasion resistant, electrostatically applied, thermally cured, triglycidal isocyanurate (TGIC) polyester powdercoat
- Optical bezel finish to match the luminaire housing

LED/OPTICS

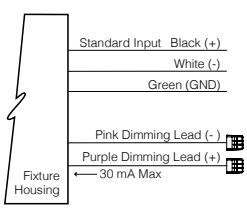
- Optical cartridge system consisting of a die cast heat sink, LED engine, TIR optics, gasket and bezel plate
- Optics are held in place without the use of adhesives
- Molded silicone gasket ensures a weather-proof seal around each individual LED.
- Features individual LED optical control based on high performance TIR optical designs
- House Side Shield is available on Standard and Clear Lens options except any Type 5 distribution. House Side Shield is not available for any distribution using a Diffused Lens

INSTALLATION

- Fixtures must be grounded in accordance with national, state and/or local electrical codes. Failure to do so may result in serious personal injury

ELECTRICAL

- Luminaires have UL recognized integral surge protection, and have a surge current rating of 10,000 Amps using the industry standard 8/20uSec wave and surge rating of 372J
- Drivers are UL recognized with an inrush current maximum of <20.0 Amps maximum at 230VAC
- 100%-1% dimming range. Fixture will be wired for low voltage 0-10V dimming control



- Driver and surge suppressor are mounted to a prewired tray with quick disconnects that may be removed from the gear compartment
- Surge protection: 10,000k in parallel, 20,000k in series

CONTROLS

- Egress adapter(s) will slip over a 4"/100mm DIA. pole with the luminaire or arm slipping over the adapter to add a total of 4.5"/114mm to the overall height. Adapter(s) are prewired, independently rotatable 359°, and have a cast access cover with an integral lens and lanyard
- Egress adapter will require an auxiliary 120 volt supply for operation of an integral MR16 lamp in the event of emergency. The lamp may be aimed and locked into position with an adjustment range of 15°-45°. Adapter will have a socket that accepts miniature bi-pin MR16 lamps up to 50 watts, lamp by others
- Photocell adapter includes a 7-Pin internal twist lock receptacle. Photocell by others

CERTIFICATIONS

- ETL listed under UL 1598 and CSA C22.2 No. 250.0-08 for wet locations

WARRANTY

- 5 year warranty

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PROV2

ARCHITECTURAL AREA/SITE

DATE: LOCATION:

TYPE: PROJECT:

CATALOG #:

ORDERING GUIDE

Example: PROV2-36L-325-3K7-4W-BL-SLA1-DF-HS-AD5-UNV

CATALOG #

ORDERING GUIDE

HOUSING

PROV2

Housing	LED Quantity	Lumen output	CCT/CRI	Distribution	Finish
PROV2 Providence Medium 2.0	**36L** 36 LED	**295** 450mA Microcore Equivalent	**AMB** Amber-595nm Peak [1]	**1** Type I	**BLS** Black Gloss Smooth
		325 325mA, 4500 Lumens	**3K7** 3000K, 70 CRI	**2** Type II	**BLT** Black Matte Textured
		510 510mA, 6500 Lumens	**4K7** 4000K, 70 CRI	**3** Type III	**DBS** Dark Bronze Gloss Smooth
		525 700mA Microcore Equivalent	**5K7** 5000K, 70 CRI	**4W** Type IV Wide	**DBT** Dark Bronze Matte Textured
		615 615mA, 7500 Lumens	Contact factory for options listed below	**5Q** Type V Square	**GTT** Graphite Matte Textured
			27K8 2700K, 80 CRI	**5W** Type V Wide	**LGS** Light Grey Gloss Smooth
			80 or 90 CRI for standard color temperatures		**LGT** Light Grey Matte Textured
					PSS Platinum Silver Gloss Smooth
					VGT Verde Green Matte Textured
					WHS White Gloss Smooth
					WHT White Matte Textured
					Color Option
					CC [4] Custom Color

Mounting		Optional Lens		Options		Mounting Options		Voltage	
Pole Mount		**CL**	Clear Lens	**HS**	House Side Shield [3,5]	**AD5**	Adaptor-5" OD Pole	**UNV**	120-277V
STND_MNT [6]	Standard Mount	**DL**	Diffused Lens [2]	**PFN**	Brass Colored Finish	**PCA-C**	Photocontrol Adapter Contemporary		
PT23	2 3/8" tenon			**SPK**	Cast Spikes	**PCA-T**	Rotatable photocell housing. The housing slips over a 4"/100mm o.d. pole.a fixture slips over the 4"/100mm O.D. tenon. Includes an internal twist lock receptacle, and an access cover with integral lens and stainless steel tether. Adds 5"/125mm to the overall height of the pole/fixtureassembly. Prewire don the load side and line side for easy installation. Photocell by others		
PT3	3" tenon			**BPS**	Brass Colored Struts				
PT4	4" tenon			**SF**	Single Fuse (120, 277)				
Arm Mount				**DF**	Double Fuse (208, 240)	**EPA-C**	Egress Adapter Contemporary		
SLA1	4" pole or tenon								
TRA5U-4	4" pole or tenon								
TRA6U-4	4" pole or tenon								
TRA8U-4	4" pole or tenon								
TRA55-4	4" pole or tenon								
TRA5U-5	5" pole or tenon								
TRA6U-5	5" pole or tenon								
TRA8U-5	5" pole or tenon								
TRA55-5	5" pole or tenon								
TRA56-5	5" pole or tenon								
Wall Mount									
WMA55	Wall Mount								
WMA56	Wall Mount								
Pier Mount									
PM1	Pier Mount 1								
PM2	Pier Mount 2								
PM3	Pier Mount 3								

Notes:

1 Turtle Friendly

2 Diffused Lens is available only with T3 and T5W distribution

3 House side Shield is available only with T1, T2, T3 and T4W distributions

4 Consult factory for custom color, marine and corrosive finish options

5 Contact Factory for additional glare shield options

6 Slide over 4" OD Pole

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DELIVERED LUMENS

The table below shows the delivered lumens for the various lumen outputs and beam distributions. Use this chart in connection with the lumen factor (LF) capability to deliver any output required.

LED #	Drive Current	Lumen Package	Lens	Distribution	3000K 70CRI					4000K 70CRI					5000K 70CRI				
					Lumen	Bug Rating			Efficancy (Lm/W)	Lumen	Bug Rating			Efficancy (Lm/W)	Lumen	Bug Rating			Efficancy (Lm/W)
36	295	450mA Microcore Equivalent	None	1	3807	1	0	1	111.6	3960	1	0	1	116.1	4128	1	0	1	121.0
				2	3596	1	0	1	105.4	3740	1	0	1	109.7	3899	1	0	1	114.3
				3	3471	1	0	1	101.8	3611	1	0	1	105.9	3764	1	0	1	110.4
				4W	3501	1	0	1	102.7	3642	1	0	1	106.8	3796	1	0	1	111.3
				1-HS	2355	0	0	1	69.1	2450	0	0	1	71.8	2554	0	0	1	74.9
				2-HS	2049	0	0	1	60.1	2132	0	0	1	62.5	2222	0	0	1	65.2
				3-HS	1981	0	0	1	58.1	2061	0	0	1	60.4	2148	0	0	1	63.0
				4W-HS	2044	0	0	1	59.9	2126	0	0	1	62.3	2216	0	0	1	65.0
				5Q	3818	2	0	1	112.0	3971	2	0	1	116.5	4140	2	0	1	121.4
				5W	3529	2	0	1	103.5	3670	2	0	1	107.6	3826	2	0	1	112.2
			Clear	1-CL	3242	1	0	1	95.0	3373	1	0	1	98.8	3516	1	0	1	103.0
				2-CL	3062	1	0	1	89.7	3186	1	0	1	93.3	3321	1	0	1	97.3
				3-CL	2957	1	0	1	86.6	3075	1	0	1	90.1	3206	1	0	1	93.9
				4W-CL	2982	1	0	1	87.4	3102	1	0	1	90.9	3233	1	0	1	94.7
				1-CL-HS	2006	0	0	1	58.8	2087	0	0	1	61.1	2175	0	0	1	63.7
				2-CL-HS	1746	0	0	1	51.1	1816	0	0	1	53.2	1893	0	0	1	55.5
				3-CL-HS	1688	0	0	1	49.4	1755	0	0	1	51.4	1830	0	0	1	53.6
				4W-CL-HS	1740	0	0	1	51.0	1810	0	0	1	53.0	1887	0	0	1	55.3
				5Q-CL	3252	2	0	1	95.3	3382	2	0	1	99.1	3526	2	0	1	103.3
				5W-CL	3005	2	0	1	88.1	3126	2	0	1	91.6	3259	2	0	1	95.5
			Diffused	3-DL	2243	1	0	1	65.8	2334	1	0	1	68.4	2433	1	0	1	71.3
				5W-DL	2280	1	0	1	66.9	2372	1	0	1	69.6	2473	1	0	1	72.5
	325	4500	None	1	4147	1	0	1	110	4313	1	0	1	114	4496	1	0	1	118.9
				2	3917	1	0	1	104	4074	1	0	1	108	4247	1	0	1	112.3
				3	3781	1	0	1	100	3933	1	0	1	104	4100	1	0	1	108.4
				4W	3813	1	0	1	101	3967	1	0	2	105	4135	1	0	2	109.3
				1-HS	2566	0	0	1	68	2669	0	0	1	71	2782	0	0	1	73.6
				2-HS	2232	0	0	1	59	2322	0	0	1	61	2421	0	0	1	64.0
				3-HS	2158	0	0	1	57	2245	0	0	1	59	2340	0	0	1	61.9
				4W-HS	2226	0	0	1	59	2315	0	0	1	61	2414	0	0	1	63.8
				5Q	4158	2	0	1	110	4326	2	0	1	114	4509	2	0	1	119.2
				5W	3844	2	0	1	102	3998	2	0	1	106	4168	3	0	1	110.2
			Clear	1-CL	3532	1	0	1	93.4	3674	1	0	1	97.1	3829	1	0	1	101.3
				2-CL	3336	1	0	1	88.2	3470	1	0	1	91.7	3617	1	0	1	95.6
				3-CL	3220	1	0	1	85.2	3350	1	0	1	88.6	3492	1	0	1	92.3
				4W-CL	3248	1	0	1	85.9	3379	1	0	1	89.3	3522	1	0	1	93.1
				1-CL-HS	2185	0	0	1	57.8	2273	0	0	1	60.1	2369	0	0	1	62.6
				2-CL-HS	1901	0	0	1	50.3	1978	0	0	1	52.3	2062	0	0	1	54.5
				3-CL-HS	1838	0	0	1	48.6	1912	0	0	1	50.6	1993	0	0	1	52.7
				4W-CL-HS	1896	0	0	1	50.1	1972	0	0	1	52.1	2056	0	0	1	54.4
				5Q-CL	3542	2	0	1	93.6	3684	2	0	1	97.4	3840	2	0	1	101.5
				5W-CL	3274	2	0	1	86.6	3405	2	0	1	90.0	3550	2	0	1	93.9
			Diffused	3-DL	2459	1	0	1	65.0	2558	1	0	1	67.7	2666	1	0	1	70.7
				5W-DL	2469	1	0	1	65.3	2568	1	0	1	67.9	2677	1	0	1	70.9

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DELIVERED LUMENS (CONTINUED)

The table below shows the delivered lumens for the various lumen outputs and beam distributions. Use this chart in connection with the lumen factor (LF) capability to deliver any output required.

LED #	Drive Current	Lumen Package	Lens	Distribution	3000K 70CRI					4000K 70CRI					5000K 70CRI				
					Lumen	Bug Rating			Efficancy (Lm/W)	Lumen	Bug Rating			Efficancy (Lm/W)	Lumen	Bug Rating			Efficancy (Lm/W)
36	510	6500	None	1	6081	1	0	1	104.1	6326	1	0	1	108	6594	1	0	1	113
				2	5744	1	0	1	98.3	5975	1	0	1	102	6228	1	0	1	107
				3	5545	1	0	2	94.9	5768	1	0	2	99	6013	1	0	2	103
				4W	5593	1	0	2	95.7	5818	1	0	2	100	6064	1	0	2	104
				1-HS	3763	0	0	1	64.4	3914	0	0	1	67	4080	0	0	1	70
				2-HS	3274	0	0	1	56.1	3406	0	0	1	58	3550	0	0	1	61
				3-HS	3165	0	0	1	54.2	3292	0	0	1	56	3432	0	0	1	59
				4W-HS	3265	0	0	1	55.9	3396	0	0	1	58	3540	0	0	1	61
				5Q	6099	2	0	1	104.4	6344	2	0	1	109	6613	3	0	1	113
				5W	5637	3	0	1	96.5	5864	3	0	1	100	6112	3	0	1	105
			Clear	1-CL	5180	1	0	1	88.7	5388	1	0	1	92.2	5616	1	0	1	96.2
				2-CL	4892	1	0	1	83.8	5089	1	0	1	87.1	5305	1	0	1	90.8
				3-CL	4723	1	0	1	80.9	4913	1	0	1	84.1	5121	1	0	1	87.7
				4W-CL	4763	1	0	2	81.6	4955	1	0	2	84.8	5165	1	0	2	88.4
				1-CL-HS	3205	0	0	1	54.9	3334	0	0	1	57.1	3475	0	0	1	59.5
				2-CL-HS	2788	0	0	1	47.7	2901	0	0	1	49.7	3024	0	0	1	51.8
				3-CL-HS	2696	0	0	1	46.2	2804	0	0	1	48.0	2923	0	0	1	50.0
				4W-CL-HS	2780	0	0	1	47.6	2892	0	0	1	49.5	3015	0	0	1	51.6
				5Q-CL	5194	2	0	1	88.9	5403	2	0	1	92.5	5632	2	0	1	96.4
				5W-CL	4801	3	0	1	82.2	4994	3	0	1	85.5	5206	3	0	1	89.1
			Diffused	3-DL	3584	1	0	1	61.4	3728	1	0	1	63.8	3886	1	0	1	66.5
				5W-DL	3615	2	0	1	61.9	3760	2	0	1	64.4	3919	2	0	1	67.1
	525	700mA Microcore Equivalent	None	1	6235	1	0	1	103.6	6486	1	0	1	107.7	6761	1	0	1	112.3
				2	5889	1	0	1	97.8	6126	1	0	1	101.8	6386	1	0	1	106.1
				3	5686	1	0	2	94.4	5914	1	0	2	98.2	6165	1	0	2	102.4
				4W	5734	1	0	2	95.3	5965	1	0	2	99.1	6218	1	0	2	103.3
				1-HS	3858	0	0	1	64.1	4013	0	0	1	66.7	4183	0	0	1	69.5
				2-HS	3357	0	0	1	55.8	3492	0	0	1	58.0	3640	0	0	1	60.5
				3-HS	3245	0	0	1	53.9	3376	0	0	1	56.1	3519	0	0	1	58.5
				4W-HS	3347	0	0	1	55.6	3482	0	0	1	57.8	3629	1	0	1	60.3
				5Q	6253	2	0	1	103.9	6504	2	0	1	108.0	6780	3	0	1	112.6
				5W	5779	3	0	1	96.0	6012	3	0	1	99.9	6267	3	0	1	104.1
			Clear	1-CL	5311	1	0	1	88.2	5524	1	0	1	91.8	5758	1	0	1	95.7
				2-CL	5016	1	0	1	83.3	5218	1	0	1	86.7	5439	1	0	1	90.3
				3-CL	4842	1	0	1	80.4	5037	1	0	2	83.7	5251	1	0	2	87.2
				4W-CL	4884	1	0	2	81.1	5080	1	0	2	84.4	5296	1	0	2	88.0
				1-CL-HS	3286	0	0	1	54.6	3418	0	0	1	56.8	3563	0	0	1	59.2
				2-CL-HS	2859	0	0	1	47.5	2974	0	0	1	49.4	3100	0	0	1	51.5
				3-CL-HS	2764	0	0	1	45.9	2875	0	0	1	47.8	2997	0	0	1	49.8
				4W-CL-HS	2851	0	0	1	47.4	2965	0	0	1	49.3	3091	0	0	1	51.3
				5Q-CL	5326	2	0	1	88.5	5540	2	0	1	92.0	5775	2	0	1	95.9
				5W-CL	4922	3	0	1	81.8	5120	3	0	1	85.1	5337	3	0	1	88.7
			Diffused	3-DL	3675	1	0	1	61.0	3822	1	0	1	63.5	3984	1	0	1	66.2
				5W-DL	3735	2	0	1	62.0	3885	2	0	1	64.5	4050	2	0	1	67.3

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DELIVERED LUMENS (CONTINUED)

The table below shows the delivered lumens for the various lumen outputs and beam distributions. Use this chart in connection with the lumen factor (LF) capability to deliver any output required.

LED #	Drive Current	Lumen Package	Lens	Distribution	3000K 70CRI					4000K 70CRI					5000K 70CRI				
					Lumen	Bug Rating			Efficancy (Lm/W)	Lumen	Bug Rating			Efficancy (Lm/W)	Lumen	Bug Rating			Efficancy (Lm/W)
36	615	7500	None	1	7118	1	0	1	101.3	7404	1	0	1	105.4	7718	1	0	1	109.9
				2	6723	1	0	1	95.7	6994	1	0	2	99.6	7290	1	0	2	103.8
				3	6491	1	0	2	92.4	6752	1	0	2	96.1	7038	1	0	2	100.2
				4W	6546	1	0	2	93.2	6809	1	0	2	96.9	7098	1	0	2	101.0
				1-HS	4404	0	0	1	62.7	4581	0	0	1	65.2	4775	0	0	1	68.0
				2-HS	3832	0	0	1	54.5	3986	0	0	1	56.7	4155	0	0	1	59.1
				3-HS	3705	0	0	1	52.7	3854	0	0	1	54.9	4017	0	0	1	57.2
				4W-HS	3821	1	0	1	54.4	3975	1	0	1	56.6	4143	1	0	1	59.0
				5Q	7138	3	0	1	101.6	7425	3	0	1	105.7	7740	3	0	1	110.2
				5W	6598	3	0	1	93.9	6863	3	0	1	97.7	7154	3	0	1	101.8
			Clear	1-CL	6063	1	0	1	86.3	6306	1	0	1	89.8	6574	1	0	1	93.6
				2-CL	5726	1	0	1	81.5	5956	1	0	1	84.8	6209	1	0	1	88.4
				3-CL	5528	1	0	1	78.7	5750	1	0	1	81.9	5994	1	0	2	85.3
				4W-CL	5575	1	0	2	79.4	5800	1	0	2	82.6	6045	1	0	2	86.1
				1-CL-HS	3751	0	0	1	53.4	3902	0	0	1	55.5	4067	0	0	1	57.9
				2-CL-HS	3264	0	0	1	46.5	3395	0	0	1	48.3	3539	0	0	1	50.4
				3-CL-HS	3155	0	0	1	44.9	3282	0	0	1	46.7	3421	0	0	1	48.7
				4W-CL-HS	3254	0	0	1	46.3	3385	0	0	1	48.2	3529	0	0	1	50.2
				5Q-CL	6080	2	0	1	86.5	6324	2	0	1	90.0	6592	2	0	1	93.8
				5W-CL	5619	3	0	1	80.0	5845	3	0	1	83.2	6093	3	0	1	86.7
			Diffused	3-DL	4195	1	0	1	59.7	4364	1	0	1	62.1	4549	1	0	1	64.7
				5W-DL	4264	2	0	1	60.7	4436	2	0	1	63.1	4624	2	0	1	65.8

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PHOTOMETRY

PROV2-36L-615-4K7-1

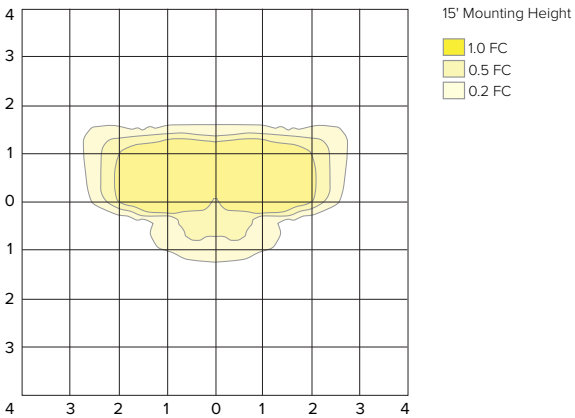
LUMINAIRE DATA

Description	**4000 Kelvin, 70CRI**
Delivered Lumens	**7405**
Watts	**70.25**
Efficacy	**105.4**
IES Type	**II**
BUG Rating	**B1-U0-G1**
Mounting Height	**15 ft**
Grid Scale	**15 ft**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	6403	86%
Downward House Side	1002	14%
Downward Total	7405	100%
Upward Street Side	0	0%
Upward House Side	0	0%
Upward Total	0	0%
Total Flux	7405	100%

ISOFOOT CANDLE PLOT



PROV2-36L-615-4K7-2

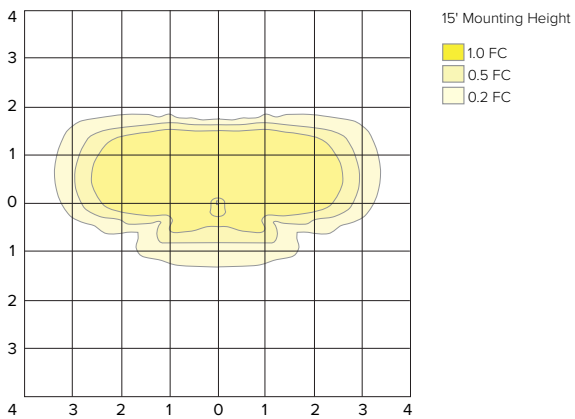
LUMINAIRE DATA

Description	**4000 Kelvin, 70CRI**
Delivered Lumens	**6994**
Watts	**70.25**
Efficacy	**99.6**
IES Type	**II**
BUG Rating	**B1-U0-G2**
Mounting Height	**15 ft**
Grid Scale	**15 ft**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	5665	81%
Downward House Side	1329	19%
Downward Total	6994	100%
Upward Street Side	0	0%
Upward House Side	0	0%
Upward Total	0	0%
Total Flux	6994	100%

ISOFOOT CANDLE PLOT



PROV2-36L-615-4K7-3

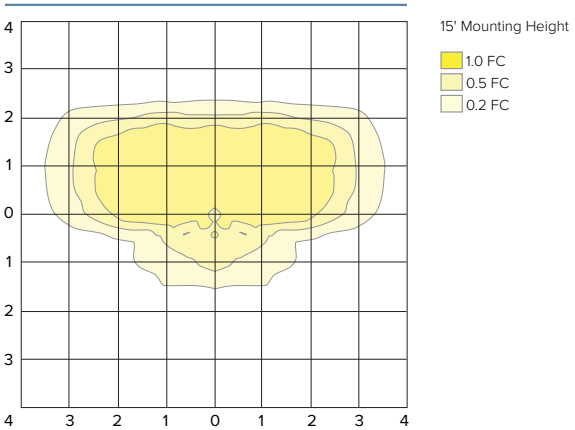
LUMINAIRE DATA

Description	**4000 Kelvin, 70CRI**
Delivered Lumens	**6752**
Watts	**70.25**
Efficacy	**96.1**
IES Type	**III**
BUG Rating	**B1-U0-G2**
Mounting Height	**15 ft**
Grid Scale	**15 ft**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	5552	82%
Downward House Side	1200	18%
Downward Total	6752	100%
Upward Street Side	0	0%
Upward House Side	0	0%
Upward Total	0	0%
Total Flux	6752	100%

ISOFOOT CANDLE PLOT



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PHOTOMETRY

PROV2-36L-615-4K7-4W

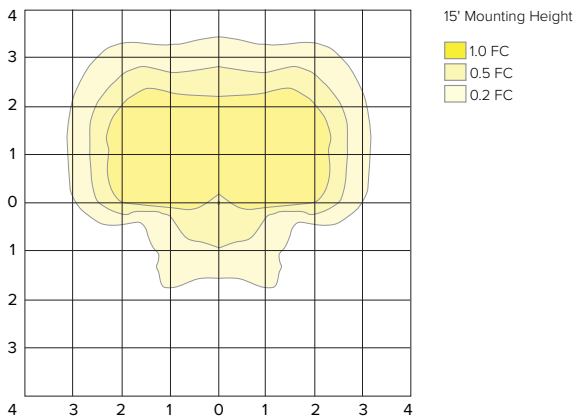
LUMINAIRE DATA

Description	**4000 Kelvin, 70CRI**
Delivered Lumens	**6809**
Watts	**70.25**
Efficacy	**96.9**
IES Type	**IV Wide**
BUG Rating	**B1-U0-G2**
Mounting Height	**15 ft**
Grid Scale	**15 ft**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	5802	85%
Downward House Side	1007	15%
Downward Total	6809	100%
Upward Street Side	0	0%
Upward House Side	0	0%
Upward Total	0	0%
Total Flux	6809	100%

ISOFOOT CANDLE PLOT



PROV2-36L-615-4K7-5Q

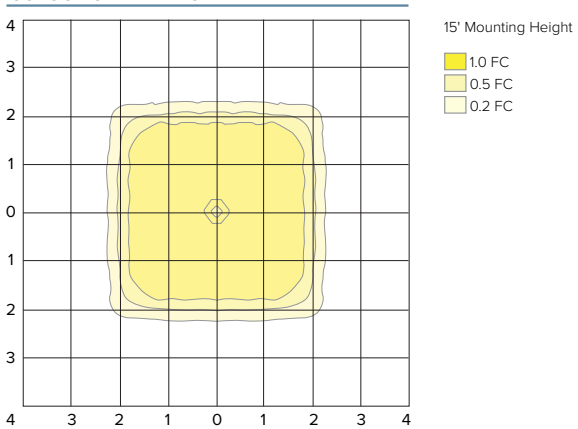
LUMINAIRE DATA

Description	**4000 Kelvin, 70CRI**
Delivered Lumens	**7425**
Watts	**70.25**
Efficacy	**105.7**
IES Type	**VS**
BUG Rating	**B3-U0-G1**
Mounting Height	**15 ft**
Grid Scale	**15 ft**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	3713	50%
Downward House Side	3713	50%
Downward Total	7425	100%
Upward Street Side	0	0%
Upward House Side	0	0%
Upward Total	0	0%
Total Flux	7425	100%

ISOFOOT CANDLE PLOT



PROV2-36L-615-4K7-5W

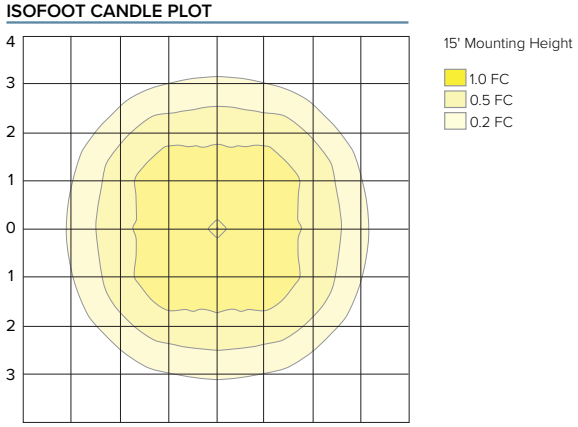
LUMINAIRE DATA

Description	**4000 Kelvin, 70CRI**
Delivered Lumens	**6863**
Watts	**70.25**
Efficacy	**97.7**
IES Type	**VS**
BUG Rating	**B3-U0-G1**
Mounting Height	**15 ft**
Grid Scale	**15 ft**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	3432	50%
Downward House Side	3432	50%
Downward Total	6863	100%
Upward Street Side	0	0%
Upward House Side	0	0%
Upward Total	0	0%
Total Flux	6863	100%

ISOFOOT CANDLE PLOT



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PROV2

ARCHITECTURAL AREA/SITE

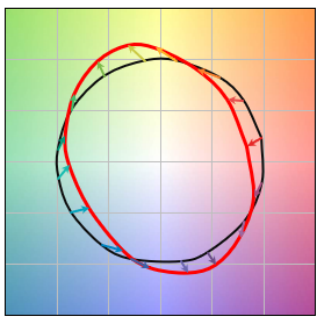
DATE: LOCATION:

TYPE: PROJECT:

CATALOG #:

TM-30 DATA

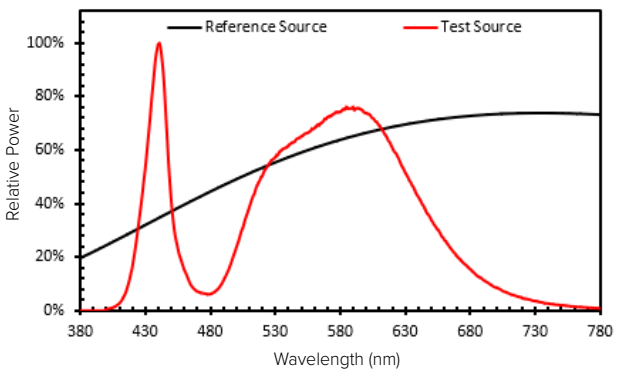
COLOR VECTOR GRAPHIC



TEST SOURCE

MBM TEST RESULTS	
CCT (K)	3947
CIE Ra	72
Duv	0.0004
x	0.3831
y	0.3793
Rf	68
Rg	99

SPECTRAL POWER DISTRIBUTION COMPARISON



ELECTRICAL DATA

Electrical											Dimming				
Light Engine	System Current	System Watts	Line Voltage		Amps AC				Min. Power Factor	Max THD (%)	Dimming Range	Source current out of 0-10V		Absolute voltage range on 0-10V (+)	
			VAC	HZ	120	208	240	277				Min	Max	Min	Max
36	295 mA	34.1	120-277	50/60	0.28	0.16	0.14	0.12	>0.9	20	10% to 100%	0mA	1mA	0V	10V
	325 mA	37.8			0.32	0.18	0.16	0.14							
	510 mA	58.4			0.49	0.28	0.24	0.21							
	525 mA	60.2			0.50	0.29	0.25	0.22							
	615 mA	70.3			0.59	0.34	0.29	0.25							

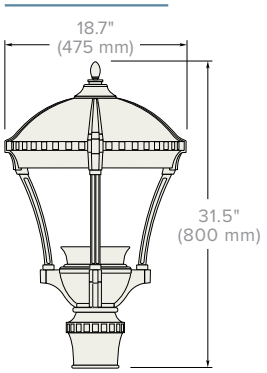
TM-21 LIFETIME CALCULATION - PROJECTED LUMEN MAINTENANCE (25°C / 77°F)						
HOURS	0	25,000	36,000	50,000	100,000	REPORTED L70
Projected Lumen Maintenance	100%	98.0%	96.9%	95.4%	90.5%	> 60,000

AMBER MULTIPLIER	
CCT	MULTIPLIER
5000K	1
AM	0.1727

2700K MULTIPLIER	
CCT	MULTIPLIER
5000K	1
2700K	0.897

LENS OPTION MULTIPLIER	
CLEAR LENS	DIFFUSED LENS
0.8517	0.6462

DIMENSIONS



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RSS-A Series Poles

ROUND STRAIGHT STEEL

DATE:	LOCATION:
TYPE:	PROJECT:
CATALOG #:	

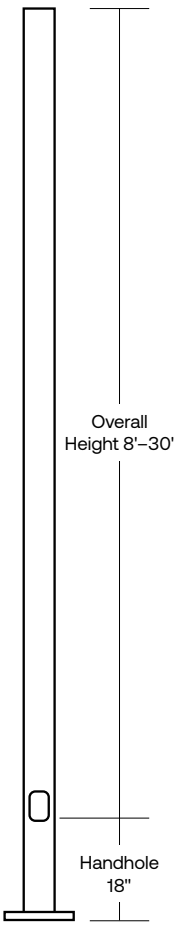
SPECIFICATIONS

CONSTRUCTION

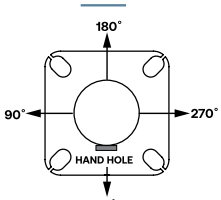
- Shaft: One-piece straight steel with round cross section, Minimum yield of 46,000 psi (ASTM-A500, Grade C); Longitudinal weld seam to appear flush in shaft wall; Steel base plate with axial bolt circle slots welded flush to pole shaft having minimum yield of 36,000 psi (ASTM A36)
- Base cover: Two-piece square aluminum base cover included standard
- Pole cap: Pole shaft supplied with removable cover when applicable; Tenon and post-top configurations also available
- Hand hole: Rectangular 3x5 steel hand hole frame (2.38" x 4.38" opening); Mounting provisions for grounding lug located behind gasketed cover
- Anchor bolts: Four galvanized anchor bolts provided per pole with minimum yield of 55,000 psi (ASTM F1554). Galvanized hardware with two washers and two nuts per bolt for leveling
  - Anchor bolt part numbers: 3/4 x 30 x 3 — TAB-30-M38
    1 x 36 x 4 — TAB-36-M38
- Durable thermoset polyester powder coat paint finish with nominal 3.0 mil thickness
- Powder paint prime applied over “white metal” steel substrate cleaned via mechanical shot blast method
- Decorative finish coat available in multiple standard colors; Custom colors available; RAL number preferable

INSTALLATION

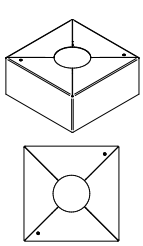
- Lighting installations for side and top mounting of luminaires with effective projected area (EPA) not exceeding maximum allowable loading of the specified pole in its installed geographic location



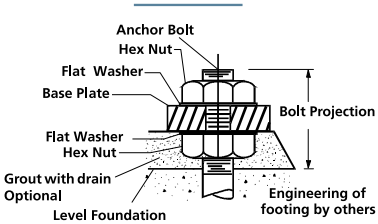
BASE



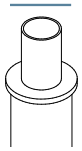
BASE COVER



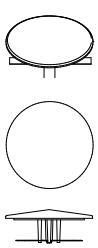
BASE DETAIL



TENON



POLE CAP



Current

currentlighting.com/aal

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RSS-A Series Poles

ROUND STRAIGHT STEEL

DATE: | LOCATION:

TYPE: | PROJECT:

CATALOG #:

ORDERING INFORMATION

Example: RSS-A–25–50–B–2L–DBT–UL

RSS-A –

Series	Height	Shaft	Thickness	Mounting	Finish	Options
RSS-A Round Straight Steel Pole AAL	Reference page 3 Ordering matrix **15**	Reference page 3 Ordering matrix **40**	Reference page 3 Ordering matrix **A** - .125" Wall B - .188" Wall C - .250" Wall	**1** Single arm mount **2** Two fixtures at 180° **2L** Two fixtures at 90° **3T** Three fixtures at 90° **3Y** Three fixtures at 120° **4** Four fixtures at 90° **TA** Tenon (2.375" OD) **TB** Tenon (2.875" OD) **TC** Tenon (3.5" OD) **OT** Open Top (includes pole cap)	**BLT** Black Matte Textured **BLS** Black Gloss Smooth **DBT** Dark Bronze Matte Textured **DBS** Dark Bronze Gloss Smooth **GTT** Graphite Matte Textured **LGT** Light Grey Matte Textured **LGS** Light Grey Gloss Smooth **PSS** Platinum Silver Smooth **WHT** White Matte Textured **WHS** White Gloss Smooth **VGT** Verde Green Textured **Color Option** **CC**[1] Custom Color	**GFI**[2] 20 Amp GFCI Receptacle and Cover **EHH**[2] Extra Handhole **C05**[2] .5" Coupling **C07**[2] .75" Coupling **C20**[2] 2" Coupling **MPB**[2] Mid-pole Luminaire Bracket **VM2**[3] 2nd mode vibration dampener **LAB** Less Anchor Bolts **UL** UL Certified **RBC** Round Base Cover

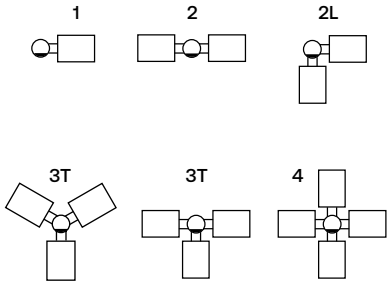
Accessories (Order Separately)

- ☐ **VM2S08** Field-installed 2nd mode vibration dampener - 8 ft
- ☐ **VM2S12** Field-installed 2nd mode vibration dampener - 12 ft
- ☐ **VM2S16** Field-installed 2nd mode vibration dampener - 16 ft
- ☐ **VM2S20** Field-installed 2nd mode vibration dampener - 20 ft
- ☐ **VM2S25** Field-installed 2nd mode vibration dampener - 25 ft

1 Custom colors available; RAL number preferable
2 Specify option location using logic found on page 3 (Option Orientation)
3 There will be a weld witness mark on the side of the pole with the Factory installed VM2

MOUNTING ORIENTATION

○ ◄—— Denotes handhole location



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RSS-A Series Poles

ROUND STRAIGHT STEEL

DATE: | LOCATION:

TYPE: | PROJECT:

CATALOG #:

ORDERING INFORMATION (CONTINUED)

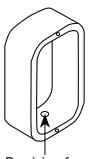
CATALOG NUMBER	HEIGHT		NOMINAL SHAFT DIMENSIONS	WALL THICKNESS	BOLT CIRCLE (SUGGESTED)	BOLT CIRCLE (RANGE)	BASE PLATE SQUARE	BASE PLATE THICKNESS	ANCHOR BOLT SIZE	BOLT PROJECTION	POLE WEIGHT
	FEET	METERS									
RSS-A-10-40-A	10	3	4" round	0.125"	9"	7.5" - 10"	9"	0.75"	3/4" x 30" x 3"	3.5"	52
RSS-A-12-40-A	12	3.7	4" round	0.125"	9"	7.5" - 10"	9"	0.75"	3/4" x 30" x 3"	3.5"	62
RSS-A-14-40-A	14	4.3	4" round	0.125"	9"	7.5" - 10"	9"	0.75"	3/4" x 30" x 3"	3.5"	72
Cut to 15' RSS-A-16-40-A	16	4.9	4" round	0.125"	9"	7.5" - 10"	9"	0.75"	3/4" x 30" x 3"	3.5"	83
RSS-A-18-40-A	18	5.5	4" round	0.125"	9"	7.5" - 10"	9"	0.75"	3/4" x 30" x 3"	3.5"	93
RSS-A-20-40-A	20	6.1	4" round	0.125"	9"	7.5" - 10"	9"	0.75"	3/4" x 30" x 3"	3.5"	103
RSS-A-10-40-B	10	3	4" round	0.188"	9"	7.5" - 10"	9"	0.75"	3/4" x 30" x 3"	3.5"	77
RSS-A-12-40-B	12	3.7	4" round	0.188"	9"	7.5" - 10"	9"	0.75"	3/4" x 30" x 3"	3.5"	92
RSS-A-14-40-B	14	4.3	4" round	0.188"	9"	7.5" - 10"	9"	0.75"	3/4" x 30" x 3"	3.5"	107
RSS-A-16-40-B	16	4.9	4" round	0.188"	9"	7.5" - 10"	9"	0.75"	3/4" x 30" x 3"	3.5"	122
RSS-A-18-40-B	18	5.5	4" round	0.188"	9"	7.5" - 10"	9"	0.75"	3/4" x 30" x 3"	3.5"	138
RSS-A-20-40-B	20	6.1	4" round	0.188"	9"	7.5" - 10"	9"	0.75"	3/4" x 30" x 3"	3.5"	153
RSS-A-10-50-B	10	3	5" round	0.188"	10"	8.0" - 11"	10.25"	1"	1" x 36" x 4"	4.5"	97
RSS-A-12-50-B	12	3.7	5" round	0.188"	10"	8.0" - 11"	10.25"	1"	1" x 36" x 4"	4.5"	116
RSS-A-14-50-B	14	4.3	5" round	0.188"	10"	8.0" - 11"	10.25"	1"	1" x 36" x 4"	4.5"	135
RSS-A-16-50-B	16	4.9	5" round	0.188"	10"	8.0" - 11"	10.25"	1"	1" x 36" x 4"	4.5"	155
RSS-A-18-50-B	18	5.5	5" round	0.188"	10"	8.0" - 11"	10.25"	1"	1" x 36" x 4"	4.5"	174
RSS-A-20-50-B	20	6.1	5" round	0.188"	10"	8.0" - 11"	10.25"	1"	1" x 36" x 4"	4.5"	194
RSS-A-25-50-B	25	7.6	5" round	0.188"	10"	8.0" - 11"	10.25"	1"	1" x 36" x 4"	4.5"	242
RSS-A-20-60-C	20	6.1	6" round	0.250"	10"	9.0" - 11"	10.25"	1"	1" x 36" x 4"	4.5"	307
RSS-A-25-60-C	25	7.6	6" round	0.250"	10"	9.0" - 11"	10.25"	1"	1" x 36" x 4"	4.5"	384
RSS-A-30-60-C	30	9.1	6" round	0.250"	10"	9.0" - 11"	10.25"	1"	1" x 36" x 4"	4.5"	461

Notes:

- Factory supplied template must be used when setting anchor bolts. Current will deny any claim for incorrect anchorage placement resulting from failure to use factory supplied template and anchor bolts.
- For more information about pole vibration and vibration dampeners, please consult factory.
- Unwrap poles immediately upon receipt to avoid condensation build up and possible corrosion.

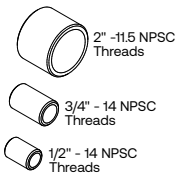
[1] There will be a weld witness mark on the side of the pole with the Factory installed VM2.

EHH
Extra handhole

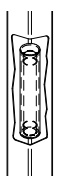


Provision for Grounding

C05 / C07 / C20
Coupling



VM2[1]
2nd mode vibration dampener



Factory installed, internal dampener designed to alter pole resonance to reduce movement and material fatigue caused by 2nd mode vibration.

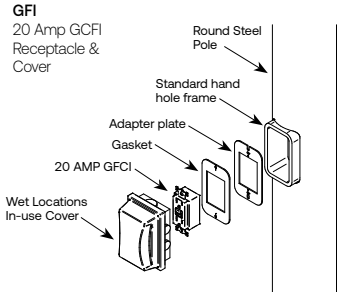
VM2SXX
Field-installed 2nd mode vibration dampener



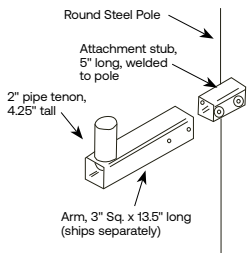
VM2S08 – 8'
VM2S12 – 12'
VM2S16 – 16'
VM2S20 – 20'
VM2S24 – 24'

Field installed, internal dampener designed to alter pole resonance to reduce movement and material fatigue caused by 2nd mode vibration.

GFI
20 Amp GCFI Receptacle & Cover



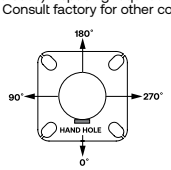
MPB
Mid Pole Bracket

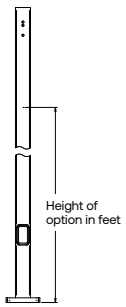


Option Orientation

Follow the logic below when ordering location specific options. For each option, include its orientation (in degrees) and its height (in feet).

Example: Option C05 should be ordered as: RSS-B-20-40-A-TA-DBT-C05-0-15 (.5" coupling on the handhole/arm side of pole, 15' up from the pole base) 1' spacing required between option. Consult factory for other configurations.





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RSS-A Series Poles

ROUND STRAIGHT STEEL

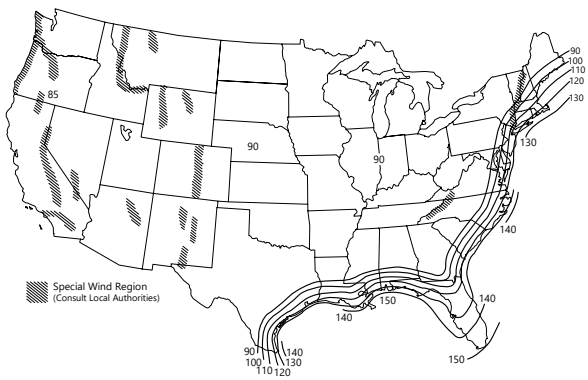
DATE: | LOCATION:

TYPE: | PROJECT:

CATALOG #:

WIND MAPS

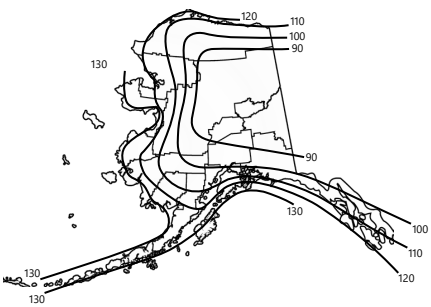
ASCE7-05 WIND MAP



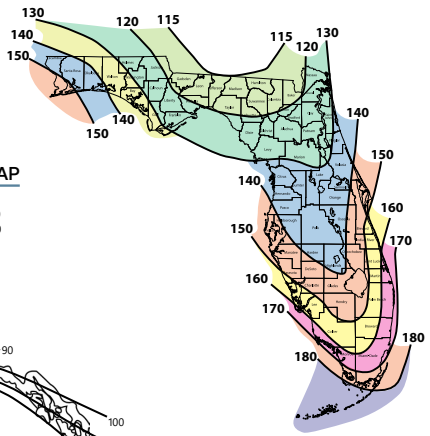
HAWAII – 105 mph
PUERTO RICO – 145 mph

*Printed with permission from ASCE

ALASKA REGION WIND MAP



FLORIDA REGION WIND MAP



Florida region wind map above is based upon 3-second gust winds and the 2017 Florida Building Code.

ASCE 7-05 wind map EPA Load Rating - 3 second gust wind speeds (Use for all locations except Florida)

Catalog Number	85	90	100	110	120	105	145
RSS-A-10-40-A	21.0	18.7	15.0	12.2	10.1	13.5	6.8
RSS-A-12-40-A	16.8	14.8	11.8	9.5	7.7	10.5	5.1
RSS-A-14-40-A	13.6	12.0	9.4	7.4	5.9	8.3	3.9
RSS-A-16-40-A	11.1	9.7	7.5	5.8	4.5	6.6	2.9
RSS-A-18-40-A	9.0	7.8	5.8	4.4	3.3	5.1	2.0
RSS-A-20-40-A	7.2	6.2	4.5	3.1	2.2	3.8	1.2
RSS-A-10-40-B	25.0	25.0	22.4	18.4	15.3	20.2	10.4
RSS-A-12-40-B	25.0	22.3	17.9	14.5	12.0	16.1	8.1
RSS-A-14-40-B	20.6	18.3	14.6	11.7	9.6	13.0	6.4
RSS-A-16-40-B	17.2	15.2	12.0	9.5	7.7	10.7	5.1
RSS-A-18-40-B	14.3	12.6	9.8	7.6	6.1	8.6	3.9
RSS-A-20-40-B	11.8	10.3	7.9	6.0	4.7	6.9	2.9
RSS-A-10-50-B	25.0	25.0	25.0	25.0	25.0	25.0	17.7
RSS-A-12-50-B	25.0	25.0	25.0	24.8	20.8	25.0	14.3
RSS-A-14-50-B	25.0	25.0	24.7	20.5	17.2	22.4	11.7
RSS-A-16-50-B	25.0	25.0	20.7	17.1	14.3	18.8	9.7
RSS-A-18-50-B	24.5	21.6	17.3	14.3	11.9	15.7	8.0
RSS-A-20-50-B	20.6	18.1	14.4	11.8	9.8	13.0	6.5
RSS-A-25-50-B	13.6	11.7	9.1	7.3	6.0	8.1	3.8
RSS-A-20-60-C	25.0	25.0	25.0	25.0	21.5	25.0	14.8
RSS-A-25-60-C	25.0	25.0	21.9	18.0	15.0	19.8	10.1
RSS-A-30-60-C	21.8	19.4	15.6	12.7	10.6	14.1	6.9

Florida Building Code 2017 EPA Load Rating - 3 second gust wind speeds (Use for Florida only)

Catalog Number	115	120	130	140	150	160	170	180
RSS-A-10-40-A	25.0	23.5	20.0	17.0	14.5	12.5	11.0	10.0
RSS-A-12-40-A	21.0	19.0	16.0	13.5	11.5	9.5	9.0	8.0
RSS-A-14-40-A	17.5	15.7	13.0	10.8	9.0	7.5	7.0	6.5
RSS-A-16-40-A	14.2	13.0	10.5	8.5	7.0	5.8	5.0	4.5
RSS-A-18-40-A	11.6	10.4	8.2	6.8	5.4	4.4	4.0	3.6
RSS-A-20-40-A	9.5	8.4	6.5	5.2	4.0	3.0	2.8	2.5
RSS-A-10-40-B	25.0	25.0	25.0	22.0	19.0	16.5	15.2	13.4
RSS-A-12-40-B	25.0	25.0	20.8	17.6	15.1	13.0	12.0	10.6
RSS-A-14-40-B	22.5	20.4	17.2	14.4	12.2	10.4	10.0	8.8
RSS-A-16-40-B	18.9	17.0	14.1	11.7	9.8	8.2	7.5	7.0
RSS-A-18-40-B	15.6	14.1	11.5	9.4	7.7	6.4	6.0	5.7
RSS-A-20-40-B	13.0	11.6	9.3	7.5	6.0	4.8	4.0	3.5
RSS-A-10-50-B	25.0	25.0	25.0	25.0	25.0	23.6	20.8	18.4
RSS-A-12-50-B	25.0	25.0	25.0	25.0	22.2	19.3	16.8	14.8
RSS-A-14-50-B	25.0	25.0	23.9	21.5	18.4	15.9	13.8	12.1
RSS-A-16-50-B	25.0	23.8	19.6	18.0	15.4	13.2	11.4	9.9
RSS-A-18-50-B	21.8	19.6	16.1	15.1	12.8	10.8	9.3	8.0
RSS-A-20-50-B	18.2	16.4	14.1	12.7	10.7	9.0	7.7	6.5
RSS-A-25-50-B	11.7	10.2	9.4	8.4	6.8	5.6	4.5	3.7
RSS-A-20-60-C	25.0	25.0	25.0	22.1	18.8	16.1	13.9	12.0
RSS-A-25-60-C	24.7	22.4	18.4	15.3	12.8	10.8	9.1	7.6
RSS-A-30-60-C	18.2	16.3	13.2	10.7	8.7	7.0	5.7	4.5

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All values are design or typical values when measured under laboratory conditions.

architectural arealighting

RSS-A Series Poles

ROUND STRAIGHT STEEL

DATE:	LOCATION:
TYPE:	PROJECT:
CATALOG #:	

NOTES

Wind-speed Website disclaimer:
Current has no connection to the linked website and makes no representations as to its accuracy. While the information presented on this third party website provides a useful starting point for analyzing wind conditions, Current has not verified any of the information on this third party website and assumes no responsibility or liability for its accuracy. The material presented in the windspeed website should not be used or relied upon for any specific application without competent examination and verification of its accuracy, suitability and applicability by engineers or other licensed professionals. Current does not intend that the use of this information replace the sound judgment of such competent professionals, having experience and knowledge in the field of practice, nor to substitute for the standard of care required of such professionals in interpreting and applying the results of the windspeed report provided by this website. Users of the information from this third party website assume all liability arising from such use. Use of the output of these referenced websites do not imply approval by the governing building code bodies responsible for building code approval and interpretation for the building site described by latitude/longitude location in the windspeed report. http://windspeed.atcouncil.org

- Allowable EPA, to determine max pole loading weight, multiply allowable EPA by 30 lbs.
- The tables for allowable pole EPA are based on the ASCE 7-05 Wind Map or the Florida Region Wind Map for the 2010 Florida Building Code. The Wind Maps are intended only as a general guide and cannot be used in conjunction with other maps. Always consult local authorities to determine maximum wind velocities, gusting and unique wind conditions for each specific application
- Allowable pole EPA for jobsite wind conditions must be equal to or greater than the total EPA for fixtures, arms, and accessories to be assembled to the pole. Responsibility lies with the specifier for correct pole selection. Installation of poles without luminaires or attachment of any unauthorized accessories to poles is discouraged and shall void the manufacturer's warranty
- Wind speeds and listed EPAs are for ground mounted installations. Poles mounted on structures (such as bridges and buildings) must consider vibration and coefficient of height factors beyond this general guide; Consult local and federal standards
- Wind Induced Vibration brought on by steady, unidirectional winds and other unpredictable aerodynamic forces are not included in wind velocity ratings. Consult Current Lighting's Pole Vibration Application Guide for environmental risk factors and design considerations.
- Extreme Wind Events like, Hurricanes, Typhoons, Cyclones, or Tornadoes may expose poles to flying debris, wind shear or other detrimental effects not included in wind velocity ratings

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29: NOISE AND VIBRATION (14.6.4(G))

Per the provisions of this section, all proposed heating, ventilation, and air conditioning equipment (HVAC) and air handling units, emergency generators, and similar equipment shall meet applicable state and federal emissions requirements. The project architect, SMRT, specifies the equipment in their plans. The placement of said equipment does not interfere with abutting or residential properties. The R-P Zone Noise Standard is 55 dB at all times of day as measured at the property line.

HVAC, air handling units, and other necessary equipment will be installed on the building rooftop. Modular water boilers will be located in the mechanical penthouse. A new emergency generator will be placed on an exterior pad and screened from direct views. A mechanical system for the proposed building has not yet been selected. After the selection of the system and development of design and equipment selections occur, SMRT will provide cut sheets for mechanical equipment. Zoning requirements related to noise levels produced by mechanical and electrical equipment will be adhered to during the equipment selection process.

Reference is made to the site and architectural roof and mechanical plans for HVAC and other equipment placement.

30: SIGNAGE AND WAYFINDING (14.6.4(H))

1. The size, scale, proportions, design, and materials of permanent freestanding signs are designed to complement the subject building and do not adversely affect visibility at the building or intersections.

2. On-site directional traffic signage is provided for safety and ease of navigation. A formal sign schedule is provided on the appended site plans.

31: ZONE-RELATED DESIGN STANDARDS (14.6.4(I))

The Martins Point campus in the R-P Residential Professional Zone (1) Standard has a consistently established architectural character that is observed and maintained. The new building complements the existing development, as shown on the SMRT architectural plans.

Construction Management Plan
Martin's Point Health Care – Building 7
331 Veranda Street, Portland 04103

December 27, 2023

Purpose:
Construction Management Plans shall be depicted on the project site plan, including the overall planning, coordination, and control of a construction site from beginning to completion. The City's goal for a construction management plan is to support a safe construction site and protect public safety, accessibility (including preserving accessible pedestrian, bicycle, and vehicular modes of transport throughout the City), and welfare during construction. In addition, the construction management plan shall minimize construction impacts in duration and magnitude to the surrounding area and develop an effective communication process for resolving concerns and conflicts.

Project Narrative:
The applicant/developer proposes the redevelopment of the Building 7 precinct at the existing Martin's Point Health Care campus at 331 Veranda Street in Portland. This project will primarily disturb previously developed areas involving the removal and replacement of Building 7 and other associated site improvements.

1. Install temporary erosion control measures;
2. Remove vegetation;;
3. Demolition and removals;
4. Excavate to subgrade;
5. Grade for access, building replacement, and stormwater management area;
6. Utilities extension and new services;
7. Install subbase materials;
8. Install surface finishes for parking, walks, courtyard, and pathways and striping in parking;
9. Install landscaping;
10. Removal and disposal of erosion control measures.

Performance Guarantees, Inspection Fees, Pre-construction Meeting, and Permits:
As a Major Site Plan Application, the developer of the project will be required to submit a performance guarantee. This performance guarantee and site development inspection fees will be based on a cost estimate submitted and approved by the City. The guarantee will be a letter of credit from an approved bank or credit union, deposited in a bank-held escrow account or a city-held escrow account. These fees/guarantees will need to be paid and in place prior to scheduling the pre-construction meeting.

As this project involves work within the street right-of-way, the selected site contractor will obtain the required street opening permit from the Department of Public Works. If blasting is necessary for this project, the site contractor will obtain the required permit from Public Works.

Construction Administration and Communication:
This project will be managed by PC Construction of Portland, Maine. A project manager has yet to be assigned.

1. Contact Person and contact information:
   - Developer (Martin's Point Health Care): c/o Jacob Jeppson, (207) 828-2492
   - Site Contractor: TBD c/o Name, (207) phone
   - Civil Engineer (Sebago Technics, Inc.) c/o Paul Ostrowski, P.E. (207) 200-2088
2. Signage will be placed at the site that will include the above contact information. This signage will be removed when the project is complete.
3. The representative for the contractor /developer will reach out to the direct abutters to notify them of the commencement of construction.

Construction Schedule*:

- Application Approval: Anticipated – Spring 2024.
- Pre-construction Meeting: Summer 2024
- Demolition: Summer 2024
- Site Preparation – Summer 2024
- Rough Grading – Summer/Fall 2024
- Utilities, Access, Parking – Fall 2024/Spring 2025
- Building Construction – Fall 2024
- Landscaping/Seeding – Fall 2025/Spring 2026
- ESC Removals – Winter 2025
- Expected Completion – Winter 2025

* Dates are subject to change at the discretion of the engineer, depending on construction progress.

Estimated construction time: ----------18 Months±
Erosion Control Measures Placed: ---------- 2 Weeks
Demolition ---------- 1 Month
Site preparation ----------2 Months
Rough Grading---------- ---------- -- 4 Months
Utilities, Access, Parking----------9 Months
Office/Parking Construction ---------- 12 Months
Landscaping/Seeding---------- 1 Month
Removal of erosion control devices---------- Upon Final Project Completion

1. In accordance with the R-P Zone noise standards, no person shall engage in construction activities generating noise exceeding fifty (55) dB, at all times of day as measured at the property line.

2. Extended Hours or Night Work: Pursuant to Section 17-18, this section does not apply to emergency utility work or "Situations where the public works authority or the office of building inspections determines that the construction activity is of a unique character which cannot reasonably be completed or performed during the permitted hours and which is not of a recurring nature, provided that prior to engaging in such activity, the contractor or his representatives gives notice of the time and scope of such proposed activity, the notice to be given in a manner approved by the public works authority."
3. Pursuant to Section 25-129: "Each permittee shall conduct and carry out excavation work in such manner as to avoid unnecessary inconvenience and annoyance to the general public and occupants of neighboring property. To the fullest extent practicable, the permittee shall take appropriate measures to reduce noise, dust, and unsightly debris in the performance of the excavation work. Excavation work, including the use of any tool, appliance, or equipment, shall be performed between the hours of 7:00 a.m. and 10:00 p.m. only, exclusive of emergency work. Time waiver requests may be submitted to the Public Works authority for work outside of this time period and will be subject to neighborhood concerns. Excavation work shall not occur on Sundays, holidays, or on major holiday weekends unless expressly authorized by the Public Works authority or as a result of an emergency need.
4. If allowed, no construction activity shall begin before 8:00 a.m. on a Saturday, Sunday, or legal holiday.
5. All deliveries for materials will comply with the noise requirements listed above or be restricted to the hours allowed for construction work.

Security and Public Safety:

1. Prior to commencing construction, the site contractor shall install a "Construction Ahead" signs to warn bicyclists, motorists, and pedestrians of construction within the area.
2. The contractor shall be responsible for the setup of the construction staging area before construction begins.
3. The contractors shall be responsible for the safe storage of materials or equipment on-site.
4. The contractor shall have weekly tailgate meetings, which shall include discussions on security and public security.
5. The contractor shall develop a fire safety and emergency protocol and contact the nearest fire station to advise them of the ongoing construction project.
6. Excavations within the site shall be provided with adequate barricades or warnings (i.e. construction area tape around excavation) at night.

Construction Permitting and Traffic Control Plans:

1. Construction Activity in Public Streets: At no time will construction activity, including delivery vehicles, close or block streets or affect public safety access without prior notice and approval of the City of Portland Department of Public Works (DPW).
2. Traffic Control Plans: Construction activity that impacts the existing public street system must be controlled to protect the safety of the construction workers and all modes of the traveling public.

a. Work within the right-of-way and travel way of Veranda Street is proposed; therefore, temporary lane closures will be required and coordinated with Portland DPW.
b. Traffic Control signs shall not be placed where they are an obstruction to bicycles or pedestrians.

Site Management and Controls:

1. The land development contractor shall be responsible for the site management during the construction of site infrastructure.
2. Contractor will be responsible for providing and maintaining dumpsters during construction.
3. The contractor will utilize the existing unsignalized access from Veranda Street adjacent to Building 7 as a construction entrance and will maintain Veranda Street by including sweeping as necessary to remove tracked materials.
4. The contractor shall maintain construction BMPs and execute good housekeeping measures.
5. Dust controls: The construction shall comply with Portland's requirements under Section 25-129 on Noise, dust, and debris.
6. Noise: The construction shall comply with Portland's requirements under Section 17-18 of the City Code and Section 25-129 on Noise, dust and debris. The Contractor and City will be responsible for adjusting work should noise become an issue.
7. Rodent Control is not expected for this project. Should it become necessary, it will be provided, if applicable, by a professional exterminator and consistent with Chapter 22 of the City Code or City of Portland Public Works.
8. Snow Removal: Pursuant to Section 25-173, Contractors to ensure a safe means of travel within the work zone.
    1) Snow/ice removal or commence automatically from (1" of snow and up) or Ice
    2) Remove snow as needed within the work zone, including parking spaces, intending not to block driveways or site lines with piles of snow.
    3) Clear all walks and ramps within the work zone
    4) Sand or Salt as needed
    5) Clear all basin or drainage structures to help snow melt
    6) This would include Monday-Friday, Saturday/Sunday, and Holidays.
9. Site management and controls shall be discussed at each tailgate meeting, including maintenance of BMPs and good housekeeping measures.

Erosion Control and Preservation of Trees:

1. The site contractor shall install all temporary erosion and sedimentation controls as depicted on the plans before the pre-construction meeting for inspection by the City. The contractor shall regularly inspect the control measures, no less than weekly and after significant storm events, and maintain any installed temporary or permanent stormwater management systems in working order. The contractor shall document all inspection activities and corrective actions and be prepared to provide these documents for

inspection by the City, and/or the Maine Department of Environmental Protection upon request.

2. The site contractor shall maintain storage of materials and equipment away from the tree drip lines to preserve vegetation at the construction limits.

Construction Staging Area:

1. Portions of the existing paved parking area (unsignalized entrance) will be utilized for material (open storage) and equipment storage area. The exact location of these areas shall be up to the owner and contractor but should be sufficiently away from trees identified for preservation within the designated construction limit line.
2. Delivery Truck Holding Areas On-Site: The construction delivery holding area consists of the parking area abutting the expansion. On days when the construction activities require multiple truck deliveries, these deliveries will be carefully scheduled so that there is always an adequate on-site area for holding the trucks until they can be unloaded without queueing on public streets.
3. Delivery Truck Holding Areas Off-Site: Adequate on-site area for holding of trucks is available, such that Veranda Street will not be utilized for offloading.

Parking During Construction:

1. Construction Parking: Parking for construction workers shall be on the site. No parking shall occur along Veranda Street.
2. Truck Routes and Volumes: All deliveries to and from the site shall occur from I-295 or Washington Avenue and proceed along Veranda Street to the site.

Prepared by:

Sebago Technics, Inc.

Paul D. Ostrowski, P.E.
Senior Project Engineer/Project Delivery & Design Manager

City of Portland ME . Low-Impact Design Requirements

Owner / applicant name:	Martin's Point Health Care, INC.
Representative name:	Sebago Technics, Inc.
Projct address:	331 Veranda Street, Portland Maine, 04103
Project CBL:	Map 434, Lots C001, C005, C010
Application ID (if known):	PL-002766-2023

	Maximum Points	How to Apply	Points Awarded	LID Standard / Approach
CORE METHODS: Wetlands, Streams, & Drainage				
Protect natural drainage paths	Required			
Shoreland Zoning	Required			
Meeting DEP and ACOE standards for stream crossings	Required			
Protect wetlands	12	Select one option		Select a site that does not have wetlands or vernal pools = 12pts
				Project maintains a 50' set-back / no-disturb buffer to all wetlands = 10pts
			7	Project maintains a 25' set-back / no-disturb buffer to all wetlands = 7pts
				Project does not place structures in wetlands and avoids wetlands impacts from construction and stormwater discharges = 5pts
				Project replicates impacted wetlands elsewhere on site or within watershed = 3pt
				Project pays wetlands impact fee = 0pts
Permanently protect stream (intermittent and perennial) and riparian buffers *(exclusive of approved stream crossings; must include a no-disturb zone with markers installed and deed restriction recorded at registry of deeds)*	12	Select one option	12	Select a site with no streams = 12pts
				Permanently protect all 100ft shoreline buffers = 10pts
				Permanently protect all 75ft shoreline buffers = 7pts
				Permanently protect all 50ft shoreline buffers (intermittent streams) = 6pts
				Permanently protect all 50ft shoreline buffers (required minimum for perennial streams) = 5pts
				Permanently protect all 25ft shoreline buffers (required minimum for intermittent streams) = 5pts
Stream crossings	12	Select one option	12	Select a site with no streams = 12pts
				Avoid any stream crossings = 10pts
				All stream crossings use a bridge or open bottom culvert structure sized at 1.2 times the bank full width of the stream = 10pts
				All stream crossings use Maine Stream Smart Principles to preserve natural pre-development drainage pathways = 6pts
CORE METHODS: Natural Areas & Habitat				
Preserve threatened or endangered species habitat	Required (Beginning with Habitat Maps at a minimum)			
Protect 30% of trees over 10" DBH	Required (Tree survey required)			
Protect intact, contiguous forests and native trees over 10" DBH	8	Select one option		All development and land disturbance outside of existing wooded/forested areas (no site clearing in prior 10 years) = 8pts
			6	Protect 50% of trees over 10" DBH = 6pts
				Protect 40% of trees over 10" DBH = 4pt
CORE METHODS: Soils & Slopes				
USDA Web Soil Survey	Required (provide details how soil limitations will be mitigated)			
Avoid steep slope disturbance	5	Select one option		Selecting a site without slopes 15% or greater = 5pts
				Maintain >20' undisturbed vegetated buffer to all slopes 15% or greater = 3pts
			2	Maintain 10-20' undisturbed vegetated buffer to all slopes 15% or greater = 2pts
				Maintain 1-10' undisturbed vegetated buffer to all slopes 15% or greater = 1pt
				Disturbance of any slope 15% or greater = 0pts
Protect soils	5	Select one option	5	Redevelopment sites = 5pts
				Detailed, site-specific soil survey; preparation of a Soil Management and Protection Plan; protect highly permeable soils = 5pts

Limit site disturbance and earthwork	8	Select one option		Redevelopment limits disturbance to existing footprint = 8pts
			8	New development disturbs less than 50% of the site = 8pts
				New development disturbs less than 75% of the site = 6pts
Soil preparation & minimizing compaction	6	Select all options that apply	3	Till soils to a depth of at least 10" prior to revegetation = 3pts
			3	Organic matter amendments as needed based on soil tests = 3pts
CORE METHODS: Landscaping				
Low-Impact Landscaping	6	Select all options that apply		Redevelopment sites reduce lawn area by 50%, provided no increase in impervious area (lawn becomes landscaping) = 2pt
				New development results in >50% non-impervious developed area is landscaping = 2pt
				Use only native vegetation for landscaped areas = 2pts
			2	Using only locally-sourced landscape materials = 2pt
CORE METHODS: Impervious Area & SW Management				
Meeting City's stormwater management standards	Required			
Reduce impervious and increase permeable surfaces	10	Select all options that apply, up to a maximum of 10 points		50% or more of proposed hard surfaces are permeable (porous pavers, permeable concrete, porous asphalt) = 6pts
			4	Minimize parking impervious area by using only the minimum required number of parking spaces, the minimum required parking lot dimensions, maximizing compact spaces and utilizing low-turnover standard parking space width reductions = 4pt
				25% or more of proposed hard surfaces are permeable (porous pavers, permeable concrete, porous asphalt) = 3pts
			2	Minimize roadway impervious area by developing roadways and driveways at the minimum width and using minimum number of curb cuts = 2pt
			2	Reducing the number of driveways by using a shared driveway design = 2pt
			2	Providing transportation alternatives (such as bike share, car share, or similar) = 2pt
Use GI / natural stormwater treatment systems	12	Select all options that apply		Treatment requirements and conveyance achieved through vegetated systems = 6pts
				No more than 1-acre of drainage per treatment system = 3pts
				Increase time of concentration on site (1" 25 year storm event) = 3pts
Limit / eliminate salt use	4	Select one option		Detailed winter maintenance agreement, with annual reporting requirement, limiting chloride use (required in UIS watersheds) = 4pts
Bonus Points				
Bonus points are offered for strategies that may go above and beyond typical approaches; may offer particularly innovative site design or engineering ; or may help achieve the larger goal of low-impact development on a regional scale.	10		10	Utilizing structured parking = 10pts
	10			Utilizing a green roof (need a size minimum - follow India St. guidelines) = 10pts
	10			Restoration of previously-disturbed natural resources (minimum criteria needed) = 10pts
	10		10	BMPs designed for known water quality impairment within watershed = 10pts
	10			Connecting to City sewer from a site >200 ft from existing City infrastructure = 10pts
	6			Detention of 1.5 times the required volume = 6pts
	6			Treatment for 1.5 times the required water quality volume = 6pts
	6			Innovative LID site design and/or stormwater improvement - 6pts
	10		10	Establishing a Traffic Demand Management plan for projects under 50,000ft = 10pts
	Total Possible Points		**Total Points Awarded**	**Minimum points required for approval of LID strategies and techniques**
	178		**100**	**80**

Att HH

January 10, 2025
211026

Matthew Grooms, Deputy Director
City of Portland Planning Department
389 Congress Street 4th Floor
Portland, Maine 04101

Martin's Point Healthcare Veranda Campus – Land Use Code & Technical Manual Response
331 Veranda Street Portland, Maine 04103
Applicant: Martin's Point Health Care, Inc.
Assessor References: Map 434, Lots C001, C005, C010

Project ID: PL-002766-2023

Dear Matthew:

On behalf of Martin's Point, Sebago has provided the following additional information regarding the proposed project at 331 Veranda Street. As requested in your email on January 9, 2025, please find the attached narratives that address the amendments made to the City of Portland's Land Use Code (Article 13) and Technical Manual. We have also addressed and completed the Low Impact Development evaluation. Please see below for our responses to the amended sections that are applicable to the project:

CITY OF PORTLAND LAND USE RECODE - SITE PLAN REVIEW STANDARDS (Section 13.6)

1. *Site Landscaping and Buffering (Sec. 13.6.2B)*

   A. *On-site landscaping*
   Response: The total lot area of the project site is 533,000 square feet and will require 106 shade trees. The landscape plan proposes 47 new shade trees, and is preserving 98 existing trees greater than 10 inches; this combined total exceeds the minimum requirement.

   B. *Buffers & screening*
   Response: Loading and service areas are screened from the public rights-of-way. Trash service areas are internal to the building behind doors. Site screening for the proposed emergency generator is shown on the site plan. The building's mechanical systems are roof-mounted and screened. The proposed surface parking areas are not located within 30 feet of the public right-of-way and will not require screening.

C. *Parking & vehicle display lot landscaping*
Response: The development has 44,859 square feet of asphalt parking areas, which requires 60 trees to be planted within landscape islands. According to Section 4.1.4 of the Technical Manual, required on-site plantings may be planted anywhere on the site; the landscape plan proposes 60 new trees, which satisfies this requirement.

D. *Non-vehicular hardscape*
Response: The development utilizes structured parking to reduce the amount of asphalt parking areas across the project site. The landscape plan also proposes a variety of 47 shade trees across the site which will increase the Solar Reflective Index (SRI) of the asphalt parking areas.

E. *Street trees*
Response: The project site has 945 feet of frontage on Veranda Street, which requires 27 street trees for the proposed development. The Applicant intends to retain existing healthy trees within the public right-of-way, or within 20 feet of the edge of the right-of-way. 13 existing trees located within these areas satisfy the minimum requirement because the cumulative tree diameters, as outlined in section 4.1.3 of the Technical Manual, count as 27 street trees.

CITY OF PORTLAND TECHNICAL MANUAL – AMENDED SECTIONS

1. *Low Impact Development Standards (Sec. 3)*
Response: The proposed design carefully balances development needs while preserving the site's environmental resources to the greatest extent possible. Please see the attached low-value impact scoring tool; our proposed design earned 100 points on the low-impact development evaluation, which exceeds the 80-point minimum requirement.

2. *Stormwater Management Standards (Sec. 5)*

5.2.1 Erosion and sedimentation control
See responses to updates to Section 12 of the Technical Manual.

5.2.2. Water quality treatment requirements
A. Stormwater quality treatment shall be provided for:
1. Projects which do not require a state stormwater permit
Not applicable. The project does require a state stormwater permit.

2. Projects which do require a state stormwater or SLOD permit:
a. 95% of the new impervious area
While the proposed project is considered a redevelopment project, the Applicant is providing in excess of 95% treatment of the newly created and redeveloped impervious surfaces with a proposed Jellyfish Filter unit which has been sized to treat the tributary non-roof impervious area as well as the roof area of Building 6. The proposed building will have a

white membrane roof which does not require stormwater quality or cooling attenuation.

b. *80% of the new developed area*
This standard is being met by providing treatment through a proposed Jellyfish Filter for over 80% of the required developed area.

c. *95% of non-roof redeveloped impervious area*
This standard is met by considering all redeveloped impervious area as new impervious and meeting the required treatment percentage through the implementation of a Jellyfish Filter system for the newly created and redeveloped non-roof impervious area.

d. *Total redeveloped area as required by Chapter 500*
Not applicable. The proposed project did not persue the redevelopment standard.

B. *Additional notes*
1. *Stormwater treatment systems must be designed in accordance with Chapter 500 rules and the Maine DEP Stormwater BMP Manual.*
The proposed stormwater treatment system is a MDEP approved proprietary system that has been designed in accordance with the approval letter provided on the MDEP website.

5.2.3. *Flooding standard requirements*
Comply with the Chapter 500 Flooding Standard.
This project is eligible for a waiver from the flooding standard per MDEP Chapter 500 because runoff from the project site discharges directly to a coastal wetland exclusively in sheet flow, a manmade open channel, or in a piped system.

5.2.4. *Minimum stormwater detention volume requirement*
Not Applicable. The proposed project does not discharge stormwater into the City's stormdrain system.

5.2.5. *Urban impaired stream requirements*
Not Applicable. The proposed project is not in the watershed of an urban impaired stream.

5.2.6. *Small-scale residential project requirements*
Not Applicable. The proposed project does qualify as a small-scale residential project.

5.2.7. *Other Chapter 500 requirements*
The proposed project does not require any of the additional Chapter 500 standards mentioned in this section.

3. *Erosion & Sedimentation Control Standards (Sec. 12)*

Response: The plans submitted within the Site Plan Application provide all required erosion and sedimentation control Best Management Practices (BMPs) as specified by the updated City of Portland Technical Manual, Section 12: Erosion and Sedimentation Control Standards, most recently revised on December 10, 2024. Erosion Control installation specifications can be found within the plan set on Sheet 31. The proposed work involves redeveloping areas within 50 feet of the Atlantic Ocean; this work involves upgrading an existing storm drain outfall pipe that directly discharges to the Atlantic Ocean, installing ADA-compliant pathways to the proposed building, and providing emergency vehicle egress to the building.

Impacts to the Atlantic Ocean within 50 feet are limited to the greatest extent practicable by:

- **A double-rowed filter barrier is specified between the site disturbance and the Atlantic Ocean, which satisfies the criteria specified within Section 12.4.1.B. of the Technical Manual. Following Maine DEP Erosion and Sedimentation Control Best Management Practices Guidelines, the row closest to the resource is specified to be a silt fence to avoid barrier material migrating into the Ocean.**

- **The outfall proposed to discharge treated stormwater is specified to replace an existing stormwater outfall pipe within 50 feet of the Atlantic Ocean, rather than disturb additional area within the 50-foot buffer. The outfall is protected by existing riprap that is specified to remain, to permanently stabilize the outfall location and prevent erosion and sediment migration to the Atlantic Ocean.**

- **Slopes within the 50-foot buffer are proposed to be protected by erosion control blanket. To limit disturbed areas, the proposed slopes are steepened to 2H:1V, and as described previously, separated by a double-row filter barrier between site disturbance and the Atlantic Ocean.**

Other onsite erosion and sedimentation control measures include:

- **Catch basin inlet protection is proposed on all catch basins (existing and proposed) to prevent sediment from entering the existing storm drain system that discharges to the Atlantic Ocean.**

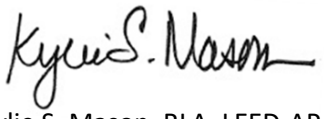
- **A stabilized construction entrance/exit is proposed at the access to the site to avoid sediment tracking onto Veranda Street. As specified on Sheet 31 of the submitted plan set, any off-site tracking is to be swept immediately and no less than once per week, as well as prior to significant storm events.**

Inspection and Maintenance and Good Housekeeping and Pollution Prevention requirements can be found within the previously submitted Inspection, Maintenance, and Housekeeping Plan as part of the Stormwater Management Report. This Plan uses inspection and maintenance measures specified in the Maine DEP Erosion and Sediment Control Best Management Practices Manual that satisfy the criteria of Section 12 of the City of Portland Technical Manual. Specified Winter

Construction methods that satisfy the criteria of Section 12.5.4 of the City of Portland Technical Manual are outlined on Sheet 31 of the plan set.

We are hopeful that this letter adequately addresses the amendments to the Land Use Code and Technical Manual so that the project will move forward in the City's Major Site Plan review process. Upon your review of the enclosed information, please call with any questions or comments. We appreciate your consideration.

Sincerely,
SEBAGO TECHNICS, INC.



Kylie S. Mason, RLA, LEED-AP
Chief Operations Officer
Maine Licensed Landscape Architect

KSM/js
Enc.

cc: Martin's Point Health Care, Inc.

CITY OF PORTLAND
Planning & Urban Development Department

MAJOR SITE PLAN
GENERAL DOCUMENT AND DRAWINGS CHECKLIST

Please submit each document as a separate PDF file.
Please confirm by electronically checking the boxes in the left-hand column.

**** PLEASE FILL OUT AND UPLOAD THE ZONING ASSESSMENT TABLE AND WAIVER TABLE SEPARATELY AS NOTED BELOW ****

At the time of application submission, please contact the Department of Public Works regarding E-911 addressing for your project.

GENERAL APPLICATION DOCUMENTS			
Yes	**NA**	**Project Description** 01 • Cover letter with detailed project description	
Yes	**NA**	**Completed Checklist** (this document) 02	
Yes	**NA**	**Evidence of Right, Title, and Interest** 03 • Deeds, leases, or purchase and sales agreements	
Yes	**NA**	**Evidence of State or Federal Approvals** 04 • Permits or letters of non-jurisdiction, if applicable	
Yes	**NA**	**Zoning Assessment** (see Zoning Assessment Table) 05 Summary of compliance with use and dimensional standards of the land use code	
Yes	**NA**	**Site Plan Standards Assessment** (see Section 14.6 of the land use code) 06 • Summary of project compliance with site plan standards of the land use code	
Yes	**NA**	**Summary of Existing and/or Proposed Easements or Covenants, applicable.** 07 • Evidence of existing easements and any proposed easements, covenants, public or private rights-of-way	
Yes	**NA**	**Waiver Requests** (see Waiver Table) 08 • Written request for waiver describing request and compliance with applicable waiver standards	
Yes	**NA**	**Financial Capability** 09 • Letter or evidence from a financial institution or third party verifying financial capacity to undertake project	
Yes	**NA**	**Technical Capability** 10 • Evidence of technical capability of applicant and consultants – resumes and/or examples of past projects	

MAJOR SITE PLAN
STANDARDS AND SUBMISSION CHECKLIST

Provide assessment of compliance with standards and include supplemental documentation, as applicable.
Please submit each document as a separate PDF file.

TRANSPORTATION		
Yes	**NA**	**Impact on Surrounding Street Systems (14-14.6.1(A))** 11 ● Describe incremental volume of traffic impacts and mitigation measures. If needed
Yes	**NA**	**Access and Circulation (14-14.6.1(B))** 12 Identify and describe the following: ● Site access and internal circulation, including ADA access ● Drive-up features, if applicable ● Loading and servicing needs, routes, and geometry, providing turning templates for delivery vehicles, if applicable ● Sidewalks and condition along street frontages and internal walkways ● Engineered details for ADA ramps and public sidewalks, meeting sidewalk material policy and construction requirements (Technical Manual, Section 1)
Yes	**NA**	**Public Transit (14-14.6.1(C)), if applicable** 13 Identify and describe the following: ● Existing available transit service and proposed transit improvements, including design details, such as easement, pad base, and shelter
Yes	**NA**	**Off-Street Parking (14-14.6.1(D)), if applicable** 14 Identify and describe the following: ● Proposed vehicular and bicycle parking supply (including ADA-compliant parking) in relation to applicable parking requirements in Article 19 of the land use code ● Curb cut separation and parking layout (Technical Manual, Section 1) ● Construction details for bicycle racks ● Management plan for snow storage and removal
Yes	**NA**	**Transportation Demand Management (TDM) (14-14.6.1(E)), if applicable** 15 ● Provide TDM plan drafted in accordance with Technical Manual Section 1 requirements

ENVIRONMENTAL		
Yes	**NA**	**Preservation of Significant Natural Features (14-14.6.2(A)), if applicable** **16** Identify and describe the following: ● High and moderate value waterfowl and wading habitat ● Aquifers (for Casco Bay Islands) ● Waterbodies (including wetlands, watercourses, significant vernal pools and floodplains) ● Proposed preservation areas and protection measures ● Documentation from environmental compliance consultants and determinations from applicable state and federal agencies
Yes	**NA**	**Landscape Preservation (14-14.6.2(B))** **17** Identify and describe the following: ● Measures to preserve trees, including within required zoning setbacks (Technical Manual, Section 4) ● Measures to protect existing vegetation during construction
Yes	**NA**	**Site Landscaping and Buffers (14-14.6.2(C))** **18** Identify and describe the following: ● Overall landscaping approach and consistency with standards ● The use of screening and buffering of service areas and between non-residential and residential uses ● Existing Heritage or Feature Trees on site and measures to preserve ● Compliance with street tree requirements
Yes	**NA**	**Water Quality, Stormwater Management, and Erosion Control (14-14.6.2(D))** **19** Identify and describe the following: ● Erosion and sedimentation control plan and measures ● Evidence of compliance with Urban Impaired Stream Standards pursuant to DEP Chapter 500 stormwater law, as applicable ● Subsurface sanitary sewage disposal and groundwater protection measures

PUBLIC INFRASTRUCTURE AND COMMUNITY SAFETY			
Yes	**NA**	**Consistency with City Master Plans (14-14.6.3(A))** 20 ● Describe proposed easements, rights and improvements to connect or continue off-premises public infrastructure, as applicable	
Yes	**NA**	**Public Safety and Fire Prevention (14-14.6.3(B))** 21 Identify and describe the following: ● Compliance with Crime Prevention through Environmental Design (CPTED) requirements (Technical Manual, Section 3) ● Emergency vehicle access ● Consistency with public safety standards (Technical Manual, Section 3)	
Yes	**NA**	**Availability and Adequacy of Public Utilities (14-14.6.3(C)) (Technical Manual, Sections 2 & 9)** 22 Identify and describe the following: ● Electrical services, including providing underground services ● Existing and proposed connections for public utilities and required public utility upgrades ● Sewer line connections	
SITE DESIGN			
Yes	**NA**	**Massing, Ventilations and Wind Impact (14-14.6.4(A))** 23 Identify and describe the following: ● Wind and ventilation impacts on adjoining structures and/or adjacent public spaces, including wind study, if applicable ● Bulk, location, or height impacts on adjoining structures	
Yes	**NA**	**Shadows (14-14.6.4(B)), if applicable** 24 ● Provide shadow analysis of impacts on publicly accessible open space (Technical Manual, Section 11)	
Yes	**NA**	**Snow and Ice Loading (14-14.6.4(C))** 25 ● Describe building design measures to prevent snow and ice from loading or falling onto adjacent properties or public ways	
Yes	**NA**	**View Corridors (14-14.6.4(D)), if applicable** 26 ● Describe any protection of designated view corridors (Portland Design Manual, Appendix. 1)	
Yes	**NA**	**Historic Resources (14-14.6.4(E)), if applicable** 27 Identify and describe the following: ● The site's status as a designated landmark, within a historic district or historic landscape district, or within 100 feet of any designated landmark, historic district, or historic landscape district ● Compliance with standards for preservation and documentation of archaeological resources	

Yes	**NA**	**Exterior Lighting (14-14.6.4(F))** **28** ● Describe how the proposed site lighting will adhere to photometrics requirements as it relates to light trespass and full cutoff fixture design, pursuant to Technical Manual Section 12
Yes	**NA**	**Noise and Vibration (14-14.6.4(G))** **29** ● Provide data on noise levels for HVAC and other mechanical equipment, such as design specifications, to demonstrate consistency with state and federal noise emissions requirements as well as City code
Yes	**NA**	**Signage and Wayfinding (14-14.6.4(H)), if applicable** **30** ● Provide signage plan showing the location, dimensions, height and setback of all existing and proposed signs ● Provide drawings of all commercial and directional signage on site
Yes	**NA**	**Zone-Related Design Standards (14-14.6.4(I))** **31** ● Address any applicable design review standards by zone, including compliance with Design Manual

MAJOR SITE PLAN
DRAWINGS CHECKLIST

Please upload the following DRAWINGS with the listed details into e-Plan as separate pdfs.

All drawings must be submitted in a 24 x 36 sheet size.

BOUNDARY SURVEY (stamped by a Maine Licensed Surveyor and drawn as per Technical Manual Sec. 13)

SITE PLAN(s) (stamped by a Maine Licensed Professional Engineer) including:

All sheets – Include a title block with project title and the following information:

- Project street address
- Name and address of property owner & applicant
- Licensed design professional, incl firm that produced plans
- North arrow
- Date of preparation and revision history block
- Tax parcel (chart, block, and lot) number

Existing Conditions Plan with the following:

- Existing structures, with distance from primary building façade(s) to the property line
- Approximate location of structures on abutting properties
- All streets and intersections adjacent to the site
- Existing driveways, pedestrian ways, and bicycle infrastructure, including dimensions and materials
- Existing public transit infrastructure
- Existing vehicle & bicycle parking areas
- Existing utilities on site and within adjacent rights-of-way
- Existing grades (two-foot contours preferred)
- Location of water courses, wetlands, and vegetation, or other significant natural features
- Existing soil conditions and location of test pits and borings
- Zoning boundary lines, including overlays
- Location of all existing easements and rights-of-way

Proposed Site Plan with the following:

- Proposed structures, including distance from primary building façade(s) to property lines
- Ground floor area, and finished floor elevations for all buildings
- Any proposed geometric modifications to streets and intersections adjacent to site
- Location, dimensions and materials of all proposed driveways, vehicle, bicycle, & pedestrian access ways with corresponding curb lines
- Engineered specifications/ cross-sections for proposed driveways, sidewalks & paved areas
- Location and dimensions of proposed loading areas, including turning templates
- Proposed transit infrastructure with dimensions/ engineering specifications
- Location of vehicle and bicycle parking with dimensions and engineering specifications
- Location of all snow storage areas
- Exterior lighting (please see Technical Manual Sec. 12 for photometrics requirements)

- Location of fire hydrants
- Location of solid waste management receptacles
- Location of all proposed HVAC and mechanical equipment, including proposed screening, where applicable
- Location of proposed easements and rights-of-way, including dimensions
- Please utilize color-coding and/or hatches and shading to delineate changes between the pre and post development condition as needed

UTILITY PLAN including:

- Proposed electrical infrastructure
- Location, sizing and directional flows of all proposed sewer and stormwater infrastructure
- Location and dimensions of off-premises public or publicly accessible infrastructure adjacent to site
- Electric utility infrastructure

GRADING AND DRAINAGE PLAN including:

- Proposed grades
- Proposed stormwater management measures meeting Technical Manual (Section 5) standards
- Any proposed alteration of a watercourse or wetlands
- Any groundwater protection measures
- Proposed buffers and preservation measures for wetlands or significant natural features

LANDSCAPE PLAN including:

- Existing vegetation to be preserved and preservation measures
- Proposed landscaping, screening, and street trees, including caliper widths for trees
- Planting schedule, including street trees

ARCHITECTURAL PLANS AND RENDERINGS including:

- Exterior building elevations, color renderings, illustrations of all sides
- Axonometric and street-level views for structures greater than three stories in height
- Provide context drawings, if applicable (Design Manual, page 1)
- Floor plans

CONSTRUCTION MANAGEMENT PLAN including:

- Specifics on traffic control, sidewalk sheds, and pedestrian rerouting
- Include a drawing and written narrative

OTHER

- Details and cross-sections, as necessary

03: EVIDENCE OF RIGHT, TITLE OR INTEREST

The record owner of the parcel is Martin's Point Health Care, Inc., as recorded in the Cumberland County Registry of Deeds (CCRD):

- CCRD Book 29771/Page 60
- CCRD Book 24070/Page 323
- CCRD Book 11581/Page 337 (HTTA: Penboscot Bay Medical Associates, Inc.)
- CCRD Book 4898/Page 199 (HTTA: Penobscot Bay Medical Associates)

Reference is made to the Existing Conditions plans prepared by Sebago Technics.

CORRECTIVE DEED
QUITCLAIM DEED WITH COVENANT

MORRISON CENTER (f/k/a Morrison Developmental Center and f/k/a Cerebral Palsy Association of Greater Portland, Inc.), a Maine nonprofit corporation ("Grantor"), FOR CONSIDERATION PAID, grants to MARTIN'S POINT HEALTH CARE, INC., a Maine nonprofit corporation ("Grantee") with a mailing address of 891 Washington Avenue, Portland, Maine, with QUITCLAIM COVENANT, certain real property, together with any improvements thereon (the "Premises") located at or near 331 Veranda Street, Portland, Cumberland County, Maine, and more particularly described on Exhibit A attached hereto and made a part hereof.

Meaning and intending to describe and convey the same premises conveyed to the Grantor by Quitclaim Deed from the City of Portland, dated April 17, 1986, and recorded in the Cumberland County Registry of Deeds at Book 7138, Page 247.

The purpose of this Corrective Deed is to correct the name of the Grantee in the Quitclaim Deed With Covenant dated December 14, 2007, recorded in the Cumberland County Registry of Deeds in Book 25685, Page 331.

IN WITNESS WHEREOF, MORRISON CENTER has caused this instrument to be executed by Charles McBrady, its President thereunto duly authorized, this 7th day of JUNE, 2012.

WITNESS:

MORRISON CENTER

By: _____
Charles McBrady, Its President

STATE OF MAINE
COUNTY OF CUMBERLAND, SS. JUNE 7, 2012

Personally appeared the above-named Charles McBrady, Its President as aforesaid of Morrison Center, and acknowledged the foregoing instrument to be his free act and deed in his said capacity and the free act and deed of said corporation.

Before me,

_____
Attorney-at-Law/Notary Public (ex: 3-19-15)
Print Name: MARK L. RYDER

EXHIBIT A

A certain lot or parcel of land with any buildings and improvements thereon situated off Veranda Street in the City of Portland, County of Cumberland and State of Maine, bounded and described as follows:

Beginning at a point in the division line running between Parcel No. 1 and Parcel No. 2 as shown on a plan of Martins Point dated June 6, 1984. Said plan being on file in the office of the Director of Parks and Public Works of the City of Portland in plan file 548/21.

Said point of beginning being the fifth (5th) angle in said division line between Parcel 1 and Parcel 2 southerly of the old southerly side line of Veranda Street, all as shown on the aforementioned plan of Martins Point.

Thence from said point of beginning on a course having a bearing of North no degrees, fifty-five minutes and no second West (N 00°-55'-00" W) a distance of sixty-four and forty-five one-hundredths (64.45') feet to a point;

Thence South sixty-two degrees, twenty-five minutes and no seconds West (S 62°-25'-00" W) a distance of one hundred fifty-six and forty-five on-hundredths (156.45') feet to a point;

Thence South nineteen degrees, forty-two minutes and no seconds East (S 19°-42'-00" E) a distance of one hundred seventeen and eighty-four one-hundredths (117.84') feet to a point;

Thence South fifteen degrees, seventeen minutes and no seconds East (S 15°-17'-00" E) a distance of one hundred ninety-five and eighty-two one-hundredths (195.82') feet to a point;

Thence North seventy-four degrees, forty-three minutes and no seconds East (N 74°-43'-00" E) a distance of one hundred twenty-nine and fifty-five one-hundredths (129.55') feet to a point;

Thence North fifteen degrees, thirty-seven minutes and no seconds West (N 15°-37'-00" W) a distance of two hundred eighty-four and forty-one one-hundredths (284.41') feet to the point of beginning.

Also a perpetual easement for the purposes of ingress and egress over the parcel of land described below as well as the right to install, repair, maintain, and or replace utility lines over, under and above said parcel:

Beginning at a point in the most northerly side line of land now or formerly of the Cerebral Palsy Center Association of Greater Portland, Inc.

Said point being forty-six and twenty one-hundredths (46.20') feet westerly along the said northerly side line of land of the Cerebral Palsy Center Association of Greater Portland, Inc. from the most northerly corner of said Cerebral Palsy Association of Greater Portland, Inc. land.

Thence North eleven degrees, thirty-five minutes and no seconds West (N 11°-35'-00" W) a distance of one hundred sixteen and fifty-two one-hundredths (116.52') feet to a point;

Thence South eighty-nine degrees, fifty-three minutes and no seconds West (S 89°-53'-00" W) a distance of three hundred eleven and forty-three one-hundredths (311.43') feet to a point in the southerly side line of old Veranda Street.

Said point being one hundred sixty-four and eighty one-hundredths (164.80') feet easterly along the said southerly side line of old Veranda Street from the first angle therein easterly of its intersection with the southerly side line of Veranda Street relocated.

Said easement or right-of-way to be forty and no one-hundredths (40.00') feet wide and to lie equally on each side of the above described line.

The Premises are conveyed subject to the following conditions:

Conditions subsequent #4 (anti-discrimination provisions) set forth in the deed from the United States of America to the City of Portland dated August 12, 1976 and recorded at Cumberland County Registry of Deeds in Book 3892, Page 334, as affected by Consent to Transfer Agreement dated November 6, 1985, recorded in said Registry of Deeds in Book 7138, Page 239.

Rights and easements granted to the Portland Water District by the United States by deed dated September 20, 1955 and recorded in Book 2254, Page 97, including the building restrictions set forth therein.

Rights and easements granted to Central Maine Power Company by deed dated December 18, 1978 and recorded in Book 4385, Page 64.

Rights and easements granted to Central Maine Power Company and New England Telephone and Telegraph Company by deed dated January 14, 1980 and recorded in Book 4568, Page 90.

Received
Recorded Register of Deeds
Jul 23,2012 10:35:53A
Cumberland County
Pamela E. Lovley

FINAL

QUITCLAIM DEED WITHOUT COVENANT

The CITY OF PORTLAND, a body politic and corporate, located in the County of Cumberland and State of Maine ("Grantor") for one dollar and other good and valuable consideration, Grants to MARTIN'S POINT HEALTH CARE, INC., a/k/a Martin's Point Health Care Center and f/k/a Penobscot Bay Medical Associates and/or Penobscot Bay Medical Associates, Inc., a Maine non-profit corporation, with offices at 331 Veranda Street, Portland, Maine 04103 ("Grantee") certain real property located on the southeasterly side of Veranda Street on Martin's Point in the City of Portland, Cumberland County, Maine, together with the buildings and improvements thereon and certain appurtenant easements, all as more particularly described on Exhibit A attached hereto and incorporated by reference herein (the "Premises").

The Premises are shown on a Plan entitled "Conveyance Plan on Veranda Street, Portland, Maine, made for Martin's Point Health Care Inc." by Owen Haskell, Inc. dated June 13, 2006, as last revised June 14, 2006, as "N/F City of Portland 3892/334" to be recorded at the Cumberland County Registry of Deeds.

MAINE REAL ESTATE TAX PAID

The Premises are conveyed subject to:

1. A right of way and easement forty (40) feet in width on and over a strip of land more particularly described on Exhibit B attached hereto and made a part hereof, which right of way and easement benefits land of the Morrison Developmental Center (formerly of the Cerebral Palsy Association of Greater Portland, Inc. described in Quitclaim Deed recorded in the Cumberland County Registry of Deeds in Book 7138, Page 247). Grantee herein by acceptance of this deed assumes all obligations of Grantor arising after the date of this deed with respect to said forty (40) foot easement as may be set forth in said Quitclaim Deed.

2. Rights and easements described in instrument from City of Portland to Central Maine Power Company dated December 18, 1978 and recorded at the Cumberland County Registry of Deeds in Book 4385, Page 64, and the terms, provisions, and restrictions set forth therein.

3. Rights and easements described in instrument from City of Portland to Central Maine Power Company and New England Telephone and Telegraph dated January 14, 1980 and recorded at the Cumberland County Registry of Deeds in Book 4568, Page 90, and the terms, provisions and restrictions set forth therein.

4. Rights and easements reserved to Grantor (and herein excepted and reserved) for a "Park Area," "Walkways" and public safety access (as set forth in Paragraphs "1," "2" and "3") in a deed from Grantor to Grantee dated August 8, 1994, and recorded in the Cumberland County Registry of Deeds in Book 11581, Page 337, said Easements for a Park Area and Walkways being further amended by a certain Easement Relocation Agreement of even date between Grantor and Grantee and to be recorded at the Cumberland County Registry of Deeds. Grantor also reserves the benefit of the covenants (a), (b), (c) and (d) set forth in said deed recorded in Book 11581, Page 337 provided that any reference to the "Park Area" and "Walkway" shall mean as relocated pursuant to the Easement Relocation Agreement of even date herewith.

5. Covenants, conditions and restrictions set forth as items (a), (b), (c) and (d) on page 8 in Deed from the United States of America dated August 12, 1976, to the Grantor and recorded at the Cumberland County Registry of Deeds in Book 3892, Page 334, excepting, however, any restrictions, covenants or conditions which were abrogated and/or released by a certain "Abrogation and Release of Restrictions" from the United States of America dated August 12, 1994, and recorded at said Registry of Deeds in Book 11581, Page 332.

Grantee by acceptance of this deed covenants and agrees that notwithstanding the fact that Grantee is a not-for-profit corporation whose purposes may render it real and personal property tax exempt Grantee agrees that so long as it or any affiliate owns the Premises it will pay to the City of Portland payments in lieu of taxes thereon in amounts equivalent to what would otherwise be then payable on the Premises in municipal real property and, if applicable, personal property taxes, reserving however to Grantee all rights and privileges as to abatement and appeal of valuations, rates and the like as are accorded non-tax exempt owners of real and personal property in Maine.

Grantor further reserves a right of first refusal respecting the Premises in favor of the Grantor on the following terms: The right shall, if not earlier terminated or waived, automatically terminate upon the earlier to occur of: (i) seven (7) years from the date of closing hereunder or (ii) one (1) year from the issuance of an occupancy permit to Grantee (or its affiliates) for the Marine Hospital building, so-called, located on the Premises. The right shall not be applicable to "Permitted Transfers" (as described below) however the right shall apply to a sale of the Premises or a sale of a combination of the Premises with the property currently owned by Grantee adjacent to the Premises (a "Campus Sale"). During the term of this right of first refusal, upon the receipt by Grantee of a bona fide offer from a third party purchaser, which Grantee proposes to accept or has accepted, Grantee will provide written notice (the "Sale Notice") to the Grantor of the proposed terms and conditions of sale contained in said offer, including the price and financing terms, if any. Following the Sale Notice, Grantor shall have the option, by written notice (the "Exercise Notice") to Grantee within twenty one (21) days of receipt of the Sale Notice, to notify Grantee of its election to purchase the property that is being sold at the price and on terms that the Grantee proposes to accept or has accepted from such bona fide third party purchaser. If Grantor timely exercises the right, the closing on such purchase by Grantor shall occur on the first business day that is sixty (60) days from the date of the Exercise Notice, at which time the Grantor shall pay the purchase price set out in the Sale Notice and otherwise close on the terms of such offer. If Grantor does not notify Grantee of its exercise of

the right within the said 21 -day period and by the means set forth herein, then Grantee may sell the Premises to the said third party purchaser for the same price set forth in the Sale Notice, and upon such sale, this right will automatically terminate. A confirmation of termination of the right may be recorded by Grantee in the Cumberland County Registry of Deeds. The right shall not be triggered by any transfer of the Premises by Grantee to (i) any party or entity for purpose of securing financing or lending arrangements (including without limitation a "sale-leaseback" transaction), or to any proceedings for the foreclosure thereof, including foreclosure auctions and the subsequent sale by a foreclosing mortgagee who is the successful bidder at the foreclosure auction or similar proceeding; (ii) any parent, subsidiary or affiliate corporation or entity or any corporation resulting from the consolidation or merger of Grantee into or with any other entity; or (iii) any person, firm, entity or corporation acquiring control of Grantee or otherwise, through ownership or voting securities, by contract or otherwise ("Permitted Transfers"). However, this right of first refusal, if not sooner terminated, shall survive such Permitted Transfer(s). In any event, the Grantor agrees to subordinate its interest in this right of first refusal to any such financing or lending arrangements upon the request of Grantee's lender.

SIGNATURES ON FOLLOWING PAGE

IN WITNESS WHEREOF, the CITY OF PORTLAND has caused this instrument to be signed by Duane G. Kline, its Finance Director, on the 15th day of June, 2006.

WITNESS:

Donna M. Katsiafikas

CITY OF PORTLAND

By: _____
Duane G. Kline
Director of Finance

STATE OF MAINE
CUMBERLAND, SS.

June 15, 2006

PERSONALLY APPEARED the above-named Duane G. Kline, its Finance Director, as aforesaid, and acknowledged the foregoing instrument to be his free act and deed in his said capacity and the free act and deed of said City of Portland.

Before me,

Donna M. Katsiafikas
~~Notary Public~~/Attorney-at-Law
Print Name: DONNA M. KATSIAFICAS
Commission Expires:

EXHIBIT A

A certain lot or parcel of land with any buildings and improvements thereon situated on the southeasterly sideline of Veranda Street in the City of Portland, County of Cumberland and State of Maine, bounded and described as follows:

Beginning at a point on the southeasterly sideline of Veranda Street, said point being distant 313.30 feet northeasterly along said southeasterly sideline of Veranda Street on a course of N 61° 45' E from a granite three-foot offset monument located on the split of the last angle in Veranda Street as shown on a plan numbered 548/21 on file in the Office of the Director of Public Works, City Hall, Portland, Maine;

Thence S 59° 15'E, a distance of sixty (60) feet to a point;

Thence N 79° 55' E, a distance of one hundred and fifty (150.00) feet to a point;

Thence S 50° 55' E, a distance of two hundred forty-five (245.00) feet to a point;

Thence S 12° 55' E a distance of eleven and nine hundredths (11.90) feet to land n/f Penobscot Bay Medical Associates, Inc. (Book 11581, Page 337) to a point;

Thence N 77° 01'16" E a distance of two hundred eighteen and fifty-three hundredths (218.53) feet to a point;

Thence S 12° 58'44" E a distance of fourteen and thirty-four hundredths (14.34) feet to a point;

Thence N 77° 01'16" E a distance of twenty-seven and seventy-two hundredths (27.72) feet to a point;

Thence N 12° 58'44" W a distance of fourteen and thirty-four hundredths (14.34) feet to a point;

Thence N 77° 01'16" E a distance of ninety-seven and fifty hundredths (97.50) feet to a point and land n/f Cerebral Palsy Association of Greater Portland, Inc. (Book 7138, Page 247);

Thence N 15° 17' 00" W along said land n/f of Cerebral Palsy Association a distance of forty two and eighty-two hundredths (42.82') feet to a point;

Thence N 19° 42'00" W along said land n/f of Cerebral Palsy Association a distance of one hundred seventeen and eighty-four hundredths (117.84) feet to a point;

Thence N 62° 25'00" E along said land n/f of Cerebral Palsy Association a distance of one hundred fifty-six and forty-five hundredths (156.45) feet and land n/f of United States of America;

Thence N 00° 55' W along said land n/f of United States of America a distance of one hundred twelve and fifty-seven hundredths (112.57) feet to a point;

Thence S 87° 35' W along said land n/f of United States of America a distance of fifty-eight and sixty-two hundredths (58.62) feet to a point;

Thence N 01° 25' W along said land n/f of United States of America a distance of thirty-three and eighty-four hundredths (33.84) feet to a point;

Thence S 89° 20' W along said land n/f of United States of America a distance of one hundred eighty-five and twenty-three hundredths (185.23) feet to a point;

Thence N 24° 17' W along said land n/f of United States of America a distance of eight and twelve hundredths (8.12) feet to a point and an intersection with the southeasterly sideline of the land of the State of Maine. Said southeasterly sideline of the land of the State of Maine being the southeasterly sideline of the old Veranda Street before its relocation on December 31, 1896;

Thence S 65° 43' W along the said southeasterly sideline of the land of the State of Maine, a distance of two hundred ninety-two and fifty-six hundredths (292.56) feet to a point;

Thence S 61° 45' W along the said southeasterly sideline of the land of the State of Maine and along the southeasterly sideline of Veranda Street as it now exists, a distance of three hundred thirty-eight and sixty-one hundredths (338.61) feet to the point of beginning.

The above-described premises are conveyed together with and the Grantor hereby releases to Grantee its rights under a certain "Easement to City of Portland 4015/160" which is shown on the Plan and more particularly described in instrument recorded in the Cumberland County Registry of Deeds in Book 4015, Page 160.

Together with and releasing to Grantee those easements for sewer, water and underground electric, as well as an easement relating to an underground storage tank (which has been removed by the Grantor prior to the date hereof) all of which were excepted and reserved by the Grantor in paragraphs numbered 4, 5 and 6 in the deed from Grantor to the Grantee dated August 8, 1994 and recorded in the Cumberland County Registry of Deeds in Book 11581, Page 337.

EXHIBIT B

A strip of land forty (40) feet in width whose centerline is described as follows:

Beginning at a point in the most northerly side line of land now or formerly of the Cerebral Palsy Center more particularly described in deed recorded in the Cumberland County Registry of Deeds in Book 7138, Page 247; said point being forty-six and twenty one-hundredths feet (46.20') westerly from the most northerly corner of said Cerebral Palsy Center land; thence North eleven degrees, thirty-five minutes and no seconds West (N 11° 35' 00" W) a distance of one hundred sixteen and fifty-two one hundredths feet (116.52') to a point; thence South eighty-nine degrees, fifty-three minutes and no seconds West (S 89° 53' 00" W) a distance of three hundred eleven and forty-three one hundredths feet (311.43') to a point in the southerly sideline of old Veranda Street. Said point being one hundred sixty-four and eighty one-hundredths feet (164.80') easterly along said southerly line of old Veranda Street from the first angle therein easterly of its intersection with the southerly side line of Veranda Street relocated.

Said easement or right-of-way to be forty and no one-hundredths feet (40.00') wide and to lie equally on each side of the above-described line.

Received
Recorded Register of Deeds
Jun 15,2006 11:47:30A
Cumberland County
John B OBrien

19109

QUITCLAIM DEED WITH COVENANT

The CITY OF PORTLAND, a body politic and corporate located in the County of Cumberland and State of Maine ("Grantor") for One Dollar and other good and valuable consideration grants with Quitclaim Covenant to PENOBSCOT BAY MEDICAL ASSOCIATES, INC., a Maine non-profit corporation, formerly known as Penobscot Bay Medical Associates and sometimes doing business under the name Martin's Point Health Care Center, with offices at 331 Veranda Street, Portland, Maine 04103 ("Grantee"), certain real property located off the Southeasterly side of Veranda Street on Martin's Point in the City of Portland, Cumberland County, Maine, together with the buildings and improvements thereon and certain appurtenant easements all more particularly described as follows:

Commencing at the Northernmost corner of the land of Grantee (as described in instrument recorded at the Cumberland County Registry of Deeds in Book 4899, Page 203) as shown on "Plan of Property in Portland, Maine Made for Penobscot Bay Medical Associates by Morton & Rose Associates November 23, 1981" recorded at the Cumberland County Registry of Deeds in Plan Book 133, Page 18, and also shown on "Site Plan of Martin's Point City of Portland, Maine Department of Public Works June 6, 1974" by Morton & Rose filed as City Plan 548/21;

Thence, the following courses by the land of Grantee:

S-59°-15'-00"-E a distance of 60.00 feet;
N-79°-55-00"-E a distance of 150.00 feet;
S-50°-55'-00"-E a distance of 245.00 feet to a 6" by 6" granite monument with a drill hole found;
S-12°-55'-00"-E a distance of 11.90 feet to a 5/8" iron rod set and the point of beginning of this parcel;

Thence, the following courses by the remaining land of Grantor:

N-77°-01'-16"-E a distance of 218.53 feet to a 5/8" iron rod set;
S-12°-58'-44"-E a distance of 14.34 feet to a 5/8" iron rod set;
N-77°-01'-16"-E a distance of 27.72 feet to a 5/8" iron rod set;
N-12°-58'-44"-W a distance of 14.34 feet to a 5/8" iron rod set;
N-77°-01'-16"-E a distance of 97.50 feet to a 5/8" iron rod set and the land now or formerly of the Cerebral Palsy Association of Greater Portland, Inc. (Book 7138, Page 247);

Thence, the following courses by land of the Cerebral Palsy Association of Greater Portland, Inc.:

S-15°-17′-00"-E a distance of 153 feet to a 5/8" iron rod set;
N-74°-43′-00"-E a distance of 129.45 feet to the land of the United States of America;

Thence, S-15°-37′-00"-E by the United States of America to low water of Casco Bay;

Thence, Southwesterly by low water of Casco Bay to the land of Grantee;

Thence, N-12°-55′-00"-W by the land of Grantee to high water of Casco Bay;

Thence, N-12°-55′-00"-W by the land of Grantee 286 feet more or less to the point of beginning.

Said parcel contains 1.66 acres more or less and is shown on "Standard Boundary Survey at Martins Point on Veranda Street, Portland, Maine made for Penobscot Bay Medical Associates, d/b/a Martin's Point Health Care Center dated June 7, 1994," prepared by Owen Haskell, Inc., and recorded in the Cumberland County Registry of Deeds in Plan Book 194, Page 258 (the "Plan"). All bearings are based on a plan recorded in the Cumberland County Registry of Deeds in Plan Book 133, Page 18.

The above described parcel is hereinafter referred to as the "Premises."

Together with the right to construct, install, maintain, replace and repair a walkway extending from the northerly sideline of the Premises running in a northerly direction on the easterly side of the road shown on the Plan as "Access To Lower Parking Lot," then crossing said road and running on the westerly side of and parallel to said road in the approximate location identified as "Walkway" on the Plan and extending across the Lower Parking Lot to land now or formerly of the United States of America.

Also together with an easement for purposes of vehicular and pedestrian passage extending from the Premises in a northerly direction on, over and along the area identified as "Access to Lower Parking Lot" on the Plan to the area designated on the Plan as "Lower Parking Lot," and in connection therewith the right to install, maintain, replace and repair said road and to enter onto land immediately adjacent to said Access to Lower Parking Lot area for any of the aforesaid purposes. The road designated as Access to Lower Parking Lot shall be used by Grantor and its successors and assigns in common with the Portland School Department, Grantee and their successors and assigns.

Also together with an easement in common with the Portland School Department, Grantor and the Cerebral Palsy Association of

Greater Portland, Inc., on and over a 40-foot wide strip of land shown on the Plan as "40' Easement."

Excepting and reserving to Grantor the following:

1. An easement for Grantor and the public for pedestrian (including wheelchair) use for recreational purposes during daylight hours of the area shown on the Plan as "Park Area (Proposed)" on the southerly side of the wall shown on the Plan as "Retaining Wall (Proposed)," which is to be located on the southerly edge of the area shown on the Plan as "Parking Area (Proposed)," together with the right to use the walkways, overlooks, seating areas and stairs constructed within such Park Area (the "Park Area") and the pathway shown on the Plan as "Access Pathway and Stairs (Proposed)" across the Park Area and Parking Area to remaining land of Grantor.

2. An easement for the installation, maintenance, replacement and repair of the Park Area on those portions of the above-described Premises that will not be used as a parking area, including without limitation the right to remove or relocate trees and shrubs and to provide landscaping of the Park Area, including the planting, pruning, and general maintenance of the trees and shrubs, and the installation, maintenance and repair of the Park Area, including the walkways, overlooks, stairs, benches, lighting and other park amenities which may be installed in the Park Area from time to time.

3. An easement for the entry into the Park Area at all times by the Portland Police Department, the Portland Fire Department, emergency medical personnel and other authorized officials, such as park rangers, to assure public safety and proper use of the Park Area.

4. An easement to maintain, replace and repair the sewer and underground electric lines crossing the Premises and serving the buildings shown on the Plan as the Portland School Department Buildings and the Cerebral Palsy Association Building.

5. An easement for the maintenance, replacement and repair of a water line providing water to the Portland School Department buildings, the Cerebral Palsy Association building, and Great Diamond Island.

6. An easement for the maintenance, replacement and repair of an underground storage tank and associated piping and manholes in the approximate location shown on the Plan as "Underground Fuel Tank" provided, however, in the event that the Grantor removes and/or replaces said tank,

Grantor shall restore the surface of the earth to substantially the same condition as prior to said removal and/or replacement, and provided further that Grantor shall maintain, remove, replace, repair and operate the tank in compliance with applicable laws.

Grantee by acceptance of this Deed on behalf of itself, its successors and assigns hereby covenants and agrees as follows:

(a) At its expense to construct the Park Area and Walkways and install such other park amenities as are shown on site plans approved by the City of Portland Planning Board.

(b) That the public shall have the right to use the Park Area as shown on the Plan and the Walkways that provide access to the Park Area during daylight hours.

(c) To maintain the Park Area and Walkways in a clean and good condition and repair.

(d) That any above ground new construction or exterior alterations on the Premises which may have a visual effect on the setting of the Marine Hospital Building, which is located on land of Grantor adjacent to the Premises, shall receive prior approval from the Maine Historic Preservation Commission. This covenant is also for the benefit of and enforceable by the United States of America.

These covenants are intended to benefit adjacent land being retained by Grantor and to run with and burden the Premises in perpetuity.

IN WITNESS WHEREOF, the CITY OF PORTLAND has caused this instrument to be signed by Duane G. Kline, its Finance Director, on the 5th day of August, 1994.

WITNESS:

CITY OF PORTLAND

By: _____
Duane G. Kline
Its: Finance Director

STATE OF MAINE
CUMBERLAND, ss.

August 5, 1994.

PERSONALLY APPEARED, the above-named Duane G. Kline, its Finance Director, as aforesaid, and acknowledged the foregoing

instrument to be his free act and deed in his said capacity and the free act and deed of said City of Portland.

Before me,

Natalie L Burns

Natalie L Burns
~~Notary Public~~/Attorney-at-law

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12079017.ded

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QUITCLAIM DEED

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This indenture, made this 11 th day ofDecember, 1981 between the UNITED STATES OF AMERICA, acting by and through the Secretary of Health and Human Services, Grantor, under and pursuant to the power and authority provided by the Omnibus Budget Reconciliation Act of 1981, Public Law 97-35, (hereinafter called the Act), and the Penobscot Bay Medical Associates, a non-profit corporation, Rockland, Maine, Grantee.

WITNESSETH

WHEREAS, the Grantee has made a firm offer to the Secretary of Health and Human Services to acquire and operate the herein described real property, including improvements thereon, known as the Portland, Maine, Public Health Service Clinic (hereinafter called the Property), in accordance with the provisions of the Act; and

WHEREAS, the Grantor has accepted the offer of the Grantee;

NOW, THEREFORE, the Grantor, for and in consideration of the foregoing, the sum of one dollar ($1.00), and of the observance and performance by the Grantee of the covenants and restrictions hereinafter contained and other good and valuable consideration, receipt of which is hereby acknowledged, has given, granted, conveyed and quitclaimed and by these presents does give, grant, convey and quitclaim without representation or warranty, express or implied to the Grantee, its successors and assigns, all right, title, interest, claim and demand, including any after acquired title, which the United States of America has in and to the Property, situate, lying, and being in the County of Cumberland, State of Maine, and more particularly described as follows:

Beginning at an iron pipe on the southeasterly right of way line of Veranda Street, at the northeasterly corner of land now or formerly of Edwin B. Thurston, Jr. and Cora R. Thurston on the line of a steel fence running on the line between the herein conveyed property and land of said Thurston, said pipe being approximately sixty (60.0) feet west of the west corner of a barn standing upon premises as shown on a "Site Plan," U.S. Public Health Services Hospital, Portland, Maine, dated July 7, 1954, General Services Administration drawing No. 27-CR1-13; thence N 61-45 E along the southerly side of Veranda Street three hundred thirteen and thirty hundredths (313.30) feet to an iron pipe set in the ground; thence S 59-15 E sixty (60.0) feet to an iron pipe set in the ground; thence N 79-55 E one hundred fifty (150.0) feet to a P.K. nail set in asphalt roadway; thence S 50-55 E two hundred forty five (245.0) feet to a granite monument set in the ground; thence S12-55 E two hundred thirty two and eighty nine hundredths (232.89) feet to an iron pipe set in the ground at the top of the bank; thence S 12-55 E to the low water mark of Casco Bay approximately one hundred thirty (130.0) feet; thence westerly by said low water mark to a point intersected by a straight line bearing S 14-37 E from the iron pipe at the point of beginning; thence N 14-37 W approximately three hundred (300.0) feet to the high water mark of Casco Bay; thence N 14-37 W approximately forty one (41.0) feet to a granite monument; thence N 14-37 W along a steel fence seventy one and fifteen hundredths (71.15) feet to the point of beginning.

Containing approximately 8 acres of land.

Being a portion of a certain parcel of land situated in Westbrook (now Portland), known as "Martin's Point Farm" conveyed to the United States of America by deed of November 22, 1852 by Francis O.J. Smith recorded in Book 246, Page 14 of the Cumberland County Registry of Deeds. As shown on a plan entitled Plan of Land made for "Penobscot Bay Medical Associates" dated November 23, 1981 by Morton and Rose Associates to be recorded in the Cumberland County Registry of Deeds.

Subject to Grant of Easements to the City of Portland for roadway and sewer line, as recorded on May 15, 1977, in Cumberland County Registry of Deeds in Book 4015, Page 160 and as shown on Drawing No. 668/10 on file at the City of Portland Engineer's Office.

Subject also to Grants and Easement to Portland Water District for water line to Great Diamond Island dated August 10, 1928 and September 20, 1955 recorded in the Cumberland County Registry of Deeds, Book 2254, Page 97.

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This conveyance is made subject to all other easements, reservations, exceptions or interests of Record now existing on the above described real estate and conveys any easements, Rights of Way, etc., appurtenant to the above described real estate.

TO HAVE AND TO HOLD the Property herein granted unto the Grantee, its successors and assigns forever.

Grantee covenants and agrees on its behalf and its successors and assigns to the following covenants which shall be binding upon and enforceable against the Grantee, its successors and assigns:

1. That for a period of thirty (30) years from the date hereof the Property herein conveyed will be used continuously as a general health care facility (except as such use may be interrupted by labor strikes, fire, flood, or acts of God or acts beyond the control of the Grantee) providing a range of diagnostic, therapeutic, rehabilitative and nursing services, to the population within its service area. Grantee shall have sole discretion in connection with the provision of this range of services in determining any services to be provided, beneficiaries, charges, maintenance of facilities, personnel matters, and other such matters involving operation of the Clinic for the purpose of providing those services.

2. That subject to all provisions of law, including State and Federal rights to privacy, the Secretary of Health and Human Services and the Comptroller General of the United States, their delegates, or successors shall have access during the aforesaid thirty (30) year period, for the purpose of audit and examination, to any then existing books, documents, or other records of the Grantee which, in the opinion of the Secretary or the Comptroller General, may be necessary for either of those officials to carry out his duties under the Act or under any other applicable provision of this deed.

3. That during the aforesaid period of thirty (30) years the Grantee will not resell, lease, mortgage, or encumber, or otherwise dispose of any part of the Property or interest therein except as the Grantor or its successor in function may authorize in writing, except for mortgages or encumbrances or other indebtedness insured or guaranteed by any agency, department, or instrumentality of the United States. Such authorization shall not unreasonably be withheld and such authorization shall, upon request, be provided in form and content required by Grantee. The Grantee hereby agrees that, at the time authorization is given by the Grantor for any such sale, lease, mortgage, encumbrance, or other disposition of the Property, the Grantor may require the Grantee to provide to the Grantor a security interest in any proceeds from such sale, lease, mortgage, encumbrance, or other disposition, except that such security interest shall not attach to any such proceeds that are used by the Grantee for health care purposes as provided in covenant numbered 1.

4. That, for the period during which the Property is used for the purpose for which the Federal assistance is hereby extended, the Grantee agrees that it will comply with Title VI of the Civil Rights Act of 1964, section 504 of the Rehabilitation Act of 1973, and where applicable, Title IX of the Education Amendments of 1972, and all requirements imposed by or pursuant to the Regulations of the Grantor (45 CFR Parts 80, 84 and 86) issued pursuant to said Acts and now in effect or as subsequently amended, to the end that, in accordance with said Acts and Regulations, no person shall, on the ground of race, color, national origin, handicap, or sex (where applicable) be excluded from participation in, be denied the benefits of, or otherwise be subjected to discrimination under any program or activity of the Grantee, its successors or assigns to which such Acts apply by reason of this conveyance.

In the event that the Grantee breaches covenants, 1 through 4 set forth above, whether caused by the legal or other inability of the Grantee, its successors and assigns, the Grantee or its successors and assigns by acceptance of this deed agrees for itself, and its successors and assigns that the Grantee shall owe to the Grantor as damages an amount equal to the lesser of (a) a sum agreed to by Grantor and Grantee or (b) an amount equal to 1/360 of the appraised value of the Property, as determined below, for each full month remaining in the 30 year period referenced in covenant numbered 1, as of

HHS _____ PBMA _____

the date of receipt by the Grantee of written notice of the breach as provided below.

Notwithstanding anything to the contrary in this Deed or in a certain Note and Mortgage of even date herewith (the "Note" and "Mortgage") or in any other document between the Grantor and the Grantee, the Grantor agrees for itself, its successors and assigns that neither it nor they will seek collection of any damages due it or them under this Deed, the Note and Mortgage from any property or resources of the Grantee other than the real property described in said Mortgage and no other assets of the Grantee shall be levied upon and no director, officer or member of the Grantee shall be personally liable for payment of such damages.

To determine the appraised value as set forth hereinabove Grantee shall appoint an MAI (Member of the Appraisers Institute) in good standing within ten (10) days after the Grantee is advised by the Grantor that the time to cure has expired without a cure being accomplished. Within fifteen (15) days after this appointment, the appointed appraiser shall complete and deliver an appraisal of the Property to the Grantee and Grantor setting forth an appraised value of the Property. Such determination shall in all respects be conclusive, unless Grantor shall notify Grantee within ten (10) days after receipt of the appraisal that (i) Grantor is not satisfied with the appraised value as determined by the appraisal and (ii) Grantor has appointed an MAI appraiser, in good standing. Within ten (10) days after the notice of Grantor's appointment and dissatisfaction to Grantee, both the appraiser appointed by Grantee and the appraiser appointed by the Grantor shall jointly appoint a third MAI appraiser, in good standing. Within fifteen (15) days after the appointment of said third appraiser, all three appraisers shall jointly appraise the Property and determine the appraised value of the Property. The determination made by the appraisers shall be in writing, signed by at least two of the appraisers. Such determination of appraised value shall be final for the purposes set forth herein, without the right to appeal to the courts or otherwise.

In the event either Grantor or Grantee shall fail or refuse to appoint an appraiser within the time provided herein, then the other party shall have the right to so appoint an MAI appraiser for that party. Each party shall pay the fees and expenses of the appraiser appointed by it. The fees and expenses of the third appraiser, if necessary, shall be divided equally between the Grantee and Grantor.

Prior to the assertion of any of the rights set forth above the Grantor will provide the Grantee with written notice of any breach and the opportunity to cure the breach within sixty (60) days of receipt of such written notice or, where by its nature such breach cannot reasonably be cured within sixty (60) days, to commence to cure the breach within such time and thereafter to diligently prosecute its efforts until such breach is cured.

The failure of the Grantor or its successor in function to insist in any one or more instances upon complete performance of any of the said covenants shall not be construed as a waiver or relinquishment of the future performance of any of said covenants, but the obligations of the Grantee with respect to such future performance shall continue in full force and effect. Notwithstanding any other provisions contained herein, the covenants numbered 1 through 3 shall terminate and be of no further force and effect thirty (30) years from the date hereof.

The Grantee, by acceptance of this deed, covenants and agrees for itself, its successors and assigns, with respect to the Property or any part thereof--which covenant shall attach to and run with the land for so long as the Property is used for a purpose for which Federal assistance is hereby extended by the Grantor or for another purpose involving the provision of similar services or benefits, and which covenant shall in any event, and without regard to technical classification or designation, legal or otherwise, be binding to the fullest extent permitted by law and equity, for the benefit of and in favor of and enforceable by the Grantor or its successor in function thereof--that it will comply with Title VI of the Civil Rights Act of 1964, section 504 of the Rehabilitation Act of 1973, and where applicable, Title IX of the Education Amendments of 1972, and with all requirements imposed by or pursuant to the Regulations of the Grantor (45 CFR Parts 80, 84 and 86) issued pursuant to said Acts and now in effect or as subsequently amended, to the end that, in accordance with said Acts and Regulations, no person in the United States shall, on the ground of race, color, national origin, handicap, or sex (where applicable) be excluded from participation in, be denied the benefits

of, or otherwise be subjected to discrimination under the program referred to in covenant numbered 1 above or under any other program or activity of the Grantee's, its successors or assigns, to which said Acts and Regulations apply by reason of this conveyance.

The Grantee, by acceptance of this deed, covenants and agrees, for itself, its successors and assigns, and every successor in interest to the Property or any part thereof, which covenant shall attach to and run with the land and which covenant shall, in any event, and without regard to the technical classification or designation, legal or otherwise, be binding to the fullest extent permitted by law or equity, for the benefit and in favor of and enforceable by the Grantor and its successors against the Grantee, its successors and assigns and every successor in interest to the Property, or any part thereof;

a. That with respect to any future restoration or action affecting the exterior architecture or structural integrity of any structures on the Property visible from the grounds or structure known as the Portland Maine Marine Hospital, such restoration or action will be accomplished to the maximum extent feasible in a manner which will not detract from the appearance and historic characteristics of the Portland Maine Marine Hospital.

b. That it will present any proposed architectural or rehabilitation plans affecting structures visible from the grounds or structure known as the Portland Maine Marine Hospital and any plans for the construction of additional structures visible from the grounds or structure known as the Portland Maine Marine Hospital, to the State Historic Preservation Officer of the State of Maine, or his/her successor in interest and responsibility, for review and comment prior to the implementation thereof.

The Grantee by the acceptance of this deed, further covenants and agrees, for itself, its successors and assigns, that if the Grantee, its successors and assigns, shall cause any of the buildings on the Property to be insured against loss, damage or destruction and any such loss, damage or destruction shall occur during the period Grantee holds title to the Property subject to said covenants 1 through 3, said insurance and all moneys paid to the Grantee, its successors or assigns, thereunder shall be held in trust by the Grantee, its successors or assigns, and shall be promptly used by the Grantee for the purpose of repairing or replacing such buildings or, if not so used, shall to the extent available after satisfying any claims to such insurance proceeds which may be asserted by persons or entities which hold mortgages on the Property superior to those of the Grantee be paid over to the Treasurer of the United States in an amount not exceeding 1/360th of said insurance proceeds for each full month remaining in the thirty (30) year period referenced in covenant numbered 1 as of the date of such loss, damage, or destruction. Grantee agrees to advise Grantor promptly of any substantial loss, damage or destruction to a substantial portion of the Property.

Notwithstanding any other provision of this deed, all rights, titles, interests, liens, mortgages, claims and demands reserved by or given to the Grantor by the terms of this deed are hereby subordinated to the lien of any deed of trust, mortgage, indenture, security agreement or other instrument affecting the Propety which secures payment of a loan to or other indebtedness of the Grantee, its successors or assigns, obtained for the purpose of constructing improvements to or rehabilitating, renovating, expanding or modifying the Property or for the purpose of providing working capital to operate the Property as provided in covenant numbered 1 above, <u>provided, however</u>, that such loan or other indebtedness is either (a) insured or guaranteed by an agency, department or instrumentality of the United States or (b) authorized by the Grantor or its successor in function in accordance with covenant numbered 3 above. The foregoing subordination shall be effective so that any deed of trust, mortgage, indenture, security agreement or other instrument to which the Grantor's rights are hereby subordinated shall have the same status, force and effect as if made, delivered and recorded before the making, delivery and recording of this deed.

This subordination provision is intended to be and shall be self-executing, and any mortgagee, title insurance company, or other third party involved in such financing may rely upon this provision without duty of further inquiry or confirmation from Grantor. Grantor hereby agrees that, notwithstanding the self-executing notice of this subordination provision, acting through the Secretary of Health and Human Services, or his or her

delegate, upon reasonable written request from any such mortgagee, title insurance company or third party, to confirm in writing to such party the continued effectiveness of this provision and to execute and deliver such other documents as shall reasonably be requested by any such party to give full effect to such subordination.

The Grantee may secure abrogation of the covenants numbered 1, 2, and 3 herein by:

1. Obtaining the written consent of the Grantor, or its successor in function, therefor, which consent will not unreasonably be withheld; and

2. Paying to the United States of America, at the option of the Grantor, an amount not to exceed 1/360th of the appraised value, as of the date of such requested abrogation, of that portion of the Property to be released for each month of the period to be abrogated.

IN WITNESS WHEREOF, the Grantor has caused this instrument to be executed as of the day and year first above written.

UNITED STATES OF AMERICA
Acting through the Secretary
of Health and Human Services

By: _____
Albert A. Peter, Jr.
Director, Office of
Facilities Engineeing

HHS _____ PBMA _____

ACKNOWLEDGEMENT

CITY OF WASHINGTON)
DISTRICT OF COLUMBIA)

On this 16th day of December 1981, before me, a Notary Public in and for the City of Washington, District of Columbia, personally appeared Albert A. Peter, Jr., to me known to be the Director, Office of Facilities Engineering, and known to be the person who executed the foregoing instrument on behalf of the United States of America, and acknowledged to me that he subscribed to he said instrument on behalf of the United States of America.

Witness my hand and official seal.

Jacqueline M. Bennett
My Commission Expires: 8/15/86

JACQUELINE M. BENNETT NOTARY PUBLIC (SEAL) DISTRICT OF COLUMBIA

ACCEPTANCE

The Penobscot Bay Medical Assoicates, hereby accepts this instrument and thereby accepts and agrees to all the terms, covenants, reservations and restrictions contained therein.

PENOBSCOT BAY MEDICAL ASSOCIATES

By: Edward K. Morse
President

PENOBSCOT BAY MEDICAL ASSOCIATES MAINE

ACKNOWLEDGEMENT

STATE OF Maine)
COUNTY OF Cumberland) ss

December 17, 1981

Then personally appeared the above named Edward K Morse, President of Penobscot Bay Medical Associates and acknowledged the foregoing instrument to be his free act and deed in his said capacity and the free act and deed of said corporation.

Before me,

Mary L Schendel
Notary Public

MY COMMISSION EXPIRES DECEMBER 15, 1985

MARY L. SCHENDEL NOTARY PUBLIC MAINE

DEC 18 1981
REGISTRY OF DEEDS CUMBERLAND COUNTY, MAINE
Received at 2 H 46 M P M, and recorded in
BOOK 4898 PAGE 199 Edward J. Gunstein Register

HHS [illegible] PBMA [illegible]

04: EVIDENCE OF STATE OR FEDERAL APPROVALS

The City has reviewed numerous site plans for continued improvements on the Veranda Street Martins Point Campus. Other anticipated reviews/approvals related to the proposed Campus Building #7 redevelopment:

Maine DEP Natural Resources Protection, Permit by Rule Notices

Maine Historic Preservation - Email comment received from MHPC on December 28, 2023, indicating the Building 7 site improvements will not affect the Marine Hospital is located in Section 27-Historic Resources.

We note that the proposed Building 7 improvements will disturb ±3.19 acres; however, less than one acre of additional impervious area is proposed. The site improvements, as designed, do not require MDEP Site Law or other state or federal permits that are not listed above.

05: ZONING ASSESSMENT

This section includes the updated Zoning Analysis Table.

ZONING ANALYSIS Relevant Zone(s) B-5

All Projects:

	Required	Proposed
Lot Size	--	533,000 sf
Area Per Dwelling Unit	--	
Minimum Street Frontage	--	945'
Front Yard Minimum	--	142.09'
Front Yard Maximum	--	
Rear Yard	--	103.54'
Yard Right	--	16.53'
Yard Left	--	
Side Street Setback	--	
Step Back	--	
Maximum Lot Coverage	--	
Minimum Lot Coverage	--	
Maximum Height	65'	45'-10 1/4"
Open Space	--	
Maximum Impervious Area	--	53%
Pavement Setback	--	
Floor Area Ratio	--	
Off Street Parking Spaces	--	499
Loading Bays	--	
Build to Zone	0-10'	Waiver request
Build to Percentage (min.)	80%	Waiver request
Building Length as a percentage of street frontage (min.)	60%	75%
Blank Wall Area (max.)	20'	4.25'

06: SITE PLAN STANDARDS ASSESSMENT

Details of the Site Plan Standards are addressed in the individual sections identified in Section 2-Checklist. A general overview of the standards assessment follows:

6.2 Determination of Use

Per Table 6-D, the use is permitted as a principal use in the R-P Zone.

6.3 Change of Use

Not applicable; the project site continues the existing site uses.

6.4 Supplemental Use Standards

Not applicable.

6.5 Conditional Uses

Not applicable; the proposed improvements are not considered a Conditional Use.

6.6 Accessory Uses

Not applicable; accessory uses are not proposed.

6.7 Temporary Uses

Not applicable; temporary uses are not proposed.

6.8 Performance Standards

6.8.1 Design

A. Not applicable. The project is not in the B-3 zone.
B. Not applicable. The project is not in the B-7 zone.

6.8.2 Development in the R-OS zone

Not applicable. The project is not in the R-OS zone.

6.8.3 Discharges

Withdrawal from or ejection to the aquifer is not proposed. Stormwater will be handled per the Stormwater Management Plan (Section 19) and as shown on the appended site plans. Contaminants or other materials with the potential to pollute the water supply will not be discharged as part of this project.

6.8.4 Electromagnetic interference

No electromagnetic interference is anticipated or associated with this project.

6.8.5 Exterior lighting

The existing approved lighting will remain as it exists, with site lighting modification applicable to the proposed Building 7 precinct only. The applicant intends to utilize LED full cut-off fixtures

to minimize light pollution. Generally, exterior lighting is provided at building entrances, parking, and new pedestrian pathways. Lighting is designed in accordance with the City of Portland's requirements. Professionally prepared site lighting, including photometric diagramming and fixture specifications, coordinated by the project architect, is located in Section 28.

6.8.6 Heat, glare, radiation

Heat, glare, and radiation are not anticipated as a result of the Building 7 project; therefore, no safety hazards are anticipated.

6.8.7 Historic resources

The site is not located in a City historic district. The Maine Historic Preservation Commission (MHPC) is reviewing the Building 7 proposal with specific attention to its relationship to Building 5-Marine Hospital, which is on the National Register of Historic Places. Upon receipt, the written response will be provided to the City; reference is made to Section 27-Historic Resources.

6.8.8 Landscaping and screening

The site is located in the R-P zone, requiring screening of parking and accessory site elements from right-of-ways, public open space, and abutting residential uses. The applicant intends to provide comprehensive landscaping meeting the requirements of this section. Reference is made to the site plans showing detailed landscaping.

6.8.9 Noise

No changes to site uses are proposed. Post-construction sound levels will continue within the parameters of the sound levels in Table 6-G: Noise Standards in the R-P Zone (55 dBA, Daytime/Night). The project does not abut residential uses.

6.8.10 Odor

The proposed project will not create an odor nuisance.

6.8.11 Outdoor effects

Uses on the site are contained within an enclosed structure, as required.

6.8.12 Outdoor storage

This project does not propose new outdoor storage areas. Per Table 6-H: Outdoor Storage Standards, any proposed exterior storage area must be fully enclosed.

6.8.13 Relocation of displaced residents

Not applicable. The project does not include a residential component.

6.8.14 Smoke

This project does not include smoke emissions. Emissions exceeding opacity levels per Table 6-I: Smoke Standards are not applicable.

6.8.15 Storage and repair of vehicles

Not applicable. The storage and/or repair of motor vehicles is not proposed.

6.8.16 Traffic

Not applicable. The project is not located in an I-M zone. The project traffic, parking, access, and circulation are addressed in Sections 11 – 15.

6.8.17 Waste disposal

Post-construction waste disposal services will continue with the existing contracted private removal services utilized by Martins Point, using a licensed Maine DEP transporter to handle the removal with ultimate disposal at a licensed facility. Waste storage will be internal to Building 7 in a secured, dedicated location.

07: SUMMARY OF EXISTING AND/OR PROPOSED EASEMENTS OR COVENANTS, APPLICABLE

Existing and proposed easements are shown and referenced in the Building 7 deeds in Section 3-Right, Title, or Interest and as shown on the appended Standard Boundary Survey and the Existing Conditions Plan.

A stamped Boundary Survey plan (CCRD 194/258) depicting the overall Martins Point Veranda Street Campus is appended to the application materials. Changes to the applicant's property lines have not occurred since the plan was recorded.

We note that the "Parcel 2," identified as lands of the United States of America, was formally transferred to the City of Portland by CCRD 3657/57 signed December 24, 1974.

08: WAIVER REQUESTS

Requested waivers from standards are enclosed in this section.

Notes	Cite Standard to be Waived: Cite specific language of applicable Ordinance or Technical Manual Standard	Waiver Being Sought: Describe waiver being sought. Ex.-We are requesting a two-way parking lot drive aisle width of 20'.	Justification for Waiver: Address specific waiver criteria, if applicable, and document reasons for the waiver request.
This waiver request was previously acknowledged and deemed appropriate by City review. April 2024	**1.** Environmental Quality Standards (14-14.6.2 (D)	We are requesting a waiver from the water quality/stormwater management/erosion control standard flooding standard.	The project discharges directly into a tidal body of water.
New 11/14/2024 Per 7.6.4.B.3, the Planning Board may approve a different front setback or build-to zone for irregularly shaped lots provided that the front setback or build-to zone is met to the maximum extent practicable.	**2.** Ch. 7 Dimensional Standards, 7.6.4 Setbacks, Table 7-C: Mixed Use Zone Dimensional Standards-B-5, Build to Zone	We are requesting a waiver for reduction to the minimum & maximum build-to requirements for B-5 Zone: 0-10' front setback and the build-to percentage of 80% as allowed by 7.6.4.B.3.	The site is irregularly shaped, and the location of the building is strongly influenced by the location of existing structures and, most importantly, the City's desire to maintain the visibility of the Marine Hospital. The waiver request also involves consideration of the existing curb cut at Veranda Street, grades, ease of trail access, location, and convenient connection to existing infrastructure desired in mixed-use zones (B-5). Adherence to the B-5 build-to-zone setback at Martin's Point would modify the character of the overall site by placing a single building adjacent to the street. The raze-and-replace project, as proposed, does not include significant reorganization of campus buildings. The layout, as presented, allows for a walkable campus core. The new building, as designed, is ±142 feet from the front lot line, which is the least amount practicable to preserve the clustering of the main structures on the site without significant grading or impacting the Marine Hospital. Per 7.6.4.B.3a, when buildings are set back more than 10' from the lot line abutting a street, a continuous attractive and pedestrian-scaled edge treatment is required. The design meets this requirement through a combination of existing street trees, proposed new landscaping and aesthetically pleasing and interesting views from the street.

09: FINANCIAL CAPABILITY

Financial The project will be developed and financed by Martins Point Health Care, which verifies financial capacity by letter in this section.

Per PC Construction, the schematic design estimate of the probable cost for the overall project is approximately $39,982,061.00

An itemized list of the significant site development costs are as follows:

OPINION OF PROBABLE SITE COSTS

02 Site Work		
2.01	Demolition	$ 166,198.00
2.03	Preliminary Sitework	$ 178,211.00
2.04	Earthwork	$ 83,029.00
2.08	Solider Piles+Lagging	$ 276,625.00
2.12	Storm Drainage	$ 528,467.00
2.13	Sanitary Systems	$ 170,989.00
2.14	Water Systems	$ 72,186.00
2.16	Misc Utility Work	$ 139,032.00
2.17	Roads & Walks	$ 544,905.00
2.18	Site Improvements	$ 1,269,291.00
Probable Site Cost		$ 3,428,933.00

10: TECHNICAL CAPABILITY

Martins Point Health Care Applicant / Owner
Martins Point is a local not-for-profit organization providing high-quality health care for over 40 years. Martins Point currently offers medical services in six locations throughout southern Maine and New Hampshire. Martins Point has permitted and developed many projects at its sites, including the Veranda Street campus in Portland. The most recent approved site improvements at the Veranda Street Campus include the Building 4 improvements.

SMRT Architect
SMRT provides sustainable architecture design, bidding, building, and construction management services focusing on energy conservation. Projects throughout the northeast include health and wellness, educational, government, athletics, and science/technology clients. Reference is made to the enclosed resumes of the pertinent MPHC team.

Sebago Technics, Inc. (STI) Civil Engineering/Survey/Site Permitting
Sebago Technics is a multi-disciplined engineering firm with more than 40 years of experience, offering a wide range of services specializing in land development, planning, landscape architecture, engineering design, survey, traffic, environmental, soil sciences, and regulatory permitting. Please see the attached resumes.



Derek Veillleux AIA, EDAC, NCARB

PRINCIPAL-IN-CHARGE

Derek leads SMRT's healthcare practice. He is an extremely skilled designer, bringing excellent communication skills and technical proficiency to every project. With a strong focus on healthcare design, he understands the intricacies of healthcare codes and guidelines and the need to address both hospital operational challenges and the patient experience in project planning and design.

EDUCATION

BArch, Rensselaer Polytechnic Institute

BS, Building Science, Rensselaer Polytechnic Institute

REGISTRATIONS

ME, CT, GA, MA, NH, NY, VT

SELECTED EXPERIENCE

- Martin's Point Healthcare – Brunswick Medical Office Building, Brunswick, ME
- Martin's Point Healthcare – Scarborough Medical Office Building, Scarborough, ME
- Martin's Point Healthcare – Biddeford Medical Office Building, Biddeford, ME
- Martin's Point Healthcare – Gorham Medical Office Building, Gorham, ME
- Maine Medical Center – Medical Office Building and Tenant Fit-Up, Scarborough, ME
- Maine General Medical Center – Harold Alfond Cancer Care Center, Augusta, ME
- Eastern Maine Medical Center – Emergency Department Renovations, Bangor, ME
- Mount Desert Island Hospital – Master Planning, Renovation, and Expansion, Bar Harbor, ME
- Husson University – Wellness Learning Center, Bangor, ME



Matthew Ranger AIA

ARCHITECT

Matt has more than 20 years of experience providing architectural design services, including serving as an architect, project manager, job captain, construction administrator, and performing existing condition surveys. Most recently he has been responsible for planning and construction administration for the addition and renovation to the Maine General Medical Center HArold Alfond Center for Cancer Care currently under construction in Augusta. Matt brings expertise in medical equipment planning, ensuring that equipment needs and overall design considerations are in alignment.

EDUCATION

AAS, Technical Graphics and Design, Southern Maine Technical College

REGISTRATION

ME

SELECTED EXPERIENCE

- Martin's Point Healthcare – Brunswick Medical Office Building, Brunswick, ME
- Martin's Point Healthcare – Scarborough Medical Office Building, Scarborough, ME
- Martin's Point Healthcare – Biddeford Medical Office Building, Biddeford, ME
- Martin's Point Healthcare – Gorham Medical Office Building, Gorham, ME
- Western Maine Health – Ripley Medical Center, Norway, ME
- Maine General Medical Center – Harold Alfond Cancer Care Center Expansion, Augusta, ME
- Maine Medical Center – Medical Office Building and Tenant Fit-Up, Scarborough, ME
- Eyecare Medical Group – Relocation and Expansion, South Portland, ME
- Plaistow Regional Health Center – Medical Office Building, Plaistow, NH



William Heil PE, LC, LEED AP

ELECTRICAL ENGINEER

Bill leads SMRT's electrical engineering group. In his 34 years of practice, he has acquired experience in electrical engineering design for healthcare, institutional, government, educational, retail, and industrial clients. His expertise includes project management, technical drawings and specifications, due-diligence reports, and power studies. He has been responsible for the design of normal and emergency power systems, lighting, fire alarm, security, and tel/data systems.

EDUCATION

BS, Electrical Engineering, Pennsylvania State University

REGISTRATIONS

ME, CA, CT, DE, FL, GA, IL, IN, MA, MD, MI, NH, NY, OH, PA, RI, SC, VA, VT

SELECTED EXPERIENCE

- Maine General Medical Center – Alfond Center for Health, Augusta, ME
- Mercy Hospital – Fore River Campus Consolidation, Portland, ME
- Eastern Maine Medical Center – Emergency Department Renovation, Bangor, ME
- Heywood Hospital – Facilities Masterplan, Gardner, MA
- Mount Desert Island Hospital – Master Planning, Renovation, and Expansion, Bar Harbor, ME
- Athol Hospital – Emergency Department and Medical Office Building, Athol, MA
- Eatern Maine Medical Center – Grant Tower Renovations, Bangor, ME
- L.L.Bean – Corporate Headquarters, Freeport, ME



Michael Connors PE

MECHANICAL ENGINEER

Mike Connors has more than 20 years' experience as a mechanical engineer, focusing on the design and analysis of specialized HVAC systems for notable institutions in the healthcare, commercial, R&D, laboratory, pharmaceutical, and education sectors. Mike works closely with architects and owners in the design and selection of mechanical systems and QA/QC review.

EDUCATION

BS, Mechanical Engineering, Syracuse University

REGISTRATIONS

ME, MA, NH

SELECTED EXPERIENCE

- Beth Israel Lahey Health – Lifestyle Health Center, Burlington, MA
- Stephens Memorial Hospital – AHU Replacement, Norway, ME
- Exeter Hospital – Operating Room Upgrades, Exeter, NH
- VA Medical Center Bedford – Women's Health Clinic, Bedford, MA
- VA Medical Center Brockton – Mental Health Unit Renovation, Brockton, MA
- Exeter Hospital – Imaging Renovation, Exeter, NH
- Exeter Hospital – Ultrasound Department Renovation, Exeter, NH
- RayzeBio – Manufacturing Facility and Office, Indianapolis, IN



Brian McDonough PE, LEED Green Associate

FIRE PROTECTION AND PLUMBING ENGINEER

Brian brings more than 15 years of experience designing plumbing and fire protection solutions for clients. He has extensive healthcare and workplace experience for clients throughout New England.

EDUCATION

BS, Mechanical Engineering,
Worcester Polytechnic Institute

REGISTRATIONS

ME, MA, NH, NY

SELECTED EXPERIENCE

- VA Medical Center Bedford – Women's Health Clinic, Bedford, MA
- Millinocket Regional Hospital – Emergency Department Expansion and Renovations, Millinocket, ME
- Intermed – Marginal Way First Floor Renovations, Portland, ME
- Littleton Hospital – Laboratory Upgrades, Littleton, NH
- Intermed – 100 Foden Road Third Floor Renovation, South Portland, ME
- Hartford Healthcare – Medical Office, Hartford, CT*
- Shields Health – Dedham Medical Center, Dedham, MA*
- Brigham and Women's Hospital – Shapiro Surgical Specialties, Boston, MA*
- Brookside Community Health Center, Jamaica Plain, MA*

** Projects completed under previous employment*

KYLIE S. MASON, RLA, LEED-AP

Chief Operations Officer



Kylie Mason, RLA, LEED-AP, is a Maine licensed landscape architect and Chief Operations Officer for Sebago Technics. In this role, she is responsible for the overall operations of one of Maine's largest and most successful land development firms.

In addition, Kylie oversees large-scale, complex projects serving a range of clients from Public & Private Schools to Medical Provider Campuses to Corporate Campuses. She excels in her listening and communication skills, which form the foundation of her strong design ability and understanding of clients' goals and objectives.

EXPERIENCE

- **Sanford School District:** Site Selection Study, Site Engineering and Permitting for a New 350,000 s.f. High School and Regional Technical Center in the City of Sanford.
- **Cross Street Extension, Freeport, Maine:** Masterplanning, Design and Permitting for new extension of Cross Street, redirecting retail traffic from Main Street into a new cooperative public parking area shared by multiple land owners. Pedestrian circulation and streetscape enhancements provide direct connectivity with retailers and Main Street. Traffic recirculation planning included the elimination of one-way streets.
- **Riverwalk North, Westbrook, Maine:** Evaluation of Site, Masterplanning, Design and Permitting for new Riverwalk, Park and Brown Street realignment and streetscape along the Presumpscot River in Westbrook between Bridge Street and Cumberland Street.
- **The City's representative, project manager and lead designer for the Gardiner Waterfront Park Project** working side-by-side with numerous stakeholders to ensure timely delivery of the park. Significant collaboration with the Savings Bank of Maine, having committed $1 million to the project.
- **Campus Master Plan for the L.L. Bean Flagship Store & Retail Campus** featuring: innovative bioretention/rain gardens considered the first of its kind in Maine and received a LEED Silver Certification; multiple pedestrian plazas, retail vignette opportunities and Route One Streetscape Enhancements in Freeport, Maine.
- **Bowdoin College Land Acquisition Feasibility and Site Suitability Study:** Evaluation and Recommendation for strategic acquisition of 250 acres as part of the Brunswick Naval Air Station decommissioning.
- **Bowdoin College Campus Masterplanning:** Development of Masterplan, including programmatic uses for expansion as well as vehicular and pedestrian circulation between the existing campus and the campus expansion.
- **Maine Medical Center Long-Range Planning and Parcel Evaluation:** Portland and Scarborough Campus.
- **Martin's Point Healthcare Long-Range Planning and Site Development:** Site Selection, Site Engineering and Permitting for innovative new Medical Office Facilities throughout Maine.
- **Animal Refuge League of Greater Portland:** A new 25,000 s.f. facility with associated site improvements. The project required many partnerships to support and provide for an enriching sanctuary for Maine's future companions.
- **L.L. Bean Outdoor Discovery Center at Lower Flying Point,** a new waterfront facility serving thousands of visitors annually. Including; multi-purpose space, visitor orientation space and wrap-around porch with direct access to Casco Bay. This is the flagship for the premiere Maine retailer's Outdoor Discovery Programs.
- **Camp Susan Curtis** Recreation and Activity area Masterplan.

REGISTRATIONS

Registered Landscape Architect
Maine #3335

LEED Accredited Professional

CLARB Certified

LPA Certification, NHDOT

ASSOCIATIONS

American Society of Landscape Architects

Council of Landscape Architects Registration Board

USGBC (LEED)

PUBLIC SPEAKING

2013 USGBC - New Hampshire Chapter: Sustainable and Functional Aesthetics in the Landscape

2013 Maine Medical Association: Accomodating your levels of care - LEED Healthcare, Healing Spaces & Exterior considerations for your practice

2014 Maine Society of Landscape Architects: Sustainable Strategies for Stormwater in Maine

SEBAGO TECHNICS

PAUL D. OSTROWSKI, PE

Senior Project Engineer / Project Delivery Engineering & Design Manager



Mr. Ostrowski joined Sebago Technics in 2013 and is a Senior Project Engineer with nearly two decades of experience in the civil engineering field, with extensive experience in the design and inspection of municipal utility projects. He has brought the knowledge gained from construction inspection back to project design, performing constructability reviews for projects, as well as finding unique design solutions for complex projects.

In his role as Project Delivery Engineering Design Manager, Paul is responsible for the training and development of team members, the QA&QC process, and the advancement of design assignments through our teams. As a talented and creative engineer, Paul continues to serve as the lead engineer on special projects, shaping challenging sites and developing creative solutions for clients. Paul's willingness to explore alternatives and commitment to the growth and advancement of the team members that he manages is admirable. He is responsible for shaping the most successful and recognized projects our organization has completed.

EXPERIENCE

Portland Schools Site Evaluation – Portland, ME: Mr. Ostrowski, as part of a larger project team, reviewed existing schools and ancillary buildings within the Portland School Department. Responsibilities included reviewing existing site conditions and their remaining life expectancy, identifying grading/drainage concerns or deficiencies, and ADA accessibility. Mr. Ostrowski assisted in generating conceptual cost estimates for addressing noted deficiencies or replacement of site amenities at or past their life expectancy.

Thornton Heights Sewer Separation – South Portland, ME: Mr. Ostrowski assisted in the design and bid document preparation for Phase 1 of a three phase sewer separation project in the Thornton Heights neighborhood. Responsibilities included sizing of the storm drain system to accommodate future phase separation, quantity take-offs and cost estimates. Mr. Ostrowski leads the design of the Portland Water District's work in Thornton Heights.

Westside Interceptor Sewer (Capisic Brook) – Portland, ME: While employed at another firm, Mr. Ostrowski served as full-time construction representative to observe the progress and quality of construction. The project included installation of 5,700 feet of 60-inch sanitary sewer pipe using T-Base and conventional manhole structures. Duties included daily observations; preparation of daily, weekly and monthly reports; verification of contractor payment requests; and coordination with City representatives for field changes during construction. The sewer replacement project traversed through Capisic Park, which is designated by the Maine Department of Environmental Protection as an Inland Wading Waterfowl Habitat (IWWH), thus requiring Mr. Ostrowski to closely monitor disturbance limits within the IWWH as well as discuss proposed work and restoration efforts with abutting property owners, Friends of Capisic Park Neighborhood Group, and Portland Trails.

Forest Avenue to Mt. Sinai Cemetery CSO Project – Portland, ME: Mr. Ostrowski was the design engineer for this project which separated the combined storm drainage within the West Side Interceptor sewer into a 42 to 48-inch diameter storm drain which parallels the existing interceptor sewer. Coordination was required with Portland Water District for the relocation of existing infrastructure (16-inch, 6-inch, and 4-inch mains) within Forest Avenue.

Numerous Assignments – Portland, ME: Senior Inspector responsible for part/full-time inspection of roadway and sewer infrastructure improvements from 2010 to 2013 for the City of Portland. Work included utility and infrastructure upgrades for the following roadways; Canco/ Carlyle/Read, Dorothy/Dibiase, Belfort/Commonwealth, Broadway/Lexington, Victor/Vera, Allen/Auburn/Washington, Alpine/Hillside, and Barltey/Rustic.

EDUCATION

B.S., Civil Engineering
University of Maine, Orono, 2000

CERTIFICATIONS

MaineDOT LPA Certified
Recertification May 2019

NETTCP Paving Inspector # 4527

MEMBERSHIPS

American Society of Civil Engineers

REGISTRATIONS

Registered Professional Engineer:
Maine #11175

SEBAGO TECHNICS

KELLY G. KOEHLER

Civil Engineer



Ms. Koehler joined Sebago Technics, Inc. (STI) in 2023 as a Civil Engineer. Kelly is a graduate of Colorado State University with a degree in Engineering Science with a focus in civil and environmental engineering. Born and raised in Colorado, she relocated to Maine after graduation. Kelly is a member of the Project Delivery Team at Sebago Technics.

EXPERIENCE

Dumas-Hall Residence — Great Diamond Island, Maine
Design engineer for a single-family house lot on Great Diamond Island. Provided grading and utility design for the site. Assisted in preparing project design documents and agency correspondence.

Poland Animal Hospital — Poland, Maine
Design engineer for the expansion of Poland Animal Hospital in Poland. Provided site grading, utility design, and stormwater treatment and design. Assisted in preparing local and state permitting and submission documents.

Nason Brook Stream Restoration Permitting — Westbrook, Maine
Assisted in the permitting process for the reconstruction of an approximately 600-ft section of Nasons Brook located between the Rock Row private way access road and the Westbrook-Portland City line. Involved in formatting an NRPA application.

Cobscook Bay State Park Shower & Utility Upgrades — Edmunds, Maine:
Assisted in preparing site development plans, utility layout design, grading, and septic system design for Cobscook Bay State Park

EDUCATION

Colorado State University
Fort Collins, CO
B.S., Engineering Science and International Studies; Minor: German
2022

CERTIFICATIONS

Maine Engineer-Intern Certification: EI8177

SEBAGO TECHNICS

BRIAN A. MCMAHON

Landscape Designer



Brian McMahon graduated from the University of Rhode Island with a degree in Landscape Architecture and a minor in Community Planning. His curiosity and eagerness to learn have shaped him into a critical lead designer on all of his projects. He excels in numerous skills including due diligence research, site inventory and analysis, conceptual site planning, graphic visualizations, site design development, and planting design.

EXPERIENCE

One Diamond – Biddeford, ME: Provided master planning efforts for a large-scale residential project along the Saco River. Brian assisted with site design, including a riverwalk trail and recreational amenities, detailing site elements, landscape exhibits, and graphic renderings of the full master plan.

Lakeside Norway – Norway, ME: Assisted with site design for a commercial project located along a lakefront property. Brian assisted with the design of the site's recreational amenities along the waterfront, detailed planting plans, and graphic visitations for the full master plan.

L.L. Bean Campus – Freeport, ME: Created graphic visualizations, both in plan-view and section, for future master planning efforts of the existing campus.

Village Area Loop Trail – Gray, ME: Collaborated directly with the Town of Gray to develop a new trail as part of a larger masterplan effort. Brian designed the layout of the trail, as well as the associated amenities and planting plans.

Topolina – Kennebunk, ME: Provided site design for the conversion of an existing building into a restaurant located near downtown Kennebunk. Brian was responsible for the layout of outdoor amenity areas, detailing of site elements, and landscape exhibits for the project.

Berlin City Nissan Addition – South Portland, ME: As part of the design team, Brian was responsible for the site design associated with a building addition at the existing Berlin City Nissan. He also assisted with detailing the site elements and creating an updated landscape plan for the property.

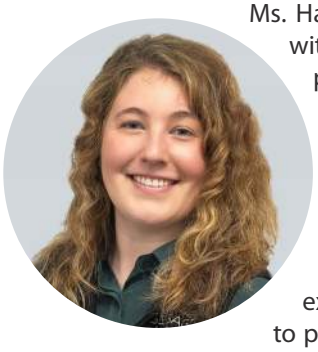
EDUCATION

University of Rhode Island,
Kingston, Rhode Island
Bachelor of Landscape Architecture
Minor: Community Planning
2021

SEBAGO TECHNICS

KIRA A. HARMON

Virtual Design and Construction Project Manager



Ms. Harmon joined Sebago Technics, Inc. (STI) in May of 2019 as a 3D Modeler and CAD Technician working with the Survey-Geomatics group to produce digital deliverables for municipal, federal, and private sector projects. In 2022 Kira was elevated to Virtual Design and Construction (VDC) Project Manager. In this role, Kira oversees all 3D modeling/graphics services including project scoping, estimating, and overall project/client management. Additionally, she supports the development and maintenance of 3D modeling processes and standards, along with training, coordination, and management of 3D modeling personnel.

Kira has worked on projects ranging from facility management modeling to creating life-like 3D renderings, and everything in between. Her project responsibilities have included accurately extracting existing conditions survey data from a point cloud as well as modeling a potential development project to produce life-like 3D renderings. This experience allows her the flexibility to understand project needs and goals in order to properly extract and provide the digital foundations necessary for a successful project and provide useful insight as a project team member.

EXPERIENCE

American Aquafarms – Frenchman Bay, ME: Ms. Harmon assisted in the production of 3D Modeling and visualizations for the proposed aquaculture facility. 3D Models were developed in Revit collaboratively with the client and used to generate visualizations from the key observation points. Sebago merged the 3D Models with measured photographs that were survey located within the study area. Paint color studies were also completed to determine the least contrasting options. The visualizations were included in the State of Maine Department of Marine Resource application.

Main Street – Orono, ME: Sebago Technics was retained to do a traffic study from Kelley Road to the Stillwater River Bridge in Orono Maine in 2020 by the Maine Department of Transportation. This study involved Sebago Technics survey/ geomatics division as well as their transportation engineering division. Ms. Harmon's role in this project was to assist with the survey aspect of the project. This project was surveyed using a high-definition laser scanner. Ms. Harmon used the laser scan data to extract survey features and geometry to create an existing condition plan of the entire stretch of roadway. By using this method of survey, the Sebago team as able to get more accurate data as well as much denser data. This allows for the transportation engineers to have more accurate studies as well as designs.

Shore Road – Cape Elizabeth, ME: The Town of Cape Elizabeth, looking to renovate a long section of their highly traveled Shore Road, retained Sebago Technics to provide a combination of survey and traffic engineering services. Town officials also wanted to be able to show townspeople what key areas would look like once restructured. To accomplish this, numerous high-quality 3D renderings of select locations along Shore Road were produced. Ms. Harmon oversaw the 3D renderings that Mr. Burbank created and assisted in the process of working with the engineers and landscape architects. Along with oversight it was Ms. Harmon's responsibility to quality review each image not only in the techniques Mr. Burbank was using but also the accuracy of each image. To achieve this Ms. Harmon used her knowledge of the virtual design and construction field as well as the quality assurance steps Sebago has put in place that Ms. Harmon assisted in creating to verify accuracy and realism of the rendered images.

Piper Shores Retirement Community Expansion – Scarborough, ME: The retirement community of Piper Shores decided to expand and develop a parcel of land across from the community's original development site. With the concept of the retirement community expansions and its location, there were some concerns from neighboring properties. Ms. Harmon made an Autodesk Revit 3D visualization model using the architect's plans, as well as Sebago Technics survey information and site design. Ms. Harmon was able to give the client, as well as the neighboring properties, some piece of mind as to how the buildings and new landscaping would impact the surrounding areas. A buffering concern was able to be addressed prior to the building process because of the 3D renderings.

EDUCATION

Southern Maine Community College
South Portland, ME
Associates of Applied Science,
Architectural and Engineering Design
2019

CERTIFICATIONS

OSHA 10-hour Construction Safety

CPR & First Aid

SEBAGO TECHNICS

JEDIAH M. SCOTT, PLS

Senior Surveyor



Jediah Scott is a seasoned Senior Surveyor who joined Sebago Technics in 2021. With extensive expertise in land surveying, he has consistently delivered accurate and detailed survey data for a variety of projects. Jediah's proficiency in utilizing advanced surveying technologies, coupled with his exceptional attention to detail, has contributed to the successful execution of numerous complex projects. He is a dedicated professional who consistently demonstrates a commitment to precision, efficiency, and excellence in the field of surveying.

EXPERIENCE

Stroudwater Preserve – Portland, ME:
Surveyor for a multi-phase subdivision along the Stroudwater River. Review of subdivision amendments and site plans as well as drafting of easement exhibits and oversight of layout. Coordination with engineering firm and general contractor.

Continental Mill – Lewiston, ME:
Surveyor for a condominium plan of a historic mill on the Androscoggin River. Determination of boundary lines and encumbrances and drafting easements to connect to a proposed trail network across the adjacent canal.

Center Street CSO – Portland, ME:
Surveyor for a storm and sewer mapping project in order to separate storm and sewer systems. Field location of underground utilities and determination of the right of way for over 4,000 feet of City streets.

Madawaska LPOE – Madawaska, ME:
Surveyor for the Land Port of Entry site for the new Madawaska-Edmundston bridge. Boundary and topographic survey for engineering and design of new facilities, and subsequent layout.

EDUCATION

University of Maine
Farmington, Maine
B.A., Environmental Policy & Planning
Minor: Visual Arts
2013

REGISTRATIONS

Professional Land Surveyor
Maine #2660

CERTIFICATIONS

CPR & First Aid
OSHA 10

AFFILIATIONS

Maine Society of Land Surveyors

SEBAGO TECHNICS

STEFANIE K. NICHOLS

Permitting Specialist/Project Coordinator



Mrs. Nichols joined Sebago Technics, Inc. (STI) in 2018 as a Permitting Specialist/Project Coordinator and is a Regulatory Specialist with over 36 years of diverse experience. During this time, she has worked with many different disciplines in the various aspects of site permitting and site inventory, and associated reports and graphics. Other duties over the years include civil drafting-hand and ACAD, project bid tracking and construction submittal processing, sourcing landscape materials, livestock procurement/travel permits, and short-term fostering.

EXPERIENCE

Solar Array Projects
Locations: Berwick, Kenduskeag, Lewiston, Livermore Falls, Mechanic Falls, Minot, North Berwick, Orrington, Oxford, Prospect, Searsmont, Stockton Springs, etc.
Applications: MDEP Site Law, NRPA, Stormwater, Transfer, Extension, Decommissioning, USACE, MDOT Driveway, and Municipal.

Homestead Farms Subdivision - Falmouth, ME
Single-Family Clustered Development
Applications: MDEP Site Law, NRPA, ACOE, Municipal Subdivision/Site Plan Review

Copart of Connecticut - Windham, ME
Vehicle Auction Facility/Offices
Applications: MDEP Site Law, NRPA, Municipal Site, and Subdivision

Harborchase - South Portland, ME
Senior Housing/Memory Care
Applications: Municipal, MDEP and FAA

Maine Medical Center - Portland, ME
Large Medical Facility Expansion, Congress Street
Application: Municipal Level III Site Plan Application

Colby College - Waterville, ME (2003-2018)
Liberal Arts College modifications and expansions: Athletic Fieldhouse Complex, Grossman Hall Addition/Renovation, Oakland Solar Array, Baseball/Softball Facility, Johnson Pond Water Quality, Biomass Plant Expansion, Cotter Union Expansion, The Diamond Building, Roberts Row Elevator Towers, Colby Green, etc.
Applications: MDEP, USACE, Municipal

Sugarloaf - Carrabassett Valley, ME (2003-2016)
Ski Resort additions and modifications: Glades at Burnt Mountain, Golf Course, Snow Park, Bullwinkle's Expansion, Trail Widening, Parking, Sand and Salt Storage, etc.
Applications: MDEP, USACE, Municipal

Sebasco Harbor Resort and Harbor Island - Phippsburg, ME (2003-2018)
Resort permitting, building modification, golf course modifications, parking, utilities, subdivision projects
Applications: MDEP Site Location, NRPA, OBD Renewal, DEP Transfers & Extensions, Municipal Site, and Subdivision

100+ Private Residences
Locations: Maine, Massachusetts, New Hampshire, Connecticut, Montana
Applications: Municipal Site/Shoreland Review, MDEP NRPA, USACE, MDOT Driveway

EDUCATION

Northern Maine Technical College
Presque Isle, ME
Drafting Technology

Central Maine Technical College
Auburn, ME

Maine Technical Source (MTS)
Yarmouth, ME
AutoCAD I

SEBAGO TECHNICS

207.200.2120 NICHOLS@SEBAGOTECHNICS.COM

11: IMPACT ON SURROUNDING STREET SYSTEMS (14.6.1(A))

The proposed project will not create or aggravate any significant hazard to safety on the surrounding street network, nor will it substantially increase congestion on the roadways in the vicinity of the site. Reference is made to existing conditions, access, traffic volumes, generation, etc., included in the Traffic Impact Study Martin's Point Veranda Campus, December 18, 2023, prepared by Sebago Technics, Inc., this is included in this section.

Based on trip generation for a General Office Building, 50,000 SF, a Traffic Movement Permit (TMP) is not required.

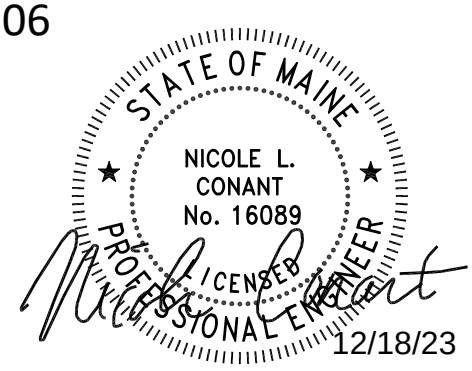
SEBAGO TECHNICS

CIVIL ENGINEERING • SURVEYING • LANDSCAPE ARCHITECTURE

Traffic Impact Study
Martin's Point Veranda Campus
Portland, Maine

Applicant:
Martin's Point Health Care, Inc.
10700 Prairie Lakes Drive
Eden Prairie, Minnesota 55344

Prepared By:
Sebago Technics, Inc.
75 John Roberts Road, Suite 4A
South Portland, Maine 04106



December 18, 2023

Traffic Impact Study

Martin's Point Veranda Campus

Portland, Maine

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A. ITE Trip Generation Data
B. Traffic Count Data
C. MaineDOT Crash Data
D. SimTraffic Reports

1.0 Introduction

On behalf of Martin's Point Health Care, Inc., Sebago Technics, Inc. has prepared this Traffic Impact Study (TIS) to evaluate the impact of the proposed redevelopment of a portion of the existing Martin's Point medical office campus off Veranda Street (Route 1) in Portland, Maine. The Veranda Campus is roughly 12.5 acres in size. The redevelopment is primarily anticipated on land identified by the City of Portland as Tax Map 434 and Lots C-10 with some redevelopment on parcels C-1 and C-5.

The redevelopment is proposed to eliminate the existing storage and greenhouse space and build a 50,000 square foot (SF) office building. Initial employee count projections for the new office space include about 85 employees, with a portion of them relocating from other buildings on the Veranda Street Campus. The long-term capacity of the building could be up to 250 employees; however, Martin's Point provides flexibility with remote work options and therefore actual daily in-office employee counts will likely vary. Construction is currently scheduled for fall of 2024 with 2026 occupancy. It should be noted that the office space is not intended to operate as a medical office building with patient services.

Access to the development from Veranda Street is provided via two existing access points: the signalized access of Marine Hospital Road and an additional unsignalized access approximately 500 feet north of Marine Hospital Road. Work as part of this development includes converting the unsignalized drive to a right-in/right-out only access.

The site plan proposes internal sidewalks from the unsignalized Veranda Street intersection to the proposed building on Lot C-10 as wells as up the hill to the existing building on Lot C-1. A pedestrian bridge is also provided between the proposed building and the existing building on Lot C-1.

A meeting was held with City Staff for the project on September 26, 2023 with representees from the project application team and the City of Portland to discuss traffic considerations, as outlined in the subsequent sections.

2.0 Study Area

Based on the trip generation and assignments, outlined in Section 6 – Trip Generation and Section 7 – Trip Assignment, the study area for analysis purposes includes the site access drives on Veranda Street. Data was also collected for the Veranda Street I-295 on and off ramp intersections given they are part of a coordinated signal system with the Marine Hospital Site Drive.

3.0 Existing Conditions

The existing Martin's Point Health Care is a medical office campus made up of multiple buildings with the primary purpose of serving patient health care. The operating hours for the campus are 7:30 AM to 6:00 PM.

The development parcels are bordered by Veranda Street (Route 1) to the northwest, the Atlantic Ocean to the east and the south, and a commercial property to the west. A location map is provided with this application.

A review of the surrounding area was completed to compile pedestrian, bicycle, and transit trip generators within a ¼ mile radius given this is considered an urban development.

Pedestrian generators within that study area include residential and commercial properties along Veranda Street to Olympia Street. Existing transit opportunities are available to the site with METRO stops in both the northbound and southbound directions in the vicinity of Martin's Point.

The Veranda Street Project (MaineDOT WIN# 21745.00) recently reconstructed this area on both sides of Veranda Street. Bicycle and pedestrian infrastructure upgrades in the vicinity of the site include the following:

- Upgraded sidewalk on the northwest side of Veranda Street from Wordsworth Street to Marine Hospital Drive.
- Upgraded sidewalk on the southeast side of Veranda Street from Wordsworth Street to the unsignalized Martin's Point Access. The sidewalk widens to 10 feet north of Olympia Street providing shared access north towards Falmouth.
- Upgrades to the existing pedestrian infrastructure was provided at the signalized access of Marine Hospital Road.
- Buffered bicycle lanes are provided in both directions to Medical Campus Drive, transitioning to standard bicycle lanes just south of the unsignalized Martin's Point Access.
- Existing pedestrian and bicycle facilities continue across the bridge to and from Falmouth.

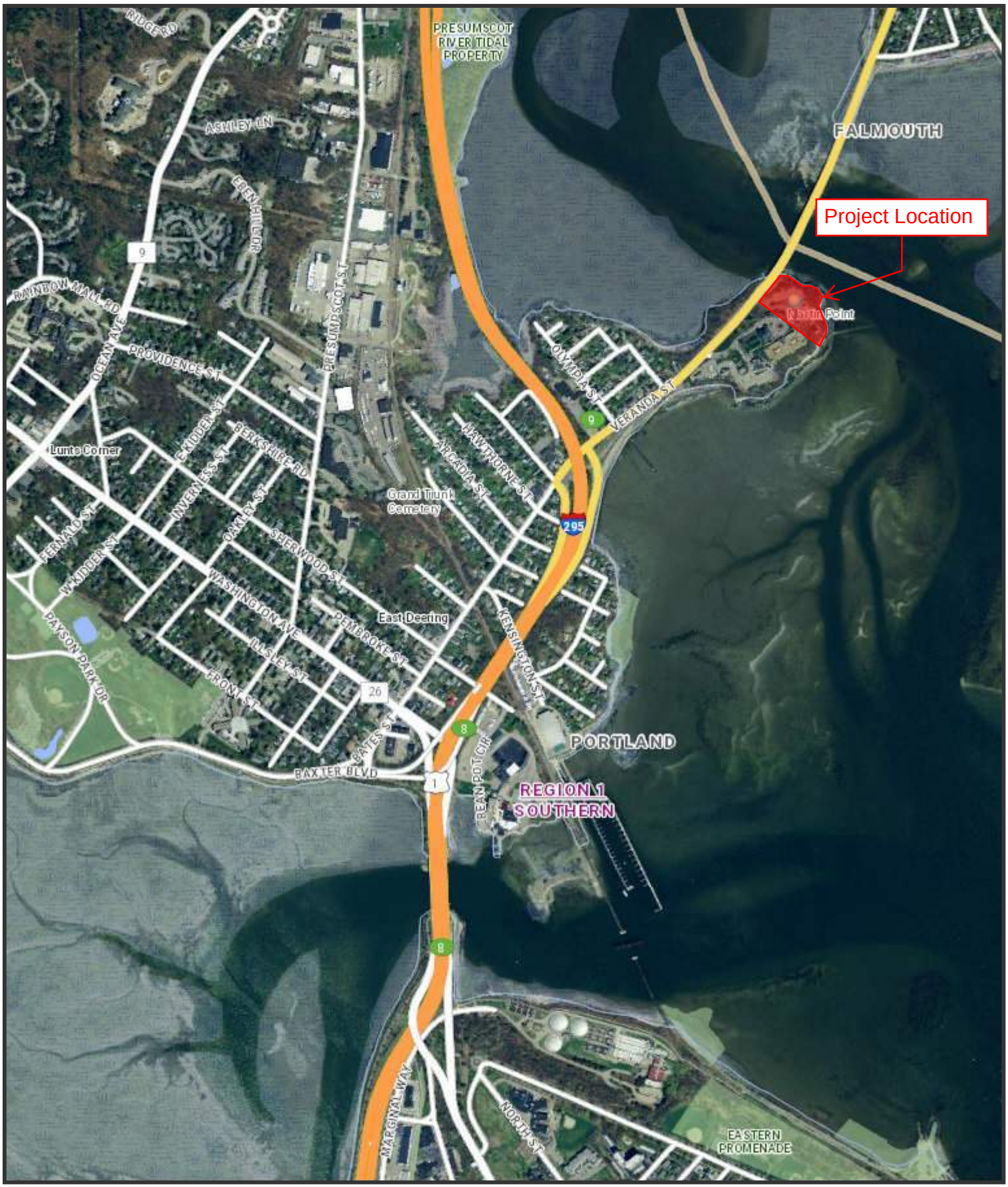
4.0 Site Access

Access to the development is via two (2) existing access points: Marine Hospital Road and an unsignalized right-in/right-out access drive. Internal site connections are available between the access points on Veranda Street.

1. The intersection of Veranda Street (Route 1) and Marine Hospital Road is a signalized access as a part of a coordinated corridor with the Interstate 295 on and off ramp intersections. Veranda Street has a through lane and left-turn lane southbound and a through/right-turn lane northbound. Marine Hospital Road has left and right-turn egress lanes and a single ingress lane. Signalized crosswalks are provided across Marine Hospital Road and across Veranda Street.

2. The unsignalized drive is located approximately 500 feet northeast of Marine Hospital Road. No crosswalks are currently provided at the access. This access is proposed to be converted to a right-in/right-out only access to reduce the unsignalized left-turn conflict points and encourage the use of the Marine Hospital Road signalized intersection. Given a sidewalk continues either side of the right-in/right-out, the access has been regraded to comply with the Americans with Disabilities Act (ADA).

LOCATION MAP



The Maine Department of Transportation provides this publication for information only. Reliance upon this information is at user risk. It is subject to revision and may be incomplete depending upon changing conditions. The Department assumes no liability if injuries or damages result from this information. This map is not intended to support emergency dispatch.

0.2 Miles

1 inch = 0.26 miles

Date: 5/24/2023
Time: 3:02:16 PM

5.0 Base Traffic Volumes

Turning movement counts (TMCs) were collected on Thursday, May 25th, 2023 to establish preliminary traffic patterns and trip assignments to determine the study area for the traffic study. Counts were collected for the AM (7:00 – 9:00 AM) and PM (3:00 – 6:00 PM) peak hour periods. The count data is provided in the Appendix and is summarized as follows:

- Veranda Street (Route 1) at Interstate 295 Southbound On-Ramp and Wordsworth Street
  AM peak hour 8:00 – 9:00 AM, PM peak hour 3:15 – 4:15 PM
- Veranda Street (Route 1) at Interstate 295 Northbound Off-Ramp
  AM peak hour 7:45 – 8:45 AM, PM peak hour 4:30 – 5:30 PM
- Veranda Street (Route 1) at Marine Hospital Road
  AM peak hour 8:00 – 9:00 AM, PM peak hour 4:30 – 5:30 PM
- Veranda Street (Route 1) at Martin's Point Health Care Driveway
  AM peak hour 8:00 – 9:00 AM, PM peak hour 4:30 – 5:30 PM

The roadways in the vicinity of the site are classified as Group I – Urban. The counts were factored to 30th highest hour volumes, or peak summer conditions utilizing the 2022 MaineDOT Weekly Group Mean Factors which resulted in a rate of 0.89/0.87 = 1.02. The factored counts are summarized in Figure 1.

Traffic volume data for Veranda Street was reviewed in the vicinity of the site from MaineDOT's Traffic Database. The locations and associated historical AADT are summarized in Table 1:

Table 1 – Average Annual Daily Traffic Data

Location	*2016 AADT*	*2017 AADT*	*2019 AADT*	*2022 AADT*	*Avg. Annual Growth Rate*
US 1 (VERANDA ST) (SB) SW/O OLYMPIA ST	7,000	-	8,050	-	4.8%
US 1 (VERANDA ST) NE/O OREGON ST	14,020	15,240	15,620	-	3.7%
VERANDA ST SW/O KENSINGTON ST	3,960	-	4,500	-	4.4%
US 1 (MARTIN POINT BR) @ PORTLAND TL	12,680	-	13,210	11,840	-1.1%

As demonstrated in Table 1, a weighted average annual growth rate of approximately 2.5% was realized on the adjacent roadway system over the available data period. When comparing the collected turning movement counts from May 2023 and MaineDOT collected counts from May 2017, the peak hour through volumes on Route 1 were observed to decrease over the six-year period by approximately 19%. As such, a growth rate of 2% was utilized to project the 2023 volumes to 2026 base no-build conditions.

Additionally, the City of Portland Traffic Peer Reviewer was contacted to determine what other development in the vicinity of the site was approved, yet unbuilt or under construction that should be included in the background volumes. The Roux Institute Campus located at the former industrial space off Kensington Street was approved as a mixed-use development in early 2023. The project's

Institutional Development Plan estimated 565 and 737 external vehicle trips in the AM and PM peak hours respectively, assigning 7% of trips to and from the north via Veranda Street in the vicinity of Martin's Point. Additional projects under construction included the Front Street Redevelopment project which included 100 units of multi-family housing and the Winchester Woods residential apartments off Sherwood Street totaling 48 units of multi-family apartments. Given the proximity to Washington Avenue, a percentage (utilized similar rate of 7%) of traffic would travel north on Veranda Street to the Town of Falmouth. Remaining traffic would utilize Washington Avenue to travel west or access the Interstate. Trip generation for the three developments is summarized in Table 2.

Table 2 – Other Development Trip Generation

Time Period	*Total Entering*	*Total Exiting*	*Veranda St. Entering (7%)*	*Veranda St. Entering (7%)*
AM Peak Hour – Roux Development	424	141	30	10
AM Peak Hour – Front Street[a]	5	20	0	1
AM Peak Hour – Winchester Woods[b]	5	14	0	1
AM Peak Hour – TOTAL	434	175	30	12
PM Peak Hour – Roux Development	217	520	15	36
PM Peak Hour – Front Street[a]	21	11	1	1
PM Peak Hour – Winchester Woods[b]	15	9	1	1
PM Peak Hour – TOTAL	253	540	17	38

[a]Trip generation from site application material.
[b]Trip generation estimated using LUC – 220 Multifamily Housing (Low-Rise) for 48 dwelling units.

The other development trip assignments are shown in Figure 2 and added to the 2026 factored volumes to become the 2026 no-build volumes in Figure 3.

6.0 Trip Generation

Vehicular trip generation was completed for the proposed building by utilizing the 11th Edition of the Institute of Transportation Engineers (ITE), Trip Generation Manual. Land use code (LUC) 710 – General Office Building was utilized as ITE summarizes LUC 710 as "a location where affairs of businesses, commercial or industrial organizations, or professional persons or firms are conducted." Trip generation for the office building was calculated based on 50,000 SF in Table 3. Given the nature of the site and the fluctuations in the number of day-to-day employees with remote work available, trip generation was based on the square footage of the development only.

Table 3 – ITE Trip Generation
Land Use Code 710 – General Office Building
50,000 SF

Time Period	*Fitted Curve Equation*	*Trips*	*Entering*	*Exiting*
Weekday	Ln(T) = 0.87 Ln(X) + 3.05	636	318 (50%)	318 (50%)
AM Peak Hour – Adjacent Street (7 – 9 AM)	Ln(T) = 0.86 Ln(X) + 1.16	92	81 (88%)	11 (12%)
AM Peak Hour – Generator *	Ln(T) = 0.86 Ln(X) + 1.16	92	81 (88%)	11 (12%)
PM Peak Hour – Adjacent Street (4 – 6 PM)	Ln(T) = 0.83 Ln(X) + 1.29	93	16 (17%)	77 (83%)
PM Peak Hour – Generator *	Ln(T) = 0.83 Ln(X) + 1.29	93	16 (17%)	77 (83%)

*Data for peak hours of the generator not available and assumed to be equivalent to the adjacent street

As demonstrated in Table 3, the proposed office is expected to generate 92 trips and 93 trips during the AM and PM peak hour periods. Given this level of trip generation, a Traffic Movement Permit (TMP) is not required from the City of Portland as it does not surpass the 100-trip threshold during a peak hour. The City of Portland has delegated review authority from the Maine Department of Transportation (MaineDOT) for TMPs.

It is important to note that the existing Martin's Point Campus was built and occupied over ten (10) years ago. As such, those trips are grandfathered and the need for a permit is based on the proposed development only. The Martin's Point Campus did have a previous TMP that has since lapsed.

7.0 Trip Assignment

The project generated trips were assigned to the roadway network based on the trip composition and distribution. All northbound entering trips were assigned to the northerly access drive given the proximity to the new building. All the exiting northbound trips were also assigned to the unsignalized access. The remaining traffic was assigned to the signalized access at Marine Hospital Road given the unsignalized drive is proposed as right-in/right-out only. Existing left-turning traffic at the unsignalized intersection was re-assigned to the Marine Hospital Road signalized intersection.

Existing traffic volumes were reviewed during both peak hour periods to determine distributions for primary trip generation. Given the development traffic is expected to be 100% employee traffic, existing volumes in and out of Marine Hospital Road and the unsignalized site driveway, in the half hour before operational hours, were reviewed to determine distribution in front of the site. Distribution between the AM and PM is expected to be the same given the nature of employee trips. Trip distribution based on the available data is shown in Table 4:

Table 4 – Trip Distribution

Location	*Distribution*
To/From South (Portland)	65%
To/From North (Falmouth)	35%

The distribution of traffic between Interstate 295 and further south on Veranda Street was determined from the overall traffic volumes between both I-295 ramp intersections. It was determined that 80% of traffic to and from the south utilized the I-295 on and off ramps. The remaining 20% traveled further south on Veranda Street.

Based on the above trip assignment assumptions, and the previous trip generation calculations and distributions, the resulting trip assignments for the development are shown in Figures 4 and 5, for the AM and PM peak hour periods.

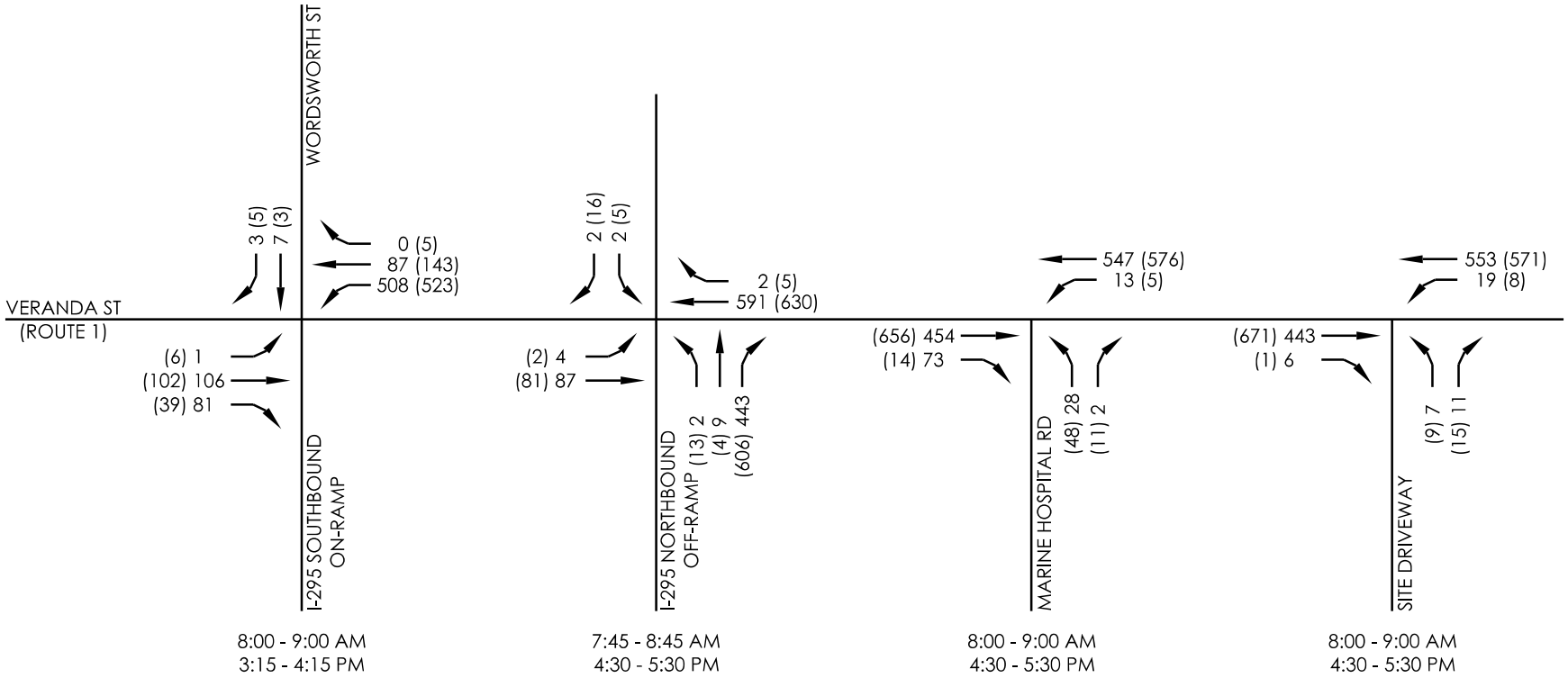
Given the trip assignment diagrams the preliminary study area is expected to include the following site access points:

- Veranda Street at Marine Hospital Road – Signalized
- Veranda Street at Martin's Point Health Care Driveway – Right-in/Right-out

The Veranda Street ramps were included within data collection efforts, as the Marine Hospital Road intersection is a part of the coordinated corridor with the signals at the ramps. Given the ramp intersections were recently reconstructed and based on discussions at the Pre-Scoping Meeting with City Staff, they were excluded from the study results.

The resulting 2026 build volumes, found by adding the 2026 no-build volumes and the trip assignments, are shown in Figure 6.

NOTE:
VOLUMES COLLECTED ON MAY 25, 2023. COUNTS WERE FACTORED TO 30TH HIGHEST HOUR USING 2022 MAINEDOT WEEKLY GROUP MEAN FACTORS FOR A GROUP I ROADWAY.



AM PEAK HOUR
(PM PEAK HOUR)

SEBAGO TECHNICS
WWW.SEBAGOTECHNICS.COM
75 John Roberts Rd.
Suite 4A
South Portland, ME 04106
Tel. 207-200-2100

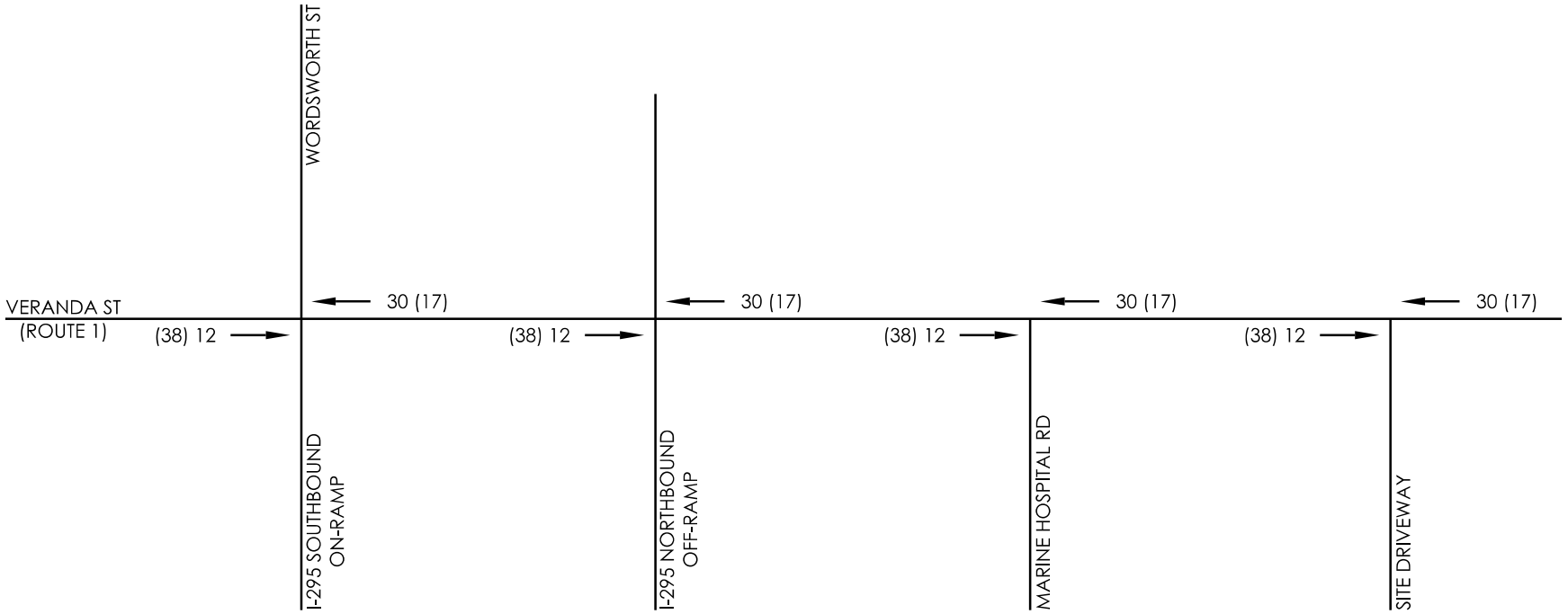
2023 BACKGROUND VOLUMES
MARTIN'S POINT HEALTH CARE

SCALE: N.T.S
DATE: 12/06/23

LOCATION:
MARTIN'S POINT
PORTLAND, MAINE

FOR: MARTIN'S POINT HEALTH CARE, INC.
10700 PRAIRIE LAKES DR
EDEN PRAIRIE, MN 55344

FIGURE:
1 OF 6



AM PEAK HOUR
(PM PEAK HOUR)

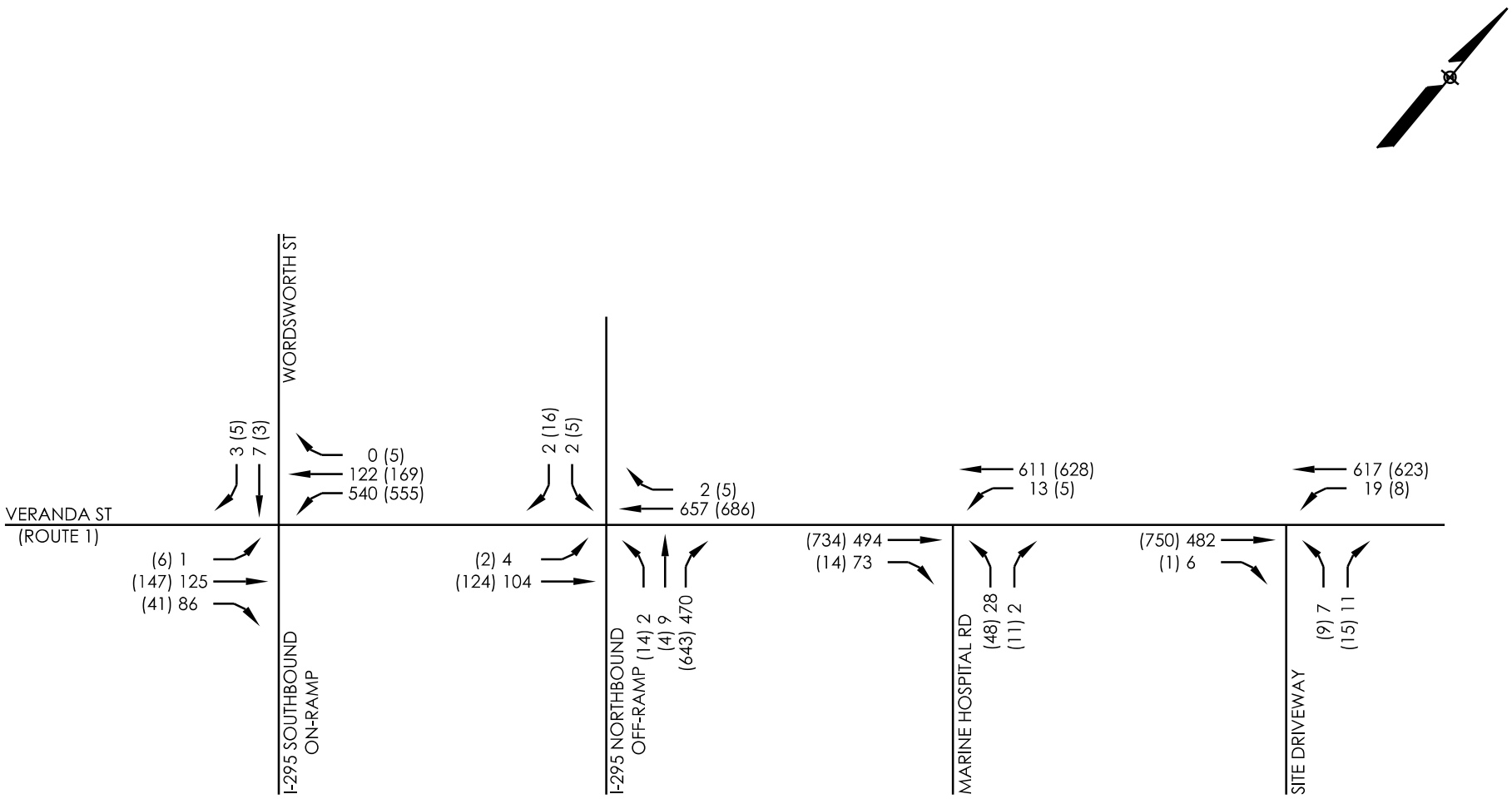
SEBAGO TECHNICS
WWW.SEBAGOTECHNICS.COM
75 John Roberts Rd.
Suite 4A
South Portland, ME 04106
Tel. 207-200-2100

OTHER DEVELOPMENT VOLUMES
MARTIN'S POINT HEALTH CARE

LOCATION:
MARTIN'S POINT
PORTLAND, MAINE

FOR: MARTIN'S POINT HEALTH CARE, INC.
10700 PRAIRIE LAKES DR
EDEN PRAIRIE, MN 55344

SCALE: N.T.S
DATE: 12/06/23
FIGURE: 2 OF 6



AM PEAK HOUR
(PM PEAK HOUR)

SEBAGO TECHNICS
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75 John Roberts Rd.
Suite 4A
South Portland, ME 04106
Tel. 207-200-2100

2026 NO-BUILD VOLUMES
MARTIN'S POINT HEALTH CARE

LOCATION:
MARTIN'S POINT
PORTLAND, MAINE

FOR: MARTIN'S POINT HEALTH CARE, INC.
10700 PRAIRIE LAKES DR
EDEN PRAIRIE, MN 55344

SCALE: N.T.S
DATE: 12/06/23
FIGURE: 3 OF 6



PROJECT TRIP GENERATION

	AM
ENTERING	81
EXITING	11
TOTAL	92

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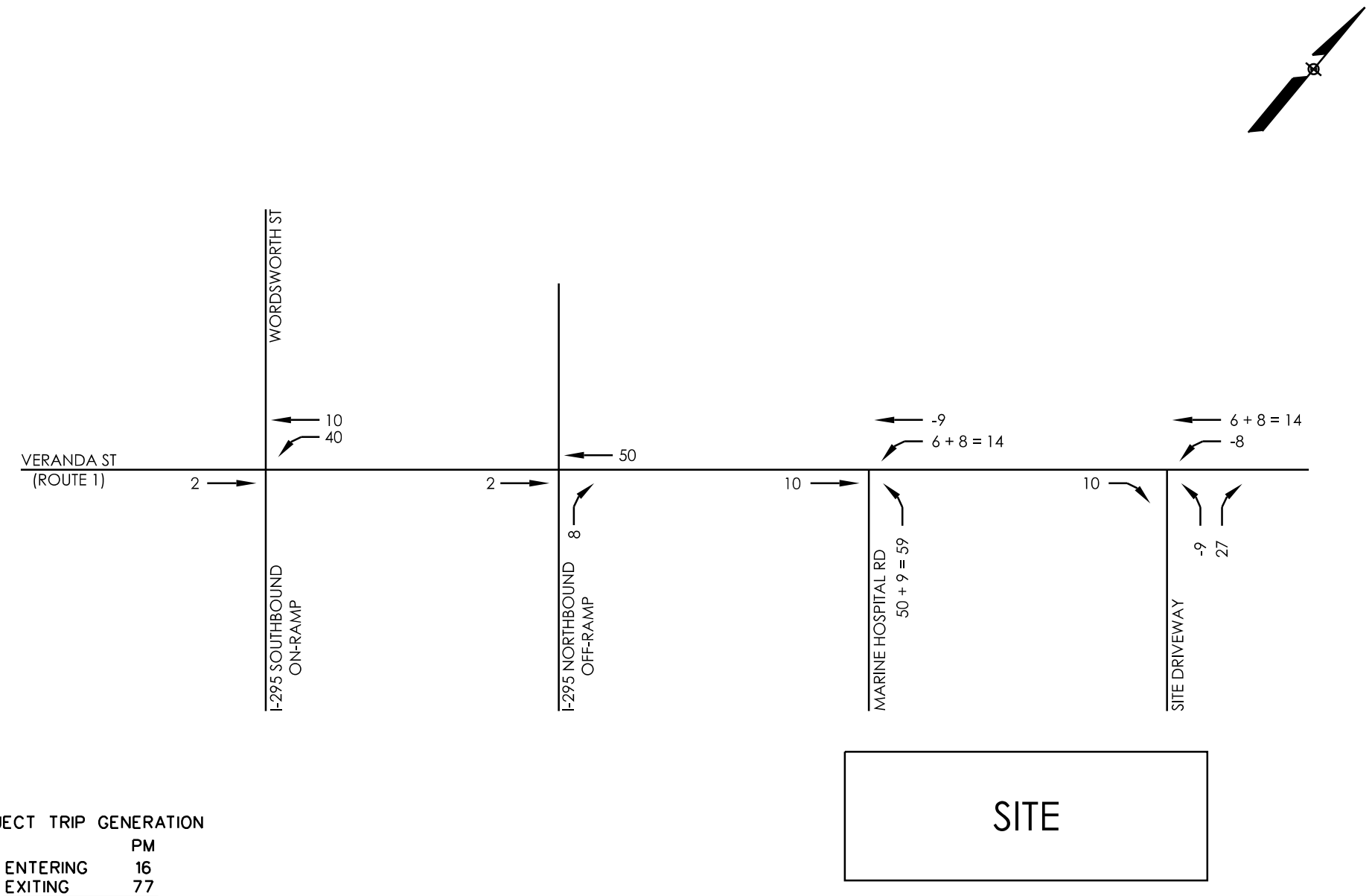
Suite 4A
South Portland, ME 04106
Tel. 207-200-2100

AM TRIP ASSIGNMENTS
MARTIN'S POINT HEALTH CARE

LOCATION: MARTIN'S POINT
PORTLAND, MAINE

FOR: MARTIN'S POINT HEALTH CARE, INC.
10700 PRAIRIE LAKES DR
EDEN PRAIRIE, MN 55344

SCALE: N.T.S
DATE: 12/06/23
FIGURE: 4 OF 6



PROJECT TRIP GENERATION

	PM
ENTERING	16
EXITING	77
TOTAL	93

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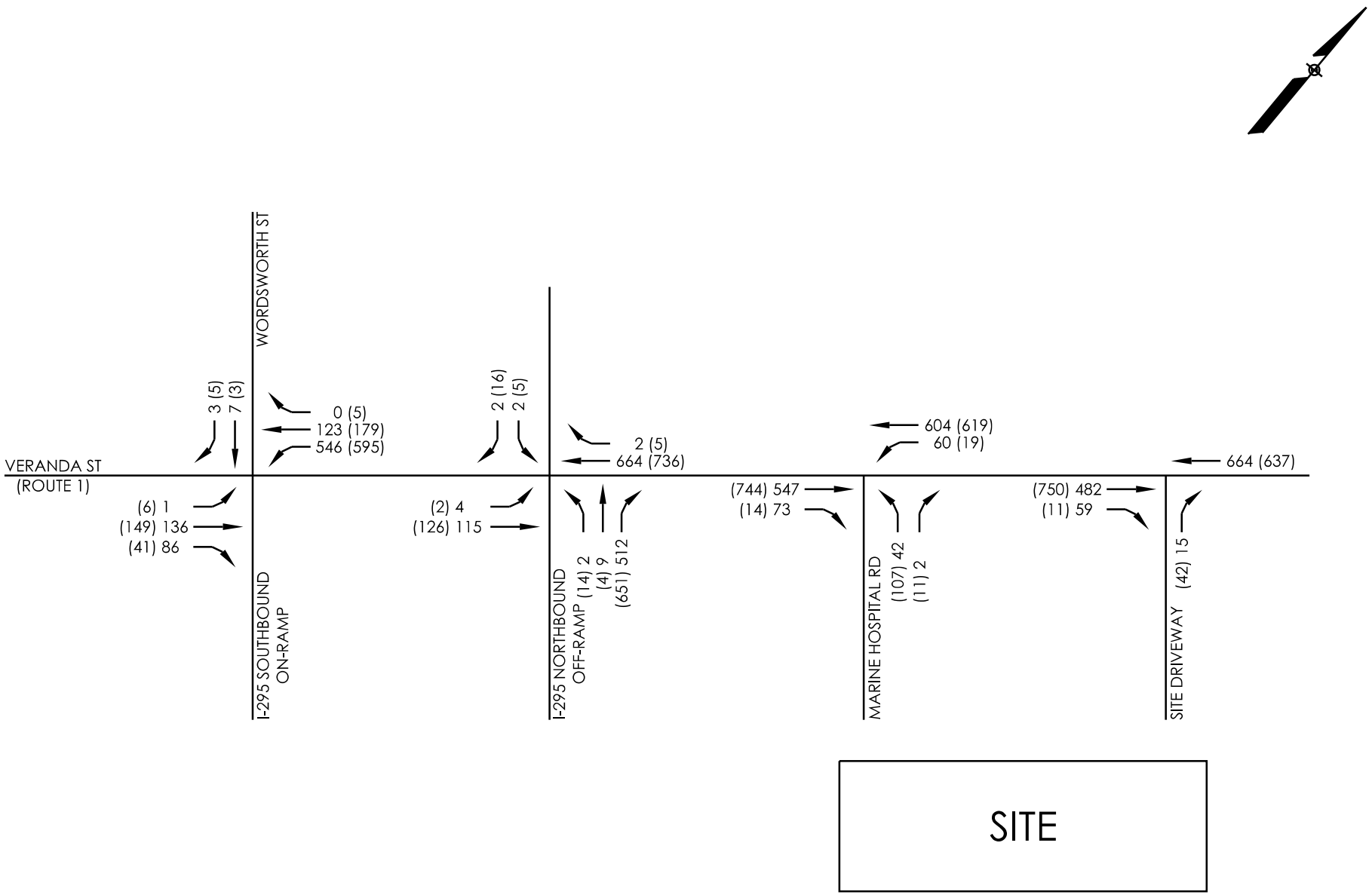
PM TRIP ASSIGNMENTS
MARTIN'S POINT HEALTH CARE

LOCATION:
MARTIN'S POINT
PORTLAND, MAINE

FOR: MARTIN'S POINT HEALTH CARE, INC.
10700 PRAIRIE LAKES DR
EDEN PRAIRIE, MN 55344

SCALE: N.T.S
DATE: 12/06/23
FIGURE: 5 OF 6



AM PEAK HOUR
(PM PEAK HOUR)

SEBAGO TECHNICS
WWW.SEBAGOTECHNICS.COM
75 John Roberts Rd.
Suite 4A
South Portland, ME 04106
Tel. 207-200-2100

2026 BUILD VOLUMES
MARTIN'S POINT HEALTH CARE

LOCATION:
MARTIN'S POINT
PORTLAND, MAINE

FOR: MARTIN'S POINT HEALTH CARE, INC.
10700 PRAIRIE LAKES DR
EDEN PRAIRIE, MN 55344

SCALE: N.T.S
DATE: 12/06/23
FIGURE: 6 OF 6

8.0 Capacity Analysis

An intersection capacity analysis was performed utilizing Synchro/SimTraffic v11 to calculate the control delay, or the average amount of delay that a vehicle experiences as it travels through an intersection or section of roadway. The analysis was completed by applying the average of ten (10) SimTraffic simulation runs, each consisting of a 15-minute seeding interval and a one-hour recording interval.

Level of Service (LOS) is determined by the control delay, in terms of "A" through "F," with "A" being optimal and "F" being unacceptable. The LOS and control delay for signalized and unsignalized intersections is depicted in the Highway Capacity Manual 6 and shown in Table 5.

Table 5 – Level of Service from Control Delay

Level of Service (LOS)	*Signalized Control Delay (Sec./Vehicle)*	*Unsignalized Control Delay (Sec./Vehicle)*
A	≤10	≤10
B	>10-≤20	>10-≤15
C	>20-≤35	>15-≤25
D	>35-≤55	>25-≤35
E	>55-≤80	>35-≤50
F	>80	>50

Capacity analysis was completed for the site driveways for the AM and PM analysis periods. Signal timings for Marine Hospital Road were obtained from MaineDOT WIN# 21745.00 for the Veranda Street corridor. The model includes the I-295 intersections given the network is coordinated to appropriately model platooning conditions through the corridor. Volumes for the ramp intersections were balanced with the Marine Hospital Road peak hour volumes. The results for the levels of service for 2026 no-build and build conditions are shown in Tables 6 and 7:

Table 6 – Level of Service from Control Delay
Right-In/Out at Veranda Street (Route 1)

Movement	*2026 AM No-Build* *Delay (LOS)*	*2026 AM Build* *Delay (LOS)*	*2026 PM No-Build* *Delay (LOS)*	*2026 PM Build* *Delay (LOS)*
Martin's Point WBL	32.0 (D)	-	35.8 (E)	-
Martin's Point WBR	7.3 (A)	5.6 (A)	13.8 (B)	9.5 (A)
Veranda St SWL	3.2 (A)	-	7.0 (A)	-

Table 7 – Level of Service from Control Delay
Marine Hospital Road at Veranda Street (Route 1)

Movement	*2026 AM No-Build* *Delay (LOS)*	*2026 AM Build* *Delay (LOS)*	*2026 PM No-Build* *Delay (LOS)*	*2026 PM Build* *Delay (LOS)*
Marine Hospital Rd WBL	11.8 (B)	19.9 (B)	14.0 (B)	19.4 (B)
Marine Hospital Rd WBR	15.8 (B)	14.2 (B)	17.4 (B)	14.4 (B)
Veranda St NET	4.8 (A)	8.7 (A)	5.8 (A)	9.5 (A)
Veranda St NER	3.5 (A)	6.8 (A)	4.7 (A)	8.2 (A)
Veranda St SWL	11.5 (B)	17.8 (B)	21.8 (C)	27.0 (C)
Veranda St SWT	2.2 (A)	2.8 (A)	3.3 (A)	5.1 (A)
INTERSECTION	3.7 (A)	6.7 (A)	5.1 (A)	8.6 (A)

As shown in Tables 6 and 7, all movements in the build condition to and from the site driveways via Veranda Street are anticipated to operate at acceptable levels of service with all movements at LOS "C" or better. It should be noted that left-turns from the unsignalized access were operating at LOS "D" and "E" demonstrating an improvement by reconstructing this intersection to right-in/right-out.

A queue analysis was also completed utilizing Synchro/SimTraffic. The 95th percentile queues during the peak hours are summarized in Table 8 for the site drive intersections.

Table 8 – 95th Percentile Queue Analysis

Movement *(Storage Length)*	*2026 AM No-Build*	*2026 AM Build*	*2026 PM No-Build*	*2026 PM Build*
Right-In/Out at Veranda Street (Route 1)				
Martin's Point WB LR	28	25	39	39
Veranda St SW L (55')	28	-	22	-
Marine Hospital Road at Veranda Street (Route 1)				
Marine Hospital Rd WB L (100')	31	46	42	88
Marine Hospital Rd WB R	12	12	28	33
Veranda St NE TR	126	203	173	238
Veranda St SW L (65')	34	**67**	22	46
Veranda St SW R	109	126	121	158

As seen in Table 8, the left-turn lane queue into Marine Hospital Road slightly exceeds the available striped storage length of 65 feet in the 2026 AM build peak hour, but does not appear to impact the intersection performance. It should be noted that the left-turn length has approximately 100' of full width length, with a potion likely operating as deceleration space.

A field review of the coordinated Veranda Street corridor was completed on December 5, 2023 to field verify the modeling. It was noted that the southbound I-295 and Veranda Street intersection in the PM peak hour period experienced long queue lengths where it appeared the northbound Veranda Street phase was green for an extended period with no vehicles present. There did not appear to be any

performance issues related to the existing Marine Hospital Road at Veranda Street intersection. While this queueing occasionally occurred in the PM peak 15-minute interval in the Synchro model, it did not appear to be caused by the northbound Veranda Street signal phase's green time.

9.0 Safety Analysis

Crash data was requested from MaineDOT for the most recent three-year period of 2020 to 2022 to determine if there are any high crash locations (HCLs) within the study area. An intersection or section of roadway is deemed an HCL if two criteria are met: a Critical Rate Factor (CRF) greater than 1.0 and a minimum of eight (8) crashes in a three-year period. The crash data reports are included in the Appendix and are summarized in Table 9 and Table 10.

Table 9 – Crash Summary – Intersections

Node	*Location*	*# of Crashes*	*CRF*
17614	Intersection of Veranda Street and Arcadia Street	1	0.48
60334	**Intersection of Veranda Street and I-295 Southbound**	**10**	**4.75**
15787	Intersection of Veranda Street and Olympia Street	2	0.61
15786	Intersection of Veranda Street and Oregon Street	2	0.48
69124	Intersection of Veranda Street and Marine Hospital Road	2	0.12

Table 10 – Crash Summary – Segments

Link	*Location*	*# of Crashes*	*CRF*
17612 – 60334	Veranda St between Hawthorne St and I-295 SB	1	1.14
74668 – 15787	Veranda St between I-295 Off-Ramp and Olympia St	1	0.37
69124 – 15788	Veranda St between Marine Hospital Rd and Falmouth TL	1	0.12

As demonstrated in the previous tables, there is one (1) high crash location within the proposed study area of the site: the intersection of Veranda Street at the I-295 southbound on-ramp and Wordsworth Street. The most recent available crash diagram (2019 to 2021) demonstrates all angle collisions at the intersection with several significant injuries and a fatality. The intersection was recently reconstructed in 2022 with a new signal as a part of the MaineDOT Veranda Street Project. As such no recommendations for improvements are included in conjunction with this project.

Evaluation of Pedestrian and Bicycle Crashes

Evaluation of pedestrian and bicycle related crashes was performed between the years of 2018 and 2022. General evaluation of pedestrian crashes within a ½ mile radius of the site revealed no pedestrian related crashes as shown on the map in the Appendix.

Evaluation of bicycle crashes within a mile radius of the site revealed a total of 11 bicycle related crashes, also shown in the Appendix. None of the 11 bicycle related crashes were located within the previously outlined study area.

10.0 Sight Distance Analysis

Sight distance for the proposed right in-right out driveway was reviewed in field on May 16, 2023 to assure the proposed access point would provide adequate sight lines. Sight distance was measured ten (10) feet behind the edge of travel way from an eye height of 3.5 feet to an object height of 4.25 feet. Table 11 outlines the required sight distance per the City of Portland's *Technical Manual.* These minimum sight distances are equivalent to MaineDOT's *Chapter 299 Highway Driveway and Entrance Rules.*

Table 11 – Sight Distance Requirements

Posted Speed (MPH)	*Minimum Sight Distance (Feet)*
25	200
30	250
35	305
40	360
45	425
50	495
55	570

The posted speed limit on Veranda Street in vicinity of the site is 35 MPH before transitioning to 40 MPH at the Martin's Point Bridge. Threrefore, sight distance is required to be 305 feet looking left towards the interstate. Sight distance looking left from the proposed right-in/right-out driveway was measured to be 510 feet. As such, sight distance exceeded the required minimum for a 35 MPH roadway. It is important to note that no landscaping, signage, or other features shall be located within the sight triangle of the proposed driveway.

11.0 Conclusions and Recommendations

Sebago Technics, Inc. has completed the traffic impact study for the Martin's Point Veranda Campus redevelopment and provides the following conclusions and recommendations:

- The proposed 50,000 SF office building is calculated to generate a total of 92 trips and 93 trips during the AM and PM peak hour generator periods, respectively. Given this level of trip generation, a Traffic Movement Permit (TMP) is not required by the City of Portland as trip generation does not surpass the 100-PCE threshold requirement for a TMP during any peak hour period.

- One high crash location, as classified by MaineDOT, was identified in the vicinity of the site driveways. The intersection of Veranda Street at the I-295 southbound on-ramp and Wordsworth Street. The intersection was recently reconstructed in 2022 with a new signal as a part of the MaineDOT Veranda Street Project. As such no recommendations for improvements are included in conjunction with this project.

- Sight distance looking left from the proposed right-in/right-out exceeds the required minimum for the speed limit of 35 MPH along Veranda Street in vicinity of the site driveway. It is important to note that no landscaping, signage, or other features shall be located within the sight triangle of the proposed driveway.

- A review of the capacity analysis at the study area intersections demonstrated that all movements to and from the site drive intersections are expected to operate at LOS "C" or better in the build condition. Based on operations of the existing left-turn movements from the unsignalized access, the need for the alteration of the access to right-in/right-out is confirmed. As such, this access is proposed to be reconstructed in conjunction with this project, including regrading the crossing for ADA compliance.

Appendix A

Trip Generation Data

Land Use: 220
Multifamily Housing (Low-Rise)

Description

Low-rise multifamily housing includes apartments, townhouses, and condominiums located within the same building with at least three other dwelling units and that have two or three floors (levels). Various configurations fit this description, including walkup apartment, mansion apartment, and stacked townhouse.

- A walkup apartment typically is two or three floors in height with dwelling units that are accessed by a single or multiple entrances with stairways and hallways.
- A mansion apartment is a single structure that contains several apartments within what appears to be a single-family dwelling unit.
- A fourplex is a single two-story structure with two matching dwelling units on the ground and second floors. Access to the individual units is typically internal to the structure and provided through a central entry and stairway.
- A stacked townhouse is designed to match the external appearance of a townhouse. But, unlike a townhouse dwelling unit that only shares walls with an adjoining unit, the stacked townhouse units share both floors and walls. Access to the individual units is typically internal to the structure and provided through a central entry and stairway.

Multifamily housing (mid-rise) (Land Use 221), multifamily housing (high-rise) (Land Use 222), affordable housing (Land Use 223), and off-campus student apartment (low-rise) (Land Use 225) are related land uses.

Land Use Subcategory

Data are presented for two subcategories for this land use: (1) not close to rail transit and (2) close to rail transit. A site is considered close to rail transit if the walking distance between the residential site entrance and the closest rail transit station entrance is ½ mile or less.

Additional Data

For the three sites for which both the number of residents and the number of occupied dwelling units were available, there were an average of 2.72 residents per occupied dwelling unit.

For the two sites for which the numbers of both total dwelling units and occupied dwelling units were available, an average of 96.2 percent of the total dwelling units were occupied.

The technical appendices provide supporting information on time-of-day distributions for this land use. The appendices can be accessed through either the ITETripGen web app or the trip

generation resource page on the ITE website (https://www.ite.org/technical-resources/topics/trip-and-parking-generation/).

For the three sites for which data were provided for both occupied dwelling units and residents, there was an average of 2.72 residents per occupied dwelling unit.

It is expected that the number of bedrooms and number of residents are likely correlated to the trips generated by a residential site. To assist in future analysis, trip generation studies of all multifamily housing should attempt to obtain information on occupancy rate and on the mix of residential unit sizes (i.e., number of units by number of bedrooms at the site complex).

The sites were surveyed in the 1980s, the 1990s, the 2000s, the 2010s, and the 2020s in British Columbia (CAN), California, Delaware, Florida, Georgia, Illinois, Indiana, Maine, Maryland, Massachusetts, Minnesota, New Jersey, Ontario (CAN), Oregon, Pennsylvania, South Carolina, South Dakota, Tennessee, Texas, Utah, and Washington.

Source Numbers

188, 204, 237, 300, 305, 306, 320, 321, 357, 390, 412, 525, 530, 579, 583, 638, 864, 866, 896, 901, 903, 904, 936, 939, 944, 946, 947, 948, 963, 964, 966, 967, 1012, 1013, 1014, 1036, 1047, 1056, 1071, 1076

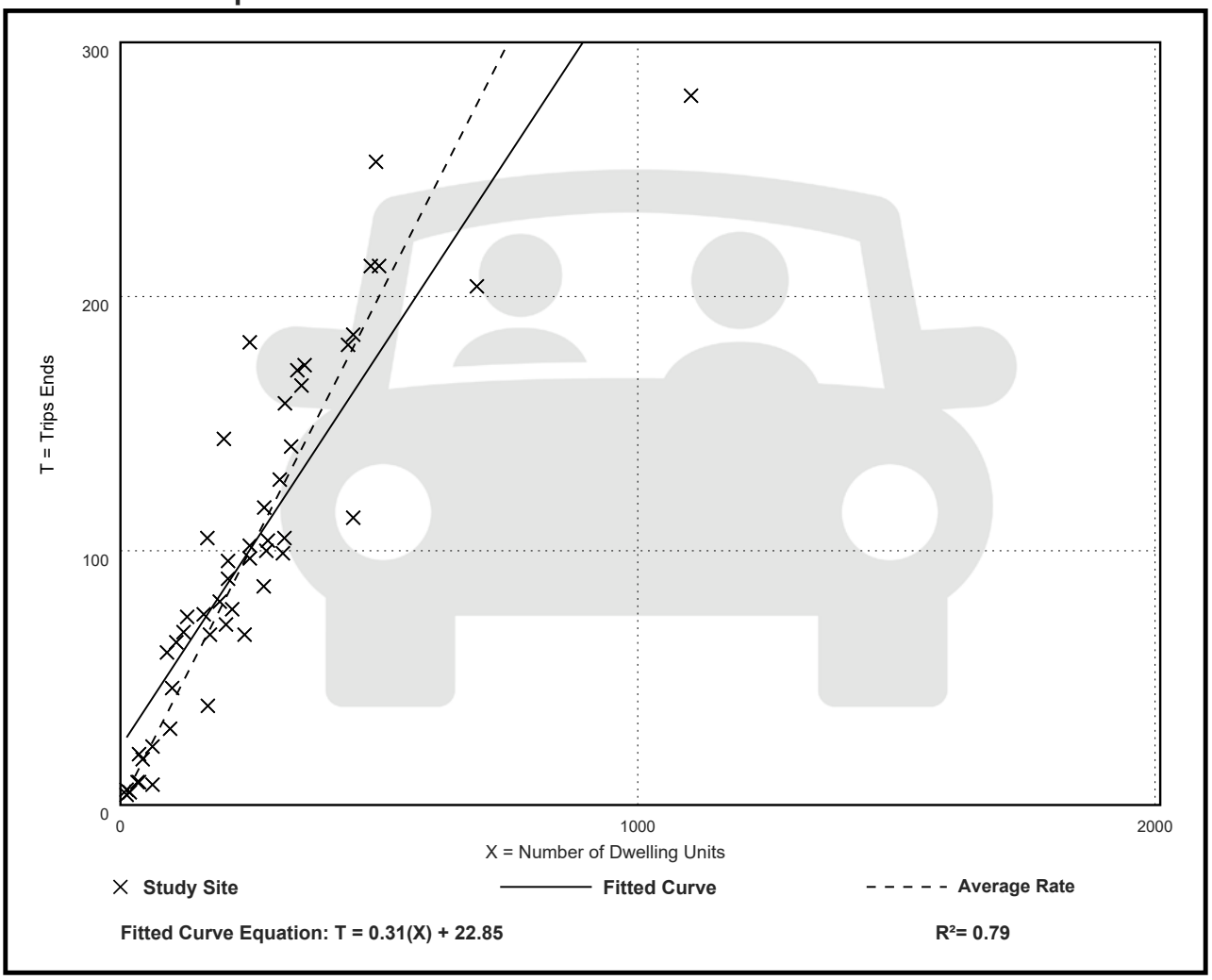
Multifamily Housing (Low-Rise)
Not Close to Rail Transit (220)

Vehicle Trip Ends vs: Dwelling Units
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: General Urban/Suburban
Number of Studies: 49
Avg. Num. of Dwelling Units: 249
Directional Distribution: 24% entering, 76% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.40	0.13 - 0.73	0.12

Data Plot and Equation



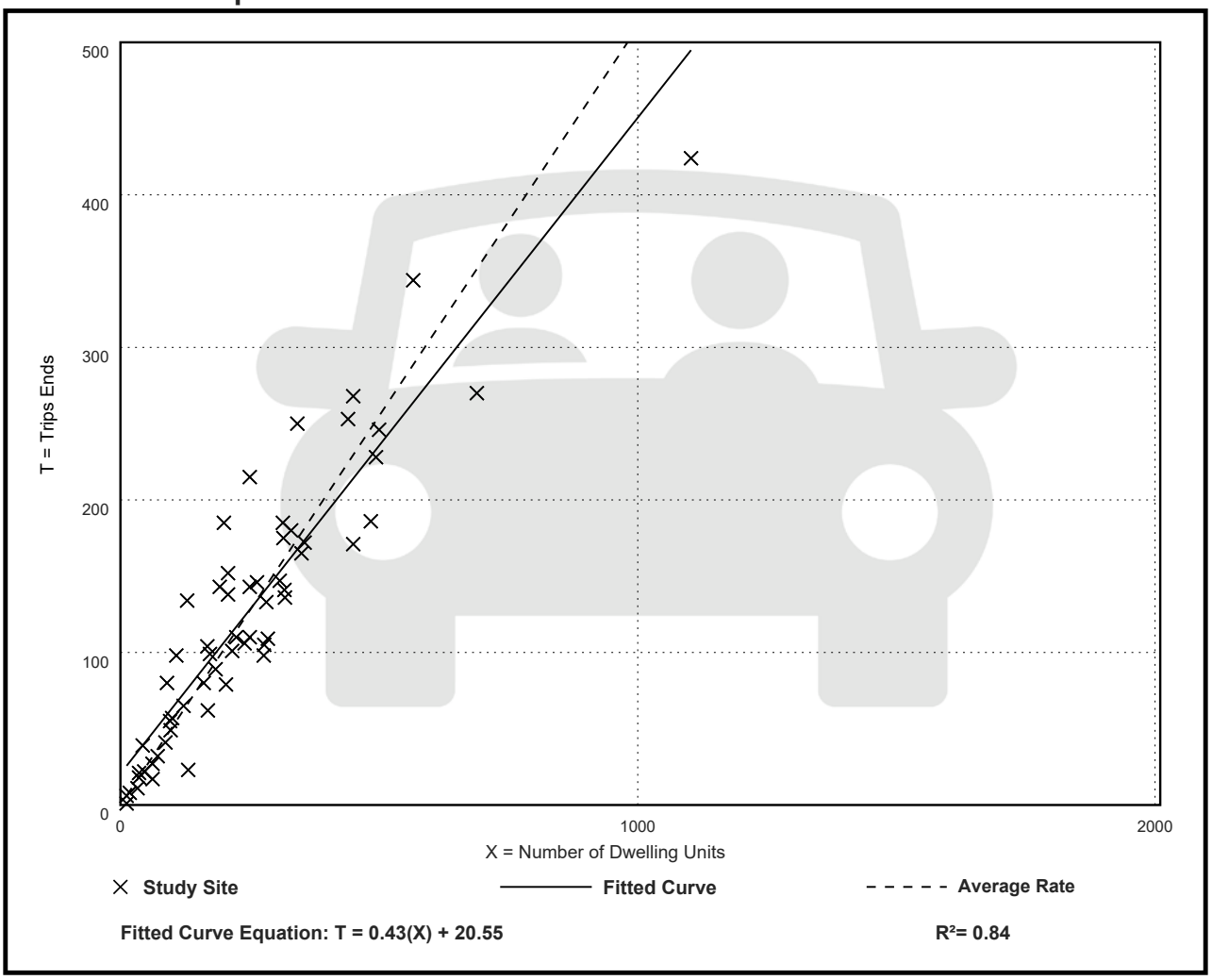
Multifamily Housing (Low-Rise)
Not Close to Rail Transit (220)

Vehicle Trip Ends vs: Dwelling Units
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: General Urban/Suburban
Number of Studies: 59
Avg. Num. of Dwelling Units: 241
Directional Distribution: 63% entering, 37% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.51	0.08 - 1.04	0.15

Data Plot and Equation



Fitted Curve Equation: T = 0.43(X) + 20.55

R^2= 0.84

Land Use: 710
General Office Building

Description

A general office building is a location where affairs of businesses, commercial or industrial organizations, or professional persons or firms are conducted. An office building houses multiple tenants that can include, as examples, professional services, insurance companies, investment brokers, a banking institution, a restaurant, or other service retailers. A general office building with a gross floor area of 10,000 square feet or less is classified as a small office building (Land Use 712). Corporate headquarters building (Land Use 714), single tenant office building (Land Use 715), medical-dental office building (Land Use 720), office park (Land Use 750), research and development center (Land Use 760), and business park (Land Use 770) are additional related uses.

Additional Data

If two or more general office buildings are in close physical proximity (within a close walk) and function as a unit (perhaps with a shared parking facility and common or complementary tenants), the total gross floor area or employment of the paired office buildings can be used for calculating the site trip generation. If the individual buildings are isolated or not functionally related to one another, trip generation should be calculated for each building separately.

For study sites with reported gross floor area and employees, an average employee density of 3.3 employees per 1,000 square feet GFA (or roughly 300 square feet per employee) has been consistent through the 1980s, 1990s, and 2000s. No sites counted in the 2010s reported both GFA and employees.

The average building occupancy varies considerably within the studies for which occupancy data were provided. The reported occupied gross floor area was 88 percent for general urban/suburban sites and 96 percent for the center city core and dense multi-use urban sites.

The technical appendices provide supporting information on time-of-day distributions for this land use. The appendices can be accessed through either the ITETripGen web app or the trip generation resource page on the ITE website (https://www.ite.org/technical-resources/topics/trip-and-parking-generation/).

The average numbers of person trips per vehicle trip at the eight center city core sites at which both person trip and vehicle trip data were collected are as follows:

- 2.8 during Weekday, Peak Hour of Adjacent Street Traffic, one hour between 7 and 9 a.m.
- 2.9 during Weekday, AM Peak Hour of Generator
- 2.9 during Weekday, Peak Hour of Adjacent Street Traffic, one hour between 4 and 6 p.m.
- 3.0 during Weekday, PM Peak Hour of Generator

The average numbers of person trips per vehicle trip at the 18 dense multi-use urban sites at which both person trip and vehicle trip data were collected are as follows:

- 1.5 during Weekday, Peak Hour of Adjacent Street Traffic, one hour between 7 and 9 a.m.
- 1.5 during Weekday, AM Peak Hour of Generator
- 1.5 during Weekday, Peak Hour of Adjacent Street Traffic, one hour between 4 and 6 p.m.
- 1.5 during Weekday, PM Peak Hour of Generator

The average numbers of person trips per vehicle trip at the 23 general urban/suburban sites at which both person trip and vehicle trip data were collected are as follows:

- 1.3 during Weekday, Peak Hour of Adjacent Street Traffic, one hour between 7 and 9 a.m.
- 1.3 during Weekday, AM Peak Hour of Generator
- 1.3 during Weekday, Peak Hour of Adjacent Street Traffic, one hour between 4 and 6 p.m.
- 1.4 during Weekday, PM Peak Hour of Generator

The sites were surveyed in the 1980s, the 1990s, the 2000s, the 2010s, and the 2020s in Alberta (CAN), California, Colorado, Connecticut, Georgia, Illinois, Indiana, Kansas, Kentucky, Maine, Maryland, Michigan, Minnesota, Missouri, Montana, New Hampshire, New Jersey, New York, Ontario (CAN)Pennsylvania, Texas, Utah, Virginia, and Washington.

Source Numbers

161, 175, 183, 184, 185, 207, 212, 217, 247, 253, 257, 260, 262, 273, 279, 297, 298, 300, 301, 302, 303, 304, 321, 322, 323, 324, 327, 404, 407, 408, 419, 423, 562, 734, 850, 859, 862, 867, 869, 883, 884, 890, 891, 904, 940, 944, 946, 964, 965, 972, 1009, 1030, 1058, 1061

General Office Building
(710)

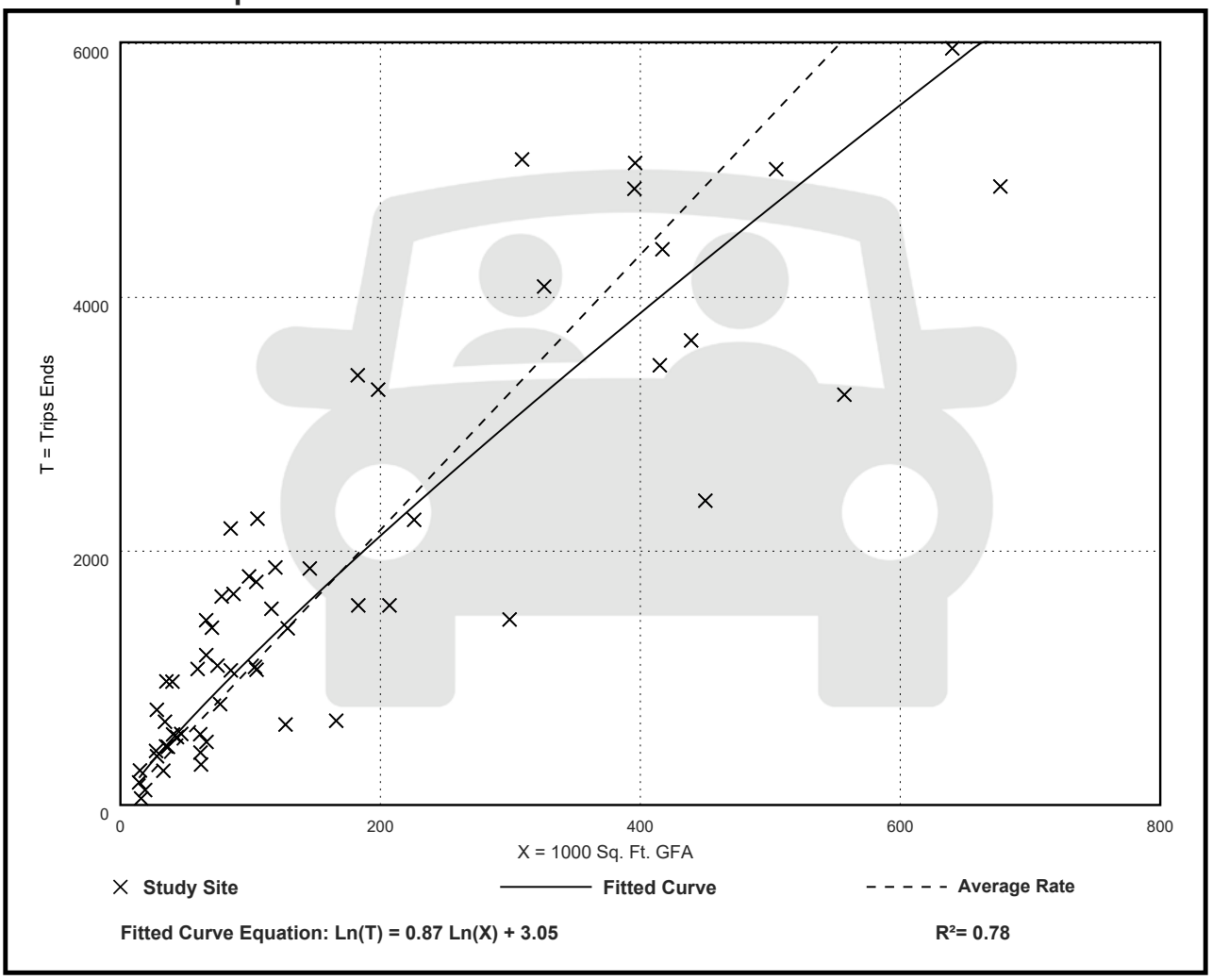
Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
On a: Weekday

Setting/Location: General Urban/Suburban
Number of Studies: 59
Avg. 1000 Sq. Ft. GFA: 163
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
10.84	3.27 - 27.56	4.76

Data Plot and Equation



Fitted Curve Equation: Ln(T) = 0.87 Ln(X) + 3.05

R^2= 0.78

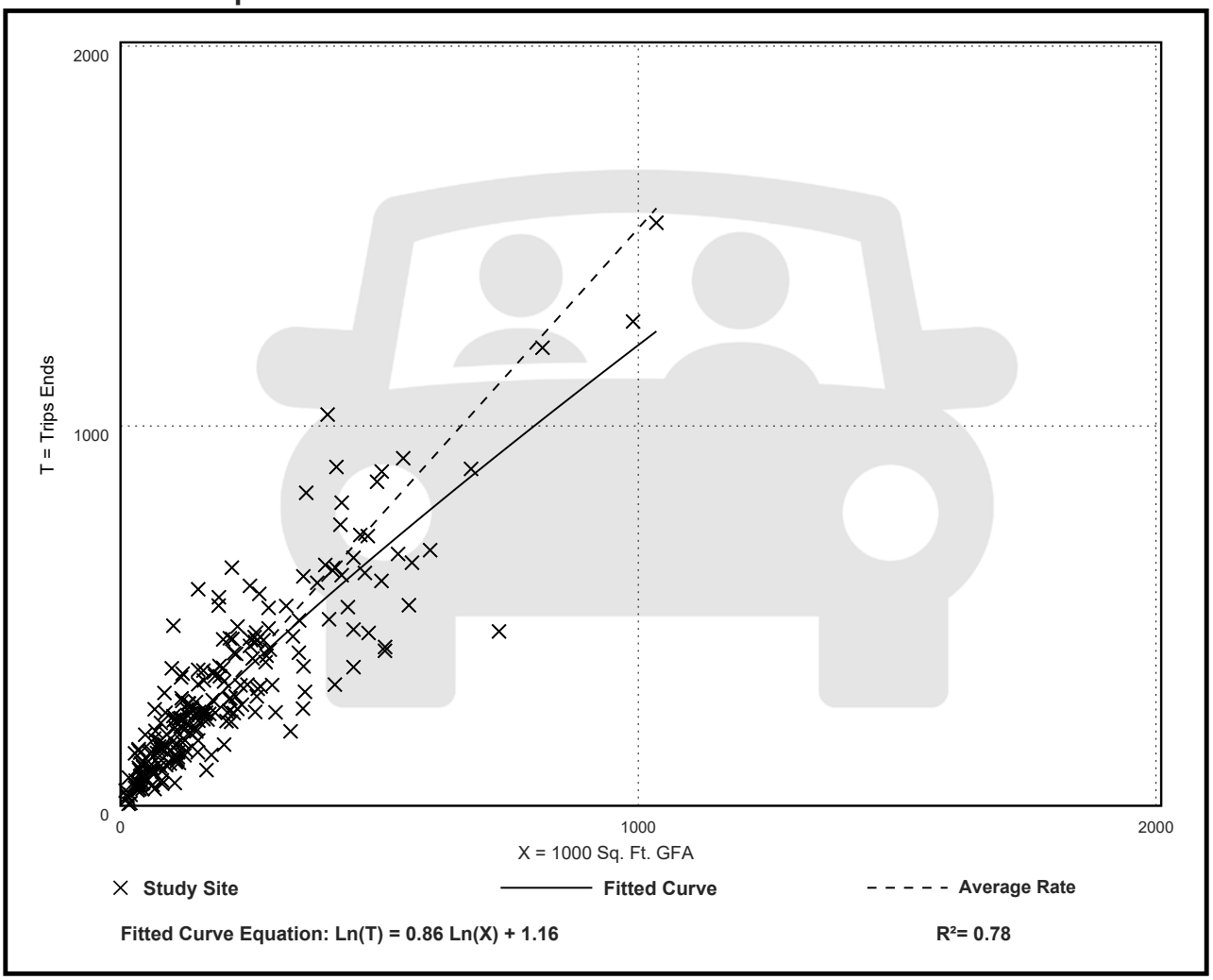
General Office Building
(710)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: General Urban/Suburban
Number of Studies: 221
Avg. 1000 Sq. Ft. GFA: 201
Directional Distribution: 88% entering, 12% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
1.52	0.32 - 4.93	0.58

Data Plot and Equation



Fitted Curve Equation: Ln(T) = 0.86 Ln(X) + 1.16

R^2= 0.78

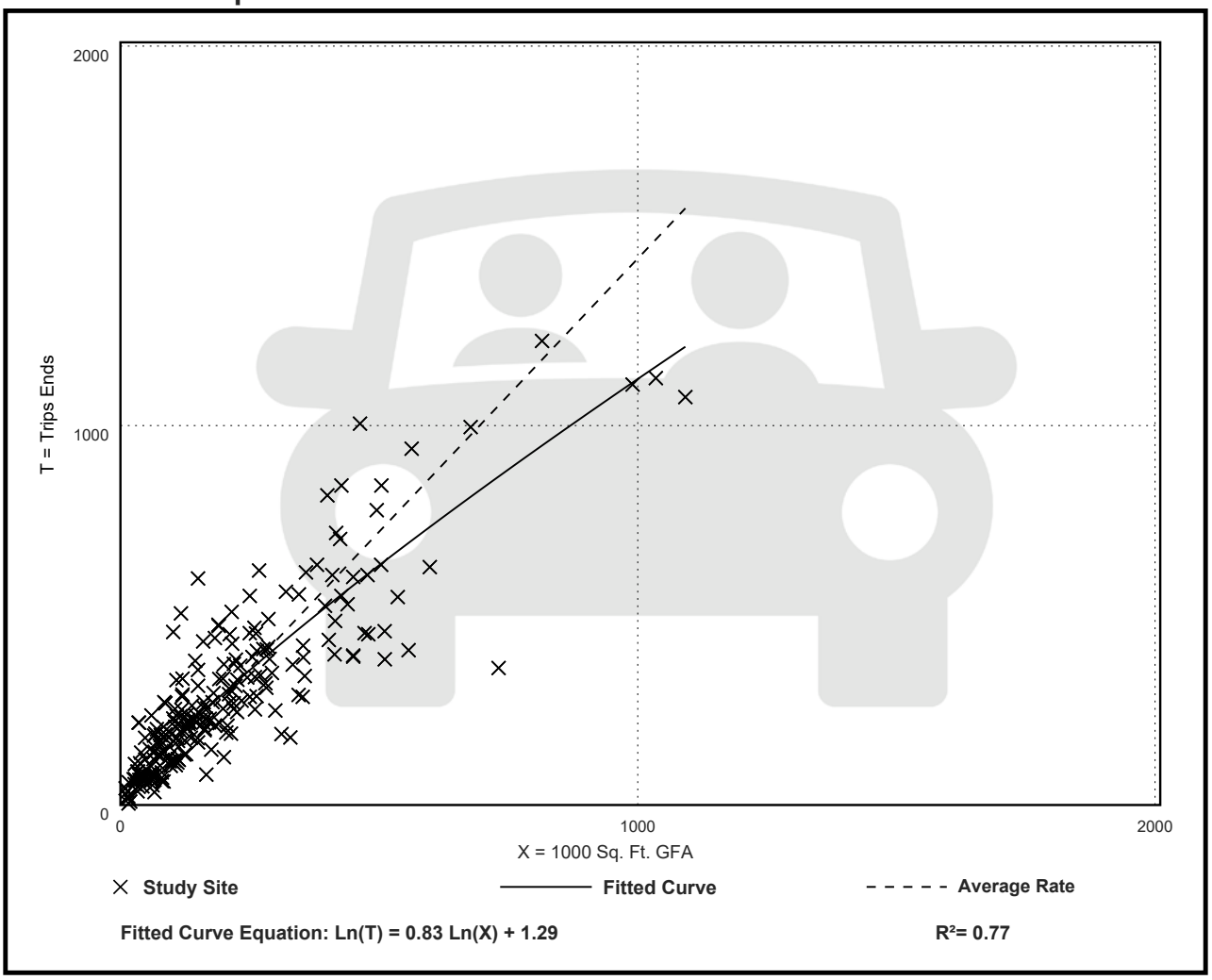
General Office Building
(710)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: General Urban/Suburban
Number of Studies: 232
Avg. 1000 Sq. Ft. GFA: 199
Directional Distribution: 17% entering, 83% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
1.44	0.26 - 6.20	0.60

Data Plot and Equation



Fitted Curve Equation: Ln(T) = 0.83 Ln(X) + 1.29

R^2= 0.77

Appendix B

Traffic Count Data

Accurate Counts

978-664-2565

N/S Street : Marine Hospital Road
E/W Street : Veranda Street
City/State : Portland, ME
Weather : Clear

File Name : 10260001
Site Code : 10260001
Start Date : 5/25/2023
Page No : 1

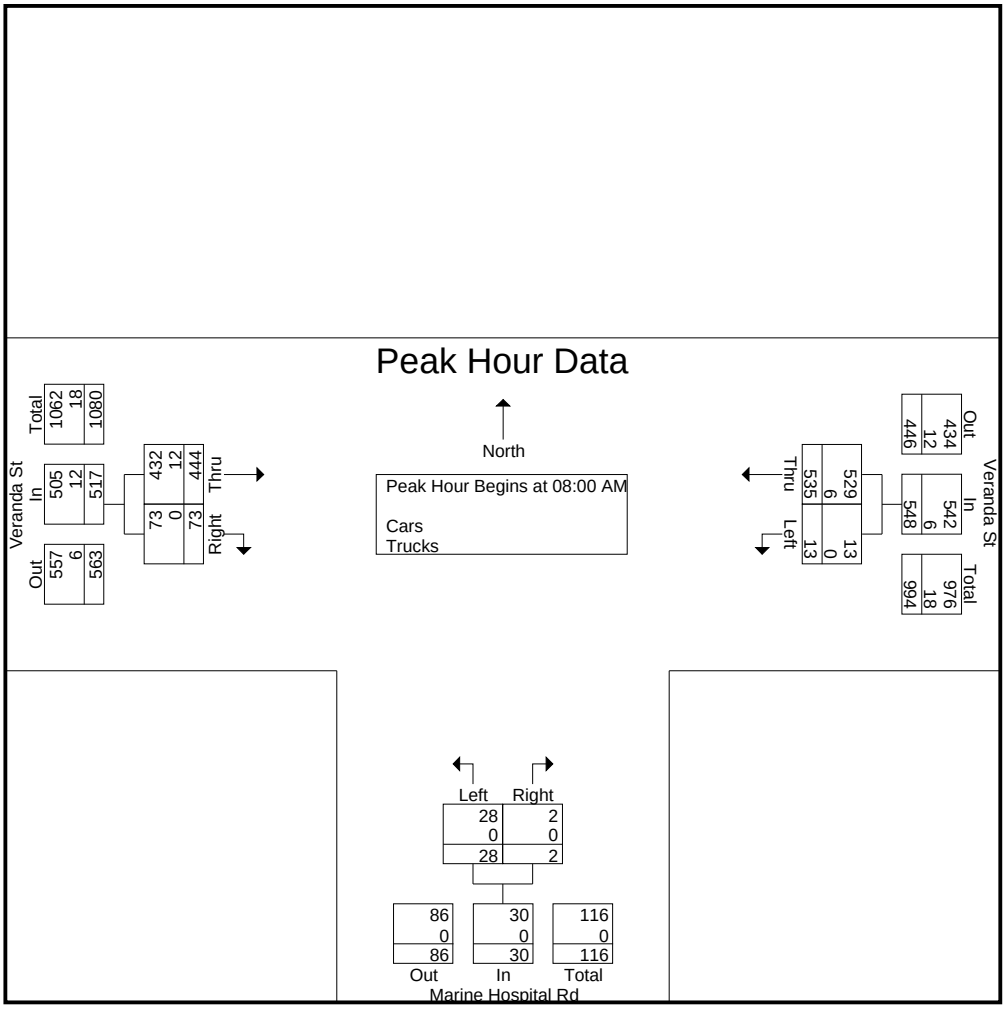
Groups Printed- Cars - Trucks

	Veranda St From East		Marine Hospital Rd From South		Veranda St From West		
Start Time	Left	Thru	Left	Right	Thru	Right	Int. Total
07:00 AM	7	60	5	0	53	12	137
07:15 AM	3	99	6	0	71	18	197
07:30 AM	2	104	3	0	77	23	209
07:45 AM	8	122	2	2	110	20	264
Total	20	385	16	2	311	73	807
08:00 AM	5	132	9	1	112	17	276
08:15 AM	3	123	6	0	113	16	261
08:30 AM	1	154	4	0	103	13	275
08:45 AM	4	126	9	1	116	27	283
Total	13	535	28	2	444	73	1095
Grand Total	33	920	44	4	755	146	1902
Apprch %	3.5	96.5	91.7	8.3	83.8	16.2	
Total %	1.7	48.4	2.3	0.2	39.7	7.7	
Cars	33	911	44	4	735	145	1872
% Cars	100	99	100	100	97.4	99.3	98.4
Trucks	0	9	0	0	20	1	30
% Trucks	0	1	0	0	2.6	0.7	1.6

	Veranda St From East			Marine Hospital Rd From South			Veranda St From West			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 08:00 AM										
08:00 AM	**5**	132	137	**9**	**1**	**10**	112	17	129	276
08:15 AM	3	123	126	6	0	6	113	16	129	261
08:30 AM	1	**154**	**155**	4	0	4	103	13	116	275
08:45 AM	4	126	130	9	1	10	**116**	**27**	**143**	**283**
Total Volume	13	535	548	28	2	30	444	73	517	1095
% App. Total	2.4	97.6		93.3	6.7		85.9	14.1		
PHF	.650	.869	.884	.778	.500	.750	.957	.676	.904	.967
Cars	13	529	542	28	2	30	432	73	505	1077
% Cars	100	98.9	98.9	100	100	100	97.3	100	97.7	98.4
Trucks	0	6	6	0	0	0	12	0	12	18
% Trucks	0	1.1	1.1	0	0	0	2.7	0	2.3	1.6

N/S Street : Marine Hospital Road
E/W Street : Veranda Street
City/State : Portland, ME
Weather : Clear

File Name : 10260001
Site Code : 10260001
Start Date : 5/25/2023
Page No : 2

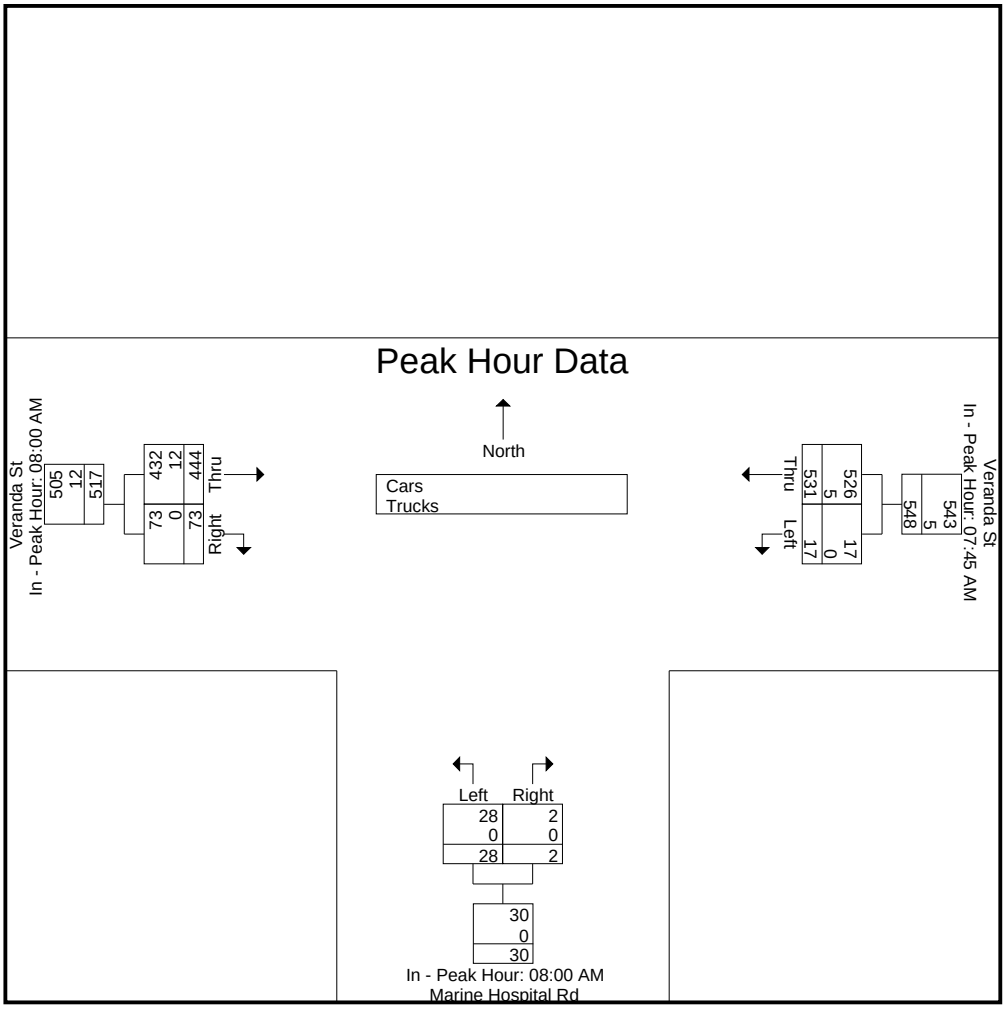


Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:45 AM			08:00 AM			08:00 AM		
+0 mins.	**8**	122	130	**9**	**1**	**10**	112	17	129
+15 mins.	5	132	137	6	0	6	113	16	129
+30 mins.	3	123	126	4	0	4	103	13	116
+45 mins.	1	**154**	**155**	9	1	10	**116**	**27**	**143**
Total Volume	17	531	548	28	2	30	444	73	517
% App. Total	3.1	96.9		93.3	6.7		85.9	14.1	
PHF	.531	.862	.884	.778	.500	.750	.957	.676	.904
Cars	17	526	543	28	2	30	432	73	505
% Cars	100	99.1	99.1	100	100	100	97.3	100	97.7
Trucks	0	5	5	0	0	0	12	0	12
% Trucks	0	0.9	0.9	0	0	0	2.7	0	2.3

N/S Street : Marine Hospital Road
E/W Street : Veranda Street
City/State : Portland, ME
Weather : Clear

File Name : 10260001
Site Code : 10260001
Start Date : 5/25/2023
Page No : 3



Accurate Counts

978-664-2565

N/S Street : Marine Hospital Road
E/W Street : Veranda Street
City/State : Portland, ME
Weather : Clear

File Name : 10260001
Site Code : 10260001
Start Date : 5/25/2023

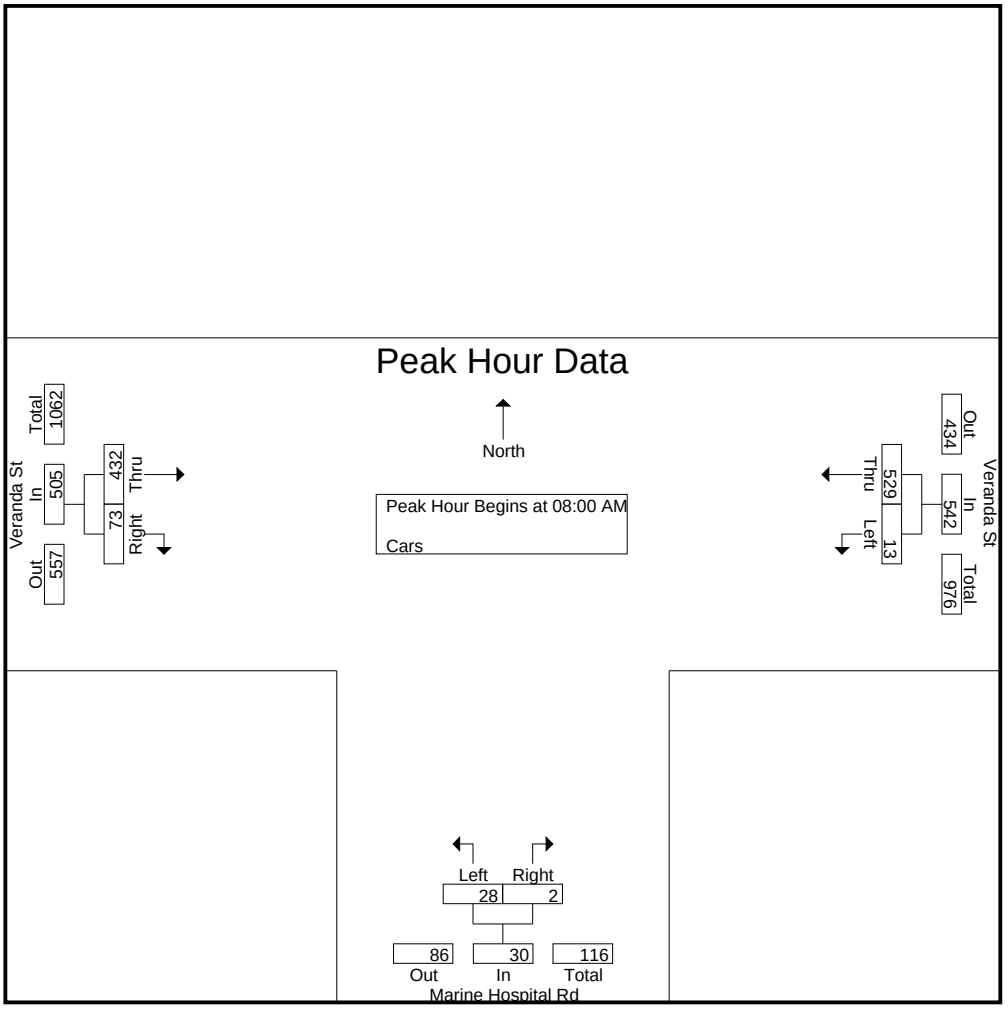
Groups Printed- Cars

	Veranda St From East		Marine Hospital Rd From South		Veranda St From West		
Start Time	Left	Thru	Left	Right	Thru	Right	Int. Total
07:00 AM	7	59	5	0	51	12	134
07:15 AM	3	99	6	0	68	18	194
07:30 AM	2	103	3	0	76	22	206
07:45 AM	8	121	2	2	108	20	261
Total	20	382	16	2	303	72	795
08:00 AM	5	130	9	1	109	17	271
08:15 AM	3	122	6	0	110	16	257
08:30 AM	1	153	4	0	98	13	269
08:45 AM	4	124	9	1	115	27	280
Total	13	529	28	2	432	73	1077
Grand Total	33	911	44	4	735	145	1872
Apprch %	3.5	96.5	91.7	8.3	83.5	16.5	
Total %	1.8	48.7	2.4	0.2	39.3	7.7	

	Veranda St From East			Marine Hospital Rd From South			Veranda St From West			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 08:00 AM										
08:00 AM	**5**	130	135	**9**	**1**	**10**	109	17	126	271
08:15 AM	3	122	125	6	0	6	110	16	126	257
08:30 AM	1	**153**	**154**	4	0	4	98	13	111	269
08:45 AM	4	124	128	9	1	10	**115**	**27**	**142**	**280**
Total Volume	13	529	542	28	2	30	432	73	505	1077
% App. Total	2.4	97.6		93.3	6.7		85.5	14.5		
PHF	.650	.864	.880	.778	.500	.750	.939	.676	.889	.962

N/S Street : Marine Hospital Road
E/W Street : Veranda Street
City/State : Portland, ME
Weather : Clear

File Name : 10260001
Site Code : 10260001
Start Date : 5/25/2023
Page No : 5

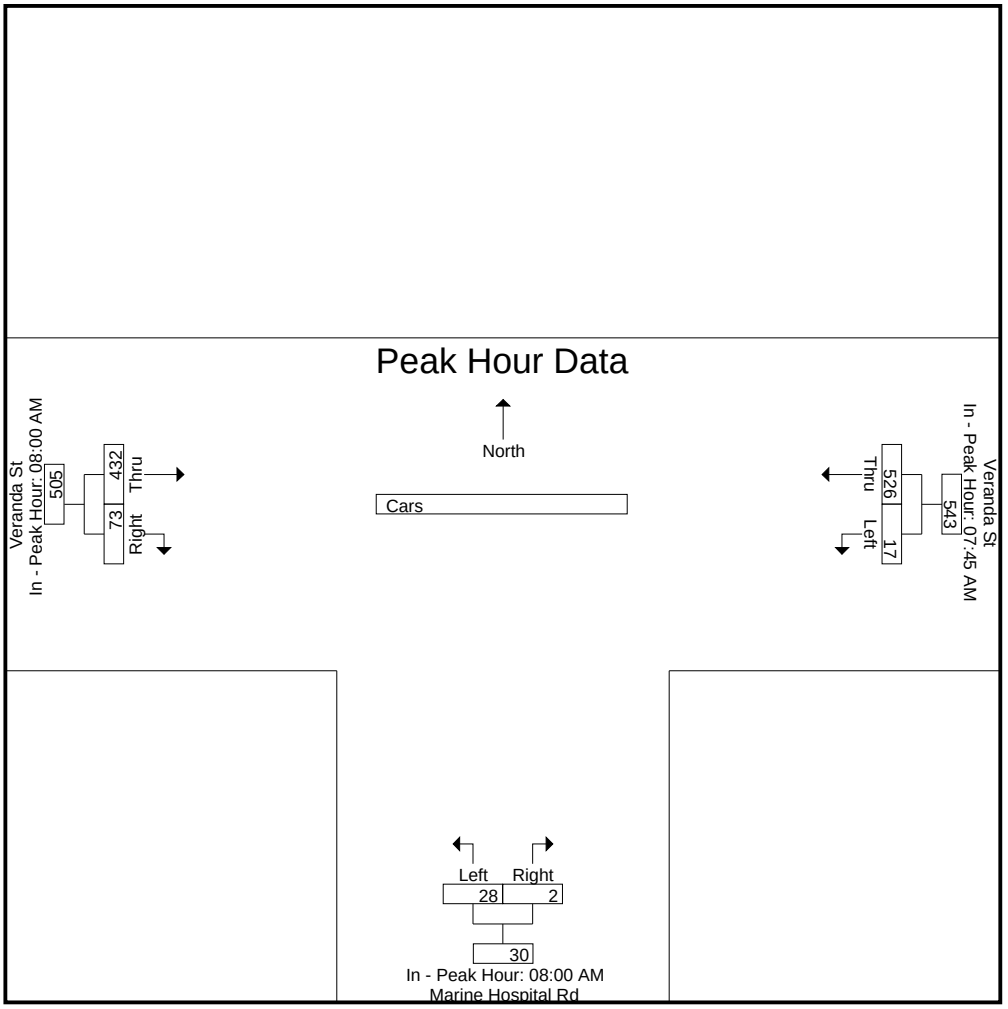


Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:45 AM			08:00 AM			08:00 AM		
+0 mins.	**8**	121	129	**9**	**1**	**10**	109	17	126
+15 mins.	5	130	135	6	0	6	110	16	126
+30 mins.	3	122	125	4	0	4	98	13	111
+45 mins.	1	**153**	**154**	9	1	10	**115**	**27**	**142**
Total Volume	17	526	543	28	2	30	432	73	505
% App. Total	3.1	96.9		93.3	6.7		85.5	14.5	
PHF	.531	.859	.881	.778	.500	.750	.939	.676	.889

N/S Street : Marine Hospital Road
E/W Street : Veranda Street
City/State : Portland, ME
Weather : Clear

File Name : 10260001
Site Code : 10260001
Start Date : 5/25/2023
Page No : 6



Accurate Counts

978-664-2565

N/S Street : Marine Hospital Road
E/W Street : Veranda Street
City/State : Portland, ME
Weather : Clear

File Name : 10260001
Site Code : 10260001
Start Date : 5/25/2023

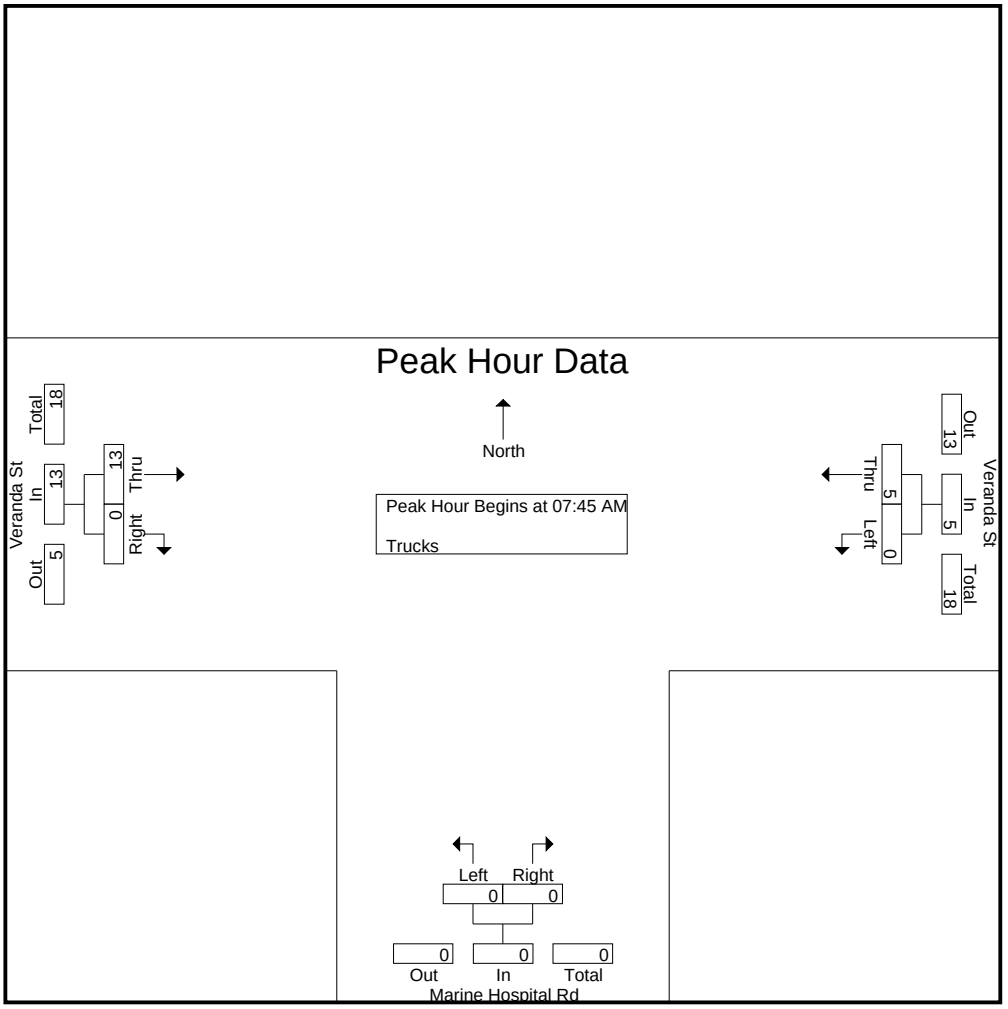
Groups Printed- Trucks

	Veranda St From East		Marine Hospital Rd From South		Veranda St From West		
Start Time	Left	Thru	Left	Right	Thru	Right	Int. Total
07:00 AM	0	1	0	0	2	0	3
07:15 AM	0	0	0	0	3	0	3
07:30 AM	0	1	0	0	1	1	3
07:45 AM	0	1	0	0	2	0	3
Total	0	3	0	0	8	1	12
08:00 AM	0	2	0	0	3	0	5
08:15 AM	0	1	0	0	3	0	4
08:30 AM	0	1	0	0	5	0	6
08:45 AM	0	2	0	0	1	0	3
Total	0	6	0	0	12	0	18
Grand Total	0	9	0	0	20	1	30
Apprch %	0	100	0	0	95.2	4.8	
Total %	0	30	0	0	66.7	3.3	

	Veranda St From East			Marine Hospital Rd From South			Veranda St From West			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:45 AM										
07:45 AM	0	1	1	0	0	0	2	0	2	3
08:00 AM	0	**2**	**2**	0	0	0	3	0	3	5
08:15 AM	0	1	1	0	0	0	3	0	3	4
08:30 AM	0	1	1	0	0	0	**5**	0	**5**	**6**
Total Volume	0	5	5	0	0	0	13	0	13	18
% App. Total	0	100		0	0		100	0		
PHF	.000	.625	.625	.000	.000	.000	.650	.000	.650	.750

N/S Street : Marine Hospital Road
E/W Street : Veranda Street
City/State : Portland, ME
Weather : Clear

File Name : 10260001
Site Code : 10260001
Start Date : 5/25/2023
Page No : 8

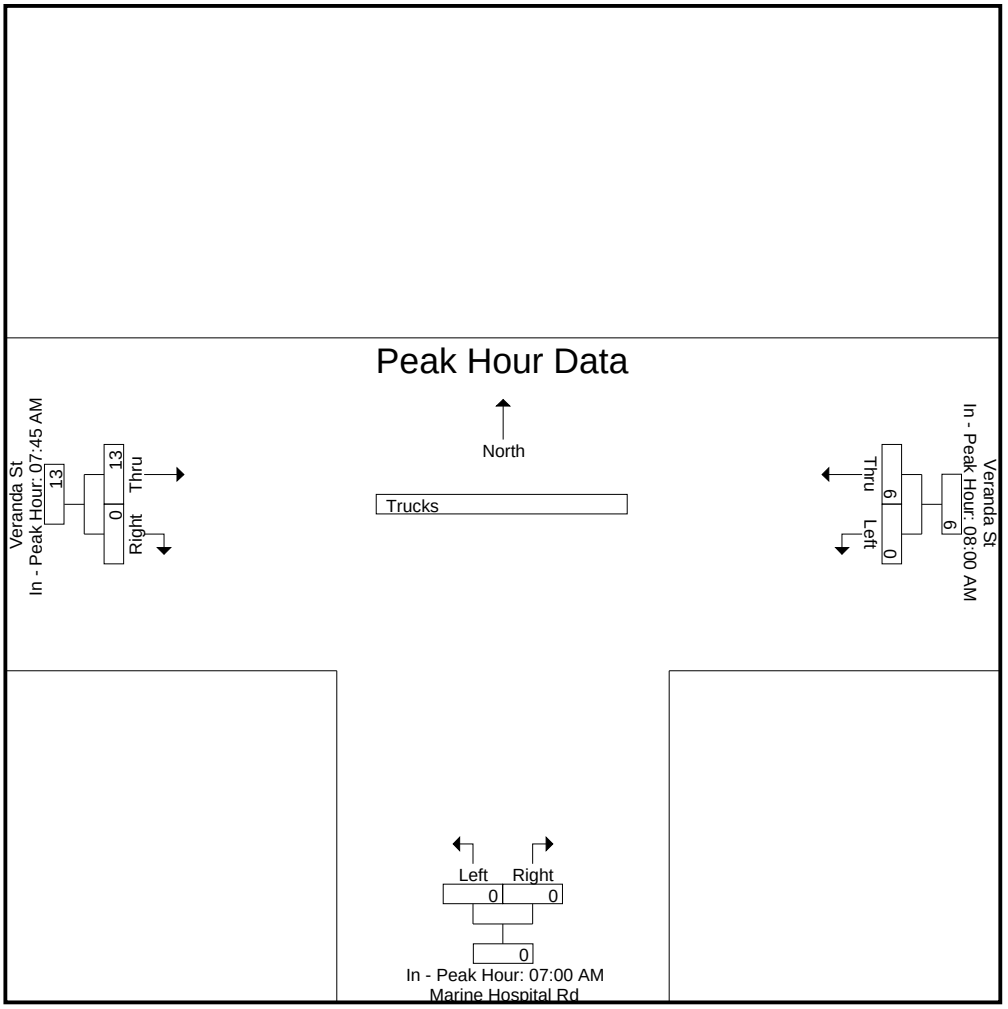


Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	08:00 AM			07:00 AM			07:45 AM		
+0 mins.	0	**2**	**2**	0	0	0	2	0	2
+15 mins.	0	1	1	0	0	0	3	0	3
+30 mins.	0	1	1	0	0	0	3	0	3
+45 mins.	0	2	2	0	0	0	**5**	0	**5**
Total Volume	0	6	6	0	0	0	13	0	13
% App. Total	0	100		0	0		100	0	
PHF	.000	.750	.750	.000	.000	.000	.650	.000	.650

N/S Street : Marine Hospital Road
E/W Street : Veranda Street
City/State : Portland, ME
Weather : Clear

File Name : 10260001
Site Code : 10260001
Start Date : 5/25/2023
Page No : 9



Accurate Counts

978-664-2565

N/S Street : Marine Hospital Road
E/W Street : Veranda Street
City/State : Portland, ME
Weather : Clear

File Name : 10260001
Site Code : 10260001
Start Date : 5/25/2023
Page No : 10

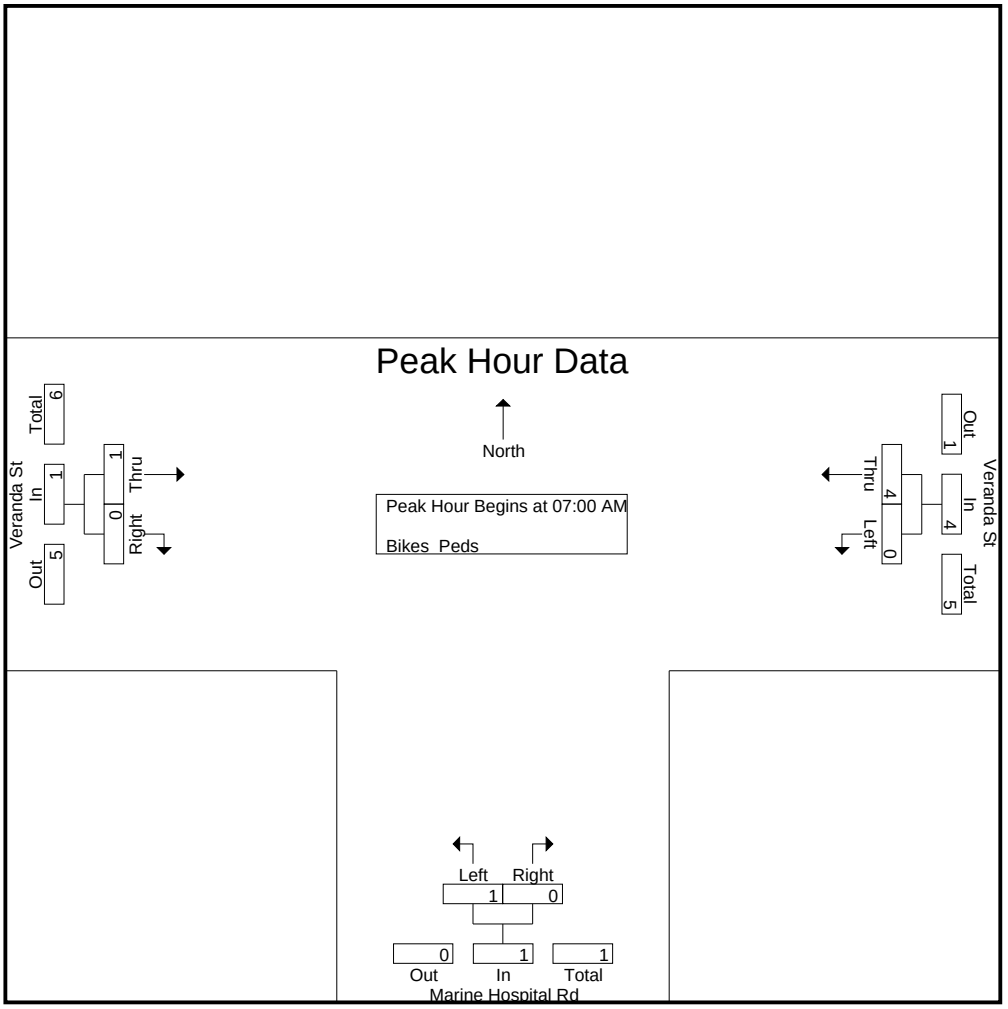
Groups Printed- Bikes Peds

	Veranda St From East			Marine Hospital Rd From South			Veranda St From West					
Start Time	Left	Thru	Peds	Left	Right	Peds	Thru	Right	Peds	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	0	1	0	0	0	1	0	0	0	1	1	2
07:15 AM	0	1	0	1	0	0	0	0	0	0	2	2
07:30 AM	0	1	0	0	0	0	1	0	0	0	2	2
07:45 AM	0	1	0	0	0	0	0	0	0	0	1	1
Total	0	4	0	1	0	1	1	0	0	1	6	7
08:00 AM	0	0	0	0	0	2	0	0	1	3	0	3
08:15 AM	0	1	0	0	0	2	0	0	2	4	1	5
08:30 AM	0	1	0	0	0	4	2	0	0	4	3	7
08:45 AM	0	0	0	0	0	5	0	0	0	5	0	5
Total	0	2	0	0	0	13	2	0	3	16	4	20
Grand Total	0	6	0	1	0	14	3	0	3	17	10	27
Apprch %	0	100		100	0		100	0				
Total %	0	60		10	0		30	0		63	37	

	Veranda St From East			Marine Hospital Rd From South			Veranda St From West			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:00 AM										
07:00 AM	0	**1**	**1**	0	0	0	0	0	0	1
07:15 AM	0	1	1	**1**	0	**1**	0	0	0	**2**
07:30 AM	0	1	1	0	0	0	**1**	0	**1**	2
07:45 AM	0	1	1	0	0	0	0	0	0	1
Total Volume	0	4	4	1	0	1	1	0	1	6
% App. Total	0	100		100	0		100	0		
PHF	.000	1.00	1.00	.250	.000	.250	.250	.000	.250	.750

N/S Street : Marine Hospital Road
E/W Street : Veranda Street
City/State : Portland, ME
Weather : Clear

File Name : 10260001
Site Code : 10260001
Start Date : 5/25/2023
Page No : 11

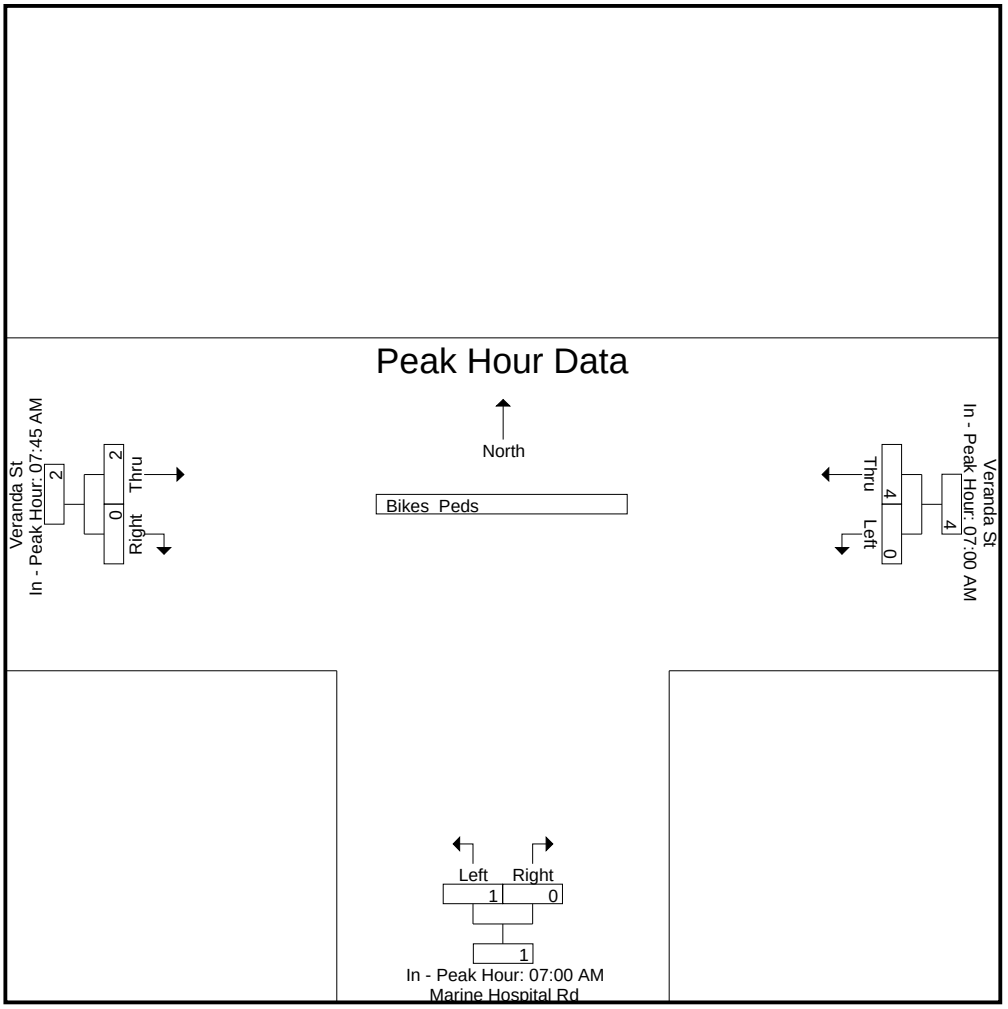


Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM			07:00 AM			07:45 AM		
+0 mins.	0	**1**	**1**	0	0	0	0	0	0
+15 mins.	0	1	1	**1**	0	**1**	0	0	0
+30 mins.	0	1	1	0	0	0	0	0	0
+45 mins.	0	1	1	0	0	0	**2**	0	**2**
Total Volume	0	4	4	1	0	1	2	0	2
% App. Total	0	100		100	0		100	0	
PHF	.000	1.000	1.000	.250	.000	.250	.250	.000	.250

N/S Street : Marine Hospital Road
E/W Street : Veranda Street
City/State : Portland, ME
Weather : Clear

File Name : 10260001
Site Code : 10260001
Start Date : 5/25/2023
Page No : 12



Accurate Counts

978-664-2565

N/S Street : Marine Hospital Road
E/W Street : Veranda Street
City/State : Portland, ME
Weather : Clear

File Name : 10260001
Site Code : 10260001
Start Date : 5/25/2023
Page No : 1

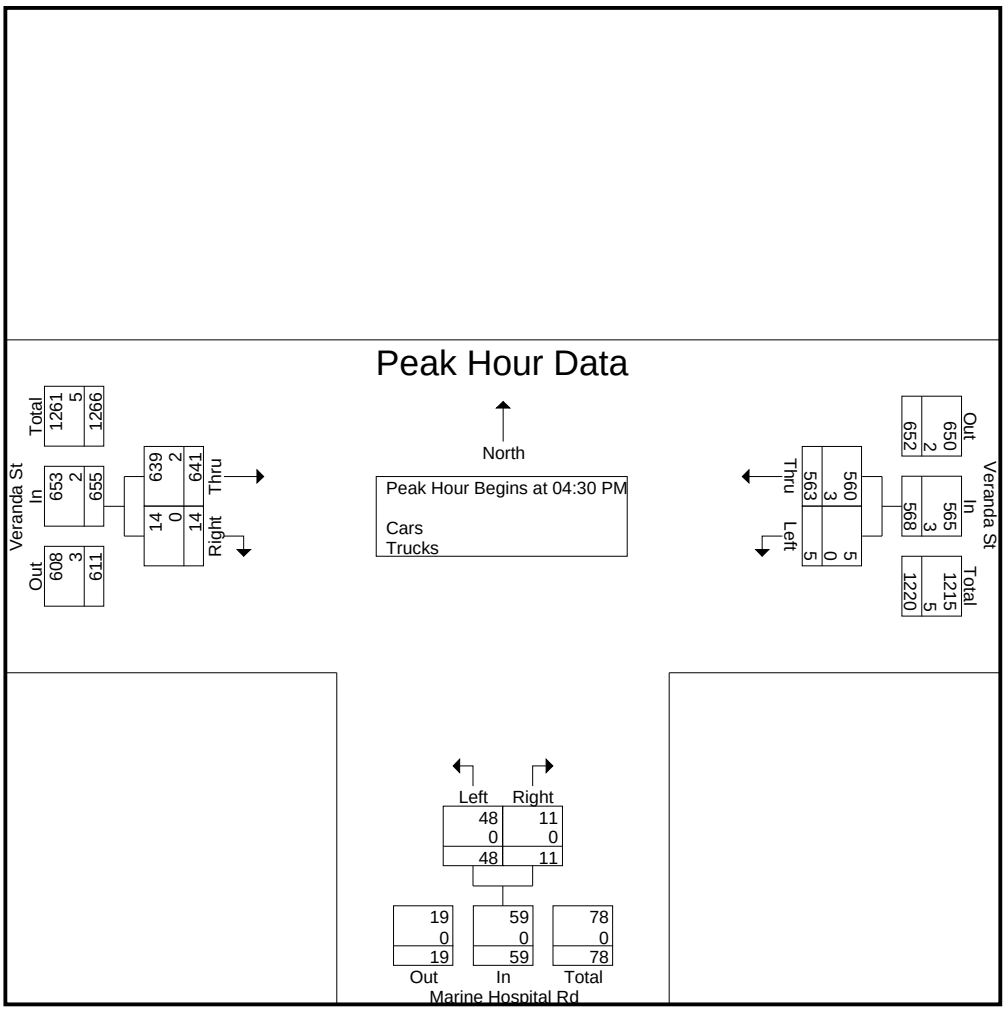
Groups Printed- Cars - Trucks

	Veranda St From East		Marine Hospital Rd From South		Veranda St From West		
Start Time	Left	Thru	Left	Right	Thru	Right	Int. Total
03:00 PM	3	156	1	2	139	15	316
03:15 PM	3	132	9	2	133	13	292
03:30 PM	0	146	12	4	147	11	320
03:45 PM	1	124	17	4	146	5	297
Total	7	558	39	12	565	44	1225
04:00 PM	0	143	23	11	138	5	320
04:15 PM	2	122	10	2	149	7	292
04:30 PM	1	155	17	3	168	2	346
04:45 PM	1	136	7	4	150	5	303
Total	4	556	57	20	605	19	1261
05:00 PM	1	143	7	3	175	3	332
05:15 PM	2	129	17	1	148	4	301
05:30 PM	1	117	6	3	146	2	275
05:45 PM	0	97	5	0	126	2	230
Total	4	486	35	7	595	11	1138
Grand Total	15	1600	131	39	1765	74	3624
Apprch %	0.9	99.1	77.1	22.9	96	4	
Total %	0.4	44.2	3.6	1.1	48.7	2	
Cars	15	1589	131	39	1761	74	3609
% Cars	100	99.3	100	100	99.8	100	99.6
Trucks	0	11	0	0	4	0	15
% Trucks	0	0.7	0	0	0.2	0	0.4

	Veranda St From East			Marine Hospital Rd From South			Veranda St From West			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:30 PM										
04:30 PM	1	**155**	**156**	**17**	3	**20**	168	2	170	**346**
04:45 PM	1	136	137	7	**4**	11	150	**5**	155	303
05:00 PM	1	143	144	7	3	10	**175**	3	**178**	332
05:15 PM	**2**	129	131	17	1	18	148	4	152	301
Total Volume	5	563	568	48	11	59	641	14	655	1282
% App. Total	0.9	99.1		81.4	18.6		97.9	2.1		
PHF	.625	.908	.910	.706	.688	.738	.916	.700	.920	.926
Cars	5	560	565	48	11	59	639	14	653	1277
% Cars	100	99.5	99.5	100	100	100	99.7	100	99.7	99.6
Trucks	0	3	3	0	0	0	2	0	2	5
% Trucks	0	0.5	0.5	0	0	0	0.3	0	0.3	0.4

N/S Street : Marine Hospital Road
E/W Street : Veranda Street
City/State : Portland, ME
Weather : Clear

File Name : 10260001
Site Code : 10260001
Start Date : 5/25/2023
Page No : 2

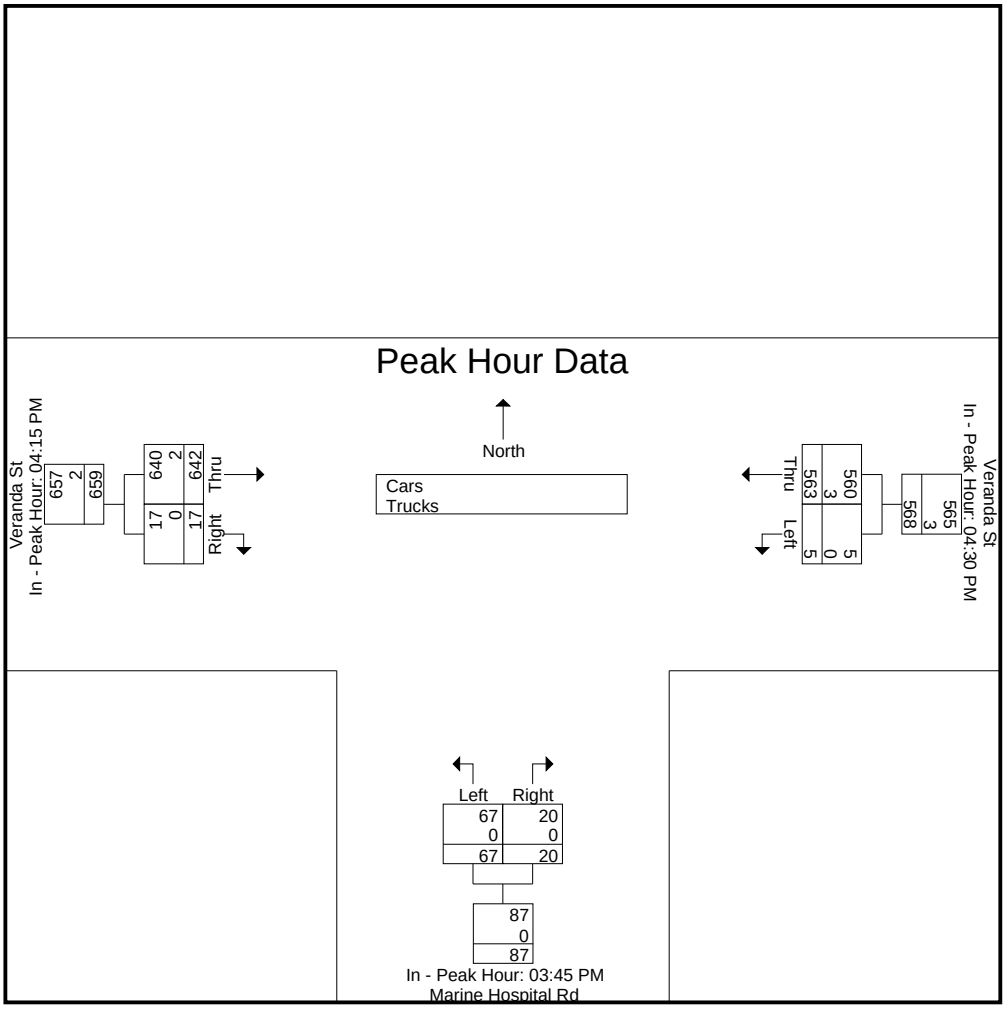


Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM			03:45 PM			04:15 PM		
+0 mins.	1	**155**	**156**	17	4	21	149	**7**	156
+15 mins.	1	136	137	**23**	**11**	**34**	168	2	170
+30 mins.	1	143	144	10	2	12	150	5	155
+45 mins.	**2**	129	131	17	3	20	**175**	3	**178**
Total Volume	5	563	568	67	20	87	642	17	659
% App. Total	0.9	99.1		77	23		97.4	2.6	
PHF	.625	.908	.910	.728	.455	.640	.917	.607	.926
Cars	5	560	565	67	20	87	640	17	657
% Cars	100	99.5	99.5	100	100	100	99.7	100	99.7
Trucks	0	3	3	0	0	0	2	0	2
% Trucks	0	0.5	0.5	0	0	0	0.3	0	0.3

N/S Street : Marine Hospital Road
E/W Street : Veranda Street
City/State : Portland, ME
Weather : Clear

File Name : 10260001
Site Code : 10260001
Start Date : 5/25/2023
Page No : 3



Accurate Counts

978-664-2565

N/S Street : Marine Hospital Road
E/W Street : Veranda Street
City/State : Portland, ME
Weather : Clear

File Name : 10260001
Site Code : 10260001
Start Date : 5/25/2023
Page No : 4

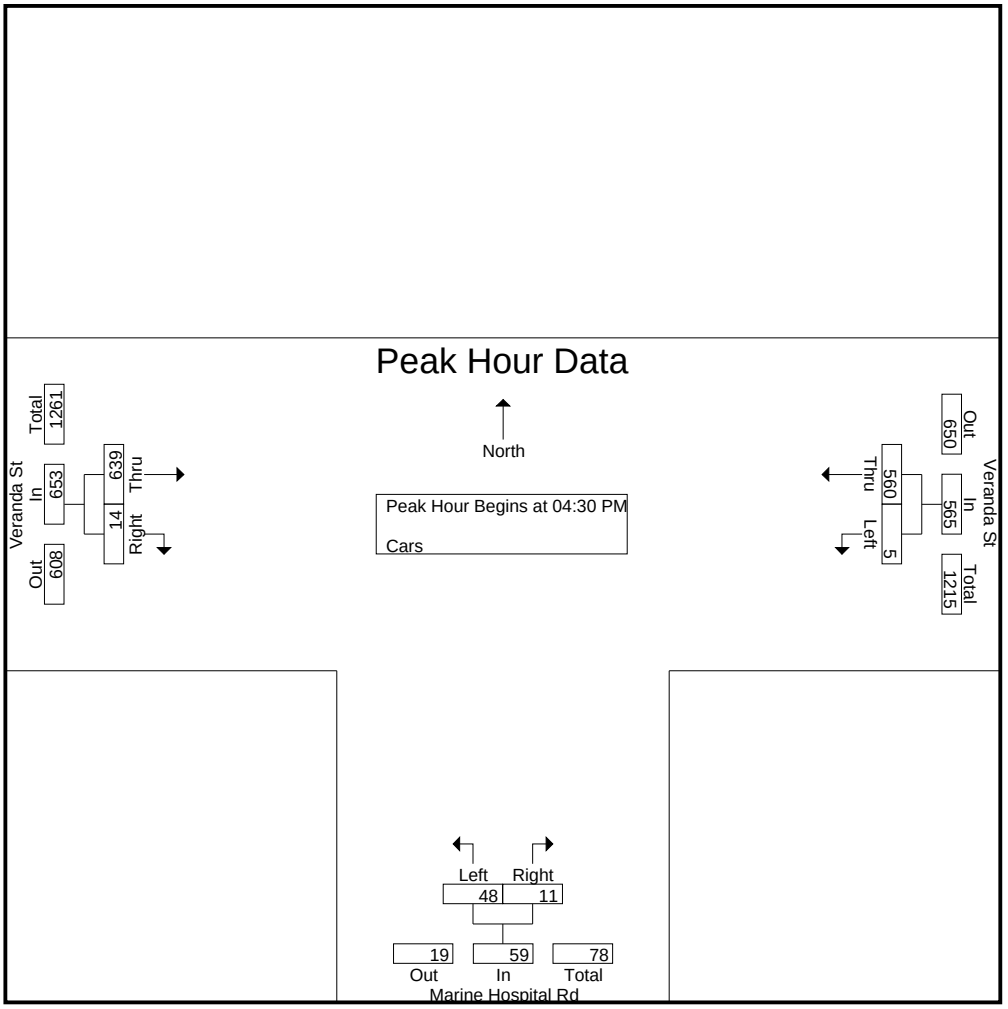
Groups Printed- Cars

	Veranda St From East		Marine Hospital Rd From South		Veranda St From West		
Start Time	Left	Thru	Left	Right	Thru	Right	Int. Total
03:00 PM	3	155	1	2	139	15	315
03:15 PM	3	129	9	2	133	13	289
03:30 PM	0	146	12	4	147	11	320
03:45 PM	1	123	17	4	145	5	295
Total	7	553	39	12	564	44	1219
04:00 PM	0	141	23	11	138	5	318
04:15 PM	2	121	10	2	149	7	291
04:30 PM	1	154	17	3	168	2	345
04:45 PM	1	136	7	4	148	5	301
Total	4	552	57	20	603	19	1255
05:00 PM	1	143	7	3	175	3	332
05:15 PM	2	127	17	1	148	4	299
05:30 PM	1	117	6	3	145	2	274
05:45 PM	0	97	5	0	126	2	230
Total	4	484	35	7	594	11	1135
Grand Total	15	1589	131	39	1761	74	3609
Apprch %	0.9	99.1	77.1	22.9	96	4	
Total %	0.4	44	3.6	1.1	48.8	2.1	

	Veranda St From East			Marine Hospital Rd From South			Veranda St From West			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:30 PM										
04:30 PM	1	**154**	**155**	**17**	3	**20**	168	2	170	**345**
04:45 PM	1	136	137	7	**4**	11	148	**5**	153	301
05:00 PM	1	143	144	7	3	10	**175**	3	**178**	332
05:15 PM	**2**	127	129	17	1	18	148	4	152	299
Total Volume	5	560	565	48	11	59	639	14	653	1277
% App. Total	0.9	99.1		81.4	18.6		97.9	2.1		
PHF	.625	.909	.911	.706	.688	.738	.913	.700	.917	.925

N/S Street : Marine Hospital Road
E/W Street : Veranda Street
City/State : Portland, ME
Weather : Clear

File Name : 10260001
Site Code : 10260001
Start Date : 5/25/2023
Page No : 5

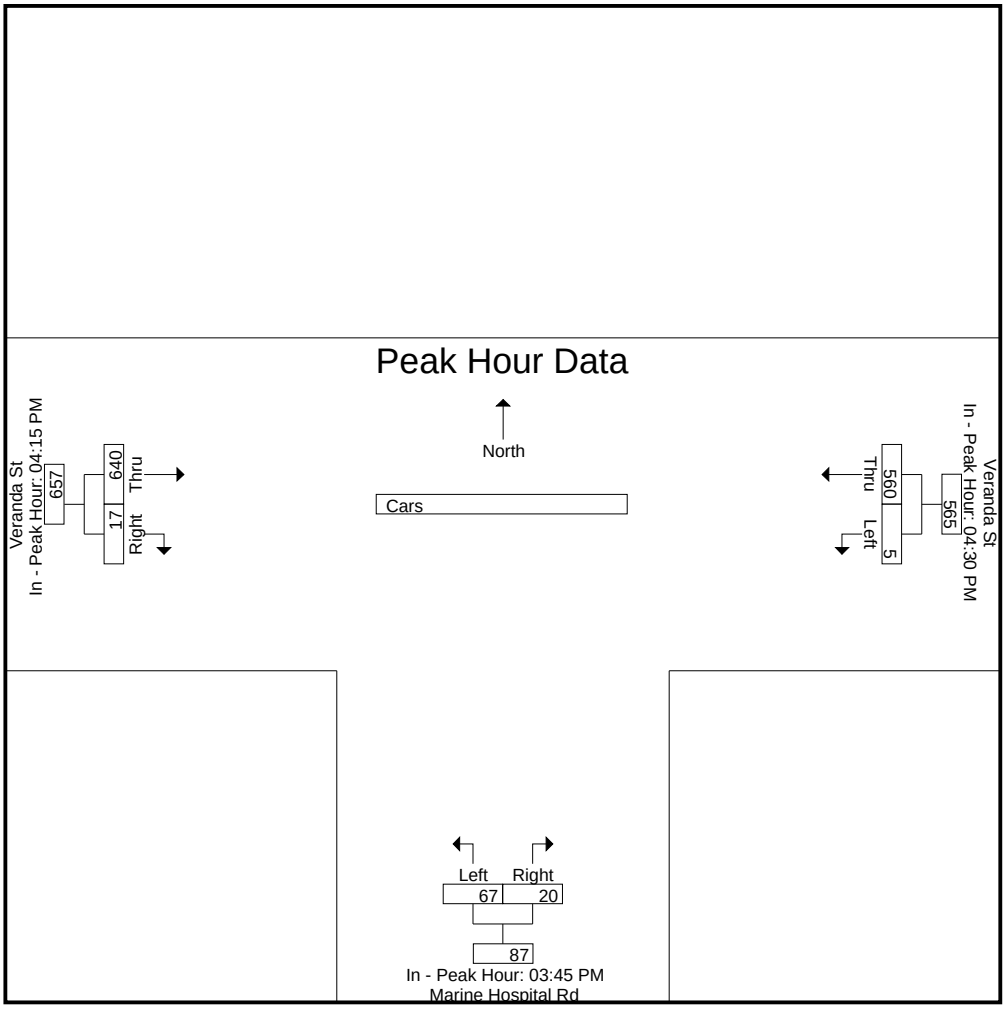


Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM			03:45 PM			04:15 PM		
+0 mins.	1	**154**	**155**	17	4	21	149	**7**	156
+15 mins.	1	136	137	**23**	**11**	**34**	168	2	170
+30 mins.	1	143	144	10	2	12	148	5	153
+45 mins.	**2**	127	129	17	3	20	**175**	3	**178**
Total Volume	5	560	565	67	20	87	640	17	657
% App. Total	0.9	99.1		77	23		97.4	2.6	
PHF	.625	.909	.911	.728	.455	.640	.914	.607	.923

N/S Street : Marine Hospital Road
E/W Street : Veranda Street
City/State : Portland, ME
Weather : Clear

File Name : 10260001
Site Code : 10260001
Start Date : 5/25/2023
Page No : 6



Accurate Counts

978-664-2565

N/S Street : Marine Hospital Road
E/W Street : Veranda Street
City/State : Portland, ME
Weather : Clear

File Name : 10260001
Site Code : 10260001
Start Date : 5/25/2023
Page No : 7

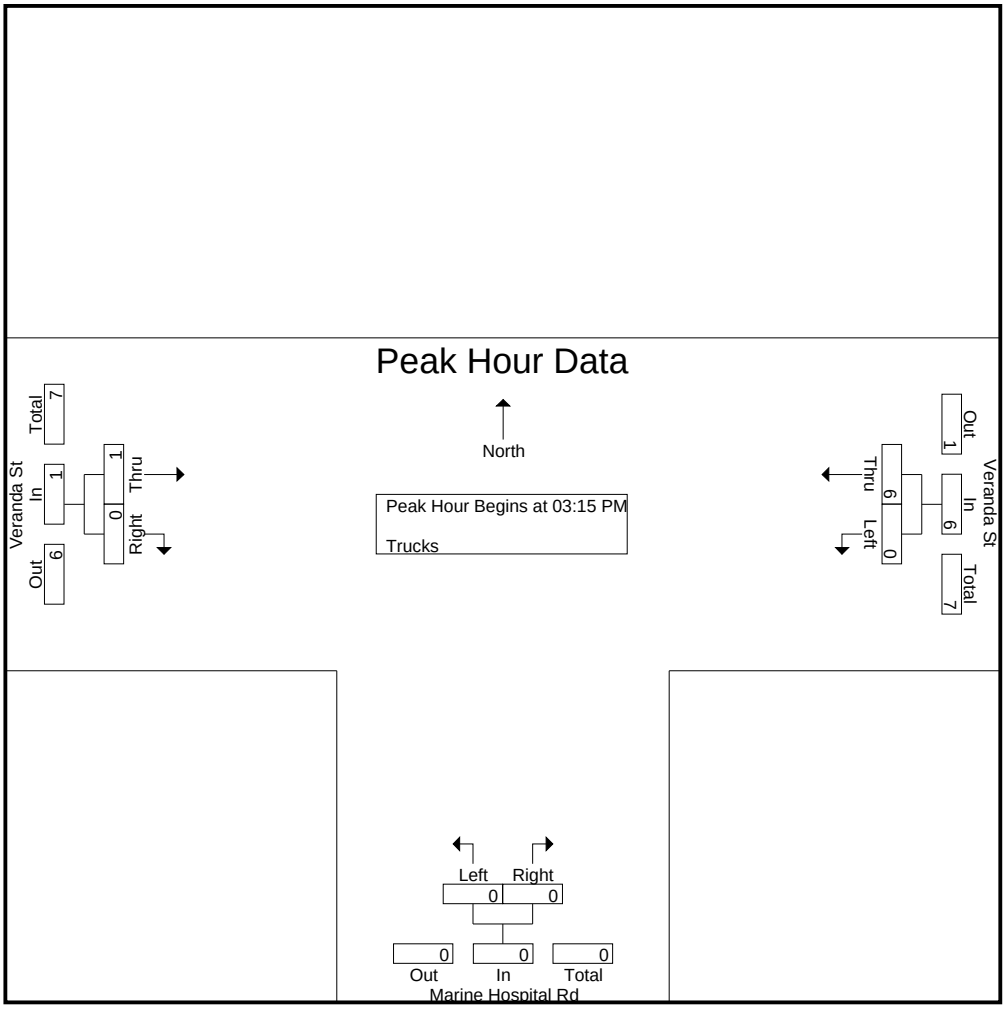
Groups Printed- Trucks

	Veranda St From East		Marine Hospital Rd From South		Veranda St From West		
Start Time	Left	Thru	Left	Right	Thru	Right	Int. Total
03:00 PM	0	1	0	0	0	0	1
03:15 PM	0	3	0	0	0	0	3
03:30 PM	0	0	0	0	0	0	0
03:45 PM	0	1	0	0	1	0	2
Total	0	5	0	0	1	0	6
04:00 PM	0	2	0	0	0	0	2
04:15 PM	0	1	0	0	0	0	1
04:30 PM	0	1	0	0	0	0	1
04:45 PM	0	0	0	0	2	0	2
Total	0	4	0	0	2	0	6
05:00 PM	0	0	0	0	0	0	0
05:15 PM	0	2	0	0	0	0	2
05:30 PM	0	0	0	0	1	0	1
05:45 PM	0	0	0	0	0	0	0
Total	0	2	0	0	1	0	3
Grand Total	0	11	0	0	4	0	15
Apprch %	0	100	0	0	100	0	
Total %	0	73.3	0	0	26.7	0	

	Veranda St From East			Marine Hospital Rd From South			Veranda St From West			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 03:15 PM										
03:15 PM	0	**3**	**3**	0	0	0	0	0	0	**3**
03:30 PM	0	0	0	0	0	0	0	0	0	0
03:45 PM	0	1	1	0	0	0	**1**	0	**1**	2
04:00 PM	0	2	2	0	0	0	0	0	0	2
Total Volume	0	6	6	0	0	0	1	0	1	7
% App. Total	0	100		0	0		100	0		
PHF	.000	.500	.500	.000	.000	.000	.250	.000	.250	.583

N/S Street : Marine Hospital Road
E/W Street : Veranda Street
City/State : Portland, ME
Weather : Clear

File Name : 10260001
Site Code : 10260001
Start Date : 5/25/2023
Page No : 8



Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	03:15 PM			03:00 PM			04:45 PM		
+0 mins.	0	**3**	**3**	0	0	0	**2**	0	**2**
+15 mins.	0	0	0	0	0	0	0	0	0
+30 mins.	0	1	1	0	0	0	0	0	0
+45 mins.	0	2	2	0	0	0	1	0	1
Total Volume	0	6	6	0	0	0	3	0	3
% App. Total	0	100		0	0		100	0	
PHF	.000	.500	.500	.000	.000	.000	.375	.000	.375

N/S Street : Marine Hospital Road
E/W Street : Veranda Street
City/State : Portland, ME
Weather : Clear

File Name : 10260001
Site Code : 10260001
Start Date : 5/25/2023
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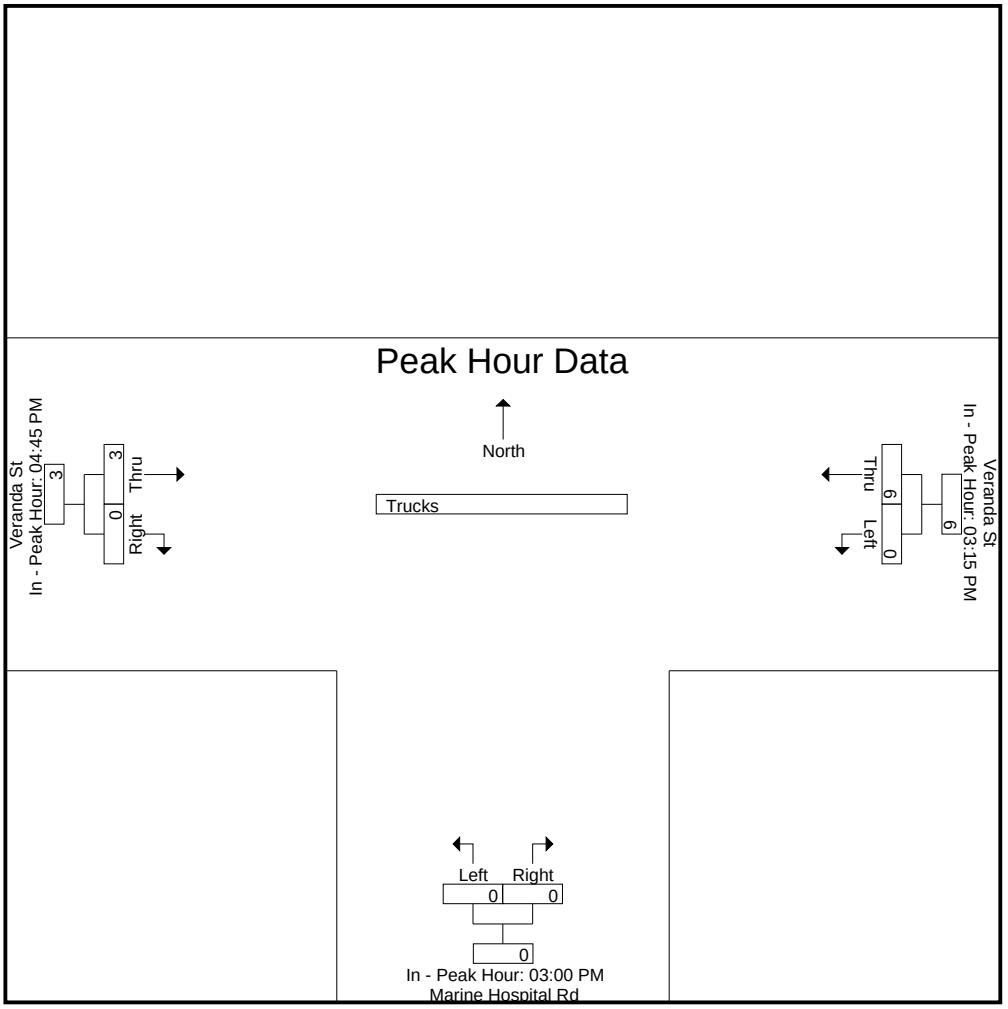


Accurate Counts

978-664-2565

N/S Street : Marine Hospital Road
E/W Street : Veranda Street
City/State : Portland, ME
Weather : Clear

File Name : 10260001
Site Code : 10260001
Start Date : 5/25/2023
Page No : 10

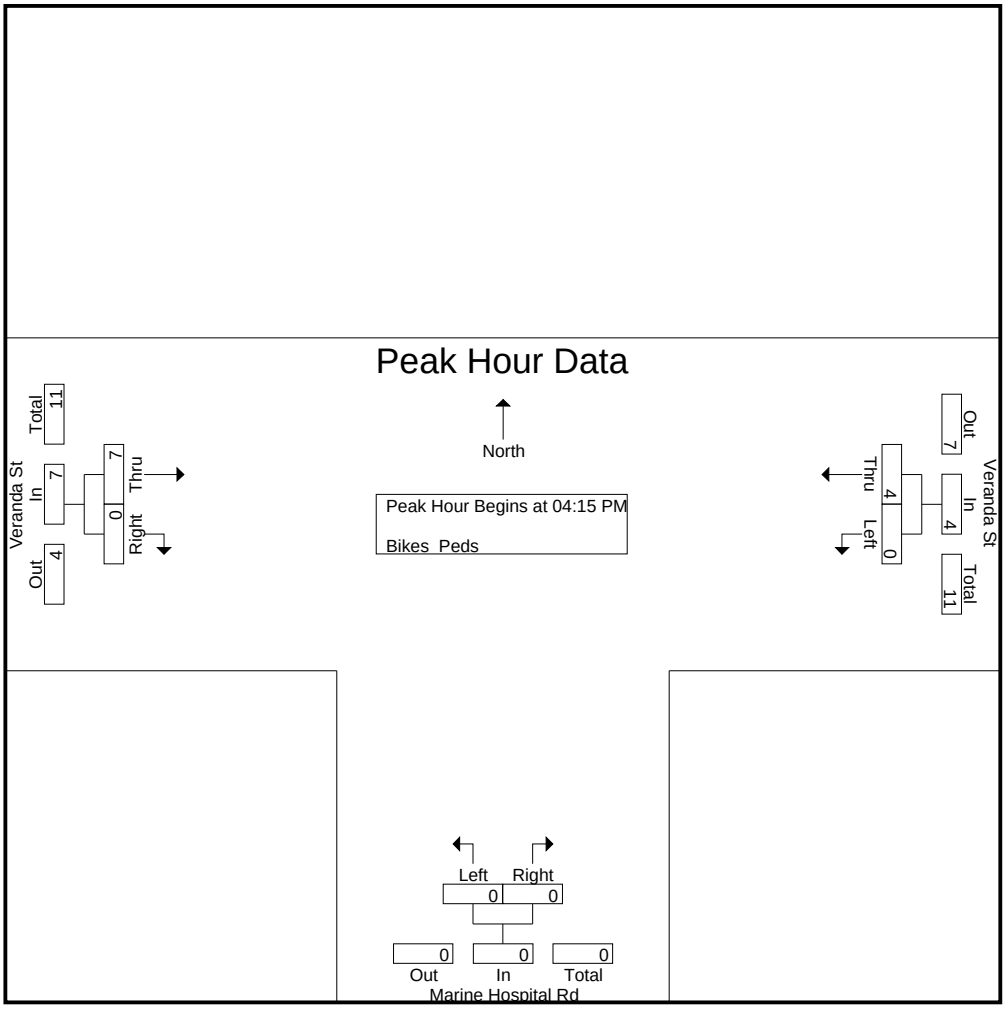
Groups Printed- Bikes Peds

	Veranda St From East			Marine Hospital Rd From South			Veranda St From West					
Start Time	Left	Thru	Peds	Left	Right	Peds	Thru	Right	Peds	Exclu. Total	Inclu. Total	Int. Total
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
03:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
03:30 PM	0	0	0	0	0	0	2	0	0	0	2	2
03:45 PM	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	2	0	0	0	2	2
04:00 PM	0	1	0	0	0	0	2	0	0	0	3	3
04:15 PM	0	2	0	0	0	0	1	0	1	1	3	4
04:30 PM	0	1	0	0	0	1	1	0	0	1	2	3
04:45 PM	0	0	0	0	0	2	1	0	0	2	1	3
Total	0	4	0	0	0	3	5	0	1	4	9	13
05:00 PM	0	1	0	0	0	0	4	0	0	0	5	5
05:15 PM	0	1	0	0	0	1	1	0	0	1	2	3
05:30 PM	0	1	0	0	0	0	0	0	0	0	1	1
05:45 PM	0	0	0	1	0	1	0	0	0	1	1	2
Total	0	3	0	1	0	2	5	0	0	2	9	11
Grand Total	0	7	0	1	0	5	12	0	1	6	20	26
Apprch %	0	100		100	0		100	0				
Total %	0	35		5	0		60	0		23.1	76.9	

	Veranda St From East			Marine Hospital Rd From South			Veranda St From West			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:15 PM										
04:15 PM	0	**2**	**2**	0	0	0	1	0	1	3
04:30 PM	0	1	1	0	0	0	1	0	1	2
04:45 PM	0	0	0	0	0	0	1	0	1	1
05:00 PM	0	1	1	0	0	0	**4**	0	**4**	**5**
Total Volume	0	4	4	0	0	0	7	0	7	11
% App. Total	0	100		0	0		100	0		
PHF	.000	.500	.500	.000	.000	.000	.438	.000	.438	.550

N/S Street : Marine Hospital Road
E/W Street : Veranda Street
City/State : Portland, ME
Weather : Clear

File Name : 10260001
Site Code : 10260001
Start Date : 5/25/2023
Page No : 11

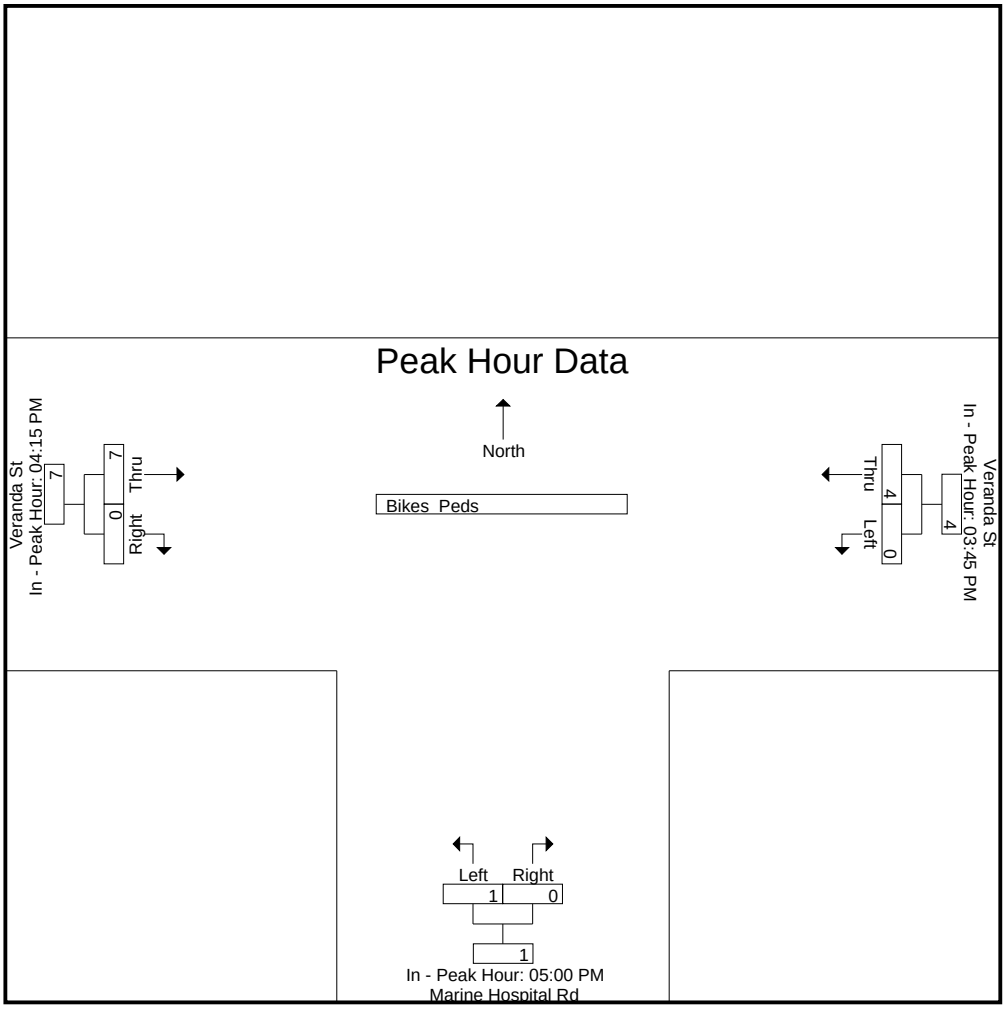


Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	03:45 PM			05:00 PM			04:15 PM		
+0 mins.	0	0	0	0	0	0	1	0	1
+15 mins.	0	1	1	0	0	0	1	0	1
+30 mins.	0	**2**	**2**	0	0	0	1	0	1
+45 mins.	0	1	1	**1**	0	**1**	**4**	0	**4**
Total Volume	0	4	4	1	0	1	7	0	7
% App. Total	0	100		100	0		100	0	
PHF	.000	.500	.500	.250	.000	.250	.438	.000	.438

N/S Street : Marine Hospital Road
E/W Street : Veranda Street
City/State : Portland, ME
Weather : Clear

File Name : 10260001
Site Code : 10260001
Start Date : 5/25/2023
Page No : 12



Accurate Counts

978-664-2565

N/S Street : Driveway / Route 295 NB Off Ramp
E/W Street : Veranda Street
City/State : Portland, ME
Weather : Clear

File Name : 10260002
Site Code : 10260002
Start Date : 5/25/2023
Page No : 1

Groups Printed- Cars - Trucks

	Driveway From North			Veranda St From East			Route 295 NB Off Ramp From South			Veranda St From West			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
07:00 AM	0	0	1	0	58	2	0	0	51	0	13	0	125
07:15 AM	0	0	0	0	107	0	2	0	79	0	8	0	196
07:30 AM	0	0	0	0	117	0	0	0	86	0	15	0	218
07:45 AM	0	0	0	0	144	1	0	3	115	3	22	0	288
Total	0	0	1	0	426	3	2	3	331	3	58	0	827
08:00 AM	1	0	0	0	146	0	1	1	107	0	23	0	279
08:15 AM	0	0	1	0	128	1	0	1	108	1	21	0	261
08:30 AM	1	0	1	0	160	0	1	4	103	0	19	0	289
08:45 AM	0	0	2	0	136	4	1	2	104	0	36	0	285
Total	2	0	4	0	570	5	3	8	422	1	99	0	1114
Grand Total	2	0	5	0	996	8	5	11	753	4	157	0	1941
Apprch %	28.6	0	71.4	0	99.2	0.8	0.7	1.4	97.9	2.5	97.5	0	
Total %	0.1	0	0.3	0	51.3	0.4	0.3	0.6	38.8	0.2	8.1	0	
Cars	2	0	5	0	986	8	5	11	740	4	148	0	1909
% Cars	100	0	100	0	99	100	100	100	98.3	100	94.3	0	98.4
Trucks	0	0	0	0	10	0	0	0	13	0	9	0	32
% Trucks	0	0	0	0	1	0	0	0	1.7	0	5.7	0	1.6

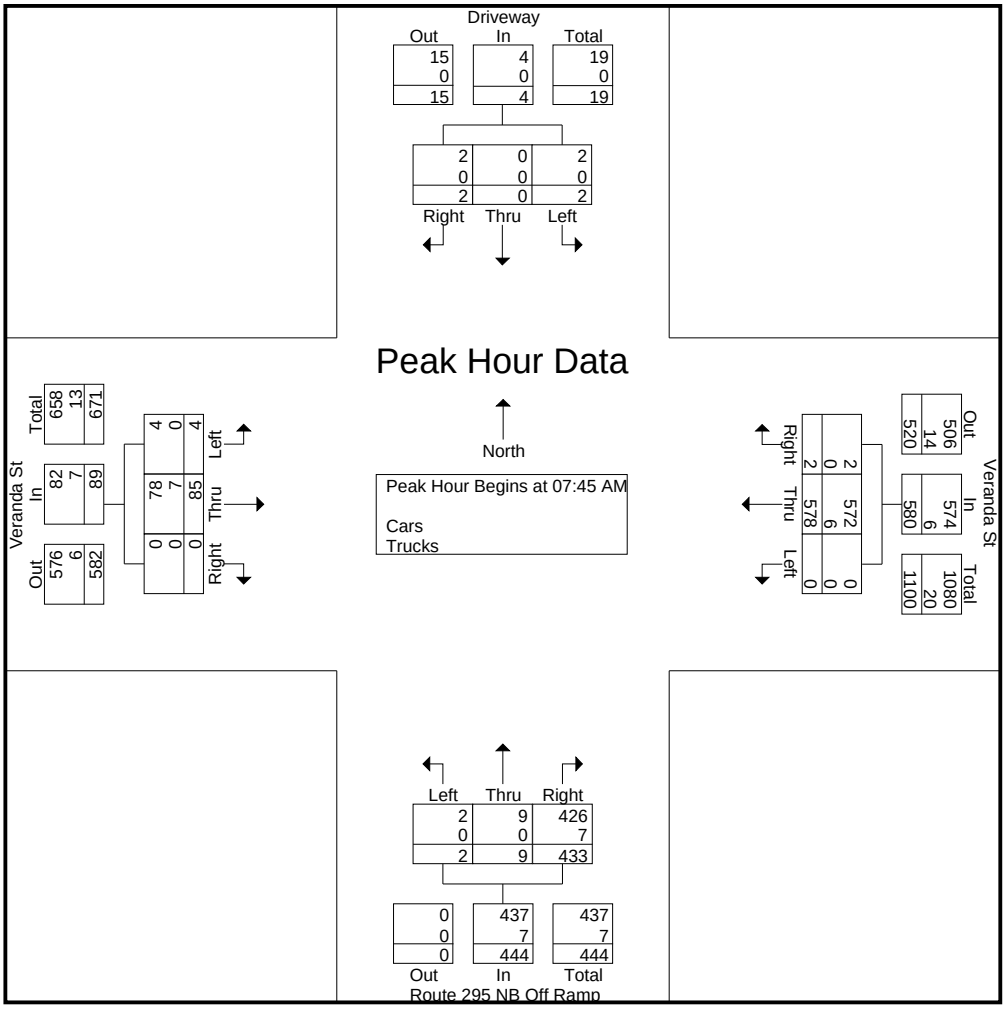
	Driveway From North				Veranda St From East				Route 295 NB Off Ramp From South				Veranda St From West				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	0	0	0	0	0	144	**1**	145	0	3	**115**	**118**	**3**	22	0	**25**	288
08:00 AM	**1**	0	0	1	0	146	0	146	**1**	1	107	109	0	**23**	0	23	279
08:15 AM	0	0	**1**	1	0	128	1	129	0	1	108	109	1	21	0	22	261
08:30 AM	1	0	1	**2**	0	**160**	0	**160**	1	**4**	103	108	0	19	0	19	**289**
Total Volume	2	0	2	4	0	578	2	580	2	9	433	444	4	85	0	89	1117
% App. Total	50	0	50		0	99.7	0.3		0.5	2	97.5		4.5	95.5	0		
PHF	.500	.000	.500	.500	.000	.903	.500	.906	.500	.563	.941	.941	.333	.924	.000	.890	.966
Cars	2	0	2	4	0	572	2	574	2	9	426	437	4	78	0	82	1097
% Cars	100	0	100	100	0	99.0	100	99.0	100	100	98.4	98.4	100	91.8	0	92.1	98.2
Trucks	0	0	0	0	0	6	0	6	0	0	7	7	0	7	0	7	20
% Trucks	0	0	0	0	0	1.0	0	1.0	0	0	1.6	1.6	0	8.2	0	7.9	1.8

Accurate Counts

978-664-2565

N/S Street : Driveway / Route 295 NB Off Ramp
E/W Street : Veranda Street
City/State : Portland, ME
Weather : Clear

File Name : 10260002
Site Code : 10260002
Start Date : 5/25/2023
Page No : 2



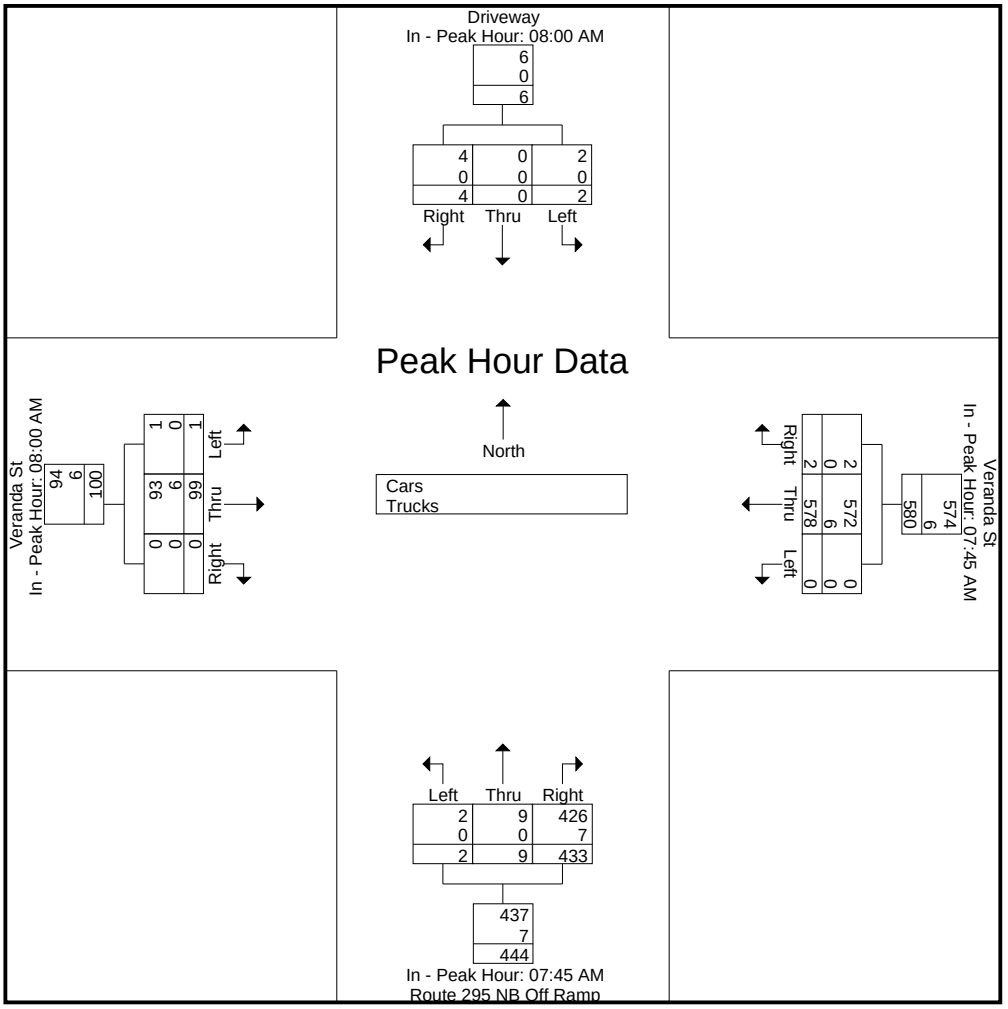
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	08:00 AM				07:45 AM				07:45 AM				08:00 AM			
+0 mins.	**1**	0	0	1	0	144	**1**	145	0	3	**115**	**118**	0	23	0	23
+15 mins.	0	0	1	1	0	146	0	146	**1**	1	107	109	**1**	21	0	22
+30 mins.	1	0	1	**2**	0	128	1	129	0	1	108	109	0	19	0	19
+45 mins.	0	0	**2**	2	0	**160**	0	**160**	1	**4**	103	108	0	**36**	0	**36**
Total Volume	2	0	4	6	0	578	2	580	2	9	433	444	1	99	0	100
% App. Total	33.3	0	66.7		0	99.7	0.3		0.5	2	97.5		1	99	0	
PHF	.500	.000	.500	.750	.000	.903	.500	.906	.500	.563	.941	.941	.250	.688	.000	.694
Cars	2	0	4	6	0	572	2	574	2	9	426	437	1	93	0	94
% Cars	100	0	100	100	0	99	100	99	100	100	98.4	98.4	100	93.9	0	94
Trucks	0	0	0	0	0	6	0	6	0	0	7	7	0	6	0	6
% Trucks	0	0	0	0	0	1	0	1	0	0	1.6	1.6	0	6.1	0	6

N/S Street : Driveway / Route 295 NB Off Ramp
E/W Street : Veranda Street
City/State : Portland, ME
Weather : Clear

File Name : 10260002
Site Code : 10260002
Start Date : 5/25/2023
Page No : 3



Accurate Counts

978-664-2565

N/S Street : Driveway / Route 295 NB Off Ramp
E/W Street : Veranda Street
City/State : Portland, ME
Weather : Clear

File Name : 10260002
Site Code : 10260002
Start Date : 5/25/2023
Page No : 4

Groups Printed- Cars

	Driveway From North			Veranda St From East			Route 295 NB Off Ramp From South			Veranda St From West			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
07:00 AM	0	0	1	0	57	2	0	0	50	0	12	0	122
07:15 AM	0	0	0	0	107	0	2	0	76	0	8	0	193
07:30 AM	0	0	0	0	116	0	0	0	85	0	14	0	215
07:45 AM	0	0	0	0	143	1	0	3	114	3	21	0	285
Total	0	0	1	0	423	3	2	3	325	3	55	0	815
08:00 AM	1	0	0	0	144	0	1	1	105	0	22	0	274
08:15 AM	0	0	1	0	127	1	0	1	107	1	18	0	256
08:30 AM	1	0	1	0	158	0	1	4	100	0	17	0	282
08:45 AM	0	0	2	0	134	4	1	2	103	0	36	0	282
Total	2	0	4	0	563	5	3	8	415	1	93	0	1094
Grand Total	2	0	5	0	986	8	5	11	740	4	148	0	1909
Apprch %	28.6	0	71.4	0	99.2	0.8	0.7	1.5	97.9	2.6	97.4	0	
Total %	0.1	0	0.3	0	51.7	0.4	0.3	0.6	38.8	0.2	7.8	0	

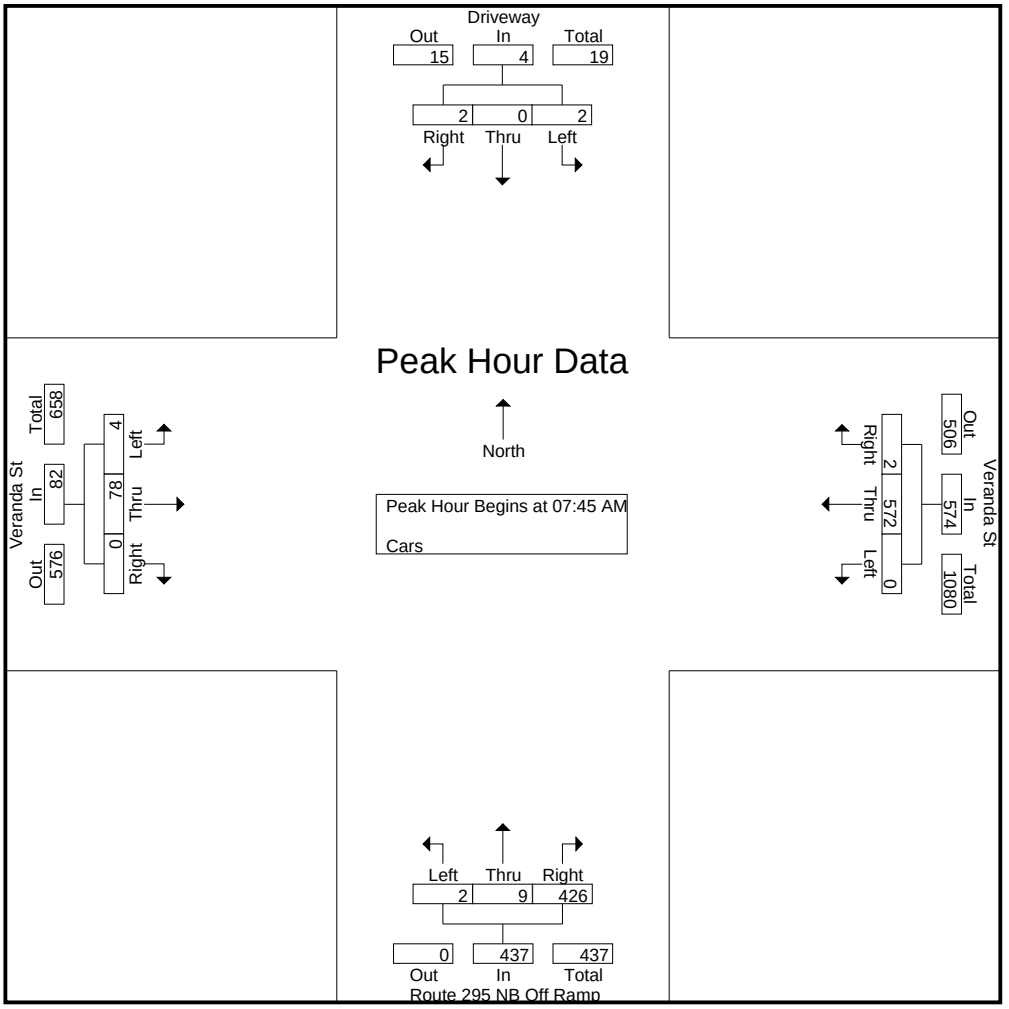
	Driveway From North				Veranda St From East				Route 295 NB Off Ramp From South				Veranda St From West				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	0	0	0	0	0	143	**1**	144	0	3	**114**	**117**	**3**	21	0	**24**	**285**
08:00 AM	**1**	0	0	1	0	144	0	144	**1**	1	105	107	0	**22**	0	22	274
08:15 AM	0	0	**1**	1	0	127	1	128	0	1	107	108	1	18	0	19	256
08:30 AM	1	0	1	**2**	0	**158**	0	**158**	1	**4**	100	105	0	17	0	17	282
Total Volume	2	0	2	4	0	572	2	574	2	9	426	437	4	78	0	82	1097
% App. Total	50	0	50		0	99.7	0.3		0.5	2.1	97.5		4.9	95.1	0		
PHF	.500	.000	.500	.500	.000	.905	.500	.908	.500	.563	.934	.934	.333	.886	.000	.854	.962

Accurate Counts

978-664-2565

N/S Street : Driveway / Route 295 NB Off Ramp
E/W Street : Veranda Street
City/State : Portland, ME
Weather : Clear

File Name : 10260002
Site Code : 10260002
Start Date : 5/25/2023
Page No : 5



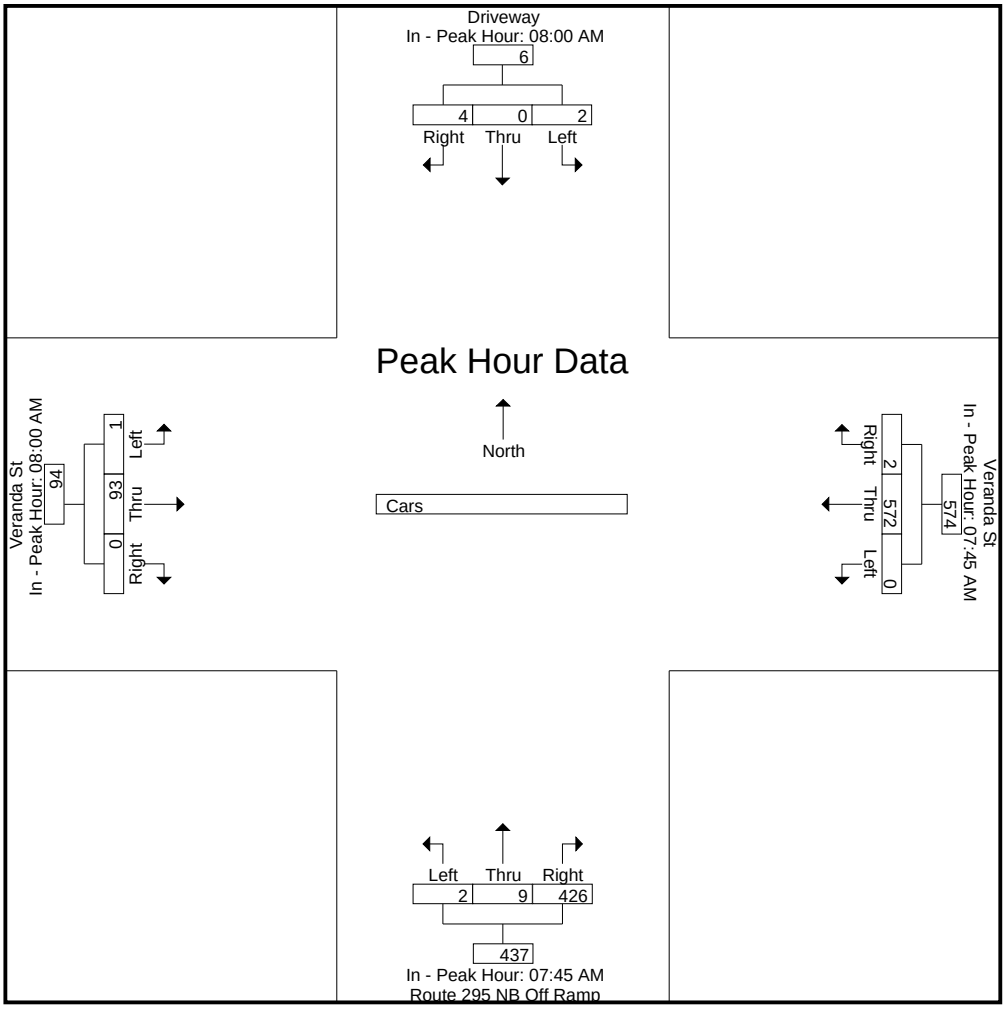
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	08:00 AM				07:45 AM				07:45 AM				08:00 AM			
+0 mins.	**1**	0	0	1	0	143	**1**	144	0	3	**114**	**117**	0	22	0	22
+15 mins.	0	0	1	1	0	144	0	144	**1**	1	105	107	**1**	18	0	19
+30 mins.	1	0	1	**2**	0	127	1	128	0	1	107	108	0	17	0	17
+45 mins.	0	0	**2**	2	0	**158**	0	**158**	1	**4**	100	105	0	**36**	0	**36**
Total Volume	2	0	4	6	0	572	2	574	2	9	426	437	1	93	0	94
% App. Total	33.3	0	66.7		0	99.7	0.3		0.5	2.1	97.5		1.1	98.9	0	
PHF	.500	.000	.500	.750	.000	.905	.500	.908	.500	.563	.934	.934	.250	.646	.000	.653

N/S Street : Driveway / Route 295 NB Off Ramp
E/W Street : Veranda Street
City/State : Portland, ME
Weather : Clear

File Name : 10260002
Site Code : 10260002
Start Date : 5/25/2023
Page No : 6



Accurate Counts

978-664-2565

N/S Street : Driveway / Route 295 NB Off Ramp
E/W Street : Veranda Street
City/State : Portland, ME
Weather : Clear

File Name : 10260002
Site Code : 10260002
Start Date : 5/25/2023
Page No : 7

Groups Printed- Trucks

	Driveway From North			Veranda St From East			Route 295 NB Off Ramp From South			Veranda St From West			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
07:00 AM	0	0	0	0	1	0	0	0	1	0	1	0	3
07:15 AM	0	0	0	0	0	0	0	0	3	0	0	0	3
07:30 AM	0	0	0	0	1	0	0	0	1	0	1	0	3
07:45 AM	0	0	0	0	1	0	0	0	1	0	1	0	3
Total	0	0	0	0	3	0	0	0	6	0	3	0	12
08:00 AM	0	0	0	0	2	0	0	0	2	0	1	0	5
08:15 AM	0	0	0	0	1	0	0	0	1	0	3	0	5
08:30 AM	0	0	0	0	2	0	0	0	3	0	2	0	7
08:45 AM	0	0	0	0	2	0	0	0	1	0	0	0	3
Total	0	0	0	0	7	0	0	0	7	0	6	0	20
Grand Total	0	0	0	0	10	0	0	0	13	0	9	0	32
Apprch %	0	0	0	0	100	0	0	0	100	0	100	0	
Total %	0	0	0	0	31.2	0	0	0	40.6	0	28.1	0	

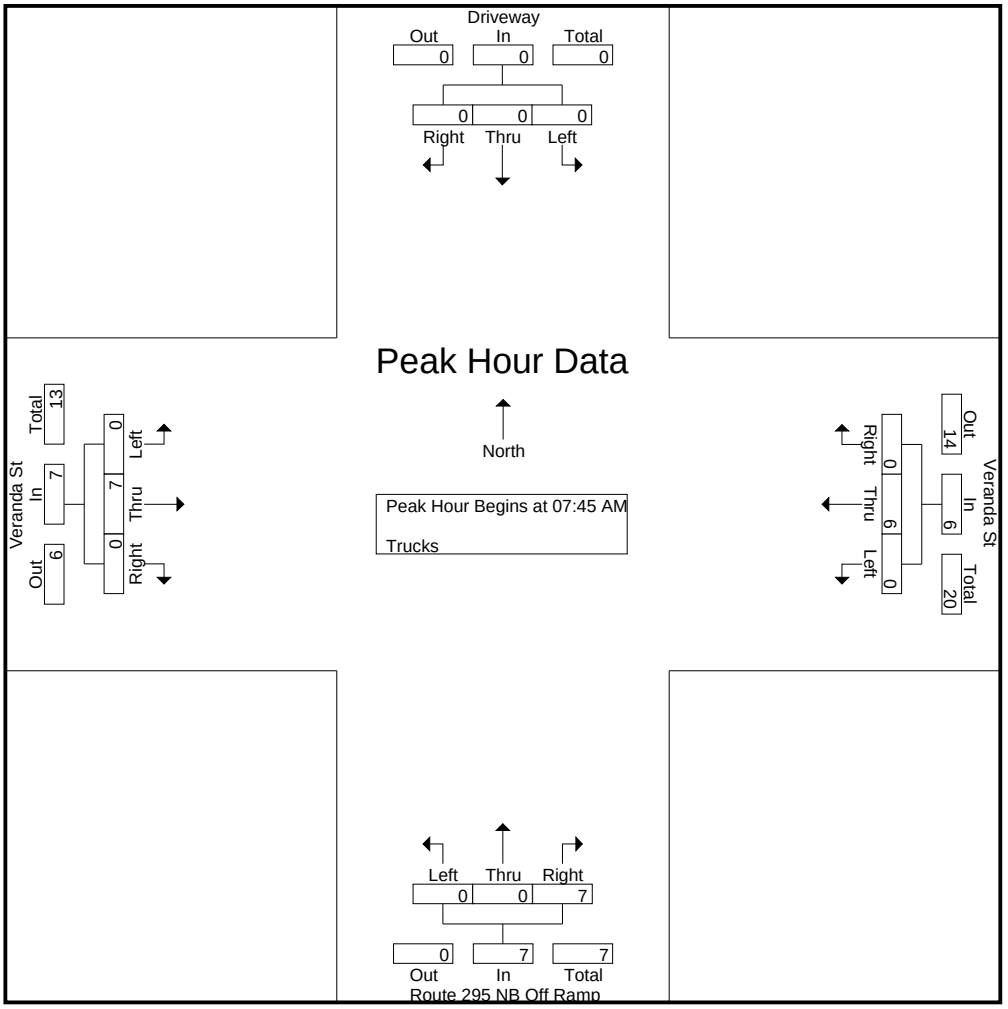
	Driveway From North				Veranda St From East				Route 295 NB Off Ramp From South				Veranda St From West				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	0	0	0	0	0	1	0	1	0	0	1	1	0	1	0	1	3
08:00 AM	0	0	0	0	0	**2**	0	**2**	0	0	2	2	0	1	0	1	5
08:15 AM	0	0	0	0	0	1	0	1	0	0	1	1	0	**3**	0	**3**	5
08:30 AM	0	0	0	0	0	2	0	2	0	0	**3**	**3**	0	2	0	2	**7**
Total Volume	0	0	0	0	0	6	0	6	0	0	7	7	0	7	0	7	20
% App. Total	0	0	0		0	100	0		0	0	100		0	100	0		
PHF	.000	.000	.000	.000	.000	.750	.000	.750	.000	.000	.583	.583	.000	.583	.000	.583	.714

Accurate Counts

978-664-2565

N/S Street : Driveway / Route 295 NB Off Ramp
E/W Street : Veranda Street
City/State : Portland, ME
Weather : Clear

File Name : 10260002
Site Code : 10260002
Start Date : 5/25/2023
Page No : 8



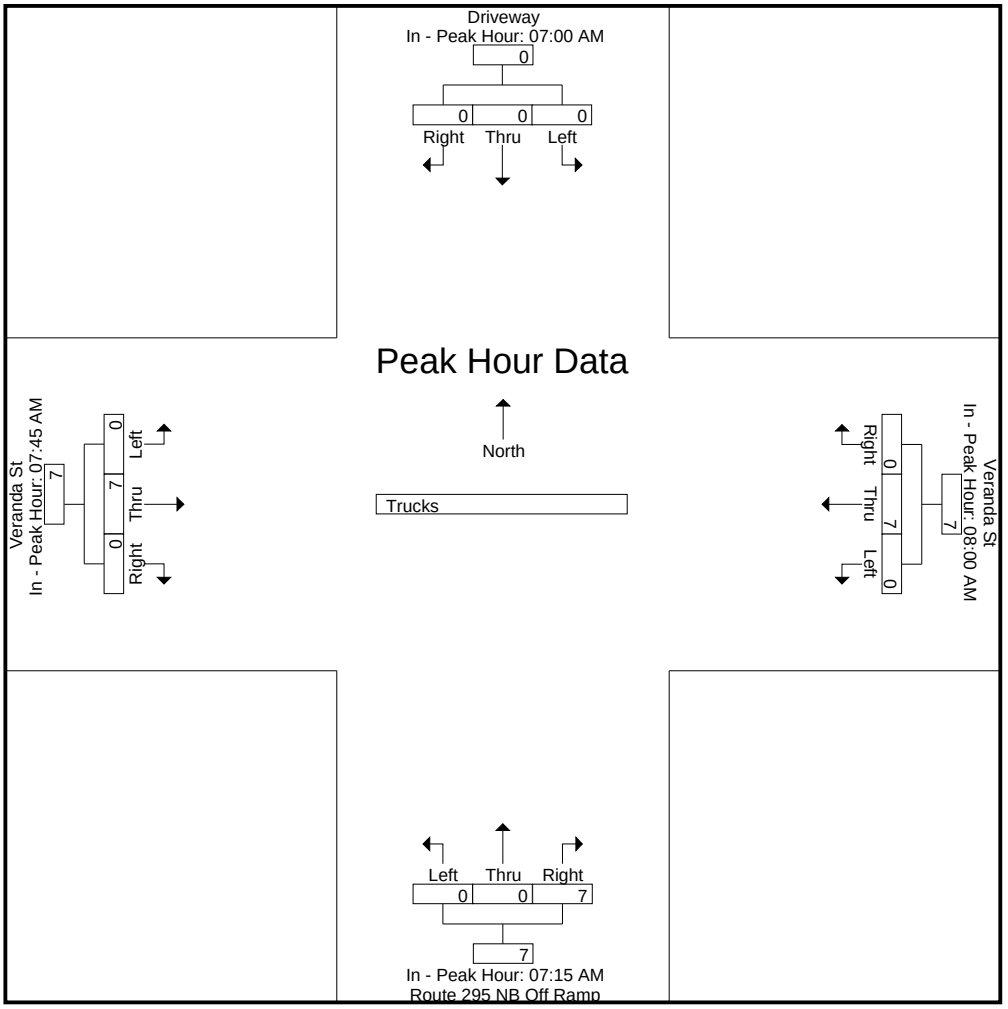
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	07:00 AM				08:00 AM				07:15 AM				07:45 AM			
+0 mins.	0	0	0	0	0	**2**	0	**2**	0	0	**3**	**3**	0	1	0	1
+15 mins.	0	0	0	0	0	1	0	1	0	0	1	1	0	1	0	1
+30 mins.	0	0	0	0	0	2	0	2	0	0	1	1	0	**3**	0	**3**
+45 mins.	0	0	0	0	0	2	0	2	0	0	2	2	0	2	0	2
Total Volume	0	0	0	0	0	7	0	7	0	0	7	7	0	7	0	7
% App. Total	0	0	0		0	100	0		0	0	100		0	100	0	
PHF	.000	.000	.000	.000	.000	.875	.000	.875	.000	.000	.583	.583	.000	.583	.000	.583

N/S Street : Driveway / Route 295 NB Off Ramp
E/W Street : Veranda Street
City/State : Portland, ME
Weather : Clear

File Name : 10260002
Site Code : 10260002
Start Date : 5/25/2023
Page No : 9



Accurate Counts

978-664-2565

N/S Street : Driveway / Route 295 NB Off Ramp
E/W Street : Veranda Street
City/State : Portland, ME
Weather : Clear

File Name : 10260002
Site Code : 10260002
Start Date : 5/25/2023

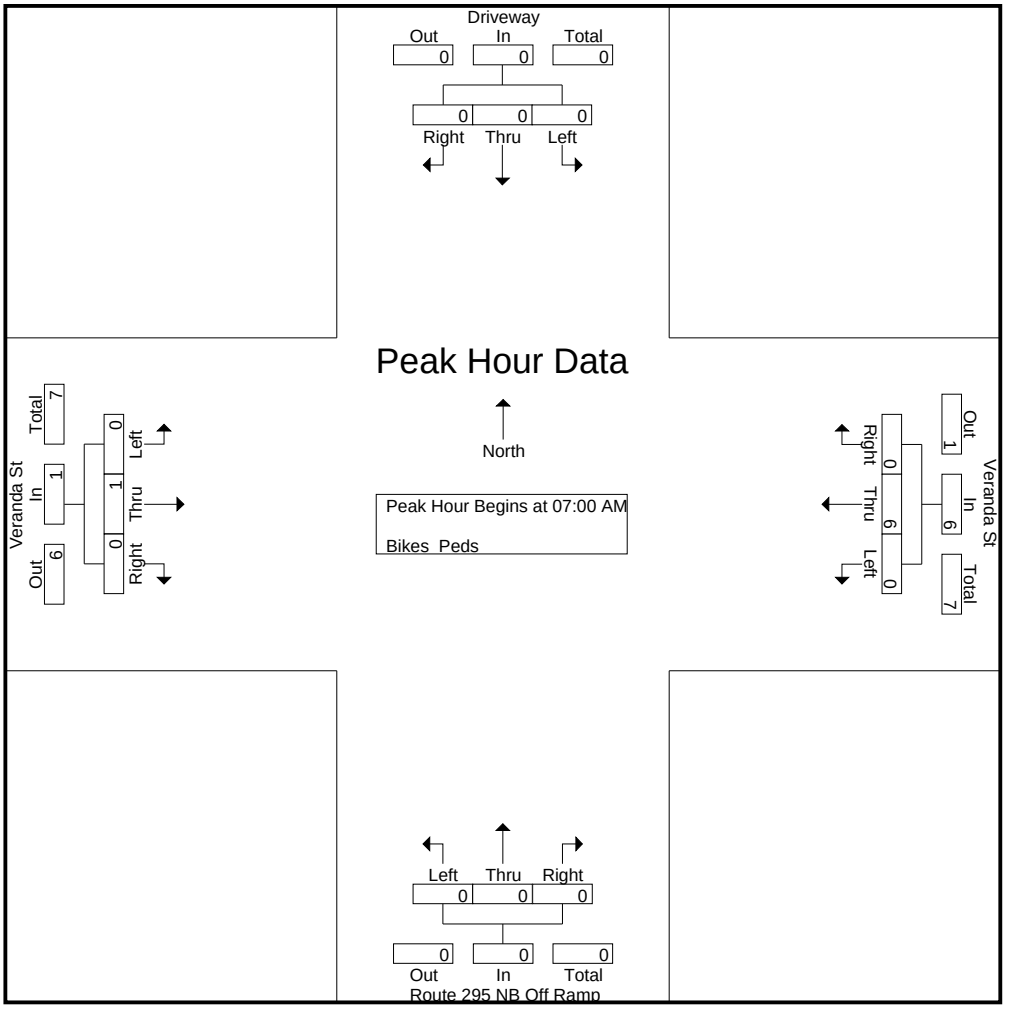
Groups Printed- Bikes Peds

	Driveway From North				Veranda St From East				Route 295 NB Off Ramp From South				Veranda St From West						
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1
07:15 AM	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	2	2
07:30 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	2	2
07:45 AM	0	0	0	2	0	2	0	1	0	0	0	1	0	0	0	0	4	2	6
Total	0	0	0	2	0	6	0	1	0	0	0	1	0	1	0	0	4	7	11
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	1
08:15 AM	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1	1	2
08:30 AM	0	0	0	3	0	1	0	0	0	0	0	4	0	2	0	0	7	3	10
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	1
Total	0	0	0	4	0	2	0	0	0	0	0	6	0	2	0	0	10	4	14
Grand Total	0	0	0	6	0	8	0	1	0	0	0	7	0	3	0	0	14	11	25
Apprch %	0	0	0		0	100	0		0	0	0		0	100	0				
Total %	0	0	0		0	72.7	0		0	0	0		0	27.3	0		56	44	

	Driveway From North				Veranda St From East				Route 295 NB Off Ramp From South				Veranda St From West				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
07:15 AM	0	0	0	0	0	**2**	0	**2**	0	0	0	0	0	0	0	0	**2**
07:30 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	**1**	0	**1**	2
07:45 AM	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	2
Total Volume	0	0	0	0	0	6	0	6	0	0	0	0	0	1	0	1	7
% App. Total	0	0	0		0	100	0		0	0	0		0	100	0		
PHF	.000	.000	.000	.000	.000	.750	.000	.750	.000	.000	.000	.000	.000	.250	.000	.250	.875

N/S Street : Driveway / Route 295 NB Off Ramp
E/W Street : Veranda Street
City/State : Portland, ME
Weather : Clear

File Name : 10260002
Site Code : 10260002
Start Date : 5/25/2023
Page No : 11



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:00 AM				07:45 AM			
+0 mins.	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	**2**	0	**2**	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	2	0	2	0	0	0	0	0	**2**	0	**2**
Total Volume	0	0	0	0	0	6	0	6	0	0	0	0	0	2	0	2
% App. Total	0	0	0		0	100	0		0	0	0		0	100	0	
PHF	.000	.000	.000	.000	.000	.750	.000	.750	.000	.000	.000	.000	.000	.250	.000	.250

N/S Street : Driveway / Route 295 NB Off Ramp
E/W Street : Veranda Street
City/State : Portland, ME
Weather : Clear

File Name : 10260002
Site Code : 10260002
Start Date : 5/25/2023
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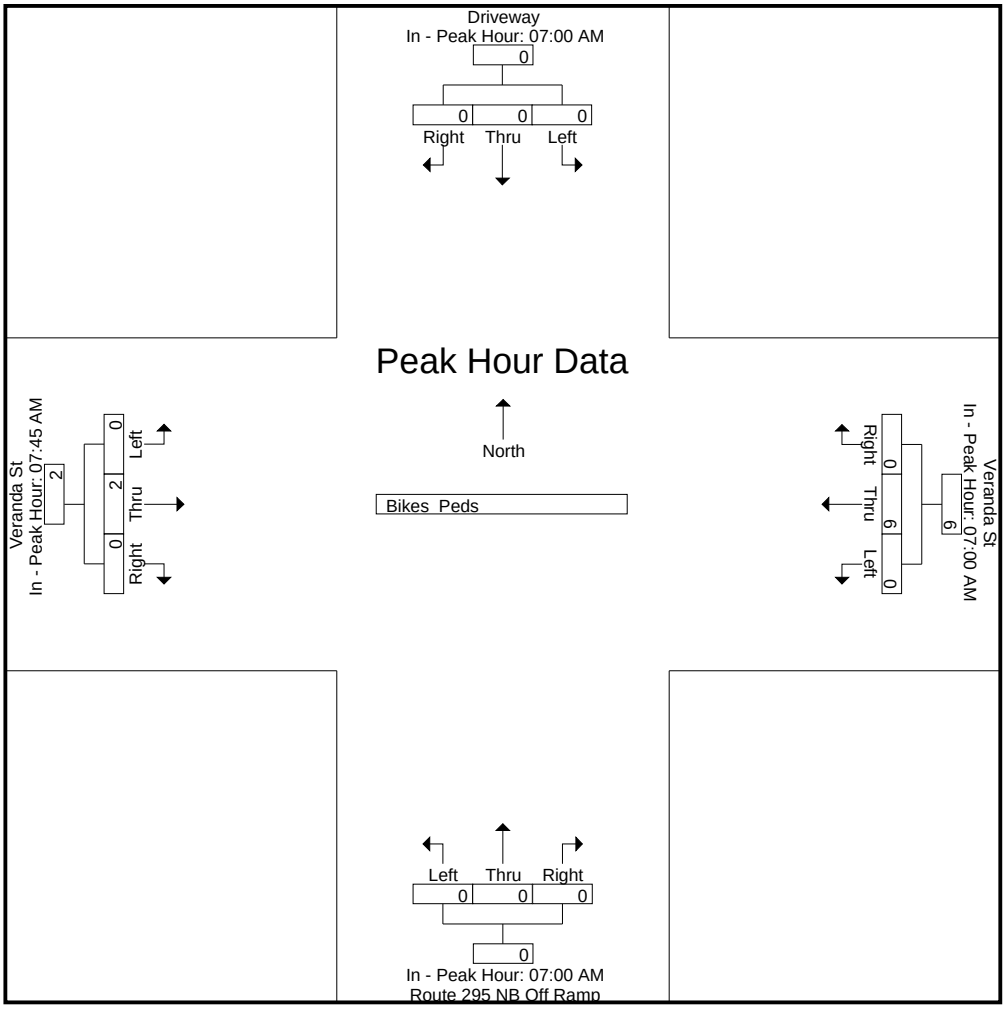


Accurate Counts

978-664-2565

N/S Street : Driveway / Route 295 NB Off Ramp
E/W Street : Veranda Street
City/State : Portland, ME
Weather : Clear

File Name : 10260002
Site Code : 10260002
Start Date : 5/25/2023
Page No : 1

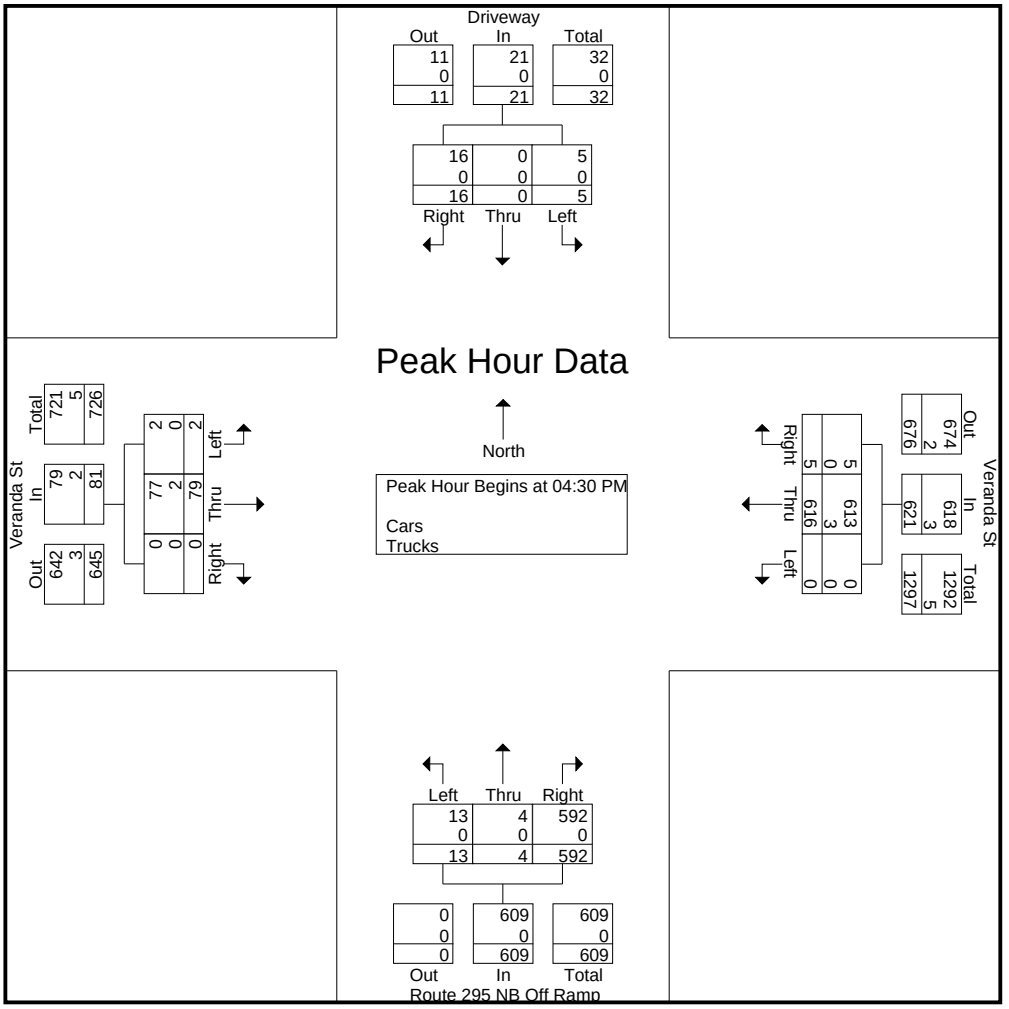
Groups Printed- Cars - Trucks

	Driveway From North			Veranda St From East			Route 295 NB Off Ramp From South			Veranda St From West			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
03:00 PM	1	0	2	0	162	0	2	0	133	4	24	0	328
03:15 PM	0	0	4	0	142	0	2	3	123	2	28	0	304
03:30 PM	2	0	6	0	167	0	7	0	139	2	19	0	342
03:45 PM	0	0	2	0	143	0	4	1	123	0	29	0	302
Total	3	0	14	0	614	0	15	4	518	8	100	0	1276
04:00 PM	1	0	4	0	169	1	1	1	128	1	19	0	325
04:15 PM	4	0	2	0	125	1	4	2	143	3	19	0	303
04:30 PM	1	0	3	0	174	1	2	2	148	0	18	0	349
04:45 PM	2	0	4	0	142	1	5	2	140	1	20	0	317
Total	8	0	13	0	610	4	12	7	559	5	76	0	1294
05:00 PM	2	0	6	0	150	2	2	0	167	1	21	0	351
05:15 PM	0	0	3	0	150	1	4	0	137	0	20	0	315
05:30 PM	1	0	3	0	128	1	6	1	132	0	17	0	289
05:45 PM	0	0	1	0	105	0	6	0	112	0	13	0	237
Total	3	0	13	0	533	4	18	1	548	1	71	0	1192
Grand Total	14	0	40	0	1757	8	45	12	1625	14	247	0	3762
Apprch %	25.9	0	74.1	0	99.5	0.5	2.7	0.7	96.6	5.4	94.6	0	
Total %	0.4	0	1.1	0	46.7	0.2	1.2	0.3	43.2	0.4	6.6	0	
Cars	14	0	39	0	1745	8	45	11	1625	14	243	0	3744
% Cars	100	0	97.5	0	99.3	100	100	91.7	100	100	98.4	0	99.5
Trucks	0	0	1	0	12	0	0	1	0	0	4	0	18
% Trucks	0	0	2.5	0	0.7	0	0	8.3	0	0	1.6	0	0.5

	Driveway From North				Veranda St From East				Route 295 NB Off Ramp From South				Veranda St From West				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	1	0	3	4	0	**174**	1	**175**	2	**2**	148	152	0	18	0	18	349
04:45 PM	**2**	0	4	6	0	142	1	143	**5**	2	140	147	**1**	20	0	21	317
05:00 PM	2	0	**6**	**8**	0	150	**2**	152	2	0	**167**	**169**	1	**21**	0	**22**	**351**
05:15 PM	0	0	3	3	0	150	1	151	4	0	137	141	0	20	0	20	315
Total Volume	5	0	16	21	0	616	5	621	13	4	592	609	2	79	0	81	1332
% App. Total	23.8	0	76.2		0	99.2	0.8		2.1	0.7	97.2		2.5	97.5	0		
PHF	.625	.000	.667	.656	.000	.885	.625	.887	.650	.500	.886	.901	.500	.940	.000	.920	.949
Cars	5	0	16	21	0	613	5	618	13	4	592	609	2	77	0	79	1327
% Cars	100	0	100	100	0	99.5	100	99.5	100	100	100	100	100	97.5	0	97.5	99.6
Trucks	0	0	0	0	0	3	0	3	0	0	0	0	0	2	0	2	5
% Trucks	0	0	0	0	0	0.5	0	0.5	0	0	0	0	0	2.5	0	2.5	0.4

N/S Street : Driveway / Route 295 NB Off Ramp
E/W Street : Veranda Street
City/State : Portland, ME
Weather : Clear

File Name : 10260002
Site Code : 10260002
Start Date : 5/25/2023
Page No : 2

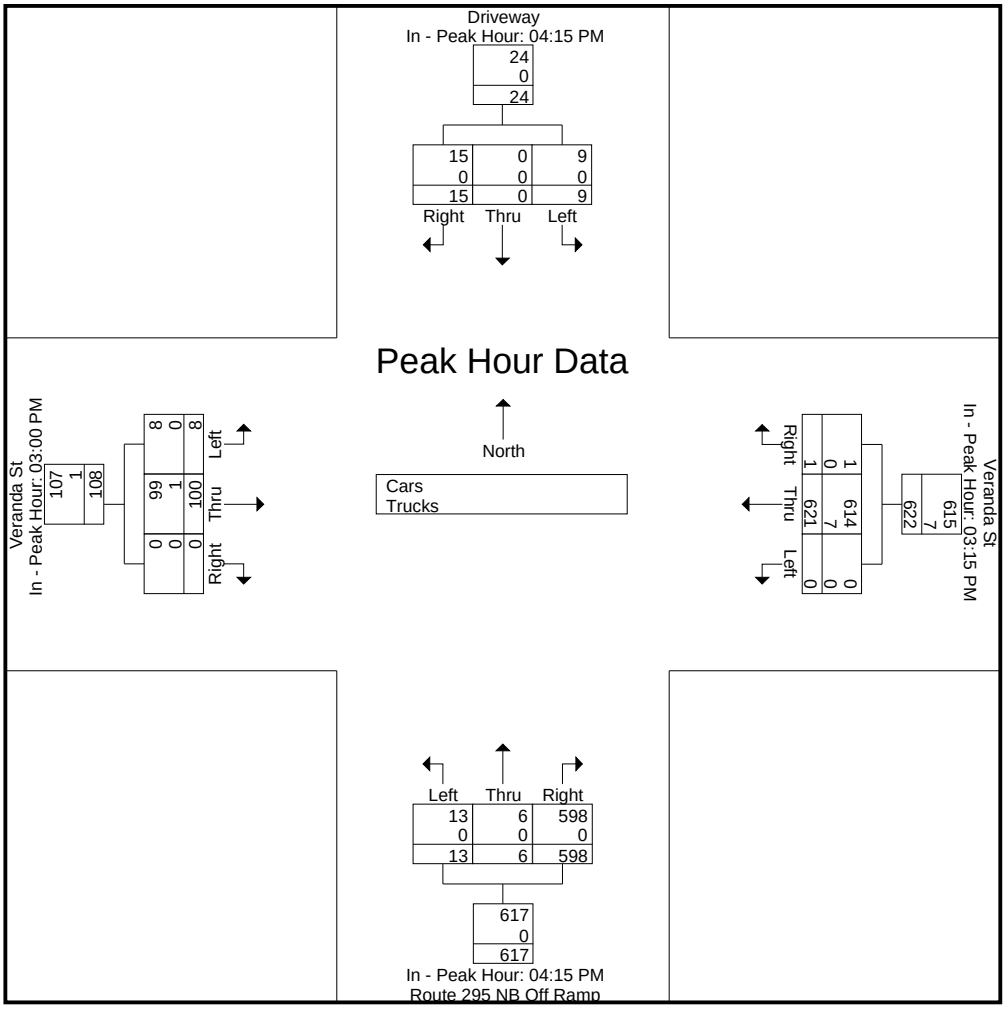


Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:15 PM				03:15 PM				04:15 PM				03:00 PM			
+0 mins.	**4**	0	2	6	0	142	0	142	4	**2**	143	149	**4**	24	0	28
+15 mins.	1	0	3	4	0	167	0	167	2	2	148	152	2	28	0	**30**
+30 mins.	2	0	4	6	0	143	0	143	**5**	2	140	147	2	19	0	21
+45 mins.	2	0	**6**	**8**	0	**169**	**1**	**170**	2	0	**167**	**169**	0	**29**	0	29
Total Volume	9	0	15	24	0	621	1	622	13	6	598	617	8	100	0	108
% App. Total	37.5	0	62.5		0	99.8	0.2		2.1	1	96.9		7.4	92.6	0	
PHF	.563	.000	.625	.750	.000	.919	.250	.915	.650	.750	.895	.913	.500	.862	.000	.900
Cars	9	0	15	24	0	614	1	615	13	6	598	617	8	99	0	107
% Cars	100	0	100	100	0	98.9	100	98.9	100	100	100	100	100	99	0	99.1
Trucks	0	0	0	0	0	7	0	7	0	0	0	0	0	1	0	1
% Trucks	0	0	0	0	0	1.1	0	1.1	0	0	0	0	0	1	0	0.9

N/S Street : Driveway / Route 295 NB Off Ramp
E/W Street : Veranda Street
City/State : Portland, ME
Weather : Clear

File Name : 10260002
Site Code : 10260002
Start Date : 5/25/2023
Page No : 3



Accurate Counts

978-664-2565

N/S Street : Driveway / Route 295 NB Off Ramp
E/W Street : Veranda Street
City/State : Portland, ME
Weather : Clear

File Name : 10260002
Site Code : 10260002
Start Date : 5/25/2023
Page No : 4

Groups Printed- Cars

	Driveway From North			Veranda St From East			Route 295 NB Off Ramp From South			Veranda St From West			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
03:00 PM	1	0	2	0	161	0	2	0	133	4	24	0	327
03:15 PM	0	0	4	0	139	0	2	2	123	2	28	0	300
03:30 PM	2	0	5	0	167	0	7	0	139	2	19	0	341
03:45 PM	0	0	2	0	142	0	4	1	123	0	28	0	300
Total	3	0	13	0	609	0	15	3	518	8	99	0	1268
04:00 PM	1	0	4	0	166	1	1	1	128	1	19	0	322
04:15 PM	4	0	2	0	124	1	4	2	143	3	19	0	302
04:30 PM	1	0	3	0	173	1	2	2	148	0	17	0	347
04:45 PM	2	0	4	0	142	1	5	2	140	1	19	0	316
Total	8	0	13	0	605	4	12	7	559	5	74	0	1287
05:00 PM	2	0	6	0	150	2	2	0	167	1	21	0	351
05:15 PM	0	0	3	0	148	1	4	0	137	0	20	0	313
05:30 PM	1	0	3	0	128	1	6	1	132	0	16	0	288
05:45 PM	0	0	1	0	105	0	6	0	112	0	13	0	237
Total	3	0	13	0	531	4	18	1	548	1	70	0	1189
Grand Total	14	0	39	0	1745	8	45	11	1625	14	243	0	3744
Apprch %	26.4	0	73.6	0	99.5	0.5	2.7	0.7	96.7	5.4	94.6	0	
Total %	0.4	0	1	0	46.6	0.2	1.2	0.3	43.4	0.4	6.5	0	

	Driveway From North				Veranda St From East				Route 295 NB Off Ramp From South				Veranda St From West				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	1	0	3	4	0	**173**	1	**174**	2	**2**	148	152	0	17	0	17	347
04:45 PM	**2**	0	4	6	0	142	1	143	**5**	2	140	147	**1**	19	0	20	316
05:00 PM	2	0	**6**	**8**	0	150	**2**	152	2	0	**167**	**169**	1	**21**	0	**22**	**351**
05:15 PM	0	0	3	3	0	148	1	149	4	0	137	141	0	20	0	20	313
Total Volume	5	0	16	21	0	613	5	618	13	4	592	609	2	77	0	79	1327
% App. Total	23.8	0	76.2		0	99.2	0.8		2.1	0.7	97.2		2.5	97.5	0		
PHF	.625	.000	.667	.656	.000	.886	.625	.888	.650	.500	.886	.901	.500	.917	.000	.898	.945

Accurate Counts

978-664-2565

N/S Street : Driveway / Route 295 NB Off Ramp
E/W Street : Veranda Street
City/State : Portland, ME
Weather : Clear

File Name : 10260002
Site Code : 10260002
Start Date : 5/25/2023
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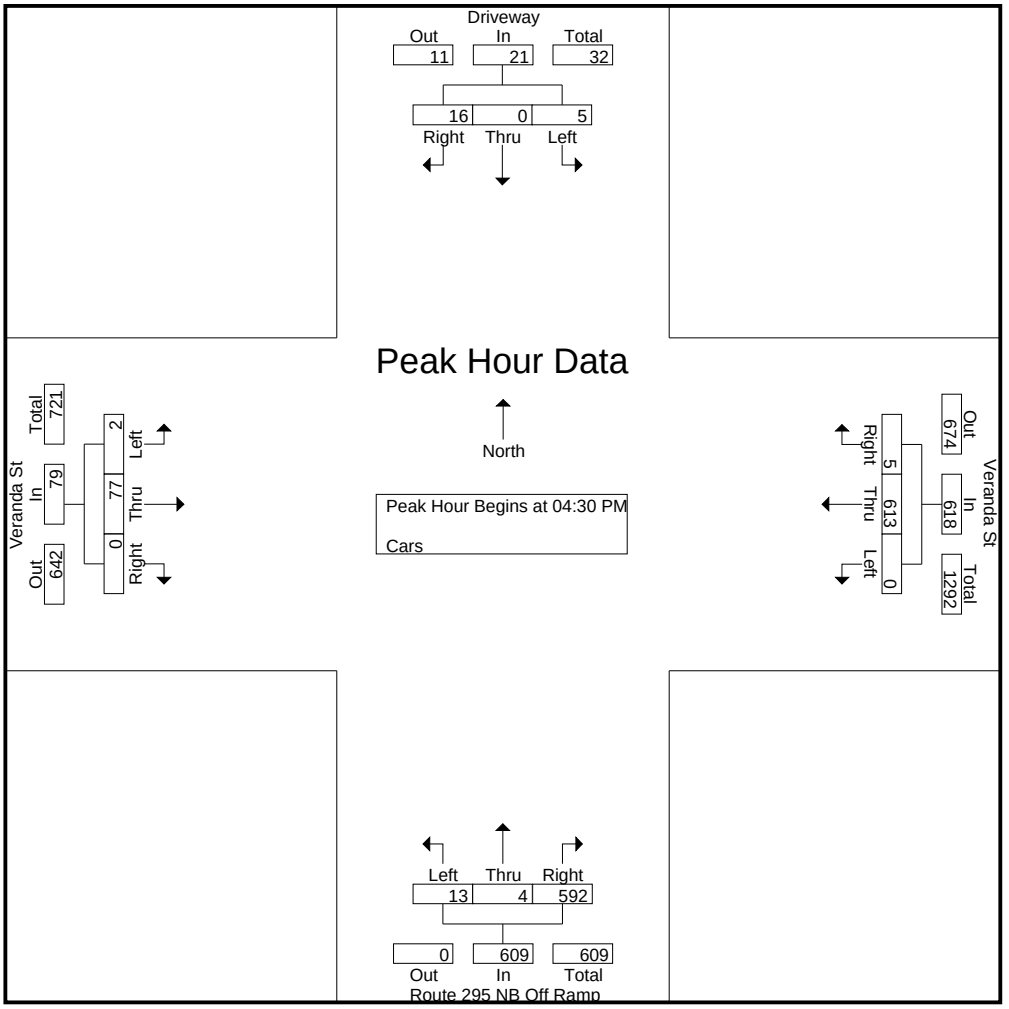

Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	04:15 PM				04:30 PM				04:15 PM				03:00 PM			
+0 mins.	**4**	0	2	6	0	**173**	1	**174**	4	**2**	143	149	**4**	24	0	28
+15 mins.	1	0	3	4	0	142	1	143	2	2	148	152	2	**28**	0	**30**
+30 mins.	2	0	4	6	0	150	**2**	152	**5**	2	140	147	2	19	0	21
+45 mins.	2	0	**6**	**8**	0	148	1	149	2	0	**167**	**169**	0	28	0	28
Total Volume	9	0	15	24	0	613	5	618	13	6	598	617	8	99	0	107
% App. Total	37.5	0	62.5		0	99.2	0.8		2.1	1	96.9		7.5	92.5	0	
PHF	.563	.000	.625	.750	.000	.886	.625	.888	.650	.750	.895	.913	.500	.884	.000	.892

N/S Street : Driveway / Route 295 NB Off Ramp
E/W Street : Veranda Street
City/State : Portland, ME
Weather : Clear

File Name : 10260002
Site Code : 10260002
Start Date : 5/25/2023
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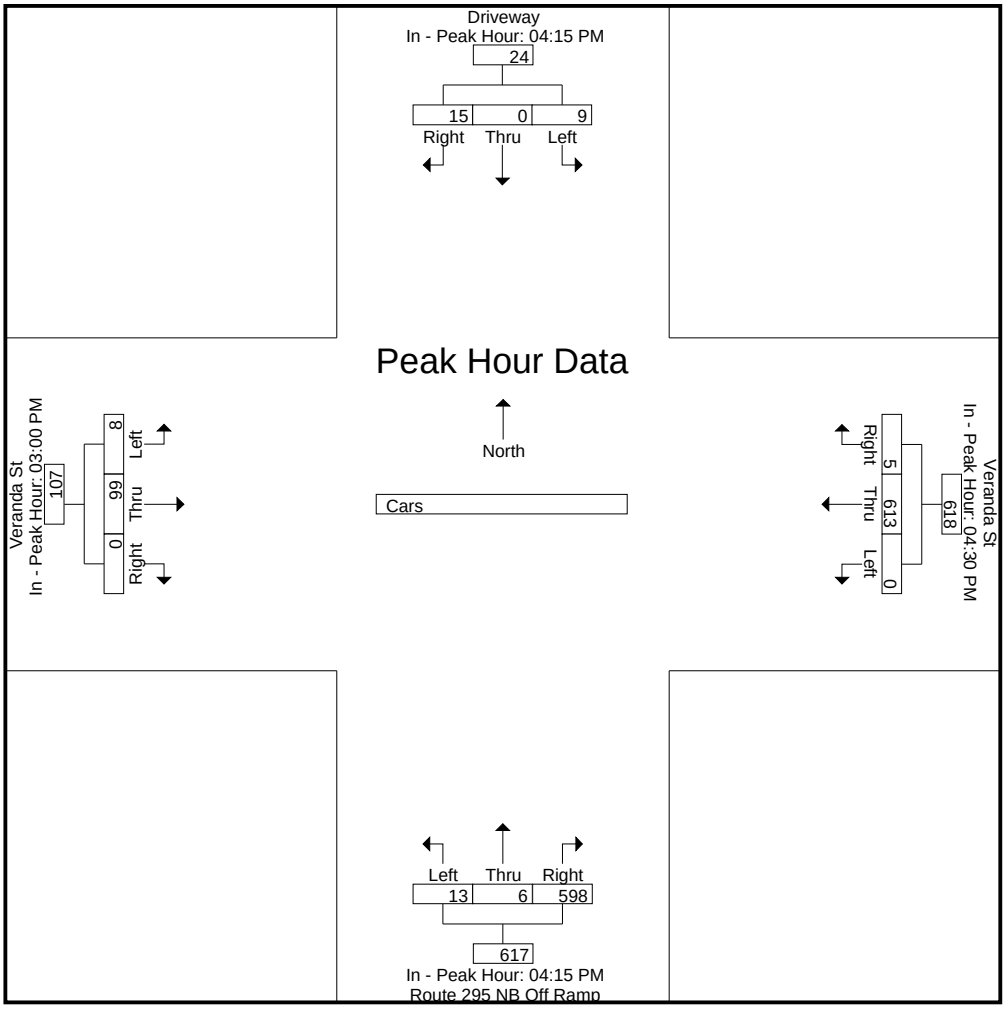

Accurate Counts

978-664-2565

N/S Street : Driveway / Route 295 NB Off Ramp
E/W Street : Veranda Street
City/State : Portland, ME
Weather : Clear

File Name : 10260002
Site Code : 10260002
Start Date : 5/25/2023
Page No : 7

Groups Printed- Trucks

	Driveway From North			Veranda St From East			Route 295 NB Off Ramp From South			Veranda St From West			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
03:00 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
03:15 PM	0	0	0	0	3	0	0	1	0	0	0	0	4
03:30 PM	0	0	1	0	0	0	0	0	0	0	0	0	1
03:45 PM	0	0	0	0	1	0	0	0	0	0	1	0	2
Total	0	0	1	0	5	0	0	1	0	0	1	0	8
04:00 PM	0	0	0	0	3	0	0	0	0	0	0	0	3
04:15 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
04:30 PM	0	0	0	0	1	0	0	0	0	0	1	0	2
04:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
Total	0	0	0	0	5	0	0	0	0	0	2	0	7
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	2	0	0	0	0	0	0	0	2
05:30 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	2	0	0	0	0	0	1	0	3
Grand Total	0	0	1	0	12	0	0	1	0	0	4	0	18
Apprch %	0	0	100	0	100	0	0	100	0	0	100	0	
Total %	0	0	5.6	0	66.7	0	0	5.6	0	0	22.2	0	

	Driveway From North				Veranda St From East				Route 295 NB Off Ramp From South				Veranda St From West				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 03:15 PM																	
03:15 PM	0	0	0	0	0	**3**	0	**3**	0	**1**	0	**1**	0	0	0	0	**4**
03:30 PM	0	0	**1**	**1**	0	0	0	0	0	0	0	0	0	0	0	0	1
03:45 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	**1**	0	**1**	2
04:00 PM	0	0	0	0	0	3	0	3	0	0	0	0	0	0	0	0	3
Total Volume	0	0	1	1	0	7	0	7	0	1	0	1	0	1	0	1	10
% App. Total	0	0	100		0	100	0		0	100	0		0	100	0		
PHF	.000	.000	.250	.250	.000	.583	.000	.583	.000	.250	.000	.250	.000	.250	.000	.250	.625

N/S Street : Driveway / Route 295 NB Off Ramp
E/W Street : Veranda Street
City/State : Portland, ME
Weather : Clear

File Name : 10260002
Site Code : 10260002
Start Date : 5/25/2023
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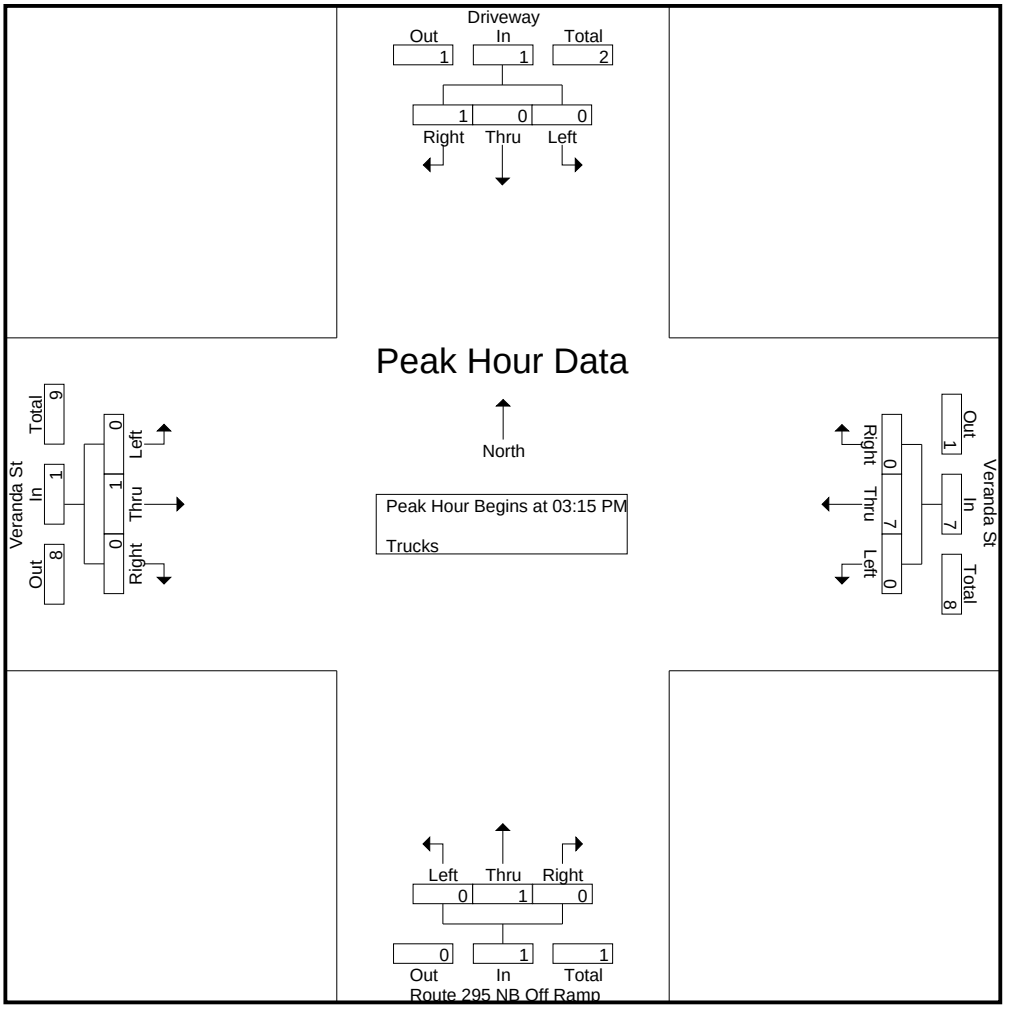
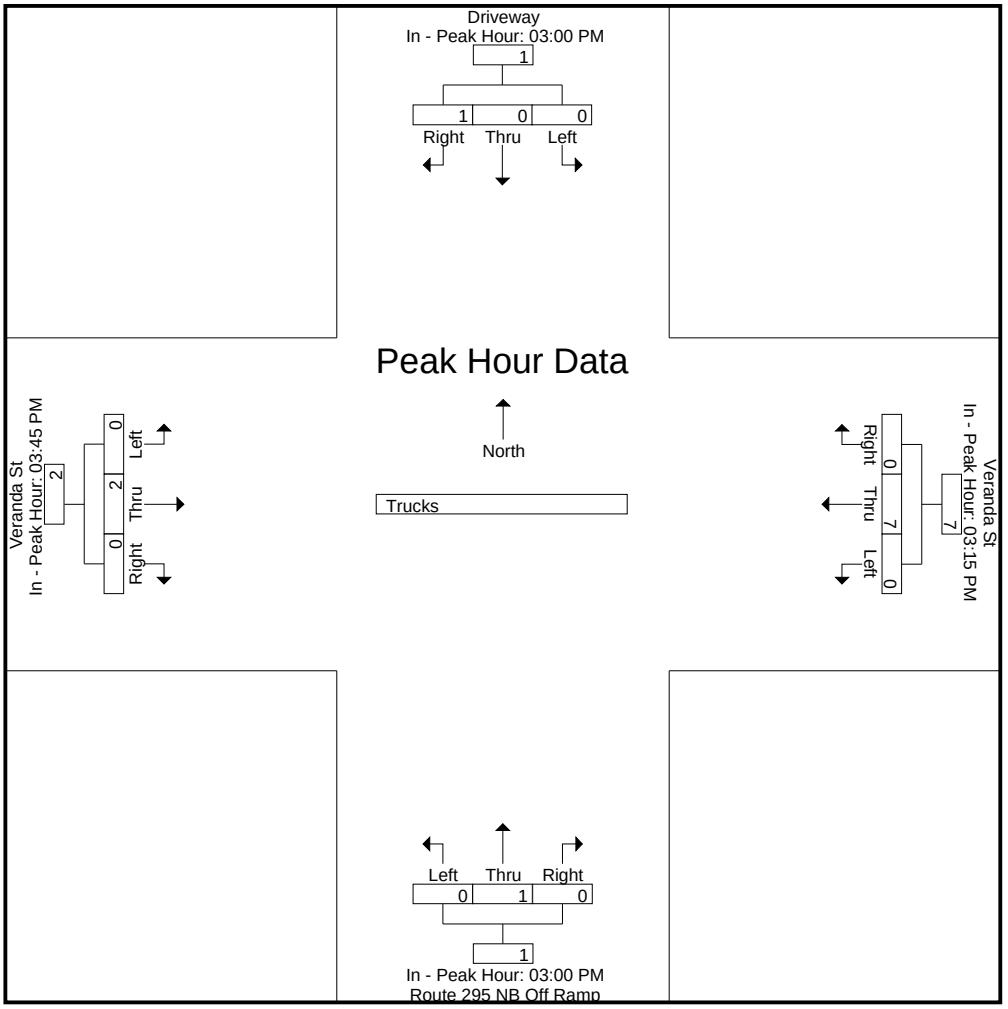


Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	03:00 PM				03:15 PM				03:00 PM				03:45 PM			
+0 mins.	0	0	0	0	0	**3**	0	**3**	0	0	0	0	0	**1**	0	**1**
+15 mins.	0	0	0	0	0	0	0	0	0	**1**	0	**1**	0	0	0	0
+30 mins.	0	0	**1**	**1**	0	1	0	1	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	3	0	3	0	0	0	0	0	1	0	1
Total Volume	0	0	1	1	0	7	0	7	0	1	0	1	0	2	0	2
% App. Total	0	0	100		0	100	0		0	100	0		0	100	0	
PHF	.000	.000	.250	.250	.000	.583	.000	.583	.000	.250	.000	.250	.000	.500	.000	.500

N/S Street : Driveway / Route 295 NB Off Ramp
E/W Street : Veranda Street
City/State : Portland, ME
Weather : Clear

File Name : 10260002
Site Code : 10260002
Start Date : 5/25/2023
Page No : 9



Accurate Counts

978-664-2565

N/S Street : Driveway / Route 295 NB Off Ramp
E/W Street : Veranda Street
City/State : Portland, ME
Weather : Clear

File Name : 10260002
Site Code : 10260002
Start Date : 5/25/2023
Page No : 10

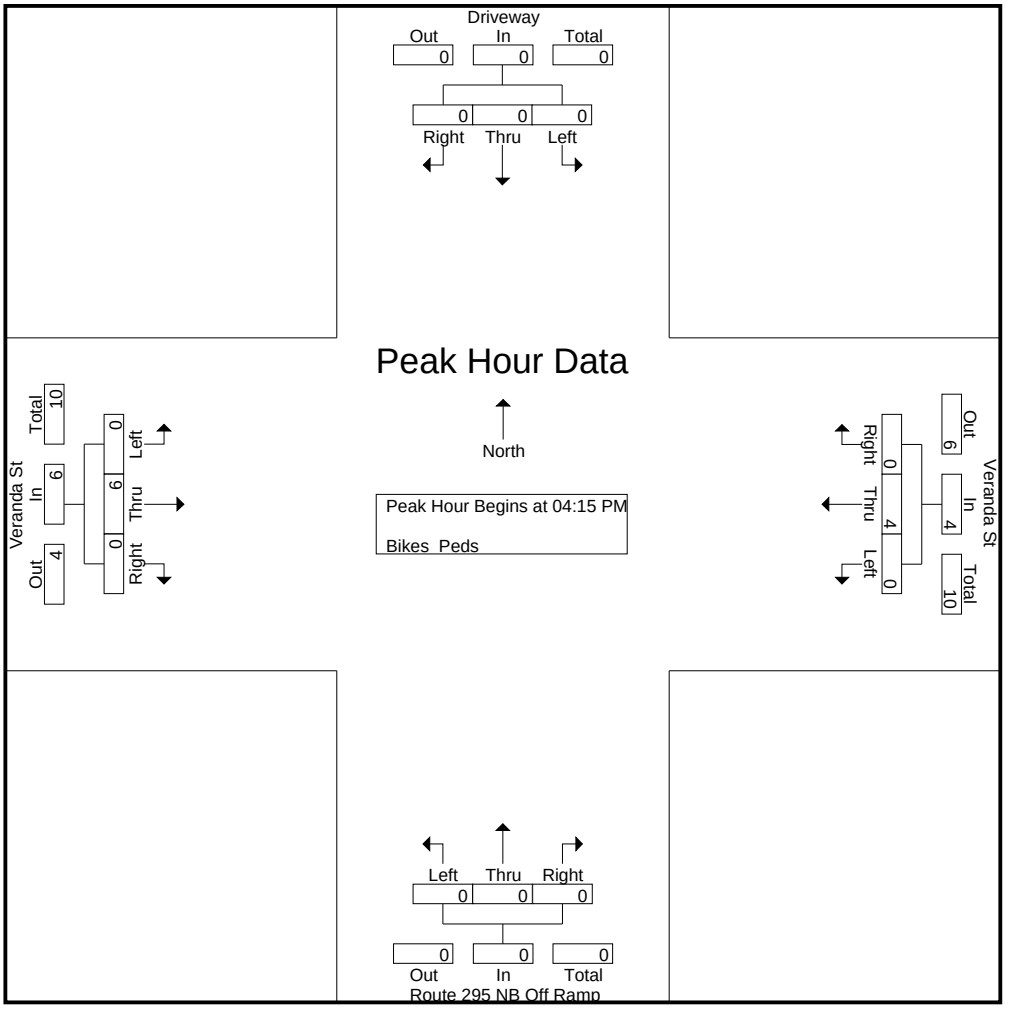
Groups Printed- Bikes Peds

	Driveway From North				Veranda St From East				Route 295 NB Off Ramp From South				Veranda St From West						
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Exclu. Total	Inclu. Total	Int. Total
03:00 PM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
03:15 PM	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2
03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3	3
03:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	3	0	0	0	0	0	0	0	0	0	3	0	0	3	3	6
04:00 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	2	0	0	0	3	3
04:15 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	2	2
04:30 PM	0	0	0	5	0	1	0	0	0	0	0	1	0	2	0	0	6	3	9
04:45 PM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
Total	0	0	0	6	0	3	0	0	0	0	0	1	0	5	0	0	7	8	15
05:00 PM	0	0	0	2	0	2	0	0	0	0	0	0	0	3	0	0	2	5	7
05:15 PM	0	0	0	1	0	1	0	0	0	0	0	0	0	1	0	0	1	2	3
05:30 PM	0	0	0	5	0	1	0	0	0	0	0	0	0	0	0	1	6	1	7
05:45 PM	0	0	0	5	0	1	0	0	0	0	0	1	0	0	0	0	6	1	7
Total	0	0	0	13	0	5	0	0	0	0	0	1	0	4	0	1	15	9	24
Grand Total	0	0	0	22	0	8	0	0	0	0	0	2	0	12	0	1	25	20	45
Apprch %	0	0	0		0	100	0		0	0	0		0	100	0				
Total %	0	0	0		0	40	0		0	0	0		0	60	0		55.6	44.4	

	Driveway From North				Veranda St From East				Route 295 NB Off Ramp From South				Veranda St From West				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
04:30 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	2	0	2	3
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	**2**	0	**2**	0	0	0	0	0	**3**	0	**3**	**5**
Total Volume	0	0	0	0	0	4	0	4	0	0	0	0	0	6	0	6	10
% App. Total	0	0	0		0	100	0		0	0	0		0	100	0		
PHF	.000	.000	.000	.000	.000	.500	.000	.500	.000	.000	.000	.000	.000	.500	.000	.500	.500

N/S Street : Driveway / Route 295 NB Off Ramp
E/W Street : Veranda Street
City/State : Portland, ME
Weather : Clear

File Name : 10260002
Site Code : 10260002
Start Date : 5/25/2023
Page No : 11

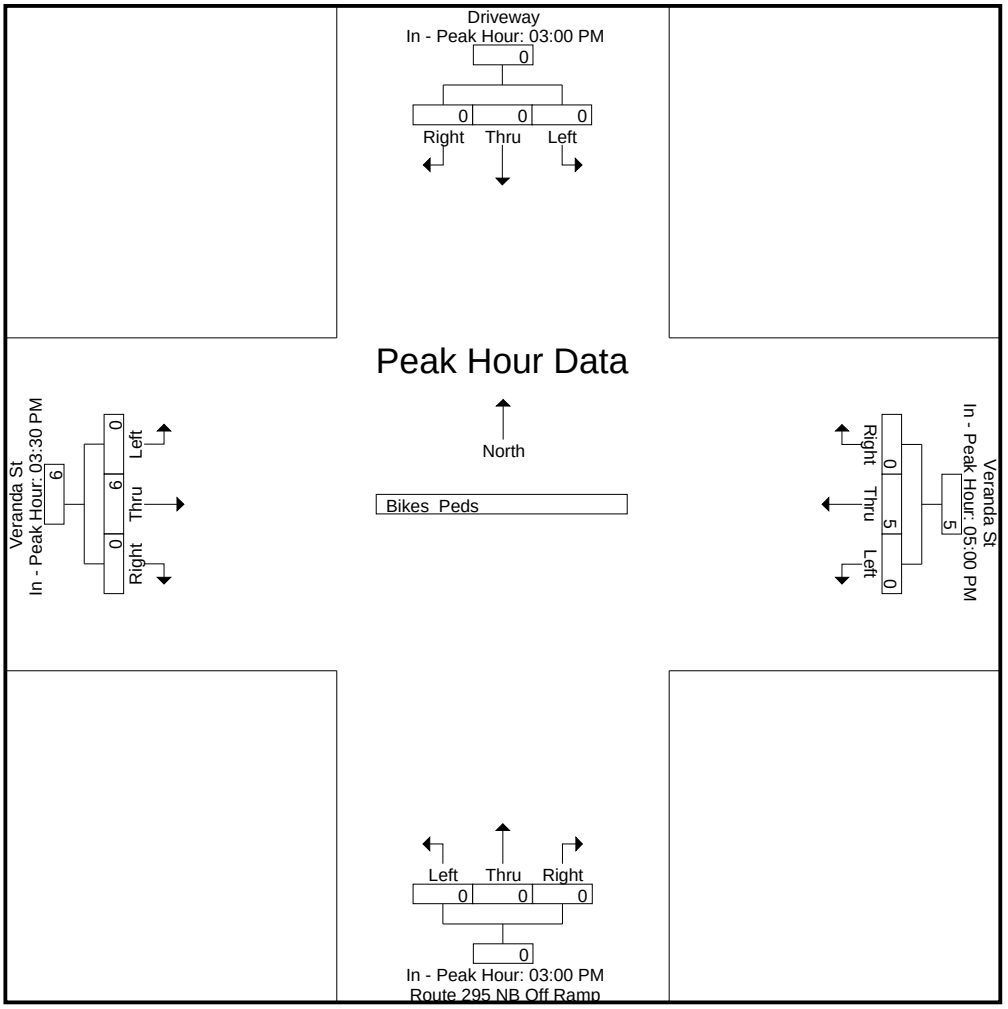


Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	03:00 PM				05:00 PM				03:00 PM				03:30 PM			
+0 mins.	0	0	0	0	0	**2**	0	**2**	0	0	0	0	0	**3**	0	**3**
+15 mins.	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	1	0	1	0	0	0	0	0	2	0	2
+45 mins.	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1
Total Volume	0	0	0	0	0	5	0	5	0	0	0	0	0	6	0	6
% App. Total	0	0	0		0	100	0		0	0	0		0	100	0	
PHF	.000	.000	.000	.000	.000	.625	.000	.625	.000	.000	.000	.000	.000	.500	.000	.500

N/S Street : Driveway / Route 295 NB Off Ramp
E/W Street : Veranda Street
City/State : Portland, ME
Weather : Clear

File Name : 10260002
Site Code : 10260002
Start Date : 5/25/2023
Page No : 12



Accurate Counts

978-664-2565

N/S Street : Wordsworth St / Route 295 SB On Ramp
E/W Street : Veranda Street
City/State : Portland, ME
Weather : Clear

File Name : 10260003
Site Code : 10260003
Start Date : 5/25/2023
Page No : 1

Groups Printed- Cars - Trucks

	Wordsworth St From North			Veranda St From East			Route 295 SB On Ramp From South			Veranda St From West			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
07:00 AM	0	0	0	47	8	0	0	0	0	0	13	6	74
07:15 AM	0	1	1	96	15	0	0	0	0	0	9	16	138
07:30 AM	0	0	0	102	16	0	0	0	0	0	14	17	149
07:45 AM	0	3	0	110	25	0	0	0	0	1	25	25	189
Total	0	4	1	355	64	0	0	0	0	1	61	64	550
08:00 AM	0	0	0	139	17	0	0	0	0	1	24	24	205
08:15 AM	0	2	1	112	19	0	0	0	0	0	22	23	179
08:30 AM	0	2	0	138	20	0	0	0	0	0	17	17	194
08:45 AM	0	3	2	108	29	0	0	0	0	0	41	15	198
Total	0	7	3	497	85	0	0	0	0	1	104	79	776
Grand Total	0	11	4	852	149	0	0	0	0	2	165	143	1326
Apprch %	0	73.3	26.7	85.1	14.9	0	0	0	0	0.6	53.2	46.1	
Total %	0	0.8	0.3	64.3	11.2	0	0	0	0	0.2	12.4	10.8	
Cars	0	11	4	848	144	0	0	0	0	2	156	142	1307
% Cars	0	100	100	99.5	96.6	0	0	0	0	100	94.5	99.3	98.6
Trucks	0	0	0	4	5	0	0	0	0	0	9	1	19
% Trucks	0	0	0	0.5	3.4	0	0	0	0	0	5.5	0.7	1.4

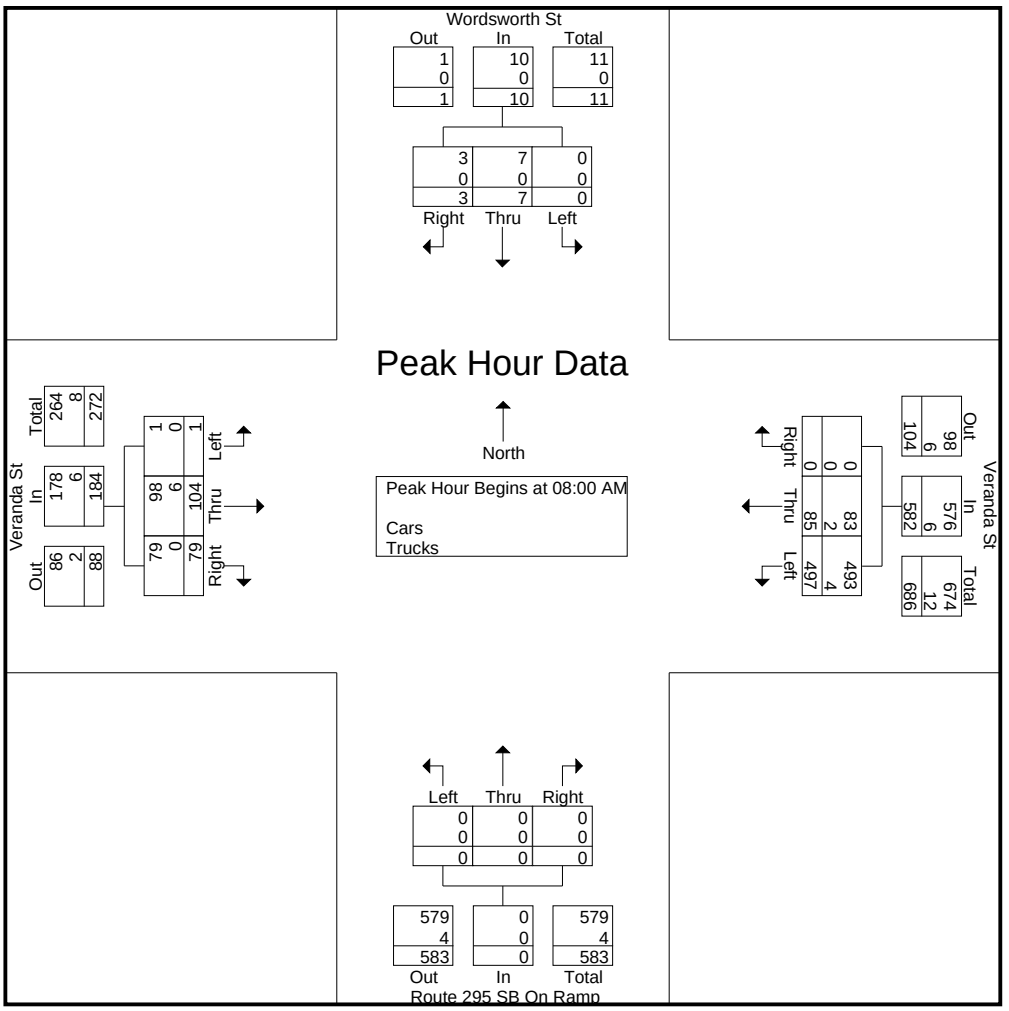
	Wordsworth St From North				Veranda St From East				Route 295 SB On Ramp From South				Veranda St From West				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:00 AM																	
08:00 AM	0	0	0	0	**139**	17	0	156	0	0	0	0	**1**	24	**24**	49	**205**
08:15 AM	0	2	1	3	112	19	0	131	0	0	0	0	0	22	23	45	179
08:30 AM	0	2	0	2	138	20	0	**158**	0	0	0	0	0	17	17	34	194
08:45 AM	0	**3**	**2**	**5**	108	**29**	0	137	0	0	0	0	0	**41**	15	**56**	198
Total Volume	0	7	3	10	497	85	0	582	0	0	0	0	1	104	79	184	776
% App. Total	0	70	30		85.4	14.6	0		0	0	0		0.5	56.5	42.9		
PHF	.000	.583	.375	.500	.894	.733	.000	.921	.000	.000	.000	.000	.250	.634	.823	.821	.946
Cars	0	7	3	10	493	83	0	576	0	0	0	0	1	98	79	178	764
% Cars	0	100	100	100	99.2	97.6	0	99.0	0	0	0	0	100	94.2	100	96.7	98.5
Trucks	0	0	0	0	4	2	0	6	0	0	0	0	0	6	0	6	12
% Trucks	0	0	0	0	0.8	2.4	0	1.0	0	0	0	0	0	5.8	0	3.3	1.5

Accurate Counts

978-664-2565

N/S Street : Wordsworth St / Route 295 SB On Ramp
E/W Street : Veranda Street
City/State : Portland, ME
Weather : Clear

File Name : 10260003
Site Code : 10260003
Start Date : 5/25/2023
Page No : 2



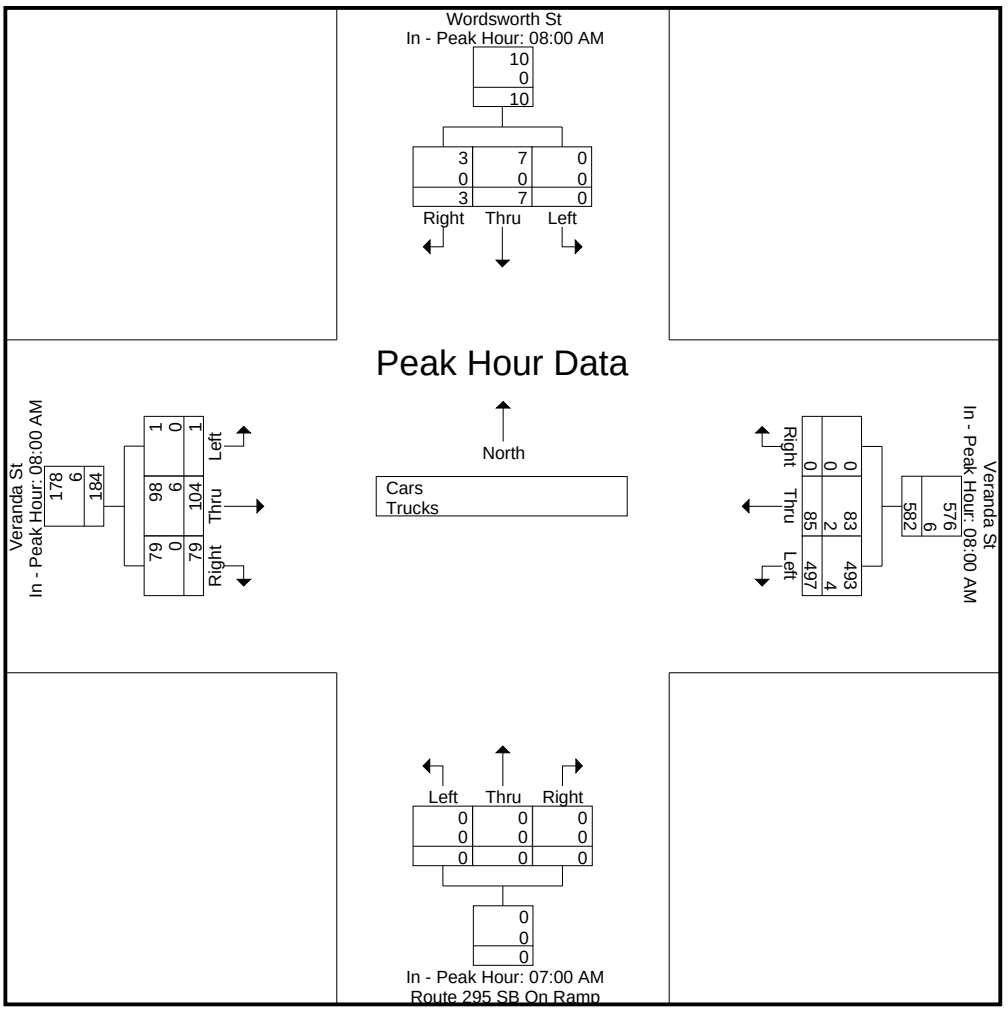
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	08:00 AM				08:00 AM				07:00 AM				08:00 AM			
+0 mins.	0	0	0	0	**139**	17	0	156	0	0	0	0	**1**	24	**24**	49
+15 mins.	0	2	1	3	112	19	0	131	0	0	0	0	0	22	23	45
+30 mins.	0	2	0	2	138	20	0	**158**	0	0	0	0	0	17	17	34
+45 mins.	0	**3**	**2**	**5**	108	**29**	0	137	0	0	0	0	0	**41**	15	**56**
Total Volume	0	7	3	10	497	85	0	582	0	0	0	0	1	104	79	184
% App. Total	0	70	30		85.4	14.6	0		0	0	0		0.5	56.5	42.9	
PHF	.000	.583	.375	.500	.894	.733	.000	.921	.000	.000	.000	.000	.250	.634	.823	.821
Cars	0	7	3	10	493	83	0	576	0	0	0	0	1	98	79	178
% Cars	0	100	100	100	99.2	97.6	0	99	0	0	0	0	100	94.2	100	96.7
Trucks	0	0	0	0	4	2	0	6	0	0	0	0	0	6	0	6
% Trucks	0	0	0	0	0.8	2.4	0	1	0	0	0	0	0	5.8	0	3.3

N/S Street : Wordsworth St / Route 295 SB On Ramp
E/W Street : Veranda Street
City/State : Portland, ME
Weather : Clear

File Name : 10260003
Site Code : 10260003
Start Date : 5/25/2023
Page No : 3



Accurate Counts

978-664-2565

N/S Street : Wordsworth St / Route 295 SB On Ramp
E/W Street : Veranda Street
City/State : Portland, ME
Weather : Clear

File Name : 10260003
Site Code : 10260003
Start Date : 5/25/2023
Page No : 4

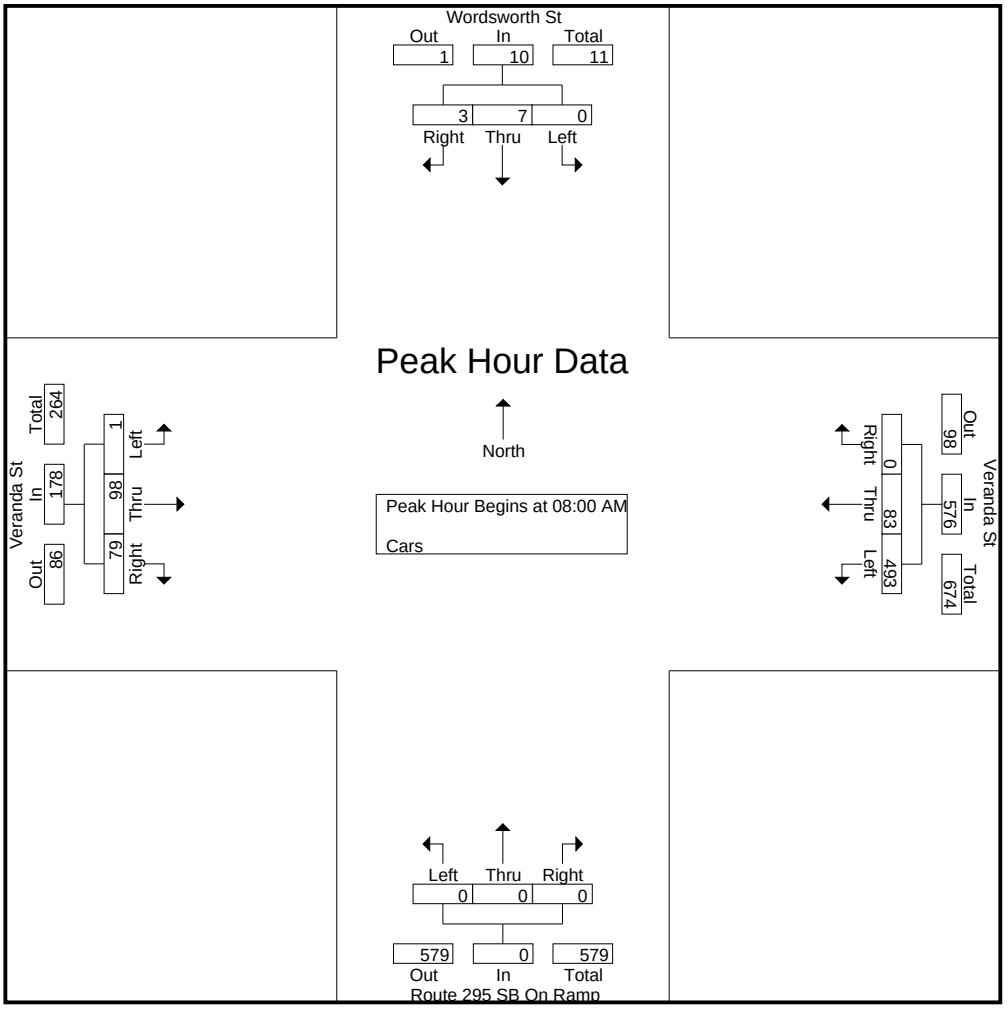
Groups Printed- Cars

	Wordsworth St From North			Veranda St From East			Route 295 SB On Ramp From South			Veranda St From West			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
07:00 AM	0	0	0	47	7	0	0	0	0	0	12	6	72
07:15 AM	0	1	1	96	15	0	0	0	0	0	9	16	138
07:30 AM	0	0	0	102	15	0	0	0	0	0	13	17	147
07:45 AM	0	3	0	110	24	0	0	0	0	1	24	24	186
Total	0	4	1	355	61	0	0	0	0	1	58	63	543
08:00 AM	0	0	0	137	17	0	0	0	0	1	22	24	201
08:15 AM	0	2	1	112	18	0	0	0	0	0	20	23	176
08:30 AM	0	2	0	137	19	0	0	0	0	0	15	17	190
08:45 AM	0	3	2	107	29	0	0	0	0	0	41	15	197
Total	0	7	3	493	83	0	0	0	0	1	98	79	764
Grand Total	0	11	4	848	144	0	0	0	0	2	156	142	1307
Apprch %	0	73.3	26.7	85.5	14.5	0	0	0	0	0.7	52	47.3	
Total %	0	0.8	0.3	64.9	11	0	0	0	0	0.2	11.9	10.9	

	Wordsworth St From North				Veranda St From East				Route 295 SB On Ramp From South				Veranda St From West				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:00 AM																	
08:00 AM	0	0	0	0	**137**	17	0	154	0	0	0	0	**1**	22	**24**	47	**201**
08:15 AM	0	2	1	3	112	18	0	130	0	0	0	0	0	20	23	43	176
08:30 AM	0	2	0	2	137	19	0	**156**	0	0	0	0	0	15	17	32	190
08:45 AM	0	**3**	**2**	**5**	107	**29**	0	136	0	0	0	0	0	**41**	15	**56**	197
Total Volume	0	7	3	10	493	83	0	576	0	0	0	0	1	98	79	178	764
% App. Total	0	70	30		85.6	14.4	0		0	0	0		0.6	55.1	44.4		
PHF	.000	.583	.375	.500	.900	.716	.000	.923	.000	.000	.000	.000	.250	.598	.823	.795	.950

N/S Street : Wordsworth St / Route 295 SB On Ramp
E/W Street : Veranda Street
City/State : Portland, ME
Weather : Clear

File Name : 10260003
Site Code : 10260003
Start Date : 5/25/2023
Page No : 5



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

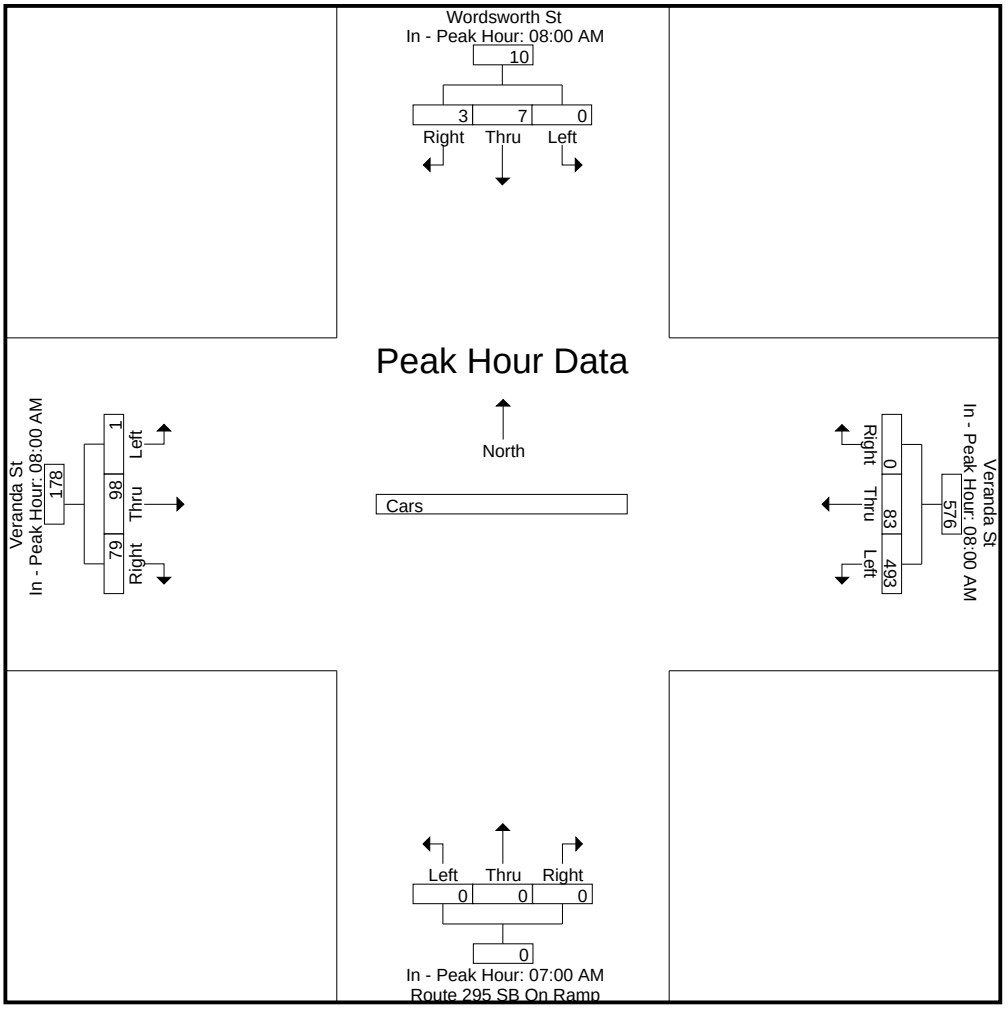
	08:00 AM				08:00 AM				07:00 AM				08:00 AM			
+0 mins.	0	0	0	0	**137**	17	0	154	0	0	0	0	**1**	22	**24**	47
+15 mins.	0	2	1	3	112	18	0	130	0	0	0	0	0	20	23	43
+30 mins.	0	2	0	2	137	19	0	**156**	0	0	0	0	0	15	17	32
+45 mins.	0	**3**	**2**	**5**	107	**29**	0	136	0	0	0	0	0	**41**	15	**56**
Total Volume	0	7	3	10	493	83	0	576	0	0	0	0	1	98	79	178
% App. Total	0	70	30		85.6	14.4	0		0	0	0		0.6	55.1	44.4	
PHF	.000	.583	.375	.500	.900	.716	.000	.923	.000	.000	.000	.000	.250	.598	.823	.795

Accurate Counts

978-664-2565

N/S Street : Wordsworth St / Route 295 SB On Ramp
E/W Street : Veranda Street
City/State : Portland, ME
Weather : Clear

File Name : 10260003
Site Code : 10260003
Start Date : 5/25/2023
Page No : 6



Accurate Counts

978-664-2565

N/S Street : Wordsworth St / Route 295 SB On Ramp
E/W Street : Veranda Street
City/State : Portland, ME
Weather : Clear

File Name : 10260003
Site Code : 10260003
Start Date : 5/25/2023
Page No : 7

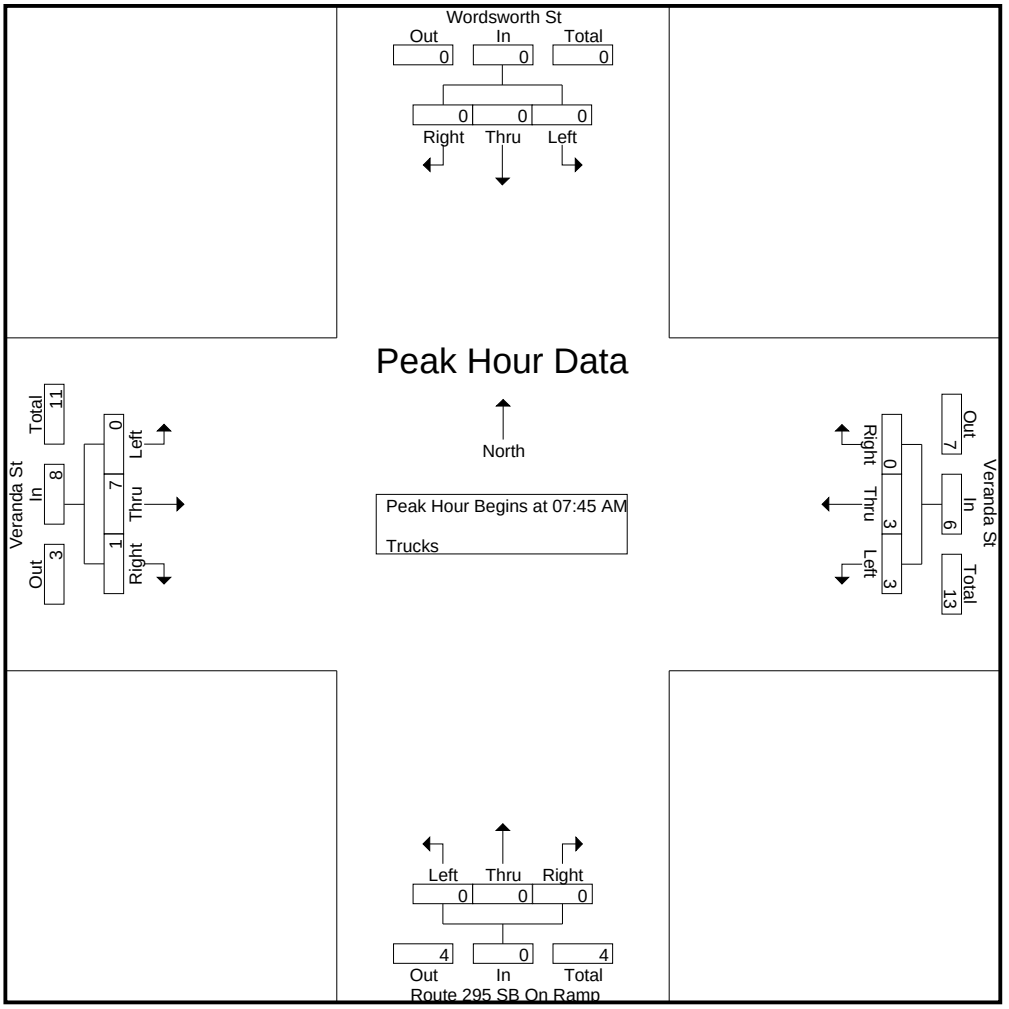
Groups Printed- Trucks

	Wordsworth St From North			Veranda St From East			Route 295 SB On Ramp From South			Veranda St From West			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
07:00 AM	0	0	0	0	1	0	0	0	0	0	1	0	2
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	1	0	0	0	0	0	1	0	2
07:45 AM	0	0	0	0	1	0	0	0	0	0	1	1	3
Total	0	0	0	0	3	0	0	0	0	0	3	1	7
08:00 AM	0	0	0	2	0	0	0	0	0	0	2	0	4
08:15 AM	0	0	0	0	1	0	0	0	0	0	2	0	3
08:30 AM	0	0	0	1	1	0	0	0	0	0	2	0	4
08:45 AM	0	0	0	1	0	0	0	0	0	0	0	0	1
Total	0	0	0	4	2	0	0	0	0	0	6	0	12
Grand Total	0	0	0	4	5	0	0	0	0	0	9	1	19
Apprch %	0	0	0	44.4	55.6	0	0	0	0	0	90	10	
Total %	0	0	0	21.1	26.3	0	0	0	0	0	47.4	5.3	

	Wordsworth St From North				Veranda St From East				Route 295 SB On Ramp From South				Veranda St From West				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	0	0	0	0	0	**1**	0	1	0	0	0	0	0	1	**1**	**2**	3
08:00 AM	0	0	0	0	**2**	0	0	**2**	0	0	0	0	0	**2**	0	2	**4**
08:15 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	2	0	2	3
08:30 AM	0	0	0	0	1	1	0	2	0	0	0	0	0	2	0	2	4
Total Volume	0	0	0	0	3	3	0	6	0	0	0	0	0	7	1	8	14
% App. Total	0	0	0		50	50	0		0	0	0		0	87.5	12.5		
PHF	.000	.000	.000	.000	.375	.750	.000	.750	.000	.000	.000	.000	.000	.875	.250	1.00	.875

N/S Street : Wordsworth St / Route 295 SB On Ramp
E/W Street : Veranda Street
City/State : Portland, ME
Weather : Clear

File Name : 10260003
Site Code : 10260003
Start Date : 5/25/2023
Page No : 8

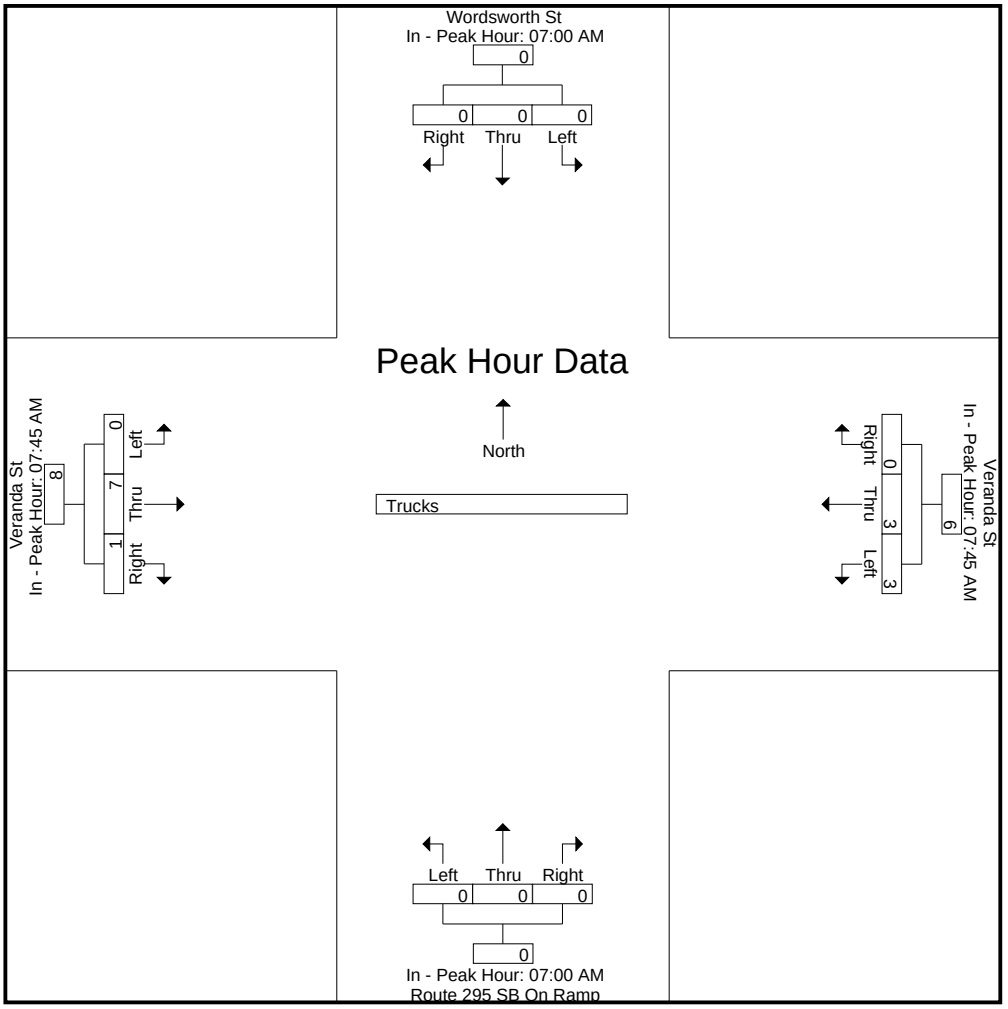


Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				07:45 AM				07:00 AM				07:45 AM			
+0 mins.	0	0	0	0	0	**1**	0	1	0	0	0	0	0	1	**1**	**2**
+15 mins.	0	0	0	0	**2**	0	0	**2**	0	0	0	0	0	**2**	0	2
+30 mins.	0	0	0	0	0	1	0	1	0	0	0	0	0	2	0	2
+45 mins.	0	0	0	0	1	1	0	2	0	0	0	0	0	2	0	2
Total Volume	0	0	0	0	3	3	0	6	0	0	0	0	0	7	1	8
% App. Total	0	0	0		50	50	0		0	0	0		0	87.5	12.5	
PHF	.000	.000	.000	.000	.375	.750	.000	.750	.000	.000	.000	.000	.000	.875	.250	1.000

N/S Street : Wordsworth St / Route 295 SB On Ramp
E/W Street : Veranda Street
City/State : Portland, ME
Weather : Clear

File Name : 10260003
Site Code : 10260003
Start Date : 5/25/2023
Page No : 9



Accurate Counts

978-664-2565

N/S Street : Wordsworth St / Route 295 SB On Ramp
E/W Street : Veranda Street
City/State : Portland, ME
Weather : Clear

File Name : 10260003
Site Code : 10260003
Start Date : 5/25/2023
Page No : 10

Groups Printed- Bikes Peds

	Wordsworth St From North				Veranda St From East				Route 295 SB On Ramp From South				Veranda St From West						
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	2	2
07:15 AM	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	2	2
07:30 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	2	2
07:45 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1
Total	0	0	1	0	0	5	0	0	0	0	0	0	0	1	0	0	0	7	7
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	1
08:15 AM	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1	1	2
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	3	0	3	0	0	3	3	6
08:45 AM	0	0	0	1	0	1	0	0	0	0	0	1	0	0	0	0	2	1	3
Total	0	0	0	2	0	2	0	0	0	0	0	5	0	3	0	0	7	5	12
Grand Total	0	0	1	2	0	7	0	0	0	0	0	5	0	4	0	0	7	12	19
Apprch %	0	0	100		0	100	0		0	0	0		0	100	0				
Total %	0	0	8.3		0	58.3	0		0	0	0		0	33.3	0		36.8	63.2	

	Wordsworth St From North				Veranda St From East				Route 295 SB On Ramp From South				Veranda St From West				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	**1**	**1**	0	1	0	1	0	0	0	0	0	0	0	0	**2**
07:15 AM	0	0	0	0	0	**2**	0	**2**	0	0	0	0	0	0	0	0	2
07:30 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	**1**	0	**1**	2
07:45 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
Total Volume	0	0	1	1	0	5	0	5	0	0	0	0	0	1	0	1	7
% App. Total	0	0	100		0	100	0		0	0	0		0	100	0		
PHF	.000	.000	.250	.250	.000	.625	.000	.625	.000	.000	.000	.000	.000	.250	.000	.250	.875

N/S Street : Wordsworth St / Route 295 SB On Ramp
E/W Street : Veranda Street
City/State : Portland, ME
Weather : Clear

File Name : 10260003
Site Code : 10260003
Start Date : 5/25/2023
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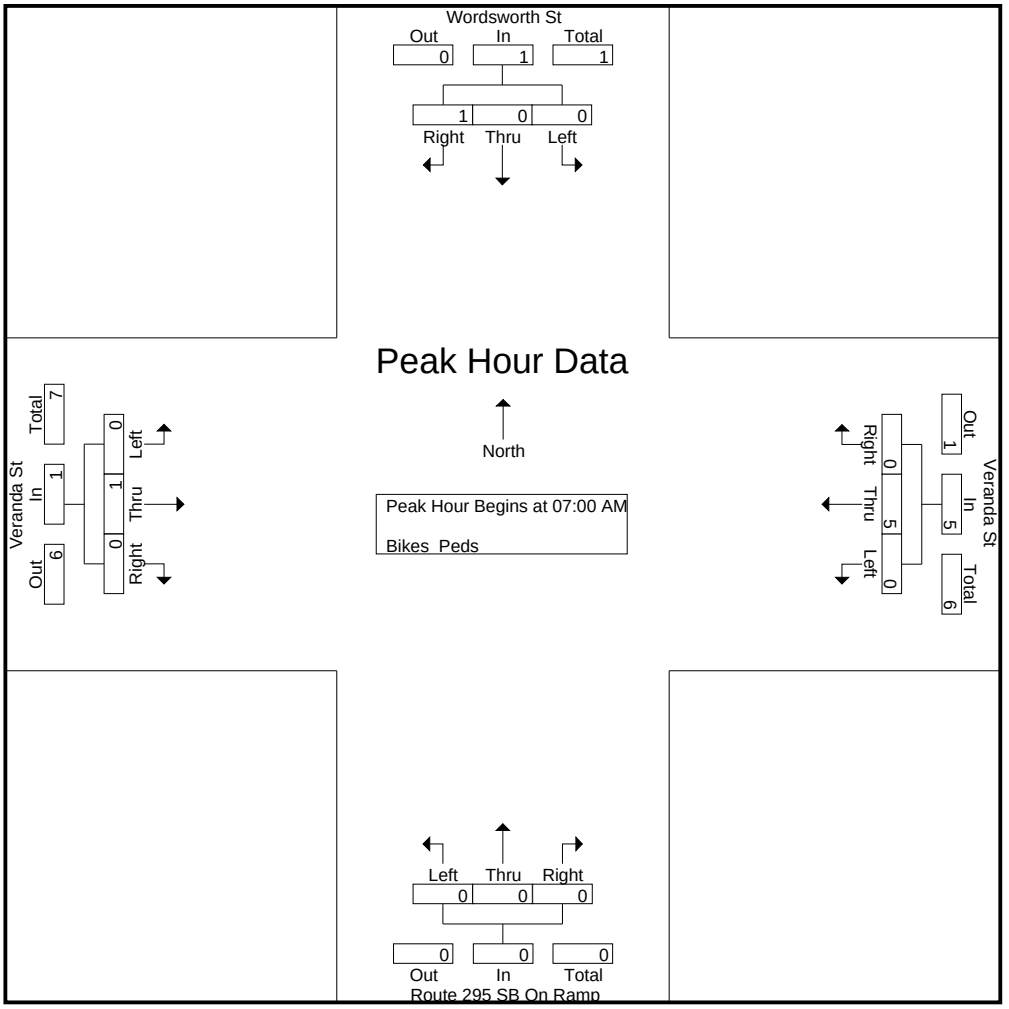

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:00 AM				07:45 AM			
+0 mins.	0	0	**1**	**1**	0	1	0	1	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	**2**	0	**2**	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	1	0	1	0	0	0	0	0	**3**	0	**3**
Total Volume	0	0	1	1	0	5	0	5	0	0	0	0	0	3	0	3
% App. Total	0	0	100		0	100	0		0	0	0		0	100	0	
PHF	.000	.000	.250	.250	.000	.625	.000	.625	.000	.000	.000	.000	.000	.250	.000	.250

N/S Street : Wordsworth St / Route 295 SB On Ramp
E/W Street : Veranda Street
City/State : Portland, ME
Weather : Clear

File Name : 10260003
Site Code : 10260003
Start Date : 5/25/2023
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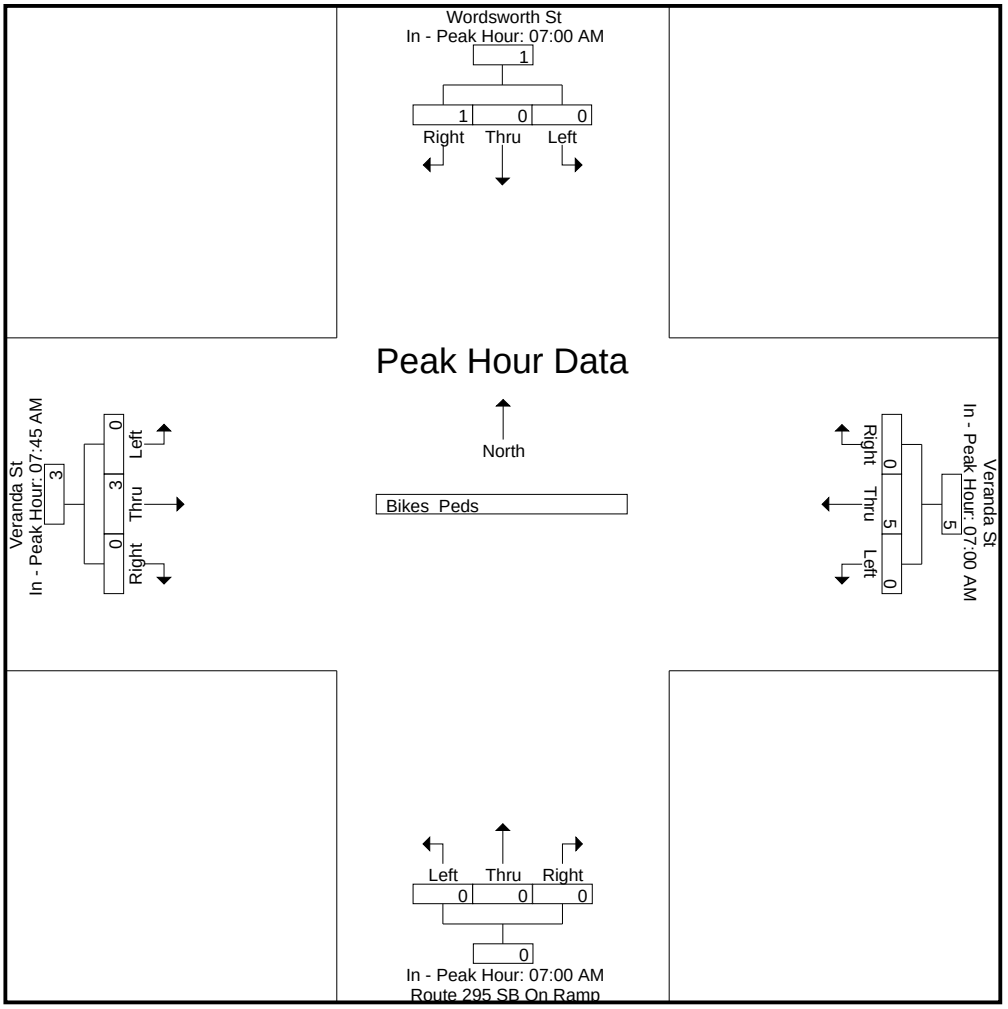

Accurate Counts

978-664-2565

N/S Street : Wordsworth St / Route 295 SB On Ramp
E/W Street : Veranda Street
City/State : Portland, ME
Weather : Clear

File Name : 10260003
Site Code : 10260003
Start Date : 5/25/2023
Page No : 1

Groups Printed- Cars - Trucks

	Wordsworth St From North			Veranda St From East			Route 295 SB On Ramp From South			Veranda St From West			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
03:00 PM	1	0	1	144	27	1	0	0	0	1	28	5	208
03:15 PM	0	0	1	113	31	0	0	0	0	0	29	5	179
03:30 PM	0	0	1	149	37	1	0	0	0	1	23	12	224
03:45 PM	0	0	1	111	35	2	0	0	0	0	29	10	188
Total	1	0	4	517	130	4	0	0	0	2	109	32	799
04:00 PM	0	3	2	138	37	2	0	0	0	5	19	11	217
04:15 PM	1	1	2	107	28	0	0	0	0	2	20	13	174
04:30 PM	0	2	0	134	34	0	0	0	0	4	18	12	204
04:45 PM	1	0	0	124	36	1	0	0	0	0	21	15	198
Total	2	6	4	503	135	3	0	0	0	11	78	51	793
05:00 PM	2	2	2	114	44	0	0	0	0	3	19	15	201
05:15 PM	0	1	2	124	32	1	0	0	0	2	20	11	193
05:30 PM	0	2	0	103	36	2	0	0	0	3	18	10	174
05:45 PM	0	3	1	84	29	2	0	0	0	2	14	15	150
Total	2	8	5	425	141	5	0	0	0	10	71	51	718
Grand Total	5	14	13	1445	406	12	0	0	0	23	258	134	2310
Apprch %	15.6	43.8	40.6	77.6	21.8	0.6	0	0	0	5.5	62.2	32.3	
Total %	0.2	0.6	0.6	62.6	17.6	0.5	0	0	0	1	11.2	5.8	
Cars	5	14	13	1438	400	12	0	0	0	23	254	132	2291
% Cars	100	100	100	99.5	98.5	100	0	0	0	100	98.4	98.5	99.2
Trucks	0	0	0	7	6	0	0	0	0	0	4	2	19
% Trucks	0	0	0	0.5	1.5	0	0	0	0	0	1.6	1.5	0.8

	Wordsworth St From North				Veranda St From East				Route 295 SB On Ramp From South				Veranda St From West				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 03:15 PM																	
03:15 PM	0	0	1	1	113	31	0	144	0	0	0	0	0	**29**	5	34	179
03:30 PM	0	0	1	1	**149**	**37**	1	**187**	0	0	0	0	1	23	**12**	36	**224**
03:45 PM	0	0	1	1	111	35	**2**	148	0	0	0	0	0	29	10	**39**	188
04:00 PM	0	**3**	**2**	**5**	138	37	2	177	0	0	0	0	**5**	19	11	35	217
Total Volume	0	3	5	8	511	140	5	656	0	0	0	0	6	100	38	144	808
% App. Total	0	37.5	62.5		77.9	21.3	0.8		0	0	0		4.2	69.4	26.4		
PHF	.000	.250	.625	.400	.857	.946	.625	.877	.000	.000	.000	.000	.300	.862	.792	.923	.902
Cars	0	3	5	8	506	137	5	648	0	0	0	0	6	99	37	142	798
% Cars	0	100	100	100	99.0	97.9	100	98.8	0	0	0	0	100	99.0	97.4	98.6	98.8
Trucks	0	0	0	0	5	3	0	8	0	0	0	0	0	1	1	2	10
% Trucks	0	0	0	0	1.0	2.1	0	1.2	0	0	0	0	0	1.0	2.6	1.4	1.2

N/S Street : Wordsworth St / Route 295 SB On Ramp
E/W Street : Veranda Street
City/State : Portland, ME
Weather : Clear

File Name : 10260003
Site Code : 10260003
Start Date : 5/25/2023
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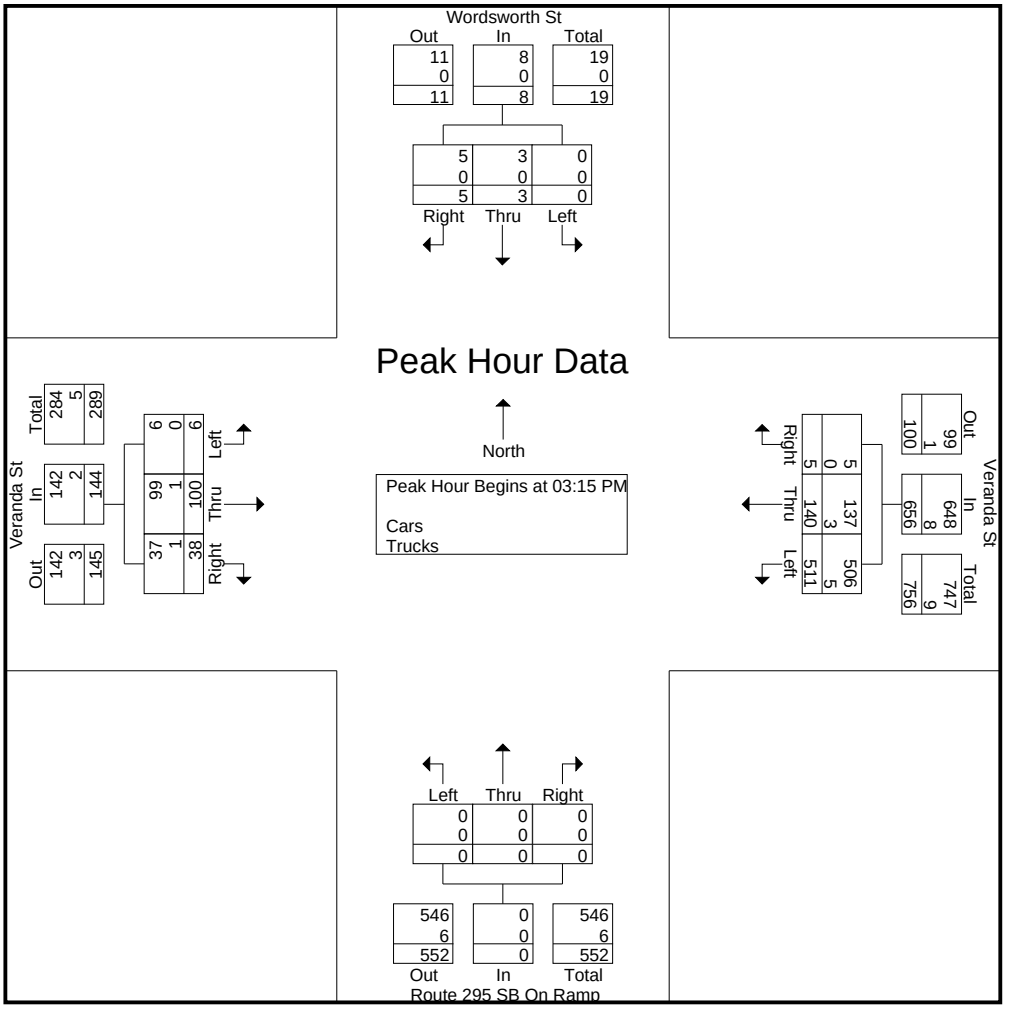

Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM				03:15 PM				03:00 PM				03:30 PM			
+0 mins.	**2**	2	**2**	**6**	113	31	0	144	0	0	0	0	1	23	12	36
+15 mins.	0	1	2	3	**149**	**37**	1	**187**	0	0	0	0	0	**29**	10	**39**
+30 mins.	0	2	0	2	111	35	**2**	148	0	0	0	0	**5**	19	11	35
+45 mins.	0	**3**	1	4	138	37	2	177	0	0	0	0	2	20	**13**	35
Total Volume	2	8	5	15	511	140	5	656	0	0	0	0	8	91	46	145
% App. Total	13.3	53.3	33.3		77.9	21.3	0.8		0	0	0		5.5	62.8	31.7	
PHF	.250	.667	.625	.625	.857	.946	.625	.877	.000	.000	.000	.000	.400	.784	.885	.929
Cars	2	8	5	15	506	137	5	648	0	0	0	0	8	90	45	143
% Cars	100	100	100	100	99	97.9	100	98.8	0	0	0	0	100	98.9	97.8	98.6
Trucks	0	0	0	0	5	3	0	8	0	0	0	0	0	1	1	2
% Trucks	0	0	0	0	1	2.1	0	1.2	0	0	0	0	0	1.1	2.2	1.4

N/S Street : Wordsworth St / Route 295 SB On Ramp
E/W Street : Veranda Street
City/State : Portland, ME
Weather : Clear

File Name : 10260003
Site Code : 10260003
Start Date : 5/25/2023
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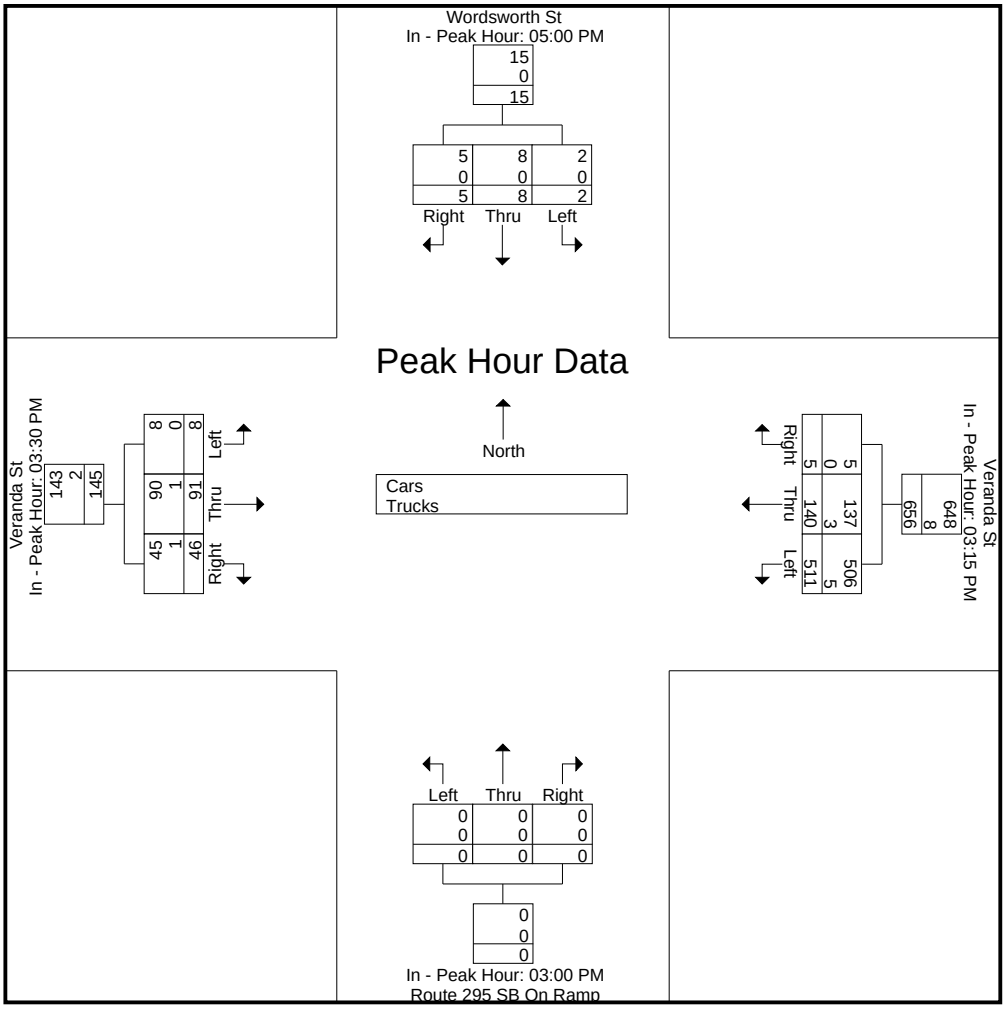

Accurate Counts

978-664-2565

N/S Street : Wordsworth St / Route 295 SB On Ramp
E/W Street : Veranda Street
City/State : Portland, ME
Weather : Clear

File Name : 10260003
Site Code : 10260003
Start Date : 5/25/2023
Page No : 4

Groups Printed- Cars

	Wordsworth St From North			Veranda St From East			Route 295 SB On Ramp From South			Veranda St From West			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
03:00 PM	1	0	1	143	27	1	0	0	0	1	28	5	207
03:15 PM	0	0	1	112	29	0	0	0	0	0	29	5	176
03:30 PM	0	0	1	148	37	1	0	0	0	1	23	12	223
03:45 PM	0	0	1	110	35	2	0	0	0	0	28	9	185
Total	1	0	4	513	128	4	0	0	0	2	108	31	791
04:00 PM	0	3	2	136	36	2	0	0	0	5	19	11	214
04:15 PM	1	1	2	107	27	0	0	0	0	2	20	13	173
04:30 PM	0	2	0	133	34	0	0	0	0	4	17	12	202
04:45 PM	1	0	0	124	36	1	0	0	0	0	20	15	197
Total	2	6	4	500	133	3	0	0	0	11	76	51	786
05:00 PM	2	2	2	114	44	0	0	0	0	3	19	14	200
05:15 PM	0	1	2	124	30	1	0	0	0	2	20	11	191
05:30 PM	0	2	0	103	36	2	0	0	0	3	17	10	173
05:45 PM	0	3	1	84	29	2	0	0	0	2	14	15	150
Total	2	8	5	425	139	5	0	0	0	10	70	50	714
Grand Total	5	14	13	1438	400	12	0	0	0	23	254	132	2291
Apprch %	15.6	43.8	40.6	77.7	21.6	0.6	0	0	0	5.6	62.1	32.3	
Total %	0.2	0.6	0.6	62.8	17.5	0.5	0	0	0	1	11.1	5.8	

	Wordsworth St From North				Veranda St From East				Route 295 SB On Ramp From South				Veranda St From West				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 03:15 PM																	
03:15 PM	0	0	1	1	112	29	0	141	0	0	0	0	0	**29**	5	34	176
03:30 PM	0	0	1	1	**148**	**37**	1	**186**	0	0	0	0	1	23	**12**	36	**223**
03:45 PM	0	0	1	1	110	35	**2**	147	0	0	0	0	0	28	9	**37**	185
04:00 PM	0	**3**	**2**	**5**	136	36	2	174	0	0	0	0	**5**	19	11	35	214
Total Volume	0	3	5	8	506	137	5	648	0	0	0	0	6	99	37	142	798
% App. Total	0	37.5	62.5		78.1	21.1	0.8		0	0	0		4.2	69.7	26.1		
PHF	.000	.250	.625	.400	.855	.926	.625	.871	.000	.000	.000	.000	.300	.853	.771	.959	.895

Accurate Counts

978-664-2565

N/S Street : Wordsworth St / Route 295 SB On Ramp
E/W Street : Veranda Street
City/State : Portland, ME
Weather : Clear

File Name : 10260003
Site Code : 10260003
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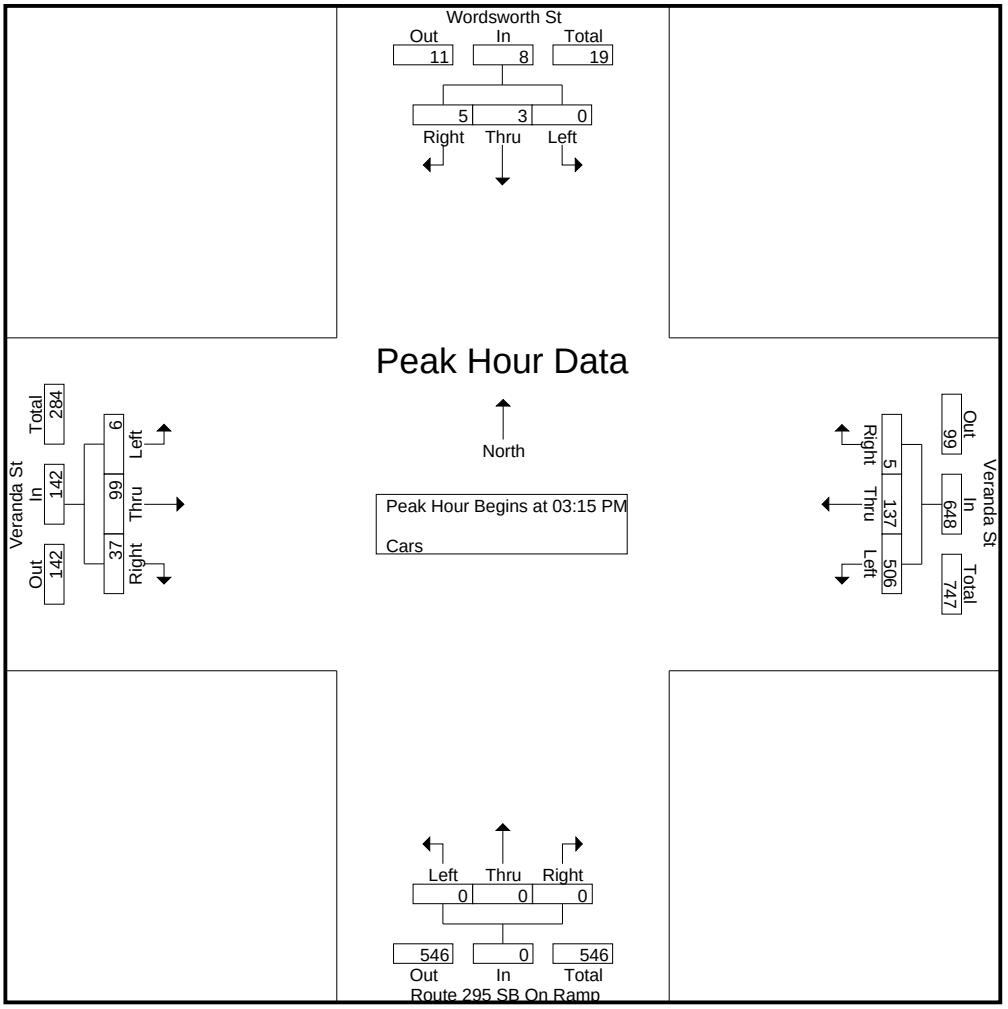

Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	05:00 PM				03:15 PM				03:00 PM				03:30 PM			
+0 mins.	**2**	2	**2**	**6**	112	29	0	141	0	0	0	0	1	23	12	36
+15 mins.	0	1	2	3	**148**	**37**	1	**186**	0	0	0	0	0	**28**	9	**37**
+30 mins.	0	2	0	2	110	35	**2**	147	0	0	0	0	**5**	19	11	35
+45 mins.	0	**3**	1	4	136	36	2	174	0	0	0	0	2	20	**13**	35
Total Volume	2	8	5	15	506	137	5	648	0	0	0	0	8	90	45	143
% App. Total	13.3	53.3	33.3		78.1	21.1	0.8		0	0	0		5.6	62.9	31.5	
PHF	.250	.667	.625	.625	.855	.926	.625	.871	.000	.000	.000	.000	.400	.804	.865	.966

N/S Street : Wordsworth St / Route 295 SB On Ramp
E/W Street : Veranda Street
City/State : Portland, ME
Weather : Clear

File Name : 10260003
Site Code : 10260003
Start Date : 5/25/2023
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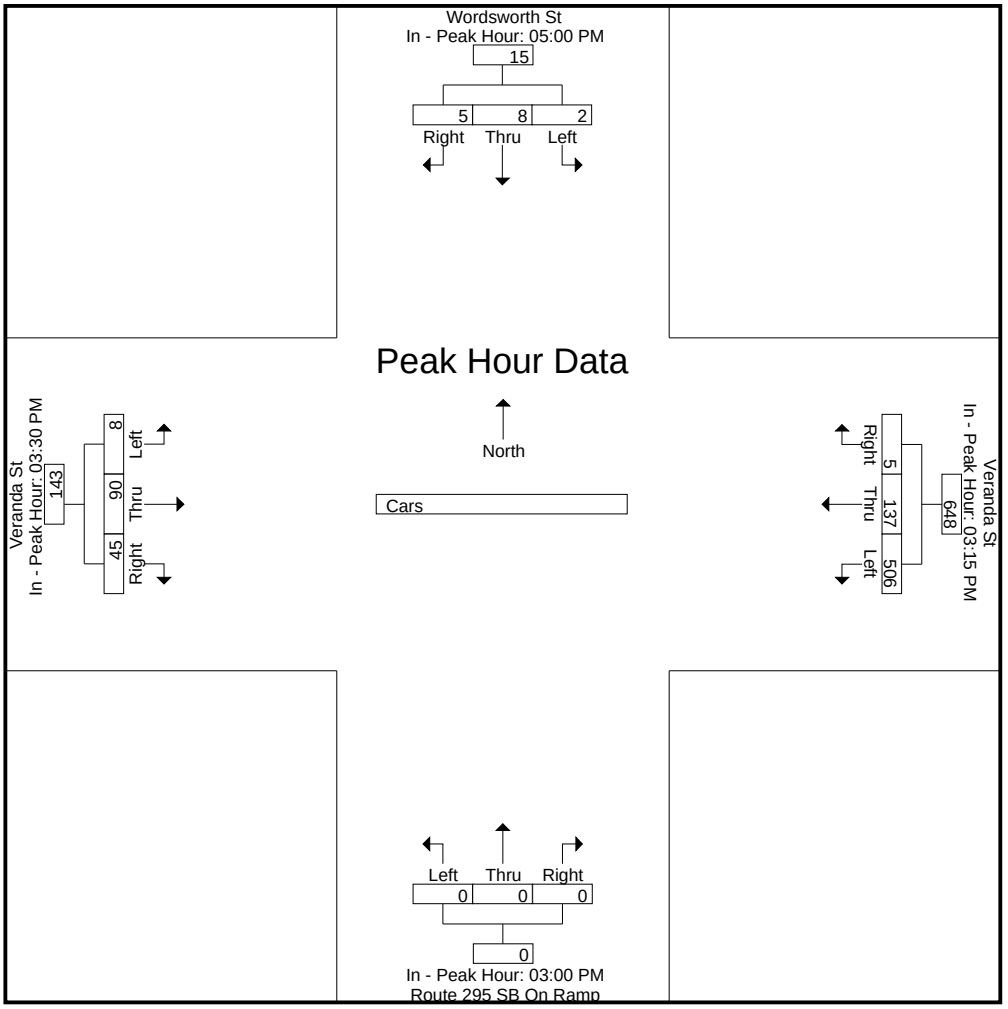

Accurate Counts

978-664-2565

N/S Street : Wordsworth St / Route 295 SB On Ramp
E/W Street : Veranda Street
City/State : Portland, ME
Weather : Clear

File Name : 10260003
Site Code : 10260003
Start Date : 5/25/2023
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Groups Printed- Trucks

	Wordsworth St From North			Veranda St From East			Route 295 SB On Ramp From South			Veranda St From West			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
03:00 PM	0	0	0	1	0	0	0	0	0	0	0	0	1
03:15 PM	0	0	0	1	2	0	0	0	0	0	0	0	3
03:30 PM	0	0	0	1	0	0	0	0	0	0	0	0	1
03:45 PM	0	0	0	1	0	0	0	0	0	0	1	1	3
Total	0	0	0	4	2	0	0	0	0	0	1	1	8
04:00 PM	0	0	0	2	1	0	0	0	0	0	0	0	3
04:15 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
04:30 PM	0	0	0	1	0	0	0	0	0	0	1	0	2
04:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
Total	0	0	0	3	2	0	0	0	0	0	2	0	7
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	1	1
05:15 PM	0	0	0	0	2	0	0	0	0	0	0	0	2
05:30 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	2	0	0	0	0	0	1	1	4
Grand Total	0	0	0	7	6	0	0	0	0	0	4	2	19
Apprch %	0	0	0	53.8	46.2	0	0	0	0	0	66.7	33.3	
Total %	0	0	0	36.8	31.6	0	0	0	0	0	21.1	10.5	

	Wordsworth St From North				Veranda St From East				Route 295 SB On Ramp From South				Veranda St From West				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 03:15 PM																	
03:15 PM	0	0	0	0	1	**2**	0	**3**	0	0	0	0	0	0	0	0	**3**
03:30 PM	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1
03:45 PM	0	0	0	0	1	0	0	1	0	0	0	0	0	**1**	**1**	**2**	3
04:00 PM	0	0	0	0	**2**	1	0	3	0	0	0	0	0	0	0	0	3
Total Volume	0	0	0	0	5	3	0	8	0	0	0	0	0	1	1	2	10
% App. Total	0	0	0		62.5	37.5	0		0	0	0		0	50	50		
PHF	.000	.000	.000	.000	.625	.375	.000	.667	.000	.000	.000	.000	.000	.250	.250	.250	.833

N/S Street : Wordsworth St / Route 295 SB On Ramp
E/W Street : Veranda Street
City/State : Portland, ME
Weather : Clear

File Name : 10260003
Site Code : 10260003
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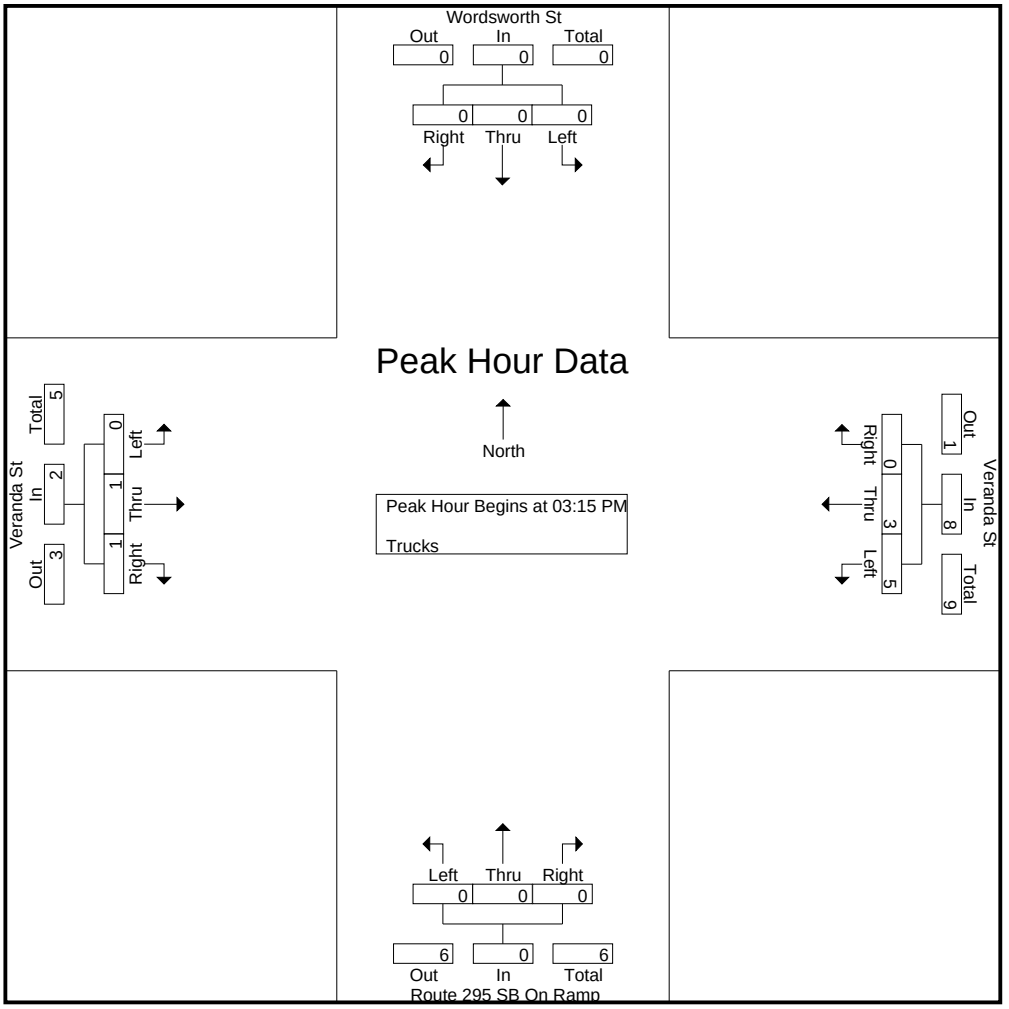

Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	03:00 PM				03:15 PM				03:00 PM				03:45 PM			
+0 mins.	0	0	0	0	1	**2**	0	**3**	0	0	0	0	0	**1**	**1**	**2**
+15 mins.	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	**2**	1	0	3	0	0	0	0	0	1	0	1
Total Volume	0	0	0	0	5	3	0	8	0	0	0	0	0	2	1	3
% App. Total	0	0	0		62.5	37.5	0		0	0	0		0	66.7	33.3	
PHF	.000	.000	.000	.000	.625	.375	.000	.667	.000	.000	.000	.000	.000	.500	.250	.375

N/S Street : Wordsworth St / Route 295 SB On Ramp
E/W Street : Veranda Street
City/State : Portland, ME
Weather : Clear

File Name : 10260003
Site Code : 10260003
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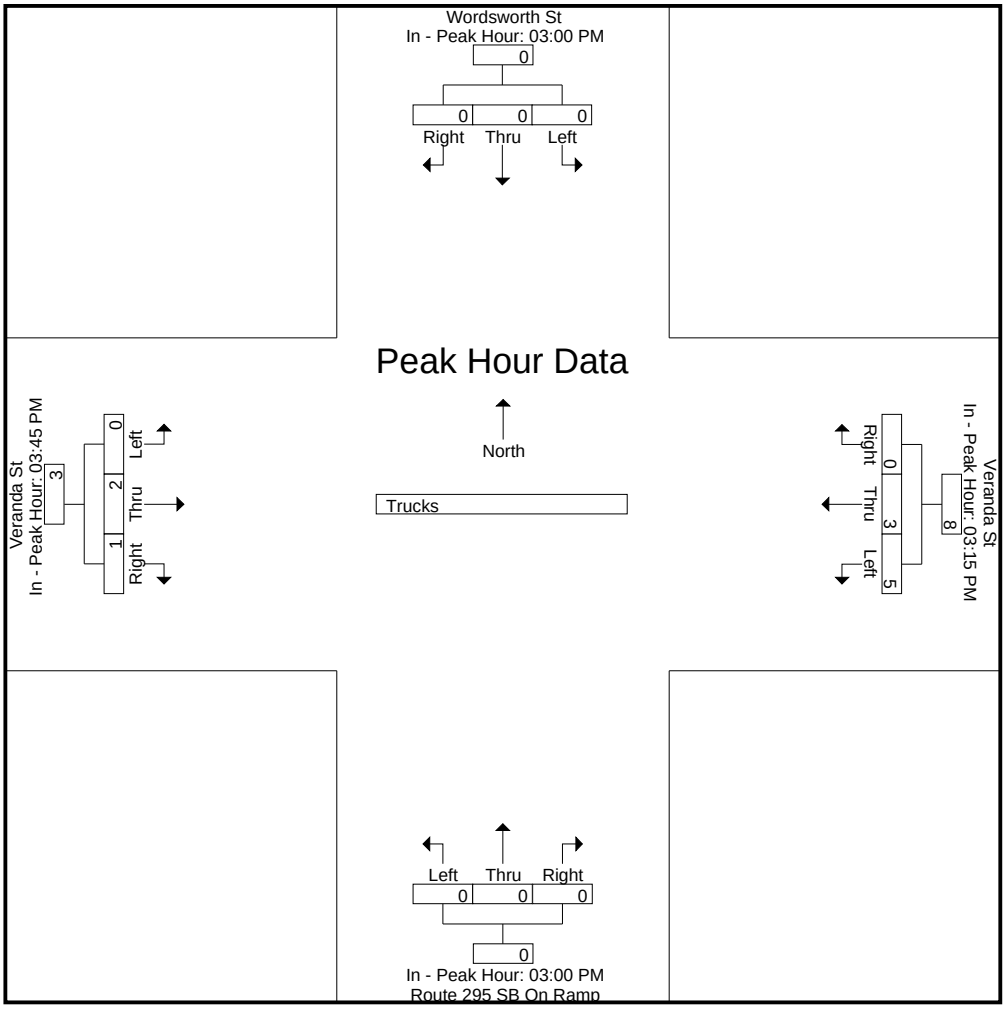

Accurate Counts

978-664-2565

N/S Street : Wordsworth St / Route 295 SB On Ramp
E/W Street : Veranda Street
City/State : Portland, ME
Weather : Clear

File Name : 10260003
Site Code : 10260003
Start Date : 5/25/2023
Page No : 10

Groups Printed- Bikes Peds

	Wordsworth St From North				Veranda St From East				Route 295 SB On Ramp From South				Veranda St From West						
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Exclu. Total	Inclu. Total	Int. Total
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3	3
03:45 PM	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2
Total	0	0	0	2	0	0	0	0	0	0	0	0	0	3	0	0	2	3	5
04:00 PM	0	0	0	1	0	2	0	0	0	0	0	0	0	2	0	0	1	4	5
04:15 PM	0	0	0	1	0	1	0	0	0	0	0	0	0	1	0	0	1	2	3
04:30 PM	0	0	0	3	0	1	0	0	0	0	0	0	0	3	0	0	3	4	7
04:45 PM	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	1	1	2
Total	0	0	0	6	0	4	0	0	0	0	0	0	0	7	0	0	6	11	17
05:00 PM	0	0	0	0	0	2	0	0	0	0	0	0	0	2	0	0	0	4	4
05:15 PM	0	0	0	4	0	1	0	1	0	0	0	0	0	1	0	0	5	2	7
05:30 PM	0	0	0	3	0	1	0	0	0	0	0	0	0	0	0	0	3	1	4
05:45 PM	0	0	0	4	0	1	0	0	0	0	0	0	0	0	0	0	4	1	5
Total	0	0	0	11	0	5	0	1	0	0	0	0	0	3	0	0	12	8	20
Grand Total	0	0	0	19	0	9	0	1	0	0	0	0	0	13	0	0	20	22	42
Apprch %	0	0	0		0	100	0		0	0	0		0	100	0				
Total %	0	0	0		0	40.9	0		0	0	0		0	59.1	0		47.6	52.4	

	Wordsworth St From North				Veranda St From East				Route 295 SB On Ramp From South				Veranda St From West				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	0	0	0	0	0	**2**	0	**2**	0	0	0	0	0	2	0	2	**4**
04:15 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
04:30 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	**3**	0	**3**	4
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
Total Volume	0	0	0	0	0	4	0	4	0	0	0	0	0	7	0	7	11
% App. Total	0	0	0		0	100	0		0	0	0		0	100	0		
PHF	.000	.000	.000	.000	.000	.500	.000	.500	.000	.000	.000	.000	.000	.583	.000	.583	.688

N/S Street : Wordsworth St / Route 295 SB On Ramp
E/W Street : Veranda Street
City/State : Portland, ME
Weather : Clear

File Name : 10260003
Site Code : 10260003
Start Date : 5/25/2023
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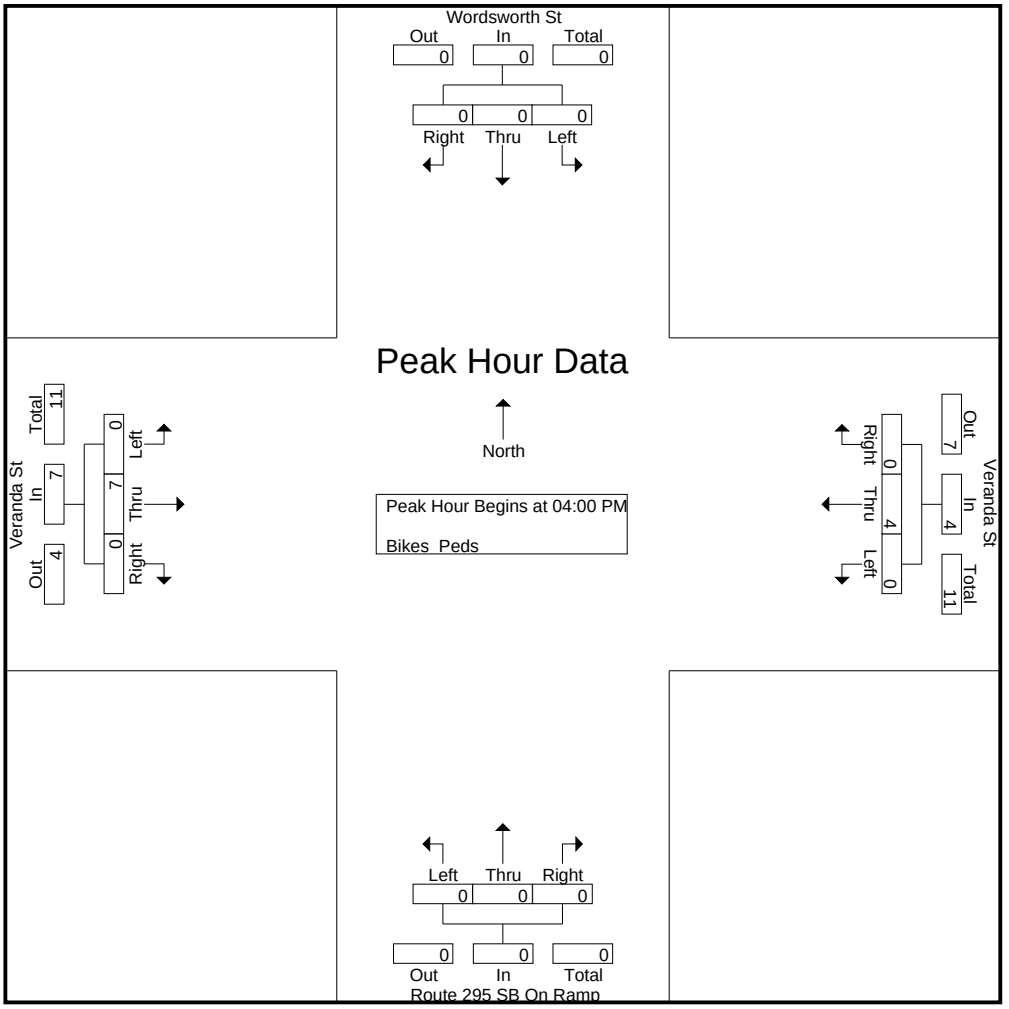

Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	03:00 PM				05:00 PM				03:00 PM				04:00 PM			
+0 mins.	0	0	0	0	0	**2**	0	**2**	0	0	0	0	0	2	0	2
+15 mins.	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1
+30 mins.	0	0	0	0	0	1	0	1	0	0	0	0	0	**3**	0	**3**
+45 mins.	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1
Total Volume	0	0	0	0	0	5	0	5	0	0	0	0	0	7	0	7
% App. Total	0	0	0		0	100	0		0	0	0		0	100	0	
PHF	.000	.000	.000	.000	.000	.625	.000	.625	.000	.000	.000	.000	.000	.583	.000	.583

N/S Street : Wordsworth St / Route 295 SB On Ramp
E/W Street : Veranda Street
City/State : Portland, ME
Weather : Clear

File Name : 10260003
Site Code : 10260003
Start Date : 5/25/2023
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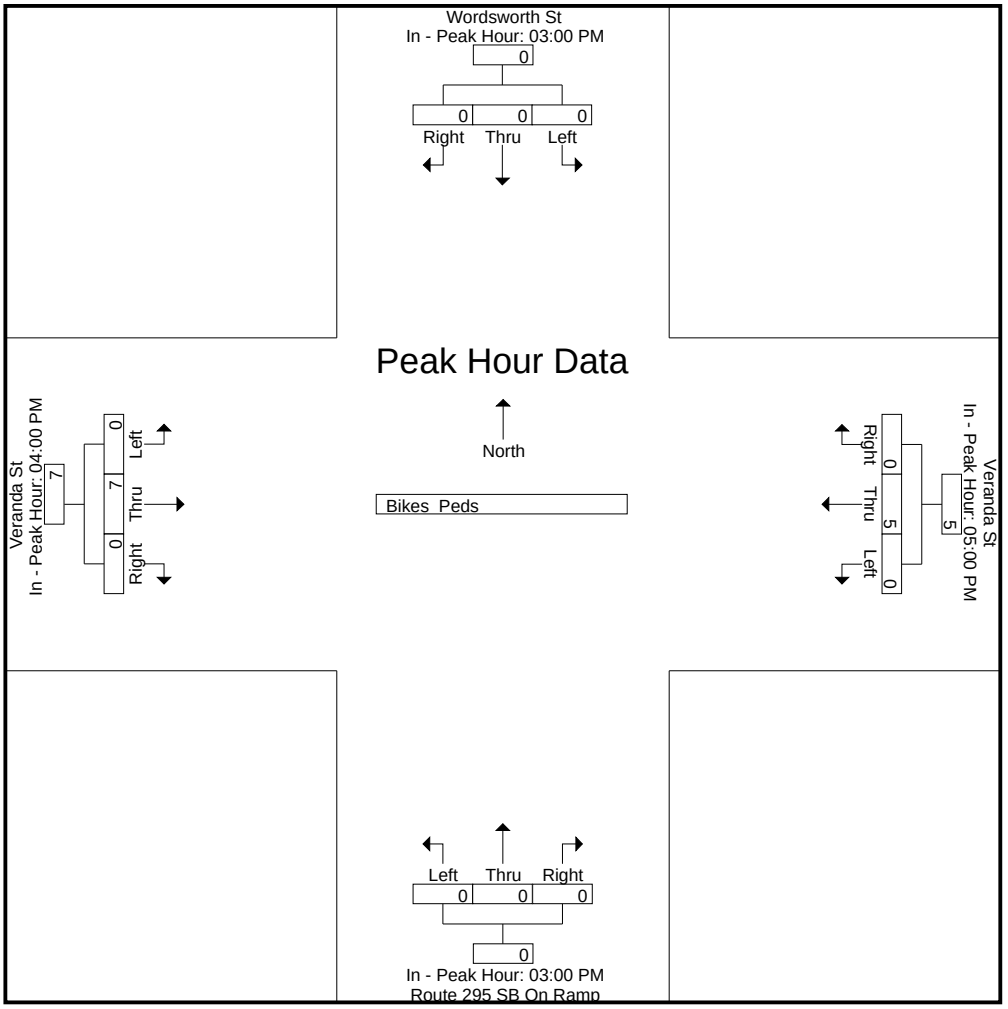

Accurate Counts

978-664-2565

N/S Street : Martins Point Second Driveway
E/W Street : Veranda Street
City/State : Portland, ME
Weather : Clear

File Name : 10260004
Site Code : 10260004
Start Date : 5/25/2023
Page No : 1

Groups Printed- Cars - Trucks

	Veranda St From East		Martins Point Second Dwy From South		Veranda St From West		
Start Time	Left	Thru	Left	Right	Thru	Right	Int. Total
07:00 AM	2	70	0	0	49	0	121
07:15 AM	5	99	1	3	73	0	181
07:30 AM	8	104	0	0	76	1	189
07:45 AM	4	132	0	1	115	0	252
Total	19	405	1	4	313	1	743
08:00 AM	2	136	1	1	109	3	252
08:15 AM	5	127	1	3	110	1	247
08:30 AM	3	153	2	4	101	1	264
08:45 AM	9	125	3	3	113	1	254
Total	19	541	7	11	433	6	1017
Grand Total	38	946	8	15	746	7	1760
Apprch %	3.9	96.1	34.8	65.2	99.1	0.9	
Total %	2.2	53.8	0.5	0.9	42.4	0.4	
Cars	38	937	8	15	726	7	1731
% Cars	100	99	100	100	97.3	100	98.4
Trucks	0	9	0	0	20	0	29
% Trucks	0	1	0	0	2.7	0	1.6

	Veranda St From East			Martins Point Second Dwy From South			Veranda St From West			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 08:00 AM										
08:00 AM	2	136	138	1	1	2	109	**3**	112	252
08:15 AM	5	127	132	1	3	4	110	1	111	247
08:30 AM	3	**153**	**156**	2	**4**	**6**	101	1	102	**264**
08:45 AM	**9**	125	134	**3**	3	6	**113**	1	**114**	254
Total Volume	19	541	560	7	11	18	433	6	439	1017
% App. Total	3.4	96.6		38.9	61.1		98.6	1.4		
PHF	.528	.884	.897	.583	.688	.750	.958	.500	.963	.963
Cars	19	535	554	7	11	18	420	6	426	998
% Cars	100	98.9	98.9	100	100	100	97.0	100	97.0	98.1
Trucks	0	6	6	0	0	0	13	0	13	19
% Trucks	0	1.1	1.1	0	0	0	3.0	0	3.0	1.9

N/S Street : Martins Point Second Driveway
E/W Street : Veranda Street
City/State : Portland, ME
Weather : Clear

File Name : 10260004
Site Code : 10260004
Start Date : 5/25/2023
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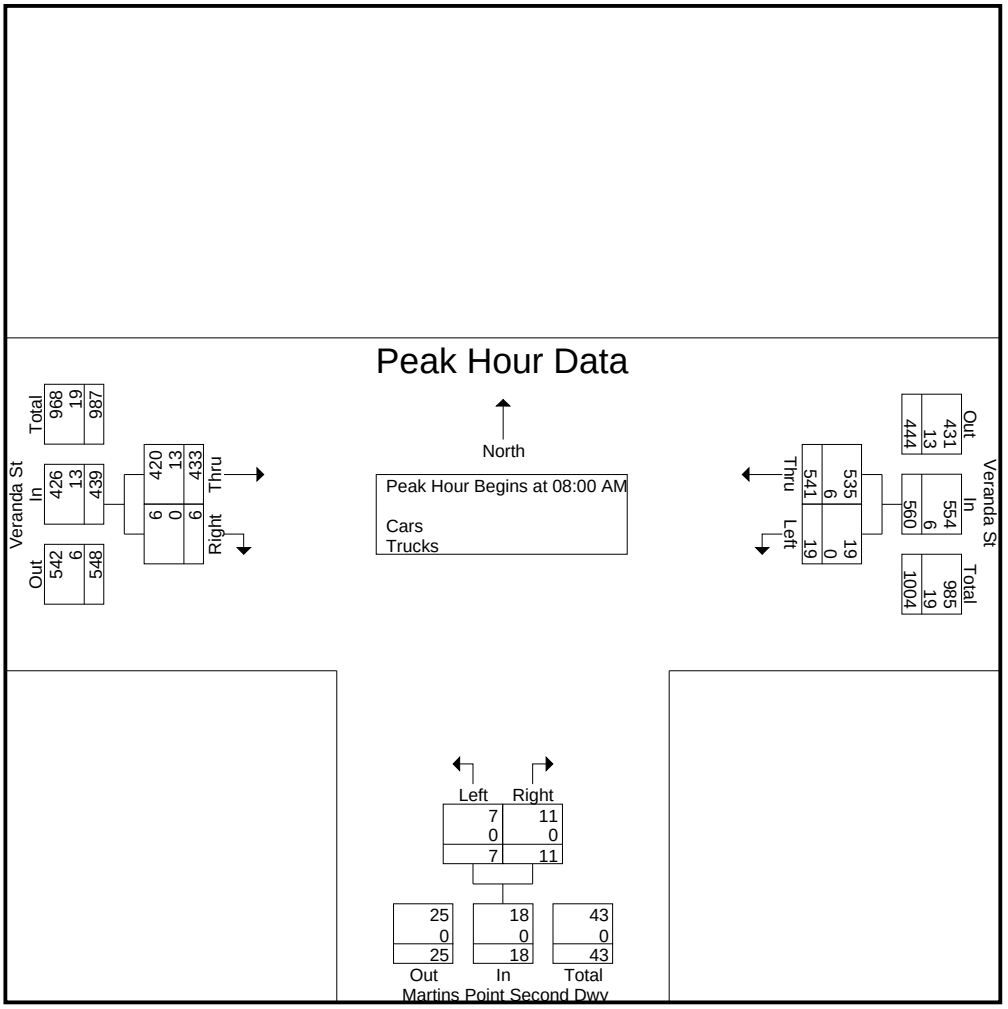

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:45 AM			08:00 AM			07:45 AM		
+0 mins.	4	132	136	1	1	2	**115**	0	**115**
+15 mins.	2	136	138	1	3	4	109	**3**	112
+30 mins.	**5**	127	132	2	**4**	**6**	110	1	111
+45 mins.	3	**153**	**156**	**3**	3	6	101	1	102
Total Volume	14	548	562	7	11	18	435	5	440
% App. Total	2.5	97.5		38.9	61.1		98.9	1.1	
PHF	.700	.895	.901	.583	.688	.750	.946	.417	.957
Cars	14	543	557	7	11	18	422	5	427
% Cars	100	99.1	99.1	100	100	100	97	100	97
Trucks	0	5	5	0	0	0	13	0	13
% Trucks	0	0.9	0.9	0	0	0	3	0	3

N/S Street : Martins Point Second Driveway
E/W Street : Veranda Street
City/State : Portland, ME
Weather : Clear

File Name : 10260004
Site Code : 10260004
Start Date : 5/25/2023
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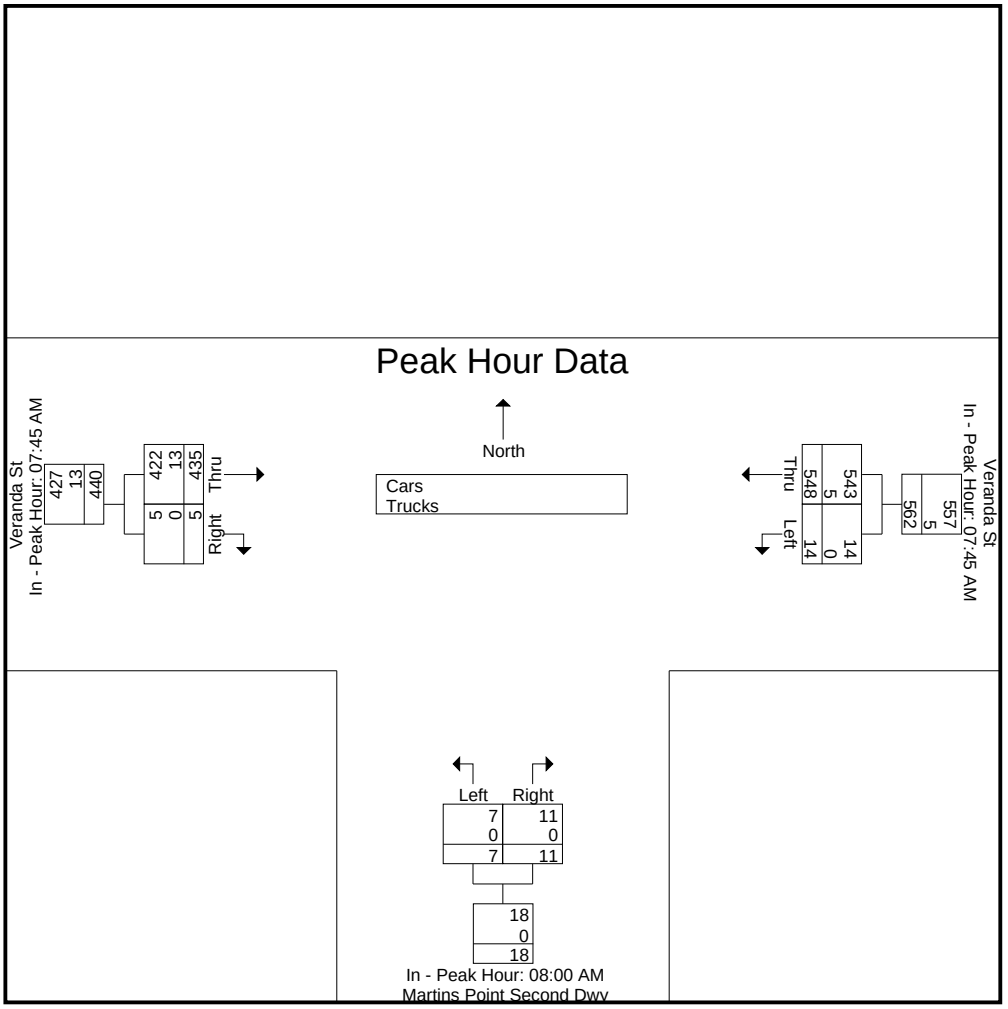

Accurate Counts

978-664-2565

N/S Street : Martins Point Second Driveway
E/W Street : Veranda Street
City/State : Portland, ME
Weather : Clear

File Name : 10260004
Site Code : 10260004
Start Date : 5/25/2023
Page No : 4

Groups Printed- Cars

	Veranda St From East		Martins Point Second Dwy From South		Veranda St From West		
Start Time	Left	Thru	Left	Right	Thru	Right	Int. Total
07:00 AM	2	69	0	0	48	0	119
07:15 AM	5	99	1	3	71	0	179
07:30 AM	8	103	0	0	74	1	186
07:45 AM	4	131	0	1	113	0	249
Total	19	402	1	4	306	1	733
08:00 AM	2	134	1	1	106	3	247
08:15 AM	5	126	1	3	107	1	243
08:30 AM	3	152	2	4	96	1	258
08:45 AM	9	123	3	3	111	1	250
Total	19	535	7	11	420	6	998
Grand Total	38	937	8	15	726	7	1731
Apprch %	3.9	96.1	34.8	65.2	99	1	
Total %	2.2	54.1	0.5	0.9	41.9	0.4	

	Veranda St From East			Martins Point Second Dwy From South			Veranda St From West			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 08:00 AM										
08:00 AM	2	134	136	1	1	2	106	**3**	109	247
08:15 AM	5	126	131	1	3	4	107	1	108	243
08:30 AM	3	**152**	**155**	2	**4**	**6**	96	1	97	**258**
08:45 AM	**9**	123	132	**3**	3	6	**111**	1	**112**	250
Total Volume	19	535	554	7	11	18	420	6	426	998
% App. Total	3.4	96.6		38.9	61.1		98.6	1.4		
PHF	.528	.880	.894	.583	.688	.750	.946	.500	.951	.967

Accurate Counts

978-664-2565

N/S Street : Martins Point Second Driveway
E/W Street : Veranda Street
City/State : Portland, ME
Weather : Clear

File Name : 10260004
Site Code : 10260004
Start Date : 5/25/2023
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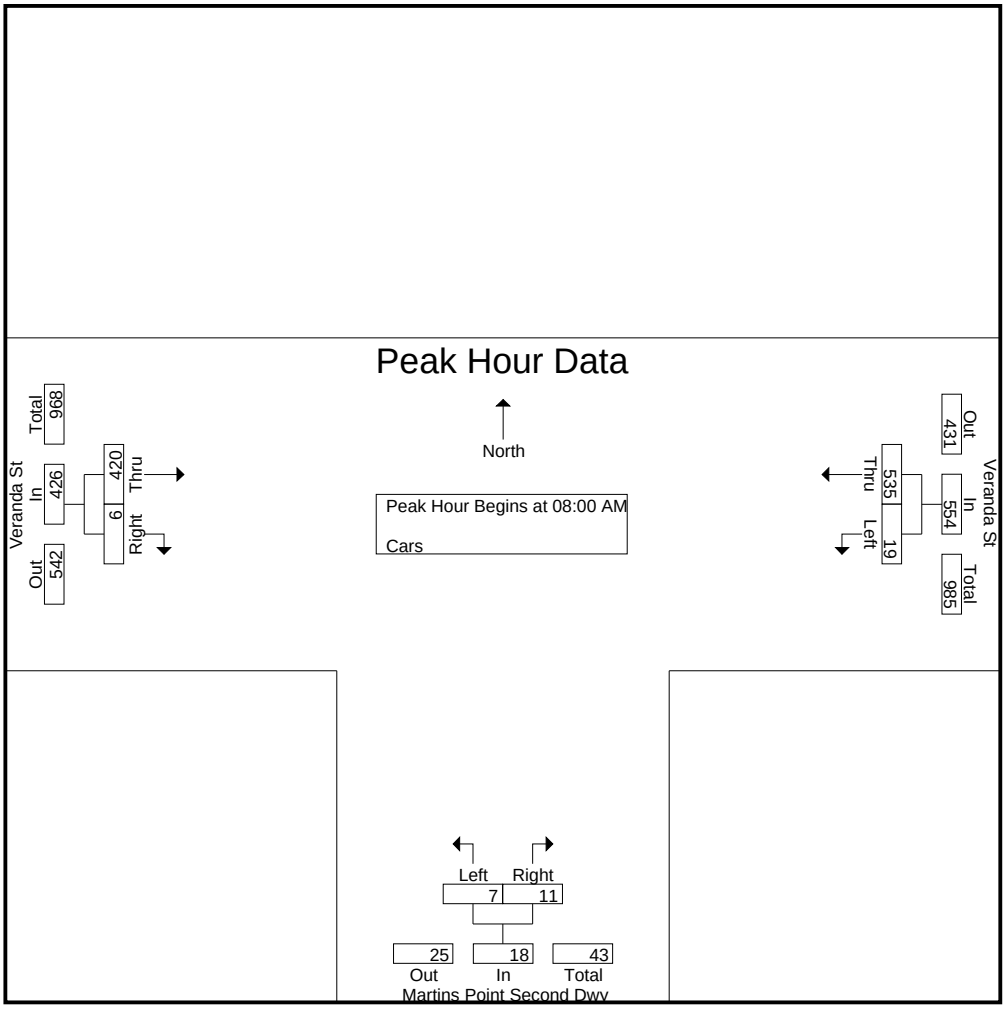

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:45 AM			08:00 AM			07:45 AM		
+0 mins.	4	131	135	1	1	2	**113**	0	**113**
+15 mins.	2	134	136	1	3	4	106	**3**	109
+30 mins.	**5**	126	131	2	**4**	**6**	107	1	108
+45 mins.	3	**152**	**155**	**3**	3	6	96	1	97
Total Volume	14	543	557	7	11	18	422	5	427
% App. Total	2.5	97.5		38.9	61.1		98.8	1.2	
PHF	.700	.893	.898	.583	.688	.750	.934	.417	.945

N/S Street : Martins Point Second Driveway
E/W Street : Veranda Street
City/State : Portland, ME
Weather : Clear

File Name : 10260004
Site Code : 10260004
Start Date : 5/25/2023
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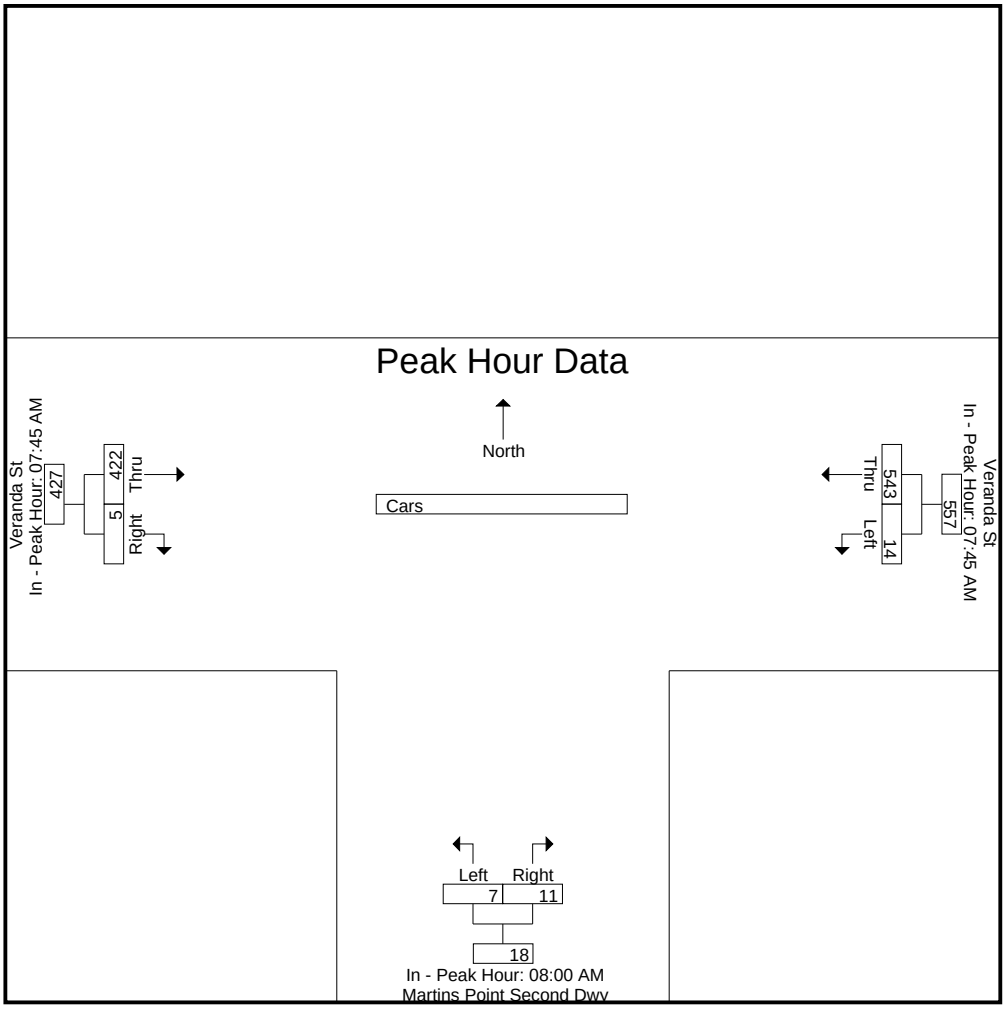

Accurate Counts

978-664-2565

N/S Street : Martins Point Second Driveway
E/W Street : Veranda Street
City/State : Portland, ME
Weather : Clear

File Name : 10260004
Site Code : 10260004
Start Date : 5/25/2023

Groups Printed- Trucks

	Veranda St From East		Martins Point Second Dwy From South		Veranda St From West		
Start Time	Left	Thru	Left	Right	Thru	Right	Int. Total
07:00 AM	0	1	0	0	1	0	2
07:15 AM	0	0	0	0	2	0	2
07:30 AM	0	1	0	0	2	0	3
07:45 AM	0	1	0	0	2	0	3
Total	0	3	0	0	7	0	10
08:00 AM	0	2	0	0	3	0	5
08:15 AM	0	1	0	0	3	0	4
08:30 AM	0	1	0	0	5	0	6
08:45 AM	0	2	0	0	2	0	4
Total	0	6	0	0	13	0	19
Grand Total	0	9	0	0	20	0	29
Apprch %	0	100	0	0	100	0	
Total %	0	31	0	0	69	0	

	Veranda St From East			Martins Point Second Dwy From South			Veranda St From West			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 08:00 AM										
08:00 AM	0	**2**	**2**	0	0	0	3	0	3	5
08:15 AM	0	1	1	0	0	0	3	0	3	4
08:30 AM	0	1	1	0	0	0	**5**	0	**5**	**6**
08:45 AM	0	2	2	0	0	0	2	0	2	4
Total Volume	0	6	6	0	0	0	13	0	13	19
% App. Total	0	100		0	0		100	0		
PHF	.000	.750	.750	.000	.000	.000	.650	.000	.650	.792

N/S Street : Martins Point Second Driveway
E/W Street : Veranda Street
City/State : Portland, ME
Weather : Clear

File Name : 10260004
Site Code : 10260004
Start Date : 5/25/2023
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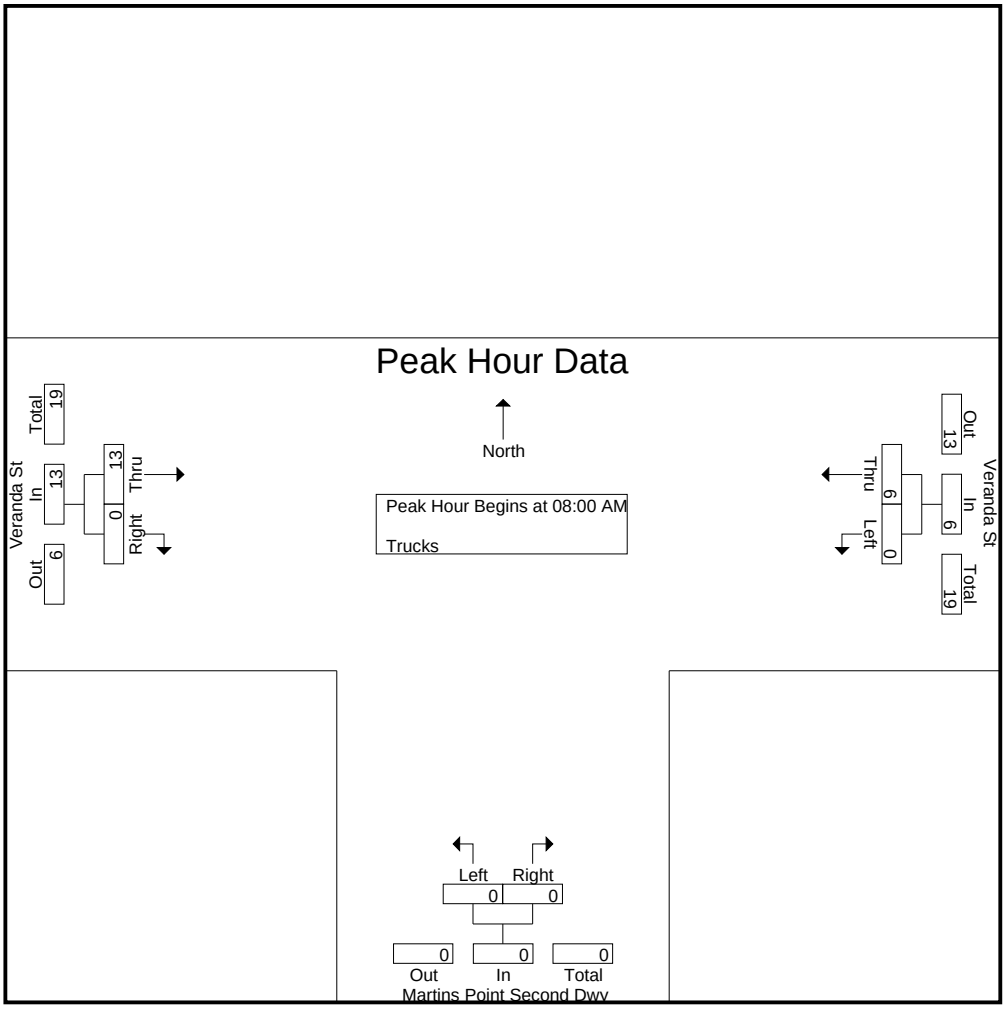

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	08:00 AM			07:00 AM			07:45 AM		
+0 mins.	0	**2**	**2**	0	0	0	2	0	2
+15 mins.	0	1	1	0	0	0	3	0	3
+30 mins.	0	1	1	0	0	0	3	0	3
+45 mins.	0	2	2	0	0	0	**5**	0	**5**
Total Volume	0	6	6	0	0	0	13	0	13
% App. Total	0	100		0	0		100	0	
PHF	.000	.750	.750	.000	.000	.000	.650	.000	.650

N/S Street : Martins Point Second Driveway
E/W Street : Veranda Street
City/State : Portland, ME
Weather : Clear

File Name : 10260004
Site Code : 10260004
Start Date : 5/25/2023
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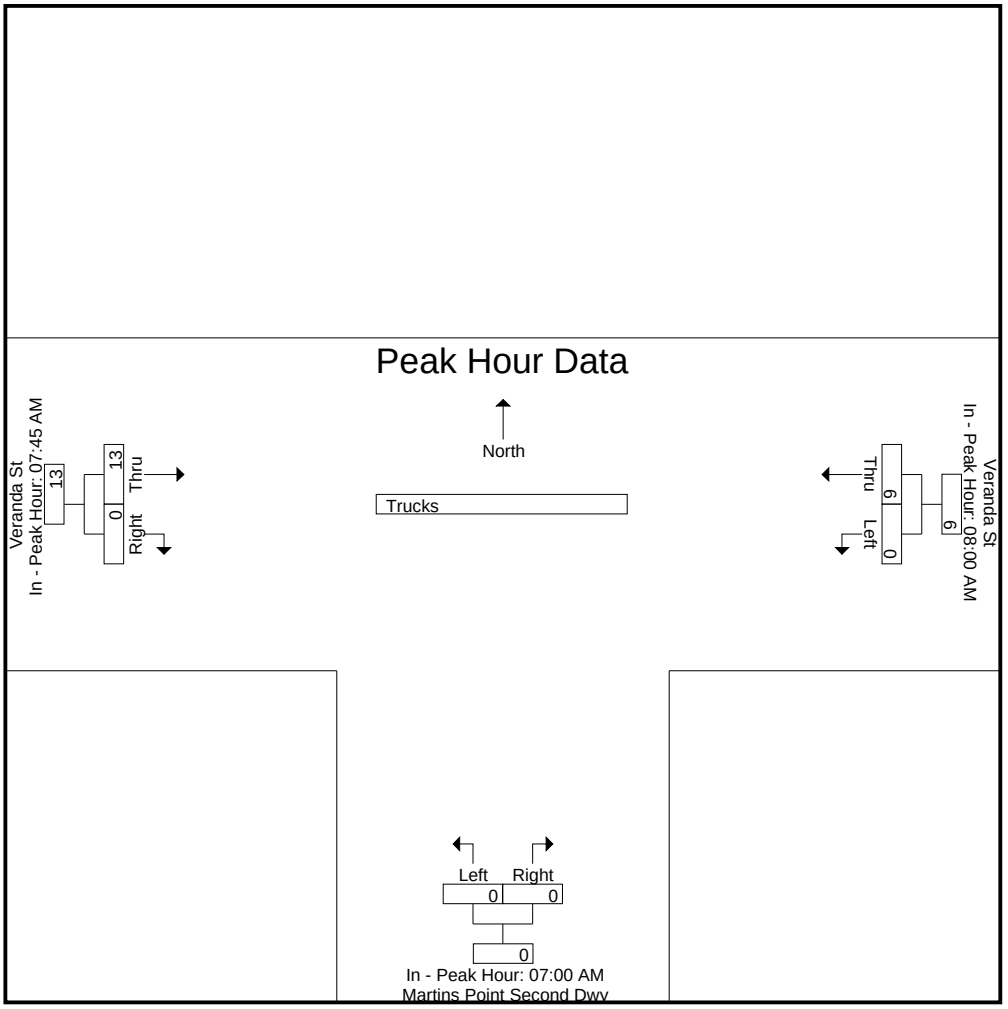

Accurate Counts

978-664-2565

N/S Street : Martins Point Second Driveway
E/W Street : Veranda Street
City/State : Portland, ME
Weather : Clear

File Name : 10260004
Site Code : 10260004
Start Date : 5/25/2023
Page No : 10

Groups Printed- Bikes Peds

	Veranda St From East			Martins Point Second Dwy From South			Veranda St From West					
Start Time	Left	Thru	Peds	Left	Right	Peds	Thru	Right	Peds	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	1	0	0	0	1	1	0	0	1	2	3
07:30 AM	0	1	0	0	0	0	1	0	0	0	2	2
07:45 AM	0	1	0	0	0	0	0	0	0	0	1	1
Total	0	3	0	0	0	1	2	0	0	1	5	6
08:00 AM	0	1	0	0	0	2	1	0	0	2	2	4
08:15 AM	0	1	0	0	0	0	0	0	1	1	1	2
08:30 AM	0	2	0	0	0	5	1	0	0	5	3	8
08:45 AM	0	0	0	0	0	4	0	0	0	4	0	4
Total	0	4	0	0	0	11	2	0	1	12	6	18
Grand Total	0	7	0	0	0	12	4	0	1	13	11	24
Apprch %	0	100		0	0		100	0				
Total %	0	63.6		0	0		36.4	0		54.2	45.8	

	Veranda St From East			Martins Point Second Dwy From South			Veranda St From West			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:15 AM										
07:15 AM	0	**1**	**1**	0	0	0	**1**	0	**1**	**2**
07:30 AM	0	1	1	0	0	0	1	0	1	2
07:45 AM	0	1	1	0	0	0	0	0	0	1
08:00 AM	0	1	1	0	0	0	1	0	1	2
Total Volume	0	4	4	0	0	0	3	0	3	7
% App. Total	0	100		0	0		100	0		
PHF	.000	1.00	1.00	.000	.000	.000	.750	.000	.750	.875

N/S Street : Martins Point Second Driveway
E/W Street : Veranda Street
City/State : Portland, ME
Weather : Clear

File Name : 10260004
Site Code : 10260004
Start Date : 5/25/2023
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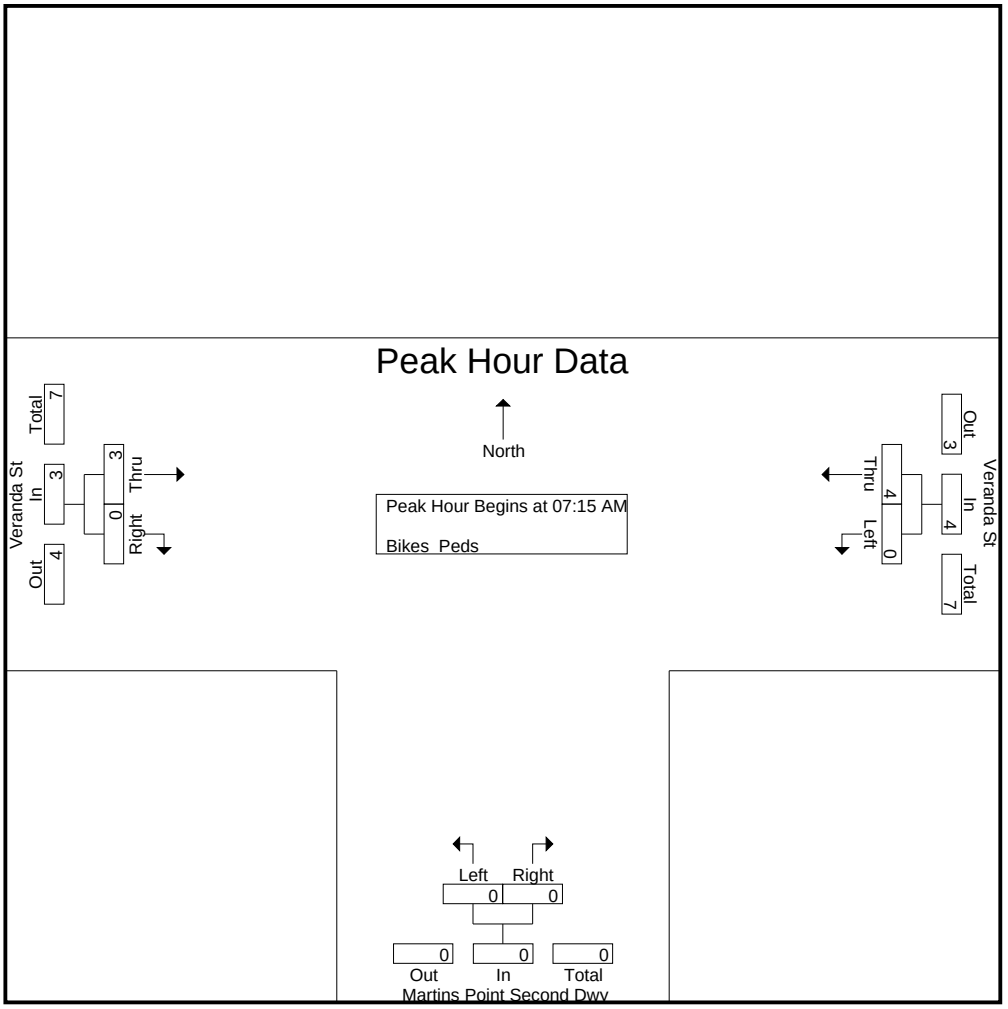

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:45 AM			07:00 AM			07:15 AM		
+0 mins.	0	1	1	0	0	0	**1**	0	**1**
+15 mins.	0	1	1	0	0	0	1	0	1
+30 mins.	0	1	1	0	0	0	0	0	0
+45 mins.	0	**2**	**2**	0	0	0	1	0	1
Total Volume	0	5	5	0	0	0	3	0	3
% App. Total	0	100		0	0		100	0	
PHF	.000	.625	.625	.000	.000	.000	.750	.000	.750

N/S Street : Martins Point Second Driveway
E/W Street : Veranda Street
City/State : Portland, ME
Weather : Clear

File Name : 10260004
Site Code : 10260004
Start Date : 5/25/2023
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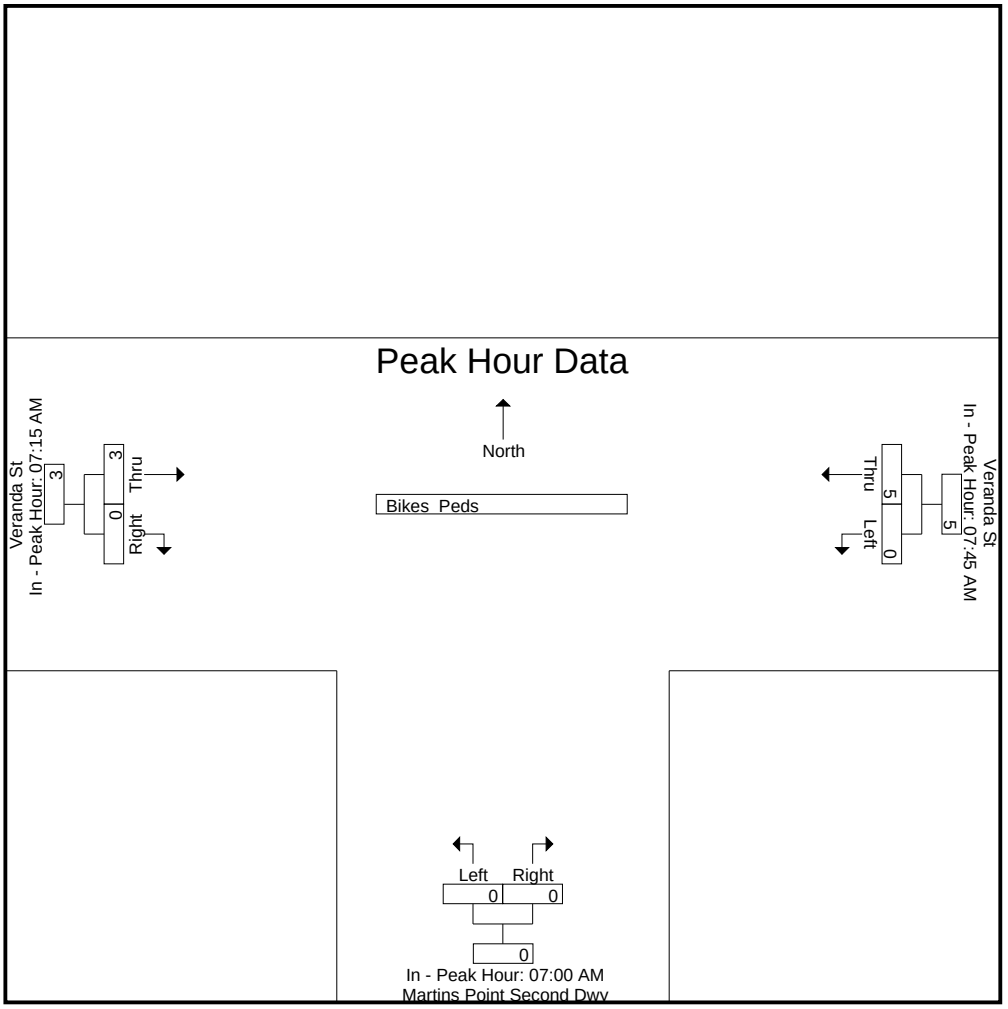


Accurate Counts

978-664-2565

N/S Street : Martins Point Second Driveway
E/W Street : Veranda Street
City/State : Portland, ME
Weather : Clear

File Name : 10260004
Site Code : 10260004
Start Date : 5/25/2023
Page No : 1

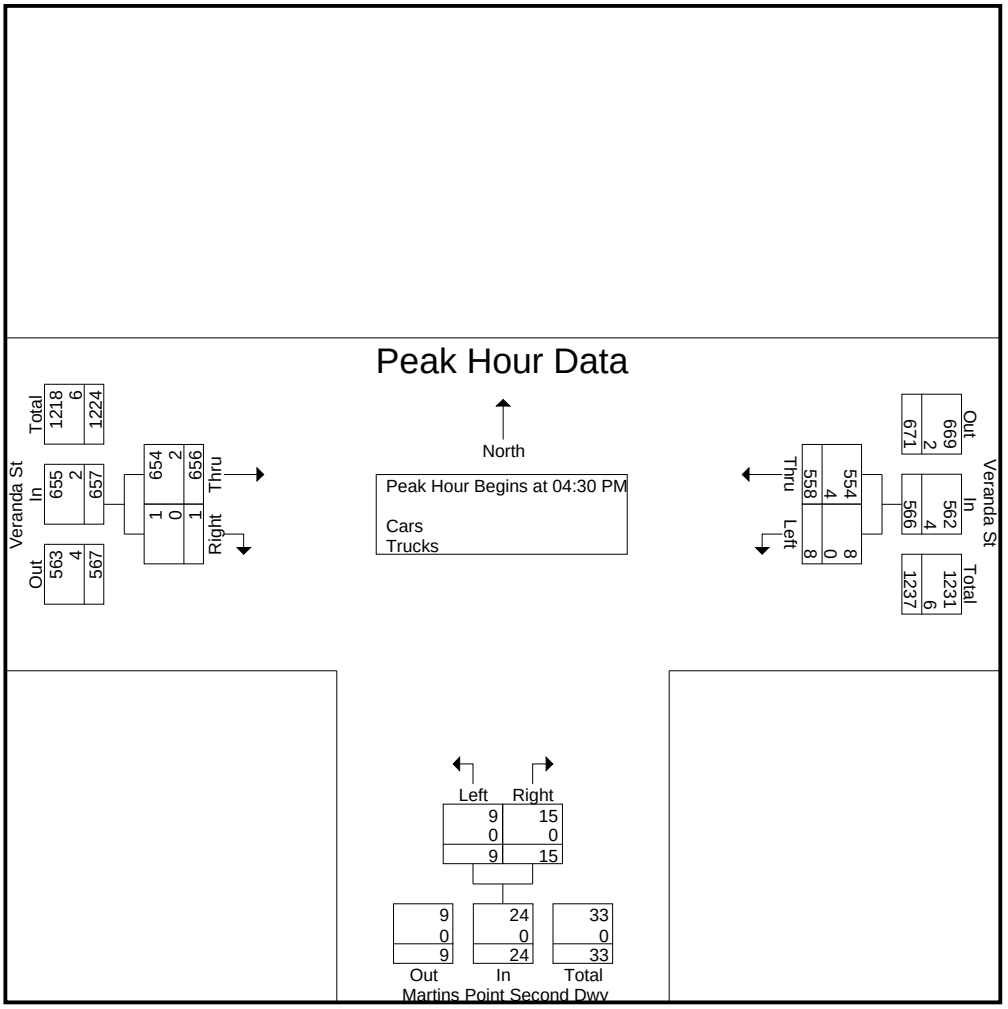
Groups Printed- Cars - Trucks

	Veranda St From East		Martins Point Second Dwy From South		Veranda St From West		
Start Time	Left	Thru	Left	Right	Thru	Right	Int. Total
03:00 PM	3	156	3	3	141	0	306
03:15 PM	4	133	3	5	131	2	278
03:30 PM	4	141	4	8	149	1	307
03:45 PM	1	124	1	1	153	0	280
Total	12	554	11	17	574	3	1171
04:00 PM	2	137	4	5	148	0	296
04:15 PM	2	121	4	0	147	2	276
04:30 PM	2	152	3	8	170	0	335
04:45 PM	3	135	3	3	156	0	300
Total	9	545	14	16	621	2	1207
05:00 PM	2	139	2	2	180	1	326
05:15 PM	1	132	1	2	150	0	286
05:30 PM	3	114	7	3	144	3	274
05:45 PM	1	94	2	1	126	0	224
Total	7	479	12	8	600	4	1110
Grand Total	28	1578	37	41	1795	9	3488
Apprch %	1.7	98.3	47.4	52.6	99.5	0.5	
Total %	0.8	45.2	1.1	1.2	51.5	0.3	
Cars	28	1566	37	41	1791	9	3472
% Cars	100	99.2	100	100	99.8	100	99.5
Trucks	0	12	0	0	4	0	16
% Trucks	0	0.8	0	0	0.2	0	0.5

	Veranda St From East			Martins Point Second Dwy From South			Veranda St From West			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:30 PM										
04:30 PM	2	**152**	**154**	**3**	**8**	**11**	170	0	170	**335**
04:45 PM	**3**	135	138	3	3	6	156	0	156	300
05:00 PM	2	139	141	2	2	4	**180**	**1**	**181**	326
05:15 PM	1	132	133	1	2	3	150	0	150	286
Total Volume	8	558	566	9	15	24	656	1	657	1247
% App. Total	1.4	98.6		37.5	62.5		99.8	0.2		
PHF	.667	.918	.919	.750	.469	.545	.911	.250	.907	.931
Cars	8	554	562	9	15	24	654	1	655	1241
% Cars	100	99.3	99.3	100	100	100	99.7	100	99.7	99.5
Trucks	0	4	4	0	0	0	2	0	2	6
% Trucks	0	0.7	0.7	0	0	0	0.3	0	0.3	0.5

N/S Street : Martins Point Second Driveway
E/W Street : Veranda Street
City/State : Portland, ME
Weather : Clear

File Name : 10260004
Site Code : 10260004
Start Date : 5/25/2023
Page No : 2

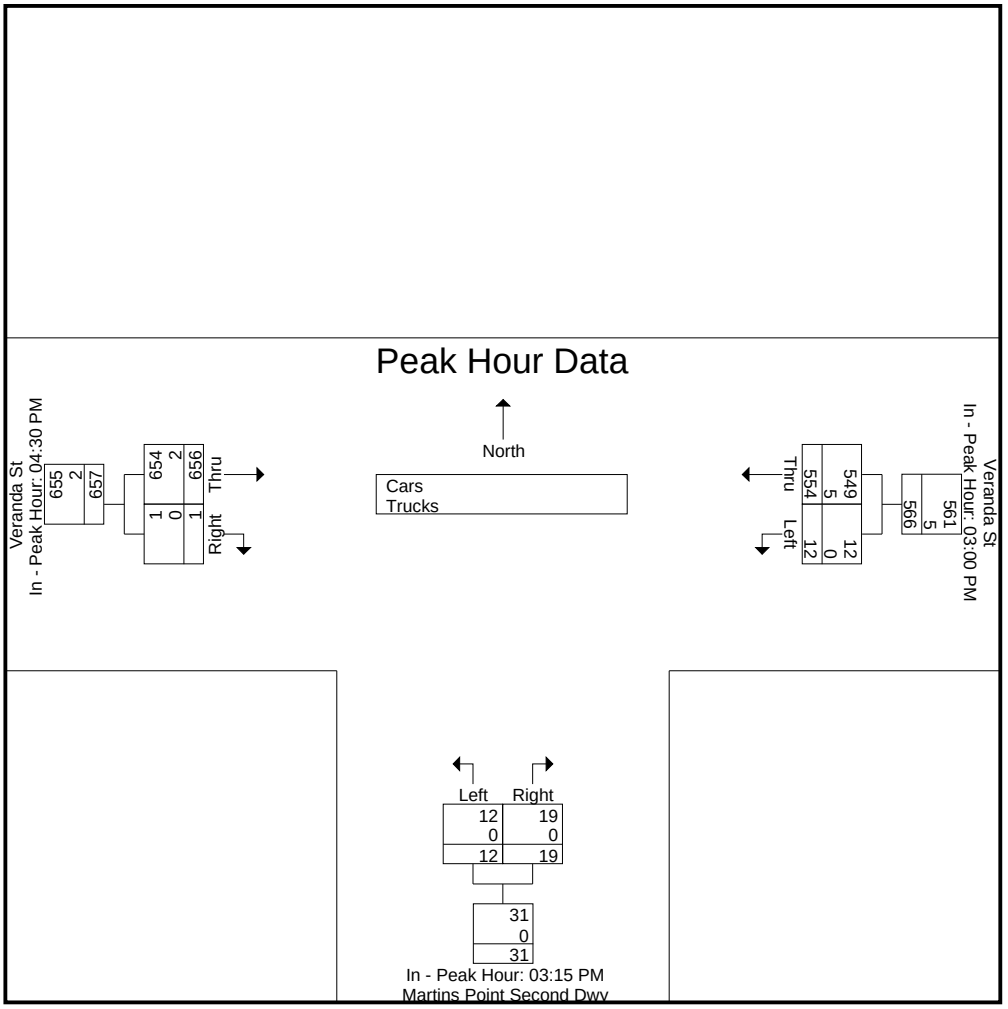


Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	03:00 PM			03:15 PM			04:30 PM		
+0 mins.	3	**156**	**159**	3	5	8	170	0	170
+15 mins.	**4**	133	137	**4**	**8**	**12**	156	0	156
+30 mins.	4	141	145	1	1	2	**180**	**1**	**181**
+45 mins.	1	124	125	4	5	9	150	0	150
Total Volume	12	554	566	12	19	31	656	1	657
% App. Total	2.1	97.9		38.7	61.3		99.8	0.2	
PHF	.750	.888	.890	.750	.594	.646	.911	.250	.907
Cars	12	549	561	12	19	31	654	1	655
% Cars	100	99.1	99.1	100	100	100	99.7	100	99.7
Trucks	0	5	5	0	0	0	2	0	2
% Trucks	0	0.9	0.9	0	0	0	0.3	0	0.3

N/S Street : Martins Point Second Driveway
E/W Street : Veranda Street
City/State : Portland, ME
Weather : Clear

File Name : 10260004
Site Code : 10260004
Start Date : 5/25/2023
Page No : 3



Accurate Counts

978-664-2565

N/S Street : Martins Point Second Driveway
E/W Street : Veranda Street
City/State : Portland, ME
Weather : Clear

File Name : 10260004
Site Code : 10260004
Start Date : 5/25/2023
Page No : 4

Groups Printed- Cars

	Veranda St From East		Martins Point Second Dwy From South		Veranda St From West		
Start Time	Left	Thru	Left	Right	Thru	Right	Int. Total
03:00 PM	3	155	3	3	141	0	305
03:15 PM	4	130	3	5	131	2	275
03:30 PM	4	141	4	8	149	1	307
03:45 PM	1	123	1	1	152	0	278
Total	12	549	11	17	573	3	1165
04:00 PM	2	135	4	5	148	0	294
04:15 PM	2	120	4	0	147	2	275
04:30 PM	2	151	3	8	170	0	334
04:45 PM	3	135	3	3	154	0	298
Total	9	541	14	16	619	2	1201
05:00 PM	2	139	2	2	180	1	326
05:15 PM	1	129	1	2	150	0	283
05:30 PM	3	114	7	3	144	3	274
05:45 PM	1	94	2	1	125	0	223
Total	7	476	12	8	599	4	1106
Grand Total	28	1566	37	41	1791	9	3472
Apprch %	1.8	98.2	47.4	52.6	99.5	0.5	
Total %	0.8	45.1	1.1	1.2	51.6	0.3	

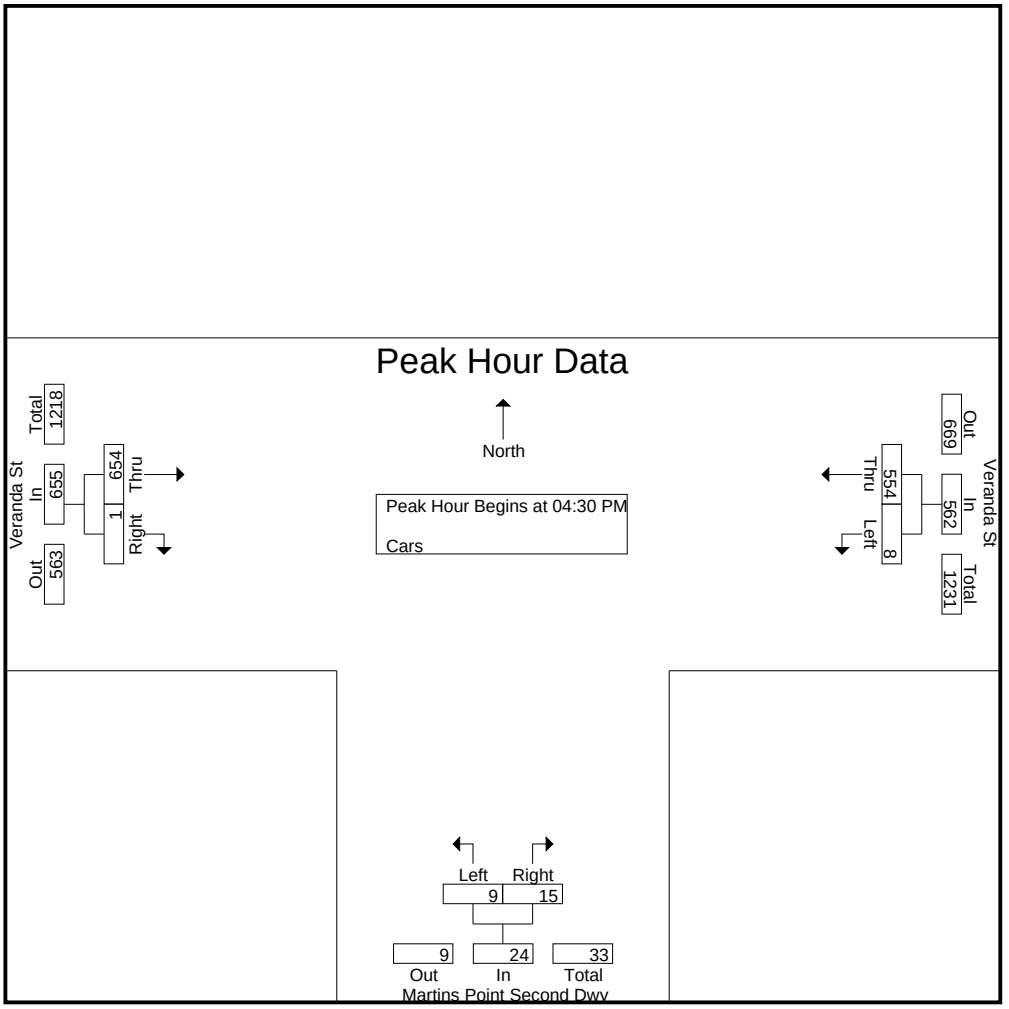
	Veranda St From East			Martins Point Second Dwy From South			Veranda St From West			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:30 PM										
04:30 PM	2	**151**	**153**	**3**	**8**	**11**	170	0	170	**334**
04:45 PM	**3**	135	138	3	3	6	154	0	154	298
05:00 PM	2	139	141	2	2	4	**180**	**1**	**181**	326
05:15 PM	1	129	130	1	2	3	150	0	150	283
Total Volume	8	554	562	9	15	24	654	1	655	1241
% App. Total	1.4	98.6		37.5	62.5		99.8	0.2		
PHF	.667	.917	.918	.750	.469	.545	.908	.250	.905	.929

Accurate Counts

978-664-2565

N/S Street : Martins Point Second Driveway
E/W Street : Veranda Street
City/State : Portland, ME
Weather : Clear

File Name : 10260004
Site Code : 10260004
Start Date : 5/25/2023
Page No : 5

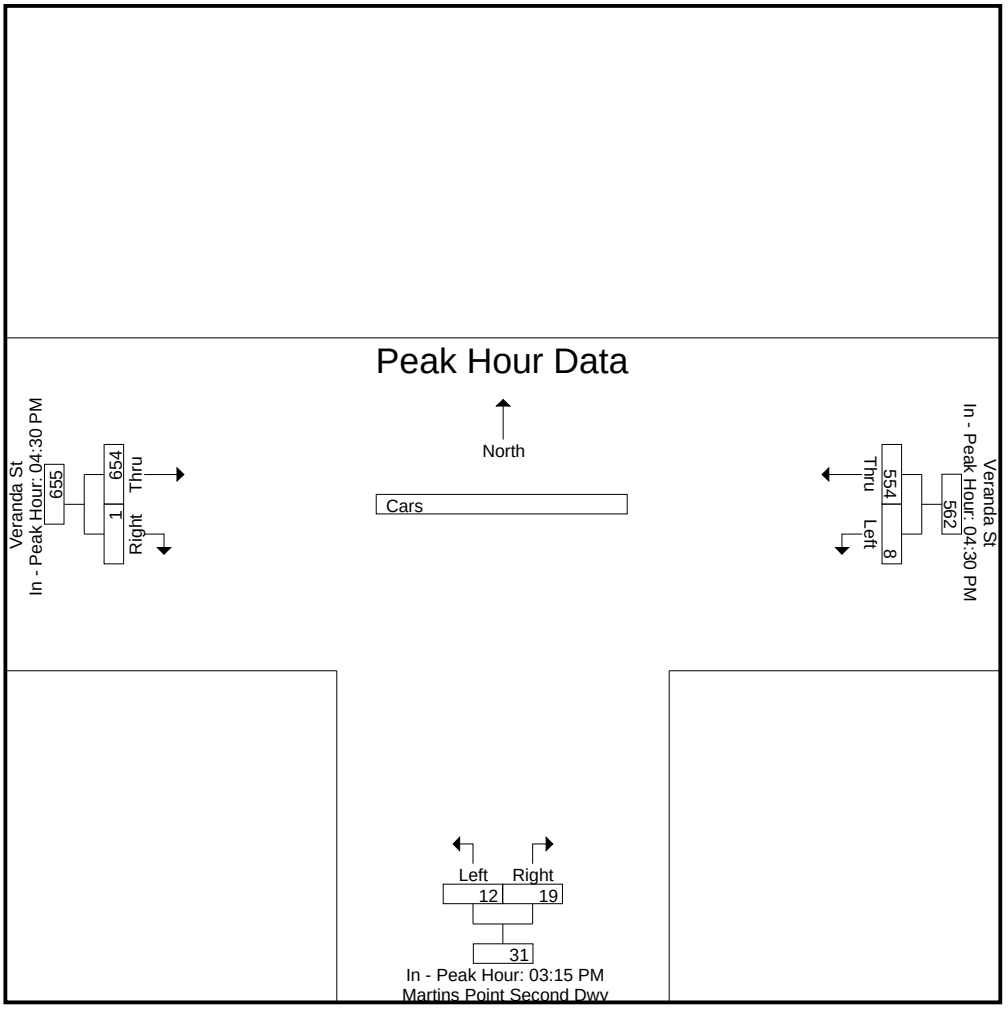


Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM			03:15 PM			04:30 PM		
+0 mins.	2	**151**	**153**	3	5	8	170	0	170
+15 mins.	**3**	135	138	**4**	**8**	**12**	154	0	154
+30 mins.	2	139	141	1	1	2	**180**	**1**	**181**
+45 mins.	1	129	130	4	5	9	150	0	150
Total Volume	8	554	562	12	19	31	654	1	655
% App. Total	1.4	98.6		38.7	61.3		99.8	0.2	
PHF	.667	.917	.918	.750	.594	.646	.908	.250	.905

N/S Street : Martins Point Second Driveway
E/W Street : Veranda Street
City/State : Portland, ME
Weather : Clear

File Name : 10260004
Site Code : 10260004
Start Date : 5/25/2023
Page No : 6



Accurate Counts

978-664-2565

N/S Street : Martins Point Second Driveway
E/W Street : Veranda Street
City/State : Portland, ME
Weather : Clear

File Name : 10260004
Site Code : 10260004
Start Date : 5/25/2023
Page No : 7

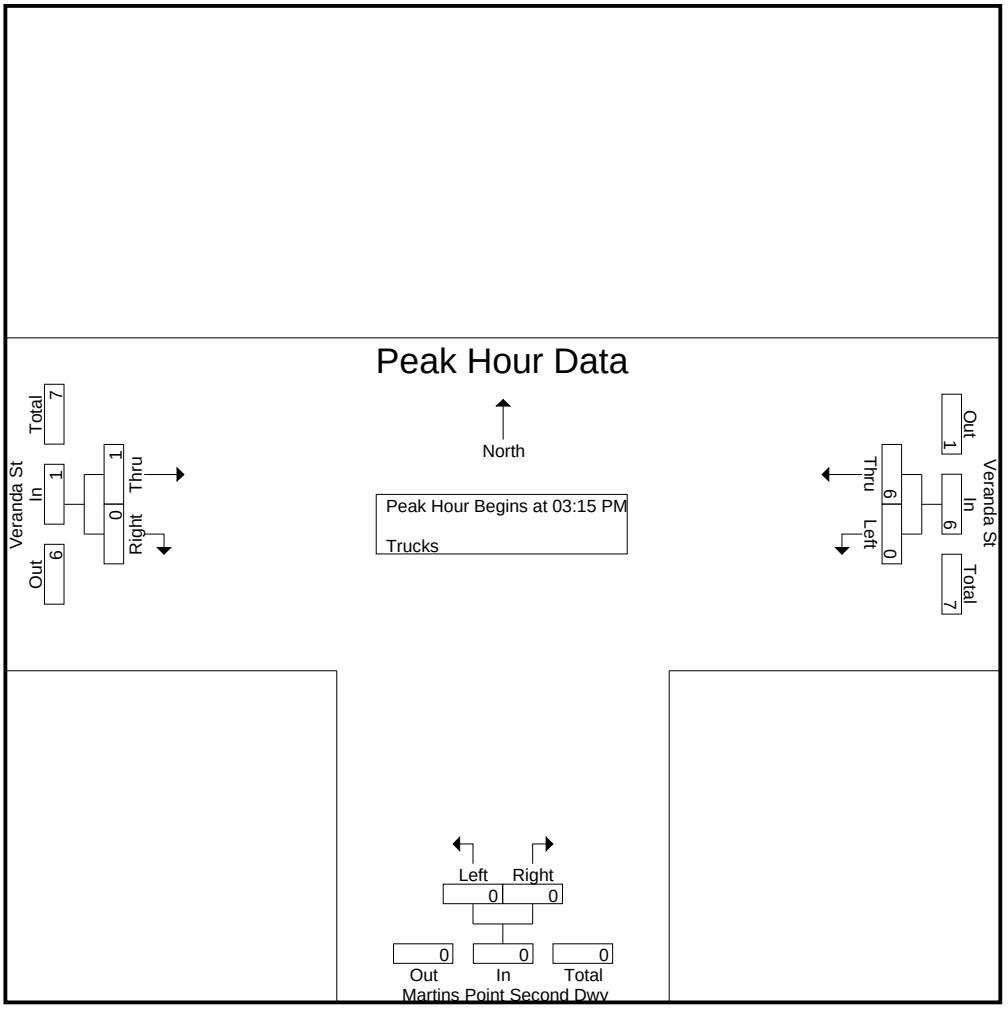
Groups Printed- Trucks

	Veranda St From East		Martins Point Second Dwy From South		Veranda St From West		
Start Time	Left	Thru	Left	Right	Thru	Right	Int. Total
03:00 PM	0	1	0	0	0	0	1
03:15 PM	0	3	0	0	0	0	3
03:30 PM	0	0	0	0	0	0	0
03:45 PM	0	1	0	0	1	0	2
Total	0	5	0	0	1	0	6
04:00 PM	0	2	0	0	0	0	2
04:15 PM	0	1	0	0	0	0	1
04:30 PM	0	1	0	0	0	0	1
04:45 PM	0	0	0	0	2	0	2
Total	0	4	0	0	2	0	6
05:00 PM	0	0	0	0	0	0	0
05:15 PM	0	3	0	0	0	0	3
05:30 PM	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	1	0	1
Total	0	3	0	0	1	0	4
Grand Total	0	12	0	0	4	0	16
Apprch %	0	100	0	0	100	0	
Total %	0	75	0	0	25	0	

	Veranda St From East			Martins Point Second Dwy From South			Veranda St From West			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 03:15 PM										
03:15 PM	0	**3**	**3**	0	0	0	0	0	0	**3**
03:30 PM	0	0	0	0	0	0	0	0	0	0
03:45 PM	0	1	1	0	0	0	**1**	0	**1**	2
04:00 PM	0	2	2	0	0	0	0	0	0	2
Total Volume	0	6	6	0	0	0	1	0	1	7
% App. Total	0	100		0	0		100	0		
PHF	.000	.500	.500	.000	.000	.000	.250	.000	.250	.583

N/S Street : Martins Point Second Driveway
E/W Street : Veranda Street
City/State : Portland, ME
Weather : Clear

File Name : 10260004
Site Code : 10260004
Start Date : 5/25/2023
Page No : 8

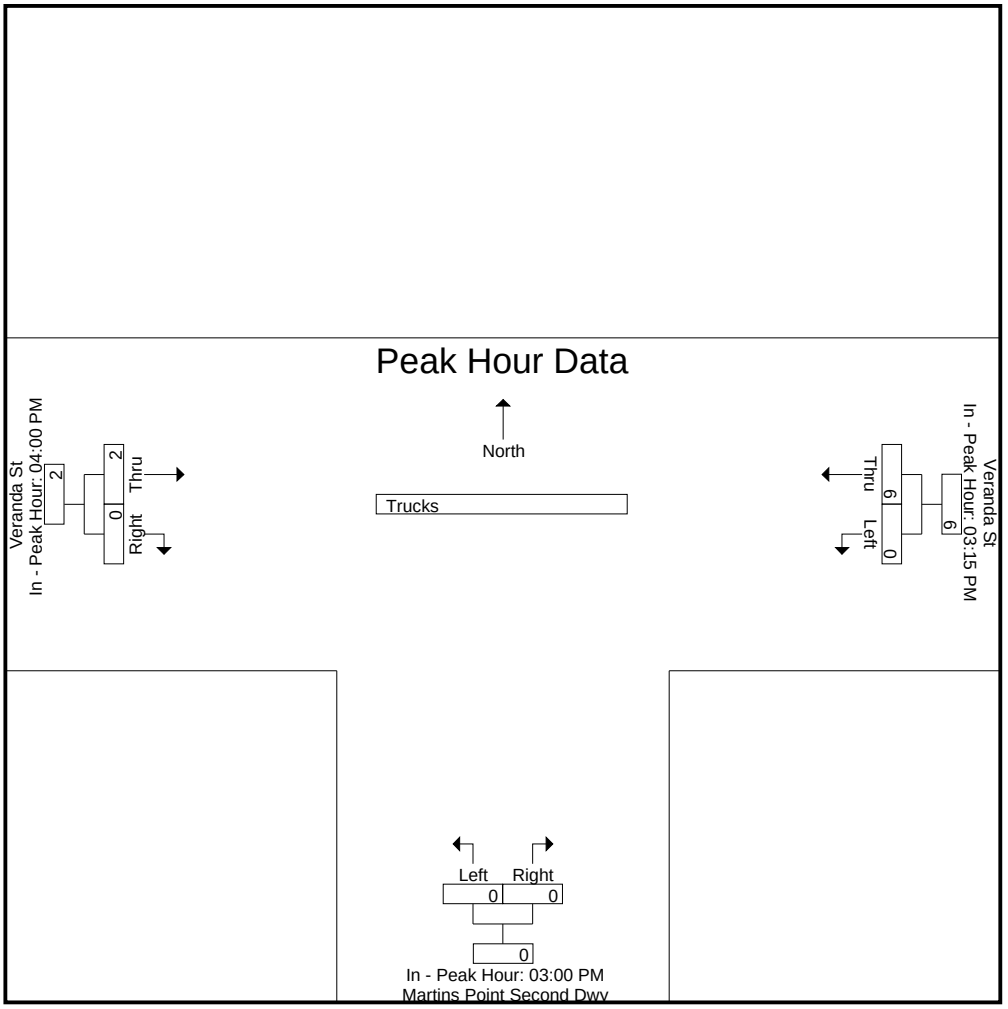


Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	03:15 PM			03:00 PM			04:00 PM		
+0 mins.	0	**3**	**3**	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0
+30 mins.	0	1	1	0	0	0	0	0	0
+45 mins.	0	2	2	0	0	0	**2**	0	**2**
Total Volume	0	6	6	0	0	0	2	0	2
% App. Total	0	100		0	0		100	0	
PHF	.000	.500	.500	.000	.000	.000	.250	.000	.250

N/S Street : Martins Point Second Driveway
E/W Street : Veranda Street
City/State : Portland, ME
Weather : Clear

File Name : 10260004
Site Code : 10260004
Start Date : 5/25/2023
Page No : 9



Accurate Counts

978-664-2565

N/S Street : Martins Point Second Driveway
E/W Street : Veranda Street
City/State : Portland, ME
Weather : Clear

File Name : 10260004
Site Code : 10260004
Start Date : 5/25/2023
Page No : 10

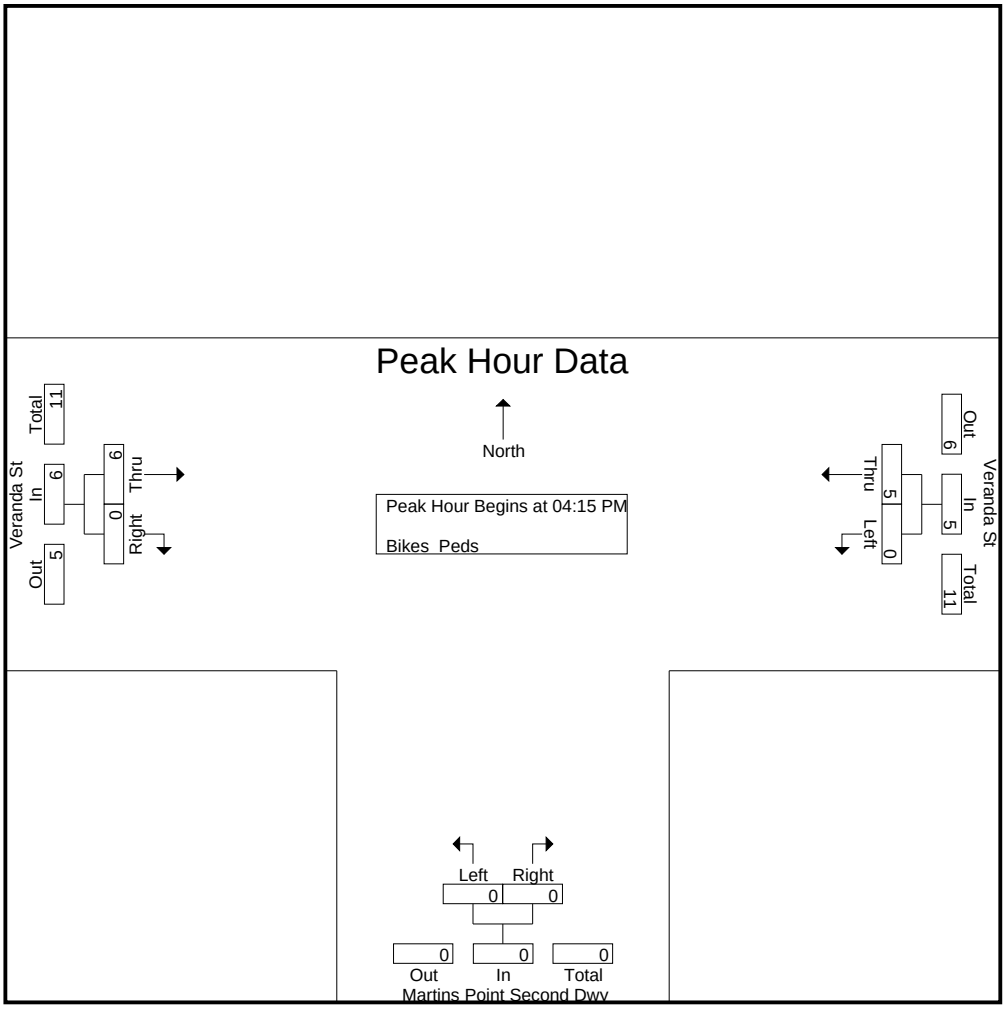
Groups Printed- Bikes Peds

	Veranda St From East			Martins Point Second Dwy From South			Veranda St From West					
Start Time	Left	Thru	Peds	Left	Right	Peds	Thru	Right	Peds	Exclu. Total	Inclu. Total	Int. Total
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
03:15 PM	0	0	0	0	0	1	0	0	0	1	0	1
03:30 PM	0	0	0	0	0	1	2	0	0	1	2	3
03:45 PM	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	2	2	0	0	2	2	4
04:00 PM	0	1	0	0	0	0	2	0	0	0	3	3
04:15 PM	0	2	0	0	0	0	0	0	0	0	2	2
04:30 PM	0	1	0	0	0	0	1	0	0	0	2	2
04:45 PM	0	0	0	0	0	1	1	0	0	1	1	2
Total	0	4	0	0	0	1	4	0	0	1	8	9
05:00 PM	0	2	0	0	0	1	4	0	0	1	6	7
05:15 PM	0	0	0	0	0	1	1	0	0	1	1	2
05:30 PM	0	1	0	0	0	1	0	0	1	2	1	3
05:45 PM	0	0	0	0	0	1	0	0	0	1	0	1
Total	0	3	0	0	0	4	5	0	1	5	8	13
Grand Total	0	7	0	0	0	7	11	0	1	8	18	26
Apprch %	0	100		0	0		100	0				
Total %	0	38.9		0	0		61.1	0		30.8	69.2	

	Veranda St From East			Martins Point Second Dwy From South			Veranda St From West			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:15 PM										
04:15 PM	0	**2**	**2**	0	0	0	0	0	0	2
04:30 PM	0	1	1	0	0	0	1	0	1	2
04:45 PM	0	0	0	0	0	0	1	0	1	1
05:00 PM	0	2	2	0	0	0	**4**	0	**4**	**6**
Total Volume	0	5	5	0	0	0	6	0	6	11
% App. Total	0	100		0	0		100	0		
PHF	.000	.625	.625	.000	.000	.000	.375	.000	.375	.458

N/S Street : Martins Point Second Driveway
E/W Street : Veranda Street
City/State : Portland, ME
Weather : Clear

File Name : 10260004
Site Code : 10260004
Start Date : 5/25/2023
Page No : 11

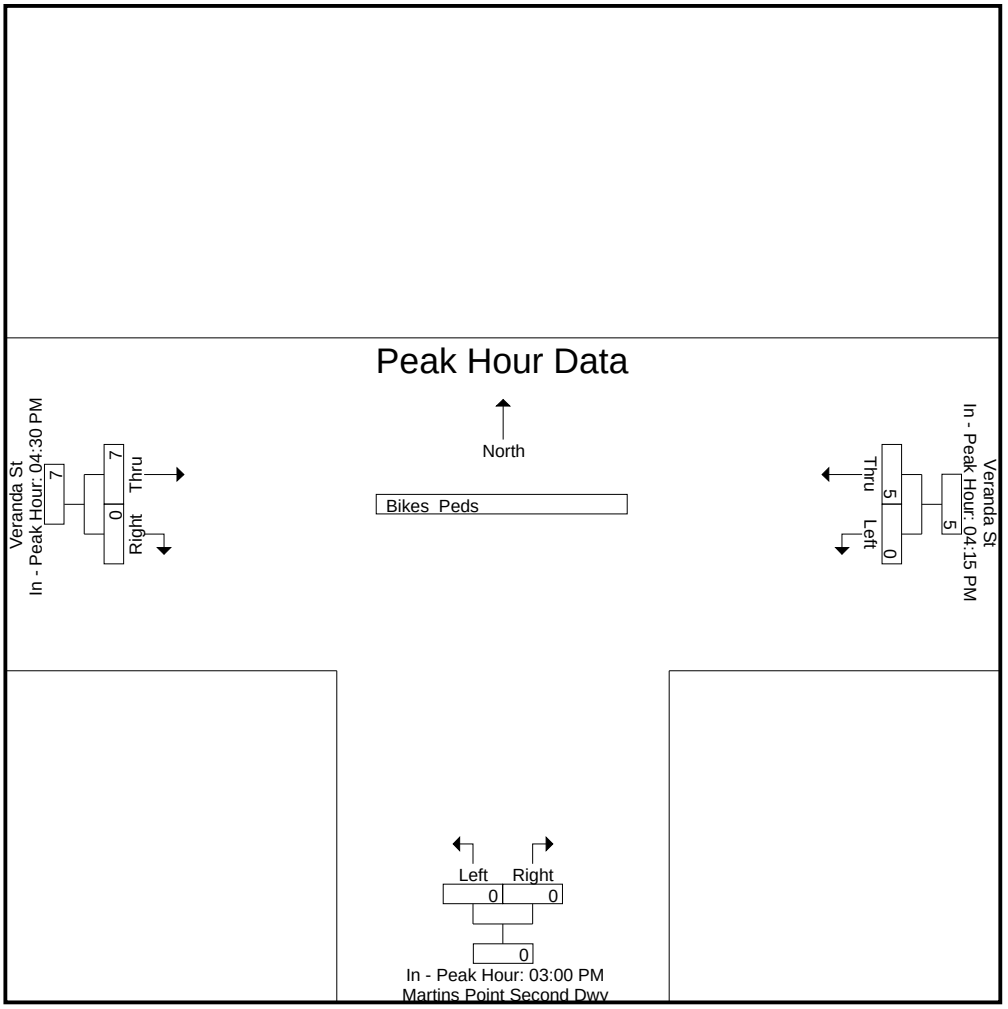


Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:15 PM			03:00 PM			04:30 PM		
+0 mins.	0	**2**	**2**	0	0	0	1	0	1
+15 mins.	0	1	1	0	0	0	1	0	1
+30 mins.	0	0	0	0	0	0	**4**	0	**4**
+45 mins.	0	2	2	0	0	0	1	0	1
Total Volume	0	5	5	0	0	0	7	0	7
% App. Total	0	100		0	0		100	0	
PHF	.000	.625	.625	.000	.000	.000	.438	.000	.438

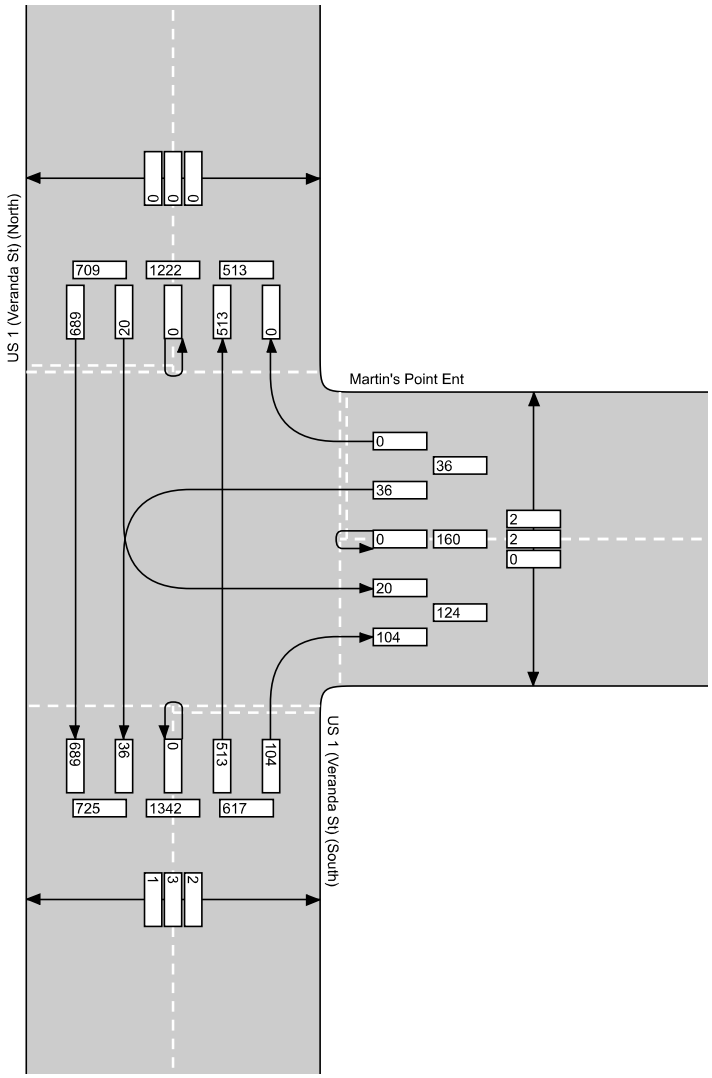
N/S Street : Martins Point Second Driveway
E/W Street : Veranda Street
City/State : Portland, ME
Weather : Clear

File Name : 10260004
Site Code : 10260004
Start Date : 5/25/2023
Page No : 12



Diagram

MAINE_DOT_TM - 000005170314 - US 1 (VERANDA ST), MARTINS POINT S ENT, 17/05/2017 - Wednesday, May 17, 2017



Time Period:

- ○ All times
- ◉ AM Peak Hour:08:00 - 09:00
- ○ PM Peak Hour:16:45 - 17:45
- ○ Overall Peak Hour:16:45 - 17:45
- ○ Custom: 06:00 - 18:00

Traffic Bins:

- ☑ Mcl
- ☑ Car
- ☑ LGV
- ☑ Bus
- ☑ SUT
- ☑ Semis
- ☐ Bicycle

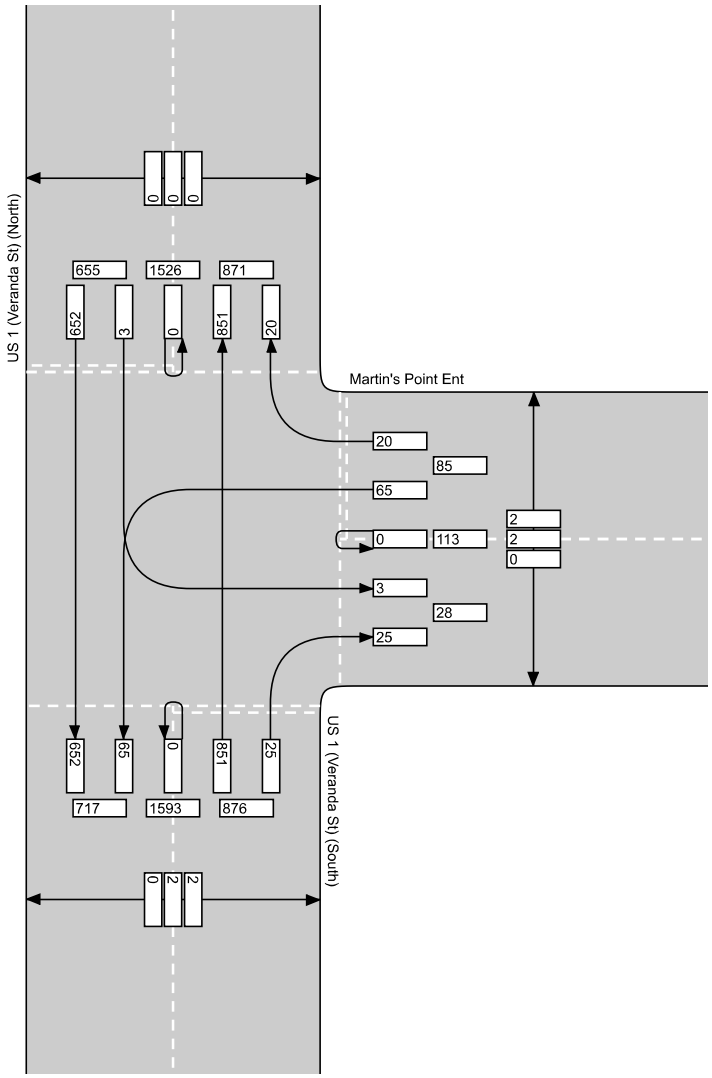
Crossing Bins:

- ☑ Bicycle
- ☑ Ped

Traffic total: 1362

Diagram

MAINE_DOT_TM - 000005170314 - US 1 (VERANDA ST), MARTINS POINT S ENT, 17/05/2017 - Wednesday, May 17, 2017



Time Period:

- ○ All times
- ○ AM Peak Hour:08:00 - 09:00
- ◉ PM Peak Hour:16:45 - 17:45
- ○ Overall Peak Hour:16:45 - 17:45
- ○ Custom: 06:00 - 18:00

Traffic Bins:

- ☑ Mcl
- ☑ Car
- ☑ LGV
- ☑ Bus
- ☑ SUT
- ☑ Semis
- ☐ Bicycle

Crossing Bins:

- ☑ Bicycle
- ☑ Ped

Traffic total: 1616

Appendix C

MaineDOT Crash Data

Crash Summary Report

Report Selections and Input Parameters

REPORT SELECTIONS

☑ **Crash Summary I** ☐ **Section Detail** ☑ **Crash Summary II** ☐ **1320 Public** ☐ **1320 Private** ☐ **1320 Summary**

REPORT DESCRIPTION

Portland
Veranda St. from Acadia/Fairfield St. to Falmouth TL

REPORT PARAMETERS

Year 2020, Start Month 1 through Year 2022 End Month: 12

Route: **0560753**	Start Node: **17614**	Start Offset: **0**	☐ **Exclude First Node**
	End Node: **60334**	End Offset: **0**	☐ **Exclude Last Node**
Route: **0001S**	Start Node: **74668**	Start Offset: **0**	☑ **Exclude First Node**
	End Node: **60334**	End Offset: **0**	☑ **Exclude Last Node**
Route: **0001X**	Start Node: **74668**	Start Offset: **0**	☐ **Exclude First Node**
	End Node: **15788**	End Offset: **0**	☐ **Exclude Last Node**

Crash Summary I

Nodes

Node	Route - MP	Node Description	U/R	Total Crashes	Injury Crashes K	A	B	C	PD	Percent Injury	Annual M Ent-Veh	Crash Rate	Critical Rate	CRF
17614	0560753 - 0.33	Int of ARCADIA ST FAIRFIELD ST VERANDA ST	2	1	0	0	0	1	0	100.0	1.677	0.20	0.42	0.48
												Statewide Crash Rate:	0.12	
17612	0560753 - 0.38	Int of FAYETTE ST HAWTHORNE ST VERANDA ST	2	0	0	0	0	0	0	0.0	1.558	0.00	0.43	0.00
												Statewide Crash Rate:	0.12	
60334	0560753 - 0.43	Int of RAMP ON FROM VERANDA ST VERANDA ST WORD	2	10	1	1	0	4	4	60.0	2.010	1.66	0.35	4.75
												Statewide Crash Rate:	0.10	
74668	0001X - 52.27	Int of US 1 NB VERANDA ST	2	0	0	0	0	0	0	0.0	5.103	0.00	0.28	0.00
												Statewide Crash Rate:	0.10	
15787	0001X - 52.33	Int of OLYMPIA ST VERANDA ST	2	2	0	0	0	0	2	0.0	3.044	0.22	0.36	0.61
												Statewide Crash Rate:	0.12	
15786	0001X - 52.42	Int of OREGON ST VERANDA ST	2	2	0	0	0	1	1	50.0	4.144	0.16	0.33	0.48
												Statewide Crash Rate:	0.12	
69124	0001X - 52.50	Int of ENT TO MARTINS POINT VERANDA ST	9	2	0	0	1	0	1	50.0	4.875	0.14	1.14	0.12
												Statewide Crash Rate:	0.64	
15788	0001X - 52.71	TL Falmouth Portland	2	0	0	0	0	0	0	0.0	4.008	0.00	0.34	0.00
												Statewide Crash Rate:	0.12	
Study Years:	3.00	**NODE TOTALS:**		17	1	1	1	6	8	52.9	26.419	0.21	0.34	0.64

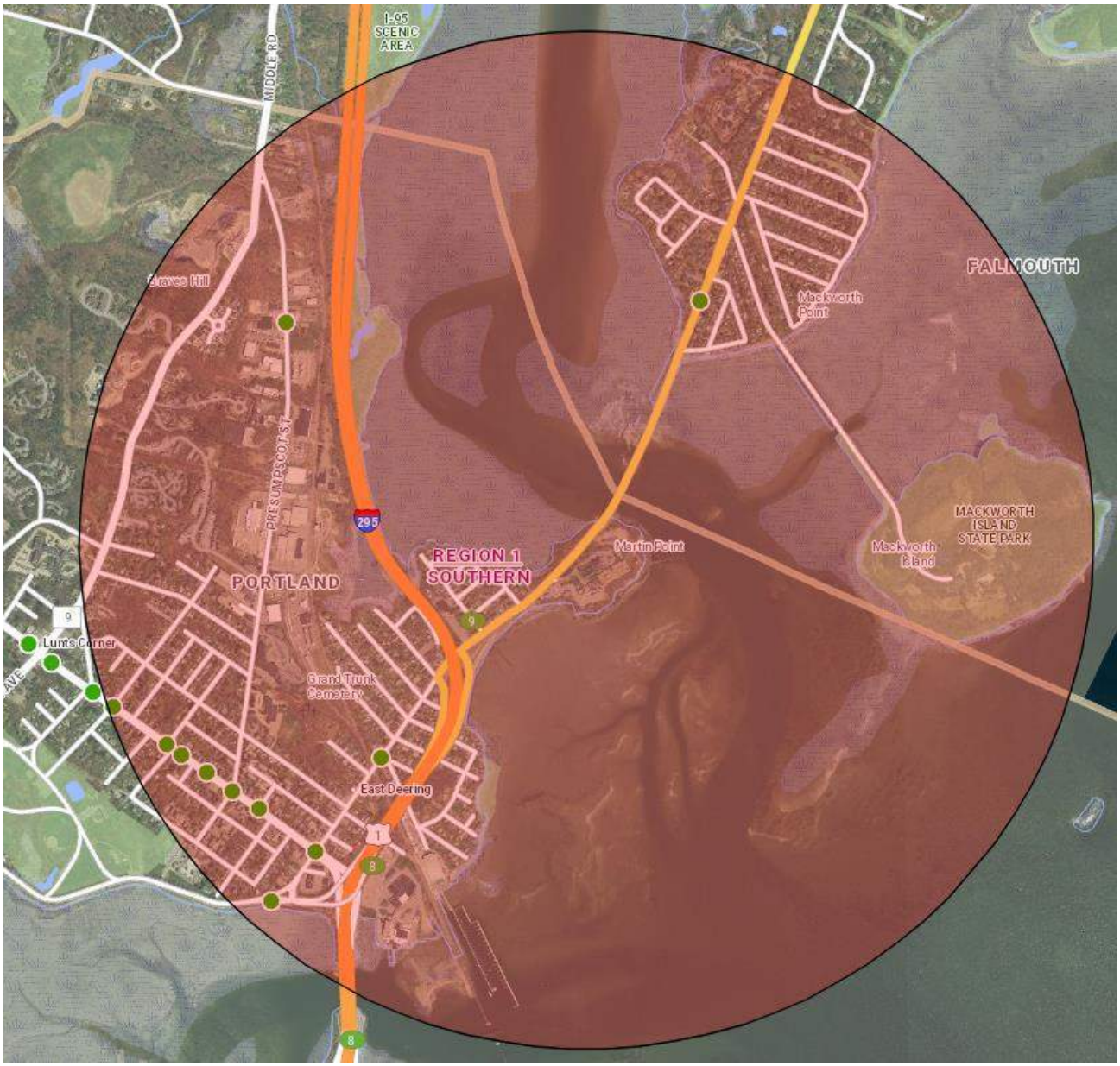
Crash Summary I

Sections

Start Node	End Node	Element	Offset Begin - End	Route - MP	Section Length	U/R	Total Crashes	Injury Crashes K	A	B	C	PD	Percent Injury	Annual HMVM	Crash Rate	Critical Rate	CRF
17612	17614	3122281	0 - 0.05	0560753 - 0.33	0.05	2	0	0	0	0	0	0	0.0	0.00076	0.00	609.48	0.00
Int of FAYETTE ST HAWTHORNE ST VERANDA ST				RD INV 05 60753											Statewide Crash Rate: 155.59		
60334	17612	5402045	0 - 0.02	0560753 - 0.38	0.02	2	0	0	0	0	0	0	0.0	0.00029	0.00	670.69	0.00
Int of RAMP ON FROM VERANDA ST VERANDA ST WORDSWORTH ST				RD INV 05 60753											Statewide Crash Rate: 155.59		
60334	17612	5402045	0.02 - 0.05	0560753 - 0.38	0.03	2	1	0	0	0	0	0	0.0	0.00044	754.25	660.92	1.14
Int of RAMP ON FROM VERANDA ST VERANDA ST WORDSWORTH ST				RD INV 05 60753											Statewide Crash Rate: 155.59		
74668	60334	5402069	0 - 0.04	0001S - 16.28	0.04	2	0	0	0	0	0	0	0.0	0.00095	0.00	581.51	0.00
Int of US 1 NB VERANDA ST				US 1 SB											Statewide Crash Rate: 155.59		
74668	60334	5402069	0.04 - 0.07	0001S - 16.32	0.03	2	0	0	0	0	0	0	0.0	0.00072	0.00	616.20	0.00
Int of US 1 NB VERANDA ST				US 1 SB											Statewide Crash Rate: 155.59		
15787	74668	5402070	0 - 0.06	0001X - 52.27	0.06	2	1	0	0	0	0	1	0.0	0.00181	184.49	499.79	0.37
Int of OLYMPIA ST VERANDA ST				US 1											Statewide Crash Rate: 155.59		
15786	15787	5402071	0 - 0.09	0001X - 52.33	0.09	2	0	0	0	0	0	0	0.0	0.00260	0.00	455.53	0.00
Int of OREGON ST VERANDA ST				US 1											Statewide Crash Rate: 155.59		
69124	15786	3509045	0 - 0.08	0001X - 52.42	0.08	2	0	0	0	0	0	0	0.0	0.00423	0.00	401.36	0.00
Int of ENT TO MARTINS POINT VERANDA ST				US 1											Statewide Crash Rate: 155.59		
15788	69124	3509044	0 - 0.21	0001X - 52.50	0.21	2	1	0	0	1	0	0	100.0	0.00842	39.61	338.00	0.12
TL Falmouth Portland				US 1											Statewide Crash Rate: 155.59		
Study Years: 3.00				**Section Totals:**	0.61		3	0	0	1	0	1	33.3	0.02021	49.47	277.82	0.18
				Grand Totals:	0.61		20	1	1	2	6	9	50.0	0.02021	329.79	409.68	0.80



Pedestrian Crash Locations within ½ Mile of the Site



Bicycle Crash Locations within 1 Mile of the Site

Appendix D

SimTraffic Reports

Summary of All Intervals

Run Number	1	2	3	4	5	6	7
Start Time	7:45	7:45	7:45	7:45	7:45	7:45	7:45
End Time	9:00	9:00	9:00	9:00	9:00	9:00	9:00
Total Time (min)	75	75	75	75	75	75	75
Time Recorded (min)	60	60	60	60	60	60	60
# of Intervals	5	5	5	5	5	5	5
# of Recorded Intervals	4	4	4	4	4	4	4
Vehs Entered	1453	1438	1371	1385	1370	1418	1346
Vehs Exited	1441	1430	1376	1397	1370	1419	1356
Starting Vehs	22	18	35	36	25	36	37
Ending Vehs	34	26	30	24	25	35	27
Travel Distance (mi)	695	690	661	673	652	683	652
Travel Time (hr)	32.7	33.7	31.9	32.5	30.8	33.1	30.3
Total Delay (hr)	9.7	10.9	10.1	10.3	9.3	10.5	8.9
Total Stops	946	994	964	929	885	969	863
Fuel Used (gal)	25.6	25.7	24.9	25.2	24.2	25.5	24.0

Summary of All Intervals

Run Number	8	9	10	Avg
Start Time	7:45	7:45	7:45	7:45
End Time	9:00	9:00	9:00	9:00
Total Time (min)	75	75	75	75
Time Recorded (min)	60	60	60	60
# of Intervals	5	5	5	5
# of Recorded Intervals	4	4	4	4
Vehs Entered	1464	1448	1419	1413
Vehs Exited	1463	1447	1419	1413
Starting Vehs	27	29	24	30
Ending Vehs	28	30	24	26
Travel Distance (mi)	709	692	676	678
Travel Time (hr)	36.0	33.3	32.8	32.7
Total Delay (hr)	12.5	10.3	10.5	10.3
Total Stops	1095	942	977	956
Fuel Used (gal)	26.7	25.7	25.2	25.3

Interval #0 Information Seeding

Start Time	7:45
End Time	8:00
Total Time (min)	15

Volumes adjusted by Growth Factors.
No data recorded this interval.

Interval #1 Information Recording

Start Time	8:00
End Time	8:15
Total Time (min)	15

Volumes adjusted by Growth Factors, Anti PHF.

Run Number	1	2	3	4	5	6	7
Vehs Entered	351	362	342	322	312	314	320
Vehs Exited	348	351	341	330	316	321	323
Starting Vehs	22	18	35	36	25	36	37
Ending Vehs	25	29	36	28	21	29	34
Travel Distance (mi)	174	176	166	165	154	155	157
Travel Time (hr)	8.0	8.2	7.8	7.8	6.6	7.0	6.8
Total Delay (hr)	2.3	2.4	2.3	2.4	1.5	1.9	1.6
Total Stops	200	215	243	245	164	193	174
Fuel Used (gal)	6.4	6.4	6.3	6.1	5.4	5.7	5.7

Interval #1 Information Recording

Start Time	8:00
End Time	8:15
Total Time (min)	15

Volumes adjusted by Growth Factors, Anti PHF.

Run Number	8	9	10	Avg
Vehs Entered	321	363	311	332
Vehs Exited	327	365	316	334
Starting Vehs	27	29	24	30
Ending Vehs	21	27	19	25
Travel Distance (mi)	160	179	152	164
Travel Time (hr)	7.5	7.9	6.9	7.4
Total Delay (hr)	2.2	2.0	1.9	2.0
Total Stops	215	181	217	205
Fuel Used (gal)	5.8	6.3	5.5	6.0

Interval #2 Information Recording

Start Time	8:15
End Time	8:30
Total Time (min)	15

Volumes adjusted by PHF, Growth Factors.

Run Number	1	2	3	4	5	6	7
Vehs Entered	418	434	385	398	432	409	390
Vehs Exited	409	424	374	394	422	403	381
Starting Vehs	25	29	36	28	21	29	34
Ending Vehs	34	39	47	32	31	35	43
Travel Distance (mi)	182	198	173	183	190	188	172
Travel Time (hr)	9.1	10.9	9.5	9.9	10.5	9.6	9.1
Total Delay (hr)	3.0	4.3	3.8	3.8	4.2	3.4	3.3
Total Stops	291	365	320	283	307	289	295
Fuel Used (gal)	7.0	7.7	7.0	7.2	7.5	7.1	6.7

Interval #2 Information Recording

Start Time	8:15
End Time	8:30
Total Time (min)	15

Volumes adjusted by PHF, Growth Factors.

Run Number	8	9	10	Avg
Vehs Entered	456	400	427	417
Vehs Exited	433	385	415	403
Starting Vehs	21	27	19	25
Ending Vehs	44	42	31	38
Travel Distance (mi)	205	178	191	186
Travel Time (hr)	12.0	9.2	9.8	10.0
Total Delay (hr)	5.2	3.3	3.5	3.8
Total Stops	409	293	284	312
Fuel Used (gal)	8.1	6.8	7.3	7.2

Interval #3 Information Recording

Start Time	8:30
End Time	8:45
Total Time (min)	15

Volumes adjusted by Growth Factors, Anti PHF.

Run Number	1	2	3	4	5	6	7
Vehs Entered	342	318	313	338	313	335	328
Vehs Exited	346	315	331	334	306	328	342
Starting Vehs	34	39	47	32	31	35	43
Ending Vehs	30	42	29	36	38	42	29
Travel Distance (mi)	169	154	157	164	150	166	169
Travel Time (hr)	8.1	7.2	7.3	7.6	6.8	8.4	7.6
Total Delay (hr)	2.5	2.1	2.2	2.2	1.8	2.9	2.0
Total Stops	260	191	206	212	209	241	191
Fuel Used (gal)	6.2	5.6	5.8	5.9	5.6	6.2	6.2

Interval #3 Information Recording

Start Time	8:30
End Time	8:45
Total Time (min)	15

Volumes adjusted by Growth Factors, Anti PHF.

Run Number	8	9	10	Avg
Vehs Entered	319	326	361	328
Vehs Exited	338	344	354	332
Starting Vehs	44	42	31	38
Ending Vehs	25	24	38	31
Travel Distance (mi)	163	164	176	163
Travel Time (hr)	7.8	8.3	9.0	7.8
Total Delay (hr)	2.5	2.9	3.2	2.4
Total Stops	220	264	277	227
Fuel Used (gal)	6.0	6.3	6.6	6.0

Interval #4 Information Recording

Start Time	8:45
End Time	9:00
Total Time (min)	15

Volumes adjusted by Growth Factors, Anti PHF.

Run Number	1	2	3	4	5	6	7
Vehs Entered	342	324	331	327	313	360	308
Vehs Exited	338	340	330	339	326	367	310
Starting Vehs	30	42	29	36	38	42	29
Ending Vehs	34	26	30	24	25	35	27
Travel Distance (mi)	169	162	165	162	157	175	153
Travel Time (hr)	7.5	7.4	7.3	7.3	6.9	8.1	6.9
Total Delay (hr)	2.0	2.1	1.9	1.9	1.7	2.4	1.9
Total Stops	195	223	195	189	205	246	203
Fuel Used (gal)	6.0	6.0	5.8	5.9	5.6	6.5	5.5

Interval #4 Information Recording

Start Time	8:45
End Time	9:00
Total Time (min)	15

Volumes adjusted by Growth Factors, Anti PHF.

Run Number	8	9	10	Avg
Vehs Entered	368	359	320	336
Vehs Exited	365	353	334	339
Starting Vehs	25	24	38	31
Ending Vehs	28	30	24	26
Travel Distance (mi)	180	172	156	165
Travel Time (hr)	8.7	7.9	7.1	7.5
Total Delay (hr)	2.7	2.2	2.0	2.1
Total Stops	251	204	199	210
Fuel Used (gal)	6.7	6.3	5.7	6.0

3: Veranda St & Martin's Point Performance by movement

Movement	WBL	WBR	NET	NER	SWL	SWT	All
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	3.0	0.6	0.4
Total Del/Veh (s)	32.0	7.3	1.5	1.1	3.2	0.6	1.3

5: Veranda St & Marine Hospital Rd Performance by movement

Movement	WBL	WBR	NET	NER	SWL	SWT	All
Denied Del/Veh (s)	4.1	0.1	0.0	0.0	0.0	0.0	0.1
Total Del/Veh (s)	11.8	15.8	4.8	3.5	11.5	2.2	3.7

Total Zone Performance

Denied Del/Veh (s)	0.8
Total Del/Veh (s)	224.7

Intersection: 3: Veranda St & Martin's Point

Movement	WB	SW
Directions Served	LR	L
Maximum Queue (ft)	35	38
Average Queue (ft)	9	7
95th Queue (ft)	28	28
Link Distance (ft)	217	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		55
Storage Blk Time (%)		0
Queuing Penalty (veh)		0

Intersection: 5: Veranda St & Marine Hospital Rd

Movement	WB	WB	NE	SW	SW
Directions Served	L	R	TR	L	T
Maximum Queue (ft)	41	24	163	41	141
Average Queue (ft)	12	2	53	10	41
95th Queue (ft)	31	12	126	34	109
Link Distance (ft)		350	1168		452
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)	100			65	
Storage Blk Time (%)				0	2
Queuing Penalty (veh)				0	0

Zone Summary

Zone wide Queuing Penalty: 1

Intersection: 5: Veranda St & Marine Hospital Rd

Phase	1	2	4	6
Movement(s) Served	SWL	NET	WBL	SWT
Maximum Green (s)	5.0	70.0	17.0	81.0
Minimum Green (s)	5.0	5.0	5.0	5.0
Recall	None	Min	None	C-Min
Avg. Green (s)	6.4	77.4	6.1	106.2
g/C Ratio	-0.01	-0.01	-0.01	-0.01
Cycles Skipped (%)	67	18	30	33
Cycles @ Minimum (%)	0	0	0	0
Cycles Maxed Out (%)	0	28	0	67
Cycles with Peds (%)	0	0	0	0

Controller Summary
Average Cycle Length (s): NA

Number of Complete Cycles : 0

Summary of All Intervals

Run Number	1	2	3	4	5	6	7
Start Time	7:45	7:45	7:45	7:45	7:45	7:45	7:45
End Time	9:00	9:00	9:00	9:00	9:00	9:00	9:00
Total Time (min)	75	75	75	75	75	75	75
Time Recorded (min)	60	60	60	60	60	60	60
# of Intervals	5	5	5	5	5	5	5
# of Recorded Intervals	4	4	4	4	4	4	4
Vehs Entered	1501	1519	1538	1511	1483	1503	1467
Vehs Exited	1493	1537	1541	1535	1465	1512	1473
Starting Vehs	35	44	33	47	19	37	36
Ending Vehs	43	26	30	23	37	28	30
Travel Distance (mi)	719	721	732	726	703	718	691
Travel Time (hr)	37.5	36.4	39.3	36.4	35.5	35.3	34.8
Total Delay (hr)	13.7	12.5	14.9	12.2	12.1	11.5	11.7
Total Stops	1237	1122	1267	1192	1123	1096	1152
Fuel Used (gal)	27.5	27.7	28.5	27.7	26.7	27.2	26.5

Summary of All Intervals

Run Number	8	9	10	Avg
Start Time	7:45	7:45	7:45	7:45
End Time	9:00	9:00	9:00	9:00
Total Time (min)	75	75	75	75
Time Recorded (min)	60	60	60	60
# of Intervals	5	5	5	5
# of Recorded Intervals	4	4	4	4
Vehs Entered	1520	1537	1481	1504
Vehs Exited	1508	1533	1489	1508
Starting Vehs	31	37	30	32
Ending Vehs	43	41	22	31
Travel Distance (mi)	721	724	702	716
Travel Time (hr)	36.7	36.7	35.0	36.4
Total Delay (hr)	12.6	12.7	11.7	12.5
Total Stops	1145	1193	1116	1166
Fuel Used (gal)	27.9	27.8	26.8	27.4

Interval #0 Information Seeding

Start Time	7:45
End Time	8:00
Total Time (min)	15

Volumes adjusted by Growth Factors.

No data recorded this interval.

Interval #1 Information Recording

Start Time	8:00
End Time	8:15
Total Time (min)	15

Volumes adjusted by Growth Factors, Anti PHF.

Run Number	1	2	3	4	5	6	7
Vehs Entered	362	363	375	346	326	316	325
Vehs Exited	359	372	364	367	326	327	323
Starting Vehs	35	44	33	47	19	37	36
Ending Vehs	38	35	44	26	19	26	38
Travel Distance (mi)	181	176	173	175	158	159	155
Travel Time (hr)	9.1	8.4	8.8	8.4	7.2	7.2	7.1
Total Delay (hr)	3.1	2.6	3.0	2.6	1.9	2.0	2.0
Total Stops	260	265	280	283	229	212	242
Fuel Used (gal)	6.8	6.7	6.6	6.6	5.8	5.9	5.8

Interval #1 Information Recording

Start Time	8:00
End Time	8:15
Total Time (min)	15

Volumes adjusted by Growth Factors, Anti PHF.

Run Number	8	9	10	Avg
Vehs Entered	336	383	344	348
Vehs Exited	334	390	342	351
Starting Vehs	31	37	30	32
Ending Vehs	33	30	32	31
Travel Distance (mi)	165	185	165	169
Travel Time (hr)	8.2	9.0	7.9	8.1
Total Delay (hr)	2.7	2.8	2.4	2.5
Total Stops	268	300	269	260
Fuel Used (gal)	6.2	6.9	6.3	6.4

Interval #2 Information Recording

Start Time	8:15
End Time	8:30
Total Time (min)	15

Volumes adjusted by PHF, Growth Factors.

Run Number	1	2	3	4	5	6	7
Vehs Entered	462	447	450	421	461	444	439
Vehs Exited	452	447	435	397	444	443	431
Starting Vehs	38	35	44	26	19	26	38
Ending Vehs	48	35	59	50	36	27	46
Travel Distance (mi)	208	198	204	189	202	197	194
Travel Time (hr)	12.0	11.1	12.9	10.3	11.7	10.6	11.2
Total Delay (hr)	5.0	4.4	6.1	4.0	4.9	4.0	4.7
Total Stops	426	356	421	359	384	347	383
Fuel Used (gal)	8.2	8.0	8.5	7.3	8.1	7.6	7.8

Interval #2 Information Recording

Start Time	8:15
End Time	8:30
Total Time (min)	15

Volumes adjusted by PHF, Growth Factors.

Run Number	8	9	10	Avg
Vehs Entered	445	443	442	446
Vehs Exited	443	434	441	436
Starting Vehs	33	30	32	31
Ending Vehs	35	39	33	40
Travel Distance (mi)	200	195	199	199
Travel Time (hr)	11.1	10.7	10.7	11.2
Total Delay (hr)	4.4	4.2	4.1	4.6
Total Stops	355	353	337	373
Fuel Used (gal)	8.0	7.9	7.7	7.9

Interval #3 Information Recording

Start Time	8:30
End Time	8:45
Total Time (min)	15

Volumes adjusted by Growth Factors, Anti PHF.

Run Number	1	2	3	4	5	6	7
Vehs Entered	340	331	377	391	356	361	363
Vehs Exited	355	324	405	408	344	347	381
Starting Vehs	48	35	59	50	36	27	46
Ending Vehs	33	42	31	33	48	41	28
Travel Distance (mi)	170	160	192	190	172	176	179
Travel Time (hr)	8.7	7.2	10.0	9.7	8.5	8.6	8.7
Total Delay (hr)	3.1	1.9	3.6	3.4	2.8	2.8	2.7
Total Stops	295	193	317	308	277	257	266
Fuel Used (gal)	6.6	5.8	7.4	7.4	6.5	6.6	6.8

Interval #3 Information Recording

Start Time	8:30
End Time	8:45
Total Time (min)	15

Volumes adjusted by Growth Factors, Anti PHF.

Run Number	8	9	10	Avg
Vehs Entered	350	355	371	356
Vehs Exited	357	363	369	366
Starting Vehs	35	39	33	40
Ending Vehs	28	31	35	34
Travel Distance (mi)	173	176	181	177
Travel Time (hr)	8.2	8.7	8.9	8.7
Total Delay (hr)	2.5	2.9	2.9	2.9
Total Stops	246	282	270	271
Fuel Used (gal)	6.6	6.6	6.7	6.7

Interval #4 Information Recording

Start Time	8:45
End Time	9:00
Total Time (min)	15

Volumes adjusted by Growth Factors, Anti PHF.

Run Number	1	2	3	4	5	6	7
Vehs Entered	337	378	336	353	340	382	340
Vehs Exited	327	394	337	363	351	395	338
Starting Vehs	33	42	31	33	48	41	28
Ending Vehs	43	26	30	23	37	28	30
Travel Distance (mi)	161	187	162	173	171	185	164
Travel Time (hr)	7.8	9.6	7.6	8.0	8.1	8.9	7.8
Total Delay (hr)	2.5	3.5	2.2	2.2	2.4	2.8	2.3
Total Stops	256	308	249	242	233	280	261
Fuel Used (gal)	6.0	7.2	6.0	6.5	6.3	7.2	6.1

Interval #4 Information Recording

Start Time	8:45
End Time	9:00
Total Time (min)	15

Volumes adjusted by Growth Factors, Anti PHF.

Run Number	8	9	10	Avg
Vehs Entered	389	356	324	353
Vehs Exited	374	346	337	358
Starting Vehs	28	31	35	34
Ending Vehs	43	41	22	31
Travel Distance (mi)	184	169	157	171
Travel Time (hr)	9.2	8.4	7.5	8.3
Total Delay (hr)	3.1	2.8	2.3	2.6
Total Stops	276	258	240	261
Fuel Used (gal)	7.0	6.5	6.0	6.5

3: Veranda St & Martin's Point Performance by movement

Movement	WBR	NET	NER	SWT	All
Denied Del/Veh (s)	0.1	0.0	0.0	0.5	0.3
Total Del/Veh (s)	5.6	3.3	2.5	0.6	1.8

5: Veranda St & Marine Hospital Rd Performance by movement

Movement	WBL	WBR	NET	NER	SWL	SWT	All
Denied Del/Veh (s)	4.1	0.2	0.0	0.0	0.1	0.0	0.1
Total Del/Veh (s)	19.9	14.2	8.7	6.8	17.8	2.8	6.7

Total Zone Performance

Denied Del/Veh (s)	0.8
Total Del/Veh (s)	317.3

Intersection: 3: Veranda St & Martin's Point

Movement	WB
Directions Served	R
Maximum Queue (ft)	25
Average Queue (ft)	8
95th Queue (ft)	25
Link Distance (ft)	211
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 5: Veranda St & Marine Hospital Rd

Movement	WB	WB	NE	SW	SW
Directions Served	L	R	TR	L	T
Maximum Queue (ft)	58	26	270	86	148
Average Queue (ft)	20	2	102	35	51
95th Queue (ft)	46	12	203	67	126
Link Distance (ft)		350	1168		457
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)	100			65	
Storage Blk Time (%)				2	3
Queuing Penalty (veh)				11	2

Zone Summary

Zone wide Queuing Penalty: 13

Intersection: 5: Veranda St & Marine Hospital Rd

Phase	1	2	4	6
Movement(s) Served	SWL	NET	WBL	SWT
Maximum Green (s)	5.0	70.0	17.0	81.0
Minimum Green (s)	5.0	5.0	5.0	5.0
Recall	None	Min	None	C-Min
Avg. Green (s)	6.6	37.6	6.9	87.3
g/C Ratio	-0.01	NA	-0.01	-0.01
Cycles Skipped (%)	9	0	21	22
Cycles @ Minimum (%)	4	0	0	0
Cycles Maxed Out (%)	4	9	0	78
Cycles with Peds (%)	0	0	0	0

Controller Summary
Average Cycle Length (s): NA
Number of Complete Cycles : 0

Summary of All Intervals

Run Number	1	2	3	4	5	6	7
Start Time	3:45	3:45	3:45	3:45	3:45	3:45	3:45
End Time	5:00	5:00	5:00	5:00	5:00	5:00	5:00
Total Time (min)	75	75	75	75	75	75	75
Time Recorded (min)	60	60	60	60	60	60	60
# of Intervals	5	5	5	5	5	5	5
# of Recorded Intervals	4	4	4	4	4	4	4
Vehs Entered	1487	1655	1635	1587	1526	1540	1546
Vehs Exited	1486	1663	1629	1597	1530	1523	1531
Starting Vehs	35	37	35	42	33	30	27
Ending Vehs	36	29	41	32	29	47	42
Travel Distance (mi)	758	840	828	808	778	775	783
Travel Time (hr)	35.6	41.3	40.7	40.0	38.3	37.8	38.9
Total Delay (hr)	10.9	14.0	14.0	13.7	13.1	12.6	13.4
Total Stops	1062	1227	1290	1284	1219	1114	1199
Fuel Used (gal)	28.6	31.8	31.6	30.9	29.9	29.2	30.0

Summary of All Intervals

Run Number	8	9	10	Avg
Start Time	3:45	3:45	3:45	3:45
End Time	5:00	5:00	5:00	5:00
Total Time (min)	75	75	75	75
Time Recorded (min)	60	60	60	60
# of Intervals	5	5	5	5
# of Recorded Intervals	4	4	4	4
Vehs Entered	1521	1513	1530	1556
Vehs Exited	1523	1523	1539	1555
Starting Vehs	40	43	41	37
Ending Vehs	38	33	32	34
Travel Distance (mi)	773	772	778	789
Travel Time (hr)	39.4	37.2	38.3	38.7
Total Delay (hr)	14.3	12.1	12.9	13.1
Total Stops	1296	1088	1187	1197
Fuel Used (gal)	30.0	29.1	29.8	30.1

Interval #0 Information Seeding

Start Time	3:45
End Time	4:00
Total Time (min)	15

Volumes adjusted by Growth Factors.
No data recorded this interval.

Interval #1 Information Recording

Start Time	4:00
End Time	4:15
Total Time (min)	15

Volumes adjusted by Growth Factors, Anti PHF.

Run Number	1	2	3	4	5	6	7
Vehs Entered	364	403	426	374	332	340	377
Vehs Exited	363	403	403	375	334	351	364
Starting Vehs	35	37	35	42	33	30	27
Ending Vehs	36	37	58	41	31	19	40
Travel Distance (mi)	187	202	216	192	174	178	190
Travel Time (hr)	8.6	9.5	9.9	9.3	8.0	8.3	8.7
Total Delay (hr)	2.6	2.9	2.9	3.1	2.3	2.5	2.5
Total Stops	274	270	274	298	256	235	245
Fuel Used (gal)	7.1	7.6	7.8	7.2	6.6	6.6	7.1

Interval #1 Information Recording

Start Time	4:00
End Time	4:15
Total Time (min)	15

Volumes adjusted by Growth Factors, Anti PHF.

Run Number	8	9	10	Avg
Vehs Entered	310	370	372	367
Vehs Exited	318	364	380	365
Starting Vehs	40	43	41	37
Ending Vehs	32	49	33	37
Travel Distance (mi)	162	188	198	189
Travel Time (hr)	7.3	8.8	9.7	8.8
Total Delay (hr)	2.1	2.7	3.2	2.7
Total Stops	236	234	297	260
Fuel Used (gal)	6.1	6.9	7.5	7.0

Interval #2 Information Recording

Start Time	4:15
End Time	4:30
Total Time (min)	15

Volumes adjusted by PHF, Growth Factors.

Run Number	1	2	3	4	5	6	7
Vehs Entered	452	468	414	445	458	456	458
Vehs Exited	442	443	438	441	457	432	443
Starting Vehs	36	37	58	41	31	19	40
Ending Vehs	46	62	34	45	32	43	55
Travel Distance (mi)	219	226	204	218	225	218	224
Travel Time (hr)	10.7	11.8	10.7	12.3	13.0	11.7	12.4
Total Delay (hr)	3.5	4.5	4.0	5.1	5.6	4.5	5.1
Total Stops	314	390	353	438	447	340	386
Fuel Used (gal)	8.3	8.7	8.2	8.8	9.3	8.5	8.8

Interval #2 Information Recording

Start Time	4:15
End Time	4:30
Total Time (min)	15

Volumes adjusted by PHF, Growth Factors.

Run Number	8	9	10	Avg
Vehs Entered	498	441	433	454
Vehs Exited	456	422	431	441
Starting Vehs	32	49	33	37
Ending Vehs	74	68	35	48
Travel Distance (mi)	236	211	206	219
Travel Time (hr)	13.3	11.2	10.9	11.8
Total Delay (hr)	5.6	4.3	4.1	4.6
Total Stops	467	382	400	392
Fuel Used (gal)	9.4	8.4	8.3	8.7

Interval #3 Information Recording

Start Time	4:30
End Time	4:45
Total Time (min)	15

Volumes adjusted by Growth Factors, Anti PHF.

Run Number	1	2	3	4	5	6	7
Vehs Entered	319	395	392	364	372	354	344
Vehs Exited	338	423	389	377	359	364	363
Starting Vehs	46	62	34	45	32	43	55
Ending Vehs	27	34	37	32	45	33	36
Travel Distance (mi)	171	213	202	190	188	181	183
Travel Time (hr)	7.5	10.6	9.8	8.5	8.8	8.8	8.7
Total Delay (hr)	1.9	3.7	3.3	2.3	2.7	3.0	2.7
Total Stops	188	311	322	245	273	282	287
Fuel Used (gal)	6.3	8.2	7.7	7.1	6.9	6.8	7.0

Interval #3 Information Recording

Start Time	4:30
End Time	4:45
Total Time (min)	15

Volumes adjusted by Growth Factors, Anti PHF.

Run Number	8	9	10	Avg
Vehs Entered	340	347	358	358
Vehs Exited	396	383	367	375
Starting Vehs	74	68	35	48
Ending Vehs	18	32	26	31
Travel Distance (mi)	188	185	187	189
Travel Time (hr)	10.0	8.7	8.7	9.0
Total Delay (hr)	3.9	2.7	2.6	2.9
Total Stops	326	250	227	272
Fuel Used (gal)	7.6	6.9	7.0	7.1

Interval #4 Information Recording

Start Time	4:45
End Time	5:00
Total Time (min)	15

Volumes adjusted by Growth Factors, Anti PHF.

Run Number	1	2	3	4	5	6	7
Vehs Entered	352	389	403	404	364	390	367
Vehs Exited	343	394	399	404	380	376	361
Starting Vehs	27	34	37	32	45	33	36
Ending Vehs	36	29	41	32	29	47	42
Travel Distance (mi)	181	200	206	208	190	198	185
Travel Time (hr)	8.7	9.4	10.4	9.9	8.6	9.0	9.0
Total Delay (hr)	2.9	2.9	3.8	3.1	2.4	2.6	3.0
Total Stops	286	256	341	303	243	257	281
Fuel Used (gal)	6.8	7.3	8.0	7.8	7.1	7.3	7.1

Interval #4 Information Recording

Start Time	4:45
End Time	5:00
Total Time (min)	15

Volumes adjusted by Growth Factors, Anti PHF.

Run Number	8	9	10	Avg
Vehs Entered	373	355	367	377
Vehs Exited	353	354	361	372
Starting Vehs	18	32	26	31
Ending Vehs	38	33	32	34
Travel Distance (mi)	188	189	188	193
Travel Time (hr)	8.9	8.4	8.9	9.1
Total Delay (hr)	2.7	2.4	2.9	2.9
Total Stops	267	222	263	273
Fuel Used (gal)	7.0	6.9	7.0	7.2

3: Veranda St & Martin's Point Performance by movement

Movement	WBL	WBR	NET	NER	SWL	SWT	All
Denied Del/Veh (s)	0.1	0.1	0.0		3.1	0.5	0.2
Total Del/Veh (s)	35.8	13.8	1.8		7.0	0.6	1.7

5: Veranda St & Marine Hospital Rd Performance by movement

Movement	WBL	WBR	NET	NER	SWL	SWT	All
Denied Del/Veh (s)	4.1	0.3	0.0	0.0	0.0	0.0	0.1
Total Del/Veh (s)	14.0	17.4	5.8	4.7	21.8	3.3	5.1

Total Zone Performance

Denied Del/Veh (s)	0.7
Total Del/Veh (s)	388.8

Intersection: 3: Veranda St & Martin's Point

Movement	WB	SW
Directions Served	LR	L
Maximum Queue (ft)	52	30
Average Queue (ft)	14	5
95th Queue (ft)	39	22
Link Distance (ft)	217	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		55
Storage Blk Time (%)		0
Queuing Penalty (veh)		0

Intersection: 5: Veranda St & Marine Hospital Rd

Movement	WB	WB	NE	SW	SW
Directions Served	L	R	TR	L	T
Maximum Queue (ft)	52	31	222	31	160
Average Queue (ft)	19	8	81	4	55
95th Queue (ft)	42	28	173	22	121
Link Distance (ft)		350	1168		452
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)	100			65	
Storage Blk Time (%)					4
Queuing Penalty (veh)					0

Zone Summary

Zone wide Queuing Penalty: 0

Intersection: 5: Veranda St & Marine Hospital Rd

Phase	1	2	4	6
Movement(s) Served	SWL	NET	WBL	SWT
Maximum Green (s)	5.0	51.0	22.0	62.0
Minimum Green (s)	5.0	5.0	5.0	5.0
Recall	None	Min	None	C-Min
Avg. Green (s)	6.2	61.0	6.6	65.1
g/C Ratio	-0.01	-0.01	-0.01	-0.01
Cycles Skipped (%)	88	13	15	16
Cycles @ Minimum (%)	0	0	0	0
Cycles Maxed Out (%)	0	28	0	84
Cycles with Peds (%)	0	0	0	0

Controller Summary
Average Cycle Length (s): NA

Number of Complete Cycles : 0

Summary of All Intervals

Run Number	1	2	3	4	5	6	7
Start Time	3:45	3:45	3:45	3:45	3:45	3:45	3:45
End Time	5:00	5:00	5:00	5:00	5:00	5:00	5:00
Total Time (min)	75	75	75	75	75	75	75
Time Recorded (min)	60	60	60	60	60	60	60
# of Intervals	5	5	5	5	5	5	5
# of Recorded Intervals	4	4	4	4	4	4	4
Vehs Entered	1741	1688	1638	1601	1613	1637	1646
Vehs Exited	1750	1688	1641	1593	1597	1629	1639
Starting Vehs	33	32	46	41	35	34	33
Ending Vehs	24	32	43	49	51	42	40
Travel Distance (mi)	870	846	816	792	787	809	817
Travel Time (hr)	58.6	44.2	44.3	39.8	44.9	42.8	41.9
Total Delay (hr)	30.0	16.5	17.7	13.8	19.0	16.4	15.0
Total Stops	2107	1522	1561	1350	1591	1504	1400
Fuel Used (gal)	36.8	33.1	32.7	30.8	32.0	31.9	32.0

Summary of All Intervals

Run Number	8	9	10	Avg
Start Time	3:45	3:45	3:45	3:45
End Time	5:00	5:00	5:00	5:00
Total Time (min)	75	75	75	75
Time Recorded (min)	60	60	60	60
# of Intervals	5	5	5	5
# of Recorded Intervals	4	4	4	4
Vehs Entered	1653	1650	1654	1653
Vehs Exited	1663	1650	1654	1648
Starting Vehs	45	39	42	36
Ending Vehs	35	39	42	40
Travel Distance (mi)	822	829	821	821
Travel Time (hr)	44.5	43.2	44.3	44.8
Total Delay (hr)	17.7	16.1	17.4	18.0
Total Stops	1468	1461	1561	1553
Fuel Used (gal)	32.8	32.5	32.5	32.7

Interval #0 Information Seeding

Start Time	3:45
End Time	4:00
Total Time (min)	15

Volumes adjusted by Growth Factors.
No data recorded this interval.

Interval #1 Information Recording

Start Time	4:00
End Time	4:15
Total Time (min)	15

Volumes adjusted by Growth Factors, Anti PHF.

Run Number	1	2	3	4	5	6	7
Vehs Entered	424	402	409	374	361	349	420
Vehs Exited	409	388	415	364	363	351	397
Starting Vehs	33	32	46	41	35	34	33
Ending Vehs	48	46	40	51	33	32	56
Travel Distance (mi)	214	200	208	185	181	175	206
Travel Time (hr)	11.0	9.8	11.0	9.1	8.4	8.3	11.1
Total Delay (hr)	4.0	3.2	4.2	3.1	2.5	2.6	4.4
Total Stops	363	331	390	308	280	298	399
Fuel Used (gal)	8.4	7.6	8.2	7.2	6.9	6.7	8.2

Interval #1 Information Recording

Start Time	4:00
End Time	4:15
Total Time (min)	15

Volumes adjusted by Growth Factors, Anti PHF.

Run Number	8	9	10	Avg
Vehs Entered	384	386	391	389
Vehs Exited	389	381	397	385
Starting Vehs	45	39	42	36
Ending Vehs	40	44	36	41
Travel Distance (mi)	201	193	200	196
Travel Time (hr)	9.5	9.9	10.1	9.8
Total Delay (hr)	3.0	3.6	3.6	3.4
Total Stops	282	339	357	337
Fuel Used (gal)	7.5	7.5	7.8	7.6

Interval #2 Information Recording

Start Time	4:15
End Time	4:30
Total Time (min)	15

Volumes adjusted by PHF, Growth Factors.

Run Number	1	2	3	4	5	6	7
Vehs Entered	538	474	450	446	507	495	465
Vehs Exited	488	474	443	450	472	465	482
Starting Vehs	48	46	40	51	33	32	56
Ending Vehs	98	46	47	47	68	62	39
Travel Distance (mi)	241	229	211	215	232	228	227
Travel Time (hr)	19.2	13.7	13.7	11.4	17.6	13.8	12.3
Total Delay (hr)	11.2	6.1	6.7	4.2	9.9	6.2	4.8
Total Stops	772	497	533	402	689	520	403
Fuel Used (gal)	10.9	9.4	9.1	8.5	10.4	9.5	9.2

Interval #2 Information Recording

Start Time	4:15
End Time	4:30
Total Time (min)	15

Volumes adjusted by PHF, Growth Factors.

Run Number	8	9	10	Avg
Vehs Entered	500	477	471	483
Vehs Exited	471	463	452	466
Starting Vehs	40	44	36	41
Ending Vehs	69	58	55	59
Travel Distance (mi)	231	228	224	227
Travel Time (hr)	14.6	13.1	13.8	14.3
Total Delay (hr)	7.0	5.6	6.5	6.8
Total Stops	552	492	522	539
Fuel Used (gal)	9.8	9.4	9.3	9.5

Interval #3 Information Recording

Start Time	4:30
End Time	4:45
Total Time (min)	15

Volumes adjusted by Growth Factors, Anti PHF.

Run Number	1	2	3	4	5	6	7
Vehs Entered	396	411	377	388	351	405	376
Vehs Exited	446	424	378	394	387	439	386
Starting Vehs	98	46	47	47	68	62	39
Ending Vehs	48	33	46	41	32	28	29
Travel Distance (mi)	215	211	193	193	181	210	194
Travel Time (hr)	18.2	10.6	9.3	9.6	9.5	11.1	9.7
Total Delay (hr)	11.2	3.7	3.1	3.2	3.5	4.3	3.3
Total Stops	639	375	307	327	326	383	313
Fuel Used (gal)	9.8	8.2	7.5	7.6	7.3	8.3	7.6

Interval #3 Information Recording

Start Time	4:30
End Time	4:45
Total Time (min)	15

Volumes adjusted by Growth Factors, Anti PHF.

Run Number	8	9	10	Avg
Vehs Entered	368	391	401	386
Vehs Exited	394	410	421	406
Starting Vehs	69	58	55	59
Ending Vehs	43	39	35	36
Travel Distance (mi)	189	203	200	199
Travel Time (hr)	10.4	10.0	10.3	10.9
Total Delay (hr)	4.2	3.3	3.8	4.4
Total Stops	308	286	350	362
Fuel Used (gal)	7.6	7.6	8.0	7.9

Interval #4 Information Recording

Start Time	4:45
End Time	5:00
Total Time (min)	15

Volumes adjusted by Growth Factors, Anti PHF.

Run Number	1	2	3	4	5	6	7
Vehs Entered	383	401	402	393	394	388	385
Vehs Exited	407	402	405	385	375	374	374
Starting Vehs	48	33	46	41	32	28	29
Ending Vehs	24	32	43	49	51	42	40
Travel Distance (mi)	200	205	205	200	192	196	191
Travel Time (hr)	10.1	10.1	10.3	9.8	9.4	9.6	8.8
Total Delay (hr)	3.6	3.5	3.7	3.2	3.1	3.2	2.5
Total Stops	333	319	331	313	296	303	285
Fuel Used (gal)	7.7	7.9	7.9	7.6	7.4	7.4	7.1

Interval #4 Information Recording

Start Time	4:45
End Time	5:00
Total Time (min)	15

Volumes adjusted by Growth Factors, Anti PHF.

Run Number	8	9	10	Avg
Vehs Entered	401	396	391	392
Vehs Exited	409	396	384	393
Starting Vehs	43	39	35	36
Ending Vehs	35	39	42	40
Travel Distance (mi)	202	204	197	199
Travel Time (hr)	10.0	10.2	10.0	9.8
Total Delay (hr)	3.4	3.5	3.5	3.3
Total Stops	326	344	332	316
Fuel Used (gal)	7.9	8.0	7.5	7.6

3: Veranda St & Martin's Point Performance by movement

Movement	WBR	NET	NER	SWT	All
Denied Del/Veh (s)	0.1	0.0	0.0	0.5	0.2
Total Del/Veh (s)	9.5	2.7	2.2	0.5	1.9

5: Veranda St & Marine Hospital Rd Performance by movement

Movement	WBL	WBR	NET	NER	SWL	SWT	All
Denied Del/Veh (s)	3.9	0.4	0.0	0.0	0.1	0.0	0.3
Total Del/Veh (s)	19.4	14.4	9.5	8.2	27.0	5.1	8.6

Total Zone Performance

Denied Del/Veh (s)	0.9
Total Del/Veh (s)	590.5

Intersection: 3: Veranda St & Martin's Point

Movement	WB
Directions Served	R
Maximum Queue (ft)	48
Average Queue (ft)	18
95th Queue (ft)	39
Link Distance (ft)	211
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 5: Veranda St & Marine Hospital Rd

Movement	WB	WB	NE	SW	SW
Directions Served	L	R	TR	L	T
Maximum Queue (ft)	116	43	310	56	191
Average Queue (ft)	41	8	122	16	82
95th Queue (ft)	88	33	238	46	158
Link Distance (ft)		350	1168		457
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)	100			65	
Storage Blk Time (%)	1			0	7
Queuing Penalty (veh)	0			3	1

Zone Summary

Zone wide Queuing Penalty: 5

Intersection: 5: Veranda St & Marine Hospital Rd

Phase	1	2	4	6
Movement(s) Served	SWL	NET	WBL	SWT
Maximum Green (s)	5.0	51.0	22.0	62.0
Minimum Green (s)	5.0	5.0	5.0	5.0
Recall	None	Min	None	C-Min
Avg. Green (s)	6.4	38.3	8.3	45.6
g/C Ratio	-0.01	-0.01	-0.01	-0.01
Cycles Skipped (%)	60	2	2	2
Cycles @ Minimum (%)	3	0	0	0
Cycles Maxed Out (%)	3	14	0	98
Cycles with Peds (%)	0	0	0	0

Controller Summary
Average Cycle Length (s): NA
Number of Complete Cycles : 0

12: ACCESS AND CIRCULATION (14.6.1(B))

Memorandum response to the City of Portland Peer Review and City Public Works Comments Received January 29, 2024, and April 9, 2024, are enclosed in this section.

1. In general
   a. Safe and reasonable access and internal circulation is provided following the design standards of the Technical Manual.

      Per discussion with the City, the unsignalized existing access at Building 7 has been redesigned to provide access in conformance with City standards. Primary campus access is via the signalized access located 500 feet± south at Marine Hospital Road.

   b. Continuous accessible internal walkways between existing and proposed development and pedestrian access trails are provided. Sidewalk regrading is proposed at Veranda Street for compliance with the Americans with Disabilities (ADA) standards.

   c. Access for Building 7 is over the improved existing unsignalized curb cut at Veranda Street. The site is also accessible from the signalized primary access at Marine Hospital Road, as shown on the enclosed site plans.

   d. Services requiring stacking capacity are not proposed.

2. Loading and servicing.
   The site is designed to meet the loading and servicing needs associated with anticipated uses. Vehicular, parking, pedestrian, and bicycle circulation will not be affected by deliveries. Internal circulation routes and geometry were checked utilizing turn templates for anticipated rescue and delivery vehicles. Reference is made to the turn graphics in Section 21.

3. Curb and sidewalks.
   a./b./c. The existing curb and sidewalk along Veranda Street are in good condition. This project includes regrading for connection and compliance with ADA standards, as shown on the appended site plans. Slopes range from 1% to 4%, in compliance with the Americans with Disabilities Act (ADA) regulations, providing a safe and accessible route to the proposed Building 7, and the public trail system south of Building 6. Waivers from standards are not requested.
   d. Curbing will be reset, as necessary, and shown on appended site plans.

SEBAGO TECHNICS

CIVIL ENGINEERING ▪ SURVEYING ▪ LANDSCAPE ARCHITECTURE

211026

Date: November 8, 2024

Subject: Response to Comments, Martin's Point Healthcare Veranda Campus, Portland

The purpose of this document is to summarize a response to the comments received by the City of Portland traffic peer review and Department of Public Works, dated January 29, 2024 and April 9, 2024, respectively.

This response also reflects the major discussion points from a meeting that occurred between Sebago Technics and City staff on 11/8/2024 to discuss specific items related to the requested offsite mitigation.

The comments are listed below in italics, with our associated responses:

Site Plan Worksheet Comments

1) *The applicant should note if the relocation of existing employees to the proposed building is allowing for an increased in medical office space in existing buildings.*

   This is not the intent of the proposed project.

2) *The base assumption for the trip generation analysis is that the proposed building will function as administrative, or office use only. If changes to the use occur, a revised trip generation analysis will be required.*

   Acknowledged.

3) *Based upon the current assumptions, the project does not meet the requirement for a Traffic Movement Permit.*

   Acknowledged.

4) *The analysis indicates the site driveway intersections will operate at acceptable levels of service following project completion.*

   Acknowledged.

5) *Field observations of traffic conditions indicated congestion at the Veranda Street and I295 Southbound On-Ramp intersection. It appears this is related to traffic signal operational issues.*

   Acknowledged.

6) *The are no safety concerns identified in the immediate vicinity of the project.*

   Acknowledged.

7) *Sight distance from the northerly driveway meets City standards.*

   Acknowledged.

8) *The traffic model analysis did identify vehicle queuing following project completion will exceed available storage. I would note that the through lane queue is longer and will prevent vehicles for entering the left-turn lane.*

   Acknowledged.

9) *Traffic Signal Equipment upgrades to the site signal on Route 1 are required. The applicant shall implement the following:*

   a. *Fiber interconnect to the new signals at the Veranda Bridge interchange.*

      Based on a review of the construction plans from MaineDOT WIN #021745.00, fiber interconnect to the new signals was already installed in 2022, along with a new ATC controller, fiber optic patch panel, and ethernet switch. The cabinet was inspected to confirm the presence of these items. Following a conversation with City staff on 11/8/24 it was agreed that no further action is required on this item.

   b. *The controller cabinet shall be updated to ATC architecture.*

      On 11/8/24, City staff agreed that a new ATC cabinet or any additional components would not be required because a new ATC controller had been installed under WIN #021745.00.

   c. *Reflective border backplates meeting current standards.*

      This will be provided.

   d. *The Route 1 southbound permissive left-turn phasing shall be modified to a flashing yellow phasing system.*

      This will be provided.

10) *For the northerly driveway, I would suggest a raised median be constructed to prevent left-turn movements. This will also have traffic calming benefits.*

    This has been provided.

11) *The entrance off of Route One is a commercial driveway and needs to be designed in accordance with City Standards. The existing Driveway width shall be reduced, removed and reconstructed per the City Technical Manual Standard for <u>COMMERICAL/INDUSTRIAL DRIVEWAY APRON I-9B</u>*

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and I-10C. The sidewalk material shall be continued through the driveway aprons at grade with the proposed sidewalk and not in excess of 2% cross-slope.

The entrance has been updated to meet the applicable City standards. The original design enforced the right-in/right-out nature of the entrance, which required a wider entrance. Due to the introduction of a raised median on Veranda Street, the island within the entrance has been removed.

12) *The applicant shall provide vehicle turning template graphics and justification for the wide diagonal painted area at the garage entrance.*

Turning movement diagrams were included in Sec.21 Public Safety & Fire Protection Uploaded to EPlan on 12/22/2023. The painted area provides fire truck access to the building side and accommodates short term parking for deliveries or maintenance arriving in vehicles that exceed the garage entry height.

Portland Public Works Comments

1) *Meeting the "required slopes, including a maximum 2% slope in the sidewalk width" is not sufficient to meet the City standard for a driveway apron. This is a non signalized commercial drive that falls within a trail route and needs to be designed in accordance with City Standards. The existing Driveway width shall be reduced, removed and reconstructed per the City Technical Manual Standard for COMMERCIAL/INDUSTRIAL DRIVEWAY APRON I-9B and I-10C (see example below). The sidewalk material shall be continued through the driveway aprons at grade with the proposed sidewalk and not in excess of 2% cross-slope.*

The entrance has been updated to meet the applicable City standards. The original design was to enforce the right in/right out nature of the entrance which required a wider entrance. Due to the introduction of a raised median on Veranda Street, the island within the entrance has been removed.

2) *The applicant shall update the plans to label or provide spot grades and slopes for the proposed sidewalks, and driveways at grade breaks when redesigning the driveway.*

Acknowledged.

3) *The applicant shall dimension proposed improvements and existing conditions in the ROW on the plan view sheets. For example ROW, street, lanes sidewalk, esplanade driveways (and other improvements) widths as well as when a width changes.*

Sidewalk dimensions, street names, and curb labels, and material types are shown on sheet 8 of the plan package. Dimensioning of the lane widths has been added for clarity. These lane widths are based on allowable turning movements for a passenger vehicle. No new esplanades are provided within the public right-of-way.

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4) *The applicant shall provide justification for the need for a split driveway rather than the standard driveway detail*.

   The split driveway has been removed due to the introduction of a raised median on Veranda Street.

Additionally, we received a comment from City Staff to provide a TDM plan for the development, which will be provided in an upcoming submission.

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13: PUBLIC TRANSIT (14.6.1(C))

The Martins Point Veranda Street campus is on METRO Route 7- Falmouth Route 1, with transit opportunities available in northbound and southbound directions. A change to the available service is not proposed. Per a telephone conversation with METRO, since the City Workshop Meeting in March 2024, they stated that they are satisfied with the existing MPHC service and are not in support of changes to the route or access.

14: OFF-STREET PARKING (14.6.1(D))

1. Vehicular parking

   Martins Point Health Care is eligible for a categorical exception to off-street parking minimums per Land Use Code 19-Off-Street Parking & Loading, Table 19-B: Major Site Plans and Transit proximate development and uses.

   No off-street parking is required within ¼ mile of fixed route transit service. Martin's Point Health Care is on METRO Route 7, with inbound and outbound stops within the ¼ mile designation.

   For informational purposes, the overall parking count existing and proposed is provided to the City, as requested during the pre-application meetings, as follows:

Existing Surface and Garage:	407
Proposed Surface and Garage:	499
	+92 Spaces, 0 Required

   The proposed parking meets the dimensional requirements of the Technical Manual.

15: Transportation Demand Management (TDM) (14.6.1(E))

In accordance with the provisions of this section, 1 we offer the following responses to TDM criteria:

a. All major site plan triggering development in the B-7 Zone.
   Response: Not applicable, the site is not in a B-7 Zone.

b. All commercial, institutional, or mixed-use developments of 50,000 square feet or more total floor area.
   Response: The proposed use as a non-profit organization is categorized as an institutional use with a total floor area of over 50,000 square feet, requiring a TDM Plan. The TDM is provided in this section.

c. All commercial or institutional uses designed to accommodate 100 or more employees or, for educational institutions, 100 or more students.
   Response: The use is designed to accommodate 100+ employees requiring a TDM.

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Transportation Demand Management Plan

Martin's Point Healthcare
331 Veranda Street
Portland, Maine

Applicant:
Martin's Point Health Care, Inc.
PO BOX 9746
Portland, Maine 04103

Prepared By:
Sebago Technics, Inc.
75 John Roberts Road, Suite 4A
South Portland, Maine 04106

April 17, 2024

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Transportation Narrative

The proposed new office building for Martin's Point Healthcare is located off Veranda Street (Route 1), in close proximity to the Falmouth Municipal Line. The proposed office space is intended to accommodate employees of Martin's Point, both from the existing Veranda Street campus and from other locations as well. The building is not intended for patient health services. As such, the office users will consist of one primary group: users who will arrive and depart during normal AM and PM commuting peak hours.

The area around the site is occupied by both residential and commercial uses. Much of the residential varies between a distance of 0.10 miles to 0.75 miles away into Portland or approximately 0.50 miles away into Falmouth. Veranda Street was recently reconstructed, providing new and accommodating pedestrian and bicycle facilities a distance of approximately 0.32 miles through the I-295 ramps. Sidewalk facilities extend to the intersection of Washington Avenue and Veranda Street is striped with sharrows. Headed into Falmouth both sidewalks and dedicated bicycle lanes are available.

METRO Bus Route 7 services along Veranda Street. This route provides services between Downtown Portland via Congress Street and Route 1 into Falmouth. There is currently a marked stop for the bus service in the immediate vicinity of Martin's Point.

Based on the location of the project, the available infrastructure, and the proposed use, the majority of the trips to the site are by way of personal vehicles. Alternatively, there may be a small percentage that live in a reasonable proximity to choose to walk or take their bicycle. Similarly, there may be a small percentage of employees that elect to utilize transit services. Given the trip mode split is highly contingent on an employee's location of residence, the trip reduction strategy that will likely provide the greatest impact, is Martin's Point's remote work flexibility. A lesser effective multi-faceted approach may be observed by carpooling/ridesharing or incentive through alternative modes via transit, bicycling, or walking.

TDM Coordinator

Martin's Point will appoint a Transportation Demand Management (TDM) coordinator who will be responsible for the implementation and monitoring of the TDM strategies. This employee will actively promote and educate on alternative forms of transportation for other employees. The coordinator will also be responsible for monitoring and updating the TDM Plan.

Employee Survey

A survey will be developed for employees of the office building, consisting of questions to gain an understanding of employee locations and commuting means. The survey will collect information such as:

- Mode of Transportation used on a daily basis (vehicle, transit, walking, bicycle, taxi/rideshare, carpooling, etc.)
- Reason for selected transportation mode
- Number of days a week commuting
- Barriers to using other modes of transportation
- Suggestions to encourage use of alternative modes of transportation

On an annual basis, the TDM Coordinator will be responsible for compiling the results of the survey and submitting a report to the City for review. The obtained information will be utilized to review the effectiveness of any existing TDM strategies and adjust the TDM plan as necessary.

Trip Reduction Targets

Trip generation was completed for the proposed office by utilizing the 11th Edition of the Institute of Transportation Engineers (ITE), Trip Generation Manual. Land use code (LUC) 710 – General Office Building was utilized as ITE summarizes LUC 710 as "a location where affairs of businesses, commercial or industrial organizations, or professional persons or firms are conducted." Trip generation for the office building was calculated based on 50,000 SF in Table 3.

Table 1 – ITE Trip Generation
Land Use Code 710 – General Office Building
50,000 SF

Time Period	*Fitted Curve Equation*	*Trips*	*Entering*	*Exiting*
Weekday	Ln(T) = 0.87 Ln(X) + 3.05	636	318 (50%)	318 (50%)
AM Peak Hour – Adjacent Street (7 – 9 AM)	Ln(T) = 0.86 Ln(X) + 1.16	92	81 (88%)	11 (12%)
AM Peak Hour – Generator *	Ln(T) = 0.86 Ln(X) + 1.16	92	81 (88%)	11 (12%)
PM Peak Hour – Adjacent Street (4 – 6 PM)	Ln(T) = 0.83 Ln(X) + 1.29	93	16 (17%)	77 (83%)
PM Peak Hour – Generator *	Ln(T) = 0.83 Ln(X) + 1.29	93	16 (17%)	77 (83%)

*Data for peak hours of the generator not available and assumed to be equivalent to the adjacent street

As outlined in Table 1, the new office building is estimated to generate 636 daily weekday trips, 92 trips during the AM peak hour period, and 93 trips during the PM peak hour period. Through the implementation of the TDM plan, a trip reduction of 5% is targeted.

Trip Reduction Strategies

A number of strategies will be implemented to achieve the targeted reduction in vehicular trips accessing the development.

Remote Work/Flex Time

Martin's Point will continue to allow remote work for office employees and flexible hours in an effort to reduce the total number of people commuting on a given day.

Carpool/Vanpool

Martin's Point will partner with GO MAINE to facilitate and encourage carpooling (in addition to other transportation means) among employees. This service allows employees to conveniently match with others who may have similar commuting routes and be candidates for carpooling. The program also offers additional benefits and rewards to those who register.

Transit

Martin's Point will work to implement means of discounting or reimbursing employees a portion of expenses for those who choose to commute to work via Public Transit. Information will be distributed regarding the available transit options, specifically the METRO Route 7 service which has an existing stop adjacent to the site.

Bicycle and Pedestrian

The proposed site plan includes new bicycle rack parking spaces and extensive new pedestrian infrastructure that connects to other buildings on campus, the Veranda Street infrastructure, and the existing nearby trail system.

Education

Education initiatives will be implemented to inform employees of the alternative means of commuting that exist and the potential benefits. This will include the posting and emailing of materials highlighting the TDM strategies and employee incentives.

Martin's Point will explore hosting employee training through GO MAINE to explain the availability of alternative transportation options and the benefits.

The training and materials will be distributed to all employees on the Martin's Point Veranda Campus, expanding reach for potential carpooling opportunities outside of just the proposed office building.

16: PRESERVATION OF SIGNIFICANT NATURAL FEATURES (14.6.2(A))

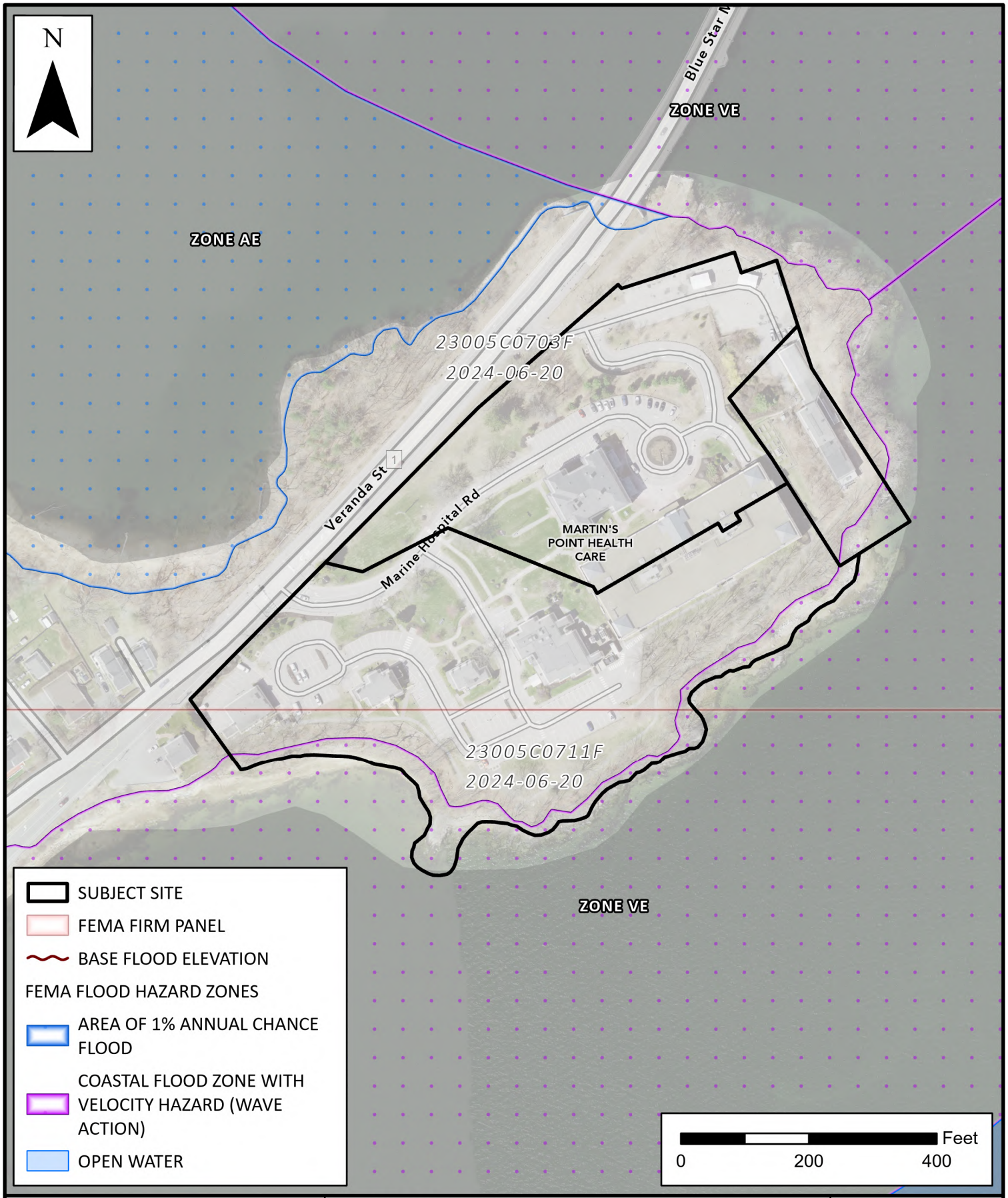
The proposed site improvements at Building 7 occur on a portion of the parcel previously developed in an urban setting adjacent to Casco Bay. The changes will require building, pavement, and vegetation removal. The overall MPHC site is irregularly shaped and roughly bounded by Casco Bay and Veranda Steet. The applicant intends to offset the removal of trees by implementing a formal landscaping plan that will provide buffer enhancement and improve visual aesthetics. Trees to remain will be protected by recognized protection measures as shown on the landscape plans.

Wetlands
Freshwater wetlands and vernal pools are not located near the project site.

Flood
No portion of the proposed site improvements are located within a flood zone. We note that portions of the overall MPHC campus are located within a flood hazard area as delineated on the newly effective FEMA Flood Insurance Rate Map, Portland, Cumberland County, 23005C0703F and 23005C0711F, effective date June 20, 2024, showing the shoreline has a VE-15 designation. For reference, an excerpt from the map is included in this section. The lowest finished floor of the proposed structure is situated well above the base flood elevation. Reference is made to the updated FEMA map exhibit in this section and the site plan set for the revised flood line.

Habitat
A portion of the Martin's Point Health Care campus is adjacent to recognized tidal waterfowl and wading bird habitat without specific documented occurrences per the Maine Department of Inland Fisheries and Wildlife Environmental Review Tool updated in 2022. Activity is not proposed within the resource or ±50 linear feet of NHW at Casco Bay. The site review response dated February 5, 2024, is enclosed in this section.

Maine Natural Areas: By letter dated March 25, 2022, the Maine Natural Areas Program indicates the absence of documented rare botanical features and that there is a low probability that rare or botanical features occur at this project location; see attachments in this section.



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Tel. 207-200-2100

FEMA NATIONAL FLOOD HAZARDS

MARTIN'S POINT VERANDA CAMPUS

SCALE:	1:2,400
DATE:	11/4/2024

LOCATION:
331 VERANDA STREET
PORTLAND, ME

INFORMATION:
FEMA NFHL 2024-06-20
2020 ORTHOREGIONAL IMAGERY

JANET T. MILLS
GOVERNOR

STATE OF MAINE
DEPARTMENT OF
INLAND FISHERIES & WILDLIFE
353 WATER STREET
41 STATE HOUSE STATION
AUGUSTA ME 04333-0041

JUDITH CAMUSO
COMMISSIONER

February 05, 2024

Stefanie Nichols
Sebago Technics, Inc.
75 John Roberts Road, Suite 4A
South Portland, ME 04106

RE: Information Request – Martins Point Campus, Portland Project (ERID 5883)

Dear Stefanie:

Per your request received on December 06, 2023, we have reviewed current Maine Department of Inland Fisheries and Wildlife (MDIFW) information for known locations of Endangered, Threatened, and Special Concern species; designated Essential and Significant Wildlife Habitats; and inland fisheries habitat concerns within the vicinity of the *Martins Point Campus, Portland* project. For the purpose of this review, we assume that tree removal may be required.

Our Department has not mapped any Essential Habitats or inland fisheries habitats that would be directly affected by your project.

Endangered, Threatened, and Special Concern Species

Bat Species – Of the eight species of bats that occur in Maine, four species are afforded protection under Maine's Endangered Species Act (MESA, 12 M.R.S §12801 et. seq.): little brown bat (State Endangered), northern long-eared bat (State Endangered), eastern small-footed bat (State Threatened), and tri-colored bat (State Threatened). The four remaining bat species are designated as Species of Special Concern: big brown bat, red bat, hoary bat, and silver-haired bat. While a comprehensive statewide inventory for bats has not been completed, based on historical evidence, it is likely that several of these species occur within the project area during spring/fall migration, the summer breeding season, and/or for overwintering. However, our Agency does not anticipate significant impacts to any of the bat species as a result of this project.

Significant Wildlife Habitat

Tidal Waterfowl Wading Bird Habitat (TWWH) – This project area includes TWWH, a Significant Wildlife Habitat under Maine's Natural Resources Protection Act. TWWHs provide important breeding, feeding, migration, staging, and wintering habitat for diverse waterfowl and wading bird species. Birds utilize emergent wetlands, intertidal mudflats, eelgrass beds, and mussel beds to forage for aquatic invertebrates, a primary food source. Maintaining natural tidal flow is essential to maintaining healthy intertidal areas and food sources to support waterfowl and wading bird species. MDIFW recommends that projects near TWWHs provide as much undisturbed buffer as possible to protect this habitat.

This consultation review has been conducted specifically for known MDIFW jurisdictional features and should not be interpreted as a comprehensive review for the presence of other regulated features that may occur in this area. Prior to the start of any future site disturbance, we recommend additional consultation

with the municipality, and other state resource agencies including the Maine Natural Areas Program, Maine Department of Marine Resources, and Maine Department of Environmental Protection in order to avoid unintended protected resource disturbance.

Please feel free to contact my office if you have any questions regarding this information, or if I can be of any further assistance.

Best regards,

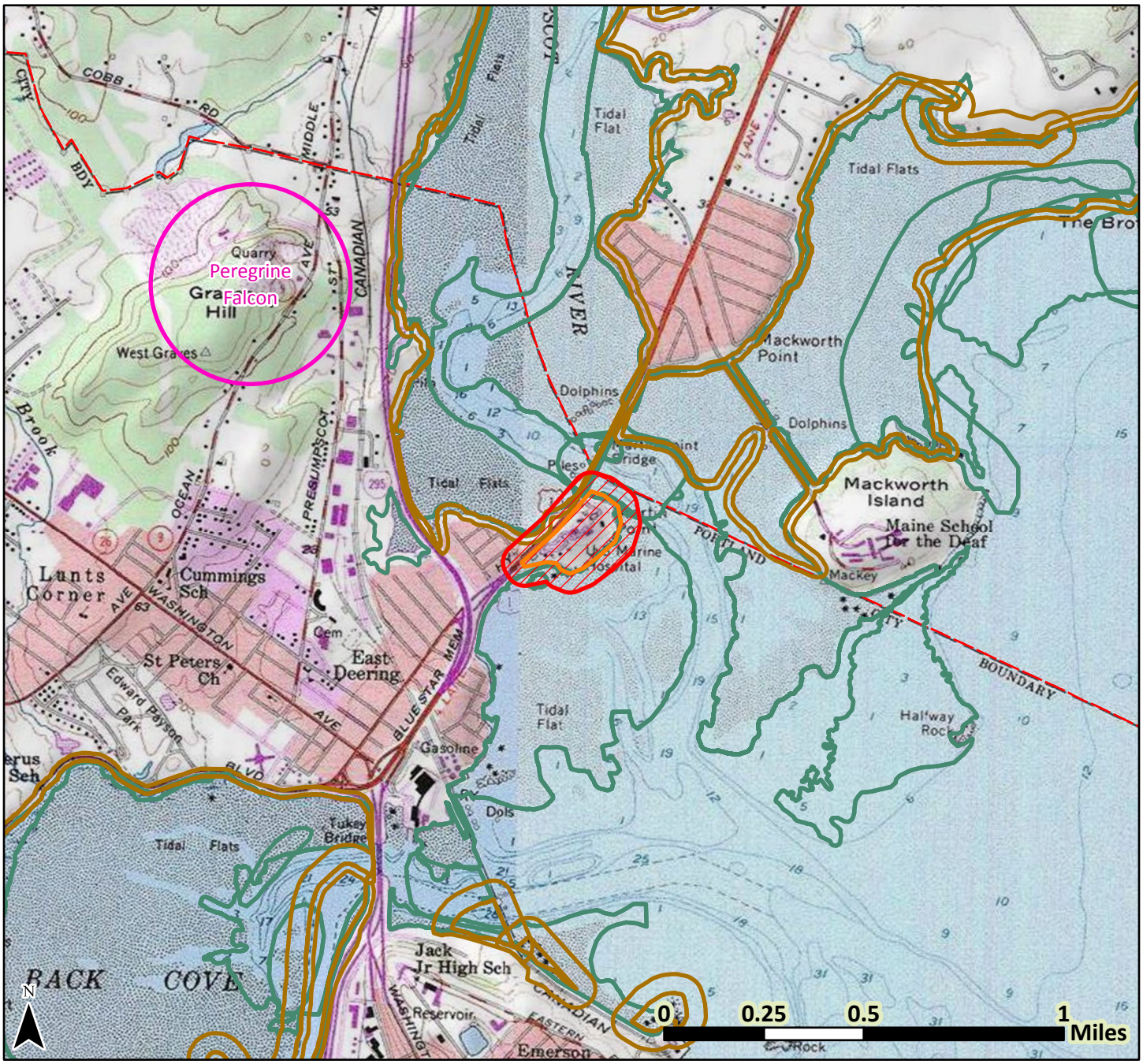


Ciara Wentworth
Resource Biologist

Maine Department of Inland Fisheries and Wildlife

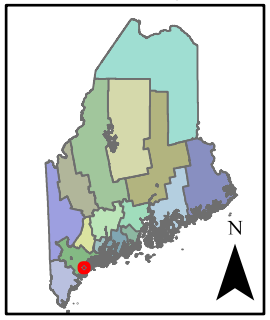
Project Area Review of Fish and Wildlife Observations and Priority Habitats

Martins Point Campus, Portland



- County Boundary
- Township Boundary
- Project Footprint
- Search Area
- E, T, & SC Species
- Shorebird Area
- Tidal Waterfowl/Wading Bird

Date: 12/13/2023
Projection:
UTM Zone 19N, NAD83



Legend only lists resources visible in the map; see response letter for all resources that were evaluated.

17: LANDSCAPE PRESERVATION (14.6.2(B))

1. The proposed project site is a previously developed urban parcel currently or formerly used for surface parking, a greenhouse, a garage, immunization drive-through services, and a vacant building (Building 7) to be razed and replaced. The Building 7 redevelopment area is designed to avoid the removal of existing trees to the greatest extent practicable. The existing vegetation will be preserved beyond the construction limits, as shown on the site plans. The proposed project has a comprehensive landscaping plan.

2. Proposed removals are identified on site plans, and new plantings and details are shown on the landscape plans. Protection measures outlined in the standards of the City Technical Manual will be utilized.

3. Trees 10 inches or larger DBH within the project area have been located and documented. Licensed arborist and project consultant Jeff Tarling describes the on-site conditions and suggests a landscape note per his letter dated November 21, 2023, included in this section.

   Additional vegetation location between the 250' setbacks has occurred since Jeff Tarling's letter, upon request of City staff. The inventory confirms that the proposed removal area does not exceed 40% of the existing trees 4" or greater in size, and the removal area is in compliance with requirements. The information is shown on the appended civil plan set.

4./5. Per an email comment received on February 8, 2024, from Mark Reiland, City Arborist, regarding a single hickory to be removed as part of the proposed Building 7 site improvements, the applicant will offer a financial contribution of $2,000.00 to the City of Portland Tree Fund. The fee is based on the City of Portland Technical Manual Section 4.3.8 fee table indicating $100.00 per inch diameter ($100. x 20) for a feature mature tree removal.

Please see the plan set for the proposed landscaping plans.

18: SITE LANDSCAPE AND BUFFERS (14.6.2(C))

The proposed project has been designed to be in compliance with the applicable landscape and buffering requirements of the R-P zone.

1. Landscaping.
   This provision of the ordinance is applicable, and the landscape design at the Building 7 lot meets or exceeds the requirements of the Technical Manual. Landscape plans are provided within the plan set, identifying trees to remain and proposed plantings.

2. Buffers.
   a. Loading and service areas are screened from view from public rights of way. Trash service areas are internal to the building behind doors. Site screening for the proposed emergency generator is shown on the site plan. The building's mechanical systems are roof-mounted and screened.

   b. The project does not abut a residential zone; therefore, a new landscape buffer is not applicable.

3. Parking and vehicle display lot landscaping.
   a./b./c. Parking is located in exterior lots and on the two lower levels of the new administrative building. By allowed exception, Section 19-Table 19B, transit proximate projects, additional parking is not required. We note that the proposed parking stalls meet the dimensional requirements of the Technical Manual.

4. Street Trees.
   a. Eleven (11) existing trees greater than 6" on the site are within 20’ of the front property line and are visible from the right of way. Five (5) existing trees are located in the city’s right-of-way.

   b. The existing vegetation on the Building 7 lot will be preserved to the greatest extent practicable and supplemented by the landscaping shown on the appended site plans.

19: WATER QUALITY, STORMWATER MANAGEMENT, AND EROSION CONTROL (14.6.2(D))

1. The Building 7 site is designed to minimize impervious areas to the greatest extent practicable. We note that stormwater management, as planned, provides an increase to treatment and improved conditions on the site by improvements at an eroded area permitted by a Maine DEP Permit by Rule, Section 7-Outfalls.

   a. Stormwater management does not include ponding or flooding on the site or adjacent properties.

   b./c. Downstream problems or stormwater system capacity issues are not anticipated.

2. Stormwater management for this project is permitted by the standards of a Maine DEP Stormwater Management Permit by Rule that includes the required Maine Construction General Permit authorization.

3. Development does not pose a risk of groundwater contamination during or post-construction per the Technical Manual stormwater management and water supply standards description.

   Please see the plan set for the written ESC Plan and this section for the Stormwater Management Plan.

   NOTE: Per City staff comments received in February 2024, updated Contech Engineered Solutions information regarding the Jellyfish Filter design has been inserted at the end of this section. The enclosed letter, design calculations, and standard detail configuration plan amend and supersede the Contech design submittal dated December 2023.

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Stormwater Management Report

For:

Martin's Point Veranda Campus

331 Veranda Street
Portland, Maine

Prepared for:
Martin's Point Health Care, INC
PO Box 9746
Portland, ME 04103

Prepared by:
Sebago Technics, Inc.
75 John Roberts Road, Suite 4A
South Portland, Maine 04106

March 2024

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Attachment 2B – Hydrologic Modeling– Proposed Condition (HydroCAD) Summary
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Attachment 4 – FEMA Flood Insurance Rate Map
Attachment 5 – Stormwater Management Plans

Stormwater Management Report Narrative

A. Introduction

This Stormwater Management Report has been prepared to present analyses performed to address the potential impacts associated with the project due to proposed modifications in stormwater runoff characteristics and land cover changes. The stormwater management controls that are outlined in this report have been designed to suit the proposed redevelopment project and to comply with applicable regulatory requirements.

B. Existing Conditions

Located in Portland Maine, the approximate 12.6-acre property is fully developed as Martin's Point Health Care Vernada Street campus. The entire campus consists of 7 buildings with associated parking, walkways, and landscaped areas. The campus is identified as Lots C001, C005, and C010 on the City of Portland Tax Map 434. The site is bounded by Veranda Street to the north and west, land owned by The City of Portland to the east, and Casco Bay to the south.

This report focuses on an approximate 4.5-acre portion of the campus surrounding the existing buildings 5,6, and 7 that is being directly impacted by the proposed redevelopment project. The project impacts Lot C010 and a portion of Lot C005.

An existing closed drainage system conveys stormwater runoff from the site and outlets directly to Casco Bay at the northeastern edge of the site. The Martin's Point Veranda campus has three existing Filterra tree filters and one existing underdrain soil filter for stormwater treatment within the areas of impact for this project. Although these systems exist on-site, Martin's Point does not currently collect any stormwater credits from the City of Portland. All three existing stormwater detention and treatment systems will be removed and replaced with a proposed end-of-the-line treatment system.

The area of redevelopment is located within Zone V2 100-year floodplain, per the FEMA Flood Insurance Rate Map as depicted on the FEMA FIRM panel 230051 0008 B with an effective date of July 17, 1986. A copy of the FIRM can be found in Attachment 4.

The project site is located within the Casco Bay watershed. Casco Bay is not classified as urban impaired or a lake most at risk from development, per the Maine Department of Environmental Protection (MDEP) Chapter 502.

C. Soils

Soil information for the site was obtained via the USDA United States Department of Agriculture and Natural Resources Conservation Service's Web Soil Survey. The Hydrologic Soil Group (HSG) of the site soils are classified by Technical Release TR-55 of the Soil Conservation Service as follows:

Soil Name	Soil Map Symbol	HSG	Slope (%)
Lyman-Tunbridge Complex	HrB	C	0-8
Lyman-Tunbridge Complex	HrC	C	8-15
Suffield Silt Loam	SuC2	C	8-15

D. Proposed Site and Stormwater Improvements

Proposed site improvements include the removal of an existing structure (BLDG 7), construction of a new 4-story building with a 25,000 square-foot footprint, the redevelopment of the access drive from Veranda Street, the redevelopment of surface-level parking areas, and a variety of enhancements to the existing Martin's Point Varanda campus. Proposed improvements include both redeveloped and newly developed areas, totaling approximately 4.48 acres of developed area with 3.14 acres of impervious area.

Stormwater infrastructure for the development is designed to accommodate proposed site improvements. The proposed drainage system drains to the northeast corner of the site where an end-of-the-line Jellyfish Filter stormwater treatment system is proposed to treat stormwater runoff. Runoff from a proposed offsite trailhead plaza will be captured and treated via permeable pavers before discharging to the proposed drainage system. Runoff from areas of the site that will not be treated by the Jellyfish Filter system will drain directly to Casco Bay. The project's Stormwater Management Plan is designed so that the existing drainage patterns will not be significantly altered. The proposed closed drainage system will utilize the same outlet pipe location as the existing system.

E. Methodology

Stormwater runoff analyses were developed using the "HydroCAD" computer modeling software, which incorporates the TR-55 and TR-20 methodologies as provided by the Soil Conservation Service of the U.S. Department of Agriculture.

The estimated peak runoff rates were calculated using a 24-hour duration storm event with a Type III rainfall distribution. The rainfall amounts for Cumberland County SE for the 2-year, 10-year and 25-year storm events are as follows:

Storm Frequency	24-hr Duration Rainfall (in.)
2-yr	3.1
10-yr	4.6
25-yr	5.8

F. Existing Conditions Model

The existing conditions HydroCAD model consists of eleven (11) catchment areas labeled 1S-11S, and one (1) point of analysis (POA-1) for comparing peak runoff rates.

POA-1: All proposed catchment areas contribute runoff to Point of Analysis 1 (POA-1), Casco Bay, with a total area of approximately 4.48 acres.

- Existing condition catchment areas 1S through 8S represent areas of the project site where stormwater runoff is collected within the existing closed drainage system. Runoff collected in this drainage system is treated by three Filterra tree filters and one underdrain soil filter before discharging at the northeast corner of the property, directly into Casco Bay. Approximately 2.4 acres of impervious area and 0.9 acres of landscaped area are represented by these catchment areas.
- Existing condition catchment area 10S represents the northwestern portion of the project site where runoff drains directly to Casco Bay. 10S consists of mostly wooded and landscaped areas with a minor amount of impervious area. Approximately 0.05 acres of impervious area and 0.23 acres of landscaped area are represented by catchment 10S.
- Existing condition catchment area 9S represents the remaining area on the southeastern portion of the project site where runoff drains directly to Casco Bay. Approximately 0.26 acres of impervious and 0.63 acres of landscaped area are represented by catchment area 9S.

G. Proposed Conditions Model

The post-developed condition HydroCAD model consists of thirteen (13) catchment areas labeled 1.0S – 11.0S. The total proposed area is consistent with existing conditions.

POA-1: All proposed catchment areas contribute runoff to Point of Analysis 1 (POA-1), Casco Bay, with a total area of approximately 4.48 acres.

- Proposed catchment areas 1.0S (inclusive of 1.1S) through 8.0S represent areas of the project site in which stormwater runoff will be collected within the proposed closed drainage system and treated by the Jellyfish Filter system, represented by pond 31P. Approximately 2.36 acres of impervious area and 0.83 acres of landscaped area are represented by these catchment areas.
- Proposed catchment area 1.2S represents the proposed structure which will have a flat light-colored membrane roof which will not be treated via the proposed Jellyfish. This roof drain will connect to a manhole just downstream of the Jellyfish unit and discharge to Casco Bay.
- Proposed catchment area 10.0S represents the northwestern portion of the project site that drains directly to Casco Bay. Approximately 0.05 acres of impervious and 0.19 acres of landscaped area are represented by catchment 10.0S.
- Proposed catchment area 9.0S represents the remaining area along the southern and eastern edges of the project site where runoff drains directly to Casco Bay. Approximately 0.16 acres of impervious area and 0.33 acres of landscaped area are represented by catchment 9.0S.

H. Regulatory Requirements

MDEP Chapters 500 and 502 describe stormwater management requirements for new projects. The rules describe performance standards divided into five major categories: Basic Standard, General Standard, Phosphorous Standard, Urban Impaired Stream Standard, and Flooding Standard. The following sections describe how this project will address these stormwater management performance standards.

Basic Standard – Chapter 500, Section 4(B)

Since the project will disturb more than one (1) acre of land area, MDEP Basic Standards apply, requiring that grading or other construction activities on the site do not impede or otherwise alter drainage ways to have an unreasonable adverse impact. Adverse impacts are minimized by providing an Erosion and Sedimentation Control Plan, and an Inspection, Maintenance, and Housekeeping Plan (Attachment 3) to be implemented during construction and post-construction stabilization of the site. These construction requirements have been developed following Best Management Practice guidelines.

General Standard – Chapter 500, Section 4(C)

Since the project will create more than one (1) acre of impervious surface, MDEP General Standards apply, which require a project's stormwater management system to include treatment measures that will mitigate the increased frequency and duration of channel erosive flows due to runoff from smaller storms, provide for effective treatment of pollutants in stormwater, and mitigate potential temperature impacts. The General Standards require treatment of no less than 95% of the site's created impervious area and no less than 80% of the site's created developed area (landscaped area and impervious area combined).

A Jellyfish Filter system is being proposed as an end-of-the-line treatment system for the proposed closed drainage system. Jellyfish Filters are effective at removing a wide range of pollutants. Runoff from 100% of the new impervious area and portions of existing impervious areas and 91% of the developed area (impervious and landscaped) is being treated by the Jellyfish Filter. All proposed impervious area is being treated as new impervious area except for the roof of existing building 6. Runoff from building 6 will be collected and treated within the proposed system, bringing the percentage of impervious area treated above 100%. Before runoff enters the Jellyfish Filter, it will pass through The Cascade Separator by Contech as a pre-treatment measure. The Cascade utilizes sediment capture technology to provide high sediment removal efficiency.

Flooding Standard – Chapter 500, Section 4(F)

This project is eligible for a waiver from the flooding standard because runoff from the project site discharges directly to a coastal wetland exclusively in sheet flow, a manmade open channel, or in a piped system.

The following table summarizes the peak rates of runoff for the existing and proposed conditions:

Stormwater Peak Discharge Summary Table									
Study Point	**2-Year Storm**			**10-Year Storm**			**25-Year Storm**		
	Pre (cfs)	**Post (cfs)**	**Diff. (cfs)**	**Pre (cfs)**	**Post (cfs)**	**Diff. (cfs)**	**Pre (cfs)**	**Post (cfs)**	**Diff. (cfs)**
POA-1	10.0	10.8	+0.8	16.8	17.2	+0.4	22.3	22.4	+0.2

The HydroCAD Data output sheets from this analysis are appended to this report under Attachments 2A and 2B, along with existing condition and proposed condition stormwater management plans as attachments. The results of stormwater modeling at the identified study point indicate that the peak rates of runoff under proposed conditions will slightly exceed existing conditions for the 2-year, 10-year, and 25-year storm events. However, all stormwater runoff discharges directly into Casco Bay, a major coastal wetland.

I. Summary

The proposed project requires the use of stormwater management systems to meet treatment requirements specified in MDEP Chapter 500 standards. A waiver is being requested for the standard to control peak rates of runoff in accordance with City of Portland standards (Chapter 500.F.3). The proposed stormwater management system includes a Jellyfish that provides the necessary treatment.

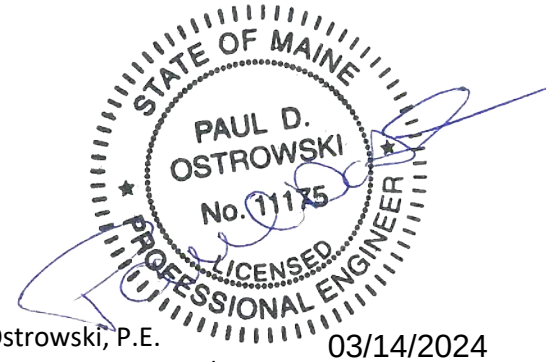
Flows leaving the site from the study point and converging at downstream locations, follow the same drainage patterns as the existing condition. Based on the modeling data, it is anticipated that stormwater runoff from the proposed site development will not cause a significant adverse effect on off-site receiving channels or downstream areas, as the existing outfall location is being utilized in the post-development condition and this area is a rock stabilized slope.

Additionally, erosion and sedimentation controls along with associated maintenance and housekeeping procedures have been outlined to prevent unreasonable impacts on the site and to the surrounding environment.

Prepared by:

SEBAGO TECHNICS, INC.

Kelly Koehler, E.I.
Project Engineer



Paul Ostrowski, P.E.
Senior Project Engineer/Engineering Design Manager

03/14/2024

Attachment 1

Stormwater Quality Calculations

Table 1: MDEP GENERAL STANDARD CALCULATIONS

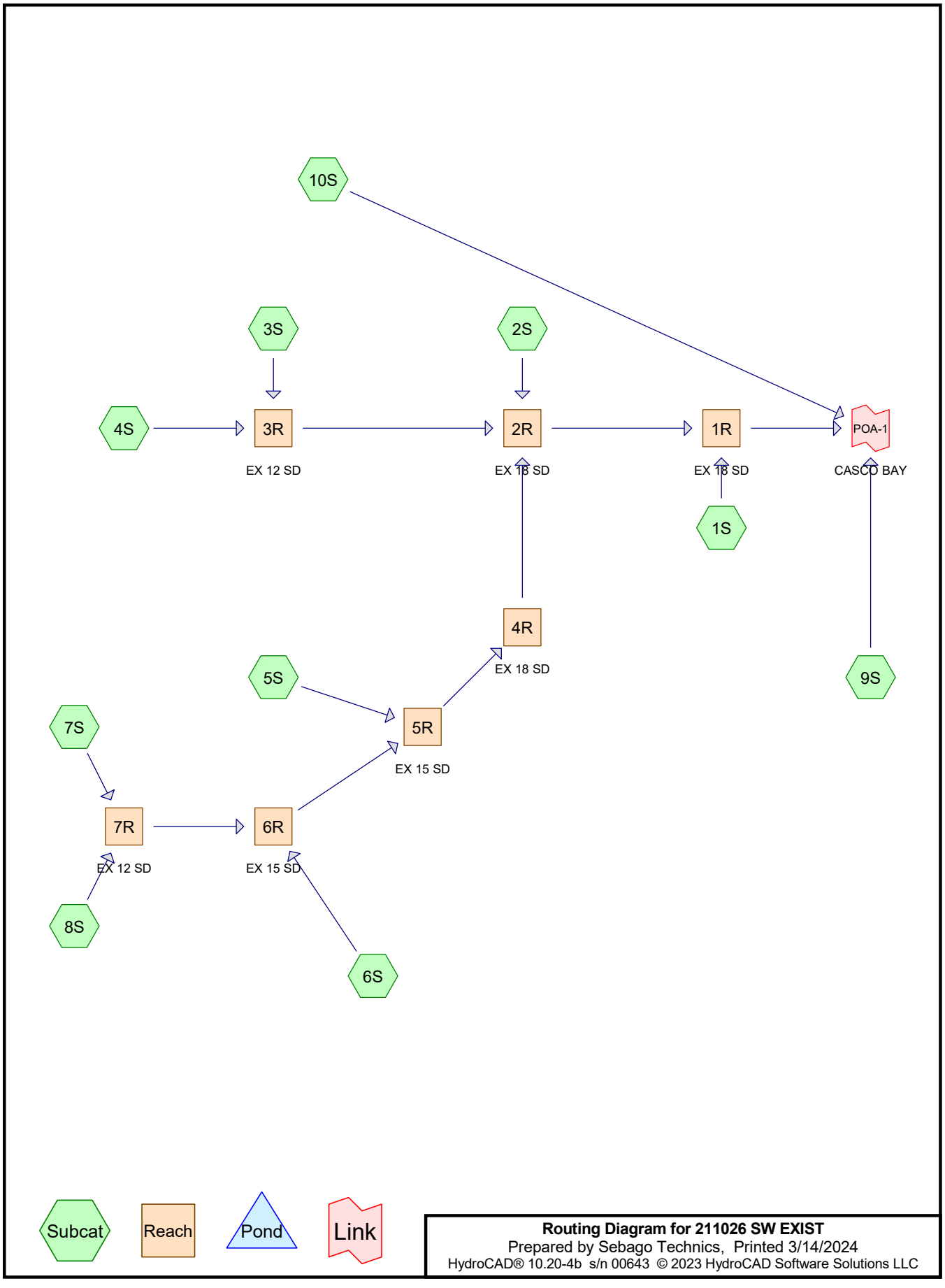
Job #

AREA ID	WATERSHED SIZE (S.F.)	EXISTING ONSITE IMPERVIOUS AREA TO REMAIN (S.F.)	NEW ONSITE IMPERVIOUS AREA (S.F.)	EXISTING ONSITE LANDSCAPED AREA TO REMAIN (S.F.)	NEW ONSITE LANDSCAPED AREA (S.F.)	NET NEW DEVELOPED AREA (S.F.)	NET EXISTING DEVELOPED AREAS (S.F.)	TREATMENT PROVIDED?	IMPERVIOUS AREA TREATED (S.F.)	LANDSCAPED AREA TREATED (S.F.)	DEVELOPED AREA TREATED (S.F.)	TREATMENT BMP
1	2,600		2,600		0	2,600	0	YES	2,600	0	2,600	JELLYFISH FILTER
2	3,620		3,400		220	3,620	0	YES	3,400	220	3,620	JELLYFISH FILTER
3	3,400		200		3200	3,400	0	YES	200	3,200	3,400	JELLYFISH FILTER
4	3,200		1600		1600	3,200	0	YES	1,600	1,600	3,200	JELLYFISH FILTER
5	2,100		2100		0	2,100	0	YES	2,100	0	2,100	JELLYFISH FILTER
6	1,100		0		1100	1,100	0	YES	0	1,100	1,100	JELLYFISH FILTER
7	1,800		1500		300	1,800	0	YES	1,500	300	1,800	JELLYFISH FILTER
8	1,000		300		700	1,000	0	YES	300	700	1,000	JELLYFISH FILTER
9	6,100		5200		900	6,100	0	YES	5,200	900	6,100	JELLYFISH FILTER
10	2,800		1700		1100	2,800	0	YES	1,700	1,100	2,800	JELLYFISH FILTER
11	2,300		1700		600	2,300	0	YES	1,700	600	2,300	JELLYFISH FILTER
12	6,700		4600		2100	6,700	0	YES	4,600	2,100	6,700	JELLYFISH FILTER
13	900		200		700	900	0	YES	200	700	900	JELLYFISH FILTER
14	2,200		1100		1100	2,200	0	YES	1,100	1,100	2,200	JELLYFISH FILTER
15	1,200		1200		0	1,200	0	YES	1,200	0	1,200	JELLYFISH FILTER
16	4,100		0		4100	4,100	0	YES	0	4,100	4,100	JELLYFISH FILTER
17	10,500		2200		8300	10,500	0	NO	0	0	0	N/A
18	4,400		0		4400	4,400	0	YES	0	4,400	4,400	JELLYFISH FILTER
19	3,800		2000		1800	3,800	0	YES	2,000	1,800	3,800	JELLYFISH FILTER
20	2,200		1900		300	2,200	0	YES	1,900	300	2,200	JELLYFISH FILTER
21	7,500		6000		1500	7,500	0	YES	6,000	1,500	7,500	JELLYFISH FILTER
22	3,300		3200		100	3,300	0	YES	3,200	100	3,300	JELLYFISH FILTER
23	4,800		1700		3100	4,800	0	YES	1,700	3,100	4,800	JELLYFISH FILTER
24	1,900		1600		300	1,900	0	YES	1,600	300	1,900	JELLYFISH FILTER
25	800		800		0	800	0	YES	800	0	800	JELLYFISH FILTER
26	13,300		10200		3100	13,300	0	YES	10,200	3,100	13,300	JELLYFISH FILTER
27	25,000		25000		0	25,000	0	NO	0	0	0	WHITE MEMBRANE
28	21,100		6900		14200	21,100	0	NO	0	0	0	N/A
29	43,000	43,000	0	0	0	0	43,000	YES	43,000	0	43,000	JELLYFISH FILTER
30	3,000		1200		1800	3,000	0	YES	1,200	1,800	3,000	JELLYFISH FILTER
31	1,700		200		1500	1,700	0	YES	200	1,500	1,700	JELLYFISH FILTER
32	3,600		3300		300	3,600	0	YES	3,300	300	3,600	JELLYFISH FILTER
TOTAL (S.F.)	**195,020**	**43,000**	93600	**0**	**58,420**	**152,020**	**43,000**		**102,500**	**35,920**	**138,420**	

TOTAL NEW IMPERVIOUS AREA (S.F.)	**93,600**	**TOTAL DEVELOPED AREA (S.F.)**	**152,020**
TOTAL IMPERVIOUS AREA RECEIVING TREATMENT (S.F.)	**102,500**	**TOTAL AREA RECEIVING TREATMENT (S.F.)**	**138,420**
% OF IMPERVIOUS AREA RECEIVING TREATMENT	**109.51%**	**% OF AREA RECEIVING TREATMENT**	**91.05%**

Attachment 2A

Existing Condition HydroCAD Summary


10S
3S
2S
4S
3R
2R
1R
POA-1
EX 12 SD
EX 18 SD
EX 18 SD
CASCO BAY
1S
4R
EX 18 SD
5S
9S
7S
5R
EX 15 SD
7R
6R
EX 12 SD
EX 15 SD
8S
6S
Subcat
Reach
Pond
Link
Routing Diagram for 211026 SW EXIST
Prepared by Sebago Technics, Printed 3/14/2024
HydroCAD® 10.20-4b s/n 00643 © 2023 HydroCAD Software Solutions LLC

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
1.626	74	>75% Grass cover, Good, HSG C (1S, 2S, 3S, 4S, 5S, 6S, 7S, 8S, 9S, 10S)
1.662	98	Paved parking, HSG C (1S, 2S, 3S, 4S, 5S, 6S, 7S, 8S, 9S, 10S)
0.987	98	Roof (6S)
0.202	70	Woods, Good, HSG C (4S, 5S, 7S, 10S)

Summary for Subcatchment 1S:

Runoff = 1.4 cfs @ 12.09 hrs, Volume= 0.096 af, Depth= 1.83"
Routed to Reach 1R : EX 18 SD

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-YR Rainfall=3.10"

Area (ac)	CN	Description
0.298	74	>75% Grass cover, Good, HSG C
0.333	98	Paved parking, HSG C
0.631	87	Weighted Average
0.298		47.23% Pervious Area
0.333		52.77% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.1	5	0.0200	0.74		**Sheet Flow, A-B** Smooth surfaces n= 0.011 P2= 3.10"
0.0	5	0.3000	8.82		**Shallow Concentrated Flow, B-C** Unpaved Kv= 16.1 fps
0.1	10	0.2100	2.29		**Shallow Concentrated Flow, C-D** Woodland Kv= 5.0 fps
0.0	10	0.2000	7.20		**Shallow Concentrated Flow, D-E** Unpaved Kv= 16.1 fps
0.4	65	0.2500	2.50		**Shallow Concentrated Flow, E-F** Woodland Kv= 5.0 fps
0.0	10	0.1000	5.09		**Shallow Concentrated Flow, F-G** Unpaved Kv= 16.1 fps
0.3	85	0.0470	4.40		**Shallow Concentrated Flow, G-H** Paved Kv= 20.3 fps
0.4	85	0.0300	3.52		**Shallow Concentrated Flow, H-I** Paved Kv= 20.3 fps
4.7					**Direct Entry, DIRECT**
6.0	275	Total			

Summary for Subcatchment 2S:

Runoff = 1.1 cfs @ 12.09 hrs, Volume= 0.079 af, Depth= 2.08"
Routed to Reach 2R : EX 18 SD

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-YR Rainfall=3.10"

Area (ac)	CN	Description
0.149	74	>75% Grass cover, Good, HSG C
0.305	98	Paved parking, HSG C
0.454	90	Weighted Average
0.149		32.82% Pervious Area
0.305		67.18% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.2	60	0.3000	0.45		**Sheet Flow, A-B** Grass: Short n= 0.150 P2= 3.10"
0.2	60	0.0500	4.54		**Shallow Concentrated Flow, B-C** Paved Kv= 20.3 fps
3.6					**Direct Entry, DIRECT**
6.0	120	Total			

Summary for Subcatchment 3S:

Runoff = 0.2 cfs @ 12.08 hrs, Volume= 0.017 af, Depth= 2.65"
Routed to Reach 3R : EX 12 SD

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-YR Rainfall=3.10"

Area (ac)	CN	Description
0.005	74	>75% Grass cover, Good, HSG C
0.074	98	Paved parking, HSG C
0.079	96	Weighted Average
0.005		6.33% Pervious Area
0.074		93.67% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.2	20	0.0750	1.66		**Sheet Flow, A-B** Smooth surfaces n= 0.011 P2= 3.10"
0.4	130	0.0850	5.92		**Shallow Concentrated Flow, B-C** Paved Kv= 20.3 fps
5.4					**Direct Entry, DIRECT**
6.0	150	Total			

Summary for Subcatchment 4S:

Runoff = 0.2 cfs @ 12.09 hrs, Volume= 0.018 af, Depth= 1.33"
Routed to Reach 3R : EX 12 SD

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-YR Rainfall=3.10"

Area (ac)	CN	Description
0.050	70	Woods, Good, HSG C
0.060	74	>75% Grass cover, Good, HSG C
0.052	98	Paved parking, HSG C
0.162	80	Weighted Average
0.110		67.90% Pervious Area
0.052		32.10% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.3	30	0.2100	0.15		**Sheet Flow, A-B** Woods: Light underbrush n= 0.400 P2= 3.10"
0.0	25	0.3800	9.92		**Shallow Concentrated Flow, B-C** Unpaved Kv= 16.1 fps
0.5	150	0.0660	5.22		**Shallow Concentrated Flow, C-D** Paved Kv= 20.3 fps
2.2					**Direct Entry, DIRECT**
6.0	205	Total			

Summary for Subcatchment 5S:

Runoff = 0.2 cfs @ 12.09 hrs, Volume= 0.016 af, Depth= 1.67"
Routed to Reach 5R : EX 15 SD

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-YR Rainfall=3.10"

Area (ac)	CN	Description
0.009	70	Woods, Good, HSG C
0.053	74	>75% Grass cover, Good, HSG C
0.055	98	Paved parking, HSG C
0.117	85	Weighted Average
0.062		52.99% Pervious Area
0.055		47.01% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.9	50	0.0300	0.17		**Sheet Flow, A-B** Grass: Short n= 0.150 P2= 3.10"
0.2	60	0.0560	4.80		**Shallow Concentrated Flow, B-C** Paved Kv= 20.3 fps
0.3	100	0.1000	6.42		**Shallow Concentrated Flow, C-D** Paved Kv= 20.3 fps
0.6					**Direct Entry, DIRECT**
6.0	210	Total			

Summary for Subcatchment 6S:

Runoff = 3.6 cfs @ 12.08 hrs, Volume= 0.269 af, Depth= 2.45"
Routed to Reach 6R : EX 15 SD

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-YR Rainfall=3.10"

Area (ac)	CN	Description
0.229	74	>75% Grass cover, Good, HSG C
0.104	98	Paved parking, HSG C
* 0.987	98	Roof
1.320	94	Weighted Average
0.229		17.35% Pervious Area
1.091		82.65% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.6	10	0.2000	0.27		**Sheet Flow, A-B** Grass: Short n= 0.150 P2= 3.10"
0.3	45	0.1500	2.71		**Shallow Concentrated Flow, B-C** Short Grass Pasture Kv= 7.0 fps
0.3	165	0.0200	8.06	9.90	**Pipe Channel, C-D** 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012
4.8					**Direct Entry, DIRECT ENTRY**
6.0	220	Total			

Summary for Subcatchment 7S:

Runoff = 0.7 cfs @ 12.09 hrs, Volume= 0.050 af, Depth= 2.16"
Routed to Reach 7R : EX 12 SD

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-YR Rainfall=3.10"

Area (ac)	CN	Description
0.006	70	Woods, Good, HSG C
0.078	74	>75% Grass cover, Good, HSG C
0.193	98	Paved parking, HSG C
0.277	91	Weighted Average
0.084		30.32% Pervious Area
0.193		69.68% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.8	70	0.0280	1.44		**Sheet Flow, A-B** Smooth surfaces n= 0.011 P2= 3.10"
0.2	65	0.0460	4.35		**Shallow Concentrated Flow, B-C** Paved Kv= 20.3 fps
0.1	25	0.0800	4.55		**Shallow Concentrated Flow, C-D** Unpaved Kv= 16.1 fps
4.9					**Direct Entry, DIRECT**
6.0	160	Total			

Summary for Subcatchment 8S:

Runoff = 0.8 cfs @ 12.08 hrs, Volume= 0.059 af, Depth= 2.55"
Routed to Reach 7R : EX 12 SD

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-YR Rainfall=3.10"

Area (ac)	CN	Description
0.035	74	>75% Grass cover, Good, HSG C
0.244	98	Paved parking, HSG C
0.279	95	Weighted Average
0.035		12.54% Pervious Area
0.244		87.46% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, DIRECT**

Summary for Subcatchment 9S:

Runoff = 1.4 cfs @ 12.09 hrs, Volume= 0.102 af, Depth= 1.39"
Routed to Link POA-1 : CASCO BAY

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-YR Rainfall=3.10"

Area (ac)	CN	Description
0.631	74	>75% Grass cover, Good, HSG C
0.253	98	Paved parking, HSG C
0.884	81	Weighted Average
0.631		71.38% Pervious Area
0.253		28.62% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.2	33	0.1000	0.26		**Sheet Flow, A-B** Grass: Short n= 0.150 P2= 3.10"
0.7	135	0.2400	3.43		**Shallow Concentrated Flow, B-C** Short Grass Pasture Kv= 7.0 fps
0.2	80	0.1200	7.03		**Shallow Concentrated Flow, C-D** Paved Kv= 20.3 fps
0.0	10	1.0000	20.30		**Shallow Concentrated Flow, D-E** Paved Kv= 20.3 fps
2.9					**Direct Entry, DIRECT**
6.0	258	Total			

Summary for Subcatchment 10S:

Runoff = 0.3 cfs @ 12.09 hrs, Volume= 0.025 af, Depth= 1.08"
Routed to Link POA-1 : CASCO BAY

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-YR Rainfall=3.10"

Area (ac)	CN	Description
0.137	70	Woods, Good, HSG C
0.088	74	>75% Grass cover, Good, HSG C
0.049	98	Paved parking, HSG C
0.274	76	Weighted Average
0.225		82.12% Pervious Area
0.049		17.88% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.1	20	0.2900	0.16		**Sheet Flow, A-B** Woods: Light underbrush n= 0.400 P2= 3.10"
0.5	90	0.1600	2.80		**Shallow Concentrated Flow, B-C** Short Grass Pasture Kv= 7.0 fps
0.2	45	0.0330	3.69		**Shallow Concentrated Flow, C-D** Paved Kv= 20.3 fps
0.8	80	0.0510	1.58		**Shallow Concentrated Flow, D-E** Short Grass Pasture Kv= 7.0 fps
2.4					**Direct Entry, DIRECTY ENTRY**
6.0	235	Total			

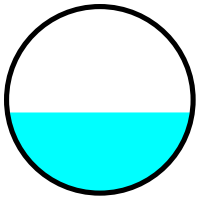
Summary for Reach 1R: EX 18 SD

Inflow Area = 3.319 ac, 70.71% Impervious, Inflow Depth = 2.19" for 2-YR event
Inflow = 8.3 cfs @ 12.09 hrs, Volume= 0.605 af
Outflow = 8.3 cfs @ 12.09 hrs, Volume= 0.605 af, Atten= 0%, Lag= 0.0 min
Routed to Link POA-1 : CASCO BAY

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Max. Velocity= 11.24 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 3.56 fps, Avg. Travel Time= 0.1 min

Peak Storage= 19 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.65' , Surface Width= 1.49'
Bank-Full Depth= 1.50' Flow Area= 1.8 sf, Capacity= 21.2 cfs

18.0" Round Pipe
n= 0.012
Length= 26.0' Slope= 0.0346 '/'
Inlet Invert= 22.90', Outlet Invert= 22.00'



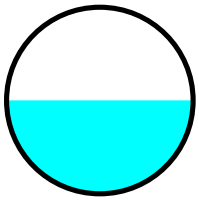
Summary for Reach 2R: EX 18 SD

Inflow Area = 2.688 ac, 74.93% Impervious, Inflow Depth = 2.27" for 2-YR event
Inflow = 6.9 cfs @ 12.09 hrs, Volume= 0.509 af
Outflow = 6.9 cfs @ 12.09 hrs, Volume= 0.509 af, Atten= 0%, Lag= 0.2 min
Routed to Reach 1R : EX 18 SD

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Max. Velocity= 7.79 fps, Min. Travel Time= 0.3 min
Avg. Velocity = 2.50 fps, Avg. Travel Time= 0.9 min

Peak Storage= 115 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.75' , Surface Width= 1.50'
Bank-Full Depth= 1.50' Flow Area= 1.8 sf, Capacity= 13.8 cfs

18.0" Round Pipe
n= 0.012
Length= 130.0' Slope= 0.0146 '/'
Inlet Invert= 24.90', Outlet Invert= 23.00'



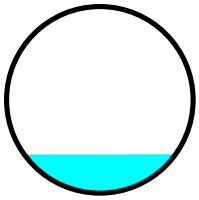
Summary for Reach 3R: EX 12 SD

Inflow Area = 0.241 ac, 52.28% Impervious, Inflow Depth = 1.76" for 2-YR event
Inflow = 0.5 cfs @ 12.09 hrs, Volume= 0.035 af
Outflow = 0.5 cfs @ 12.10 hrs, Volume= 0.035 af, Atten= 0%, Lag= 0.4 min
Routed to Reach 2R : EX 18 SD

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Max. Velocity= 4.00 fps, Min. Travel Time= 0.6 min
Avg. Velocity = 1.27 fps, Avg. Travel Time= 2.0 min

Peak Storage= 18 cf @ 12.10 hrs
Average Depth at Peak Storage= 0.21' , Surface Width= 0.81'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 5.0 cfs

12.0" Round Pipe
n= 0.012
Length= 150.0' Slope= 0.0167 '/'
Inlet Invert= 27.40', Outlet Invert= 24.90'



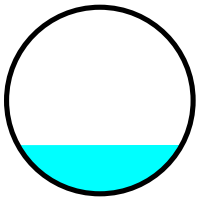
Summary for Reach 4R: EX 18 SD

Inflow Area = 1.993 ac, 79.43% Impervious, Inflow Depth = 2.38" for 2-YR event
Inflow = 5.3 cfs @ 12.09 hrs, Volume= 0.395 af
Outflow = 5.3 cfs @ 12.09 hrs, Volume= 0.395 af, Atten= 0%, Lag= 0.0 min
Routed to Reach 2R : EX 18 SD

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Max. Velocity= 14.50 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 4.66 fps, Avg. Travel Time= 0.2 min

Peak Storage= 18 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.39' , Surface Width= 1.32'
Bank-Full Depth= 1.50' Flow Area= 1.8 sf, Capacity= 35.6 cfs

18.0" Round Pipe
n= 0.012
Length= 50.0' Slope= 0.0980 '/'
Inlet Invert= 29.90', Outlet Invert= 25.00'



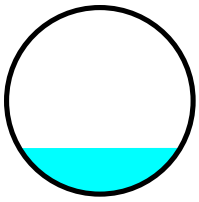
Summary for Reach 5R: EX 15 SD

Inflow Area = 1.993 ac, 79.43% Impervious, Inflow Depth = 2.38" for 2-YR event
Inflow = 5.3 cfs @ 12.09 hrs, Volume= 0.395 af
Outflow = 5.3 cfs @ 12.09 hrs, Volume= 0.395 af, Atten= 0%, Lag= 0.0 min
Routed to Reach 4R : EX 18 SD

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Max. Velocity= 22.53 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 7.26 fps, Avg. Travel Time= 0.1 min

Peak Storage= 11 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.31' , Surface Width= 1.08'
Bank-Full Depth= 1.25' Flow Area= 1.2 sf, Capacity= 39.6 cfs

15.0" Round Pipe
n= 0.012
Length= 45.0' Slope= 0.3209 '/'
Inlet Invert= 44.44', Outlet Invert= 30.00'



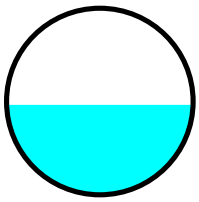
Summary for Reach 6R: EX 15 SD

Inflow Area = 1.876 ac, 81.45% Impervious, Inflow Depth = 2.42" for 2-YR event
Inflow = 5.1 cfs @ 12.09 hrs, Volume= 0.378 af
Outflow = 5.1 cfs @ 12.09 hrs, Volume= 0.378 af, Atten= 0%, Lag= 0.0 min
Routed to Reach 5R : EX 15 SD

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Max. Velocity= 8.70 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 2.86 fps, Avg. Travel Time= 0.1 min

Peak Storage= 9 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.60' , Surface Width= 1.25'
Bank-Full Depth= 1.25' Flow Area= 1.2 sf, Capacity= 10.8 cfs

15.0" Round Pipe
n= 0.012
Length= 15.0' Slope= 0.0240 '/'
Inlet Invert= 44.90', Outlet Invert= 44.54'



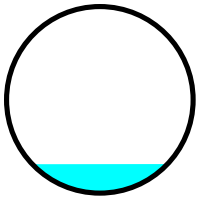
Summary for Reach 7R: EX 12 SD

Inflow Area = 0.556 ac, 78.60% Impervious, Inflow Depth = 2.36" for 2-YR event
Inflow = 1.5 cfs @ 12.09 hrs, Volume= 0.109 af
Outflow = 1.5 cfs @ 12.09 hrs, Volume= 0.109 af, Atten= 0%, Lag= 0.0 min
Routed to Reach 6R : EX 15 SD

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Max. Velocity= 19.07 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 6.16 fps, Avg. Travel Time= 0.1 min

Peak Storage= 2 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.16' , Surface Width= 0.72'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 28.4 cfs

12.0" Round Pipe
n= 0.012
Length= 20.0' Slope= 0.5400 '/'
Inlet Invert= 56.50', Outlet Invert= 45.70'



Summary for Link POA-1: CASCO BAY

Inflow Area = 4.477 ac, 59.17% Impervious, Inflow Depth = 1.96" for 2-YR event
Inflow = 10.0 cfs @ 12.09 hrs, Volume= 0.732 af
Primary = 10.0 cfs @ 12.09 hrs, Volume= 0.732 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs

Summary for Subcatchment 1S:

Runoff = 2.3 cfs @ 12.09 hrs, Volume= 0.168 af, Depth= 3.19"
Routed to Reach 1R : EX 18 SD

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-YR Rainfall=4.60"

Area (ac)	CN	Description
0.298	74	>75% Grass cover, Good, HSG C
0.333	98	Paved parking, HSG C
0.631	87	Weighted Average
0.298		47.23% Pervious Area
0.333		52.77% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.1	5	0.0200	0.74		**Sheet Flow, A-B** Smooth surfaces n= 0.011 P2= 3.10"
0.0	5	0.3000	8.82		**Shallow Concentrated Flow, B-C** Unpaved Kv= 16.1 fps
0.1	10	0.2100	2.29		**Shallow Concentrated Flow, C-D** Woodland Kv= 5.0 fps
0.0	10	0.2000	7.20		**Shallow Concentrated Flow, D-E** Unpaved Kv= 16.1 fps
0.4	65	0.2500	2.50		**Shallow Concentrated Flow, E-F** Woodland Kv= 5.0 fps
0.0	10	0.1000	5.09		**Shallow Concentrated Flow, F-G** Unpaved Kv= 16.1 fps
0.3	85	0.0470	4.40		**Shallow Concentrated Flow, G-H** Paved Kv= 20.3 fps
0.4	85	0.0300	3.52		**Shallow Concentrated Flow, H-I** Paved Kv= 20.3 fps
4.7					**Direct Entry, DIRECT**
6.0	275	Total			

Summary for Subcatchment 2S:

Runoff = 1.8 cfs @ 12.09 hrs, Volume= 0.132 af, Depth= 3.49"
Routed to Reach 2R : EX 18 SD

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-YR Rainfall=4.60"

Area (ac)	CN	Description
0.149	74	>75% Grass cover, Good, HSG C
0.305	98	Paved parking, HSG C
0.454	90	Weighted Average
0.149		32.82% Pervious Area
0.305		67.18% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.2	60	0.3000	0.45		**Sheet Flow, A-B** Grass: Short n= 0.150 P2= 3.10"
0.2	60	0.0500	4.54		**Shallow Concentrated Flow, B-C** Paved Kv= 20.3 fps
3.6					**Direct Entry, DIRECT**
6.0	120	Total			

Summary for Subcatchment 3S:

Runoff = 0.3 cfs @ 12.08 hrs, Volume= 0.027 af, Depth= 4.14"
Routed to Reach 3R : EX 12 SD

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-YR Rainfall=4.60"

Area (ac)	CN	Description
0.005	74	>75% Grass cover, Good, HSG C
0.074	98	Paved parking, HSG C
0.079	96	Weighted Average
0.005		6.33% Pervious Area
0.074		93.67% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.2	20	0.0750	1.66		**Sheet Flow, A-B** Smooth surfaces n= 0.011 P2= 3.10"
0.4	130	0.0850	5.92		**Shallow Concentrated Flow, B-C** Paved Kv= 20.3 fps
5.4					**Direct Entry, DIRECT**
6.0	150	Total			

Summary for Subcatchment 4S:

Runoff = 0.5 cfs @ 12.09 hrs, Volume= 0.034 af, Depth= 2.55"
Routed to Reach 3R : EX 12 SD

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-YR Rainfall=4.60"

Area (ac)	CN	Description
0.050	70	Woods, Good, HSG C
0.060	74	>75% Grass cover, Good, HSG C
0.052	98	Paved parking, HSG C
0.162	80	Weighted Average
0.110		67.90% Pervious Area
0.052		32.10% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.3	30	0.2100	0.15		**Sheet Flow, A-B** Woods: Light underbrush n= 0.400 P2= 3.10"
0.0	25	0.3800	9.92		**Shallow Concentrated Flow, B-C** Unpaved Kv= 16.1 fps
0.5	150	0.0660	5.22		**Shallow Concentrated Flow, C-D** Paved Kv= 20.3 fps
2.2					**Direct Entry, DIRECT**
6.0	205	Total			

Summary for Subcatchment 5S:

Runoff = 0.4 cfs @ 12.09 hrs, Volume= 0.029 af, Depth= 3.00"
Routed to Reach 5R : EX 15 SD

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-YR Rainfall=4.60"

Area (ac)	CN	Description
0.009	70	Woods, Good, HSG C
0.053	74	>75% Grass cover, Good, HSG C
0.055	98	Paved parking, HSG C
0.117	85	Weighted Average
0.062		52.99% Pervious Area
0.055		47.01% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.9	50	0.0300	0.17		**Sheet Flow, A-B** Grass: Short n= 0.150 P2= 3.10"
0.2	60	0.0560	4.80		**Shallow Concentrated Flow, B-C** Paved Kv= 20.3 fps
0.3	100	0.1000	6.42		**Shallow Concentrated Flow, C-D** Paved Kv= 20.3 fps
0.6					**Direct Entry, DIRECT**
6.0	210	Total			

Summary for Subcatchment 6S:

Runoff = 5.7 cfs @ 12.08 hrs, Volume= 0.431 af, Depth= 3.91"
Routed to Reach 6R : EX 15 SD

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-YR Rainfall=4.60"

Area (ac)	CN	Description
0.229	74	>75% Grass cover, Good, HSG C
0.104	98	Paved parking, HSG C
* 0.987	98	Roof
1.320	94	Weighted Average
0.229		17.35% Pervious Area
1.091		82.65% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.6	10	0.2000	0.27		**Sheet Flow, A-B** Grass: Short n= 0.150 P2= 3.10"
0.3	45	0.1500	2.71		**Shallow Concentrated Flow, B-C** Short Grass Pasture Kv= 7.0 fps
0.3	165	0.0200	8.06	9.90	**Pipe Channel, C-D** 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012
4.8					**Direct Entry, DIRECT ENTRY**
6.0	220	Total			

Summary for Subcatchment 7S:

Runoff = 1.1 cfs @ 12.08 hrs, Volume= 0.083 af, Depth= 3.59"
Routed to Reach 7R : EX 12 SD

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-YR Rainfall=4.60"

Area (ac)	CN	Description
0.006	70	Woods, Good, HSG C
0.078	74	>75% Grass cover, Good, HSG C
0.193	98	Paved parking, HSG C
0.277	91	Weighted Average
0.084		30.32% Pervious Area
0.193		69.68% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.8	70	0.0280	1.44		**Sheet Flow, A-B** Smooth surfaces n= 0.011 P2= 3.10"
0.2	65	0.0460	4.35		**Shallow Concentrated Flow, B-C** Paved Kv= 20.3 fps
0.1	25	0.0800	4.55		**Shallow Concentrated Flow, C-D** Unpaved Kv= 16.1 fps
4.9					**Direct Entry, DIRECT**
6.0	160	Total			

Summary for Subcatchment 8S:

Runoff = 1.2 cfs @ 12.08 hrs, Volume= 0.094 af, Depth= 4.02"
Routed to Reach 7R : EX 12 SD

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-YR Rainfall=4.60"

Area (ac)	CN	Description
0.035	74	>75% Grass cover, Good, HSG C
0.244	98	Paved parking, HSG C
0.279	95	Weighted Average
0.035		12.54% Pervious Area
0.244		87.46% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, DIRECT**

Summary for Subcatchment 9S:

Runoff = 2.7 cfs @ 12.09 hrs, Volume= 0.194 af, Depth= 2.63"
Routed to Link POA-1 : CASCO BAY

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-YR Rainfall=4.60"

Area (ac)	CN	Description
0.631	74	>75% Grass cover, Good, HSG C
0.253	98	Paved parking, HSG C
0.884	81	Weighted Average
0.631		71.38% Pervious Area
0.253		28.62% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.2	33	0.1000	0.26		**Sheet Flow, A-B** Grass: Short n= 0.150 P2= 3.10"
0.7	135	0.2400	3.43		**Shallow Concentrated Flow, B-C** Short Grass Pasture Kv= 7.0 fps
0.2	80	0.1200	7.03		**Shallow Concentrated Flow, C-D** Paved Kv= 20.3 fps
0.0	10	1.0000	20.30		**Shallow Concentrated Flow, D-E** Paved Kv= 20.3 fps
2.9					**Direct Entry, DIRECT**
6.0	258	Total			

Summary for Subcatchment 10S:

Runoff = 0.7 cfs @ 12.09 hrs, Volume= 0.050 af, Depth= 2.21"
Routed to Link POA-1 : CASCO BAY

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-YR Rainfall=4.60"

Area (ac)	CN	Description
0.137	70	Woods, Good, HSG C
0.088	74	>75% Grass cover, Good, HSG C
0.049	98	Paved parking, HSG C
0.274	76	Weighted Average
0.225		82.12% Pervious Area
0.049		17.88% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.1	20	0.2900	0.16		**Sheet Flow, A-B** Woods: Light underbrush n= 0.400 P2= 3.10"
0.5	90	0.1600	2.80		**Shallow Concentrated Flow, B-C** Short Grass Pasture Kv= 7.0 fps
0.2	45	0.0330	3.69		**Shallow Concentrated Flow, C-D** Paved Kv= 20.3 fps
0.8	80	0.0510	1.58		**Shallow Concentrated Flow, D-E** Short Grass Pasture Kv= 7.0 fps
2.4					**Direct Entry, DIRECTY ENTRY**
6.0	235	Total			

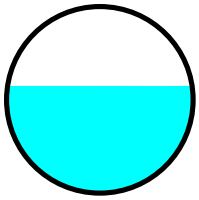
Summary for Reach 1R: EX 18 SD

Inflow Area = 3.319 ac, 70.71% Impervious, Inflow Depth = 3.61" for 10-YR event
Inflow = 13.4 cfs @ 12.09 hrs, Volume= 0.998 af
Outflow = 13.4 cfs @ 12.09 hrs, Volume= 0.998 af, Atten= 0%, Lag= 0.0 min
Routed to Link POA-1 : CASCO BAY

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Max. Velocity= 12.67 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 4.09 fps, Avg. Travel Time= 0.1 min

Peak Storage= 27 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.86' , Surface Width= 1.48'
Bank-Full Depth= 1.50' Flow Area= 1.8 sf, Capacity= 21.2 cfs

18.0" Round Pipe
n= 0.012
Length= 26.0' Slope= 0.0346 '/'
Inlet Invert= 22.90', Outlet Invert= 22.00'



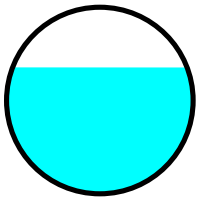
Summary for Reach 2R: EX 18 SD

Inflow Area = 2.688 ac, 74.93% Impervious, Inflow Depth = 3.71" for 10-YR event
Inflow = 11.0 cfs @ 12.09 hrs, Volume= 0.830 af
Outflow = 11.0 cfs @ 12.09 hrs, Volume= 0.830 af, Atten= 0%, Lag= 0.2 min
Routed to Reach 1R : EX 18 SD

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Max. Velocity= 8.65 fps, Min. Travel Time= 0.3 min
Avg. Velocity = 2.87 fps, Avg. Travel Time= 0.8 min

Peak Storage= 166 cf @ 12.09 hrs
Average Depth at Peak Storage= 1.02' , Surface Width= 1.40'
Bank-Full Depth= 1.50' Flow Area= 1.8 sf, Capacity= 13.8 cfs

18.0" Round Pipe
n= 0.012
Length= 130.0' Slope= 0.0146 '/'
Inlet Invert= 24.90', Outlet Invert= 23.00'



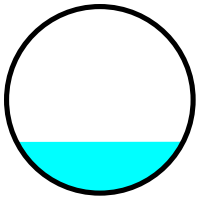
Summary for Reach 3R: EX 12 SD

Inflow Area = 0.241 ac, 52.28% Impervious, Inflow Depth = 3.07" for 10-YR event
Inflow = 0.8 cfs @ 12.09 hrs, Volume= 0.062 af
Outflow = 0.8 cfs @ 12.09 hrs, Volume= 0.062 af, Atten= 0%, Lag= 0.4 min
Routed to Reach 2R : EX 18 SD

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Max. Velocity= 4.70 fps, Min. Travel Time= 0.5 min
Avg. Velocity = 1.46 fps, Avg. Travel Time= 1.7 min

Peak Storage= 26 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.28' , Surface Width= 0.89'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 5.0 cfs

12.0" Round Pipe
n= 0.012
Length= 150.0' Slope= 0.0167 '/'
Inlet Invert= 27.40', Outlet Invert= 24.90'



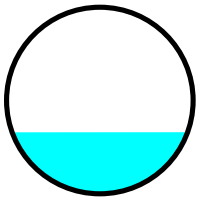
Summary for Reach 4R: EX 18 SD

Inflow Area = 1.993 ac, 79.43% Impervious, Inflow Depth = 3.83" for 10-YR event
Inflow = 8.4 cfs @ 12.08 hrs, Volume= 0.636 af
Outflow = 8.4 cfs @ 12.09 hrs, Volume= 0.636 af, Atten= 0%, Lag= 0.0 min
Routed to Reach 2R : EX 18 SD

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Max. Velocity= 16.48 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 5.30 fps, Avg. Travel Time= 0.2 min

Peak Storage= 25 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.50' , Surface Width= 1.41'
Bank-Full Depth= 1.50' Flow Area= 1.8 sf, Capacity= 35.6 cfs

18.0" Round Pipe
n= 0.012
Length= 50.0' Slope= 0.0980 '/'
Inlet Invert= 29.90', Outlet Invert= 25.00'



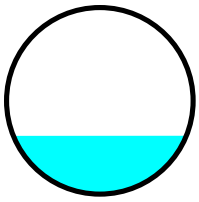
Summary for Reach 5R: EX 15 SD

Inflow Area = 1.993 ac, 79.43% Impervious, Inflow Depth = 3.83" for 10-YR event
Inflow = 8.4 cfs @ 12.08 hrs, Volume= 0.636 af
Outflow = 8.4 cfs @ 12.08 hrs, Volume= 0.636 af, Atten= 0%, Lag= 0.0 min
Routed to Reach 4R : EX 18 SD

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Max. Velocity= 25.63 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 8.25 fps, Avg. Travel Time= 0.1 min

Peak Storage= 15 cf @ 12.08 hrs
Average Depth at Peak Storage= 0.39' , Surface Width= 1.16'
Bank-Full Depth= 1.25' Flow Area= 1.2 sf, Capacity= 39.6 cfs

15.0" Round Pipe
n= 0.012
Length= 45.0' Slope= 0.3209 '/'
Inlet Invert= 44.44', Outlet Invert= 30.00'



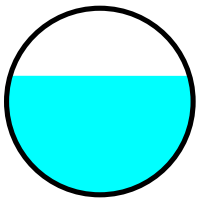
Summary for Reach 6R: EX 15 SD

Inflow Area = 1.876 ac, 81.45% Impervious, Inflow Depth = 3.88" for 10-YR event
Inflow = 8.0 cfs @ 12.08 hrs, Volume= 0.607 af
Outflow = 8.0 cfs @ 12.08 hrs, Volume= 0.607 af, Atten= 0%, Lag= 0.0 min
Routed to Reach 5R : EX 15 SD

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Max. Velocity= 9.66 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 3.26 fps, Avg. Travel Time= 0.1 min

Peak Storage= 12 cf @ 12.08 hrs
Average Depth at Peak Storage= 0.80' , Surface Width= 1.20'
Bank-Full Depth= 1.25' Flow Area= 1.2 sf, Capacity= 10.8 cfs

15.0" Round Pipe
n= 0.012
Length= 15.0' Slope= 0.0240 '/'
Inlet Invert= 44.90', Outlet Invert= 44.54'



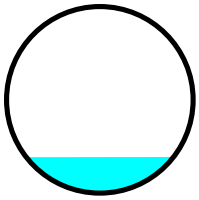
Summary for Reach 7R: EX 12 SD

Inflow Area = 0.556 ac, 78.60% Impervious, Inflow Depth = 3.81" for 10-YR event
Inflow = 2.3 cfs @ 12.08 hrs, Volume= 0.177 af
Outflow = 2.3 cfs @ 12.08 hrs, Volume= 0.177 af, Atten= 0%, Lag= 0.0 min
Routed to Reach 6R : EX 15 SD

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Max. Velocity= 21.82 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 6.99 fps, Avg. Travel Time= 0.0 min

Peak Storage= 2 cf @ 12.08 hrs
Average Depth at Peak Storage= 0.19' , Surface Width= 0.79'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 28.4 cfs

12.0" Round Pipe
n= 0.012
Length= 20.0' Slope= 0.5400 '/'
Inlet Invert= 56.50', Outlet Invert= 45.70'



Summary for Link POA-1: CASCO BAY

Inflow Area = 4.477 ac, 59.17% Impervious, Inflow Depth = 3.33" for 10-YR event
Inflow = 16.8 cfs @ 12.09 hrs, Volume= 1.242 af
Primary = 16.8 cfs @ 12.09 hrs, Volume= 1.242 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs

Summary for Subcatchment 1S:

Runoff = 3.1 cfs @ 12.09 hrs, Volume= 0.227 af, Depth= 4.33"
Routed to Reach 1R : EX 18 SD

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-YR Rainfall=5.80"

Area (ac)	CN	Description
0.298	74	>75% Grass cover, Good, HSG C
0.333	98	Paved parking, HSG C
0.631	87	Weighted Average
0.298		47.23% Pervious Area
0.333		52.77% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.1	5	0.0200	0.74		**Sheet Flow, A-B** Smooth surfaces n= 0.011 P2= 3.10"
0.0	5	0.3000	8.82		**Shallow Concentrated Flow, B-C** Unpaved Kv= 16.1 fps
0.1	10	0.2100	2.29		**Shallow Concentrated Flow, C-D** Woodland Kv= 5.0 fps
0.0	10	0.2000	7.20		**Shallow Concentrated Flow, D-E** Unpaved Kv= 16.1 fps
0.4	65	0.2500	2.50		**Shallow Concentrated Flow, E-F** Woodland Kv= 5.0 fps
0.0	10	0.1000	5.09		**Shallow Concentrated Flow, F-G** Unpaved Kv= 16.1 fps
0.3	85	0.0470	4.40		**Shallow Concentrated Flow, G-H** Paved Kv= 20.3 fps
0.4	85	0.0300	3.52		**Shallow Concentrated Flow, H-I** Paved Kv= 20.3 fps
4.7					**Direct Entry, DIRECT**
6.0	275	Total			

Summary for Subcatchment 2S:

Runoff = 2.4 cfs @ 12.08 hrs, Volume= 0.176 af, Depth= 4.65"
Routed to Reach 2R : EX 18 SD

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-YR Rainfall=5.80"

Area (ac)	CN	Description
0.149	74	>75% Grass cover, Good, HSG C
0.305	98	Paved parking, HSG C
0.454	90	Weighted Average
0.149		32.82% Pervious Area
0.305		67.18% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.2	60	0.3000	0.45		**Sheet Flow, A-B**
					Grass: Short n= 0.150 P2= 3.10"
0.2	60	0.0500	4.54		**Shallow Concentrated Flow, B-C**
					Paved Kv= 20.3 fps
3.6					**Direct Entry, DIRECT**
6.0	120	Total			

Summary for Subcatchment 3S:

Runoff = 0.4 cfs @ 12.08 hrs, Volume= 0.035 af, Depth= 5.33"
Routed to Reach 3R : EX 12 SD

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-YR Rainfall=5.80"

Area (ac)	CN	Description
0.005	74	>75% Grass cover, Good, HSG C
0.074	98	Paved parking, HSG C
0.079	96	Weighted Average
0.005		6.33% Pervious Area
0.074		93.67% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.2	20	0.0750	1.66		**Sheet Flow, A-B**
					Smooth surfaces n= 0.011 P2= 3.10"
0.4	130	0.0850	5.92		**Shallow Concentrated Flow, B-C**
					Paved Kv= 20.3 fps
5.4					**Direct Entry, DIRECT**
6.0	150	Total			

Summary for Subcatchment 4S:

Runoff = 0.7 cfs @ 12.09 hrs, Volume= 0.049 af, Depth= 3.60"
Routed to Reach 3R : EX 12 SD

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-YR Rainfall=5.80"

Area (ac)	CN	Description
0.050	70	Woods, Good, HSG C
0.060	74	>75% Grass cover, Good, HSG C
0.052	98	Paved parking, HSG C
0.162	80	Weighted Average
0.110		67.90% Pervious Area
0.052		32.10% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.3	30	0.2100	0.15		**Sheet Flow, A-B** Woods: Light underbrush n= 0.400 P2= 3.10"
0.0	25	0.3800	9.92		**Shallow Concentrated Flow, B-C** Unpaved Kv= 16.1 fps
0.5	150	0.0660	5.22		**Shallow Concentrated Flow, C-D** Paved Kv= 20.3 fps
2.2					**Direct Entry, DIRECT**
6.0	205	Total			

Summary for Subcatchment 5S:

Runoff = 0.6 cfs @ 12.09 hrs, Volume= 0.040 af, Depth= 4.11"
Routed to Reach 5R : EX 15 SD

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-YR Rainfall=5.80"

Area (ac)	CN	Description
0.009	70	Woods, Good, HSG C
0.053	74	>75% Grass cover, Good, HSG C
0.055	98	Paved parking, HSG C
0.117	85	Weighted Average
0.062		52.99% Pervious Area
0.055		47.01% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.9	50	0.0300	0.17		**Sheet Flow, A-B** Grass: Short n= 0.150 P2= 3.10"
0.2	60	0.0560	4.80		**Shallow Concentrated Flow, B-C** Paved Kv= 20.3 fps
0.3	100	0.1000	6.42		**Shallow Concentrated Flow, C-D** Paved Kv= 20.3 fps
0.6					**Direct Entry, DIRECT**
6.0	210	Total			

Summary for Subcatchment 6S:

Runoff = 7.3 cfs @ 12.08 hrs, Volume= 0.561 af, Depth= 5.10"
Routed to Reach 6R : EX 15 SD

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-YR Rainfall=5.80"

Area (ac)	CN	Description
0.229	74	>75% Grass cover, Good, HSG C
0.104	98	Paved parking, HSG C
* 0.987	98	Roof
1.320	94	Weighted Average
0.229		17.35% Pervious Area
1.091		82.65% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.6	10	0.2000	0.27		**Sheet Flow, A-B** Grass: Short n= 0.150 P2= 3.10"
0.3	45	0.1500	2.71		**Shallow Concentrated Flow, B-C** Short Grass Pasture Kv= 7.0 fps
0.3	165	0.0200	8.06	9.90	**Pipe Channel, C-D** 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012
4.8					**Direct Entry, DIRECT ENTRY**
6.0	220	Total			

Summary for Subcatchment 7S:

Runoff = 1.5 cfs @ 12.08 hrs, Volume= 0.110 af, Depth= 4.76"
Routed to Reach 7R : EX 12 SD

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-YR Rainfall=5.80"

Area (ac)	CN	Description
0.006	70	Woods, Good, HSG C
0.078	74	>75% Grass cover, Good, HSG C
0.193	98	Paved parking, HSG C
0.277	91	Weighted Average
0.084		30.32% Pervious Area
0.193		69.68% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.8	70	0.0280	1.44		**Sheet Flow, A-B** Smooth surfaces n= 0.011 P2= 3.10"
0.2	65	0.0460	4.35		**Shallow Concentrated Flow, B-C** Paved Kv= 20.3 fps
0.1	25	0.0800	4.55		**Shallow Concentrated Flow, C-D** Unpaved Kv= 16.1 fps
4.9					**Direct Entry, DIRECT**
6.0	160	Total			

Summary for Subcatchment 8S:

Runoff = 1.6 cfs @ 12.08 hrs, Volume= 0.121 af, Depth= 5.21"
Routed to Reach 7R : EX 12 SD

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-YR Rainfall=5.80"

Area (ac)	CN	Description
0.035	74	>75% Grass cover, Good, HSG C
0.244	98	Paved parking, HSG C
0.279	95	Weighted Average
0.035		12.54% Pervious Area
0.244		87.46% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, DIRECT**

Summary for Subcatchment 9S:

Runoff = 3.8 cfs @ 12.09 hrs, Volume= 0.273 af, Depth= 3.70"
Routed to Link POA-1 : CASCO BAY

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-YR Rainfall=5.80"

Area (ac)	CN	Description
0.631	74	>75% Grass cover, Good, HSG C
0.253	98	Paved parking, HSG C
0.884	81	Weighted Average
0.631		71.38% Pervious Area
0.253		28.62% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.2	33	0.1000	0.26		**Sheet Flow, A-B** Grass: Short n= 0.150 P2= 3.10"
0.7	135	0.2400	3.43		**Shallow Concentrated Flow, B-C** Short Grass Pasture Kv= 7.0 fps
0.2	80	0.1200	7.03		**Shallow Concentrated Flow, C-D** Paved Kv= 20.3 fps
0.0	10	1.0000	20.30		**Shallow Concentrated Flow, D-E** Paved Kv= 20.3 fps
2.9					**Direct Entry, DIRECT**
6.0	258	Total			

Summary for Subcatchment 10S:

Runoff = 1.0 cfs @ 12.09 hrs, Volume= 0.073 af, Depth= 3.21"
Routed to Link POA-1 : CASCO BAY

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-YR Rainfall=5.80"

Area (ac)	CN	Description
0.137	70	Woods, Good, HSG C
0.088	74	>75% Grass cover, Good, HSG C
0.049	98	Paved parking, HSG C
0.274	76	Weighted Average
0.225		82.12% Pervious Area
0.049		17.88% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.1	20	0.2900	0.16		**Sheet Flow, A-B** Woods: Light underbrush n= 0.400 P2= 3.10"
0.5	90	0.1600	2.80		**Shallow Concentrated Flow, B-C** Short Grass Pasture Kv= 7.0 fps
0.2	45	0.0330	3.69		**Shallow Concentrated Flow, C-D** Paved Kv= 20.3 fps
0.8	80	0.0510	1.58		**Shallow Concentrated Flow, D-E** Short Grass Pasture Kv= 7.0 fps
2.4					**Direct Entry, DIRECTY ENTRY**
6.0	235	Total			

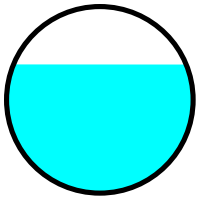
Summary for Reach 1R: EX 18 SD

Inflow Area = 3.319 ac, 70.71% Impervious, Inflow Depth = 4.77" for 25-YR event
Inflow = 17.4 cfs @ 12.09 hrs, Volume= 1.319 af
Outflow = 17.4 cfs @ 12.09 hrs, Volume= 1.319 af, Atten= 0%, Lag= 0.0 min
Routed to Link POA-1 : CASCO BAY

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Max. Velocity= 13.38 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 4.44 fps, Avg. Travel Time= 0.1 min

Peak Storage= 34 cf @ 12.09 hrs
Average Depth at Peak Storage= 1.04' , Surface Width= 1.39'
Bank-Full Depth= 1.50' Flow Area= 1.8 sf, Capacity= 21.2 cfs

18.0" Round Pipe
n= 0.012
Length= 26.0' Slope= 0.0346 '/'
Inlet Invert= 22.90', Outlet Invert= 22.00'



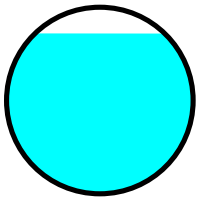
Summary for Reach 2R: EX 18 SD

Inflow Area = 2.688 ac, 74.93% Impervious, Inflow Depth = 4.87" for 25-YR event
Inflow = 14.3 cfs @ 12.09 hrs, Volume= 1.092 af
Outflow = 14.3 cfs @ 12.09 hrs, Volume= 1.092 af, Atten= 0%, Lag= 0.3 min
Routed to Reach 1R : EX 18 SD

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Max. Velocity= 8.87 fps, Min. Travel Time= 0.2 min
Avg. Velocity = 3.10 fps, Avg. Travel Time= 0.7 min

Peak Storage= 210 cf @ 12.09 hrs
Average Depth at Peak Storage= 1.29' , Surface Width= 1.04'
Bank-Full Depth= 1.50' Flow Area= 1.8 sf, Capacity= 13.8 cfs

18.0" Round Pipe
n= 0.012
Length= 130.0' Slope= 0.0146 '/'
Inlet Invert= 24.90', Outlet Invert= 23.00'



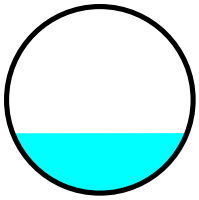
Summary for Reach 3R: EX 12 SD

Inflow Area = 0.241 ac, 52.28% Impervious, Inflow Depth = 4.17" for 25-YR event
Inflow = 1.1 cfs @ 12.09 hrs, Volume= 0.084 af
Outflow = 1.1 cfs @ 12.09 hrs, Volume= 0.084 af, Atten= 0%, Lag= 0.4 min
Routed to Reach 2R : EX 18 SD

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Max. Velocity= 5.12 fps, Min. Travel Time= 0.5 min
Avg. Velocity = 1.59 fps, Avg. Travel Time= 1.6 min

Peak Storage= 33 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.32' , Surface Width= 0.93'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 5.0 cfs

12.0" Round Pipe
n= 0.012
Length= 150.0' Slope= 0.0167 '/'
Inlet Invert= 27.40', Outlet Invert= 24.90'



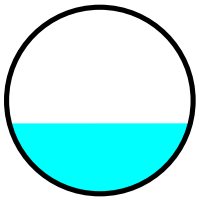
Summary for Reach 4R: EX 18 SD

Inflow Area = 1.993 ac, 79.43% Impervious, Inflow Depth = 5.01" for 25-YR event
Inflow = 10.8 cfs @ 12.08 hrs, Volume= 0.832 af
Outflow = 10.8 cfs @ 12.09 hrs, Volume= 0.832 af, Atten= 0%, Lag= 0.0 min
Routed to Reach 2R : EX 18 SD

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Max. Velocity= 17.68 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 5.72 fps, Avg. Travel Time= 0.1 min

Peak Storage= 31 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.57' , Surface Width= 1.45'
Bank-Full Depth= 1.50' Flow Area= 1.8 sf, Capacity= 35.6 cfs

18.0" Round Pipe
n= 0.012
Length= 50.0' Slope= 0.0980 '/'
Inlet Invert= 29.90', Outlet Invert= 25.00'



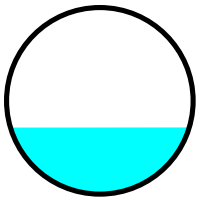
Summary for Reach 5R: EX 15 SD

Inflow Area = 1.993 ac, 79.43% Impervious, Inflow Depth = 5.01" for 25-YR event
Inflow = 10.8 cfs @ 12.08 hrs, Volume= 0.832 af
Outflow = 10.8 cfs @ 12.08 hrs, Volume= 0.832 af, Atten= 0%, Lag= 0.0 min
Routed to Reach 4R : EX 18 SD

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Max. Velocity= 27.52 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 8.89 fps, Avg. Travel Time= 0.1 min

Peak Storage= 18 cf @ 12.08 hrs
Average Depth at Peak Storage= 0.45' , Surface Width= 1.20'
Bank-Full Depth= 1.25' Flow Area= 1.2 sf, Capacity= 39.6 cfs

15.0" Round Pipe
n= 0.012
Length= 45.0' Slope= 0.3209 '/'
Inlet Invert= 44.44', Outlet Invert= 30.00'



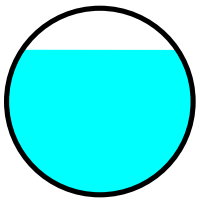
Summary for Reach 6R: EX 15 SD

Inflow Area = 1.876 ac, 81.45% Impervious, Inflow Depth = 5.07" for 25-YR event
Inflow = 10.3 cfs @ 12.08 hrs, Volume= 0.792 af
Outflow = 10.3 cfs @ 12.08 hrs, Volume= 0.792 af, Atten= 0%, Lag= 0.0 min
Routed to Reach 5R : EX 15 SD

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Max. Velocity= 10.05 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 3.51 fps, Avg. Travel Time= 0.1 min

Peak Storage= 15 cf @ 12.08 hrs
Average Depth at Peak Storage= 0.97' , Surface Width= 1.04'
Bank-Full Depth= 1.25' Flow Area= 1.2 sf, Capacity= 10.8 cfs

15.0" Round Pipe
n= 0.012
Length= 15.0' Slope= 0.0240 '/'
Inlet Invert= 44.90', Outlet Invert= 44.54'



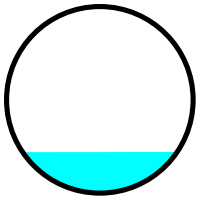
Summary for Reach 7R: EX 12 SD

Inflow Area = 0.556 ac, 78.60% Impervious, Inflow Depth = 4.99" for 25-YR event
Inflow = 3.0 cfs @ 12.08 hrs, Volume= 0.231 af
Outflow = 3.0 cfs @ 12.08 hrs, Volume= 0.231 af, Atten= 0%, Lag= 0.0 min
Routed to Reach 6R : EX 15 SD

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Max. Velocity= 23.50 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 7.52 fps, Avg. Travel Time= 0.0 min

Peak Storage= 3 cf @ 12.08 hrs
Average Depth at Peak Storage= 0.22' , Surface Width= 0.83'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 28.4 cfs

12.0" Round Pipe
n= 0.012
Length= 20.0' Slope= 0.5400 '/'
Inlet Invert= 56.50', Outlet Invert= 45.70'



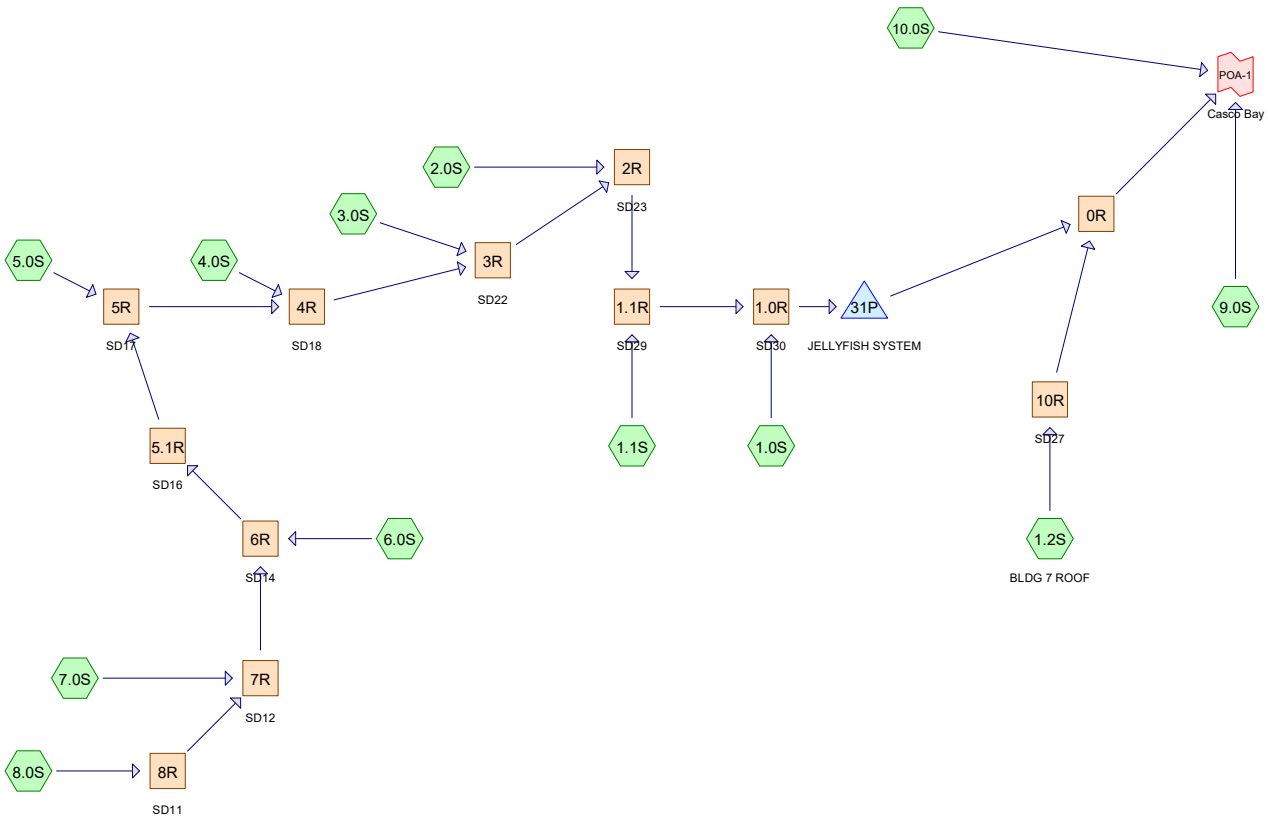
Summary for Link POA-1: CASCO BAY

Inflow Area = 4.477 ac, 59.17% Impervious, Inflow Depth = 4.46" for 25-YR event
Inflow = 22.3 cfs @ 12.09 hrs, Volume= 1.665 af
Primary = 22.3 cfs @ 12.09 hrs, Volume= 1.665 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs

Attachment 2B

Proposed Condition HydroCAD Summary



Subcat Reach Pond Link

Routing Diagram for 211026 SW PROPOSED
Prepared by Sebago Technics, Printed 3/14/2024
HydroCAD® 10.20-4b s/n 00643 © 2023 HydroCAD Software Solutions LLC

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
1.151	74	>75% Grass cover, Good, HSG C (1.0S, 1.1S, 2.0S, 3.0S, 4.0S, 5.0S, 6.0S, 7.0S, 8.0S, 9.0S, 10.0S)
1.577	98	Paved parking, HSG C (1.0S, 1.1S, 2.0S, 3.0S, 4.0S, 5.0S, 6.0S, 7.0S, 8.0S, 9.0S, 10.0S)
1.561	98	Roofs, HSG C (1.2S, 8.0S)
0.188	70	Woods, Good, HSG C (5.0S, 10.0S)

Summary for Subcatchment 1.0S:

Runoff = 0.8 cfs @ 12.08 hrs, Volume= 0.062 af, Depth= 2.43"
Routed to Reach 1.0R : SD30

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-YR Rainfall=3.10"

Area (ac)	CN	Description
0.234	98	Paved parking, HSG C
0.071	74	>75% Grass cover, Good, HSG C
0.305		Weighted Average
0.071		23.28% Pervious Area
0.234		76.72% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.4	25	0.0200	1.03		**Sheet Flow, A-B** Smooth surfaces n= 0.011 P2= 3.10"
0.6	100	0.0200	2.87		**Shallow Concentrated Flow, B-C** Paved Kv= 20.3 fps
5.0					**Direct Entry, DIRECT**
6.0	125	Total			

Summary for Subcatchment 1.1S:

Runoff = 0.7 cfs @ 12.09 hrs, Volume= 0.058 af, Depth= 1.87"
Routed to Reach 1.1R : SD29

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-YR Rainfall=3.10"

Area (ac)	CN	Description
0.195	74	>75% Grass cover, Good, HSG C
0.175	98	Paved parking, HSG C
0.370		Weighted Average
0.195		52.70% Pervious Area
0.175		47.30% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.7	20	0.0200	0.12		**Sheet Flow, A-B** Grass: Short n= 0.150 P2= 3.10"
0.5	110	0.0300	3.52		**Shallow Concentrated Flow, B-C** Paved Kv= 20.3 fps
2.8					**Direct Entry, DIRECT ENTRY**
6.0	130	Total			

Summary for Subcatchment 1.2S: BLDG 7 ROOF

Runoff = 1.7 cfs @ 12.08 hrs, Volume= 0.137 af, Depth= 2.87"
Routed to Reach 10R : SD27

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-YR Rainfall=3.10"

Area (ac)	CN	Description
0.574	98	Roofs, HSG C
0.574		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, DIRECT ENTRY**

Summary for Subcatchment 2.0S:

Runoff = 0.2 cfs @ 12.08 hrs, Volume= 0.018 af, Depth= 2.82"
Routed to Reach 2R : SD23

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-YR Rainfall=3.10"

Area (ac)	CN	Description
0.074	98	Paved parking, HSG C
0.002	74	>75% Grass cover, Good, HSG C
0.076		Weighted Average
0.002		2.63% Pervious Area
0.074		97.37% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, DIRECT ENTRY**

Summary for Subcatchment 3.0S:

Runoff = 0.5 cfs @ 12.08 hrs, Volume= 0.036 af, Depth= 2.49"
Routed to Reach 3R : SD22

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-YR Rainfall=3.10"

Area (sf)	CN	Description
6,000	98	Paved parking, HSG C
1,500	74	>75% Grass cover, Good, HSG C
7,500		Weighted Average
1,500		20.00% Pervious Area
6,000		80.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.0	15	0.1500	0.26		**Sheet Flow, A-B** Grass: Short n= 0.150 P2= 3.10"
0.0	5	0.0150	2.49		**Shallow Concentrated Flow, B-C** Paved Kv= 20.3 fps
0.3	20	0.0250	1.11		**Shallow Concentrated Flow, C-D** Short Grass Pasture Kv= 7.0 fps
0.6	115	0.0220	3.01		**Shallow Concentrated Flow, D-E** Paved Kv= 20.3 fps
4.1					**Direct Entry, DIRECT ENTRY**
6.0	155	Total			

Summary for Subcatchment 4.0S:

Runoff = 0.1 cfs @ 12.08 hrs, Volume= 0.011 af, Depth= 2.61"
Routed to Reach 4R : SD18

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-YR Rainfall=3.10"

Area (ac)	CN	Description
0.044	98	Paved parking, HSG C
0.007	74	>75% Grass cover, Good, HSG C
0.051		Weighted Average
0.007		13.73% Pervious Area
0.044		86.27% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.3	25	0.0400	1.35		**Sheet Flow, A-B** Smooth surfaces n= 0.011 P2= 3.10"
0.3	105	0.1000	6.42		**Shallow Concentrated Flow, B-C** Paved Kv= 20.3 fps
5.4					**Direct Entry, DIRECT**
6.0	130	Total			

Summary for Subcatchment 5.0S:

Runoff = 0.3 cfs @ 12.09 hrs, Volume= 0.021 af, Depth= 1.36"
Routed to Reach 5R : SD17

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-YR Rainfall=3.10"

Area (ac)	CN	Description
0.071	74	>75% Grass cover, Good, HSG C
0.046	98	Paved parking, HSG C
0.071	70	Woods, Good, HSG C
0.188		Weighted Average
0.142		75.53% Pervious Area
0.046		24.47% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.0	10	0.5000	0.17		**Sheet Flow, A-B** Woods: Light underbrush n= 0.400 P2= 3.10"
0.1	25	0.5000	3.54		**Shallow Concentrated Flow, B-C** Woodland Kv= 5.0 fps
0.4	50	0.1000	2.21		**Shallow Concentrated Flow, C-D** Short Grass Pasture Kv= 7.0 fps
0.2	70	0.0800	5.74		**Shallow Concentrated Flow, D-E** Paved Kv= 20.3 fps
4.3					**Direct Entry, DIRECT ENTRY**
6.0	155	Total			

Summary for Subcatchment 6.0S:

Runoff = 0.2 cfs @ 12.09 hrs, Volume= 0.015 af, Depth= 2.26"
Routed to Reach 6R : SD14

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-YR Rainfall=3.10"

Area (ac)	CN	Description
0.025	74	>75% Grass cover, Good, HSG C
0.053	98	Paved parking, HSG C
0.078		Weighted Average
0.025		32.05% Pervious Area
0.053		67.95% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.3	25	0.0500	1.48		**Sheet Flow, A-B** Smooth surfaces n= 0.011 P2= 3.10"
0.2	50	0.0600	4.97		**Shallow Concentrated Flow, B-C** Paved Kv= 20.3 fps
5.5					**Direct Entry, DIRECT ENTRY**
6.0	75	Total			

Summary for Subcatchment 7.0S:

Runoff = 0.4 cfs @ 12.09 hrs, Volume= 0.029 af, Depth= 2.28"
Routed to Reach 7R : SD12

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-YR Rainfall=3.10"

Area (ac)	CN	Description
0.106	98	Paved parking, HSG C
0.048	74	>75% Grass cover, Good, HSG C
0.154		Weighted Average
0.048		31.17% Pervious Area
0.106		68.83% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.4	25	0.0200	1.03		**Sheet Flow, A-B** Smooth surfaces n= 0.011 P2= 3.10"
0.4	90	0.0300	3.52		**Shallow Concentrated Flow, B-C** Paved Kv= 20.3 fps
0.3	35	0.0570	1.67		**Shallow Concentrated Flow, C-D** Short Grass Pasture Kv= 7.0 fps
4.9					**Direct Entry, DIRECT**
6.0	150	Total			

Summary for Subcatchment 8.0S:

Runoff = 4.8 cfs @ 12.08 hrs, Volume= 0.379 af, Depth= 2.55"
Routed to Reach 8R : SD11

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-YR Rainfall=3.10"

Area (ac)	CN	Description
0.299	74	>75% Grass cover, Good, HSG C
0.498	98	Paved parking, HSG C
0.987	98	Roofs, HSG C
1.784		Weighted Average
0.299		16.76% Pervious Area
1.485		83.24% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.6	10	0.0200	0.11		**Sheet Flow, A-B** Grass: Short n= 0.150 P2= 3.10"
0.3	40	0.0100	2.03		**Shallow Concentrated Flow, B-C** Paved Kv= 20.3 fps
0.3	65	0.0350	3.80		**Shallow Concentrated Flow, C-D** Paved Kv= 20.3 fps
0.1	40	0.0550	11.53	9.05	**Pipe Channel, D-E** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.012
0.1	70	0.0500	12.75	15.65	**Pipe Channel, E-F** 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012
3.6					**Direct Entry, DIRECT ENTRY**
6.0	225	Total			

Summary for Subcatchment 9.0S:

Runoff = 0.8 cfs @ 12.09 hrs, Volume= 0.064 af, Depth= 1.59"
Routed to Link POA-1 : Casco Bay

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-YR Rainfall=3.10"

Area (ac)	CN	Description
0.158	98	Paved parking, HSG C
0.326	74	>75% Grass cover, Good, HSG C
0.484		Weighted Average
0.326		67.36% Pervious Area
0.158		32.64% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, DIRECT**

Summary for Subcatchment 10.0S:

Runoff = 0.3 cfs @ 12.09 hrs, Volume= 0.026 af, Depth= 1.28"
Routed to Link POA-1 : Casco Bay

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-YR Rainfall=3.10"

Area (ac)	CN	Description
0.051	98	Paved parking, HSG C
0.073	74	>75% Grass cover, Good, HSG C
0.117	70	Woods, Good, HSG C
0.241		Weighted Average
0.190		78.84% Pervious Area
0.051		21.16% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.1	20	0.2900	0.16		**Sheet Flow, A-B** Woods: Light underbrush n= 0.400 P2= 3.10"
0.5	90	0.1600	2.80		**Shallow Concentrated Flow, B-C** Short Grass Pasture Kv= 7.0 fps
0.2	45	0.0330	3.69		**Shallow Concentrated Flow, C-D** Paved Kv= 20.3 fps
0.8	80	0.0510	1.58		**Shallow Concentrated Flow, D-E** Short Grass Pasture Kv= 7.0 fps
2.4					**Direct Entry, DIRECT ENTRY**
6.0	235	Total			

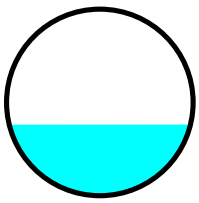
Summary for Reach 0R:

Inflow Area = 3.752 ac, 78.05% Impervious, Inflow Depth = 2.45" for 2-YR event
Inflow = 9.6 cfs @ 12.09 hrs, Volume= 0.765 af
Outflow = 9.6 cfs @ 12.09 hrs, Volume= 0.765 af, Atten= 0%, Lag= 0.0 min
Routed to Link POA-1 : Casco Bay

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Max. Velocity= 8.70 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 2.81 fps, Avg. Travel Time= 0.1 min

Peak Storage= 28 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.77' , Surface Width= 1.94'
Bank-Full Depth= 2.00' Flow Area= 3.1 sf, Capacity= 31.0 cfs

24.0" Round Pipe
n= 0.012
Length= 25.0' Slope= 0.0160 '/'
Inlet Invert= 22.60', Outlet Invert= 22.20'



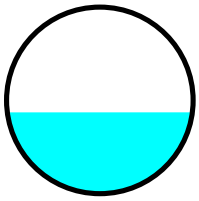
Summary for Reach 1.0R: SD30

Inflow Area = 3.178 ac, 74.09% Impervious, Inflow Depth = 2.37" for 2-YR event
Inflow = 7.9 cfs @ 12.09 hrs, Volume= 0.628 af
Outflow = 7.9 cfs @ 12.09 hrs, Volume= 0.628 af, Atten= 0%, Lag= 0.0 min
Routed to Pond 31P : JELLYFISH SYSTEM

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Max. Velocity= 5.99 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 1.98 fps, Avg. Travel Time= 0.1 min

Peak Storage= 20 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.87' , Surface Width= 1.98'
Bank-Full Depth= 2.00' Flow Area= 3.1 sf, Capacity= 20.0 cfs

24.0" Round Pipe
n= 0.012
Length= 15.0' Slope= 0.0067 '/'
Inlet Invert= 23.45', Outlet Invert= 23.35'



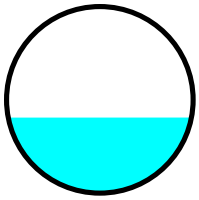
Summary for Reach 1.1R: SD29

Inflow Area = 2.873 ac, 73.81% Impervious, Inflow Depth = 2.37" for 2-YR event
Inflow = 7.1 cfs @ 12.09 hrs, Volume= 0.567 af
Outflow = 7.1 cfs @ 12.09 hrs, Volume= 0.567 af, Atten= 0%, Lag= 0.1 min
Routed to Reach 1.0R : SD30

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Max. Velocity= 5.98 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 1.97 fps, Avg. Travel Time= 0.3 min

Peak Storage= 42 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.81' , Surface Width= 1.96'
Bank-Full Depth= 2.00' Flow Area= 3.1 sf, Capacity= 20.7 cfs

24.0" Round Pipe
n= 0.012
Length= 35.0' Slope= 0.0071 '/'
Inlet Invert= 23.80', Outlet Invert= 23.55'



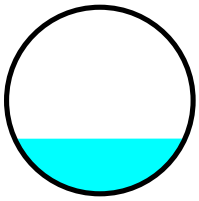
Summary for Reach 2R: SD23

Inflow Area = 2.503 ac, 77.73% Impervious, Inflow Depth = 2.44" for 2-YR event
Inflow = 6.4 cfs @ 12.09 hrs, Volume= 0.509 af
Outflow = 6.4 cfs @ 12.09 hrs, Volume= 0.509 af, Atten= 0%, Lag= 0.1 min
Routed to Reach 1.1R : SD29

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Max. Velocity= 8.23 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 2.68 fps, Avg. Travel Time= 0.2 min

Peak Storage= 31 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.59' , Surface Width= 1.83'
Bank-Full Depth= 2.00' Flow Area= 3.1 sf, Capacity= 33.6 cfs

24.0" Round Pipe
n= 0.012
Length= 40.0' Slope= 0.0187 '/'
Inlet Invert= 24.65', Outlet Invert= 23.90'



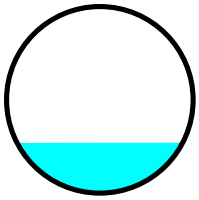
Summary for Reach 3R: SD22

Inflow Area = 2.427 ac, 77.12% Impervious, Inflow Depth = 2.43" for 2-YR event
Inflow = 6.2 cfs @ 12.09 hrs, Volume= 0.491 af
Outflow = 6.2 cfs @ 12.09 hrs, Volume= 0.491 af, Atten= 0%, Lag= 0.1 min
Routed to Reach 2R : SD23

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Max. Velocity= 9.03 fps, Min. Travel Time= 0.2 min
Avg. Velocity = 2.94 fps, Avg. Travel Time= 0.5 min

Peak Storage= 62 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.54' , Surface Width= 1.78'
Bank-Full Depth= 2.00' Flow Area= 3.1 sf, Capacity= 38.7 cfs

24.0" Round Pipe
n= 0.012
Length= 90.0' Slope= 0.0250 '/'
Inlet Invert= 27.00', Outlet Invert= 24.75'



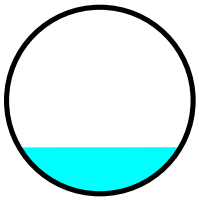
Summary for Reach 4R: SD18

Inflow Area = 2.255 ac, 76.90% Impervious, Inflow Depth = 2.42" for 2-YR event
Inflow = 5.7 cfs @ 12.09 hrs, Volume= 0.455 af
Outflow = 5.7 cfs @ 12.09 hrs, Volume= 0.455 af, Atten= 0%, Lag= 0.2 min
Routed to Reach 3R : SD22

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Max. Velocity= 9.36 fps, Min. Travel Time= 0.3 min
Avg. Velocity = 3.04 fps, Avg. Travel Time= 0.8 min

Peak Storage= 92 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.50' , Surface Width= 1.73'
Bank-Full Depth= 2.00' Flow Area= 3.1 sf, Capacity= 42.0 cfs

24.0" Round Pipe
n= 0.012
Length= 150.0' Slope= 0.0293 '/'
Inlet Invert= 31.50', Outlet Invert= 27.10'



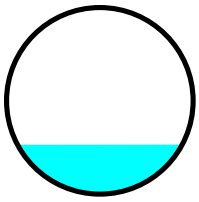
Summary for Reach 5.1R: SD16

Inflow Area = 2.016 ac, 81.55% Impervious, Inflow Depth = 2.52" for 2-YR event
Inflow = 5.3 cfs @ 12.09 hrs, Volume= 0.423 af
Outflow = 5.3 cfs @ 12.09 hrs, Volume= 0.423 af, Atten= 0%, Lag= 0.0 min
Routed to Reach 5R : SD17

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Max. Velocity= 14.20 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 4.62 fps, Avg. Travel Time= 0.1 min

Peak Storage= 15 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.40' , Surface Width= 1.32'
Bank-Full Depth= 1.50' Flow Area= 1.8 sf, Capacity= 34.6 cfs

18.0" Round Pipe
n= 0.012
Length= 40.0' Slope= 0.0925 '/'
Inlet Invert= 36.15', Outlet Invert= 32.45'



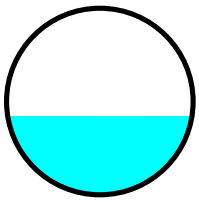
Summary for Reach 5R: SD17

Inflow Area = 2.204 ac, 76.68% Impervious, Inflow Depth = 2.42" for 2-YR event
Inflow = 5.6 cfs @ 12.09 hrs, Volume= 0.444 af
Outflow = 5.6 cfs @ 12.09 hrs, Volume= 0.444 af, Atten= 0%, Lag= 0.0 min
Routed to Reach 4R : SD18

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Max. Velocity= 7.89 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 2.61 fps, Avg. Travel Time= 0.1 min

Peak Storage= 14 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.63' , Surface Width= 1.48'
Bank-Full Depth= 1.50' Flow Area= 1.8 sf, Capacity= 15.1 cfs

18.0" Round Pipe
n= 0.012
Length= 20.0' Slope= 0.0175 '/'
Inlet Invert= 32.35', Outlet Invert= 32.00'



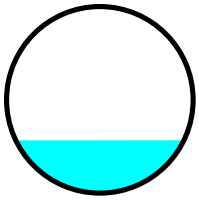
Summary for Reach 6R: SD14

Inflow Area = 2.016 ac, 81.55% Impervious, Inflow Depth = 2.52" for 2-YR event
Inflow = 5.3 cfs @ 12.09 hrs, Volume= 0.423 af
Outflow = 5.3 cfs @ 12.09 hrs, Volume= 0.423 af, Atten= 0%, Lag= 0.1 min
Routed to Reach 5.1R : SD16

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Max. Velocity= 12.88 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 4.20 fps, Avg. Travel Time= 0.4 min

Peak Storage= 46 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.43' , Surface Width= 1.35'
Bank-Full Depth= 1.50' Flow Area= 1.8 sf, Capacity= 30.2 cfs

18.0" Round Pipe
n= 0.012
Length= 110.0' Slope= 0.0705 '/'
Inlet Invert= 44.00', Outlet Invert= 36.25'



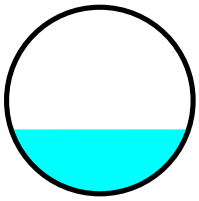
Summary for Reach 7R: SD12

Inflow Area = 1.938 ac, 82.09% Impervious, Inflow Depth = 2.53" for 2-YR event
Inflow = 5.2 cfs @ 12.09 hrs, Volume= 0.408 af
Outflow = 5.2 cfs @ 12.09 hrs, Volume= 0.408 af, Atten= 0%, Lag= 0.1 min
Routed to Reach 6R : SD14

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Max. Velocity= 9.47 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 3.11 fps, Avg. Travel Time= 0.3 min

Peak Storage= 27 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.52' , Surface Width= 1.43'
Bank-Full Depth= 1.50' Flow Area= 1.8 sf, Capacity= 20.0 cfs

18.0" Round Pipe
n= 0.012
Length= 50.0' Slope= 0.0308 '/'
Inlet Invert= 45.64', Outlet Invert= 44.10'



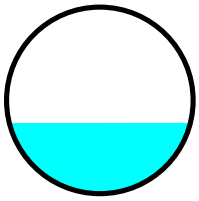
Summary for Reach 8R: SD11

Inflow Area = 1.784 ac, 83.24% Impervious, Inflow Depth = 2.55" for 2-YR event
Inflow = 4.8 cfs @ 12.08 hrs, Volume= 0.379 af
Outflow = 4.8 cfs @ 12.09 hrs, Volume= 0.379 af, Atten= 0%, Lag= 0.0 min
Routed to Reach 7R : SD12

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Max. Velocity= 7.75 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 2.55 fps, Avg. Travel Time= 0.2 min

Peak Storage= 20 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.57' , Surface Width= 1.46'
Bank-Full Depth= 1.50' Flow Area= 1.8 sf, Capacity= 15.6 cfs

18.0" Round Pipe
n= 0.012
Length= 32.0' Slope= 0.0188 '/'
Inlet Invert= 46.34', Outlet Invert= 45.74'



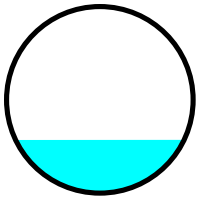
Summary for Reach 10R: SD27

Inflow Area = 0.574 ac,100.00% Impervious, Inflow Depth = 2.87" for 2-YR event
Inflow = 1.7 cfs @ 12.08 hrs, Volume= 0.137 af
Outflow = 1.7 cfs @ 12.09 hrs, Volume= 0.137 af, Atten= 0%, Lag= 0.3 min
Routed to Reach 0R :

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Max. Velocity= 5.93 fps, Min. Travel Time= 0.4 min
Avg. Velocity = 1.93 fps, Avg. Travel Time= 1.1 min

Peak Storage= 38 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.36' , Surface Width= 1.13'
Bank-Full Depth= 1.25' Flow Area= 1.2 sf, Capacity= 9.6 cfs

15.0" Round Pipe
n= 0.012
Length= 130.0' Slope= 0.0188 '/'
Inlet Invert= 26.00', Outlet Invert= 23.55'



Summary for Pond 31P: JELLYFISH SYSTEM

Inflow Area = 3.178 ac, 74.09% Impervious, Inflow Depth = 2.37" for 2-YR event
Inflow = 7.9 cfs @ 12.09 hrs, Volume= 0.628 af
Outflow = 7.9 cfs @ 12.10 hrs, Volume= 0.628 af, Atten= 0%, Lag= 0.1 min
Primary = 7.9 cfs @ 12.10 hrs, Volume= 0.628 af
Routed to Reach 0R :

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Starting Elev= 22.85' Surf.Area= 0.001 ac Storage= 0.009 af
Peak Elev= 25.00' @ 12.10 hrs Surf.Area= 0.001 ac Storage= 0.012 af (0.003 af above start)
Flood Elev= 30.00' Surf.Area= 0.001 ac Storage= 0.016 af (0.007 af above start)

Plug-Flow detention time= 19.1 min calculated for 0.619 af (99% of inflow)
Center-of-Mass det. time= 1.7 min (771.6 - 770.0)

Volume	Invert	Avail.Storage	Storage Description
#1	16.35'	0.016 af	**8.00'W x 8.00'L x 11.50'H Prismatoid** 0.017 af Overall x 96.0% Voids

Device	Routing	Invert	Outlet Devices
#1	Device 3	22.85'	**JFPD0808-11-3-54 CSV File** Head (feet) 0.00 0.08 0.17 0.25 0.33 0.42 0.50 0.58 0.67 0.75 0.83 0.92 1.00 1.08 1.17 1.25 1.33 1.42 1.50 Disch. (cfs) 0.000 0.015 0.030 0.045 0.059 0.074 0.089 0.267 0.446 0.624 0.802 0.980 1.159 1.337 1.515 1.693 1.872 2.050 2.228
#2	Device 3	24.35'	**3.5' long x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32
#3	Primary	22.85'	**24.0" Round Culvert** L= 13.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 22.85' / 22.70' S= 0.0115 '/' Cc= 0.900 n= 0.012, Flow Area= 3.14 sf

Primary OutFlow Max=7.9 cfs @ 12.10 hrs HW=24.99' TW=23.36' (Dynamic Tailwater)
└**3=Culvert** (Passes 7.9 cfs of 12.7 cfs potential flow)
├**1=JFPD0808-11-3-54 CSV File** (Custom Controls 2.2 cfs)
└**2=Broad-Crested Rectangular Weir** (Weir Controls 5.7 cfs @ 2.51 fps)

Summary for Link POA-1: Casco Bay

Inflow Area = 4.477 ac, 70.08% Impervious, Inflow Depth = 2.29" for 2-YR event
Inflow = 10.8 cfs @ 12.09 hrs, Volume= 0.855 af
Primary = 10.8 cfs @ 12.09 hrs, Volume= 0.855 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs

Summary for Subcatchment 1.0S:

Runoff = 1.2 cfs @ 12.08 hrs, Volume= 0.097 af, Depth= 3.83"
Routed to Reach 1.0R : SD30

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-YR Rainfall=4.60"

Area (ac)	CN	Description
0.234	98	Paved parking, HSG C
0.071	74	>75% Grass cover, Good, HSG C
0.305		Weighted Average
0.071		23.28% Pervious Area
0.234		76.72% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.4	25	0.0200	1.03		**Sheet Flow, A-B** Smooth surfaces n= 0.011 P2= 3.10"
0.6	100	0.0200	2.87		**Shallow Concentrated Flow, B-C** Paved Kv= 20.3 fps
5.0					**Direct Entry, DIRECT**
6.0	125	Total			

Summary for Subcatchment 1.1S:

Runoff = 1.2 cfs @ 12.09 hrs, Volume= 0.097 af, Depth= 3.14"
Routed to Reach 1.1R : SD29

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-YR Rainfall=4.60"

Area (ac)	CN	Description
0.195	74	>75% Grass cover, Good, HSG C
0.175	98	Paved parking, HSG C
0.370		Weighted Average
0.195		52.70% Pervious Area
0.175		47.30% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.7	20	0.0200	0.12		**Sheet Flow, A-B** Grass: Short n= 0.150 P2= 3.10"
0.5	110	0.0300	3.52		**Shallow Concentrated Flow, B-C** Paved Kv= 20.3 fps
2.8					**Direct Entry, DIRECT ENTRY**
6.0	130	Total			

Summary for Subcatchment 1.2S: BLDG 7 ROOF

Runoff = 2.6 cfs @ 12.08 hrs, Volume= 0.209 af, Depth= 4.36"
Routed to Reach 10R : SD27

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-YR Rainfall=4.60"

Area (ac)	CN	Description
0.574	98	Roofs, HSG C
0.574		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, DIRECT ENTRY**

Summary for Subcatchment 2.0S:

Runoff = 0.3 cfs @ 12.08 hrs, Volume= 0.027 af, Depth= 4.30"
Routed to Reach 2R : SD23

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-YR Rainfall=4.60"

Area (ac)	CN	Description
0.074	98	Paved parking, HSG C
0.002	74	>75% Grass cover, Good, HSG C
0.076		Weighted Average
0.002		2.63% Pervious Area
0.074		97.37% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, DIRECT ENTRY**

Summary for Subcatchment 3.0S:

Runoff = 0.7 cfs @ 12.08 hrs, Volume= 0.056 af, Depth= 3.90"
Routed to Reach 3R : SD22

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-YR Rainfall=4.60"

Area (sf)	CN	Description
6,000	98	Paved parking, HSG C
1,500	74	>75% Grass cover, Good, HSG C
7,500		Weighted Average
1,500		20.00% Pervious Area
6,000		80.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.0	15	0.1500	0.26		**Sheet Flow, A-B** Grass: Short n= 0.150 P2= 3.10"
0.0	5	0.0150	2.49		**Shallow Concentrated Flow, B-C** Paved Kv= 20.3 fps
0.3	20	0.0250	1.11		**Shallow Concentrated Flow, C-D** Short Grass Pasture Kv= 7.0 fps
0.6	115	0.0220	3.01		**Shallow Concentrated Flow, D-E** Paved Kv= 20.3 fps
4.1					**Direct Entry, DIRECT ENTRY**
6.0	155	Total			

Summary for Subcatchment 4.0S:

Runoff = 0.2 cfs @ 12.08 hrs, Volume= 0.017 af, Depth= 4.05"
Routed to Reach 4R : SD18

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-YR Rainfall=4.60"

Area (ac)	CN	Description
0.044	98	Paved parking, HSG C
0.007	74	>75% Grass cover, Good, HSG C
0.051		Weighted Average
0.007		13.73% Pervious Area
0.044		86.27% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.3	25	0.0400	1.35		**Sheet Flow, A-B** Smooth surfaces n= 0.011 P2= 3.10"
0.3	105	0.1000	6.42		**Shallow Concentrated Flow, B-C** Paved Kv= 20.3 fps
5.4					**Direct Entry, DIRECT**
6.0	130	Total			

Summary for Subcatchment 5.0S:

Runoff = 0.5 cfs @ 12.09 hrs, Volume= 0.039 af, Depth= 2.50"
Routed to Reach 5R : SD17

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-YR Rainfall=4.60"

Area (ac)	CN	Description
0.071	74	>75% Grass cover, Good, HSG C
0.046	98	Paved parking, HSG C
0.071	70	Woods, Good, HSG C
0.188		Weighted Average
0.142		75.53% Pervious Area
0.046		24.47% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.0	10	0.5000	0.17		**Sheet Flow, A-B** Woods: Light underbrush n= 0.400 P2= 3.10"
0.1	25	0.5000	3.54		**Shallow Concentrated Flow, B-C** Woodland Kv= 5.0 fps
0.4	50	0.1000	2.21		**Shallow Concentrated Flow, C-D** Short Grass Pasture Kv= 7.0 fps
0.2	70	0.0800	5.74		**Shallow Concentrated Flow, D-E** Paved Kv= 20.3 fps
4.3					**Direct Entry, DIRECT ENTRY**
6.0	155	Total			

Summary for Subcatchment 6.0S:

Runoff = 0.3 cfs @ 12.09 hrs, Volume= 0.024 af, Depth= 3.62"
Routed to Reach 6R : SD14

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-YR Rainfall=4.60"

Area (ac)	CN	Description
0.025	74	>75% Grass cover, Good, HSG C
0.053	98	Paved parking, HSG C
0.078		Weighted Average
0.025		32.05% Pervious Area
0.053		67.95% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.3	25	0.0500	1.48		**Sheet Flow, A-B** Smooth surfaces n= 0.011 P2= 3.10"
0.2	50	0.0600	4.97		**Shallow Concentrated Flow, B-C** Paved Kv= 20.3 fps
5.5					**Direct Entry, DIRECT ENTRY**
6.0	75	Total			

Summary for Subcatchment 7.0S:

Runoff = 0.6 cfs @ 12.08 hrs, Volume= 0.047 af, Depth= 3.64"
Routed to Reach 7R : SD12

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-YR Rainfall=4.60"

Area (ac)	CN	Description
0.106	98	Paved parking, HSG C
0.048	74	>75% Grass cover, Good, HSG C
0.154		Weighted Average
0.048		31.17% Pervious Area
0.106		68.83% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.4	25	0.0200	1.03		**Sheet Flow, A-B** Smooth surfaces n= 0.011 P2= 3.10"
0.4	90	0.0300	3.52		**Shallow Concentrated Flow, B-C** Paved Kv= 20.3 fps
0.3	35	0.0570	1.67		**Shallow Concentrated Flow, C-D** Short Grass Pasture Kv= 7.0 fps
4.9					**Direct Entry, DIRECT**
6.0	150	Total			

Summary for Subcatchment 8.0S:

Runoff = 7.4 cfs @ 12.08 hrs, Volume= 0.591 af, Depth= 3.98"
Routed to Reach 8R : SD11

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-YR Rainfall=4.60"

Area (ac)	CN	Description
0.299	74	>75% Grass cover, Good, HSG C
0.498	98	Paved parking, HSG C
0.987	98	Roofs, HSG C
1.784		Weighted Average
0.299		16.76% Pervious Area
1.485		83.24% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.6	10	0.0200	0.11		**Sheet Flow, A-B** Grass: Short n= 0.150 P2= 3.10"
0.3	40	0.0100	2.03		**Shallow Concentrated Flow, B-C** Paved Kv= 20.3 fps
0.3	65	0.0350	3.80		**Shallow Concentrated Flow, C-D** Paved Kv= 20.3 fps
0.1	40	0.0550	11.53	9.05	**Pipe Channel, D-E** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.012
0.1	70	0.0500	12.75	15.65	**Pipe Channel, E-F** 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012
3.6					**Direct Entry, DIRECT ENTRY**
6.0	225	Total			

Summary for Subcatchment 9.0S:

Runoff = 1.5 cfs @ 12.09 hrs, Volume= 0.113 af, Depth= 2.81"
Routed to Link POA-1 : Casco Bay

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-YR Rainfall=4.60"

Area (ac)	CN	Description
0.158	98	Paved parking, HSG C
0.326	74	>75% Grass cover, Good, HSG C
0.484		Weighted Average
0.326		67.36% Pervious Area
0.158		32.64% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, DIRECT**

Summary for Subcatchment 10.0S:

Runoff = 0.6 cfs @ 12.09 hrs, Volume= 0.048 af, Depth= 2.39"
Routed to Link POA-1 : Casco Bay

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-YR Rainfall=4.60"

Area (ac)	CN	Description
0.051	98	Paved parking, HSG C
0.073	74	>75% Grass cover, Good, HSG C
0.117	70	Woods, Good, HSG C
0.241		Weighted Average
0.190		78.84% Pervious Area
0.051		21.16% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.1	20	0.2900	0.16		**Sheet Flow, A-B** Woods: Light underbrush n= 0.400 P2= 3.10"
0.5	90	0.1600	2.80		**Shallow Concentrated Flow, B-C** Short Grass Pasture Kv= 7.0 fps
0.2	45	0.0330	3.69		**Shallow Concentrated Flow, C-D** Paved Kv= 20.3 fps
0.8	80	0.0510	1.58		**Shallow Concentrated Flow, D-E** Short Grass Pasture Kv= 7.0 fps
2.4					**Direct Entry, DIRECT ENTRY**
6.0	235	Total			

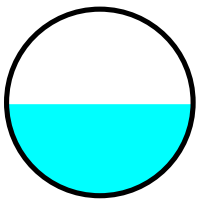
Summary for Reach 0R:

Inflow Area = 3.752 ac, 78.05% Impervious, Inflow Depth = 3.85" for 10-YR event
Inflow = 15.1 cfs @ 12.09 hrs, Volume= 1.204 af
Outflow = 15.1 cfs @ 12.09 hrs, Volume= 1.204 af, Atten= 0%, Lag= 0.0 min
Routed to Link POA-1 : Casco Bay

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Max. Velocity= 9.79 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 3.20 fps, Avg. Travel Time= 0.1 min

Peak Storage= 38 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.98' , Surface Width= 2.00'
Bank-Full Depth= 2.00' Flow Area= 3.1 sf, Capacity= 31.0 cfs

24.0" Round Pipe
n= 0.012
Length= 25.0' Slope= 0.0160 '/'
Inlet Invert= 22.60', Outlet Invert= 22.20'



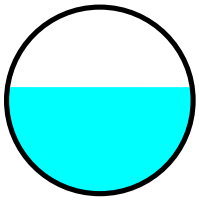
Summary for Reach 1.0R: SD30

Inflow Area = 3.178 ac, 74.09% Impervious, Inflow Depth = 3.76" for 10-YR event
Inflow = 12.5 cfs @ 12.09 hrs, Volume= 0.995 af
Outflow = 12.5 cfs @ 12.09 hrs, Volume= 0.995 af, Atten= 0%, Lag= 0.0 min
Routed to Pond 31P : JELLYFISH SYSTEM

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Max. Velocity= 6.72 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 2.26 fps, Avg. Travel Time= 0.1 min

Peak Storage= 28 cf @ 12.09 hrs
Average Depth at Peak Storage= 1.14' , Surface Width= 1.98'
Bank-Full Depth= 2.00' Flow Area= 3.1 sf, Capacity= 20.0 cfs

24.0" Round Pipe
n= 0.012
Length= 15.0' Slope= 0.0067 '/'
Inlet Invert= 23.45', Outlet Invert= 23.35'



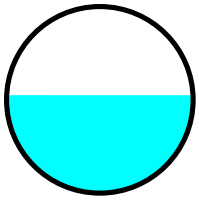
Summary for Reach 1.1R: SD29

Inflow Area = 2.873 ac, 73.81% Impervious, Inflow Depth = 3.75" for 10-YR event
Inflow = 11.3 cfs @ 12.09 hrs, Volume= 0.898 af
Outflow = 11.3 cfs @ 12.09 hrs, Volume= 0.898 af, Atten= 0%, Lag= 0.1 min
Routed to Reach 1.0R : SD30

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Max. Velocity= 6.73 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 2.25 fps, Avg. Travel Time= 0.3 min

Peak Storage= 59 cf @ 12.09 hrs
Average Depth at Peak Storage= 1.05' , Surface Width= 2.00'
Bank-Full Depth= 2.00' Flow Area= 3.1 sf, Capacity= 20.7 cfs

24.0" Round Pipe
n= 0.012
Length= 35.0' Slope= 0.0071 '/'
Inlet Invert= 23.80', Outlet Invert= 23.55'



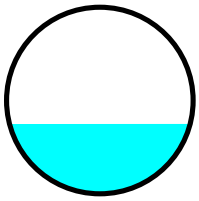
Summary for Reach 2R: SD23

Inflow Area = 2.503 ac, 77.73% Impervious, Inflow Depth = 3.84" for 10-YR event
Inflow = 10.0 cfs @ 12.09 hrs, Volume= 0.801 af
Outflow = 10.0 cfs @ 12.09 hrs, Volume= 0.801 af, Atten= 0%, Lag= 0.1 min
Routed to Reach 1.1R : SD29

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Max. Velocity= 9.33 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 3.06 fps, Avg. Travel Time= 0.2 min

Peak Storage= 43 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.75' , Surface Width= 1.94'
Bank-Full Depth= 2.00' Flow Area= 3.1 sf, Capacity= 33.6 cfs

24.0" Round Pipe
n= 0.012
Length= 40.0' Slope= 0.0187 '/'
Inlet Invert= 24.65', Outlet Invert= 23.90'



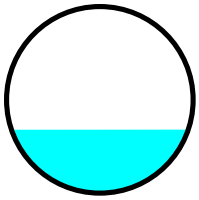
Summary for Reach 3R: SD22

Inflow Area = 2.427 ac, 77.12% Impervious, Inflow Depth = 3.83" for 10-YR event
Inflow = 9.7 cfs @ 12.09 hrs, Volume= 0.774 af
Outflow = 9.7 cfs @ 12.09 hrs, Volume= 0.774 af, Atten= 0%, Lag= 0.1 min
Routed to Reach 2R : SD23

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Max. Velocity= 10.25 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 3.35 fps, Avg. Travel Time= 0.4 min

Peak Storage= 85 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.68' , Surface Width= 1.90'
Bank-Full Depth= 2.00' Flow Area= 3.1 sf, Capacity= 38.7 cfs

24.0" Round Pipe
n= 0.012
Length= 90.0' Slope= 0.0250 '/'
Inlet Invert= 27.00', Outlet Invert= 24.75'



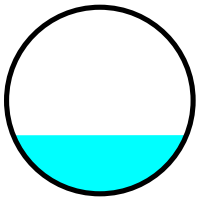
Summary for Reach 4R: SD18

Inflow Area = 2.255 ac, 76.90% Impervious, Inflow Depth = 3.82" for 10-YR event
Inflow = 9.0 cfs @ 12.09 hrs, Volume= 0.718 af
Outflow = 9.0 cfs @ 12.09 hrs, Volume= 0.718 af, Atten= 0%, Lag= 0.2 min
Routed to Reach 3R : SD22

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Max. Velocity= 10.64 fps, Min. Travel Time= 0.2 min
Avg. Velocity = 3.47 fps, Avg. Travel Time= 0.7 min

Peak Storage= 127 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.63' , Surface Width= 1.86'
Bank-Full Depth= 2.00' Flow Area= 3.1 sf, Capacity= 42.0 cfs

24.0" Round Pipe
n= 0.012
Length= 150.0' Slope= 0.0293 '/'
Inlet Invert= 31.50', Outlet Invert= 27.10'



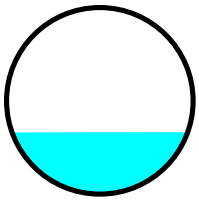
Summary for Reach 5.1R: SD16

Inflow Area = 2.016 ac, 81.55% Impervious, Inflow Depth = 3.94" for 10-YR event
Inflow = 8.3 cfs @ 12.09 hrs, Volume= 0.661 af
Outflow = 8.3 cfs @ 12.09 hrs, Volume= 0.661 af, Atten= 0%, Lag= 0.0 min
Routed to Reach 5R : SD17

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Max. Velocity= 16.08 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 5.27 fps, Avg. Travel Time= 0.1 min

Peak Storage= 21 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.50' , Surface Width= 1.41'
Bank-Full Depth= 1.50' Flow Area= 1.8 sf, Capacity= 34.6 cfs

18.0" Round Pipe
n= 0.012
Length= 40.0' Slope= 0.0925 '/'
Inlet Invert= 36.15', Outlet Invert= 32.45'



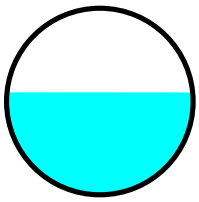
Summary for Reach 5R: SD17

Inflow Area = 2.204 ac, 76.68% Impervious, Inflow Depth = 3.81" for 10-YR event
Inflow = 8.8 cfs @ 12.09 hrs, Volume= 0.701 af
Outflow = 8.8 cfs @ 12.09 hrs, Volume= 0.701 af, Atten= 0%, Lag= 0.0 min
Routed to Reach 4R : SD18

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Max. Velocity= 8.85 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 2.98 fps, Avg. Travel Time= 0.1 min

Peak Storage= 20 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.82' , Surface Width= 1.49'
Bank-Full Depth= 1.50' Flow Area= 1.8 sf, Capacity= 15.1 cfs

18.0" Round Pipe
n= 0.012
Length= 20.0' Slope= 0.0175 '/'
Inlet Invert= 32.35', Outlet Invert= 32.00'



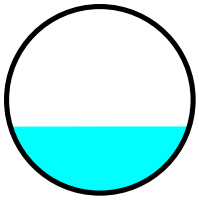
Summary for Reach 6R: SD14

Inflow Area = 2.016 ac, 81.55% Impervious, Inflow Depth = 3.94" for 10-YR event
Inflow = 8.3 cfs @ 12.09 hrs, Volume= 0.661 af
Outflow = 8.3 cfs @ 12.09 hrs, Volume= 0.661 af, Atten= 0%, Lag= 0.1 min
Routed to Reach 5.1R : SD16

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Max. Velocity= 14.57 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 4.79 fps, Avg. Travel Time= 0.4 min

Peak Storage= 62 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.54' , Surface Width= 1.44'
Bank-Full Depth= 1.50' Flow Area= 1.8 sf, Capacity= 30.2 cfs

18.0" Round Pipe
n= 0.012
Length= 110.0' Slope= 0.0705 '/'
Inlet Invert= 44.00', Outlet Invert= 36.25'



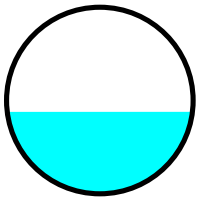
Summary for Reach 7R: SD12

Inflow Area = 1.938 ac, 82.09% Impervious, Inflow Depth = 3.95" for 10-YR event
Inflow = 8.0 cfs @ 12.08 hrs, Volume= 0.638 af
Outflow = 8.0 cfs @ 12.09 hrs, Volume= 0.638 af, Atten= 0%, Lag= 0.1 min
Routed to Reach 6R : SD14

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Max. Velocity= 10.66 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 3.54 fps, Avg. Travel Time= 0.2 min

Peak Storage= 37 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.66' , Surface Width= 1.49'
Bank-Full Depth= 1.50' Flow Area= 1.8 sf, Capacity= 20.0 cfs

18.0" Round Pipe
n= 0.012
Length= 50.0' Slope= 0.0308 '/'
Inlet Invert= 45.64', Outlet Invert= 44.10'



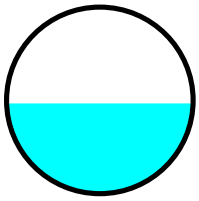
Summary for Reach 8R: SD11

Inflow Area = 1.784 ac, 83.24% Impervious, Inflow Depth = 3.98" for 10-YR event
Inflow = 7.4 cfs @ 12.08 hrs, Volume= 0.591 af
Outflow = 7.4 cfs @ 12.08 hrs, Volume= 0.591 af, Atten= 0%, Lag= 0.0 min
Routed to Reach 7R : SD12

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Max. Velocity= 8.70 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 2.91 fps, Avg. Travel Time= 0.2 min

Peak Storage= 27 cf @ 12.08 hrs
Average Depth at Peak Storage= 0.73' , Surface Width= 1.50'
Bank-Full Depth= 1.50' Flow Area= 1.8 sf, Capacity= 15.6 cfs

18.0" Round Pipe
n= 0.012
Length= 32.0' Slope= 0.0188 '/'
Inlet Invert= 46.34', Outlet Invert= 45.74'



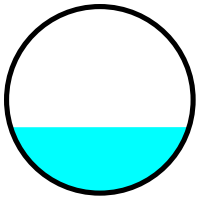
Summary for Reach 10R: SD27

Inflow Area = 0.574 ac,100.00% Impervious, Inflow Depth = 4.36" for 10-YR event
Inflow = 2.6 cfs @ 12.08 hrs, Volume= 0.209 af
Outflow = 2.6 cfs @ 12.09 hrs, Volume= 0.209 af, Atten= 0%, Lag= 0.2 min
Routed to Reach 0R :

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Max. Velocity= 6.64 fps, Min. Travel Time= 0.3 min
Avg. Velocity = 2.19 fps, Avg. Travel Time= 1.0 min

Peak Storage= 50 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.44' , Surface Width= 1.20'
Bank-Full Depth= 1.25' Flow Area= 1.2 sf, Capacity= 9.6 cfs

15.0" Round Pipe
n= 0.012
Length= 130.0' Slope= 0.0188 '/'
Inlet Invert= 26.00', Outlet Invert= 23.55'



Summary for Pond 31P: JELLYFISH SYSTEM

Inflow Area = 3.178 ac, 74.09% Impervious, Inflow Depth = 3.76" for 10-YR event
Inflow = 12.5 cfs @ 12.09 hrs, Volume= 0.995 af
Outflow = 12.5 cfs @ 12.09 hrs, Volume= 0.995 af, Atten= 0%, Lag= 0.1 min
Primary = 12.5 cfs @ 12.09 hrs, Volume= 0.995 af
Routed to Reach 0R :

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Starting Elev= 22.85' Surf.Area= 0.001 ac Storage= 0.009 af
Peak Elev= 25.27' @ 12.09 hrs Surf.Area= 0.001 ac Storage= 0.013 af (0.003 af above start)
Flood Elev= 30.00' Surf.Area= 0.001 ac Storage= 0.016 af (0.007 af above start)

Plug-Flow detention time= 13.0 min calculated for 0.986 af (99% of inflow)
Center-of-Mass det. time= 1.2 min (765.1 - 763.8)

Volume	Invert	Avail.Storage	Storage Description
#1	16.35'	0.016 af	**8.00'W x 8.00'L x 11.50'H Prismatoid** 0.017 af Overall x 96.0% Voids

Device	Routing	Invert	Outlet Devices
#1	Device 3	22.85'	**JFPD0808-11-3-54 CSV File** Head (feet) 0.00 0.08 0.17 0.25 0.33 0.42 0.50 0.58 0.67 0.75 0.83 0.92 1.00 1.08 1.17 1.25 1.33 1.42 1.50 Disch. (cfs) 0.000 0.015 0.030 0.045 0.059 0.074 0.089 0.267 0.446 0.624 0.802 0.980 1.159 1.337 1.515 1.693 1.872 2.050 2.228
#2	Device 3	24.35'	**3.5' long x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32
#3	Primary	22.85'	**24.0" Round Culvert** L= 13.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 22.85' / 22.70' S= 0.0115 '/' Cc= 0.900 n= 0.012, Flow Area= 3.14 sf

Primary OutFlow Max=12.5 cfs @ 12.09 hrs HW=25.27' TW=23.58' (Dynamic Tailwater)
└**3=Culvert** (Passes 12.5 cfs of 14.2 cfs potential flow)
  ├**1=JFPD0808-11-3-54 CSV File** (Custom Controls 2.2 cfs)
  └**2=Broad-Crested Rectangular Weir** (Weir Controls 10.2 cfs @ 3.18 fps)

Summary for Link POA-1: Casco Bay

Inflow Area = 4.477 ac, 70.08% Impervious, Inflow Depth = 3.66" for 10-YR event
Inflow = 17.2 cfs @ 12.09 hrs, Volume= 1.365 af
Primary = 17.2 cfs @ 12.09 hrs, Volume= 1.365 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs

Summary for Subcatchment 1.0S:

Runoff = 1.6 cfs @ 12.08 hrs, Volume= 0.126 af, Depth= 4.97"
Routed to Reach 1.0R : SD30

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-YR Rainfall=5.80"

Area (ac)	CN	Description
0.234	98	Paved parking, HSG C
0.071	74	>75% Grass cover, Good, HSG C
0.305		Weighted Average
0.071		23.28% Pervious Area
0.234		76.72% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.4	25	0.0200	1.03		**Sheet Flow, A-B** Smooth surfaces n= 0.011 P2= 3.10"
0.6	100	0.0200	2.87		**Shallow Concentrated Flow, B-C** Paved Kv= 20.3 fps
5.0					**Direct Entry, DIRECT**
6.0	125	Total			

Summary for Subcatchment 1.1S:

Runoff = 1.7 cfs @ 12.09 hrs, Volume= 0.130 af, Depth= 4.22"
Routed to Reach 1.1R : SD29

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-YR Rainfall=5.80"

Area (ac)	CN	Description
0.195	74	>75% Grass cover, Good, HSG C
0.175	98	Paved parking, HSG C
0.370		Weighted Average
0.195		52.70% Pervious Area
0.175		47.30% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.7	20	0.0200	0.12		**Sheet Flow, A-B** Grass: Short n= 0.150 P2= 3.10"
0.5	110	0.0300	3.52		**Shallow Concentrated Flow, B-C** Paved Kv= 20.3 fps
2.8					**Direct Entry, DIRECT ENTRY**
6.0	130	Total			

Summary for Subcatchment 1.2S: BLDG 7 ROOF

Runoff = 3.3 cfs @ 12.08 hrs, Volume= 0.266 af, Depth= 5.56"
Routed to Reach 10R : SD27

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-YR Rainfall=5.80"

Area (ac)	CN	Description
0.574	98	Roofs, HSG C
0.574		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, DIRECT ENTRY**

Summary for Subcatchment 2.0S:

Runoff = 0.4 cfs @ 12.08 hrs, Volume= 0.035 af, Depth= 5.50"
Routed to Reach 2R : SD23

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-YR Rainfall=5.80"

Area (ac)	CN	Description
0.074	98	Paved parking, HSG C
0.002	74	>75% Grass cover, Good, HSG C
0.076		Weighted Average
0.002		2.63% Pervious Area
0.074		97.37% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, DIRECT ENTRY**

Summary for Subcatchment 3.0S:

Runoff = 0.9 cfs @ 12.08 hrs, Volume= 0.073 af, Depth= 5.05"
Routed to Reach 3R : SD22

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-YR Rainfall=5.80"

Area (sf)	CN	Description
6,000	98	Paved parking, HSG C
1,500	74	>75% Grass cover, Good, HSG C
7,500		Weighted Average
1,500		20.00% Pervious Area
6,000		80.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.0	15	0.1500	0.26		**Sheet Flow, A-B** Grass: Short n= 0.150 P2= 3.10"
0.0	5	0.0150	2.49		**Shallow Concentrated Flow, B-C** Paved Kv= 20.3 fps
0.3	20	0.0250	1.11		**Shallow Concentrated Flow, C-D** Short Grass Pasture Kv= 7.0 fps
0.6	115	0.0220	3.01		**Shallow Concentrated Flow, D-E** Paved Kv= 20.3 fps
4.1					**Direct Entry, DIRECT ENTRY**
6.0	155	Total			

Summary for Subcatchment 4.0S:

Runoff = 0.3 cfs @ 12.08 hrs, Volume= 0.022 af, Depth= 5.21"
Routed to Reach 4R : SD18

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-YR Rainfall=5.80"

Area (ac)	CN	Description
0.044	98	Paved parking, HSG C
0.007	74	>75% Grass cover, Good, HSG C
0.051		Weighted Average
0.007		13.73% Pervious Area
0.044		86.27% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.3	25	0.0400	1.35		**Sheet Flow, A-B** Smooth surfaces n= 0.011 P2= 3.10"
0.3	105	0.1000	6.42		**Shallow Concentrated Flow, B-C** Paved Kv= 20.3 fps
5.4					**Direct Entry, DIRECT**
6.0	130	Total			

Summary for Subcatchment 5.0S:

Runoff = 0.7 cfs @ 12.09 hrs, Volume= 0.055 af, Depth= 3.50"
Routed to Reach 5R : SD17

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-YR Rainfall=5.80"

Area (ac)	CN	Description
0.071	74	>75% Grass cover, Good, HSG C
0.046	98	Paved parking, HSG C
0.071	70	Woods, Good, HSG C
0.188		Weighted Average
0.142		75.53% Pervious Area
0.046		24.47% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.0	10	0.5000	0.17		**Sheet Flow, A-B** Woods: Light underbrush n= 0.400 P2= 3.10"
0.1	25	0.5000	3.54		**Shallow Concentrated Flow, B-C** Woodland Kv= 5.0 fps
0.4	50	0.1000	2.21		**Shallow Concentrated Flow, C-D** Short Grass Pasture Kv= 7.0 fps
0.2	70	0.0800	5.74		**Shallow Concentrated Flow, D-E** Paved Kv= 20.3 fps
4.3					**Direct Entry, DIRECT ENTRY**
6.0	155	Total			

Summary for Subcatchment 6.0S:

Runoff = 0.4 cfs @ 12.08 hrs, Volume= 0.031 af, Depth= 4.75"
Routed to Reach 6R : SD14

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-YR Rainfall=5.80"

Area (ac)	CN	Description
0.025	74	>75% Grass cover, Good, HSG C
0.053	98	Paved parking, HSG C
0.078		Weighted Average
0.025		32.05% Pervious Area
0.053		67.95% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.3	25	0.0500	1.48		**Sheet Flow, A-B** Smooth surfaces n= 0.011 P2= 3.10"
0.2	50	0.0600	4.97		**Shallow Concentrated Flow, B-C** Paved Kv= 20.3 fps
5.5					**Direct Entry, DIRECT ENTRY**
6.0	75	Total			

Summary for Subcatchment 7.0S:

Runoff = 0.8 cfs @ 12.08 hrs, Volume= 0.061 af, Depth= 4.77"
Routed to Reach 7R : SD12

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-YR Rainfall=5.80"

Area (ac)	CN	Description
0.106	98	Paved parking, HSG C
0.048	74	>75% Grass cover, Good, HSG C
0.154		Weighted Average
0.048		31.17% Pervious Area
0.106		68.83% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.4	25	0.0200	1.03		**Sheet Flow, A-B** Smooth surfaces n= 0.011 P2= 3.10"
0.4	90	0.0300	3.52		**Shallow Concentrated Flow, B-C** Paved Kv= 20.3 fps
0.3	35	0.0570	1.67		**Shallow Concentrated Flow, C-D** Short Grass Pasture Kv= 7.0 fps
4.9					**Direct Entry, DIRECT**
6.0	150	Total			

Summary for Subcatchment 8.0S:

Runoff = 9.5 cfs @ 12.08 hrs, Volume= 0.763 af, Depth= 5.14"
Routed to Reach 8R : SD11

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-YR Rainfall=5.80"

Area (ac)	CN	Description
0.299	74	>75% Grass cover, Good, HSG C
0.498	98	Paved parking, HSG C
0.987	98	Roofs, HSG C
1.784		Weighted Average
0.299		16.76% Pervious Area
1.485		83.24% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.6	10	0.0200	0.11		**Sheet Flow, A-B** Grass: Short n= 0.150 P2= 3.10"
0.3	40	0.0100	2.03		**Shallow Concentrated Flow, B-C** Paved Kv= 20.3 fps
0.3	65	0.0350	3.80		**Shallow Concentrated Flow, C-D** Paved Kv= 20.3 fps
0.1	40	0.0550	11.53	9.05	**Pipe Channel, D-E** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.012
0.1	70	0.0500	12.75	15.65	**Pipe Channel, E-F** 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012
3.6					**Direct Entry, DIRECT ENTRY**
6.0	225	Total			

Summary for Subcatchment 9.0S:

Runoff = 2.0 cfs @ 12.09 hrs, Volume= 0.155 af, Depth= 3.85"
Routed to Link POA-1 : Casco Bay

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-YR Rainfall=5.80"

Area (ac)	CN	Description
0.158	98	Paved parking, HSG C
0.326	74	>75% Grass cover, Good, HSG C
0.484		Weighted Average
0.326		67.36% Pervious Area
0.158		32.64% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, DIRECT**

Summary for Subcatchment 10.0S:

Runoff = 0.9 cfs @ 12.09 hrs, Volume= 0.068 af, Depth= 3.38"
Routed to Link POA-1 : Casco Bay

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-YR Rainfall=5.80"

Area (ac)	CN	Description
0.051	98	Paved parking, HSG C
0.073	74	>75% Grass cover, Good, HSG C
0.117	70	Woods, Good, HSG C
0.241		Weighted Average
0.190		78.84% Pervious Area
0.051		21.16% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.1	20	0.2900	0.16		**Sheet Flow, A-B** Woods: Light underbrush n= 0.400 P2= 3.10"
0.5	90	0.1600	2.80		**Shallow Concentrated Flow, B-C** Short Grass Pasture Kv= 7.0 fps
0.2	45	0.0330	3.69		**Shallow Concentrated Flow, C-D** Paved Kv= 20.3 fps
0.8	80	0.0510	1.58		**Shallow Concentrated Flow, D-E** Short Grass Pasture Kv= 7.0 fps
2.4					**Direct Entry, DIRECT ENTRY**
6.0	235	Total			

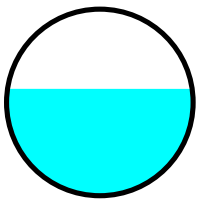
Summary for Reach 0R:

Inflow Area = 3.752 ac, 78.05% Impervious, Inflow Depth = 5.00" for 25-YR event
Inflow = 19.4 cfs @ 12.09 hrs, Volume= 1.562 af
Outflow = 19.5 cfs @ 12.09 hrs, Volume= 1.562 af, Atten= 0%, Lag= 0.0 min
Routed to Link POA-1 : Casco Bay

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Max. Velocity= 10.42 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 3.45 fps, Avg. Travel Time= 0.1 min

Peak Storage= 47 cf @ 12.09 hrs
Average Depth at Peak Storage= 1.15' , Surface Width= 1.98'
Bank-Full Depth= 2.00' Flow Area= 3.1 sf, Capacity= 31.0 cfs

24.0" Round Pipe
n= 0.012
Length= 25.0' Slope= 0.0160 '/'
Inlet Invert= 22.60', Outlet Invert= 22.20'



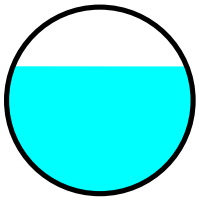
Summary for Reach 1.0R: SD30

Inflow Area = 3.178 ac, 74.09% Impervious, Inflow Depth = 4.89" for 25-YR event
Inflow = 16.2 cfs @ 12.09 hrs, Volume= 1.296 af
Outflow = 16.2 cfs @ 12.09 hrs, Volume= 1.296 af, Atten= 0%, Lag= 0.0 min
Routed to Pond 31P : JELLYFISH SYSTEM

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Max. Velocity= 7.09 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 2.44 fps, Avg. Travel Time= 0.1 min

Peak Storage= 34 cf @ 12.09 hrs
Average Depth at Peak Storage= 1.37' , Surface Width= 1.86'
Bank-Full Depth= 2.00' Flow Area= 3.1 sf, Capacity= 20.0 cfs

24.0" Round Pipe
n= 0.012
Length= 15.0' Slope= 0.0067 '/'
Inlet Invert= 23.45', Outlet Invert= 23.35'



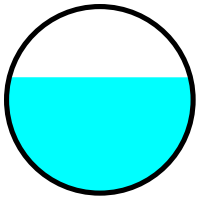
Summary for Reach 1.1R: SD29

Inflow Area = 2.873 ac, 73.81% Impervious, Inflow Depth = 4.89" for 25-YR event
Inflow = 14.7 cfs @ 12.09 hrs, Volume= 1.170 af
Outflow = 14.7 cfs @ 12.09 hrs, Volume= 1.170 af, Atten= 0%, Lag= 0.1 min
Routed to Reach 1.0R : SD30

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Max. Velocity= 7.15 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 2.43 fps, Avg. Travel Time= 0.2 min

Peak Storage= 72 cf @ 12.09 hrs
Average Depth at Peak Storage= 1.24' , Surface Width= 1.94'
Bank-Full Depth= 2.00' Flow Area= 3.1 sf, Capacity= 20.7 cfs

24.0" Round Pipe
n= 0.012
Length= 35.0' Slope= 0.0071 '/'
Inlet Invert= 23.80', Outlet Invert= 23.55'



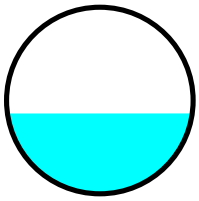
Summary for Reach 2R: SD23

Inflow Area = 2.503 ac, 77.73% Impervious, Inflow Depth = 4.98" for 25-YR event
Inflow = 13.0 cfs @ 12.09 hrs, Volume= 1.040 af
Outflow = 13.0 cfs @ 12.09 hrs, Volume= 1.040 af, Atten= 0%, Lag= 0.0 min
Routed to Reach 1.1R : SD29

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Max. Velocity= 10.00 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 3.30 fps, Avg. Travel Time= 0.2 min

Peak Storage= 52 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.86' , Surface Width= 1.98'
Bank-Full Depth= 2.00' Flow Area= 3.1 sf, Capacity= 33.6 cfs

24.0" Round Pipe
n= 0.012
Length= 40.0' Slope= 0.0187 '/'
Inlet Invert= 24.65', Outlet Invert= 23.90'



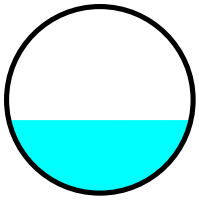
Summary for Reach 3R: SD22

Inflow Area = 2.427 ac, 77.12% Impervious, Inflow Depth = 4.97" for 25-YR event
Inflow = 12.6 cfs @ 12.09 hrs, Volume= 1.005 af
Outflow = 12.6 cfs @ 12.09 hrs, Volume= 1.005 af, Atten= 0%, Lag= 0.1 min
Routed to Reach 2R : SD23

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Max. Velocity= 11.01 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 3.62 fps, Avg. Travel Time= 0.4 min

Peak Storage= 103 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.78' , Surface Width= 1.95'
Bank-Full Depth= 2.00' Flow Area= 3.1 sf, Capacity= 38.7 cfs

24.0" Round Pipe
n= 0.012
Length= 90.0' Slope= 0.0250 '/'
Inlet Invert= 27.00', Outlet Invert= 24.75'



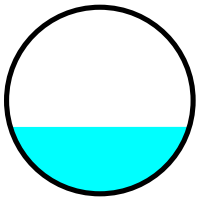
Summary for Reach 4R: SD18

Inflow Area = 2.255 ac, 76.90% Impervious, Inflow Depth = 4.96" for 25-YR event
Inflow = 11.7 cfs @ 12.09 hrs, Volume= 0.933 af
Outflow = 11.7 cfs @ 12.09 hrs, Volume= 0.933 af, Atten= 0%, Lag= 0.2 min
Routed to Reach 3R : SD22

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Max. Velocity= 11.43 fps, Min. Travel Time= 0.2 min
Avg. Velocity = 3.74 fps, Avg. Travel Time= 0.7 min

Peak Storage= 153 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.72' , Surface Width= 1.92'
Bank-Full Depth= 2.00' Flow Area= 3.1 sf, Capacity= 42.0 cfs

24.0" Round Pipe
n= 0.012
Length= 150.0' Slope= 0.0293 '/'
Inlet Invert= 31.50', Outlet Invert= 27.10'



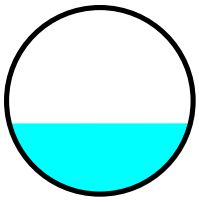
Summary for Reach 5.1R: SD16

Inflow Area = 2.016 ac, 81.55% Impervious, Inflow Depth = 5.09" for 25-YR event
Inflow = 10.7 cfs @ 12.09 hrs, Volume= 0.856 af
Outflow = 10.7 cfs @ 12.09 hrs, Volume= 0.856 af, Atten= 0%, Lag= 0.0 min
Routed to Reach 5R : SD17

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Max. Velocity= 17.24 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 5.68 fps, Avg. Travel Time= 0.1 min

Peak Storage= 25 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.57' , Surface Width= 1.46'
Bank-Full Depth= 1.50' Flow Area= 1.8 sf, Capacity= 34.6 cfs

18.0" Round Pipe
n= 0.012
Length= 40.0' Slope= 0.0925 '/'
Inlet Invert= 36.15', Outlet Invert= 32.45'



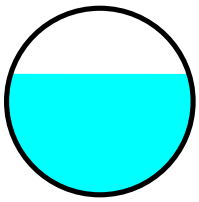
Summary for Reach 5R: SD17

Inflow Area = 2.204 ac, 76.68% Impervious, Inflow Depth = 4.96" for 25-YR event
Inflow = 11.4 cfs @ 12.09 hrs, Volume= 0.910 af
Outflow = 11.4 cfs @ 12.09 hrs, Volume= 0.910 af, Atten= 0%, Lag= 0.0 min
Routed to Reach 4R : SD18

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Max. Velocity= 9.36 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 3.22 fps, Avg. Travel Time= 0.1 min

Peak Storage= 24 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.97' , Surface Width= 1.43'
Bank-Full Depth= 1.50' Flow Area= 1.8 sf, Capacity= 15.1 cfs

18.0" Round Pipe
n= 0.012
Length= 20.0' Slope= 0.0175 '/'
Inlet Invert= 32.35', Outlet Invert= 32.00'



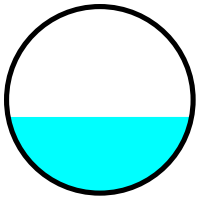
Summary for Reach 6R: SD14

Inflow Area = 2.016 ac, 81.55% Impervious, Inflow Depth = 5.09" for 25-YR event
Inflow = 10.7 cfs @ 12.09 hrs, Volume= 0.856 af
Outflow = 10.7 cfs @ 12.09 hrs, Volume= 0.856 af, Atten= 0%, Lag= 0.1 min
Routed to Reach 5.1R : SD16

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Max. Velocity= 15.61 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 5.17 fps, Avg. Travel Time= 0.4 min

Peak Storage= 75 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.62' , Surface Width= 1.48'
Bank-Full Depth= 1.50' Flow Area= 1.8 sf, Capacity= 30.2 cfs

18.0" Round Pipe
n= 0.012
Length= 110.0' Slope= 0.0705 '/'
Inlet Invert= 44.00', Outlet Invert= 36.25'



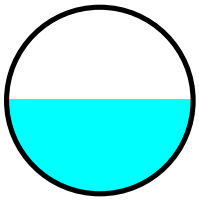
Summary for Reach 7R: SD12

Inflow Area = 1.938 ac, 82.09% Impervious, Inflow Depth = 5.11" for 25-YR event
Inflow = 10.3 cfs @ 12.08 hrs, Volume= 0.825 af
Outflow = 10.3 cfs @ 12.09 hrs, Volume= 0.825 af, Atten= 0%, Lag= 0.1 min
Routed to Reach 6R : SD14

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Max. Velocity= 11.38 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 3.82 fps, Avg. Travel Time= 0.2 min

Peak Storage= 45 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.76' , Surface Width= 1.50'
Bank-Full Depth= 1.50' Flow Area= 1.8 sf, Capacity= 20.0 cfs

18.0" Round Pipe
n= 0.012
Length= 50.0' Slope= 0.0308 '/'
Inlet Invert= 45.64', Outlet Invert= 44.10'



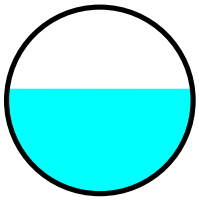
Summary for Reach 8R: SD11

Inflow Area = 1.784 ac, 83.24% Impervious, Inflow Depth = 5.14" for 25-YR event
Inflow = 9.5 cfs @ 12.08 hrs, Volume= 0.763 af
Outflow = 9.5 cfs @ 12.08 hrs, Volume= 0.763 af, Atten= 0%, Lag= 0.0 min
Routed to Reach 7R : SD12

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Max. Velocity= 9.25 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 3.14 fps, Avg. Travel Time= 0.2 min

Peak Storage= 33 cf @ 12.08 hrs
Average Depth at Peak Storage= 0.85' , Surface Width= 1.49'
Bank-Full Depth= 1.50' Flow Area= 1.8 sf, Capacity= 15.6 cfs

18.0" Round Pipe
n= 0.012
Length= 32.0' Slope= 0.0188 '/'
Inlet Invert= 46.34', Outlet Invert= 45.74'



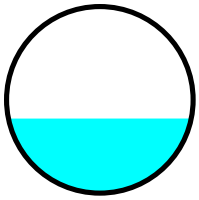
Summary for Reach 10R: SD27

Inflow Area = 0.574 ac,100.00% Impervious, Inflow Depth = 5.56" for 25-YR event
Inflow = 3.3 cfs @ 12.08 hrs, Volume= 0.266 af
Outflow = 3.3 cfs @ 12.09 hrs, Volume= 0.266 af, Atten= 0%, Lag= 0.2 min
Routed to Reach 0R :

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Max. Velocity= 7.07 fps, Min. Travel Time= 0.3 min
Avg. Velocity = 2.36 fps, Avg. Travel Time= 0.9 min

Peak Storage= 60 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.50' , Surface Width= 1.23'
Bank-Full Depth= 1.25' Flow Area= 1.2 sf, Capacity= 9.6 cfs

15.0" Round Pipe
n= 0.012
Length= 130.0' Slope= 0.0188 '/'
Inlet Invert= 26.00', Outlet Invert= 23.55'



Summary for Pond 31P: JELLYFISH SYSTEM

Inflow Area = 3.178 ac, 74.09% Impervious, Inflow Depth = 4.89" for 25-YR event
Inflow = 16.2 cfs @ 12.09 hrs, Volume= 1.296 af
Outflow = 16.2 cfs @ 12.10 hrs, Volume= 1.296 af, Atten= 0%, Lag= 0.2 min
Primary = 16.2 cfs @ 12.10 hrs, Volume= 1.296 af
Routed to Reach 0R :

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Starting Elev= 22.85' Surf.Area= 0.001 ac Storage= 0.009 af
Peak Elev= 25.69' @ 12.10 hrs Surf.Area= 0.001 ac Storage= 0.013 af (0.004 af above start)
Flood Elev= 30.00' Surf.Area= 0.001 ac Storage= 0.016 af (0.007 af above start)

Plug-Flow detention time= 10.3 min calculated for 1.287 af (99% of inflow)
Center-of-Mass det. time= 1.0 min (761.5 - 760.5)

Volume	Invert	Avail.Storage	Storage Description
#1	16.35'	0.016 af	**8.00'W x 8.00'L x 11.50'H Prismatoid** 0.017 af Overall x 96.0% Voids

Device	Routing	Invert	Outlet Devices
#1	Device 3	22.85'	**JFPD0808-11-3-54 CSV File** Head (feet) 0.00 0.08 0.17 0.25 0.33 0.42 0.50 0.58 0.67 0.75 0.83 0.92 1.00 1.08 1.17 1.25 1.33 1.42 1.50 Disch. (cfs) 0.000 0.015 0.030 0.045 0.059 0.074 0.089 0.267 0.446 0.624 0.802 0.980 1.159 1.337 1.515 1.693 1.872 2.050 2.228
#2	Device 3	24.35'	**3.5' long x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32
#3	Primary	22.85'	**24.0" Round Culvert** L= 13.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 22.85' / 22.70' S= 0.0115 '/' Cc= 0.900 n= 0.012, Flow Area= 3.14 sf

Primary OutFlow Max=16.2 cfs @ 12.10 hrs HW=25.69' TW=23.75' (Dynamic Tailwater)
└**3=Culvert** (Inlet Controls 16.2 cfs @ 5.15 fps)
  ├**1=JFPD0808-11-3-54 CSV File** (Passes < 2.2 cfs potential flow)
  └**2=Broad-Crested Rectangular Weir** (Passes < 17.9 cfs potential flow)

Summary for Link POA-1: Casco Bay

Inflow Area = 4.477 ac, 70.08% Impervious, Inflow Depth = 4.79" for 25-YR event
Inflow = 22.4 cfs @ 12.09 hrs, Volume= 1.785 af
Primary = 22.4 cfs @ 12.09 hrs, Volume= 1.785 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs

Attachment 3

Inspection, Maintenance, & Housekeeping Plan

INSPECTION, MAINTENANCE, AND HOUSEKEEPING PLAN

For:
Martin's Point Vernada Campus
Portland, Maine

By:
Sebago Technics, Inc.
75 John Roberts Road, Suite 4A
South Portland, Maine

Introduction

The following plan outlines the anticipated inspection and maintenance procedures for the erosion and sedimentation control measures as well as stormwater management facilities for the project. This plan also outlines several housekeeping requirements that shall be followed during and after construction. These procedures shall be followed in order to ensure the intended function of the designed measures and to prevent unreasonably adverse impacts to the surrounding environment.

The procedures outlined in this Inspection, Maintenance and Housekeeping Plan are provided as an overview of the anticipated practices to be used on this site. In some instances, additional measures may be required due to unexpected conditions. For additional detail on any of the erosion and sedimentation control measures or stormwater management devices to be utilized on this project, refer to the most recently revised edition of the "Maine Erosion and Sedimentation Control BMP" manual and/or the "Stormwater Management for Maine: Best Management Practices" manual as published by the Maine Department of Environmental Protection (MDEP).

During Construction

1. **Inspection:** During the construction process, it is the Contractor's responsibility to comply with the inspection and maintenance procedures outlined in this section. These responsibilities include inspecting disturbed and impervious areas, erosion control measures, materials storage areas that are exposed to precipitation, and locations where vehicles enter or exit the site. These areas shall be inspected at least once a week as well as before and after a storm event (0.5" of rainfall), and prior to completing permanent stabilization measures. A person with knowledge of erosion and stormwater control, including the standards and conditions in any applicable permits, shall conduct the inspections.

2. **Maintenance:** All measures shall be maintained in an effective operating condition until areas are permanently stabilized. If Best Management Practices (BMPs) need to be maintained or modified, additional BMPs are necessary, or other corrective action is needed, implementation must be completed within 7 calendar days and prior to any storm event (0.5" of rainfall).

3. **Documentation:** A log summarizing the inspections and any corrective action taken must be maintained on-site. The log must include the name(s) and qualifications of the person making the inspections, the date(s) of the inspections, and major observations about the operation and maintenance of erosion and sedimentation controls, material storage areas, and vehicle access points to the site. Major observations must include BMPs that need maintenance, BMPs that failed

to operate as designed or proved inadequate for a particular location, and locations where additional BMPs are needed. For each BMP requiring maintenance, BMP needing replacement, and location needing additional BMPs, note in the log the corrective action taken and when it was taken. The log must be made accessible to the appropriate regulatory agency upon request. The permittee shall retain a copy of the log for a period of at least three years from the completion of permanent stabilization.

4. **Specific Inspection and Maintenance Tasks:** The following is a list of erosion control and stormwater management measures and the specific inspection and maintenance tasks to be performed during construction.

A. Sediment Barriers:

- Hay bale barriers, silt fences, and filter berms shall be inspected immediately after each rainfall and at least daily during prolonged rainfall.
- If the fabric on a silt fence or filter barrier should decompose or become ineffective prior to the end of the expected usable life and the barrier is still necessary, it shall be replaced.
- Sediment deposits should be removed after each storm event (0.5" of rainfall). They must be removed before deposits reach approximately one-half the height of the barrier.
- Filter berms shall be reshaped as needed.
- Any sediment deposits remaining in place after the silt fence or filter barrier is no longer required should be dressed to conform to the existing grade, prepared, and seeded.

B. Riprap Materials:

- Once a riprap installation has been completed, it should require very little maintenance. It shall, however, be inspected periodically to determine if high flows have caused scour beneath the riprap or dislodged any of the stone.

C. Erosion Control Blankets:

- Inspect these reinforced areas semi-annually and after significant rainfall events for slumping, sliding, seepage, and scour. Pay close attention to unreinforced areas adjacent to the erosion control blankets, which may experience accelerated erosion.
- Review all applicable inspection and maintenance procedures recommended by the specific blanket manufacturer. These tasks shall be included in addition to the requirements of this plan.

D. Stabilized Construction Entrances/Exits:

- The exit shall be maintained in a condition that will prevent tracking of sediment onto public rights-of-way.
- When the control pad becomes ineffective, the stone shall be removed along with the collected soil material. The entrance should then be reconstructed.
- Areas that have received mud-tracking or sediment deposits shall be swept or washed. Washing shall be done on an area stabilized with aggregate, which drains

into an approved sediment-trapping device (not into storm drains, ditches, or waterways).

E. Temporary Seed and Mulch:

- Mulched areas should be inspected after rain events to check for rill erosion.
- If less than 90% of the soil surface is covered by mulch, additional mulch shall be applied in bare areas.
- In applications where seeding and mulch have been applied in conjunction with erosion control blankets, the blankets must be inspected after rain events for dislocation or undercutting.
- Mulch shall continue to be reapplied until 95% of the soil surface has established temporary vegetative cover.

F. Stabilized Temporary Drainage Swales:

- Sediment accumulation in the swale shall be removed once the cross section of the swale is reduced by 25%.
- The swales shall be inspected after rainfall events. Any evidence of sloughing of the side slopes or channel erosion shall be repaired and corrective action should be taken to prevent reoccurrence of the problem.
- In addition to the stabilized lining of the channel (i.e. erosion control blankets), stone check dams may be needed to further reduce channel velocity.

5. **Housekeeping:** The following general performance standards apply to the proposed project.

A. Spill prevention: Controls must be used to prevent pollutants from being discharged from materials on-site, including storage practices to minimize exposure of the materials to stormwater, and appropriate spill prevention, containment, and response planning and implementation.

B. Groundwater protection: During construction, liquid petroleum products and other hazardous materials with the potential to contaminate groundwater may not be stored or handled in areas of the site draining to an infiltration area. An "infiltration area" is any area of the site that by design or as a result of soils, topography and other relevant factors, accumulates runoff that infiltrates into the soil. Dikes, berms, sumps, and other forms of secondary containment that prevent discharge to groundwater may be used to isolate portions of the site for the purposes of storage and handling of these materials.

C. Fugitive sediment and dust: Actions must be taken to ensure that activities do not result in noticeable erosion of soils or fugitive dust emissions during or after construction. Oil may not be used for dust control.

D. Debris and other materials: Litter, construction debris, and chemicals exposed to stormwater must be prevented from becoming a pollutant source.

E. Trench or foundation dewatering: Trench dewatering is the removal of water from trenches, foundations, cofferdams, ponds, and other areas within the construction area

that retain water after excavation. In most cases, the collected water is heavily silted and hinders correct and safe construction practices. The collected water must be removed from the ponded area, either through gravity or pumping, and must be spread through natural wooded buffers or removed to areas that are specifically designed to collect the maximum amount of sediment possible, like a cofferdam sedimentation basin. Avoid allowing the water to flow over disturbed areas of the site. Equivalent measures may be taken if approved.

Post-Construction

1. **Inspection:** After construction, it is the responsibility of the owner or assigned heirs to comply with the inspection and maintenance procedures outlined in this section. All measures must be maintained in effective operating condition. The owner shall inspect and maintain the BMPs, including but not limited to any parking areas, catch basins, drainage swales, detention basins and ponds, pipes and related structures, in accordance with all municipal and state inspection, cleaning and maintenance requirements of the approved post-construction stormwater management plan.

2. **Specific Inspection and Maintenance Tasks:** The following is a list of permanent erosion control and stormwater management measures and the inspection and maintenance tasks to be performed after construction. If the BMP requires maintenance, repair or replacement to function as intended by the approved post-construction stormwater management plan, the owner or operator of the BMP shall take corrective action(s) to address the deficiency or deficiencies as soon as possible after the deficiency is discovered and shall provide a record of the deficiency and corrective action(s) to the local municipality in the annual report.

   A. Vegetated Areas:

   - Inspect vegetated areas, particularly slopes and embankments, early in the growing season or after heavy rains (>0.5") to identify active or potential erosion problems.
   - Replant bare areas or areas with sparse growth. Where rill erosion is evident, armor the area with an appropriate lining or divert the erosive flows to on-site areas able to withstand the concentrated flows.

   B. Ditches, Swales and Other Open Channels:

   - Inspect ditches, swales, level spreaders and other open stormwater channels in the spring, in the late fall, and after heavy rains to remove any obstructions to flow. Remove accumulated sediments and debris, remove woody vegetative growth that could obstruct flow, and repair any erosion of the ditch lining.
   - Vegetated ditches must be mowed at least annually or otherwise maintained to control the growth of woody vegetation and maintain flow capacity.
   - Any woody vegetation growing through riprap linings must also be removed. Repair any slumping side slopes as soon as practicable.
   - If the ditch has a riprap lining, replace riprap in areas where any underlying filter fabric or underdrain gravel is showing through the stone or where stones have dislodged.

C. Culverts:

- Inspect culverts in the spring, in the late fall, and after heavy rains (>0.5") to remove any obstructions to flow.
- Remove accumulated sediments and debris at the inlet, at the outlet, and within the conduit.
- Inspect and repair any erosion damage at the culvert's inlet and outlet.

D. Removal of Winter Sand:

- Clear accumulations of winter sand in parking lots and along roadways at least once a year, preferably in the spring.
- Accumulations on pavement may be removed by pavement sweeping.
- Accumulations of sand along road shoulders may be removed by grading excess sand to the pavement edge and removing it manually or by a front-end loader or other acceptable method

E. Jellyfish Filter

- The system must be inspected at least once every six months.
- Jellyfish systems require periodic maintenance on an annual basis.
- Maintenance should be performed when sediment depth reaches 12" of accumulation.

3. Documentation:

A. The owner or operator of a BMP or a qualified post-construction stormwater inspector hired by that person, shall, as required by the local municipality, provide a completed and signed certification on a form provided by the local municipality, certifying that the person has inspected the BMP(s) and that they are adequately maintained and functioning as intended by the approved post-construction stormwater management plan, or that they required maintenance or repair, including the record of the deficiency and corrective action(s) taken.

B. A log summarizing the inspections and any corrective action taken must be maintained. The log must include the name(s) and qualifications of the person making the inspections, the date(s) of the inspections, and major observations about the operation and maintenance of controls. Major observations must include BMPs that need maintenance, BMPs that failed to operate as designed or proved inadequate for a particular location, and locations where additional BMPs are needed. For each BMP requiring maintenance, BMP needing replacement, and location needing additional BMPs, note in the log the corrective action taken and when it was taken. The log must be made accessible to the appropriate regulatory agency upon request. A sample "Stormwater Inspection and Maintenance Form" has been included in Attachment 1 of this Inspection, Maintenance, and Housekeeping Plan.

4. **Duration of Maintenance:** Perform maintenance as described and required for any associated permits unless and until the system is formally accepted by a municipality or quasi-municipal district, or is placed under the jurisdiction of a legally created association that will be responsible for the maintenance of the system. If a municipality or quasi-municipal district chooses to accept a stormwater management system or a component of a stormwater system, it must provide a letter to the MDEP stating that it assumes responsibility for the system. The letter must specify the components of the system for which the municipality or district will assume responsibility, and that the municipality or district agrees to maintain those components of the system in compliance with MDEP standards. Upon such assumption of responsibility, and approval by the MDEP, the municipality, quasi-municipal district, or association becomes a co-permittee for this purpose only and must comply with all terms and conditions of the permit.

ATTACHMENT 1 – STORMWATER INSPECTION AND MAINTENANCE LOG

Martin's Point Veranda Campus
331 Veranda Street
Portland, Maine

This log is intended to accompany the Inspection, Maintenance, and Housekeeping Plan for the Martin's Point Veranda Campus Development in Portland, Maine. The following items shall be checked, cleaned, and maintained on a regular basis as specified in the Maintenance Plan and as described in the sections below. This log shall be kept on file for a minimum of five (5) years and shall be available for review by the City of Portland and the Maine DEP. Qualified personnel familiar with the drainage systems and soils shall perform all inspections. A copy of the construction and post-construction maintenance logs are provided.

INSPECTION MAINTENANCE AND HOUSEKEEPING FORM			
General Information			
Project Name:		**Inspection Date:**	
Project Location:		**Current Weather:**	
		Date / Amount Last Precip:	
BMP Owner:		**Company conducting inspection:**	
Owner Mailing Address:		**Company Mailing Address**	
Owner Phone #:		**Company Phone #:**	
Owner Email:		**Inspector Name:**	
		Inspector Email:	

BMP Element	Suggested Maintenance (recm'd frequency)	Observations	Inspection Notes/Recommended Action
Cascade Separator			
	Sediment Depth (Annually)		
Jellyfish Filter			
	Sediment Depth (Annually)		

Additional Notes/Observations:

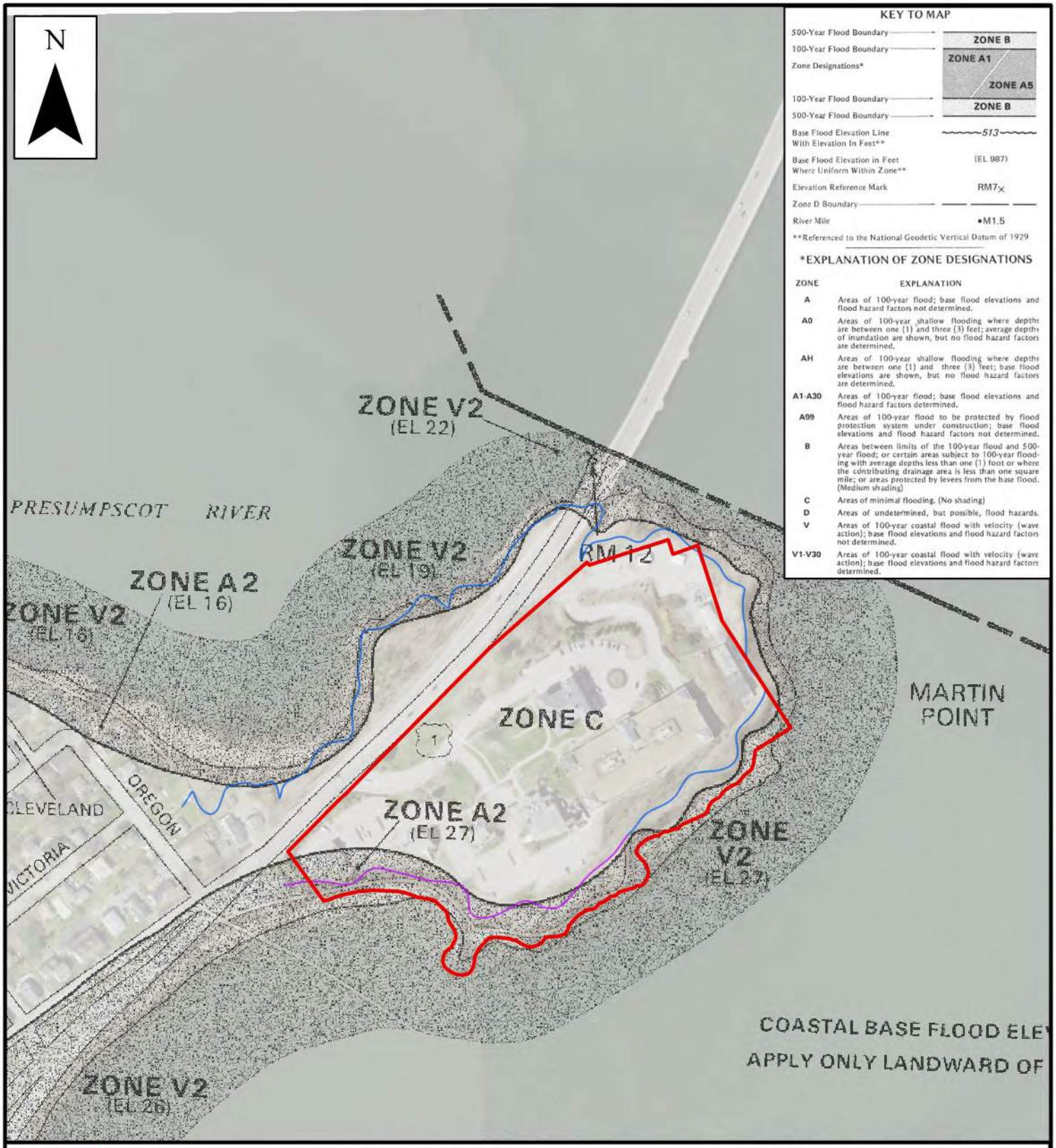
INSPECTION MAINTENANCE AND HOUSEKEEPING FORM			
General Information			
Project Name:		**Inspection Date:**	
Project Location:		**Current Weather:**	
		Date / Amount Last Precip:	
BMP Owner:		**Company conducting inspection:**	
Owner Mailing Address:		**Company Mailing Address**	
Owner Phone #:		**Company Phone #:**	
Owner Email:		**Inspector Name:**	
		Inspector Email:	

Site Element	Suggested Maintenance (recm'd frequency)	Observations	Inspection Notes/Recommended Action
Vegetated Areas	Inspect Slopes/Embankments for erosion (annually)		
	Replant bare areas or areas of sparse growth (annually)		
Ditches/Swales	Remove obstructions/debris/sediment (monthly)		
	Inspect for erosion/repair as needed (annually)		
	Remove woody vegetation (annually)		
	Mow vegetated ditches (annually)		
Catch Basins	Remove sediment/debris from sump (annually)		
	Remove accumulated debris from inlet grate		
Culverts	Remove sediment/debris from inlet/outlet aprons (annually)		
	Inspect inlet/outlet aprons for erosion, repair as needed (annually)		
	Inspect, repair as needed, riprap aprons for dislodged/sparse coverage (annually)		
Pipe Outlets	Remove sediment/debris from outlet aprons (annually)		
	Inspect outlet aprons for erosion, repair as needed (annually)		
	Inspect, repair as needed, riprap aprons for dislodged/sparse coverage (annually)		

Additional Notes/Observations:

Attachment 4

FEMA Flood Insurance Rate Map



Subject Site

Feet

0 300 600

Fema Flood Hazards

Zone A2 - 100-year Floodplain; Base Flood Elevation (BFE) Determined

Zone V2 - 100-year Floodplain with Velocity (Wave Action); Base Flood Elevation (BFE) Determined

SEBAGO TECHNICS
WWW.SEBAGOTECHNICS.COM
75 John Roberts Rd. - Suite 4A
South Portland, ME 04106
Tel. 207-200-2100

FEMA NATIONAL FLOOD HAZARDS

MARTIN'S POINT VERANDA CAMPUS

SCALE: 1:3,600

DATE: 11/8/2023

LOCATION:
331 VERANDA STREET,
PORTLAND, ME

INFORMATION:
FEMA FIRM PANEL 230051 0008 B
EFFECTIVE JULY 17, 1986

Attachment 5

Stormwater Management Plans

SuC2

HrB

SuC2

HrB

HrB

HrC

HrB

HrB

HrC

HrC

HrC

HrC

HrB

EXISTING CONDITIONS LEGEND

- WATERSHED BOUNDARY
- TIME OF CONCENTRATION (A, B)
- REACH (A, B)
- 1.0S — SUBCATCHMENT LABEL
- 1R — REACH
- POA-1 — POINT OF ANALYSIS
- 1P — STORMWATER TREATMENT/DETENTION POND
- HSG # / HSG # — SOILS BOUNDARY

2S 3S 4S 10S 1S 5S 7S 8S 9S 6S

POA-1

EXPOSED LEDGE

ABANDONED

CRUSHED STONE PAD

TREE WELL

RAILINGS

AWNING

FIRE ESCAPE

EXISTING BUILDING 5

DECK

FIRE ESCAPE

RISER PANEL

DOOR SILL

EXISTING BUILDING 6

STOP

GRAPHIC SCALE
20 0 10 20 40
(IN FEET)
1 INCH = 20 FT.

TAX PARCELS: 434-C-1,434-C-5 & 434-C-10

PAUL D. OSTROWSKI, PE 11175
STATE OF MAINE
PAUL D. OSTROWSKI No. 11175 PROFESSIONAL ENGINEER
03/14/2024

REV:	BY:	DATE:	STATUS:
B	KSM	03/14/2024	RESPONSE TO CITY REVIEW COMMENTS
A	KSM	12/20/2023	ISSUED TO CITY OF PORTLAND FOR SITE PLAN REVIEW

THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM SEBAGO TECHNICS, INC. ANY ALTERATIONS MADE TO THIS PLAN WITHOUT THE EXPERT'S SEAL AND WITHOUT LIABILITY TO SEBAGO TECHNICS, INC.

SEBAGO TECHNICS
WWW.SEBAGOTECHNICS.COM
75 John Roberts Rd.
Suite A
South Portland, ME 04106
Tel: 207-200-2100

PRE STORMWATER PLAN

MARTIN'S POINT HEALTHCARE VERANDA CAMPUS
331 VERANDA STREET
PORTLAND, ME 04103

MARTIN'S POINT HEALTH CARE, INC.
PO BOX 9746
PORTLAND, ME 04103

DESIGNED	BAM/KGK
DRAWN	CJC
CHECKED	PDO
DATE	04/10/2023
SCALE	1" = 20'
PROJECT	211026

SHEET 1 OF 2

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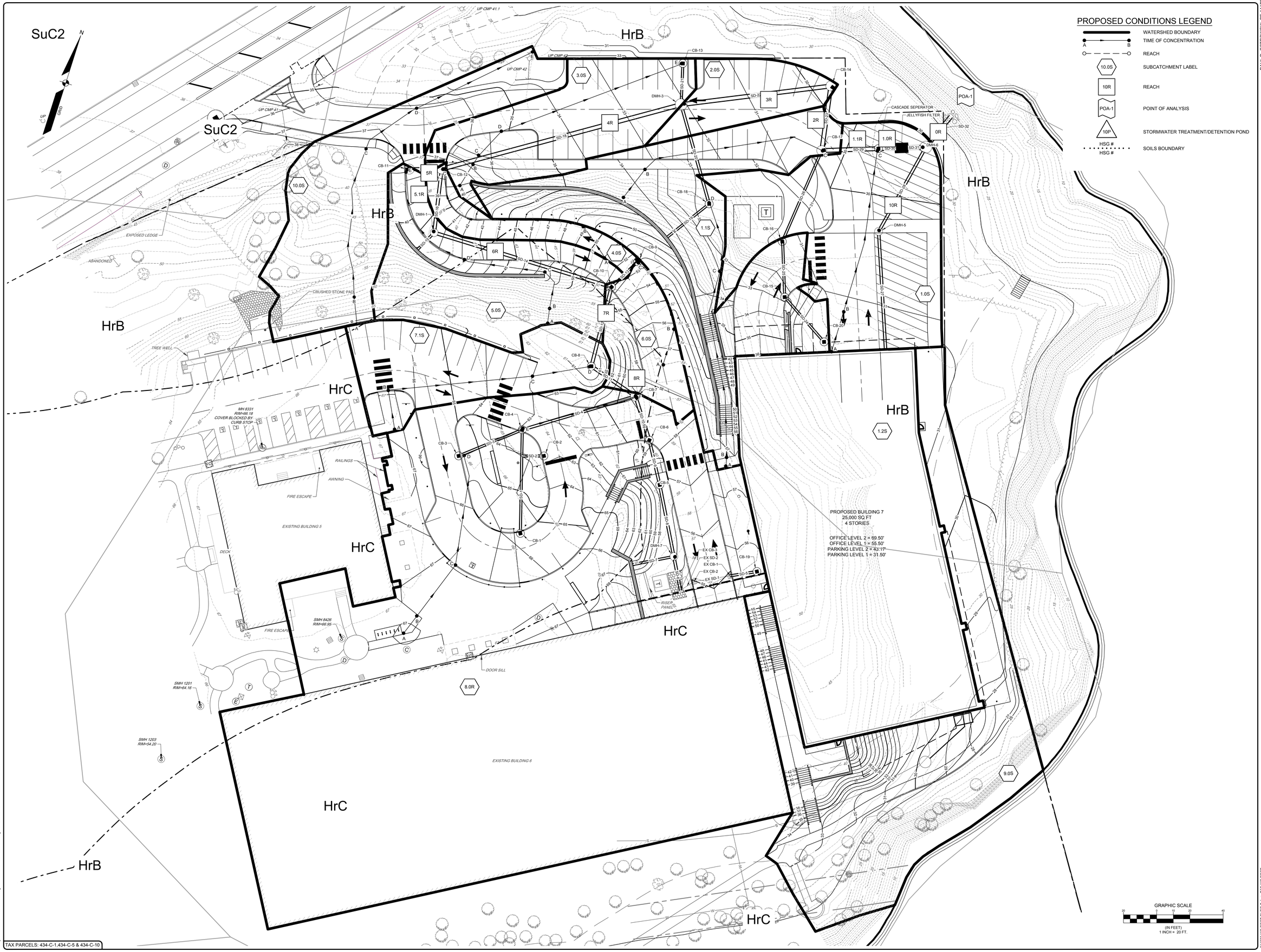
211026 WS PRE-BLDG 7.dwg, TAB:WS POST



TAX PARCELS: 434-C-1,434-C-5 & 434-C-10

PAUL D. OSTROWSKI, PE 11175

STATE OF MAINE — PAUL D. OSTROWSKI No. 11175 — PROFESSIONAL ENGINEER — 03/14/2024

REV:	BY:	DATE:	STATUS:
B	KSM	03/14/2024	RESPONSE TO CITY REVIEW COMMENTS
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SEBAGO TECHNICS
WWW.SEBAGOTECHNICS.COM
75 John Roberts Rd.
Suite A
South Portland, ME 04106
Tel: 207-200-2100

POST STORMWATER PLAN

MARTIN'S POINT HEALTHCARE VERANDA CAMPUS
331 VERANDA STREET
PORTLAND, ME 04103

MARTIN'S POINT HEALTH CARE, INC.
PO BOX 9746
PORTLAND, ME 04103

DESIGNED	BAM/KGK
DRAWN	CJC
CHECKED	PDO
DATE	04/10/2023
SCALE	1" = 20'
PROJECT	211026

SHEET 2 OF 2

211026 WS POST-BLDG 7.dwg, TAB:WS POST

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Contech Engineered Solutions LLC
71 US Rte 1, Suite F
Scarborough, ME 04074
Tel.: 207-885-6191
www.ContechES.com

March 8, 2024

Kelly Koehler, EI
Sebago Technics, Inc.
75 John Roberts Road, Suite 4A
South Portland, ME 04106

RE: Martin's Point Veranda Campus (Contech Reference No. 777865)
Review of Jellyfish Design

Dear Ms. Koehler:

The purpose of this letter is to document review of the plans and the proposed application of the Jellyfish water quality unit for the Martin's Point Veranda Campus, Portland, ME project.

Contech Engineered Solutions (Contech) has reviewed the Jellyfish Filter design for the project. We believe the Jellyfish Filter is an appropriate water quality solution for this site. The Jellyfish system is approved for use by MEDEP meeting the General Standards of the Stormwater Rules (Chapter 500) if designed, installed, and maintained in accordance with the provisions noted in the January 21, 2015 approval letter from the MEDEP.

The engineer of record reports a drainage area of 3.18 acres, of which, 2.35 acres is impervious, and a WQ Flow rate of 2.08 cfs. The Jellyfish is designed in accordance with the tested hydraulic loading rate of the 54-inch Hi-Flo cartridges at 80 gpm and Drain Down cartridge at 40 gpm. In order to adequately treat the runoff from this area, Contech recommends a Jellyfish Peak Diversion Vault 8'x8' with 54" cartridges (11 Hi-Flo and 3 Drain Down) with model designation JFPD0808-11-3 (54" cartridges) with up to 2.23 cfs treatment flow.

Our systems require periodic maintenance to continue operating properly. Given typical runoff pollutant loading rates, Contech recommends maintenance inspections on an annual basis. Maintenance should be performed when sediment depth reaches 12" of accumulation.

This system is expected to operate in accordance with Contech's design intent. Please feel free to contact me if you have any questions or concerns.

Sincerely,

David Adams

David Adams, PE
Project Engineer
Contech Engineered Solutions LLC
dave.adams@conteches.com

Jellyfish Design Calculation

CONTECH Stormwater Solutions Inc. Engineer:	DRA
Date Prepared:	**3/8/2024**

Site Information

Project Name	**Martin's Point Veranda Campus**
Project State	**Portland**
Project City	**ME**

Total Drainage Area, Ad	**3.18**	ac
Post Development Impervious Area, Ai	**2.35**	ac
Pervious Area, Ap	**0.83**	ac
% Impervious	**74%**	
Runoff Coefficient, Rc	**0.72**	

Mass Loading Calculations

Mean Annual Rainfall, P	**49**	in
Agency Required % Removal	**80%**	
Percent Runoff Capture	**90%**	
Mean Annual Runoff, Vt	**364,029**	ft^3
Event Mean Concentration of Pollutant, EMC	**75**	mg/l
Annual Mass Load, M total	**1,703**	lbs

Filter System

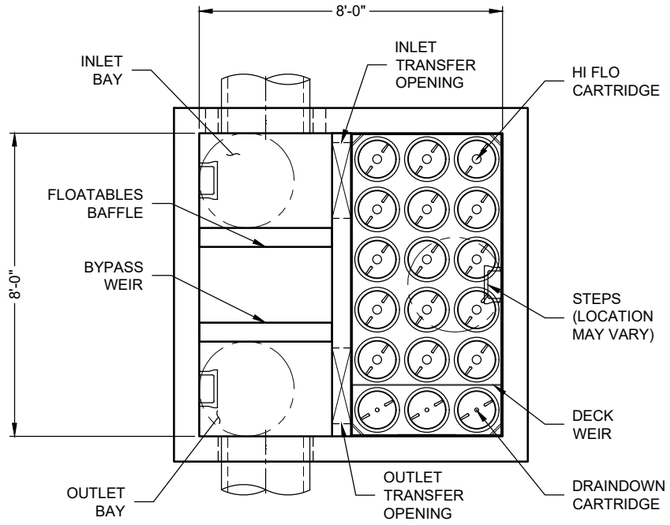
Filtration Brand	**Jelly Fish**
Cartridge Length	**54** in

Jelly Fish Sizing

Mass to be Captured by System	**1,363**	lbs
Water Quality Flow	**2.08**	cfs

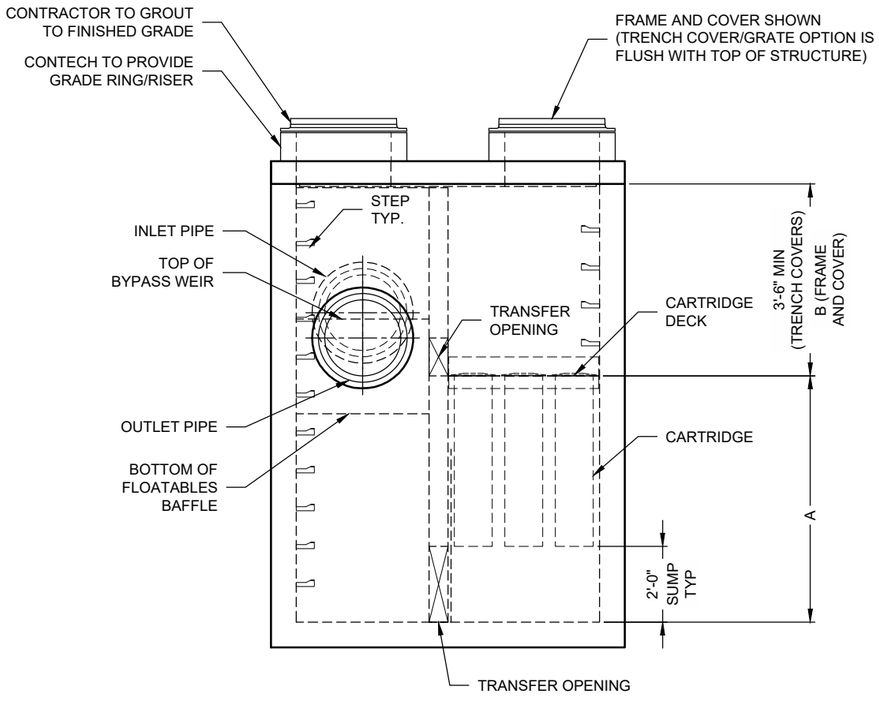
Method to Use **FLOW BASED**

Summary			
Flow	Treatment Flow Rate	2.23	cfs
	Required Size	**JFPD0808-11-3**	



PLAN VIEW

(TOP SLAB NOT SHOWN FOR CLARITY)



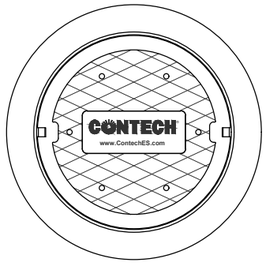
ELEVATION VIEW

JELLYFISH DESIGN NOTES

JELLYFISH TREATMENT CAPACITY IS A FUNCTION OF THE CARTRIDGE LENGTH AND THE NUMBER OF CARTRIDGES. THE STANDARD PEAK DIVERSION STYLE WITH PRECAST TOP SLAB IS SHOWN. ALTERNATE OFFLINE VAULT AND/OR SHALLOW ORIENTATIONS ARE AVAILABLE. PEAK CONVEYANCE CAPACITY TO BE DETERMINED BY ENGINEER OF RECORD

CARTRIDGE SELECTION

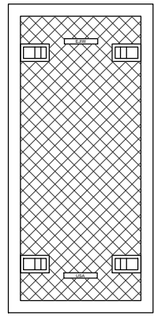
CARTRIDGE LENGTH	54"	40"	27"	15"
OUTLET INVERT TO STRUCTURE INVERT (A)	6'-6"	5'-4"	4'-3"	3'-3"
FLOW RATE HI-FLO / DRAINDOWN (CFS) (PER CART)	0.178 / 0.089	0.133 / 0.067	0.089 / 0.045	0.049 / 0.025
MAX. TREATMENT (CFS)	2.94	2.21	1.47	0.81
DECK TO INSIDE TOP (MIN) (B)	5.00	4.00	4.00	4.00



FRAME AND COVER

(DIAMETER VARIES)

N.T.S.



24"

TRENCH COVER

(LENGTH VARIES)

N.T.S.

SITE SPECIFIC DATA REQUIREMENTS

STRUCTURE ID	*
WATER QUALITY FLOW RATE (cfs)	*
PEAK FLOW RATE (cfs)	*
RETURN PERIOD OF PEAK FLOW (yrs)	*
# OF CARTRIDGES REQUIRED (HF / DD)	*
CARTRIDGE LENGTH	*

PIPE DATA:	I.E.	MAT'L	DIA	SLOPE %	HGL
INLET #1	*	*	*	*	*
INLET #2	*	*	*	*	*
OUTLET	*	*	*	*	*

SEE GENERAL NOTES 6-7 FOR INLET AND OUTLET HYDRAULIC AND SIZING REQUIREMENTS.

RIM ELEVATION	*

ANTI-FLOTATION BALLAST	WIDTH	HEIGHT
	*	*

NOTES/SPECIAL REQUIREMENTS:

* PER ENGINEER OF RECORD

GENERAL NOTES:

1. CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
2. FOR SITE SPECIFIC DRAWINGS WITH DETAILED STRUCTURE DIMENSIONS AND WEIGHT, PLEASE CONTACT YOUR CONTECH ENGINEERED SOLUTIONS REPRESENTATIVE. www.ContechES.com
3. JELLYFISH WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING. CONTRACTOR TO CONFIRM STRUCTURE MEETS REQUIREMENTS OF PROJECT.
4. STRUCTURE SHALL MEET AASHTO HS-20 OR PER APPROVING JURISDICTION REQUIREMENTS, WHICHEVER IS MORE STRINGENT, ASSUMING EARTH COVER OF 0' - 10', AND GROUNDWATER ELEVATION AT, OR BELOW, THE OUTLET PIPE INVERT ELEVATION. ENGINEER OF RECORD TO CONFIRM ACTUAL GROUNDWATER ELEVATION. CASTINGS SHALL MEET AASHTO M306 LOAD RATING AND BE CAST WITH THE CONTECH LOGO.
5. STRUCTURE SHALL BE PRECAST CONCRETE CONFORMING TO ASTM C-857, ASTM C-918, AND AASHTO LOAD FACTOR DESIGN METHOD.
6. OUTLET PIPE INVERT IS EQUAL TO THE CARTRIDGE DECK ELEVATION.
7. THE OUTLET PIPE DIAMETER FOR NEW INSTALLATIONS IS RECOMMENDED TO BE ONE PIPE SIZE LARGER THAN THE INLET PIPE AT EQUAL OR GREATER SLOPE.
8. NO PRODUCT SUBSTITUTIONS SHALL BE ACCEPTED UNLESS SUBMITTED 10 DAYS PRIOR TO PROJECT BID DATE, OR AS DIRECTED BY THE ENGINEER OF RECORD.

INSTALLATION NOTES

A. ANY SUB-BASE, BACKFILL DEPTH, AND/OR ANTI-FLOTATION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD.
B. CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE STRUCTURE.
C. CONTRACTOR WILL INSTALL AND LEVEL THE STRUCTURE, SEALING THE JOINTS, LINE ENTRY AND EXIT POINTS (NON-SHRINK GROUT WITH APPROVED WATERSTOP OR FLEXIBLE BOOT).
D. CARTRIDGE INSTALLATION, BY CONTECH, SHALL OCCUR ONLY AFTER SITE HAS BEEN STABILIZED AND THE JELLYFISH UNIT IS CLEAN AND FREE OF DEBRIS. CONTACT CONTECH TO COORDINATE CARTRIDGE INSTALLATION WITH SITE STABILIZATION.

Jellyfish Filter

THIS PRODUCT MAY BE PROTECTED BY ONE OR MORE OF THE FOLLOWING: U.S. PATENT NO. 8,287,726; 8,221,618; US 8,123,935; OTHER INTERNATIONAL PATENTS PENDING

CONTECH ENGINEERED SOLUTIONS LLC
www.ContechES.com
9025 Centre Pointe Dr., Suite 400, West Chester, OH 45069
800-338-1122 513-645-7000 513-645-7993 FAX

JELLYFISH JFPD0808 STANDARD DETAIL PEAK DIVERSION CONFIGURATION

I:\COMMON\CAD\TREATMENT\13 JELLYFISH FILTER\40 STANDARD DRAWINGS\JFPD\DWG\JFPD0808-DTL NEW.DWG 1/29/2018 10:50 AM

CITY OF PORTLAND
DELEGATED REVIEW AUTHORITY

Maine Department of Environmental Protection
38 M.R.S.A. §§ 481 to 490

Major Amendment
Site Location of Development Act

Martins Point Health Care
Proposed Building 7 - Site Improvements
331 Veranda Street
Portland, Maine 04103

For:
Martin's Point Health Care, Inc.
331 Veranda Street
Portland, Maine 04103

Prepared by:
Sebago Technics, Inc.
75 John Roberts Road, Suite 4A
South Portland, Maine 04106

January 2025
211026

Table of Contents

Form A **Application/Signature Page**
Form D **Submissions Checklist**

1. Development Description

2. Right, Title Interest

3. Financial Capacity

4. Technical Ability

5. Noise

6. Visual Quality and Scenic Character

7. Wildlife and Fisheries

8. Historic Sites

9. Unusual Natural Areas

10. Buffers

11. Soils

12. Stormwater Management

13. Urban Impaired Stream

14. Basic Standards

16. Water Supply

17. Wastewater Disposal

18. Solid Waste

19. Flooding

20. Blasting

21.-24. Air Emissions, Odors, Water Vapor, Sunlight

Appended: Site Plans

Note: Section25-Notices is not applicable to site modification, City delegated review.

Department of Environmental Protection
Bureau of Land & Water Quality
17 State House Station
Augusta, Maine 04333
Telephone: 207-287-3901

FOR DEP USE **FORM A PAGE 1**
ATS # _____
L-_____
Total Fees: _____
Date: Received _____

****

SITE LOCATION OF DEVELOPMENT PERMIT APPLICATION 38 M.R.SA. §§481-490

PLEASE TYPE OR PRINT IN *INK ONLY*

This application is for: (CHECK THE ONE THAT APPLIES)	☐ **20 acre development** ☐ **Planning Permit** ☐ **Metallic Mining**	☐ **Marine Oil Terminal** ☐ **Structure** ☐ **Subdivision**	☒ **Major Amendment** ☐ **Minor Amendment**

1. Name of Applicant:	Martins Point Health Care, Inc. c/o Kacey Parquette, Project Manager	**6. Name of Agent (if applicable):**	Sebago Technics, Inc. Kylie S. Mason, RLA,
2. Applicant's Mailing Address:	MPHC PO Box 9746, Portland, ME 04104	**7. Agent's Mailing Address:**	75 John Roberts Road, Suite 4A South Portland, ME 04106
3. Applicant's Daytime Phone #:	(207) 253-6112	**8. Agent's Daytime Phone # :**	(207) 200-2071
4. Applicant's Fax # (if available):		**9. Agent's Fax # (if available):**	(207) 856-2206
5. Applicant's *e-mail address* (REQUIRED -license will be sent via: e-mail):	kacey.parquette@martinspoint.org	**10. Agent's *e-mail address* (REQUIRED - license will be sent via e-mail):**	kmason@sebagotechnics.com

PROJECT INFORMATION

11. Name of Development:	Martins Point Health Care - Veranda Campus, Building 7						
12. Map and Lot #'s:	434-C001 434-C005 434-C010	**13. Deed Reference #'s:**		**Book #:**	29771 24070	**Page #:**	60 323
14. Location of Project City/Town:	Portland	**15. County:**	Cumberland	**16. UTM Northing**	19T 4838056	**17. UTM Easting**	399639

18. Brief Description of Project including total parcel size: Redevelopment by the removal and replace an existing structure (Bldg 7) on a ±5.6-acre portion of 12.6-acre overall property. The project includes access drives, a new building, utilities, walks, trail, stormwater management features, landscaping and other associated improvements.

19. Type of Direct Watershed: (Check all that apply)

☐ Lake not most at risk	☐ River, stream or brook	☒ Coastal wetland
☐ Lake most at risk	☐ Urban impaired stream	☐ Wellhead or public water
☐ Lake most at risk, severely blooming	☐ Freshwater wetland	

20. Name of Waterbody Project Site drains to: Casco Bay

21. Amount of Developed Area:	Total acres: 4.53	Existing Developed area: _____acres	New Developed area: ____acres
22. Amount of Impervious Area:	Total acres: 3.19	Existing Impervious areas _____acres	New Impervious area: ____acres

23. Development started prior to obtaining a license?: ☐ **Yes** ☒ **No**

24. .Development or any portion of the site subject to enforcement action? ☐ **Yes** ☒ **No** **If yes**, name of enforcement staff involved?

25. Common scheme of development?: ☐ **Yes** ☒ **No**

26. Title, Right or Interest: ☒ **own** ☐ **lease** ☐ **purchase option** ☐ **written agreement**

27. Natural Resources Protection Act permit required?: ☐ **Yes** ☒ **No** **If yes:** ☐ **PBR** ☐ **Tier 1** ☐ **Tier 2** ☐ **Full Permit**

28. Existing DEP Permit number (if applicable): L-229976-B-N, Stormwater Law, delegated review 2007

29. Names of DEP staff person(s) present at the pre-application meeting: n/a, delegated review by City Staff

30. Does agent have an interest in project? If yes, what is the interest? ☐ **Yes** ☒ **No**

CERTIFICATIONS AND SIGNATURES LOCATED ON PAGE 2

IMPORTANT: IF THE SIGNATURE BELOW IS NOT THE APPLICANT'S SIGNATURE, ATTACH LETTER OF AGENT AUTHORIZATION SIGNED BY THE APPLICANT.

By signing below the applicant (or authorized agent), certifies that he or she has read and understood the following :

CERTIFICATIONS / SIGNATURES

"I certify under penalty of law that I have personally examined the information submitted in this document and all attachments thereto and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the information is true, accurate, and complete. I am aware there are significant penalties for submitting false information, including the possibility of fine and imprisonment. I authorize the Department to enter the property that is the subject of this application, at reasonable hours, including buildings, structures or conveyances on the property, to determine the accuracy of any information provided herein.

Further, I hereby authorize the DEP to send me an electronically signed decision on the license I am applying for with this application by emailing the decision to the electronic address located on the front page of this application (see #5 for the applicant and #10 for the agent)"..

Signed: _____ **Title** Agent **Date:** January 7, 2025

Kylie S. Mason, RLA, COO, Sebago Technics, Inc.

Notice of Intent to Comply with Maine Construction General Permit	**With this Site Law application form and my signature, I am filing notice of my intent to carry out work which meets the requirements of the Maine Construction General Permit (MCGP). I have read and will comply with all of the MCGP standards.** **If this form is not being signed by the landowner or lessee of the property, attach documentation showing authorization to sign.** **Signed** _____ **Date:** January 7, 2025 Kylie S. Mason, RLA, COO, Sebago Technics, Inc.

NOTE: You must file a MCGP Notice of Termination (Form K) within 20 days of completing permanent stabilization of the project site.

CERTIFICATION

The person responsible for preparing this application and/or attaching pertinent site and design information hereto, by signing below, certifies that the application for development approval is complete and accurate to the best of his/her knowledge.

Signature: _____

Name (print): Kylie S. Mason, RLA, COO

Date: January 7, 2025

Re/Cert/Lic No.: **ME # 3335**

Engineer _____

Geologist _____

Soil Scientist _____

Land Surveyor _____

Site Evaluator _____

Active Member of the Maine Bar _____

Professional Landscape Architect **X**

Other _____

FORM D

SUBMISSIONS CHECKLIST

If a provision is not applicable, put "NA"

Section 1. Development description

A. Narrative

X 1. Objectives and details

X 2. Existing facilities (with dates of construction)

B. Topographic map

X 1. Location of development boundaries

X 2. Quadrangle name

C. Construction plan

X 1. Outline of construction sequence (major aspects)

2. Dates

D. Drawings

X 1. Development facilities

X a. Location, function and ground area

X b. Length/cross-sections for roads

X 2. Site work (nature and extent)

X 3. Existing facilities (location, function ground area and floor area)

4. Topography

X a. Pre- and post-development (contours 2 ft or less)

X b. Previous construction, facilities and lot lines

X **Section 2. Title, right or interest** (copy of document)

Section 3. Financial capacity

X A. Estimated costs

B. Financing

X 1. Letter of commitment to fund

2. Self-financing

____ a. Annual report

____ b. Bank statement

3. Other

____ a. Cash equity commitment

____ b. Financial plan

____ c. Letter

____ 4. Affordable housing information

Section 4. Technical ability (description)

X A. Prior experience (statement)

X B. Personnel (documents)

Section 5. Noise

X A. Developments producing a minor noise impact (statement)

____ 1. Residential developments

____ 2. Certain non-residential subdivisions

____ 3. Schools and hospitals

X 4. Other developments

____ a. Type, source and location of noise

____ b. Uses, zoning and plans

____ c. Protected locations

____ d. Minor nature of impact

X e. Demonstration

B. Developments producing a major noise impact (full noise study)

1. Baseline

a. Uses, zoning and plans

b. Protected locations

c. Quiet area

X 2. Noise generated by the development

X a. Type, source and location of noise

X b. Sound levels

c. Control measures

X d. Comparison with regulatory limits

X e. Comparison with local limits

X **Section 6. Visual quality and scenic character**(narrative, description, visual impact analysis)

X **Section 7. Wildlife and fisheries** (narrative)

X **Section 8. Historic sites** (narrative)

X **Section 9. Unusual natural areas** (narrative)

Section 10. Buffers

X A. Site plan and narrative

Section 11. Soils

X A. Soil survey map and report

1. Soil investigation narrative

2. Soil survey map

X B. Soil survey intensity level by development type

1. Class A (High Intensity) Soil Survey

2. Class B (High Intensity) Soil Survey

3. Class C (Medium High-Intensity) Soil Survey

4. Class D (Medium Intensity) Soil Survey

X C. Geotechnical Investigation

n/a D. Hydric soils mapping

Section 12. Stormwater management

A. Narrative

X 1. Development location

2. Surface water on or abutting the site

3. Downstream ponds and lakes

4. General topography

5. Flooding

6. Alterations to natural drainage ways

7. Alterations to land cover

8. Modeling assumptions

9. Basic standard

10. Flooding standard

11. General standard

12. Parcel size

13. Developed area

14. Disturbed area

15. Impervious area

B. Maps

X 1. U.S.G.S. map with site boundaries

X 2. S.C.S. soils map with site boundaries

X C. Drainage Plans (a pre-development plan and a post-development plan)

1. Contours
2. Plan elements
3. Land cover types and boundaries
4. Soil group boundaries
5. Stormwater quantity subwatershed boundaries
6. Stormwater quality subwatershed boundaries
7. Watershed analysis points
8. Hydrologic flow lines (w/flow types and flow lengths labeled)
9. Runoff storage areas
10. Roads and drives
11. Buildings, parking lots, and other facilities
12. Drainage system layout for storm drains, catch basins, and culverts
13. Natural and man-made open drainage channels
14. Wetlands
15. Flooded areas
16. Benchmark
17. Stormwater detention, retention, and infiltration facilities
18. Stormwater treatment facilities
19. Drainage easements
20. Identify reaches, ponds, and subwatersheds matching stormwater model
21. Buffers

D. Runoff analysis (pre-development and post development)
1. Curve number computations
2. Time of concentration calculations
3. Travel time calculations
4. Peak discharge calculations
5. Reservoir routing calculations

E. Flooding Standard
1. Variance submissions (if applicable)
   a. Submissions for discharge to the ocean, great pond, or major river
      i. Map
      ii. Drainage plan
      iii. Drainage system design
      iv. Outfall design
      v. Easements
   b. Insignificant increase
      i. Downstream impacts

   c. Submissions for discharge to a public stormwater system
      i. Letter of permission
      ii. Proof of capacity
      ii. Outfall analysis and design (pictures)
2. Sizing of storm drains and culverts
3. Stormwater ponds and basins
   a. Impoundment sizing calculations
   b. Inlet calculations
   c. Outlet calculations
   d. Emergency spillway calculations
   e. Subsurface investigation report
   f. Embankment specifications
   g. Embankment seepage controls
   h. Outlet seepage controls
   i. Detail sheet
   j. Basin cross sections
   k. Basin plan sheet
4. Infiltration systems
   a. Well locations map
   b. Sand and gravel aquifer map
   c. Subsurface investigation report with test pit or boring logs

na

d. Permeability analysis
e. Infiltration structure design
f. Pollutant generation and transport analysis
g. Monitoring and operations plan
i. Locations of storage points of potential contaminants
ii. Locations of observation wells and infiltration monitoring plan
iii. Groundwater quality monitoring plan

5. Drainage easement declarations.

F. Stormwater quality treatment plan peak discharge calculations

1. Basic stabilization plan
a. Ditches, swales, and other open channel stabilization
b. Culvert and storm-drain outfall stabilization
c. Earthen slope and embankment stabilization
d. Disturbed area stabilization
e. Gravel roads and drives stabilization

2. General Standard
a. Calculations for sizing BMP
b. Impervious area calculation
c. Developed area calculation
d. Summary spreadsheet of calculations

3. Phosphorus control plan
a. Calculations for the site's allowable phosphorus export
b. Calculations for determining the developed site's phosphorus export
c. Calculations for determining any phosphorus compensation fees

4. Offset Credits
a. Urban impaired stream
Offset credit calculation
b. Phosphorus credit determination
i. Location map
ii. Scaled plan
iii. Title and right
iv. Demolition plan
v. Vegetation plan
vi. Offset credit calculation
vii. Calculation for the new allowable export

5. Runoff treatment measures
a. structural measures
i. Design drawings and specifications
ii. Design calculations
iii. Maintenance plan
iv. TSS removal or phosphorus treatment factor determinations
v. Stabilization plan
b. Vegetated buffers
i. Soil survey
ii. Buffer plan
iii. Turnout and level spreader designs
iv. Deed restrictions

6. Control plan for thermal impacts to coldwater fisheries
7. Control plan for other pollutants
8. Engineering inspection of stormwater management facilities

G. Maintenance of common facilities or property

1. Components of the maintenance plan
A. Maintenance of facilities by owner or operator
1. Site owner or operator (name legally responsible party)
2. Contact person responsible for maintenance
3. Transfer mechanism

4. List of facilities to be maintained
5. List of inspection and maintenance tasks for each facility
6. Identifications of any deed covenants, easements, or restrictions
7. Sample maintenance log
8. Copies of any third-party maintenance contracts

B. Maintenance of facilities by homeowner's association
1. Incorporation documents for the association
2. Membership criteria
3. Association officer responsible for maintenance
4. Establishment of fee assessment for maintenance work
5. Establishment of lien system
6. Reference to department order(s) in association charter
7. Transfer mechanism from developer to association
8. List of facilities to be maintained
9. Identification of any deed covenants, easements, or restrictions
10. Renewal of covenants and leases
11. List of inspection and maintenance tasks for each facility
12. Sample maintenance log
13. Copies of any third-party maintenance contracts

C. Maintenance of facilities by municipality or municipal district
1. Identification of the municipal department or utility district
2. Contact person responsible for maintenance
3. Evidence of acceptance of maintenance responsibility
4. Transfer mechanism from developer
5. List of facilities to be maintained
6. List of inspection and maintenance tasks for each facility
7. Identifications of any deed covenants, easements, or restrictions
8. Sample maintenance log

2. General inspection and maintenance requirements
a. Drainage easements
b. Ditches, culverts, and catch-basin systems
c. Roadways and parking surfaces
d. Stormwater detention and retention facilities
1. Embankment inspection and maintenance
2. Outlet inspection and clean-out
3. Spillway maintenance
4. Sediment removal and disposal
e. Stormwater infiltration facilities
1. Sediment protection plan
2. Infiltration rehabilitation plan
3. Sediment removal and disposal
4. Groundwater monitoring plan
f. Proprietary treatment devices
g. Buffers
h. Other practices and measures

Section 13. Urban Impaired Stream Submissions

n/a
1. Off-site credits
2. Compensation fees (Urban Impaired Stream/Phosphorus)
3. Development impacts

Section 14. Basic Standards

X
A. Narrative
1. Soil types
2. Existing erosion problems
3. Critical areas
4. Protected natural resources
5. Erosion control measures

6. Site stabilization
B. Implementation schedule
C. Erosion and sediment control plan
1. Pre-development and post-development contours
2. Plan scale and elements
3. Land cover types and boundaries
4. Existing erosion problems
5. Critical areas
6. Protected natural resources
7. Locations (general)
8. Locations of controls
9. Disturbed areas
10. Stabilized construction entrance
D. Details and specifications (for both temporary and permanent measures)
E. Design calculations
F. Stabilization plan
1. Temporary seeding
2. Permanent seeding
3. Sodding
4. Temporary mulching
5. Permanent mulching
G. Winter construction plan
1. Dormant seeding
2. Winter mulching
H. Third-party inspections
1. Inspector's name, address, and telephone number
2. Inspector's qualifications
3. Inspection schedule
4. Contractor contact
5. Reporting protocol

Section 15. Groundwater

X A. Narrative
X 1. Location and maps
X 2. Quantity
X 3. Sources
4. Measures to prevent degradation
B. Groundwater protection plan
n/a C. Monitoring plan
1. Monitoring points
2. Monitoring frequency
3. Background conditions
4. Monitoring parameters
5. Personnel qualifications
6. Proof of training
7. Equipment and methods
8. Quality assurance/quality control
9. Reporting requirements
10. Remedial action plan
n/a D. Monitoring well installation report
1. Well location map
2. Elevation data
3. Well installation data
4. Well construction details
5. Borehole logs
6. Summary of depth measurements
7. Characteristics of subsurface strata
8. Well installation contract

____ 9. Schematic cross-sections
____ 10. Monitoring point summary table
____ 11. Protective casing
____ 12. On-site well identification

Section 16. Water supply

X A. Water supply method
____ 1. Individual wells (evidence of sufficient/healthful supply)
____ a. Support of findings by well drillers
____ b. Support of findings by geologist
____ 2. Common well(s) (reports)
____ a. Hydrogeology report
____ b. Engineering report
____ c. Well installation report
____ d. Long-term safe yield and zone of influence determination
____ e. Public water supply
____ i. Proposed well or wells
____ ii. Existing well or wells
____ iii. Water quality analysis
____ 3. Well construction in shallow-to-bedrock areas
____ 4. Additional information
X 5. Off-site utility company or public agency
____ 6. Other sources
____ B. Subsurface wastewater disposal systems (locations of systems and wells)
X C. Total usage (statement re: total anticipated water usage)

Section 17. Wastewater disposal

____ A. On-site subsurface wastewater disposal systems (investigation results)
____ 1. Site plan
2. Soil conditions summary table
____ 3. Logs of subsurface explorations
4. Additional test pits, borings or probes
____ a. Soil conditions A
____ b. Soils with Profiles 8 and 9 parent material
____ c. Soil conditions D
____ d. Disposal field length 60 feet or greater
____ 5. 3-bedroom design
____ 6. Larger disposal systems
a. System design details
____ b. Plan view
____ c. Cross sections
____ d. Test pit data
____ e. Mounding analysis
____ B. Nitrate-nitrogen impact assessment
____ 1. When required
____ a. Exempted____
i. Conventional systems meeting certain setbacks
____ ii. Denitrification systems
____ b. Special conditions and other exemptions
____ 2. Assumptions
____ a. Initial concentration
____ b. Background concentration
____ c. Contribution from development
____ d. Mixing and dilution
____ e. Severe-drought scenario
____ f. Wastewater flow to subsurface wastewater disposal fields

____ 3. Assessment report minimum requirements
____ a. Narrative and calculations
____ b. Site plan
____ i. Well locations
____ ii. 10 mg/l and 8 mg/l isocons
____ iii. Groundwater contours and groundwater flow divides
____ c. References
____ 4. Denitrification systems
____ a. Design plans and specifications
____ b. Installation information
____ c. Monitoring plan
____ d. Maintenance
____ e. Backup system
X D. Municipal facility or utility company letter
____ E. Storage or treatment lagoons

X **Section 18. Solid waste** (list: type, quantity, method of collection and location)
X A. Commercial solid waste facility (final disposal location)
X B. Off-site disposal of construction/demolition debris (final disposal location)
C. On-site disposal of woodwaste/land clearing debris
X 1. Applicability of rules (evidence re: applicability of rules)
2. Burning of wood wastes
n/a a. Delineation on site plan
____ b. Plans for handling unburned woodwaste and woodash
____ c. Evidence of capacity to accept waste (approved facility)
____ d. Usage of materials
____ e. Data on mixing ratios and application rates
n/a D. Special or Hazardous Waste

Section 19. Flooding
X A. Explanation of flooding impact
____ B. Site plan showing 100-year flood elevation
____ C. Hydrology analysis
X D. FEMA flood zone map with site boundaries

Section 20. Blasting
X A. Site Plan or map
X B. Report
1. Assessment
2. Blasting plan

Section 21. Air emissions (narrative and summary)
n/a A. Point and non-point sources identified
____ B. Emission components (point sources)

Section 22. Odors
n/a A. Identification of nature/source
____ B. Estimate of areas affected
____ C. Methods of control)

n/a **Section 23. Water vapor** (narrative)

n/a **Section 24. Sunlight** (statement and drawing, if required)

Section 25. Notices
X A. Evidence that notice sent
X B. List of abutters for purposes of notice

Section 1

Development Description

Section 1: Development Description

A. Narrative

The redevelopment proposal began with an informal discussion in January 2022, regarding a proposed new administrative building at the Martin's Point Veranda Street campus. Since that time, a pre-application meeting occurred in November 2023 followed by a formal site plan review submittal to the City of Portland in late December 2023. Modification to the site is subject to delegated review authority by the City since 2006 including stormwater management. Reference is made to Stormwater Management Law L-22976-NJ-B-N approval order dated February 28, 2007.

Project Site:

The project site is located in the Mixed-Use B-5 Zone. The 331 Veranda Street Martin's Point Health Care campus is comprised of parcels 434/C001, 434/C005, and 434/C010 bounded by Veranda Street to the north and west, land of the City of Portland to the east, and Casco Bay to the south. The project area consists of ±4.5-acres of the overall 12.6-acre campus of MPHC. The entire campus consists of seven buildings with associated parking, walkways, and landscaping.

Development Program:

Proposed site improvements include the removal of an existing structure (Building 7), construction of a new 4-story building with a 25,000 square foot footprint (2 administrative levels and 2 parking levels), the realignment of the unsignalized access drive from Veranda Street, redevelopment of surface parking areas, and other associated improvements considered redevelopment and newly developed area totaling 4.48 acres with 3.19 acres of impervious area.

Utilities:

Changes to the existing utilities are proposed and have been reviewed by the City and respective utility companies.

Stormwater Management and Erosion Control:

The proposed development consists of redevelopment of the Building 7 precinct only. The previous stormwater delegated review (Building 4 medical center development) was approved in 2007. The current development makes adequate provision to ensure that the proposed project meets the MDEP Chapter 500 and local standards, as required.

An existing closed drainage system conveys stormwater runoff from the site and outlets directly to Casco Bay at the northeast portion of the site. Existing stormwater features include three existing Filterra tree filters and one existing underdrain soil filter for treatment within the areas of impact for this project. We note that the existing do not contribute to stormwater credits from the City of Portland. All three existing detention and treatment systems will removed and replaced with a proposed end-of-the-line Jellyfish Filter treatment system. The project's stormwater management plan is designed so that existing drainage patterns are not significantly altered and to utilize the same outlet pipe location as the existing system.

We understand that the City will provide a detailed overview of the project's compliance with applicable Site Law standards, more specifically, MDEP Site Law Section 12-Stormwater, as part of the municipal public hearing report.

B. Topographic Map

USGS Site Location Map excerpt is included in this section.

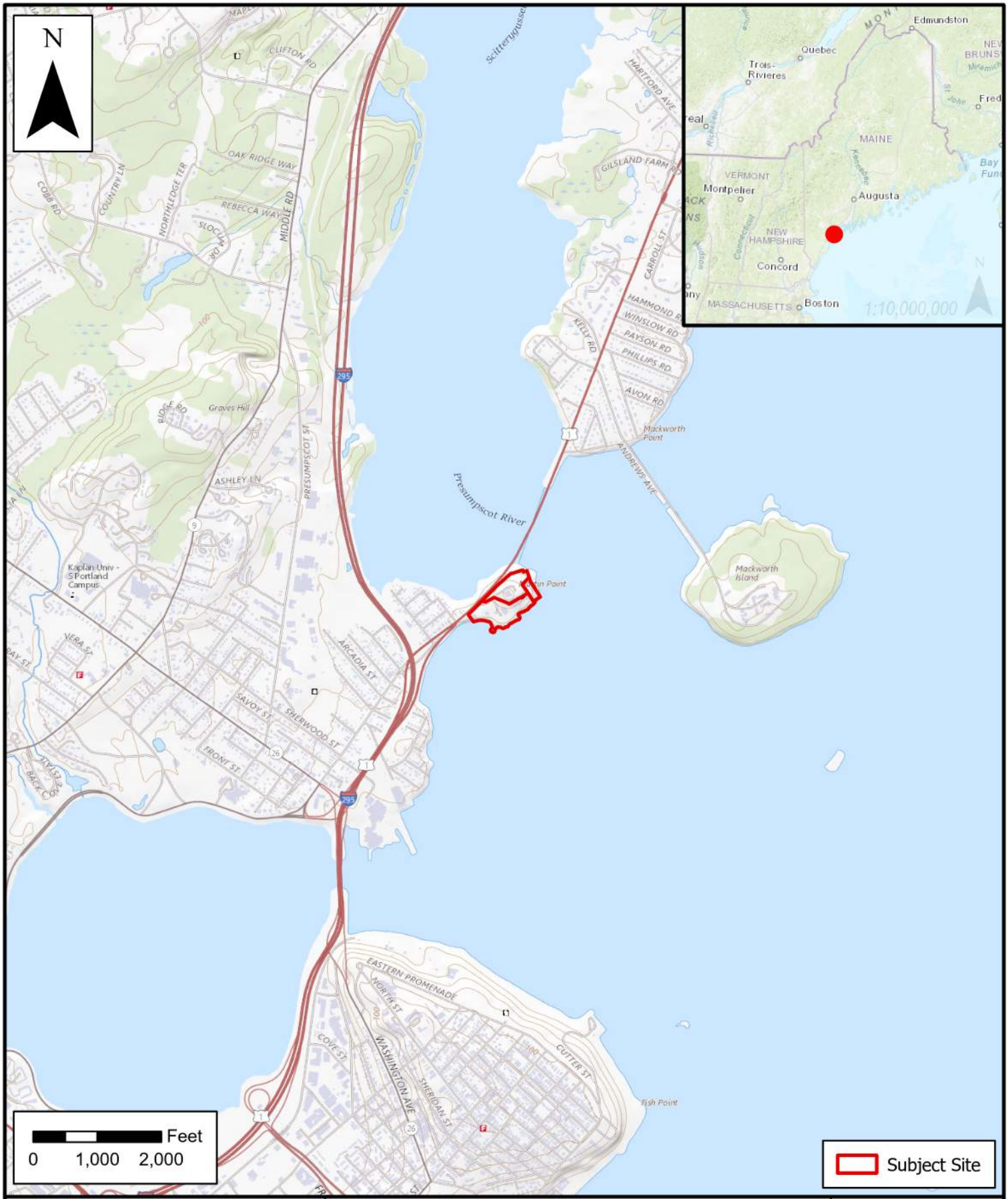
C. Construction Plan and Schedule

The applicant anticipates completing the permitting process through the City Staff Review during winter 2025 to allow an immediate start within three months and up to two year completion schedule.

A. Estimate of Probable Overall Project Schedule	**Start**	**Completion**
1. Site Construction	Spring 2025	Spring 2027
B. Detailed Construction Plan for site work:		
1. General Conditions - Mobilization, Signage, etc.	Spring 2025	Summer 2025
2. Demolition/Site Preparation	Summer 2025	Summer 2025
3. Earthwork	Spring/Summer 2023	Spring/Summer 2023
4. Erosion Controls	Spring 2025	When fully vegetated
5. Pavement	2026	Autumn 2026
6. Drainage	Winter 2025/ Spring 2026	Autumn 2026
7. Loam & Seed/Landscaping	Autumn 2025- Autumn 2026	Spring 2027
8. Erosion Control Removals	Summer 2027	When fully vegetated

D. Drawings

The site plan set is appended to this application.



SEBAGO TECHNICS

WWW.SEBAGOTECHNICS.COM
75 John Roberts Rd. - Suite 4A
South Portland, ME 04106
Tel. 207-200-2100

LOCATION MAP

MARTIN'S POINT VERANDA CAMPUS

SCALE:	1:24,000
DATE:	3/24/2022

LOCATION:
331 VERANDA STREET,
PORTLAND, ME

INFORMATION:
MAINE GEOLIBRARY
USGS QUADRANGLE

Section 2

Right, Title, or Interest

Section 2: Right, Title, or Interest

The record owner of the parcel is Martin's Point Health Care, Inc., as recorded in the Cumberland County Registry of Deeds (CCRD):

- CCRD Book 29771/Page 60
- CCRD Book 24070/Page 323
- CCRD Book 11581/Page 337 (HTTA: Penobscot Bay Medical Associates, Inc.)
- CCRD Book 4898/Page 199 (HTTA: Penobscot Bay Medical Associates)

Reference is made to the Existing Conditions plans prepared by Sebago Technics, Inc.

CORRECTIVE DEED
QUITCLAIM DEED WITH COVENANT

MORRISON CENTER (f/k/a Morrison Developmental Center and f/k/a Cerebral Palsy Association of Greater Portland, Inc.), a Maine nonprofit corporation ("Grantor"), FOR CONSIDERATION PAID, grants to MARTIN'S POINT HEALTH CARE, INC., a Maine nonprofit corporation ("Grantee") with a mailing address of 891 Washington Avenue, Portland, Maine, with QUITCLAIM COVENANT, certain real property, together with any improvements thereon (the "Premises") located at or near 331 Veranda Street, Portland, Cumberland County, Maine, and more particularly described on Exhibit A attached hereto and made a part hereof.

Meaning and intending to describe and convey the same premises conveyed to the Grantor by Quitclaim Deed from the City of Portland, dated April 17, 1986, and recorded in the Cumberland County Registry of Deeds at Book 7138, Page 247.

The purpose of this Corrective Deed is to correct the name of the Grantee in the Quitclaim Deed With Covenant dated December 14, 2007, recorded in the Cumberland County Registry of Deeds in Book 25685, Page 331.

IN WITNESS WHEREOF, MORRISON CENTER has caused this instrument to be executed by Charles McBrady, its President thereunto duly authorized, this 7th day of JUNE, 2012.

WITNESS:

MORRISON CENTER

By: _____
Charles McBrady, Its President

STATE OF MAINE
COUNTY OF CUMBERLAND, SS. JUNE 7, 2012

Personally appeared the above-named Charles McBrady, Its President as aforesaid of Morrison Center, and acknowledged the foregoing instrument to be his free act and deed in his said capacity and the free act and deed of said corporation.

Before me,

_____
Attorney-at-Law/Notary Public (ex: 3-19-15)
Print Name: MARK L. RYDER

EXHIBIT A

A certain lot or parcel of land with any buildings and improvements thereon situated off Veranda Street in the City of Portland, County of Cumberland and State of Maine, bounded and described as follows:

Beginning at a point in the division line running between Parcel No. 1 and Parcel No. 2 as shown on a plan of Martins Point dated June 6, 1984. Said plan being on file in the office of the Director of Parks and Public Works of the City of Portland in plan file 548/21.

Said point of beginning being the fifth (5th) angle in said division line between Parcel 1 and Parcel 2 southerly of the old southerly side line of Veranda Street, all as shown on the aforementioned plan of Martins Point.

Thence from said point of beginning on a course having a bearing of North no degrees, fifty-five minutes and no second West (N 00°-55'-00" W) a distance of sixty-four and forty-five one-hundredths (64.45') feet to a point;

Thence South sixty-two degrees, twenty-five minutes and no seconds West (S 62°-25'-00" W) a distance of one hundred fifty-six and forty-five on-hundredths (156.45') feet to a point;

Thence South nineteen degrees, forty-two minutes and no seconds East (S 19°-42'-00" E) a distance of one hundred seventeen and eighty-four one-hundredths (117.84') feet to a point;

Thence South fifteen degrees, seventeen minutes and no seconds East (S 15°-17'-00" E) a distance of one hundred ninety-five and eighty-two one-hundredths (195.82') feet to a point;

Thence North seventy-four degrees, forty-three minutes and no seconds East (N 74°-43'-00" E) a distance of one hundred twenty-nine and fifty-five one-hundredths (129.55') feet to a point;

Thence North fifteen degrees, thirty-seven minutes and no seconds West (N 15°-37'-00" W) a distance of two hundred eighty-four and forty-one one-hundredths (284.41') feet to the point of beginning.

Also a perpetual easement for the purposes of ingress and egress over the parcel of land described below as well as the right to install, repair, maintain, and or replace utility lines over, under and above said parcel:

Beginning at a point in the most northerly side line of land now or formerly of the Cerebral Palsy Center Association of Greater Portland, Inc.

Said point being forty-six and twenty one-hundredths (46.20') feet westerly along the said northerly side line of land of the Cerebral Palsy Center Association of Greater Portland, Inc. from the most northerly corner of said Cerebral Palsy Association of Greater Portland, Inc. land.

Thence North eleven degrees, thirty-five minutes and no seconds West (N 11°-35'-00" W) a distance of one hundred sixteen and fifty-two one-hundredths (116.52') feet to a point;

Thence South eighty-nine degrees, fifty-three minutes and no seconds West (S 89°-53'-00" W) a distance of three hundred eleven and forty-three one-hundredths (311.43') feet to a point in the southerly side line of old Veranda Street.

Said point being one hundred sixty-four and eighty one-hundredths (164.80') feet easterly along the said southerly side line of old Veranda Street from the first angle therein easterly of its intersection with the southerly side line of Veranda Street relocated.

Said easement or right-of-way to be forty and no one-hundredths (40.00') feet wide and to lie equally on each side of the above described line.

The Premises are conveyed subject to the following conditions:

Conditions subsequent #4 (anti-discrimination provisions) set forth in the deed from the United States of America to the City of Portland dated August 12, 1976 and recorded at Cumberland County Registry of Deeds in Book 3892, Page 334, as affected by Consent to Transfer Agreement dated November 6, 1985, recorded in said Registry of Deeds in Book 7138, Page 239.

Rights and easements granted to the Portland Water District by the United States by deed dated September 20, 1955 and recorded in Book 2254, Page 97, including the building restrictions set forth therein.

Rights and easements granted to Central Maine Power Company by deed dated December 18, 1978 and recorded in Book 4385, Page 64.

Rights and easements granted to Central Maine Power Company and New England Telephone and Telegraph Company by deed dated January 14, 1980 and recorded in Book 4568, Page 90.

Received
Recorded Register of Deeds
Jul 23,2012 10:35:53A
Cumberland County
Pamela E. Lovley

FINAL

QUITCLAIM DEED WITHOUT COVENANT

The CITY OF PORTLAND, a body politic and corporate, located in the County of Cumberland and State of Maine ("Grantor") for one dollar and other good and valuable consideration, Grants to MARTIN'S POINT HEALTH CARE, INC., a/k/a Martin's Point Health Care Center and f/k/a Penobscot Bay Medical Associates and/or Penobscot Bay Medical Associates, Inc., a Maine non-profit corporation, with offices at 331 Veranda Street, Portland, Maine 04103 ("Grantee") certain real property located on the southeasterly side of Veranda Street on Martin's Point in the City of Portland, Cumberland County, Maine, together with the buildings and improvements thereon and certain appurtenant easements, all as more particularly described on Exhibit A attached hereto and incorporated by reference herein (the "Premises").

The Premises are shown on a Plan entitled "Conveyance Plan on Veranda Street, Portland, Maine, made for Martin's Point Health Care Inc." by Owen Haskell, Inc. dated June 13, 2006, as last revised June 14, 2006, as "N/F City of Portland 3892/334" to be recorded at the Cumberland County Registry of Deeds.

MAINE REAL ESTATE TAX PAID

The Premises are conveyed subject to:

1. A right of way and easement forty (40) feet in width on and over a strip of land more particularly described on Exhibit B attached hereto and made a part hereof, which right of way and easement benefits land of the Morrison Developmental Center (formerly of the Cerebral Palsy Association of Greater Portland, Inc. described in Quitclaim Deed recorded in the Cumberland County Registry of Deeds in Book 7138, Page 247). Grantee herein by acceptance of this deed assumes all obligations of Grantor arising after the date of this deed with respect to said forty (40) foot easement as may be set forth in said Quitclaim Deed.

2. Rights and easements described in instrument from City of Portland to Central Maine Power Company dated December 18, 1978 and recorded at the Cumberland County Registry of Deeds in Book 4385, Page 64, and the terms, provisions, and restrictions set forth therein.

3. Rights and easements described in instrument from City of Portland to Central Maine Power Company and New England Telephone and Telegraph dated January 14, 1980 and recorded at the Cumberland County Registry of Deeds in Book 4568, Page 90, and the terms, provisions and restrictions set forth therein.

4. Rights and easements reserved to Grantor (and herein excepted and reserved) for a "Park Area," "Walkways" and public safety access (as set forth in Paragraphs "1," "2" and "3") in a deed from Grantor to Grantee dated August 8, 1994, and recorded in the Cumberland County Registry of Deeds in Book 11581, Page 337, said Easements for a Park Area and Walkways being further amended by a certain Easement Relocation Agreement of even date between Grantor and Grantee and to be recorded at the Cumberland County Registry of Deeds. Grantor also reserves the benefit of the covenants (a), (b), (c) and (d) set forth in said deed recorded in Book 11581, Page 337 provided that any reference to the "Park Area" and "Walkway" shall mean as relocated pursuant to the Easement Relocation Agreement of even date herewith.

5. Covenants, conditions and restrictions set forth as items (a), (b), (c) and (d) on page 8 in Deed from the United States of America dated August 12, 1976, to the Grantor and recorded at the Cumberland County Registry of Deeds in Book 3892, Page 334, excepting, however, any restrictions, covenants or conditions which were abrogated and/or released by a certain "Abrogation and Release of Restrictions" from the United States of America dated August 12, 1994, and recorded at said Registry of Deeds in Book 11581, Page 332.

Grantee by acceptance of this deed covenants and agrees that notwithstanding the fact that Grantee is a not-for-profit corporation whose purposes may render it real and personal property tax exempt Grantee agrees that so long as it or any affiliate owns the Premises it will pay to the City of Portland payments in lieu of taxes thereon in amounts equivalent to what would otherwise be then payable on the Premises in municipal real property and, if applicable, personal property taxes, reserving however to Grantee all rights and privileges as to abatement and appeal of valuations, rates and the like as are accorded non-tax exempt owners of real and personal property in Maine.

Grantor further reserves a right of first refusal respecting the Premises in favor of the Grantor on the following terms: The right shall, if not earlier terminated or waived, automatically terminate upon the earlier to occur of: (i) seven (7) years from the date of closing hereunder or (ii) one (1) year from the issuance of an occupancy permit to Grantee (or its affiliates) for the Marine Hospital building, so-called, located on the Premises. The right shall not be applicable to "Permitted Transfers" (as described below) however the right shall apply to a sale of the Premises or a sale of a combination of the Premises with the property currently owned by Grantee adjacent to the Premises (a "Campus Sale"). During the term of this right of first refusal, upon the receipt by Grantee of a bona fide offer from a third party purchaser, which Grantee proposes to accept or has accepted, Grantee will provide written notice (the "Sale Notice") to the Grantor of the proposed terms and conditions of sale contained in said offer, including the price and financing terms, if any. Following the Sale Notice, Grantor shall have the option, by written notice (the "Exercise Notice") to Grantee within twenty one (21) days of receipt of the Sale Notice, to notify Grantee of its election to purchase the property that is being sold at the price and on terms that the Grantee proposes to accept or has accepted from such bona fide third party purchaser. If Grantor timely exercises the right, the closing on such purchase by Grantor shall occur on the first business day that is sixty (60) days from the date of the Exercise Notice, at which time the Grantor shall pay the purchase price set out in the Sale Notice and otherwise close on the terms of such offer. If Grantor does not notify Grantee of its exercise of

ROA

the right within the said 21 -day period and by the means set forth herein, then Grantee may sell the Premises to the said third party purchaser for the same price set forth in the Sale Notice, and upon such sale, this right will automatically terminate. A confirmation of termination of the right may be recorded by Grantee in the Cumberland County Registry of Deeds. The right shall not be triggered by any transfer of the Premises by Grantee to (i) any party or entity for purpose of securing financing or lending arrangements (including without limitation a "sale-leaseback" transaction), or to any proceedings for the foreclosure thereof, including foreclosure auctions and the subsequent sale by a foreclosing mortgagee who is the successful bidder at the foreclosure auction or similar proceeding; (ii) any parent, subsidiary or affiliate corporation or entity or any corporation resulting from the consolidation or merger of Grantee into or with any other entity; or (iii) any person, firm, entity or corporation acquiring control of Grantee or otherwise, through ownership or voting securities, by contract or otherwise ("Permitted Transfers"). However, this right of first refusal, if not sooner terminated, shall survive such Permitted Transfer(s). In any event, the Grantor agrees to subordinate its interest in this right of first refusal to any such financing or lending arrangements upon the request of Grantee's lender.

SIGNATURES ON FOLLOWING PAGE

IN WITNESS WHEREOF, the CITY OF PORTLAND has caused this instrument to be signed by Duane G. Kline, its Finance Director, on the 15th day of June, 2006.

WITNESS:

Donna M. Katsaufras

CITY OF PORTLAND

By: _____
Duane G. Kline
Director of Finance

STATE OF MAINE
CUMBERLAND, SS.

June 15, 2006

PERSONALLY APPEARED the above-named Duane G. Kline, its Finance Director, as aforesaid, and acknowledged the foregoing instrument to be his free act and deed in his said capacity and the free act and deed of said City of Portland.

Before me,

Donna M. Katsaufras
~~Notary Public~~/Attorney-at-Law
Print Name: Donna M. Katsaufras
Commission Expires:

EXHIBIT A

A certain lot or parcel of land with any buildings and improvements thereon situated on the southeasterly sideline of Veranda Street in the City of Portland, County of Cumberland and State of Maine, bounded and described as follows:

Beginning at a point on the southeasterly sideline of Veranda Street, said point being distant 313.30 feet northeasterly along said southeasterly sideline of Veranda Street on a course of N 61° 45' E from a granite three-foot offset monument located on the split of the last angle in Veranda Street as shown on a plan numbered 548/21 on file in the Office of the Director of Public Works, City Hall, Portland, Maine;

Thence S 59° 15'E, a distance of sixty (60) feet to a point;

Thence N 79° 55' E, a distance of one hundred and fifty (150.00) feet to a point;

Thence S 50° 55' E, a distance of two hundred forty-five (245.00) feet to a point;

Thence S 12° 55' E a distance of eleven and nine hundredths (11.90) feet to land n/f Penobscot Bay Medical Associates, Inc. (Book 11581, Page 337) to a point;

Thence N 77° 01'16" E a distance of two hundred eighteen and fifty-three hundredths (218.53) feet to a point;

Thence S 12° 58'44" E a distance of fourteen and thirty-four hundredths (14.34) feet to a point;

Thence N 77° 01'16" E a distance of twenty-seven and seventy-two hundredths (27.72) feet to a point;

Thence N 12° 58'44" W a distance of fourteen and thirty-four hundredths (14.34) feet to a point;

Thence N 77° 01'16" E a distance of ninety-seven and fifty hundredths (97.50) feet to a point and land n/f Cerebral Palsy Association of Greater Portland, Inc. (Book 7138, Page 247);

Thence N 15° 17' 00" W along said land n/f of Cerebral Palsy Association a distance of forty two and eighty-two hundredths (42.82') feet to a point;

Thence N 19° 42'00" W along said land n/f of Cerebral Palsy Association a distance of one hundred seventeen and eighty-four hundredths (117.84) feet to a point;

Thence N 62° 25'00" E along said land n/f of Cerebral Palsy Association a distance of one hundred fifty-six and forty-five hundredths (156.45) feet and land n/f of United States of America;

Thence N 00° 55' W along said land n/f of United States of America a distance of one hundred twelve and fifty-seven hundredths (112.57) feet to a point;

Thence S 87° 35' W along said land n/f of United States of America a distance of fifty-eight and sixty-two hundredths (58.62) feet to a point;

Thence N 01° 25' W along said land n/f of United States of America a distance of thirty-three and eighty-four hundredths (33.84) feet to a point;

Thence S 89° 20' W along said land n/f of United States of America a distance of one hundred eighty-five and twenty-three hundredths (185.23) feet to a point;

Thence N 24° 17' W along said land n/f of United States of America a distance of eight and twelve hundredths (8.12) feet to a point and an intersection with the southeasterly sideline of the land of the State of Maine. Said southeasterly sideline of the land of the State of Maine being the southeasterly sideline of the old Veranda Street before its relocation on December 31, 1896;

Thence S 65° 43' W along the said southeasterly sideline of the land of the State of Maine, a distance of two hundred ninety-two and fifty-six hundredths (292.56) feet to a point;

Thence S 61° 45' W along the said southeasterly sideline of the land of the State of Maine and along the southeasterly sideline of Veranda Street as it now exists, a distance of three hundred thirty-eight and sixty-one hundredths (338.61) feet to the point of beginning.

The above-described premises are conveyed together with and the Grantor hereby releases to Grantee its rights under a certain "Easement to City of Portland 4015/160" which is shown on the Plan and more particularly described in instrument recorded in the Cumberland County Registry of Deeds in Book 4015, Page 160.

Together with and releasing to Grantee those easements for sewer, water and underground electric, as well as an easement relating to an underground storage tank (which has been removed by the Grantor prior to the date hereof) all of which were excepted and reserved by the Grantor in paragraphs numbered 4, 5 and 6 in the deed from Grantor to the Grantee dated August 8, 1994 and recorded in the Cumberland County Registry of Deeds in Book 11581, Page 337.

EXHIBIT B

A strip of land forty (40) feet in width whose centerline is described as follows:

Beginning at a point in the most northerly side line of land now or formerly of the Cerebral Palsy Center more particularly described in deed recorded in the Cumberland County Registry of Deeds in Book 7138, Page 247; said point being forty-six and twenty one-hundredths feet (46.20') westerly from the most northerly corner of said Cerebral Palsy Center land; thence North eleven degrees, thirty-five minutes and no seconds West (N 11° 35' 00" W) a distance of one hundred sixteen and fifty-two one hundredths feet (116.52') to a point; thence South eighty-nine degrees, fifty-three minutes and no seconds West (S 89° 53' 00" W) a distance of three hundred eleven and forty-three one hundredths feet (311.43') to a point in the southerly sideline of old Veranda Street. Said point being one hundred sixty-four and eighty one-hundredths feet (164.80') easterly along said southerly line of old Veranda Street from the first angle therein easterly of its intersection with the southerly side line of Veranda Street relocated.

Said easement or right-of-way to be forty and no one-hundredths feet (40.00') wide and to lie equally on each side of the above-described line.

Received
Recorded Register of Deeds
Jun 15,2006 11:47:20A
Cumberland County
John B OBrien

19109

QUITCLAIM DEED WITH COVENANT

The CITY OF PORTLAND, a body politic and corporate located in the County of Cumberland and State of Maine ("Grantor") for One Dollar and other good and valuable consideration grants with Quitclaim Covenant to PENOBSCOT BAY MEDICAL ASSOCIATES, INC., a Maine non-profit corporation, formerly known as Penobscot Bay Medical Associates and sometimes doing business under the name Martin's Point Health Care Center, with offices at 331 Veranda Street, Portland, Maine 04103 ("Grantee"), certain real property located off the Southeasterly side of Veranda Street on Martin's Point in the City of Portland, Cumberland County, Maine, together with the buildings and improvements thereon and certain appurtenant easements all more particularly described as follows:

Commencing at the Northernmost corner of the land of Grantee (as described in instrument recorded at the Cumberland County Registry of Deeds in Book 4899, Page 203) as shown on "Plan of Property in Portland, Maine Made for Penobscot Bay Medical Associates by Morton & Rose Associates November 23, 1981" recorded at the Cumberland County Registry of Deeds in Plan Book 133, Page 18, and also shown on "Site Plan of Martin's Point City of Portland, Maine Department of Public Works June 6, 1974" by Morton & Rose filed as City Plan 548/21;

Thence, the following courses by the land of Grantee:

S-59°-15'-00"-E a distance of 60.00 feet;
N-79°-55-00"-E a distance of 150.00 feet;
S-50°-55'-00"-E a distance of 245.00 feet to a 6" by 6" granite monument with a drill hole found;
S-12°-55'-00"-E a distance of 11.90 feet to a 5/8" iron rod set and the point of beginning of this parcel;

Thence, the following courses by the remaining land of Grantor:

N-77°-01'-16"-E a distance of 218.53 feet to a 5/8" iron rod set;
S-12°-58'-44"-E a distance of 14.34 feet to a 5/8" iron rod set;
N-77°-01'-16"-E a distance of 27.72 feet to a 5/8" iron rod set;
N-12°-58'-44"-W a distance of 14.34 feet to a 5/8" iron rod set;
N-77°-01'-16"-E a distance of 97.50 feet to a 5/8" iron rod set and the land now or formerly of the Cerebral Palsy Association of Greater Portland, Inc. (Book 7138, Page 247);

Thence, the following courses by land of the Cerebral Palsy Association of Greater Portland, Inc.:

S-15°-17'-00"-E a distance of 153 feet to a 5/8" iron rod set;
N-74°-43'-00"-E a distance of 129.45 feet to the land of the United States of America;

Thence, S-15°-37'-00"-E by the United States of America to low water of Casco Bay;

Thence, Southwesterly by low water of Casco Bay to the land of Grantee;

Thence, N-12°-55'-00"-W by the land of Grantee to high water of Casco Bay;

Thence, N-12°-55'-00"-W by the land of Grantee 286 feet more or less to the point of beginning.

Said parcel contains 1.66 acres more or less and is shown on "Standard Boundary Survey at Martins Point on Veranda Street, Portland, Maine made for Penobscot Bay Medical Associates, d/b/a Martin's Point Health Care Center dated June 7, 1994," prepared by Owen Haskell, Inc., and recorded in the Cumberland County Registry of Deeds in Plan Book 194, Page 258 (the "Plan"). All bearings are based on a plan recorded in the Cumberland County Registry of Deeds in Plan Book 133, Page 18.

The above described parcel is hereinafter referred to as the "Premises."

Together with the right to construct, install, maintain, replace and repair a walkway extending from the northerly sideline of the Premises running in a northerly direction on the easterly side of the road shown on the Plan as "Access To Lower Parking Lot," then crossing said road and running on the westerly side of and parallel to said road in the approximate location identified as "Walkway" on the Plan and extending across the Lower Parking Lot to land now or formerly of the United States of America.

Also together with an easement for purposes of vehicular and pedestrian passage extending from the Premises in a northerly direction on, over and along the area identified as "Access to Lower Parking Lot" on the Plan to the area designated on the Plan as "Lower Parking Lot," and in connection therewith the right to install, maintain, replace and repair said road and to enter onto land immediately adjacent to said Access to Lower Parking Lot area for any of the aforesaid purposes. The road designated as Access to Lower Parking Lot shall be used by Grantor and its successors and assigns in common with the Portland School Department, Grantee and their successors and assigns.

Also together with an easement in common with the Portland School Department, Grantor and the Cerebral Palsy Association of

Greater Portland, Inc., on and over a 40-foot wide strip of land shown on the Plan as "40' Easement."

Excepting and reserving to Grantor the following:

1. An easement for Grantor and the public for pedestrian (including wheelchair) use for recreational purposes during daylight hours of the area shown on the Plan as "Park Area (Proposed)" on the southerly side of the wall shown on the Plan as "Retaining Wall (Proposed)," which is to be located on the southerly edge of the area shown on the Plan as "Parking Area (Proposed)," together with the right to use the walkways, overlooks, seating areas and stairs constructed within such Park Area (the "Park Area") and the pathway shown on the Plan as "Access Pathway and Stairs (Proposed)" across the Park Area and Parking Area to remaining land of Grantor.

2. An easement for the installation, maintenance, replacement and repair of the Park Area on those portions of the above-described Premises that will not be used as a parking area, including without limitation the right to remove or relocate trees and shrubs and to provide landscaping of the Park Area, including the planting, pruning, and general maintenance of the trees and shrubs, and the installation, maintenance and repair of the Park Area, including the walkways, overlooks, stairs, benches, lighting and other park amenities which may be installed in the Park Area from time to time.

3. An easement for the entry into the Park Area at all times by the Portland Police Department, the Portland Fire Department, emergency medical personnel and other authorized officials, such as park rangers, to assure public safety and proper use of the Park Area.

4. An easement to maintain, replace and repair the sewer and underground electric lines crossing the Premises and serving the buildings shown on the Plan as the Portland School Department Buildings and the Cerebral Palsy Association Building.

5. An easement for the maintenance, replacement and repair of a water line providing water to the Portland School Department buildings, the Cerebral Palsy Association building, and Great Diamond Island.

6. An easement for the maintenance, replacement and repair of an underground storage tank and associated piping and manholes in the approximate location shown on the Plan as "Underground Fuel Tank" provided, however, in the event that the Grantor removes and/or replaces said tank,

Grantor shall restore the surface of the earth to substantially the same condition as prior to said removal and/or replacement, and provided further that Grantor shall maintain, remove, replace, repair and operate the tank in compliance with applicable laws.

Grantee by acceptance of this Deed on behalf of itself, its successors and assigns hereby covenants and agrees as follows:

(a) At its expense to construct the Park Area and Walkways and install such other park amenities as are shown on site plans approved by the City of Portland Planning Board.

(b) That the public shall have the right to use the Park Area as shown on the Plan and the Walkways that provide access to the Park Area during daylight hours.

(c) To maintain the Park Area and Walkways in a clean and good condition and repair.

(d) That any above ground new construction or exterior alterations on the Premises which may have a visual effect on the setting of the Marine Hospital Building, which is located on land of Grantor adjacent to the Premises, shall receive prior approval from the Maine Historic Preservation Commission. This covenant is also for the benefit of and enforceable by the United States of America.

These covenants are intended to benefit adjacent land being retained by Grantor and to run with and burden the Premises in perpetuity.

IN WITNESS WHEREOF, the CITY OF PORTLAND has caused this instrument to be signed by Duane G. Kline, its Finance Director, on the 5th day of August, 1994.

WITNESS:

CITY OF PORTLAND

By: Duane G. Kline
Its: Finance Director

STATE OF MAINE
CUMBERLAND, ss.

August 5, 1994.

PERSONALLY APPEARED, the above-named Duane G. Kline, its Finance Director, as aforesaid, and acknowledged the foregoing

instrument to be his free act and deed in his said capacity and the free act and deed of said City of Portland.

Before me,

Natalie L Burns

Natalie L. Burns
~~Notary Public~~/Attorney-at-law

240.NHS
12079017.ded

RECEIVED
94 AUG 15 PM 3:36
MULTNOMAH COUNTY

- 5 -

QUITCLAIM DEED

33604

This indenture, made this 11 th day of December, 1981 between the UNITED STATES OF AMERICA, acting by and through the Secretary of Health and Human Services, Grantor, under and pursuant to the power and authority provided by the Omnibus Budget Reconciliation Act of 1981, Public Law 97-35, (hereinafter called the Act), and the Penobscot Bay Medical Associates, a non-profit corporation, Rockland, Maine, Grantee.

WITNESSETH

WHEREAS, the Grantee has made a firm offer to the Secretary of Health and Human Services to acquire and operate the herein described real property, including improvements thereon, known as the Portland, Maine, Public Health Service Clinic (hereinafter called the Property), in accordance with the provisions of the Act; and

WHEREAS, the Grantor has accepted the offer of the Grantee;

NOW, THEREFORE, the Grantor, for and in consideration of the foregoing, the sum of one dollar ($1.00), and of the observance and performance by the Grantee of the covenants and restrictions hereinafter contained and other good and valuable consideration, receipt of which is hereby acknowledged, has given, granted, conveyed and quitclaimed and by these presents does give, grant, convey and quitclaim without representation or warranty, express or implied to the Grantee, its successors and assigns, all right, title, interest, claim and demand, including any after acquired title, which the United States of America has in and to the Property, situate, lying, and being in the County of Cumberland, State of Maine, and more particularly described as follows:

Beginning at an iron pipe on the southeasterly right of way line of Veranda Street, at the northeasterly corner of land now or formerly of Edwin B. Thurston, Jr. and Cora R. Thurston on the line of a steel fence running on the line between the herein conveyed property and land of said Thurston, said pipe being approximately sixty (60.0) feet west of the west corner of a barn standing upon premises as shown on a "Site Plan," U.S. Public Health Services Hospital, Portland, Maine, dated July 7, 1954, General Services Administration drawing No. 27-CR1-13; thence N 61-45 E along the southerly side of Veranda Street three hundred thirteen and thirty hundredths (313.30) feet to an iron pipe set in the ground; thence S 59-15 E sixty (60.0) feet to an iron pipe set in the ground; thence N 79-55 E one hundred fifty (150.0) feet to a P.K. nail set in asphalt roadway; thence S 50-55 E two hundred forty five (245.0) feet to a granite monument set in the ground; thence S12-55 E two hundred thirty two and eighty nine hundredths (232.89) feet to an iron pipe set in the ground at the top of the bank; thence S 12-55 E to the low water mark of Casco Bay approximately one hundred thirty (130.0) feet; thence westerly by said low water mark to a point intersected by a straight line bearing S 14-37 E from the iron pipe at the point of beginning; thence N 14-37 W approximately three hundred (300.0) feet to the high water mark of Casco Bay; thence N 14-37 W approximately forty one (41.0) feet to a granite monument; thence N 14-37 W along a steel fence seventy one and fifteen hundredths (71.15) feet to the point of beginning.

Containing approximately 8 acres of land.

Being a portion of a certain parcel of land situated in Westbrook (now Portland), known as "Martin's Point Farm" conveyed to the United States of America by deed of November 22, 1852 by Francis O.J. Smith recorded in Book 246, Page 14 of the Cumberland County Registry of Deeds. As shown on a plan entitled Plan of Land made for "Penobscot Bay Medical Associates" dated November 23, 1981 by Morton and Rose Associates to be recorded in the Cumberland County Registry of Deeds.

Subject to Grant of Easements to the City of Portland for roadway and sewer line, as recorded on May 15, 1977, in Cumberland County Registry of Deeds in Book 4015, Page 160 and as shown on Drawing No. 668/10 on file at the City of Portland Engineer's Office.

Subject also to Grants and Easement to Portland Water District for water line to Great Diamond Island dated August 10, 1928 and September 20, 1955 recorded in the Cumberland County Registry of Deeds, Book 2254, Page 97.

HHS _____ PBMA _____

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This conveyance is made subject to all other easements, reservations, exceptions or interests of Record now existing on the above described real estate and conveys any easements, Rights of Way, etc., appurtenant to the above described real estate.

TO HAVE AND TO HOLD the Property herein granted unto the Grantee, its successors and assigns forever.

Grantee covenants and agrees on its behalf and its successors and assigns to the following covenants which shall be binding upon and enforceable against the Grantee, its successors and assigns:

1. That for a period of thirty (30) years from the date hereof the Property herein conveyed will be used continuously as a general health care facility (except as such use may be interrupted by labor strikes, fire, flood, or acts of God or acts beyond the control of the Grantee) providing a range of diagnostic, therapeutic, rehabilitative and nursing services, to the population within its service area. Grantee shall have sole discretion in connection with the provision of this range of services in determining any services to be provided, beneficiaries, charges, maintenance of facilities, personnel matters, and other such matters involving operation of the Clinic for the purpose of providing those services.

2. That subject to all provisions of law, including State and Federal rights to privacy, the Secretary of Health and Human Services and the Comptroller General of the United States, their delegates, or successors shall have access during the aforesaid thirty (30) year period, for the purpose of audit and examination, to any then existing books, documents, or other records of the Grantee which, in the opinion of the Secretary or the Comptroller General, may be necessary for either of those officials to carry out his duties under the Act or under any other applicable provision of this deed.

3. That during the aforesaid period of thirty (30) years the Grantee will not resell, lease, mortgage, or encumber, or otherwise dispose of any part of the Property or interest therein except as the Grantor or its successor in function may authorize in writing, except for mortgages or encumbrances or other indebtedness insured or guaranteed by any agency, department, or instrumentality of the United States. Such authorization shall not unreasonably be withheld and such authorization shall, upon request, be provided in form and content required by Grantee. The Grantee hereby agrees that, at the time authorization is given by the Grantor for any such sale, lease, mortgage, encumbrance, or other disposition of the Property, the Grantor may require the Grantee to provide to the Grantor a security interest in any proceeds from such sale, lease, mortgage, encumbrance, or other disposition, except that such security interest shall not attach to any such proceeds that are used by the Grantee for health care purposes as provided in covenant numbered 1.

4. That, for the period during which the Property is used for the purpose for which the Federal assistance is hereby extended, the Grantee agrees that it will comply with Title VI of the Civil Rights Act of 1964, section 504 of the Rehabilitation Act of 1973, and where applicable, Title IX of the Education Amendments of 1972, and all requirements imposed by or pursuant to the Regulations of the Grantor (45 CFR Parts 80, 84 and 86) issued pursuant to said Acts and now in effect or as subsequently amended, to the end that, in accordance with said Acts and Regulations, no person shall, on the ground of race, color, national origin, handicap, or sex (where applicable) be excluded from participation in, be denied the benefits of, or otherwise be subjected to discrimination under any program or activity of the Grantee, its successors or assigns to which such Acts apply by reason of this conveyance.

In the event that the Grantee breaches covenants, 1 through 4 set forth above, whether caused by the legal or other inability of the Grantee, its successors and assigns, the Grantee or its successors and assigns by acceptance of this deed agrees for itself, and its successors and assigns that the Grantee shall owe to the Grantor as damages an amount equal to the lesser of (a) a sum agreed to by Grantor and Grantee or (b) an amount equal to 1/360 of the appraised value of the Property, as determined below, for each full month remaining in the 30 year period referenced in covenant numbered 1, as of

the date of receipt by the Grantee of written notice of the breach as provided below.

Notwithstanding anything to the contrary in this Deed or in a certain Note and Mortgage of even date herewith (the "Note" and "Mortgage") or in any other document between the Grantor and the Grantee, the Grantor agrees for itself, its successors and assigns that neither it nor they will seek collection of any damages due it or them under this Deed, the Note and Mortgage from any property or resources of the Grantee other than the real property described in said Mortgage and no other assets of the Grantee shall be levied upon and no director, officer or member of the Grantee shall be personally liable for payment of such damages.

To determine the appraised value as set forth hereinabove Grantee shall appoint an MAI (Member of the Appraisers Institute) in good standing within ten (10) days after the Grantee is advised by the Grantor that the time to cure has expired without a cure being accomplished. Within fifteen (15) days after this appointment, the appointed appraiser shall complete and deliver an appraisal of the Property to the Grantee and Grantor setting forth an appraised value of the Property. Such determination shall in all respects be conclusive, unless Grantor shall notify Grantee within ten (10) days after receipt of the appraisal that (i) Grantor is not satisfied with the appraised value as determined by the appraisal and (ii) Grantor has appointed an MAI appraiser, in good standing. Within ten (10) days after the notice of Grantor's appointment and dissatisfaction to Grantee, both the appraiser appointed by Grantee and the appraiser appointed by the Grantor shall jointly appoint a third MAI appraiser, in good standing. Within fifteen (15) days after the appointment of said third appraiser, all three appraisers shall jointly appraise the Property and determine the appraised value of the Property. The determination made by the appraisers shall be in writing, signed by at least two of the appraisers. Such determination of appraised value shall be final for the purposes set forth herein, without the right to appeal to the courts or otherwise.

In the event either Grantor or Grantee shall fail or refuse to appoint an appraiser within the time provided herein, then the other party shall have the right to so appoint an MAI appraiser for that party. Each party shall pay the fees and expenses of the appraiser appointed by it. The fees and expenses of the third appraiser, if necessary, shall be divided equally between the Grantee and Grantor.

Prior to the assertion of any of the rights set forth above the Grantor will provide the Grantee with written notice of any breach and the opportunity to cure the breach within sixty (60) days of receipt of such written notice or, where by its nature such breach cannot reasonably be cured within sixty (60) days, to commence to cure the breach within such time and thereafter to diligently prosecute its efforts until such breach is cured.

The failure of the Grantor or its successor in function to insist in any one or more instances upon complete performance of any of the said covenants shall not be construed as a waiver or relinquishment of the future performance of any of said covenants, but the obligations of the Grantee with respect to such future performance shall continue in full force and effect. Notwithstanding any other provisions contained herein, the covenants numbered 1 through 3 shall terminate and be of no further force and effect thirty (30) years from the date hereof.

The Grantee, by acceptance of this deed, covenants and agrees for itself, its successors and assigns, with respect to the Property or any part thereof--which covenant shall attach to and run with the land for so long as the Property is used for a purpose for which Federal assistance is hereby extended by the Grantor or for another purpose involving the provision of similar services or benefits, and which covenant shall in any event, and without regard to technical classification or designation, legal or otherwise, be binding to the fullest extent permitted by law and equity, for the benefit of and in favor of and enforceable by the Grantor or its successor in function thereof--that it will comply with Title VI of the Civil Rights Act of 1964, section 504 of the Rehabilitation Act of 1973, and where applicable, Title IX of the Education Amendments of 1972, and with all requirements imposed by or pursuant to the Regulations of the Grantor (45 CFR Parts 80, 84 and 86) issued pursuant to said Acts and now in effect or as subsequently amended, to the end that, in accordance with said Acts and Regulations, no person in the United States shall, on the ground of race, color, national origin, handicap, or sex (where applicable) be excluded from participation in, be denied the benefits

of, or otherwise be subjected to discrimination under the program referred to in covenant numbered 1 above or under any other program or activity of the Grantee's, its successors or assigns, to which said Acts and Regulations apply by reason of this conveyance.

The Grantee, by acceptance of this deed, covenants and agrees, for itself, its successors and assigns, and every successor in interest to the Property or any part thereof, which covenant shall attach to and run with the land and which covenant shall, in any event, and without regard to the technical classification or designation, legal or otherwise, be binding to the fullest extent permitted by law or equity, for the benefit and in favor of and enforceable by the Grantor and its successors against the Grantee, its successors and assigns and every successor in interest to the Property, or any part thereof;

a. That with respect to any future restoration or action affecting the exterior architecture or structural integrity of any structures on the Property visible from the grounds or structure known as the Portland Maine Marine Hospital, such restoration or action will be accomplished to the maximum extent feasible in a manner which will not detract from the appearance and historic characteristics of the Portland Maine Marine Hospital.

b. That it will present any proposed architectural or rehabilitation plans affecting structures visible from the grounds or structure known as the Portland Maine Marine Hospital and any plans for the construction of additional structures visible from the grounds or structure known as the Portland Maine Marine Hospital, to the State Historic Preservation Officer of the State of Maine, or his/her successor in interest and responsibility, for review and comment prior to the implementation thereof.

The Grantee by the acceptance of this deed, further covenants and agrees, for itself, its successors and assigns, that if the Grantee, its successors and assigns, shall cause any of the buildings on the Property to be insured against loss, damage or destruction and any such loss, damage or destruction shall occur during the period Grantee holds title to the Property subject to said covenants 1 through 3, said insurance and all moneys paid to the Grantee, its successors or assigns, thereunder shall be held in trust by the Grantee, its successors or assigns, and shall be promptly used by the Grantee for the purpose of repairing or replacing such buildings or, if not so used, shall to the extent available after satisfying any claims to such insurance proceeds which may be asserted by persons or entities which hold mortgages on the Property superior to those of the Grantee be paid over to the Treasurer of the United States in an amount not exceeding 1/360th of said insurance proceeds for each full month remaining in the thirty (30) year period referenced in covenant numbered 1 as of the date of such loss, damage, or destruction. Grantee agrees to advise Grantor promptly of any substantial loss, damage or destruction to a substantial portion of the Property.

Notwithstanding any other provision of this deed, all rights, titles, interests, liens, mortgages, claims and demands reserved by or given to the Grantor by the terms of this deed are hereby subordinated to the lien of any deed of trust, mortgage, indenture, security agreement or other instrument affecting the Propety which secures payment of a loan to or other indebtedness of the Grantee, its successors or assigns, obtained for the purpose of constructing improvements to or rehabilitating, renovating, expanding or modifying the Property or for the purpose of providing working capital to operate the Property as provided in covenant numbered 1 above, <u>provided, however</u>, that such loan or other indebtedness is either (a) insured or guaranteed by an agency, department or instrumentality of the United States or (b) authorized by the Grantor or its successor in function in accordance with covenant numbered 3 above. The foregoing subordination shall be effective so that any deed of trust, mortgage, indenture, security agreement or other instrument to which the Grantor's rights are hereby subordinated shall have the same status, force and effect as if made, delivered and recorded before the making, delivery and recording of this deed.

This subordination provision is intended to be and shall be self-executing, and any mortgagee, title insurance company, or other third party involved in such financing may rely upon this provision without duty of further inquiry or confirmation from Grantor. Grantor hereby agrees that, notwithstanding the self-executing notice of this subordination provision, acting through the Secretary of Health and Human Services, or his or her

delegate, upon reasonable written request from any such mortgagee, title insurance company or third party, to confirm in writing to such party the continued effectiveness of this provision and to execute and deliver such other documents as shall reasonably be requested by any such party to give full effect to such subordination.

The Grantee may secure abrogation of the covenants numbered 1, 2, and 3 herein by:

1. Obtaining the written consent of the Grantor, or its successor in function, therefor, which consent will not unreasonably be withheld; and

2. Paying to the United States of America, at the option of the Grantor, an amount not to exceed 1/360th of the appraised value, as of the date of such requested abrogation, of that portion of the Property to be released for each month of the period to be abrogated.

IN WITNESS WHEREOF, the Grantor has caused this instrument to be executed as of the day and year first above written.

UNITED STATES OF AMERICA
Acting through the Secretary
of Health and Human Services

By: _____
Albert A. Peter, Jr.
Director, Office of
Facilities Engineering

HHS _____ PBMA _____

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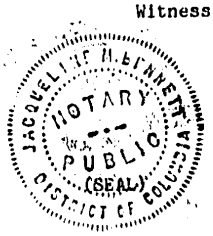
ACKNOWLEDGEMENT

CITY OF WASHINGTON)
DISTRICT OF COLUMBIA)

On this 16th day of December 1981, before me, a Notary Public in and for the City of Washington, District of Columbia, personally appeared Albert A. Peter, Jr., to me known to be the Director, Office of Facilities Engineering, and known to be the person who executed the foregoing instrument on behalf of the United States of America, and acknowledged to me that he subscribed to he said instrument on behalf of the United States of America.

Witness my hand and official seal.



Jacqueline M. Bennett
My Commission Expires: 8/14/86

ACCEPTANCE

The Penobscot Bay Medical Assoicates, hereby accepts this instrument and thereby accepts and agrees to all the terms, covenants, reservations and restrictions contained therein.



PENOBSCOT BAY MEDICAL
ASSOCIATES

By: Edward K. Morse
President

ACKNOWLEDGEMENT

STATE OF Maine)
COUNTY OF Cumberland) ss December 17, 1981

Then personally appeared the above named Edward K Morse, President of Penobscot Bay Medical Associates and acknowledged the foregoing instrument to be his free act and deed in his said capacity and the free act and deed of said corporation.

Before me,



Mary L Schendel
Notary Public
MY COMMISSION EXPIRES
DECEMBER 15, 1985

DEC 18 1981
REGISTRY OF DEEDS CUMBERLAND COUNTY, MAINE
Received at 2 H 46 M P M, and recorded in
BOOK 4898 PAGE 199 Edward D. Gauthier Register

HHS _____ PBMA _____

Section 3

Financial Capacity

Section 3: Financial capacity

A. Estimated costs.

An estimate of the probable cost of the proposed site work is approximate $3,428,933.00. The itemized list of the significant site development costs, including the projected cost of measures taken to minimize or prevent adverse effects on the environment during construction and operation, are as follows:

OPINION OF PROBABLE SITE COSTS

2.01 Demolition	$166,198.00
2.03 Preliminary Sitework	$178,211.00
2.04 Earthwork	$83,029.00
2.08 Soldier Piles+Lagging	$276,625.00
2.12 Storm Drainage	$528,467.00
2.13 Sanitary Systems	$170,989.00
2.14 Water Systems	$72,186.00
2.16 Misc Utility Work	$139,032.00
2.17 Roads & Walks	$544,905.00
2.18 Site Improvements	$1,269,291.00
Probable Site Cost	$3,428,933.00

B. Financing, (2) Self-financing, (b) Bank statement.

The project will be developed and financed by MPHC, which verifies financial capacity by letter, which is included in this section.

C. Certificate of Good Standing

Reference is made to the State of Maine Secretary of State's evidence of good corporate standing for the applicant, MPHC.

MAINE
Department of the Secretary of State
Bureau of Corporations, Elections and Commissions

Corporate Name Search

Information Summary

Subscriber activity report

This record contains information from the CEC database and is accurate as of: Mon Jan 06 2025 16:20:13. Please print or save for your records.

Legal Name	Charter Number	Filing Type	Status
MARTIN'S POINT HEALTH CARE, INC.	19710057ND	NON-PROFIT CORPORATION (UNDER TITLE 13-B)	GOOD STANDING

Filing Date	Expiration Date	Jurisdiction
05/20/1971	N/A	MAINE

Other Names	(A=Assumed ; F=Former)
COASTAL HEALTH SERVICE	A
HEALTHMED	A
HEALTHWORKS	A
MARTIN'S POINT HEALTH CARE CENTER	A
PENOBSCOT BAY MEDICAL ASSOCIATES	A
PENOBSCOT BAY MEDICAL ASSOCIATES, INC.	A
PENOBSCOT BAY MEDICAL ASSOCIATES	F
PENOBSCOT BAY MEDICAL ASSOCIATES, INC.	F

Principal Home Office Address

Physical	Mailing
331 VERANDA STREET	PO BOX 9746
PORTLAND, ME 04103	PORTLAND, ME 04104-5040

Clerk/Registered Agent	
Physical	**Mailing**
ERIC D. ALTHOLZ ONE PORTLAND SQUARE PORTLAND, ME 04101	ERIC D. ALTHOLZ P.O. BOX 586 PORTLAND, ME 04112-0586

New Search

Click on a link to obtain additional information.

List of Filings	View list of filings	
Obtain additional information:		
Certificate of Existence (Good Standing) (more info)	Short Form without amendments ($10.00)	Long Form with amendments ($10.00)
Certificate of Legal Existence (more info)	Short Form without amendments ($10.00)	Long Form with amendments ($10.00)

You will need Adobe Acrobat version 3.0 or higher in order to view PDF files.
If you encounter problems, visit the troubleshooting page.

If you encounter technical difficulties while using these services, please contact the Webmaster. If you are unable to find the information you need through the resources provided on this web site, please contact the Division of Corporations, UCC & Commissions Reporting and Information Section at 207-624-7752 or e-mail.

© Department of the Secretary of State

Section 4

Technical Ability

Section 4: TECHNICAL ABILITY

The project team for the Martin's Point Health Care Veranda Street campus improvements at Building 7 is as follows:

Martins Point Health Care, Inc. Applicant/Owner
Martins Point is a local not-for-profit organization that has been providing high-quality healthcare services for over forty years. Martins Point currently offers medical services in six locations throughout southern Maine and New Hampshire. Martins Point has permitted and developed many projects at its sites, including the Veranda Street campus in Portland. The most recent approved site improvements at the Veranda Street campus include the Building 4 improvements.

SMRT Architecture
SMRT provides sustainable architectural design, bidding, building, and construction management services focusing on energy conservation. Projects throughout the northeast include health and wellness, educational, government, athletics, and science/technology clients. Reference is made to the enclosed resumes of the pertinent MPHC team.

Sebago Technics, Inc
Sebago Technics is a multi-disciplined engineering firm with more than 40 years of experience, offering a wide range of services specializing in land development, planning, landscape architecture, engineering design, survey, traffic, environmental, soil sciences, and regulatory permitting.



Derek Veillleux AIA, EDAC, NCARB

PRINCIPAL-IN-CHARGE

Derek leads SMRT's healthcare practice. He is an extremely skilled designer, bringing excellent communication skills and technical proficiency to every project. With a strong focus on healthcare design, he understands the intricacies of healthcare codes and guidelines and the need to address both hospital operational challenges and the patient experience in project planning and design.

EDUCATION

BArch, Rensselaer Polytechnic Institute

BS, Building Science, Rensselaer Polytechnic Institute

REGISTRATIONS

ME, CT, GA, MA, NH, NY, VT

SELECTED EXPERIENCE

- Martin's Point Healthcare – Brunswick Medical Office Building, Brunswick, ME
- Martin's Point Healthcare – Scarborough Medical Office Building, Scarborough, ME
- Martin's Point Healthcare – Biddeford Medical Office Building, Biddeford, ME
- Martin's Point Healthcare – Gorham Medical Office Building, Gorham, ME
- Maine Medical Center – Medical Office Building and Tenant Fit-Up, Scarborough, ME
- Maine General Medical Center – Harold Alfond Cancer Care Center, Augusta, ME
- Eastern Maine Medical Center – Emergency Department Renovations, Bangor, ME
- Mount Desert Island Hospital – Master Planning, Renovation, and Expansion, Bar Harbor, ME
- Husson University – Wellness Learning Center, Bangor, ME



Matthew Ranger AIA

ARCHITECT

Matt has more than 20 years of experience providing architectural design services, including serving as an architect, project manager, job captain, construction administrator, and performing existing condition surveys. Most recently he has been responsible for planning and construction administration for the addition and renovation to the Maine General Medical Center HArold Alfond Center for Cancer Care currently under construction in Augusta. Matt brings expertise in medical equipment planning, ensuring that equipment needs and overall design considerations are in alignment.

EDUCATION

AAS, Technical Graphics and Design, Southern Maine Technical College

REGISTRATION

ME

SELECTED EXPERIENCE

- Martin's Point Healthcare – Brunswick Medical Office Building, Brunswick, ME
- Martin's Point Healthcare – Scarborough Medical Office Building, Scarborough, ME
- Martin's Point Healthcare – Biddeford Medical Office Building, Biddeford, ME
- Martin's Point Healthcare – Gorham Medical Office Building, Gorham, ME
- Western Maine Health – Ripley Medical Center, Norway, ME
- Maine General Medical Center – Harold Alfond Cancer Care Center Expansion, Augusta, ME
- Maine Medical Center – Medical Office Building and Tenant Fit-Up, Scarborough, ME
- Eyecare Medical Group – Relocation and Expansion, South Portland, ME
- Plaistow Regional Health Center – Medical Office Building, Plaistow, NH



William Heil PE, LC, LEED AP

ELECTRICAL ENGINEER

Bill leads SMRT's electrical engineering group. In his 34 years of practice, he has acquired experience in electrical engineering design for healthcare, institutional, government, educational, retail, and industrial clients. His expertise includes project management, technical drawings and specifications, due-diligence reports, and power studies. He has been responsible for the design of normal and emergency power systems, lighting, fire alarm, security, and tel/data systems.

EDUCATION

BS, Electrical Engineering, Pennsylvania State University

REGISTRATIONS

ME, CA, CT, DE, FL, GA, IL, IN, MA, MD, MI, NH, NY, OH, PA, RI, SC, VA, VT

SELECTED EXPERIENCE

- Maine General Medical Center – Alfond Center for Health, Augusta, ME
- Mercy Hospital – Fore River Campus Consolidation, Portland, ME
- Eastern Maine Medical Center – Emergency Department Renovation, Bangor, ME
- Heywood Hospital – Facilities Masterplan, Gardner, MA
- Mount Desert Island Hospital – Master Planning, Renovation, and Expansion, Bar Harbor, ME
- Athol Hospital – Emergency Department and Medical Office Building, Athol, MA
- Eatern Maine Medical Center – Grant Tower Renovations, Bangor, ME
- L.L.Bean – Corporate Headquarters, Freeport, ME



Michael Connors PE

MECHANICAL ENGINEER

Mike Connors has more than 20 years' experience as a mechanical engineer, focusing on the design and analysis of specialized HVAC systems for notable institutions in the healthcare, commercial, R&D, laboratory, pharmaceutical, and education sectors. Mike works closely with architects and owners in the design and selection of mechanical systems and QA/QC review.

EDUCATION

BS, Mechanical Engineering, Syracuse University

REGISTRATIONS

ME, MA, NH

SELECTED EXPERIENCE

- Beth Israel Lahey Health – Lifestyle Health Center, Burlington, MA
- Stephens Memorial Hospital – AHU Replacement, Norway, ME
- Exeter Hospital – Operating Room Upgrades, Exeter, NH
- VA Medical Center Bedford – Women's Health Clinic, Bedford, MA
- VA Medical Center Brockton – Mental Health Unit Renovation, Brockton, MA
- Exeter Hospital – Imaging Renovation, Exeter, NH
- Exeter Hospital – Ultrasound Department Renovation, Exeter, NH
- RayzeBio – Manufacturing Facility and Office, Indianapolis, IN



Brian McDonough PE, LEED Green Associate

FIRE PROTECTION AND PLUMBING ENGINEER

Brian brings more than 15 years of experience designing plumbing and fire protection solutions for clients. He has extensive healthcare and workplace experience for clients throughout New England.

EDUCATION

BS, Mechanical Engineering,
Worcester Polytechnic Institute

REGISTRATIONS

ME, MA, NH, NY

SELECTED EXPERIENCE

- VA Medical Center Bedford – Women's Health Clinic, Bedford, MA
- Millinocket Regional Hospital – Emergency Department Expansion and Renovations, Millinocket, ME
- Intermed – Marginal Way First Floor Renovations, Portland, ME
- Littleton Hospital – Laboratory Upgrades, Littleton, NH
- Intermed – 100 Foden Road Third Floor Renovation, South Portland, ME
- Hartford Healthcare – Medical Office, Hartford, CT*
- Shields Health – Dedham Medical Center, Dedham, MA*
- Brigham and Women's Hospital – Shapiro Surgical Specialties, Boston, MA*
- Brookside Community Health Center, Jamaica Plain, MA*

** Projects completed under previous employment*

KYLIE S. MASON, RLA, LEED-AP

Chief Operations Officer



Kylie Mason, RLA, LEED-AP, is a Maine licensed landscape architect and Chief Operations Officer for Sebago Technics. In this role, she is responsible for the overall operations of one of Maine's largest and most successful land development firms.

In addition, Kylie oversees large-scale, complex projects serving a range of clients from Public & Private Schools to Medical Provider Campuses to Corporate Campuses. She excels in her listening and communication skills, which form the foundation of her strong design ability and understanding of clients' goals and objectives.

EXPERIENCE

- **Sanford School District:** Site Selection Study, Site Engineering and Permitting for a New 350,000 s.f. High School and Regional Technical Center in the City of Sanford.
- **Cross Street Extension, Freeport, Maine:** Masterplanning, Design and Permitting for new extension of Cross Street, redirecting retail traffic from Main Street into a new cooperative public parking area shared by multiple land owners. Pedestrian circulation and streetscape enhancements provide direct connectivity with retailers and Main Street. Traffic recirculation planning included the elimination of one-way streets.
- **Riverwalk North, Westbrook, Maine:** Evaluation of Site, Masterplanning, Design and Permitting for new Riverwalk, Park and Brown Street realignment and streetscape along the Presumpscot River in Westbrook between Bridge Street and Cumberland Street.
- **The City's representative, project manager and lead designer for the Gardiner Waterfront Park Project** working side-by-side with numerous stakeholders to ensure timely delivery of the park. Significant collaboration with the Savings Bank of Maine, having committed $1 million to the project.
- **Campus Master Plan for the L.L. Bean Flagship Store & Retail Campus** featuring: innovative bioretention/rain gardens considered the first of its kind in Maine and received a LEED Silver Certification; multiple pedestrian plazas, retail vignette opportunities and Route One Streetscape Enhancements in Freeport, Maine.
- **Bowdoin College Land Acquisition Feasibility and Site Suitability Study:** Evaluation and Recommendation for strategic acquisition of 250 acres as part of the Brunswick Naval Air Station decommissioning.
- **Bowdoin College Campus Masterplanning:** Development of Masterplan, including programmatic uses for expansion as well as vehicular and pedestrian circulation between the existing campus and the campus expansion.
- **Maine Medical Center Long-Range Planning and Parcel Evaluation:** Portland and Scarborough Campus.
- **Martin's Point Healthcare Long-Range Planning and Site Development:** Site Selection, Site Engineering and Permitting for innovative new Medical Office Facilities throughout Maine.
- **Animal Refuge League of Greater Portland:** A new 25,000 s.f. facility with associated site improvements. The project required many partnerships to support and provide for an enriching sanctuary for Maine's future companions.
- **L.L. Bean Outdoor Discovery Center at Lower Flying Point,** a new waterfront facility serving thousands of visitors annually. Including; multi-purpose space, visitor orientation space and wrap-around porch with direct access to Casco Bay. This is the flagship for the premiere Maine retailer's Outdoor Discovery Programs.
- **Camp Susan Curtis** Recreation and Activity area Masterplan.

REGISTRATIONS

Registered Landscape Architect
Maine #3335

LEED Accredited Professional

CLARB Certified

LPA Certification, NHDOT

ASSOCIATIONS

American Society of Landscape Architects

Council of Landscape Architects Registration Board

USGBC (LEED)

PUBLIC SPEAKING

2013 USGBC - New Hampshire Chapter: Sustainable and Functional Aesthetics in the Landscape

2013 Maine Medical Association: Accomodating your levels of care - LEED Healthcare, Healing Spaces & Exterior considerations for your practice

2014 Maine Society of Landscape Architects: Sustainable Strategies for Stormwater in Maine

SEBAGO TECHNICS

PAUL D. OSTROWSKI, PE

Senior Project Engineer / Project Delivery Engineering & Design Manager



Mr. Ostrowski joined Sebago Technics in 2013 and is a Senior Project Engineer with nearly two decades of experience in the civil engineering field, with extensive experience in the design and inspection of municipal utility projects. He has brought the knowledge gained from construction inspection back to project design, performing constructability reviews for projects, as well as finding unique design solutions for complex projects.

In his role as Project Delivery Engineering Design Manager, Paul is responsible for the training and development of team members, the QA&QC process, and the advancement of design assignments through our teams. As a talented and creative engineer, Paul continues to serve as the lead engineer on special projects, shaping challenging sites and developing creative solutions for clients. Paul's willingness to explore alternatives and commitment to the growth and advancement of the team members that he manages is admirable. He is responsible for shaping the most successful and recognized projects our organization has completed.

EXPERIENCE

Portland Schools Site Evaluation – Portland, ME: Mr. Ostrowski, as part of a larger project team, reviewed existing schools and ancillary buildings within the Portland School Department. Responsibilities included reviewing existing site conditions and their remaining life expectancy, identifying grading/drainage concerns or deficiencies, and ADA accessibility. Mr. Ostrowski assisted in generating conceptual cost estimates for addressing noted deficiencies or replacement of site amenities at or past their life expectancy.

Thornton Heights Sewer Separation – South Portland, ME: Mr. Ostrowski assisted in the design and bid document preparation for Phase 1 of a three phase sewer separation project in the Thornton Heights neighborhood. Responsibilities included sizing of the storm drain system to accommodate future phase separation, quantity take-offs and cost estimates. Mr. Ostrowski leads the design of the Portland Water District's work in Thornton Heights.

Westside Interceptor Sewer (Capisic Brook) – Portland, ME: While employed at another firm, Mr. Ostrowski served as full-time construction representative to observe the progress and quality of construction. The project included installation of 5,700 feet of 60-inch sanitary sewer pipe using T-Base and conventional manhole structures. Duties included daily observations; preparation of daily, weekly and monthly reports; verification of contractor payment requests; and coordination with City representatives for field changes during construction. The sewer replacement project traversed through Capisic Park, which is designated by the Maine Department of Environmental Protection as an Inland Wading Waterfowl Habitat (IWWH), thus requiring Mr. Ostrowski to closely monitor disturbance limits within the IWWH as well as discuss proposed work and restoration efforts with abutting property owners, Friends of Capisic Park Neighborhood Group, and Portland Trails.

Forest Avenue to Mt. Sinai Cemetery CSO Project – Portland, ME: Mr. Ostrowski was the design engineer for this project which separated the combined storm drainage within the West Side Interceptor sewer into a 42 to 48-inch diameter storm drain which parallels the existing interceptor sewer. Coordination was required with Portland Water District for the relocation of existing infrastructure (16-inch, 6-inch, and 4-inch mains) within Forest Avenue.

Numerous Assignments – Portland, ME: Senior Inspector responsible for part/full-time inspection of roadway and sewer infrastructure improvements from 2010 to 2013 for the City of Portland. Work included utility and infrastructure upgrades for the following roadways; Canco/ Carlyle/Read, Dorothy/Dibiase, Belfort/Commonwealth, Broadway/Lexington, Victor/Vera, Allen/Auburn/Washington, Alpine/Hillside, and Barltey/Rustic.

EDUCATION

B.S., Civil Engineering
University of Maine, Orono, 2000

CERTIFICATIONS

MaineDOT LPA Certified
Recertification May 2019

NETTCP Paving Inspector # 4527

MEMBERSHIPS

American Society of Civil Engineers

REGISTRATIONS

Registered Professional Engineer:
Maine #11175

SEBAGO TECHNICS

BRIAN A. MCMAHON

Landscape Designer



Brian McMahon graduated from the University of Rhode Island with a degree in Landscape Architecture and a minor in Community Planning. His curiosity and eagerness to learn have shaped him into a critical lead designer on all of his projects. He excels in numerous skills including due diligence research, site inventory and analysis, conceptual site planning, graphic visualizations, site design development, and planting design.

EXPERIENCE

One Diamond – Biddeford, ME: Provided master planning efforts for a large-scale residential project along the Saco River. Brian assisted with site design, including a riverwalk trail and recreational amenities, detailing site elements, landscape exhibits, and graphic renderings of the full master plan.

Lakeside Norway – Norway, ME: Assisted with site design for a commercial project located along a lakefront property. Brian assisted with the design of the site's recreational amenities along the waterfront, detailed planting plans, and graphic visitations for the full master plan.

L.L. Bean Campus – Freeport, ME: Created graphic visualizations, both in plan-view and section, for future master planning efforts of the existing campus.

Village Area Loop Trail – Gray, ME: Collaborated directly with the Town of Gray to develop a new trail as part of a larger masterplan effort. Brian designed the layout of the trail, as well as the associated amenities and planting plans.

Topolina – Kennebunk, ME: Provided site design for the conversion of an existing building into a restaurant located near downtown Kennebunk. Brian was responsible for the layout of outdoor amenity areas, detailing of site elements, and landscape exhibits for the project.

Berlin City Nissan Addition – South Portland, ME: As part of the design team, Brian was responsible for the site design associated with a building addition at the existing Berlin City Nissan. He also assisted with detailing the site elements and creating an updated landscape plan for the property.

EDUCATION

University of Rhode Island,
Kingston, Rhode Island
Bachelor of Landscape Architecture
Minor: Community Planning
2021

SEBAGO TECHNICS

BRADLEY R. LYON, PE, PTOE

Vice President of Transportation Engineering



Mr. Lyon joined Sebago Technics, Inc. (STI) in 2006, as a graduate from the University of Maine with a B.S. in Civil Engineering. Since joining the firm, he became licensed as a Professional Engineer in the states of Maine, New Hampshire, and Vermont, as well as becoming licensed as a Professional Traffic Operations Engineer. He was also responsible for developing Sebago's Traffic Operations practice in 2008, which bridges the gap between traditional traffic engineers and contractors, allowing for engineered solutions to be implemented and examined directly in the field.

Mr. Lyon now serves as the Vice President of Transportation Engineering and his unique and diverse background in highway design, traffic analysis/planning studies, and traffic signal operations allows for him to effectively provide leadership, mentorship, and management across all the Team's specialties. Brad continues to collaborate with both clients and partnering firms alike, while expanding his business development responsibilities with existing and prospective clients. As a member of senior leadership for the company, Brad works closely with Sebago's employee-owners to better integrate the Team's services across the organization, while working with the rest of the leadership team to help set Sebago up for success now and well into the future.

EXPERIENCE

- **Redesign of Exit 3 on I-295, MaineDOT** - South Portland, ME
- **Redesign of Lower Central Avenue** - Dover, NH
- **Design of new traffic signal at Routes 5/11** - Springfield, VT
- **Maplewood Avenue Complete Street** - Portsmouth, NH
- **Route 27 Improvements** - Boothbay, ME
- **I-91 Brattleboro Bridge Project** - Brattleboro, VT
- **Replacement of Sarah Mildred Long Bridge** - Kittery, ME & Portsmouth, NH
- **Rochester Street Reconstruction** - Berwick, ME
- **William Clarke Drive Improvements, MaineDOT** - Westbrook, ME
- **Conway Village Streetscape** - Conway, NH
- **Traffic Operations Modeling, Downtown Transportation Study** - So. Berwick, ME
- **Mona/Bernard Neighborhood Street Reconstruction** - Portland, ME
- **MaineDOT Traffic Signal Design, McKeen Street** - Brunswick, ME
- **Maintenance of Traffic Plans for Bridge Replacement I-91** - Hartford, VT
- **Maintenance of Traffic Plans for Bridge Replacement I-91** - Rockingham, VT

In the traffic signal design and operations area, Mr. Lyon is responsible for inventorying existing intersection signal control equipment, designing appropriate upgrades in control and communications, and developing/deploying new programming for signal system optimization. Recent assignments have included:

- **6 Naztec signals, Broadway** - South Portland, ME
- **7 Naztec signals, Route 1** - Kennebunk, ME
- **10 signals in Kittery and Lebanon, ME** for KACTS
- **8 Eagle signals in Bangor and Brewer, ME** for BACTS
- **17 Eagle and McCain signals in Dover, NH** for City
- **Calibration of Counting Loops, Broadway** - South Portland, ME
- **8 Naztec signals, William Clarke Drive** - Westbrook, ME

Mr. Lyon is also responsible for daily monitoring of traffic signal performance for the following centrally managed signal systems:

- **Maine Mall ATMS** – 23 Naztec signals - South Portland, ME
- **RTMS** - PACTS Region, ME
- **Routes 1 and 3 – 8 Econolite signals** - Ellsworth, ME
- **City-wide ATMS** – 31 McCain signals - Dover, NH
- **Route One** – 7 Naztec signals - Kennebunk, ME
- **William Clarke Drive** – 8 Naztec signals - Westbrook, ME

EDUCATION

University of Maine, Orono, ME
B.S., Civil Engineering, 2006

REGISTRATIONS & CERTIFICATIONS

Professional Engineer:
ME #12632; NH #13819; VT# 109886

Professional Traffic Operations Engineer #3217

Local Project Administration Certification
MaineDOT

IMSA Work Zone Temporary Traffic Control Technician #ZZ_118440

IMSA Traffic Signal Technician Level I #AA_118440

IMSA Traffic Signal Design / Engineering Technician Level II #BD_118440

IMSA Traffic Signal Construction Technician Level II #BC_118440

IMSA Traffic Signal Field Technician Level II #BE_118440

MEMBERSHIPS

American Society of Civil Engineers

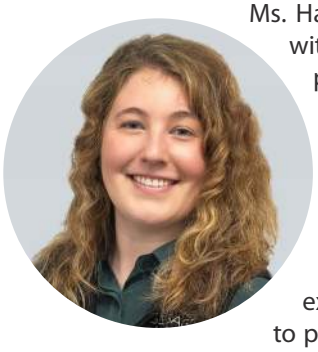
Maine Institute of Transportation Engineers
(Past President 2019-2021)

Maine Better Transportation Association
(Currently serving on Board of Directors)

SEBAGO TECHNICS

KIRA A. HARMON

Virtual Design and Construction Project Manager



Ms. Harmon joined Sebago Technics, Inc. (STI) in May of 2019 as a 3D Modeler and CAD Technician working with the Survey-Geomatics group to produce digital deliverables for municipal, federal, and private sector projects. In 2022 Kira was elevated to Virtual Design and Construction (VDC) Project Manager. In this role, Kira oversees all 3D modeling/graphics services including project scoping, estimating, and overall project/client management. Additionally, she supports the development and maintenance of 3D modeling processes and standards, along with training, coordination, and management of 3D modeling personnel.

Kira has worked on projects ranging from facility management modeling to creating life-like 3D renderings, and everything in between. Her project responsibilities have included accurately extracting existing conditions survey data from a point cloud as well as modeling a potential development project to produce life-like 3D renderings. This experience allows her the flexibility to understand project needs and goals in order to properly extract and provide the digital foundations necessary for a successful project and provide useful insight as a project team member.

EXPERIENCE

American Aquafarms – Frenchman Bay, ME: Ms. Harmon assisted in the production of 3D Modeling and visualizations for the proposed aquaculture facility. 3D Models were developed in Revit collaboratively with the client and used to generate visualizations from the key observation points. Sebago merged the 3D Models with measured photographs that were survey located within the study area. Paint color studies were also completed to determine the least contrasting options. The visualizations were included in the State of Maine Department of Marine Resource application.

Main Street – Orono, ME: Sebago Technics was retained to do a traffic study from Kelley Road to the Stillwater River Bridge in Orono Maine in 2020 by the Maine Department of Transportation. This study involved Sebago Technics survey/ geomatics division as well as their transportation engineering division. Ms. Harmon's role in this project was to assist with the survey aspect of the project. This project was surveyed using a high-definition laser scanner. Ms. Harmon used the laser scan data to extract survey features and geometry to create an existing condition plan of the entire stretch of roadway. By using this method of survey, the Sebago team as able to get more accurate data as well as much denser data. This allows for the transportation engineers to have more accurate studies as well as designs.

Shore Road – Cape Elizabeth, ME: The Town of Cape Elizabeth, looking to renovate a long section of their highly traveled Shore Road, retained Sebago Technics to provide a combination of survey and traffic engineering services. Town officials also wanted to be able to show townspeople what key areas would look like once restructured. To accomplish this, numerous high-quality 3D renderings of select locations along Shore Road were produced. Ms. Harmon oversaw the 3D renderings that Mr. Burbank created and assisted in the process of working with the engineers and landscape architects. Along with oversight it was Ms. Harmon's responsibility to quality review each image not only in the techniques Mr. Burbank was using but also the accuracy of each image. To achieve this Ms. Harmon used her knowledge of the virtual design and construction field as well as the quality assurance steps Sebago has put in place that Ms. Harmon assisted in creating to verify accuracy and realism of the rendered images.

Piper Shores Retirement Community Expansion – Scarborough, ME: The retirement community of Piper Shores decided to expand and develop a parcel of land across from the community's original development site. With the concept of the retirement community expansions and its location, there were some concerns from neighboring properties. Ms. Harmon made an Autodesk Revit 3D visualization model using the architect's plans, as well as Sebago Technics survey information and site design. Ms. Harmon was able to give the client, as well as the neighboring properties, some piece of mind as to how the buildings and new landscaping would impact the surrounding areas. A buffering concern was able to be addressed prior to the building process because of the 3D renderings.

EDUCATION

Southern Maine Community College
South Portland, ME
Associates of Applied Science,
Architectural and Engineering Design
2019

CERTIFICATIONS

OSHA 10-hour Construction Safety

CPR & First Aid

SEBAGO TECHNICS

JEDIAH M. SCOTT, PLS

Senior Surveyor



Jediah Scott is a seasoned Senior Surveyor who joined Sebago Technics in 2021. With extensive expertise in land surveying, he has consistently delivered accurate and detailed survey data for a variety of projects. Jediah's proficiency in utilizing advanced surveying technologies, coupled with his exceptional attention to detail, has contributed to the successful execution of numerous complex projects. He is a dedicated professional who consistently demonstrates a commitment to precision, efficiency, and excellence in the field of surveying.

EXPERIENCE

Stroudwater Preserve – Portland, ME:
Surveyor for a multi-phase subdivision along the Stroudwater River. Review of subdivision amendments and site plans as well as drafting of easement exhibits and oversight of layout. Coordination with engineering firm and general contractor.

Continental Mill – Lewiston, ME:
Surveyor for a condominium plan of a historic mill on the Androscoggin River. Determination of boundary lines and encumbrances and drafting easements to connect to a proposed trail network across the adjacent canal.

Center Street CSO – Portland, ME:
Surveyor for a storm and sewer mapping project in order to separate storm and sewer systems. Field location of underground utilities and determination of the right of way for over 4,000 feet of City streets.

Madawaska LPOE – Madawaska, ME:
Surveyor for the Land Port of Entry site for the new Madawaska-Edmundston bridge. Boundary and topographic survey for engineering and design of new facilities, and subsequent layout.

EDUCATION

University of Maine
Farmington, Maine
B.A., Environmental Policy & Planning
Minor: Visual Arts
2013

REGISTRATIONS

Professional Land Surveyor
Maine #2660

CERTIFICATIONS

CPR & First Aid
OSHA 10

AFFILIATIONS

Maine Society of Land Surveyors

SEBAGO TECHNICS

STEFANIE K. NICHOLS

Permitting Specialist/Project Coordinator



Mrs. Nichols joined Sebago Technics, Inc. (STI) in 2018 as a Permitting Specialist/Project Coordinator and is a Regulatory Specialist with over 40 years of diverse experience. During this time, she has worked with many different disciplines in the various aspects of site permitting and site inventory, and associated reports and graphics. Other duties over the years include civil drafting-hand and ACAD, project bid tracking and construction submittal processing, sourcing landscape materials, livestock procurement/travel permits, and short-term fostering.

EXPERIENCE

Uncommon Clean - Cumberland, ME: Mixed-use, commercial and residential development
Applications: Municipal, MDEP NRPA, Stormwater, USACE

Robie Street Subdivision - Gorham, ME: Phased residential development
Applications: Municipal, MDEP NRPA, Stormwater, USACE

Solar Array Projects: Berwick, Kenduskeag, Lewiston, Livermore Falls, Mechanic Falls, Minot, Orrington, Oxford, Prospect, Searsmont, Stockton Springs, etc.
Applications: MDEP Site Law, NRPA, Stormwater, Transfer, Extension, Decommissioning, USACE, MDOT Driveway, and Municipal

Allagash Brewing - Portland, ME: Permitting for future manufacturing expansion and operational needs
Applications: Municipal Zoning Amendment, Site Plan Amendment

Hammond Lumber - Portland, ME: Retail facility and parking expansion
Applications: Site Plan Amendment, MDEP Site Law Modification

Copart of Connecticut - Windham, ME: Vehicle Auction Facility/Offices
Applications: MDEP Site Law, NRPA, AST Variance, Municipal

Homestead Farms Subdivision - Falmouth, ME: Single-Family Clustered Development
Applications: MDEP Site Law, NRPA, USACE, Municipal

Harborchase - South Portland, ME: Senior Housing/Memory Care
Applications: MDEP NRPA, FAA, Municipal

Maine Medical Center - Portland, ME: Large Medical Facility Expansion
Applications: Municipal Level III Site Plan Application, FAA

Colby College - Waterville, ME (2003-2018): Site modifications
Applications: MDEP Site Law, NRPA, USACE, Municipal

Sugarloaf - Carrabassett Valley, ME (2003-2016): Site modifications
Applications: MDEP Site Location, NRPA, USACE, Municipal

EDUCATION

Northern Maine Technical College
Presque Isle, ME
Drafting Technology

Central Maine Technical College
Auburn, ME

Maine Technical Source (MTS)
Yarmouth, ME
AutoCAD I

SEBAGO TECHNICS

Section 5

Noise

Section 5: NOISE

No adverse environmental impact due to noise is associated with the MPHC Building 7 redevelopment site improvements. We assert that the development is classified as a development producing a minor sound impact per the following:

A. Developments producing a minor noise impact.
(4) Other developments.

(a) Type, source and location of noise.

The type of noise associated with the site is limited to employee and patron vehicular access to the new administrative building that includes interior parking levels..

(b) Uses, zoning and plans.

The proposed use is allowed use and consistent with City of Portland B-5 Zoning. Portland has an applicable, quantifiable noise standard (and ordinances in place for this type of development, and post-construction decibel levels will not exceed maximum permissible sound levels during daytime or nightime hours.

(d)Minor nature of impact.

Noise associated with the on-site activity will be in compliance with the City noise ordinance.

(e)Demonstration.

The site use will not exceed the allowable maximum sound limits per the City regulations. Reference is made to City of Portland Land Use Code 6.8.6 Noise, Table 6-H: Noise Standards allowing 60dBA from 7a-9p, 50 dBA between 9p-7a. We note that 6.8.6F allows exemptions for noise created by construction and maintenance activities between 7a and 9p and other applicable exemptions.

Post-Construction: Sound from routine operations, sound from maintenance activities. Change from the current site use is not proposed.

Section 6

Visual Quality and Scenic Character

Section 6: VISUAL QUALITY AND SCENIC CHARACTER

The development does not impact areas of significant scenic character; therefore, a Visual Impact Analysis is not included. The proposed site development activity will not be visible from scenic resources as defined by Chapter 315 of the relevant Maine DEP regulations.

Section 7

Wildlife and Fisheries

Section 7: Wildlife and Fisheries

A portion of the MPHC Veranda Street campus is adjacent to recognized tidal waterfowl and wading bird habitat without specific documented occurrences per the Maine Department of Inland Fisheries and Wildlife (MDIFW) environmental review tool updated in 2022. Activity is not proposed within 50± linear feet of NHW at Casco Bay. The MDIFW review response dated February 5, 2024, is enclosed in this section.

JANET T. MILLS
GOVERNOR

STATE OF MAINE
DEPARTMENT OF
INLAND FISHERIES & WILDLIFE
353 WATER STREET
41 STATE HOUSE STATION
AUGUSTA ME 04333-0041

JUDITH CAMUSO
COMMISSIONER

February 05, 2024

Stefanie Nichols
Sebago Technics, Inc.
75 John Roberts Road, Suite 4A
South Portland, ME 04106

RE: Information Request – Martins Point Campus, Portland Project (ERID 5883)

Dear Stefanie:

Per your request received on December 06, 2023, we have reviewed current Maine Department of Inland Fisheries and Wildlife (MDIFW) information for known locations of Endangered, Threatened, and Special Concern species; designated Essential and Significant Wildlife Habitats; and inland fisheries habitat concerns within the vicinity of the *Martins Point Campus, Portland* project. For the purpose of this review, we assume that tree removal may be required.

Our Department has not mapped any Essential Habitats or inland fisheries habitats that would be directly affected by your project.

Endangered, Threatened, and Special Concern Species

Bat Species – Of the eight species of bats that occur in Maine, four species are afforded protection under Maine's Endangered Species Act (MESA, 12 M.R.S §12801 et. seq.): little brown bat (State Endangered), northern long-eared bat (State Endangered), eastern small-footed bat (State Threatened), and tri-colored bat (State Threatened). The four remaining bat species are designated as Species of Special Concern: big brown bat, red bat, hoary bat, and silver-haired bat. While a comprehensive statewide inventory for bats has not been completed, based on historical evidence, it is likely that several of these species occur within the project area during spring/fall migration, the summer breeding season, and/or for overwintering. However, our Agency does not anticipate significant impacts to any of the bat species as a result of this project.

Significant Wildlife Habitat

Tidal Waterfowl Wading Bird Habitat (TWWH) – This project area includes TWWH, a Significant Wildlife Habitat under Maine's Natural Resources Protection Act. TWWHs provide important breeding, feeding, migration, staging, and wintering habitat for diverse waterfowl and wading bird species. Birds utilize emergent wetlands, intertidal mudflats, eelgrass beds, and mussel beds to forage for aquatic invertebrates, a primary food source. Maintaining natural tidal flow is essential to maintaining healthy intertidal areas and food sources to support waterfowl and wading bird species. MDIFW recommends that projects near TWWHs provide as much undisturbed buffer as possible to protect this habitat.

This consultation review has been conducted specifically for known MDIFW jurisdictional features and should not be interpreted as a comprehensive review for the presence of other regulated features that may occur in this area. Prior to the start of any future site disturbance, we recommend additional consultation

with the municipality, and other state resource agencies including the Maine Natural Areas Program, Maine Department of Marine Resources, and Maine Department of Environmental Protection in order to avoid unintended protected resource disturbance.

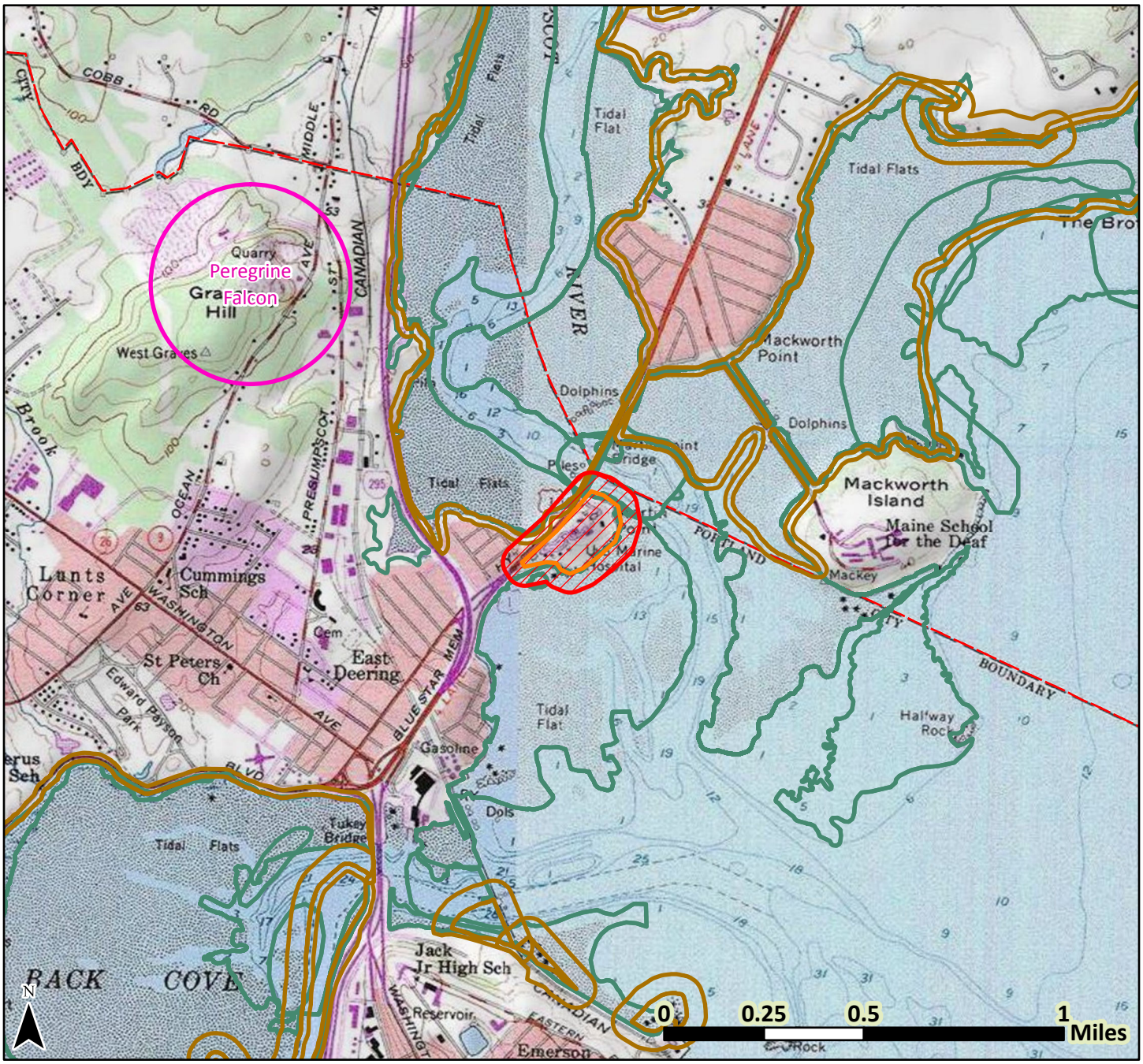
Please feel free to contact my office if you have any questions regarding this information, or if I can be of any further assistance.

Best regards,



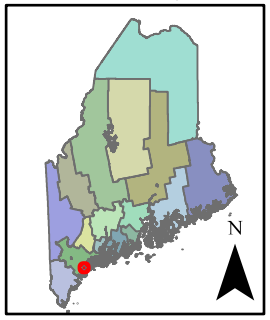
Ciara Wentworth
Resource Biologist

Maine Department of Inland Fisheries and Wildlife
Project Area Review of Fish and Wildlife Observations and Priority Habitats
Martins Point Campus, Portland



County Boundary
Township Boundary
Project Footprint
Search Area
E, T, & SC Species
Shorebird Area
Tidal Waterfowl/Wading Bird

Date: 12/13/2023
Projection:
UTM Zone 19N, NAD83



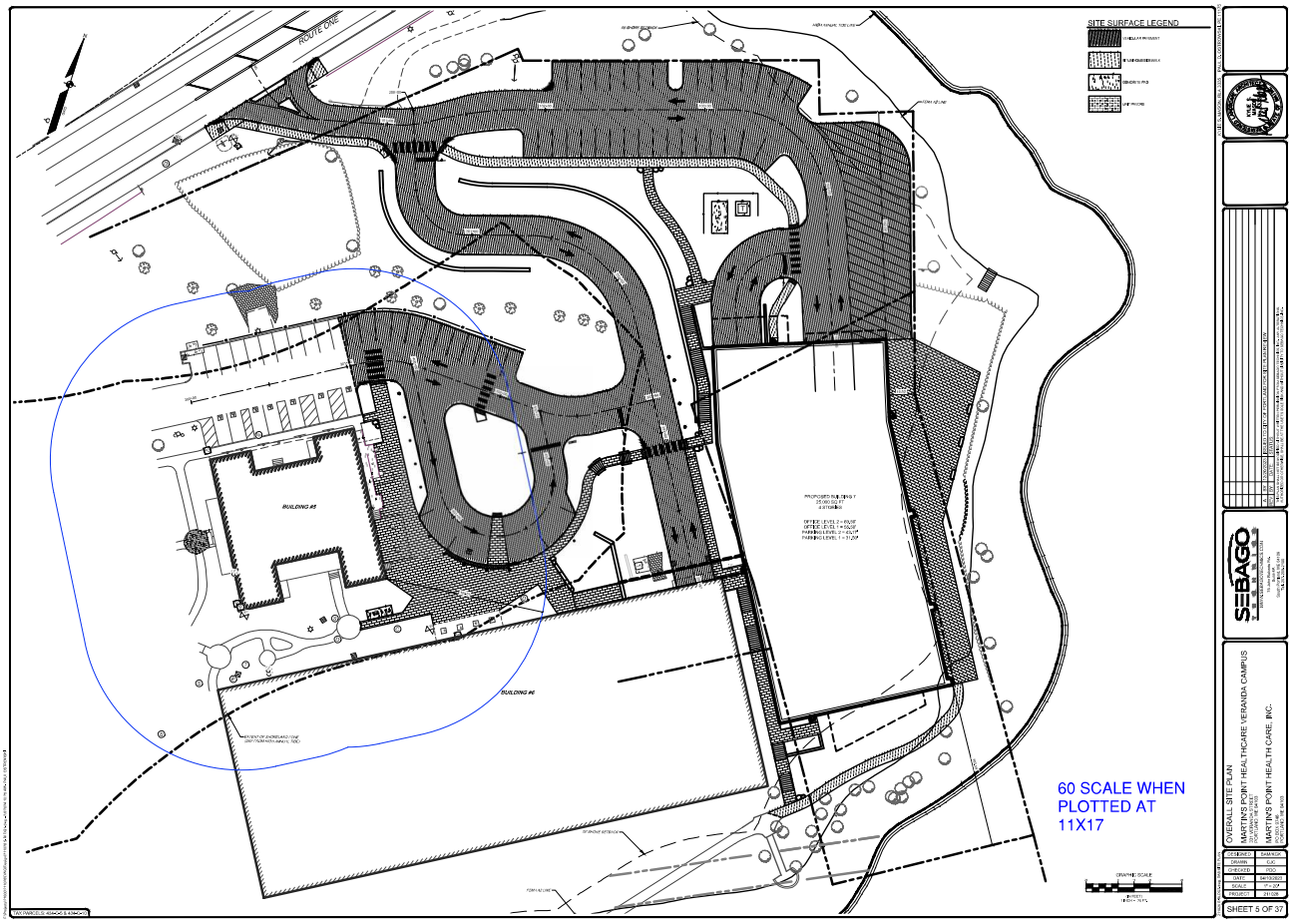
Legend only lists resources visible in the map; see response letter for all resources that were evaluated.

Section 8

Historic Sites

Section 8: HISTORIC SITES

The proposed project is not located in a designated historic or historic landscape district; however, the proposed improvements on the Martins Point Veranda Street campus are located within proximity to the Marine Hospital (Building 5), which is listed on the National Register of Historic Places. A review of the Building 7 project by the Maine Historic Preservation Commission (MHPC) determined that redevelopment project is approved; see attached correspondence from Mike Johnson, MHPC. The City of Portland also reviewed the project and determined that the project meets applicable City standards.


SITE SURFACE LEGEND
ROUTE ONE
BUILDING #5
BUILDING #6
60 SCALE WHEN
PLOTTED AT
11X17
OVERALL SITE PLAN
MARTIN'S POINT HEALTHCARE VERANDA CAMPUS
MARTIN'S POINT HEALTH CARE, INC.
SHEET 5 OF 37

Stefanie Nichols

From: Johnson, Mike D <Mike.D.Johnson@maine.gov>
Sent: Friday, December 29, 2023 8:30 AM
To: Stefanie Nichols
Subject: RE: [External] Maine Historic Preservation - Martin's Point -Portland Follow-Up

Thank you Stefanie,

Based on the site conditions and the plans and renderings provided by Sebago Technics, we have determined that the proposed Martin's Point redevelopment is in accordance with the terms of the Marine Hospital deeded covenant and is approved.

Please feel free to contact me if you have any questions.
Mike

Mike Johnson
Historic Rehabilitation Tax Credit Coordinator
Grants & Easements Coordinator
Maine Historic Preservation Commission
State House Station 65
55 Capitol Street
Augusta, ME 04333
207-287-2949

From: Stefanie Nichols <snichols@sebagotechnics.com>
Sent: Tuesday, December 19, 2023 11:31 AM
To: Johnson, Mike D <Mike.D.Johnson@maine.gov>
Cc: Kira Harmon <kharmon@sebagotechnics.com>; Kylie Mason <kmason@sebagotechnics.com>
Subject: RE: Maine Historic Preservation - Martin's Point -Portland Follow-Up

EXTERNAL: This email originated from outside of the State of Maine Mail System. Do not click links or open attachments unless you recognize the sender and know the content is safe.
Good morning Mike,

Please find the winter conditions plans as viewed from the bridge, as requested. Kira is working on the bird's eye model for MHPC.

Best, Stef

From: Stefanie Nichols
Sent: Tuesday, December 12, 2023 4:43 PM
To: 'Johnson, Mike D' <Mike.D.Johnson@maine.gov>
Cc: Kira Harmon <kharmon@sebagotechnics.com>
Subject: RE: [External] Martin's Point -Portland Follow-Up

Mike,

Yes. This email request is copied to Kira Harmon, Sebago's virtual design manager overseeing all in-house 3D modeling/graphics services.

Best, Stefanie

From: Johnson, Mike D <Mike.D.Johnson@maine.gov>
Sent: Tuesday, December 12, 2023 3:08 PM
To: Stefanie Nichols <snichols@sebagotechnics.com>
Subject: RE: [External] Martin's Point -Portland Follow-Up

Thanks Stefanie,

Can you send me a couple renderings showing what this would look like in the winter?

Thanks,
Mike

Mike Johnson
Historic Rehabilitation Tax Credit Coordinator
Grants & Easements Coordinator
Maine Historic Preservation Commission
State House Station 65
55 Capitol Street
Augusta, ME 04333
207-287-2949

From: Stefanie Nichols <snichols@sebagotechnics.com>
Sent: Tuesday, December 5, 2023 1:53 PM
To: Johnson, Mike D <Mike.D.Johnson@maine.gov>
Subject: Martin's Point -Portland Follow-Up

EXTERNAL: This email originated from outside of the State of Maine Mail System. Do not click links or open attachments unless you recognize the sender and know the content is safe.
Good afternoon Mike,

Martins Point is progressing with the Building 7 development plan discussed last year. I offer recent site plans and the requested supplemental information addressing the proposed visual massing as viewed from the bridge. We are pleased to offer the attached information based on the current design for MHPC consideration. Sebago will have a bird's eye graphic showing the campus building relationship available before Christmas. Federal permitting is not anticipated for the proposed site improvements.

We look forward to hearing from you.

Best, Stefanie

Section 9

Unusual Natural Areas

Section 9: UNUSUAL NATURAL AREAS

The proposed MPHC redevelopment site (Building 7) will not adversely affect an unusual natural area. Per the enclosed March 22, 2022, correspondence with the Maine Natural Areas Program (MNAP), there is a low probability that rare or botanical features will occur at this project site.

STATE OF MAINE
DEPARTMENT OF AGRICULTURE, CONSERVATION & FORESTRY
177 STATE HOUSE STATION
AUGUSTA, MAINE 04333

JANET T. MILLS
GOVERNOR

AMANDA E. BEAL
COMMISSIONER

March 25, 2022

Jessa Solis
Sebago Technics
75 John Roberts Road, Suite 4A
South Portland, ME 04106

Via email: jsolis@sebagotechnics.com

Re: Rare and exemplary botanical features in proximity to: #211026, Martin's Point Veranda Campus, 331 Veranda Street, Portland, Maine

Dear Ms. Solis:

I have searched the Maine Natural Areas Program's Biological and Conservation Data System files in response to your request received March 24, 2022 for information on the presence of rare or unique botanical features documented from the vicinity of the project in Portland, Maine. Rare and unique botanical features include the habitat of rare, threatened, or endangered plant species and unique or exemplary natural communities. Our review involves examining maps, manual and computerized records, other sources of information such as scientific articles or published references, and the personal knowledge of staff or cooperating experts.

Our official response covers only botanical features. For authoritative information and official response for zoological features you must make a similar request to the Maine Department of Inland Fisheries and Wildlife, 284 State Street, Augusta, Maine 04333.

According to the information currently in our Biological and Conservation Data System files, there are no rare botanical features documented specifically within the project area. Based on the information in our files and the landscape context of this project, there is a low probability that rare or significant botanical features occur at this project location.

This finding is available and appropriate for preparation and review of environmental assessments, but it is not a substitute for on-site surveys. Comprehensive field surveys do not exist for all natural areas in Maine, and in the absence of a specific field investigation, the Maine Natural Areas Program cannot provide a definitive statement on the presence or absence of unusual natural features at this site.

The Maine Natural Areas Program (MNAP) is continuously working to achieve a more comprehensive database of exemplary natural features in Maine. We would appreciate the contribution of any information obtained should you decide to do field work. MNAP welcomes coordination with individuals or organizations proposing environmental alteration, or conducting environmental assessments. If, however, data provided by MNAP are to be published in any form, the Program should be informed at the outset and credited as the source.

MOLLY DOCHERTY, DIRECTOR
MAINE NATURAL AREAS PROGRAM
90 BLOSSOM LANE, DEERING BUILDING

PHONE: (207) 287-8044
WWW.MAINE.GOV/DACF/MNAP

The Maine Natural Areas Program has instituted a fee structure of $75.00 an hour to recover the actual cost of processing your request for information. You will receive an invoice for $150.00 for two hours of our services.

Thank you for using MNAP in the environmental review process. Please do not hesitate to contact me if you have further questions about the Natural Areas Program or about rare or unique botanical features on this site.

Sincerely,

Lisa St. Hilaire

Lisa St. Hilaire | Information Manager | Maine Natural Areas Program
207-287-8044 | lisa.st.hilaire@maine.gov

Section 10

Buffers

10: BUFFERS

Formal stormwater or resource buffering is not proposed for this project.

Section 11

Soils

11: SOILS

A. Soil survey map and report
A copy of the Cumberland County Medium-Intensity Soils Map (Web Soil Survey) is enclosed in this section and is described in Section 12-Stormwater.

B. Soil survey intensity level by development type.
See above.

C. Geotechnical investigation.
Explorations and Geotechnical Engineering Report dated May 2, 2022, which includes existing conditions and construction methods, is enclosed in this section.

D. Hydric soils mapping.
Wetlands and vernal pools are not identified within the Building 7 site. Reference is made to the enclosed Existing Conditions Plan appended to this application. Site improvements do not affect mapped freshwater or coastal wetland areas.

REPORT

12-0103.2 S
May 2, 2022

Explorations and Geotechnical Engineering Services

Proposed Building #7
331 Veranda Street
Portland, ME

Prepared For:
Martin's Point Health Care
Attention: Jacob Jeppson
331 Veranda Street
Portland, Maine 04103

Prepared By:
S. W. Cole Engineering, Inc.
286 Portland Road
Gray, ME 04039-9586
T: 207-657-2866

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12-0103.2 S

May 2, 2022

Martin's Point Health Care
Attention: Jacob Jeppson
331 Veranda Street
Portland, ME 04103

Subject: Explorations and Geotechnical Engineering Services
Proposed Building #7
331 Veranda Street
Portland, ME 04103

Dear Jacob:

In accordance with our Proposal, dated March 11, 2022, we have performed subsurface explorations for the subject project. This report summarizes our findings and geotechnical recommendations and its contents are subject to the limitations set forth in Appendix A.

1.0 INTRODUCTION

1.1 Scope and Purpose

The purpose of our services was to obtain subsurface information at the site in order to develop geotechnical recommendations relative to foundations and earthwork associated with the proposed construction. Our scope of services included a review of prior explorations, three test boring explorations, soils laboratory testing, a geotechnical analysis of the subsurface findings and preparation of this report.

1.2 Site and Proposed Construction

The site is situated on the easterly side of the Martin's Point Health Care campus at 331 Veranda Street in Portland, Maine. We understand development plans call for demolition of the existing Building #7 and construction of a new 1 to 2 story medical office building with 2 levels of parking below. We anticipate the floor elevations will match those of the adjoining Building #6 with a ground parking level sloping up from

about elevation 33 to 43 feet, north to south, an elevated parking deck at about elevation 54 feet and medical office floors at about elevations 66 and 78 feet. Proposed grading and structural loading information is currently unknown. Proposed and existing site features are shown on the "Exploration Location Plan" attached in Appendix B.

2.0 EXPLORATION AND TESTING

2.1 Explorations

2.1.1 Current Building 7 Explorations

Three test borings (B-22-1 through B-22-3) were made at the site on April 8, 2022 by S. W. Cole Explorations, LLC. These exploration locations were selected and established in the field by S. W. Cole Engineering, Inc. (S.W.COLE) using measurements from existing site features. These approximate exploration locations are shown on the "Exploration Location Plan" attached in Appendix B. Logs of these explorations and a key to the notes and symbols used on the logs are attached in Appendix C. The elevations shown on the logs were estimated based on topographic information shown on the "Exploration Location Plan".

2.1.2 Prior Building 7 Explorations

Twelve test boings (B-101 through B-112) and four test pits (TP-101 to TP-104) were made around Building # 7 in February 2012. These prior exploration locations were selected based on then proposed plans and established in the field by S.W.COLE using measurements from existing site features. The approximate locations of these explorations are shown on the "Exploration Location Plan" attached in Appendix B. Logs of these prior explorations are attached in Appendix C.

2.1.3 Prior Building 6 Explorations

Sixteen test boings (B-1 through B-16) and seventeen auger probes (P-1 through P-17) were made for then proposed Building # 6 in November 2005. Fourteen additional auger probes (P-18 through P-31) were made for campus improvements associated with Building # 6 in January 2009. These prior exploration locations were selected based on then proposed plans and established in the field by S.W.COLE using measurements from existing site features. The approximate locations of these explorations are shown on the "Exploration Location Plan" attached in Appendix B. Logs of these prior explorations are attached in Appendix C.

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It should be noted that Building # 6 has been constructed since completing borings B-1 through B-16 and probes P-1 through R-31; therefore, the information on these logs has changed and these logs are attached as historical reference only.

2.2 Testing

The test borings were drilled using a combination of hollow stem auger and cased wash-boring techniques. The soils were sampled at 2 to 5 foot intervals using a split spoon sampler and Standard Penetration Testing (SPT) methods. SPT blow counts results are shown on the logs. Rock core was obtained at certain borings using a NQ2 core barrel.

Soil samples obtained from the explorations were returned to our laboratory for classification and testing. Laboratory testing included two soil moisture content tests and two grain size analyses from prior borings B-103 and B-107. Moisture content test results are shown on these logs. Gradation test results are attached in Appendix D.

3.0 SUBSURFACE CONDITIONS

3.1 Soil and Bedrock

Underlying a surficial layer of pavement or topsoil, test borings generally encountered fill overlying native sands, glacial till, and bedrock. The principal strata encountered are summarized below. Not all the strata were encountered in each of the exploratioins; refer to the attached logs for a more detailed description of the findings.

Fill: Underlying pavement or topsoil, the borings encountered varying fill soils consisting primarily of loose to medium dense sand with varying portions of silt, gravel, cobbles, boulders, organics and miscellaneous debris such as ash, coal, and brick. The fill extended to depths varying from about 0.5 to 15.5 feet at the borings.

Native Sands and Glacial Till: Underlying the fill, the borings generally encountered loose to medium dense native sands with varying portions of silt and gravel and medium dense to dense glacial till, consisting primarily of silty sand with varying portions of gravel and cobbles.

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Bedrock: Underlying the fill and/or native soils, the borings encountered refusal surfaces (probable bedrock) at depths varying from 0.5 to 12 feet. After penetrating a zone of probable weathered bedrock, rock coring was performed at borings B-22-3, B-102 and B-108. The rock core was classified as phyllite with RQD values varying from 0 to 71%, corresponding to a rock quality designation of very poor to fair. The depth to and quality of the bedrock at the site should be anticipated to vary across the site.

Building #7 Foundations: Test pits TP-101 through TP-104 were made adjacent to the existing building #7 in February 2012 to explore existing foundation conditions (configuration, depth and subgrade) for then proposed plans. Refer to the attached test pit logs for descriptions of the conditions encountered at these test pits.

3.2 Groundwater

Free water or saturated soils were observed at depths varying from about 4 ½ to 9 feet in the borings at the time of exploration. Groundwater likely becomes perched in the fill soils and on relatively impervious native glacial till soils and bedrock. It should be anticipated that seasonal groundwater levels will fluctuate, especially during periods of snowmelt and heavy precipitation.

4.0 EVALUATION AND RECOMMENDATIONS

4.1 General Findings

Based on the subsurface findings, the proposed construction appears feasible from a geotechnical standpoint. The principle geotechnical considerations include:

- It appears that bedrock removal, likely by blasting, has been performed at the site. Additionally, various existing utility trenches appear to have been excavated into the bedrock across the site. It should be anticipated that variable depths to bedrock and thickness of soil and bedrock disturbance are present across the site, particularly around existing structures.

- Spread footing foundations and a slab-on-grade floors bearing on properly prepared subgrades appear suitable for the proposed building. Footings should bear on 6 inches of compacted Crushed Stone overlying dense glacial till, sound

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bedrock or on compacted Structural Fill overlying dense glacial till or sound bedrock.

- On-grade floor slabs in heated area should bear on at least 12-inches of compacted Structural Fill overlying properly prepared subgrades. In unheated areas, on-grade floor slabs should bear on 12 inches of compacted Structural Fill overlying at least 3 inches of rigid insulation, for frost protection, overlying properly prepared subgrades.

- Considering the relatively shallow depth to bedrock, bedrock removal by blasting or mechanical hoe-ramming will be needed. We recommend pre-drilling be completed for rock cuts and that blasting be controlled to a depth of 6 inches beneath footings and 2 feet below on-grade slabs to help reduce overblasting.

- All topsoil, organics, remnant structures, foundations, utilities, pavement, and debris must be completely removed from beneath the proposed building and paved areas and backfilled with properly compacted Granular Borrow. Existing fills, disturbed soils and loose blasted bedrock must be removed beneath footings and backfilled with compacted Structural Fill.

- A perimeter foundation underdrain system is recommended.

4.2 Site and Subgrade Preparation

We recommend that site preparation begin with the construction of an erosion control system to protect adjacent drainage ways and areas outside the construction limits. Surficial organics, roots and topsoil should be completely removed from areas of proposed fill and construction. As much vegetation as possible should remain outside the construction areas to lessen the potential for erosion and site disturbance.

Building Pad and Footings: Existing pavement, foundations, buried structures, utilities, and debris must be completely removed from beneath the proposed building and backfilled with compacted Granular Borrow. Existing fills within the building should be proof-rolled and densified with at least 3 passes of a 10 ton vibratory roller compactor. Areas that become soft or continue to yield after proof-rolling should be removed and replaced with compacted Granular Borrow.

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We recommend that footings be underlain by at least 6 inches of compacted Crushed Stone bearing on competent bedrock, dense glacial till or compacted Structural Fill overlying dense glacial till or sound bedrock. Where competent bedrock or dense glacial till is not present at footing subgrade, we recommend over-excavating to bedrock or dense glacial till and backfilling with compacted Structural Fill. The limits of over-excavation beneath footings should extend 1 foot horizontally beyond the footing edges for every foot of over-excavation (1H:1V bearing splay).

Paved Areas: Existing fills beneath proposed paved areas should be proof-rolled and densified with several passes of a 10-ton vibratory roller compactor. Areas that become soft or continue to yield after densification should be removed and replaced with compacted Granular Borrow.

4.3 Excavation and Dewatering

Excavation work will generally encounter pavement, existing fills, silty sand, glacial till and bedrock. Care must be exercised during construction to limit disturbance of the bearing surfaces. Earthwork and grading activities should ideally occur during drier, non-freezing weather of Spring, Summer and Fall. Final cuts to subgrade in soil should be performed with a smooth-edged bucket to help reduce strength loss from soil disturbance.

Based on the subsurface findings, we anticipate blasting or mechanical hoe-ramming will be required for bedrock removal. We recommend a licensed blasting contractor be engaged to provide bedrock removal. Pre-blast surveys should be completed on surrounding structures, water supply wells and infrastructure prior to commencing blasting activities. We recommend pre-drilling be completed for rock cuts and that blasting be controlled to depths of 6 inches beneath footings and 2 feet below on-grade slabs to help reduce overblasting.

Vibrations from construction should be controlled below threshold limits of 0.5 in/sec for structures, water supply wells and infrastructure within 500 feet of the project site. More restrictive vibration limits may be warranted in specific cases with sensitive equipment, historic structures or artifacts on-site or within close proximity.

Sumping and pumping dewatering techniques should be adequate to control groundwater in excavations. Controlling the water levels to at least one foot below planned excavation

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depths will help stabilize subgrades during construction. Excavations must be properly shored or sloped in accordance with OSHA Regulations to prevent sloughing and caving of the sidewalls during construction. Care must be taken to preclude undermining adjacent structures, utilities and roadways. The design and planning of excavations, excavation support systems, and dewatering is the responsibility of the contractor.

4.4 Foundations

We recommend the proposed buildings be supported on spread footings founded on at least 6-inches of compacted Crushed Stone bearing on dense glacial till, sound intact bedrock or compacted Structural Fill overlying dense glacial till or sound intact bedrock. Where competent bedrock or dense glacial till is not present at footing subgrade, we recommend over-excavating to bedrock or dense glacial till and backfilling with compacted Structural Fill. The limits of over-excavation beneath footings should extend 1 foot horizontally beyond the footing edges for every foot of over-excavation (1H:1V bearing splay). For foundations bearing on properly prepared subgrades, as recommended herein, we recommend the following geotechnical parameters for design consideration:

Geotechnical Parameters for Spread Footings and Foundation Walls	
Design Frost Depth (100 year AFI)	4.5 feet (soil) 2.5 feet (bedrock)
Net Allowable Foundation Bearing Pressure	3.0 ksf (soil) 8.0 ksf (bedrock)
Base Friction Factor	0.4
Total Unit Weight of Backfill	125 pcf
At-Rest Lateral Earth Pressure Coefficient	0.5
Internal Friction Angle of Backfill	30°
Seismic Soil Site Class	C (IBC 2015)
Estimated Total Settlement	1-inch
Differential Settlement	½-inch

4.5 Foundation Drainage

We recommend an underdrain system be installed on the edge of perimeter footings and retaining walls. The underdrain pipe should consist of 4-inch diameter, perforated SDR-35 foundation drain pipe bedded in Crushed Stone and wrapped in non-woven geotextile fabric. The underdrain pipe must have a positive gravity outlet protected from freezing, clogging and backflow. Surface grades should be sloped away from the building for

positive surface water drainage. General underdrain details are illustrated on the "Foundation Detail Sketch" attached in Appendix B.

4.6 Slab-On-Grade

On-grade floor slabs in heated areas may be designed using a subgrade reaction modulus of 100 pci (pounds per cubic inch) provided the slab is underlain by at least 12-inches of compacted Structural Fill placed over properly prepared subgrades. In unheated spaces, we recommend a 2-inch layer of rigid foundation insulation be installed beneath the 12-inch layer of Structural Fill recommended below on-grade slabs. The structural engineer or concrete consultant must design steel reinforcing and joint spacing appropriate to slab thickness and function. The structural engineer or concrete consultant must design steel reinforcing and joint spacing appropriate to slab thickness and function, as well as prevention of slab cracking and curling.

We recommend a sub-slab vapor retarder particularly in areas of the building where the concrete slab will be covered with an impermeable surface treatment or floor covering that may be sensitive to moisture vapors. The vapor retarder must have a permeance that is less than the floor cover or surface treatment that is applied to the slab. The vapor retarder must have sufficient durability to withstand direct contact with the sub-slab base material and construction activity. The vapor retarder material should be placed according to the manufacturer's recommended method, including the taping and lapping of all joints and wall connections. The architect and/or flooring consultant should select the vapor retarder products compatible with flooring and adhesive materials.

The floor slab should be appropriately cured using moisture retention methods after casting. Typical floor slab curing methods should be used for at least 7 days. The architect or flooring consultant should assign curing methods consistent with current applicable American Concrete Institute (ACI) procedures with consideration of curing method compatibility to proposed surface treatments, flooring and adhesive materials.

4.7 Entrance Slabs and Sidewalks

Entrance slabs and sidewalks adjacent to the building must be designed to reduce the effects of differential frost action between adjacent pavement, doorways, and entrances. We recommend that non-frost susceptible Structural Fill be provided to a depth of at least 4.5 feet below the top of entrance slabs if overlying soil and at least 2.5 feet if

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overlying competent bedrock. This thickness of Structural Fill should extend the full width of the entrance slab and outward at least 4.5 feet, thereafter, transitioning up to the bottom of the adjacent sidewalk or pavement gravels at a 3H:1V or flatter slope. General details of this frost transition zone are shown on the "Foundation Detail Sketch" attached in Appendix B.

For plaza slabs extending beyond immediate building entrances, we recommend extending the thickness of Structural Fill beneath the entire plaza slab thereafter transitioning up to the bottom of the adjacent sidewalk or pavement gravels at a 3H:1V or flatter slope.

4.8 Fill, Backfill and Compaction

We recommend the following fill and backfill materials: recycled products must also be tested in accordance with applicable environmental regulations and approved by a qualified environmental consultant.

Common Borrow: Fill to raise grades in landscape areas should be non-organic compactable earth meeting the requirements of 2020 MaineDOT Standard Specification 703.18 Common Borrow.

Granular Borrow: Fill to raise grades in building and paved areas, as well as to repair soft areas, should be sand or silty sand meeting the requirements of 2020 MaineDOT Standard Specification 703.19 Granular Borrow.

Structural Fill: Backfill for overexcavations below footings, foundation backfill, slab base material and material below exterior entrances slabs should be clean, non-frost susceptible sand and crushed gravel meeting the gradation requirements for Structural Fill as given below:

Structural Fill	
Sieve Size	**Percent Finer by Weight**
4 inch	100
3 inch	90 to 100
¼ inch	25 to 90
No. 40	0 to 30
No. 200	0 to 6

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Crushed Stone: Crushed Stone, used beneath foundations and for underdrain aggregate should be washed ¾-inch crushed stone meeting the requirements of 2020 MaineDOT Standard Specification 703.13 Crushed Stone ¾-Inch.

Reuse of Site Soils: The non-organic on-site soils are unsuitable for reuse in building areas, but may be suitable for reuse as Common Borrow in landscape areas, provided they are at a compactable moisture content at the time of reuse. Bedrock may be crushed and blended with granular soils for reuse as Granular Borrow and Structural Fill in paved and building areas.

Placement and Compaction: Fill should be placed in horizontal lifts and compacted such that the desired density is achieved throughout the lift thickness with 3 to 5 passes of the compaction equipment. Loose lift thicknesses for grading, fill and backfill activities should not exceed 12 inches. We recommend that fill and backfill in building and paved areas be compacted to at least 95 percent of its maximum dry density as determined by ASTM D-1557. Crushed Stone should be compacted with 3 to 5 passes of a vibratory plate compactor having a static weight of at least 500 pounds.

4.9 Weather Considerations

Construction activity should be limited during wet and freezing weather and the site soils may require drying or thawing before construction activities may continue. The contractor should anticipate the need for water to temper fills in order to facilitate compaction during dry weather. If construction takes place during cold weather, subgrades, foundations and floor slabs must be protected during freezing conditions. Concrete and fill must not be placed on frozen soil; and once placed, the concrete and soil beneath the structure must be protected from freezing.

4.10 Design Review and Construction Testing

S.W.COLE should be retained to review the construction documents prior to bidding to determine that our earthwork and foundation recommendations have been properly interpreted and implemented.

A construction materials testing and quality assurance program should be implemented during construction to observe compliance with the design concepts, plans, and specifications. S.W.COLE is available to observe earthwork activities, the preparation of

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foundation bearing surfaces and pavement subgrades, as well as to provide testing and IBC Special Inspection services for soils, concrete, steel, spray-applied fireproofing, fire-stopping, structural masonry and asphalt construction materials.

5.0 CLOSURE

It has been a pleasure to be of assistance to you with this phase of your project. We look forward to working with you during the construction phase of the project.

Sincerely,

S. W. Cole Engineering, Inc.

Timothy J. Boyce, P.E.
Principal Geotechnical Engineer

TJB:pfk

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APPENDIX A

Limitations

This report has been prepared for the exclusive use of Martin's Point Health Care for specific application to the proposed Building # 7 at 331 Veranda Street in Portland, Maine. S. W. Cole Engineering, Inc. (S.W.COLE) has endeavored to conduct our services in accordance with generally accepted soil and foundation engineering practices. No warranty, expressed or implied, is made.

The soil profiles described in the report are intended to convey general trends in subsurface conditions. The boundaries between strata are approximate and are based upon interpretation of exploration data and samples.

The analyses performed during this investigation and recommendations presented in this report are based in part upon the data obtained from subsurface explorations made at the site. Variations in subsurface conditions may occur between explorations and may not become evident until construction. If variations in subsurface conditions become evident after submission of this report, it will be necessary to evaluate their nature and to review the recommendations of this report.

Observations have been made during exploration work to assess site groundwater levels. Fluctuations in water levels will occur due to variations in rainfall, temperature, and other factors.

S.W.COLE's scope of services has not included the investigation, detection, or prevention of any Biological Pollutants at the project site or in any existing or proposed structure at the site. The term "Biological Pollutants" includes, but is not limited to, molds, fungi, spores, bacteria, and viruses, and the byproducts of any such biological organisms.

Recommendations contained in this report are based substantially upon information provided by others regarding the proposed project. In the event that any changes are made in the design, nature, or location of the proposed project, S.W.COLE should review such changes as they relate to analyses associated with this report. Recommendations contained in this report shall not be considered valid unless the changes are reviewed by S.W.COLE.

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APPENDIX B

Figures

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PROPOSED BUILDING 7
1 OR 2 STORY M.O.B. OVER
2 LEVELS OF PARKING
FFE'S MATCHING BUILDING 6

BUILDING 2
BUILDING 3
BUILDING 4
BUILDING 5
BUILDING 6

N

LEGEND

- APPROXIMATE BORING LOCATION
- APPROXIMATE PROBE LOCATION
- APPROXIMATE TEST PIT LOCATION

NOTES:

1. EXPLORATION LOCATION PLAN WAS COMPILED FROM IMAGERY ENTITLED "ORTHOREGIONAL2020," PROVIDED BY THE MAINE GEOLIBRARY AND A 1"=100' SCALE PLAN OF THE SITE ENTITLED "VERANDA CAMPUS MASTER PLAN D - 40, SF FOOTPRINT," PREPARED BY SMRT, DATED 10/13/2021.

2. BORINGS B-22-1 THROUGH B-22-3 WERE LOCATED IN THE FIELD BY S. W. COLE ENGINEERING, INC. (S.W.COLE) USING A MAPPING GRADE GPS RECEIVER.

3. BORINGS B-1 THROUGH B-16 AND PROBES P-1 THROUGH P-17 WERE PERFORMED UNDER THE DIRECTION OF S.W.COLE IN NOVEMBER 2005.

4. PROBES P-18 THROUGH P-31 WERE PERFORMED UNDER THE DIRECTION OF S.W.COLE IN JANUARY 2009.

5. BORINGS B-101 THROUGH B-112 AND TEST PITS TP-101 THROUGH TP-104 WERE PERFORMED UNDER THE DIRECTION OF S.W.COLE IN FEBRUARY 2012.

5. THIS PLAN SHOULD BE USED IN CONJUNCTION WITH THE ASSOCIATED S. W. COLE ENGINEERING, INC. GEOTECHNICAL REPORT.

5. THE PURPOSE OF THIS PLAN IS ONLY TO DEPICT THE LOCATION OF THE EXPLORATIONS IN RELATION TO THE EXISTING CONDITIONS AND PROPOSED CONSTRUCTION AND IS NOT TO BE USED FOR CONSTRUCTION.

0 20 40 80 120
Feet

S.W.COLE ENGINEERING, INC.

MARTIN'S POINT HEATHCARE

EXPLORATION LOCATION PLAN

PROPOSED BUILDING #7
MARTIN'S POINT HEALTHCARE CAMPUS
311 VERANDA STREET
PORTLAND, MAINE

Job No.	12-0103.2	Scale	1" = 40'
Date:	05/02/2022	Sheet	1

APPENDIX C

Exploration Logs and Key

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BORING LOG

CLIENT: Martin's Point Healthcare
PROJECT: Building No. 7
LOCATION: 331 Veranda St, Portland, ME

BORING NO.: B-22-1
SHEET: 1 of 1
PROJECT NO. 12-0103.2
DATE START: 4/8/2022
DATE FINISH: 4/8/2022

Drilling Information

LOCATION: See Exploration Location Plan | **ELEVATION (FT):** 30' +/- | **TOTAL DEPTH (FT):** 7.0 | **LOGGED BY:** Paul Kohler
DRILLING CO.: S. W. Cole Explorations, LLC | **DRILLER:** Ben Cross | **DRILLING METHOD:** Hollow Stem Auger
RIG TYPE: Track Mounted Diedrich D-50 | **AUGER ID/OD:** 2 1/4 in / 5 5/8 in | **SAMPLER:** Standard Split-Spoon
HAMMER TYPE: Automatic | **HAMMER WEIGHT (lbs):** 140 / 300 | **CASING ID/OD:** N/A /N/A | **CORE BARREL:**
HAMMER EFFICIENCY FACTOR: 0.974 | **HAMMER DROP (inch):** 30 / 16
WATER LEVEL ELEVATIONS (ft): 4/08/2022 No Free Water Observed - Soils moist to wet
GENERAL NOTES:

KEY TO NOTES AND SYMBOLS: Water Level: ▽ At time of Drilling; ▼ At Completion of Drilling; ▼ After Drilling
D = Split Spoon Sample; U = Thin Walled Tube Sample; R = Rock Core Sample; V = Field Vane Shear
Pen. = Penetration Length; Rec. = Recovery Length; bpf = Blows per Foot; mpf = Minute per Foot
WOR = Weight of Rods; WOH = Weight of Hammer; RQD = Rock Quality Designation; PID = Photoionization Detector
S_v = Field Vane Shear Strength, kips/sq.ft.; q_u = Unconfined Compressive Strength, kips/sq.ft.; Ø = Friction Angle (Estimated); N/A = Not Applicable

Elev. (ft)	Depth (ft)	Casing Pen. (bpf)	SAMPLE INFORMATION: Sample No.	Type	Depth (ft)	Pen./ Rec. (in)	Blow Count or RQD	Field / Lab Test Data	Graphic Log	Sample Description & Classification	H_2O Depth	Remarks
			1D		0.5-2.5	24/8	4-5-4-3			0.3 Asphalt Pavement Loose brown silty SAND, some gravel (Fill)		
			2D		2.5-4.5	24/20	3-5-11-22			2.3 Loose becoming medium dense brown and rust brown fine SAND and SILT		
25	5		3D		5-6.4	17/17	11-23-50/5"			6.4 Auger into Probable Weathered Bedrock Refusal at 7.0 feet Auger Refusal - Probable bedrock		

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

BORING NO.: B-22-1

BORING / WELL 12-0103.2.GPJ SWCE TEMPLATE.GDT 4/30/22

BORING LOG

CLIENT:	Martin's Point Healthcare
PROJECT:	Building No. 7
LOCATION:	331 Veranda St, Portland, ME

BORING NO.:	B-22-2
SHEET:	1 of 1
PROJECT NO.	12-0103.2
DATE START:	4/8/2022
DATE FINISH:	4/8/2022

Drilling Information

LOCATION: See Exploration Location Plan **ELEVATION (FT):** 51' +/- **TOTAL DEPTH (FT):** 15.5 **LOGGED BY:** Paul Kohler

DRILLING CO.: S. W. Cole Explorations, LLC **DRILLER:** Ben Cross **DRILLING METHOD:** Hollow Stem Auger

RIG TYPE: Track Mounted Diedrich D-50 **AUGER ID/OD:** 2 1/4 in / 5 5/8 in **SAMPLER:** Standard Split-Spoon

HAMMER TYPE: Automatic **HAMMER WEIGHT (lbs):** 140 / 300 **CASING ID/OD:** N/A /N/A **CORE BARREL:**

HAMMER EFFICIENCY FACTOR: 0.974 **HAMMER DROP (inch):** 30 / 16

WATER LEVEL ELEVATIONS (ft): 4/08/2022 No free water observed - soils wet to saturated below 10 +/- ft

GENERAL NOTES:

KEY TO NOTES AND SYMBOLS:
Water Level: ▽ At time of Drilling; ▼ At Completion of Drilling; ▼ After Drilling
D = Split Spoon Sample; U = Thin Walled Tube Sample; R = Rock Core Sample; V = Field Vane Shear
Pen. = Penetration Length; Rec. = Recovery Length; bpf = Blows per Foot; mpf = Minute per Foot
WOR = Weight of Rods; WOH = Weight of Hammer; RQD = Rock Quality Designation; PID = Photoionization Detector
S_v = Field Vane Shear Strength, kips/sq.ft.; q_u = Unconfined Compressive Strength, kips/sq.ft.; Ø = Friction Angle (Estimated); N/A = Not Applicable

Elev. (ft)	Depth (ft)	Casing Pen. (bpf)	SAMPLE INFORMATION: Sample No.	Type	Depth (ft)	Pen./ Rec. (in)	Blow Count or RQD	Field / Lab Test Data	Graphic Log	Sample Description & Classification	H_20 Depth	Remarks
50										0.4 Asphalt Pavement		
			1D		1-3	24/14	10-15-14-25			1.0 Medium dense brown SAND and GRAVEL, some silt (Fill)		
			2D		3-5	24/12	13-16-15-10			Medium dense brown silty SAND with gravel, broken rock (Fill)		
	5		3D		5-7	24/10	8-10-9-9					
45			4D		7-9	24/10	13-7-6-6					
	10		5D		10-12	24/10	3-2-2-2			9.0 Loose brown and dark brown silty SAND, trace gravel, trace organics (Fill)		
40										12.0 Loose to medium dense brown silty SAND and GRAVEL, brick pieces, possible ash(Fill)		
	15		6D		15-15.5	6/5	50			Refusal at 15.5 feet Auger Refusal - Probable bedrock		

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

BORING NO.: B-22-2

BORING / WELL 12-0103.2.GPJ SWCE TEMPLATE.GDT 4/30/22

BORING LOG

CLIENT:	Martin's Point Healthcare
PROJECT:	Building No. 7
LOCATION:	331 Veranda St, Portland, ME

BORING NO.:	B-22-3
SHEET:	1 of 1
PROJECT NO.	12-0103.2
DATE START:	4/8/2022
DATE FINISH:	4/8/2022

Drilling Information

LOCATION: See Exploration Location Plan **ELEVATION (FT):** 58' +/- **TOTAL DEPTH (FT):** 25.0 **LOGGED BY:** Paul Kohler

DRILLING CO.: S. W. Cole Explorations, LLC **DRILLER:** Ben Cross **DRILLING METHOD:** Cased Boring

RIG TYPE: Track Mounted Diedrich D-50 **AUGER ID/OD:** N/A / N/A **SAMPLER:** Standard Split-Spoon

HAMMER TYPE: Automatic **HAMMER WEIGHT (lbs):** 140 / 300 **CASING ID/OD:** 4 in / 4 1/2 in **CORE BARREL:** NQ2 / 2

HAMMER EFFICIENCY FACTOR: 0.974 **HAMMER DROP (inch):** 30 / 16

WATER LEVEL ELEVATIONS (ft): ▼ 48.50 ft 4/08/2022 12:00 am 20 min after finish coring

GENERAL NOTES:

KEY TO NOTES AND SYMBOLS: Water Level: ▽ At time of Drilling; ▼ At Completion of Drilling; ▼ After Drilling

D = Split Spoon Sample; U = Thin Walled Tube Sample; R = Rock Core Sample; V = Field Vane Shear

Pen. = Penetration Length; Rec. = Recovery Length; bpf = Blows per Foot; mpf = Minute per Foot

WOR = Weight of Rods; WOH = Weight of Hammer; RQD = Rock Quality Designation; PID = Photoionization Detector

S_v = Field Vane Shear Strength, kips/sq.ft.; q_u = Unconfined Compressive Strength, kips/sq.ft.; Ø = Friction Angle (Estimated); N/A = Not Applicable

Elev. (ft)	Depth (ft)	Casing Pen. (bpf)	SAMPLE INFORMATION: Sample No.	Type	Depth (ft)	Pen./ Rec. (in)	Blow Count or RQD	Field / Lab Test Data	Graphic Log	Sample Description & Classification	H_20 Depth	Remarks
										0.5 Asphalt Pavement		
			1D		1-3	24/16	10-17-23-22			1.0 Concrete		
55										Medium dense to dense brown silty SAND with gravel (Fill)		
			2D		3-3.4	5/4	50/5"			3.0		
	5									3.5 Dense brown silty SAND with gravel and broken rock (Possible Weathered Bedrock)		
			R1		5-10	60/56	72			5.0 Roller-cone to 5 ft (Probable Bedrock)		
50										Bedrock Light gray Phyllite Moderately Hard, Moderately Fractured	▼	
	10		R2		10-15	60/64	65					
45												
	15		R3		15-16.8	22/22	0					
			R4		16.8-20	38/38	71					
40												
	20		R5		20-25	60/60	68					
35												
	25									Bottom of Exploration at 25.0 feet		

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

BORING NO.: B-22-3

S.W.COLE ENGINEERING, INC.

BORING LOG

BORING NO.: **B-101**
SHEET: 1 OF 1
PROJECT NO.: 12-0103

PROJECT: PROPOSED BUILDING #7 RENOVATIONS AND ADDITIONS
CLIENT : MARTIN'S POINT HEALTHCARE
LOCATION: PORTLAND, MAINE
DRILLING FIRM: GREAT WORKS TEST BORING, INC. DRILLER: JEFF LEE

DATE START: 2/17/2012
DATE FINISH: 2/17/2012
ELEVATION: 35' +/-
SWC REP.: K. GIMPEL

	TYPE	SIZE	HAMMER WT.	HAMMER FALL
CASING:	SSA	4" O.D.		
SAMPLER:	N/A			
CORE BARREL:	N/A			

WATER LEVEL INFORMATION
NO FREE WATER OBSERVED

CASING BLOWS PER FOOT	SAMPLE NO.	SAMPLE PEN.	SAMPLE REC.	SAMPLE DEPTH @ BOT	SAMPLER BLOWS PER 6" 0-6	6-12	12-18	18-24	DEPTH	STRATA & TEST DATA
										[ADVANCED BY AUGER - NO SAMPLING]
									4.5'	REFUSAL AT 4.5' PROBABLE BEDROCK

SAMPLES:
D = SPLIT SPOON
C = 3" SHELBY TUBE
U = 3.5" SHELBY TUBE

SOIL CLASSIFIED BY:
[ ] DRILLER - VISUALLY
[X] SOIL TECH. - VISUALLY
[ ] LABORATORY TEST

REMARKS: APPROXIMATELY 12-INCHES FROST PRESENT AT TIME OF DRILLING

STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES AND THE TRANSITION MAY BE GRADUAL.

2

BORING NO.: **B-101**

S.W.COLE ENGINEERING, INC.

BORING LOG

BORING NO.: **B-102**
SHEET: 1 OF 1
PROJECT NO.: 12-0103

PROJECT: PROPOSED BUILDING #7 RENOVATIONS AND ADDITIONS
CLIENT : MARTIN'S POINT HEALTHCARE
LOCATION: PORTLAND, MAINE
DRILLING FIRM: GREAT WORKS TEST BORING, INC. DRILLER: JEFF LEE

DATE START: 2/17/2012
DATE FINISH: 2/17/2012
ELEVATION: 35' +/-
SWC REP.: K. GIMPEL

	TYPE	SIZE	HAMMER WT.	HAMMER FALL
CASING:	HW	4" I.D.		
SAMPLER:	SS	1 3/8" I.D.	140-lb	30"
CORE BARREL:	NQ	2" I.D.		

WATER LEVEL INFORMATION
WATER AT GROUND SURFACE AFTER CASING EXTRACTED (RESIDUAL WASH WATER)

CASING BLOWS PER FOOT	SAMPLE NO.	SAMPLE PEN.	SAMPLE REC.	SAMPLE DEPTH @ BOT	SAMPLER BLOWS PER 6" 0-6	6-12	12-18	18-24	DEPTH	STRATA & TEST DATA
SSA									0.1'	2-INCHES ASPHALT PAVEMENT
										BROWN SILTY SAND AND GRAVEL
	1D	24"	16"	3.0'	7	9	8	9		WITH ASH (FILL)
	2D	9"	1"	3.8'	12	50/3"			3.5'	
									4.0'	PROBABLE WEATHERED BEDROCK
										BEDROCK
										[SEE ROCK CORE LOG]
	1R	60"	60"	9.0'					9.0'	RQD = 22 %
										BOTTOM OF EXPLORATION AT 9.0'

SAMPLES:
D = SPLIT SPOON
C = 3" SHELBY TUBE
U = 3.5" SHELBY TUBE

SOIL CLASSIFIED BY:
[ ] DRILLER - VISUALLY
[X] SOIL TECH. - VISUALLY
[ ] LABORATORY TEST

REMARKS: APPROXIMATELY 12-INCHES FROST PRESENT AT TIME OF DRILLING

STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES AND THE TRANSITION MAY BE GRADUAL.

3

BORING NO.: **B-102**

S.W.COLE ENGINEERING, INC.

BORING LOG

BORING NO.: **B-103**
SHEET: 1 OF 1
PROJECT NO.: 12-0103

PROJECT: PROPOSED BUILDING #7 RENOVATIONS AND ADDITIONS
CLIENT : MARTIN'S POINT HEALTHCARE
LOCATION: PORTLAND, MAINE
DRILLING FIRM: GREAT WORKS TEST BORING, INC. DRILLER: JEFF LEE

DATE START: 2/17/2012
DATE FINISH: 2/17/2012
ELEVATION: 35' +/-
SWC REP.: K. GIMPEL

	TYPE	SIZE	HAMMER WT.	HAMMER FALL
CASING:	SSA	4" O.D.		
SAMPLER:	SS	1 3/8" I.D.	140-lb	30"
CORE BARREL:	N/A			

WATER LEVEL INFORMATION
WATER MEASURED AT 7.3' +/-
IN OPEN HOLE AFTER DRILLING

CASING BLOWS PER FOOT	SAMPLE NO.	PEN.	REC.	DEPTH @ BOT	SAMPLER BLOWS PER 6" 0-6	6-12	12-18	18-24	DEPTH	STRATA & TEST DATA
									0.1'	2-INCHES ASPHALT PAVEMENT
										BROWN SILTY SAND SOME GRAVEL
	1D	24"	18"	2.5'	24	10	7	9	2.3'	WITH ASH AND COAL FRAGMENTS (FILL)
										BROWN SAND SOME SILT TRACE GRAVEL
	2D	24"	20"	4.5'	13	33	27	27	5.0'	~MEDIUM DENSE~
										BROWN SILTY GRAVELLY SAND (TILL)
	3D	24"	17"	7.0'	23	25	25	41		w = 9.9 %
										~DENSE~
	4D	3"	2"	10.2'	50/3"				10.2'	
										REFUSAL AT 10.2'
										PROBABLE BEDROCK

SAMPLES:
D = SPLIT SPOON
C = 3" SHELBY TUBE
U = 3.5" SHELBY TUBE

SOIL CLASSIFIED BY:
[ ] DRILLER - VISUALLY
[X] SOIL TECH. - VISUALLY
[X] LABORATORY TEST

REMARKS: APPROXIMATELY 12-INCHES FROST PRESENT AT TIME OF DRILLING

STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES AND THE TRANSITION MAY BE GRADUAL.

4

BORING NO.: **B-103**

S.W.COLE ENGINEERING, INC.

BORING LOG

BORING NO.: **B-104**
SHEET: 1 OF 1
PROJECT NO.: 12-0103

PROJECT: PROPOSED BUILDING #7 RENOVATIONS AND ADDITIONS
CLIENT : MARTIN'S POINT HEALTHCARE
LOCATION: PORTLAND, MAINE
DRILLING FIRM: GREAT WORKS TEST BORING, INC. DRILLER: JEFF LEE

DATE START: 2/17/2012
DATE FINISH: 2/17/2012
ELEVATION: 34' +/-
SWC REP.: K. GIMPEL

	TYPE	SIZE	HAMMER WT.	HAMMER FALL
CASING:	SSA	4" O.D.		
SAMPLER:	SS	1 3/8" I.D.	140-lb	30"
CORE BARREL:	N/A			

WATER LEVEL INFORMATION
WATER MEASURED AT 6' +/-
IN OPEN HOLE AFTER DRILLING

CASING BLOWS PER FOOT	SAMPLE NO.	SAMPLE PEN.	SAMPLE REC.	SAMPLE DEPTH @ BOT	SAMPLER BLOWS PER 6" 0-6	6-12	12-18	18-24	DEPTH	STRATA & TEST DATA
									0.1'	DARK BROWN SANDY SILT WITH ORGANICS
									1.0'	BROWN GRAVELLY SAND SOME SILT (FILL)
	1D	24"	17"	3.0'	3	3	4	13	2.5'	~LOOSE~ BROWN SAND SOME SILT
										BROWN SILTY SAND TRACE TO SOME GRAVEL (TILL)
										~MEDIUM DENSE TO DENSE~
	2D	24"	18"	7.0'	8	16	16	23		
									7.5'	
										REFUSAL AT 7.5'
										PROBABLE BEDROCK

SAMPLES:
D = SPLIT SPOON
C = 3" SHELBY TUBE
U = 3.5" SHELBY TUBE

SOIL CLASSIFIED BY:
[ ] DRILLER - VISUALLY
[X] SOIL TECH. - VISUALLY
[ ] LABORATORY TEST

REMARKS: APPROXIMATELY 12-INCHES FROST PRESENT AT TIME OF DRILLING

STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES AND THE TRANSITION MAY BE GRADUAL.

5

BORING NO.: **B-104**

S.W.COLE ENGINEERING, INC.

BORING LOG

BORING NO.: **B-105**
SHEET: 1 OF 1
PROJECT NO.: 12-0103

PROJECT: PROPOSED BUILDING #7 RENOVATIONS AND ADDITIONS
CLIENT : MARTIN'S POINT HEALTHCARE
LOCATION: PORTLAND, MAINE
DRILLING FIRM: GREAT WORKS TEST BORING, INC. DRILLER: JEFF LEE

DATE START: 2/17/2012
DATE FINISH: 2/17/2012
ELEVATION: 33' +/-
SWC REP.: K. GIMPEL

	TYPE	SIZE	HAMMER WT.	HAMMER FALL
CASING:	SSA	4" O.D.		
SAMPLER:	SS	1 3/8" I.D.	140-lb	30"
CORE BARREL:	N/A			

WATER LEVEL INFORMATION
NO FREEWATER OBSERVED
SOILS APPEARED SATURATED BELOW 6.5' +/-

CASING BLOWS PER FOOT	SAMPLE NO.	PEN.	REC.	DEPTH @ BOT	SAMPLER BLOWS PER 6" 0-6	6-12	12-18	18-24	DEPTH	STRATA & TEST DATA
									0.1'	2-INCHES ASPHALT PAVEMENT
										BROWN GRAVELLY SILTY SAND (FILL)
	1D	24"	19"	3.0'	9	7	5	4	2.5'	~ MEDIUM DENSE ~
										BROWN SAND SOME SILT
	2D	24"	12"	5.0'	3	4	5	5	5.0'	~LOOSE~
	3D	18"	12"	6.5'	25	30	21	25/0"		BROWN SILTY SAND SOME GRAVEL
										WITH COBBLES (TILL)
										~DENSE~
									9.3'	
										REFUSAL AT 9.3'
										PROBABLE BEDROCK

SAMPLES:
D = SPLIT SPOON
C = 3" SHELBY TUBE
U = 3.5" SHELBY TUBE

SOIL CLASSIFIED BY:
[ ] DRILLER - VISUALLY
[X] SOIL TECH. - VISUALLY
[ ] LABORATORY TEST

REMARKS: APPROXIMATELY 12-INCHES FROST PRESENT AT TIME OF DRILLING

STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES AND THE TRANSITION MAY BE GRADUAL.

6

BORING NO.: **B-105**

S.W.COLE ENGINEERING, INC.

BORING LOG

BORING NO.: **B-106**
SHEET: 1 OF 1
PROJECT NO.: 12-0103

PROJECT: PROPOSED BUILDING #7 RENOVATIONS AND ADDITIONS
CLIENT : MARTIN'S POINT HEALTHCARE
LOCATION: PORTLAND, MAINE
DRILLING FIRM: GREAT WORKS TEST BORING, INC. DRILLER: JEFF LEE

DATE START: 2/17/2012
DATE FINISH: 2/17/2012
ELEVATION: 32.5' +/-
SWC REP.: K. GIMPEL

	TYPE	SIZE	HAMMER WT.	HAMMER FALL
CASING:	SSA	4" O.D.		
SAMPLER:	SS	1 3/8" I.D.	140-lb	30"
CORE BARREL:	N/A			

WATER LEVEL INFORMATION
NO FREEWATER OBSERVED
SOILS APPEARED SATURATED BELOW 6.5' +/-

CASING BLOWS PER FOOT	SAMPLE NO.	SAMPLE PEN.	SAMPLE REC.	SAMPLE DEPTH @ BOT	SAMPLER BLOWS PER 6" 0-6	6-12	12-18	18-24	DEPTH	STRATA & TEST DATA
									0.1'	1.5-INCHES ASPHALT PAVEMENT
									1.2'	BROWN GRAVELLY SAND SOME SILT (FILL)
	1D	24"	12"	3.0'	8	12	16	12	2.9'	BROWN SILTY SAND SOME GRAVEL (FILL)
										BROWN SAND SOME SILT
										~MEDIUM DENSE~
									6.0'	
	2D	24"	16"	7.0'	14	20	26	28		BROWN SILTY SAND TRACE GRAVEL (TILL)
										~DENSE~
									9.0'	
									10.0'	PROBABLE WEATHERED BEDROCK
										REFUSAL AT 10.0'
										PROBABLE BEDROCK

SAMPLES:
D = SPLIT SPOON
C = 3" SHELBY TUBE
U = 3.5" SHELBY TUBE

SOIL CLASSIFIED BY:
[ ] DRILLER - VISUALLY
[X] SOIL TECH. - VISUALLY
[ ] LABORATORY TEST

REMARKS: APPROXIMATELY 12-INCHES FROST PRESENT AT TIME OF DRILLING

STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES AND THE TRANSITION MAY BE GRADUAL.

7

BORING NO.: **B-106**

S.W.COLE ENGINEERING, INC.

BORING LOG

BORING NO.: **B-107**
SHEET: 1 OF 1
PROJECT NO.: 12-0103

PROJECT: PROPOSED BUILDING #7 RENOVATIONS AND ADDITIONS
CLIENT : MARTIN'S POINT HEALTHCARE
LOCATION: PORTLAND, MAINE
DRILLING FIRM: GREAT WORKS TEST BORING, INC. DRILLER: JEFF LEE

DATE START: 2/17/2012
DATE FINISH: 2/17/2012
ELEVATION: 32' +/-
SWC REP.: K. GIMPEL

	TYPE	SIZE	HAMMER WT.	HAMMER FALL
CASING:	SSA	4" O.D.		
SAMPLER:	SS	1 3/8" I.D.	140-lb	30"
CORE BARREL:	N/A			

WATER LEVEL INFORMATION
NO FREE WATER OBSERVED

CASING BLOWS PER FOOT	SAMPLE NO.	SAMPLE PEN.	SAMPLE REC.	SAMPLE DEPTH @ BOT	SAMPLER BLOWS PER 6" 0-6	6-12	12-18	18-24	DEPTH	STRATA & TEST DATA
	1D	12"	8"	1.0'	6	31			0.3'	DARK BROWN ORGANICS AND SILTY SAND (FILL)
										BROWN SILTY SAND SOME GRAVEL SOME ASH (FILL)
	2D	24"	6"	3.0'	3	4	4	4	2.5'	
										BROWN SAND SOME SILT TRACE GRAVEL
										~LOOSE TO MEDIUM DENSE~
	3D	24"	18"	7.0'	7	16	31	45	6.5'	
										w = 6.5 %
										BROWN GRAVELLY SAND SOME SILT (TILL)
										~DENSE~
										[ADVANCED BY AUGER]
									12.0'	
										REFUSAL AT 12.0'
										PROBABLE BEDROCK

SAMPLES:
D = SPLIT SPOON
C = 3" SHELBY TUBE
U = 3.5" SHELBY TUBE

SOIL CLASSIFIED BY:
[ ] DRILLER - VISUALLY
[X] SOIL TECH. - VISUALLY
[X] LABORATORY TEST

REMARKS: APPROXIMATELY 12-INCHES FROST PRESENT AT TIME OF DRILLING

STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES AND THE TRANSITION MAY BE GRADUAL.

8

BORING NO.: **B-107**

S.W.COLE ENGINEERING, INC.

BORING LOG

BORING NO.: **B-108**
SHEET: 1 OF 1
PROJECT NO.: 12-0103

PROJECT: PROPOSED BUILDING #7 RENOVATIONS AND ADDITIONS
CLIENT : MARTIN'S POINT HEALTHCARE
LOCATION: PORTLAND, MAINE
DRILLING FIRM: GREAT WORKS TEST BORING, INC. DRILLER: JEFF LEE

DATE START: 2/17/2012
DATE FINISH: 2/17/2012
ELEVATION: 31.5' +/-
SWC REP.: K. GIMPEL

	TYPE	SIZE	HAMMER WT.	HAMMER FALL
CASING:	HW	4" I.D.		
SAMPLER:	SS	1 3/8" I.D.	140-lb	30"
CORE BARREL:	NQ	2" I.D.		

WATER LEVEL INFORMATION
WATER MEASURED AT 4.7' +/-
IN OPEN HOLE AFTER CASING EXTRACTED

CASING BLOWS PER FOOT	SAMPLE NO.	SAMPLE PEN.	SAMPLE REC.	SAMPLE DEPTH @ BOT	SAMPLER BLOWS PER 6" 0-6	6-12	12-18	18-24	DEPTH	STRATA & TEST DATA
SSA	1D	12"	12"	1.0'	21	50				DARK BROWN SILTY SAND SOME GRAVEL WITH BRICKS AND OCCASIONAL COBBLES (FILL)
	2D	24"	14"	5.0'	4	5	7	7	4.5'	
									6.0'	~LOOSE~ BROWN SAND SOME SILT TRACE GRAVEL
	3D	22"	18"	6.8'	6	6	7	50/4"	6.5'	~MEDIUM DENSE~ BROWN SILTY SAND SOME GRAVEL (TILL)
									8.0'	PROBABLE WEATHERED BEDROCK
										BEDROCK [SEE ROCK CORE LOG]
	1R	60"	30"	13.0'					13.0'	RQD = 0 %
										BOTTOM OF EXPLORATION AT 13.0'

SAMPLES:
D = SPLIT SPOON
C = 3" SHELBY TUBE
U = 3.5" SHELBY TUBE

SOIL CLASSIFIED BY:
[ ] DRILLER - VISUALLY
[X] SOIL TECH. - VISUALLY
[ ] LABORATORY TEST

REMARKS: APPROXIMATELY 12-INCHES FROST PRESENT AT TIME OF DRILLING

STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES AND THE TRANSITION MAY BE GRADUAL.

9

BORING NO.: **B-108**

S.W.COLE ENGINEERING, INC.

BORING LOG

BORING NO.: **B-109**
SHEET: 1 OF 1
PROJECT NO.: 12-0103

PROJECT: PROPOSED BUILDING #7 RENOVATIONS AND ADDITIONS
CLIENT : MARTIN'S POINT HEALTHCARE
LOCATION: PORTLAND, MAINE
DRILLING FIRM: GREAT WORKS TEST BORING, INC. DRILLER: JEFF LEE

DATE START: 2/17/2012
DATE FINISH: 2/17/2012
ELEVATION: 30.5' +/-
SWC REP.: K. GIMPEL

	TYPE	SIZE	HAMMER WT.	HAMMER FALL
CASING:	SSA	4" O.D.		
SAMPLER:	SS	1 3/8" I.D.	140-lb	30"
CORE BARREL:	N/A			

WATER LEVEL INFORMATION
NO FREE WATER OBSERVED

CASING BLOWS PER FOOT	SAMPLE NO.	SAMPLE PEN.	SAMPLE REC.	SAMPLE DEPTH @ BOT	SAMPLER BLOWS PER 6" 0-6	6-12	12-18	18-24	DEPTH	STRATA & TEST DATA
									1.0'	BROWN GRAVELLY SAND WITH COBBLES (FILL)
	1D	5"	1"	1.4'	50/5"					BOULDER FROM 1' TO 4.5' (POSSIBLE RELIC BLAST ROCK FILL) [ADVANCED BY AUGER]
									4.5'	
										BROWN SILTY SAND TRACE TO SOME GRAVEL (POSSIBLE TILL FILL)
	2D	24"	10"	7.0'	4	3	4	6	6.8'	~LOOSE~
										DARK BROWN SILTY SAND WITH ORGANICS (POSSIBLE RELIC GROUND SURFACE/FILL)
									9.5'	~LOOSE~
										REFUSAL AT 9.5'
										PROBABLE BEDROCK

SAMPLES:
D = SPLIT SPOON
C = 3" SHELBY TUBE
U = 3.5" SHELBY TUBE

SOIL CLASSIFIED BY:
[ ] DRILLER - VISUALLY
[X] SOIL TECH. - VISUALLY
[ ] LABORATORY TEST

REMARKS: APPROXIMATELY 12-INCHES FROST PRESENT AT TIME OF DRILLING

STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES AND THE TRANSITION MAY BE GRADUAL.

10

BORING NO.: **B-109**

S.W.COLE ENGINEERING, INC.

BORING LOG

BORING NO.: **B-110**
SHEET: 1 OF 1
PROJECT NO.: 12-0103

PROJECT: PROPOSED BUILDING #7 RENOVATIONS AND ADDITIONS
CLIENT : MARTIN'S POINT HEALTHCARE
LOCATION: PORTLAND, MAINE
DRILLING FIRM: GREAT WORKS TEST BORING, INC. DRILLER: JEFF LEE

DATE START: 2/17/2012
DATE FINISH: 2/17/2012
ELEVATION: 25.5' +/-
SWC REP.: K. GIMPEL

	TYPE	SIZE	HAMMER WT.	HAMMER FALL
CASING:	SSA	4" O.D.		
SAMPLER:	SS	1 3/8" I.D.	140-lb	30"
CORE BARREL:	N/A			

WATER LEVEL INFORMATION
NO FREEWATER OBSERVED

CASING BLOWS PER FOOT	SAMPLE NO.	SAMPLE PEN.	SAMPLE REC.	SAMPLE DEPTH @ BOT	SAMPLER BLOWS PER 6" 0-6	6-12	12-18	18-24	DEPTH	STRATA & TEST DATA
										BROWN GRAVELLY SILTY SAND WITH ORGANICS (FILL)
										~LOOSE~
	1D	24"	16"	3.0'	2	3	4	17	2.9'	
									3.5'	PROBABLE WEATHERED BEDROCK
										REFUSAL AT 3.5'
										PROBABLE BEDROCK

SAMPLES:
D = SPLIT SPOON
C = 3" SHELBY TUBE
U = 3.5" SHELBY TUBE

SOIL CLASSIFIED BY:
[ ] DRILLER - VISUALLY
[X] SOIL TECH. - VISUALLY
[ ] LABORATORY TEST

REMARKS: APPROXIMATELY 12-INCHES FROST PRESENT AT TIME OF DRILLING

STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES AND THE TRANSITION MAY BE GRADUAL.

11

BORING NO.: **B-110**

S.W.COLE ENGINEERING, INC.

BORING LOG

BORING NO.: **B-111**
SHEET: 1 OF 1
PROJECT NO.: 12-0103

PROJECT: PROPOSED BUILDING #7 RENOVATIONS AND ADDITIONS
CLIENT : MARTIN'S POINT HEALTHCARE
LOCATION: PORTLAND, MAINE
DRILLING FIRM: GREAT WORKS TEST BORING, INC. DRILLER: JEFF LEE

DATE START: 2/17/2012
DATE FINISH: 2/17/2012
ELEVATION: 29' +/-
SWC REP.: K. GIMPEL

	TYPE	SIZE	HAMMER WT.	HAMMER FALL
CASING:	SSA	4" O.D.		
SAMPLER:	N/A			
CORE BARREL:	N/A			

WATER LEVEL INFORMATION
NO FREEWATER OBSERVED

CASING BLOWS PER FOOT	SAMPLE NO.	SAMPLE PEN.	SAMPLE REC.	SAMPLE DEPTH @ BOT	SAMPLER BLOWS PER 6" 0-6	6-12	12-18	18-24	DEPTH	STRATA & TEST DATA
									0.5'	BROWN SILTY SAND WITH ORGANICS (FILL)
									1.0'	PROBABLE WEATHERED BEDROCK
										BOTTOM OF EXPLORATION AT 1.0'
										PROBABLE BEDROCK

SAMPLES:
D = SPLIT SPOON
C = 3" SHELBY TUBE
U = 3.5" SHELBY TUBE

SOIL CLASSIFIED BY:
[ ] DRILLER - VISUALLY
[X] SOIL TECH. - VISUALLY
[ ] LABORATORY TEST

REMARKS: APPROXIMATELY 12-INCHES FROST PRESENT AT TIME OF DRILLING

STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES AND THE TRANSITION MAY BE GRADUAL.

12

BORING NO.: **B-111**

S.W.COLE ENGINEERING, INC.

BORING LOG

BORING NO.: **B-112**
SHEET: 1 OF 1
PROJECT NO.: 12-0103

PROJECT: PROPOSED BUILDING #7 RENOVATIONS AND ADDITIONS
CLIENT : MARTIN'S POINT HEALTHCARE
LOCATION: PORTLAND, MAINE
DRILLING FIRM: GREAT WORKS TEST BORING, INC. DRILLER: JEFF LEE

DATE START: 2/17/2012
DATE FINISH: 2/17/2012
ELEVATION: 38.5' +/-
SWC REP.: K. GIMPEL

	TYPE	SIZE	HAMMER WT.	HAMMER FALL
CASING:	SSA	4" O.D.		
SAMPLER:	SS	1 3/8" I.D.	140-lb	30"
CORE BARREL:	N/A			

WATER LEVEL INFORMATION
NO FREE WATER OBSERVED

CASING BLOWS PER FOOT	SAMPLE NO.	SAMPLE PEN.	SAMPLE REC.	SAMPLE DEPTH @ BOT	SAMPLER BLOWS PER 6" 0-6	6-12	12-18	18-24	DEPTH	STRATA & TEST DATA
									0.1'	2-INCHES ASPHALT PAVEMENT
									1.0'	PROBABLE GRAVELLY SILTY SAND (FILL)
	1D	24"	12"	3.0'	22	11	9	25	2.5'	BROWN SILTY SAND WITH ASH AND COAL FRAGMENTS (FILL)
									3.5'	PROBABLE SILTY SAND SOME GRAVEL (TILL)
										REFUSAL AT 3.5'
										PROBABLE BEDROCK

SAMPLES:
D = SPLIT SPOON
C = 3" SHELBY TUBE
U = 3.5" SHELBY TUBE

SOIL CLASSIFIED BY:
[ ] DRILLER - VISUALLY
[X] SOIL TECH. - VISUALLY
[ ] LABORATORY TEST

REMARKS: APPROXIMATELY 12-INCHES FROST PRESENT AT TIME OF DRILLING

STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES AND THE TRANSITION MAY BE GRADUAL.

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BORING NO.: **B-112**

S.W.COLE ENGINEERING, INC.

ROCK CORE LOG

PROJECT: PROPOSED BUILDING #7 RENOVATIONS AND ADDITIONS - PORTLAND, ME
BORING NO.: B-102
CLIENT: MARTIN'S POINT HEALTHCARE
PROJECT NO.: 12-0103

LOGGED BY K. GIMPEL DATE: 2/20/2012 SHEET 1 OF 1
CHECKED BY G. BUCKLIIN DATE: 2/20/2012 CORE SIZE NQ - 2"

DEPTH BELOW SURFACE (FT)	CORE RUN	CORE INTERVAL (FT)	CORE RECOVERY (FT)	RQD (%)	ROCK QUALITY	GRAPHIC LOG	ROCK DESCRIPTION AND IDENTIFICATION
4.0'	1R	5.0	5.0	1.1 / 5.0 22%	VERY POOR		LIGHT GRAY PHYLLITE WITH CALCITE VEINS AND TRACE PYRITE HARD, SLIGHTLY WEATHERED AND HIGHLY FRACTURED FRACTURE ANGLES FROM 10° TO 60° FROM HORIZONTAL
9.0'							BOTTOM OF EXPLORATION AT 9.0'

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S.W.COLE ENGINEERING, INC.

ROCK CORE LOG

PROJECT: PROPOSED BUILDING #7 RENOVATIONS AND ADDITIONS - PORTLAND, ME
BORING NO.: B-108
CLIENT: MARTIN'S POINT HEALTHCARE
PROJECT NO.: 12-0103

LOGGED BY K. GIMPEL DATE: 2/20/2012 SHEET 1 OF 1
CHECKED BY G. BUCKLIIN DATE: 2/20/2012 CORE SIZE NQ - 2"

DEPTH BELOW SURFACE (FT)	CORE RUN	CORE INTERVAL (FT)	CORE RECOVERY (FT)	RQD (%)	ROCK QUALITY	GRAPHIC LOG	ROCK DESCRIPTION AND IDENTIFICATION
8.0'							LIGHT GRAY PHYLLITE WITH CALCITE VEINS AND TRACE PYRITE HARD, SLIGHTLY WEATHERED AND HIGHLY FRACTURED FRACTURE ANGLES FROM 10° TO 60° FROM HORIZONTAL
	1R	5.0	2.5	0 / 5.0 0%	VERY POOR		ZONE OF NO RECOVERY
13.0'							BOTTOM OF EXPLORATION AT 13.0'

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S.W.COLE ENGINEERING, INC.

TEST PIT LOG

CLIENT/PROJECT: **MARTIN'S POINT HEALTHCARE /PROPOSED BUILDING #7 RENOVAT. AND ADDIT.**

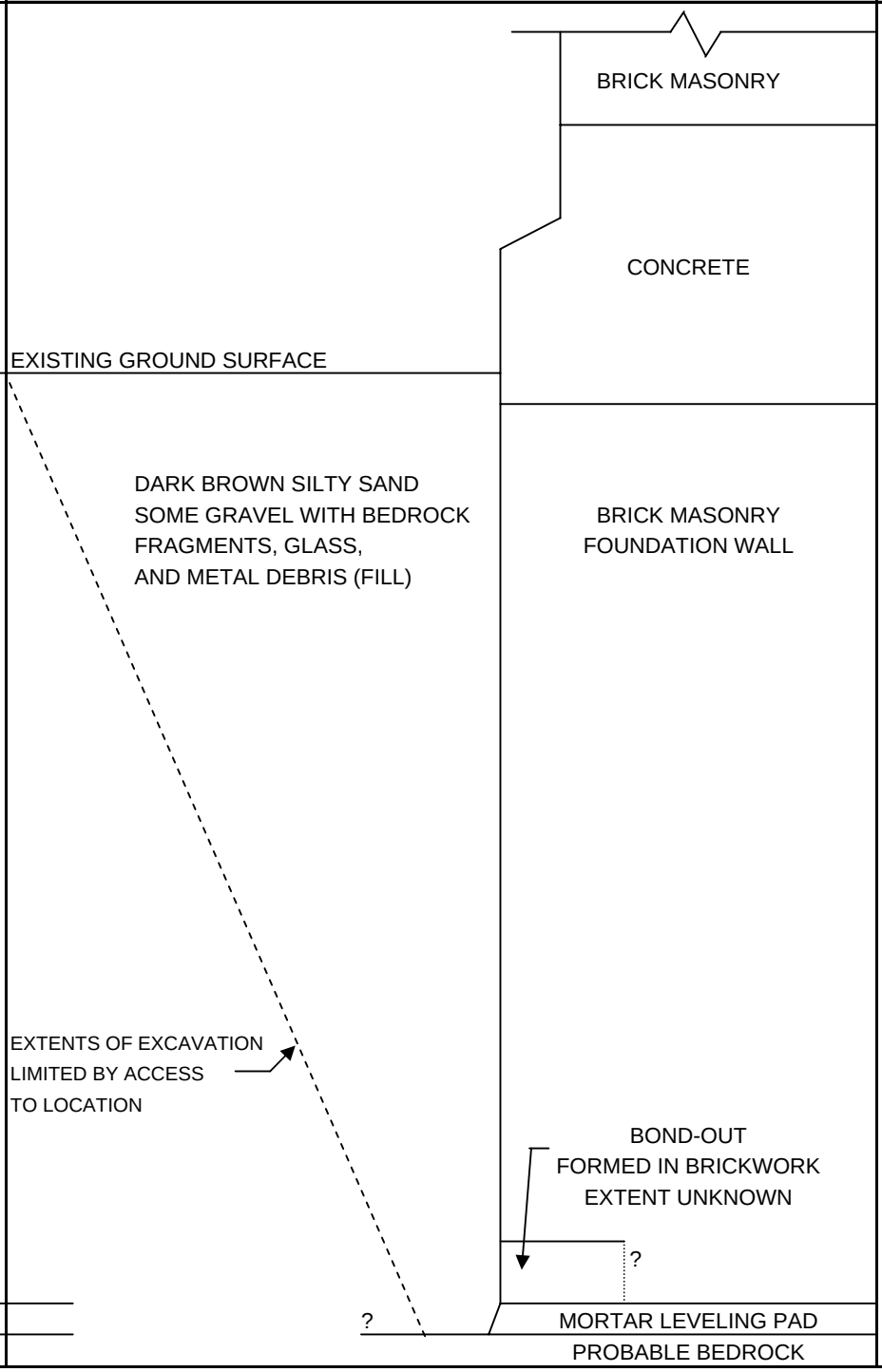
LOCATION: **MARTIN'S POINT HEALTHCARE CAMPUS, VERANDA STREET, PORTLAND, MAINE**

PROJECT NO. 12-0103

TEST PIT TP-101

DATE: 02/17/12 SURFACE ELEVATION: 35' +/- LOCATION: SEE SHEET 1

SAMPLE NO.	SAMPLE DEPTH	DEPTH (FT)	STRATUM DESCRIPTION	TEST RESULTS
		0.0'	EXISTING GROUND SURFACE	
		1.0	DARK BROWN SILTY SAND SOME GRAVEL WITH BEDROCK FRAGMENTS, GLASS, AND METAL DEBRIS (FILL)	
		2.0		
		3.0		
		4.0	EXTENTS OF EXCAVATION LIMITED BY ACCESS TO LOCATION	
		5.0		
		5.2	PROBABLE BEDROCK	



COMPLETION DEPTH: 5.2' DEPTH TO WATER: SOILS MOIST / SEEPAGE @ 5'

S.W.COLE ENGINEERING, INC.

TEST PIT LOG

CLIENT/PROJECT: **MARTIN'S POINT HEALTHCARE /PROPOSED BUILDING #7 RENOVAT. AND ADDIT.**

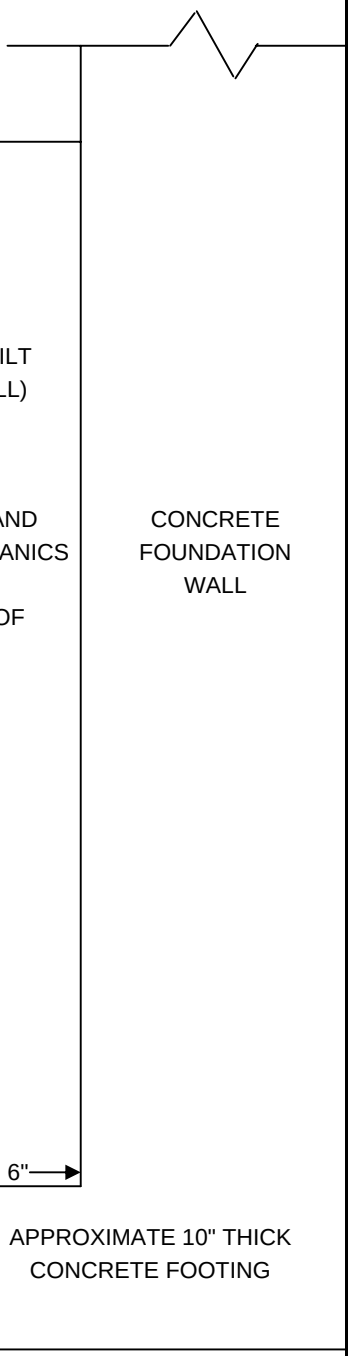
LOCATION: **MARTIN'S POINT HEALTHCARE CAMPUS, VERANDA STREET, PORTLAND, MAINE**

PROJECT NO. 12-0103

TEST PIT TP-102

DATE: 02/17/12 SURFACE ELEVATION: 29.5' +/- LOCATION: SEE SHEET 1

SAMPLE NO.	SAMPLE DEPTH	DEPTH (FT)	STRATUM DESCRIPTION	TEST RESULTS
		0.0	EXISTING GROUND SURFACE	
		1.0	BROWN SAND SOME SILT AND GRAVEL (BACKFILL) ~ LOOSE ~	
		2.0	TRANSITIONING TO DARK BROWN SILTY SAND SOME GRAVEL WITH ORGANICS (FILL) AT LATERAL EXTENT OF TEST PIT	
		3.0		
		4.0		
		5.0		
		6.0		
		6.2	? PROBABLE BEDROCK (VARIES)	



COMPLETION DEPTH: 6.2' DEPTH TO WATER: SOILS MOIST

S.W.COLE ENGINEERING, INC.

TEST PIT LOG

CLIENT/PROJECT: **MARTIN'S POINT HEALTHCARE /PROPOSED BUILDING #7 RENOVAT. AND ADDIT.**

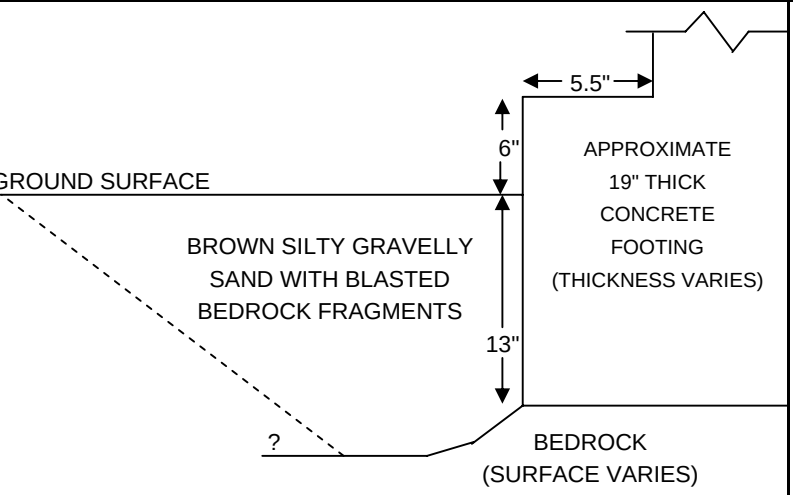
LOCATION: **MARTIN'S POINT HEALTHCARE CAMPUS, VERANDA STREET, PORTLAND, MAINE**

PROJECT NO. 12-0103

TEST PIT TP-103

DATE: 02/17/12 SURFACE ELEVATION: 27' +/- LOCATION: SEE SHEET 1

SAMPLE NO.	SAMPLE DEPTH	DEPTH (FT)	STRATUM DESCRIPTION	TEST RESULTS
		0.0	EXISTING GROUND SURFACE	
		1.0	BROWN SILTY GRAVELLY SAND WITH BLASTED BEDROCK FRAGMENTS	
		1.3	? BEDROCK (SURFACE VARIES)	
		2.0		
		3.0		
		4.0		
		5.0		
		6.0		



COMPLETION DEPTH: 1.3' DEPTH TO WATER: NO FREE WATER OBSERVED

S.W.COLE ENGINEERING, INC.

TEST PIT LOG

CLIENT/PROJECT: **MARTIN'S POINT HEALTHCARE /PROPOSED BUILDING #7 RENOVAT. AND ADDIT.**

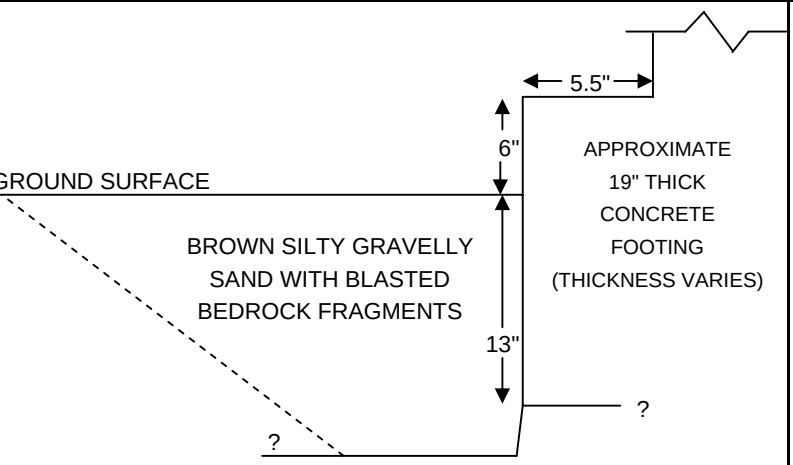
LOCATION: **MARTIN'S POINT HEALTHCARE CAMPUS, VERANDA STREET, PORTLAND, MAINE**

PROJECT NO. 12-0103

TEST PIT TP-104

DATE: 02/17/12 SURFACE ELEVATION: 27' +/- LOCATION: SEE SHEET 1

SAMPLE NO.	SAMPLE DEPTH	DEPTH (FT)	STRATUM DESCRIPTION	TEST RESULTS
		0.0	EXISTING GROUND SURFACE	
		1.0	BROWN SILTY GRAVELLY SAND WITH BLASTED BEDROCK FRAGMENTS	
		1.3	BROWN SILTY SANDY GRAVEL WITH BLASTED BEDROCK FRAGMENTS (BLASTED TRENCH BACKFILL EXTENDING BENEATH FOOTING - EXTENTS UNKNOWN)	
		2.0		
		3.0		
		4.0		
		5.0		
		6.0		



COMPLETION DEPTH: 1.3' DEPTH TO WATER: NO FREE WATER OBSERVED

S.W.COLE ENGINEERING, INC.

BORING LOG

BORING NO.: **B-1**
SHEET: 1 OF 1
PROJECT NO.: 05-0927 S
DATE START: 11/17/2005
DATE FINISH: 11/17/2005
ELEVATION: 42+/-
SWC REP.: PFK

PROJECT: **PROPOSED OFFICE BUILDING**
CLIENT : **MARTINS POINT HEALTHCARE**
LOCATION: **331 VERANDA STREET PORTLAND, MAINE**
DRILLING FIRM: **GWTB** DRILLER: **JEFF/WILL**

	TYPE	SIZE I.D.	HAMMER WT.	HAMMER FALL
CASING:	HW	4"	300 LB	18"
SAMPLER:	SS	1 3/8"	140 LB	30"
CORE BARREL:				

WATER LEVEL INFORMATION
BLAST SPOIL DRAINED
UNDERLYING SOIL MOIST

CASING BLOWS PER FOOT	SAMPLE NO.	SAMPLE PEN.	SAMPLE REC.	SAMPLE DEPTH @ BOT	SAMPLER BLOWS PER 6" 0-6	6-12	12-18	18-24	DEPTH	STRATA & TEST DATA
HW									2"+/-	ASPHALT PAVEMENT
	S1	24"	10"	2.0'	9	12	15	11	2.0'	DARK BROWN GRAVELLY SAND WITH SOME SILT (FILL)
										BROWN SAND SOME GRAVEL, SOME SILT AND BLAST SPOILS (FILL)
	S2	24"	10"	4.0'	9	7	15	12		~ MEDIUM DENSE ~
									5.0'	AUGER REFUSAL AT 5'+/- INSTALLED CASING TO 5'
									6.0'	WASH AHEAD TO 6' PROBABLE BLAST SPOILS (FILL)
										BLAST SPOIL (FILL)
	S3	24"	12"	8.0'	16	18	23	28	8.0'	
SSA									9.0'	PROBABLE BLAST SPOIL (FILL)
										BROWN SILTY SAND WITH SOME GRAVEL
										(APPEARS TO BE NATIVE SOIL)
									13.5'	
										REFUSAL AT 13.5' (PROBABLE BEDROCK)

SAMPLES:
S = SPLIT SPOON
C = 3" SHELBY TUBE
U = 3.5" SHELBY TUBE

SOIL CLASSIFIED BY:
[X] DRILLER - VISUALLY
[X] SOIL TECH. - VISUALLY
[ ] LABORATORY TEST

REMARKS:
STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES AND THE TRANSITION MAY BE GRADUAL.

2

BORING NO.: **B-1**

S.W.COLE ENGINEERING, INC.

BORING LOG

BORING NO.: **B-2**
SHEET: 1 OF 1
PROJECT NO.: 05-0927 S
DATE START: 11/17/2005
DATE FINISH: 11/17/2005
ELEVATION: 44+/-
SWC REP.: PFK

PROJECT: **PROPOSED OFFICE BUILDING**
CLIENT : **MARTINS POINT HEALTHCARE**
LOCATION: **331 VERANDA STREET PORTLAND, MAINE**
DRILLING FIRM: **GWTB** DRILLER: **JEFF/WILL**

	TYPE	SIZE I.D.	HAMMER WT.	HAMMER FALL
CASING:	HW	4"	300 LB	18"
SAMPLER:	SS	1 3/8"	140 LB	30"
CORE BARREL:				

WATER LEVEL INFORMATION
SOILS MOIST

CASING BLOWS PER FOOT	SAMPLE NO.	SAMPLE PEN.	SAMPLE REC.	SAMPLE DEPTH @ BOT	SAMPLER BLOWS PER 6" 0-6	6-12	12-18	18-24	DEPTH	STRATA & TEST DATA
SSA/HW									2.5"+/-	ASPHALT PAVEMENT
	S1	24"	12"	2.5'	10	15	12	9		BROWN GRAVELLY SAND WITH SOME SILT (FILL) w = 9.5% ~ MEDIUM DENSE ~
									6'+/-	
										BROWN SAND AND SILT WITH SOME GRAVEL (FILL)
									10.5'	~DENSITY~
									12.4'	BROWN SILTY SAND WITH SOME GRAVEL (TILL)
									13.5'	ROLLER CONE 12.4' TO 13.5' PROBABLE ROCK
										ROCK CORE - GRAY SULFIDIC PELITE
	R1	60"	53"	18.5'					18.5'	RQD = 52% FAIR
										BOTTOM OF EXPLORATION AT 18.5'

SAMPLES:
S = SPLIT SPOON
C = 3" SHELBY TUBE
U = 3.5" SHELBY TUBE

SOIL CLASSIFIED BY:
X DRILLER - VISUALLY
X SOIL TECH. - VISUALLY
X LABORATORY TEST

REMARKS:
STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES AND THE TRANSITION MAY BE GRADUAL.

3

BORING NO.: **B-2**

S.W.COLE ENGINEERING, INC.

BORING LOG

BORING NO.: **B-3**
SHEET: 1 OF 1
PROJECT NO.: 05-0927 S
DATE START: 11/17/2005
DATE FINISH: 11/17/2005
ELEVATION: 33.5+/-
SWC REP.: PFK

PROJECT: **PROPOSED OFFICE BUILDING**
CLIENT : **MARTINS POINT HEALTHCARE**
LOCATION: **331 VERANDA STREET PORTLAND, MAINE**
DRILLING FIRM: **GWTB** DRILLER: **JEFF/WILL**

	TYPE	SIZE I.D.	HAMMER WT.	HAMMER FALL
CASING:	HW	4"	300 LB	18"
SAMPLER:	SS	1 3/8"	140 LB	30"
CORE BARREL:				

WATER LEVEL INFORMATION
SOILS MOIST

CASING BLOWS PER FOOT	SAMPLE NO.	PEN.	REC.	DEPTH @ BOT	SAMPLER BLOWS PER 6" 0-6	6-12	12-18	18-24	DEPTH	STRATA & TEST DATA
HW									12"+/-	BLACK ORGANIC TOPSOIL
	S1	24"	6"	2.0'	3	5	5	7		~ LOOSE ~
										BROWN SILTY SAND WITH SOME GRAVEL (TILL)
	S2	24"	16"	4.0'	13	12	10	13		~ MEDIUM DENSE BECOMING ...
	S3	24"	21"	7.0'	9	12	14	21		w = 28.2%
										... DENSE ~
	S4	24"	18"	12.0'	18	29	27	15		w = 33.1%
									15.6'	
	S5	7"	7"	15.6'	7	25/1"			16.5'	ROLLER CONE 15.6' TO 16.5' PROBABLE BEDROCK
										ROCK CORE - GRAY SULFIDIC PELITE
									21.5'	RQD = 62% FAIR
	R1	60"	60"	21.5'						BOTTOM OF EXPLORATION AT 21.5'

SAMPLES:
S = SPLIT SPOON
C = 3" SHELBY TUBE
U = 3.5" SHELBY TUBE

SOIL CLASSIFIED BY:
X DRILLER - VISUALLY
X SOIL TECH. - VISUALLY
X LABORATORY TEST

REMARKS:
STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES AND THE TRANSITION MAY BE GRADUAL.

4

BORING NO.: **B-3**

S.W.COLE ENGINEERING, INC.

BORING LOG

BORING NO.: **B-4**
SHEET: 1 OF 1
PROJECT NO.: 05-0927 S
DATE START: 11/17/2005
DATE FINISH: 11/17/2005
ELEVATION: 33.5+/-
SWC REP.: PFK

PROJECT: **PROPOSED OFFICE BUILDING**
CLIENT : **MARTINS POINT HEALTHCARE**
LOCATION: **331 VERANDA STREET PORTLAND, MAINE**
DRILLING FIRM: **GWTB** DRILLER: **JEFF/WILL**

	TYPE	SIZE I.D.	HAMMER WT.	HAMMER FALL
CASING:	SSA			
SAMPLER:	SS	1 3/8"	140 LB	30"
CORE BARREL:				

WATER LEVEL INFORMATION
SOILS MOIST

CASING BLOWS PER FOOT	SAMPLE NO.	PEN.	REC.	DEPTH @ BOT	SAMPLER BLOWS PER 6" 0-6	6-12	12-18	18-24	DEPTH	STRATA & TEST DATA
									2"+/-	ASPHALT PAVEMENT
	S1	24"	16"	2.0'	1	3	3	3		~ LOOSE ~
										BROWN SILTY SAND WITH SOME GRAVEL (POSSIBLE TILL FILL)
									4'+/-	
										BROWN SILTY SAND WITH SOME GRAVEL (TILL)
	S2	24"	24"	6.5'	17	19	19	40		~ DENSE ~
									11.7'	
	S3	24"	18"	11.5'	17	23	27	29		BOTTOM OF EXPLORATION AT 11.7' - AUGER REFUSAL
										(PROBABLE BEDROCK)

SAMPLES:
S = SPLIT SPOON
C = 3" SHELBY TUBE
U = 3.5" SHELBY TUBE

SOIL CLASSIFIED BY:
[X] DRILLER - VISUALLY
[X] SOIL TECH. - VISUALLY
[ ] LABORATORY TEST

REMARKS:
STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES AND THE TRANSITION MAY BE GRADUAL.

5

BORING NO.: **B-4**

S.W.COLE ENGINEERING, INC.

BORING LOG

BORING NO.: **B-5**
SHEET: 1 OF 1
PROJECT NO.: 05-0927 S
DATE START: 11/17/2005
DATE FINISH: 11/17/2005
ELEVATION: 59+/-
SWC REP.: PFK

PROJECT: **PROPOSED OFFICE BUILDING**
CLIENT : **MARTINS POINT HEALTHCARE**
LOCATION: **331 VERANDA STREET PORTLAND, MAINE**
DRILLING FIRM: **GWTB** DRILLER: **JEFF/WILL**

	TYPE	SIZE I.D.	HAMMER WT.	HAMMER FALL
CASING:	HW	4"	300 LB	18"
SAMPLER:	SS	1 3/8"	140 LB	30"
CORE BARREL:				

WATER LEVEL INFORMATION
SOILS MOIST

CASING BLOWS PER FOOT	SAMPLE NO.	SAMPLE PEN.	SAMPLE REC.	SAMPLE DEPTH @ BOT	SAMPLER BLOWS PER 6" 0-6	6-12	12-18	18-24	DEPTH	STRATA & TEST DATA
HW									1.5"+/-	ASPHALT PAVEMENT
	S1	23"	14"	2.0'	13	13	13	50/5"		BLAST SPOILS WITH SOME SAND
	S2	10"	6"	2.8'	15	45/4"				TRANSITIONING TO MOSTLY BLAST SPOILS (PROBABLE FILL)
									5.4'	
										ROCK CORE - GRAY SULFIDIC PELITE
									10.4'	RQD = 13% VERY POOR
	R1	60"	60"	10.4'						BOTTOM OF EXPLORATION AT 10.4'

NOTE :
BORING NEAR EXISTING UTILITY.
BORING MAY BE WITHIN BLASTED TRENCH AREA.

SAMPLES:
S = SPLIT SPOON
C = 3" SHELBY TUBE
U = 3.5" SHELBY TUBE

SOIL CLASSIFIED BY:
[X] DRILLER - VISUALLY
[X] SOIL TECH. - VISUALLY
[ ] LABORATORY TEST

REMARKS:
STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES AND THE TRANSITION MAY BE GRADUAL.

6

BORING NO.: **B-5**

S.W.COLE ENGINEERING, INC.

BORING LOG

BORING NO.: **B-6**
SHEET: 1 OF 1
PROJECT NO.: 05-0927 S
DATE START: 11/18/2005
DATE FINISH: 11/18/2005
ELEVATION: 40+/-
SWC REP.: MFB

PROJECT: **PROPOSED OFFICE BUILDING**
CLIENT : **MARTINS POINT HEALTHCARE**
LOCATION: **331 VERANDA STREET PORTLAND, MAINE**
DRILLING FIRM: **GWTB** DRILLER: **JEFF/WILL**

	TYPE	SIZE I.D.	HAMMER WT.	HAMMER FALL
CASING:	HSA	4"		
SAMPLER:	SS	1 3/8"	140 LB	30"
CORE BARREL:				

WATER LEVEL INFORMATION
SOILS MOIST

CASING BLOWS PER FOOT	SAMPLE NO.	SAMPLE PEN.	SAMPLE REC.	SAMPLE DEPTH @ BOT	SAMPLER BLOWS PER 6" 0-6	6-12	12-18	18-24	DEPTH	STRATA & TEST DATA
									2"+/-	ASPHALT PAVEMENT
	S1	24"	10"	2.0'	10	12	12	10		~ MEDIUM DENSE ~ DARK BROWN AND BROWN GRAVELLY SAND WITH SOME SILT (FILL)
									4'+/-	
										~ HARD~ BROWN SILTY CLAY (DESSICATED)
	S2	24"	20"	7.0'	8	11	15	20		qp = 9+ ksf
									9'+/-	
										BROWN SILTY SAND WITH SOME GRAVEL (TILL) ~ VERY DENSE ~
	S3	24"	20"	12.0'	32	39	37	28		
									15'+/-	
										PROBABLE WEATHERED ROCK
									19.0'	
										BOTTOM OF EXPLORATION AT 19.0' - AUGER REFUSAL (PROBABLE BEDROCK)

SAMPLES:
S = SPLIT SPOON
C = 3" SHELBY TUBE
U = 3.5" SHELBY TUBE

SOIL CLASSIFIED BY:
[X] DRILLER - VISUALLY
[X] SOIL TECH. - VISUALLY
[ ] LABORATORY TEST

REMARKS:
STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES AND THE TRANSITION MAY BE GRADUAL.

7

BORING NO.: **B-6**

S.W.COLE ENGINEERING, INC.

BORING LOG

BORING NO.: **B-7**
SHEET: 1 OF 1
PROJECT NO.: 05-0927 S
DATE START: 11/18/2005
DATE FINISH: 11/18/2005
ELEVATION: 43+/-
SWC REP.: MFB

PROJECT: **PROPOSED OFFICE BUILDING**
CLIENT : **MARTINS POINT HEALTHCARE**
LOCATION: **331 VERANDA STREET PORTLAND, MAINE**
DRILLING FIRM: **GWTB** DRILLER: **JEFF/WILL**

	TYPE	SIZE I.D.	HAMMER WT.	HAMMER FALL
CASING:	HSA	4"		
SAMPLER:	SS	1 3/8"	140 LB	30"
CORE BARREL:				

WATER LEVEL INFORMATION
SOILS MOIST

CASING BLOWS PER FOOT	SAMPLE NO.	SAMPLE PEN.	SAMPLE REC.	SAMPLE DEPTH @ BOT	SAMPLER BLOWS PER 6" 0-6	6-12	12-18	18-24	DEPTH	STRATA & TEST DATA
									2"+/-	ASPHALT PAVEMENT
	S1	24"	14"	2.0'	9	12	12	13		~ MEDIUM DENSE ~
										BROWN GRAVELLY SAND WITH SOME SILT (FILL)
									4.0'	W = 11.6%
										BOTTOM OF EXPLORATION AT 4.0' - AUGER REFUSAL
										(PROBABLE BEDROCK)

SAMPLES:
S = SPLIT SPOON
C = 3" SHELBY TUBE
U = 3.5" SHELBY TUBE

SOIL CLASSIFIED BY:
X DRILLER - VISUALLY
X SOIL TECH. - VISUALLY
X LABORATORY TEST

REMARKS:
STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES AND THE TRANSITION MAY BE GRADUAL.

8

BORING NO.: **B-7**

S.W.COLE ENGINEERING, INC.

BORING LOG

BORING NO.: **B-8**
SHEET: 1 OF 1
PROJECT NO.: 05-0927 S
DATE START: 11/18/2005
DATE FINISH: 11/18/2005
ELEVATION: 41+/-
SWC REP.: MFB

PROJECT: **PROPOSED OFFICE BUILDING**
CLIENT : **MARTINS POINT HEALTHCARE**
LOCATION: **331 VERANDA STREET PORTLAND, MAINE**
DRILLING FIRM: **GWTB** DRILLER: **JEFF/WILL**

	TYPE	SIZE I.D.	HAMMER WT.	HAMMER FALL
CASING:	HSA	4"		
SAMPLER:	SS	1 3/8"	140 LB	30"
CORE BARREL:				

WATER LEVEL INFORMATION
SOILS MOIST

CASING BLOWS PER FOOT	SAMPLE NO.	SAMPLE PEN.	SAMPLE REC.	SAMPLE DEPTH @ BOT	SAMPLER BLOWS PER 6" 0-6	6-12	12-18	18-24	DEPTH	STRATA & TEST DATA
									2"+/-	ASPHALT PAVEMENT
	S1	24"	12"	2.0'	8	13	16	17		~ MEDIUM DENSE ~
									3.0'	BROWN SAND WITH SOME SILT AND GRAVEL (FILL)
										BROWN SILTY SAND WITH SOME GRAVEL (TILL)
	S2	24"	20"	7.0'	14	17	21	25		~ MEDIUM DENSE TO DENSE ~
	S3	24"	16"	12.0'	15	14	11	21		
									21.0'	BOTTOM OF EXPLORATION AT 21.0' - AUGER REFUSAL
										(PROBABLE BEDROCK)

SAMPLES:
S = SPLIT SPOON
C = 3" SHELBY TUBE
U = 3.5" SHELBY TUBE

SOIL CLASSIFIED BY:
[X] DRILLER - VISUALLY
[X] SOIL TECH. - VISUALLY
[ ] LABORATORY TEST

REMARKS:
STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES AND THE TRANSITION MAY BE GRADUAL.

9

BORING NO.: **B-8**

S.W.COLE ENGINEERING, INC.

BORING LOG

BORING NO.: **B-9**
SHEET: 1 OF 1
PROJECT NO.: 05-0927 S

PROJECT: **PROPOSED OFFICE BUILDING**
CLIENT : **MARTINS POINT HEALTHCARE**
LOCATION: **331 VERANDA STREET PORTLAND, MAINE**
DRILLING FIRM: **GWTB** DRILLER: **JEFF/WILL**

DATE START: 11/18/2005
DATE FINISH: 11/18/2005
ELEVATION: 44+/-
SWC REP.: MFB

	TYPE	SIZE I.D.	HAMMER WT.	HAMMER FALL
CASING:	HSA	4"		
SAMPLER:	SS	1 3/8"	140 LB	30"
CORE BARREL:				

WATER LEVEL INFORMATION
SOILS MOIST

CASING BLOWS PER FOOT	SAMPLE NO.	SAMPLE PEN.	SAMPLE REC.	SAMPLE DEPTH @ BOT	SAMPLER BLOWS PER 6" 0-6	6-12	12-18	18-24	DEPTH	STRATA & TEST DATA
									2"+/-	ASPHALT PAVEMENT
	S1	24"	12"	2.0'	16	20	18	20		~ DENSE ~ BROWN GRAVELLY SAND WITH TRACE SILT (FILL)
	S2	24"	10"	7.0'	8	17	15	14		DARK BROWN SILTY SAND WITH SOME GRAVEL AND ROCK PIECES (POSSIBLE WEATHERED COBBLE) (PROBABLE FILL)
									8'+/-	
	S3	24"	16"	12.0'	11	15	21	33		~ DENSE ~ LIGHT BROWN SILT AND FINE SAND, SOME GRAVEL
									16.1'	
										BOTTOM OF EXPLORATION AT 16.1' - AUGER REFUSAL (PROBABLE BEDROCK)

SAMPLES:
S = SPLIT SPOON
C = 3" SHELBY TUBE
U = 3.5" SHELBY TUBE

SOIL CLASSIFIED BY:
[X] DRILLER - VISUALLY
[X] SOIL TECH. - VISUALLY
[ ] LABORATORY TEST

REMARKS:
STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES AND THE TRANSITION MAY BE GRADUAL.

10

BORING NO.: **B-9**

S.W.COLE ENGINEERING, INC.

BORING LOG

BORING NO.: **B-10**
SHEET: 1 OF 1
PROJECT NO.: 05-0927 S

PROJECT: **PROPOSED OFFICE BUILDING**
CLIENT : **MARTINS POINT HEALTHCARE**
LOCATION: **331 VERANDA STREET PORTLAND, MAINE**
DRILLING FIRM: **GWTB** DRILLER: **JEFF/WILL**

DATE START: 11/18/2005
DATE FINISH: 11/18/2005
ELEVATION: 64+/-
SWC REP.: MFB

	TYPE	SIZE I.D.	HAMMER WT.	HAMMER FALL
CASING:	HSA	4"		
SAMPLER:	SS	1 3/8"	140 LB	30"
CORE BARREL:				

WATER LEVEL INFORMATION
SOILS MOIST

CASING BLOWS PER FOOT	SAMPLE NO.	SAMPLE PEN.	SAMPLE REC.	SAMPLE DEPTH @ BOT	SAMPLER BLOWS PER 6" 0-6	6-12	12-18	18-24	DEPTH	STRATA & TEST DATA
									2"+/-	ASPHALT PAVEMENT
	S1	18"	8"	1.5'	10	36	44		2.75'	~ DENSE ~ DARK BROWN SILTY SAND WITH SOME GRAVEL (FILL)
										BOTTOM OF EXPLORATION AT 2.75' - AUGER REFUSAL (PROBABLE BEDROCK)

SAMPLES:
S = SPLIT SPOON
C = 3" SHELBY TUBE
U = 3.5" SHELBY TUBE

SOIL CLASSIFIED BY:
[X] DRILLER - VISUALLY
[X] SOIL TECH. - VISUALLY
[ ] LABORATORY TEST

REMARKS:
STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES AND THE TRANSITION MAY BE GRADUAL.

11

BORING NO.: **B-10**

S.W.COLE ENGINEERING, INC.

BORING LOG

BORING NO.: **B-11**
SHEET: 1 OF 1
PROJECT NO.: 05-0927 S
DATE START: 11/18/2005
DATE FINISH: 11/18/2005
ELEVATION: 50+/-
SWC REP.: MFB

PROJECT: **PROPOSED OFFICE BUILDING**
CLIENT : **MARTINS POINT HEALTHCARE**
LOCATION: **331 VERANDA STREET PORTLAND, MAINE**
DRILLING FIRM: **GWTB** DRILLER: **JEFF/WILL**

	TYPE	SIZE I.D.	HAMMER WT.	HAMMER FALL
CASING:	HSA	4"		
SAMPLER:	SS	1 3/8"	140 LB	30"
CORE BARREL:				

WATER LEVEL INFORMATION
SOILS MOIST

CASING BLOWS PER FOOT	SAMPLE NO.	SAMPLE PEN.	SAMPLE REC.	SAMPLE DEPTH @ BOT	SAMPLER BLOWS PER 6" 0-6	6-12	12-18	18-24	DEPTH	STRATA & TEST DATA
									6"+/-	DARK BROWN ORGANIC TOPSOIL
	S1	24"	8"	2.0'	1	5	7	6		~ LOOSE TO MEDIUM DENSE ~
										BLAST SPOILS, BRICK PIECES AND SAND (FILL)
									4.7'	
										BOTTOM OF EXPLORATION AT 4.7' - AUGER REFUSAL
										(PROBABLE BEDROCK)

SAMPLES:
S = SPLIT SPOON
C = 3" SHELBY TUBE
U = 3.5" SHELBY TUBE

SOIL CLASSIFIED BY:
[X] DRILLER - VISUALLY
[X] SOIL TECH. - VISUALLY
[ ] LABORATORY TEST

REMARKS:
STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES AND THE TRANSITION MAY BE GRADUAL.

12

BORING NO.: **B-11**

S.W.COLE ENGINEERING, INC.

BORING LOG

BORING NO.: **B-12**
SHEET: 1 OF 1
PROJECT NO.: 05-0927 S

PROJECT: **PROPOSED OFFICE BUILDING**
CLIENT : **MARTINS POINT HEALTHCARE**
LOCATION: **331 VERANDA STREET PORTLAND, MAINE**
DRILLING FIRM: **GWTB** DRILLER: **JEFF/WILL**

DATE START: 11/18/2005
DATE FINISH: 11/18/2005
ELEVATION: 52.5+/-
SWC REP.: MFB

	TYPE	SIZE I.D.	HAMMER WT.	HAMMER FALL
CASING:	HSA	4"		
SAMPLER:	SS	1 3/8"	140 LB	30"
CORE BARREL:				

WATER LEVEL INFORMATION
SOILS MOIST

CASING BLOWS PER FOOT	SAMPLE NO.	SAMPLE PEN.	SAMPLE REC.	SAMPLE DEPTH @ BOT	SAMPLER BLOWS PER 6" 0-6	6-12	12-18	18-24	DEPTH	STRATA & TEST DATA
									12"+/-	DARK BROWN ORGANIC TOPSOIL
	S1	24"	10"	2.0'	3	3	3	5		~ LOOSE ~
										DARK BROWN SAND WITH ORGANICS
									5.0'	
										BOTTOM OF EXPLORATION AT 5.0' - AUGER REFUSAL
										(PROBABLE BEDROCK)

SAMPLES:
S = SPLIT SPOON
C = 3" SHELBY TUBE
U = 3.5" SHELBY TUBE

SOIL CLASSIFIED BY:
[X] DRILLER - VISUALLY
[X] SOIL TECH. - VISUALLY
[ ] LABORATORY TEST

REMARKS:
STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES AND THE TRANSITION MAY BE GRADUAL.

13

BORING NO.: **B-12**

S.W.COLE ENGINEERING, INC.

BORING LOG

BORING NO.: **B-13**
SHEET: 1 OF 1
PROJECT NO.: 05-0927 S
DATE START: 11/18/2005
DATE FINISH: 11/18/2005
ELEVATION: 56.5+/-
SWC REP.: MFB

PROJECT: **PROPOSED OFFICE BUILDING**
CLIENT : **MARTINS POINT HEALTHCARE**
LOCATION: **331 VERANDA STREET PORTLAND, MAINE**
DRILLING FIRM: **GWTB** DRILLER: **JEFF/WILL**

	TYPE	SIZE I.D.	HAMMER WT.	HAMMER FALL
CASING:	HSA	4"		
SAMPLER:	SS	1 3/8"	140 LB	30"
CORE BARREL:				

WATER LEVEL INFORMATION
SOILS MOIST

CASING BLOWS PER FOOT	SAMPLE NO.	SAMPLE PEN.	SAMPLE REC.	SAMPLE DEPTH @ BOT	SAMPLER BLOWS PER 6" 0-6	6-12	12-18	18-24	DEPTH	STRATA & TEST DATA
									2"+/-	ASPHALT PAVEMENT
	S1	24"	8"	2.0'	3	7	5	5	2.5'	~ MED. DENSE ~ DARK BROWN GRAVELLY SILTY SAND W/ROCK PIECES (FILL)
										BOTTOM OF EXPLORATION AT 2.5' - AUGER REFUSAL (PROBABLE BEDROCK)

SAMPLES:
S = SPLIT SPOON
C = 3" SHELBY TUBE
U = 3.5" SHELBY TUBE

SOIL CLASSIFIED BY:
[X] DRILLER - VISUALLY
[X] SOIL TECH. - VISUALLY
[ ] LABORATORY TEST

REMARKS:
STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES AND THE TRANSITION MAY BE GRADUAL.

14

BORING NO.: **B-13**

S.W.COLE ENGINEERING, INC.

BORING LOG

BORING NO.: **B-14**
SHEET: 1 OF 1
PROJECT NO.: 05-0927 S

PROJECT: **PROPOSED OFFICE BUILDING**
CLIENT : **MARTINS POINT HEALTHCARE**
LOCATION: **331 VERANDA STREET PORTLAND, MAINE**
DRILLING FIRM: **GWTB** DRILLER: **JEFF/WILL**

DATE START: 11/18/2005
DATE FINISH: 11/18/2005
ELEVATION: 58+/-
SWC REP.: MFB

	TYPE	SIZE I.D.	HAMMER WT.	HAMMER FALL
CASING:	HSA	4"		
SAMPLER:	SS	1 3/8"	140 LB	30"
CORE BARREL:				

WATER LEVEL INFORMATION
SOILS MOIST

CASING BLOWS PER FOOT	SAMPLE NO.	SAMPLE PEN.	SAMPLE REC.	SAMPLE DEPTH @ BOT	SAMPLER BLOWS PER 6" 0-6	6-12	12-18	18-24	DEPTH	STRATA & TEST DATA
									2"+/-	ASPHALT PAVEMENT
	S1	24"	19"	2.0'	10	9	7	5		~ MEDIUM DENSE ~
										WEATHERED ROCK OR BLAST SPOILS WITH SILTY SAND
										(PROBABLE FILL)
									5.0'	
										BOTTOM OF EXPLORATION AT 5.0' - AUGER REFUSAL
										(PROBABLE BEDROCK)

SAMPLES:
S = SPLIT SPOON
C = 3" SHELBY TUBE
U = 3.5" SHELBY TUBE

SOIL CLASSIFIED BY:
[X] DRILLER - VISUALLY
[X] SOIL TECH. - VISUALLY
[ ] LABORATORY TEST

REMARKS:
STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES AND THE TRANSITION MAY BE GRADUAL.

15

BORING NO.: **B-14**

S.W.COLE ENGINEERING, INC.

BORING LOG

BORING NO.: **B-15**
SHEET: 1 OF 1
PROJECT NO.: 05-0927 S

PROJECT: **PROPOSED OFFICE BUILDING**
CLIENT : **MARTINS POINT HEALTHCARE**
LOCATION: **331 VERANDA STREET PORTLAND, MAINE**
DRILLING FIRM: **GWTB** DRILLER: **JEFF/WILL**

DATE START: 11/18/2005
DATE FINISH: 11/18/2005
ELEVATION: 47+/-
SWC REP.: MFB

	TYPE	SIZE I.D.	HAMMER WT.	HAMMER FALL
CASING:	HSA	4"		
SAMPLER:	SS	1 3/8"	140 LB	30"
CORE BARREL:				

WATER LEVEL INFORMATION
SOILS MOIST

CASING BLOWS PER FOOT	SAMPLE NO.	SAMPLE PEN.	SAMPLE REC.	SAMPLE DEPTH @ BOT	SAMPLER BLOWS PER 6" 0-6	6-12	12-18	18-24	DEPTH	STRATA & TEST DATA
									4"+/-	DARK BROWN ORGANIC TOPSOIL
	S1	24"	8"	2.0'	2	7	8	7		~ MEDIUM DENSE ~ BROWN GRAVELLY SILTY SAND (FILL)
									4'+/-	
										~ MEDIUM DENSE ~ DARK BROWN SILTY SAND WITH SOME GRAVEL (POSSIBLE FILL)
	S2	24"	8"	7.0'	7	4	6	4	7.5'	
										BOTTOM OF EXPLORATION AT 7.5' - AUGER REFUSAL (PROBABLE BEDROCK)

SAMPLES:
S = SPLIT SPOON
C = 3" SHELBY TUBE
U = 3.5" SHELBY TUBE

SOIL CLASSIFIED BY:
[X] DRILLER - VISUALLY
[X] SOIL TECH. - VISUALLY
[ ] LABORATORY TEST

REMARKS:
STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES AND THE TRANSITION MAY BE GRADUAL.

16

BORING NO.: **B-15**

S.W.COLE ENGINEERING, INC.

BORING LOG

BORING NO.: **B-16**
SHEET: 1 OF 1
PROJECT NO.: 05-0927 S

PROJECT: **PROPOSED OFFICE BUILDING**
CLIENT : **MARTINS POINT HEALTHCARE**
LOCATION: **331 VERANDA STREET PORTLAND, MAINE**
DRILLING FIRM: **GWTB** DRILLER: **JEFF/WILL**

DATE START: 11/18/2005
DATE FINISH: 11/18/2005
ELEVATION: 48+/-
SWC REP.: MFB

	TYPE	SIZE I.D.	HAMMER WT.	HAMMER FALL
CASING:	HSA	4"		
SAMPLER:	SS	1 3/8"	140 LB	30"
CORE BARREL:				

WATER LEVEL INFORMATION
SOILS MOIST

CASING BLOWS PER FOOT	SAMPLE NO.	SAMPLE PEN.	SAMPLE REC.	SAMPLE DEPTH @ BOT	SAMPLER BLOWS PER 6" 0-6	6-12	12-18	18-24	DEPTH	STRATA & TEST DATA
									6"+/-	DARK BROWN ORGANIC TOPSOIL
	S1	24"	10"	2.0'	1	2	2	2		~ LOOSE ~
										RUST BROWN SILTY SAND WITH SOME ORGANICS (POSSIBLE FILL)
									4'+/-	
										~ MEDIUM DENSE TO DENSE ~
										BROWN SILTY SAND WITH SOME GRAVEL (TILL)
	S2	24"	16"	7.0'	10	14	15	17		
									8.4'	
										BOTTOM OF EXPLORATION AT 8.4' - AUGER REFUSAL
										(PROBABLE BEDROCK)

SAMPLES:
S = SPLIT SPOON
C = 3" SHELBY TUBE
U = 3.5" SHELBY TUBE

SOIL CLASSIFIED BY:
[X] DRILLER - VISUALLY
[X] SOIL TECH. - VISUALLY
[ ] LABORATORY TEST

REMARKS:
STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES AND THE TRANSITION MAY BE GRADUAL.

17

BORING NO.: **B-16**

S.W.COLE ENGINEERING, INC.

AUGER PROBE LOGS

PROJECT: **PROPOSED OFFICE BUILDING** PROJECT NO. 05-0927 S

CLIENT: **MARTINS POINT HEALTHCARE**

LOCATION: **331 VERANDA STREET PORTLAND, MAINE** AUGER PROBE SIZE O.D. SSA

DRILLING FIRM: GWTB DRILLER: JEFF/WILL

PROBE NO. P-1
STREET NAME
GROUND ELEV. 61.5+/-
DATE 11-18-05

DEPTH	STRATUM DESCRIPTION
2"+/-	ASPHALT PAVEMENT
	WEATHERED ROCK OR BLAST SPOILS
5.5'	
	AUGER REFUSAL AT 5.5' (PROBABLE BEDROCK)

PROBE NO. P-2
STREET NAME
GROUND ELEV. 67+/-
DATE 11-18-05

DEPTH	STRATUM DESCRIPTION
2"+/-	ASPHALT PAVEMENT
	BLACK GRAVEL AND SAND POSSIBLE ASH (FILL)
4.0'	
	AUGER REFUSAL AT 4.0' (PROBABLE BEDROCK)

X	DRILLER - VISUALLY
X	SOIL TECHNICIAN - VISUALLY
	LABORATORY TESTS

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S.W.COLE ENGINEERING, INC.

AUGER PROBE LOGS

PROJECT: **PROPOSED OFFICE BUILDING** PROJECT NO. 05-0927 S

CLIENT: **MARTINS POINT HEALTHCARE**

LOCATION: **331 VERANDA STREET PORTLAND, MAINE** AUGER PROBE SIZE O.D. SSA

DRILLING FIRM: GWTB DRILLER: JEFF/WILL

PROBE NO. P-3
STREET NAME
GROUND ELEV. 65+/-
DATE 11-18-05

DEPTH	STRATUM DESCRIPTION
	BROWN GRAVELLY SILTY SAND
2.0'	WITH PIECES OF BRICK (FILL)
	AUGER REFUSAL AT 2.0'
	(PROBABLE BEDROCK)

PROBE NO. P-4
STREET NAME
GROUND ELEV. 62+/-
DATE 11-18-05

DEPTH	STRATUM DESCRIPTION
	BROWN SILTY SAND WITH SOME GRAVEL
	WITH PIECES OF BRICK (FILL)
4.2'	
	AUGER REFUSAL AT 4.2'
	(PROBABLE BEDROCK)

X	DRILLER - VISUALLY
X	SOIL TECHNICIAN - VISUALLY
	LABORATORY TESTS

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S.W.COLE ENGINEERING, INC.

AUGER PROBE LOGS

PROJECT: **PROPOSED OFFICE BUILDING** PROJECT NO. 05-0927 S

CLIENT: **MARTINS POINT HEALTHCARE**

LOCATION: **331 VERANDA STREET PORTLAND, MAINE** AUGER PROBE SIZE O.D. SSA

DRILLING FIRM: GWTB DRILLER: JEFF/WILL

PROBE NO. P-5
STREET NAME
GROUND ELEV. 44.5+/-
DATE 11-18-05

DEPTH	STRATUM DESCRIPTION
2"+/-	ASPHALT PAVEMENT
	LIGHT BROWN FINE SAND AND SILT
	WITH SOME ROCK
4.0'	(POSSIBLE WEATHERED ROCK)
	AUGER REFUSAL AT 4.0'
	(PROBABLE BEDROCK)

PROBE NO. P-6
STREET NAME
GROUND ELEV. 45.5+/-
DATE 11-18-05

DEPTH	STRATUM DESCRIPTION
2"+/-	ASPHALT PAVEMENT
	PROBABLE BROWN SAND
	SOME GRAVEL AND SILT (FILL)
5.7'	
	AUGER REFUSAL AT 5.7'
	(PROBABLE BEDROCK)

X	DRILLER - VISUALLY
X	SOIL TECHNICIAN - VISUALLY
	LABORATORY TESTS

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S.W.COLE ENGINEERING, INC.

AUGER PROBE LOGS

PROJECT: **PROPOSED OFFICE BUILDING**
CLIENT: **MARTINS POINT HEALTHCARE**
LOCATION: **331 VERANDA STREET PORTLAND, MAINE**
DRILLING FIRM: GWTB DRILLER: JEFF/WILL

PROJECT NO. 05-0927 S
AUGER PROBE SIZE O.D. SSA

PROBE NO. P-7
STREET NAME
GROUND ELEV. 65+/-
DATE 11-18-05

DEPTH	STRATUM DESCRIPTION
4"+/-	BROWN ORGANIC TOPSOIL
	PROBABLE GRANULAR FILL
6.0'	AUGER REFUSAL AT 6.0' (PROBABLE BEDROCK)

PROBE NO. P-8
STREET NAME
GROUND ELEV. 48+/-
DATE 11-18-05

DEPTH	STRATUM DESCRIPTION
4"+/-	BROWN ORGANIC TOPSOIL
	PROBABLE GRANULAR FILL
7.3'	AUGER REFUSAL AT 7.3' (PROBABLE BEDROCK)

X	DRILLER - VISUALLY
X	SOIL TECHNICIAN - VISUALLY
	LABORATORY TESTS

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S.W.COLE ENGINEERING, INC.

AUGER PROBE LOGS

PROJECT: **PROPOSED OFFICE BUILDING** PROJECT NO. 05-0927 S

CLIENT: **MARTINS POINT HEALTHCARE**

LOCATION: **331 VERANDA STREET PORTLAND, MAINE** AUGER PROBE SIZE O.D. SSA

DRILLING FIRM: GWTB DRILLER: JEFF/WILL

PROBE NO. P-9
STREET NAME
GROUND ELEV. 49.5+/-
DATE 11-18-05

DEPTH	STRATUM DESCRIPTION
4"+/-	BROWN ORGANIC TOPSOIL
3.7'	PROBABLE GRANULAR FILL
	AUGER REFUSAL AT 3.7' (PROBABLE BEDROCK)

PROBE NO. P-10
STREET NAME
GROUND ELEV. 52+/-
DATE 11-18-05

DEPTH	STRATUM DESCRIPTION
2"+/-	ASPHALT PAVEMENT
	PROBABLE BLAST SPOIL WITH SILTY SAND AND GRAVEL (FILL)
6.7'	
	AUGER REFUSAL AT 6.7' (PROBABLE BEDROCK)

X	DRILLER - VISUALLY
X	SOIL TECHNICIAN - VISUALLY
	LABORATORY TESTS

22

S.W.COLE ENGINEERING, INC.

AUGER PROBE LOGS

PROJECT: **PROPOSED OFFICE BUILDING** PROJECT NO. 05-0927 S

CLIENT: **MARTINS POINT HEALTHCARE**

LOCATION: **331 VERANDA STREET PORTLAND, MAINE** AUGER PROBE SIZE O.D. SSA

DRILLING FIRM: GWTB DRILLER: JEFF/WILL

PROBE NO. P-11
STREET NAME
GROUND ELEV. 48.5+/-
DATE 11-18-05

DEPTH	STRATUM DESCRIPTION
6"+/-	BROWN ORGANIC TOPSOIL
1.2'	PROBABLE GRANULAR FILL
	AUGER REFUSAL AT 1.2' (PROBABLE BEDROCK)

PROBE NO. P-12
STREET NAME
GROUND ELEV. 51+/-
DATE 11-18-05

DEPTH	STRATUM DESCRIPTION
	BROWN SILTY SAND WITH SOME GRAVEL
10.5'	PROBABLE SANDY SILT (WET)
	AUGER REFUSAL AT 10.5' (PROBABLE BEDROCK)

X	DRILLER - VISUALLY
X	SOIL TECHNICIAN - VISUALLY
	LABORATORY TESTS

23

S.W.COLE ENGINEERING, INC.

AUGER PROBE LOGS

PROJECT: **PROPOSED OFFICE BUILDING** PROJECT NO. 05-0927 S

CLIENT: **MARTINS POINT HEALTHCARE**

LOCATION: **331 VERANDA STREET PORTLAND, MAINE** AUGER PROBE SIZE O.D. SSA

DRILLING FIRM: GWTB DRILLER: JEFF/WILL

PROBE NO. P-13
STREET NAME
GROUND ELEV. 59.5+/-
DATE 11-18-05

DEPTH	STRATUM DESCRIPTION
6"+/-	BROWN ORGANIC TOPSOIL
2.0'	PROBABLE GRANULAR FILL
	AUGER REFUSAL AT 2.0' (PROBABLE BEDROCK)

PROBE NO. P-14
STREET NAME
GROUND ELEV. 55+/-
DATE 11-18-05

DEPTH	STRATUM DESCRIPTION
	BROWN SILTY SAND WITH SOME GRAVEL (POSSIBLE FILL)
5'+/-	(POSSIBLE TILL)
10.3'	AUGER REFUSAL AT 10.3' (PROBABLE BEDROCK)

X	DRILLER - VISUALLY
X	SOIL TECHNICIAN - VISUALLY
	LABORATORY TESTS

24

S.W.COLE ENGINEERING, INC.

AUGER PROBE LOGS

PROJECT: **PROPOSED OFFICE BUILDING** PROJECT NO. 05-0927 S

CLIENT: **MARTINS POINT HEALTHCARE**

LOCATION: **331 VERANDA STREET PORTLAND, MAINE** AUGER PROBE SIZE O.D. SSA

DRILLING FIRM: GWTB DRILLER: JEFF/WILL

PROBE NO. P-15
STREET NAME
GROUND ELEV. 51.5+/-
DATE 11-18-05

DEPTH	STRATUM DESCRIPTION
6"+/-	BROWN ORGANIC TOPSOIL
5.6'	PROBABLE GRANULAR SOIL
	AUGER REFUSAL AT 5.6' (PROBABLE BEDROCK)

PROBE NO. P-16
STREET NAME
GROUND ELEV. 59+/-
DATE 11-18-05

DEPTH	STRATUM DESCRIPTION
6"+/-	BROWN ORGANIC TOPSOIL
8.6'	BROWN SAND WITH SOME SILT SOME GRAVEL
	AUGER REFUSAL AT 8.6' (PROBABLE BEDROCK)

X	DRILLER - VISUALLY
X	SOIL TECHNICIAN - VISUALLY
	LABORATORY TESTS

25

S.W.COLE ENGINEERING, INC.

AUGER PROBE LOGS

PROJECT: **PROPOSED OFFICE BUILDING** PROJECT NO. 05-0927 S

CLIENT: **MARTINS POINT HEALTHCARE**

LOCATION: **331 VERANDA STREET PORTLAND, MAINE** AUGER PROBE SIZE O.D. SSA

DRILLING FIRM: GWTB DRILLER: JEFF/WILL

PROBE NO. P-17

STREET NAME

GROUND ELEV. 54+/-

DATE 11-18-05

DEPTH	STRATUM DESCRIPTION
4"+/-	BROWN ORGANIC TOPSOIL
1.0'	PROBABLE GRANULAR SOIL
	AUGER REFUSAL AT 1.0'
	(PROBABLE BEDROCK)

X	DRILLER - VISUALLY
X	SOIL TECHNICIAN - VISUALLY
	LABORATORY TESTS

26

S.W.COLE ENGINEERING, INC.

AUGER PROBE REFUSAL DEPTHS

PROJECT NO.: 05-0927.3
AUGER SIZE (O.D.) 4 1/2"
DATE: 1/22/2009

PROJECT: PROPOSED PHASE II CAMPUS IMPROVEMENTS
CLIENT: MARTIN'S POINT HEALTHCARE, INC
LOCATION: U.S. ROUTE ONE, PORTLAND, MAINE
DRILLING FIRM: GREAT WORKS TEST BORINGS, INC.

PROBE NUMBER	DEPTH TO WEATHERED BEDROCK	DEPTH TO REFUSAL	NOTES
P-18	4.3'	4.3'	
P-19	2.5'	2.5'	
P-20	13.0'	13.0'	MOVED TO BENCHED AREA ON SLOPE - APPEARED TO BE FILL SOILS
P-21	3.0'	3.0'	POSSIBLE RELIC CONCRETE ENCOUNTERED BELOW ASPHALT PAVEMENT
P-22	1.5'	1.5'	
P-23	3.0'	3.0'	
P-24	6.0'	8.0'	PROBABLE WEATHERED ROCK AT 6.0'
P-25	4.5'	5.0'	PROBABLE WEATHERED ROCK AT 4.5'
P-26	2.5'	3.5'	PROBABLE WEATHERED ROCK AT 2.5'
P-27		N/A	DID NOT DRILL DUE TO UTILITY CONFLICTS AND DIFFICULT ACCESS
P-28		N/A	DID NOT DRILL DUE TO UTILITY CONFLICTS AND DIFFICULT ACCESS
P-29	7.5'	9.5'	PROBABLE WEATHERED ROCK AT 7.5'
P-30	21.5'	21.5'	
P-31		25' NR	25.0' PROBE DEPTH WITH NO REFUSAL SURFACE ENCOUNTERED

S.W.COLE ENGINEERING, INC.

ROCK CORE LOG

PROJECT: PROPOSED OFFICE BUILDING — **BORING NO.:** B-2

CLIENT: MARTINS POINT HEALTHCARE — **PROJECT NO.:** 05-0927 S

LOCATION: 331 VERANDA STREET PORTLAND, MAINE

LOGGED BY: GWB — **DATE:** 12/07/05 — **SHEET NO.:** 1 OF 1

CHECKED BY: PFK — **DATE:** 12/07/05 — **CORE SIZE:** NQ-2

DEPTH BELOW SURFACE (FT)	CORE RUN	CORE INTERVAL (FT)	CORE RECOVERY (FT)	RQD (%)	ROCK QUALITY	GRAPHIC LOG	ROCK DESCRIPTION AND IDENTIFICATION
13.5'							HIGHLY FRACTURED ZONE
							PIECES <2"
							GRAY SULFIDIC PELITE
				31"/60"			• HIGHLY WEATHERED BECOMING...
	R-1	5.0'	4.4'	52%	FAIR		• HARD
							• RUST STAINS ON FRACTURE SURFACES
							• FRACTURES AT 25 TO 55 DEGREES FROM HORIZONTAL
							• ... MODERATELY WEATHERED
18.5'							ZONE OF CORE LOSS

28

S.W.COLE ENGINEERING, INC.

ROCK CORE LOG

PROJECT: PROPOSED OFFICE BUILDING — **BORING NO.:** B-3

CLIENT: MARTINS POINT HEALTHCARE — **PROJECT NO.:** 05-0927 S

LOCATION: 331 VERANDA STREET PORTLAND, MAINE

LOGGED BY: GWB — **DATE:** 12/07/05 — **SHEET NO.:** 1 OF 1

CHECKED BY: PFK — **DATE:** 12/07/05 — **CORE SIZE:** NQ-2

DEPTH BELOW SURFACE (FT)	CORE RUN	CORE INTERVAL (FT)	CORE RECOVERY (FT)	RQD (%)	ROCK QUALITY	GRAPHIC LOG	ROCK DESCRIPTION AND IDENTIFICATION
16.5'	R-1	5.0'	5.0'	37"/60" 62%	FAIR		GRAY SULFIDIC PELITE • MODERATELY WEATHERED • HARD • RUST STAINS ON FRACTURE SURFACES • FRACTURES AT 10 TO 20 AND 55 DEGREES FROM HORIZONTAL
21.5'							

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S.W.COLE ENGINEERING, INC.

ROCK CORE LOG

PROJECT: PROPOSED OFFICE BUILDING — **BORING NO.:** B-5

CLIENT: MARTINS POINT HEALTHCARE — **PROJECT NO.:** 05-0927 S

LOCATION: 331 VERANDA STREET PORTLAND, MAINE

LOGGED BY: GWB — **DATE:** 12/07/05 — **SHEET NO.:** 1 OF 1

CHECKED BY: PFK — **DATE:** 12/07/05 — **CORE SIZE:** NQ-2

DEPTH BELOW SURFACE (FT)	CORE RUN	CORE INTERVAL (FT)	CORE RECOVERY (FT)	RQD (%)	ROCK QUALITY	GRAPHIC LOG	ROCK DESCRIPTION AND IDENTIFICATION
5.0'	R-1	5.0'	5.0'	8"/60" 13%	VERY POOR		GRAY SULFIDIC PELITE • HIGHLY WEATHERED • SOFT • VERY RUSTY • (RUST STAINS ON ROCK SURFACE AND FRACTURE SURFACES) • FRACTURES AT 10 TO 75 DEGREES FROM HORIZONTAL HIGHLY FRACTURED ZONE ... PIECES <1"
10.0'							

30

S.W.COLE ENGINEERING, INC.

AUGER PROBE REFUSAL DEPTHS

PROJECT NO.: 05-0927.3
AUGER SIZE (O.D.) 4 1/2"
DATE: 1/22/2009

PROJECT: PROPOSED PHASE II CAMPUS IMPROVEMENTS
CLIENT: MARTIN'S POINT HEALTHCARE, INC
LOCATION: U.S. ROUTE ONE, PORTLAND, MAINE
DRILLING FIRM: GREAT WORKS TEST BORINGS, INC.

PROBE NUMBER	DEPTH TO WEATHERED BEDROCK	DEPTH TO REFUSAL	NOTES
P-18	4.3'	4.3'	
P-19	2.5'	2.5'	
P-20	13.0'	13.0'	MOVED TO BENCHED AREA ON SLOPE - APPEARED TO BE FILL SOILS
P-21	3.0'	3.0'	POSSIBLE RELIC CONCRETE ENCOUNTERED BELOW ASPHALT PAVEMENT
P-22	1.5'	1.5'	
P-23	3.0'	3.0'	
P-24	6.0'	8.0'	PROBABLE WEATHERED ROCK AT 6.0'
P-25	4.5'	5.0'	PROBABLE WEATHERED ROCK AT 4.5'
P-26	2.5'	3.5'	PROBABLE WEATHERED ROCK AT 2.5'
P-27		N/A	DID NOT DRILL DUE TO UTILITY CONFLICTS AND DIFFICULT ACCESS
P-28		N/A	DID NOT DRILL DUE TO UTILITY CONFLICTS AND DIFFICULT ACCESS
P-29	7.5'	9.5'	PROBABLE WEATHERED ROCK AT 7.5'
P-30	21.5'	21.5'	
P-31		25' NR	25.0' PROBE DEPTH WITH NO REFUSAL SURFACE ENCOUNTERED

KEY TO NOTES & SYMBOLS
Test Boring and Test Pit Explorations

Stratification lines represent the approximate boundary between soil types and the transition may be gradual.

Key to Symbols Used:

w	-	water content, percent (dry weight basis)
q_u	-	unconfined compressive strength, kips/sq. ft. - laboratory test
S_v	-	field vane shear strength, kips/sq. ft.
L_v	-	lab vane shear strength, kips/sq. ft.
q_p	-	unconfined compressive strength, kips/sq. ft. – pocket penetrometer test
O	-	organic content, percent (dry weight basis)
W_L	-	liquid limit - Atterberg test
W_P	-	plastic limit - Atterberg test
WOH	-	advance by weight of hammer
WOM	-	advance by weight of man
WOR	-	advance by weight of rods
HYD	-	advance by force of hydraulic piston on drill
RQD	-	Rock Quality Designator - an index of the quality of a rock mass.
γ_T	-	total soil weight
γ_B	-	buoyant soil weight

Description of Proportions:

Trace:	0 to 5%
Some:	5 to 12%
"Y"	12 to 35%
And	35+%
With	Undifferentiated

Description of Stratified Soils

Parting:	0 to 1/16" thickness
Seam:	1/16" to 1/2" thickness
Layer:	½" to 12" thickness
Varved:	Alternating seams or layers
Occasional:	one or less per foot of thickness
Frequent:	more than one per foot of thickness

REFUSAL: **Test Boring Explorations** - Refusal depth indicates that depth at which, in the drill foreman's opinion, sufficient resistance to the advance of the casing, auger, probe rod or sampler was encountered to render further advance impossible or impracticable by the procedures and equipment being used.

REFUSAL: **Test Pit Explorations** - Refusal depth indicates that depth at which sufficient resistance to the advance of the backhoe bucket was encountered to render further advance impossible or impracticable by the procedures and equipment being used.

Although refusal may indicate the encountering of the bedrock surface, it may indicate the striking of large cobbles, boulders, very dense or cemented soil, or other buried natural or man-made objects or it may indicate the encountering of a harder zone after penetrating a considerable depth through a weathered or disintegrated zone of the bedrock.

DRAFT

APPENDIX D

Laboratory Test Results

DRAFT

S.W.COLE ENGINEERING, INC.

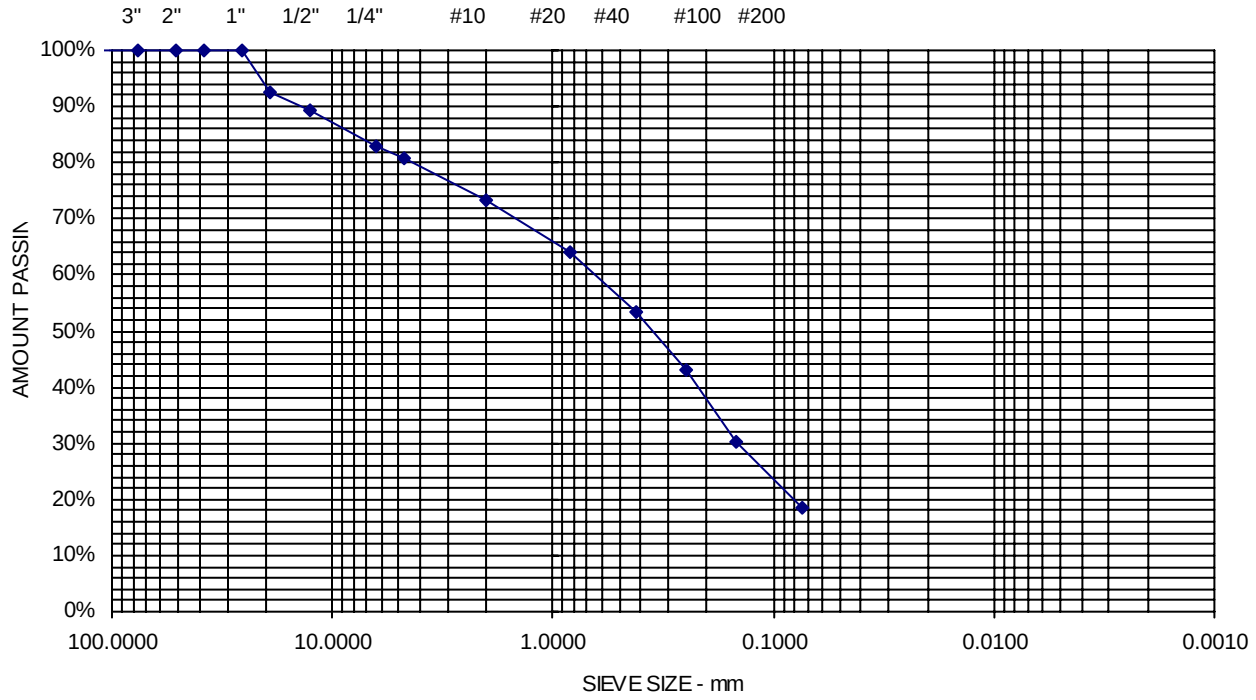
Report of Gradation

ASTM C-117 & C-136

Project Name	PORTLAND ME - PROPOSED BUILDING #7 RENOVATION - GEOTECHNICAL ENGINEERING SERVICES	Project Number	12-0103
Client	MARTIN'S POINT HEALTH CARE, INC.	Lab ID	15176G
		Date Received	2/20/2012
		Date Completed	2/21/2012
Material Source	**B-103, 3D (5-7')**	Tested By	JUSTIN BISSON

STANDARD DESIGNATION (mm/µm)	SIEVE SIZE	AMOUNT PASSING (%)	
150 mm	**6"**	**100**	
125 mm	**5"**	**100**	
100 mm	**4"**	**100**	
75 mm	**3"**	**100**	
50 mm	**2"**	**100**	
38.1 mm	**1-1/2"**	**100**	
25.0 mm	**1"**	**100**	
19.0 mm	**3/4"**	**93**	
12.5 mm	**1/2"**	**89**	
6.3 mm	**1/4"**	**83**	
4.75 mm	**No. 4**	**81**	19.3% Gravel
2.00 mm	**No. 10**	**73**	
850 um	**No. 20**	**64**	
425 um	**No. 40**	**53**	62.2% Sand
250 um	**No. 60**	**43**	
150 um	**No. 100**	**30**	
75 um	**No. 200**	**18.5**	18.5% Fines

BROWN SILTY GRAVELLY SAND



Comments: w = 9.9%

Sheet 21

S.W.COLE ENGINEERING, INC.

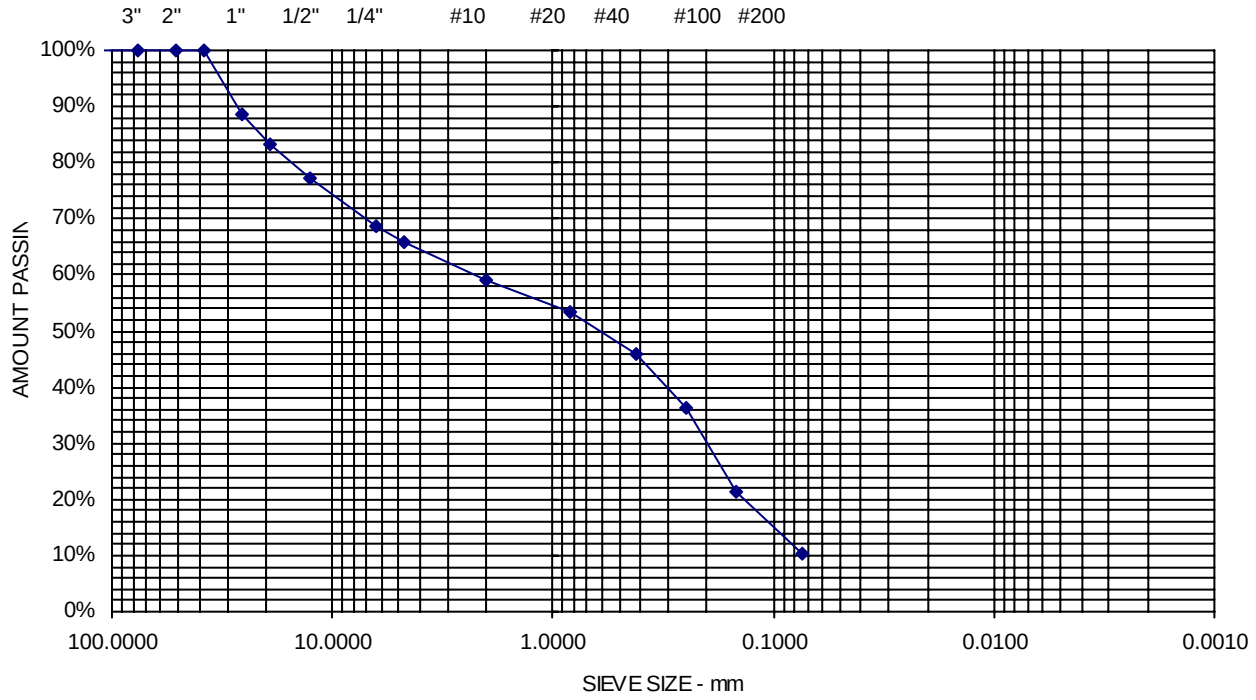
Report of Gradation

ASTM C-117 & C-136

Project Name	PORTLAND ME - PROPOSED BUILDING #7 RENOVATION - GEOTECHNICAL ENGINEERING SERVICES	Project Number	12-0103
Client	MARTIN'S POINT HEALTH CARE, INC.	Lab ID	15177G
		Date Received	2/20/2012
		Date Completed	2/21/2012
Material Source	**B-107, 3D (5-7')**	Tested By	JUSTIN BISSON

STANDARD DESIGNATION (mm/µm)	SIEVE SIZE	AMOUNT PASSING (%)	
150 mm	**6"**	**100**	
125 mm	**5"**	**100**	
100 mm	**4"**	**100**	
75 mm	**3"**	**100**	
50 mm	**2"**	**100**	
38.1 mm	**1-1/2"**	**100**	
25.0 mm	**1"**	**89**	
19.0 mm	**3/4"**	**83**	
12.5 mm	**1/2"**	**77**	
6.3 mm	**1/4"**	**69**	
4.75 mm	**No. 4**	**66**	34.3% Gravel
2.00 mm	**No. 10**	**59**	
850 um	**No. 20**	**53**	
425 um	**No. 40**	**46**	55.3% Sand
250 um	**No. 60**	**36**	
150 um	**No. 100**	**21**	
75 um	**No. 200**	**10.4**	10.4% Fines

BROWN GRAVELLY SAND SOME SILT



Comments: w = 6.5%

Sheet 22

Section 12

Stormwater Management

Section 12: Stormwater Management

The Stormwater Report developed per Maine DEP Chapter 500 and City of Portland standards is enclosed in this section.

SEBAGO TECHNICS

CIVIL ENGINEERING • SURVEYING • LANDSCAPE ARCHITECTURE

Stormwater Management Report

For:

Martin's Point Veranda Campus

331 Veranda Street
Portland, Maine

Prepared for:
Martin's Point Health Care, INC
PO Box 9746
Portland, ME 04103

Prepared by:
Sebago Technics, Inc.
75 John Roberts Road, Suite 4A
South Portland, Maine 04106

March 2024

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Attachment 1 – Stormwater Quality Calculations
Attachment 2A – Hydrologic Modeling– Existing Condition (HydroCAD) Summary
Attachment 2B – Hydrologic Modeling– Proposed Condition (HydroCAD) Summary
Attachment 3 – Inspection, Maintenance, and Housekeeping Plan
Attachment 4 – FEMA Flood Insurance Rate Map
Attachment 5 – Stormwater Management Plans

Stormwater Management Report Narrative

A. Introduction

This Stormwater Management Report has been prepared to present analyses performed to address the potential impacts associated with the project due to proposed modifications in stormwater runoff characteristics and land cover changes. The stormwater management controls that are outlined in this report have been designed to suit the proposed redevelopment project and to comply with applicable regulatory requirements.

B. Existing Conditions

Located in Portland Maine, the approximate 12.6-acre property is fully developed as Martin's Point Health Care Vernada Street campus. The entire campus consists of 7 buildings with associated parking, walkways, and landscaped areas. The campus is identified as Lots C001, C005, and C010 on the City of Portland Tax Map 434. The site is bounded by Veranda Street to the north and west, land owned by The City of Portland to the east, and Casco Bay to the south.

This report focuses on an approximate 4.5-acre portion of the campus surrounding the existing buildings 5,6, and 7 that is being directly impacted by the proposed redevelopment project. The project impacts Lot C010 and a portion of Lot C005.

An existing closed drainage system conveys stormwater runoff from the site and outlets directly to Casco Bay at the northeastern edge of the site. The Martin's Point Veranda campus has three existing Filterra tree filters and one existing underdrain soil filter for stormwater treatment within the areas of impact for this project. Although these systems exist on-site, Martin's Point does not currently collect any stormwater credits from the City of Portland. All three existing stormwater detention and treatment systems will be removed and replaced with a proposed end-of-the-line treatment system.

The area of redevelopment is located within Zone V2 100-year floodplain, per the FEMA Flood Insurance Rate Map as depicted on the FEMA FIRM panel 230051 0008 B with an effective date of July 17, 1986. A copy of the FIRM can be found in Attachment 4.

The project site is located within the Casco Bay watershed. Casco Bay is not classified as urban impaired or a lake most at risk from development, per the Maine Department of Environmental Protection (MDEP) Chapter 502.

C. Soils

Soil information for the site was obtained via the USDA United States Department of Agriculture and Natural Resources Conservation Service's Web Soil Survey. The Hydrologic Soil Group (HSG) of the site soils are classified by Technical Release TR-55 of the Soil Conservation Service as follows:

Soil Name	Soil Map Symbol	HSG	Slope (%)
Lyman-Tunbridge Complex	HrB	C	0-8
Lyman-Tunbridge Complex	HrC	C	8-15
Suffield Silt Loam	SuC2	C	8-15

D. Proposed Site and Stormwater Improvements

Proposed site improvements include the removal of an existing structure (BLDG 7), construction of a new 4-story building with a 25,000 square-foot footprint, the redevelopment of the access drive from Veranda Street, the redevelopment of surface-level parking areas, and a variety of enhancements to the existing Martin's Point Varanda campus. Proposed improvements include both redeveloped and newly developed areas, totaling approximately 4.48 acres of developed area with 3.14 acres of impervious area.

Stormwater infrastructure for the development is designed to accommodate proposed site improvements. The proposed drainage system drains to the northeast corner of the site where an end-of-the-line Jellyfish Filter stormwater treatment system is proposed to treat stormwater runoff. Runoff from a proposed offsite trailhead plaza will be captured and treated via permeable pavers before discharging to the proposed drainage system. Runoff from areas of the site that will not be treated by the Jellyfish Filter system will drain directly to Casco Bay. The project's Stormwater Management Plan is designed so that the existing drainage patterns will not be significantly altered. The proposed closed drainage system will utilize the same outlet pipe location as the existing system.

E. Methodology

Stormwater runoff analyses were developed using the "HydroCAD" computer modeling software, which incorporates the TR-55 and TR-20 methodologies as provided by the Soil Conservation Service of the U.S. Department of Agriculture.

The estimated peak runoff rates were calculated using a 24-hour duration storm event with a Type III rainfall distribution. The rainfall amounts for Cumberland County SE for the 2-year, 10-year and 25-year storm events are as follows:

Storm Frequency	24-hr Duration Rainfall (in.)
2-yr	3.1
10-yr	4.6
25-yr	5.8

F. Existing Conditions Model

The existing conditions HydroCAD model consists of eleven (11) catchment areas labeled 1S-11S, and one (1) point of analysis (POA-1) for comparing peak runoff rates.

POA-1: All proposed catchment areas contribute runoff to Point of Analysis 1 (POA-1), Casco Bay, with a total area of approximately 4.48 acres.

- Existing condition catchment areas 1S through 8S represent areas of the project site where stormwater runoff is collected within the existing closed drainage system. Runoff collected in this drainage system is treated by three Filterra tree filters and one underdrain soil filter before discharging at the northeast corner of the property, directly into Casco Bay. Approximately 2.4 acres of impervious area and 0.9 acres of landscaped area are represented by these catchment areas.
- Existing condition catchment area 10S represents the northwestern portion of the project site where runoff drains directly to Casco Bay. 10S consists of mostly wooded and landscaped areas with a minor amount of impervious area. Approximately 0.05 acres of impervious area and 0.23 acres of landscaped area are represented by catchment 10S.
- Existing condition catchment area 9S represents the remaining area on the southeastern portion of the project site where runoff drains directly to Casco Bay. Approximately 0.26 acres of impervious and 0.63 acres of landscaped area are represented by catchment area 9S.

G. Proposed Conditions Model

The post-developed condition HydroCAD model consists of thirteen (13) catchment areas labeled 1.0S – 11.0S. The total proposed area is consistent with existing conditions.

POA-1: All proposed catchment areas contribute runoff to Point of Analysis 1 (POA-1), Casco Bay, with a total area of approximately 4.48 acres.

- Proposed catchment areas 1.0S (inclusive of 1.1S) through 8.0S represent areas of the project site in which stormwater runoff will be collected within the proposed closed drainage system and treated by the Jellyfish Filter system, represented by pond 31P. Approximately 2.36 acres of impervious area and 0.83 acres of landscaped area are represented by these catchment areas.
- Proposed catchment area 1.2S represents the proposed structure which will have a flat light-colored membrane roof which will not be treated via the proposed Jellyfish. This roof drain will connect to a manhole just downstream of the Jellyfish unit and discharge to Casco Bay.
- Proposed catchment area 10.0S represents the northwestern portion of the project site that drains directly to Casco Bay. Approximately 0.05 acres of impervious and 0.19 acres of landscaped area are represented by catchment 10.0S.
- Proposed catchment area 9.0S represents the remaining area along the southern and eastern edges of the project site where runoff drains directly to Casco Bay. Approximately 0.16 acres of impervious area and 0.33 acres of landscaped area are represented by catchment 9.0S.

H. Regulatory Requirements

MDEP Chapters 500 and 502 describe stormwater management requirements for new projects. The rules describe performance standards divided into five major categories: Basic Standard, General Standard, Phosphorous Standard, Urban Impaired Stream Standard, and Flooding Standard. The following sections describe how this project will address these stormwater management performance standards.

Basic Standard – Chapter 500, Section 4(B)

Since the project will disturb more than one (1) acre of land area, MDEP Basic Standards apply, requiring that grading or other construction activities on the site do not impede or otherwise alter drainage ways to have an unreasonable adverse impact. Adverse impacts are minimized by providing an Erosion and Sedimentation Control Plan, and an Inspection, Maintenance, and Housekeeping Plan (Attachment 3) to be implemented during construction and post-construction stabilization of the site. These construction requirements have been developed following Best Management Practice guidelines.

General Standard – Chapter 500, Section 4(C)

Since the project will create more than one (1) acre of impervious surface, MDEP General Standards apply, which require a project's stormwater management system to include treatment measures that will mitigate the increased frequency and duration of channel erosive flows due to runoff from smaller storms, provide for effective treatment of pollutants in stormwater, and mitigate potential temperature impacts. The General Standards require treatment of no less than 95% of the site's created impervious area and no less than 80% of the site's created developed area (landscaped area and impervious area combined).

A Jellyfish Filter system is being proposed as an end-of-the-line treatment system for the proposed closed drainage system. Jellyfish Filters are effective at removing a wide range of pollutants. Runoff from 100% of the new impervious area and portions of existing impervious areas and 91% of the developed area (impervious and landscaped) is being treated by the Jellyfish Filter. All proposed impervious area is being treated as new impervious area except for the roof of existing building 6. Runoff from building 6 will be collected and treated within the proposed system, bringing the percentage of impervious area treated above 100%. Before runoff enters the Jellyfish Filter, it will pass through The Cascade Separator by Contech as a pre-treatment measure. The Cascade utilizes sediment capture technology to provide high sediment removal efficiency.

Flooding Standard – Chapter 500, Section 4(F)

This project is eligible for a waiver from the flooding standard because runoff from the project site discharges directly to a coastal wetland exclusively in sheet flow, a manmade open channel, or in a piped system.

The following table summarizes the peak rates of runoff for the existing and proposed conditions:

Stormwater Peak Discharge Summary Table									
Study Point	**2-Year Storm**			**10-Year Storm**			**25-Year Storm**		
	Pre (cfs)	**Post (cfs)**	**Diff. (cfs)**	**Pre (cfs)**	**Post (cfs)**	**Diff. (cfs)**	**Pre (cfs)**	**Post (cfs)**	**Diff. (cfs)**
POA-1	10.0	10.8	+0.8	16.8	17.2	+0.4	22.3	22.4	+0.2

The HydroCAD Data output sheets from this analysis are appended to this report under Attachments 2A and 2B, along with existing condition and proposed condition stormwater management plans as attachments. The results of stormwater modeling at the identified study point indicate that the peak rates of runoff under proposed conditions will slightly exceed existing conditions for the 2-year, 10-year, and 25-year storm events. However, all stormwater runoff discharges directly into Casco Bay, a major coastal wetland.

I. Summary

The proposed project requires the use of stormwater management systems to meet treatment requirements specified in MDEP Chapter 500 standards. A waiver is being requested for the standard to control peak rates of runoff in accordance with City of Portland standards (Chapter 500.F.3). The proposed stormwater management system includes a Jellyfish that provides the necessary treatment.

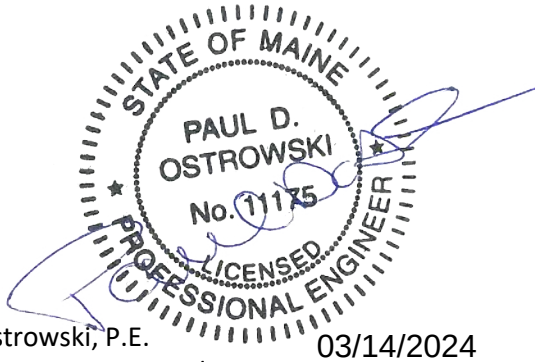
Flows leaving the site from the study point and converging at downstream locations, follow the same drainage patterns as the existing condition. Based on the modeling data, it is anticipated that stormwater runoff from the proposed site development will not cause a significant adverse effect on off-site receiving channels or downstream areas, as the existing outfall location is being utilized in the post-development condition and this area is a rock stabilized slope.

Additionally, erosion and sedimentation controls along with associated maintenance and housekeeping procedures have been outlined to prevent unreasonable impacts on the site and to the surrounding environment.

Prepared by:

SEBAGO TECHNICS, INC.

Kelly Koehler, E.I.
Project Engineer



Paul Ostrowski, P.E.
Senior Project Engineer/Engineering Design Manager

03/14/2024

Attachment 1

Stormwater Quality Calculations

Table 1: MDEP GENERAL STANDARD CALCULATIONS

Job #

AREA ID	WATERSHED SIZE (S.F.)	EXISTING ONSITE IMPERVIOUS AREA TO REMAIN (S.F.)	NEW ONSITE IMPERVIOUS AREA (S.F.)	EXISTING ONSITE LANDSCAPED AREA TO REMAIN (S.F.)	NEW ONSITE LANDSCAPED AREA (S.F.)	NET NEW DEVELOPED AREA (S.F.)	NET EXISTING DEVELOPED AREAS (S.F.)	TREATMENT PROVIDED?	IMPERVIOUS AREA TREATED (S.F.)	LANDSCAPED AREA TREATED (S.F.)	DEVELOPED AREA TREATED (S.F.)	TREATMENT BMP
1	2,600		2,600		0	2,600	0	YES	2,600	0	2,600	JELLYFISH FILTER
2	3,620		3,400		220	3,620	0	YES	3,400	220	3,620	JELLYFISH FILTER
3	3,400		200		3200	3,400	0	YES	200	3,200	3,400	JELLYFISH FILTER
4	3,200		1600		1600	3,200	0	YES	1,600	1,600	3,200	JELLYFISH FILTER
5	2,100		2100		0	2,100	0	YES	2,100	0	2,100	JELLYFISH FILTER
6	1,100		0		1100	1,100	0	YES	0	1,100	1,100	JELLYFISH FILTER
7	1,800		1500		300	1,800	0	YES	1,500	300	1,800	JELLYFISH FILTER
8	1,000		300		700	1,000	0	YES	300	700	1,000	JELLYFISH FILTER
9	6,100		5200		900	6,100	0	YES	5,200	900	6,100	JELLYFISH FILTER
10	2,800		1700		1100	2,800	0	YES	1,700	1,100	2,800	JELLYFISH FILTER
11	2,300		1700		600	2,300	0	YES	1,700	600	2,300	JELLYFISH FILTER
12	6,700		4600		2100	6,700	0	YES	4,600	2,100	6,700	JELLYFISH FILTER
13	900		200		700	900	0	YES	200	700	900	JELLYFISH FILTER
14	2,200		1100		1100	2,200	0	YES	1,100	1,100	2,200	JELLYFISH FILTER
15	1,200		1200		0	1,200	0	YES	1,200	0	1,200	JELLYFISH FILTER
16	4,100		0		4100	4,100	0	YES	0	4,100	4,100	JELLYFISH FILTER
17	10,500		2200		8300	10,500	0	NO	0	0	0	N/A
18	4,400		0		4400	4,400	0	YES	0	4,400	4,400	JELLYFISH FILTER
19	3,800		2000		1800	3,800	0	YES	2,000	1,800	3,800	JELLYFISH FILTER
20	2,200		1900		300	2,200	0	YES	1,900	300	2,200	JELLYFISH FILTER
21	7,500		6000		1500	7,500	0	YES	6,000	1,500	7,500	JELLYFISH FILTER
22	3,300		3200		100	3,300	0	YES	3,200	100	3,300	JELLYFISH FILTER
23	4,800		1700		3100	4,800	0	YES	1,700	3,100	4,800	JELLYFISH FILTER
24	1,900		1600		300	1,900	0	YES	1,600	300	1,900	JELLYFISH FILTER
25	800		800		0	800	0	YES	800	0	800	JELLYFISH FILTER
26	13,300		10200		3100	13,300	0	YES	10,200	3,100	13,300	JELLYFISH FILTER
27	25,000		25000		0	25,000	0	NO	0	0	0	WHITE MEMBRANE
28	21,100		6900		14200	21,100	0	NO	0	0	0	N/A
29	43,000	43,000	0	0	0	0	43,000	YES	43,000	0	43,000	JELLYFISH FILTER
30	3,000		1200		1800	3,000	0	YES	1,200	1,800	3,000	JELLYFISH FILTER
31	1,700		200		1500	1,700	0	YES	200	1,500	1,700	JELLYFISH FILTER
32	3,600		3300		300	3,600	0	YES	3,300	300	3,600	JELLYFISH FILTER
TOTAL (S.F.)	**195,020**	**43,000**	93600	**0**	**58,420**	**152,020**	**43,000**		**102,500**	**35,920**	**138,420**	

TOTAL NEW IMPERVIOUS AREA (S.F.)	**93,600**	**TOTAL DEVELOPED AREA (S.F.)**	**152,020**
TOTAL IMPERVIOUS AREA RECEIVING TREATMENT (S.F.)	**102,500**	**TOTAL AREA RECEIVING TREATMENT (S.F.)**	**138,420**
% OF IMPERVIOUS AREA RECEIVING TREATMENT	**109.51%**	**% OF AREA RECEIVING TREATMENT**	**91.05%**

Contech Engineered Solutions LLC
71 US Rte 1, Suite F
Scarborough, ME 04074
Tel.: 207-885-6191
www.ContechES.com

December 14, 2023

Kelly Koehler, EI
Sebago Technics, Inc.
75 John Roberts Road, Suite 4A
South Portland, ME 04106

RE: Martin's Point Veranda Campus (Contech Reference No. 777865)
Review of Jellyfish Design

Dear Ms. Koehler:

The purpose of this letter is to document review of the plans and the proposed application of the Jellyfish water quality unit for the Martin's Point Veranda Campus, Portland, ME project.

Contech Engineered Solutions (Contech) has reviewed the Jellyfish Filter design for the project. We believe the Jellyfish Filter is an appropriate water quality solution for this site. The Jellyfish system is approved for use by MEDEP meeting the General Standards of the Stormwater Rules (Chapter 500) if designed, installed, and maintained in accordance with the provisions noted in the January 21, 2015 approval letter from the MEDEP.

The engineer of record reports a drainage area of 3.26 acres, of which, 2.51 acres is impervious, and a WQ Flow rate of 2.09 cfs. The Jellyfish is designed in accordance with the tested hydraulic loading rate of the 54-inch Hi-Flo cartridges at 80 gpm and Drain Down cartridge at 40 gpm. In order to adequately treat the runoff from this area, Contech recommends a Jellyfish Peak Diversion Vault 8'x8' with 54" cartridges (11 Hi-Flo and 3 Drain Down) with model designation JFPD0808-11-3 (54" cartridges).

Our systems require periodic maintenance to continue operating properly. Given typical runoff pollutant loading rates, Contech recommends maintenance inspections on an annual basis. Maintenance should be performed when sediment depth reaches 12" of accumulation.

This system is expected to operate in accordance with Contech's design intent. Please feel free to contact me if you have any questions or concerns.

Sincerely,

David Adams

David Adams, PE
Project Engineer
Contech Engineered Solutions LLC
dave.adams@conteches.com

Jellyfish Design Calculation

CONTECH Stormwater Solutions Inc. Engineer:	DRA
Date Prepared:	**12/14/2023**

Site Information

Project Name	**Martin's Point Veranda Campus**
Project State	**Portland**
Project City	**ME**

Total Drainage Area, Ad	**3.26**	ac
Post Development Impervious Area, Ai	**2.51**	ac
Pervious Area, Ap	**0.75**	ac
% Impervious	**77%**	
Runoff Coefficient, Rc	**0.74**	

Mass Loading Calculations

Mean Annual Rainfall, P	**49**	in
Agency Required % Removal	**80%**	
Percent Runoff Capture	**90%**	
Mean Annual Runoff, Vt	**387,721**	ft^3
Event Mean Concentration of Pollutant, EMC	**75**	mg/l
Annual Mass Load, M total	**1,814**	lbs

Filter System

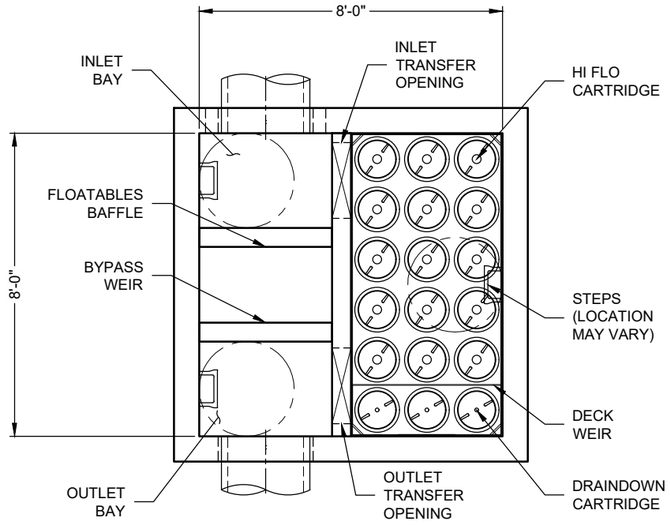
Filtration Brand	**Jelly Fish**	
Cartridge Length	**54**	in

Jelly Fish Sizing

Mass to be Captured by System	**1,451**	lbs
Water Quality Flow	**2.09**	cfs

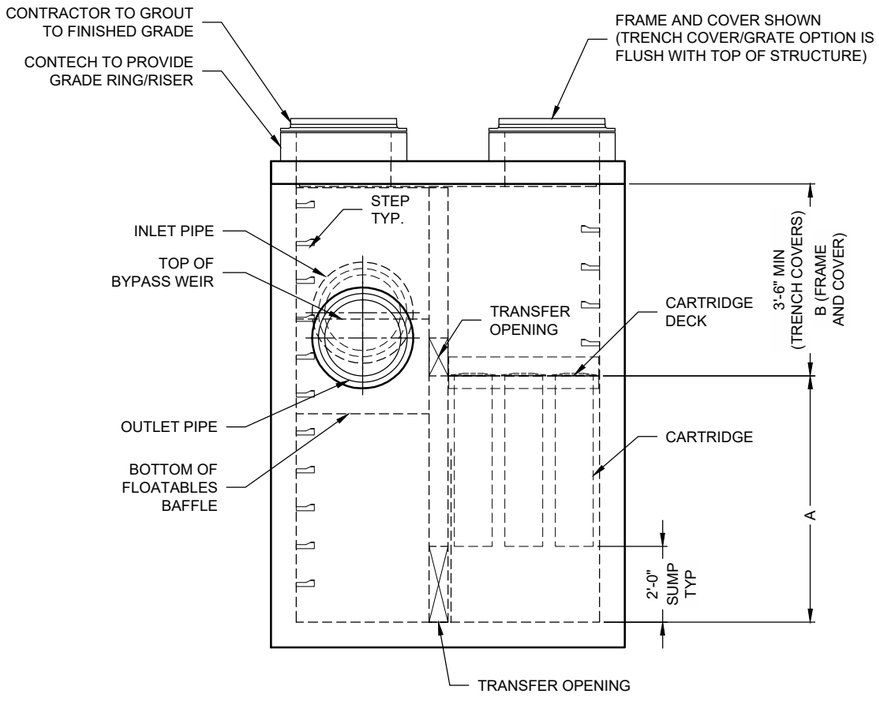
Method to Use **FLOW BASED**

Summary			
Flow	Treatment Flow Rate	2.23	cfs
	Required Size	**JFPD0808-11-3**	



PLAN VIEW

(TOP SLAB NOT SHOWN FOR CLARITY)



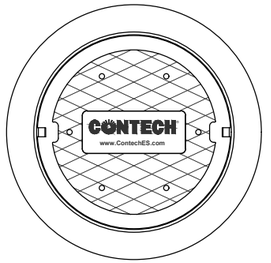
ELEVATION VIEW

JELLYFISH DESIGN NOTES

JELLYFISH TREATMENT CAPACITY IS A FUNCTION OF THE CARTRIDGE LENGTH AND THE NUMBER OF CARTRIDGES. THE STANDARD PEAK DIVERSION STYLE WITH PRECAST TOP SLAB IS SHOWN. ALTERNATE OFFLINE VAULT AND/OR SHALLOW ORIENTATIONS ARE AVAILABLE. PEAK CONVEYANCE CAPACITY TO BE DETERMINED BY ENGINEER OF RECORD

CARTRIDGE SELECTION

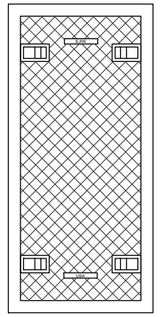
CARTRIDGE LENGTH	54"	40"	27"	15"
OUTLET INVERT TO STRUCTURE INVERT (A)	6'-6"	5'-4"	4'-3"	3'-3"
FLOW RATE HI-FLO / DRAINDOWN (CFS) (PER CART)	0.178 / 0.089	0.133 / 0.067	0.089 / 0.045	0.049 / 0.025
MAX. TREATMENT (CFS)	2.94	2.21	1.47	0.81
DECK TO INSIDE TOP (MIN) (B)	5.00	4.00	4.00	4.00



FRAME AND COVER

(DIAMETER VARIES)

N.T.S.



24"

TRENCH COVER

(LENGTH VARIES)

N.T.S.

SITE SPECIFIC DATA REQUIREMENTS

STRUCTURE ID	*
WATER QUALITY FLOW RATE (cfs)	*
PEAK FLOW RATE (cfs)	*
RETURN PERIOD OF PEAK FLOW (yrs)	*
# OF CARTRIDGES REQUIRED (HF / DD)	*
CARTRIDGE LENGTH	*

PIPE DATA:	I.E.	MAT'L	DIA	SLOPE %	HGL
INLET #1	*	*	*	*	*
INLET #2	*	*	*	*	*
OUTLET	*	*	*	*	*

SEE GENERAL NOTES 6-7 FOR INLET AND OUTLET HYDRAULIC AND SIZING REQUIREMENTS.

RIM ELEVATION	*

ANTI-FLOTATION BALLAST	WIDTH	HEIGHT
	*	*

NOTES/SPECIAL REQUIREMENTS:

* PER ENGINEER OF RECORD

GENERAL NOTES:

1. CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
2. FOR SITE SPECIFIC DRAWINGS WITH DETAILED STRUCTURE DIMENSIONS AND WEIGHT, PLEASE CONTACT YOUR CONTECH ENGINEERED SOLUTIONS REPRESENTATIVE. www.ContechES.com
3. JELLYFISH WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING. CONTRACTOR TO CONFIRM STRUCTURE MEETS REQUIREMENTS OF PROJECT.
4. STRUCTURE SHALL MEET AASHTO HS-20 OR PER APPROVING JURISDICTION REQUIREMENTS, WHICHEVER IS MORE STRINGENT, ASSUMING EARTH COVER OF 0' - 10', AND GROUNDWATER ELEVATION AT, OR BELOW, THE OUTLET PIPE INVERT ELEVATION. ENGINEER OF RECORD TO CONFIRM ACTUAL GROUNDWATER ELEVATION. CASTINGS SHALL MEET AASHTO M306 LOAD RATING AND BE CAST WITH THE CONTECH LOGO.
5. STRUCTURE SHALL BE PRECAST CONCRETE CONFORMING TO ASTM C-857, ASTM C-918, AND AASHTO LOAD FACTOR DESIGN METHOD.
6. OUTLET PIPE INVERT IS EQUAL TO THE CARTRIDGE DECK ELEVATION.
7. THE OUTLET PIPE DIAMETER FOR NEW INSTALLATIONS IS RECOMMENDED TO BE ONE PIPE SIZE LARGER THAN THE INLET PIPE AT EQUAL OR GREATER SLOPE.
8. NO PRODUCT SUBSTITUTIONS SHALL BE ACCEPTED UNLESS SUBMITTED 10 DAYS PRIOR TO PROJECT BID DATE, OR AS DIRECTED BY THE ENGINEER OF RECORD.

INSTALLATION NOTES

A. ANY SUB-BASE, BACKFILL DEPTH, AND/OR ANTI-FLOTATION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD.
B. CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE STRUCTURE.
C. CONTRACTOR WILL INSTALL AND LEVEL THE STRUCTURE, SEALING THE JOINTS, LINE ENTRY AND EXIT POINTS (NON-SHRINK GROUT WITH APPROVED WATERSTOP OR FLEXIBLE BOOT).
D. CARTRIDGE INSTALLATION, BY CONTECH, SHALL OCCUR ONLY AFTER SITE HAS BEEN STABILIZED AND THE JELLYFISH UNIT IS CLEAN AND FREE OF DEBRIS. CONTACT CONTECH TO COORDINATE CARTRIDGE INSTALLATION WITH SITE STABILIZATION.

Jellyfish Filter

THIS PRODUCT MAY BE PROTECTED BY ONE OR MORE OF THE FOLLOWING: U.S. PATENT NO. 8,287,726; 8,221,618; US 8,123,935; OTHER INTERNATIONAL PATENTS PENDING

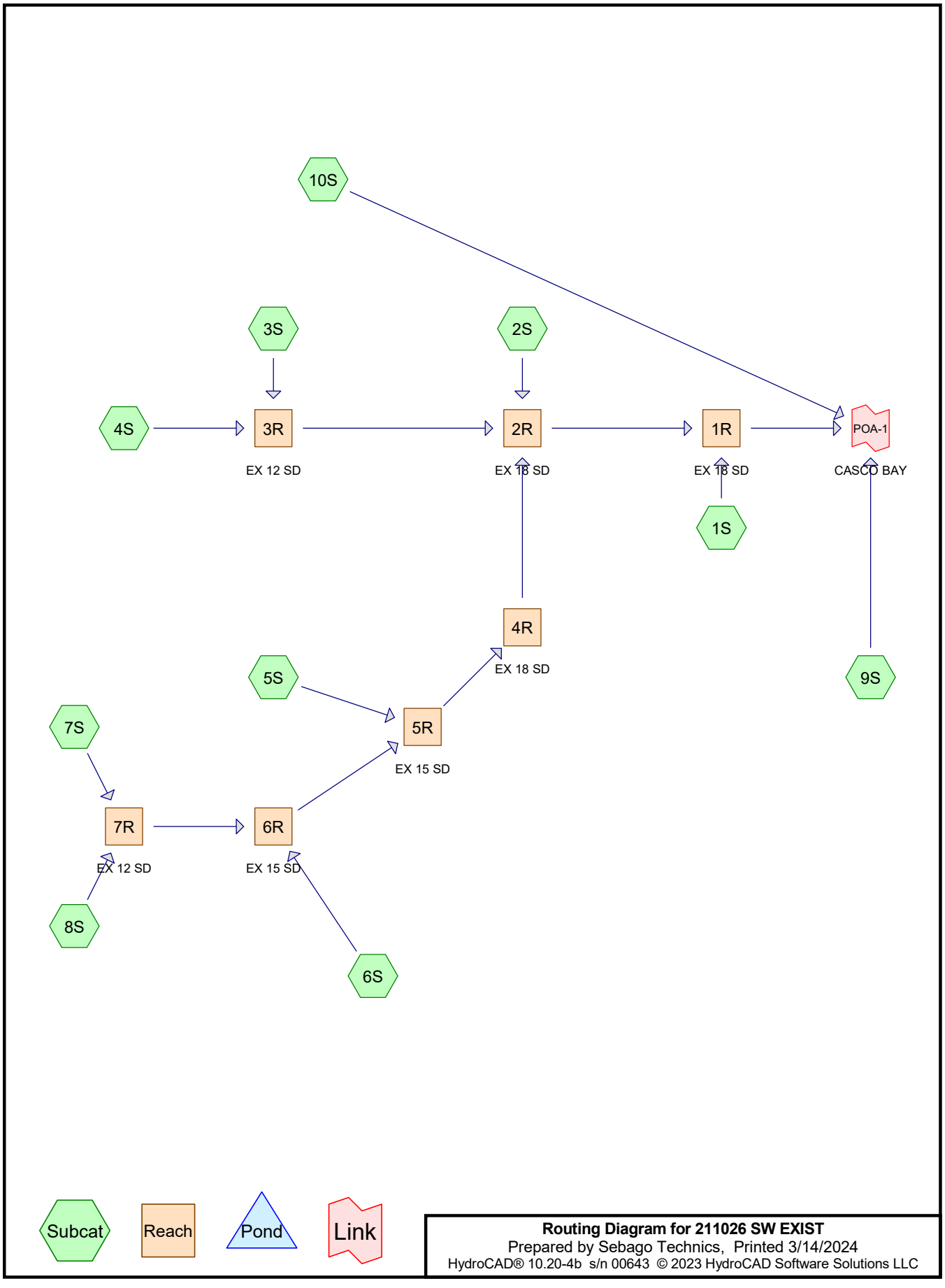
CONTECH ENGINEERED SOLUTIONS LLC
www.ContechES.com
9025 Centre Pointe Dr., Suite 400, West Chester, OH 45069
800-338-1122 513-645-7000 513-645-7993 FAX

JELLYFISH JFPD0808 STANDARD DETAIL PEAK DIVERSION CONFIGURATION

I:\COMMON\CAD\TREATMENT\13 JELLYFISH FILTER\40 STANDARD DRAWINGS\JFPD\DWG\JFPD0808-DTL NEW.DWG 1/29/2018 10:50 AM

Attachment 2A

Existing Condition HydroCAD Summary


10S
3S
2S
4S
3R
2R
1R
POA-1
EX 12 SD
EX 18 SD
EX 18 SD
CASCO BAY
1S
4R
EX 18 SD
5S
9S
7S
5R
EX 15 SD
7R
6R
EX 12 SD
EX 15 SD
8S
6S
Subcat
Reach
Pond
Link
Routing Diagram for 211026 SW EXIST
Prepared by Sebago Technics, Printed 3/14/2024
HydroCAD® 10.20-4b s/n 00643 © 2023 HydroCAD Software Solutions LLC

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
1.626	74	>75% Grass cover, Good, HSG C (1S, 2S, 3S, 4S, 5S, 6S, 7S, 8S, 9S, 10S)
1.662	98	Paved parking, HSG C (1S, 2S, 3S, 4S, 5S, 6S, 7S, 8S, 9S, 10S)
0.987	98	Roof (6S)
0.202	70	Woods, Good, HSG C (4S, 5S, 7S, 10S)

Summary for Subcatchment 1S:

Runoff = 1.4 cfs @ 12.09 hrs, Volume= 0.096 af, Depth= 1.83"
Routed to Reach 1R : EX 18 SD

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-YR Rainfall=3.10"

Area (ac)	CN	Description
0.298	74	>75% Grass cover, Good, HSG C
0.333	98	Paved parking, HSG C
0.631	87	Weighted Average
0.298		47.23% Pervious Area
0.333		52.77% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.1	5	0.0200	0.74		**Sheet Flow, A-B** Smooth surfaces n= 0.011 P2= 3.10"
0.0	5	0.3000	8.82		**Shallow Concentrated Flow, B-C** Unpaved Kv= 16.1 fps
0.1	10	0.2100	2.29		**Shallow Concentrated Flow, C-D** Woodland Kv= 5.0 fps
0.0	10	0.2000	7.20		**Shallow Concentrated Flow, D-E** Unpaved Kv= 16.1 fps
0.4	65	0.2500	2.50		**Shallow Concentrated Flow, E-F** Woodland Kv= 5.0 fps
0.0	10	0.1000	5.09		**Shallow Concentrated Flow, F-G** Unpaved Kv= 16.1 fps
0.3	85	0.0470	4.40		**Shallow Concentrated Flow, G-H** Paved Kv= 20.3 fps
0.4	85	0.0300	3.52		**Shallow Concentrated Flow, H-I** Paved Kv= 20.3 fps
4.7					**Direct Entry, DIRECT**
6.0	275	Total			

Summary for Subcatchment 2S:

Runoff = 1.1 cfs @ 12.09 hrs, Volume= 0.079 af, Depth= 2.08"
Routed to Reach 2R : EX 18 SD

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-YR Rainfall=3.10"

Area (ac)	CN	Description
0.149	74	>75% Grass cover, Good, HSG C
0.305	98	Paved parking, HSG C
0.454	90	Weighted Average
0.149		32.82% Pervious Area
0.305		67.18% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.2	60	0.3000	0.45		**Sheet Flow, A-B**
					Grass: Short n= 0.150 P2= 3.10"
0.2	60	0.0500	4.54		**Shallow Concentrated Flow, B-C**
					Paved Kv= 20.3 fps
3.6					**Direct Entry, DIRECT**
6.0	120	Total			

Summary for Subcatchment 3S:

Runoff = 0.2 cfs @ 12.08 hrs, Volume= 0.017 af, Depth= 2.65"
Routed to Reach 3R : EX 12 SD

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-YR Rainfall=3.10"

Area (ac)	CN	Description
0.005	74	>75% Grass cover, Good, HSG C
0.074	98	Paved parking, HSG C
0.079	96	Weighted Average
0.005		6.33% Pervious Area
0.074		93.67% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.2	20	0.0750	1.66		**Sheet Flow, A-B**
					Smooth surfaces n= 0.011 P2= 3.10"
0.4	130	0.0850	5.92		**Shallow Concentrated Flow, B-C**
					Paved Kv= 20.3 fps
5.4					**Direct Entry, DIRECT**
6.0	150	Total			

Summary for Subcatchment 4S:

Runoff = 0.2 cfs @ 12.09 hrs, Volume= 0.018 af, Depth= 1.33"
Routed to Reach 3R : EX 12 SD

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-YR Rainfall=3.10"

Area (ac)	CN	Description
0.050	70	Woods, Good, HSG C
0.060	74	>75% Grass cover, Good, HSG C
0.052	98	Paved parking, HSG C
0.162	80	Weighted Average
0.110		67.90% Pervious Area
0.052		32.10% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.3	30	0.2100	0.15		**Sheet Flow, A-B** Woods: Light underbrush n= 0.400 P2= 3.10"
0.0	25	0.3800	9.92		**Shallow Concentrated Flow, B-C** Unpaved Kv= 16.1 fps
0.5	150	0.0660	5.22		**Shallow Concentrated Flow, C-D** Paved Kv= 20.3 fps
2.2					**Direct Entry, DIRECT**
6.0	205	Total			

Summary for Subcatchment 5S:

Runoff = 0.2 cfs @ 12.09 hrs, Volume= 0.016 af, Depth= 1.67"
Routed to Reach 5R : EX 15 SD

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-YR Rainfall=3.10"

Area (ac)	CN	Description
0.009	70	Woods, Good, HSG C
0.053	74	>75% Grass cover, Good, HSG C
0.055	98	Paved parking, HSG C
0.117	85	Weighted Average
0.062		52.99% Pervious Area
0.055		47.01% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.9	50	0.0300	0.17		**Sheet Flow, A-B** Grass: Short n= 0.150 P2= 3.10"
0.2	60	0.0560	4.80		**Shallow Concentrated Flow, B-C** Paved Kv= 20.3 fps
0.3	100	0.1000	6.42		**Shallow Concentrated Flow, C-D** Paved Kv= 20.3 fps
0.6					**Direct Entry, DIRECT**
6.0	210	Total			

Summary for Subcatchment 6S:

Runoff = 3.6 cfs @ 12.08 hrs, Volume= 0.269 af, Depth= 2.45"
Routed to Reach 6R : EX 15 SD

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-YR Rainfall=3.10"

Area (ac)	CN	Description
0.229	74	>75% Grass cover, Good, HSG C
0.104	98	Paved parking, HSG C
* 0.987	98	Roof
1.320	94	Weighted Average
0.229		17.35% Pervious Area
1.091		82.65% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.6	10	0.2000	0.27		**Sheet Flow, A-B** Grass: Short n= 0.150 P2= 3.10"
0.3	45	0.1500	2.71		**Shallow Concentrated Flow, B-C** Short Grass Pasture Kv= 7.0 fps
0.3	165	0.0200	8.06	9.90	**Pipe Channel, C-D** 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012
4.8					**Direct Entry, DIRECT ENTRY**
6.0	220	Total			

Summary for Subcatchment 7S:

Runoff = 0.7 cfs @ 12.09 hrs, Volume= 0.050 af, Depth= 2.16"
Routed to Reach 7R : EX 12 SD

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-YR Rainfall=3.10"

Area (ac)	CN	Description
0.006	70	Woods, Good, HSG C
0.078	74	>75% Grass cover, Good, HSG C
0.193	98	Paved parking, HSG C
0.277	91	Weighted Average
0.084		30.32% Pervious Area
0.193		69.68% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.8	70	0.0280	1.44		**Sheet Flow, A-B** Smooth surfaces n= 0.011 P2= 3.10"
0.2	65	0.0460	4.35		**Shallow Concentrated Flow, B-C** Paved Kv= 20.3 fps
0.1	25	0.0800	4.55		**Shallow Concentrated Flow, C-D** Unpaved Kv= 16.1 fps
4.9					**Direct Entry, DIRECT**
6.0	160	Total			

Summary for Subcatchment 8S:

Runoff = 0.8 cfs @ 12.08 hrs, Volume= 0.059 af, Depth= 2.55"
Routed to Reach 7R : EX 12 SD

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-YR Rainfall=3.10"

Area (ac)	CN	Description
0.035	74	>75% Grass cover, Good, HSG C
0.244	98	Paved parking, HSG C
0.279	95	Weighted Average
0.035		12.54% Pervious Area
0.244		87.46% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, DIRECT**

Summary for Subcatchment 9S:

Runoff = 1.4 cfs @ 12.09 hrs, Volume= 0.102 af, Depth= 1.39"
Routed to Link POA-1 : CASCO BAY

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-YR Rainfall=3.10"

Area (ac)	CN	Description
0.631	74	>75% Grass cover, Good, HSG C
0.253	98	Paved parking, HSG C
0.884	81	Weighted Average
0.631		71.38% Pervious Area
0.253		28.62% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.2	33	0.1000	0.26		**Sheet Flow, A-B** Grass: Short n= 0.150 P2= 3.10"
0.7	135	0.2400	3.43		**Shallow Concentrated Flow, B-C** Short Grass Pasture Kv= 7.0 fps
0.2	80	0.1200	7.03		**Shallow Concentrated Flow, C-D** Paved Kv= 20.3 fps
0.0	10	1.0000	20.30		**Shallow Concentrated Flow, D-E** Paved Kv= 20.3 fps
2.9					**Direct Entry, DIRECT**
6.0	258	Total			

Summary for Subcatchment 10S:

Runoff = 0.3 cfs @ 12.09 hrs, Volume= 0.025 af, Depth= 1.08"
Routed to Link POA-1 : CASCO BAY

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-YR Rainfall=3.10"

Area (ac)	CN	Description
0.137	70	Woods, Good, HSG C
0.088	74	>75% Grass cover, Good, HSG C
0.049	98	Paved parking, HSG C
0.274	76	Weighted Average
0.225		82.12% Pervious Area
0.049		17.88% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.1	20	0.2900	0.16		**Sheet Flow, A-B** Woods: Light underbrush n= 0.400 P2= 3.10"
0.5	90	0.1600	2.80		**Shallow Concentrated Flow, B-C** Short Grass Pasture Kv= 7.0 fps
0.2	45	0.0330	3.69		**Shallow Concentrated Flow, C-D** Paved Kv= 20.3 fps
0.8	80	0.0510	1.58		**Shallow Concentrated Flow, D-E** Short Grass Pasture Kv= 7.0 fps
2.4					**Direct Entry, DIRECTY ENTRY**
6.0	235	Total			

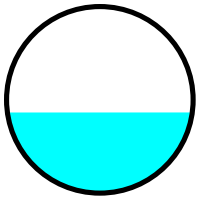
Summary for Reach 1R: EX 18 SD

Inflow Area = 3.319 ac, 70.71% Impervious, Inflow Depth = 2.19" for 2-YR event
Inflow = 8.3 cfs @ 12.09 hrs, Volume= 0.605 af
Outflow = 8.3 cfs @ 12.09 hrs, Volume= 0.605 af, Atten= 0%, Lag= 0.0 min
Routed to Link POA-1 : CASCO BAY

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Max. Velocity= 11.24 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 3.56 fps, Avg. Travel Time= 0.1 min

Peak Storage= 19 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.65' , Surface Width= 1.49'
Bank-Full Depth= 1.50' Flow Area= 1.8 sf, Capacity= 21.2 cfs

18.0" Round Pipe
n= 0.012
Length= 26.0' Slope= 0.0346 '/'
Inlet Invert= 22.90', Outlet Invert= 22.00'



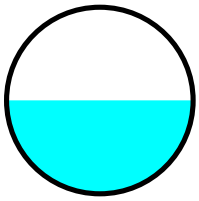
Summary for Reach 2R: EX 18 SD

Inflow Area = 2.688 ac, 74.93% Impervious, Inflow Depth = 2.27" for 2-YR event
Inflow = 6.9 cfs @ 12.09 hrs, Volume= 0.509 af
Outflow = 6.9 cfs @ 12.09 hrs, Volume= 0.509 af, Atten= 0%, Lag= 0.2 min
Routed to Reach 1R : EX 18 SD

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Max. Velocity= 7.79 fps, Min. Travel Time= 0.3 min
Avg. Velocity = 2.50 fps, Avg. Travel Time= 0.9 min

Peak Storage= 115 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.75' , Surface Width= 1.50'
Bank-Full Depth= 1.50' Flow Area= 1.8 sf, Capacity= 13.8 cfs

18.0" Round Pipe
n= 0.012
Length= 130.0' Slope= 0.0146 '/'
Inlet Invert= 24.90', Outlet Invert= 23.00'



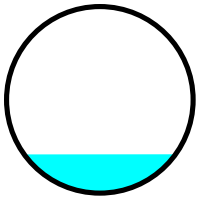
Summary for Reach 3R: EX 12 SD

Inflow Area = 0.241 ac, 52.28% Impervious, Inflow Depth = 1.76" for 2-YR event
Inflow = 0.5 cfs @ 12.09 hrs, Volume= 0.035 af
Outflow = 0.5 cfs @ 12.10 hrs, Volume= 0.035 af, Atten= 0%, Lag= 0.4 min
Routed to Reach 2R : EX 18 SD

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Max. Velocity= 4.00 fps, Min. Travel Time= 0.6 min
Avg. Velocity = 1.27 fps, Avg. Travel Time= 2.0 min

Peak Storage= 18 cf @ 12.10 hrs
Average Depth at Peak Storage= 0.21' , Surface Width= 0.81'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 5.0 cfs

12.0" Round Pipe
n= 0.012
Length= 150.0' Slope= 0.0167 '/'
Inlet Invert= 27.40', Outlet Invert= 24.90'



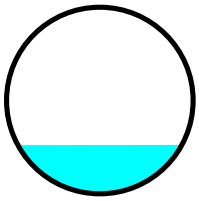
Summary for Reach 4R: EX 18 SD

Inflow Area = 1.993 ac, 79.43% Impervious, Inflow Depth = 2.38" for 2-YR event
Inflow = 5.3 cfs @ 12.09 hrs, Volume= 0.395 af
Outflow = 5.3 cfs @ 12.09 hrs, Volume= 0.395 af, Atten= 0%, Lag= 0.0 min
Routed to Reach 2R : EX 18 SD

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Max. Velocity= 14.50 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 4.66 fps, Avg. Travel Time= 0.2 min

Peak Storage= 18 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.39' , Surface Width= 1.32'
Bank-Full Depth= 1.50' Flow Area= 1.8 sf, Capacity= 35.6 cfs

18.0" Round Pipe
n= 0.012
Length= 50.0' Slope= 0.0980 '/'
Inlet Invert= 29.90', Outlet Invert= 25.00'



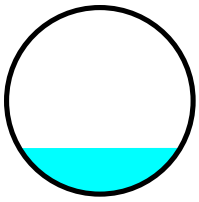
Summary for Reach 5R: EX 15 SD

Inflow Area = 1.993 ac, 79.43% Impervious, Inflow Depth = 2.38" for 2-YR event
Inflow = 5.3 cfs @ 12.09 hrs, Volume= 0.395 af
Outflow = 5.3 cfs @ 12.09 hrs, Volume= 0.395 af, Atten= 0%, Lag= 0.0 min
Routed to Reach 4R : EX 18 SD

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Max. Velocity= 22.53 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 7.26 fps, Avg. Travel Time= 0.1 min

Peak Storage= 11 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.31' , Surface Width= 1.08'
Bank-Full Depth= 1.25' Flow Area= 1.2 sf, Capacity= 39.6 cfs

15.0" Round Pipe
n= 0.012
Length= 45.0' Slope= 0.3209 '/'
Inlet Invert= 44.44', Outlet Invert= 30.00'



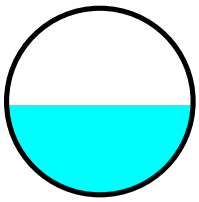
Summary for Reach 6R: EX 15 SD

Inflow Area = 1.876 ac, 81.45% Impervious, Inflow Depth = 2.42" for 2-YR event
Inflow = 5.1 cfs @ 12.09 hrs, Volume= 0.378 af
Outflow = 5.1 cfs @ 12.09 hrs, Volume= 0.378 af, Atten= 0%, Lag= 0.0 min
Routed to Reach 5R : EX 15 SD

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Max. Velocity= 8.70 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 2.86 fps, Avg. Travel Time= 0.1 min

Peak Storage= 9 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.60' , Surface Width= 1.25'
Bank-Full Depth= 1.25' Flow Area= 1.2 sf, Capacity= 10.8 cfs

15.0" Round Pipe
n= 0.012
Length= 15.0' Slope= 0.0240 '/'
Inlet Invert= 44.90', Outlet Invert= 44.54'



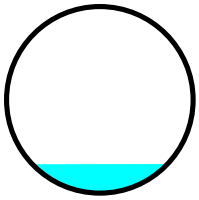
Summary for Reach 7R: EX 12 SD

Inflow Area = 0.556 ac, 78.60% Impervious, Inflow Depth = 2.36" for 2-YR event
Inflow = 1.5 cfs @ 12.09 hrs, Volume= 0.109 af
Outflow = 1.5 cfs @ 12.09 hrs, Volume= 0.109 af, Atten= 0%, Lag= 0.0 min
Routed to Reach 6R : EX 15 SD

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Max. Velocity= 19.07 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 6.16 fps, Avg. Travel Time= 0.1 min

Peak Storage= 2 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.16' , Surface Width= 0.72'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 28.4 cfs

12.0" Round Pipe
n= 0.012
Length= 20.0' Slope= 0.5400 '/'
Inlet Invert= 56.50', Outlet Invert= 45.70'



Summary for Link POA-1: CASCO BAY

Inflow Area = 4.477 ac, 59.17% Impervious, Inflow Depth = 1.96" for 2-YR event
Inflow = 10.0 cfs @ 12.09 hrs, Volume= 0.732 af
Primary = 10.0 cfs @ 12.09 hrs, Volume= 0.732 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs

Summary for Subcatchment 1S:

Runoff = 2.3 cfs @ 12.09 hrs, Volume= 0.168 af, Depth= 3.19"
Routed to Reach 1R : EX 18 SD

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-YR Rainfall=4.60"

Area (ac)	CN	Description
0.298	74	>75% Grass cover, Good, HSG C
0.333	98	Paved parking, HSG C
0.631	87	Weighted Average
0.298		47.23% Pervious Area
0.333		52.77% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.1	5	0.0200	0.74		**Sheet Flow, A-B** Smooth surfaces n= 0.011 P2= 3.10"
0.0	5	0.3000	8.82		**Shallow Concentrated Flow, B-C** Unpaved Kv= 16.1 fps
0.1	10	0.2100	2.29		**Shallow Concentrated Flow, C-D** Woodland Kv= 5.0 fps
0.0	10	0.2000	7.20		**Shallow Concentrated Flow, D-E** Unpaved Kv= 16.1 fps
0.4	65	0.2500	2.50		**Shallow Concentrated Flow, E-F** Woodland Kv= 5.0 fps
0.0	10	0.1000	5.09		**Shallow Concentrated Flow, F-G** Unpaved Kv= 16.1 fps
0.3	85	0.0470	4.40		**Shallow Concentrated Flow, G-H** Paved Kv= 20.3 fps
0.4	85	0.0300	3.52		**Shallow Concentrated Flow, H-I** Paved Kv= 20.3 fps
4.7					**Direct Entry, DIRECT**
6.0	275	Total			

Summary for Subcatchment 2S:

Runoff = 1.8 cfs @ 12.09 hrs, Volume= 0.132 af, Depth= 3.49"
Routed to Reach 2R : EX 18 SD

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-YR Rainfall=4.60"

Area (ac)	CN	Description
0.149	74	>75% Grass cover, Good, HSG C
0.305	98	Paved parking, HSG C
0.454	90	Weighted Average
0.149		32.82% Pervious Area
0.305		67.18% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.2	60	0.3000	0.45		**Sheet Flow, A-B** Grass: Short n= 0.150 P2= 3.10"
0.2	60	0.0500	4.54		**Shallow Concentrated Flow, B-C** Paved Kv= 20.3 fps
3.6					**Direct Entry, DIRECT**
6.0	120	Total			

Summary for Subcatchment 3S:

Runoff = 0.3 cfs @ 12.08 hrs, Volume= 0.027 af, Depth= 4.14"
Routed to Reach 3R : EX 12 SD

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-YR Rainfall=4.60"

Area (ac)	CN	Description
0.005	74	>75% Grass cover, Good, HSG C
0.074	98	Paved parking, HSG C
0.079	96	Weighted Average
0.005		6.33% Pervious Area
0.074		93.67% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.2	20	0.0750	1.66		**Sheet Flow, A-B** Smooth surfaces n= 0.011 P2= 3.10"
0.4	130	0.0850	5.92		**Shallow Concentrated Flow, B-C** Paved Kv= 20.3 fps
5.4					**Direct Entry, DIRECT**
6.0	150	Total			

Summary for Subcatchment 4S:

Runoff = 0.5 cfs @ 12.09 hrs, Volume= 0.034 af, Depth= 2.55"
Routed to Reach 3R : EX 12 SD

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-YR Rainfall=4.60"

Area (ac)	CN	Description
0.050	70	Woods, Good, HSG C
0.060	74	>75% Grass cover, Good, HSG C
0.052	98	Paved parking, HSG C
0.162	80	Weighted Average
0.110		67.90% Pervious Area
0.052		32.10% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.3	30	0.2100	0.15		**Sheet Flow, A-B** Woods: Light underbrush n= 0.400 P2= 3.10"
0.0	25	0.3800	9.92		**Shallow Concentrated Flow, B-C** Unpaved Kv= 16.1 fps
0.5	150	0.0660	5.22		**Shallow Concentrated Flow, C-D** Paved Kv= 20.3 fps
2.2					**Direct Entry, DIRECT**
6.0	205	Total			

Summary for Subcatchment 5S:

Runoff = 0.4 cfs @ 12.09 hrs, Volume= 0.029 af, Depth= 3.00"
Routed to Reach 5R : EX 15 SD

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-YR Rainfall=4.60"

Area (ac)	CN	Description
0.009	70	Woods, Good, HSG C
0.053	74	>75% Grass cover, Good, HSG C
0.055	98	Paved parking, HSG C
0.117	85	Weighted Average
0.062		52.99% Pervious Area
0.055		47.01% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.9	50	0.0300	0.17		**Sheet Flow, A-B** Grass: Short n= 0.150 P2= 3.10"
0.2	60	0.0560	4.80		**Shallow Concentrated Flow, B-C** Paved Kv= 20.3 fps
0.3	100	0.1000	6.42		**Shallow Concentrated Flow, C-D** Paved Kv= 20.3 fps
0.6					**Direct Entry, DIRECT**
6.0	210	Total			

Summary for Subcatchment 6S:

Runoff = 5.7 cfs @ 12.08 hrs, Volume= 0.431 af, Depth= 3.91"
Routed to Reach 6R : EX 15 SD

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-YR Rainfall=4.60"

Area (ac)	CN	Description
0.229	74	>75% Grass cover, Good, HSG C
0.104	98	Paved parking, HSG C
* 0.987	98	Roof
1.320	94	Weighted Average
0.229		17.35% Pervious Area
1.091		82.65% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.6	10	0.2000	0.27		**Sheet Flow, A-B** Grass: Short n= 0.150 P2= 3.10"
0.3	45	0.1500	2.71		**Shallow Concentrated Flow, B-C** Short Grass Pasture Kv= 7.0 fps
0.3	165	0.0200	8.06	9.90	**Pipe Channel, C-D** 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012
4.8					**Direct Entry, DIRECT ENTRY**
6.0	220	Total			

Summary for Subcatchment 7S:

Runoff = 1.1 cfs @ 12.08 hrs, Volume= 0.083 af, Depth= 3.59"
Routed to Reach 7R : EX 12 SD

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-YR Rainfall=4.60"

Area (ac)	CN	Description
0.006	70	Woods, Good, HSG C
0.078	74	>75% Grass cover, Good, HSG C
0.193	98	Paved parking, HSG C
0.277	91	Weighted Average
0.084		30.32% Pervious Area
0.193		69.68% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.8	70	0.0280	1.44		**Sheet Flow, A-B** Smooth surfaces n= 0.011 P2= 3.10"
0.2	65	0.0460	4.35		**Shallow Concentrated Flow, B-C** Paved Kv= 20.3 fps
0.1	25	0.0800	4.55		**Shallow Concentrated Flow, C-D** Unpaved Kv= 16.1 fps
4.9					**Direct Entry, DIRECT**
6.0	160	Total			

Summary for Subcatchment 8S:

Runoff = 1.2 cfs @ 12.08 hrs, Volume= 0.094 af, Depth= 4.02"
Routed to Reach 7R : EX 12 SD

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-YR Rainfall=4.60"

Area (ac)	CN	Description
0.035	74	>75% Grass cover, Good, HSG C
0.244	98	Paved parking, HSG C
0.279	95	Weighted Average
0.035		12.54% Pervious Area
0.244		87.46% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, DIRECT**

Summary for Subcatchment 9S:

Runoff = 2.7 cfs @ 12.09 hrs, Volume= 0.194 af, Depth= 2.63"
Routed to Link POA-1 : CASCO BAY

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-YR Rainfall=4.60"

Area (ac)	CN	Description
0.631	74	>75% Grass cover, Good, HSG C
0.253	98	Paved parking, HSG C
0.884	81	Weighted Average
0.631		71.38% Pervious Area
0.253		28.62% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.2	33	0.1000	0.26		**Sheet Flow, A-B** Grass: Short n= 0.150 P2= 3.10"
0.7	135	0.2400	3.43		**Shallow Concentrated Flow, B-C** Short Grass Pasture Kv= 7.0 fps
0.2	80	0.1200	7.03		**Shallow Concentrated Flow, C-D** Paved Kv= 20.3 fps
0.0	10	1.0000	20.30		**Shallow Concentrated Flow, D-E** Paved Kv= 20.3 fps
2.9					**Direct Entry, DIRECT**
6.0	258	Total			

Summary for Subcatchment 10S:

Runoff = 0.7 cfs @ 12.09 hrs, Volume= 0.050 af, Depth= 2.21"
Routed to Link POA-1 : CASCO BAY

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-YR Rainfall=4.60"

Area (ac)	CN	Description
0.137	70	Woods, Good, HSG C
0.088	74	>75% Grass cover, Good, HSG C
0.049	98	Paved parking, HSG C
0.274	76	Weighted Average
0.225		82.12% Pervious Area
0.049		17.88% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.1	20	0.2900	0.16		**Sheet Flow, A-B** Woods: Light underbrush n= 0.400 P2= 3.10"
0.5	90	0.1600	2.80		**Shallow Concentrated Flow, B-C** Short Grass Pasture Kv= 7.0 fps
0.2	45	0.0330	3.69		**Shallow Concentrated Flow, C-D** Paved Kv= 20.3 fps
0.8	80	0.0510	1.58		**Shallow Concentrated Flow, D-E** Short Grass Pasture Kv= 7.0 fps
2.4					**Direct Entry, DIRECTY ENTRY**
6.0	235	Total			

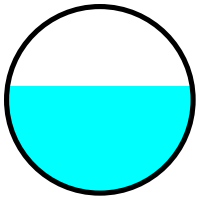
Summary for Reach 1R: EX 18 SD

Inflow Area = 3.319 ac, 70.71% Impervious, Inflow Depth = 3.61" for 10-YR event
Inflow = 13.4 cfs @ 12.09 hrs, Volume= 0.998 af
Outflow = 13.4 cfs @ 12.09 hrs, Volume= 0.998 af, Atten= 0%, Lag= 0.0 min
Routed to Link POA-1 : CASCO BAY

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Max. Velocity= 12.67 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 4.09 fps, Avg. Travel Time= 0.1 min

Peak Storage= 27 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.86' , Surface Width= 1.48'
Bank-Full Depth= 1.50' Flow Area= 1.8 sf, Capacity= 21.2 cfs

18.0" Round Pipe
n= 0.012
Length= 26.0' Slope= 0.0346 '/'
Inlet Invert= 22.90', Outlet Invert= 22.00'



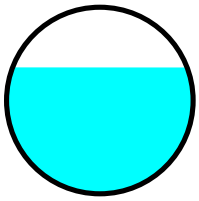
Summary for Reach 2R: EX 18 SD

Inflow Area = 2.688 ac, 74.93% Impervious, Inflow Depth = 3.71" for 10-YR event
Inflow = 11.0 cfs @ 12.09 hrs, Volume= 0.830 af
Outflow = 11.0 cfs @ 12.09 hrs, Volume= 0.830 af, Atten= 0%, Lag= 0.2 min
Routed to Reach 1R : EX 18 SD

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Max. Velocity= 8.65 fps, Min. Travel Time= 0.3 min
Avg. Velocity = 2.87 fps, Avg. Travel Time= 0.8 min

Peak Storage= 166 cf @ 12.09 hrs
Average Depth at Peak Storage= 1.02' , Surface Width= 1.40'
Bank-Full Depth= 1.50' Flow Area= 1.8 sf, Capacity= 13.8 cfs

18.0" Round Pipe
n= 0.012
Length= 130.0' Slope= 0.0146 '/'
Inlet Invert= 24.90', Outlet Invert= 23.00'



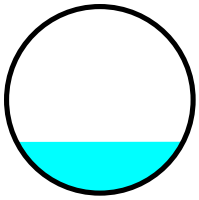
Summary for Reach 3R: EX 12 SD

Inflow Area = 0.241 ac, 52.28% Impervious, Inflow Depth = 3.07" for 10-YR event
Inflow = 0.8 cfs @ 12.09 hrs, Volume= 0.062 af
Outflow = 0.8 cfs @ 12.09 hrs, Volume= 0.062 af, Atten= 0%, Lag= 0.4 min
Routed to Reach 2R : EX 18 SD

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Max. Velocity= 4.70 fps, Min. Travel Time= 0.5 min
Avg. Velocity = 1.46 fps, Avg. Travel Time= 1.7 min

Peak Storage= 26 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.28' , Surface Width= 0.89'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 5.0 cfs

12.0" Round Pipe
n= 0.012
Length= 150.0' Slope= 0.0167 '/'
Inlet Invert= 27.40', Outlet Invert= 24.90'



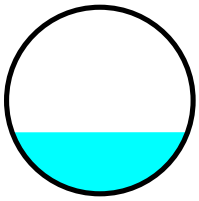
Summary for Reach 4R: EX 18 SD

Inflow Area = 1.993 ac, 79.43% Impervious, Inflow Depth = 3.83" for 10-YR event
Inflow = 8.4 cfs @ 12.08 hrs, Volume= 0.636 af
Outflow = 8.4 cfs @ 12.09 hrs, Volume= 0.636 af, Atten= 0%, Lag= 0.0 min
Routed to Reach 2R : EX 18 SD

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Max. Velocity= 16.48 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 5.30 fps, Avg. Travel Time= 0.2 min

Peak Storage= 25 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.50' , Surface Width= 1.41'
Bank-Full Depth= 1.50' Flow Area= 1.8 sf, Capacity= 35.6 cfs

18.0" Round Pipe
n= 0.012
Length= 50.0' Slope= 0.0980 '/'
Inlet Invert= 29.90', Outlet Invert= 25.00'



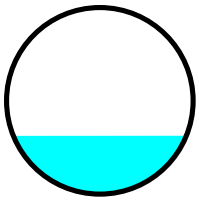
Summary for Reach 5R: EX 15 SD

Inflow Area = 1.993 ac, 79.43% Impervious, Inflow Depth = 3.83" for 10-YR event
Inflow = 8.4 cfs @ 12.08 hrs, Volume= 0.636 af
Outflow = 8.4 cfs @ 12.08 hrs, Volume= 0.636 af, Atten= 0%, Lag= 0.0 min
Routed to Reach 4R : EX 18 SD

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Max. Velocity= 25.63 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 8.25 fps, Avg. Travel Time= 0.1 min

Peak Storage= 15 cf @ 12.08 hrs
Average Depth at Peak Storage= 0.39' , Surface Width= 1.16'
Bank-Full Depth= 1.25' Flow Area= 1.2 sf, Capacity= 39.6 cfs

15.0" Round Pipe
n= 0.012
Length= 45.0' Slope= 0.3209 '/'
Inlet Invert= 44.44', Outlet Invert= 30.00'



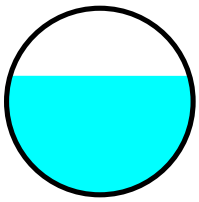
Summary for Reach 6R: EX 15 SD

Inflow Area = 1.876 ac, 81.45% Impervious, Inflow Depth = 3.88" for 10-YR event
Inflow = 8.0 cfs @ 12.08 hrs, Volume= 0.607 af
Outflow = 8.0 cfs @ 12.08 hrs, Volume= 0.607 af, Atten= 0%, Lag= 0.0 min
Routed to Reach 5R : EX 15 SD

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Max. Velocity= 9.66 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 3.26 fps, Avg. Travel Time= 0.1 min

Peak Storage= 12 cf @ 12.08 hrs
Average Depth at Peak Storage= 0.80' , Surface Width= 1.20'
Bank-Full Depth= 1.25' Flow Area= 1.2 sf, Capacity= 10.8 cfs

15.0" Round Pipe
n= 0.012
Length= 15.0' Slope= 0.0240 '/'
Inlet Invert= 44.90', Outlet Invert= 44.54'



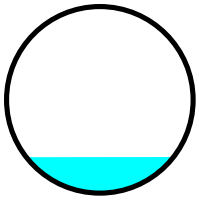
Summary for Reach 7R: EX 12 SD

Inflow Area = 0.556 ac, 78.60% Impervious, Inflow Depth = 3.81" for 10-YR event
Inflow = 2.3 cfs @ 12.08 hrs, Volume= 0.177 af
Outflow = 2.3 cfs @ 12.08 hrs, Volume= 0.177 af, Atten= 0%, Lag= 0.0 min
Routed to Reach 6R : EX 15 SD

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Max. Velocity= 21.82 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 6.99 fps, Avg. Travel Time= 0.0 min

Peak Storage= 2 cf @ 12.08 hrs
Average Depth at Peak Storage= 0.19' , Surface Width= 0.79'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 28.4 cfs

12.0" Round Pipe
n= 0.012
Length= 20.0' Slope= 0.5400 '/'
Inlet Invert= 56.50', Outlet Invert= 45.70'



Summary for Link POA-1: CASCO BAY

Inflow Area = 4.477 ac, 59.17% Impervious, Inflow Depth = 3.33" for 10-YR event
Inflow = 16.8 cfs @ 12.09 hrs, Volume= 1.242 af
Primary = 16.8 cfs @ 12.09 hrs, Volume= 1.242 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs

Summary for Subcatchment 1S:

Runoff = 3.1 cfs @ 12.09 hrs, Volume= 0.227 af, Depth= 4.33"
Routed to Reach 1R : EX 18 SD

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-YR Rainfall=5.80"

Area (ac)	CN	Description
0.298	74	>75% Grass cover, Good, HSG C
0.333	98	Paved parking, HSG C
0.631	87	Weighted Average
0.298		47.23% Pervious Area
0.333		52.77% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.1	5	0.0200	0.74		**Sheet Flow, A-B** Smooth surfaces n= 0.011 P2= 3.10"
0.0	5	0.3000	8.82		**Shallow Concentrated Flow, B-C** Unpaved Kv= 16.1 fps
0.1	10	0.2100	2.29		**Shallow Concentrated Flow, C-D** Woodland Kv= 5.0 fps
0.0	10	0.2000	7.20		**Shallow Concentrated Flow, D-E** Unpaved Kv= 16.1 fps
0.4	65	0.2500	2.50		**Shallow Concentrated Flow, E-F** Woodland Kv= 5.0 fps
0.0	10	0.1000	5.09		**Shallow Concentrated Flow, F-G** Unpaved Kv= 16.1 fps
0.3	85	0.0470	4.40		**Shallow Concentrated Flow, G-H** Paved Kv= 20.3 fps
0.4	85	0.0300	3.52		**Shallow Concentrated Flow, H-I** Paved Kv= 20.3 fps
4.7					**Direct Entry, DIRECT**
6.0	275	Total			

Summary for Subcatchment 2S:

Runoff = 2.4 cfs @ 12.08 hrs, Volume= 0.176 af, Depth= 4.65"
Routed to Reach 2R : EX 18 SD

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-YR Rainfall=5.80"

Area (ac)	CN	Description
0.149	74	>75% Grass cover, Good, HSG C
0.305	98	Paved parking, HSG C
0.454	90	Weighted Average
0.149		32.82% Pervious Area
0.305		67.18% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.2	60	0.3000	0.45		**Sheet Flow, A-B**
					Grass: Short n= 0.150 P2= 3.10"
0.2	60	0.0500	4.54		**Shallow Concentrated Flow, B-C**
					Paved Kv= 20.3 fps
3.6					**Direct Entry, DIRECT**
6.0	120	Total			

Summary for Subcatchment 3S:

Runoff = 0.4 cfs @ 12.08 hrs, Volume= 0.035 af, Depth= 5.33"
Routed to Reach 3R : EX 12 SD

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-YR Rainfall=5.80"

Area (ac)	CN	Description
0.005	74	>75% Grass cover, Good, HSG C
0.074	98	Paved parking, HSG C
0.079	96	Weighted Average
0.005		6.33% Pervious Area
0.074		93.67% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.2	20	0.0750	1.66		**Sheet Flow, A-B**
					Smooth surfaces n= 0.011 P2= 3.10"
0.4	130	0.0850	5.92		**Shallow Concentrated Flow, B-C**
					Paved Kv= 20.3 fps
5.4					**Direct Entry, DIRECT**
6.0	150	Total			

Summary for Subcatchment 4S:

Runoff = 0.7 cfs @ 12.09 hrs, Volume= 0.049 af, Depth= 3.60"
Routed to Reach 3R : EX 12 SD

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-YR Rainfall=5.80"

Area (ac)	CN	Description
0.050	70	Woods, Good, HSG C
0.060	74	>75% Grass cover, Good, HSG C
0.052	98	Paved parking, HSG C
0.162	80	Weighted Average
0.110		67.90% Pervious Area
0.052		32.10% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.3	30	0.2100	0.15		**Sheet Flow, A-B** Woods: Light underbrush n= 0.400 P2= 3.10"
0.0	25	0.3800	9.92		**Shallow Concentrated Flow, B-C** Unpaved Kv= 16.1 fps
0.5	150	0.0660	5.22		**Shallow Concentrated Flow, C-D** Paved Kv= 20.3 fps
2.2					**Direct Entry, DIRECT**
6.0	205	Total			

Summary for Subcatchment 5S:

Runoff = 0.6 cfs @ 12.09 hrs, Volume= 0.040 af, Depth= 4.11"
Routed to Reach 5R : EX 15 SD

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-YR Rainfall=5.80"

Area (ac)	CN	Description
0.009	70	Woods, Good, HSG C
0.053	74	>75% Grass cover, Good, HSG C
0.055	98	Paved parking, HSG C
0.117	85	Weighted Average
0.062		52.99% Pervious Area
0.055		47.01% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.9	50	0.0300	0.17		**Sheet Flow, A-B** Grass: Short n= 0.150 P2= 3.10"
0.2	60	0.0560	4.80		**Shallow Concentrated Flow, B-C** Paved Kv= 20.3 fps
0.3	100	0.1000	6.42		**Shallow Concentrated Flow, C-D** Paved Kv= 20.3 fps
0.6					**Direct Entry, DIRECT**
6.0	210	Total			

Summary for Subcatchment 6S:

Runoff = 7.3 cfs @ 12.08 hrs, Volume= 0.561 af, Depth= 5.10"
Routed to Reach 6R : EX 15 SD

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-YR Rainfall=5.80"

Area (ac)	CN	Description
0.229	74	>75% Grass cover, Good, HSG C
0.104	98	Paved parking, HSG C
* 0.987	98	Roof
1.320	94	Weighted Average
0.229		17.35% Pervious Area
1.091		82.65% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.6	10	0.2000	0.27		**Sheet Flow, A-B** Grass: Short n= 0.150 P2= 3.10"
0.3	45	0.1500	2.71		**Shallow Concentrated Flow, B-C** Short Grass Pasture Kv= 7.0 fps
0.3	165	0.0200	8.06	9.90	**Pipe Channel, C-D** 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012
4.8					**Direct Entry, DIRECT ENTRY**
6.0	220	Total			

Summary for Subcatchment 7S:

Runoff = 1.5 cfs @ 12.08 hrs, Volume= 0.110 af, Depth= 4.76"
Routed to Reach 7R : EX 12 SD

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-YR Rainfall=5.80"

Area (ac)	CN	Description
0.006	70	Woods, Good, HSG C
0.078	74	>75% Grass cover, Good, HSG C
0.193	98	Paved parking, HSG C
0.277	91	Weighted Average
0.084		30.32% Pervious Area
0.193		69.68% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.8	70	0.0280	1.44		**Sheet Flow, A-B** Smooth surfaces n= 0.011 P2= 3.10"
0.2	65	0.0460	4.35		**Shallow Concentrated Flow, B-C** Paved Kv= 20.3 fps
0.1	25	0.0800	4.55		**Shallow Concentrated Flow, C-D** Unpaved Kv= 16.1 fps
4.9					**Direct Entry, DIRECT**
6.0	160	Total			

Summary for Subcatchment 8S:

Runoff = 1.6 cfs @ 12.08 hrs, Volume= 0.121 af, Depth= 5.21"
Routed to Reach 7R : EX 12 SD

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-YR Rainfall=5.80"

Area (ac)	CN	Description
0.035	74	>75% Grass cover, Good, HSG C
0.244	98	Paved parking, HSG C
0.279	95	Weighted Average
0.035		12.54% Pervious Area
0.244		87.46% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, DIRECT**

Summary for Subcatchment 9S:

Runoff = 3.8 cfs @ 12.09 hrs, Volume= 0.273 af, Depth= 3.70"
Routed to Link POA-1 : CASCO BAY

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-YR Rainfall=5.80"

Area (ac)	CN	Description
0.631	74	>75% Grass cover, Good, HSG C
0.253	98	Paved parking, HSG C
0.884	81	Weighted Average
0.631		71.38% Pervious Area
0.253		28.62% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.2	33	0.1000	0.26		**Sheet Flow, A-B** Grass: Short n= 0.150 P2= 3.10"
0.7	135	0.2400	3.43		**Shallow Concentrated Flow, B-C** Short Grass Pasture Kv= 7.0 fps
0.2	80	0.1200	7.03		**Shallow Concentrated Flow, C-D** Paved Kv= 20.3 fps
0.0	10	1.0000	20.30		**Shallow Concentrated Flow, D-E** Paved Kv= 20.3 fps
2.9					**Direct Entry, DIRECT**
6.0	258	Total			

Summary for Subcatchment 10S:

Runoff = 1.0 cfs @ 12.09 hrs, Volume= 0.073 af, Depth= 3.21"
Routed to Link POA-1 : CASCO BAY

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-YR Rainfall=5.80"

Area (ac)	CN	Description
0.137	70	Woods, Good, HSG C
0.088	74	>75% Grass cover, Good, HSG C
0.049	98	Paved parking, HSG C
0.274	76	Weighted Average
0.225		82.12% Pervious Area
0.049		17.88% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.1	20	0.2900	0.16		**Sheet Flow, A-B** Woods: Light underbrush n= 0.400 P2= 3.10"
0.5	90	0.1600	2.80		**Shallow Concentrated Flow, B-C** Short Grass Pasture Kv= 7.0 fps
0.2	45	0.0330	3.69		**Shallow Concentrated Flow, C-D** Paved Kv= 20.3 fps
0.8	80	0.0510	1.58		**Shallow Concentrated Flow, D-E** Short Grass Pasture Kv= 7.0 fps
2.4					**Direct Entry, DIRECTY ENTRY**
6.0	235	Total			

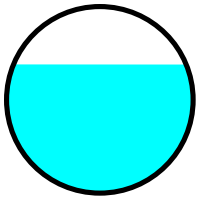
Summary for Reach 1R: EX 18 SD

Inflow Area = 3.319 ac, 70.71% Impervious, Inflow Depth = 4.77" for 25-YR event
Inflow = 17.4 cfs @ 12.09 hrs, Volume= 1.319 af
Outflow = 17.4 cfs @ 12.09 hrs, Volume= 1.319 af, Atten= 0%, Lag= 0.0 min
Routed to Link POA-1 : CASCO BAY

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Max. Velocity= 13.38 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 4.44 fps, Avg. Travel Time= 0.1 min

Peak Storage= 34 cf @ 12.09 hrs
Average Depth at Peak Storage= 1.04' , Surface Width= 1.39'
Bank-Full Depth= 1.50' Flow Area= 1.8 sf, Capacity= 21.2 cfs

18.0" Round Pipe
n= 0.012
Length= 26.0' Slope= 0.0346 '/'
Inlet Invert= 22.90', Outlet Invert= 22.00'



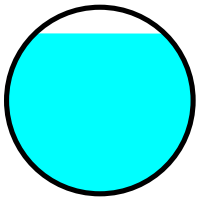
Summary for Reach 2R: EX 18 SD

Inflow Area = 2.688 ac, 74.93% Impervious, Inflow Depth = 4.87" for 25-YR event
Inflow = 14.3 cfs @ 12.09 hrs, Volume= 1.092 af
Outflow = 14.3 cfs @ 12.09 hrs, Volume= 1.092 af, Atten= 0%, Lag= 0.3 min
Routed to Reach 1R : EX 18 SD

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Max. Velocity= 8.87 fps, Min. Travel Time= 0.2 min
Avg. Velocity = 3.10 fps, Avg. Travel Time= 0.7 min

Peak Storage= 210 cf @ 12.09 hrs
Average Depth at Peak Storage= 1.29' , Surface Width= 1.04'
Bank-Full Depth= 1.50' Flow Area= 1.8 sf, Capacity= 13.8 cfs

18.0" Round Pipe
n= 0.012
Length= 130.0' Slope= 0.0146 '/'
Inlet Invert= 24.90', Outlet Invert= 23.00'



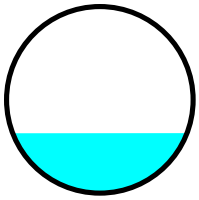
Summary for Reach 3R: EX 12 SD

Inflow Area = 0.241 ac, 52.28% Impervious, Inflow Depth = 4.17" for 25-YR event
Inflow = 1.1 cfs @ 12.09 hrs, Volume= 0.084 af
Outflow = 1.1 cfs @ 12.09 hrs, Volume= 0.084 af, Atten= 0%, Lag= 0.4 min
Routed to Reach 2R : EX 18 SD

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Max. Velocity= 5.12 fps, Min. Travel Time= 0.5 min
Avg. Velocity = 1.59 fps, Avg. Travel Time= 1.6 min

Peak Storage= 33 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.32' , Surface Width= 0.93'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 5.0 cfs

12.0" Round Pipe
n= 0.012
Length= 150.0' Slope= 0.0167 '/'
Inlet Invert= 27.40', Outlet Invert= 24.90'



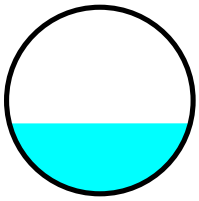
Summary for Reach 4R: EX 18 SD

Inflow Area = 1.993 ac, 79.43% Impervious, Inflow Depth = 5.01" for 25-YR event
Inflow = 10.8 cfs @ 12.08 hrs, Volume= 0.832 af
Outflow = 10.8 cfs @ 12.09 hrs, Volume= 0.832 af, Atten= 0%, Lag= 0.0 min
Routed to Reach 2R : EX 18 SD

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Max. Velocity= 17.68 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 5.72 fps, Avg. Travel Time= 0.1 min

Peak Storage= 31 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.57' , Surface Width= 1.45'
Bank-Full Depth= 1.50' Flow Area= 1.8 sf, Capacity= 35.6 cfs

18.0" Round Pipe
n= 0.012
Length= 50.0' Slope= 0.0980 '/'
Inlet Invert= 29.90', Outlet Invert= 25.00'



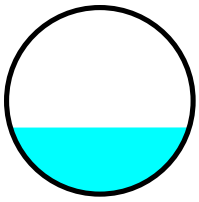
Summary for Reach 5R: EX 15 SD

Inflow Area = 1.993 ac, 79.43% Impervious, Inflow Depth = 5.01" for 25-YR event
Inflow = 10.8 cfs @ 12.08 hrs, Volume= 0.832 af
Outflow = 10.8 cfs @ 12.08 hrs, Volume= 0.832 af, Atten= 0%, Lag= 0.0 min
Routed to Reach 4R : EX 18 SD

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Max. Velocity= 27.52 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 8.89 fps, Avg. Travel Time= 0.1 min

Peak Storage= 18 cf @ 12.08 hrs
Average Depth at Peak Storage= 0.45' , Surface Width= 1.20'
Bank-Full Depth= 1.25' Flow Area= 1.2 sf, Capacity= 39.6 cfs

15.0" Round Pipe
n= 0.012
Length= 45.0' Slope= 0.3209 '/'
Inlet Invert= 44.44', Outlet Invert= 30.00'



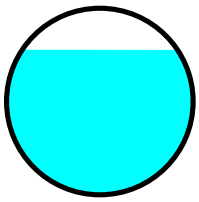
Summary for Reach 6R: EX 15 SD

Inflow Area = 1.876 ac, 81.45% Impervious, Inflow Depth = 5.07" for 25-YR event
Inflow = 10.3 cfs @ 12.08 hrs, Volume= 0.792 af
Outflow = 10.3 cfs @ 12.08 hrs, Volume= 0.792 af, Atten= 0%, Lag= 0.0 min
Routed to Reach 5R : EX 15 SD

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Max. Velocity= 10.05 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 3.51 fps, Avg. Travel Time= 0.1 min

Peak Storage= 15 cf @ 12.08 hrs
Average Depth at Peak Storage= 0.97' , Surface Width= 1.04'
Bank-Full Depth= 1.25' Flow Area= 1.2 sf, Capacity= 10.8 cfs

15.0" Round Pipe
n= 0.012
Length= 15.0' Slope= 0.0240 '/'
Inlet Invert= 44.90', Outlet Invert= 44.54'



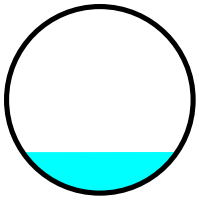
Summary for Reach 7R: EX 12 SD

Inflow Area = 0.556 ac, 78.60% Impervious, Inflow Depth = 4.99" for 25-YR event
Inflow = 3.0 cfs @ 12.08 hrs, Volume= 0.231 af
Outflow = 3.0 cfs @ 12.08 hrs, Volume= 0.231 af, Atten= 0%, Lag= 0.0 min
Routed to Reach 6R : EX 15 SD

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Max. Velocity= 23.50 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 7.52 fps, Avg. Travel Time= 0.0 min

Peak Storage= 3 cf @ 12.08 hrs
Average Depth at Peak Storage= 0.22' , Surface Width= 0.83'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 28.4 cfs

12.0" Round Pipe
n= 0.012
Length= 20.0' Slope= 0.5400 '/'
Inlet Invert= 56.50', Outlet Invert= 45.70'



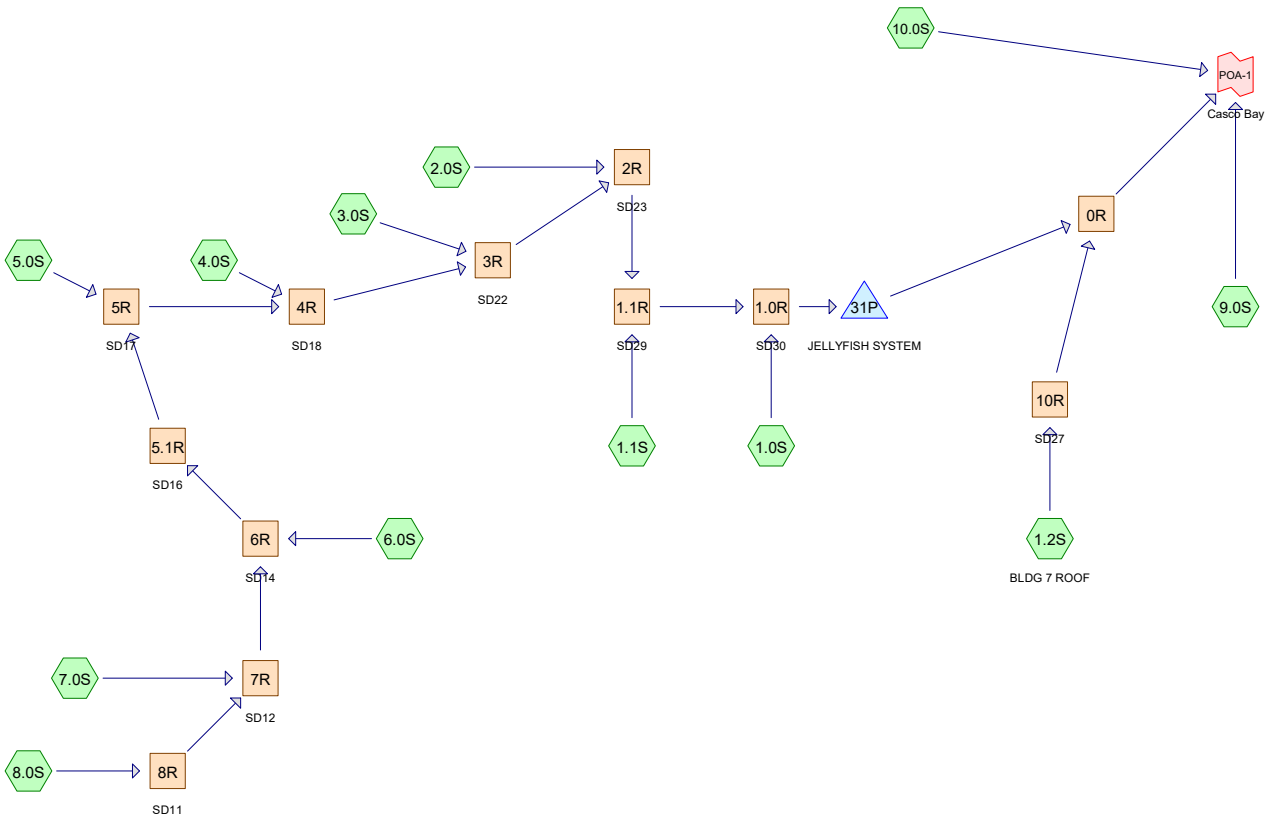
Summary for Link POA-1: CASCO BAY

Inflow Area = 4.477 ac, 59.17% Impervious, Inflow Depth = 4.46" for 25-YR event
Inflow = 22.3 cfs @ 12.09 hrs, Volume= 1.665 af
Primary = 22.3 cfs @ 12.09 hrs, Volume= 1.665 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs

Attachment 2B

Proposed Condition HydroCAD Summary



Routing Diagram for 211026 SW PROPOSED
Prepared by Sebago Technics, Printed 3/14/2024
HydroCAD® 10.20-4b s/n 00643 © 2023 HydroCAD Software Solutions LLC

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
1.151	74	>75% Grass cover, Good, HSG C (1.0S, 1.1S, 2.0S, 3.0S, 4.0S, 5.0S, 6.0S, 7.0S, 8.0S, 9.0S, 10.0S)
1.577	98	Paved parking, HSG C (1.0S, 1.1S, 2.0S, 3.0S, 4.0S, 5.0S, 6.0S, 7.0S, 8.0S, 9.0S, 10.0S)
1.561	98	Roofs, HSG C (1.2S, 8.0S)
0.188	70	Woods, Good, HSG C (5.0S, 10.0S)

Summary for Subcatchment 1.0S:

Runoff = 0.8 cfs @ 12.08 hrs, Volume= 0.062 af, Depth= 2.43"
Routed to Reach 1.0R : SD30

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-YR Rainfall=3.10"

Area (ac)	CN	Description
0.234	98	Paved parking, HSG C
0.071	74	>75% Grass cover, Good, HSG C
0.305		Weighted Average
0.071		23.28% Pervious Area
0.234		76.72% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.4	25	0.0200	1.03		**Sheet Flow, A-B** Smooth surfaces n= 0.011 P2= 3.10"
0.6	100	0.0200	2.87		**Shallow Concentrated Flow, B-C** Paved Kv= 20.3 fps
5.0					**Direct Entry, DIRECT**
6.0	125	Total			

Summary for Subcatchment 1.1S:

Runoff = 0.7 cfs @ 12.09 hrs, Volume= 0.058 af, Depth= 1.87"
Routed to Reach 1.1R : SD29

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-YR Rainfall=3.10"

Area (ac)	CN	Description
0.195	74	>75% Grass cover, Good, HSG C
0.175	98	Paved parking, HSG C
0.370		Weighted Average
0.195		52.70% Pervious Area
0.175		47.30% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.7	20	0.0200	0.12		**Sheet Flow, A-B** Grass: Short n= 0.150 P2= 3.10"
0.5	110	0.0300	3.52		**Shallow Concentrated Flow, B-C** Paved Kv= 20.3 fps
2.8					**Direct Entry, DIRECT ENTRY**
6.0	130	Total			

Summary for Subcatchment 1.2S: BLDG 7 ROOF

Runoff = 1.7 cfs @ 12.08 hrs, Volume= 0.137 af, Depth= 2.87"
Routed to Reach 10R : SD27

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-YR Rainfall=3.10"

Area (ac)	CN	Description
0.574	98	Roofs, HSG C
0.574		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, DIRECT ENTRY**

Summary for Subcatchment 2.0S:

Runoff = 0.2 cfs @ 12.08 hrs, Volume= 0.018 af, Depth= 2.82"
Routed to Reach 2R : SD23

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-YR Rainfall=3.10"

Area (ac)	CN	Description
0.074	98	Paved parking, HSG C
0.002	74	>75% Grass cover, Good, HSG C
0.076		Weighted Average
0.002		2.63% Pervious Area
0.074		97.37% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, DIRECT ENTRY**

Summary for Subcatchment 3.0S:

Runoff = 0.5 cfs @ 12.08 hrs, Volume= 0.036 af, Depth= 2.49"
Routed to Reach 3R : SD22

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-YR Rainfall=3.10"

Area (sf)	CN	Description
6,000	98	Paved parking, HSG C
1,500	74	>75% Grass cover, Good, HSG C
7,500		Weighted Average
1,500		20.00% Pervious Area
6,000		80.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.0	15	0.1500	0.26		**Sheet Flow, A-B** Grass: Short n= 0.150 P2= 3.10"
0.0	5	0.0150	2.49		**Shallow Concentrated Flow, B-C** Paved Kv= 20.3 fps
0.3	20	0.0250	1.11		**Shallow Concentrated Flow, C-D** Short Grass Pasture Kv= 7.0 fps
0.6	115	0.0220	3.01		**Shallow Concentrated Flow, D-E** Paved Kv= 20.3 fps
4.1					**Direct Entry, DIRECT ENTRY**
6.0	155	Total			

Summary for Subcatchment 4.0S:

Runoff = 0.1 cfs @ 12.08 hrs, Volume= 0.011 af, Depth= 2.61"
Routed to Reach 4R : SD18

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-YR Rainfall=3.10"

Area (ac)	CN	Description
0.044	98	Paved parking, HSG C
0.007	74	>75% Grass cover, Good, HSG C
0.051		Weighted Average
0.007		13.73% Pervious Area
0.044		86.27% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.3	25	0.0400	1.35		**Sheet Flow, A-B** Smooth surfaces n= 0.011 P2= 3.10"
0.3	105	0.1000	6.42		**Shallow Concentrated Flow, B-C** Paved Kv= 20.3 fps
5.4					**Direct Entry, DIRECT**
6.0	130	Total			

Summary for Subcatchment 5.0S:

Runoff = 0.3 cfs @ 12.09 hrs, Volume= 0.021 af, Depth= 1.36"
Routed to Reach 5R : SD17

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-YR Rainfall=3.10"

Area (ac)	CN	Description
0.071	74	>75% Grass cover, Good, HSG C
0.046	98	Paved parking, HSG C
0.071	70	Woods, Good, HSG C
0.188		Weighted Average
0.142		75.53% Pervious Area
0.046		24.47% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.0	10	0.5000	0.17		**Sheet Flow, A-B** Woods: Light underbrush n= 0.400 P2= 3.10"
0.1	25	0.5000	3.54		**Shallow Concentrated Flow, B-C** Woodland Kv= 5.0 fps
0.4	50	0.1000	2.21		**Shallow Concentrated Flow, C-D** Short Grass Pasture Kv= 7.0 fps
0.2	70	0.0800	5.74		**Shallow Concentrated Flow, D-E** Paved Kv= 20.3 fps
4.3					**Direct Entry, DIRECT ENTRY**
6.0	155	Total			

Summary for Subcatchment 6.0S:

Runoff = 0.2 cfs @ 12.09 hrs, Volume= 0.015 af, Depth= 2.26"
Routed to Reach 6R : SD14

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-YR Rainfall=3.10"

Area (ac)	CN	Description
0.025	74	>75% Grass cover, Good, HSG C
0.053	98	Paved parking, HSG C
0.078		Weighted Average
0.025		32.05% Pervious Area
0.053		67.95% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.3	25	0.0500	1.48		**Sheet Flow, A-B** Smooth surfaces n= 0.011 P2= 3.10"
0.2	50	0.0600	4.97		**Shallow Concentrated Flow, B-C** Paved Kv= 20.3 fps
5.5					**Direct Entry, DIRECT ENTRY**
6.0	75	Total			

Summary for Subcatchment 7.0S:

Runoff = 0.4 cfs @ 12.09 hrs, Volume= 0.029 af, Depth= 2.28"
Routed to Reach 7R : SD12

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-YR Rainfall=3.10"

Area (ac)	CN	Description
0.106	98	Paved parking, HSG C
0.048	74	>75% Grass cover, Good, HSG C
0.154		Weighted Average
0.048		31.17% Pervious Area
0.106		68.83% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.4	25	0.0200	1.03		**Sheet Flow, A-B** Smooth surfaces n= 0.011 P2= 3.10"
0.4	90	0.0300	3.52		**Shallow Concentrated Flow, B-C** Paved Kv= 20.3 fps
0.3	35	0.0570	1.67		**Shallow Concentrated Flow, C-D** Short Grass Pasture Kv= 7.0 fps
4.9					**Direct Entry, DIRECT**
6.0	150	Total			

Summary for Subcatchment 8.0S:

Runoff = 4.8 cfs @ 12.08 hrs, Volume= 0.379 af, Depth= 2.55"
Routed to Reach 8R : SD11

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-YR Rainfall=3.10"

Area (ac)	CN	Description
0.299	74	>75% Grass cover, Good, HSG C
0.498	98	Paved parking, HSG C
0.987	98	Roofs, HSG C
1.784		Weighted Average
0.299		16.76% Pervious Area
1.485		83.24% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.6	10	0.0200	0.11		**Sheet Flow, A-B** Grass: Short n= 0.150 P2= 3.10"
0.3	40	0.0100	2.03		**Shallow Concentrated Flow, B-C** Paved Kv= 20.3 fps
0.3	65	0.0350	3.80		**Shallow Concentrated Flow, C-D** Paved Kv= 20.3 fps
0.1	40	0.0550	11.53	9.05	**Pipe Channel, D-E** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.012
0.1	70	0.0500	12.75	15.65	**Pipe Channel, E-F** 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012
3.6					**Direct Entry, DIRECT ENTRY**
6.0	225	Total			

Summary for Subcatchment 9.0S:

Runoff = 0.8 cfs @ 12.09 hrs, Volume= 0.064 af, Depth= 1.59"
Routed to Link POA-1 : Casco Bay

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-YR Rainfall=3.10"

Area (ac)	CN	Description
0.158	98	Paved parking, HSG C
0.326	74	>75% Grass cover, Good, HSG C
0.484		Weighted Average
0.326		67.36% Pervious Area
0.158		32.64% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, DIRECT**

Summary for Subcatchment 10.0S:

Runoff = 0.3 cfs @ 12.09 hrs, Volume= 0.026 af, Depth= 1.28"
Routed to Link POA-1 : Casco Bay

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-YR Rainfall=3.10"

Area (ac)	CN	Description
0.051	98	Paved parking, HSG C
0.073	74	>75% Grass cover, Good, HSG C
0.117	70	Woods, Good, HSG C
0.241		Weighted Average
0.190		78.84% Pervious Area
0.051		21.16% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.1	20	0.2900	0.16		**Sheet Flow, A-B** Woods: Light underbrush n= 0.400 P2= 3.10"
0.5	90	0.1600	2.80		**Shallow Concentrated Flow, B-C** Short Grass Pasture Kv= 7.0 fps
0.2	45	0.0330	3.69		**Shallow Concentrated Flow, C-D** Paved Kv= 20.3 fps
0.8	80	0.0510	1.58		**Shallow Concentrated Flow, D-E** Short Grass Pasture Kv= 7.0 fps
2.4					**Direct Entry, DIRECT ENTRY**
6.0	235	Total			

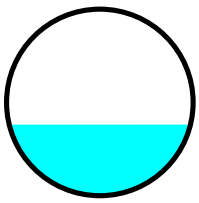
Summary for Reach 0R:

Inflow Area = 3.752 ac, 78.05% Impervious, Inflow Depth = 2.45" for 2-YR event
Inflow = 9.6 cfs @ 12.09 hrs, Volume= 0.765 af
Outflow = 9.6 cfs @ 12.09 hrs, Volume= 0.765 af, Atten= 0%, Lag= 0.0 min
Routed to Link POA-1 : Casco Bay

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Max. Velocity= 8.70 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 2.81 fps, Avg. Travel Time= 0.1 min

Peak Storage= 28 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.77' , Surface Width= 1.94'
Bank-Full Depth= 2.00' Flow Area= 3.1 sf, Capacity= 31.0 cfs

24.0" Round Pipe
n= 0.012
Length= 25.0' Slope= 0.0160 '/'
Inlet Invert= 22.60', Outlet Invert= 22.20'



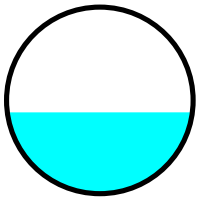
Summary for Reach 1.0R: SD30

Inflow Area = 3.178 ac, 74.09% Impervious, Inflow Depth = 2.37" for 2-YR event
Inflow = 7.9 cfs @ 12.09 hrs, Volume= 0.628 af
Outflow = 7.9 cfs @ 12.09 hrs, Volume= 0.628 af, Atten= 0%, Lag= 0.0 min
Routed to Pond 31P : JELLYFISH SYSTEM

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Max. Velocity= 5.99 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 1.98 fps, Avg. Travel Time= 0.1 min

Peak Storage= 20 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.87' , Surface Width= 1.98'
Bank-Full Depth= 2.00' Flow Area= 3.1 sf, Capacity= 20.0 cfs

24.0" Round Pipe
n= 0.012
Length= 15.0' Slope= 0.0067 '/'
Inlet Invert= 23.45', Outlet Invert= 23.35'



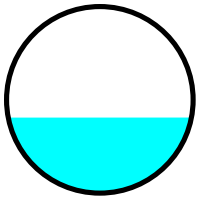
Summary for Reach 1.1R: SD29

Inflow Area = 2.873 ac, 73.81% Impervious, Inflow Depth = 2.37" for 2-YR event
Inflow = 7.1 cfs @ 12.09 hrs, Volume= 0.567 af
Outflow = 7.1 cfs @ 12.09 hrs, Volume= 0.567 af, Atten= 0%, Lag= 0.1 min
Routed to Reach 1.0R : SD30

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Max. Velocity= 5.98 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 1.97 fps, Avg. Travel Time= 0.3 min

Peak Storage= 42 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.81' , Surface Width= 1.96'
Bank-Full Depth= 2.00' Flow Area= 3.1 sf, Capacity= 20.7 cfs

24.0" Round Pipe
n= 0.012
Length= 35.0' Slope= 0.0071 '/'
Inlet Invert= 23.80', Outlet Invert= 23.55'



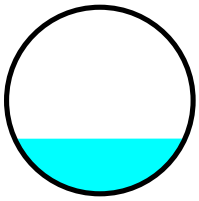
Summary for Reach 2R: SD23

Inflow Area = 2.503 ac, 77.73% Impervious, Inflow Depth = 2.44" for 2-YR event
Inflow = 6.4 cfs @ 12.09 hrs, Volume= 0.509 af
Outflow = 6.4 cfs @ 12.09 hrs, Volume= 0.509 af, Atten= 0%, Lag= 0.1 min
Routed to Reach 1.1R : SD29

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Max. Velocity= 8.23 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 2.68 fps, Avg. Travel Time= 0.2 min

Peak Storage= 31 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.59' , Surface Width= 1.83'
Bank-Full Depth= 2.00' Flow Area= 3.1 sf, Capacity= 33.6 cfs

24.0" Round Pipe
n= 0.012
Length= 40.0' Slope= 0.0187 '/'
Inlet Invert= 24.65', Outlet Invert= 23.90'



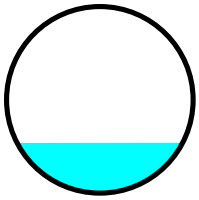
Summary for Reach 3R: SD22

Inflow Area = 2.427 ac, 77.12% Impervious, Inflow Depth = 2.43" for 2-YR event
Inflow = 6.2 cfs @ 12.09 hrs, Volume= 0.491 af
Outflow = 6.2 cfs @ 12.09 hrs, Volume= 0.491 af, Atten= 0%, Lag= 0.1 min
Routed to Reach 2R : SD23

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Max. Velocity= 9.03 fps, Min. Travel Time= 0.2 min
Avg. Velocity = 2.94 fps, Avg. Travel Time= 0.5 min

Peak Storage= 62 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.54' , Surface Width= 1.78'
Bank-Full Depth= 2.00' Flow Area= 3.1 sf, Capacity= 38.7 cfs

24.0" Round Pipe
n= 0.012
Length= 90.0' Slope= 0.0250 '/'
Inlet Invert= 27.00', Outlet Invert= 24.75'



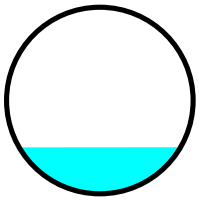
Summary for Reach 4R: SD18

Inflow Area = 2.255 ac, 76.90% Impervious, Inflow Depth = 2.42" for 2-YR event
Inflow = 5.7 cfs @ 12.09 hrs, Volume= 0.455 af
Outflow = 5.7 cfs @ 12.09 hrs, Volume= 0.455 af, Atten= 0%, Lag= 0.2 min
Routed to Reach 3R : SD22

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Max. Velocity= 9.36 fps, Min. Travel Time= 0.3 min
Avg. Velocity = 3.04 fps, Avg. Travel Time= 0.8 min

Peak Storage= 92 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.50' , Surface Width= 1.73'
Bank-Full Depth= 2.00' Flow Area= 3.1 sf, Capacity= 42.0 cfs

24.0" Round Pipe
n= 0.012
Length= 150.0' Slope= 0.0293 '/'
Inlet Invert= 31.50', Outlet Invert= 27.10'



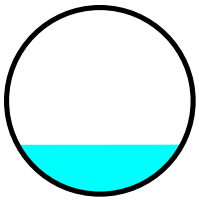
Summary for Reach 5.1R: SD16

Inflow Area = 2.016 ac, 81.55% Impervious, Inflow Depth = 2.52" for 2-YR event
Inflow = 5.3 cfs @ 12.09 hrs, Volume= 0.423 af
Outflow = 5.3 cfs @ 12.09 hrs, Volume= 0.423 af, Atten= 0%, Lag= 0.0 min
Routed to Reach 5R : SD17

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Max. Velocity= 14.20 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 4.62 fps, Avg. Travel Time= 0.1 min

Peak Storage= 15 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.40' , Surface Width= 1.32'
Bank-Full Depth= 1.50' Flow Area= 1.8 sf, Capacity= 34.6 cfs

18.0" Round Pipe
n= 0.012
Length= 40.0' Slope= 0.0925 '/'
Inlet Invert= 36.15', Outlet Invert= 32.45'



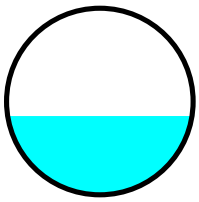
Summary for Reach 5R: SD17

Inflow Area = 2.204 ac, 76.68% Impervious, Inflow Depth = 2.42" for 2-YR event
Inflow = 5.6 cfs @ 12.09 hrs, Volume= 0.444 af
Outflow = 5.6 cfs @ 12.09 hrs, Volume= 0.444 af, Atten= 0%, Lag= 0.0 min
Routed to Reach 4R : SD18

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Max. Velocity= 7.89 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 2.61 fps, Avg. Travel Time= 0.1 min

Peak Storage= 14 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.63' , Surface Width= 1.48'
Bank-Full Depth= 1.50' Flow Area= 1.8 sf, Capacity= 15.1 cfs

18.0" Round Pipe
n= 0.012
Length= 20.0' Slope= 0.0175 '/'
Inlet Invert= 32.35', Outlet Invert= 32.00'



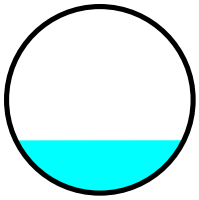
Summary for Reach 6R: SD14

Inflow Area = 2.016 ac, 81.55% Impervious, Inflow Depth = 2.52" for 2-YR event
Inflow = 5.3 cfs @ 12.09 hrs, Volume= 0.423 af
Outflow = 5.3 cfs @ 12.09 hrs, Volume= 0.423 af, Atten= 0%, Lag= 0.1 min
Routed to Reach 5.1R : SD16

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Max. Velocity= 12.88 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 4.20 fps, Avg. Travel Time= 0.4 min

Peak Storage= 46 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.43' , Surface Width= 1.35'
Bank-Full Depth= 1.50' Flow Area= 1.8 sf, Capacity= 30.2 cfs

18.0" Round Pipe
n= 0.012
Length= 110.0' Slope= 0.0705 '/'
Inlet Invert= 44.00', Outlet Invert= 36.25'



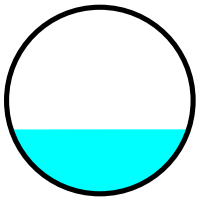
Summary for Reach 7R: SD12

Inflow Area = 1.938 ac, 82.09% Impervious, Inflow Depth = 2.53" for 2-YR event
Inflow = 5.2 cfs @ 12.09 hrs, Volume= 0.408 af
Outflow = 5.2 cfs @ 12.09 hrs, Volume= 0.408 af, Atten= 0%, Lag= 0.1 min
Routed to Reach 6R : SD14

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Max. Velocity= 9.47 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 3.11 fps, Avg. Travel Time= 0.3 min

Peak Storage= 27 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.52' , Surface Width= 1.43'
Bank-Full Depth= 1.50' Flow Area= 1.8 sf, Capacity= 20.0 cfs

18.0" Round Pipe
n= 0.012
Length= 50.0' Slope= 0.0308 '/'
Inlet Invert= 45.64', Outlet Invert= 44.10'



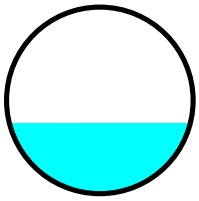
Summary for Reach 8R: SD11

Inflow Area = 1.784 ac, 83.24% Impervious, Inflow Depth = 2.55" for 2-YR event
Inflow = 4.8 cfs @ 12.08 hrs, Volume= 0.379 af
Outflow = 4.8 cfs @ 12.09 hrs, Volume= 0.379 af, Atten= 0%, Lag= 0.0 min
Routed to Reach 7R : SD12

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Max. Velocity= 7.75 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 2.55 fps, Avg. Travel Time= 0.2 min

Peak Storage= 20 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.57' , Surface Width= 1.46'
Bank-Full Depth= 1.50' Flow Area= 1.8 sf, Capacity= 15.6 cfs

18.0" Round Pipe
n= 0.012
Length= 32.0' Slope= 0.0188 '/'
Inlet Invert= 46.34', Outlet Invert= 45.74'



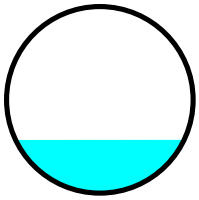
Summary for Reach 10R: SD27

Inflow Area = 0.574 ac,100.00% Impervious, Inflow Depth = 2.87" for 2-YR event
Inflow = 1.7 cfs @ 12.08 hrs, Volume= 0.137 af
Outflow = 1.7 cfs @ 12.09 hrs, Volume= 0.137 af, Atten= 0%, Lag= 0.3 min
Routed to Reach 0R :

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Max. Velocity= 5.93 fps, Min. Travel Time= 0.4 min
Avg. Velocity = 1.93 fps, Avg. Travel Time= 1.1 min

Peak Storage= 38 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.36' , Surface Width= 1.13'
Bank-Full Depth= 1.25' Flow Area= 1.2 sf, Capacity= 9.6 cfs

15.0" Round Pipe
n= 0.012
Length= 130.0' Slope= 0.0188 '/'
Inlet Invert= 26.00', Outlet Invert= 23.55'



Summary for Pond 31P: JELLYFISH SYSTEM

Inflow Area = 3.178 ac, 74.09% Impervious, Inflow Depth = 2.37" for 2-YR event
Inflow = 7.9 cfs @ 12.09 hrs, Volume= 0.628 af
Outflow = 7.9 cfs @ 12.10 hrs, Volume= 0.628 af, Atten= 0%, Lag= 0.1 min
Primary = 7.9 cfs @ 12.10 hrs, Volume= 0.628 af
Routed to Reach 0R :

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Starting Elev= 22.85' Surf.Area= 0.001 ac Storage= 0.009 af
Peak Elev= 25.00' @ 12.10 hrs Surf.Area= 0.001 ac Storage= 0.012 af (0.003 af above start)
Flood Elev= 30.00' Surf.Area= 0.001 ac Storage= 0.016 af (0.007 af above start)

Plug-Flow detention time= 19.1 min calculated for 0.619 af (99% of inflow)
Center-of-Mass det. time= 1.7 min (771.6 - 770.0)

Volume	Invert	Avail.Storage	Storage Description
#1	16.35'	0.016 af	**8.00'W x 8.00'L x 11.50'H Prismatoid** 0.017 af Overall x 96.0% Voids

Device	Routing	Invert	Outlet Devices
#1	Device 3	22.85'	**JFPD0808-11-3-54 CSV File** Head (feet) 0.00 0.08 0.17 0.25 0.33 0.42 0.50 0.58 0.67 0.75 0.83 0.92 1.00 1.08 1.17 1.25 1.33 1.42 1.50 Disch. (cfs) 0.000 0.015 0.030 0.045 0.059 0.074 0.089 0.267 0.446 0.624 0.802 0.980 1.159 1.337 1.515 1.693 1.872 2.050 2.228
#2	Device 3	24.35'	**3.5' long x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32
#3	Primary	22.85'	**24.0" Round Culvert** L= 13.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 22.85' / 22.70' S= 0.0115 '/' Cc= 0.900 n= 0.012, Flow Area= 3.14 sf

Primary OutFlow Max=7.9 cfs @ 12.10 hrs HW=24.99' TW=23.36' (Dynamic Tailwater)
└**3=Culvert** (Passes 7.9 cfs of 12.7 cfs potential flow)
├**1=JFPD0808-11-3-54 CSV File** (Custom Controls 2.2 cfs)
└**2=Broad-Crested Rectangular Weir** (Weir Controls 5.7 cfs @ 2.51 fps)

Summary for Link POA-1: Casco Bay

Inflow Area = 4.477 ac, 70.08% Impervious, Inflow Depth = 2.29" for 2-YR event
Inflow = 10.8 cfs @ 12.09 hrs, Volume= 0.855 af
Primary = 10.8 cfs @ 12.09 hrs, Volume= 0.855 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs

Summary for Subcatchment 1.0S:

Runoff = 1.2 cfs @ 12.08 hrs, Volume= 0.097 af, Depth= 3.83"
Routed to Reach 1.0R : SD30

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-YR Rainfall=4.60"

Area (ac)	CN	Description
0.234	98	Paved parking, HSG C
0.071	74	>75% Grass cover, Good, HSG C
0.305		Weighted Average
0.071		23.28% Pervious Area
0.234		76.72% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.4	25	0.0200	1.03		**Sheet Flow, A-B** Smooth surfaces n= 0.011 P2= 3.10"
0.6	100	0.0200	2.87		**Shallow Concentrated Flow, B-C** Paved Kv= 20.3 fps
5.0					**Direct Entry, DIRECT**
6.0	125	Total			

Summary for Subcatchment 1.1S:

Runoff = 1.2 cfs @ 12.09 hrs, Volume= 0.097 af, Depth= 3.14"
Routed to Reach 1.1R : SD29

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-YR Rainfall=4.60"

Area (ac)	CN	Description
0.195	74	>75% Grass cover, Good, HSG C
0.175	98	Paved parking, HSG C
0.370		Weighted Average
0.195		52.70% Pervious Area
0.175		47.30% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.7	20	0.0200	0.12		**Sheet Flow, A-B** Grass: Short n= 0.150 P2= 3.10"
0.5	110	0.0300	3.52		**Shallow Concentrated Flow, B-C** Paved Kv= 20.3 fps
2.8					**Direct Entry, DIRECT ENTRY**
6.0	130	Total			

Summary for Subcatchment 1.2S: BLDG 7 ROOF

Runoff = 2.6 cfs @ 12.08 hrs, Volume= 0.209 af, Depth= 4.36"
Routed to Reach 10R : SD27

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-YR Rainfall=4.60"

Area (ac)	CN	Description
0.574	98	Roofs, HSG C
0.574		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, DIRECT ENTRY**

Summary for Subcatchment 2.0S:

Runoff = 0.3 cfs @ 12.08 hrs, Volume= 0.027 af, Depth= 4.30"
Routed to Reach 2R : SD23

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-YR Rainfall=4.60"

Area (ac)	CN	Description
0.074	98	Paved parking, HSG C
0.002	74	>75% Grass cover, Good, HSG C
0.076		Weighted Average
0.002		2.63% Pervious Area
0.074		97.37% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, DIRECT ENTRY**

Summary for Subcatchment 3.0S:

Runoff = 0.7 cfs @ 12.08 hrs, Volume= 0.056 af, Depth= 3.90"
Routed to Reach 3R : SD22

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-YR Rainfall=4.60"

Area (sf)	CN	Description
6,000	98	Paved parking, HSG C
1,500	74	>75% Grass cover, Good, HSG C
7,500		Weighted Average
1,500		20.00% Pervious Area
6,000		80.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.0	15	0.1500	0.26		**Sheet Flow, A-B** Grass: Short n= 0.150 P2= 3.10"
0.0	5	0.0150	2.49		**Shallow Concentrated Flow, B-C** Paved Kv= 20.3 fps
0.3	20	0.0250	1.11		**Shallow Concentrated Flow, C-D** Short Grass Pasture Kv= 7.0 fps
0.6	115	0.0220	3.01		**Shallow Concentrated Flow, D-E** Paved Kv= 20.3 fps
4.1					**Direct Entry, DIRECT ENTRY**
6.0	155	Total			

Summary for Subcatchment 4.0S:

Runoff = 0.2 cfs @ 12.08 hrs, Volume= 0.017 af, Depth= 4.05"
Routed to Reach 4R : SD18

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-YR Rainfall=4.60"

Area (ac)	CN	Description
0.044	98	Paved parking, HSG C
0.007	74	>75% Grass cover, Good, HSG C
0.051		Weighted Average
0.007		13.73% Pervious Area
0.044		86.27% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.3	25	0.0400	1.35		**Sheet Flow, A-B** Smooth surfaces n= 0.011 P2= 3.10"
0.3	105	0.1000	6.42		**Shallow Concentrated Flow, B-C** Paved Kv= 20.3 fps
5.4					**Direct Entry, DIRECT**
6.0	130	Total			

Summary for Subcatchment 5.0S:

Runoff = 0.5 cfs @ 12.09 hrs, Volume= 0.039 af, Depth= 2.50"
Routed to Reach 5R : SD17

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-YR Rainfall=4.60"

Area (ac)	CN	Description
0.071	74	>75% Grass cover, Good, HSG C
0.046	98	Paved parking, HSG C
0.071	70	Woods, Good, HSG C
0.188		Weighted Average
0.142		75.53% Pervious Area
0.046		24.47% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.0	10	0.5000	0.17		**Sheet Flow, A-B** Woods: Light underbrush n= 0.400 P2= 3.10"
0.1	25	0.5000	3.54		**Shallow Concentrated Flow, B-C** Woodland Kv= 5.0 fps
0.4	50	0.1000	2.21		**Shallow Concentrated Flow, C-D** Short Grass Pasture Kv= 7.0 fps
0.2	70	0.0800	5.74		**Shallow Concentrated Flow, D-E** Paved Kv= 20.3 fps
4.3					**Direct Entry, DIRECT ENTRY**
6.0	155	Total			

Summary for Subcatchment 6.0S:

Runoff = 0.3 cfs @ 12.09 hrs, Volume= 0.024 af, Depth= 3.62"
Routed to Reach 6R : SD14

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-YR Rainfall=4.60"

Area (ac)	CN	Description
0.025	74	>75% Grass cover, Good, HSG C
0.053	98	Paved parking, HSG C
0.078		Weighted Average
0.025		32.05% Pervious Area
0.053		67.95% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.3	25	0.0500	1.48		**Sheet Flow, A-B** Smooth surfaces n= 0.011 P2= 3.10"
0.2	50	0.0600	4.97		**Shallow Concentrated Flow, B-C** Paved Kv= 20.3 fps
5.5					**Direct Entry, DIRECT ENTRY**
6.0	75	Total			

Summary for Subcatchment 7.0S:

Runoff = 0.6 cfs @ 12.08 hrs, Volume= 0.047 af, Depth= 3.64"
Routed to Reach 7R : SD12

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-YR Rainfall=4.60"

Area (ac)	CN	Description
0.106	98	Paved parking, HSG C
0.048	74	>75% Grass cover, Good, HSG C
0.154		Weighted Average
0.048		31.17% Pervious Area
0.106		68.83% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.4	25	0.0200	1.03		**Sheet Flow, A-B** Smooth surfaces n= 0.011 P2= 3.10"
0.4	90	0.0300	3.52		**Shallow Concentrated Flow, B-C** Paved Kv= 20.3 fps
0.3	35	0.0570	1.67		**Shallow Concentrated Flow, C-D** Short Grass Pasture Kv= 7.0 fps
4.9					**Direct Entry, DIRECT**
6.0	150	Total			

Summary for Subcatchment 8.0S:

Runoff = 7.4 cfs @ 12.08 hrs, Volume= 0.591 af, Depth= 3.98"
Routed to Reach 8R : SD11

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-YR Rainfall=4.60"

Area (ac)	CN	Description
0.299	74	>75% Grass cover, Good, HSG C
0.498	98	Paved parking, HSG C
0.987	98	Roofs, HSG C
1.784		Weighted Average
0.299		16.76% Pervious Area
1.485		83.24% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.6	10	0.0200	0.11		**Sheet Flow, A-B** Grass: Short n= 0.150 P2= 3.10"
0.3	40	0.0100	2.03		**Shallow Concentrated Flow, B-C** Paved Kv= 20.3 fps
0.3	65	0.0350	3.80		**Shallow Concentrated Flow, C-D** Paved Kv= 20.3 fps
0.1	40	0.0550	11.53	9.05	**Pipe Channel, D-E** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.012
0.1	70	0.0500	12.75	15.65	**Pipe Channel, E-F** 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012
3.6					**Direct Entry, DIRECT ENTRY**
6.0	225	Total			

Summary for Subcatchment 9.0S:

Runoff = 1.5 cfs @ 12.09 hrs, Volume= 0.113 af, Depth= 2.81"
Routed to Link POA-1 : Casco Bay

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-YR Rainfall=4.60"

Area (ac)	CN	Description
0.158	98	Paved parking, HSG C
0.326	74	>75% Grass cover, Good, HSG C
0.484		Weighted Average
0.326		67.36% Pervious Area
0.158		32.64% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, DIRECT**

Summary for Subcatchment 10.0S:

Runoff = 0.6 cfs @ 12.09 hrs, Volume= 0.048 af, Depth= 2.39"
Routed to Link POA-1 : Casco Bay

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-YR Rainfall=4.60"

Area (ac)	CN	Description
0.051	98	Paved parking, HSG C
0.073	74	>75% Grass cover, Good, HSG C
0.117	70	Woods, Good, HSG C
0.241		Weighted Average
0.190		78.84% Pervious Area
0.051		21.16% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.1	20	0.2900	0.16		**Sheet Flow, A-B** Woods: Light underbrush n= 0.400 P2= 3.10"
0.5	90	0.1600	2.80		**Shallow Concentrated Flow, B-C** Short Grass Pasture Kv= 7.0 fps
0.2	45	0.0330	3.69		**Shallow Concentrated Flow, C-D** Paved Kv= 20.3 fps
0.8	80	0.0510	1.58		**Shallow Concentrated Flow, D-E** Short Grass Pasture Kv= 7.0 fps
2.4					**Direct Entry, DIRECT ENTRY**
6.0	235	Total			

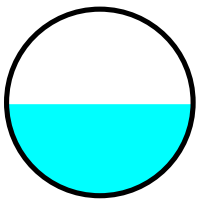
Summary for Reach 0R:

Inflow Area = 3.752 ac, 78.05% Impervious, Inflow Depth = 3.85" for 10-YR event
Inflow = 15.1 cfs @ 12.09 hrs, Volume= 1.204 af
Outflow = 15.1 cfs @ 12.09 hrs, Volume= 1.204 af, Atten= 0%, Lag= 0.0 min
Routed to Link POA-1 : Casco Bay

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Max. Velocity= 9.79 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 3.20 fps, Avg. Travel Time= 0.1 min

Peak Storage= 38 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.98' , Surface Width= 2.00'
Bank-Full Depth= 2.00' Flow Area= 3.1 sf, Capacity= 31.0 cfs

24.0" Round Pipe
n= 0.012
Length= 25.0' Slope= 0.0160 '/'
Inlet Invert= 22.60', Outlet Invert= 22.20'



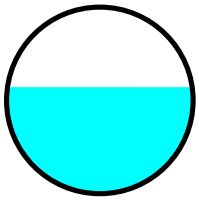
Summary for Reach 1.0R: SD30

Inflow Area = 3.178 ac, 74.09% Impervious, Inflow Depth = 3.76" for 10-YR event
Inflow = 12.5 cfs @ 12.09 hrs, Volume= 0.995 af
Outflow = 12.5 cfs @ 12.09 hrs, Volume= 0.995 af, Atten= 0%, Lag= 0.0 min
Routed to Pond 31P : JELLYFISH SYSTEM

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Max. Velocity= 6.72 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 2.26 fps, Avg. Travel Time= 0.1 min

Peak Storage= 28 cf @ 12.09 hrs
Average Depth at Peak Storage= 1.14' , Surface Width= 1.98'
Bank-Full Depth= 2.00' Flow Area= 3.1 sf, Capacity= 20.0 cfs

24.0" Round Pipe
n= 0.012
Length= 15.0' Slope= 0.0067 '/'
Inlet Invert= 23.45', Outlet Invert= 23.35'



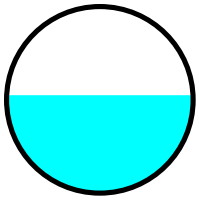
Summary for Reach 1.1R: SD29

Inflow Area = 2.873 ac, 73.81% Impervious, Inflow Depth = 3.75" for 10-YR event
Inflow = 11.3 cfs @ 12.09 hrs, Volume= 0.898 af
Outflow = 11.3 cfs @ 12.09 hrs, Volume= 0.898 af, Atten= 0%, Lag= 0.1 min
Routed to Reach 1.0R : SD30

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Max. Velocity= 6.73 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 2.25 fps, Avg. Travel Time= 0.3 min

Peak Storage= 59 cf @ 12.09 hrs
Average Depth at Peak Storage= 1.05' , Surface Width= 2.00'
Bank-Full Depth= 2.00' Flow Area= 3.1 sf, Capacity= 20.7 cfs

24.0" Round Pipe
n= 0.012
Length= 35.0' Slope= 0.0071 '/'
Inlet Invert= 23.80', Outlet Invert= 23.55'



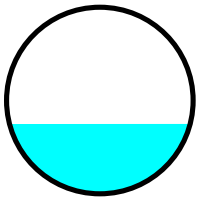
Summary for Reach 2R: SD23

Inflow Area = 2.503 ac, 77.73% Impervious, Inflow Depth = 3.84" for 10-YR event
Inflow = 10.0 cfs @ 12.09 hrs, Volume= 0.801 af
Outflow = 10.0 cfs @ 12.09 hrs, Volume= 0.801 af, Atten= 0%, Lag= 0.1 min
Routed to Reach 1.1R : SD29

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Max. Velocity= 9.33 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 3.06 fps, Avg. Travel Time= 0.2 min

Peak Storage= 43 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.75' , Surface Width= 1.94'
Bank-Full Depth= 2.00' Flow Area= 3.1 sf, Capacity= 33.6 cfs

24.0" Round Pipe
n= 0.012
Length= 40.0' Slope= 0.0187 '/'
Inlet Invert= 24.65', Outlet Invert= 23.90'



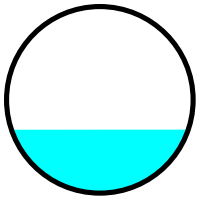
Summary for Reach 3R: SD22

Inflow Area = 2.427 ac, 77.12% Impervious, Inflow Depth = 3.83" for 10-YR event
Inflow = 9.7 cfs @ 12.09 hrs, Volume= 0.774 af
Outflow = 9.7 cfs @ 12.09 hrs, Volume= 0.774 af, Atten= 0%, Lag= 0.1 min
Routed to Reach 2R : SD23

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Max. Velocity= 10.25 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 3.35 fps, Avg. Travel Time= 0.4 min

Peak Storage= 85 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.68' , Surface Width= 1.90'
Bank-Full Depth= 2.00' Flow Area= 3.1 sf, Capacity= 38.7 cfs

24.0" Round Pipe
n= 0.012
Length= 90.0' Slope= 0.0250 '/'
Inlet Invert= 27.00', Outlet Invert= 24.75'



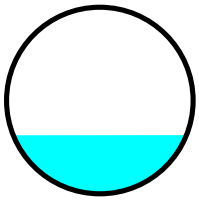
Summary for Reach 4R: SD18

Inflow Area = 2.255 ac, 76.90% Impervious, Inflow Depth = 3.82" for 10-YR event
Inflow = 9.0 cfs @ 12.09 hrs, Volume= 0.718 af
Outflow = 9.0 cfs @ 12.09 hrs, Volume= 0.718 af, Atten= 0%, Lag= 0.2 min
Routed to Reach 3R : SD22

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Max. Velocity= 10.64 fps, Min. Travel Time= 0.2 min
Avg. Velocity = 3.47 fps, Avg. Travel Time= 0.7 min

Peak Storage= 127 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.63' , Surface Width= 1.86'
Bank-Full Depth= 2.00' Flow Area= 3.1 sf, Capacity= 42.0 cfs

24.0" Round Pipe
n= 0.012
Length= 150.0' Slope= 0.0293 '/'
Inlet Invert= 31.50', Outlet Invert= 27.10'



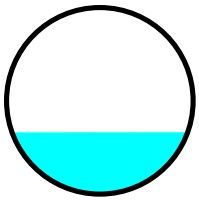
Summary for Reach 5.1R: SD16

Inflow Area = 2.016 ac, 81.55% Impervious, Inflow Depth = 3.94" for 10-YR event
Inflow = 8.3 cfs @ 12.09 hrs, Volume= 0.661 af
Outflow = 8.3 cfs @ 12.09 hrs, Volume= 0.661 af, Atten= 0%, Lag= 0.0 min
Routed to Reach 5R : SD17

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Max. Velocity= 16.08 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 5.27 fps, Avg. Travel Time= 0.1 min

Peak Storage= 21 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.50' , Surface Width= 1.41'
Bank-Full Depth= 1.50' Flow Area= 1.8 sf, Capacity= 34.6 cfs

18.0" Round Pipe
n= 0.012
Length= 40.0' Slope= 0.0925 '/'
Inlet Invert= 36.15', Outlet Invert= 32.45'



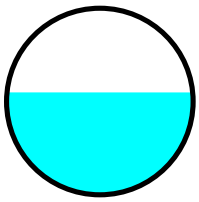
Summary for Reach 5R: SD17

Inflow Area = 2.204 ac, 76.68% Impervious, Inflow Depth = 3.81" for 10-YR event
Inflow = 8.8 cfs @ 12.09 hrs, Volume= 0.701 af
Outflow = 8.8 cfs @ 12.09 hrs, Volume= 0.701 af, Atten= 0%, Lag= 0.0 min
Routed to Reach 4R : SD18

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Max. Velocity= 8.85 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 2.98 fps, Avg. Travel Time= 0.1 min

Peak Storage= 20 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.82' , Surface Width= 1.49'
Bank-Full Depth= 1.50' Flow Area= 1.8 sf, Capacity= 15.1 cfs

18.0" Round Pipe
n= 0.012
Length= 20.0' Slope= 0.0175 '/'
Inlet Invert= 32.35', Outlet Invert= 32.00'



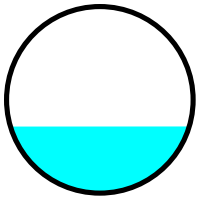
Summary for Reach 6R: SD14

Inflow Area = 2.016 ac, 81.55% Impervious, Inflow Depth = 3.94" for 10-YR event
Inflow = 8.3 cfs @ 12.09 hrs, Volume= 0.661 af
Outflow = 8.3 cfs @ 12.09 hrs, Volume= 0.661 af, Atten= 0%, Lag= 0.1 min
Routed to Reach 5.1R : SD16

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Max. Velocity= 14.57 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 4.79 fps, Avg. Travel Time= 0.4 min

Peak Storage= 62 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.54' , Surface Width= 1.44'
Bank-Full Depth= 1.50' Flow Area= 1.8 sf, Capacity= 30.2 cfs

18.0" Round Pipe
n= 0.012
Length= 110.0' Slope= 0.0705 '/'
Inlet Invert= 44.00', Outlet Invert= 36.25'



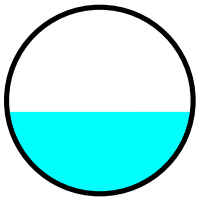
Summary for Reach 7R: SD12

Inflow Area = 1.938 ac, 82.09% Impervious, Inflow Depth = 3.95" for 10-YR event
Inflow = 8.0 cfs @ 12.08 hrs, Volume= 0.638 af
Outflow = 8.0 cfs @ 12.09 hrs, Volume= 0.638 af, Atten= 0%, Lag= 0.1 min
Routed to Reach 6R : SD14

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Max. Velocity= 10.66 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 3.54 fps, Avg. Travel Time= 0.2 min

Peak Storage= 37 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.66' , Surface Width= 1.49'
Bank-Full Depth= 1.50' Flow Area= 1.8 sf, Capacity= 20.0 cfs

18.0" Round Pipe
n= 0.012
Length= 50.0' Slope= 0.0308 '/'
Inlet Invert= 45.64', Outlet Invert= 44.10'



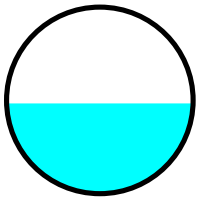
Summary for Reach 8R: SD11

Inflow Area = 1.784 ac, 83.24% Impervious, Inflow Depth = 3.98" for 10-YR event
Inflow = 7.4 cfs @ 12.08 hrs, Volume= 0.591 af
Outflow = 7.4 cfs @ 12.08 hrs, Volume= 0.591 af, Atten= 0%, Lag= 0.0 min
Routed to Reach 7R : SD12

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Max. Velocity= 8.70 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 2.91 fps, Avg. Travel Time= 0.2 min

Peak Storage= 27 cf @ 12.08 hrs
Average Depth at Peak Storage= 0.73' , Surface Width= 1.50'
Bank-Full Depth= 1.50' Flow Area= 1.8 sf, Capacity= 15.6 cfs

18.0" Round Pipe
n= 0.012
Length= 32.0' Slope= 0.0188 '/'
Inlet Invert= 46.34', Outlet Invert= 45.74'



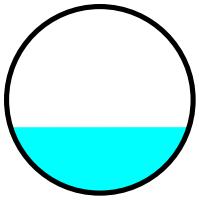
Summary for Reach 10R: SD27

Inflow Area = 0.574 ac,100.00% Impervious, Inflow Depth = 4.36" for 10-YR event
Inflow = 2.6 cfs @ 12.08 hrs, Volume= 0.209 af
Outflow = 2.6 cfs @ 12.09 hrs, Volume= 0.209 af, Atten= 0%, Lag= 0.2 min
Routed to Reach 0R :

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Max. Velocity= 6.64 fps, Min. Travel Time= 0.3 min
Avg. Velocity = 2.19 fps, Avg. Travel Time= 1.0 min

Peak Storage= 50 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.44' , Surface Width= 1.20'
Bank-Full Depth= 1.25' Flow Area= 1.2 sf, Capacity= 9.6 cfs

15.0" Round Pipe
n= 0.012
Length= 130.0' Slope= 0.0188 '/'
Inlet Invert= 26.00', Outlet Invert= 23.55'



Summary for Pond 31P: JELLYFISH SYSTEM

Inflow Area = 3.178 ac, 74.09% Impervious, Inflow Depth = 3.76" for 10-YR event
Inflow = 12.5 cfs @ 12.09 hrs, Volume= 0.995 af
Outflow = 12.5 cfs @ 12.09 hrs, Volume= 0.995 af, Atten= 0%, Lag= 0.1 min
Primary = 12.5 cfs @ 12.09 hrs, Volume= 0.995 af
Routed to Reach 0R :

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Starting Elev= 22.85' Surf.Area= 0.001 ac Storage= 0.009 af
Peak Elev= 25.27' @ 12.09 hrs Surf.Area= 0.001 ac Storage= 0.013 af (0.003 af above start)
Flood Elev= 30.00' Surf.Area= 0.001 ac Storage= 0.016 af (0.007 af above start)

Plug-Flow detention time= 13.0 min calculated for 0.986 af (99% of inflow)
Center-of-Mass det. time= 1.2 min (765.1 - 763.8)

Volume	Invert	Avail.Storage	Storage Description
#1	16.35'	0.016 af	**8.00'W x 8.00'L x 11.50'H Prismatoid** 0.017 af Overall x 96.0% Voids

Device	Routing	Invert	Outlet Devices
#1	Device 3	22.85'	**JFPD0808-11-3-54 CSV File** Head (feet) 0.00 0.08 0.17 0.25 0.33 0.42 0.50 0.58 0.67 0.75 0.83 0.92 1.00 1.08 1.17 1.25 1.33 1.42 1.50 Disch. (cfs) 0.000 0.015 0.030 0.045 0.059 0.074 0.089 0.267 0.446 0.624 0.802 0.980 1.159 1.337 1.515 1.693 1.872 2.050 2.228
#2	Device 3	24.35'	**3.5' long x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32
#3	Primary	22.85'	**24.0" Round Culvert** L= 13.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 22.85' / 22.70' S= 0.0115 '/' Cc= 0.900 n= 0.012, Flow Area= 3.14 sf

Primary OutFlow Max=12.5 cfs @ 12.09 hrs HW=25.27' TW=23.58' (Dynamic Tailwater)
└**3=Culvert** (Passes 12.5 cfs of 14.2 cfs potential flow)
  ├**1=JFPD0808-11-3-54 CSV File** (Custom Controls 2.2 cfs)
  └**2=Broad-Crested Rectangular Weir** (Weir Controls 10.2 cfs @ 3.18 fps)

Summary for Link POA-1: Casco Bay

Inflow Area = 4.477 ac, 70.08% Impervious, Inflow Depth = 3.66" for 10-YR event
Inflow = 17.2 cfs @ 12.09 hrs, Volume= 1.365 af
Primary = 17.2 cfs @ 12.09 hrs, Volume= 1.365 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs

Summary for Subcatchment 1.0S:

Runoff = 1.6 cfs @ 12.08 hrs, Volume= 0.126 af, Depth= 4.97"
Routed to Reach 1.0R : SD30

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-YR Rainfall=5.80"

Area (ac)	CN	Description
0.234	98	Paved parking, HSG C
0.071	74	>75% Grass cover, Good, HSG C
0.305		Weighted Average
0.071		23.28% Pervious Area
0.234		76.72% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.4	25	0.0200	1.03		**Sheet Flow, A-B** Smooth surfaces n= 0.011 P2= 3.10"
0.6	100	0.0200	2.87		**Shallow Concentrated Flow, B-C** Paved Kv= 20.3 fps
5.0					**Direct Entry, DIRECT**
6.0	125	Total			

Summary for Subcatchment 1.1S:

Runoff = 1.7 cfs @ 12.09 hrs, Volume= 0.130 af, Depth= 4.22"
Routed to Reach 1.1R : SD29

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-YR Rainfall=5.80"

Area (ac)	CN	Description
0.195	74	>75% Grass cover, Good, HSG C
0.175	98	Paved parking, HSG C
0.370		Weighted Average
0.195		52.70% Pervious Area
0.175		47.30% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.7	20	0.0200	0.12		**Sheet Flow, A-B** Grass: Short n= 0.150 P2= 3.10"
0.5	110	0.0300	3.52		**Shallow Concentrated Flow, B-C** Paved Kv= 20.3 fps
2.8					**Direct Entry, DIRECT ENTRY**
6.0	130	Total			

Summary for Subcatchment 1.2S: BLDG 7 ROOF

Runoff = 3.3 cfs @ 12.08 hrs, Volume= 0.266 af, Depth= 5.56"
Routed to Reach 10R : SD27

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-YR Rainfall=5.80"

Area (ac)	CN	Description
0.574	98	Roofs, HSG C
0.574		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, DIRECT ENTRY**

Summary for Subcatchment 2.0S:

Runoff = 0.4 cfs @ 12.08 hrs, Volume= 0.035 af, Depth= 5.50"
Routed to Reach 2R : SD23

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-YR Rainfall=5.80"

Area (ac)	CN	Description
0.074	98	Paved parking, HSG C
0.002	74	>75% Grass cover, Good, HSG C
0.076		Weighted Average
0.002		2.63% Pervious Area
0.074		97.37% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, DIRECT ENTRY**

Summary for Subcatchment 3.0S:

Runoff = 0.9 cfs @ 12.08 hrs, Volume= 0.073 af, Depth= 5.05"
Routed to Reach 3R : SD22

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-YR Rainfall=5.80"

Area (sf)	CN	Description
6,000	98	Paved parking, HSG C
1,500	74	>75% Grass cover, Good, HSG C
7,500		Weighted Average
1,500		20.00% Pervious Area
6,000		80.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.0	15	0.1500	0.26		**Sheet Flow, A-B** Grass: Short n= 0.150 P2= 3.10"
0.0	5	0.0150	2.49		**Shallow Concentrated Flow, B-C** Paved Kv= 20.3 fps
0.3	20	0.0250	1.11		**Shallow Concentrated Flow, C-D** Short Grass Pasture Kv= 7.0 fps
0.6	115	0.0220	3.01		**Shallow Concentrated Flow, D-E** Paved Kv= 20.3 fps
4.1					**Direct Entry, DIRECT ENTRY**
6.0	155	Total			

Summary for Subcatchment 4.0S:

Runoff = 0.3 cfs @ 12.08 hrs, Volume= 0.022 af, Depth= 5.21"
Routed to Reach 4R : SD18

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-YR Rainfall=5.80"

Area (ac)	CN	Description
0.044	98	Paved parking, HSG C
0.007	74	>75% Grass cover, Good, HSG C
0.051		Weighted Average
0.007		13.73% Pervious Area
0.044		86.27% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.3	25	0.0400	1.35		**Sheet Flow, A-B** Smooth surfaces n= 0.011 P2= 3.10"
0.3	105	0.1000	6.42		**Shallow Concentrated Flow, B-C** Paved Kv= 20.3 fps
5.4					**Direct Entry, DIRECT**
6.0	130	Total			

Summary for Subcatchment 5.0S:

Runoff = 0.7 cfs @ 12.09 hrs, Volume= 0.055 af, Depth= 3.50"
Routed to Reach 5R : SD17

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-YR Rainfall=5.80"

Area (ac)	CN	Description
0.071	74	>75% Grass cover, Good, HSG C
0.046	98	Paved parking, HSG C
0.071	70	Woods, Good, HSG C
0.188		Weighted Average
0.142		75.53% Pervious Area
0.046		24.47% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.0	10	0.5000	0.17		**Sheet Flow, A-B** Woods: Light underbrush n= 0.400 P2= 3.10"
0.1	25	0.5000	3.54		**Shallow Concentrated Flow, B-C** Woodland Kv= 5.0 fps
0.4	50	0.1000	2.21		**Shallow Concentrated Flow, C-D** Short Grass Pasture Kv= 7.0 fps
0.2	70	0.0800	5.74		**Shallow Concentrated Flow, D-E** Paved Kv= 20.3 fps
4.3					**Direct Entry, DIRECT ENTRY**
6.0	155	Total			

Summary for Subcatchment 6.0S:

Runoff = 0.4 cfs @ 12.08 hrs, Volume= 0.031 af, Depth= 4.75"
Routed to Reach 6R : SD14

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-YR Rainfall=5.80"

Area (ac)	CN	Description
0.025	74	>75% Grass cover, Good, HSG C
0.053	98	Paved parking, HSG C
0.078		Weighted Average
0.025		32.05% Pervious Area
0.053		67.95% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.3	25	0.0500	1.48		**Sheet Flow, A-B** Smooth surfaces n= 0.011 P2= 3.10"
0.2	50	0.0600	4.97		**Shallow Concentrated Flow, B-C** Paved Kv= 20.3 fps
5.5					**Direct Entry, DIRECT ENTRY**
6.0	75	Total			

Summary for Subcatchment 7.0S:

Runoff = 0.8 cfs @ 12.08 hrs, Volume= 0.061 af, Depth= 4.77"
Routed to Reach 7R : SD12

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-YR Rainfall=5.80"

Area (ac)	CN	Description
0.106	98	Paved parking, HSG C
0.048	74	>75% Grass cover, Good, HSG C
0.154		Weighted Average
0.048		31.17% Pervious Area
0.106		68.83% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.4	25	0.0200	1.03		**Sheet Flow, A-B** Smooth surfaces n= 0.011 P2= 3.10"
0.4	90	0.0300	3.52		**Shallow Concentrated Flow, B-C** Paved Kv= 20.3 fps
0.3	35	0.0570	1.67		**Shallow Concentrated Flow, C-D** Short Grass Pasture Kv= 7.0 fps
4.9					**Direct Entry, DIRECT**
6.0	150	Total			

Summary for Subcatchment 8.0S:

Runoff = 9.5 cfs @ 12.08 hrs, Volume= 0.763 af, Depth= 5.14"
Routed to Reach 8R : SD11

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-YR Rainfall=5.80"

Area (ac)	CN	Description
0.299	74	>75% Grass cover, Good, HSG C
0.498	98	Paved parking, HSG C
0.987	98	Roofs, HSG C
1.784		Weighted Average
0.299		16.76% Pervious Area
1.485		83.24% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.6	10	0.0200	0.11		**Sheet Flow, A-B** Grass: Short n= 0.150 P2= 3.10"
0.3	40	0.0100	2.03		**Shallow Concentrated Flow, B-C** Paved Kv= 20.3 fps
0.3	65	0.0350	3.80		**Shallow Concentrated Flow, C-D** Paved Kv= 20.3 fps
0.1	40	0.0550	11.53	9.05	**Pipe Channel, D-E** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.012
0.1	70	0.0500	12.75	15.65	**Pipe Channel, E-F** 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012
3.6					**Direct Entry, DIRECT ENTRY**
6.0	225	Total			

Summary for Subcatchment 9.0S:

Runoff = 2.0 cfs @ 12.09 hrs, Volume= 0.155 af, Depth= 3.85"
Routed to Link POA-1 : Casco Bay

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-YR Rainfall=5.80"

Area (ac)	CN	Description
0.158	98	Paved parking, HSG C
0.326	74	>75% Grass cover, Good, HSG C
0.484		Weighted Average
0.326		67.36% Pervious Area
0.158		32.64% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, DIRECT**

Summary for Subcatchment 10.0S:

Runoff = 0.9 cfs @ 12.09 hrs, Volume= 0.068 af, Depth= 3.38"
Routed to Link POA-1 : Casco Bay

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-YR Rainfall=5.80"

Area (ac)	CN	Description
0.051	98	Paved parking, HSG C
0.073	74	>75% Grass cover, Good, HSG C
0.117	70	Woods, Good, HSG C
0.241		Weighted Average
0.190		78.84% Pervious Area
0.051		21.16% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.1	20	0.2900	0.16		**Sheet Flow, A-B** Woods: Light underbrush n= 0.400 P2= 3.10"
0.5	90	0.1600	2.80		**Shallow Concentrated Flow, B-C** Short Grass Pasture Kv= 7.0 fps
0.2	45	0.0330	3.69		**Shallow Concentrated Flow, C-D** Paved Kv= 20.3 fps
0.8	80	0.0510	1.58		**Shallow Concentrated Flow, D-E** Short Grass Pasture Kv= 7.0 fps
2.4					**Direct Entry, DIRECT ENTRY**
6.0	235	Total			

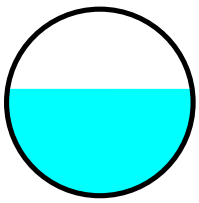
Summary for Reach 0R:

Inflow Area = 3.752 ac, 78.05% Impervious, Inflow Depth = 5.00" for 25-YR event
Inflow = 19.4 cfs @ 12.09 hrs, Volume= 1.562 af
Outflow = 19.5 cfs @ 12.09 hrs, Volume= 1.562 af, Atten= 0%, Lag= 0.0 min
Routed to Link POA-1 : Casco Bay

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Max. Velocity= 10.42 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 3.45 fps, Avg. Travel Time= 0.1 min

Peak Storage= 47 cf @ 12.09 hrs
Average Depth at Peak Storage= 1.15' , Surface Width= 1.98'
Bank-Full Depth= 2.00' Flow Area= 3.1 sf, Capacity= 31.0 cfs

24.0" Round Pipe
n= 0.012
Length= 25.0' Slope= 0.0160 '/'
Inlet Invert= 22.60', Outlet Invert= 22.20'



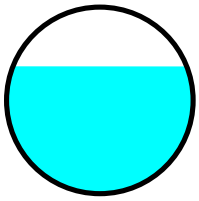
Summary for Reach 1.0R: SD30

Inflow Area = 3.178 ac, 74.09% Impervious, Inflow Depth = 4.89" for 25-YR event
Inflow = 16.2 cfs @ 12.09 hrs, Volume= 1.296 af
Outflow = 16.2 cfs @ 12.09 hrs, Volume= 1.296 af, Atten= 0%, Lag= 0.0 min
Routed to Pond 31P : JELLYFISH SYSTEM

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Max. Velocity= 7.09 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 2.44 fps, Avg. Travel Time= 0.1 min

Peak Storage= 34 cf @ 12.09 hrs
Average Depth at Peak Storage= 1.37' , Surface Width= 1.86'
Bank-Full Depth= 2.00' Flow Area= 3.1 sf, Capacity= 20.0 cfs

24.0" Round Pipe
n= 0.012
Length= 15.0' Slope= 0.0067 '/'
Inlet Invert= 23.45', Outlet Invert= 23.35'



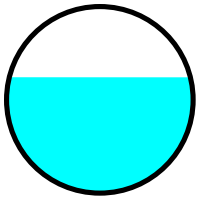
Summary for Reach 1.1R: SD29

Inflow Area = 2.873 ac, 73.81% Impervious, Inflow Depth = 4.89" for 25-YR event
Inflow = 14.7 cfs @ 12.09 hrs, Volume= 1.170 af
Outflow = 14.7 cfs @ 12.09 hrs, Volume= 1.170 af, Atten= 0%, Lag= 0.1 min
Routed to Reach 1.0R : SD30

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Max. Velocity= 7.15 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 2.43 fps, Avg. Travel Time= 0.2 min

Peak Storage= 72 cf @ 12.09 hrs
Average Depth at Peak Storage= 1.24' , Surface Width= 1.94'
Bank-Full Depth= 2.00' Flow Area= 3.1 sf, Capacity= 20.7 cfs

24.0" Round Pipe
n= 0.012
Length= 35.0' Slope= 0.0071 '/'
Inlet Invert= 23.80', Outlet Invert= 23.55'



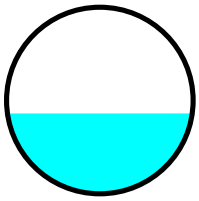
Summary for Reach 2R: SD23

Inflow Area = 2.503 ac, 77.73% Impervious, Inflow Depth = 4.98" for 25-YR event
Inflow = 13.0 cfs @ 12.09 hrs, Volume= 1.040 af
Outflow = 13.0 cfs @ 12.09 hrs, Volume= 1.040 af, Atten= 0%, Lag= 0.0 min
Routed to Reach 1.1R : SD29

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Max. Velocity= 10.00 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 3.30 fps, Avg. Travel Time= 0.2 min

Peak Storage= 52 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.86' , Surface Width= 1.98'
Bank-Full Depth= 2.00' Flow Area= 3.1 sf, Capacity= 33.6 cfs

24.0" Round Pipe
n= 0.012
Length= 40.0' Slope= 0.0187 '/'
Inlet Invert= 24.65', Outlet Invert= 23.90'



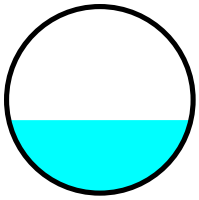
Summary for Reach 3R: SD22

Inflow Area = 2.427 ac, 77.12% Impervious, Inflow Depth = 4.97" for 25-YR event
Inflow = 12.6 cfs @ 12.09 hrs, Volume= 1.005 af
Outflow = 12.6 cfs @ 12.09 hrs, Volume= 1.005 af, Atten= 0%, Lag= 0.1 min
Routed to Reach 2R : SD23

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Max. Velocity= 11.01 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 3.62 fps, Avg. Travel Time= 0.4 min

Peak Storage= 103 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.78' , Surface Width= 1.95'
Bank-Full Depth= 2.00' Flow Area= 3.1 sf, Capacity= 38.7 cfs

24.0" Round Pipe
n= 0.012
Length= 90.0' Slope= 0.0250 '/'
Inlet Invert= 27.00', Outlet Invert= 24.75'



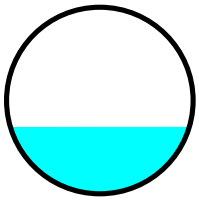
Summary for Reach 4R: SD18

Inflow Area = 2.255 ac, 76.90% Impervious, Inflow Depth = 4.96" for 25-YR event
Inflow = 11.7 cfs @ 12.09 hrs, Volume= 0.933 af
Outflow = 11.7 cfs @ 12.09 hrs, Volume= 0.933 af, Atten= 0%, Lag= 0.2 min
Routed to Reach 3R : SD22

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Max. Velocity= 11.43 fps, Min. Travel Time= 0.2 min
Avg. Velocity = 3.74 fps, Avg. Travel Time= 0.7 min

Peak Storage= 153 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.72' , Surface Width= 1.92'
Bank-Full Depth= 2.00' Flow Area= 3.1 sf, Capacity= 42.0 cfs

24.0" Round Pipe
n= 0.012
Length= 150.0' Slope= 0.0293 '/'
Inlet Invert= 31.50', Outlet Invert= 27.10'



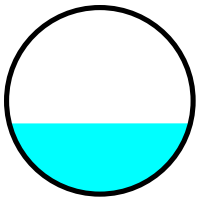
Summary for Reach 5.1R: SD16

Inflow Area = 2.016 ac, 81.55% Impervious, Inflow Depth = 5.09" for 25-YR event
Inflow = 10.7 cfs @ 12.09 hrs, Volume= 0.856 af
Outflow = 10.7 cfs @ 12.09 hrs, Volume= 0.856 af, Atten= 0%, Lag= 0.0 min
Routed to Reach 5R : SD17

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Max. Velocity= 17.24 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 5.68 fps, Avg. Travel Time= 0.1 min

Peak Storage= 25 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.57' , Surface Width= 1.46'
Bank-Full Depth= 1.50' Flow Area= 1.8 sf, Capacity= 34.6 cfs

18.0" Round Pipe
n= 0.012
Length= 40.0' Slope= 0.0925 '/'
Inlet Invert= 36.15', Outlet Invert= 32.45'



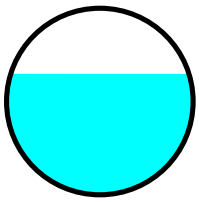
Summary for Reach 5R: SD17

Inflow Area = 2.204 ac, 76.68% Impervious, Inflow Depth = 4.96" for 25-YR event
Inflow = 11.4 cfs @ 12.09 hrs, Volume= 0.910 af
Outflow = 11.4 cfs @ 12.09 hrs, Volume= 0.910 af, Atten= 0%, Lag= 0.0 min
Routed to Reach 4R : SD18

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Max. Velocity= 9.36 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 3.22 fps, Avg. Travel Time= 0.1 min

Peak Storage= 24 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.97' , Surface Width= 1.43'
Bank-Full Depth= 1.50' Flow Area= 1.8 sf, Capacity= 15.1 cfs

18.0" Round Pipe
n= 0.012
Length= 20.0' Slope= 0.0175 '/'
Inlet Invert= 32.35', Outlet Invert= 32.00'



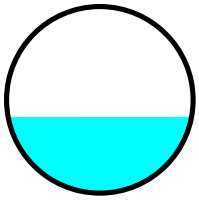
Summary for Reach 6R: SD14

Inflow Area = 2.016 ac, 81.55% Impervious, Inflow Depth = 5.09" for 25-YR event
Inflow = 10.7 cfs @ 12.09 hrs, Volume= 0.856 af
Outflow = 10.7 cfs @ 12.09 hrs, Volume= 0.856 af, Atten= 0%, Lag= 0.1 min
Routed to Reach 5.1R : SD16

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Max. Velocity= 15.61 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 5.17 fps, Avg. Travel Time= 0.4 min

Peak Storage= 75 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.62' , Surface Width= 1.48'
Bank-Full Depth= 1.50' Flow Area= 1.8 sf, Capacity= 30.2 cfs

18.0" Round Pipe
n= 0.012
Length= 110.0' Slope= 0.0705 '/'
Inlet Invert= 44.00', Outlet Invert= 36.25'



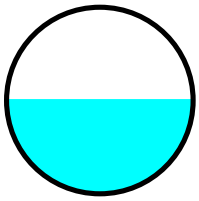
Summary for Reach 7R: SD12

Inflow Area = 1.938 ac, 82.09% Impervious, Inflow Depth = 5.11" for 25-YR event
Inflow = 10.3 cfs @ 12.08 hrs, Volume= 0.825 af
Outflow = 10.3 cfs @ 12.09 hrs, Volume= 0.825 af, Atten= 0%, Lag= 0.1 min
Routed to Reach 6R : SD14

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Max. Velocity= 11.38 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 3.82 fps, Avg. Travel Time= 0.2 min

Peak Storage= 45 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.76' , Surface Width= 1.50'
Bank-Full Depth= 1.50' Flow Area= 1.8 sf, Capacity= 20.0 cfs

18.0" Round Pipe
n= 0.012
Length= 50.0' Slope= 0.0308 '/'
Inlet Invert= 45.64', Outlet Invert= 44.10'



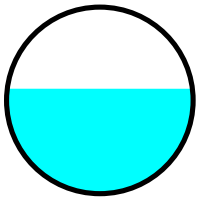
Summary for Reach 8R: SD11

Inflow Area = 1.784 ac, 83.24% Impervious, Inflow Depth = 5.14" for 25-YR event
Inflow = 9.5 cfs @ 12.08 hrs, Volume= 0.763 af
Outflow = 9.5 cfs @ 12.08 hrs, Volume= 0.763 af, Atten= 0%, Lag= 0.0 min
Routed to Reach 7R : SD12

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Max. Velocity= 9.25 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 3.14 fps, Avg. Travel Time= 0.2 min

Peak Storage= 33 cf @ 12.08 hrs
Average Depth at Peak Storage= 0.85' , Surface Width= 1.49'
Bank-Full Depth= 1.50' Flow Area= 1.8 sf, Capacity= 15.6 cfs

18.0" Round Pipe
n= 0.012
Length= 32.0' Slope= 0.0188 '/'
Inlet Invert= 46.34', Outlet Invert= 45.74'



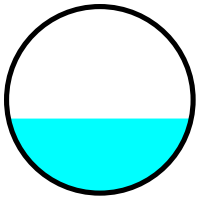
Summary for Reach 10R: SD27

Inflow Area = 0.574 ac,100.00% Impervious, Inflow Depth = 5.56" for 25-YR event
Inflow = 3.3 cfs @ 12.08 hrs, Volume= 0.266 af
Outflow = 3.3 cfs @ 12.09 hrs, Volume= 0.266 af, Atten= 0%, Lag= 0.2 min
Routed to Reach 0R :

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Max. Velocity= 7.07 fps, Min. Travel Time= 0.3 min
Avg. Velocity = 2.36 fps, Avg. Travel Time= 0.9 min

Peak Storage= 60 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.50' , Surface Width= 1.23'
Bank-Full Depth= 1.25' Flow Area= 1.2 sf, Capacity= 9.6 cfs

15.0" Round Pipe
n= 0.012
Length= 130.0' Slope= 0.0188 '/'
Inlet Invert= 26.00', Outlet Invert= 23.55'



Summary for Pond 31P: JELLYFISH SYSTEM

Inflow Area = 3.178 ac, 74.09% Impervious, Inflow Depth = 4.89" for 25-YR event
Inflow = 16.2 cfs @ 12.09 hrs, Volume= 1.296 af
Outflow = 16.2 cfs @ 12.10 hrs, Volume= 1.296 af, Atten= 0%, Lag= 0.2 min
Primary = 16.2 cfs @ 12.10 hrs, Volume= 1.296 af
Routed to Reach 0R :

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Starting Elev= 22.85' Surf.Area= 0.001 ac Storage= 0.009 af
Peak Elev= 25.69' @ 12.10 hrs Surf.Area= 0.001 ac Storage= 0.013 af (0.004 af above start)
Flood Elev= 30.00' Surf.Area= 0.001 ac Storage= 0.016 af (0.007 af above start)

Plug-Flow detention time= 10.3 min calculated for 1.287 af (99% of inflow)
Center-of-Mass det. time= 1.0 min (761.5 - 760.5)

Volume	Invert	Avail.Storage	Storage Description
#1	16.35'	0.016 af	**8.00'W x 8.00'L x 11.50'H Prismatoid** 0.017 af Overall x 96.0% Voids

Device	Routing	Invert	Outlet Devices
#1	Device 3	22.85'	**JFPD0808-11-3-54 CSV File** Head (feet) 0.00 0.08 0.17 0.25 0.33 0.42 0.50 0.58 0.67 0.75 0.83 0.92 1.00 1.08 1.17 1.25 1.33 1.42 1.50 Disch. (cfs) 0.000 0.015 0.030 0.045 0.059 0.074 0.089 0.267 0.446 0.624 0.802 0.980 1.159 1.337 1.515 1.693 1.872 2.050 2.228
#2	Device 3	24.35'	**3.5' long x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32
#3	Primary	22.85'	**24.0" Round Culvert** L= 13.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 22.85' / 22.70' S= 0.0115 '/' Cc= 0.900 n= 0.012, Flow Area= 3.14 sf

Primary OutFlow Max=16.2 cfs @ 12.10 hrs HW=25.69' TW=23.75' (Dynamic Tailwater)
↑**3=Culvert** (Inlet Controls 16.2 cfs @ 5.15 fps)
↑**1=JFPD0808-11-3-54 CSV File** (Passes < 2.2 cfs potential flow)
2=Broad-Crested Rectangular Weir (Passes < 17.9 cfs potential flow)

Summary for Link POA-1: Casco Bay

Inflow Area = 4.477 ac, 70.08% Impervious, Inflow Depth = 4.79" for 25-YR event
Inflow = 22.4 cfs @ 12.09 hrs, Volume= 1.785 af
Primary = 22.4 cfs @ 12.09 hrs, Volume= 1.785 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs

Attachment 3

Inspection, Maintenance, & Housekeeping Plan

INSPECTION, MAINTENANCE, AND HOUSEKEEPING PLAN

For:
Martin's Point Vernada Campus
Portland, Maine

By:
Sebago Technics, Inc.
75 John Roberts Road, Suite 4A
South Portland, Maine

Introduction

The following plan outlines the anticipated inspection and maintenance procedures for the erosion and sedimentation control measures as well as stormwater management facilities for the project. This plan also outlines several housekeeping requirements that shall be followed during and after construction. These procedures shall be followed in order to ensure the intended function of the designed measures and to prevent unreasonably adverse impacts to the surrounding environment.

The procedures outlined in this Inspection, Maintenance and Housekeeping Plan are provided as an overview of the anticipated practices to be used on this site. In some instances, additional measures may be required due to unexpected conditions. For additional detail on any of the erosion and sedimentation control measures or stormwater management devices to be utilized on this project, refer to the most recently revised edition of the "Maine Erosion and Sedimentation Control BMP" manual and/or the "Stormwater Management for Maine: Best Management Practices" manual as published by the Maine Department of Environmental Protection (MDEP).

During Construction

1. **Inspection:** During the construction process, it is the Contractor's responsibility to comply with the inspection and maintenance procedures outlined in this section. These responsibilities include inspecting disturbed and impervious areas, erosion control measures, materials storage areas that are exposed to precipitation, and locations where vehicles enter or exit the site. These areas shall be inspected at least once a week as well as before and after a storm event (0.5" of rainfall), and prior to completing permanent stabilization measures. A person with knowledge of erosion and stormwater control, including the standards and conditions in any applicable permits, shall conduct the inspections.

2. **Maintenance:** All measures shall be maintained in an effective operating condition until areas are permanently stabilized. If Best Management Practices (BMPs) need to be maintained or modified, additional BMPs are necessary, or other corrective action is needed, implementation must be completed within 7 calendar days and prior to any storm event (0.5" of rainfall).

3. **Documentation:** A log summarizing the inspections and any corrective action taken must be maintained on-site. The log must include the name(s) and qualifications of the person making the inspections, the date(s) of the inspections, and major observations about the operation and maintenance of erosion and sedimentation controls, material storage areas, and vehicle access points to the site. Major observations must include BMPs that need maintenance, BMPs that failed

to operate as designed or proved inadequate for a particular location, and locations where additional BMPs are needed. For each BMP requiring maintenance, BMP needing replacement, and location needing additional BMPs, note in the log the corrective action taken and when it was taken. The log must be made accessible to the appropriate regulatory agency upon request. The permittee shall retain a copy of the log for a period of at least three years from the completion of permanent stabilization.

4. **Specific Inspection and Maintenance Tasks:** The following is a list of erosion control and stormwater management measures and the specific inspection and maintenance tasks to be performed during construction.

A. Sediment Barriers:

- Hay bale barriers, silt fences, and filter berms shall be inspected immediately after each rainfall and at least daily during prolonged rainfall.
- If the fabric on a silt fence or filter barrier should decompose or become ineffective prior to the end of the expected usable life and the barrier is still necessary, it shall be replaced.
- Sediment deposits should be removed after each storm event (0.5" of rainfall). They must be removed before deposits reach approximately one-half the height of the barrier.
- Filter berms shall be reshaped as needed.
- Any sediment deposits remaining in place after the silt fence or filter barrier is no longer required should be dressed to conform to the existing grade, prepared, and seeded.

B. Riprap Materials:

- Once a riprap installation has been completed, it should require very little maintenance. It shall, however, be inspected periodically to determine if high flows have caused scour beneath the riprap or dislodged any of the stone.

C. Erosion Control Blankets:

- Inspect these reinforced areas semi-annually and after significant rainfall events for slumping, sliding, seepage, and scour. Pay close attention to unreinforced areas adjacent to the erosion control blankets, which may experience accelerated erosion.
- Review all applicable inspection and maintenance procedures recommended by the specific blanket manufacturer. These tasks shall be included in addition to the requirements of this plan.

D. Stabilized Construction Entrances/Exits:

- The exit shall be maintained in a condition that will prevent tracking of sediment onto public rights-of-way.
- When the control pad becomes ineffective, the stone shall be removed along with the collected soil material. The entrance should then be reconstructed.
- Areas that have received mud-tracking or sediment deposits shall be swept or washed. Washing shall be done on an area stabilized with aggregate, which drains

into an approved sediment-trapping device (not into storm drains, ditches, or waterways).

E. Temporary Seed and Mulch:

- Mulched areas should be inspected after rain events to check for rill erosion.
- If less than 90% of the soil surface is covered by mulch, additional mulch shall be applied in bare areas.
- In applications where seeding and mulch have been applied in conjunction with erosion control blankets, the blankets must be inspected after rain events for dislocation or undercutting.
- Mulch shall continue to be reapplied until 95% of the soil surface has established temporary vegetative cover.

F. Stabilized Temporary Drainage Swales:

- Sediment accumulation in the swale shall be removed once the cross section of the swale is reduced by 25%.
- The swales shall be inspected after rainfall events. Any evidence of sloughing of the side slopes or channel erosion shall be repaired and corrective action should be taken to prevent reoccurrence of the problem.
- In addition to the stabilized lining of the channel (i.e. erosion control blankets), stone check dams may be needed to further reduce channel velocity.

5. **Housekeeping:** The following general performance standards apply to the proposed project.

A. Spill prevention: Controls must be used to prevent pollutants from being discharged from materials on-site, including storage practices to minimize exposure of the materials to stormwater, and appropriate spill prevention, containment, and response planning and implementation.

B. Groundwater protection: During construction, liquid petroleum products and other hazardous materials with the potential to contaminate groundwater may not be stored or handled in areas of the site draining to an infiltration area. An "infiltration area" is any area of the site that by design or as a result of soils, topography and other relevant factors, accumulates runoff that infiltrates into the soil. Dikes, berms, sumps, and other forms of secondary containment that prevent discharge to groundwater may be used to isolate portions of the site for the purposes of storage and handling of these materials.

C. Fugitive sediment and dust: Actions must be taken to ensure that activities do not result in noticeable erosion of soils or fugitive dust emissions during or after construction. Oil may not be used for dust control.

D. Debris and other materials: Litter, construction debris, and chemicals exposed to stormwater must be prevented from becoming a pollutant source.

E. Trench or foundation dewatering: Trench dewatering is the removal of water from trenches, foundations, cofferdams, ponds, and other areas within the construction area

that retain water after excavation. In most cases, the collected water is heavily silted and hinders correct and safe construction practices. The collected water must be removed from the ponded area, either through gravity or pumping, and must be spread through natural wooded buffers or removed to areas that are specifically designed to collect the maximum amount of sediment possible, like a cofferdam sedimentation basin. Avoid allowing the water to flow over disturbed areas of the site. Equivalent measures may be taken if approved.

Post-Construction

1. **Inspection:** After construction, it is the responsibility of the owner or assigned heirs to comply with the inspection and maintenance procedures outlined in this section. All measures must be maintained in effective operating condition. The owner shall inspect and maintain the BMPs, including but not limited to any parking areas, catch basins, drainage swales, detention basins and ponds, pipes and related structures, in accordance with all municipal and state inspection, cleaning and maintenance requirements of the approved post-construction stormwater management plan.

2. **Specific Inspection and Maintenance Tasks:** The following is a list of permanent erosion control and stormwater management measures and the inspection and maintenance tasks to be performed after construction. If the BMP requires maintenance, repair or replacement to function as intended by the approved post-construction stormwater management plan, the owner or operator of the BMP shall take corrective action(s) to address the deficiency or deficiencies as soon as possible after the deficiency is discovered and shall provide a record of the deficiency and corrective action(s) to the local municipality in the annual report.

   A. Vegetated Areas:

   - Inspect vegetated areas, particularly slopes and embankments, early in the growing season or after heavy rains (>0.5”) to identify active or potential erosion problems.
   - Replant bare areas or areas with sparse growth. Where rill erosion is evident, armor the area with an appropriate lining or divert the erosive flows to on-site areas able to withstand the concentrated flows.

   B. Ditches, Swales and Other Open Channels:

   - Inspect ditches, swales, level spreaders and other open stormwater channels in the spring, in the late fall, and after heavy rains to remove any obstructions to flow. Remove accumulated sediments and debris, remove woody vegetative growth that could obstruct flow, and repair any erosion of the ditch lining.
   - Vegetated ditches must be mowed at least annually or otherwise maintained to control the growth of woody vegetation and maintain flow capacity.
   - Any woody vegetation growing through riprap linings must also be removed. Repair any slumping side slopes as soon as practicable.
   - If the ditch has a riprap lining, replace riprap in areas where any underlying filter fabric or underdrain gravel is showing through the stone or where stones have dislodged.

C. Culverts:

- Inspect culverts in the spring, in the late fall, and after heavy rains (>0.5") to remove any obstructions to flow.
- Remove accumulated sediments and debris at the inlet, at the outlet, and within the conduit.
- Inspect and repair any erosion damage at the culvert's inlet and outlet.

D. Removal of Winter Sand:

- Clear accumulations of winter sand in parking lots and along roadways at least once a year, preferably in the spring.
- Accumulations on pavement may be removed by pavement sweeping.
- Accumulations of sand along road shoulders may be removed by grading excess sand to the pavement edge and removing it manually or by a front-end loader or other acceptable method

E. Jellyfish Filter

- The system must be inspected at least once every six months.
- Jellyfish systems require periodic maintenance on an annual basis.
- Maintenance should be performed when sediment depth reaches 12" of accumulation.

3. Documentation:

A. The owner or operator of a BMP or a qualified post-construction stormwater inspector hired by that person, shall, as required by the local municipality, provide a completed and signed certification on a form provided by the local municipality, certifying that the person has inspected the BMP(s) and that they are adequately maintained and functioning as intended by the approved post-construction stormwater management plan, or that they required maintenance or repair, including the record of the deficiency and corrective action(s) taken.

B. A log summarizing the inspections and any corrective action taken must be maintained. The log must include the name(s) and qualifications of the person making the inspections, the date(s) of the inspections, and major observations about the operation and maintenance of controls. Major observations must include BMPs that need maintenance, BMPs that failed to operate as designed or proved inadequate for a particular location, and locations where additional BMPs are needed. For each BMP requiring maintenance, BMP needing replacement, and location needing additional BMPs, note in the log the corrective action taken and when it was taken. The log must be made accessible to the appropriate regulatory agency upon request. A sample "Stormwater Inspection and Maintenance Form" has been included in Attachment 1 of this Inspection, Maintenance, and Housekeeping Plan.

4. **Duration of Maintenance:** Perform maintenance as described and required for any associated permits unless and until the system is formally accepted by a municipality or quasi-municipal district, or is placed under the jurisdiction of a legally created association that will be responsible for the maintenance of the system. If a municipality or quasi-municipal district chooses to accept a stormwater management system or a component of a stormwater system, it must provide a letter to the MDEP stating that it assumes responsibility for the system. The letter must specify the components of the system for which the municipality or district will assume responsibility, and that the municipality or district agrees to maintain those components of the system in compliance with MDEP standards. Upon such assumption of responsibility, and approval by the MDEP, the municipality, quasi-municipal district, or association becomes a co-permittee for this purpose only and must comply with all terms and conditions of the permit.

ATTACHMENT 1 – STORMWATER INSPECTION AND MAINTENANCE LOG

Martin's Point Veranda Campus
331 Veranda Street
Portland, Maine

This log is intended to accompany the Inspection, Maintenance, and Housekeeping Plan for the Martin's Point Veranda Campus Development in Portland, Maine. The following items shall be checked, cleaned, and maintained on a regular basis as specified in the Maintenance Plan and as described in the sections below. This log shall be kept on file for a minimum of five (5) years and shall be available for review by the City of Portland and the Maine DEP. Qualified personnel familiar with the drainage systems and soils shall perform all inspections. A copy of the construction and post-construction maintenance logs are provided.

INSPECTION MAINTENANCE AND HOUSEKEEPING FORM			
General Information			
Project Name:		**Inspection Date:**	
Project Location:		**Current Weather:**	
		Date / Amount Last Precip:	
BMP Owner:		**Company conducting inspection:**	
Owner Mailing Address:		**Company Mailing Address**	
Owner Phone #:		**Company Phone #:**	
Owner Email:		**Inspector Name:**	
		Inspector Email:	

BMP Element	Suggested Maintenance (recm'd frequency)	Observations	Inspection Notes/Recommended Action
Cascade Separator			
	Sediment Depth (Annually)		
Jellyfish Filter			
	Sediment Depth (Annually)		

Additional Notes/Observations:

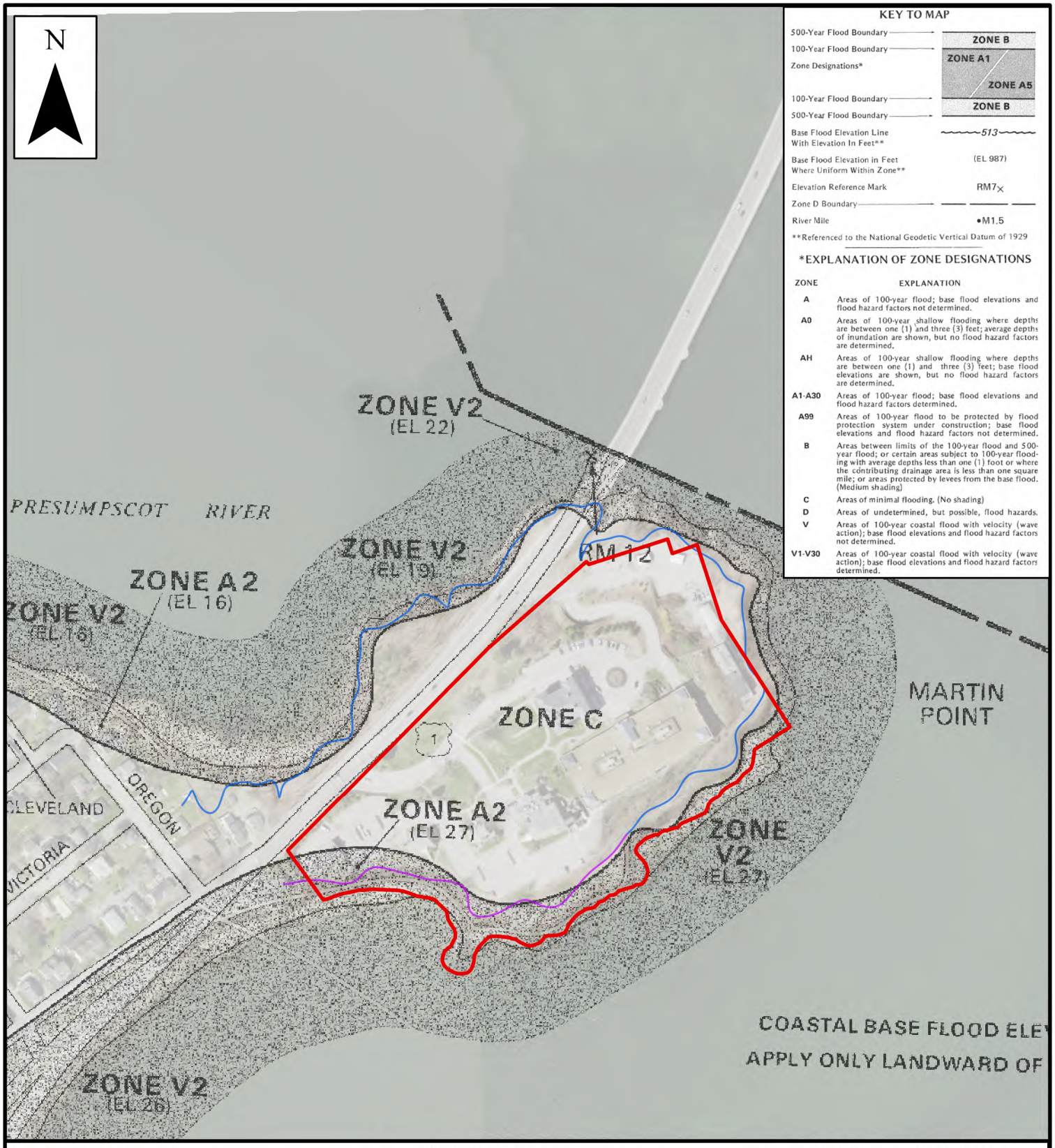
INSPECTION MAINTENANCE AND HOUSEKEEPING FORM			
General Information			
Project Name:		**Inspection Date:**	
Project Location:		**Current Weather:**	
		Date / Amount Last Precip:	
BMP Owner:		**Company conducting inspection:**	
Owner Mailing Address:		**Company Mailing Address**	
Owner Phone #:		**Company Phone #:**	
Owner Email:		**Inspector Name:**	
		Inspector Email:	

Site Element	Suggested Maintenance (recm'd frequency)	Observations	Inspection Notes/Recommended Action
Vegetated Areas	Inspect Slopes/Embankments for erosion (annually)		
	Replant bare areas or areas of sparse growth (annually)		
Ditches/Swales	Remove obstructions/debris/sediment (monthly)		
	Inspect for erosion/repair as needed (annually)		
	Remove woody vegetation (annually)		
	Mow vegetated ditches (annually)		
Catch Basins	Remove sediment/debris from sump (annually)		
	Remove accumulated debris from inlet grate		
Culverts	Remove sediment/debris from inlet/outlet aprons (annually)		
	Inspect inlet/outlet aprons for erosion, repair as needed (annually)		
	Inspect, repair as needed, riprap aprons for dislodged/sparse coverage (annually)		
Pipe Outlets	Remove sediment/debris from outlet aprons (annually)		
	Inspect outlet aprons for erosion, repair as needed (annually)		
	Inspect, repair as needed, riprap aprons for dislodged/sparse coverage (annually)		

Additional Notes/Observations:

Attachment 4

FEMA Flood Insurance Rate Map



Subject Site

Feet

0 300 600

Fema Flood Hazards

Zone A2 - 100-year Floodplain; Base Flood Elevation (BFE) Determined

Zone V2 - 100-year Floodplain with Velocity (Wave Action); Base Flood Elevation (BFE) Determined

SEBAGO TECHNICS
WWW.SEBAGOTECHNICS.COM
75 John Roberts Rd. - Suite 4A
South Portland, ME 04106
Tel. 207-200-2100

FEMA NATIONAL FLOOD HAZARDS

MARTIN'S POINT VERANDA CAMPUS

SCALE: 1:3,600

DATE: 11/8/2023

LOCATION:
331 VERANDA STREET,
PORTLAND, ME

INFORMATION:
FEMA FIRM PANEL 230051 0008 B
EFFECTIVE JULY 17, 1986

Attachment 5

Stormwater Management Plans

EXISTING CONDITIONS LEGEND

- WATERSHED BOUNDARY
- TIME OF CONCENTRATION (A, B)
- REACH (A, B, C)
- 1.0S — SUBCATCHMENT LABEL
- 1R — REACH
- POA-1 — POINT OF ANALYSIS
- 1P — STORMWATER TREATMENT/DETENTION POND
- HSG # / HSG # — SOILS BOUNDARY

SuC2 HrB SuC2 HrB HrB HrB HrC HrC HrC HrC HrB HrB

2S 3S 4S 5S 6S 7S 8S 9S 10S 1S

POA-1

STOP

EXPOSED LEDGE

ABANDONED

CRUSHED STONE PAD

TREE WELL

RAILINGS

AWNING

FIRE ESCAPE

EXISTING BUILDING 5

DECK

EXISTING BUILDING 6

RISER PANEL

DOOR SILL

GRAPHIC SCALE
20 0 10 20 40
(IN FEET)
1 INCH = 20 FT.

TAX PARCELS: 434-C-1,434-C-5 & 434-C-10

PAUL D. OSTROWSKI, PE 11175

STATE OF MAINE — PAUL D. OSTROWSKI — No. 11175 — REGISTERED PROFESSIONAL ENGINEER

REV:	BY:	DATE:	STATUS:
B	KSM	03/14/2024	RESPONSE TO CITY REVIEW COMMENTS
A	KSM	12/20/2023	ISSUED TO CITY OF PORTLAND FOR SITE PLAN REVIEW

THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM SEBAGO TECHNICS, INC. ANY ALTERATIONS, AS PROVIDED ON OTHERWISE, SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO SEBAGO TECHNICS, INC.

SEBAGO TECHNICS
WWW.SEBAGOTECHNICS.COM
75 John Roberts Rd.
Suite A
South Portland, ME 04106
Tel: 207-200-2100

PRE STORMWATER PLAN

MARTIN'S POINT HEALTHCARE VERANDA CAMPUS

331 VERANDA STREET
PORTLAND, ME 04103

MARTIN'S POINT HEALTH CARE, INC.

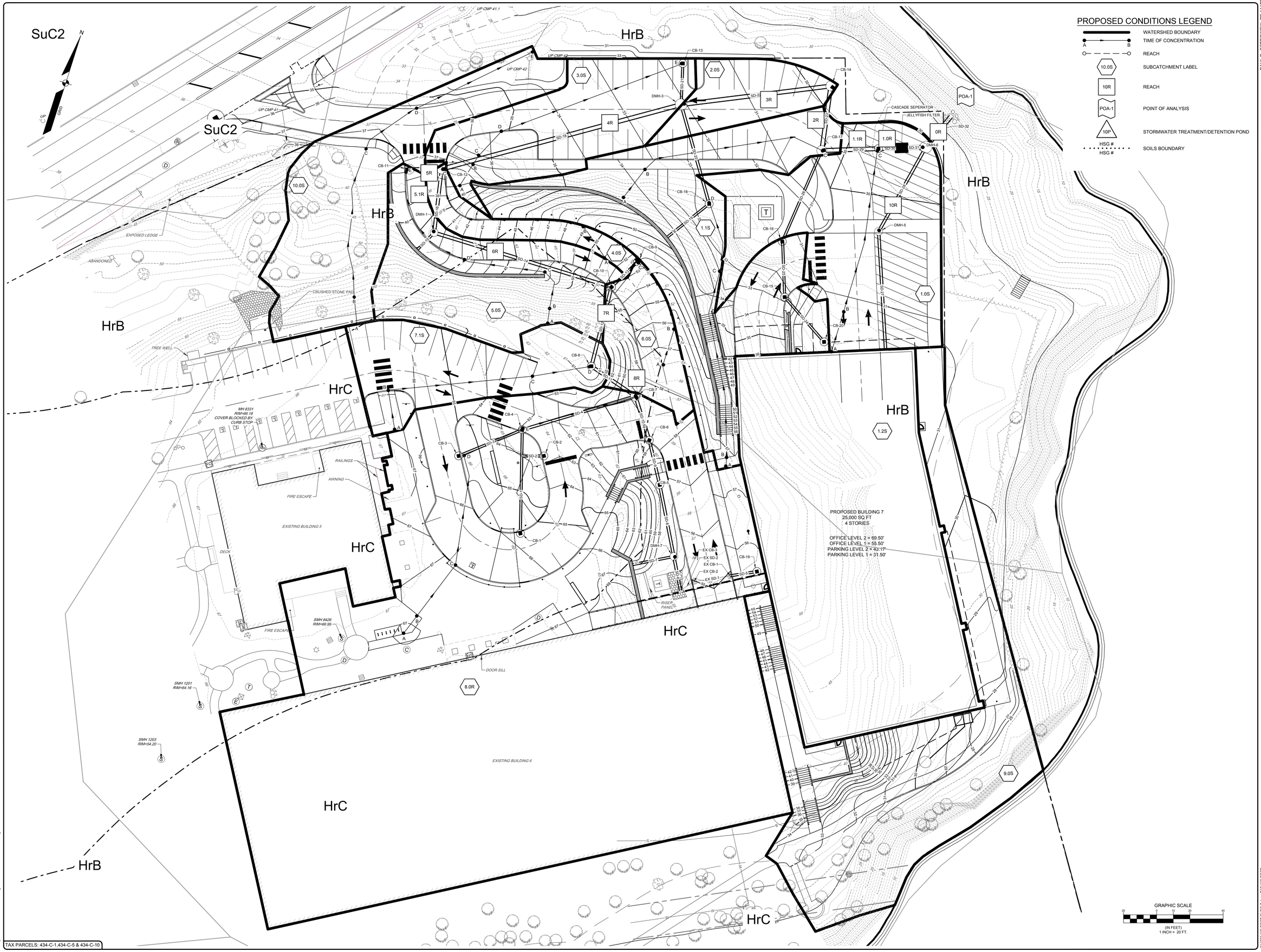
PO BOX 9746
PORTLAND, ME 04103

DESIGNED	BAM/KGK
DRAWN	CJC
CHECKED	PDO
DATE	04/10/2023
SCALE	1" = 20'
PROJECT	211026

SHEET 1 OF 2

F:\Projects\21000\211026\DWG\Design\311026 WS PRE-BLDG 7.dwg - 3/14/2024 1:26 PM - KELLY KOEHLER

211026 WS PRE-BLDG 7.dwg, TAB:WS POST



TAX PARCELS: 434-C-1,434-C-5 & 434-C-10

PAUL D. OSTROWSKI, PE 11175

STATE OF MAINE
PAUL D. OSTROWSKI
No. 11175
REGISTERED PROFESSIONAL ENGINEER

REV:	BY:	DATE:	STATUS:
B	KSM	03/14/2024	RESPONSE TO CITY REVIEW COMMENTS
A	KSM	12/20/2023	ISSUED TO CITY OF PORTLAND FOR SITE PLAN REVIEW

THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM SEBAGO TECHNICS, INC. ANY ALTERATIONS AUTHORIZED OTHERWISE, SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO SEBAGO TECHNICS, INC.

SEBAGO TECHNICS
WWW.SEBAGOTECHNICS.COM
75 John Roberts Rd.
Suite A
South Portland, ME 04106
Tel: 207-200-2100

POST STORMWATER PLAN

MARTIN'S POINT HEALTHCARE VERANDA CAMPUS
331 VERANDA STREET
PORTLAND, ME 04103

MARTIN'S POINT HEALTH CARE, INC.
PO BOX 9746
PORTLAND, ME 04103

DESIGNED	BAM/KGK
DRAWN	CJC
CHECKED	PDO
DATE	04/10/2023
SCALE	1" = 20'
PROJECT	211026

SHEET 2 OF 2

211026 WS POST-BLDG 7.dwg, TAB:WS POST

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Section 13

Urban Impaired Stream Submissions

Section 13: URBAN IMPAIRED STREAM SUBMISSIONS

The proposed project is not located in an area identified as most at risk per MDEP Chapter 502 Stormwater Management Rules for Direct Watersheds of Lakes Most at Risk from New Development and Urban Impaired Streams.

Section 14

Basic Standards

Section 14: BASIC STANDARDS

A. Narrative

Site-specific Erosion and Sedimentation Control (ESC) plans for the proposed MPHC site improvements have been prepared by Sebago Technics and are shown on the appended site drawings. The plans address temporary and permanent erosion control measures, including location, details, and a written plan. During construction, a variety of stabilization measures will be used to prevent the mobilization of soil due to water or wind action. All ESC and stabilization measures have been prepared to address the requirements of the Maine DEP Chapter 500, Stormwater Management regulations. Inspections, Maintenance, and Housekeeping are addressed in the Stormwater Report, Section 12.

B. Implementation schedule

Final stabilization removals are anticipated at project completion.

C./D./E. ESC Plan, Details, and Work Limits

All of the required and specified ESC measures are shown on the enclosed site plans. The proposed measures include the drainage and erosion control elements, their locations, and the work/disturbance limits, as required.

F. Design Drawings

The enclosed design drawings include ESC measures designed in accordance with the *Erosion and Sediment Control Handbook for Construction: Best Management Practices*, latest edition.

G. ESC Calculations for sizing, spacing, or stabilizing ESC measures.

See Section 12-Stormwater for calculations and the appended Site Plans, Details, and Notes for spacing and stabilization measures, as applicable.

Section 16

Water Supply

Section 16: Water

A. Water Supply Method

The Portland Water District (PWD) provided a formal ability/capacity to serve letter for the Building 7 project dated March 15, 2024, included in this section. Water services consist of a 4" diameter domestic and wet fire sprinkler system throughout the conditioned portions of the building at office levels 1 and 2 and the mechanical penthouse.

B. Subsurface Wastewater Disposal

Per city requirements, sanitary service will be extended from the existing on-site infrastructure, which will include a new 6"diameter service line and an exterior sewer pump station. The proposed system is part of the overall MPCH campus sewage removal. The letter of capacity is included in Section 17.

Portland Water District

FROM SEBAGO LAKE TO CASCO BAY

March 15, 2024

Paul Ostrowski, PE
Sebago Technics, Inc.
75 John Roberts Rd., Suite 4A, South Portland, ME 04106

Re: 331 Veranda Street, PO
Ability to Serve with PWD Water

Dear Mr. Ostrowski:

The Portland Water District has received your request for an Ability to Serve Determination for the noted site submitted on September 6, 2023. Based on the information provided per plans dated March 15, 2024, we can confirm that the District will be able to serve the proposed project as further described in this letter. **Please note that this letter constitutes approval of the water system as currently designed and is valid for eighteen (18) months after the date of issue. Any changes affecting the approved water system will require further review and approval by PWD.**

Conditions of Service

The following conditions of service apply:

- A new 6-inch fire service and a 4-inch domestic water service, with a 1.5-inch meter, may be installed from the water main in Veranda Street. The services should enter through the property's frontage on Veranda Street at least 10-feet from any side property lines.
- An approved testable double check backflow prevention device must be installed on each service line directly after the meter and before the sprinkler riser prior to service activation.
- The Portland Water District does not have record of any other existing infrastructure in public roads and recommends a survey and test pitting be performed by the development team prior to construction. Any conflicts that arise during construction are at the risk of the developer and may result in job shutdown until new plans are submitted by the developer and reviewed and approved by PWD.

Prior to construction, the owner or contractor will need to complete a Service Application and pay all necessary fees for each proposed service. When the project is ready for construction, an Application for each service can be requested by contacting the MEANS Group at MEANS@pwd.org or 207-774-5961 ext. 3199. Once a completed Application has been submitted with payment, please allow seven (7) days for processing.

Existing Site Service

According to District records, the project site does not currently have existing water service.

Water System Characteristics

According to District records, there is an 12-inch diameter ductile iron water main in Veranda Street and a public fire hydrant located adjacent to the site. The estimated static pressure in the area is 100 psi.

Public Fire Protection

The installation of new public hydrants to be accepted into the District water system will most likely not be required. It is your responsibility to contact the City of Portland Fire Department to ensure that this project is adequately served by existing and/or proposed hydrants.

Domestic Water Needs

The data noted above indicates there should be adequate pressure and volume of water to serve the domestic water needs of your proposed project. Based on the high water pressure in this area, we recommend that you consider the installation of pressure reducing devices that comply with state plumbing codes.

Private Fire Protection Water Needs

You have indicated that this project will require water service to provide private fire protection to the site. Please note that the District does not guarantee any quantity of water or pressure through a fire protection service. Please share these results with your sprinkler system designer so that they can design the fire protection system to best fit the noted conditions. If the data is out of date or insufficient for their needs, please contact MEANS to request a hydrant flow test and we will work with you to get more complete data.

Should you disagree with this determination, you may request a review by the District's Internal Review Team. Your request for review must be in writing and state the reason for your disagreement with the determination. The request must be sent to MEANS@PWD.org or mailed to 225 Douglass Street, Portland Maine, 04104 c/o MEANS. The Internal Review Team will undertake review as requested within 2 weeks of receipt of a request for review.

If the District can be of further assistance in this matter, please let us know.

Sincerely,
Portland Water District



Robert A. Bartels, P.E.
Senior Project Engineer

Section 17

Sanitary Sewer

Section 17: Wastewater Disposal

C. Municipal facility or utility company letter

Per city requirements, sanitary service will be extended from the existing on-site infrastructure, which will include a new 6”diameter service line and an exterior sewer pump station. The proposed system is part of the overall MPCH campus sewage removal reviewed and approved by the City of Portland.

Section 18

Solid Waste

Section 18: Solid Waste

A. **Estimated Quantities of Solid Waste**

The proposed office use at Building 7 is expected to generate solid waste in the form of regular, daily household trash and recyclable materials. Building 7 is part of a large establishment that includes the provision of private removal of municipal solid waste (MSW). Building 7 will be included in the existing campus contract for removal, disposal, and recycling.

Upon completion, the office use is expected to generate solid waste in the form of normal, daily household trash and/or recyclable material (Municipal Solid Waste, MSW), which will be generated over 20 work days per month. We note the following number is gross and is not reduced to reflect anticipated recycling:

Office use: 50,000± SF
6 lbs./1000 SF/day[1]=8,333 lbs./day
8,333 x 20 = 166,660 lbs./month = 706 CY/mo[2]

B. **Off-Site Disposal of Construction/Demolition Debris (CDD)**

Construction debris will be disposed of by contractors utilizing local licensed haulers. During the construction period, disposal will include wood, metal, packaging, cardboard, etc., and will be collected in on-site dumpsters. The waste material should be separated into the following types: wood, metal, all other material, and possibly cardboard (for recycling). The selected individual contractors will be responsible for removing debris during the construction period.

During the initial construction activities, demolition debris associated with the removal of the existing Building 7 is ±90 CY as follows: (9,000 SF x 5lb/SF) =45,000 lbs., (500 lbs. per CY=90).[3]

Per available resources, the estimated CD for the new building construction (50,000 SF, non-parking) is 5 lbs. per square foot, resulting in 250,000 lbs. Assuming that the average CD waste is 500 lbs./CY[3], approximately 500 CY of building-related debris will be generated.

CDD handling will utilize licensed non-hazardous waste transporter(s)[4] as recognized by the Maine Department of Environmental Protection.

C. **On-Site Disposal of Wood Waste/Land Clearing Debris**

We anticipate that stumps, logs, and brush will be ground on-site for mulch or erosion control. Material that has been ground and is not being used on the site must be hauled off-site within a time period of 30 days from the end of the grinding process. Marketable logs will be taken off-site.

It is estimated that about 0.52 acres of trees of varying sizes will be cleared as a result of the overall project. An estimated 208 cubic yards (CY) of stumps and grubbing (assuming 1.0 acre @ 400 CY/acre) will be generated overall at the project site.

We anticipate that 75% (156 CY) of the material will be chipped and/or ground and used on the site for the initial erosion and sedimentation control measures, i.e., berms, fortifying slopes, and stabilizing areas prior to seeding. An additional 10% (20.8 CY) of material will be stockpiled to

repair ESC and stabilization areas, as necessary, and the remaining material (±31.2 CY) will be removed from the site and hauled to a facility accepting green recycling material.

D. **Special or Hazardous Waste**

Not applicable. We do not anticipate the generation or disposal of special or hazardous waste.

References:

[1]*Cal Recycle Estimated Solid Waste Generation Rates, Commercial*
https://www2.calrecycle.ca.gov/wastecharacterization/general/rates

[2]*Volume-to-Weight Conversion Factors U.S. Environmental Protection Agency Office of Resource Conservation and Recovery April 2016*
https://www.epa.gov/sites/production/files/2016-04/documents/volume_to_weight_conversion_factors_memorandum_04192016_508fnl.pdf

[3]*Northeast Recycling Hauler Terms and Waste Conversion Factors*
https://nerc.org/documents/hauler_terms_and_waste_conversion_factors.pdf

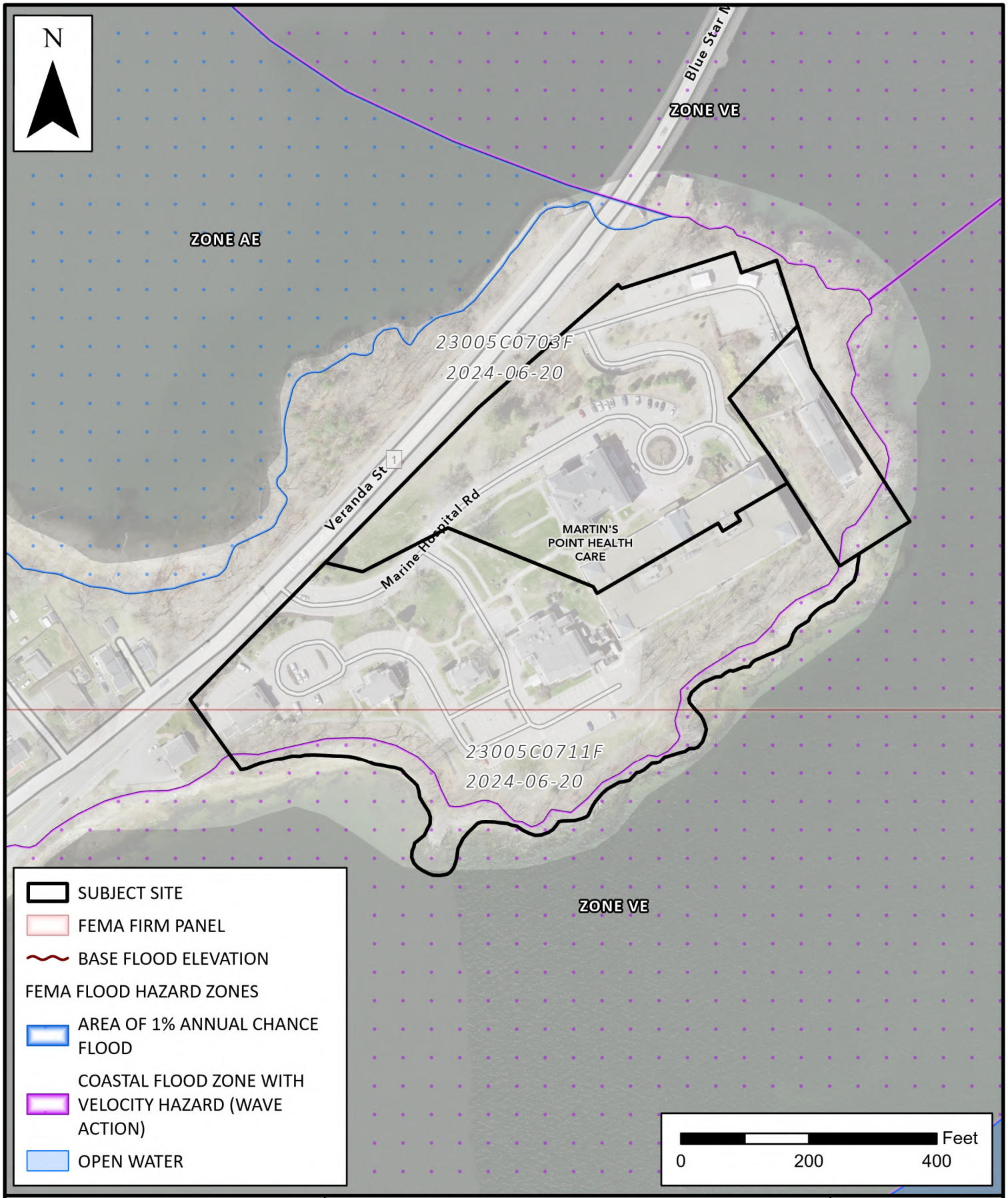
[4]*Source-Maine DEP Active Non-Hazardous Transporters – 1/1/2025 to 6/30/2027*
https://www.maine.gov/dep/ftp/reports/nactive.pdf

Section 19

Flooding

Section 19: Flooding

No portion of the proposed site improvements are located within a flood zone. We note that portions of the overall MPHC campus are located within a flood hazard area as delineated on the newly effective FEMA Flood Insurance Rate Map, Portland, Cumberland County, 23005C 0703F and 23005C0711F, effective date June 20, 2024, showing the shoreline has a VE- 15 designation. For reference, an excerpt from the map is included in this section. The lowest finished floor of the proposed structure is situated well above the base flood elevation. Reference is made to the updated FEMA map exhibit in this section and the site plan set for the revised flood line.



SEBAGO TECHNICS

WWW.SEBAGOTECHNICS.COM
75 John Roberts Rd. - Suite 4A
South Portland, ME 04106
Tel. 207-200-2100

FEMA NATIONAL FLOOD HAZARDS

MARTIN'S POINT VERANDA CAMPUS

SCALE: 1:2,400

DATE: 11/4/2024

LOCATION:
331 VERANDA STREET
PORTLAND, ME

INFORMATION:
FEMA NFHL 2024-06-20
2020 ORTHOREGIONAL IMAGERY

Section 20

Blasting

Section 20: BLASTING

Rock removal by blasting may be required for construction. Reference is made to the Geotechnical Report in Section 11-Soils.

A. SITE PLAN

Existing conditions, including the site area, are shown in the site plans appended to this application.

B. REPORT

Blasting Plan

As part of the project design, a draft of typical blasting procedures is enclosed in this section. If necessary, a site-specific Blasting Plan will be submitted to the City by the selected contractor for approval prior to project commencement.

Blasting

Given the nature of the site it is anticipated that blasting will be required. Should ledge be encountered during construction, a blasting plan will be submitted for approval that has been developed to be in compliance with the accepted limit for safe levels of blasting vibrations as developed by the U.S. Bureau of Mines as presented in Figure B-1 of Appendix B of the U.S. Bureau of Mines, RI 8507.

Blasting Requirements

Should blasting be necessary, we recommend that the following controls be implemented for the project:

The site Contractor should comply with all applicable laws, rules, ordinances, and regulations of the federal government, the State of Maine, and the City of Portland governing transportation, storage, handling and use of explosives including Title 38 MRSA 490-Z(14).

Prior to the start of rock excavation or blasting work, notices should be sent to residents and businesses in the area describing the blasting and rock excavation work, indicating the approximate schedule of work, and describing blasting procedures, mitigation measures, and blast warning signals.

Prior to the start of blasting work, pre-blast condition surveys should be conducted of all existing structures and conditions on the site, adjacent to the site, and within ½ mile of the site. Any reduction of the pre-blast survey radius shall require Maine DEP review and approval of the proposed charge weight per day limits; and shall adhere to the requirements set fort in 38 MRSA 490-z(14)(L). These surveys should extend to such structures, wells, or an item that may be affected by the Contractor's blasting operations. As a minimum, condition surveys should be performed on all structures within a half-mile of anticipated blasting areas.

Prior to the start of blasting work, the Contractor should submit to the engineer for review a blasting plan containing details of proposed blasting and construction operations including:

A. Sequence and schedule of blasting rounds including the general sequence of drilling, blasting, excavating, etc.

B. Specifics of typical blast rounds and open cut blast rounds in deepest rock cut areas and areas closest to existing structures.

C. In each area specified, include the following blast round details:

- Diameter, spacing, burden, depth and orientation of each blast hole for each round design.
- Nomenclature and amount (in terms of weight and number of cartridges) of explosives and distribution of charge to be used within each hole, on each delay, and the total for the blast.
- Nomenclature and type of detonators and delay pattern for the round.
- Type and location of stemming to be used in holes.
- Calculations of anticipated vibration levels at nearest adjacent structure or well.

D. Specifics of Test Blasts to check effectiveness and vibration characteristics of typical trench and open cut blasting rounds.

E. Methods of matting or covering the blast area to prevent fly rock and excessive air blast overpressure.

F. Name and qualifications of licensed blaster who will be on site at all times directly supervising the loading and detonation of each blast.

G. Name and qualifications of the person responsible for conducting pre-blast condition surveys.

H. Name and qualifications of the person responsible for monitoring and reporting blast vibrations.

I. Details of an audible advance signal system to be employed at the job site as a means of informing workers, Engineer, Architect, Owner, and the general public that a blast is about to occur. Details of access control during blasting.

The Contractor should conduct all blasting activity in such a manner that the peak particle velocity of ground vibration measured at the locations of the nearest structures or wells to the blast does not exceed the “safe limits” recommended by the U.S. Bureau of Mines as presented in Figure B-1 of Appendix B of U.S. Bureau of Mines, RI 8507.

The Contractor should conduct all blasting activities in such a way that sound levels from blasting shall not exceed the limits given in the Maine Department of Environmental Protection Rules, Chapter 375.10 (c)(4)(c).

# of Blasts Per Day	Sound Level Limit
1	129 dBL
2	126 dBL
3	124 dBL
4	123 dBL

Blast monitoring should be conducted by an independent firm trained in the use of a seismograph, and records should be analyzed and results reported by persons familiar with analyzing and reporting the frequency content of a seismograph record. A minimum of two (2) engineering seismographs shall be used for each blast, one each adjacent to the nearest off-site structures or wells which lie within a 300-foot radius of blasting activities.

Blast Monitoring Equipment: All instrumentation proposed for use on the project shall have been calibrated within the previous six (6) months to a standard traceable to the National Bureau of Standards. Characteristics of required instrumentation are listed below:

- Measure the three (3) mutually perpendicular components of particle velocity in the directions vertical, radial and perpendicular to the vibration source.

- Measure and display the maximum peak particle velocity component and air blast overpressure. These readings must be displayed and be able to be read in the field, immediately after each blast.

- Furnish a permanent time history record of particle velocity waveforms and air blast overpressure waveforms, so that frequency and time of maximum peak particle velocity or air blast overpressure can be determined.

Blast Monitoring Reports: Within 24 hours following each blast, the Contractor should submit to the Engineer a Blast Monitoring Report. Each Blast Monitoring Report should include all of the following applicable items:

- Records of blasts generally consistent with the requirements of 38 MRSA §490-Z(14)L must be kept and provided to the Department if requested; the Department generally does not consider such records incomplete if the social security number of the of the blaster is omitted.

- Blast round design data, as indicate in Section C of the Blasting Requirements.

- Blast Monitoring Location Plan, indicating the location of the blast, the monitoring locations, and the distances from the blast to monitoring locations.

- Vibration and air blast overpressure data from each seismograph, including a copy of the strip chart (or other permanent record of velocity/time waveform) with calibration and monitoring record marked with the date, time and location of the blast. Aire overpressure offsite may not exceed the limits

provided at Department Rules Chapter 375.10(C)(4)(c) and 38 MRSA§490-Z(14) (H).

- In the event that the Contractor's design round results in ground vibrations and/or air blast overpressures exceed the blasting limit criteria presented herein, the Contractor should immediately revise the round design appropriately and submit the revised round design to the Engineer for review. Allow sufficient time for review.

- The Contractor should report to the Engineer in writing all blasting complaints received by the Contractor within 24 hours of receipt. Each blast complaint report should include the name and address of the complaint, time received, date and time of blast complained about, and a description of the circumstances, which led to the complaint. Upon receipt of a written complaint from a resident alleging damage from the blasting, the Contractor's representative or a representative of the Blaster's Insurance Company should investigate the claim and a written report should be issued to the homeowner, with a copy to the Engineer, of the results of the investigation and the response of the Contractor. This written report should be received by the resident and the Engineer within 15 work days of receipt of the written complaint.

Review by the owner and the owner's consultant of the blast designs and techniques shall not relieve the Contractor of his responsibility for the accuracy, adequacy and safety of the blasting, exercising proper supervision and field judgment and producing the results within the blasting limits required by the requirements.

Blasting shall be limited to between the hours of 9:00 a.m. and 4:00 p.m., Monday through Friday.

Blasting mats shall be utilized for all blast rounds detonated to prevent the throw of fly rock from the blasting area, unless the Contractor's independent professional engineer/seismologist determines that the overburden is sufficient enough to prevent fly rock. Fly rock must be controlled so as to remain on the site and must not enter a protected resource unless the Department has previously approved the alteration of that resource in the impacted area.

Ammonium Nitrate Fuel Oil (ANFO) shall not be permitted for blasting.

At the start of blasting, the Contractor shall perform a series of test blast to establish a site-specific relationship between the charge weight per millisecond delay and peak ground vibration levels at various distances from the blast. The results of the test blasts will form the basis for selection of maximum permissible charge weights during production blasting.

Sections 21-24

Air Emissions,
Odors,
Water Vapor,
Sunlight

Sections 21-24: Air Emissions, Odors, Water Vapor, Sunlight

SECTION 21: AIR EMISSIONS

No unreasonable adverse environmental effect on air quality is anticipated as part of the proposed site development activities. This project does not require an Air Emission License.

SECTION 22: ODORS

The proposed site improvements will not result in the creation of any significant odors during or after construction.

SECTION 23: WATER VAPOR

No large-scale water vapor emissions are proposed as part of the site development; therefore, no adverse effect or unreasonable alteration of climate is associated with this project.

SECTION 24: SUNLIGHT

The redevelopment of Building 7 will not affect access to direct sunlight by neighboring structures on adjacent properties owned by others.

20: CONSISTENCY WITH CITY MASTER PLANS (14-14.6.3(A))

1. The proposed development is not part of a council-approved master plan.

2. The site plan includes the provision for connection or continuation to off-premises public infrastructure, as required, shown and identified on the appended site plans.

21: PUBLIC SAFETY AND FIRE PREVENTION (14.6.3(B))

1. The project has been designed following public safety principles for Crime Prevention through Environmental Design:

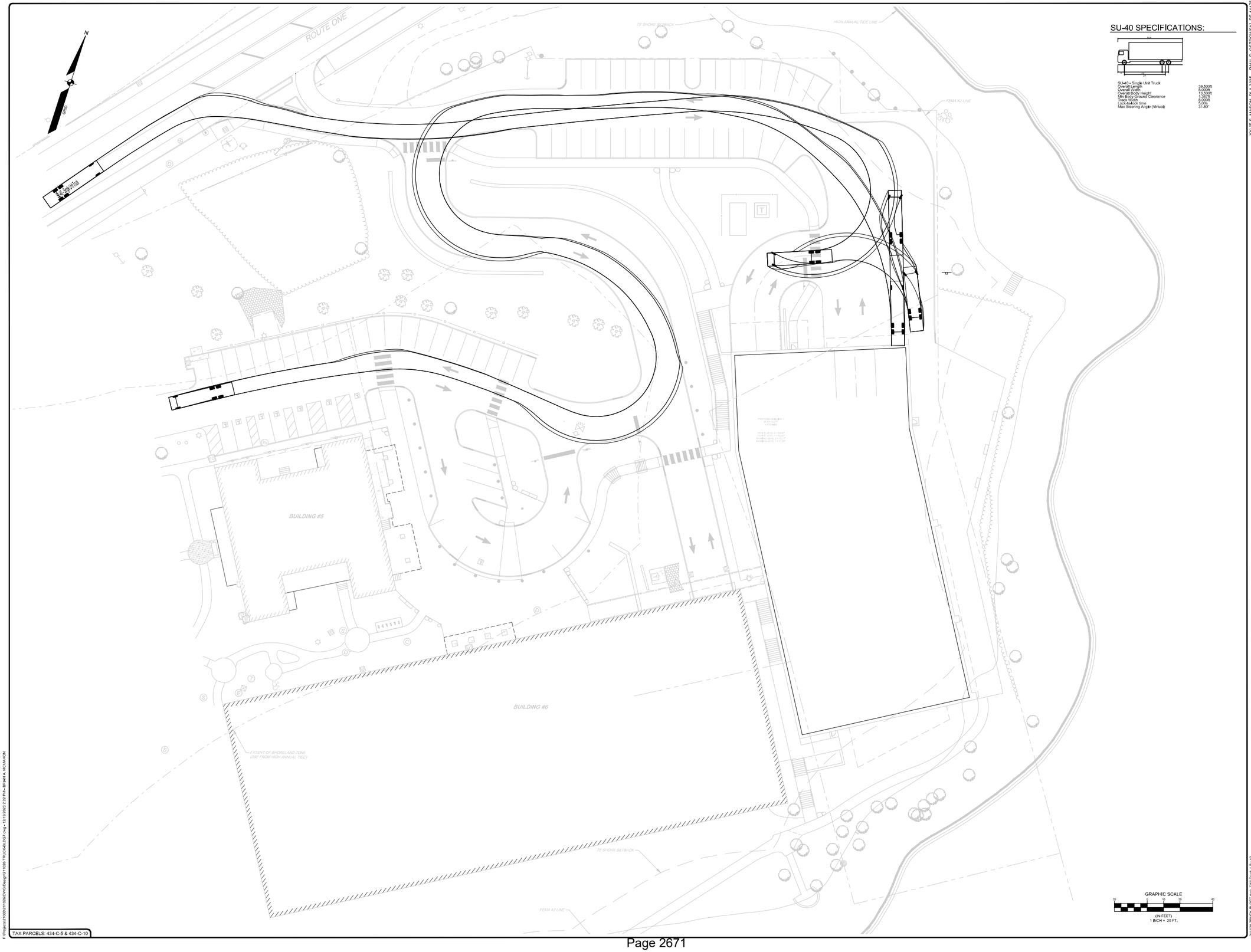
   a. Natural Surveillance.
   The proposed building design provides for natural surveillance by promoting the visibility of public areas and spaces. The public entrances are located adjacent to existing campus building access points and in well-lit parking areas in exterior and interior locations. Proposed plantings will not interrupt views or compromise natural surveillance opportunities.

   b. Access control.
   The parking garage will include a new access control security system to allow for restricted access to exterior doors, telecommunication rooms, office suite main entrances, and any other areas where general circulation limitation is essential. Features will include door controllers and proximity card readers to control unauthorized building access.

   A new video surveillance system will be provided at the exterior and common interior spaces of the facility. Components include IP-based cameras and network video recording.

   c. The site has been designed to provide territorial reinforcement and promote a sense of ownership and responsibility through environmental design. The site design, varying materials, and signage visually identify public areas versus dedicated staff use and access points. Shared outdoor space will be available to medical center visitors and staff.

2. The proposed project site is designed to provide adequate emergency vehicle access per the requirements of the Technical Manual. This section references truck turn graphics, demonstrating that single-unit 40-foot trucks (SU-40) and fire trucks can maneuver throughout the proposed Building 7 precinct.



KYLIE S. MASON, RLA 3305 PAUL D. OSTRONSKI, PE 11175

REV.	BY	DATE	
A	BJK	12/20/2023	ISSUED TO CITY OF PORTLAND FOR SITE PLAN REVIEW

THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM SEBAGO TECHNICS, INC. ANY ALTERATIONS MADE TO THIS PLAN WITHOUT THE WRITTEN APPROVAL OF SEBAGO TECHNICS, INC. WILL VOID SEBAGO TECHNICS, INC. LIABILITY FOR ANY AND ALL CONSEQUENCES ARISING FROM SUCH ALTERATIONS.

SEBAGO TECHNICS
WWW.SEBAGOTECHNICS.COM
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South Portland, ME 04106
(207) 200-2100

TURNING MOVEMENT 1 - SU-40

MARTIN'S POINT VERANDA CAMPUS
331 VERANDA STREET
PORTLAND ME

MARTIN'S POINT HEALTH CARE, INC.
PO BOX 9746
PORTLAND, ME 04103

DESIGNED	BAM/KGK
DRAWN	CJC
CHECKED	PDO
DATE	04/10/2023
SCALE	1" = 20'
PROJECT	211026

SHEET 5 OF 31

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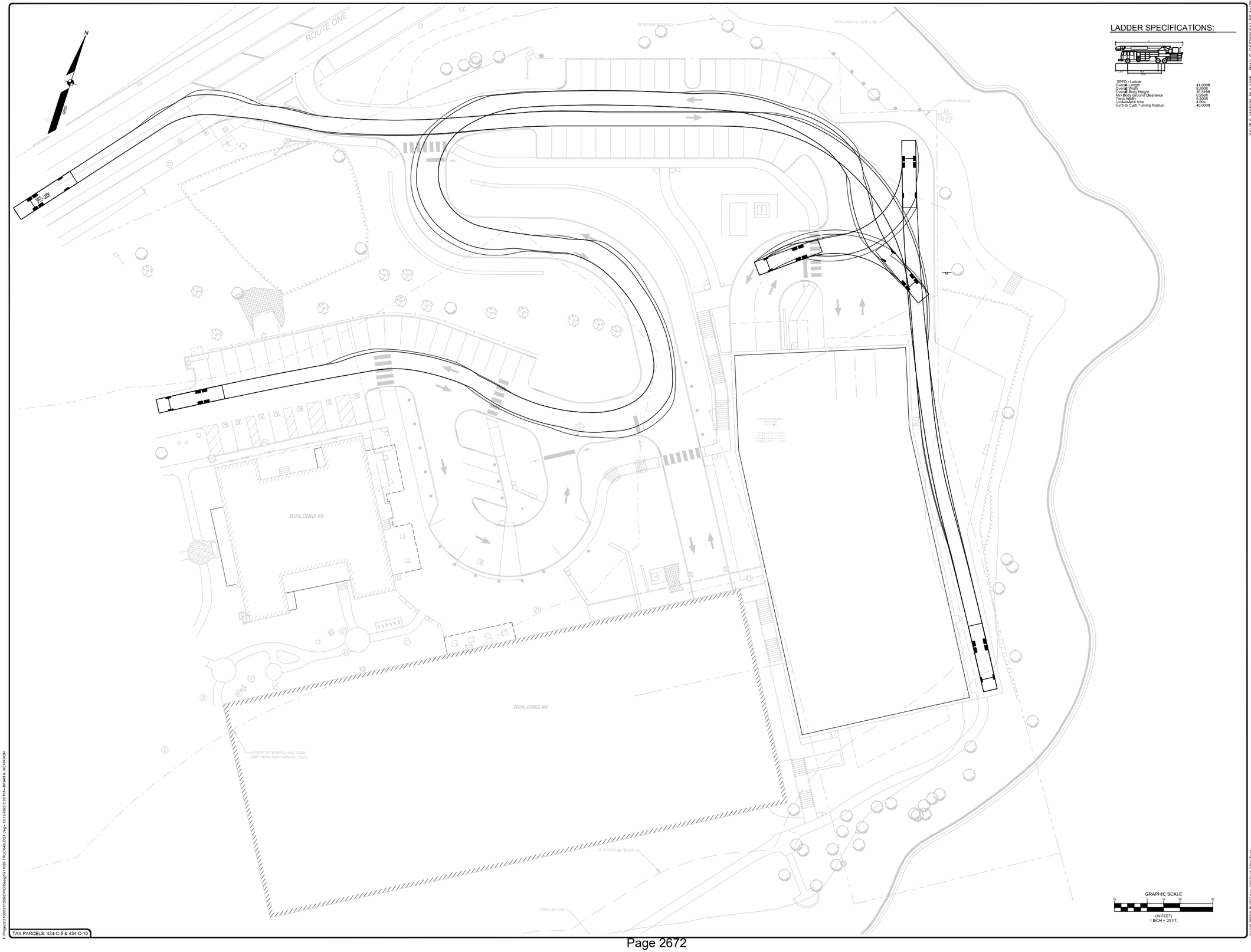
211026 TRUCK-ALIGN-2.dwg - A3 Truck 1_Su-40



LADDER SPECIFICATIONS:

SPFD - Ladder

Overall Length	41.000ft
Overall Width	8.500ft
Overall Body Height	10.015ft
Min Body Ground Clearance	0.950ft
Wheelbase	24.000ft
Lock-to-Lock time	4.000s
Curb to Curb Turning Radius	40.000ft

TAX PARCELS: 434-C-5 & 434-C-10

F:\Projects\21\026\21102601\Civil\Design\211026 TRUCK-MLS052.dwg - 12/19/2023 2:23 PM - BRIAN A. NICHOLAICH

KYLIE S. MASON, PLA 3308 PAUL D. OSTROWSKI, PE 11175

REV:	BY:	DATE:	STATUS:
A	BY	12/20/2023	ISSUED TO CITY OF PORTLAND FOR SITE PLAN REVIEW

THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM SEBAGO TECHNICS, INC. ANY ALTERATIONS MADE TO THIS PLAN SHALL BE DONE AT THE SOLE RISK OF THE PARTY MAKING SUCH ALTERATIONS.

SEBAGO TECHNICS
WWW.SEBAGOTECHNICS.COM
75 John Roberts Rd.
Suite 4A
South Portland, ME 04106
TEL (207) 200-2100

TURNING MOVEMENT 2 - FIRE TRUCK
MARTIN'S POINT VERANDA CAMPUS
331 VERANDA STREET
PORTLAND ME

MARTIN'S POINT HEALTH CARE, INC.
PO BOX 9746
PORTLAND, ME 04103

DESIGNED	BAM/KGK
DRAWN	CJC
CHECKED	PDO
DATE	04/10/2023
SCALE	1" = 20'
PROJECT	211026

SHEET 5 OF 31

211026 TRUCK-MLS052.dwg - MLS Truck 2 Fire Truck

22: AVAILABILITY AND ADEQUACY OF PUBLIC UTILITIES (14.6.3(C)) (TECHNICAL MANUAL, SECTIONS 2 & 9)

1. The development will not overburden sanitary sewers, storm drainage, water services, or other available public infrastructure or utilities. The design provides adequate utility infrastructure connection on-site and in connection to surrounding locations and facilities, as shown on the site plans.

2. Electrical service is underground, extending from available on-site infrastructure as coordinated by the project architect, SMRT.

3. All sanitary sewer, storm drainage, water lines, and other utilities are designed to meet the standards of the Technical Manual.

   Sanitary sewer: Per City requirements, sanitary service will be extended from existing on-site infrastructure that will include a new 6" service line and exterior sewer pump station. The proposed system is part of the overall MPHC campus sewage removal. The letter of capacity inquiry and Wastewater Capacity application are included in this section.

   Water: The Portland Water District (PWD) provided a formal ability/capacity to serve letter for the Building 7 project dated March 15, 2024, included in this section. As previously noted, water services will consist of a 4" domestic and a wet fire sprinkler system throughout the conditioned portions of the building at office levels 1 and 2 and the mechanical penthouse.

   Storm Drainage: We note that drainage improvements and proposed treatment are detailed on the site plans and in the Stormwater Management Plan located in Section 19.

   Natural gas: A new natural gas connection by Unitil with regulator and meter assembly is required to serve Building 7, as shown. Natural gas service coordination correspondence is included in this section.

4. Per City requirements and in accordance with the Technical Manual, the proposed new building will be connected to the existing public sanitary service as shown on the appended utility plans.

5. The proposed administrative space project has been designed to provide for the temporary interior storage of trash and recycling within a designated location. MPHC will continue to utilize existing contracted campus-wide solid waste disposal services, including Building 7. Outdoor storage of trash or recyclables is not proposed; therefore,

screening measures are not necessary or proposed. Please refer to the appended plans for additional information.

Utilities will meet the standards of the Technical Manual, Sections 2 and 9, as required.

23 October, 2023
211026

Brad Roland, P.E.
City of Portland Public Works Department
212 Canco Road
Portland, ME 04103

Sewer Capacity Request
Martin's Point Veranda Campus, 331 Veranda Street

Dear Brad:

On behalf of Martin's Point Health Care, Inc., we respectfully request a letter of sewer capacity for a proposed office building located on Martin's Point Veranda Campus at 331 Veranda Street. The project proposes to demolish the existing building 7 and develop a two-story office building with two levels of parking underneath it. It is proposed that an internal pump station will connect to the existing internal gravity sewer system on the site.

82 employees are expected to work in the proposed office building. A total flow calculation (gpd) for the proposed development was performed using Maine Subsurface Wastewater Disposal Rules, Table 4C: Design Flows for Other Facilities. This calculation resulted in a total flow of 984 gpd. The table below displays the breakdown of this calculation.

ESTIMATE OF ANTICIPATED DESIGN FLOWS			
	ANTICIPATED EMPLOYEES	**FLOW PER EMPLOYEE (GPD)**	**TOTAL GALLONS PER DAY (GPD)**
EMPLOYEES AT A PLACE OF EMPLOYMENT WITH NO SHOWERS	82	12	984

We are hopeful that there is sufficient availability to serve the proposed development and await your response. We plan to submit the Wastewater Capacity Application found on the Portland Public Works website under Sewer Rules and Regulations once the project is further along. In the interim, please call with any questions or if you require additional information. My direct line is 207-482-6305. Thank you for your consideration.

Sincerely,

SEBAGO TECHNICS, INC.

Kelly Koehler, E.I.

KGK
Att.

CITY OF PORTLAND WASTEWATER CAPACITY APPLICATION

Portland Dept. of Public Works -
Water Resources
212 Canco Road
Portland, Maine 04103

Date: 12-15-2023

Bradley Roland, P.E.
Water Resources Division
Department of Public Works
212 Canco Road
Portland, ME 04103

1. Please, Submit Utility, Site, and Locus Plans.

Site Address: 331 Veranda Street Portland, ME 04103

Chart Block Lot Number: 434 / C001, C005, C010

Proposed Use: Office Building

Previous Use: Storage Building

Existing Sanitary Flows: 0 GPD building no longer in use

Existing Process Flows: 0 GPD

Description and location of City sewer that is to receive the proposed building sewer lateral.

Sewer from proposed building will connect into an existing force main that ties into Route one.

Site Category

Commercial *(see part 4 below)*	☑
Industrial *(complete part 5 below)*	☐
Governmental	☐
Residential	☐
Other *(specify)*	☐

Clearly, indicate the proposed connections, on the submitted plans.

2. Please, Submit Contact Information.

City Planner's Name: Matthew Grooms Phone: 207-874-8719

Owner/Developer Name: Martin's Point Health Care, Inc.

Owner/Developer Address: PO Box 9746 Portland, ME 04103

Phone: Fax: E-mail:

Engineering Consultant Name: Sebago Technics, INC.

Engineering Consultant Address: 75 John Roberts RD. Suite 4A South Portland, ME 04106

Phone: 207-200-2100 Fax: E-mail: postrowski@sebagotechnics.com

Note: Consultants and Developers should allow +/- 15 days, for capacity status, prior to Planning Board Review.

3. Please, Submit Domestic Wastewater Design Flow Calculations.

Estimated Domestic Wastewater Flow Generated: 984 GPD

Peaking Factor/ Peak Times: Peak Times = 9 AM - 5 PM

Specify the source of design guidelines: *(i.e.* _ *"Handbook of Subsurface Wastewater Disposal in Maine," "Plumbers and Pipe Fitters Calculation Manual,"* _ *Portland Water District Records,* _ *Other (specify)*

Handbook of Subsurface Wastewater Disposal in Maine

Note: Please submit calculations showing the derivation of your design flows, either on the following page, in the space provided, or attached, as a separate sheet.

4. Please, Submit External Grease Interceptor Calculations.

Total Drainage Fixture Unit (DFU) Values: Not Applicable

Size of External Grease Interceptor: _____

Retention Time: _____

Peaking Factor/ Peak Times: _____

Note: In determining your restaurant process water flows, and the size of your external grease interceptor, please use The Uniform Plumbing Code. Note: In determining the retention time, sixty (60) minutes is the minimum retention time. Note: Please submit detailed calculations showing the derivation of your restaurant process water design flows, and please submit detailed calculations showing the derivation of the size of your external grease interceptor, either in the space provided below, or attached, as a separate sheet.

5. Please, Submit Industrial Process Wastewater Flow Calculations

Estimated Industrial Process Wastewater Flows Generated: _____ GPD

Do you currently hold Federal or State discharge permits? Yes ____ No ____

Is the process wastewater termed categorical under CFR 40? Yes ____ No ____

OSHA Standard Industrial Code (SIC): *(http://www.osha.gov/oshstats/sicser.html)*

Peaking Factor/Peak Process Times: _____

Note: On the submitted plans, please show where the building's domestic sanitary sewer laterals, as well as the building's industrial-commercial process wastewater sewer laterals exits the facility. Also, show where these building sewer laterals enter the city's sewer. Finally, show the location of the wet wells, control manholes, or other access points; and, the locations of filters, strainers, or grease traps.

Note: Please submit detailed calculations showing the derivation of your design flows, either in the space provided, or attached, as a separate sheet.

Portland Water District

FROM SEBAGO LAKE TO CASCO BAY

March 15, 2024

Paul Ostrowski, PE
Sebago Technics, Inc.
75 John Roberts Rd., Suite 4A, South Portland, ME 04106

Re: 331 Veranda Street, PO
Ability to Serve with PWD Water

Dear Mr. Ostrowski:

The Portland Water District has received your request for an Ability to Serve Determination for the noted site submitted on September 6, 2023. Based on the information provided per plans dated March 15, 2024, we can confirm that the District will be able to serve the proposed project as further described in this letter. **Please note that this letter constitutes approval of the water system as currently designed and is valid for eighteen (18) months after the date of issue. Any changes affecting the approved water system will require further review and approval by PWD.**

Conditions of Service

The following conditions of service apply:

- A new 6-inch fire service and a 4-inch domestic water service, with a 1.5-inch meter, may be installed from the water main in Veranda Street. The services should enter through the property's frontage on Veranda Street at least 10-feet from any side property lines.
- An approved testable double check backflow prevention device must be installed on each service line directly after the meter and before the sprinkler riser prior to service activation.
- The Portland Water District does not have record of any other existing infrastructure in public roads and recommends a survey and test pitting be performed by the development team prior to construction. Any conflicts that arise during construction are at the risk of the developer and may result in job shutdown until new plans are submitted by the developer and reviewed and approved by PWD.

Prior to construction, the owner or contractor will need to complete a Service Application and pay all necessary fees for each proposed service. When the project is ready for construction, an Application for each service can be requested by contacting the MEANS Group at MEANS@pwd.org or 207-774-5961 ext. 3199. Once a completed Application has been submitted with payment, please allow seven (7) days for processing.

Existing Site Service

According to District records, the project site does not currently have existing water service.

Water System Characteristics

According to District records, there is an 12-inch diameter ductile iron water main in Veranda Street and a public fire hydrant located adjacent to the site. The estimated static pressure in the area is 100 psi.

Public Fire Protection

The installation of new public hydrants to be accepted into the District water system will most likely not be required. It is your responsibility to contact the City of Portland Fire Department to ensure that this project is adequately served by existing and/or proposed hydrants.

Domestic Water Needs

The data noted above indicates there should be adequate pressure and volume of water to serve the domestic water needs of your proposed project. Based on the high water pressure in this area, we recommend that you consider the installation of pressure reducing devices that comply with state plumbing codes.

Private Fire Protection Water Needs

You have indicated that this project will require water service to provide private fire protection to the site. Please note that the District does not guarantee any quantity of water or pressure through a fire protection service. Please share these results with your sprinkler system designer so that they can design the fire protection system to best fit the noted conditions. If the data is out of date or insufficient for their needs, please contact MEANS to request a hydrant flow test and we will work with you to get more complete data.

Should you disagree with this determination, you may request a review by the District's Internal Review Team. Your request for review must be in writing and state the reason for your disagreement with the determination. The request must be sent to MEANS@PWD.org or mailed to 225 Douglass Street, Portland Maine, 04104 c/o MEANS. The Internal Review Team will undertake review as requested within 2 weeks of receipt of a request for review.

If the District can be of further assistance in this matter, please let us know.

Sincerely,
Portland Water District



Robert A. Bartels, P.E.
Senior Project Engineer

From: AMaP MEANS <means@pwd.org>
Sent: Wednesday, December 20, 2023 7:54 AM
To: Paul Ostrowski <postrowski@sebagotechnics.com>
Subject: RE: [External] RE: 211026 - Martin's Point Healthcare - 331 Veranda St PO - PRJ 155025

Good morning Paul,

Thank you for the information and your request for an Ability to Serve Letter for a new building at 331 Veranda Street in Portland. The information has been forwarded on to a PWD engineer to begin the review process; the assigned engineer will reach out to you with any question and/ or comments about the project. Once all PWD requirements have been met an Ability to Serve Determination letter will be issued. Please allow up to 30-days for the issuance of an Ability to Serve determination letter; this time begins once all of the documents have been correctly submitted to the engineer assigned to the review of this project.

Please don't hesitate to contact us in the meantime with any further questions.

Thank you,
Heather Smith

MEANS Group
Main Extensions and New Services
Portland Water District
225 Douglass Street
Portland, ME 04104-3553
P:(207)774-5961 Ext. 3199
F:(207)761-8307
MEANS@pwd.org

From: Paul Ostrowski <postrowski@sebagotechnics.com>
Sent: Tuesday, December 19, 2023 3:58 PM
To: AMaP MEANS <means@pwd.org>
Cc: 211026 <211026@sebagotechnics.com>
Subject: RE: [External] RE: 211026 - Martin's Point Healthcare - 331 Veranda St PO - PRJ 155025

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The sprinkler demand is 826 GPM.

Attached is an updated fixture count.

Thank you,
Paul

Paul Ostrowski, PE

Senior Project Engineer/Engineering Design Manager
Sebago Technics, Inc. | An Employee-Owned Company
75 John Roberts Rd., Suite 4A, South Portland, ME 04106
Office: 207.200.2100 | Direct: 207.200.2088 | Fax: 207.856.2206
postrowski@sebagotechnics.com | www.sebagotechnics.com





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From: AMaP MEANS <means@pwd.org>
Sent: Monday, December 11, 2023 11:49 AM
To: Paul Ostrowski <postrowski@sebagotechnics.com>
Cc: 211026 <211026@sebagotechnics.com>
Subject: RE: [External] RE: 211026 - Martin's Point Healthcare - 331 Veranda St PO - PRJ 155025

Good morning Paul,

Thank you for the fixture count worksheet. Your information will be passed along to an engineer for review once we have been provided the calculations from the sprinkler designer in GPM that will enable us to ensure your service line and meter will be sized appropriately for your project.

Thank you,
Kathryn W.

MEANS Group
Main Extensions and New Services
Portland Water District
225 Douglass Street
Portland, ME 04104-3553
P:(207)774-5961 Ext. 3199
F:(207)761-8307
MEANS@pwd.org

From: Paul Ostrowski <postrowski@sebagotechnics.com>
Sent: Monday, December 11, 2023 10:45 AM
To: AMaP MEANS <means@pwd.org>
Cc: 211026 <211026@sebagotechnics.com>
Subject: RE: [External] RE: 211026 - Martin's Point Healthcare - 331 Veranda St PO - PRJ 155025

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Attached is the fixture count spreadsheet. I am working with the Mechanical Engineer for a GPM flow for the building sprinkler.

Thank you
Paul

From: AMaP MEANS <means@pwd.org>
Sent: Monday, December 4, 2023 9:34 AM
To: Paul Ostrowski <postrowski@sebagotechnics.com>
Subject: [External] RE: 211026 - Martin's Point Healthcare - 331 Veranda St PO - PRJ 155025

Good morning Paul,

I hope you had a great weekend. Thank you for submitting your project documents for an Ability to Serve review for your project at 331 Veranda Street in Portland. Before this can be passed along to one of our engineers, we will need you to submit either a completed “fixture count worksheet” (form attached) or furnish the peak flow in Gallons per Minute (rather than Gallons per Day which is what your submitted letter currently provides). Once we have this final piece of information we will initiate the review process.

Thank you,
Kathryn W.

MEANS Group
Main Extensions and New Services
Portland Water District
225 Douglass Street
Portland, ME 04104-3553
P:(207)774-5961 Ext. 3199
F:(207)761-8307
MEANS@pwd.org

AMAP MEANS
means@pwd.org
https://www.pwd.org/

Portland Water District
From Sebago Lake to Casco Bay

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From: Paul Ostrowski <postrowski@sebagotechnics.com>
Sent: Friday, December 1, 2023 3:41 PM
To: AMaP MEANS <means@pwd.org>
Cc: Kelly Koehler <kkoehler@sebagotechnics.com>; 211026 <211026@sebagotechnics.com>
Subject: 211026 - Martin's Point Healthcare

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AMAP,
Please find enclosed a letter to request a District Engineer to assist in reviewing a proposed water main connection for a new office building for Martin's Point Healthcare at their Veranda Street campus in Portland, Maine.

Thank you,
Paul

Paul Ostrowski, PE
Senior Project Engineer/Engineering Design Manager
Sebago Technics, Inc. | An Employee-Owned Company
75 John Roberts Rd., Suite 4A, South Portland, ME 04106
Office: 207.200.2100 | Direct: 207.200.2088 | Fax: 207.856.2206
postrowski@sebagotechnics.com | www.sebagotechnics.com



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From: Carpenter, Scott <carpenters@unitil.com>
Sent: Monday, December 18, 2023 8:33 AM
To: Brian McDonough
Subject: RE: Martins Point Building 7 Gas Service

Brian, typically we would want a sleeve that is at least twice the diameter of the service but given the length and difficulty in giving us a straight, level path, we are suggesting 8 inch so that we minimize the chances that of the 2 inch service that we would be looking to install gets hung up inside of it.

For Sleeving:
•A conduit that won't crush (PVC schedule 40 or something similar). You definitely don't want to use corrugated pipe as we need a smooth interior to push our gas service through. The sleeve needs to be at least twice the diameter of your future service.
•Ideally it would be buried with 30 inches of cover.
•Tape both ends & take good measurements, stake them, and/or take photos. Anything so we can actually locate the sleeve when we need to.
•Warning tape should be installed just below the surface as it is helpful to warn future excavators that there is a gas line inside that conduit below. We ca, provide you with caution tape if needed.

If you have any questions please don't hesitate to call me directly at (207) 541-2543.

Thank you.

Scott

Scott Carpenter
Senior Business Development Representative

Unitil
ME Gas Operations
376 Riverside Industrial Parkway
Portland, ME 04103
Phone/Fax: (207) 541-2543
unitil.com | Twitter | Facebook | Instagram | energy for life

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From: Brian McDonough <bmcdonough@smrtinc.com>
Sent: Monday, December 18, 2023 7:31 AM
To: Carpenter, Scott <carpenters@unitil.com>
Subject: RE: Martins Point Building 7 Gas Service

Scott,

What is the reason for the 8" sleeve, exactly? Is that because you are assuming there is ledge to deal with or is that a standard requirement?

What are the requirements for the sleeve (material, etc.)?

Brian McDonough PE
Senior Plumbing/Fire Protection Engineer

Licensed/Registered: MA, ME, NH, NY

SMRT Architects and Engineers
| d: 978.289.6036
smrtinc.com

From: Carpenter, Scott <carpenters@unitil.com>
Sent: Friday, December 15, 2023 4:33 PM
To: Brian McDonough <bmcdonough@smrtinc.com>
Subject: RE: Martins Point Building 7 Gas Service

Brian, I met with the cost estimator and he said that the route that you sent should work but we would need you to provide us with an 8 inch sleeve from the existing gas service that feeds building 6 all the way to the riser location at building 7. Another option might be to use the existing meter and put in a tee and run the piping up onto the roof of building 6 all the way to building 7. Your thoughts?

If you have any questions please don't hesitate to call me directly at (207) 541-2543.

Thank you.

Scott

Scott Carpenter
Senior Business Development Representative

Unitil
ME Gas Operations
376 Riverside Industrial Parkway
Portland, ME 04103
Phone/Fax: (207) 541-2543
unitil.com | Twitter | Facebook | Instagram | energy for life

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From: Brian McDonough <bmcdonough@smrtinc.com>
Sent: Friday, December 15, 2023 9:12 AM
To: Carpenter, Scott <carpenters@unitil.com>
Subject: Martins Point Building 7 Gas Service

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Hi Scott,

We talked on the phone a while back about a new building, Martins Point Building 7, being constructed adjacent to the existing Building 6 at 331 Veranda St, Portland, ME.

The estimated new gas load will be 2950 CFH.

The civil engineer (Sebago Technics) provided a site plan (attached) with the proposed gas main routing from the existing service at the west side of Building 6, routing south of Building 6, to a meter at the southeast corner of the new Building 7. The grade drops about 16 feet from the west end of Building 6 to the south end of Building 7.

Also attached is an architectural building elevation plan and floor plan showing the gas service/meter/regulator assembly location. The lowest two levels of the building are a parking garage. A few questions on the location:

1. What are the clearance requirements from the regulator/meter to garage openings/mechanical intakes?
2. Does the gas service/meter assembly need to be supported from the building or would there be a concrete pad at grade to support it?

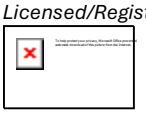
Please review the gas service routing and meter location for feasibility and provide any other comments/questions you have.

What are my options for guaranteed minimum gas pressure delivery to the building?

If you want to jump on a call to discuss anything, my cell phone is 781-413-6312.

Brian McDonough PE
Senior Plumbing/Fire Protection Engineer

Licensed/Registered: MA, ME, NH, NY



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November 14, 2024
211026

Eric Freeman, City Planner
City of Portland Planning Department
389 Congress Street 4th Floor Portland, ME 04101
Portland, Maine 04101

Martin's Point Healthcare Veranda Campus - Site Plan Review Staff Comment Response
331 Veranda Street Portland, Maine 04103
Applicant: Martin's Point Health Care, Inc.
Assessor References: Map 434, Lots C001, C005, C010

Project ID: PL-002766-2023

Dear Eric:

This letter and the enclosed revised plan set are provided to address the major site plan application Planning Board Report for the proposed Martin's Point Healthcare Veranda Campus project at 331 Veranda Street, prepared before the project review was put on hold on April 24, 2024. This response addresses comments associated with Planning Board compliance with the City's Land Use Code Site Plan Standards, Section 14.6, and Shoreland Zone, Article 11, received by email on April 5, 2024, including applicable ReCode II zone changes since that date. We have also addressed general Shoreland Zone comments from Ann Machado, Zoning Administrator, via forwarded email received from Eric Freeman, and Public Works comments received on April 9, 2024, addressed by a standalone memorandum found in EPlan *Section 12: Access and Circulation* versioned copy. We have organized the responses to restate each City *italicized* review comment, followed by our response in **bold.**

WAIVER REQUESTS *Waiver from Environmental Quality Standards (14-14.6.2(D) is appropriate as the project discharges directly into a tidal body of water. (Attachment E)*
Response: Acknowledged. The Applicant respectfully requests a waiver based on changes to zoning requiring the structure to meet build-to setback and percentage. Reference is made to the table in Exhibit 8-Waiver Requests.

RIGHT, TITLE, & INTEREST
Staff finding: The Applicant has demonstrated sufficient right, title, and interest to all parcels involved in this application. (Attachment C)
Response: Acknowledged.

FINANCIAL & TECHNICAL CAPACITY
Staff finding: Sebago and SMRT Architects have demonstrated technical capacity by Attachments F and G.
Response: Acknowledged.

ZONING ANALYSIS *The subject property is within the Residence Professional (R-P) and within the Shoreland Zone. The proposed use is permitted by right within the R-P zone under Article 11. (Attachment D)*
Response: The updated zoning assessment is located in EPlan *Section 05: Zoning Assessment*.

SITE PLAN STANDARDS (Section 14.6)

1. *Transportation Standards (Sec. 14.6.1)*

   A. *Impact on Surrounding Street Systems*
   Staff Finding: Met
   Response: Acknowledged.

   B. *Access and Circulation*
   Staff Finding: Met
   There are ongoing discussions between the Applicant and City Staff regarding the granting of a public access easement through a portion of the Martin's Point property to allow for public recreational access and extension of the Martin's Point Trail. This requirement is not a requirement of site plan approval and is being coordinated outside of the site plan review process.
   Response: Acknowledged.

   Note: Additional comments were received from the City of Portland Public Works Department on April 9, 2024. A formal comment response dated April 17, 2024, is provided; see version 2, *Section 12: Access and Circulation*, uploaded to EPlan on November 12, 2024.

   C. *Public transit access*
   Martin's Point Healthcare campus is served by Metro Route 7, with a stop on Veranda Street. The Applicant is required to install a bus transit shelter as stated in Section 14.6.1-C.
   Response: Per City comments, Sebago Technics inquired about the Greater Portland METRO shelter addition suggested by the City. As a result of that telephone conversation, we understand that METRO was not aware that the City requested additional shelter and/or services at the Martin's Point Veranda Street Campus. METRO is not in favor of adding a new shelter or revising its service route to include on-campus service.

   D. *Parking*
   Staff Finding: Met
   Response: Acknowledged.

   E. *Transportation demand management (TDM), (Attachment L)*
   Response: A full TDM plan is enclosed with this submittal, which has been prepared in conformance with the City's requirements in Section 17 of the Technical Manual. Reference is made to the versioned text uploaded to EPlan *Section 15-TDM.*

2. Environmental Quality Standards (Sec. 14.6.2)

A. Preservation of significant natural features *This application involves the removal of approximately 61 trees of 4" DBH or greater within the shoreland zone (SHZ), which is the minimum size of vegetation subject to shoreland zone requirements around the clearing or removal of vegetation, Sec. 11.4.3. Nineteen of these trees are 10" DBH or greater. Licensed arborist and project consultant Jeff Tarling describes the on-site conditions and makes recommendations for tree preservation, including within attachment P32.*

Response: Acknowledged. We note that minor tree removal changes in the SHZ have been made since the memo was received from the City. The proposed tree removal numbers have been adjusted to reflect the latest design as follows: 64 trees of 4" DBH or greater, 21 of these trees are 10" DBH or greater. The B-5 Zone is not subject to shoreland vegetation and clearing standards outlined in section 11.4.3 of the City of Portland's Ordinance.

B. Landscape preservation The Applicant intends to offset the removal of trees by implementing a formal landscaping plan that will provide buffer enhancement and improve visual aesthetics. Trees to remain will be protected by recognized protection measures as shown on the landscape plans.

The Building 7 development area and landscaping plans are designed to avoid the removal of existing trees to the greatest extent practicable. Existing vegetation will be preserved beyond construction limits.

Response: Acknowledged.

C. Site landscaping and buffers *Three new street trees are proposed along Veranda Street. The exact locations of these plantings will be coordinated with the Department of Public Works and the City Arborist.*

Response: Five existing trees are located within the City's right-of-way along Veranda Street. Additional street trees are not proposed. Reference is made to *Section 18-Site Landscape and Buffers*, v2 text submitted as part of the last comment response on March 14, 2024.

Loading and service areas are adequately screened from public view, particularly from Veranda Street.

Response: Acknowledged.

Proposed landscaping involves replanting a variety of trees identified in the Technical Manual Section 4, Figure IV-1. Proposed shrubs, perennials, and grasses are predominantly native species. Full landscaping plan has been included as attachment P23.

Response: Acknowledged. Reference is made to the revised plans uploaded to EPlan on November 14, 2024.

D. Water quality/stormwater management/erosion control, (Attachment O)

Staff Finding: Met

Response: Acknowledged. A waiver from flooding standards was requested, and City staff recommended approval.

3. Public Infrastructure and Community Safety Standards (Sec. 14.6.3)

A. Consistency with City Master Plans *There are no long-range plans that apply to this project.*
Response: Acknowledged.

B. Public safety and fire prevention (Attachment P)
Staff finding: Met
Response: Emergency vehicle turning graphics were provided to the City in January and updated as part of the March 2024 comment response documentation; reference is made to EPlan *Section 21-Public Safety & Fire Prevention*.

C. Availability and capacity of public utilities, (Attachment Q)
Response: The final ability to serve letter dated from the Portland Water District was uploaded to EPlan on 3/18/2024; reference is made to the letter dated 3/15/2024 in *Section 22-Availabilty and Adequacy of Public Utilities*.

4. Site Design Standards (Section 14.6.4)
Staff finding: The following standards in this section are met.
A-Massing, Ventilation and Wind Impact (Section 23)
B-Shadows (Section 24)
C-Snow and Ice loading (Section 25)
D-View corridors (Section 26)
E-Historic (Section 27)
F-Exterior Lighting (Section 28)
G-Noise and Vibration (Section 29)
I-Zone-related Design Standards (Section 31)
Response: Acknowledged.
City Note: The Applicant's sign schedule has not been fully reviewed
H-Signage and Wayfinding (Section 30)

SHORELAND ZONING SITE PLAN STANDARDS (Section 11.5.1)
The standards written below consist of nine supplemental site plan standards that are to be applied to applications triggering site plan review.

A. The proposal will maintain safe and healthful conditions.
This application involves improvements to a portion of an existing medical campus facility and will create new public spaces along the waterfront.
Response: The new public space option requested by the City's Parks & Recreation Department is being discussed by the Applicant's representative (Sebago Technics) and City staff. Designation of a new public space is not part of the City's Building 7 site plan review and will be addressed separately; therefore, a formal agreement is not available at this time.

B. The proposal will not result in water pollution, erosion, or sedimentation to surface waters.
Staff finding: The project, as designed, is fully compliant with the Maine DEP Ch. 500 Basic Erosion and Sedimentation Control requirements, along with the MDEP General Standard.
Response: Acknowledged.

C. *The proposal will adequately provide for the disposal of all wastewater.*
Wastewater will be discharged into the Veranda Street sewer via a new 6" service line.
Response: Acknowledged. Wastewater ability and capacity have been received. See EPlan *Section 22-Availabilty and Adequacy of Public Utilities*.

D. *The proposal will not have an adverse impact on spawing grounds, fish, aquatic life, bird, or other wildlife habitat.(Attachment M)*
Response: Acknowledged. See *Section 16-Preservation of Significant Natural Features*.

E. *The proposal will conserve shore cover and visual, as well as actual, points of access to inland coastal waters.*
Staff finding: It is not anticipated that tree removal will have an undue visual impact from the water.
Response: Acknowledged.

F. *The proposal will protect archaeological and historic resources.*
Staff finding: Met (See 4. Site Design Standards, E-Historic Resources)
Response: Acknowledged.

G. *The proposal will not adversely affect existing commercial fishing or maritime activities.*
Staff comment: There are no commercial fishing or marine activities in the vicinity of this application.
Response: Acknowledged.

H. *The proposal will avoid problems associated with flood plan development and use.*
Staff finding: This application will also require a flood hazard permit.
Response: A Flood Hazard Permit is not required. No portion of the building or other proposed site improvements are located within the designated flood hazard area (VE 15) as depicted on the updated City of Portland FEMA Maps 23005C0703F and 23005C0711F, effective date June 20, 2024. The flood map exhibit and associated narrative have been updated. See *Exhibit 16-Preservation of Significant Natural Features* and the site plans for the updated flood zone location.

I. *The proposal is in conformance with the standards set forth in this article.*
Staff finding: The proposal is in conformance with all the subsections that pertain in section 11.4.
Response: Acknowledged.

NEIGHBORHOOD MEETING AND PUBLIC COMMENT
Staff finding: A full sign-in sheet and meeting minutes from the March 29, 2024, virtual/in-person meeting were submitted to City staff, as required. One member of the public attended the meeting, Jaime Parker of Portland Trails.
Response: We note that one written public comment item was received by the City Planning Department from Jaime Parker of Portland Trails via email on January 12, 2024, that was forwarded to the project development team on April 5, 2024, in advance of the Planning Board Workshop Meeting

held on April 9, 2024. Kylie Mason addressed Mr. Parker's two comments during the Planning Board Workshop meeting. Kylie answered the question regarding the existing trail connectivity and location by sharing a highlighted trail easement plan that was subsequently shared with planning staff by email on April 16, 2024, and uploaded to EPlan on April 18, 2024.

NEXT STEPS

Staff will continue to review submitted plans and documents to ensure the proposed project complies with all applicable standards, and specifically:

1. *Address outstanding Staff comments related to public easements, shoreland zoning, and landscaping.*
   Response:
   - **Public easement discussion is not part of the formal Site Plan Review**
   - **Applicable Shoreland Zoning Responses and Landscaping are enclosed in this comment response, and the required information is shown on the site plans. We note that the items are revised or are no longer applicable based on the change from the R-P to the B-5 Zone.**

2. *Address additional comments from the Planning Board.*
   Response: Acknowledged.

3. *Prepare final plan submission.*
   Response: Acknowledged.

4. *Schedule and hold planning board public hearing.*
   Response: Acknowledged.

END PLANNING BOARD REPORT

EMAIL CORRESPONDENCE Friday, April 5, 2024, 10:42 AM
331 Veranda St-PL-002766-2023
Ann Machado amachado@portlandmaine.gov,
Zoning Administrator, Permitting and Inspections Department
To: Eric Freeman efreeman@portlandmaine.gov

Eric- Sorry that I didn't get to you sooner. I know that you wanted me to write up something in general about the Shoreland Zone for the workshop on Tuesday (April 9, 2024), but after looking over some of the revised plans and talking with Mark Reiland I'm not ready to do that yet.

1. *Just noting that the height to TOS sloped roof is 84.865'. Height from average grade is 44.855'*
   Response: Comment acknowledged. The revised TOS is 85.5. Reference is made to the enclosed plans, which depict a slightly taller building (+7 ¾" from average grade) that is in conformance with the B-5 zoning height standard of 65'.

2. *Do they have an updated survey or is it just the Existing Conditions Plan – 41A and 41B?*

Response: The Existing Conditions Plan shows the overall campus at 331 Veranda Street, including meets and bounds, easements, abutters, and applicable plan references, was prepared and sealed by Maine Professional Land Surveyor Jediah Scott of Sebago Technics.

2. *Existing Conditions Plan – Sheet 41A (Sheet 1 of 2).*
See 75' Shore setback (Approximate Note 10) – Note 10 bases the HAT (Highest Annual Tide) on MDEP report (2018). They use 6.5 NAVD but Presumpcot River Bridge is 6.7 NAVD on DEP 2018 Chart. Maine Geological Survey map uses 6.9 NAVD which is the highest annual astronomical tide. DEP told me earlier this year that we are supposed to use MGS map going forward. I have reached out to the Southern Maine DEP office to confirm which HAT we should be using.
Response: Based on the comments above, Note 10 has been revised for clarification purposes to reflect an offset from the High Astronomical Tide as identified by MGS.

3. *Plan 40 shows the land preservation and removal plan. Mark Reiland has been coordinating with me to address the issues with the proposed grids and point system clearing vegetation within the 75' shoreland zone setback (section 11.4.3.F). He had a meeting with the landscape architect from Sebago Technics on Wednesday, 4/3/24. This is from the follow up email from Mark after the meeting:*

> *He (landscape architect) is going to re-draw the grids to cover the entire 75 ft buffer and re-calculated the points withing each grid under the new layout. I told him he could me the new layout and points total when he gets them done so that you and I could take a look and get them some feedback before they submit. Unless there are additional trees that weren't included in the first survey they are going to run into problems with not having enough points in certain grids, I told them to document that and that replanting to make up points is usually only reserved for hazard tree removals in buffer area so in this case would require a waiver, but the first step is the get a better grid layout out and then we would work from there*
>
> *I am not sure when the landscape architect will get back to Mark.*

Response: The B-5 Zone is not subject to shoreland vegetation and clearing standards outlined in section 11.4.3 of the City of Portland's Ordinance

4. *Section 11.5 Supplemental Site Plan standards should be addressed by the Applicant then we will review them. Has the Applicant provided this information?*
Response: Responses to the Shoreland Zoning Site Plan Standards (Section 11.5.1) are included in this letter beginning on Page 5.

END EMAIL

PLANNING BOARD WORKSHOP COMMENTS, April 9, 2024 – As Noted by Sebago Technics.

Overview: The Board seemed supportive of the tree inventory, traffic memorandum, pathway relocation, and overall development.

Questions Previously Addressed

1. Shoreland Zoning (SHZ) Volume Calculations
   Response: Per email and telephone correspondence in March and April 2024, and submittal of volume calculations directly to Ann Machado, Zoning Administrator, via email, she agrees that the new Building 7 represents a decrease in overall volume in the SHZ and that the proposed Building 7 meets City standards.

2. Floodplain Elevation
   Response: The proposed lowest floor elevation in proposed Building 7 is 31.5 feet, which is 16.5' above the VE 15 zone as depicted on the updated City of Portland FEMA Maps 23005C0703F and 23005C0711F, effective date June 20, 2024. See *Exhibit 16-Preservation of Significant Natural Features (14.6.2(A)* and the site plans for the updated flood zone location.

3. Tree Point Inventory in the Shoreland Zone
   Response: This is not applicable, as the clearing or removal of vegetation standards outlined in section 11.4.3 do not apply to the B-5 Zone.

New additional comments or those that require additional coordination or action:

1. Bird-safe glass
   Response: The architectural plans indicate that the project window will utilize insulated dynamic glazing with bird-friendly glass.

2. Provide an overall plan that illustrates the pathways for the project.
   Response: The highlighted graphic shared during the Workshop Meeting was sent directly to the Planning Department by email and uploaded to EPlan on April 18, 2024.

3. Materials plan for the building.
   Response: The materials legend is shown on the enclosed architectural elevation plans.

4. METRO bus shelter offsite or at the Building 6 courtyard.
   Response: Per City comments, Sebago Technics inquired about the Greater Portland METRO shelter addition suggested by the City. As a result of that telephone conversation, we understand that METRO was not aware that the City requested additional shelter and/or services at the Martin's Point Veranda Street Campus. METRO is not in favor of adding a new shelter or revising its service route to include on-campus service.

   We note that the Site Plan Worksheet dated 01/29/2024 received from the City indicated that the Public Transit Access standard was met and no updates were required; reference Report Attachments #2. The subsequent City comments dated April 5, 2024, indicated that a new shelter is required, which contradicts the initial review comments.

5. Additional pedestrian accommodations at non-signalized entrance.
   Response: This discussion was initiated by a member of the public during the virtual Workshop meeting. The response by STI noted that the design provides for safe and adequate pedestrian movement within the site, and the connection to the existing sidewalk meets the standards of the City; therefore, additional accommodations are not proposed.

6. Consideration for further reduction of pavement in the loading and fire lane staging area at new Building 7.
   Response: A reduction in pavement does not provide adequate maneuvering space for fire equipment and loading for delivery vehicles that exceed garage entrance dimensions. The impervious area, as shown, represents a reduction of impervious when compared to existing conditions.

7. Clear assignment of public access for parking associated with the trail use.
   Response: Reference is made to the site plan showing dedicated parking spaces for trail system access.

8. A member of the public in attendance mentioned recent shoreline damage in one location that is downgradient from the proposed new building.
   Response: The storm-related shore damage is located on City property and does not appear to affect the proposed improvements proposed by MPHC.

We are hopeful that this letter, the versioned section text, and the revised plans adequately address the review comments so that the project will move forward in the City's Major Site Plan review process. Upon your review of the enclosed information, please call with any questions or comments. We appreciate your consideration.

Sincerely,

SEBAGO TECHNICS, INC.



Kylie S. Mason, RLA, LEED-AP
Chief Operations Officer
Maine Licensed Landscape Architect

KSM/skn

enc.

cc: Martin's Point Health Care, Inc.

211026 Martin's Point Health Care, Building 7 Redevelopment
Document Comment Response Reference

4-5-2024 City PB Report Attachment Reference: Updated Submittal	Sebago Technics Corresponding City Checklist Submittal Number (EPlan Reference)	Description	EPlan Upload Date/Version
A	**02**	**Submission Checklist**	**12/22/2023**
B		**Neighborhood Meeting Sign-In/Minutes**	**4-2-24, Eml STI to E. Freeman**
C	**03**	**Right, Title & Interest**	**v2 3/14/2024**
D	**05**	**Zoning Assessment**	**v4 11/14/2024**
E	**08**	**Waivers**	**v2 3/14/2024**
F	**09**	**Financial Capacity**	**12/22/2023**
G	**10**	**Technical Ability**	**12/22/2023**
H	**11**	**Street Impact**	**12/22/2023**
I	**12**	**Access & Circulation**	**v2 11/14/2024**
J	**13**	**Public Transit**	**12/22/2023**
K	**14**	**Off-street parking**	**12/22/2023**
L	**15**	**Transportation Demand Management**	**v2 11/14/2024**
	16	**Preservation of Significant Natural Features**	**v2 11/14/2024**
M	**17**	**Landscape Preservation**	**v3 11/14/2024**
N	**18**	**Site Landscaping & Buffers**	**v2 3/14/2024**
O	**19**	**Water Quality and Stormwater Management**	**v2 3/14/2024**
P	**21**	**Public Safety**	**v2 3/14/2024**
Q	**22**	**Public Utilities**	**v2 3/18/2024**
R	**25**	**Snow and Ice Loading**	**12/22/2023**
S	**26**	**View Corridors**	**12/22/2023**
T	**27**	**Historic Resources**	**v2 1/2/2024**
U	**28**	**Exterior Lighting**	**v2 11/14/2024**
V	**23**	**Massing, Ventilation, Wind**	**12/22/2023**
W	**24**	**Shadows**	**12/22/2023**
X	**32**	**Construction Mangement**	**1/2/2024**
Y		**Sebago Staff & Peer Comment Response Letter**	**3/14/2024**
Z	**30**	**Signage and Wayfinding**	**12/22/2023**
AA	**31**	**Zone-related Design Standards**	**12/22/2023**
BB	**04**	**Evidence of State or Federal Approvals**	**12/23/2023**
Att 2	**1/29/2024**	**Site Plan Worksheet from City**	**STI Response: 3/14/2024**
PLANS			
	New	**(11) Color Renderings**	**4/17/2024**
	New	**Trail Easement Plan**	**4/18/2024**
	Site Plans	**Versioned Copies**	**11/14/2024**
	Architectural Plans	**Versioned Copies**	**11/24/2014**
OTHER:		**Revised CSS Upload Data**	**3/14/2024**

24: SHADOWS (14.6.4(B))

The proposed project is located in the R-P zone. The proposed new building will not result in adverse impacts of shadows cast by new structures on publically designated open spaces.

25: SNOW AND ICE LOADING (14.6.4(C))

The proposed project will not result in the accumulation of significant amounts of snow and ice from loading or falling offsite. The building is designed with flat roofs with architectural designs consistent with building code requirements. Building 7 is not situated in a location where snow and ice can fall on abutting properties or public ways. A snow melt system independent of the boiler encompassing ~1,500 SF will be incorporated at the garage vehicle ramp.

Snow will be removed from the onsite driveways and sidewalks per applicable City regulations by existing contracted removal and treatment services.

5

26: VIEW CORRIDORS (14.6.4(D))

The site and views to and from the site are not identified in the Downtown Vision View Corridor Protection Plan.

The massing and height of the proposed new Building 7 meet the required zoning setbacks and are similar to the adjacent Building 6.

CITY OF PORTLAND, MAINE

PLANNING BOARD

Brandon Mazer, Chair
Justin Barker, Vice Chair
Marpheen Chann
Sean Murphy
David Silk
Austin Smith
Maggie Stanley

January 14, 2025

Kylie Mason
Sebago Technics
75 John Roberts Road
South Portland, ME 04106

Project Name:	Phased Site Plan	**Project ID:**	PL-002766-2023
Address:	331 Veranda Street	**CBL:**	434 C001
Applicant:	Martins Point Healthcare		
Planner:	Eric Freeman		

Dear Kylie Mason

On January 14, 2025, the Planning Board approved a major site plan application for a medical office building with associated site improvements at 331 Veranda Street within the B-5 Business Zone. The decision is based upon the application, documents and plans as submitted. The decision is based upon the application, documents, and plans as submitted. The Planning Board reviewed the proposal for conformance with the standards of the Site Plan Ordinance, Chapter 13, Section 13.6 and the *City of Portland Design Manual Section (d)* Based on the information provided to the Board in the application, plans, and reports, through testimony and other information submitted by the applicant, as well as the findings, conclusions and recommendations contained in the Planning Board Report for the public hearing held on January 14, 2025, which is attached hereto and incorporated herein by reference, the Planning Board found the application met all relevant standards and voted (X-X) to approve the application with the following waivers and conditions as presented below.

A. WAIVERS
The Planning Board voted X-X to waive the following *City of Portland Technical Manual* and *City Code* standards:

1. Build-to Zone and Build-to Percentage Requirement
The Planning Board finds based upon the Planning Staff's review that extraordinary conditions exist or undue hardship may result from strict compliance with the zoning dimensional requirement related to the B-5 build-to-zone and build-to percentage listed in Ch. 14, Table 7-C, which requires

that new development in the B-5 include 80% of a building's front façade within the build-to zone, and that substantial justice and the public interest are secured with the proposed variation in this standard, and that variation is consistent with the intent of the ordinance as detailed in Sec. 7.6.5.B. The Planning Board waives the B-5 dimensional standard for build-to zone and build-to percentage listed in Table 7-C.

2. Environmental Quality Standards
The Planning Board finds based upon the Planning Staff's review that extraordinary conditions exist or undue hardship may result from strict compliance with Technical Manual 5.2.3, which states that applications must adhere to flooding standards outlined in Chapter 500 of the Maine Department of Environmental Protection's Stormwater Management Regulations, that substantial justice and the public interest are secured with the proposed variation in this standard, and that variation is consistent with the intent of the ordinance. The Planning Board waives Technical Manual Section 5.2.3 to allow a discharge directly into a tidal body of water.

B. SITE PLAN REVIEW
On the basis of the application, plans, reports and other information submitted by the applicant; findings and recommendations contained in the Planning Board Report for the public hearing on January 14, 2025 for application # PL-002766-2023 at 331 Veranda Street relevant to the site plan regulations; and the testimony presented at the Planning Board hearing, the Planning Board finds that the plan is in conformance with the site plan standards of the land use code, subject to the following conditions of approval:

PRIOR TO APPLYING FOR A BUILDING PERMIT

1. The applicant shall provide an updated site plan standards assessment detailing the project's compliance with updated site plan standards, Section 13.6, and updated technical standards incorporated by reference. As necessary, the applicant shall update the site plan to comply with updated site plan review requirements, particularly around site landscaping, climate resilience, and low impact development. Updated materials shall be reviewed and approved by the Planning Authority.

2. The applicant shall provide ability to serve letters from the Portland Water District and Central Maine Power.

3. The applicant shall address outstanding comments provided by the Department of Public Works.

Standard Procedures

Note: The following standard procedures and requirements apply to all approved site plans:

1. Site Plan Expiration The site plan approval will be deemed to have expired unless work has commenced within one (1) year of the approval or within a time period up to three (3) years from the approval date as agreed upon in writing by the City and the applicant. Requests to extend approvals must be received before the one (1) year expiration date.

2. Separate Building Permits Are Required This approval does not constitute approval of building plans, which must be reviewed and approved by the City of Portland's Permitting and Inspections Department.

3. Performance Guarantee and Inspection Fees A performance guarantee covering the site improvements and an inspection fee payment of 2.0% of the guarantee amount and three (3) final sets of plans must be submitted to and approved by the Planning and Urban Development Department and Public Works Department prior to the release of a building permit, street opening permit or certificate of occupancy for site plans.

4. Construction Management Plans The applicant, contractor and subcontractors are required to conform to the approved Construction Management Plan, and all conditions contained within the project's approval, for the entire duration of the project. Any amendments to the approved Construction Management Plan shall be reviewed and approved by the Department of Public Works prior to the execution. The Planning Authority and the Department of Public Works have the right to seek revisions to an approved Construction Management Plan. The applicant shall coordinate the project's construction schedule with the timing of nearby construction activities to avoid cumulative impacts on a neighborhood and prevent unsafe vehicle and pedestrian movements. Accordingly, nearby construction activities could involve a delay in the commencement of construction.

5. Preconstruction Meeting Prior to the release of a building permit and scheduling of a preconstruction meeting, a hard copy set of approved plans shall be submitted to the Development Review Coordinator. A pre-construction meeting shall be held at the project site with the contractor, Development Review Coordinator, Public Works representative, and owner to review the construction schedule and critical aspects of the site work. At that time, the Development Review Coordinator will confirm that the contractor is working from the approved site plan and the approved Construction Management Plan. The site/building contractor shall provide one (1) copy of a detailed construction schedule to the attending City representative. It shall be the contractor's responsibility to arrange a mutually agreeable time for the pre-construction meeting.

6. Department of Public Works Permits If work or obstructions will occur within the public right-of-way, such as utilities, curb, sidewalk, driveway construction, site deliveries and equipment siting, a Street Opening and/or Occupancy Permits are required for your site. Please contact the Department of Public Works Permit Clerk at (207) 874-8300, ext. 8828. (Only excavators licensed by the City of Portland are eligible.)

7. Develop Site According to Plan The site shall be developed and maintained as depicted on the site plan and in the written submission of the applicant. Any modifications of an approved site

plan or alteration of a parcel, or of any approved exterior elevations, which were the subject of site plan approval after May 20, 1974, shall require the prior approval of an amended site plan by the Planning Board or Planning Authority pursuant to the terms of Chapter 14, Land Use, of the Portland City Code.

8. Stormwater Management The owner/operator of an approved stormwater management system, and all assigns shall comply with the conditions of Chapter 32, Stormwater including Article III, Post Construction Stormwater Management, which specifies the annual inspections and reporting requirements.

   A maintenance agreement for the stormwater drainage system, as attached, or in substantially the same form, shall be submitted for review by Corporation Counsel. Once approved, the document shall be signed and recorded at the Cumberland County Registry of Deeds prior to the issuance of a building permit. Final copies shall be submitted to both the Department of Planning and Urban Development and the Department of Public Works.

9. Third Party Inspections For all sites with one acre or greater of disturbance, the applicant shall retain the services of a third-party inspector for the duration of construction until final site stabilization is in place. The inspection is required in order to ensure that all construction and stabilization activities comply with the approved drawings and specifications; that field decisions regarding erosion control implementation, stormwater system installation, and natural resource protection are based on sound engineering and environmental considerations; and that any changes to the development's erosion control plan, stormwater management plan, or final stabilization plan is communicated to the City of Portland for additional review and approval.

   The inspector will submit weekly written reports to the Stormwater Coordinator(s) in the Water Resources Division of Public Works. Reports must include: project ID, project address, the date(s) and time(s) of inspection(s), site photographs of areas under construction, and the date(s) and approximate duration(s) of any rainfall events. The report will identify and describe any erosion problems or discharge of pollutants and what actions will be taken to address these issues and repair any damage to other properties or natural resources, actions to eliminate the erosion source, and actions to prevent future sediment discharges from the area.

10. Defect Guarantee A defect guarantee, consisting of 10% of the performance guarantee, must be posted before the performance guarantee will be released.

11. As-Built Final Plans Final sets of as-built plans shall be submitted digitally to the Planning and Urban Development Department, on a CD or DVD, in AutoCAD format (.dwg), release AutoCAD 2005 or greater. Please provide one hard copy of the mylar.

12. Mylar Copies Mylar copies of the as-built drawings for the public streets and other public infrastructure in the subdivision must be submitted to Public Works prior to the issuance of a certificate of occupancy.

13. Impact Fees New development or changes of use that result in net new residential dwelling units, non- residential building square footage, or water meters, are subject to the City of

Portland's impact fee ordinance (Chapter 14, Article XVII). Impact fees are calculated at the time of building permit and must be paid prior to the certificate of occupancy. For more information, visit https://www.portlandmaine.gov/2409/Impact-Fees

The Development Review Coordinator must be notified five (5) working days prior to the date required for final site inspection. The Development Review Coordinator can be reached at the Planning and Urban Development Department at drc@portlandmaine.gov or (207)874-8901. All site plan requirements must be completed and approved by the Development Review Coordinator prior to issuance of a Certificate of Occupancy. Please schedule any property closing with these requirements in mind.

If there are any questions, please contact Zach Powell by phone at 207-756-8083 or email at zpowell@portlandmaine.gov.

Sincerely,

Brandon Mazer, Planning Board Chair

Attachments:
1. Planning Board Report
2. Portland City Code: Chapter 32
3. Sample Stormwater Maintenance Agreement
4. Performance Guarantee Packet

MARTIN'S POINT HEALTH CARE
VERANDA CAMPUS

331 VERANDA STREET
PORTLAND, ME 04103

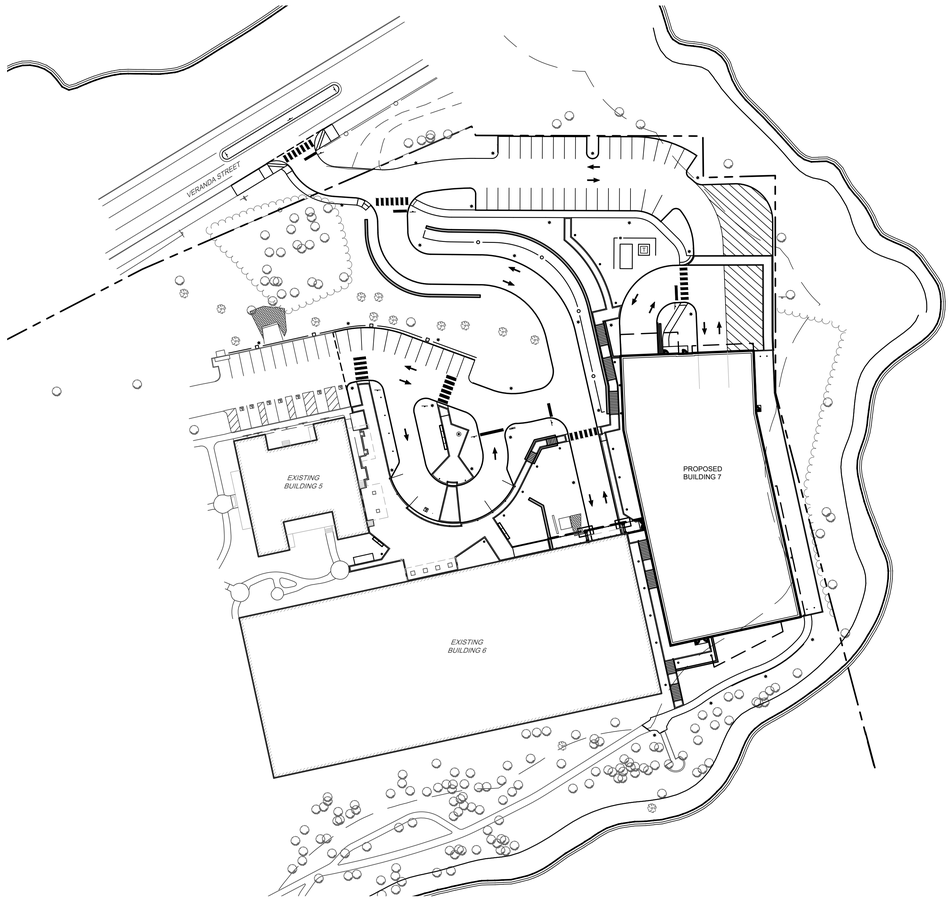
APPLICANT:
MARTIN'S POINT
HEALTH CARE, INC.
PO BOX 9746
PORTLAND, ME 04103

ENGINEER/SURVEYOR/
LANDSCAPE ARCHITECT:

SEBAGO TECHNICS
WWW.SEBAGOTECHNICS.COM
75 John Roberts Rd.
Suite 4A
South Portland, ME 04106
Tel. 207-200-2100

PROJECT ARCHITECT:

SMRT
75 WASHINGTON STREET, SUITE 3A
PORTLAND, ME



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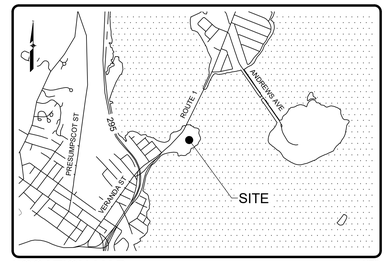
1 INCH = 50 FT.



LOCATION MAP NTS

SHEET LIST TABLE

SHEET	TITLE
1	COVER PLAN
2	NOTES AND LEGEND
3	DEMO PLAN
4	INDEX PLAN
5	OVERALL SITE PLAN
6	UPPER DRIVE SITE PLAN
7	LOWER DRIVE SITE PLAN
8	VERANDA STREET SITE PLAN
9	REAR PATH SITE PLAN
10	LOOKOUT SITE PLAN
10 A	EROSION CONTROL PLAN
11	OVERALL GRADING PLAN
12	UPPER DRIVE GRADING PLAN
13	LOWER DRIVE GRADING PLAN
14	VERANDA STREET GRADING PLAN
15	REAR PATH GRADING PLAN
16	LOOKOUT GRADING PLAN
17	UPPER DRIVE PLAN AND PROFILE
18	OVERALL UTILITY PLAN
19	UPPER DRIVE UTILITY PLAN
20	LOWER DRIVE UTILITY PLAN
21	VERANDA STREET UTILITY PLAN
22	REAR PATH UTILITY PLAN
23	LOOKOUT UTILITY PLAN
24	UTILITY CONTEXT PLAN
25	LANDSCAPE PLAN OVERALL
26	UPPER DRIVE LANDSCAPE PLAN
27	LOWER DRIVE LANDSCAPE PLAN
28	VERANDA STREET LANDSCAPE PLAN
29	REAR PATH LANDSCAPE PLAN
30	LOOKOUT LANDSCAPE PLAN
31	EROSION CONTROL NOTES
32	DETAILS
33	DETAILS
34	DETAILS
35	DETAILS
36	DETAILS
37	DETAILS
1 OF 2	PRE STORMWATER PLAN
2 OF 2	POST STORMWATER PLAN
1 OF 1	TREE PRESERVATION AND REMOVAL PLAN
1 OF 2	EXISTING CONDITIONS PLAN
2 OF 2	EXISTING CONDITIONS PLAN
1 OF 1	EXISTING CONDITONS SURVEY BY OTHERS

TAX PARCELS: 434-C-1,434-C-5 & 434-C-10

PAUL D. OSTROWSKI, PE 11175
STATE OF MAINE PAUL D. OSTROWSKI No. 11175 REGISTERED PROFESSIONAL ENGINEER 01/06/2025

KYLIE S. MASON, RLA 3335
LICENSED LANDSCAPE ARCHITECT KYLIE S. MASON No. 3335 01/06/2025

REV:	BY:	DATE:	STATUS:
E	KSM	01/06/2025	RESPONSE TO CITY DPW REVIEW COMMENTS
D	KSM	11/14/2024	RESPONSE TO CITY REVIEW COMMENTS
C	KSM	04/26/2024	RESPONSE TO CITY REVIEW COMMENTS
B	KSM	03/14/2024	RESPONSE TO CITY REVIEW COMMENTS
A	KSM	12/20/2023	ISSUED TO CITY OF PORTLAND FOR SITE PLAN REVIEW

THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM SEBAGO TECHNICS, INC. ANY ALTERATIONS, AUTHORIZED OR OTHERWISE, SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO SEBAGO TECHNICS, INC.

SEBAGO TECHNICS
WWW.SEBAGOTECHNICS.COM
75 John Roberts Rd.
Suite 4A
South Portland, ME 04106
Tel. 207-200-2100

COVER PLAN
MARTIN'S POINT HEALTH CARE VERANDA CAMPUS
331 VERANDA STREET
PORTLAND, ME 04103

MARTIN'S POINT HEALTH CARE, INC.
PO BOX 9746
PORTLAND, ME 04103

DESIGNED	BAM/PDO
DRAWN	CJC
CHECKED	PDO
DATE	04/10/2023
SCALE	1" = 50'
PROJECT	211026

SHEET 1 OF 37

F:\Projects\211026\2110026\DWG\Design\211026 C-BLDG 7.dwg - 1/6/2025 10:43 AM - PAUL OSTROWSKI

211026 C-BLDG 7.dwg, TAB:COVER PLAN

LEGEND

EXISTING		PROPOSED
	PROPERTY LINE/R.O.W.	
	ABUTTER LINE/R.O.W.	
	DEED LINE/R.O.W.	
	TIE LINE	
	SETBACK	
	EASEMENT	
	BUFFER	
	FLOODPLAIN	
	FLOODWAY	
	CENTERLINE	
⊡	MONUMENT	■
⊙	IRON PIPE/ROD	●
◎	DRILL HOLE	◉
C1/L1	DEED CALL	
C1/L1	CURVE/LINE NO.	C1/L1
	SOILS	
	ZONE LINE	
	ZONE LINE ON PL	
BENCHMARK DESCRIPTION WITH ELEVATION	BENCHMARK	
△	SURVEY CONTROL	
TP-1	TEST PIT	
MW-1	MONITORING WELL	
B-1	BORING	
	BUILDING	
	DECK/STEPS/ OVERHANG	
	EDGE WETLAND	
	WETLANDS	
	UPLANDS	
	STREAM	
	LEDGE	
	EDGE PAVEMENT	
	PAVEMENT SAWCUT	
	EDGE CONCRETE	
	PAVEMENT PAINT	
	EDGE GRAVEL	
	CURB LINE	
	EDGE OF WATER	
	TREELINE	
120 118	CONTOURS	120
×120.00	SPOT GRADE	+120.00
	CHAIN LINK FENCE	
	BARB WIRE FENCE	
	STOCKADE FENCE	
	GUARD RAIL	
	STONE WALL	
	RETAINING WALL	
	DECIDUOUS TREE	+
	CONIFEROUS TREE	+
	MULCH LINE	
○	BOLLARD	●
	SIGN	
	RAILROAD	
	GAS	G
	GAS GATE VALVE	
	GAS METER	
G	GAS MANHOLE	
	WATER	W
	WATER GATE VALVE	
	WATER SHUT OFF	
	HYDRANT	
W	WATER MANHOLE	
W	WELL	W
	SANITARY SEWER	S
	FORCE MAIN	FM
S	SANITARY MANHOLE	
	SEWER CLEANOUT	
	STORM DRAIN	SD
	UNDER DRAIN	UD
D	DRAINAGE MANHOLE	
	CATCH BASIN	
	OVERHEAD UTILITY	OHU
	UNDERGROUND UTILITY	UGU
T	TRANSFORMER PAD	T
E	ELECTRICAL MANHOLE	E
EM	ELECTRIC METER	
H	HVAC UNIT	
T	TELEPHONE MANHOLE	
	LIGHT POLE	
	UTILITY POLE	
	GUY WIRE	
	DRAINAGE DITCH	
	EROSION CONTROL BLANKET	
	FILTER BARRIER	FB
	RIPRAP	
	CHECK DAM	
	INLET PROTECTION	
	BOULDER	
	STREAM	

GENERAL NOTES

1. THE RECORD OWNER OF THE PARCEL IS MARTINS POINT HEALTH CARE, INC. AS RECORDED IN BOOK 24070, PAGE 323; BOOK 29771, PAGE 60; BOOK 11581, PAGE 337 (HTTA: "PENOBSCOT BAY MEDICAL ASSOCIATES, INC."), AND BOOK 4898, PAGE 199 (HTTA: PENOBSCOT BAY MEDICAL ASSOCIATES); BOOK AND PAGE NUMBERS ARE REFERENCED TO THE CUMBERLAND COUNTY REGISTRY OF DEEDS UNLESS NOTED OTHERWISE.
2. THE PROPERTY IS SHOWN AS LOTS C001, C010, AND C005 ON THE CITY OF PORTLAND TAX MAP 434 AND IS LOCATED IN THE RESIDENTIAL PROFESSIONAL DISTRICT WITH A SHORELAND ZONING OVERLAY.
3. BOUNDARY AND TOPOGRAPHIC INFORMATION SHOWN HEREON IS BASED UPON FIELD WORK PERFORMED BY SEBAGO TECHNICS, INC. IN 2023-2024 AND INFORMATION COLLECTED BY OWEN HASKELL, INC. IN 2012 (AS NOTED).
4. BASIS OF BEARING IS GRID NORTH, MAINE STATE PLANE COORDINATE SYSTEM, WEST ZONE 1802-NAD83. ELEVATIONS DEPICTED HEREON ARE REFERENCED TO CITY OF PORTLAND DATUM, AS DERIVED FROM A CITY OF PORTLAND BENCHMARK LOCATED ON THE WESTERLY SIDE OF VERANDA STREET AT THE FIRST ANGLE NORTHERLY OF OREGON STREET, BEING A COPPER BOLT IN GRANITE 3-FOOT OFFSET MONUMENT (ELEVATION: 27.014).
5. BENCHMARK:
   BM-1 BOX CUT ON LIGHT POLE BASE ELEVATION: 64.20 (PORTLAND DATUM)
6. UTILITY INFORMATION DEPICTED HEREON, UNLESS OTHERWISE NOTED, IS OF QUALITY LEVEL D PER AMERICAN SOCIETY OF CIVIL ENGINEERS (ASCE) STANDARD CI/ASCE 38-02. UTILITIES DEPICTED HEREON MAY NOT NECESSARILY REPRESENT ALL EXISTING UTILITIES. CONTRACTORS AND/OR DESIGNERS NEED TO CONTACT DIG-SAFE SYSTEMS, INC. (1-888-DIG-SAFE) AND FIELD VERIFY EXISTING UTILITIES WITHIN THE PROJECT AREA PRIOR TO CONSTRUCTION AND/OR EXCAVATION.
7. PORTIONS OF THE PROPERTY AS DEPICTED HEREON DOES FALL WITHIN A SPECIAL FLOOD HAZARD AREA AS DELINEATED ON THE FLOOD INSURANCE RATE MAP FOR PORTLAND, MAINE, CUMBERLAND COUNTY, COMMUNITY-PANEL NUMBER 23005100088, HAVING AN EFFECTIVE DATE OF JULY 17, 1986. THE LOCUS FALLS WITHIN AN AREA IDENTIFIED AS ZONE A2, AREAS OF 100-YEAR FLOOD; BASE ELEVATIONS, (ELEVATION 27') AND FLOOD HAZARD FACTORS DETERMINED. A PORTION OF THE PROPERTY ALSO FALLS WITHIN AN AREA IDENTIFIED AS V2 AREAS OF 100-YEAR COASTAL FLOOD WITH VELOCITY (WAVE ACTION); BASE FLOOD ELEVATIONS, (ELEVATIONS 19', 22' & 27') AND FLOOD HAZARD FACTORS DETERMINED.
8. THE SITE IS LOCATED WITHIN THE URBAN COMMERCIAL MIXED USED (B-5) ZONING DISTRICT. ZONING DIMENSIONAL STANDARDS ARE AS FOLLOWS:

	REQUIRED:
LOT SIZE:	NO REQUIRED MIN SIZE
STREET FRONTAGE:	NO REQUIRED FRONTAGE
LOT WIDTH:	NO REQUIRED LOT WIDTH
FRONT SETBACK:	NONE REQUIRED
REAR SETBACK:	NONE REQUIRED
SIDE SETBACK:	NONE REQUIRED
STRUCTURE HEIGHT:	65 FT
IMPERVIOUS SURFACE RATIO:	NO MAXIMUM IMPERVIOUS SURFACE RATIO

9. ALL WORK SHALL CONFORM TO THE APPLICABLE CODES AND ORDINANCES.
10. CONTRACTOR SHALL VISIT THE SITE AND FAMILIARIZE THEMSELF WITH ALL CONDITIONS AFFECTING THE PROPOSED WORK AND SHALL MAKE PROVISIONS AS TO THE COST THEREOF. CONTRACTOR SHALL BE RESPONSIBLE FOR FAMILIARIZING THEMSELF WITH ALL CONTRACT DOCUMENTS, FIELD CONDITIONS AND DIMENSIONS AND CONFIRMING THAT THE WORK MAY BE ACCOMPLISHED AS SHOWN PRIOR TO PROCEEDING WITH CONSTRUCTION. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO THE COMMENCEMENT OF WORK.
11. CONTRACTOR SHALL NOTIFY ENGINEER OF ALL PRODUCTS OR ITEMS NOTED AS "EXISTING" WHICH ARE NOT FOUND IN THE FIELD.
12. PROVIDE ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND OWNER'S REQUIREMENTS UNLESS SPECIFICALLY OTHERWISE INDICATED OR WHERE LOCAL CODES OR REGULATIONS TAKE PRECEDENCE.
13. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS IN THE FIELD PRIOR TO FABRICATION AND ERECTION OF ANY MATERIAL. ANY UNUSUAL CONDITIONS SHALL BE REPORTED TO THE ATTENTION OF THE ENGINEER.
14. CONTRACTOR SHALL CLEAN AND REMOVE DEBRIS AND SEDIMENT DEPOSITED ON PUBLIC STREETS, SIDEWALKS, ADJACENT AREAS, OR OTHER PUBLIC WAYS DUE TO CONSTRUCTION.
15. CONTRACTOR SHALL INCORPORATE PROVISIONS AS NECESSARY IN CONSTRUCTION TO PROTECT EXISTING STRUCTURES, PHYSICAL FEATURES, AND MAINTAIN SITE STABILITY DURING CONSTRUCTION. CONTRACTOR SHALL RESTORE ALL AREAS TO ORIGINAL CONDITION AND AS DIRECTED BY DESIGN DRAWINGS.
16. SITE CONTRACTOR SHALL OBTAIN ALL REQUIRED PERMITS PRIOR TO CONSTRUCTION.
17. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED IN ACCORDANCE WITH "MAINE EROSION AND SEDIMENT CONTROL BMPS" PUBLISHED BY THE BUREAU OF LAND AND WATER QUALITY OF THE MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION, LATEST EDITION. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO POSSESS A COPY OF THE EROSION CONTROL PLAN AT ALL TIMES.
18. ALL PAVEMENT MARKINGS AND DIRECTIONAL SIGNAGE SHOWN ON THE PLAN SHALL CONFORM TO THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) STANDARDS.
19. ALL PAVEMENT JOINTS SHALL BE SAWCUT PRIOR TO PAVING TO PROVIDE A DURABLE AND UNIFORM JOINT.
20. NO HOLES, TRENCHES OR STRUCTURES SHALL BE LEFT OPEN OVERNIGHT IN ANY EXCAVATION ACCESSIBLE TO THE PUBLIC OR IN PUBLIC RIGHTS-OF-WAY.
21. IMMEDIATELY UPON COMPLETION OF CUTS/FILLS, THE CONTRACTOR SHALL STABILIZE DISTURBED AREAS IN ACCORDANCE WITH EROSION CONTROL NOTES AND AS SPECIFIED ON PLANS.
22. THE CONTRACTOR SHALL BE FULLY AND SOLELY RESPONSIBLE FOR THE REMOVAL, REPLACEMENT AND RECTIFICATION OF ALL DAMAGED AND DEFECTIVE MATERIAL AND WORKMANSHIP IN CONNECTION WITH THE CONTRACT WORK. THE CONTRACTOR SHALL REPLACE OR REPAIR AS DIRECTED BY THE OWNER ALL SUCH DAMAGED OR DEFECTIVE MATERIALS WHICH APPEAR WITHIN A PERIOD OF ONE YEAR FROM THE DATE OF SUBSTANTIAL COMPLETION.
23. ALL WORK PERFORMED BY THE GENERAL CONTRACTOR AND/OR TRADE SUBCONTRACTOR SHALL CONFORM TO THE REQUIREMENTS OF LOCAL, STATE OR FEDERAL LAWS, AS WELL AS ANY OTHER GOVERNING REQUIREMENTS, WHETHER OR NOT SPECIFIED ON THE DRAWINGS.
24. WHERE THE TERMS "APPROVED EQUAL", "OTHER APPROVED", "EQUAL TO", "ACCEPTABLE" OR OTHER GENERAL QUALIFYING TERMS ARE USED IN THESE NOTES, IT SHALL BE UNDERSTOOD THAT REFERENCE IS MADE TO THE RULING AND JUDGEMENT OF SEBAGO TECHNICS, INC.
25. THE GENERAL CONTRACTOR SHALL PROVIDE ALL NECESSARY PROTECTION FOR THE WORK UNTIL TURNED OVER TO THE OWNER.
26. THE GENERAL CONTRACTOR SHALL MAINTAIN A CURRENT AND COMPLETE SET OF CONSTRUCTION DRAWINGS ON SITE DURING ALL PHASES OF CONSTRUCTION FOR USE OF ALL TRADES.
27. THE CONTRACTOR SHALL TAKE FULL RESPONSIBILITY FOR ANY CHANGES AND DEVIATION OF APPROVED PLANS NOT AUTHORIZED BY THE ARCHITECT/ENGINEER AND/OR CLIENT/OWNER.
28. DETAILS ARE INTENDED TO SHOW END RESULT OF DESIGN. ANY MODIFICATION TO SUIT FIELD DIMENSION AND CONDITION SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL PRIOR TO ANY WORK.
29. BEFORE THE FINAL ACCEPTANCE OF THE PROJECT, THE CONTRACTOR SHALL REMOVE ALL EQUIPMENT AND MATERIALS, REPAIR OR REPLACE PRIVATE OR PUBLIC PROPERTY WHICH MAY HAVE BEEN DAMAGED OR DESTROYED DURING CONSTRUCTION, CLEAN THE AREAS WITHIN AND ADJACENT TO THE PROJECT WHICH HAVE BEEN OBSTRUCTED BY HIS/HER OPERATIONS, AND LEAVE THE PROJECT AREA NEAT AND PRESENTABLE.
30. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING FLOW THROUGH THE EXISTING CLOSED STORM DRAINAGE SYSTEM DURING CONSTRUCTION AND SHALL SUBMIT A WORK PLAN FOR APPROVAL BY THE DESIGN ENGINEER.

UTILITY DEMOLITION NOTES

1. PROTECT EXISTING BOUNDARY LINE MONUMENTATION. IF DISTURBED, EXISTING MONUMENTATION TO BE RESET BY A PROFESSIONAL LAND SURVEYOR.
2. DEMOLITION OF UTILITIES REQUIRING TREE REMOVAL SHALL BE COORDINATED WITH THE OWNER AND IN ACCORDANCE WITH PROJECT PLANS.
3. UTILITY DEMOLITION SHALL BE COMPLETED IN COORDINATION WITH NEW INFRASTRUCTURE. CONTRACTOR SHALL ENSURE EXISTING SURFACE DRAINAGE IS MAINTAINED DURING CONSTRUCTION.
4. EXISTING SEWER AND STORM DRAINAGE INFRASTRUCTURE TO REMAIN ACTIVE DURING CONSTRUCTION AND UPON COMPLETION OF PROJECT. DEMOLITION/CONSTRUCTION ACTIVITIES SHALL NOT INTERFERE OR IMPEDE EXISTING FLOWS. CONTRACTOR SHALL PROVIDE BYPASS PUMPING AS REQUIRED DURING SEWER AND STORM DEMOLITION AND NEW CONSTRUCTION. DAMAGE TO EXISTING SEWER INFRASTRUCTURE SHALL BE REPAIRED BY CONTRACTOR AT THEIR EXPENSE.
5. DEMOLITION SHOWN IS FOR MAJOR SITE ELEMENTS TO BE DEMOLISHED. OTHER MINOR DEMOLITION MAY BE REQUIRED AS PART OF CONSTRUCTION AND SHALL BE CONSIDERED INCIDENTAL TO THE COST OF CONSTRUCTION. COORDINATE ALL DEMOLITION WORK WITH SITE AND BUILDING DRAWINGS.
6. PRIOR TO ANY DEMOLITION, THE CONTRACTOR SHALL SUBMIT A SEQUENCE OF DEMOLITION PLANS TO THE OWNER. THIS PLAN SHALL DEPICT LOCATIONS OF PROPOSED TERMINATIONS AND ANY TEMPORARY SERVICES THAT WILL BE NEEDED.
7. CONTRACTOR REQUIRED TO CONFIRM/MAINTAIN BENCHMARKS. IF IMPACTED CONTRACTOR IS RESPONSIBLE FOR NOTIFICATION/RELOCATION AND COORDINATION WITH PROJECT TEAM.

GRADING & EROSION NOTES

1. SIDESLOPES SHALL NOT BE STEEPER THAN 3:1 (H:V) EXCEPT AS OTHERWISE IDENTIFIED ON THIS PLAN. ALL SIDESLOPES STEEPER THAN 3:1 (H: V) SHALL BE LINED WITH EROSION CONTROL BLANKET, OR ADDITIONAL MEASURES AS INDICATED.
2. ALL SEDIMENT AND EROSION CONTROL MEASURES SHALL BE INSTALLED IN ACCORDANCE WITH "MAINE EROSION AND SEDIMENT CONTROL BMPS" MANUAL PUBLISHED BY BUREAU OF LAND AND WATER QUALITY MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION, LATEST EDITION. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO POSSESS A COPY OF THE EROSION CONTROL PLAN AT ALL TIMES.
3. ALL AREAS DISTURBED DURING CONSTRUCTION AND NOT RESTORED WITH IMPERVIOUS SURFACES (BUILDINGS, PAVEMENTS, WALKS, ETC.) SHALL RECEIVE LOAM AND SEED PER DETAIL.
4. SEE UTILITY DRAWINGS FOR PIPE AND STRUCTURE DATA TABLES.

CONSTRUCTION PLAN

1. PROVIDE EROSION CONTROL MEASURES PRIOR TO SITE DISTURBANCE.
2. GRADING AND CLEARING LIMITS SHALL NOT ENCROACH ON ADJACENT PROPERTIES UNLESS NOTED OTHERWISE ON THE PLANS.
3. OPEN AREAS SHALL BE LIMITED TO AREAS BEING WORKED IN. THE AREA STRIPPED OF EXISTING VEGETATION AT ANY GIVEN TIME SHALL BE MINIMIZED AND BE PHASED WHERE PRACTICAL SO THAT AREAS ARE REVEGETATED AND PERMANENTLY STABILIZED BEFORE ADDITIONAL AREAS ARE STRIPPED OF EXISTING VEGETATION. STABILIZE CONSTRUCTION AREAS BY USE OF RIPRAP, SEED, MULCH, OR OTHER GROUND COVER WITHIN ONE WEEK FROM THE TIME IT WAS ACTIVELY WORKED. SURFACES SHALL BE STABILIZED PRIOR TO DIRECTING STORMWATER RUNOFF TOWARD STORMWATER BMPS. PLEASE REFER TO DRAINAGE PLANS FOR WATERSHED AREAS.

LANDSCAPE NOTES

1. PLANT QUANTITIES SHOWN ON PLANT LISTS ARE FOR CONVENIENCE TO THE CONTRACTOR ONLY. THE CONTRACTOR IS RESPONSIBLE FOR ALL PLANT MATERIAL INSTALLATION AS SHOWN ON PLANS.
2. SIZE AND GRADING STANDARDS OF PLANT MATERIALS SHALL CONFORM TO THE LATEST EDITION OF "U.S.A. STANDARD FOR NURSERY STOCK," BY THE AMERICAN ASSOCIATION OF NURSERYMEN, INC.
3. ALL PLANT MATERIAL SHALL BE FREE FROM INSECTS AND DISEASE.
4. ALL PLANTING SHALL BE DONE IN ACCORDANCE WITH ACCEPTABLE HORTICULTURAL PRACTICES. THIS IS TO INCLUDE PROPER PLANTING MIX, PLANT BED AND TREE PIT PREPARATION, PRUNING, STAKING OR GUYING, WRAPPING, SPRAYING, FERTILIZATION, PLANTING AND ADEQUATE MAINTENANCE UNTIL ACCEPTANCE BY THE OWNER.
5. PLANT MATERIAL SHALL BE GUARANTEED FOR A PERIOD OF ONE YEAR BY THE CONTRACTOR AND A PERIOD OF TWO YEARS THEREAFTER BY THE OWNER FROM DATE OF INSTALLATION. DURING THE ONE YEAR GUARANTEE PERIOD, DEAD PLANT MATERIAL SHALL BE REPLACED AT NO COST TO THE OWNER. AT THE END OF THE ONE YEAR PERIOD, THE CONTRACTOR SHALL OBTAIN FINAL ACCEPTANCE FROM THE OWNER.
6. ALL GRASS, OTHER VEGETATION AND DEBRIS SHALL BE REMOVED FROM ALL PLANTING AREAS PRIOR TO PLANTING.
7. EXISTING TREES TO BE PRESERVED WILL BE PROTECTED DURING CONSTRUCTION AND SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR.
8. THE LANDSCAPE CONTRACTOR IS ADVISED OF THE PRESENCE OF THE UNDERGROUND UTILITIES AND SHALL VERIFY THE EXISTENCE AND LOCATION OF SAME BEFORE COMMENCING AND DIGGING OPERATIONS. THE LANDSCAPE CONTRACTOR SHALL REPLACE OR REPAIR UTILITIES, PAVING, WALKS, CURBING, ETC. DAMAGED IN PERFORMANCE OF THIS JOB AT NO ADDITIONAL COST TO THE OWNER.
9. ALL SHRUB BEDS SHALL BE MULCHED WITH 3" CLEAN SHREDDED DARK BROWN BARK MULCH.
10. THE CONTRACTOR SHALL PROVIDE 6" LOAM FOR ALL AREAS TO BE SODDED OR SEEDED. PLANTING AREAS SHALL RECEIVE 18" ROLLED THICKNESS OF LOAM. THE LANDSCAPE CONTRACTOR SHALL COORDINATE SUBGRADE PREPARATION WITH THE GENERAL CONTRACTOR PRIOR TO PLACING LOAM.
11. ANY DEVIATION FROM THE LANDSCAPE PLAN, INCLUDING PLANT LOCATION, SELECTION, SIZE, QUANTITY OR CONDITION SHALL BE REVIEWED AND APPROVED BY THE OWNER AND LANDSCAPE ARCHITECT (AND MUNICIPAL AUTHORITY, IF APPLICABLE) PRIOR TO INSTALLATION ON SITE.
12. WHERE INDICATED ON PLAN, PLANTING SOIL MIXTURE FOR PERENNIAL AND ANNUAL FLOWER BED AREAS SHALL CONSIST OF FOUR PARTS TOPSOIL, TWO PARTS SPHAGNUM PEAT MOSS, AND ONE PART HORTICULTURAL PERLITE BY VOLUME. PEAT MOSS MAY BE SUBSTITUTED WITH WELL-ROTTED OR DEHYDRATED MANURE OR COMPOST. ROTOTILL BEDS TO A DEPTH OF 8 INCHES.
13. DURING CLEANING OF SITE AND PRIOR TO TREE AND SHRUB INSTALLATION, CONTRACTOR SHALL REMOVE INVASIVE PLANTS. AREAS WHERE INVASIVE PLANTS ARE REMOVED AND NO OTHER PLANTING IS PROPOSED, AREA SHALL BE LOAM AND SEEDED.

UTILITY NOTES

1. UTILITY INFORMATION DEPICTED HEREON IS COMPILED USING PHYSICAL EVIDENCE LOCATED IN THE FIELD. UTILITIES DEPICTED HEREON MAY NOT NECESSARILY REPRESENT ALL EXISTING UTILITIES. CONTRACTORS AND/OR DESIGNERS NEED TO CONTACT DIG-SAFE SYSTEMS, INC. (1-888-DIG-SAFE) AND FIELD VERIFY EXISTING UTILITIES PRIOR TO CONSTRUCTION AND/OR EXCAVATION. PROTECT EXISTING ONSITE SEWER PIPE AND ADJUST MANHOLE RIMS TO GRADE WHERE APPLICABLE.
2. ALL GRAVITY CONDUIT PIPES SHALL BE INSTALLED USING A PIPE LASER AND TARGET SYSTEM THROUGH THE PIPE. ON PIPE RUNS 50 FEET OR LESS, THE CONTRACTOR SHALL REQUEST ENGINEER'S APPROVAL TO USE OR NOT USE A GROUND LASER.
3. MAINTAIN MINIMUM 5'-6" OF COVER ABOVE TOP OF WATER SERVICE PIPE.
4. MAINTAIN MINIMUM 10 FEET HORIZONTAL SEPARATION BETWEEN WATER SERVICES AND OTHER UTILITIES. MAINTAIN MINIMUM 18 INCHES VERTICAL SEPARATION BETWEEN WATER SERVICES AND OTHER UTILITIES.
5. LOWER OR RAISE WATER SERVICES AS REQUIRED TO MAINTAIN MINIMUM 12 INCH VERTICAL SEPARATION FROM OTHER UTILITIES. WATER SERVICES CROSSING SEWERS SHALL MAINTAIN 12 INCH MINIMUM SEPARATION BETWEEN THE BOTTOM OF WATER LINE AND TOP OF SEWER UNLESS NOTED OTHERWISE ON THE PLANS.
6. PIPE:
   - SEWER PIPE SHALL BE SDR 35 PVC OR APPROVED EQUAL.
   - STORMDRAIN SHALL BE ADS N-12 DUAL WALL HDPE PIPE WITH SMOOTH-WALLED INTERIOR OR APPROVED EQUAL UNLESS NOTED OTHERWISE ON THE UTILITY PLANS.
   - WATER PIPE AND FITTINGS SHALL CONFORM TO THE DISTRICT HAVING JURISDICTION'S SPECIFICATIONS. MAIN WATER SERVICE PIPE SHALL BE DUCTILE IRON, CLASS 52 PUSH-ON PIPE MEETING THE REQUIREMENTS OF AWWA/ANSI C-111/A21.11 (LATEST REVISION). PIPE SHALL BE CEMENT-LINED AWWA/ANSI C104/A21.4 WITH LINING TWICE THE THICKNESS SPECIFIED, AND COATED TWICE WITH A BITUMINOUS SEAL COATING. PROVIDE THRUST BLOCKS AT ALL WATER SERVICE BENDS.
7. COORDINATE ALL UTILITY LOCATIONS AND INVERTS AT BUILDING WITH ARCHITECTURAL, STRUCTURAL AND PLUMBING DRAWINGS.
8. WATER SERVICE ENTRANCE DESIGNS TO INCLUDE METERS AND BACKFLOW PREVENTERS TO MEET ALL STANDARDS AND REQUIREMENTS OF THE DISTRICT HAVING JURISDICTION.
9. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY GRADE CHANGES THAT WILL IMPACT STORM DRAINAGE INFRASTRUCTURE OR OTHER UTILITIES.
10. UTILITIES WITHIN 5 FEET FROM FACE OF BUILDING ARE COORDINATED ON RELEVANT M.E.P. DRAWINGS. CONTRACTOR SHALL COORDINATE INVERTS, CONNECTIONS AND MATERIALS WITH ALL DRAWINGS.
11. CONTRACTOR SHALL FURNISH AND INSTALL TRENCHING, MATERIALS AND BACKFILL FOR ALL UTILITIES. ELECTRICAL AND TELECOM/DATA PROVIDERS WILL PULL PRIMARY SERVICE TO TRANSFORMER AND PANEL. CONTRACTOR RESPONSIBLE FOR TIMING AND COORDINATION WITH UTILITIES AND DRAWINGS. COORDINATE WITH ELECTRICAL DRAWINGS FOR CONDUIT SCHEDULE, TYPE AND SIZES.
12. COORDINATE ALL WATER RELATED WORK WITH DISTRICT HAVING JURISDICTION.
13. THE CONTRACTOR IS HEREBY CAUTIONED THAT ALL SITE FEATURES SHOWN HEREON ARE BASED ON FIELD OBSERVATIONS BY THE SURVEYOR AND BY INFORMATION PROVIDED BY UTILITY COMPANIES. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR SHALL CONTACT DIG SAFE (811) AT LEAST THREE (3) BUT NOT MORE THAN THIRTY (30) DAYS PRIOR TO COMMENCEMENT OF EXCAVATION OR DEMOLITION TO VERIFY HORIZONTAL AND VERTICAL LOCATION OF ALL UTILITIES.
14. CONTRACTOR SHALL BE AWARE THAT DIG SAFE ONLY NOTIFIES ITS "MEMBER" UTILITIES ABOUT THE DIG. WHEN NOTIFIED, DIG SAFE WILL ADVISE CONTRACTOR OF MEMBER UTILITIES IN THE AREA. CONTRACTOR IS RESPONSIBLE FOR IDENTIFYING AND CONTACTING NON-MEMBER UTILITIES DIRECTLY. NON-MEMBER UTILITIES MAY INCLUDE TOWN OR CITY WATER AND SEWER DISTRICTS AND SMALL LOCAL UTILITIES, AS WELL AS USG PUBLIC WORKS SYSTEMS.
15. CONTRACTORS SHALL BE RESPONSIBLE FOR COMPLIANCE WITH THE REQUIREMENTS OF 23 MRSA 3360-A. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE WITH THE APPROPRIATE UTILITIES TO OBTAIN AUTHORIZATION PRIOR TO RELOCATION OF ANY EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THESE PLANS. IF A UTILITY CONFLICT ARISES, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE OWNER, THE MUNICIPALITY AND APPROPRIATE UTILITY COMPANY PRIOR TO PROCEEDING WITH ANY RELOCATION.
16. UTILITY CONTACTS:
    WATER:
    PORTLAND WATER DISTRICT
    MEANS GROUP
    207-774-5961
    SEWER:
    CITY OF PORTLAND
    DEPARTMENT OF PUBLIC WORKS, WATER RESOURCES
    207-874-8462

TYPICAL ABBREVIATIONS

AC	ACRE
AFG	ABOVE FINISH GRADE
APPROX.	APPROXIMATELY
BC	BOTTOM OF CURB
BCC	BITUMINOUS CONCRETE CURB
BIT	BITUMINOUS
BLDG	BUILDING
BS	BOTTOM OF SLAB
BW	BOTTOM OF WALL
CB	CATCH BASIN
CONC	CONCRETE
CONT	CONTINUOUS
DI	DUCTILE IRON
DIA	DIAMETER
DMH	DRAIN MANHOLE
E.W.	EACH WAY
ELEV	ELEVATION
FFE	FINISH FLOOR ELEVATION
FIN. GR.	FINISH GRADE
FTG	FOOTING
GTC	GRANITE TRANSITION CURB
HDPE	HIGH DENSITY POLYETHYLENE
HGT	HEIGHT
HMA	HOT MIX ASPHALT
INV	INVERT
LF	LINEAR FEET
OC	ON CENTER
PVC	POLYVINYL CHLORIDE
PWD	PORTLAND WATER DISTRICT
R	RADIUS
R.O.W.	RIGHT OF WAY
S.F.	SQUARE FEET
SCH	SCHEDULE
SCSC	SLIPFORM CONCRETE SLOPED CURB
SCVC	SLIPFORM CONCRETE VERTICAL CURB
SD	STORM DRAIN
SGC	SLOPED GRANITE CURB
SMH	SEWER MANHOLE SPECS SPECIFICATIONS
SS	SANITARY SEWER
TC	TOP OF CURB
TS	TOP OF SLAB
TW	TOP OF WALL
TYP	TYPICAL
VGC	VERTICAL GRANITE CURB
VIF	VERIFY IN FIELD

TAX PARCELS: 434-C-1,434-C-5 & 434-C-10

STATE OF MAINE — PAUL D. OSTROWSKI — 10057 — REGISTERED PROFESSIONAL ENGINEER — 01/06/2025
PAUL D. OSTROWSKI, PE 11175

KYLIE S. MASON — NOTARY PUBLIC — STATE OF MAINE — MY COMMISSION EXPIRES 03/06/2030 — 01/06/2025
KYLIE S. MASON, RLA 3335

REV	BY:	DATE:	STATUS:
E	KSM	01/06/2025	RESPONSE TO CITY DPW REVIEW COMMENTS
D	KSM	11/15/2024	RESPONSE TO CITY REVIEW COMMENTS
C	KSM	04/26/2024	RESPONSE TO CITY REVIEW COMMENTS
B	KSM	03/14/2024	RESPONSE TO CITY REVIEW COMMENTS
A	KSM	12/20/2023	ISSUED TO CITY OF PORTLAND FOR SITE PLAN REVIEW

THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM SEBAGO TECHNICS, INC. ANY ALTERATIONS, AUTHORIZED OR OTHERWISE, SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO SEBAGO TECHNICS, INC.

SEBAGO TECHNICS
WWW.SEBAGOTECHNICS.COM
75 John Roberts Rd.
Suite E
South Portland, ME 04106
Tel: 207-200-2100

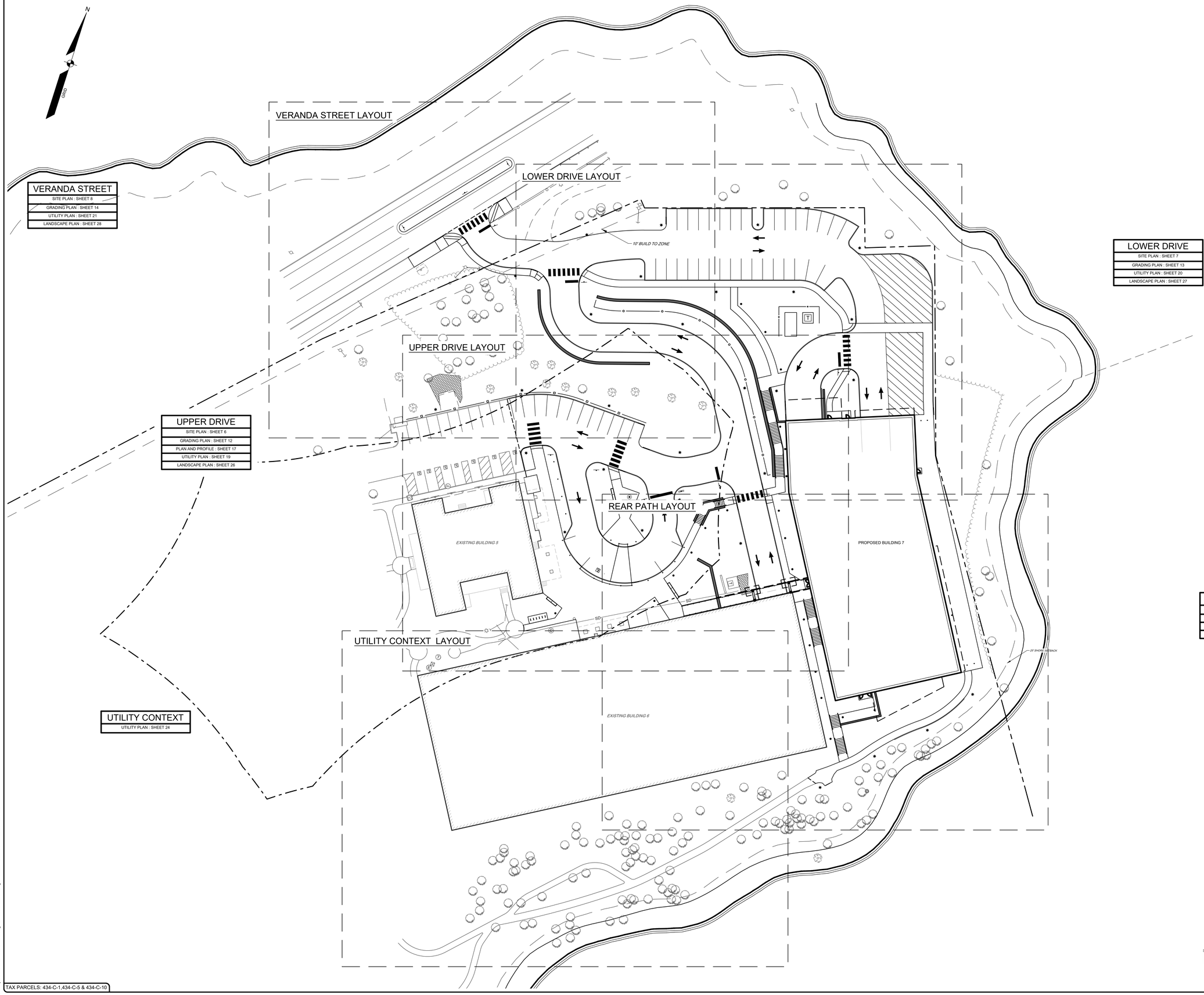
NOTES AND LEGEND
MARTIN'S POINT HEALTH CARE VERANDA CAMPUS
331 VERANDA STREET
PORTLAND, ME 04103
MARTIN'S POINT HEALTH CARE, INC.
PO BOX 9746
PORTLAND, ME 04103

211026 NL-BLDG 7.dwg, TAB NOTES AND LEGEND

DESIGNED	BAM/PDO
DRAWN	CJC
CHECKED	PDO
DATE	04/10/2023
SCALE	NTS
PROJECT	211026

SHEET 2 OF 37

F:\Projects\211000\211026\DWG\Design\211026 NL-BLDG 7.dwg - 1/6/2025 10:43 AM - PAUL OSTROWSKI



VERANDA STREET
SITE PLAN : SHEET 8
GRADING PLAN : SHEET 14
UTILITY PLAN : SHEET 21
LANDSCAPE PLAN : SHEET 28

UPPER DRIVE
SITE PLAN : SHEET 6
GRADING PLAN : SHEET 12
PLAN AND PROFILE : SHEET 17
UTILITY PLAN : SHEET 19
LANDSCAPE PLAN : SHEET 26

UTILITY CONTEXT
UTILITY PLAN : SHEET 24

LOWER DRIVE
SITE PLAN : SHEET 7
GRADING PLAN : SHEET 13
UTILITY PLAN : SHEET 20
LANDSCAPE PLAN : SHEET 27

REAR PATH
SITE PLAN : SHEET 9
GRADING PLAN : SHEET 15
UTILITY PLAN : SHEET 22
LANDSCAPE PLAN : SHEET 29

GRAPHIC SCALE
30 0 15 30 60
(IN FEET)
1 INCH = 30 FT.

TAX PARCELS: 434-C-1,434-C-5 & 434-C-10

PAUL D. OSTROWSKI, PE 11175
STATE OF MAINE — PAUL D. OSTROWSKI — No. 11175 — REGISTERED PROFESSIONAL ENGINEER — 01/06/2025

KYLIE S. MASON, RLA 3335
LICENSED LANDSCAPE ARCHITECT — KYLIE S. MASON — No. 3335 — 01/06/2025

REV:	BY:	DATE:	STATUS:
E	KSM	01/06/2025	RESPONSE TO CITY 'DPW' REVIEW COMMENTS
D	KSM	11/14/2024	RESPONSE TO CITY REVIEW COMMENTS
C	KSM	04/26/2024	RESPONSE TO CITY REVIEW COMMENTS
B	KSM	03/14/2024	RESPONSE TO CITY REVIEW COMMENTS
A	KSM	12/20/2023	ISSUED TO CITY OF PORTLAND FOR SITE PLAN REVIEW

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SEBAGO TECHNICS
WWW.SEBAGOTECHNICS.COM
75 John Roberts Rd.
Suite 4A
South Portland, ME 04106
Tel: 207-200-2100

INDEX PLAN

MARTIN'S POINT HEALTH CARE VERANDA CAMPUS

331 VERANDA STREET
PORTLAND, ME 04103

MARTIN'S POINT HEALTH CARE, INC.

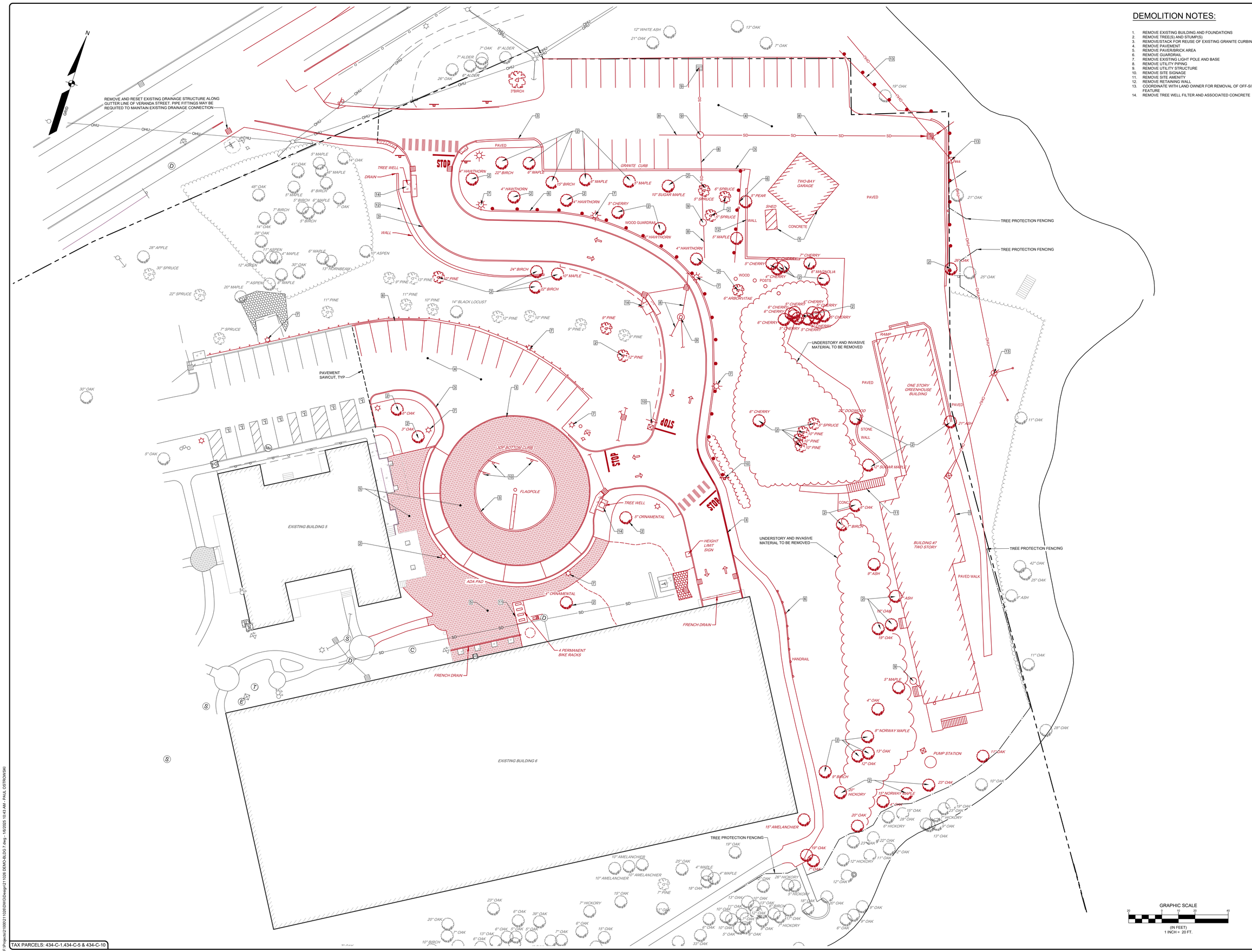
PO BOX 9746
PORTLAND, ME 04103

DESIGNED	BAM/PDO
DRAWN	CJC
CHECKED	PDO
DATE	04/10/2023
SCALE	1" = 30'
PROJECT	211026

SHEET 4 OF 37

F:\Projects\211026\211026\DWG\Design\211026 S-BLDG7.dwg - 1/6/2025 10:43 AM - PAUL OSTROWSKI

211026 S-BLDG7.dwg, TAB:INDEX PLAN



TAX PARCELS: 434-C-1,434-C-5 & 434-C-10

DEMOLITION NOTES:

1. REMOVE EXISTING BUILDING AND FOUNDATIONS
2. REMOVE TREE(S) AND STUMP(S)
3. REMOVE/STACK FOR REUSE OF EXISTING GRANITE CURBING
4. REMOVE PAVEMENT
5. REMOVE PAVER/BRICK AREA
6. REMOVE GUARDRAIL
7. REMOVE EXISTING LIGHT POLE AND BASE
8. REMOVE UTILITY PIPING
9. REMOVE UTILITY STRUCTURE
10. REMOVE SITE SIGNAGE
11. REMOVE SITE AMENITY
12. REMOVE RETAINING WALL
13. COORDINATE WITH LAND OWNER FOR REMOVAL OF OFF-SITE FEATURE
14. REMOVE TREE WELL FILTER AND ASSOCIATED CONCRETE

PAUL D. OSTROWSKI, PE 11175

STATE OF MAINE
PAUL D. OSTROWSKI
No. 11175
LICENSED PROFESSIONAL ENGINEER
01/06/2025

KYLIE S. MASON, RLA 3335

LICENSED LANDSCAPE ARCHITECT
KYLIE S. MASON
STATE OF MAINE
01/06/2025

REV:	BY:	DATE:	STATUS:
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75 John Roberts Rd.
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Tel. 207-200-2100

DEMO PLAN

MARTIN'S POINT HEALTH CARE VERANDA CAMPUS
331 VERANDA STREET
PORTLAND, ME 04103

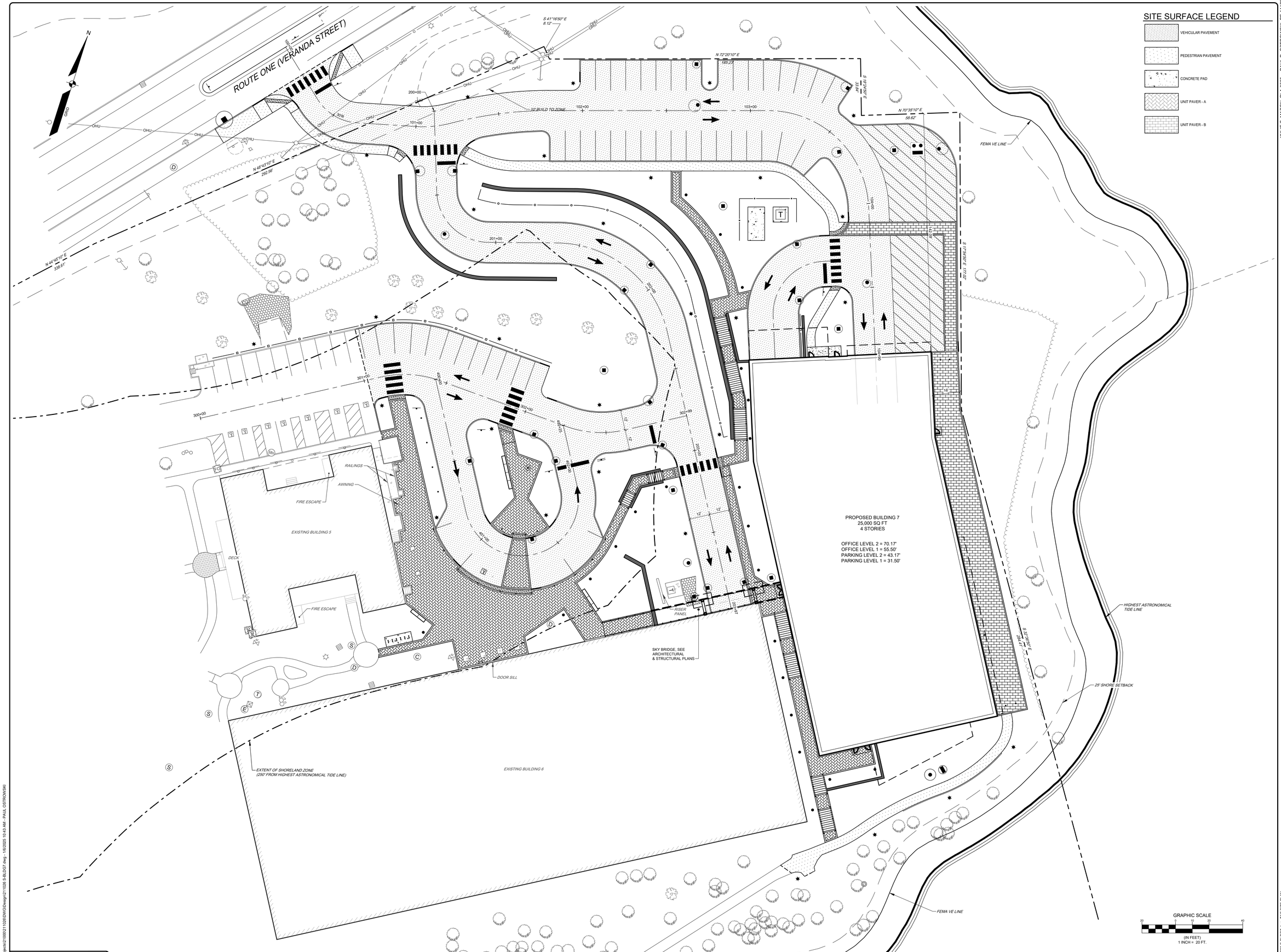
MARTIN'S POINT HEALTH CARE, INC.
PO BOX 9746
PORTLAND, ME 04103

DESIGNED	BAM/PDO
DRAWN	CJC
CHECKED	PDO
DATE	04/10/2023
SCALE	1" = 20'
PROJECT	211026

SHEET 3 OF 37

211026 DEMO-BLDG 7.dwg, TAB:DEMO PLAN

F:\Projects\21000\211026\DWG\Design\211026 DEMO-BLDG 7.dwg - 1/6/2025 10:43 AM - PAUL OSTROWSKI



TAX PARCELS: 434-C-1,434-C-5 & 434-C-10

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211026 S-BLDG7.dwg, TAB:SITE PLAN

STATE OF MAINE
PAUL D. OSTROWSKI
No. 11175
REGISTERED PROFESSIONAL ENGINEER
01/06/2025

PAUL D. OSTROWSKI, PE 11175

KYLIE S. MASON, RLA 3335

LICENSED LANDSCAPE ARCHITECT
KYLIE S. MASON
No. 3335
STATE OF MAINE
01/06/2025

KYLIE S. MASON, RLA 3335

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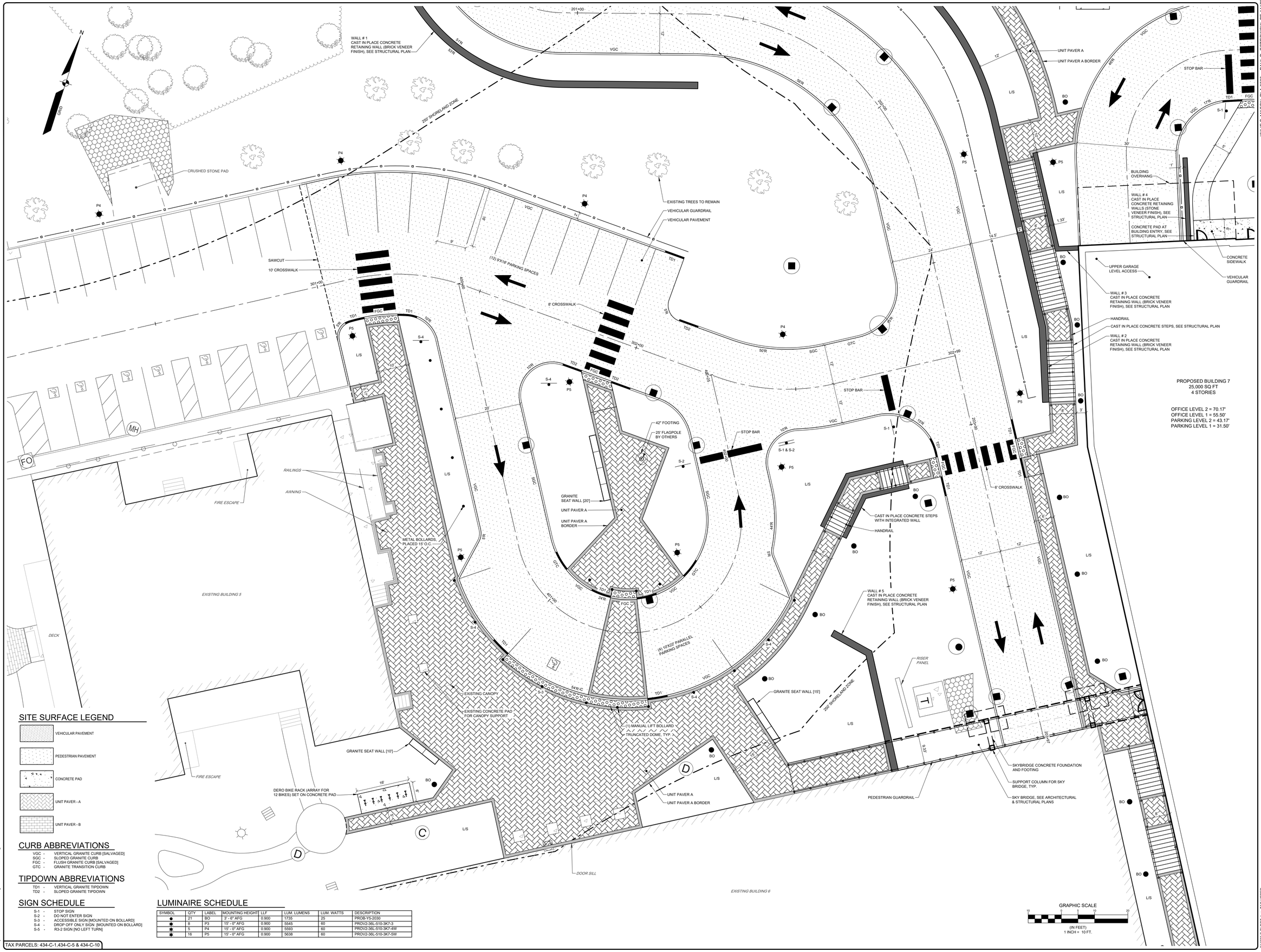
OVERALL SITE PLAN

MARTIN'S POINT HEALTH CARE VERANDA CAMPUS
331 VERANDA STREET
PORTLAND, ME 04103

MARTIN'S POINT HEALTH CARE, INC.
PO BOX 9746
PORTLAND, ME 04103

DESIGNED	BAM/PDO
DRAWN	CJC
CHECKED	PDO
DATE	04/10/2023
SCALE	1" = 20'
PROJECT	211026

SHEET 5 OF 37



SITE SURFACE LEGEND

- VEHICULAR PAVEMENT
- PEDESTRIAN PAVEMENT
- CONCRETE PAD
- UNIT PAVER - A
- UNIT PAVER - B

CURB ABBREVIATIONS

- VGC - VERTICAL GRANITE CURB [SALVAGED]
- SGC - SLOPED GRANITE CURB
- FGC - FLUSH GRANITE CURB [SALVAGED]
- GTC - GRANITE TRANSITION CURB

TIPDOWN ABBREVIATIONS

- TD1 - VERTICAL GRANITE TIPDOWN
- TD2 - SLOPED GRANITE TIPDOWN

SIGN SCHEDULE

- S-1 - STOP SIGN
- S-2 - DO NOT ENTER SIGN
- S-3 - ACCESSIBLE SIGN [MOUNTED ON BOLLARD]
- S-4 - DROP OFF ONLY SIGN [MOUNTED ON BOLLARD]
- S-5 - R3-2 SIGN [NO LEFT TURN]

LUMINAIRE SCHEDULE

SYMBOL	QTY	LABEL	MOUNTING HEIGHT	LLF	LUM. LUMENS	LUM. WATTS	DESCRIPTION
●	21	BO	3' - 6" AFG	0.900	1735	25	PROB-Y5-2030
✱	8	P3	15' - 0" AFG	0.900	5545	60	PROV2-36L-510-3K7-3
✱	5	P4	15' - 0" AFG	0.900	5593	60	PROV2-36L-510-3K7-4W
✱	16	P5	15' - 0" AFG	0.900	5638	60	PROV2-36L-510-3K7-5W

TAX PARCELS: 434-C-1,434-C-5 & 434-C-10

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PAUL D. OSTROWSKI, PE 11175
STATE OF MAINE — PAUL D. OSTROWSKI — No. 11175 — PROFESSIONAL ENGINEER — 01/06/2025

KYLE S. MASON, RLA 3335
LICENSED LANDSCAPE ARCHITECT — KYLE S. MASON — No. 3335 — 01/06/2025

REV.	BY:	DATE:	STATUS:
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Tel: 207-200-2100

UPPER DRIVE SITE PLAN

MARTIN'S POINT HEALTH CARE VERANDA CAMPUS
331 VERANDA STREET
PORTLAND, ME 04103

MARTIN'S POINT HEALTH CARE, INC.
PO BOX 9748
PORTLAND, ME 04103

DESIGNED	BAM/PDO
DRAWN	CJC
CHECKED	PDO
DATE	04/10/2023
SCALE	1" = 10'
PROJECT	211026

211026 S-BLDG7.dwg, TABUPPER

SHEET 6 OF 37

LUMINAIRE SCHEDULE

SYMBOL	QTY	LABEL	MOUNTING HEIGHT	LLF	LUM. LUMENS	LUM. WATTS	DESCRIPTION
●	21	BO	3' - 6" AFG	0.900	1735	25	PROB-YS-2030
✱	8	P3	15' - 0" AFG	0.900	5545	60	PROV2-36L-510-3K7-3
✱	5	P4	15' - 0" AFG	0.900	5593	60	PROV2-36L-510-3K7-4W
✱	16	P5	15' - 0" AFG	0.900	5638	60	PROV2-36L-510-3K7-5W

SITE SURFACE LEGEND

- VEHICULAR PAVEMENT
- PEDESTRIAN PAVEMENT
- CONCRETE PAD
- UNIT PAVER - A
- UNIT PAVER - B

CURB ABBREVIATIONS

- VGC - VERTICAL GRANITE CURB [SALVAGED]
- SGC - SLOPED GRANITE CURB
- FGC - FLUSH GRANITE CURB [SALVAGED]
- GTC - GRANITE TRANSITION CURB

TIPDOWN ABBREVIATIONS

- TD1 - VERTICAL GRANITE TIPDOWN
- TD2 - SLOPED GRANITE TIPDOWN

SIGN SCHEDULE

- S-1 - STOP SIGN
- S-2 - DO NOT ENTER SIGN
- S-3 - ACCESSIBLE SIGN [MOUNTED ON BOLLARD]
- S-4 - DROP OFF ONLY SIGN [MOUNTED ON BOLLARD]
- S-5 - R3-2 SIGN [NO LEFT TURN]

N 72°20'10" E 185.23'
S 18°54'50" E 33.64'
N 70°35'10" E 58.62'
S 18°54'50" E 231.27'
(8) 9'X18' PARKING SPACES
(9) 9'X18' PARKING SPACES
(16) 9'X18' PARKING SPACES
(12) 9'X18' PARKING SPACES
UP CMP 41.1
UP CMP 42
S 41°16'50" E 8.12'
UTILITY POLE
FENCE
GRID
10' BUILD TO ZONE
SNOW STORAGE
250' SHORELAND ZONE
TRUNCATED DOME, TYP.
6' CROSSWALK
STOP BAR
WALL # 1 CAST IN PLACE CONCRETE RETAINING WALL (BRICK VENEER FINISH), SEE STRUCTURAL PLAN
WALL # 2 CAST IN PLACE CONCRETE RETAINING WALL (BRICK VENEER FINISH), SEE STRUCTURAL PLAN
PEDESTRIAN GUARDRAIL
EXISTING TREES TO REMAIN
VEHICULAR GUARDRAIL
VEHICULAR PAVEMENT
PEDESTRIAN PAVEMENT
6' TALL SCREEN FENCING
TRANSFORMER PAD [9' X 9'], SEE UTILITY PLANS
GENERATOR PAD [10' X 20'], SEE UTILITY PLANS
42" FOOTING
25' FLAGPOLE BY OTHERS
UNIT PAVER A
UNIT PAVER A BORDER
UNIT PAVER B
UNIT PAVER B BORDER
4" SOLID WHITE LINE AT 45 DEGREES, SPACED 4' ON CENTER
BUILDING OVERHANG
WALL # 4 CAST IN PLACE CONCRETE RETAINING WALLS (STONE VENEER FINISH), SEE STRUCTURAL PLAN
CONCRETE PAD AT BUILDING ENTRY, SEE STRUCTURAL PLAN
CONCRETE SIDEWALK
VEHICULAR GUARDRAIL
UPPER GARAGE LEVEL ACCESS
LOWER GARAGE LEVEL ACCESS
LOADING AREA
(2) MANUAL LIFT BOLLARD
WALL # 3 CAST IN PLACE CONCRETE RETAINING WALL (BRICK VENEER FINISH), SEE STRUCTURAL PLAN
HANDRAIL
CAST IN PLACE CONCRETE STEPS, SEE STRUCTURAL PLAN
PROPOSED BUILDING 7
25,000 SQ FT
4 STORIES
OFFICE LEVEL 2 = 70.17'
OFFICE LEVEL 1 = 55.50'
PARKING LEVEL 2 = 43.17'
PARKING LEVEL 1 = 31.50'
GRAPHIC SCALE
(IN FEET)
1 INCH = 10 FT.
TAX PARCELS: 434-C-1,434-C-5 & 434-C-10

PAUL D. OSTROWSKI, PE 11175
STATE OF MAINE — PAUL D. OSTROWSKI — No. 11175 — PROFESSIONAL ENGINEER — 01/06/2025

KYLIE S. MASON, RLA 3335
KYLIE S. MASON — No. 3335 — REGISTERED LANDSCAPE ARCHITECT — 01/06/2025

REV.	BY:	DATE:	STATUS:
E	KSM	01/06/2025	RESPONSE TO CITY DPW REVIEW COMMENTS
D	KSM	04/28/2024	RESPONSE TO CITY REVIEW COMMENTS
C	KSM	04/28/2024	RESPONSE TO CITY REVIEW COMMENTS
B	KSM	03/14/2024	RESPONSE TO CITY REVIEW COMMENTS
A	KSM	12/20/2023	ISSUED TO CITY OF PORTLAND FOR SITE PLAN REVIEW

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75 John Roberts Rd.
Suite 4A
South Portland, ME 04106
Tel: 207-200-2100

LOWER DRIVE SITE PLAN
MARTIN'S POINT HEALTH CARE VERANDA CAMPUS
331 VERANDA STREET
PORTLAND, ME 04103

MARTIN'S POINT HEALTH CARE, INC.
PO BOX 9746
PORTLAND, ME 04103

DESIGNED	BAM/PDO
DRAWN	CJC
CHECKED	PDO
DATE	04/10/2023
SCALE	1" = 10'
PROJECT	211026

SHEET 7 OF 37

F:\Projects\21\026\21102621026\DWG\Design\211026 S-BLDG7.dwg - 1/6/2025 10:44 AM - PAUL OSTROWSKI

211026 S-BLDG7.dwg, TAB:LOWER

LUMINAIRE SCHEDULE

SYMBOL	QTY	LABEL	MOUNTING HEIGHT	LLF	LUM. LUMENS	LUM. WATTS	DESCRIPTION
●	21	BO	3' - 6" AFG	0.900	1735	25	PROB-YS-2030
✱	8	P3	15' - 0" AFG	0.900	5545	60	PROV2-36L-510-3K7-3
✱	5	P4	15' - 0" AFG	0.900	5593	60	PROV2-36L-510-3K7-4W
✱	16	P5	15' - 0" AFG	0.900	5638	60	PROV2-36L-510-3K7-5W

SITE SURFACE LEGEND

- VEHICULAR PAVEMENT
- PEDESTRIAN PAVEMENT
- CONCRETE PAD
- UNIT PAVER - A
- UNIT PAVER - B

CURB ABBREVIATIONS

- VGC - VERTICAL GRANITE CURB [SALVAGED]
- SGC - SLOPED GRANITE CURB
- FGC - FLUSH GRANITE CURB [SALVAGED]
- GTC - GRANITE TRANSITION CURB

TIPDOWN ABBREVIATIONS

- TD1 - VERTICAL GRANITE TIPDOWN
- TD2 - SLOPED GRANITE TIPDOWN

SIGN SCHEDULE

- S-1 - STOP SIGN
- S-2 - DO NOT ENTER SIGN
- S-3 - ACCESSIBLE SIGN [MOUNTED ON BOLLARD]
- S-4 - DROP OFF ONLY SIGN [MOUNTED ON BOLLARD]
- S-5 - R3-2 SIGN [NO LEFT TURN]

NOTE:

TRAFFIC SIGNAL AT MARINE HOSPITAL ROAD AND VERANDA STREET MODIFIED TO INCLUDE THE FOLLOWING:

*ALL EXISTING TRAFFIC SIGNAL BACKPLATES TO BE RETROFITTED WITH 3" RETROREFLECTIVE BOARDERS.

*TRAFFIC SIGNAL FOR SOUTHBOUND LEFT TURN LANE TO BE REPLACED WITH A FLASHING YELLOW ARROW FOR PERMISSIVE LEFT TURNS.

GRAPHIC SCALE
(IN FEET)
1 INCH = 10 FT.

TAX PARCELS: 434-C-1,434-C-5 & 434-C-10

PAUL D. OSTROWSKI, PE 11175
STATE OF MAINE — PAUL D. OSTROWSKI No. 11175 — REGISTERED PROFESSIONAL ENGINEER — 01/06/2025

KYLIE S. MASON, RLA 3335
KYLIE S. MASON — LICENSED LANDSCAPE ARCHITECT — 01/06/2025

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VERANDA STREET SITE PLAN

MARTIN'S POINT HEALTH CARE VERANDA CAMPUS
331 VERANDA STREET
PORTLAND, ME 04103

MARTIN'S POINT HEALTH CARE, INC.
PO BOX 9746
PORTLAND, ME 04103

DESIGNED	BAM/PDO
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PROJECT	211026

SHEET 8 OF 37

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211026 S-BLDG7.dwg, TAB:VERANDA



SITE SURFACE LEGEND

- VEHICULAR PAVEMENT
- PEDESTRIAN PAVEMENT
- CONCRETE PAD
- UNIT PAVER - A
- UNIT PAVER - B

CURB ABBREVIATIONS

VGC	-	VERTICAL GRANITE CURB [SALVAGED]
SGC	-	SLOPED GRANITE CURB
FGC	-	FLUSH GRANITE CURB [SALVAGED]
GTC	-	GRANITE TRANSITION CURB

TIPDOWN ABBREVIATIONS

TD1	-	VERTICAL GRANITE TIPDOWN
TD2	-	SLOPED GRANITE TIPDOWN

SIGN SCHEDULE

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S-2	-	DO NOT ENTER SIGN
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LUMINAIRE SCHEDULE

SYMBOL	QTY	LABEL	MOUNTING HEIGHT	LLF	LUM. LUMENS	LUM. WATTS	DESCRIPTION
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TAX PARCELS: 434-C-1,434-C-5 & 434-C-10

PAUL D. OSTROWSKI, PE 11175
STATE OF MAINE — PAUL D. OSTROWSKI — No. 11175 — LICENSED PROFESSIONAL ENGINEER — 01/06/2025

KYLIE S. MASON, RLA 3335
LICENSED LANDSCAPE ARCHITECT — KYLIE S. MASON — 3335 — 01/06/2025

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75 John Roberts Rd.
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South Portland, ME 04106
Tel: 207-200-2100

REAR PATH SITE PLAN

MARTIN'S POINT HEALTH CARE VERANDA CAMPUS
331 VERANDA STREET
PORTLAND, ME 04103

MARTIN'S POINT HEALTH CARE, INC.
PO BOX 9746
PORTLAND, ME 04103

DESIGNED	BAM/PDO
DRAWN	CJC
CHECKED	PDO
DATE	04/10/2023
SCALE	1" = 10'
PROJECT	211026

SHEET 9 OF 37

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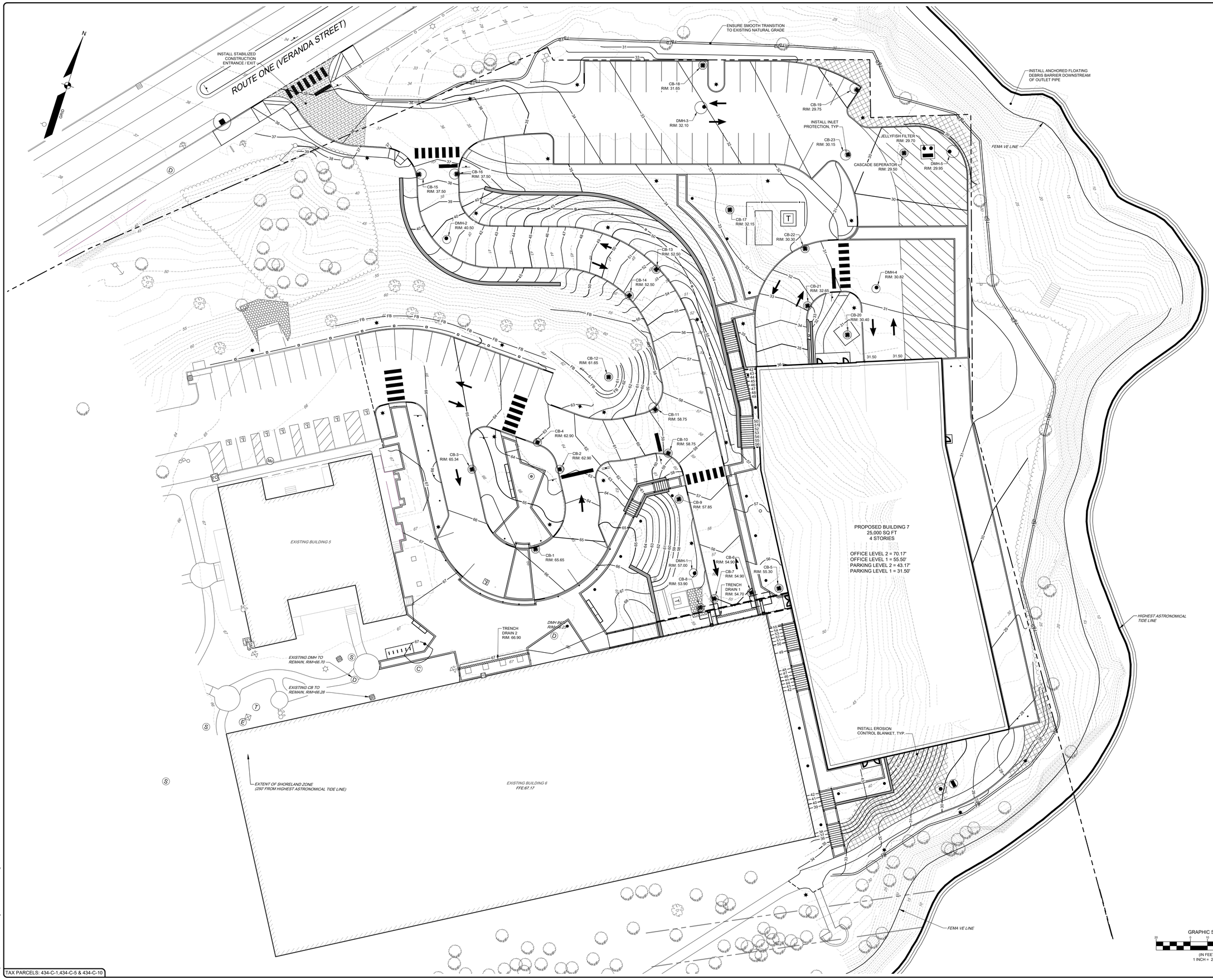

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PAUL D. OSTROWSKI, PE 11175

STATE OF MAINE
PAUL D. OSTROWSKI
No. 11175
LICENSED PROFESSIONAL ENGINEER
01/06/2025

KYLIE S. MASON, RLA 3335

LICENSED LANDSCAPE ARCHITECT
KYLIE S. MASON
No. 3335
STATE OF MAINE
01/06/2025

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Tel. 207-200-2100

EROSION CONTROL PLAN

MARTIN'S POINT HEALTH CARE VERANDA CAMPUS
331 VERANDA STREET
PORTLAND, ME 04103

MARTIN'S POINT HEALTH CARE, INC.
PO BOX 9746
PORTLAND, ME 04103

DESIGNED	BAM/PDO
DRAWN	CJC
CHECKED	PDO
DATE	04/10/2023
SCALE	1" = 20'
PROJECT	211026

211026 ESC-BLDG7.dwg, TAB:Overall Erosion Control

SHEET 10 AOF37

ROUTE ONE (VERANDA STREET)

ENSURE SMOOTH TRANSITION TO EXISTING NATURAL GRADE

CB-18 RIM: 31.65
CB-19 RIM: 29.75
DMH-3 RIM: 32.10
CB-23 RIM: 30.15
JELLYFISH FILTER RIM: 29.70
CASCADE SEPERATOR RIM: 29.50
DMH-5 RIM: 29.95
FEMA VE LINE
CB-16 RIM: 37.50
CB-15 RIM: 37.50
DMH-2 RIM: 40.50
CB-17 RIM: 32.15
CB-22 RIM: 30.30
CB-13 RIM: 52.50
CB-14 RIM: 52.50
DMH-4 RIM: 30.82
CB-21 RIM: 32.65
CB-20 RIM: 30.40
CB-12 RIM: 61.65
CB-11 RIM: 58.75
CB-10 RIM: 58.75
CB-4 RIM: 62.90
CB-2 RIM: 62.90
CB-3 RIM: 65.34
CB-9 RIM: 57.85
CB-1 RIM: 65.65
DMH-1 RIM: 57.00
CB-8 RIM: 53.90
CB-6 RIM: 54.90
CB-7 RIM: 54.90
CB-5 RIM: 55.30
TRENCH DRAIN 1 RIM: 54.70
TRENCH DRAIN 2 RIM: 66.90
DMH 8421 RIM=66.23

PROPOSED BUILDING 7
25,000 SQ FT
4 STORIES

OFFICE LEVEL 2 = 70.17'
OFFICE LEVEL 1 = 55.50'
PARKING LEVEL 2 = 43.17'
PARKING LEVEL 1 = 31.50'

EXISTING BUILDING 5
EXISTING BUILDING 6
FFE:67.17

EXISTING DMH TO REMAIN, RIM=66.70
EXISTING CB TO REMAIN, RIM=66.28

EXTENT OF SHORELAND ZONE
(250' FROM HIGHEST ASTRONOMICAL TIDE LINE)

HIGHEST ASTRONOMICAL TIDE LINE

INSTALL EROSION CONTROL BLANKET, TYP.

FEMA VE LINE

GRAPHIC SCALE
20 0 10 20 40
(IN FEET)
1 INCH = 20 FT.

TAX PARCELS: 434-C-1,434-C-5 & 434-C-10

PAUL D. OSTROWSKI, PE 11175
STATE OF MAINE — PAUL D. OSTROWSKI — No. 11175 — REGISTERED PROFESSIONAL ENGINEER — 01/06/2025

KYLIE S. MASON, RLA 3335
LICENSED LANDSCAPE ARCHITECT — KYLIE S. MASON — No. 3335 — 01/06/2025

REV.	BY:	DATE:	STATUS:
E	KSM	01/06/2025	RESPONSE TO CITY DPW REVIEW COMMENTS
D	KSM	11/14/2024	RESPONSE TO CITY REVIEW COMMENTS
C	KSM	04/26/2024	RESPONSE TO CITY REVIEW COMMENTS
B	KSM	03/14/2024	RESPONSE TO CITY REVIEW COMMENTS
A	KSM	12/20/2023	ISSUED TO CITY OF PORTLAND FOR SITE PLAN REVIEW

THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM SEBAGO TECHNICS, INC. ANY ALTERATIONS, AUTHORIZED OR OTHERWISE, SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO SEBAGO TECHNICS, INC.

SEBAGO TECHNICS
WWW.SEBAGOTECHNICS.COM
75 John Roberts Rd.
Suite A
South Portland, ME 04106
Tel: 207-200-2100

OVERALL GRADING PLAN

MARTIN'S POINT HEALTH CARE VERANDA CAMPUS

331 VERANDA STREET
PORTLAND, ME 04103

MARTIN'S POINT HEALTH CARE, INC.

PO BOX 9746
PORTLAND, ME 04103

DESIGNED	BAM/PDO
DRAWN	CJC
CHECKED	PDO
DATE	04/10/2023
SCALE	1" = 20'
PROJECT	211026

SHEET 11 OF 37

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211026 G-BLDG7.dwg, TAB:OVERALL GRADING PLAN

PROPOSED BUILDING 7
25,000 SQ FT
4 STORIES

OFFICE LEVEL 2 = 70.17'
OFFICE LEVEL 1 = 55.50'
PARKING LEVEL 2 = 43.17'
PARKING LEVEL 1 = 31.50'

EXISTING BUILDING 5

EXISTING BUILDING 6
FFE:67.17

EXISTING DMH TO REMAIN, RIM=66.70

EXISTING CB TO REMAIN, RIM=66.28

DMH 8421
RIM=66.23

TAX PARCELS: 434-C-1,434-C-5 & 434-C-10

GRAPHIC SCALE
10 0 5 10 20
(IN FEET)
1 INCH = 10 FT.

PAUL D. OSTROWSKI, PE 11175
STATE OF MAINE — PAUL D. OSTROWSKI — No. 11175 — REGISTERED PROFESSIONAL ENGINEER — 01/06/2025

KYLIE S. MASON, RLA 3335
LICENSED LANDSCAPE ARCHITECT — KYLIE S. MASON — No. 3335 — 01/06/2025

REV:	BY:	DATE:	STATUS:
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C	KSM	04/08/2024	RESPONSE TO CITY REVIEW COMMENTS
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SEBAGO TECHNICS
WWW.SEBAGOTECHNICS.COM
75 John Roberts Rd.
Suite E
South Portland, ME 04106
Tel: 207-200-2100

UPPER DRIVE GRADING PLAN

MARTIN'S POINT HEALTH CARE VERANDA CAMPUS
331 VERANDA STREET
PORTLAND, ME 04103

MARTIN'S POINT HEALTH CARE, INC.
PO BOX 9746
PORTLAND, ME 04103

DESIGNED	BAM/PDO
DRAWN	CJC
CHECKED	PDO
DATE	04/10/2023
SCALE	1" = 10'
PROJECT	211026

SHEET 12 OF 37

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211026 G-BLDG7.dwg, TAB:GRADING PLAN 2

LOWER DRIVE GRADING PLAN

MARTIN'S POINT HEALTH CARE, INC.

331 VERANDA STREET
PORTLAND, ME 04103

MARTIN'S POINT HEALTH CARE VERANDA CAMPUS

DESIGNED	BAM/RDB
DRAWN	CJC
CHECKED	PDO
DATE	04/10/2023
SCALE	1" = 10'
PROJECT	211026

SHEET 13 OF 37

SEBAGO TECHNICS
75 John Roberts Rd.
Suite 4A
South Portland, ME 04106
Tel: 207-200-2100
WWW.SEBAGOTECHNICS.COM

REV.:	BY:	DATE:	STATUS:
A	KSM	12/20/2023	ISSUED TO CITY OF PORTLAND FOR SITE PLAN REVIEW
B	KSM	03/14/2024	RESPONSE TO CITY REVIEW COMMENTS
C	KSM	04/26/2024	RESPONSE TO CITY REVIEW COMMENTS
D	KSM	11/14/2024	RESPONSE TO CITY REVIEW COMMENTS
E	KSM	01/06/2025	RESPONSE TO CITY DPW REVIEW COMMENTS

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KYLIE S. MASON, R.L.A. 3335

PAUL D. OSTROWSKI, P.E. 11175

01/06/2025

TAX PARCELS: 434-C-1, 434-C-5 & 434-C-10

GRAPHIC SCALE
(IN FEET)
1 INCH = 10 FT.

PROPOSED BUILDING 7
55,000 SQ. FT.
4 STORIES

OFFICE LEVEL 2 = 70.47'
OFFICE LEVEL 1 = 55.50'
PARKING LEVEL 2 = 43.17'
PARKING LEVEL 1 = 31.50'

GENERATOR PAD

ENSURE SMOOTH TRANSITION TO EXISTING NATURAL GRADE

DMD

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VERANDA STREET GRADING PLAN

MARTIN'S POINT HEALTH CARE VERANDA CAMPUS

331 VERANDA STREET
PORTLAND, ME 04103

MARTIN'S POINT HEALTH CARE, INC.
PO BOX 9746
PORTLAND, ME 04103

SEBAGO TECHNICS
WWW.SEBAGOTECHNICS.COM
75 John Roberts Rd.
Suite 4A
South Portland, ME 04106
Tel: 207-200-2100

DESIGNED	BAM/PDO
DRAWN	CJC
CHECKED	PDO
DATE	04/10/2023
SCALE	1" = 10'
PROJECT	21102B

SHEET 14 OF 37

REV.:	BY:	DATE:	STATUS:
A	KSM	12/20/2023	ISSUED TO CITY OF PORTLAND FOR SITE PLAN REVIEW
B	KSM	03/14/2024	RESPONSE TO CITY REVIEW COMMENTS
C	KSM	04/26/2024	RESPONSE TO CITY REVIEW COMMENTS
D	KSM	11/14/2024	RESPONSE TO CITY REVIEW COMMENTS
E	KSM	01/06/2025	RESPONSE TO CITY DPW REVIEW COMMENTS

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KYLE S. MASON, RLA 3335
01/06/2025

PAUL D. OSTROWSKI, PE 11175
01/06/2025

21102B G-BLDG7.dwg, TAB-GRADING PLAN 3

TAX PARCELS: 434-C-1, 434-C-5 & 434-C-10

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Page 2718

PROPOSED BUILDING 7
25,000 SQ FT
4 STORIES

OFFICE LEVEL 2 = 70.17'
OFFICE LEVEL 1 = 55.50'
PARKING LEVEL 2 = 43.17'
PARKING LEVEL 1 = 31.50'

CB-1
RIM: 65.65

CB-5
RIM: 55.30

CB-6
RIM: 54.90

CB-7
RIM: 54.90

CB-8
RIM: 53.90

CB-9
RIM: 57.85

DMH-1
RIM: 57.00

TRENCH
DRAIN 1
RIM: 54.70

TRENCH
DRAIN 2
RIM: 66.90

DMH 8421
RIM=66.23

EXISTING BUILDING 6
FFE:67.17

INSTALL EROSION
CONTROL BLANKET, TYP.

SEWER PUMP STATION AND VALVE PIT,
REFER TO UTILITY PLAN AND DETAIL
FOR ADDITIONAL INFORMATION

HIGHEST ASTRONOMICAL
TIDE LINE

FEMA VE LINE

GRAPHIC SCALE
(IN FEET)
1 INCH = 10 FT.

TAX PARCELS: 434-C-1,434-C-5 & 434-C-10

PAUL D. OSTROWSKI, PE 11175
STATE OF MAINE
PAUL D. OSTROWSKI
No. 11175
Registered Professional Engineer
01/06/2025

KYLIE S. MASON, RLA 3335
KYLIE S. MASON
3335
REGISTERED LANDSCAPE ARCHITECT
STATE OF MAINE
01/06/2025

REV.	BY:	DATE:	STATUS:
E	KSM	01/06/2025	RESPONSE TO CITY DPW REVIEW COMMENTS
D	KSM	11/14/2024	RESPONSE TO CITY REVIEW COMMENTS
C	KSM	04/26/2024	RESPONSE TO CITY REVIEW COMMENTS
B	KSM	03/14/2024	RESPONSE TO CITY REVIEW COMMENTS
A	KSM	12/20/2023	ISSUED TO CITY OF PORTLAND FOR SITE PLAN REVIEW

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75 John Roberts Rd.
Suite 4A
South Portland, ME 04106
Tel: 207-200-2100

REAR PATH GRADING PLAN

MARTIN'S POINT HEALTH CARE VERANDA CAMPUS
331 VERANDA STREET
PORTLAND, ME 04103

MARTIN'S POINT HEALTH CARE, INC.
PO BOX 9746
PORTLAND, ME 04103

DESIGNED	BAM/PDO
DRAWN	CJC
CHECKED	PDO
DATE	04/10/2023
SCALE	1" = 10'
PROJECT	211026

SHEET15OF 37

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211026 C-BLDG7.dwg, TAB:GRADING PLAN 4

UPPER DRIVE PLAN AND PROFILE

MARTIN'S POINT HEALTH CARE VERANDA CAMPUS

331 VERANDA STREET
PORTLAND, ME 04103

MARTIN'S POINT HEALTH CARE, INC.

PO BOX 9748
PORTLAND, ME 04103

SEBAGO TECHNICS
WWW.SEBAGOTECHNICS.COM
75 John Roberts Rd.
Suite 4A
South Portland, ME 04106
Tel: 207-200-2100

DESIGNED	BAM/PDO
DRAWN	CJC
CHECKED	PDO
DATE	04/10/2023
SCALE	AS NOTED
PROJECT	211026

SHEET 17 OF 37

REV:	BY:	DATE:	STATUS:
A	KSM	12/20/2023	ISSUED TO CITY OF PORTLAND FOR SITE PLAN REVIEW
B	KSM	03/14/2024	RESPONSE TO CITY REVIEW COMMENTS
C	KSM	04/26/2024	RESPONSE TO CITY REVIEW COMMENTS
D	KSM	11/14/2024	RESPONSE TO CITY REVIEW COMMENTS
E	KSM	01/06/2025	RESPONSE TO CITY DPW REVIEW COMMENTS

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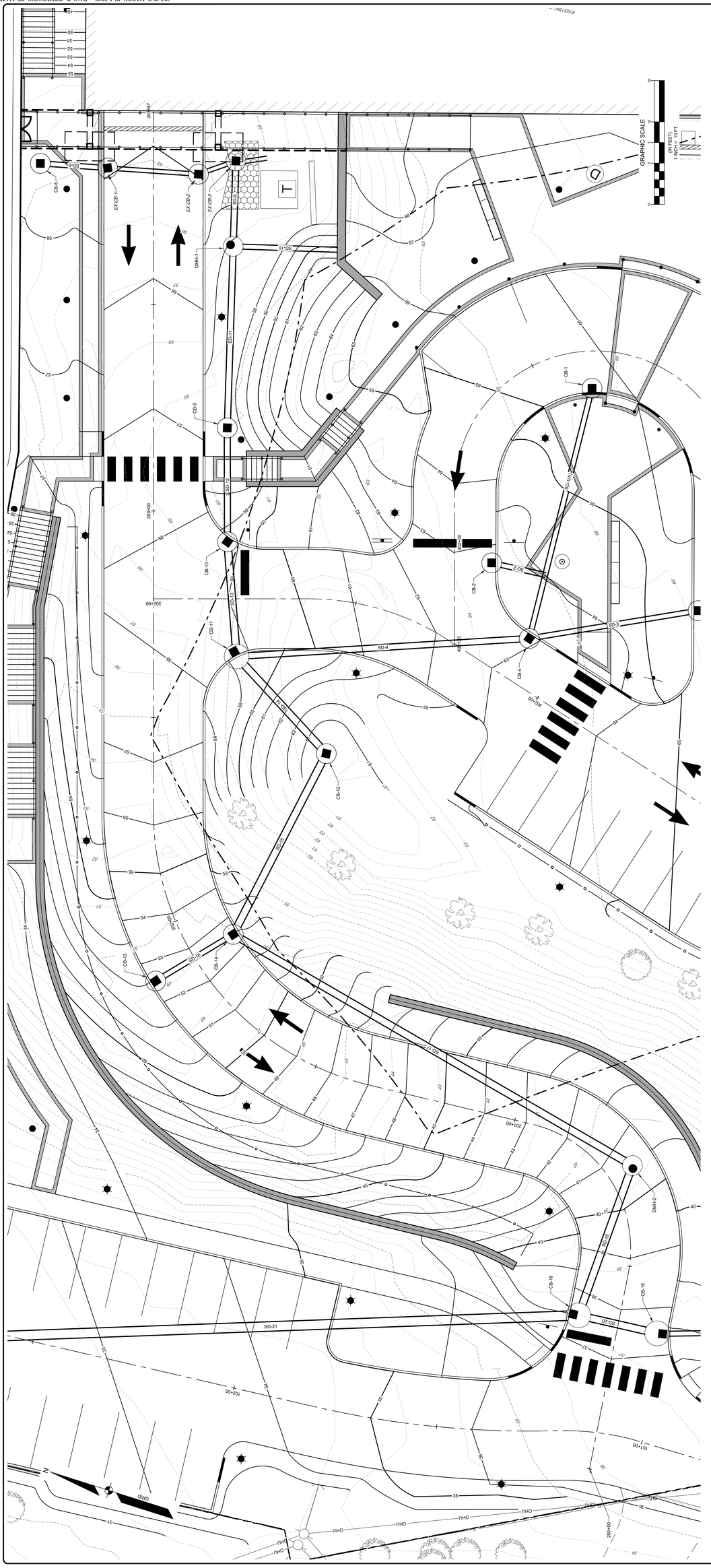
KYLE S. MASON, R.L.A. 3335

01/06/2025

PAUL D. OSTROWSKI, P.E. 11175

01/06/2025

211026 PP-BLDG 7.dwg, TAB:UPPER DRIVE



TAX PARCELS: 434-C-1,434-C-5 & 434-C-10

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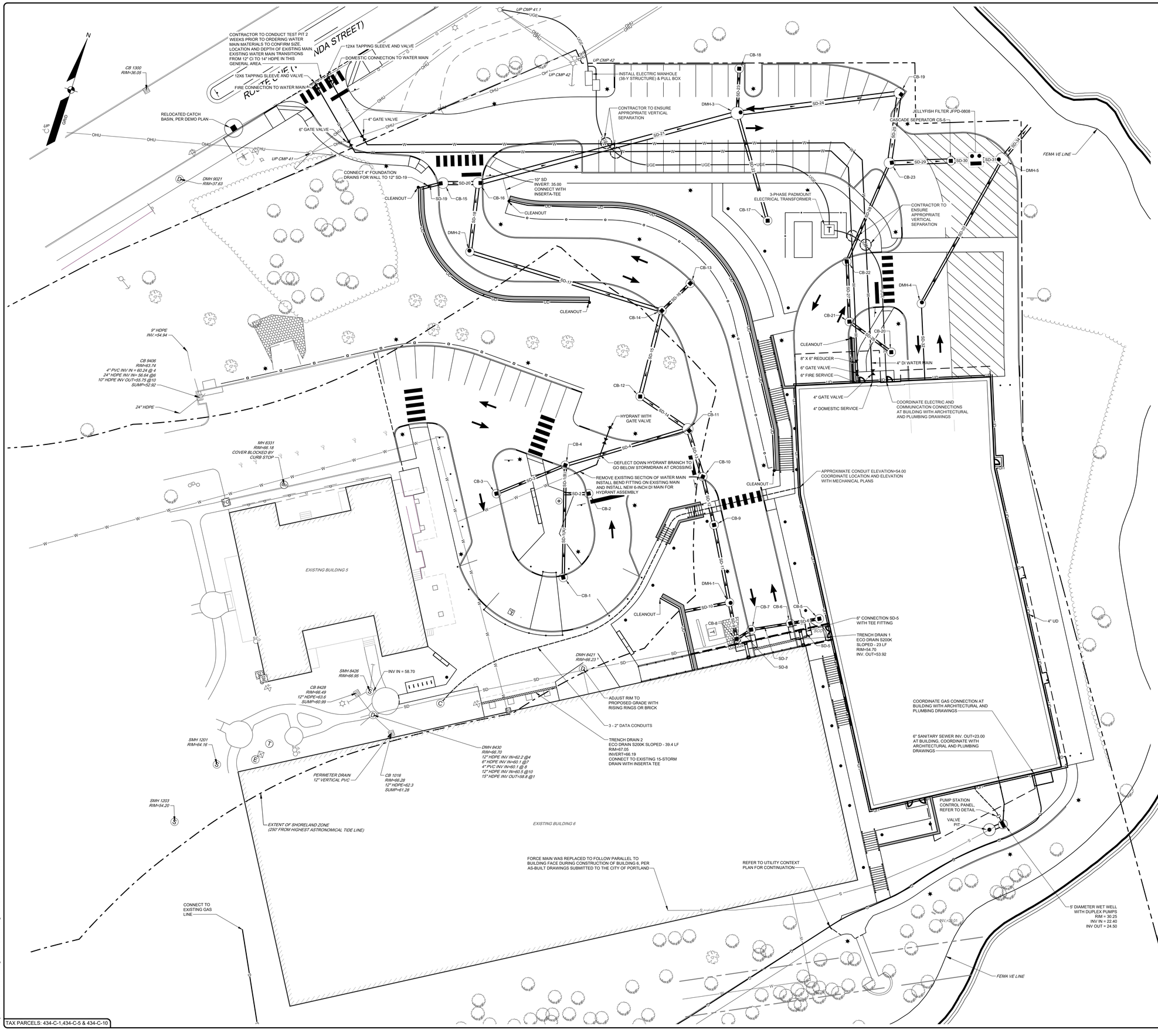

STORM DRAIN STRUCTURE DATA

STRUCTURE	RIM	INV. IN	INV. OUT:	DIAM.
CASCADE SEPERATOR CS-5	29.50	23.55 (SD-29)	23.45 (SD-30)	48"
CB-1	65.65		60.75 (SD-1(A))	48"
CB-2	62.90		58.90 (SD-2)	48"
CB-3	65.34		60.58 (SD-3)	48"
CB-4	62.90	58.50 (SD-3) 58.60 (SD-1(B))	58.00 (SD-4)	48"
CB-5	55.30		50.20 (SD-6)	48"
CB-6	54.90	50.00 (SD-6)	49.90 (SD-7)	48"
CB-7	54.90	49.71 (SD-7)	49.61 (SD-8)	48"
CB-8	53.90	49.65 (SD-8) 48.70 (SD-EX)	48.45 (SD-9)	48"
CB-9	57.85	47.60 (SD-11)	47.50 (SD-12)	48"
CB-10	58.75	47.00 (SD-12)	46.75 (SD-13)	48"
CB-11	58.75	54.50 (SD-4) 46.44 (SD-13)	46.34 (SD-14)	60"
CB-12	61.65	45.74 (SD-14)	45.64 (SD-15)	48"
CB-13	52.50		48.50 (SD-16)	48"
CB-14	52.50	44.10 (SD-15) 48.15 (SD-16)	44.00 (SD-17)	48"
CB-15	37.50	33.90 (SD-19)	32.35 (SD-20)	60"
CB-16	37.50	32.00 (SD-20) 32.45 (SD-18)	31.50 (SD-21)	60"
CB-17	32.15		28.40 (SD-22)	48"
CB-18	31.65		27.95 (SD-23)	48"
CB-19	29.75	24.75 (SD-24)	24.65 (SD-25)	60"
CB-20	30.40		27.50 (SD-26)	48"
CB-21	32.65	27.10 (SD-26)	27.00 (SD-27)	48"
CB-22	30.30		26.00 (SD-28)	48"
CB-23	30.15	23.90 (SD-25) 25.00 (SD-28)	23.80 (SD-29)	60"
DMH-1	57.00	48.10 (SD-9) 48.35 (SD-10)	48.00 (SD-11)	48"
DMH-2	40.50	36.25 (SD-17)	36.15 (SD-18)	48"
DMH-3	32.10	27.10 (SD-21) 27.75 (SD-22) 27.70 (SD-23)	27.00 (SD-24)	72"
DMH-4	30.82	25.60 (SD-32)	25.43 (SD-33)	48"
DMH-5	29.95	22.70 (SD-31) 23.67 (SD-33)	22.60 (SD-34)	72"
JELLYFISH FILTER JFPD-0808	29.70	23.35 (SD-30)	22.85 (SD-31)	48"
TRENCH DRAIN 1	54.70		53.92 (SD-5)	8"
TRENCH DRAIN 2	67.05		66.19	8"

STORM DRAIN PIPE DATA

NAME	SIZE	LENGTH	SLOPE
SD-1(A)	12"	45'	3.92%
SD-1(B)	12"	14'	6.08%
SD-2	12"	11'	3.54%
SD-3	12"	37'	5.55%
SD-4	15"	67'	5.26%
SD-5	6"	15'	0.00%
SD-6	12"	12'	1.62%
SD-7	12"	18'	1.05%
SD-8	12"	6'	-0.71%
SD-9	15"	17'	2.09%
SD-10	12"	25'	26.38%
SD-11	15"	42'	0.95%
SD-12	15"	24'	2.12%
SD-13	18"	23'	1.33%
SD-14	18"	28'	2.18%
SD-15	18"	45'	3.40%
SD-16	12"	18'	1.95%
SD-17	18"	108'	7.19%
SD-18	18"	34'	10.81%
SD-19	12"	9'	1.05%
SD-20	18"	15'	2.40%
SD-21	24"	144'	3.06%
SD-22	15"	57'	1.14%
SD-23	12"	20'	1.26%
SD-24	24"	85'	2.64%
SD-25	24"	34'	2.19%
SD-26	12"	25'	1.61%
SD-27	12"	31'	2.93%
SD-28	12"	55'	1.81%
SD-29	24"	30'	0.84%
SD-30	24"	10'	1.01%
SD-31	24"	10'	1.54%
SD-32	10"	42'	0.94%
SD-33	12"	89'	1.98%
SD-34	24"	21'	1.93%
SD-EX	12"	6'	

GRAPHIC SCALE
20 0 10 20 40
(IN FEET)
1 INCH = 20 FT.

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PAUL D. OSTROWSKI, PE 11175
STATE OF MAINE — PAUL D. OSTROWSKI — No. 11175 — REGISTERED PROFESSIONAL ENGINEER — 01/06/2025

KYLIE S. MASON, RLA 3335
STATE OF MAINE — KYLIE S. MASON — No. 3335 — REGISTERED LANDSCAPE ARCHITECT — 01/06/2025

SEBAGO TECHNICS
WWW.SEBAGOTECHNICS.COM
75 John Roberts Rd.
Suite E
South Portland, ME 04106
Tel: 207-200-2100

MARTIN'S POINT HEALTH CARE, INC.
PO BOX 9746
PORTLAND, ME 04103

MARTIN'S POINT HEALTH CARE VERANDA CAMPUS
331 VERANDA STREET
PORTLAND, ME 04103

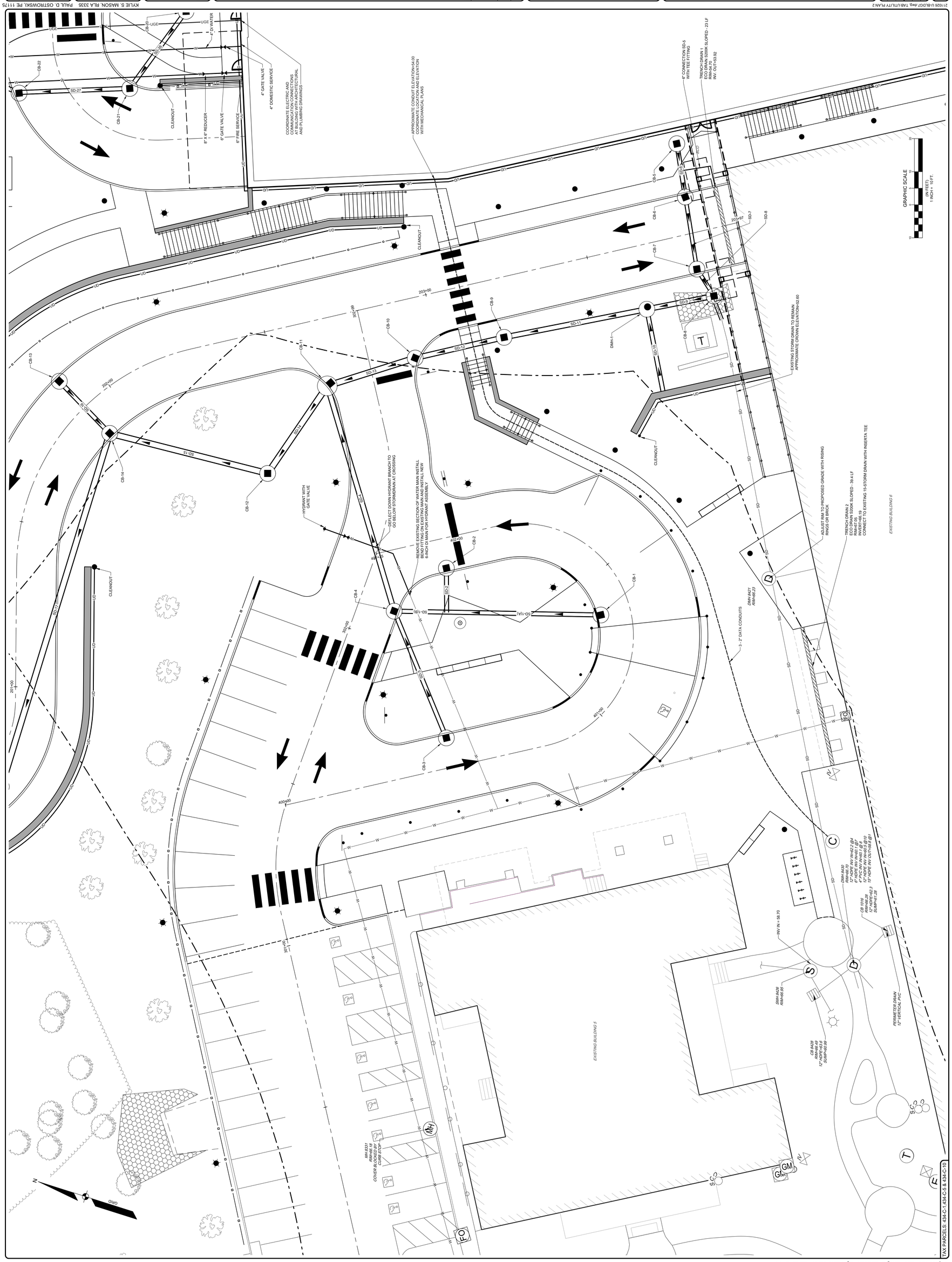
OVERALL UTILITY PLAN

DESIGNED	BAM/PDO
DRAWN	CJC
CHECKED	PDO
DATE	04/10/2023
SCALE	1" = 20'
PROJECT	211026

SHEET 18 OF 37

211026 U-BLDG7.dwg, TAB-OVERALL UTILITY PLAN

F:\Projects\211000\211026\DWG\Dwgs\211026 U-BLDG7.dwg - 1/6/2025 10:46 AM - PAUL OSTROWSKI



TAX PARCELS: 434-C-1,434-C-5 & 434-C-10

DESIGNED	BAM/PDO
DRAWN	CJC
CHECKED	PDO
DATE	04/10/2023
SCALE	1" = 10'
PROJECT	211026

SHEET19OF 37

UPPER DRIVE UTILITY PLAN

MARTIN'S POINT HEALTH CARE VERANDA CAMPUS

331 VERANDA STREET
PORTLAND, ME 04103

MARTIN'S POINT HEALTH CARE, INC.

PO BOX 9746
PORTLAND, ME 04103

SEBAGO TECHNICS

WWW.SEBAGOTECHNICS.COM

75 John Roberts Rd.
Suite 4A
South Portland, ME 04106
Tel: 207-200-2100

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KYLIE S. MASON, RLA 3335 PAUL D. OSTROWSKI, PE 11175

211026 U-BLDG7.dwg, TAB:UTILITY PLAN 2

LOWER DRIVE UTILITY PLAN

MARTIN'S POINT HEALTH CARE VERANDA CAMPUS

331 VERANDA STREET
PORTLAND, ME 04103

MARTIN'S POINT HEALTH CARE, INC.

PO BOX 9746
PORTLAND, ME 04103

DESIGNED	BAM/PDO
DRAWN	CJC
CHECKED	PDO
DATE	04/10/2023
SCALE	1" = 10'
PROJECT	211026

SHEET 20 OF 37

SEBAGO TECHNICS
WWW.SEBAGOTECHNICS.COM
75 John Roberts Rd.
Suite 4A
South Portland, ME 04106
Tel: 207-200-2100

REV.:	BY:	DATE:	STATUS:
A	KSM	12/20/2023	ISSUED TO CITY OF PORTLAND FOR SITE PLAN REVIEW
B	KSM	02/14/2024	RESPONSE TO CITY REVIEW COMMENTS
C	KSM	04/26/2024	RESPONSE TO CITY REVIEW COMMENTS
D	KSM	11/14/2024	RESPONSE TO CITY REVIEW COMMENTS
E	KSM	01/06/2025	RESPONSE TO CITY DPW REVIEW COMMENTS

THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM SEBAGO TECHNICS, INC. ANY ALTERATIONS AUTHORIZED OR OTHERWISE, SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO SEBAGO TECHNICS, INC.

KYLE S. MASON, RLA 3335

01/06/2025

PAUL D. OSTROWSKI, PE 11175

01/06/2025

211026 U-BLD07.dwg, TAB-UTILITY PLAN 1

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Page 2723

VERANDA STREET UTILITY PLAN

MARTIN'S POINT HEALTH CARE VERANDA CAMPUS

331 VERANDA STREET
PORTLAND, ME 04103

SEBAGO TECHNICS
75 John Roberts Rd.
Suite 4A
South Portland, ME 04106
Tel: 207-200-2100
WWW.SEBAGOTECHNICS.COM

MARTIN'S POINT HEALTH CARE, INC.
PO BOX 9746
PORTLAND, ME 04103

DESIGNED	BAM/PDO
DRAWN	CJC
CHECKED	PDO
DATE	04/10/2023
SCALE	1" = 10'
PROJECT	21102B

SHEET 21 OF 37

21102B U-BLD07.dwg, TAB-UTILITY PLAN 3

REV.:	BY:	DATE:	STATUS:
A	KSM	12/20/2023	ISSUED TO CITY OF PORTLAND FOR SITE PLAN REVIEW
B	KSM	03/14/2024	RESPONSE TO CITY REVIEW COMMENTS
C	KSM	04/26/2024	RESPONSE TO CITY REVIEW COMMENTS
D	KSM	11/14/2024	RESPONSE TO CITY REVIEW COMMENTS
E	KSM	01/06/2025	RESPONSE TO CITY DPW REVIEW COMMENTS

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KYLE S. MASON, RLA 3335
01/06/2025

PAUL D. OSTROWSKI, PE 11175
01/06/2025

TAX PARCELS: 434-C-1,434-C-5 & 434-C-10

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TAX PARCELS: 434-C-1,434-C-5 & 434-C-10

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211026 LABLDG7.dwg, TABUTILITY PLAN 4

PAUL D. OSTROWSKI, PE 11175

STATE OF MAINE
PAUL D. OSTROWSKI
No. 11175
REGISTERED PROFESSIONAL ENGINEER
01/06/2025

KYLE S. MASON, RLA 3335

LICENSED LANDSCAPE ARCHITECT
KYLE S. MASON
No. 3335
STATE OF MAINE
01/06/2025

REV.	BY:	DATE:	STATUS:
E	KSM	01/06/2025	RESPONSE TO CITY DPW REVIEW COMMENTS
D	KSM	11/14/2024	RESPONSE TO CITY REVIEW COMMENTS
C	KSM	04/26/2024	RESPONSE TO CITY REVIEW COMMENTS
B	KSM	03/14/2024	RESPONSE TO CITY REVIEW COMMENTS
A	KSM	12/20/2023	ISSUED TO CITY OF PORTLAND FOR SITE PLAN REVIEW

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SEBAGO TECHNICS
WWW.SEBAGOTECHNICS.COM
75 John Roberts Rd.
Suite 4A
South Portland, ME 04106
Tel: 207-200-2100

REAR PATH UTILITY PLAN

MARTIN'S POINT HEALTH CARE VERANDA CAMPUS

331 VERANDA STREET
PORTLAND, ME 04103

MARTIN'S POINT HEALTH CARE, INC.

PO BOX 9746
PORTLAND, ME 04103

DESIGNED	BAM/PDO
DRAWN	CJC
CHECKED	PDO
DATE	04/10/2023
SCALE	1" = 10'
PROJECT	211026

SHEET22OF 37



E	KSM	01/06/2025	RESPONSE TO CITY DPW REVIEW COMMENTS
D	KSM	11/14/2024	RESPONSE TO CITY REVIEW COMMENTS
C	KSM	04/26/2024	RESPONSE TO CITY REVIEW COMMENTS
B	KSM	03/14/2024	RESPONSE TO CITY REVIEW COMMENTS
A	KSM	12/20/2023	ISSUED TO CITY OF PORTLAND FOR SITE PLAN REVIEW
REV:	BY:	DATE:	STATUS:

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SEBAGO TECHNICS
WWW.SEBAGOTECHNICS.COM
75 John Roberts Rd.
Suite 4A
South Portland, ME 04106
Tel: 207-200-2100

UTILITY CONTEXT PLAN
MARTIN'S POINT HEALTH CARE VERANDA CAMPUS
331 VERANDA STREET
PORTLAND, ME 04103
MARTIN'S POINT HEALTH CARE, INC.
PO BOX 9746
PORTLAND, ME 04103

DESIGNED	BAM/PDO
DRAWN	CJC
CHECKED	PDO
DATE	04/10/2023
SCALE	1" = 10'
PROJECT	211026

SHEET24OF 37

KYLIE S. MASON, RLA 3335 PAUL D. OSTROWSKI, PE 11175

LICENSED LANDSCAPE ARCHITECT KYLIE S. MASON STATE OF MAINE

PAUL D. OSTROWSKI No. 11175 PROFESSIONAL ENGINEER STATE OF MAINE

01/06/2025 01/06/2025

211026 U-BLDG7.dwg, TAB:UTILITY PLAN 5

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TAX PARCELS: 434-C-1,434-C-5 & 434-C-10

ROUTE ONE (VERANDA STREET)

N

EXISTING BUILDING 5

EXISTING BUILDING 6

PROPOSED BUILDING 7
25,000 SQ FT
4 STORIES

OFFICE LEVEL 2 = 70.17'
OFFICE LEVEL 1 = 55.50'
PARKING LEVEL 2 = 43.17'
PARKING LEVEL 1 = 31.50'

FEMA VE LINE

HIGHEST ASTRONOMICAL TIDE LINE

GRAPHIC SCALE
20 0 10 20 40
(IN FEET)
1 INCH = 20 FT.

PLANT SCHEDULE

KEY	BOTANICAL NAME	COMMON NAME	SIZE / NOTES
TREES:			
AG	AMELANCHIER X GRANDIFLORA 'AUTUMN BRILLIANCE'	AUTUMN BRILLIANCE SERVICEBERRY	8'-10' HGT, 3-LEADER CLUMP [MINIMUM 1.5"-2" CAL,B&B]
BF	BETULA NIGRA 'FOX VALLEY'	FOX VALLEY BIRCH	7'-8' HGT, 3-LEADER CLUMP [MINIMUM 1.5"-2" CAL,B&B]
BN	BETULA NIGRA 'HERITAGE'	HERITAGE RIVER BIRCH	8'-10' HGT, 3-LEADER CLUMP [MINIMUM 1.5"-2" CAL,B&B]
CA	CALAMAGROSTIS X ACUTIFLORA 'OVERDAM'	OVERDAM FEATHER REED GRASS	#2 CONT.
CJ	CERCIDIPHYLLUM JAPONICUM	KATSURA	2.5" CAL.
CN	CHAMAECYPARIS NOOTKATENSIS 'PENDULA'	WEEPING ALASKAN CEDAR	7'-8' HGT.
CO	CARYA OVATA	SHAGBARK HICKORY	2.5" CAL.
CP	COMPTONIA PEREGRINA	SWEET FERN	#2 CONT.
CV	CRATAEGUS VIRIDIS 'WINTER KING	WINTER KING HAWTHORN	2.5" CAL.
JC	JUNIPERUS CHINENSIS 'ROBUSTA'	ROBUSTA JUNIPER	7'-8' HGT.
JS	JUNIPERUS SABINA 'TAMARISCIFOLIA'	TAM JUNIPER	#3 CONT.
JV	JUNIPERUS VIRGINIANA 'GREY OWL	GREY OWL JUNIPER	#3 CONT.
MD	MALUS X 'DONALD WYMAN'	DONALD WYAMN CRABAPPLE	2.5" CAL.
NF	NEPETA FAASSENII 'JUNIOR WALKER'	JUNIOR WALKER CATMINT	#2 CONT.
PA	PENNISETUM ALOPECUROIDES 'HAMELN'	HAMELN FOUNTAIN GRASS	#2 CONT.
PAn	PICEA ABIES 'NIDIFORMIS'	BIRD'S NEST SPRUCE	#3 CONT.
PF	PINUS FLEXILIS 'VANDERWOLF'S PYRAMID'	VANDERWOLF PINE	7'-8' HGT.
PO	PICEA OMORIKA	SERBIAN SPRUCE	7'-8' HGT.
POs	PHYSOCARPUS OPULIFOLIUS 'SUMMER WINE BLACK'	SUMMER WINE BLACK NINEBARK	#5 CONT.
PS	PRUNUS SARGENTII 'PINK FLAIR'	PINK FLAIR CHERRY	2.5" CAL.
PQ	PARTHENOCISSUS QUINQUEFOLIA	VIRGINIA CREEPER	#1 CONT.
QP	QUERCUS PALUSTRIS	PIN OAK	2.5" CAL.
RA	RHUS AROMATICA 'GRO-LOW'	GRO-LOW FRAGRANT SUMAC	#3 CONT.
RH	RHODODENDRON 'NOVA ZEMBLA'	NOVA ZEMBLA RHODODENDRON	#5 CONT.
SS	SORBARIA SORBIFOLIA 'SEM'	ASHLEAF SPIREA	#5 CONT.
UA	ULMUS AMERICANA 'VALLEY FORGE'	VALLEY FORGE ELM	2.5" CAL.
VC	VIBURNUM CARLESII	KOREAN SPICE VIBURNUM	#5 CONT.
WF	WEIGELA FLORIDA 'WINE & ROSES'	ALEXANDRA WEIGELA	#5 CONT.

*ALL DISTURBED AREAS NOT SPECIFIED AS SEED MIX A WILL BE LOAM AND SEEDED WITH MDOT PARK MIX #1 [OR APPROVED EQUAL]
(FOR MORE INFORMATION PLEASE DIVISION 700 OF THE MAINE DEPARTMENT OF TRANSPORTATION)

TAX PARCELS: 434-C-1,434-C-5 & 434-C-10

KYLIE S. MASON, RLA 3335
01/06/2025

REV.#	BY:	DATE:	STATUS:
E	KSM	01/06/2025	RESPONSE TO CITY 'DPW REVIEW' COMMENTS
D	KSM	11/18/2024	RESPONSE TO CITY REVIEW COMMENTS
C	KSM	04/08/2024	RESPONSE TO CITY REVIEW COMMENTS
B	KSM	03/14/2024	RESPONSE TO CITY REVIEW COMMENTS
A	KSM	12/20/2023	ISSUED TO CITY OF PORTLAND FOR SITE PLAN REVIEW

THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM SEBAGO TECHNICS, INC. ANY ALTERATIONS, AUTHORIZED OR OTHERWISE, SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO SEBAGO TECHNICS, INC.

SEBAGO TECHNICS
WWW.SEBAGOTECHNICS.COM
75 John Roberts Rd.
Suite E
South Portland, ME 04106
Tel. 207-200-2100

LANDSCAPE PLAN OVERALL
MARTIN'S POINT HEALTH CARE VERANDA CAMPUS
331 VERANDA STREET
PORTLAND, ME 04103

MARTIN'S POINT HEALTH CARE, INC.
PO BOX 9746
PORTLAND, ME 04103

DESIGNED	BAM/PDO
DRAWN	CJC
CHECKED	PDO
DATE	04/10/2023
SCALE	1" = 20'
PROJECT	211026

SHEET25OF 37

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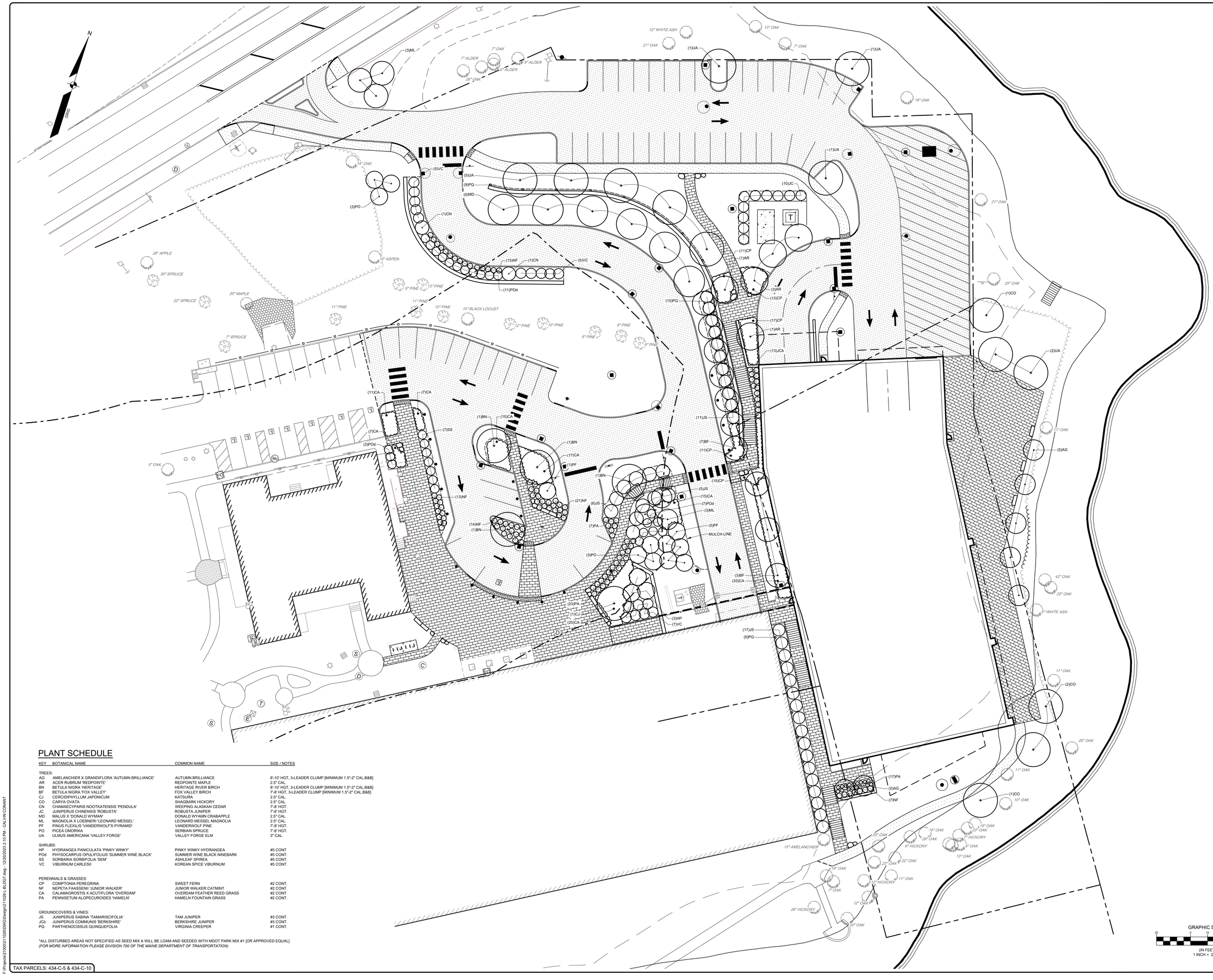
211026-LBLDG7.dwg, TAB:OVERALL LANDSCAPE PLAN



PLANT SCHEDULE

KEY	BOTANICAL NAME	COMMON NAME	SIZE / NOTES
TREES:			
AG	AMELANCHIER X GRANDIFLORA 'AUTUMN BRILLIANCE'	AUTUMN BRILLIANCE	8'-10' HGT, 3-LEADER CLUMP [MINIMUM 1.5"-2" CAL,B&B]
AR	ACER RUBRUM 'REDPOINTE'	REDPOINTE MAPLE	2.5" CAL.
BN	BETULA NIGRA 'HERITAGE'	HERITAGE RIVER BIRCH	8'-10' HGT, 3-LEADER CLUMP [MINIMUM 1.5"-2" CAL,B&B]
BF	BETULA NIGRA 'FOX VALLEY'	FOX VALLEY BIRCH	7'-8' HGT, 3-LEADER CLUMP [MINIMUM 1.5"-2" CAL,B&B]
CJ	CERCIDPHYLLUM JAPONICUM	KATSURA	2.5" CAL.
CO	CARYA OVATA	SHAGBARK HICKORY	2.5" CAL.
CN	CHAMAECYPARIS NOOTKATENSIS 'PENDULA'	WEEPING ALASKAN CEDAR	7'-8' HGT.
JC	JUNIPERUS CHINENSIS 'ROBUSTA'	ROBUSTA JUNIPER	7'-8' HGT.
MD	MALUS X 'DONALD WYMAN'	DONALD WYAMN CRABAPPLE	2.5" CAL.
ML	MAGNOLIA X LOEBNERI 'LEONARD MESSEL'	LEONARD MESSEL MAGNOLIA	2.5" CAL.
PF	PINUS FLEXILIS 'VANDERWOLF'S PYRAMID'	VANDERWOLF PINE	7'-8' HGT.
PO	PICEA OMORIKA	SERBIAN SPRUCE	7'-8' HGT.
UA	ULMUS AMERICANA 'VALLEY FORGE'	VALLEY FORGE ELM	3" CAL.
SHRUBS:			
HP	HYDRANGEA PANICULATA 'PINKY WINKY'	PINKY WINKY HYDRANGEA	#5 CONT.
POd	PHYSOCARPUS OPULIFOLIUS 'SUMMER WINE BLACK'	SUMMER WINE BLACK NINEBARK	#5 CONT.
SS	SORBARIA SORBIFOLIA 'SEM'	ASHLEAF SPIREA	#5 CONT.
VC	VIBURNUM CARLESII	KOREAN SPICE VIBURNUM	#5 CONT.
PERENNIALS & GRASSES:			
CP	COMPTONIA PEREGRINA	SWEET FERN	#2 CONT.
NF	NEPETA FAASSENII 'JUNIOR WALKER'	JUNIOR WALKER CATMINT	#2 CONT.
CA	CALAMAGROSTIS X ACUTIFLORA 'OVERDAM'	OVERDAM FEATHER REED GRASS	#2 CONT.
PA	PENNISETUM ALOPECUROIDES 'HAMELN'	HAMELN FOUNTAIN GRASS	#2 CONT.
GROUNDCOVERS & VINES:			
JS	JUNIPERUS SABINA 'TAMARISCIFOLIA'	TAM JUNIPER	#3 CONT.
JCb	JUNIPERUS COMMUNIS 'BERKSHIRE'	BERKSHIRE JUNIPER	#3 CONT.
PQ	PARTHENOCISSUS QUINQUEFOLIA	VIRGINIA CREEPER	#1 CONT.

*ALL DISTURBED AREAS NOT SPECIFIED AS SEED MIX A WILL BE LOAM AND SEEDED WITH MDOT PARK MIX #1 [OR APPROVED EQUAL]
(FOR MORE INFORMATION PLEASE DIVISION 700 OF THE MAINE DEPARTMENT OF TRANSPORTATION)

TAX PARCELS: 434-C-5 & 434-C-10

KYLIE S. MASON, RLA 3335

REGISTERED LANDSCAPE ARCHITECT — KYLIE S. MASON — 3335 — STATE OF MAINE

REV.	BY	DATE	THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM SEBAGO TECHNICS, INC. ANY ALTERATIONS MADE TO THIS PLAN SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO SEBAGO TECHNICS, INC.
A	BY	12/20/2023	ISSUED TO CITY OF PORTLAND FOR SITE PLAN REVIEW
REV.	BY:	DATE:	STATUS:

SEBAGO TECHNICS
WWW.SEBAGOTECHNICS.COM
75 John Roberts Rd.
Suite 4A
South Portland, ME 04106
Tel: 207-200-2100

OVERALL LANDSCAPE PLAN

MARTINS POINT HEALTHCARE VERANDA CAMPUS
331 VERANDA STREET
PORTLAND, ME 04103

MARTINS POINT HEALTH CARE, INC.
PO BOX 9746
PORTLAND, ME 04103

DESIGNED	BAM/KGK
DRAWN	CJC
CHECKED	PDO
DATE	04/10/2023
SCALE	1" = 20'
PROJECT	211026

SHEET25OF 37

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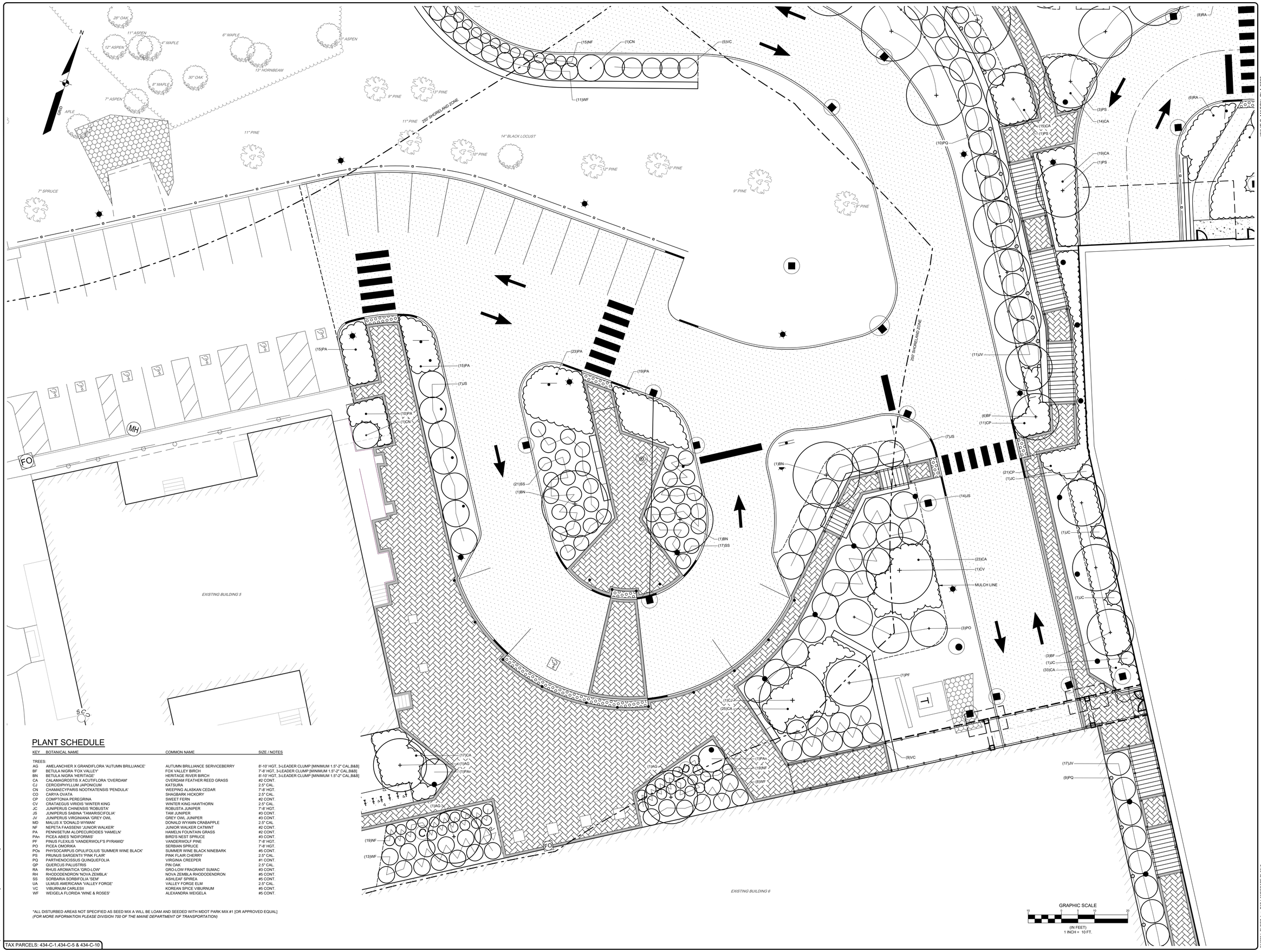
211026\L-BLDG7.dwg, TAB:OVERALL LANDSCAPE PLAN



PLANT SCHEDULE

KEY	BOTANICAL NAME	COMMON NAME	SIZE / NOTES
TREES:			
AG	AMELANCHIER X GRANDIFLORA 'AUTUMN BRILLIANCE'	AUTUMN BRILLIANCE SERVICEBERRY	8'-10' HGT, 3-LEADER CLUMP [MINIMUM 1.5"-2" CAL,B&B]
BF	BETULA NIGRA 'FOX VALLEY'	FOX VALLEY BIRCH	7'-8' HGT, 3-LEADER CLUMP [MINIMUM 1.5"-2" CAL,B&B]
BN	BETULA NIGRA 'HERITAGE'	HERITAGE RIVER BIRCH	8'-10' HGT, 3-LEADER CLUMP [MINIMUM 1.5"-2" CAL,B&B]
CA	CALAMAGROSTIS X ACUTIFLORA 'OVERDAM'	OVERDAM FEATHER REED GRASS	#2 CONT.
CJ	CERCIDIPHYLLUM JAPONICUM	KATSURA	2.5" CAL.
CN	CHAMAECYPARIS NOOTKATENSIS 'PENDULA'	WEEPING ALASKAN CEDAR	7'-8' HGT.
CO	CARYA OVATA	SHAGBARK HICKORY	2.5" CAL.
CP	COMPTONIA PEREGRINA	SWEET FERN	#2 CONT.
CV	CRATAEGUS VIRIDIS 'WINTER KING	WINTER KING HAWTHORN	2.5" CAL.
JC	JUNIPERUS CHINENSIS 'ROBUSTA'	ROBUSTA JUNIPER	7'-8' HGT.
JS	JUNIPERUS SABINA 'TAMARISCIFOLIA'	TAM JUNIPER	#3 CONT.
JV	JUNIPERUS VIRGINIANA 'GREY OWL	GREY OWL JUNIPER	#3 CONT.
MD	MALUS X 'DONALD WYMAN'	DONALD WYAMN CRABAPPLE	2.5" CAL.
NF	NEPETA FAASSENII 'JUNIOR WALKER'	JUNIOR WALKER CATMINT	#2 CONT.
PA	PENNISETUM ALOPECUROIDES 'HAMELN'	HAMELN FOUNTAIN GRASS	#2 CONT.
PAn	PICEA ABIES 'NIDIFORMIS'	BIRD'S NEST SPRUCE	#3 CONT.
PF	PINUS FLEXILIS 'VANDERWOLF'S PYRAMID'	VANDERWOLF PINE	7'-8' HGT.
PO	PICEA OMORIKA	SERBIAN SPRUCE	7'-8' HGT.
POs	PHYSOCARPUS OPULIFOLIUS 'SUMMER WINE BLACK'	SUMMER WINE BLACK NINEBARK	#5 CONT.
PS	PRUNUS SARGENTII 'PINK FLAIR'	PINK FLAIR CHERRY	2.5" CAL.
PQ	PARTHENOCISSUS QUINQUEFOLIA	VIRGINIA CREEPER	#1 CONT.
QP	QUERCUS PALUSTRIS	PIN OAK	2.5" CAL.
RA	RHUS AROMATICA 'GRO-LOW'	GRO-LOW FRAGRANT SUMAC	#3 CONT.
RH	RHODODENDRON 'NOVA ZEMBLA'	NOVA ZEMBLA RHODODENDRON	#5 CONT.
SS	SORBARIA SORBIFOLIA 'SEM'	ASHLEAF SPIREA	#5 CONT.
UA	ULMUS AMERICANA 'VALLEY FORGE'	VALLEY FORGE ELM	2.5" CAL.
VC	VIBURNUM CARLESII	KOREAN SPICE VIBURNUM	#5 CONT.
WF	WEIGELA FLORIDA 'WINE & ROSES'	ALEXANDRA WEIGELA	#5 CONT.

*ALL DISTURBED AREAS NOT SPECIFIED AS SEED MIX A WILL BE LOAM AND SEEDED WITH MDOT PARK MIX #1 [OR APPROVED EQUAL]
(FOR MORE INFORMATION PLEASE DIVISION 700 OF THE MAINE DEPARTMENT OF TRANSPORTATION)

TAX PARCELS: 434-C-1,434-C-5 & 434-C-10

KYLIE S. MASON, RLA 3335
01/06/2025

REV:	BY:	DATE:	STATUS:
E	KSM	01/06/2025	RESPONSE TO CITY "DPW REVIEW" COMMENTS
D	KSM	12/20/2024	RESPONSE TO CITY REVIEW COMMENTS
C	KSM	04/26/2024	RESPONSE TO CITY REVIEW COMMENTS
B	KSM	03/14/2024	RESPONSE TO CITY REVIEW COMMENTS
A	KSM	12/20/2023	ISSUED TO CITY OF PORTLAND FOR SITE PLAN REVIEW

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SEBAGO TECHNICS
WWW.SEBAGOTECHNICS.COM
75 John Roberts Rd.
Suite E
South Portland, ME 04106
Tel: 207-200-2100

UPPER DRIVE LANDSCAPE PLAN

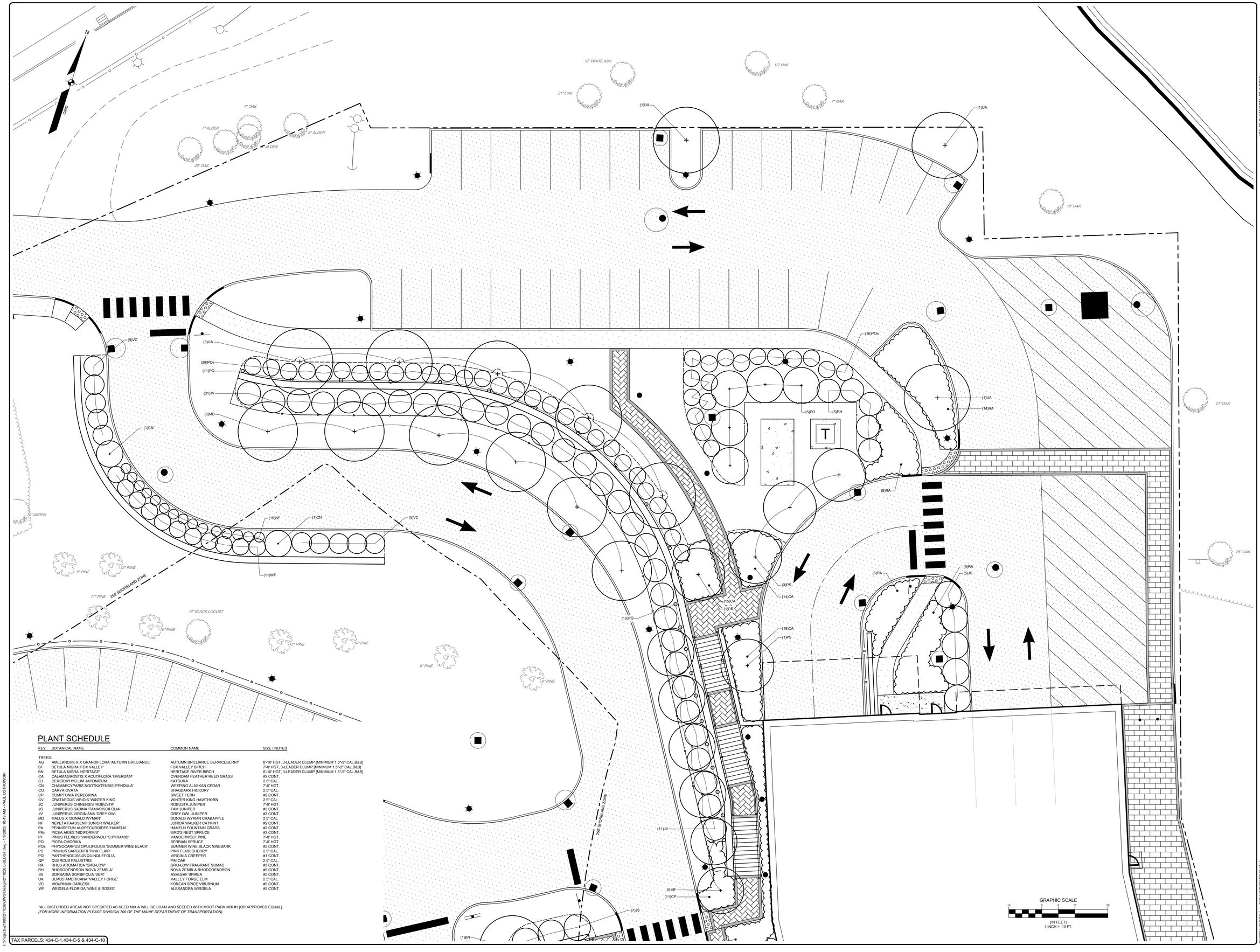
MARTIN'S POINT HEALTH CARE VERANDA CAMPUS
331 VERANDA STREET
PORTLAND, ME 04103

MARTIN'S POINT HEALTH CARE, INC.
PO BOX 9746
PORTLAND, ME 04103

DESIGNED	BAM/PDO
DRAWN	CJC
CHECKED	PDO
DATE	04/10/2023
SCALE	1" = 10'
PROJECT	211026

SHEET26OF 37

F:\Projects\21\026\21102601\DWG\Design\211026_LBLDG7.dwg - 1/6/2025 10:49 AM - PAUL OSTROWSKI
211026_LBLDG7.dwg, TAB:LANDSCAPE PLAN 2



PLANT SCHEDULE

KEY	BOTANICAL NAME	COMMON NAME	SIZE / NOTES
TREES:			
AG	AMELANCHIER X GRANDIFLORA 'AUTUMN BRILLIANCE'	AUTUMN BRILLIANCE SERVICEBERRY	8'-10' HGT, 3-LEADER CLUMP [MINIMUM 1.5"-2" CAL.B&B]
BF	BETULA NIGRA 'FOX VALLEY'	FOX VALLEY BIRCH	7'-8' HGT, 3-LEADER CLUMP [MINIMUM 1.5"-2" CAL.B&B]
BN	BETULA NIGRA 'HERITAGE'	HERITAGE RIVER BIRCH	8'-10' HGT, 3-LEADER CLUMP [MINIMUM 1.5"-2" CAL.B&B]
CA	CALAMAGROSTIS X ACUTIFLORA 'OVERDAM'	OVERDAM FEATHER REED GRASS	#2 CONT.
CJ	CERCIDIPHYLLUM JAPONICUM	KATSURA	2.5" CAL.
CN	CHAMAECYPARIS NOOTKATENSIS 'PENDULA'	WEEPING ALASKAN CEDAR	7'-8' HGT.
CO	CARYA OVATA	SHAGBARK HICKORY	2.5" CAL.
CP	COMPTONIA PEREGRINA	SWEET FERN	#2 CONT.
CV	CRATAEGUS VIRIDIS 'WINTER KING	WINTER KING HAWTHORN	2.5" CAL.
JC	JUNIPERUS CHINENSIS 'ROBUSTA'	ROBUSTA JUNIPER	7'-8' HGT.
JS	JUNIPERUS SABINA 'TAMARISCIFOLIA'	TAM JUNIPER	#3 CONT.
JV	JUNIPERUS VIRGINIANA 'GREY OWL	GREY OWL JUNIPER	#3 CONT.
MD	MALUS X 'DONALD WYMAN'	DONALD WYMAN CRABAPPLE	2.5" CAL.
NF	NEPETA FAASSENII 'JUNIOR WALKER'	JUNIOR WALKER CATMINT	#2 CONT.
PA	PENNISETUM ALOPECUROIDES 'HAMELN'	HAMELN FOUNTAIN GRASS	#2 CONT.
PAn	PICEA ABIES 'NIDIFORMIS'	BIRD'S NEST SPRUCE	#3 CONT.
PF	PINUS FLEXILIS 'VANDERWOLF'S PYRAMID'	VANDERWOLF PINE	7'-8' HGT.
PO	PICEA OMORIKA	SERBIAN SPRUCE	7'-8' HGT.
POs	PHYSOCARPUS OPULIFOLIUS 'SUMMER WINE BLACK'	SUMMER WINE BLACK NINEBARK	#5 CONT.
PS	PRUNUS SARGENTII 'PINK FLAIR'	PINK FLAIR CHERRY	2.5" CAL.
PQ	PARTHENOCISSUS QUINQUEFOLIA	VIRGINIA CREEPER	#1 CONT.
QP	QUERCUS PALUSTRIS	PIN OAK	2.5" CAL.
RA	RHUS AROMATICA 'GRO-LOW'	GRO-LOW FRAGRANT SUMAC	#3 CONT.
RH	RHODODENDRON 'NOVA ZEMBLA'	NOVA ZEMBLA RHODODENDRON	#5 CONT.
SS	SORBARIA SORBIFOLIA 'SEM'	ASHLEAF SPIREA	#5 CONT.
UA	ULMUS AMERICANA 'VALLEY FORGE'	VALLEY FORGE ELM	2.5" CAL.
VC	VIBURNUM CARLESII	KOREAN SPICE VIBURNUM	#5 CONT.
WF	WEIGELA FLORIDA 'WINE & ROSES'	ALEXANDRA WEIGELA	#5 CONT.

*ALL DISTURBED AREAS NOT SPECIFIED AS SEED MIX A WILL BE LOAM AND SEEDED WITH MDOT PARK MIX #1 [OR APPROVED EQUAL]
(FOR MORE INFORMATION PLEASE DIVISION 700 OF THE MAINE DEPARTMENT OF TRANSPORTATION)

TAX PARCELS: 434-C-1,434-C-5 & 434-C-10

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KYLE S. MASON, RLA 3335

REV:	BY:	DATE:	STATUS:
E	KSM	01/06/2025	RESPONSE TO CITY DPW REVIEW COMMENTS
D	KSM	05/14/2024	RESPONSE TO CITY REVIEW COMMENTS
C	KSM	04/26/2024	RESPONSE TO CITY REVIEW COMMENTS
B	KSM	03/14/2024	RESPONSE TO CITY REVIEW COMMENTS
A	KSM	12/20/2023	ISSUED TO CITY OF PORTLAND FOR SITE PLAN REVIEW

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WWW.SEBAGOTECHNICS.COM
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Tel: 207-200-2100

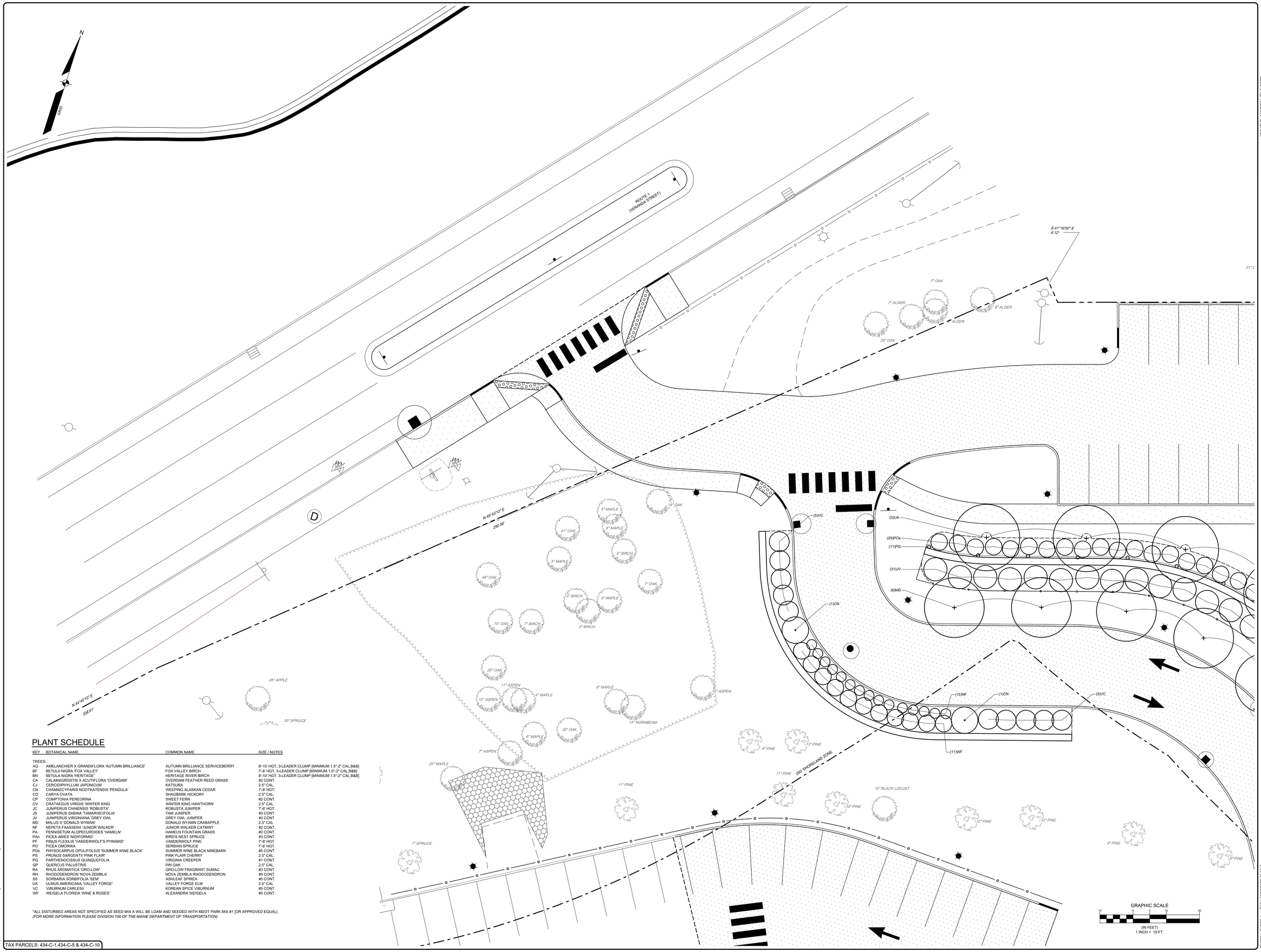
LOWER DRIVE LANDSCAPE PLAN
MARTIN'S POINT HEALTH CARE VERANDA CAMPUS
331 VERANDA STREET
PORTLAND, ME 04103

MARTIN'S POINT HEALTH CARE, INC.
PO BOX 9746
PORTLAND, ME 04103

211026 L-BLDG7.dwg, TAB LANDSCAPE PLAN 1

DESIGNED	BAM/PDO
DRAWN	CJC
CHECKED	PDO
DATE	04/10/2023
SCALE	1" = 10'
PROJECT	211026

SHEET 27 OF 37



PLANT SCHEDULE

KEY	BOTANICAL NAME	COMMON NAME	SIZE / NOTES
TREES:			
AG	AMELANCHIER X GRANDIFLORA 'AUTUMN BRILLIANCE'	AUTUMN BRILLIANCE SERVICEBERRY	6'-10' HGT, 3-LEADER CLUMP [MINIMUM 1.5"-2" CAL.B&B]
BF	BETULA NIGRA 'FOX VALLEY'	FOX VALLEY BIRCH	7'-8' HGT, 3-LEADER CLUMP [MINIMUM 1.5"-2" CAL.B&B]
BN	BETULA NIGRA 'HERITAGE'	HERITAGE RIVER BIRCH	6'-10' HGT, 3-LEADER CLUMP [MINIMUM 1.5"-2" CAL.B&B]
CA	CALAMAGROSTIS X ACUTIFLORA 'OVERDAM'	OVERDAM FEATHER REED GRASS	#2 CONT.
CJ	CERCIDIPHYLLUM JAPONICUM	KATSURA	2.5" CAL.
CN	CHAMAECYPARIS NOOTKATENSIS 'PENDULA'	WEEPING ALASKAN CEDAR	7'-8' HGT.
CO	CARYA OVATA	SHAGBARK HICKORY	2.5" CAL.
CP	COMPTONIA PEREGRINA	SWEET FERN	#2 CONT.
CV	CRATAEGUS VIRIDIS 'WINTER KING'	WINTER KING HAWTHORN	2.5" CAL.
JC	JUNIPERUS CHINENSIS 'ROBUSTA'	ROBUSTA JUNIPER	7'-8' HGT.
JS	JUNIPERUS SABINA 'TAMARISCIFOLIA'	TAM JUNIPER	#3 CONT.
JV	JUNIPERUS VIRGINIANA 'GREY OWL	GREY OWL JUNIPER	#3 CONT.
MD	MALUS X 'DONALD WYMAN'	DONALD WYAMN CRABAPPLE	2.5" CAL.
NF	NEPETA FAASSENII 'JUNIOR WALKER'	JUNIOR WALKER CATMINT	#2 CONT.
PA	PENNISETUM ALOPECUROIDES 'HAMELN'	HAMELN FOUNTAIN GRASS	#2 CONT.
PAn	PICEA ABIES 'NIDIFORMIS'	BIRD'S NEST SPRUCE	#3 CONT.
PF	PINUS FLEXILIS 'VANDERWOLF'S PYRAMID'	VANDERWOLF PINE	7'-8' HGT.
PO	PICEA OMORIKA	SERBIAN SPRUCE	7'-8' HGT.
POs	PHYSOCARPUS OPULIFOLIUS 'SUMMER WINE BLACK'	SUMMER WINE BLACK NINEBARK	#5 CONT.
PS	PRUNUS SARGENTII 'PINK FLAIR'	PINK FLAIR CHERRY	2.5" CAL.
PQ	PARTHENOCISSUS QUINQUEFOLIA	VIRGINIA CREEPER	#1 CONT.
QP	QUERCUS PALUSTRIS	PIN OAK	2.5" CAL.
RA	RHUS AROMATICA 'GRO-LOW'	GRO-LOW FRAGRANT SUMAC	#3 CONT.
RH	RHODODENDRON 'NOVA ZEMBLA'	NOVA ZEMBLA RHODODENDRON	#5 CONT.
SS	SORBARIA SORBIFOLIA 'SEM'	ASHLEAF SPIREA	#5 CONT.
UA	ULMUS AMERICANA 'VALLEY FORGE'	VALLEY FORGE ELM	2.5" CAL.
VC	VIBURNUM CARLESII	KOREAN SPICE VIBURNUM	#5 CONT.
WF	WEIGELA FLORIDA 'WINE & ROSES'	ALEXANDRA WEIGELA	#5 CONT.

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(FOR MORE INFORMATION PLEASE DIVISION 700 OF THE MAINE DEPARTMENT OF TRANSPORTATION)

TAX PARCELS: 434-C-1,434-C-5 & 434-C-10

GRAPHIC SCALE
0 5 10 20
(IN FEET)
1 INCH = 10 FT.

KYLIE S. MASON, RLA 3335

KYLIE S. MASON
MASON
3335
REGISTERED LANDSCAPE ARCHITECT
STATE OF MAINE
01/06/2025

REV	BY	DATE	STATUS
E	KSM	01/06/2025	RESPONSE TO CITY 'DPW' REVIEW COMMENTS
D	KSM	08/14/2024	RESPONSE TO CITY REVIEW COMMENTS
C	KSM	04/26/2024	RESPONSE TO CITY REVIEW COMMENTS
B	KSM	03/14/2024	RESPONSE TO CITY REVIEW COMMENTS
A	KSM	12/20/2023	ISSUED TO CITY OF PORTLAND FOR SITE PLAN REVIEW

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SEBAGO TECHNICS
WWW.SEBAGOTECHNICS.COM
75 John Roberts Rd.
Suite 4A
South Portland, ME 04106
Tel: 207-200-2100

VERANDA STREET LANDSCAPE PLAN
MARTINS POINT HEALTH CARE VERANDA CAMPUS
331 VERANDA STREET
PORTLAND, ME 04103

MARTIN'S POINT HEALTH CARE, INC.
PO BOX 9746
PORTLAND, ME 04103

DESIGNED	BAM/PDO
DRAWN	CJC
CHECKED	PDO
DATE	04/10/2023
SCALE	1" = 10'
PROJECT	211026

SHEET28OF 37

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211026 L-BLDG7.dwg, TAB:LANDSCAPE PLAN 3



PLANT SCHEDULE

KEY	BOTANICAL NAME	COMMON NAME	SIZE / NOTES
TREES:			
AG	AMELANCHIER X GRANDIFLORA 'AUTUMN BRILLIANCE'	AUTUMN BRILLIANCE SERVICEBERRY	8'-10' HGT, 3-LEADER CLUMP [MINIMUM 1.5"-2" CAL,B&B]
BF	BETULA NIGRA 'FOX VALLEY'	FOX VALLEY BIRCH	7'-8' HGT, 3-LEADER CLUMP [MINIMUM 1.5"-2" CAL,B&B]
BN	BETULA NIGRA 'HERITAGE'	HERITAGE RIVER BIRCH	8'-10' HGT, 3-LEADER CLUMP [MINIMUM 1.5"-2" CAL,B&B]
CA	CALAMAGROSTIS X ACUTIFLORA 'OVERDAM'	OVERDAM FEATHER REED GRASS	#2 CONT.
CJ	CERCIDIPHYLLUM JAPONICUM	KATSURA	2.5" CAL.
CN	CHAMAECYPARIS NOOTKATENSIS 'PENDULA'	WEEPING ALASKAN CEDAR	7'-8' HGT.
CO	CARYA OVATA	SHAGBARK HICKORY	2.5" CAL.
CP	COMPTONIA PEREGRINA	SWEET FERN	#2 CONT.
CV	CRATAEGUS VIRIDIS 'WINTER KING	WINTER KING HAWTHORN	2.5" CAL.
JC	JUNIPERUS CHINENSIS 'ROBUSTA'	ROBUSTA JUNIPER	7'-8' HGT.
JS	JUNIPERUS SABINA 'TAMARISCIFOLIA'	TAM JUNIPER	#3 CONT.
JV	JUNIPERUS VIRGINIANA 'GREY OWL	GREY OWL JUNIPER	#3 CONT.
MD	MALUS X 'DONALD WYMAN'	DONALD WYAMN CRABAPPLE	2.5" CAL.
NF	NEPETA FAASSENII 'JUNIOR WALKER'	JUNIOR WALKER CATMINT	#2 CONT.
PA	PENNISETUM ALOPECUROIDES 'HAMELN'	HAMELN FOUNTAIN GRASS	#2 CONT.
PAn	PICEA ABIES 'NIDIFORMIS'	BIRD'S NEST SPRUCE	#3 CONT.
PF	PINUS FLEXILIS 'VANDERWOLF'S PYRAMID'	VANDERWOLF PINE	7'-8' HGT.
PO	PICEA OMORIKA	SERBIAN SPRUCE	7'-8' HGT.
POs	PHYSOCARPUS OPULIFOLIUS 'SUMMER WINE BLACK'	SUMMER WINE BLACK NINEBARK	#5 CONT.
PS	PRUNUS SARGENTII 'PINK FLAIR'	PINK FLAIR CHERRY	2.5" CAL.
PQ	PARTHENOCISSUS QUINQUEFOLIA	VIRGINIA CREEPER	#1 CONT.
QP	QUERCUS PALUSTRIS	PIN OAK	2.5" CAL.
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SS	SORBARIA SORBIFOLIA 'SEM'	ASHLEAF SPIREA	#5 CONT.
UA	ULMUS AMERICANA 'VALLEY FORGE'	VALLEY FORGE ELM	2.5" CAL.
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(FOR MORE INFORMATION PLEASE DIVISION 700 OF THE MAINE DEPARTMENT OF TRANSPORTATION)

TAX PARCELS: 434-C-1,434-C-5 & 434-C-10

KYLIE S. MASON, RLA 3335

KYLIE S. MASON
LICENSED LANDSCAPE ARCHITECT
No. 3335
STATE OF MAINE
01/06/2025

REV	BY	DATE	
E	KSM	01/06/2025	RESPONSE TO CITY DPW REVIEW COMMENTS
D	KSM	11/14/2024	RESPONSE TO CITY REVIEW COMMENTS
C	KSM	04/26/2024	RESPONSE TO CITY REVIEW COMMENTS
B	KSM	03/14/2024	RESPONSE TO CITY REVIEW COMMENTS
A	KSM	12/20/2023	ISSUED TO CITY OF PORTLAND FOR SITE PLAN REVIEW

DATE: STATUS:

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SEBAGO TECHNICS
WWW.SEBAGOTECHNICS.COM
75 John Roberts Rd.
Suite 4A
South Portland, ME 04106
Tel: 207-200-2100

REAR PATH LANDSCAPE PLAN

MARTIN'S POINT HEALTH CARE VERANDA CAMPUS

331 VERANDA STREET
PORTLAND, ME 04103

MARTIN'S POINT HEALTH CARE, INC.

PO BOX 9746
PORTLAND, ME 04103

DESIGNED	BAM/PDO
DRAWN	CJC
CHECKED	PDO
DATE	04/10/2023
SCALE	1" = 10'
PROJECT	211026

SHEET 29 OF 37

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211026 L-BLDG7.dwg, TAB:LANDSCAPE PLAN 4

SHEET30OF 37

PROJECT	211026
SCALE	1" = 5'
DATE	04/10/2023
CHECKED	PDO
DRAWN	CJC
DESIGNED	BAM/PDO

LOOKOUT LANDSCAPE PLAN

MARTIN'S POINT HEALTH CARE VERANDA CAMPUS

331 VERANDA STREET
PORTLAND, ME 04103

MARTIN'S POINT HEALTH CARE, INC.

PO BOX 9746
PORTLAND, ME 04103

SEBAGO TECHNICS
WWW.SEBAGOTECHNICS.COM
75 John Roberts Rd.
Suite 4A
South Portland, ME 04106
Tel: 207-200-2100

REV.	BY:	DATE:	STATUS:
A	KSM	12/20/2023	ISSUED TO CITY OF PORTLAND FOR SITE PLAN REVIEW
B	KSM	02/14/2024	RESPONSE TO CITY REVIEW COMMENTS
C	KSM	04/26/2024	RESPONSE TO CITY REVIEW COMMENTS
D	KSM	11/14/2024	RESPONSE TO CITY REVIEW COMMENTS
E	KSM	01/06/2025	RESPONSE TO CITY DPW REVIEW COMMENTS

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KYLIE S. MASON, RLA 3335
01/06/2025

PAUL D. OSTROWSKI, PE 11175
01/06/2025

TAX PARCELS: 434-C-1,434-C-5 & 434-C-10

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EROSION CONTROL MEASURES

PRE-CONSTRUCTION PHASE

PRIOR TO THE BEGINNING OF ANY CONSTRUCTION, SEDIMENT BARRIERS (SILT FENCE) WILL BE STAKED/INSTALLED ACROSS THE SLOPE(S), ON THE CONTOUR AT OR JUST BELOW THE LIMITS OF CLEARING OR GRUBBING, AND/OR JUST ABOVE ANY ADJACENT PROPERTY LINE OR WATERCOURSE TO PROTECT AGAINST CONSTRUCTION RELATED EROSION. THE PLACEMENT OF SEDIMENT BARRIERS SHALL BE COMPLETED IN ACCORDANCE WITH GUIDELINES ESTABLISHED IN BEST MANAGEMENT PRACTICES AND IN ACCORDANCE WITH THIS EROSION CONTROL PLAN AND DETAILS IN THIS PLAN SET. THIS NETWORK IS TO BE MAINTAINED BY THE CONTRACTOR UNTIL ALL EXPOSED SLOPES HAVE AT LEAST 90% VIGOROUS PERENNIAL VEGETATIVE COVER TO PREVENT EROSION. TEMPORARY EROSION CONTROL MEASURES SHALL BE REMOVED WITHIN 30 DAYS AFTER PERMANENT STABILIZATION IS ATTAINED.

PRIOR TO ANY CLEARING OR GRUBBING, A CONSTRUCTION ENTRANCE/EXIT SHALL BE CONSTRUCTED AT THE INTERSECTION OF THE PROPOSED ENTRANCES AND EXISTING ROADWAY TO AVOID TRACKING OF MUD, DUST AND DEBRIS FROM THE SITE.

PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL PREPARE A DETAILED SCHEDULE AND MARKED UP PLAN INDICATING AREAS AND COMPONENTS OF THE WORK AND KEY DATES SHOWING DATE OF DISTURBANCE AND COMPLETION OF THE WORK. THE CONTRACTOR SHALL SCHEDULE A PRE-CONSTRUCTION MEETING WITH THE MUNICIPAL STAFF. THREE COPIES OF THE SCHEDULE AND MARKED UP PLAN SHALL BE PROVIDED TO THE MUNICIPALITY TWO DAYS PRIOR TO THE SCHEDULED PRE-CONSTRUCTION MEETING. SPECIAL ATTENTION SHALL BE GIVEN TO THE 14 DAY LIMIT OF DISTURBANCE IN THE SCHEDULE ADDRESSING TEMPORARY AND PERMANENT VEGETATION MEASURES.

CONSTRUCTION AND POST-CONSTRUCTION PHASE

AREAS UNDERGOING ACTUAL CONSTRUCTION SHALL ONLY EXPOSE THAT AMOUNT OF MINERAL SOIL NECESSARY FOR PROGRESSIVE AND EFFICIENT CONSTRUCTION. AN AREA CONSIDERED OPEN IS ANY AREA NOT STABILIZED WITH PAVEMENT, VEGETATION, MULCHING, EROSION CONTROL MATS, RIPRAP OR GRAVEL BASE ON A ROAD, SUCH AS ACTIVE EXCAVATION AND ACTIVE GRADING. LIMIT THE EXPOSED AREA TO THOSE AREAS IN WHICH WORK IS ACTIVELY OCCURRING OR CAN BE MULCHED IN THE SAME DAY. OPEN AREAS SHALL BE ANCHORED WITH TEMPORARY EROSION CONTROL AS SHOWN ON THE DESIGN PLANS AND AS DESCRIBED WITHIN THIS EROSION CONTROL PLAN WITHIN SEVEN (7) DAYS OF DISTURBANCE. AREAS LOCATED WITHIN 100 FEET OF STREAMS SHALL BE ANCHORED WITH TEMPORARY EROSION CONTROL WITHIN SEVEN (7) DAYS. REFER TO WINTER EROSION CONTROL NOTES FOR THE TREATMENT OF OPEN AREAS AFTER OCTOBER 1ST OF THE CONSTRUCTION YEAR.

THE CONTRACTOR MUST INSTALL ANY ADDED MEASURES WHICH MAY BE NECESSARY TO CONTROL EROSION/SEDIMENTATION FROM THE SITE DEPENDENT UPON THE ACTUAL SITE AND WEATHER CONDITIONS. CONTINUATION OF EARTHWORK OPERATIONS ON ADDITIONAL AREAS SHALL NOT BEGIN UNTIL THE EXPOSED SOIL SURFACE ON THE AREA BEING WORKED HAS BEEN STABILIZED, IN ORDER TO MINIMIZE AREAS WITHOUT EROSION CONTROL PROTECTION.

EROSION CONTROL APPLICATIONS & MEASURES
THE PLACEMENT OF EROSION CONTROL MEASURES SHALL BE COMPLETED IN ACCORDANCE WITH GUIDELINES ESTABLISHED IN BEST MANAGEMENT PRACTICES AND IN ACCORDANCE WITH THE EROSION CONTROL PLAN AND DETAILS IN THE PLAN SET.

1. TEMPORARY MULCHING:

ALL DISTURBED AREAS SHALL BE MULCHED WITH MATERIALS SPECIFIED BELOW PRIOR TO ANY STORM EVENT. ALL DISTURBED AREAS NOT FINAL GRADED WITHIN 14 DAYS SHALL BE MULCHED. DISTURBED AREAS ADJACENT TO NATURAL RESOURCES THAT ARE NOT GRADED WITHIN SEVEN (7) DAYS SHALL BE MULCHED. ALSO, AREAS, WHICH HAVE BEEN TEMPORARILY OR PERMANENTLY SEEDED, SHALL BE MULCHED IMMEDIATELY FOLLOWING SEEDING. EROSION CONTROL BLANKETS ARE RECOMMENDED TO BE USED AT THE BASE OF GRASSED WATERWAYS AND ON SLOPES GREATER THAN 33%. MULCH ANCHORING SHOULD BE USED ON SLOPES GREATER THAN 5% AFTER SEPTEMBER 15TH OF THE CONSTRUCTION YEAR (SEE WINTER EROSION CONTROL NOTES).
TYPES OF MULCH:

HAY OR STRAW: SHALL BE APPLIED AT A RATE OF 75 LBS/1,000 S.F. (1.5 TONS PER ACRE).

EROSION CONTROL MIX: SHALL BE PLACED EVENLY AND MUST PROVIDE 100% SOIL COVERAGE. EROSION CONTROL MIX SHALL BE APPLIED SUCH THAT THE THICKNESS ON SLOPES 3:1 OR LESS IS 2 INCHES PLUS 1/2 INCH PER 20 FEET OF SLOPE UP TO 100 FEET. THE THICKNESS ON SLOPES BETWEEN 3:1 AND 2:1 SHALL BE 4 INCHES PLUS 1/2 INCH PER 20 FEET OF SLOPE UP TO 100 FEET. THIS SHALL NOT BE USED ON SLOPES GREATER THAN 2:1.

EROSION CONTROL BLANKET: SHALL BE INSTALLED SUCH THAT CONTINUOUS CONTACT BETWEEN THE MAT AND THE SOIL IS OBTAINED. INSTALL BLANKETS AND STAPLE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

2. SOIL STOCKPILES:

STOCKPILES OF SOIL OR SUBSOIL SHALL BE MULCHED WITH HAY OR STRAW AT A RATE OF 75 LBS/1,000 S.F. (1.5 TONS PER ACRE) OR WITH A FOUR-INCH LAYER OF WOOD WASTE EROSION CONTROL MIX. THIS WILL BE DONE WITHIN 24 HOURS OF STOCKING AND RE-ESTABLISHED PRIOR TO ANY RAINFALL. ANY SOIL STOCKPILE WILL NOT BE PLACED (EVEN COVERED WITH HAY OR STRAW) WITHIN 100 FEET FROM ANY NATURAL RESOURCES. SEDIMENT BARRIERS SHALL BE INSTALLED DOWNGRADIENT OF STOCKPILES, AND STORMWATER SHALL BE PREVENTED FROM RUNNING ONTO THE STOCKPILE.

3. NATURAL RESOURCES PROTECTION:

ANY AREAS WITHIN 100 FEET FROM ANY NATURAL RESOURCES SHALL BE MULCHED USING TEMPORARY MULCHING (AS DESCRIBED IN PART 1 OF THIS SECTION) WITHIN 7 DAYS OF EXPOSURE OR PRIOR TO ANY STORM EVENT. SEDIMENT BARRIERS (AS DESCRIBED IN PART 4 OF THIS SECTION) SHALL BE PLACED BETWEEN ANY NATURAL RESOURCE AND THE DISTURBED AREA. PROJECTS CROSSING THE NATURAL RESOURCE SHALL BE PROTECTED A MINIMUM DISTANCE OF 100 FEET ON EITHER SIDE FROM THE RESOURCE.

4. SEDIMENT BARRIERS:

PRIOR TO THE BEGINNING OF ANY CONSTRUCTION, SEDIMENT BARRIERS SHALL BE STAKED ACROSS THE SLOPE(S), ON THE CONTOUR AT OR JUST BELOW THE LIMITS OF CLEARING OR GRUBBING, AND/OR JUST ABOVE ANY ADJACENT PROPERTY LINE OR WATERCOURSE TO PROTECT AGAINST CONSTRUCTION RELATED EROSION. SEDIMENT BARRIERS SHALL BE MAINTAINED BY THE CONTRACTOR UNTIL ALL EXPOSED SLOPES HAVE AT LEAST 90% VIGOROUS PERENNIAL VEGETATIVE COVER TO PREVENT EROSION.

SILT FENCE: SHALL BE INSTALLED PER THE DETAIL ON THE PLANS. THE EFFECTIVE HEIGHT OF THE FENCE SHALL NOT EXCEED 36 INCHES. IT IS RECOMMENDED THAT SILT FENCE BE REMOVED BY CUTTING THE FENCE MATERIALS AT GROUND LEVEL SO AS TO AVOID ADDITIONAL SOIL DISTURBANCE.

HAY BALES: SHALL NOT BE INSTALLED ADJACENT TO WETLAND. INSTALL PER THE DETAIL ON THE PLANS. BALES SHALL BE WIRE-BOUND OR STRING-TIED AND THESE BINDINGS MUST REMAIN PARALLEL WITH THE GROUND SURFACE DURING INSTALLATION TO PREVENT DETERIORATION OF THE BINDINGS. BALES SHALL BE INSTALLED WITHIN A MINIMUM 4 INCH DEEP TRENCH LINE WITH ENDS OF ADJACENT BALES TIGHTLY ABUTTING ONE ANOTHER.

EROSION CONTROL MIX: SHALL NOT BE USED ADJACENT TO WETLAND. INSTALL PER THE DETAIL ON THE PLANS. THE MIX SHALL CONSIST PRIMARILY OF ORGANIC MATERIAL AND CONTAIN A WELL-GRADED MIXTURE OF PARTICLE SIZES AND MAY CONTAIN ROCKS LESS THAN 4 INCHES IN DIAMETER. THE MIX COMPOSITION SHALL MEET THE STANDARDS DESCRIBED WITHIN THE MDEP BEST MANAGEMENT PRACTICES. NO TRENCHING IS REQUIRED FOR INSTALLATION OF THIS BARRIER. EROSION CONTROL MIX BERMS SHALL NOT BE USED AT THE BOTTOM OF STEEP SLOPES (>5%) OR SLOPES WITH FLOWING WATER.

CONTINUOUS CONTAINED BERM: SHALL BE INSTALLED PER THE DETAIL ON THE PLANS. THIS SEDIMENT BARRIER IS EROSION CONTROL MIX PLACED WITHIN A SYNTHETIC TUBULAR NETTING AND PERFORMS AS A STURDY SEDIMENT BARRIER THAT WORKS WELL ON HARD GROUND SUCH AS FROZEN CONDITIONS, TRAVELED AREAS OR PAVEMENT. NO TRENCHING IS REQUIRED FOR INSTALLATION OF THIS BARRIER.

5. TEMPORARY CHECK DAMS:

SHALL BE INSTALLED PER THE DETAIL ON THE PLANS. CHECK DAMS ARE TO BE PLACED WITHIN DITCHES/ SWALES AS SPECIFIED ON THE DESIGN PLANS IMMEDIATELY AFTER FINAL GRADING. CHECK DAMS SHALL BE 2 FEET HIGH. TEMPORARY CHECK DAMS MAY BE REMOVED ONLY AFTER THE ROADWAYS ARE PAVED AND THE VEGETATED SWALE ARE ESTABLISHED WITH AT LEAST 90% OF VIGOROUS PERENNIAL GROWTH. THE AREA BENEATH THE CHECK DAM MUST BE SEEDED AND MULCHED IMMEDIATELY AFTER REMOVAL OF THE CHECK DAM.

STONE CHECK DAMS: STONE DAMS SHOULD BE CONSTRUCTED OF 2 TO 3 INCH STONE AND PLACED SUCH THAT COMPLETE COVERAGE OF THE SWALE IS OBTAINED AND THAT THE CENTER OF THE DAM IS 6 INCHES LOWER THAT THE OUTER EDGES.

HAY BALE CHECK DAMS: BALES SHALL BE WIRE-BOUND OR STRING-TIED. BALES SHALL BE INSTALLED WITHIN A MINIMUM 4 INCH DEEP TRENCH LINE WITH ENDS OF ADJACENT BALES TIGHTLY ABUTTING ONE ANOTHER. HAY BALES SHALL BE PLACED SUCH THAT COMPLETE COVERAGE OF THE SWALE IS OBTAINED AND THAT THE CENTER OF THE DAM IS 6 INCHES LOWER THAT THE OUTER EDGES.

MANUFACTURED CHECK DAMS: MANUFACTURED CHECK DAMS, AS SPECIFIED IN THE DETAIL ON THE PLANS, MAY BE USED IF AUTHORIZED BY THE PROPER LOCAL, STATE OR FEDERAL REGULATING AGENCIES. THESE UNITS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURE'S RECOMMENDATIONS.

6. STORMDRAIN INLET PROTECTION:

INLET PROTECTION SHALL BE PLACED AROUND A STORMDRAIN DROP INLET OR CURB INLET PRIOR TO PERMANENT STABILIZATION OF THE IMMEDIATE AND UPSTREAM DISTURBED AREAS. THEY SHALL BE CONSTRUCTED IN A MANNER THAT WILL FACILITATE CLEAN-OUT AND DISPOSAL OF TRAPPED SEDIMENTS AND MINIMIZE INTERFERENCE WITH CONSTRUCTION ACTIVITIES. ANY RESULTANT PONDING OF WATER FROM THE PROTECTION METHOD MUST NOT CAUSE EXCESSIVE INCONVENIENCE OR DAMAGE TO ADJACENT AREAS OR STRUCTURES.

HAY BALE DROP INLET PROTECTION: WE DO NOT RECOMMEND THE USE OF HAY BALES AS INLET PROTECTION.

CONCRETE BLOCK AND STONE INLET SEDIMENT FILTER (DROP OR CURB INLET): SHALL BE INSTALLED PER THE DETAIL ON THE PLANS. THE HEIGHT OF THE CONCRETE BLOCK BARRIER CAN VARY BUT MUST BE BETWEEN 12 AND 24 INCHES TALL. A MINIMUM OF 1 INCH CRUSHED STONE SHALL BE USED.

MANUFACTURED SEDIMENT BARRIERS AND FILTER (DROP OR CURB INLET): MANUFACTURED FILTERS, AS SPECIFIED IN THE DETAIL ON THE PLANS, MAY BE USED IF INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

7. STABILIZED CONSTRUCTION ENTRANCE/EXIT:

PRIOR TO CLEARING AND/OR GRUBBING THE SITE A STABILIZED CONSTRUCTION ENTRANCE/EXIT SHALL BE CONSTRUCTED WHEREVER TRAFFIC WILL EXIT THE CONSTRUCTION SITE ONTO A PAVED ROADWAY IN ORDER TO MINIMIZE THE TRACKING OF SEDIMENT AND DEBRIS FROM THE CONSTRUCTION SITE ONTO PUBLIC ROADWAYS. THE ENTRANCES AND ADJACENT ROADWAY AREAS SHALL BE PERIODICALLY SWEPT TO FURTHER MINIMIZE THE TRACKING OF MUD, DUST OR DEBRIS FROM THE CONSTRUCTION AREA. THE TERM "SWEEP" IS UNDERSTOOD TO MEAN REMOVAL AND RECOVERY OF TRACKED SEDIMENT WITH A STREET SWEEPER, NOT BRUSHING THE MATERIAL INTO SWALES OR STRUCTURES WITH A MECHANICAL BROOM. STABILIZED CONSTRUCTION EXITS SHALL BE CONSTRUCTED IN AREAS SPECIFIED ON THE PLANS AND AS DETAILED ON THE PLANS. THE CONTRACTOR SHALL MAINTAIN THE STABILIZED CONSTRUCTION ENTRANCE UNTIL ALL DISTURBED AREAS ARE STABILIZED.

DUST CONTROL:

DUST CONTROL DURING CONSTRUCTION SHALL BE ACHIEVED BY THE USE OF A WATERING TRUCK TO PERIODICALLY SPRINKLE THE EXPOSED ROADWAY AREAS AS NECESSARY TO REDUCE DUST DURING THE DRY MONTHS. APPLYING OTHER DUST CONTROL PRODUCTS SUCH AS CALCIUM CHLORIDE OR OTHER MANUFACTURED PRODUCTS ARE ALLOWED IF AUTHORIZED BY THE PROPER LOCAL, STATE AND/OR FEDERAL REGULATING AGENCIES. HOWEVER, IT IS THE CONTRACTOR'S ULTIMATE RESPONSIBILITY TO MITIGATE DUST AND SOIL LOSS FROM THE SITE. IF OFFSITE TRACKING OCCURS, PUBLIC ROADS SHOULD BE SWEPT IMMEDIATELY AND NOT LESS THAN ONCE A WEEK AND PRIOR TO SIGNIFICANT STORM EVENTS.

TEMPORARY VEGETATION:

TEMPORARY VEGETATION SHALL BE APPLIED TO DISTURBED AREAS THAT WILL NOT RECEIVE FINAL GRADING FOR PERIODS UP TO 12 MONTHS. THIS PROCEDURE SHOULD BE USED EXTENSIVELY IN AREAS ADJACENT TO NATURAL RESOURCES. SEEDBED PREPARATION AND APPLICATION OF SEED SHALL BE CONDUCTED AS INDICATED IN THE PERMANENT VEGETATION SECTION OF THIS NARRATIVE. SPECIFIC SEEDS (FAST GROWING AND SHORT LIVING) SHALL BE SELECTED FROM THE MAINE EROSION AND SEDIMENT CONTROL BMP MANUALS FOR CONTRACTORS AND ENGINEERS, LATEST REVISION. ALTERNATIVE EROSION CONTROL MEASURES SHOULD BE USED IF SEEDING CAN NOT BE DONE BEFORE SEPTEMBER 15TH OF THE CONSTRUCTION YEAR.

PERMANENT VEGETATION:

REVEGETATION MEASURES SHALL COMMENCE IMMEDIATELY UPON COMPLETION OF FINAL GRADING OF AREAS TO BE LOAMED AND SEEDED. THE APPLICATION OF SEED SHALL BE CONDUCTED BETWEEN APRIL 1ST AND OCTOBER 1ST OF THE CONSTRUCTION YEAR, PLEASE REFER TO THE WINTER EROSION CONTROL NOTES FOR MORE DETAIL. REVEGETATION MEASURES SHALL CONSIST OF THE FOLLOWING:

SEEDBED PREPARATION:

A. FOUR (4) INCHES OF LOAM SHALL BE SPREAD OVER DISTURBED AREAS AND SMOOTHED TO A UNIFORM SURFACE. LOAM SHALL BE FREE OF SUBSOIL, CLAY LUMPS, STONES AND OTHER OBJECTS OVER 2 INCHES OR LARGER IN ANY DIMENSION, AND WITHOUT WEEDS, ROOTS OR OTHER OBJECTIONABLE MATERIAL.

B. SOILS TESTS SHALL BE TAKEN AT THE TIME OF SOIL STRIPPING TO DETERMINE FERTILIZATION REQUIREMENTS. SOILS TESTS SHALL BE TAKEN PROMPTLY AS TO NOT INTERFERE WITH THE 14-DAY LIMIT ON SOIL EXPOSURE. BASED UPON TEST RESULTS, SOIL AMENDMENTS SHALL BE INCORPORATED INTO THE SOIL PRIOR TO FINAL SEEDING. IN LIEU OF SOIL TESTS, SOIL AMENDMENTS MAY BE APPLIED AS FOLLOWS:

ITEM	APPLICATION RATE
10-20-20 FERTILIZER (N-P205-K20 OR EQUAL)	18.4 LBS./1,000 S.F.
GROUND LIMESTONE (50% CALCIUM & MAGNESIUM OXIDE)	138 LBS./1,000 S.F.

C. WORK LIME AND FERTILIZER INTO THE SOIL AS NEARLY AS PRACTICAL TO A DEPTH OF 4 INCHES WITH PROPER EQUIPMENT. ROLL THE AREA TO FIRM THE SEEDBED EXCEPT ON CLAY OR SILTY SOILS OR COARSE SAND.

APPLICATION OF SEED:

A. SEEDING: SHALL BE CONDUCTED BETWEEN APRIL 1ST AND OCTOBER 1ST OF THE CONSTRUCTION YEAR. GENERALLY A SEED MIXTURE MAY BE APPLIED AS FOLLOWS: (CONSERVATION MIX)

SEED TYPE	APPLICATION RATE
FESCUE, FAWN	0.34 LBS/1,000 S.F. (15 LBS/ACRE)
BIRD'S FOOT TREFOIL, VARIETY NOT STATED	0.28 LBS/1,000 S.F. (12 LBS/ACRE)
ANNUAL RYEGRASS	0.18 LBS/1,000 S.F. (8 LBS/ACRE)
TIMOTHY, CLIMAX	0.18 LBS/1,000 S.F. (8 LBS/ACRE)
ALSIKE CLOVER	0.11 LBS/1,000 S.F. (5 LBS/ACRE)
REDTOP	0.05 LBS/1,000 S.F. (2 LBS/ACRE)
TOTAL	1.14 LBS/1,000 S.F. (50 LBS/ACRE)

NOTE: A SPECIFIC SEED MIXTURE SHOULD BE CHOSEN TO MATCH THE SOILS CONDITION OF THE SITE. VARIOUS AGENCIES CAN RECOMMEND SEED MIXTURES. MDEP RECOMMENDED SEED MIXTURES ARE IN THE EROSION AND SEDIMENT CONTROL BMP MANUAL DATED 2016 OR LATEST REVISION.

B. HYDROSEEDING: SHALL BE CONDUCTED ON PREPARED AREAS WITH SLOPES LESS THAN 2:1. LIME AND FERTILIZER MAY BE APPLIED SIMULTANEOUSLY WITH THE SEED. RECOMMENDED SEEDING RATES MUST BE INCREASED BY 10% WHEN HYDROSEEDING.

C. MULCHING: SHALL COMMENCE IMMEDIATELY AFTER SEED IS APPLIED. REFER TO THE TEMPORARY MULCHING SECTION OF THIS NARRATIVE FOR DETAILS.

SODDING:
FOLLOWING SEEDBED PREPARATION, SOD CAN BE APPLIED IN LIEU OF SEEDING IN AREAS WHERE IMMEDIATE VEGETATION IS MOST BENEFICIAL SUCH AS DITCHES, AROUND STORMWATER DROP INLETS AND AREAS OF AESTHETIC VALUE. SOD SHOULD BE LAID AT RIGHT ANGLES TO THE DIRECTION OF FLOW, STARTING AT THE LOWEST ELEVATION. SOD SHOULD BE ROLLED OR TAMPED DOWN TO ENSURE CONTACT WITH THE SOIL. ON SLOPES ONCE LAID DOWN, WHERE FLOW IS PREVALENT THE SOD MUST BE PROPERLY ANCHORED DOWN. IRRIGATE THE SOD IMMEDIATELY AFTER INSTALLATION. IN MOST CASES, SOD CAN BE ESTABLISHED BETWEEN APRIL 1ST AND NOVEMBER 15TH OF THE CONSTRUCTION YEAR, HOWEVER, REFER TO THE WINTER EROSION CONTROL NOTES FOR ANY ACTIVITIES AFTER OCTOBER 1ST.

STANDARDS FOR TIMELY STABILIZATION:

STANDARD FOR THE TIMELY STABILIZATION OF DISTURBED SLOPES -- THE CONTRACTOR WILL CONSTRUCT AND STABILIZE STONE-COVERED SLOPES BY NOVEMBER 15. THE CONTRACTOR WILL SEED AND MULCH ALL SLOPES TO BE VEGETATED BY SEPTEMBER 15. THE MDEP WILL CONSIDER ANY AREA HAVING A GRADE GREATER THAN 15% (10H:1V) TO BE A SLOPE. IF THE CONTRACTOR FAILS TO STABILIZE ANY SLOPE TO BE VEGETATED BY SEPTEMBER 15, THEN THE CONTRACTOR WILL TAKE ONE OF THE FOLLOWING ACTIONS TO STABILIZE THE SLOPE FOR LATE FALL AND WINTER.

A. STABILIZE THE SOIL WITH TEMPORARY VEGETATION AND EROSION CONTROL MATS -- BY OCTOBER 1 THE CONTRACTOR WILL SEED THE DISTURBED SLOPE WITH WINTER RYE AT A SEEDING RATE OF 3 POUNDS PER 1,000 SQUARE FEET AND APPLY EROSION CONTROL MATS OVER THE MULCHED SLOPE. THE CONTRACTOR WILL MONITOR GROWTH OF THE RYE OVER THE NEXT 30 DAYS. IF THE RYE FAILS TO GROW AT LEAST THREE INCHES OR COVER AT LEAST 75% OF THE DISTURBED SLOPE BY NOVEMBER 1, THEN THE CONTRACTOR WILL COVER THE SLOPE WITH A LAYER OF WOOD WASTE COMPOST AS DESCRIBED IN ITEM 2(C.) OF THIS STANDARD OR WITH STONE RIPRAP AS DESCRIBED IN ITEM 2(D.) OF THIS STANDARD.

B. STABILIZE THE SLOPE WITH SOD -- THE CONTRACTOR WILL STABILIZE THE DISTURBED SLOPE WITH PROPERLY INSTALLED SOD BY OCTOBER 1. PROPER INSTALLATION INCLUDES THE CONTRACTOR PINNING THE SOD ONTO THE SLOPE WITH WIRE PINS, ROLLING THE SOD TO GUARANTEE CONTACT BETWEEN THE SOD AND UNDERLYING SOIL, AND WATERING THE SOD TO PROMOTE ROOT GROWTH INTO THE DISTURBED SOIL. THE CONTRACTOR WILL NOT USE LATE-SEASON SOD INSTALLATION TO STABILIZE SLOPES HAVING A GRADE GREATER THAN 33% (3H:1V).

C. STABILIZE THE SLOPE WITH WOOD WASTE COMPOST -- THE CONTRACTOR WILL PLACE A SIX-INCH LAYER OF WOOD WASTE COMPOST ON THE SLOPE BY NOVEMBER 15. PRIOR TO PLACING THE WOOD WASTE COMPOST, THE CONTRACTOR WILL REMOVE ANY SNOW ACCUMULATION ON THE DISTURBED SLOPE. THE CONTRACTOR WILL NOT USE WOOD WASTE COMPOST TO STABILIZE SLOPES HAVING GRADES GREATER THAN 50% (2H:1V) OR HAVING GROUNDWATER SEEPS ON THE SLOPE FACE

D. STABILIZE THE SLOPE WITH STONE RIPRAP -- THE CONTRACTOR WILL PLACE A LAYER OF STONE RIPRAP ON THE SLOPE BY NOVEMBER 15. THE CONTRACTOR WILL HIRE A REGISTERED PROFESSIONAL ENGINEER TO DETERMINE THE STONE SIZE NEEDED FOR STABILITY AND TO DESIGN A FILTER LAYER FOR UNDERNEATH THE RIPRAP.

STANDARD FOR THE TIMELY STABILIZATION OF DISTURBED SOILS -- BY SEPTEMBER 15 THE CONTRACTOR WILL SEED AND MULCH ALL DISTURBED SOILS ON AREAS HAVING A SLOPE LESS THAN 15%. IF THE CONTRACTOR FAILS TO STABILIZE THESE SOILS BY THIS DATE, THEN THE CONTRACTOR WILL TAKE ONE OF THE FOLLOWING ACTIONS TO STABILIZE THE SOIL FOR LATE FALL AND WINTER.

A. STABILIZE THE SOIL WITH TEMPORARY VEGETATION -- BY OCTOBER 1 THE CONTRACTOR WILL SEED THE DISTURBED SOIL WITH WINTER RYE AT A SEEDING RATE OF 3 POUNDS PER 1000 SQUARE FEET, LIGHTLY MULCH THE SEEDED SOIL WITH HAY OR STRAW AT 75 POUNDS PER 1000 SQUARE FEET, AND ANCHOR THE MULCH WITH PLASTIC NETTING. THE CONTRACTOR WILL MONITOR GROWTH OF THE RYE OVER THE NEXT 30 DAYS. IF THE RYE FAILS TO GROW AT LEAST THREE INCHES OR COVER AT LEAST 75% OF THE DISTURBED SOIL BEFORE NOVEMBER 15, THEN THE CONTRACTOR WILL MULCH THE AREA FOR OVER-WINTER PROTECTION AS DESCRIBED IN ITEM 3(C.) OF THIS STANDARD.

B. STABILIZE THE SOIL WITH SOD -- THE CONTRACTOR WILL STABILIZE THE DISTURBED SOIL WITH PROPERLY INSTALLED SOD BY OCTOBER 1. PROPER INSTALLATION INCLUDES THE CONTRACTOR PINNING THE SOD ONTO THE SOIL WITH WIRE PINS, ROLLING THE SOD TO GUARANTEE CONTACT BETWEEN THE SOD AND UNDERLYING SOIL, AND WATERING THE SOD TO PROMOTE ROOT GROWTH INTO THE DISTURBED SOIL.

C. STABILIZE THE SOIL WITH MULCH -- BY NOVEMBER 15 THE CONTRACTOR WILL MULCH THE DISTURBED SOIL BY SPREADING HAY OR STRAW AT A RATE OF AT LEAST 150 POUNDS PER 1000 SQUARE FEET ON THE AREA SO THAT NO SOIL IS VISIBLE THROUGH THE MULCH. PRIOR TO APPLYING THE MULCH, THE CONTRACTOR WILL REMOVE ANY SNOW ACCUMULATION ON THE DISTURBED AREA. IMMEDIATELY AFTER APPLYING THE MULCH, THE CONTRACTOR WILL ANCHOR THE MULCH WITH PLASTIC NETTING TO PREVENT WIND FROM MOVING THE MULCH OFF THE DISTURBED SOIL.

1. MAINTENANCE MEASURES SHALL BE APPLIED AS NEEDED DURING THE ENTIRE CONSTRUCTION CYCLE. AFTER EACH RAINFALL, SNOW STORM OR PERIOD OF THAWING AND RUNOFF, AND AT LEAST EVERY SEVEN (7) DAYS, THE CONTRACTOR SHALL PERFORM A VISUAL INSPECTION OF ALL INSTALLED EROSION CONTROL MEASURES. THE CONTRACTOR SHALL PERFORM REPAIRS NO LATER THAN THE END OF THE NEXT WORKDAY, TO ALLOW CONTINUED PROPER FUNCTIONING OF THE EROSION CONTROL MEASURE. THE CONTRACTOR SHALL PROVIDE THE NECESSARY REGULATING AGENCIES WITH WRITTEN DOCUMENTATION DESCRIBING DATES OF INSPECTIONS AND NECESSARY FOLLOW-UP WORK TO MAINTAIN EROSION CONTROL MEASURES MEETING THE REQUIREMENTS OF THIS PLAN WITHIN SEVEN (7) DAYS.

2. FOLLOWING THE TEMPORARY AND/OR FINAL SEEDINGS, THE CONTRACTOR SHALL INSPECT THE WORK AREA SEMIMONTHLY UNTIL THE SEEDINGS HAVE BEEN ESTABLISHED. ESTABLISHED MEANS A MINIMUM OF 90% OF AREAS VEGETATED WITH VIGOROUS GROWTH. RESEEDING SHALL BE CARRIED OUT BY THE CONTRACTOR WITH FOLLOW-UP INSPECTIONS IN THE EVENT OF ANY FAILURES UNTIL VEGETATION IS ADEQUATELY ESTABLISHED.

HOUSEKEEPING:

1. SPILL PREVENTION. CONTROLS MUST BE USED TO PREVENT POLLUTANTS FROM CONSTRUCTION AND WASTE MATERIALS STORED ON SITE TO ENTER STORMWATER, WHICH INCLUDES STORAGE PRACTICES TO MINIMIZE EXPOSURE OF THE MATERIALS TO STORMWATER, THE SITE CONTRACTOR OR OPERATOR MUST DEVELOP, AND IMPLEMENT AS NECESSARY, APPROPRIATE SPILL PREVENTION, CONTAINMENT, AND RESPONSE PLANNING MEASURES.

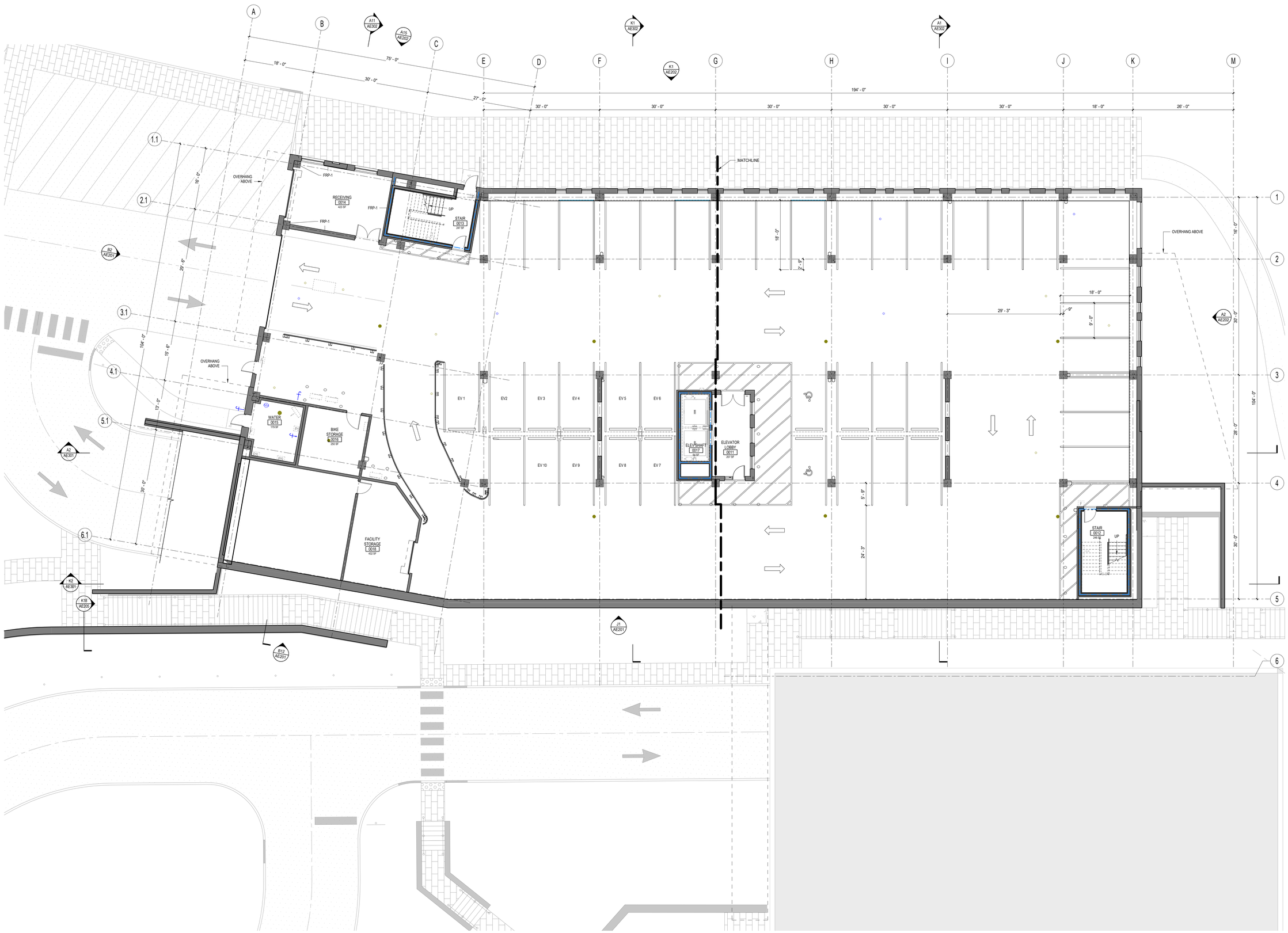
2. GROUNDWATER PROTECTION. DURING CONSTRUCTION, LIQUID PETROLEUM PRODUCTS AND OTHER HAZARDOUS MATERIALS WITH THE POTENTIAL TO CONTAMINATE GROUNDWATER MAY NOT BE STORED OR HANDLED IN AREAS OF THE SITE DRAINING TO AN INFILTRATION AREA. AN "INFILTRATION AREA" IS ANY AREA OF THE SITE THAT BY DESIGN OR AS A RESULT OF SOILS, TOPOGRAPHY AND OTHER RELEVANT FACTORS ACCUMULATES RUNOFF THAT INFILTRATES INTO THE SOIL. DIKES, BERMS, SUMPS, AND OTHER FORMS OF SECONDARY CONTAINMENT THAT PREVENT DISCHARGE TO GROUNDWATER MAY BE USED TO ISOLATE PORTIONS OF THE SITE FOR THE PURPOSES OF STORAGE AND HANDLING OF THESE MATERIALS. ANY PROJECT PROPOSING INFILTRATION OF STORMWATER MUST PROVIDE ADEQUATE PRE-TREATMENT OF STORMWATER PRIOR TO DISCHARGE OF STORMWATER TO THE INFILTRATION AREA, OR PROVIDE FOR TREATMENT WITHIN THE INFILTRATION AREA, IN ORDER TO PREVENT THE ACCUMULATION OF FINES, REDUCTION IN INFILTRATION RATE, AND CONSEQUENT FLOODING AND DESTABILIZATION.

3. FUGITIVE SEDIMENT AND DUST. ACTIONS MUST BE TAKEN TO ENSURE THAT ACTIVITIES DO NOT RESULT IN NOTICEABLE EROSION OF SOILS OR FUGITIVE DUST EMISSIONS DURING OR AFTER CONSTRUCTION. OIL MAY NOT BE USED FOR DUST CONTROL, BUT OTHER WATER ADDITIVES MAY BE CONSIDERED AS NEEDED. A STABILIZED CONSTRUCTION ENTRANCE (SCE) SHOULD BE INCLUDED TO MINIMIZE TRACKING OF MUD AND SEDIMENT. IF OFF-SITE TRACKING OCCURS, PUBLIC ROADS SHOULD BE SWEPT IMMEDIATELY AND NO LESS THAN ONCE A WEEK AND PRIOR TO SIGNIFICANT STORM EVENTS. OPERATIONS DURING DRY MONTHS, THAT EXPERIENCE FUGITIVE DUST PROBLEMS, SHOULD WET DOWN UNPAVED ACCESS ROADS ONCE A WEEK OR MORE FREQUENTLY AS NEEDED WITH A WATER ADDITIVE TO SUPPRESS FUGITIVE SEDIMENT AND DUST.

4. DEBRIS AND OTHER MATERIALS. MINIMIZE THE EXPOSURE OF CONSTRUCTION DEBRIS, BUILDING AND LANDSCAPING MATERIALS, TRASH, FERTILIZERS, PESTICIDES, HERBICIDES, DETERGENTS, SANITARY WASTE AND OTHER MATERIALS TO PRECIPITATION AND STORMWATER RUNOFF. THESE MATERIALS MUST BE PREVENTED FROM BECOMING A POLLUTANT SOURCE.

5. EXCAVATION DE-WATERING. EXCAVATION DE-WATERING IS THE REMOVAL OF WATER FROM TRENCHES, FOUNDATIONS, COFFER DAMS, PONDS, AND OTHER AREAS WITHIN THE CONSTRUCTION AREA THAT RETAIN WATER AFTER EXCAVATION. IN MOST CASES THE COLLECTED WATER IS HEAVILY SILTED AND HINDERS CORRECT AND SAFE CONSTRUCTION PRACTICES. THE COLLECTED WATER REMOVED FROM THE PONDED AREA, EITHER THROUGH GRAVITY OR PUMPING, MUST BE SPREAD THROUGH NATURAL WOODED BUFFERS OR REMOVED TO AREAS THAT ARE SPECIFICALLY DESIGNED TO COLLECT THE MAXIMUM AMOUNT OF SEDIMENT POSSIBLE, LIKE A COFFERDAM SEDIMENTATION BASIN. AVOID ALLOWING THE WATER TO FLOW OVER DISTURBED AREAS OF THE SITE. EQUIVALENT MEASURES MAY BE TAKEN IF APPROVED BY THE DEPARTMENT.

6. AUTHORIZED NON-STORMWATER DISCHARGES. IDENTIFY AND PREVENT CONTAMINATION BY NON-STORMWATER DISCHARGES. WHERE ALLOWED NON-STORMWATER DISCHARGES EXIST, THEY MUST BE IDENTIFIED AND STEPS SHOULD BE TAKEN TO ENSURE THE IMPLEMENTATION OF APPROPRIATE POLLUTION PREVENTION MEASURES FOR THE NON-STORMWATER COMPONENT(S) OF THE DISCHARGE. AUTHORIZED NON-STORMWATER DISCHARGES ARE:
A. DISCHARGES FROM FIREFIGHTING ACTIVITY;
B. FIRE HYDRANT FLUSHINGS;
C. VEHICLE WASHWATER IF DETERGENTS ARE NOT USED AND WASHING IS LIMITED TO THE EXTER



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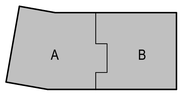
LEGEND:

1-HOUR FIRE BARRIER

2-HOUR FIRE BARRIER



KEY PLAN N.T.S. F0

REV	DESCRIPTION	DATE
0	ISSUE FOR CONSTRUCTION	10-10-2024

ISSUE FOR CONSTRUCTION
10-10-2024
CURRENT ISSUE STATUS:

PROJECT NORTH:

LICENSED ARCHITECT MATTHEW D RANGER ARC4035 10-10-24 STATE OF MAINE

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Martin's Point Health Care
Building 7 - OFFICE BUILDING

PORTLAND, MAINE

FACILITY PLAN - PARKING LEVEL 1

SHEET TITLE:

SCALE: AS NOTED

PROJECT MANAGER:	MDR	PROJECT NO:	23033
A/E OF RECORD:	MDR		
JOB CAPTAIN:	RLS		
DRAWN BY:	RLS		
SMRT FILE:	A-101-23033	SHEET No.	A-105

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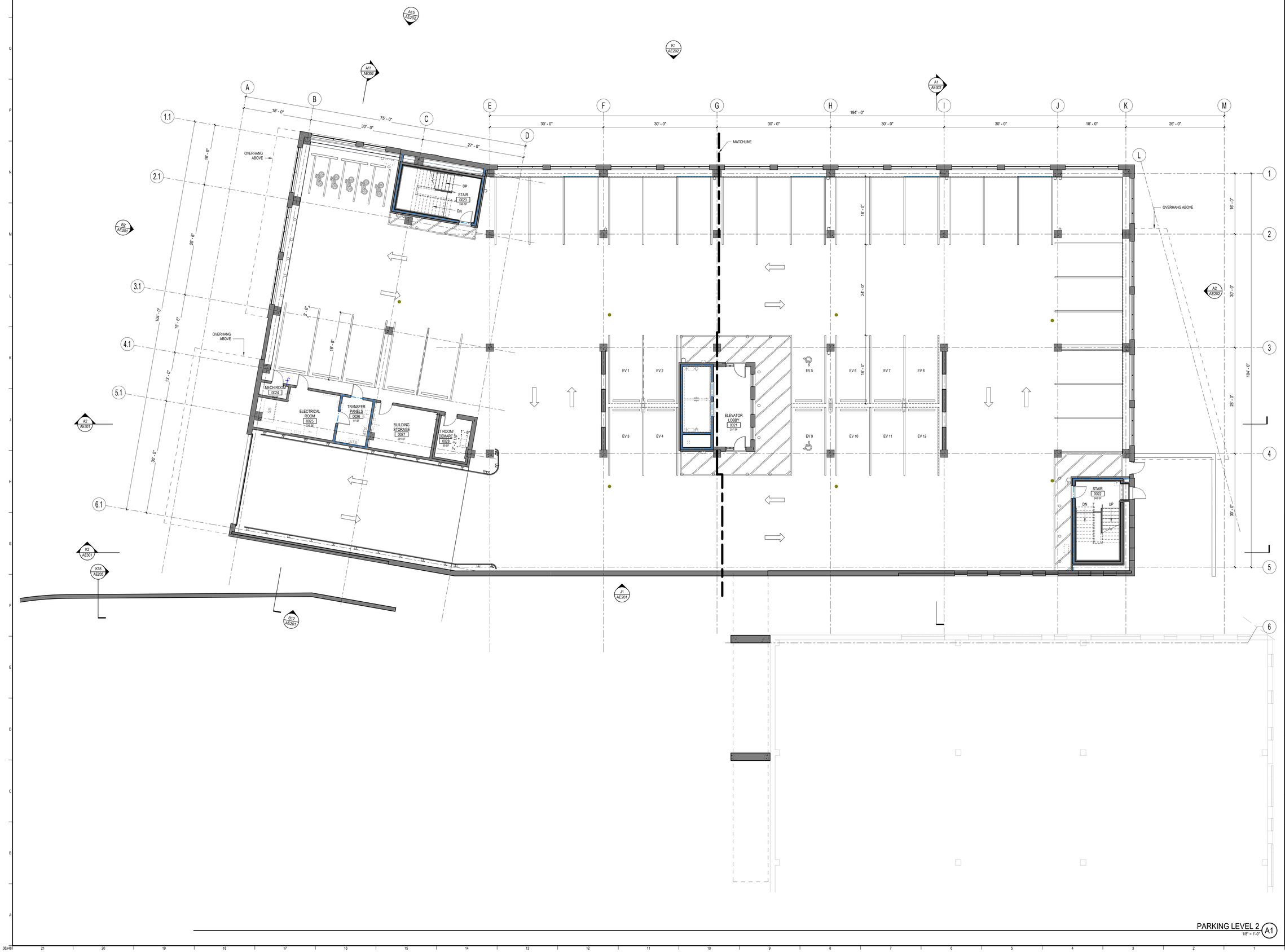
PARKING LEVEL 1
1/8" = 1'-0" A1



PARKING LEVEL 2 (A1)
1/8" = 1'-0"

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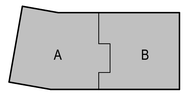

KEY PLAN (F0)
N.T.S.

REV	DESCRIPTION	DATE
0	ISSUE FOR CONSTRUCTION	10-10-2024

ISSUE FOR CONSTRUCTION
10-10-2024
CURRENT ISSUE STATUS:

TRUE NORTH
PROJECT NORTH:

LICENSED ARCHITECT
MATTHEW D RANGER
ARC4030
10-10-24
STATE OF MAINE

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Martin's Point Health Care
Building 7 - OFFICE BUILDING

PORTLAND, MAINE

FACILITY PLAN - PARKING LEVEL 2

SHEET TITLE:

SCALE: AS NOTED

PROJECT MANAGER:	MDR	PROJECT NO:	23033
A/E OF RECORD:	MDR		
JOB CAPTAIN:	RLS		
DRAWN BY:	RLS		
SMRT FILE:	A-102-23033	SHEET No.	A-106

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SCALE: AS NOTED

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A/E OF RECORD:	MDR		
JOB CAPTAIN:	RLS		
DRAWN BY:	RLS	SHEET No.	A-107
SMRT FILE:	A-103-23033		

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OFFICE LEVEL 1 1/8" = 1'-0" A1



OFFICE LEVEL 2
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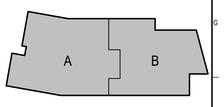
1. SEE G001 FOR GENERAL PROJECT NOTES, LEGENDS AND ABBREVIATIONS.
2. SEE G002 FOR GENERAL MOUNTING HEIGHTS, TOP OF WALL DETAILS AND PARTITION TYPES.
3. CONTRACTOR IS RESPONSIBLE FOR REVIEWING CODE COMPLIANCE PLANS AND NOTIFYING THE ARCHITECT OF CONFLICTS BETWEEN WHAT IS IN THE FIELD AND ON THE CODE DOCUMENTS.
4. DIMENSIONS ARE FACE OF CONCRETE, FACE OF MASONRY AND FACE OF STUD, UNLESS NOTED OTHERWISE.
5. DOOR JAMBS (HINGE SIDE) SHALL BE 9" FROM CORNER IN STUD PARTITIONS AND 8" FROM CORNER IN MASONRY PARTITIONS UNLESS NOTED OTHERWISE.
6. REFER TO DETAILS FOR ADDITIONAL DIMENSIONING INFORMATION.
7. REFER TO ENLARGED PLANS FOR PARTITION TYPES AND DIMENSIONS IN AREAS WHICH ARE DETAILED AT A LARGER SCALE.
8. FURNITURE AND OWNER PROVIDED EQUIPMENT ARE INDICATED BY DASHED LINE TYPE.
9. CONTRACTOR IS RESPONSIBLE FOR THE COORDINATION OF OWNER PROVIDED EQUIPMENT INCLUDING BUT NOT LIMITED TO DIMENSIONAL INFORMATION, AND MECHANICAL, ELECTRICAL AND PLUMBING REQUIREMENTS.
10. CENTER FLOOR DRAINS IN SPACE UNLESS INDICATED OTHERWISE.
11. ALL PARKING GARAGE VEHICLE PARKING SPOTS TO BE 18' LONG BY 9' WIDE, TYP.
12. ALL PARKING GARAGE MOTORCYCLE PARKING SPOTS TO BE 10' LONG BY 4' WIDE, TYP.

LEGEND:

1-HOUR FIRE BARRIER

2-HOUR FIRE BARRIER



KEY PLAN F0
N.T.S.

REV	DESCRIPTION	DATE
0	ISSUE FOR CONSTRUCTION	10-10-2024

ISSUE FOR CONSTRUCTION
10-10-2024
CURRENT ISSUE STATUS:

PROJECT NORTH:

LICENSED ARCHITECT MATTHEW D. RANGER ARC4030 10-10-24 STATE OF MAINE

SMRT Architects and Engineers
75 Washington Ave., Suite 3A
Portland, Maine 04101
1.877.700.7678
www.smrtinc.com

Martin's Point Health Care
Building 7 - OFFICE BUILDING
PORTLAND, MAINE

FACILITY PLAN - OFFICE LEVEL 2
SHEET TITLE:

SCALE: AS NOTED

PROJECT MANAGER:	MDR	PROJECT NO:	23033
A/E OF RECORD:	MDR		
JOB CAPTAIN:	RLS		
DRAWN BY:	RLS	SHEET No.	A-108
SMRT FILE:	A-104-23033		

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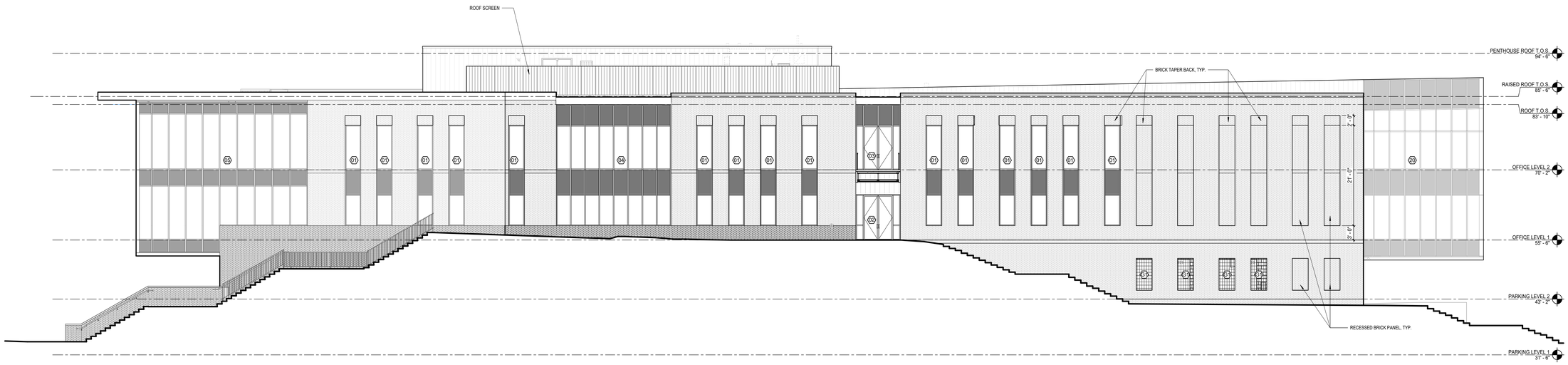
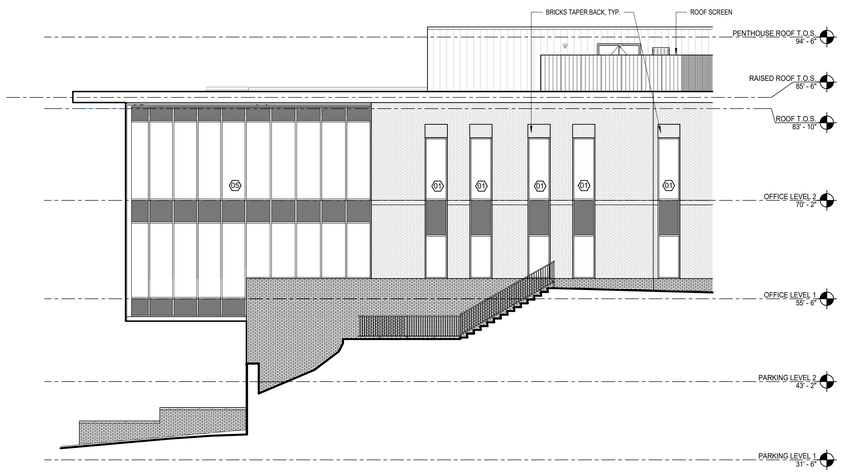
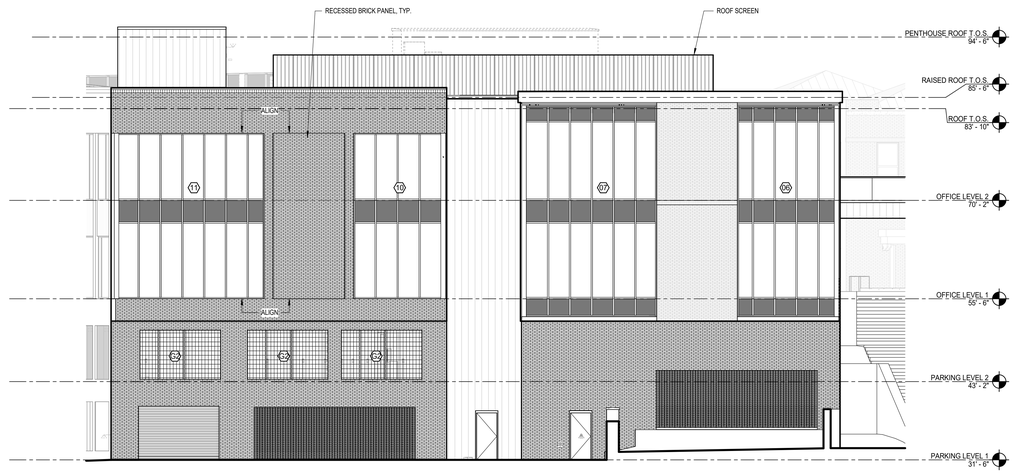


WEST ELEVATION (J1)
1/8" = 1'-0"



NORTHWEST ELEVATION (B12)
1/8" = 1'-0"



NORTH ELEVATION (B2)
1/8" = 1'-0"

EXTERIOR ELEVATION NOTES:

1. REFER TO FIRE PROTECTION, MECHANICAL, PLUMBING AND ELECTRICAL DRAWINGS FOR ALL RESPECTIVE FIXTURE/DEVICE LOCATIONS, COUNTS, & ASSOCIATED RECESSED BOXES AT EXTERIOR WALLS.
2. PROVIDE MASONRY CONTROL JOINTS AT ALL INSIDE MASONRY CORNERS AND WHERE SHOWN ON ELEVATIONS.

MATERIALS LEGEND:

- FACE BRICK TYPE 1: MORIN COLLEGE BLEND RED BRICK
- FACE BRICK TYPE 2: GRAY BRICK MIX (3 STYLES)
  - A. ENDICOTT RAVENSWOOD IRONSPOT SMOOTH MODULAR
  - B. ENDICOTT RAVENSWOOD IRONSPOT VELOUR MODULAR
  - C. ENDICOTT MANGANESE IRONSPOT ARTISAN MODULAR
- METAL PANEL: CENTRIA PROFILE W-14A, COLOR: 700 QUARRY
- INSULATED SPANDREL GLASS: WARM GRAY
- INSULATED DYNAMIC GLAZING W/ BIRD FRIENDLY GLASS

REV	DESCRIPTION	DATE
0	ISSUE FOR CONSTRUCTION	10-10-2024

ISSUE FOR CONSTRUCTION
10-10-2024

CURRENT ISSUE STATUS:

LICENSED ARCHITECT
MATTHEW D RANGER
ARC4035
10-10-24
STATE OF MAINE

SMRT Architects and Engineers
75 Washington Ave., Suite 3A
Portland, Maine 04101
1.877.700.7678
www.smrtinc.com

Martin's Point Health Care
Building 7 - OFFICE BUILDING

EXTERIOR ELEVATIONS

SHEET TITLE:

SCALE: AS NOTED

PROJECT MANAGER:	MDR	PROJECT NO:	23033
A/E OF RECORD:	MDR		
JOB CAPTAIN:	RLS		
DRAWN BY:	RLS		
SMRT FILE:	AE201-23033	SHEET No.	AE203

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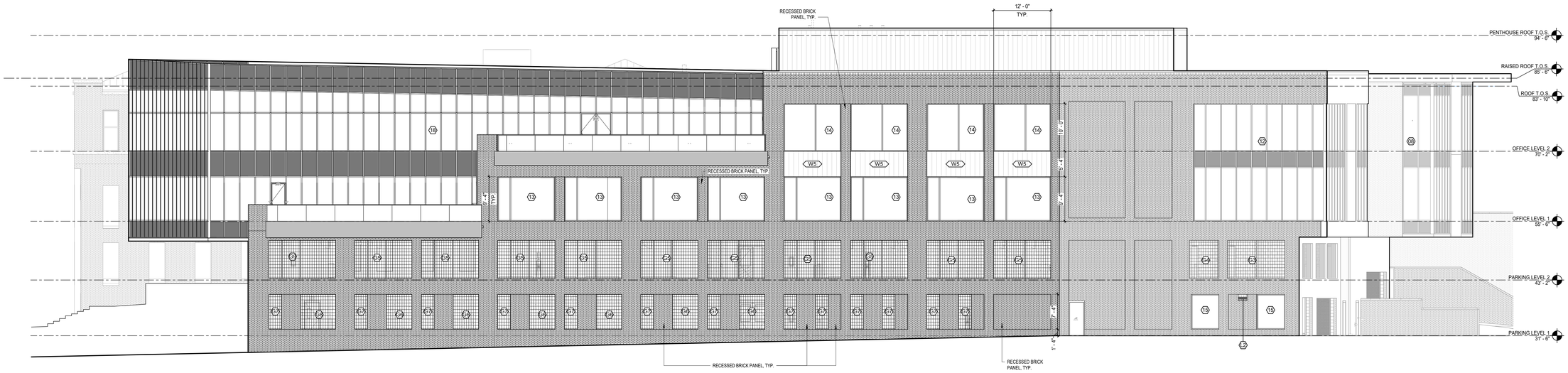
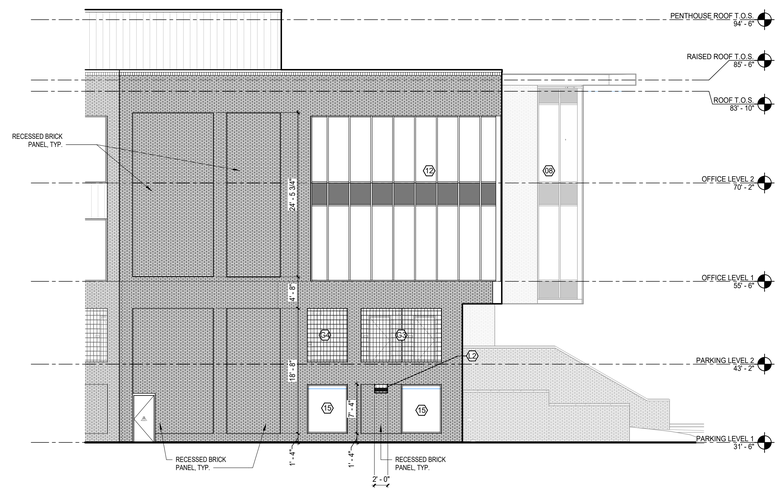
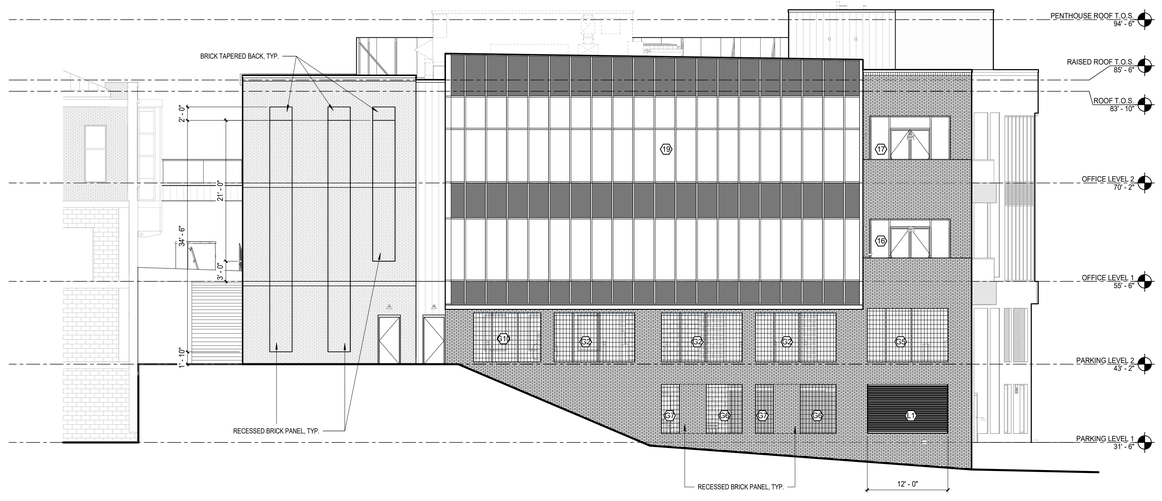


EAST ELEVATION (K1)
1/8" = 1'-0"



NORTHEAST ELEVATION (A15)
1/8" = 1'-0"



SOUTH ELEVATION (A2)
1/8" = 1'-0"

EXTERIOR ELEVATION NOTES:

1. REFER TO FIRE PROTECTION, MECHANICAL, PLUMBING AND ELECTRICAL DRAWINGS FOR ALL RESPECTIVE FIXTURE/DEVICE LOCATIONS, COUNTS, & ASSOCIATED RECESSED BOXES AT EXTERIOR WALLS.
2. PROVIDE MASONRY CONTROL JOINTS AT ALL INSIDE MASONRY CORNERS AND WHERE SHOWN ON ELEVATIONS.

MATERIALS LEGEND:

- FACE BRICK TYPE 1: MORIN COLLEGE BLEND RED BRICK
- FACE BRICK TYPE 2: GRAY BRICK MIX (3 STYLES)
  - A. ENDICOTT RAVENSWOOD IRONSPOT SMOOTH MODULAR
  - B. ENDICOTT RAVENSWOOD IRONSPOT VELOUR MODULAR
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- METAL PANEL: CENTRIA PROFILE IW-14A, COLOR: 700 QUARRY
- INSULATED SPANDREL GLASS: WARM GRAY
- INSULATED DYNAMIC GLAZING W/ BIRD FRIENDLY GLASS

REV	DESCRIPTION	DATE
0	ISSUE FOR CONSTRUCTION	10-10-2024

ISSUE FOR CONSTRUCTION
10-10-2024

CURRENT ISSUE STATUS:

LICENSED ARCHITECT
MATTHEW D RANGER
ARC4035
10-10-24
STATE OF MAINE

SMRT
Architecture • Engineering • Planning
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Portland, Maine 04101
1.877.700.7678
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Martin's Point Health Care
Building 7 - OFFICE BUILDING

EXTERIOR ELEVATIONS

SHEET TITLE:

SCALE: AS NOTED

PROJECT MANAGER:	MDR	PROJECT NO:	23033
A/E OF RECORD:	MDR		
JOB CAPTAIN:	RLS		
DRAWN BY:	RLS		
SMRT FILE:	AE202-23033	SHEET No.	AE204

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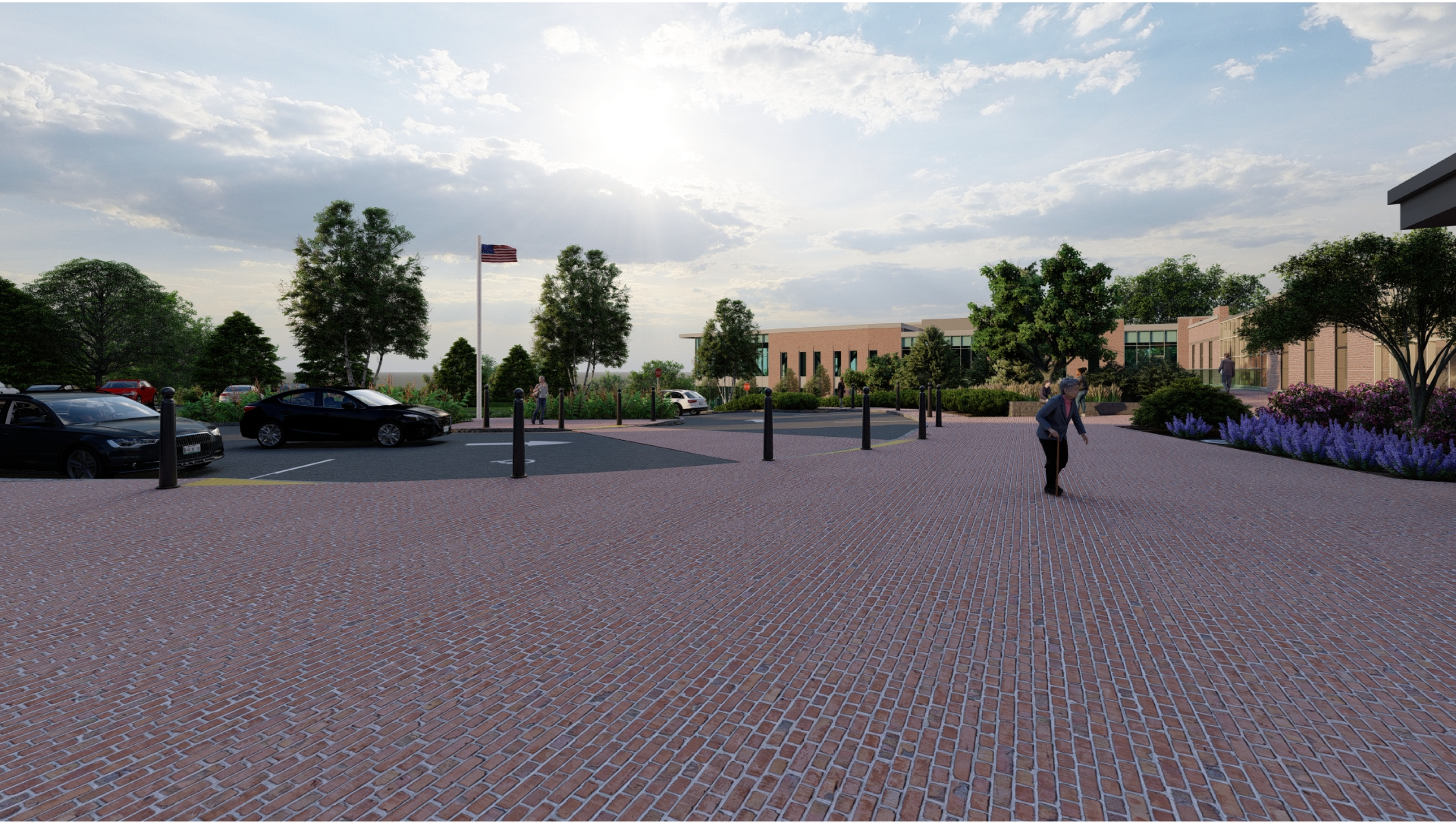

Building 6 - Vehicular Drop-off & Pedestrian Plaza

April 2, 2024

SEBAGO TECHNICS

CIVIL ENGINEERING • SURVEYING • LANDSCAPE ARCHITECTURE

Building 6 - Walkway to Pedestrian Plaza

April 2, 2024

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Building 5, 6 & 7 Aerial View

April 2, 2024

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Building 7 - Northern Pedestrian Connection

April 2, 2024

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Building 7 - Northern Pedestrian View

April 2, 2024

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Building 7 - Office Level 1 Entrance & Exit

April 2, 2024

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Building 7 - Parking Level 2 Entrance & Exit

April 2, 2024

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Building 5, 6 & 7 Aerial View

April 2, 2024

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Sky Bridge Connection to Building 7

April 2, 2024

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Northern Pedestrian Connection between Building 6 & 7

April 2, 2024

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Southern Pedestrian Connection between Building 6 & 7

April 2, 2024

SEBAGO TECHNICS

CIVIL ENGINEERING • SURVEYING • LANDSCAPE ARCHITECTURE



KYLIE S. MASON, RLA 3335 PAUL D. OSTROWSKI, PE 11175

REV	BY	DATE	STATUS
A	KSM	12/20/2023	ISSUED TO CITY OF PORTLAND FOR SITE PLAN REVIEW
B	KSM	03/14/2024	RESPONSE TO CITY REVIEW COMMENTS
C	KSM	04/08/2024	RESPONSE TO CITY REVIEW COMMENTS

THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM SEBAGO TECHNICS, INC. ANY ALTERATIONS AUTHORIZED OR OTHERWISE, SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO SEBAGO TECHNICS, INC.

SEBAGO TECHNICS
WWW.SEBAGOTECHNICS.COM
75 John Roberts Rd.
Suite 4A
South Portland, ME 04106
Tel: 207-200-2100

OVERALL SITE PLAN

MARTINS POINT HEALTH CARE VERANDA CAMPUS
331 VERANDA STREET
PORTLAND, ME 04103

MARTINS POINT HEALTH CARE, INC.
PO BOX 9746
PORTLAND, ME 04103

DESIGNED	BAM/PDO
DRAWN	CJC
CHECKED	PDO
DATE	04/10/2023
SCALE	1" = 20'
PROJECT	211026

SHEET 5 OF 37

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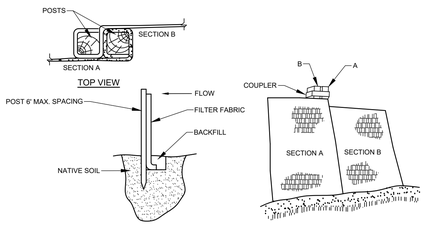
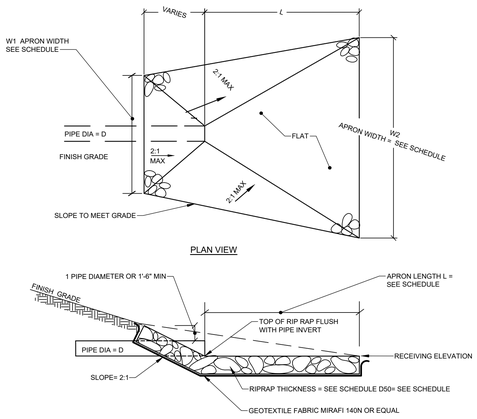
211026 S-BLDG7.dwg, TAB:SITE PLAN



INSTALLATION:

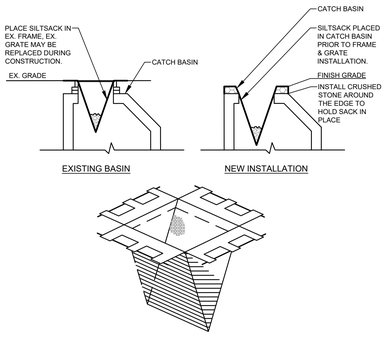
1. EXCAVATE A 6"x 6" TRENCH ALONG THE LINE OF PLACEMENT FOR THE FILTER BARRIER.
2. UNROLL A SECTION AT A TIME AND POSITION THE POSTS AGAINST THE BACK (DOWNSTREAM) WALL OF THE TRENCH.
3. DRIVE POSTS INTO THE GROUND UNTIL APPROXIMATELY 2" OF FABRIC IS LYING ON THE TRENCH BOTTOM.
4. LAY THE TOE-IN FLAP OF FABRIC ONTO THE UNDISTURBED BOTTOM OF THE TRENCH, BACKFILL THE TRENCH AND TAMP THE SOIL. TOE-IN CAN ALSO BE ACCOMPLISHED BY LAYING THE FABRIC FLAP ON UNDISTURBED GROUND AND PILING AND TAMPING FILL AT THE BASE, BUT MUST BE ACCOMPANIED BY AN INTERCEPTION DITCH.
5. JOIN SECTION AS SHOWN ABOVE.
6. BARRIER SHALL BE MIRAFI SILT FENCE OR EQUAL.

FILTER BARRIER
NOT TO SCALE



PLAN VIEW

SECTION VIEW

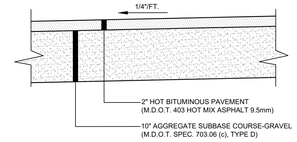


EXISTING BASIN NEW INSTALLATION

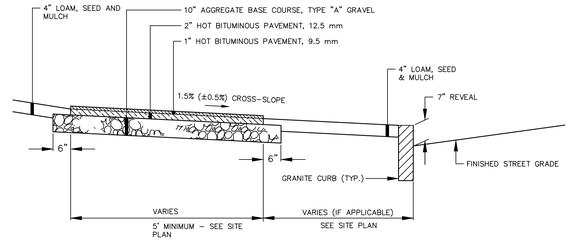
SILT SACK PROTECTION

NOTES:
PRIOR TO FINAL GRADING AND PAVING OPERATIONS BEGIN A CATCH BASIN INSERT (SUCH AS A SILT SACK OR A DANDY BAG ®) MUST BE INSTALLED IN EACH BASIN PER MANUFACTURES INSTRUCTIONS. HAY BALES SHOULD BE REMOVED ONCE INSERTS ARE INSTALLED.

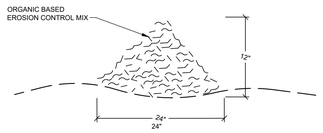
CATCH BASIN PROTECTION DETAIL
NOT TO SCALE



PEDESTRIAN PAVEMENT
NOT TO SCALE



PEDESTRIAN PAVEMENT WITHIN PUBLIC ROW
NOT TO SCALE



COMPOSITION:
EROSION CONTROL MIX SHALL BE MANUFACTURED ON OR OFF THE PROJECT SITE SUCH THAT ITS COMPOSITION IS IN ACCORDANCE WITH THE MDEP MAINE EROSION AND SEDIMENT CONTROL BMP MANUAL, LAST REVISED 3/2003 OR LATER. IT MUST CONSIST PRIMARILY OF ORGANIC MATERIAL, SEPARATED AT THE POINT OF GENERATION, AND MAY INCLUDE: SHREDDED BARK, STUMP GRINDINGS, COMPOSTED BARK, OR ACCEPTABLE MANUFACTURED PRODUCTS. WOOD AND BARK CHIPS, GROUND CONSTRUCTION DEBRIS OR REPROCESSED WOOD PRODUCTS WILL NOT BE ACCEPTABLE AS THE ORGANIC COMPONENT OF THE MIX.

INSTALLATION:

1. THE BARRIER MUST BE PLACED ACROSS THE SLOPE, ALONG THE CONTOUR.

2. EXISTING GROUND SHALL BE PREPARED SUCH THAT THE BARRIER MAY LIE NEARLY FLAT ALONG THE GROUND TO AVOID THE CREATION OF VOIDS AND BRIDGES IN ORDER TO MINIMIZE THE POTENTIAL OF WASH OUTS UNDER THE BARRIER

3. THE BARRIER SHALL BE A MINIMUM OF 1 FOOT HIGH (AS MEASURED ON THE UPHILL SIDE) AND 2 FEET WIDE FOR SLOPES LESS THAN 5% IN GRADE AND SHALL BE WIDER TO ACCOMMODATE THE ADDITIONAL RUNOFF.

4. EROSION CONTROL MIX CAN BE INSTALLED WHERE SILT FENCE IS ILLUSTRATED ON THE DESIGN PLANS IN AREAS EXCEPT IN, BUT NOT LIMITED TO, THE FOLLOWING AREAS: WETLAND AREAS, AT POINTS OF CONCENTRATED FLOW, BELOW CULVERT OUTLET APRONS, AROUND CATCH BASINS AND CLOSED STORM SYSTEMS AND AT THE BOTTOM OF STEEP SLOPES THAT ARE MORE THAN 50 FEET FROM TOP TO BOTTOM.

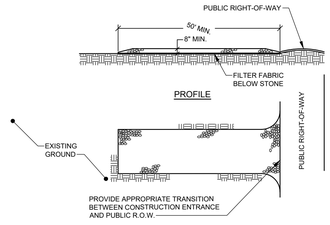
EROSION CONTROL MIX BERM
NOT TO SCALE

TYPICAL RIPRAP APRON SCHEDULE

CULVERT DIAMETER - D (IN.)	APRON LENGTH - L (FT.)	WIDTH -W1 (FT)	WIDTH -W2 (FT)	RIPRAP D50 (IN.)	RIPRAP THICKNESS (IN.)
12	8	3	9	6	14
15	10	4	12	6	14
18	13	5	15	7	16
24	18	6	20	8	18
36	29	9	32	11	25
42	33	11	37	12	27
48	39	12	43	16	36

NOTES:
1. RIPRAP TO BE PROCESSED ANGULAR ROCK.
2. RIPRAP GRADIATION SHALL BE A WELL GRADED MIX FROM ABOUT 1.5 TIMES D SIZE TO 25 PERCENT OF THE D SIZE.
3. THE RIPRAP STONES SHALL BE CAREFULLY PLACED FROM THE TOE OF THE SLOPE UPWARD.
4. STONES SHALL BE LOWERED TO THE SLOPE AND NOT BE ALLOWED TO DROP MORE THAN 12" ONTO THE GEOTEXTILE.
5. THE FINISHED SURFACE SHALL BE A RELATIVELY SMOOTH, UNIFORMLY SLOPED SURFACE.

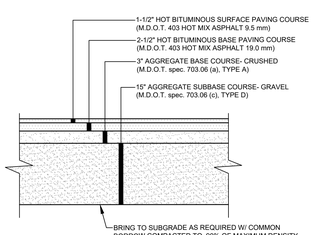
RIPRAP APRON
NOT TO SCALE



PLAN

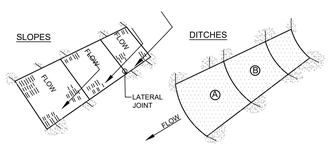
NOTES:
1. STONE SIZE- AASHTO DESIGNATION M43, SIZE NO. 2 (2 1/2" TO 1 1/2"), USE CRUSHED STONE.
2. LENGTH- AS SHOWN ON PLANS, MIN. 50 FEET.
3. THICKNESS- NOT LESS THAN EIGHT (8) INCHES.
4. WIDTH- NOT LESS THAN FULL WIDTH OF ALL POINT OF INGRESS OR EGRESS.
5. MAINTENANCE- THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHT-OF-WAY MUST BE REMOVED IMMEDIATELY.

STABILIZED CONSTRUCTION ENTRANCE
NOT TO SCALE



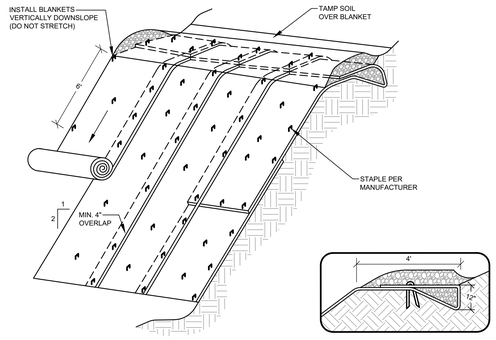
NOTES:
1. COMPACT GRAVEL SUBBASE, BASE COURSE TO 95% OF MAXIMUM DENSITY USING HEAVY ROLLER COMPACTION.
2. CONTRACTOR SHALL SET GRADE STAKES MARKING SUBBASE AND FINISH GRADE ELEVATIONS FOR CONSTRUCTION REFERENCE.

VEHICULAR PAVEMENT
NOT TO SCALE

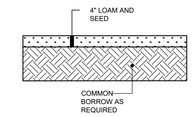


NOTES:
1. BURY THE TOP END OF THE MESH MATERIAL IN A 6" TRENCH AND BACKFILL AND TAMP TRENCHING SECURE END WITH STAPLES AT 6" SPACING, 4" DOWN FROM EXPOSED END.
2. FLOW DIRECTION JOINTS TO HAVE UPPER END OF LOWER STRIP BURIED WITH UPPER LAYERS OVERLAPPED 4" AND STAPLED. OVERLAP B OVER A.
3. LATERAL JOINTS TO HAVE 4" OVERLAP OF STRIPS. STAPLE 18" ON CENTER.
4. STAPLE OUTSIDE LATERAL EDGE 2" ON CENTER.
5. WIRE STAPLES TO BE MIN OF #11 WIRE 6" LONG AND 1-1/2" WIDE.
6. USE NORTH AMERICAN GREEN DS 150 OR APPROVED EQUAL.

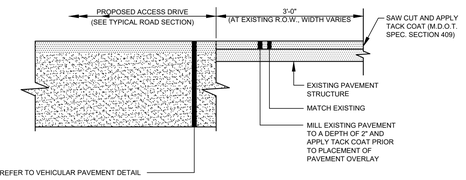
EROSION CONTROL BLANKET
NOT TO SCALE



CONSTRUCTION SPECIFICATIONS
1. THE SOIL SURFACE SHOULD BE FINELY GRADED AND SMOOTH FOR THE BLANKET TO HAVE DIRECT CONTACT WITH THE SOIL AND TO PREVENT UNDERMINING. EROSION CONTROL BLANKETS PERFORM BEST ON LOAMY SOILS AND SHOULD NOT BE USED ON ROCKY SITES OR SHALLOW SOILS.
2. SEED SHOULD BE SOWN BEFORE INSTALLING THE EROSION CONTROL BLANKET.
3. ALWAYS UNROLL THE BLANKET DOWNHILL WITHOUT STRETCHING AND ANCHOR THE UPSLOPE EDGE IN A 12 INCH DEEP TRENCH THAT IS BACKFILLED AND TAMPED.
4. OVERLAP SHINGLE STYLE A MINIMUM OF 12 INCHES AT THE TOP OF EACH ROW AND 4 INCHES AT THE EDGES OF PARALLEL ROWS. ANCHOR ALONG THE OVERLAP WITH A MAXIMUM SPACING OF 3 FEET OR AS REQUIRED BY THE MANUFACTURER.

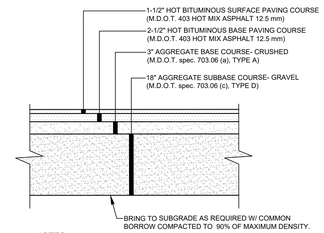


LOAM & SEED SECTION
NOT TO SCALE



NOTE:
SEE PAVEMENT SECTION DETAILS FOR PAVEMENT AND GRAVEL DEPTHS.

TYPICAL PAVEMENT JOINT
NOT TO SCALE



NOTES:
1. COMPACT GRAVEL SUBBASE, BASE COURSE TO 95% OF MAXIMUM DENSITY USING HEAVY ROLLER COMPACTION.
2. CONTRACTOR SHALL SET GRADE STAKES MARKING SUBBASE AND FINISH GRADE ELEVATIONS FOR CONSTRUCTION REFERENCE.

VERANDA STREET (PUBLIC ROW) SECTION
NOT TO SCALE

TAX PARCELS: 434-C-1,434-C-5 & 434-C-10

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PAUL D. OSTROWSKI, PE 11175
STATE OF MAINE — PAUL D. OSTROWSKI — No. 11175 — REGISTERED PROFESSIONAL ENGINEER — 01/06/2025

KYLIE S. MASON, RLA 3335
KYLIE S. MASON — No. 3335 — REGISTERED LANDSCAPE ARCHITECT — 01/06/2025

REV.	BY:	DATE:	STATUS:
E	KSM	01/06/2025	RESPONSE TO CITY DPW REVIEW COMMENTS
D	KSM	12/20/2024	RESPONSE TO CITY REVIEW COMMENTS
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SEBAGO TECHNICS
WWW.SEBAGOTECHNICS.COM
75 John Roberts Rd.
Suite 4A
South Portland, ME 04106
Tel: 207-200-2100

DETAILS

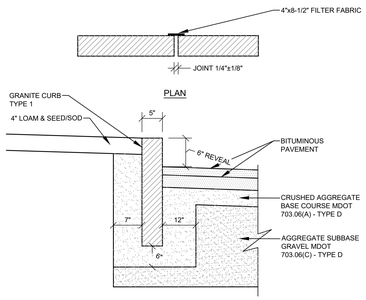
MARTIN'S POINT HEALTH CARE VERANDA CAMPUS
331 VERANDA STREET
PORTLAND, ME 04103

MARTIN'S POINT HEALTH CARE, INC.
PO BOX 9746
PORTLAND, ME 04103

DESIGNED	BAM/PDO
DRAWN	CJC
CHECKED	PDO
DATE	04/10/2023
SCALE	NTS
PROJECT	211026

SHEET 32 OF 37

211026 D-BLDG 7.dwg, TAB DETAILS 1

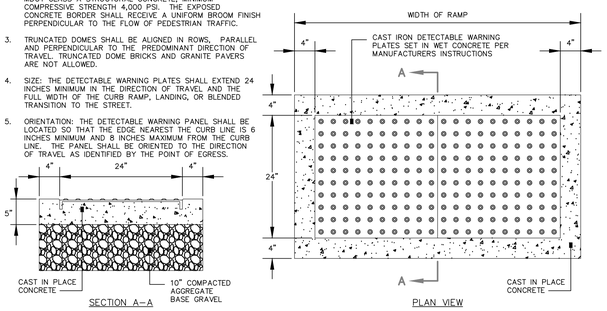


NOTES:
1. EXCAVATION INCIDENTAL TO COST OF CURB
2. SUBBASE SHALL BE COMPACTED TO A FIRM EVEN SURFACE PRIOR TO SETTING OF CURB

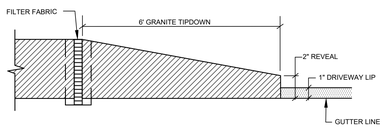
VERTICAL GRANITE CURB
NOT TO SCALE

NOTES:

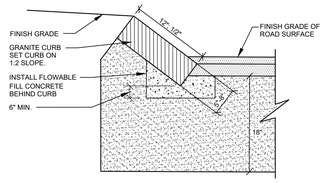
1. ALL DETECTABLE WARNING PLATES SHALL BE UNCOATED CAST IRON. FOLLOW MANUFACTURER'S INSTRUCTIONS FOR INSTALLATION.
2. CAST IN PLACE CONCRETE SHALL MEET SPECIFICATIONS FOR MDOT CLASS A STRUCTURAL CONCRETE, MINIMUM COMPRESSIVE STRENGTH 4,000 PSI. THE EXPOSED CONCRETE BORDER SHALL RECEIVE A UNIFORM BROOM FINISH PERPENDICULAR TO THE FLOW OF PEDESTRIAN TRAFFIC.
3. TRUNCATED DOMES SHALL BE ALIGNED IN ROWS, PARALLEL AND PERPENDICULAR TO THE PREDOMINANT DIRECTION OF TRAVEL. TRUNCATED DOME BRICKS AND GRANITE PAVERS ARE NOT ALLOWED.
4. SIZE: THE DETECTABLE WARNING PLATES SHALL EXTEND 24 INCHES MINIMUM IN THE DIRECTION OF TRAVEL AND THE FULL WIDTH OF THE CURB RAMP, LANDING, OR BLENDED TRANSITION TO THE STREET.
5. ORIENTATION: THE DETECTABLE WARNING PANEL SHALL BE LOCATED SO THAT THE EDGE NEAREST THE CURB LINE IS 6 INCHES MINIMUM AND 8 INCHES MAXIMUM FROM THE CURB LINE. THE PANEL SHALL BE ORIENTED TO THE DIRECTION OF TRAVEL AS IDENTIFIED BY THE POINT OF EGRESS.



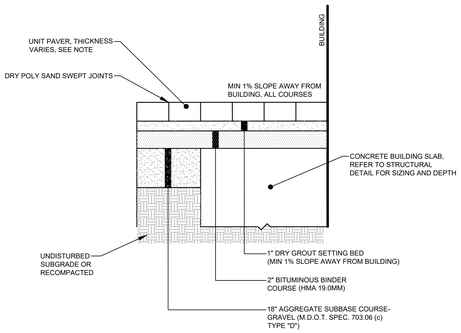
DETECTABLE WARNING PANEL WITHIN PUBLIC R.O.W
NOT TO SCALE



GRANITE TIPDOWN CURB INSTALLATION
NOT TO SCALE

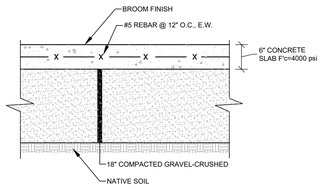


SLOPED GRANITE CURB
NOT TO SCALE



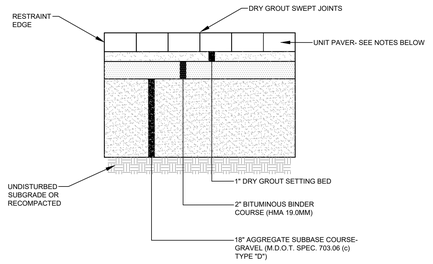
NOTE:
1. UNIT PAVER A (TOWN HALL BY UNILOCK) IS 2 3/4" THICK
2. UNIT PAVER B (PROMENADE PLANK BY UNILOCK) IS 3 7/8" THICK

UNIT PAVER ON STRCUTRUAL CONCRETE
NOT TO SCALE



NOTE:
1. PROVIDE CONTRACTION CONTROL JOINTS EVERY 6' IN EACH DIRECTION

CONCRETE SLAB
NOT TO SCALE

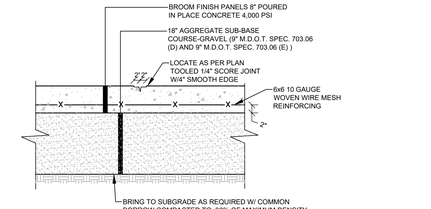


NOTES:

1. UNIT PAVER A: UNILOCK TOWN HALL
   1.1. PATTERN: HERRINGBONE
   1.1.1. COLOR: 3 COLOR BLEND
   1.2. BORDER: SOLIDER COURSE
   1.2.1. COLOR: 3 COLOR BLEND
2. UNIT PAVER B = UNILOCK PROMENADE PLANK
   2.1. PATTERN: RUNNING BOND
   2.1.1. COLOR: OPAL BLEND
   2.2. BORDER: RUNNING BOND (DOUBLE-COURSE)
   2.2.1. COLOR: STEEL GREY BLEND

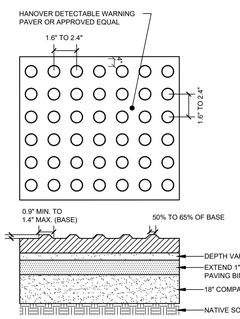
UNIT PAVER
NOT TO SCALE

VERTICAL TO SLOPED CURB GRANITE TRANSITION STONES
NOT TO SCALE



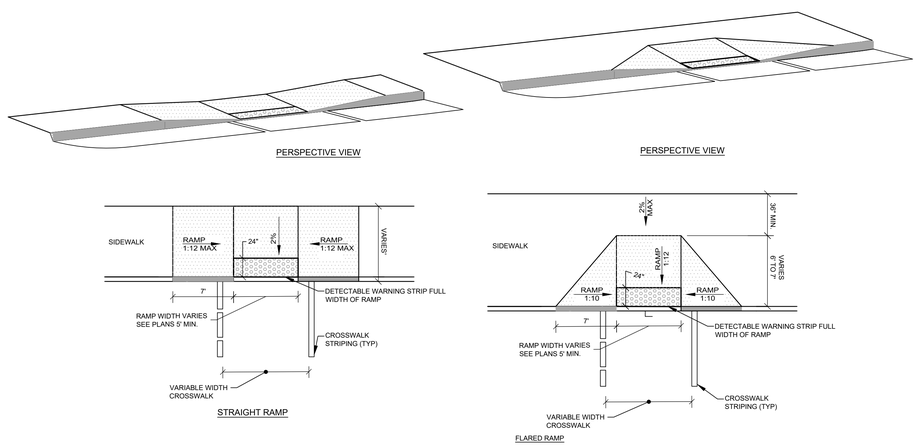
NOTES:
1. COMPACT GRAVEL SUB-BASE, BASE COURSE TO 95% OF MAXIMUM DENSITY USING HEAVY ROLLER COMPACTION.
2. CONTRACTOR SHALL SET GRADE STAKES MARKING SUBBASE AND FINISH GRADE ELEVATIONS FOR CONSTRUCTION REFERENCE.

HEAVY DUTY CONCRETE PAD
NOT TO SCALE

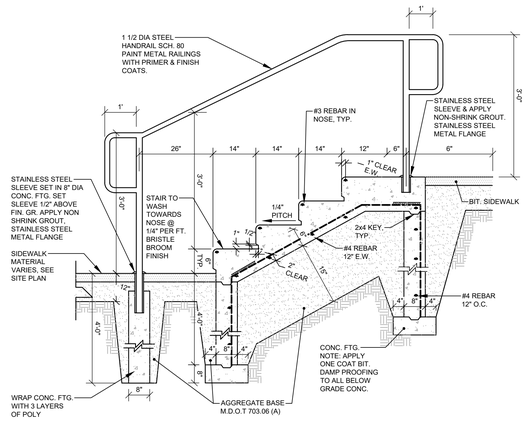


NOTES
1. PAVERS ARE INSTALLED IN A WET MORTAR BED OVER HOT BITUMINOUS OR COMPACTED FILL BASE. THE WET MORTAR BED IS REQUIRED TO LEVEL THE PAVERS.
2. SPACING REQUIREMENTS:
   A. TRUNCATED DOME PAVERS HAVE A BASE DIAMETER OF 0.9" (23 MM) MINIMUM TO 1.4" (36 MM) MAXIMUM, A TOP DIAMETER OF 50% OF THE BASE DIAMETER MINIMUM TO 65% OF THE BASE DIAMETER MAXIMUM, AND A NOMINAL DOME HEIGHT OF 0.2" (5 MM).
   B. TRUNCATED DOME PAVERS IN A DETECTABLE WARNING SURFACE HAVE A CENTER-TO-CENTER SPACING OF 1.6" (41 MM) MINIMUM AND 2.4" (61 MM) MAXIMUM, AND A BASE-TO-BASE SPACING OF 0.65" (16 MM) MINIMUM, MEASURED BETWEEN THE MOST ADJACENT DOMES ON THE SQUARE GRID.
   C. DETECTABLE WARNING SURFACES COLOR: YELLOW.

TRUNCATED DOME DETAIL
NOT TO SCALE



PEDESTRIAN RAMPS
NOT TO SCALE



CONCRETE STAIR
NOT TO SCALE

PAUL D. OSTROWSKI, PE 11175
STATE OF MAINE — PAUL D. OSTROWSKI No. 11175 — REGISTERED PROFESSIONAL ENGINEER — 01/06/2025
KYLIE S. MASON, RLA 3335
STATE OF MAINE — KYLIE S. MASON No. 3335 — REGISTERED LANDSCAPE ARCHITECT — 01/06/2025

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SHEET 33 OF 37

TAX PARCELS: 434-C-1,434-C-5 & 434-C-10

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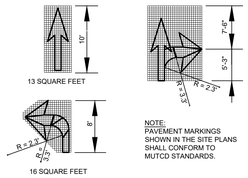
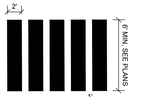


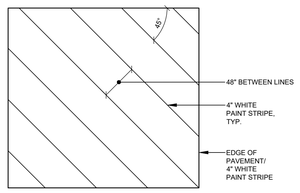
NOTE:
PAVEMENT MARKINGS SHOWN IN THE SITE PLANS SHALL CONFORM TO MUTCD STANDARDS.

PAVEMENT ARROW DETAILS
NOT TO SCALE

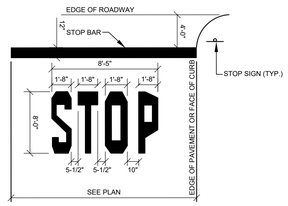


PAVEMENT MARKING NOTES
1. ALL PAVEMENT MARKINGS SHALL BE IN CONFORMANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS, U.S. DOT, FHWA, LATEST EDITION.
2. ALL PAVEMENT MARKING LINES SHALL BE PAINT AND 4" WIDE, EXCEPT FOR:
   SWSL-12"
   SYCL-12"
   CROSSWALK BARS - 24"
3. PAVEMENT WORD AND SYMBOL MARKINGS SHALL BE WHITE PAINT.
4. SOLID WHITE STOP LINE SHALL BE A MINIMUM OF 4' BEHIND THE EDGE OF CROSSWALK.

CROSSWALK DETAIL
NOT TO SCALE

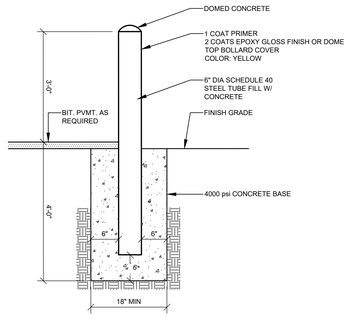


DIAGONAL PAINT MARKINGS
NOT TO SCALE

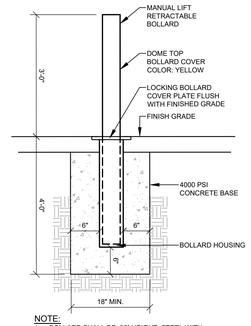


NOTE:
1. WORDS AND ARROWS FOR DRIVEWAYS SHALL BE APPLIED ACCORDING TO REQUIREMENTS AS OUTLINED IN SECTION 3B OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS.
2. THESE WORDS AND BAR ARE TO BE PAINTED REFLECTIVE WHITE.

STOP BAR
NOT TO SCALE

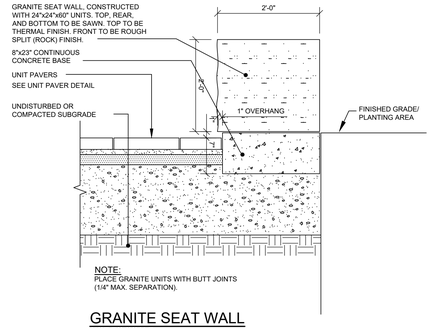


CONCRETE FILLED METAL BOLLARD
NOT TO SCALE



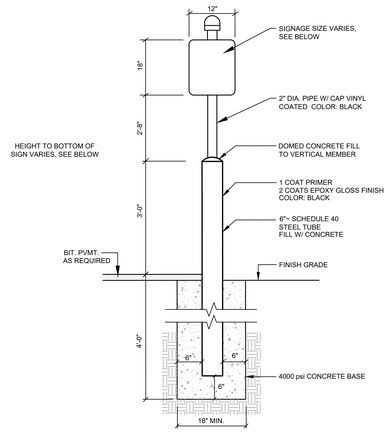
NOTE:
1. BOLLARD SHALL BE: 36" HEIGHT, STEEL WITH PLASTIC COVER WITH REFLECTIVE STRIP. STYLE AND COLOR BY ARCHITECT.

MANUAL LIFT BOLLARD
NOT TO SCALE



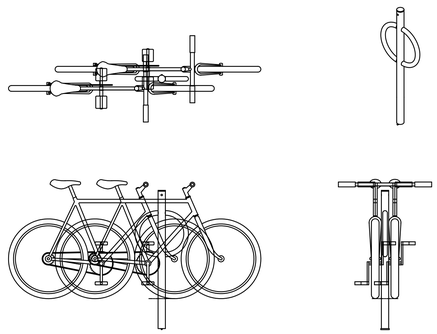
NOTE:
PLACE GRANITE UNITS WITH BUTT JOINTS (1/4" MAX. SEPARATION).

GRANITE SEAT WALL
NOT TO SCALE

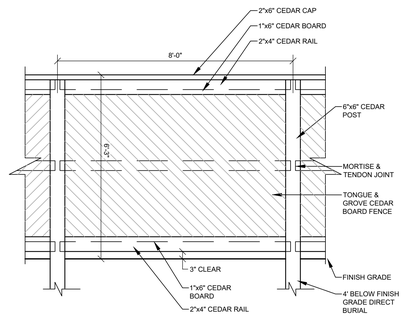


SIGNS ON METAL BOLLARD
NOT TO SCALE

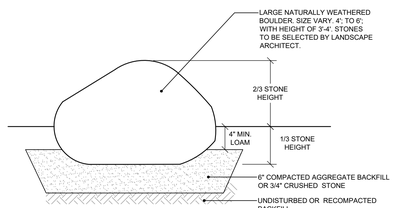
SIGN SIZE		HEIGHT TO BOTTOM OF SIGN	
S1 - STOP SIGN:	30" X 30"	S1 - STOP SIGN:	7' - 0"
S2 - DO NOT ENTER:	24" X 24"	S2 - DO NOT ENTER:	7' - 0"
S3 - ACCESSIBLE SIGN:	12" X 18"	S3 - ACCESSIBLE SIGN:	5' - 8"
S4 - DROP OFF ONLY:	12" X 18"	S4 - DROP OFF ONLY:	5' - 8"
S5 - R3-2 SIGN:	24" X 24"	S5 - R3-2 SIGN:	5' - 8"



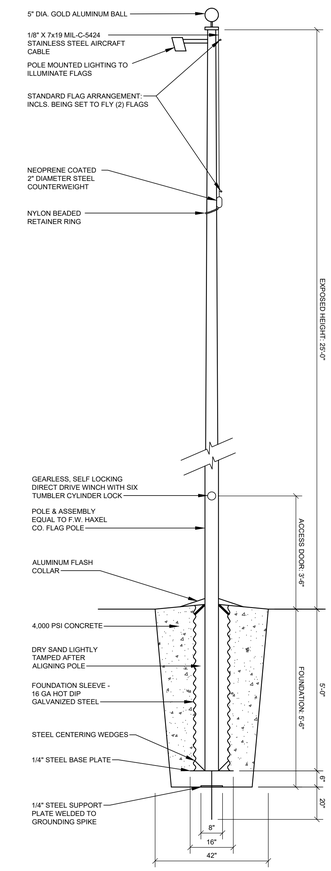
BIKE RACK DETAIL
NOT TO SCALE



SCREEN FENCE
NOT TO SCALE



BOULDER INSTALLATION
NOT TO SCALE



FLAG POLE DETAIL
NOT TO SCALE

TAX PARCELS: 434-C-1,434-C-5 & 434-C-10

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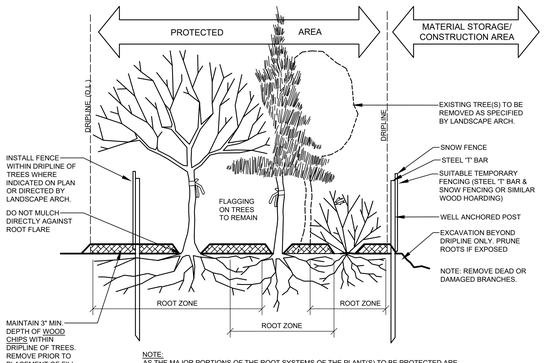
211026 D-BLDG 7.dwg, TAB:DETAILS 4



NOTE:
AS THE MAJOR PORTIONS OF THE ROOT SYSTEMS OF THE PLANT(S) TO BE PROTECTED ARE WITHIN THE DRIPLINE ZONE, THIS ENTIRE AREA SHOULD BE FENCED OFF (TO A MINIMUM HEIGHT OF 4') PRIOR TO CONSTRUCTION AND REMOVED THEREAFTER. FOR MAXIMUM PROTECTION, NO VEHICLE TRESPASS, EXCAVATION, FILL, WASTE DISCHARGE OR OR MATERIAL STORAGE SHOULD BE ALLOWED IN THIS ZONE.

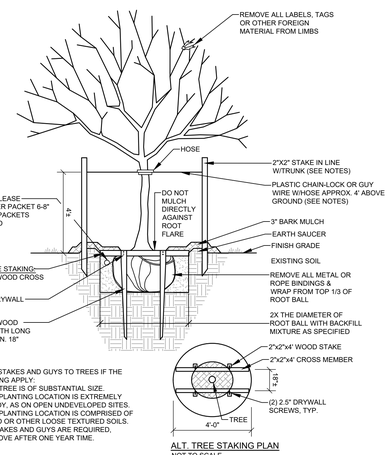
TREE PROTECTION DETAIL
NOT TO SCALE CROSS-SECTION OF TYPICAL PLANT GROUPING



ALT. TREE STAKING PLAN
NOT TO SCALE

NOTES:
INSTALL STAKES AND GUYS TO TREES IF THE FOLLOWING APPLY:
1. THE TREE IS OF SUBSTANTIAL SIZE.
2. THE PLANTING LOCATION IS EXTREMELY WINDY, AS ON OPEN UNDEVELOPED SITES.
3. THE PLANTING LOCATION IS COMPRISED OF SAND OR OTHER LOOSE TEXTURED SOILS.
4. IF STAKES AND GUYS ARE REQUIRED, REMOVE AFTER ONE YEAR TIME.

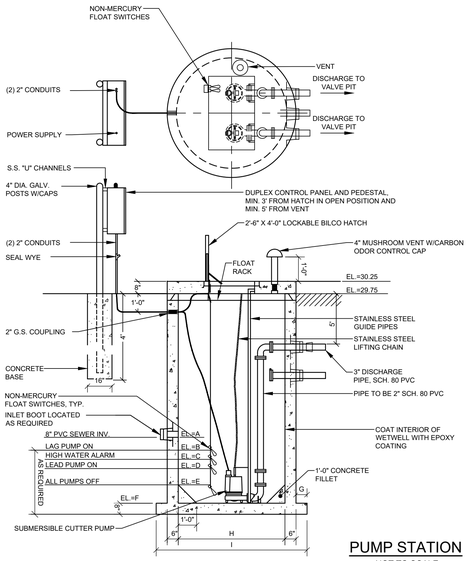
EVERGREEN TREES
NOT TO SCALE



NOTES:
INSTALL STAKES AND GUYS TO TREES IF THE FOLLOWING APPLY:
1. THE TREE IS OF SUBSTANTIAL SIZE.
2. THE PLANTING LOCATION IS EXTREMELY WINDY, AS ON OPEN UNDEVELOPED SITES.
3. THE PLANTING LOCATION IS COMPRISED OF SAND OR OTHER LOOSE TEXTURED SOILS.
4. IF STAKES AND GUYS ARE REQUIRED, REMOVE AFTER ONE YEAR TIME.

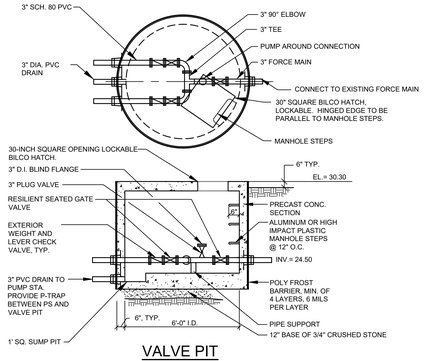
ALT. TREE STAKING PLAN
NOT TO SCALE

DECIDUOUS TREES
NOT TO SCALE



PUMP STATION
NOT TO SCALE

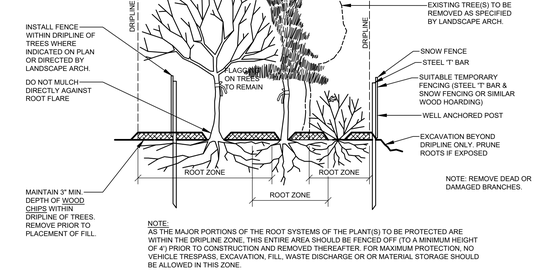
PUMP STATION SCHEDULE									
	MEASUREMENT (FT.)								
PUMP STATION	A	B	C	D	E	F	G	H	I
I	22.40	21.90	21.40	20.90	18.90	17.40	9"	5'	90°



VALVE PIT
NOT TO SCALE

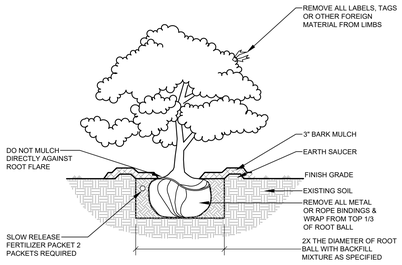
NOTES
1. LIFT STATION SHALL BE DUPLEX LIFT STATION PANEL AND CONTROLS FOR THE OPERATIONS OF HOMA GRINDER PUMP OPERATING AT APPROXIMATELY THE DUTY POINT LISTED IN THE TABLE BELOW. THE PUMPS ARE MODEL GRP26/3FM, 3 PHASE, 60 HZ, 230 VOLT, 3450 RPM AND 8.4 FLA WITH THE 5-7/16" IMPELLER.
2. PUMPS SHALL HAVE BREAK AWAY FITTINGS. BREAK AWAY FITTINGS SHALL BE NON-SPARKING.
3. ALL UNDERGROUND ELECTRIC POWER LINES SHALL BE INSTALLED IN PVC CONDUIT. ABOVE GROUND SERVICES SHALL BE INSTALLED IN SCHEDULE 40 GALVANIZED CONDUIT. SIZES AS REQUIRED BY ELECTRIC COMPANY. ALL ELECTRICAL WIRING SHALL MEET ALL LOCAL AND NEC ELECTRICAL CODE REQUIREMENTS.
4. THE PANEL SHALL BE EQUIPPED WITH AN INNER DOOR THAT HAS ELAPSED TIMED METERS, WARNING LIGHTS FOR TEMPERATURE AND MOISTURE SENSORS, CONTROL SWITCHES FOR THE INDIVIDUAL PUMPS (AUTO, OFF AND RUN) AND A CONTROL SWITCH FOR THE ALARM WITH TEST AND SILENCE.
5. THE MAIN BREAKERS (CONTROL AND PUMPS) AND FUSES FOR BOTH THE ALARM AND CONTROLS SHALL BE ACCESSIBLE WITHOUT OPENING THE INNER DOOR.
6. THE PANEL SHALL HAVE BOTH AMBER VISIBLE ALARM LIGHT AND AN AUDIBLE PIEZO 80DB ALARM. THE ENCLOSURE SHALL BE A STAINLESS STEEL NEMA 4X RATED, UL698A COMPLIANT LISTED ENCLOSURE RATED FOR THE PUMPS WITH A WIRING SCHEMATIC PROVIDED ON THE INNER FACE OF THE PANEL DOOR. THE DOOR SHALL HAVE A WEATHER SEAL AND LOCKABLE LATCHES.
7. THE PANEL SHALL HAVE THE REQUIRED CIRCUITRY, CONTROLLERS, CIRCUIT BREAKERS, DELAYS, MOTOR STARTERS, RELAYS, TERMINAL BLOCK AND GROUNDING REQUIRED TO OPERATE THE PUMPS IN A AN ALTERNATING SEQUENCE. PANEL CONTROLS AND ELECTRICAL COMPONENTS SHALL BE EXPLOSION PROOF.
8. THE PANEL SHALL BE MANUFACTURED BY SJE RHOMBUS, PRIMEX CONTROLS, CSI OR APPROVED EQUIVALENT.
9. THE PUMPS, CONTROLS, FLOATS AND FLOAT RACK SHALL BE SUPPLIED BY ONE DISTRIBUTOR OR MANUFACTURER. FLOAT SWITCHES SHALL BE INSTALLED WITH KWIK FLOAT SWITCH CONNECTION SYSTEM. DISTRIBUTOR OR MANUFACTURER SUPPLYING EQUIPMENT SHALL CONFIRM ALL EQUIPMENT MEETS THE INTENT OF THIS SPECIFICATION, AND THAT ALL EQUIPMENT SUPPLIED IS COMPATIBLE FOR THIS SPECIFIC APPLICATION. ALL EQUIPMENT SUPPLIED REQUIRING FACTORY START-UP TO OBTAIN WARRANTY SHALL BE INCLUDED AND PERFORMED BY FACTORY AUTHORIZED PERSONNEL. ANY DEFICIENCIES SHALL BE ADDRESSED PRIOR TO FINAL ACCEPTANCE.
10. PUMP POWER/CONTROL CABLES AND FLOAT CABLES SHALL BE ROUTED TO THE WET WELL IN SEPARATE CONDUITS WITH THE PROPER EXPANSION JOINTS, SEAL OFFS, AND EXPANSION JOINTS. PUMP AND FLOAT CABLES SHALL BE WIRED FORM WET WELL DIRECTLY TO PANEL WITH NO INTERMEDIATE JUNCTION BOXES. WIRE SIZING AND CONDUITS FEEDING AND LEAVING THE CONTROL PANEL SHALL BE PROPERLY SIZED, SHALL SUPPORT THE LOAD OF TWO PUMPS OPERATING AND MEET ALL APPLICABLE LOCAL, STATE AND NEC ELECTRICAL CODES.
11. PUMPS SHALL BE PROVIDED WITH TEMPERATURE AND MOISTURE SENSORS MATCHED TO THE PUMPS.
12. FLOAT CONTROLS SHALL BE NON-MERCURY MECHANICAL FLOATS.
13. CONCRETE: 5,000 PSI AFTER 28 DAYS. REINFORCING STEEL MIN. YIELD STRESS OF 40,000 PSI.
14. REINFORCING: WALLS & FLOOR 4X4/4X4 W.W.M. SLAB TOP #5 @ 8" O.C.
15. THE ACCESS HATCH SHALL H20 LOADING AND BE MANUFACTURED BY THE BILCO COMPANY OR EQUIVALENT. HATCH SHALL OPEN TOWARDS PUMP STATION PANEL AND HAVE INTEGRAL SECONDARY FALL PROTECTION.
16. ALL LIFT STATION PIPING SHALL BE SCH 80 PVC.
17. COAT EXTERIOR OF STRUCTURES WITH KOPPERS BITUMASTIC 3000 M OR EQUAL.
18. WET WELL SHALL BE INSTALLED ON A MINIMUM 12" BED OF SCREENED GRAVEL.
19. CONTRACTOR TO CONFIRM OPERATING ELEVATIONS WITH ENGINEER BEFORE ORDERING STATION.
20. CONTRACTOR TO SUBMIT SPECIFICATIONS FOR PUMPS, CONTROL PANELS, AND ALARM FOR OWNER AND ENGINEERS APPROVAL.
21. ELECTRIC SERVICES SHALL BE VERIFIED BY CONTRACTOR AND COORDINATED WITH OWNER, ELECTRIC COMPANY AND PUMP STATION MANUFACTURER PRIOR TO INSTALLATION. CONTRACTOR SHALL PROVIDE AND INSTALL ALL ELECTRICAL COMPONENTS REQUIRED FOR PUMP STATION MEETING APPLICABLE STATE, FEDERAL AND LOCAL CODES.
22. PRIOR TO CONSTRUCTION, CONTRACTOR SHALL MEET ON-SITE WITH OWNER AND ENGINEER TO REVIEW LOCATION OF PUMP STATION AND VALVE PIT. DEPENDING ON PHYSICAL SITE FEATURES, THE ENGINEER RESERVES THE RIGHT TO MODIFY LOCATION.
23. UPON INSTALLATION OF PUMP STATION, CONTRACTOR SHALL PROVIDE OWNER WITH THE FOLLOWING:
    a. OPERATION AND MAINTENANCE MANUALS.
    b. ONE-YEAR WARRANTY ON ALL STRUCTURES, PUMP STATION MECHANICS AND ELECTRIC COMPONENTS, ALL PIPING AND CONNECTIONS.
    c. STARTUP REPORT THAT INCLUDES DRAW DOWN TESTS TO DETERMINE THE OPERATING POINTS FOR BOTH PUMPS.

PUMP PARAMETERS	
STATION	I
PUMP	HOMA
MODEL	GRP26/3FM
IMPELLER	5-7/16"
FLOW (GPM)	75
TDH (FT)	48
VOLTAGE	230
HP	2.5
PHASE	3
HERTZ	60
RPM	3450

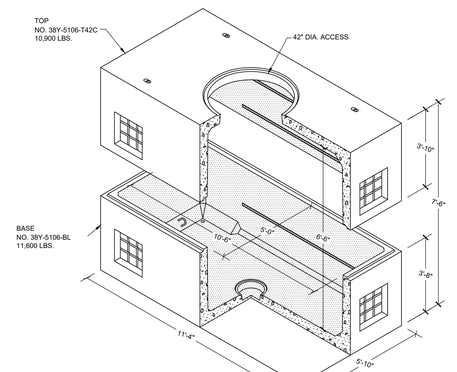


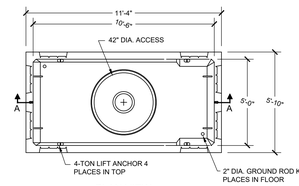
NOTE:
AS THE MAJOR PORTIONS OF THE ROOT SYSTEMS OF THE PLANT(S) TO BE PROTECTED ARE WITHIN THE DRIPLINE ZONE, THIS ENTIRE AREA SHOULD BE FENCED OFF (TO A MINIMUM HEIGHT OF 4') PRIOR TO CONSTRUCTION AND REMOVED THEREAFTER. FOR MAXIMUM PROTECTION, NO VEHICLE TRESPASS, EXCAVATION, FILL, WASTE DISCHARGE OR OR MATERIAL STORAGE SHOULD BE ALLOWED IN THIS ZONE.

TREE PROTECTION DETAIL
NOT TO SCALE CROSS-SECTION OF TYPICAL PLANT GROUPING

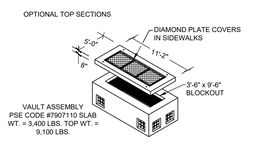


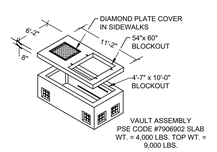
DECIDUOUS & EVERGREEN SHRUB
NOT TO SCALE



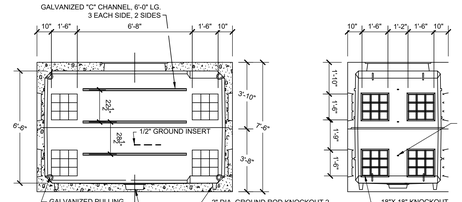


PLAN VIEW





NOTE:
1. FURNISH AND INSTALL 42" FRAME, MANHOLE COVER PER CMP STANDARDS.
2. FURNISH AND INSTALL RISER RINGS AND MASONRY TO ACHIEVE REQUIRED DEPTH AND ALLOW FOR FUTURE ADJUSTMENT TO GRADE.
3. BASIS OF DESIGN IS 3GY MANHOLE BY OLD CASTLE PRECAST MANHOLES SHALL MEET UTILITY OWNERS SPECIFICATIONS.
4. INSTALL GROUNDING RODS OR GROUNDING GRID, SEE ELECTRICAL PLANS & SPECIFICATIONS FOR GROUNDING REQUIREMENTS.



SECTION AA

END VIEW

38-Y MANHOLE FOR ELECTRIC
NOT TO SCALE

PAUL D. OSTROWSKI, PE 11175
STATE OF MAINE — PAUL D. OSTROWSKI — No. 11175 — REGISTERED PROFESSIONAL ENGINEER — 01/06/2025

KYLIE S. MASON, RLA 3335
STATE OF MAINE — KYLIE S. MASON — No. 3335 — REGISTERED LANDSCAPE ARCHITECT — 01/06/2025

REV.:	BY:	DATE:	STATUS:
E	KSM	01/06/2025	RESPONSE TO CITY DPW REVIEW COMMENTS
D	KSM	04/24/2024	RESPONSE TO CITY REVIEW COMMENTS
C	KSM	03/14/2024	RESPONSE TO CITY REVIEW COMMENTS
B	KSM	12/20/2023	ISSUED TO CITY OF PORTLAND FOR SITE PLAN REVIEW
A	KSM		

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DESIGNED	BAM/PDO
DRAWN	CJC
CHECKED	PDO
DATE	04/10/2023
SCALE	NTS
PROJECT	211026

SHEET35OF 37

TAX PARCELS: 434-C-1,434-C-5 & 434-C-10

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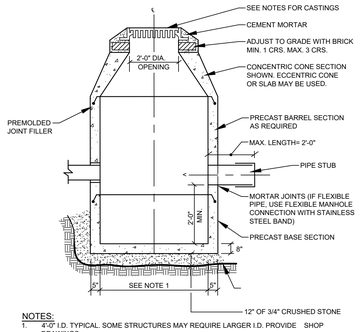
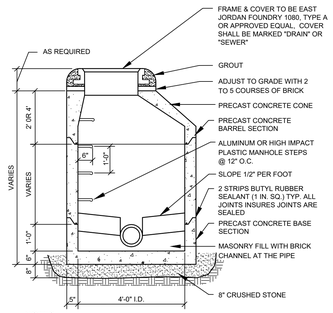


NOTES:

1. 4'-0" I.D. TYPICAL. SOME STRUCTURES MAY REQUIRE LARGER I.D. PROVIDE SHOP DRAWINGS.
2. DRAINAGE STRUCTURES TO BE DESIGNED FOR H-20 LOADING.
3. PIPE SIZES AND INVERTS AS NOTED ON GRADING AND UTILITY PLANS.
4. CATCH BASIN FRAME AND GRATE SHALL BE EAST JORDAN FOUNDRY 5250, OR APPROVED EQUAL.

TYPICAL CATCH BASIN

NOT TO SCALE

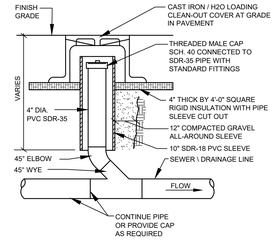


NOTES:

1. PIPE CONNECTIONS SHALL BE WATERTIGHT FLEXIBLE BOOT CONNECTORS PROVIDES LEAKPROOF CONNECTION.
2. PRECAST SECTIONS TO RECEIVE WATERPROOF COATING PER BRUNSWICK SEWER DISTRICT SPECIFICATIONS

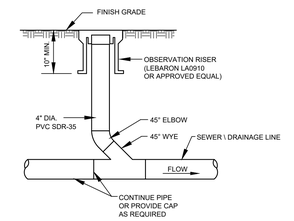
PRECAST SEWER MANHOLE

NOT TO SCALE



CLEAN-OUT IN PAVEMENT AREAS

NOT TO SCALE



CLEAN-OUT IN GRASSED AREAS

NOT TO SCALE

NOTES:

- ALL MATERIALS MUST MEET MAINE WATER SPECIFICATIONS.
- ALL M.J. CONNECTIONS MUST UTILIZE JOINT RESTRAINT.
- ALL FITTINGS (TEE, VALVE, HYDRANT BASE) MUST BE WRAPPED IN POLYETHYLENE.
- HYDRANT MUST BE PLUMB WITH BREAK LINE MATCHING FINISH GRADE

VALVE & HYDRANT MUST BE OPEN RIGHT.

APPROVED CONNECTIONS:

- M.J. TEE - D.I. NIPPLE - GATE VALVE
- M.J. TEE - FOSTER ADAPTER - GAVE VALVE
- ANCHOR TEE - GATE VALVE

HYDRANT INSTALLATION

NOT TO SCALE

NOTE:

1. EXCAVATION TO FINAL GRADE SHALL BE MADE WITH SMOOTH BLADE EQUIPMENT.

TYPICAL WATER TRENCH SECTION

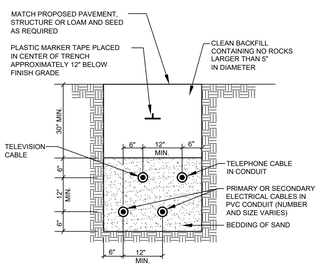
NOT TO SCALE

NOTE:

1. EXCAVATION TO FINAL GRADE SHALL BE MADE WITH SMOOTH BLADE EQUIPMENT.

TYPICAL TRENCH SECTION

NOT TO SCALE

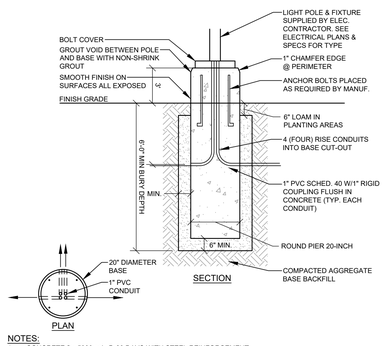


NOTES:

1. CABLES TO BE ENCASED IN SCHEDULE 40 PVC CONDUIT WHEN RUN BENEATH PAVED AREAS.
2. DUCT BANK FOR 3-PHASE POWER TO BE COORDINATED WITH CMP REFER TO ELECTRICAL DRAWINGS.
3. THIS DETAIL IS SHOWN FOR ILLUSTRATIVE PURPOSES ONLY. DUCT BANK DETAILS SHALL BE COORDINATED WITH SITE ELECTRICAL DRAWINGS.

TYPICAL UNDERGROUND CABLE INSTALLATION

NOT TO SCALE

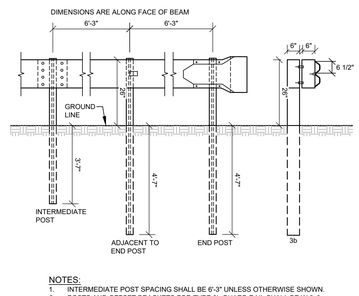


NOTES:

1. CONCRETE f'c=5000 psi. @ 28 DAYS WITH STEEL REINFORCEMENT
2. CONDUIT AND ANCHOR BOLTS PLACED AS REQUIRED PROVIDED BY ELECTRICAL CONTRACTOR
3. PROVIDE 2 COATS BITUMINOUS DAMPROOFING FOR ALL CONCRETE BELOW GRADE.
4. INSTALL BASE 3'-0" ABOVE FINISH GRADE. MAINTAIN MINIMUM BURY DEPTH.

20" ROUND LIGHT POLE BASE

NOT TO SCALE

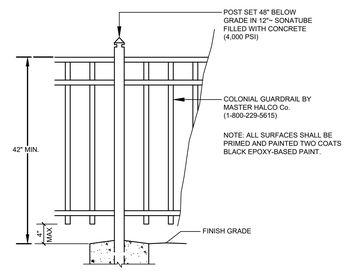


NOTES:

1. INTERMEDIATE POST SPACING SHALL BE 6'-3" UNLESS OTHERWISE SHOWN.
2. POSTS AND OFFSET BRACKETS FOR TYPE 3b GUARD RAIL SHALL BE W 6x9.
3. ALL HOLES IN BEAM TO BE SHOP-PUNCHED BEFORE GALVANIZING.

GUARDRAIL TYPE 3b

NOT TO SCALE



PEDESTRIAN GUARDRAIL (ALUMINUM TUBING)

NOT TO SCALE

TAX PARCELS: 434-C-1,434-C-5 & 434-C-10

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PAUL D. OSTROWSKI, PE 11175

STATE OF MAINE — PAUL D. OSTROWSKI — No. 11175 — REGISTERED PROFESSIONAL ENGINEER — 01/06/2025

KYLIE S. MASON, RLA 3335

KYLIE S. MASON — No. 3335 — REGISTERED LANDSCAPE ARCHITECT — 01/06/2025

REV	BY:	DATE:	STATUS:
			ISSUED TO CITY OF PORTLAND FOR SITE PLAN REVIEW
A	KSM	12/20/2023	RESPONSE TO CITY REVIEW COMMENTS
B	KSM	03/14/2024	RESPONSE TO CITY REVIEW COMMENTS
C	KSM	04/26/2024	RESPONSE TO CITY REVIEW COMMENTS
D	KSM	06/24/2024	RESPONSE TO CITY REVIEW COMMENTS
E	KSM	01/06/2025	RESPONSE TO CITY DPW REVIEW COMMENTS

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MARTIN'S POINT HEALTH CARE, INC.

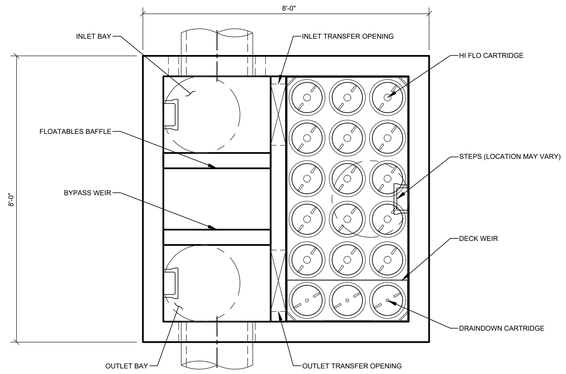
PO BOX 9746
PORTLAND, ME 04103

DESIGNED	BAM/PDO
DRAWN	CJC
CHECKED	PDO
DATE	04/10/2023
SCALE	NTS
PROJECT	211026

211026 D-BLDG 7.dwg, 1745 DETAILS 2

SHEET 36 OF 37

JELLYFISH DESIGN NOTES				
JELLYFISH TREATMENT CAPACITY IS A FUNCTION OF THE CARTRIDGE LENGTH AND THE NUMBER OF CARTRIDGES. THE STANDARD PEAK DIVERSION STYLE WITH PRECAST TOP SLAB IS SHOWN. ALTERNATE OFFLINE VAULT AND/OR SHALLOW ORIENTATIONS ARE AVAILABLE. PEAK CONVEYANCE CAPACITY TO BE DETERMINED BY ENGINEER OF RECORD				
CARTRIDGE SELECTION				
CARTRIDGE LENGTH	54"	40"	27"	15"
OUTLET INVERT TO STRUCTURE INVERT (A)	6'-6"	5'-4"	4'-3"	3'-3"
FLOW RATE HI-FLO / DRAINDOWN (CFS) (PER CART)	0.178 / 0.089	0.133 / 0.067	0.089 / 0.045	0.049 / 0.025
MAX. TREATMENT (CFS)	2.94	2.21	1.47	0.81
DECK TO INSIDE TOP (MIN) (B)	5.00	4.00	4.00	4.00



PLAN VIEW
(TOP SLAB NOT SHOWN FOR CLARITY)

SITE SPECIFIC DATA REQUIREMENTS	
STRUCTURE ID	-
WATER QUALITY FLOW RATE (cfs)	-
PEAK FLOW RATE (cfs)	-
RETURN PERIOD OF PEAK FLOW (yrs)	-
# OF CARTRIDGES REQUIRED (HF / DD)	-
CARTRIDGE LENGTH	-

PIPE DATA:	I.E.	MAT'L	DIA	SLOPE %	HGL
INLET #1	-	-	-	-	-
INLET #2	-	-	-	-	-
OUTLET	-	-	-	-	-

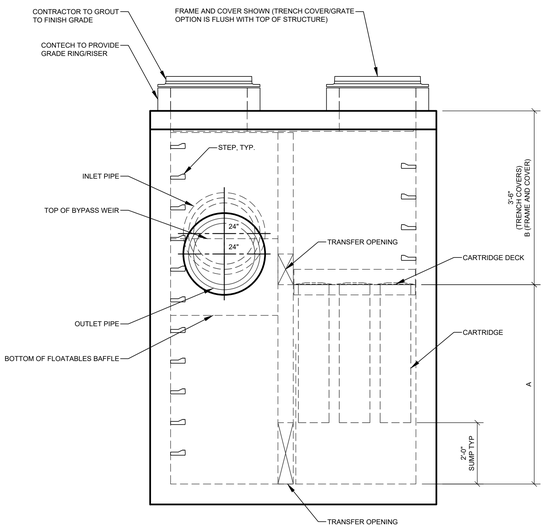
SEE GENERAL NOTES 6-7 FOR INLET AND OUTLET HYDRAULIC AND SIZING REQUIREMENTS.

RIM ELEVATION	*

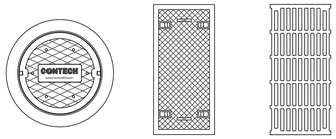
ANTI-FLOTATION BALLAST	-	-
	-	-

NOTES/SPECIAL REQUIREMENTS:

* PER ENGINEER OF RECORD



ELEVATION VIEW



FRAME AND COVER
(DIAMETER VARIES)
N.T.S.

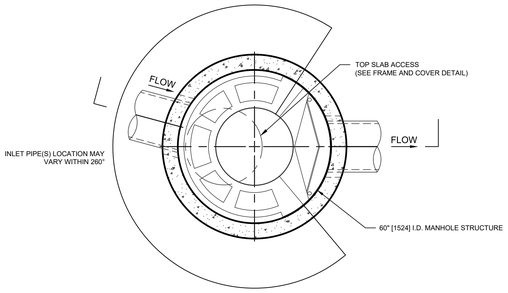
24" TRENCH COVER
(LENGTH VARIES)
N.T.S.

24" TRENCH GRATE
(LENGTH VARIES)
N.T.S.

GENERAL NOTES:
1. CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
2. FOR SITE SPECIFIC DRAWINGS WITH DETAILED STRUCTURE DIMENSIONS AND WEIGHT, PLEASE CONTACT YOUR CONTECH ENGINEERED SOLUTIONS REPRESENTATIVE. www.ContechES.com
3. JELLYFISH WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING. CONTRACTOR TO CONFIRM STRUCTURE MEETS REQUIREMENTS OF PROJECT.
4. STRUCTURE SHALL MEET AASHTO HS-20 OR PER APPROVING JURISDICTION REQUIREMENTS, WHICHEVER IS MORE STRINGENT, ASSUMING EARTH COVER OF 0' - 10', AND GROUNDWATER ELEVATION AT, OR BELOW, THE OUTLET PIPE INVERT ELEVATION. ENGINEER OF RECORD TO CONFIRM ACTUAL GROUNDWATER ELEVATION. CASTINGS SHALL MEET AASHTO M306 LOAD RATING AND BE CAST WITH THE CONTECH LOGO.
5. STRUCTURE SHALL BE PRECAST CONCRETE CONFORMING TO ASTM C-857, ASTM C-918, AND AASHTO LOAD FACTOR DESIGN METHOD.
6. OUTLET PIPE INVERT IS EQUAL TO THE CARTRIDGE DECK ELEVATION.
7. THE OUTLET PIPE DIAMETER FOR NEW INSTALLATIONS IS RECOMMENDED TO BE ONE PIPE SIZE LARGER THAN THE INLET PIPE AT EQUAL OR GREATER SLOPE.
8. NO PRODUCT SUBSTITUTIONS SHALL BE ACCEPTED UNLESS SUBMITTED 10 DAYS PRIOR TO PROJECT BID DATE, OR AS DIRECTED BY THE ENGINEER OF RECORD.

INSTALLATION NOTES
A. ANY SUB-BASE, BACKFILL DEPTH, AND/OR ANTI-FLOTATION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD.
B. CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE STRUCTURE.
C. CONTRACTOR WILL INSTALL AND LEVEL THE STRUCTURE, SEALING THE JOINTS, LINE ENTRY AND EXIT POINTS (NON-SHRINK GROUT WITH APPROVED WATERSTOP OR FLEXIBLE BOOT).
D. CARTRIDGE INSTALLATION, BY CONTECH, SHALL OCCUR ONLY AFTER SITE HAS BEEN STABILIZED AND THE JELLYFISH UNIT IS CLEAN AND FREE OF DEBRIS. CONTACT CONTECH TO COORDINATE CARTRIDGE INSTALLATION WITH SITE STABILIZATION.

JELLYFISH JFPD0808
NOT TO SCALE



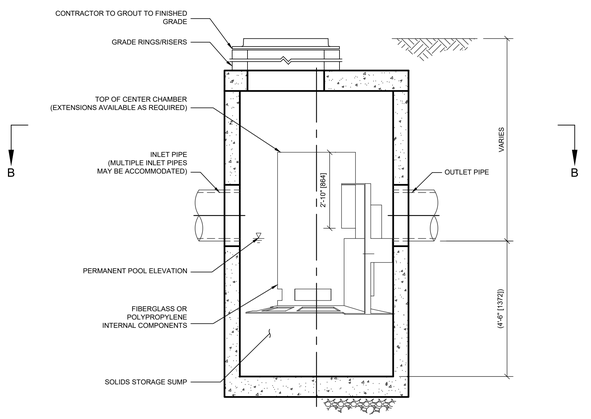
PLAN VIEW B-B
NOT TO SCALE

CASCADE SEPARATOR DESIGN NOTES
THE STANDARD #### CONFIGURATION IS SHOWN. ALTERNATE CONFIGURATIONS ARE AVAILABLE AND ARE LISTED BELOW. SOME CONFIGURATIONS MAY BE COMBINED TO SUIT SITE REQUIREMENTS.
CONFIGURATION DESCRIPTION
GRATED INLET ONLY (NO INLET PIPE)
GRATED INLET WITH INLET PIPE OR PIPES
CURB INLET ONLY (NO INLET PIPE)
CURB INLET WITH INLET PIPE OR PIPES



FRAME AND COVER
(DIAMETER VARIES)
NOT TO SCALE

SITE SPECIFIC DATA REQUIREMENTS			
STRUCTURE ID			
WATER QUALITY FLOW RATE (cfs (L/s))			
PEAK FLOW RATE (cfs (L/s))			
RETURN PERIOD OF PEAK FLOW (yrs)			
RIM ELEVATION			
PIPE DATA:	INVERT	MATERIAL	DIAMETER
INLET PIPE 1			
INLET PIPE 2			
OUTLET PIPE			
NOTES / SPECIAL REQUIREMENTS:			



GENERAL NOTES
1. CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
2. FOR SITE SPECIFIC DRAWINGS WITH DETAILED STRUCTURE DIMENSIONS AND WEIGHT, PLEASE CONTACT YOUR CONTECH ENGINEERED SOLUTIONS LLC REPRESENTATIVE. www.ContechES.com
3. CASCADE SEPARATOR WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING. CONTRACTOR TO CONFIRM STRUCTURE MEETS REQUIREMENTS OF PROJECT.
4. CASCADE SEPARATOR STRUCTURE SHALL MEET AASHTO HS20 LOAD RATING, ASSUMING EARTH COVER OF 0' - 2' [610], AND GROUNDWATER ELEVATION AT, OR BELOW, THE OUTLET PIPE INVERT ELEVATION. ENGINEER OF RECORD TO CONFIRM ACTUAL GROUNDWATER ELEVATION. CASTINGS SHALL MEET AASHTO M306 AND BE CAST WITH THE CONTECH LOGO.
5. CASCADE SEPARATOR STRUCTURE SHALL BE PRECAST CONCRETE CONFORMING TO ASTM C478 AND AASHTO LOAD FACTOR DESIGN METHOD.
6. ALTERNATE UNITS ARE SHOWN IN MILLIMETERS [mm].

INSTALLATION NOTES
A. ANY SUB-BASE, BACKFILL DEPTH, AND/OR ANTI-FLOTATION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD.
B. CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE CASCADE SEPARATOR MANHOLE STRUCTURE.
C. CONTRACTOR TO INSTALL JOINT SEALANT BETWEEN ALL STRUCTURE SECTIONS AND ASSEMBLE STRUCTURE.
D. CONTRACTOR TO PROVIDE, INSTALL, AND GROUT INLET AND OUTLET PIPE(S). MATCH PIPE INVERTS WITH ELEVATIONS SHOWN. ALL PIPE CENTERLINES TO MATCH PIPE OPENING CENTERLINES.
E. CONTRACTOR TO TAKE APPROPRIATE MEASURES TO ASSURE UNIT IS WATER TIGHT, HOLDING WATER TO FLOWLINE INVERT MINIMUM. IT IS SUGGESTED THAT ALL JOINTS BELOW PIPE INVERTS ARE GROUTED.

ELEVATION A-A
NOT TO SCALE

TAX PARCELS: 434-C-1,434-C-5 & 434-C-10

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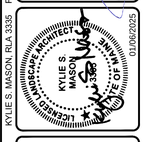
PAUL D. OSTROWSKI, PE 11175



KYLIE S. MASON, RLA 3335



REV:	BY:	DATE:	STATUS:
E	KSM	01/06/2025	RESPONSE TO CITY DPW REVIEW COMMENTS
D	KSM	11/26/2024	RESPONSE TO CITY REVIEW COMMENTS
C	KSM	04/24/2024	RESPONSE TO CITY REVIEW COMMENTS
B	KSM	03/14/2024	RESPONSE TO CITY REVIEW COMMENTS
A	KSM	12/20/2023	ISSUED TO CITY OF PORTLAND FOR SITE PLAN REVIEW

THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM SEBAGO TECHNICS, INC. ANY ALTERATIONS, AUTHORIZED OR OTHERWISE, SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO SEBAGO TECHNICS, INC.

SEBAGO TECHNICS
WWW.SEBAGOTECHNICS.COM
75 John Roberts Rd.
Suite 4A
South Portland, ME 04106
Tel: 207-200-2100

DETAILS

MARTIN'S POINT HEALTH CARE VERANDA CAMPUS
331 VERANDA STREET
PORTLAND, ME 04103

MARTIN'S POINT HEALTH CARE, INC.
PO BOX 9748
PORTLAND, ME 04103

DESIGNED	BAM/PDO
DRAWN	CJC
CHECKED	PDO
DATE	04/10/2023
SCALE	NTS
PROJECT	211026

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SHEET 37 OF 37



TAX PARCELS: 434-C-1,434-C-5 & 434-C-10

PAUL D. OSTROWSKI, PE 11175

STATE OF MAINE
PAUL D. OSTROWSKI
No. 11175
REGISTERED PROFESSIONAL ENGINEER
01/06/2025

REV:	BY:	DATE:	STATUS:
E	KSM	01/06/2025	RESPONSE TO CITY DPW REVIEW COMMENTS
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75 John Roberts Rd.
Suite A
South Portland, ME 04106
Tel: 207-200-2100

PRE STORMWATER PLAN

MARTIN'S POINT HEALTH CARE VERANDA CAMPUS

331 VERANDA STREET
PORTLAND, ME 04103

MARTIN'S POINT HEALTH CARE, INC.

PO BOX 9746
PORTLAND, ME 04103

DESIGNED	BAM/PDO
DRAWN	CJC
CHECKED	PDO
DATE	04/10/2023
SCALE	1" = 20'
PROJECT	211026

SHEET 1 OF 2

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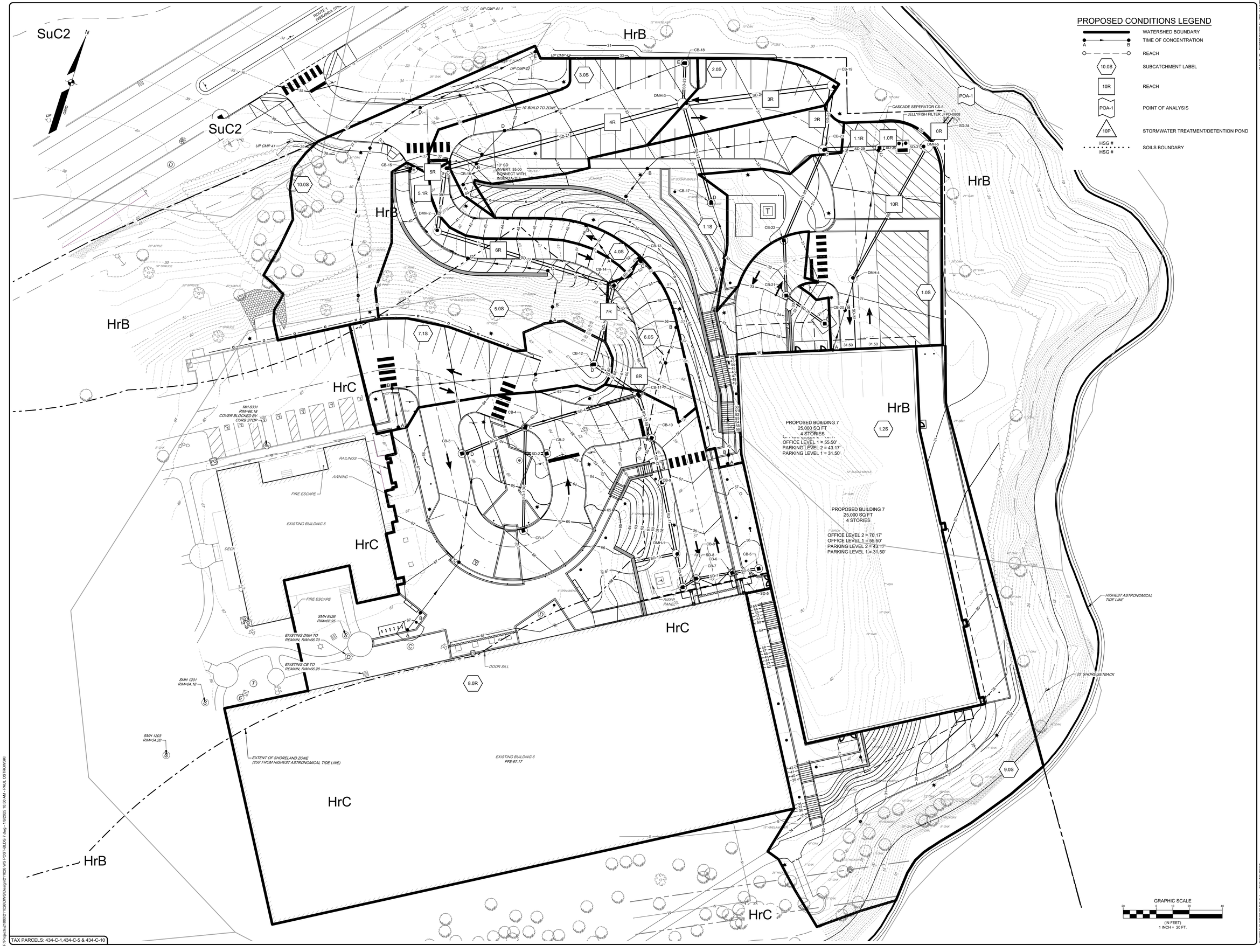

TAX PARCELS: 434-C-1,434-C-5 & 434-C-10

PAUL D. OSTROWSKI, PE 11175

STATE OF MAINE — PAUL D. OSTROWSKI — No. 11175 — REGISTERED PROFESSIONAL ENGINEER — 01/06/2025

REV:	BY:	DATE:	STATUS:
E	KSM	01/06/2025	RESPONSE TO CITY "DPW REVIEW" COMMENTS
D	KSM	11/14/2024	RESPONSE TO CITY REVIEW COMMENTS
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WWW.SEBAGOTECHNICS.COM
75 John Roberts Rd.
Suite A
South Portland, ME 04106
Tel: 207-200-2100

POST STORMWATER PLAN

MARTIN'S POINT HEALTH CARE VERANDA CAMPUS

331 VERANDA STREET
PORTLAND, ME 04103

MARTIN'S POINT HEALTH CARE, INC.

PO BOX 9746
PORTLAND, ME 04103

DESIGNED	BAM/PDO
DRAWN	CJC
CHECKED	PDO
DATE	04/10/2023
SCALE	1" = 20'
PROJECT	211026

SHEET 2 OF 2

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10" TREE INVENTORY

≥10" DECIDUOUS TREE TO BE REMOVED	= 20
≥10" CONIFEROUS TREE TO BE REMOVED	= 5
TOTAL NUMBER OF ≥ 10" TREES TO BE REMOVED	= 25 [*21 ARE LOCATED IN THE 250' SHORELAND ZONE*]
TOTAL NUMBER OF ≥ 10" TREES TO BE PRESERVED	= 98 [*93 ARE LOCATED IN THE 250' SHORELAND ZONE*]

SHORELAND TREE INVENTORY

SELECTIVE CUTTING OF NOT MORE THAN 40% OF THE VOLUME OF TREES FOUR INCHES OR MORE IN DIAMETER SHALL BE ALLOWED WITHIN ANY TEN YEAR PERIOD:

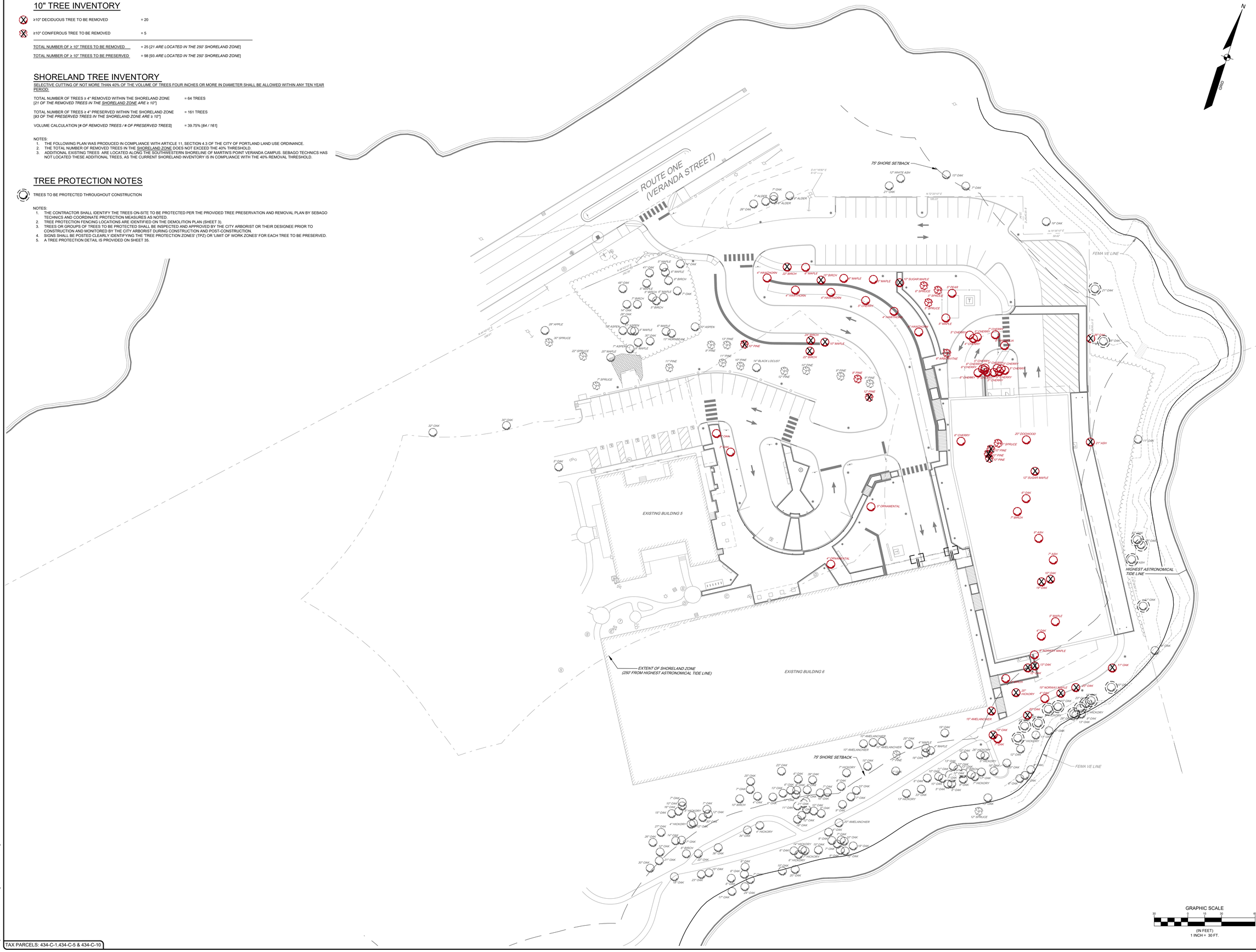
TOTAL NUMBER OF TREES ≥ 4" REMOVED WITHIN THE SHORELAND ZONE [*21 OF THE REMOVED TREES IN THE SHORELAND ZONE ARE ≥ 10"*]	= 64 TREES
TOTAL NUMBER OF TREES ≥ 4" PRESERVED WITHIN THE SHORELAND ZONE [*93 OF THE PRESERVED TREES IN THE SHORELAND ZONE ARE ≥ 10"*]	= 161 TREES
VOLUME CALCULATION [*# OF REMOVED TREES / # OF PRESERVED TREES*]	= 39.75% [*64 / 161*]

NOTES:
1. THE FOLLOWING PLAN WAS PRODUCED IN COMPLIANCE WITH ARTICLE 11, SECTION 4.3 OF THE CITY OF PORTLAND LAND USE ORDINANCE.
2. THE TOTAL NUMBER OF REMOVED TREES IN THE SHORELAND ZONE DOES NOT EXCEED THE 40% THRESHOLD.
3. ADDITIONAL EXISTING TREES ARE LOCATED ALONG THE SOUTHWESTERN SHORELINE OF MARTIN'S POINT VERANDA CAMPUS. SEBAGO TECHNICS HAS NOT LOCATED THESE ADDITIONAL TREES, AS THE CURRENT SHORELAND INVENTORY IS IN COMPLIANCE WITH THE 40% REMOVAL THRESHOLD.

TREE PROTECTION NOTES

TREES TO BE PROTECTED THROUGHOUT CONSTRUCTION

NOTES:
1. THE CONTRACTOR SHALL IDENTIFY THE TREES ON-SITE TO BE PROTECTED PER THE PROVIDED TREE PRESERVATION AND REMOVAL PLAN BY SEBAGO TECHNICS AND COORDINATE PROTECTION MEASURES AS NOTED.
2. TREE PROTECTION FENCING LOCATIONS ARE IDENTIFIED ON THE DEMOLITION PLAN (SHEET 3).
3. TREES OR GROUPS OF TREES TO BE PROTECTED SHALL BE INSPECTED AND APPROVED BY THE CITY ARBORIST OR THEIR DESIGNEE PRIOR TO CONSTRUCTION AND MONITORED BY THE CITY ARBORIST DURING CONSTRUCTION AND POST-CONSTRUCTION.
4. SIGNS SHALL BE POSTED CLEARLY IDENTIFYING THE 'TREE PROTECTION ZONES' (TPZ) OR 'LIMIT OF WORK ZONES' FOR EACH TREE TO BE PRESERVED.
5. A TREE PROTECTION DETAIL IS PROVIDED ON SHEET 35.



TAX PARCELS: 434-C-1,434-C-5 & 434-C-10

KYLIE S. MASON, RLA 3335

REV:	BY:	DATE:	STATUS:
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SEBAGO TECHNICS
WWW.SEBAGOTECHNICS.COM
75 John Roberts Rd.
Suite 4A
South Portland, ME 04106
Tel: 207-200-2100

TREE PRESERVATION AND REMOVAL PLAN

MARTIN'S POINT HEALTH CARE VERANDA CAMPUS

331 VERANDA STREET
PORTLAND, ME 04103

MARTIN'S POINT HEALTH CARE, INC.

PO BOX 9746
PORTLAND, ME 04103

DESIGNED	BAM/PDO
DRAWN	CJC
CHECKED	PDO
DATE	04/10/2023
SCALE	1" = 30'
PROJECT	211026

SHEET 1 OF 1

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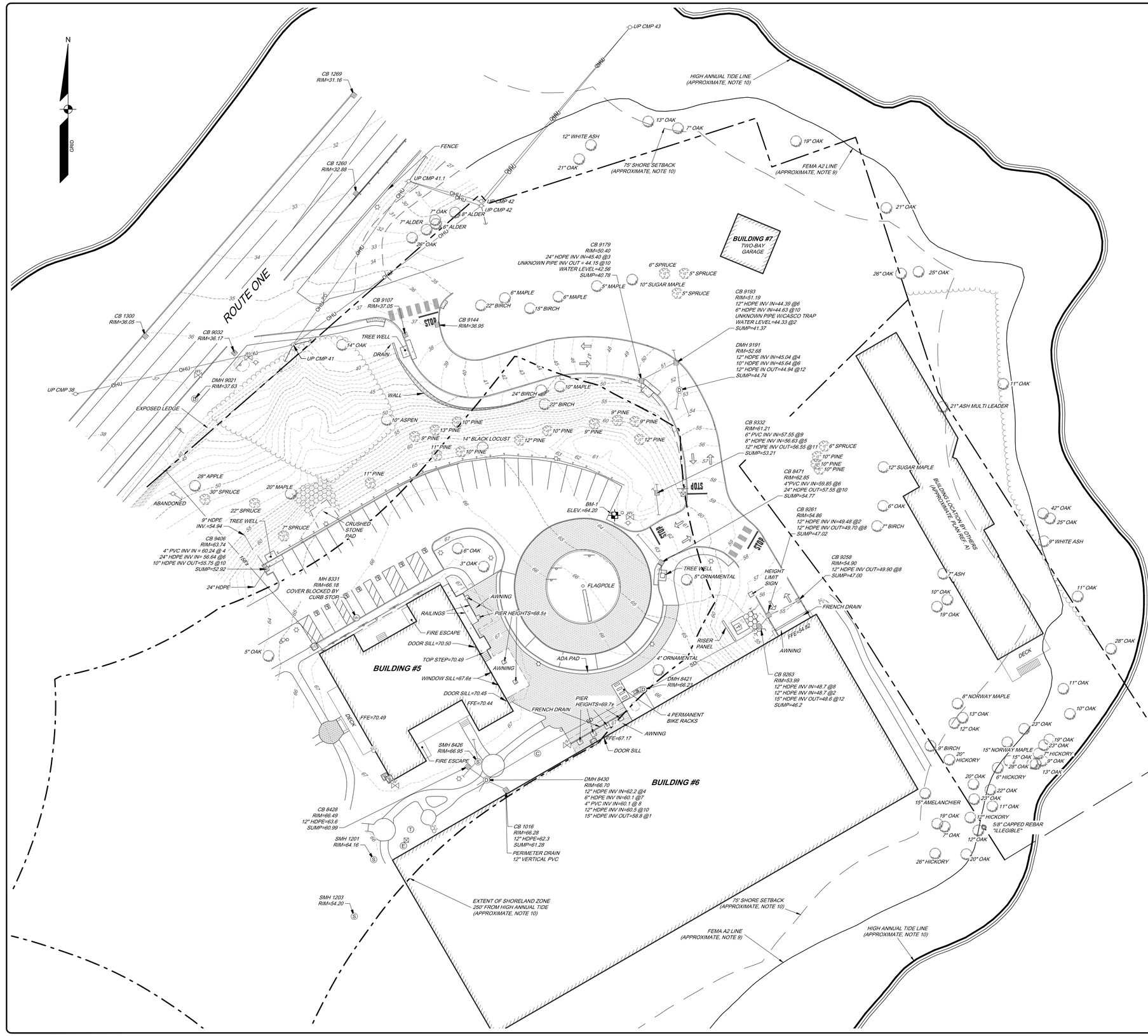

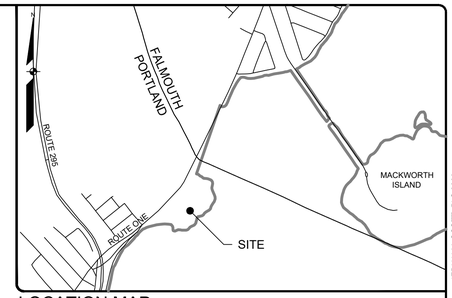

LOCATION MAP N.T.S.

JEDIAH H. SCOTT, PLS 2660

GENERAL NOTES:

1. THE RECORD OWNER OF THE PARCEL IS MARTINS POINT HEALTH CARE, INC. BY DEED DATED JUNE 15, 2006 AND RECORDED AT THE CUMBERLAND COUNTY REGISTRY OF DEEDS (CCRD) IN BOOK 24070, PAGE 323, DEED DATED DECEMBER 14, 2007, RECORDED IN BOOK 25685, PAGE 331, AND DEED DATED AUGUST 8, 1994 RECORDED IN BOOK 11581, PAGE 337 (HTTA: "PENOBSCOT BAY MEDICAL ASSOCIATES, INC.").
2. THE PROPERTY IS SHOWN AS LOTS C001, C010, AND C005 ON THE CITY OF PORTLAND TAX MAP 434 AND IS LOCATED IN THE RESIDENTIAL PROFESSIONAL DISTRICT WITH A SHORELAND ZONING OVERLAY.
3. TOPOGRAPHIC INFORMATION SHOWN HEREON IS BASED UPON FIELD WORK PERFORMED BY SEBAGO TECHNICS, INC. IN 2023 AND INFORMATION COLLECTED BY OWEN HASKELL, INC. IN 2012.
4. PLAN REFERENCES
   A. EXISTING CONDITIONS SURVEY MADE FOR MARTIN'S POINT HEALTH CARE CENTER BY OWEN HASKELL, INC. DATED FEBRUARY 22, 2012 AS REVISED THROUGH JULY 3, 2012.
5. BOUNDARY LINES SHOWN HEREON ARE APPROXIMATE, BASED SOLELY ON INFORMATION SHOWN ON PLAN REFERENCE A. NO GUARANTEES OR STATEMENTS ARE MADE REGARDING THE VALIDITY OR ACCURACY OF SAID PLAN.
6. BASIS OF BEARING IS GRID NORTH, MAINE STATE PLANE COORDINATE SYSTEM, WEST ZONE 1802-NAD83, ELEVATIONS DEPICTED HEREON ARE REFERENCED TO CITY OF PORTLAND DATUM, AS DERIVED FROM A CITY OF PORTLAND BENCHMARK LOCATED ON THE WESTERLY SIDE OF VERANDA STREET AT THE FIRST ANGLE NORTHERLY OF OREGON STREET, BEING A COPPER BOLT IN GRANITE 3-FOOT OFFSET MONUMENT (ELEVATION: 27.014).
7. BENCHMARK:
   BM-1 BOX CUT IN BASE OF LIGHT POLE ELEVATION: 64.20' (PORTLAND DATUM)
8. UTILITY INFORMATION DEPICTED HEREON, UNLESS OTHERWISE NOTED, IS OF QUALITY LEVEL D PER AMERICAN SOCIETY OF CIVIL ENGINEERS (ASCE) STANDARD CI/ASCE 38-02. UTILITIES DEPICTED HEREON MAY NOT NECESSARILY REPRESENT ALL EXISTING UTILITIES. CONTRACTORS AND/OR DESIGNERS NEED TO CONTACT DIG-SAFE SYSTEMS, INC. (1-888-DIG-SAFE) AND FIELD VERIFY EXISTING UTILITIES WITHIN THE PROJECT AREA PRIOR TO CONSTRUCTION AND/OR EXCAVATION.
9. THE LOCUS PROPERTY AS DEPICTED HEREON DOES FALL WITHIN A SPECIAL FLOOD HAZARD AREA AS DELINEATED ON THE FLOOD INSURANCE RATE MAP FOR PORTLAND, MAINE, CUMBERLAND COUNTY, COMMUNITY-PANEL NUMBER 2300510008B, HAVING AN EFFECTIVE DATE OF JULY 17, 1986. THE LOCUS FALLS WITHIN AN AREA IDENTIFIED AS ZONE A2, AREAS OF 100-YEAR FLOOD; BASE ELEVATIONS, (ELEVATION 27') AND FLOOD HAZARD FACTORS DETERMINED. THE LOCUS FALLS WITHIN AN AREA IDENTIFIED AS V2 AREAS OF 100-YEAR COASTAL FLOOD WITH VELOCITY (WAVE ACTION); BASE FLOOD ELEVATIONS, (ELEVATIONS 19', 22' & 27' [NGVD29]) AND FLOOD HAZARD FACTORS DETERMINED. FEMA A2 LINE SHOWN IS DERIVED FROM PUBLICLY AVAILABLE LIDAR DATA AND IS APPROXIMATE.
10. HIGH ANNUAL TIDE LINE BASED ON REPORT FROM MDEP (2018), BEING DERIVED FROM PUBLICLY AVAILABLE LIDAR DATA AND IS APPROXIMATE.

LEGEND

EXISTING

- PROPERTY/DEED/R.O.W. LINE (NOTE 5)
- BM-1 BENCHMARK
- BUILDING
- DECK/STEPS/ OVERHANG
- EDGE PAVEMENT
- PAVEMENT PAINT
- EDGE GRAVEL
- CURB LINE
- TREELINE
- 120 118 CONTOURS
- GUARD RAIL
- DECIDUOUS TREE
- CONIFEROUS TREE
- MULCH LINE
- BOLLARD
- SIGN
- GM GAS METER
- SEWER CUT OFF
- WV WATER GATE VALVE
- WATER SHUT OFF
- HYDRANT
- IV IRRIGATION VALVE
- FC FIRE SPIGOT
- SD STORM DRAIN
- D DRAINAGE MANHOLE
- CATCH BASIN
- OHU OVERHEAD UTILITY
- T TRANSFORMER PAD
- E ELECTRICAL MANHOLE
- T TELEPHONE MANHOLE
- HANDHOLE
- LIGHT POLE
- UTILITY POLE
- GUY WIRE
- RIPRAP

GRAPHIC SCALE
30 0 15 30 40
(IN FEET)
1 INCH = 30 FT.

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STATE OF MAINE JEDIAH SCOTT #2660 REGISTERED PROFESSIONAL LAND SURVEYOR

REV.:	BY:	DATE:	STATUS:
			THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM SEBAGO TECHNICS, INC. ANY ALTERATIONS, AUTHORIZED OR OTHERWISE, SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO SEBAGO TECHNICS, INC.

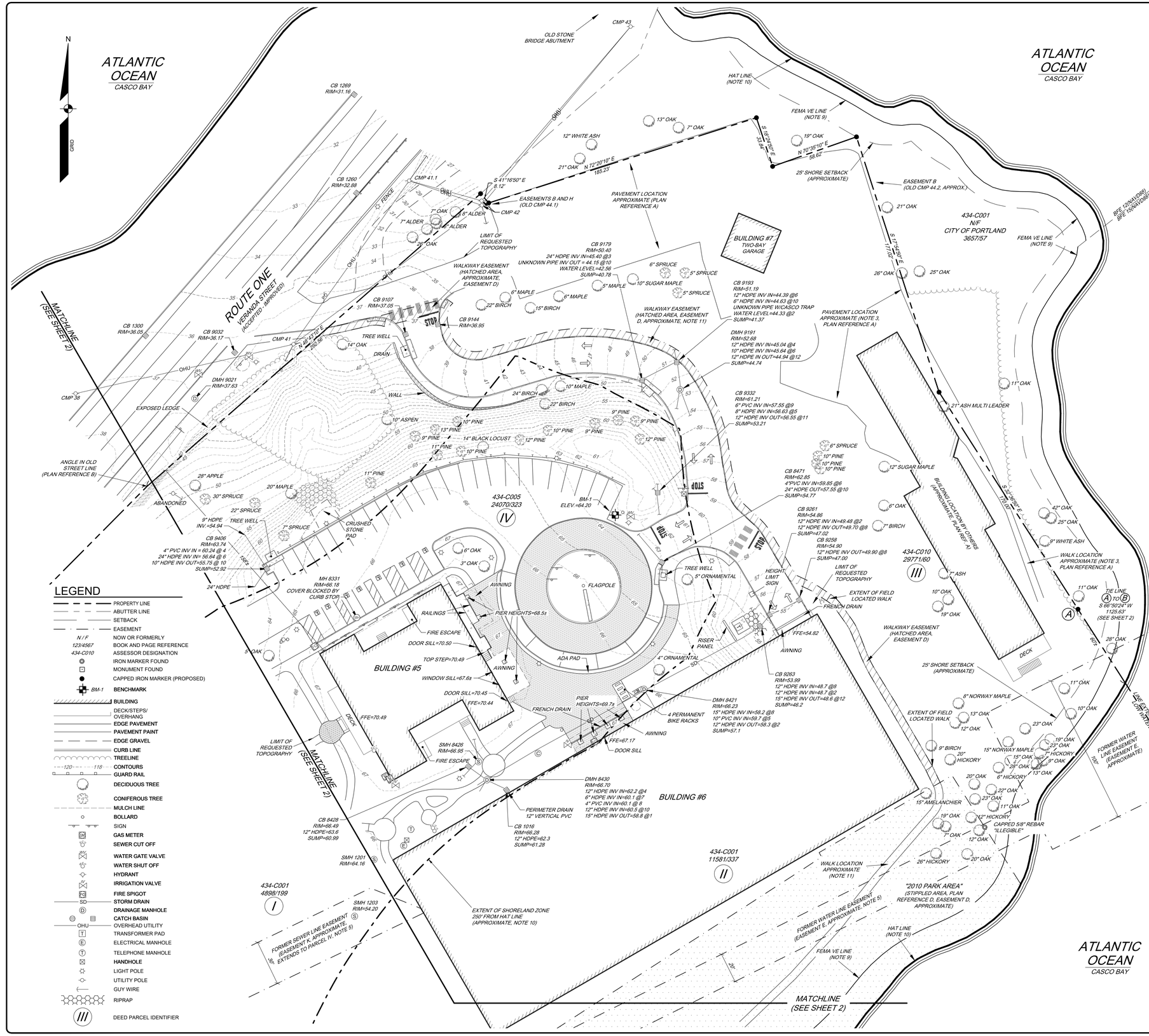
SEBAGO TECHNICS
75 John Roberts Rd.
Suite A
South Portland, ME 04106
Tel. 207-200-2100
WWW.SEBAGOTECHNICS.COM

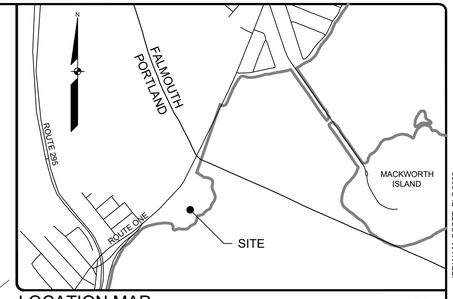
EXISTING CONDITIONS PLAN
OF:
MARTIN'S POINT - PORTLAND CAMPUS
331 VERANDA STREET
PORTLAND, ME
FOR RECORD OWNER:
MARTIN'S POINT HEALTHCARE, INC.
10700 PRAIRIE LAKES DRIVE
EDEN PRAIRIE, MN 55344

DESIGNED	-
DRAWN	CNG
CHECKED	JMS
DATE	12/06/2023
SCALE	1" = 30'
PROJECT	211026

SHEET 1 OF 1

211026 EC SURVEY dwg TAB-JMS





LOCATION MAP N.T.S.

JEDIAH H. SCOTT, PLS 2660

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STATE OF MAINE JEDIAH M. SCOTT #2660 PROFESSIONAL LAND SURVEYOR

GENERAL NOTES:

1. THE RECORD OWNER OF THE PARCEL IS MARTIN'S POINT HEALTH CARE, INC. AS RECORDED IN BOOK 24070, PAGE 323 (PARCEL IV); BOOK 29771, PAGE 60 (PARCEL III); BOOK 11581, PAGE 337 (PARCEL II; HTTA: "PENOBSCOT BAY MEDICAL ASSOCIATES, INC."); AND BOOK 4898, PAGE 199 (PARCEL I; HTTA: PENOBSCOT BAY MEDICAL ASSOCIATES). BOOK AND PAGE NUMBERS ARE REFERENCED TO THE CUMBERLAND COUNTY REGISTRY OF DEEDS UNLESS NOTED OTHERWISE.
2. THE PROPERTY IS SHOWN AS LOTS C001, C010, AND C005 ON THE CITY OF PORTLAND TAX MAP 434 AND IS LOCATED IN THE B-5 ZONE AND THE SHORELAND ZONING OVERLAY. THE TOTAL AREA OF THE PROPERTY UPLAND OF THE HIGH ANNUAL TIDE IS APPROXIMATELY 533,000 SQUARE FEET OR 12.23 ACRES, MORE OR LESS.
3. BOUNDARY AND TOPOGRAPHIC INFORMATION SHOWN HEREON IS BASED UPON FIELD WORK PERFORMED BY SEBAGO TECHNICS, INC. IN 2023-2024 AND INFORMATION COLLECTED BY OWEN HASKELL, INC. IN 2012 (AS NOTED, PLAN REFERENCE A). SURVEYOR'S STAMP IS LIMITED TO THE AREA OF REQUESTED TOPOGRAPHY.
4. PLAN REFERENCES
   - A. EXISTING CONDITIONS SURVEY MADE FOR MARTIN'S POINT HEALTH CARE CENTER BY OWEN HASKELL, INC. DATED FEBRUARY 22, 2012 AS REVISED THROUGH JULY 3, 2012.
   - B. SITE PLAN OF MARTIN'S POINT FOR CITY OF PORTLAND, MAINE DEPARTMENT OF PUBLIC WORKS APPROVED JUNE 6, 1974, CITY OF PORTLAND DRAWING NO. 541/21.
   - C. STANDARD BOUNDARY SURVEY MADE FOR PENOBSCOT BAY MEDICAL ASSOC. BY OWEN HASKELL, INC. DATED JUNE 7, 1994 RECORDED IN PLAN BOOK 194, PAGE 258.
   - D. CONCEPT PLAN MADE FOR MARTIN'S POINT HEALTH CARE, INC. BY OWEN HASKELL, INC. DATED AUGUST 10, 2010 RECORDED IN PLAN BOOK 210, PAGE 328.
   - E. CONVEYANCE PLAN MADE FOR MARTIN'S POINT HEALTH CARE, INC. BY OWEN HASKELL, INC. AS REVISED THROUGH JUNE 14, 2006 RECORDED IN BOOK 207, PAGE 364.
5. SOME EASEMENTS SHOWN ON THIS PLAN MAY HAVE BEEN TERMINATED, THOUGH UTILITIES MAY STILL BE PRESENT. CONSULT A TITLE ATTORNEY FOR A LEGAL OPINION OF EASEMENT STATUS.
6. BASIS OF BEARING IS GRID NORTH, MAINE STATE PLANE COORDINATE SYSTEM, WEST ZONE 1802-NAD83, ELEVATIONS DEPICTED HEREON ARE REFERENCED TO CITY OF PORTLAND DATUM, AS DERIVED FROM A CITY OF PORTLAND BENCHMARK LOCATED ON THE WESTERLY SIDE OF VERANDA STREET AT THE FIRST ANGLE NORTHERLY OF OREGON STREET, BEING A COPPER BOLT IN GRANITE 3-FOOT OFFSET MONUMENT (ELEVATION: 27.014).
7. BENCHMARK:
   BM-1 BOX CUT IN BASE OF LIGHT POLE ELEVATION: 64.20' (PORTLAND DATUM)
8. UTILITY INFORMATION DEPICTED HEREON, UNLESS OTHERWISE NOTED, IS OF QUALITY LEVEL D PER AMERICAN SOCIETY OF CIVIL ENGINEERS (ASCE) STANDARD CI/ASCE 38-02. UTILITIES DEPICTED HEREON MAY NOT NECESSARILY REPRESENT ALL EXISTING UTILITIES. CONTRACTORS AND/OR DESIGNERS NEED TO CONTACT DIG-SAFE SYSTEMS, INC. (1-888-DIG-SAFE) AND FIELD VERIFY EXISTING UTILITIES WITHIN THE PROJECT AREA PRIOR TO CONSTRUCTION AND/OR EXCAVATION.
9. PORTIONS OF THE PROPERTY AS DEPICTED HEREON FALL WITHIN ZONE VE WITH A BASE FLOOD ELEVATION OF 15 FEET (NAVD88) AS DELINEATED ON THE FLOOD INSURANCE RATE MAP FOR PORTLAND, MAINE, CUMBERLAND COUNTY, COMMUNITY-PANEL NUMBER 230051-0703F, HAVING AN EFFECTIVE DATE OF JUNE 20, 2024. LINE SHOWN IS BASED ON ELEVATIONS DERIVED FROM PUBLICLY AVAILABLE LIDAR DATA AND IS APPROXIMATE.
10. THE ELEVATION OF HIGH ASTRONOMICAL TIDE (HAT) AT THE PRESUMPSCOT RIVER BRIDGE IN PORTLAND IS PUBLISHED AS 6.7 NAVD88 (OR 7.4 NGVD29 VDATUM/NOAA) ACCORDING TO REPORT FROM MAINE DEP (2018). THE NATIONAL OCEANOGRAPHIC AND ATMOSPHERIC ADMINISTRATION (NOAA) OFFICE FOR COASTAL MANAGEMENT GEOGRAPHIC INFORMATION SYSTEM (GIS) 2020 USGS LIDAR DATASET PUBLISHED THE HAT LINE AT 6.7 NAVD88. LINE SHOWN IS BASED ON ELEVATIONS DERIVED FROM PUBLICLY AVAILABLE LIDAR DATA AND IS APPROXIMATE.
11. SOME FEATURES WERE NOT SURVEYED AND ARE DEPICTED BASED ON PUBLICLY AVAILABLE ORTHO-IMAGERY AND ARE APPROXIMATE (AS NOTED, MAINE GEOLIBRARY2020).
12. EASEMENTS (NOTE 5)
   - A. SUBJECT TO RIGHTS AND RESTRICTIONS RESERVED BY THE UNITED STATES OF AMERICA RECORDED IN BOOK 4898, PAGE 199 (PARCEL I) AND BOOK 3892, PAGE 334 (PARCELS II, III, AND IV).
   - B. SUBJECT TO UTILITY EASEMENTS GRANTED TO CENTRAL MAINE POWER COMPANY RECORDED IN BOOK 4385, PAGE 64 AND BOOK 4568, PAGE 90 (PARCEL IV).
   - C. SUBJECT TO A PUBLIC WALKWAY EASEMENT RECORDED IN BOOK 11581, PAGE 344.
   - D. SUBJECT TO RIGHTS OF PUBLIC ACCESS, UTILITY ACCESS, AND MAINTENANCE AGREEMENT RESERVED BY THE CITY OF PORTLAND AS RECORDED IN BOOK 11581, PAGE 337 (PARCEL II, PLAN REFERENCE C), AND MODIFIED IN BOOK 28114, PAGE 142 (PARCELS II AND IV, PLAN REFERENCE D).
   - E. AN EASEMENT WAS GRANTED TO THE PORTLAND WATER DISTRICT RECORDED IN BOOK 2254, PAGE 97 (PARCELS I, II, AND III) AND RELEASED BY THE CITY OF PORTLAND IN BOOK 24070, PAGE 323.
   - F. SUBJECT TO SIGNAL EASEMENT GRANTED TO THE STATE OF MAINE RECORDED IN BOOK 28274, PAGE 60 (PARCEL I).
   - G. SUBJECT TO UTILITY EASEMENTS GRANTED TO CENTRAL MAINE POWER COMPANY AND NEW ENGLAND TELEPHONE OPERATIONS, LLC RECORDED IN BOOK 27325, PAGES 99 (CMP 37 TO 37.1, 37.2 AND 37.3) AND 100 (CMP 34 TO 34.1).
   - H. SUBJECT TO UTILITY EASEMENTS GRANTED TO CENTRAL MAINE POWER COMPANY AND VERIZON NEW ENGLAND, INC RECORDED IN BOOK 24747, PAGE 153 (CMP 42 TO 42.1).
   - I. SUBJECT TO UTILITY EASEMENT GRANTED TO CENTRAL MAINE POWER COMPANY AD NEW ENGLAND TELEPHONE AND TELEGRAPH COMPANY RECORDED IN BOOK 9520, PAGE 192 (CMP 37.1 TO 37.1-1/2).
   - J. SUBJECT TO UTILITY EASEMENT GRANTED TO CENTRAL MAINE POWER COMPANY RECORDED IN BOOK 8353, PAGE 34 (CMP 37.3 TO 37.4).
   - K. A 40-FOOT WIDE ACCESS EASEMENT AND 30-FOOT WIDE SEWER EASEMENT WAS GRANTED TO THE CITY OF PORTLAND IN BOOK 4015, PAGE 160 AND RELEASED BY THE CITY OF PORTLAND IN BOOK 24070, PAGE 323.
   - L. PROPERTY MAY BE SUBJECT TO RIGHTS AND RESTRICTIONS RESERVED BY THE CITY OF PORTLAND RECORDED IN BOOK 7138, PAGE 247 (PARCELS III AND IV).

REV.	BY	DATE:	STATUS
4	JMS	1/6/2025	DMH 8421 INVERTS (SH. 1), 25' SHORE SETBACK FOR B-5 ZONE (NOTE 2)
3	JMS	9/10/2024	REVISED TO REFLECT NEW FEMA DESIGNATIONS, EDITED NOTES 9 AND 10
2	JMS	4/10/2024	REVISED NOTE 10
1	JMS	3/13/2024	ADDITIONAL BOUNDARY INFORMATION AND SHEET 2

THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM SEBAGO TECHNICS, INC. ANY ALTERATIONS, AUTHORIZED OR OTHERWISE, SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO SEBAGO TECHNICS, INC.

SEBAGO TECHNICS
WWW.SEBAGOTECHNICS.COM
75 John Roberts Rd.
Suite 4A
South Portland, ME 04106
Tel: 207-200-2100

EXISTING CONDITIONS PLAN

OF:

MARTIN'S POINT - PORTLAND CAMPUS

331 VERANDA STREET
PORTLAND, ME
FOR RECORD OWNER:
MARTIN'S POINT HEALTHCARE, INC.
10700 PRAIRIE LAKES DRIVE
EDEN PRAIRIE, MN 55344

DESIGNED	-
DRAWN	CNG
CHECKED	JMS
DATE	12/06/2023
SCALE	1" = 30'
PROJECT	211026

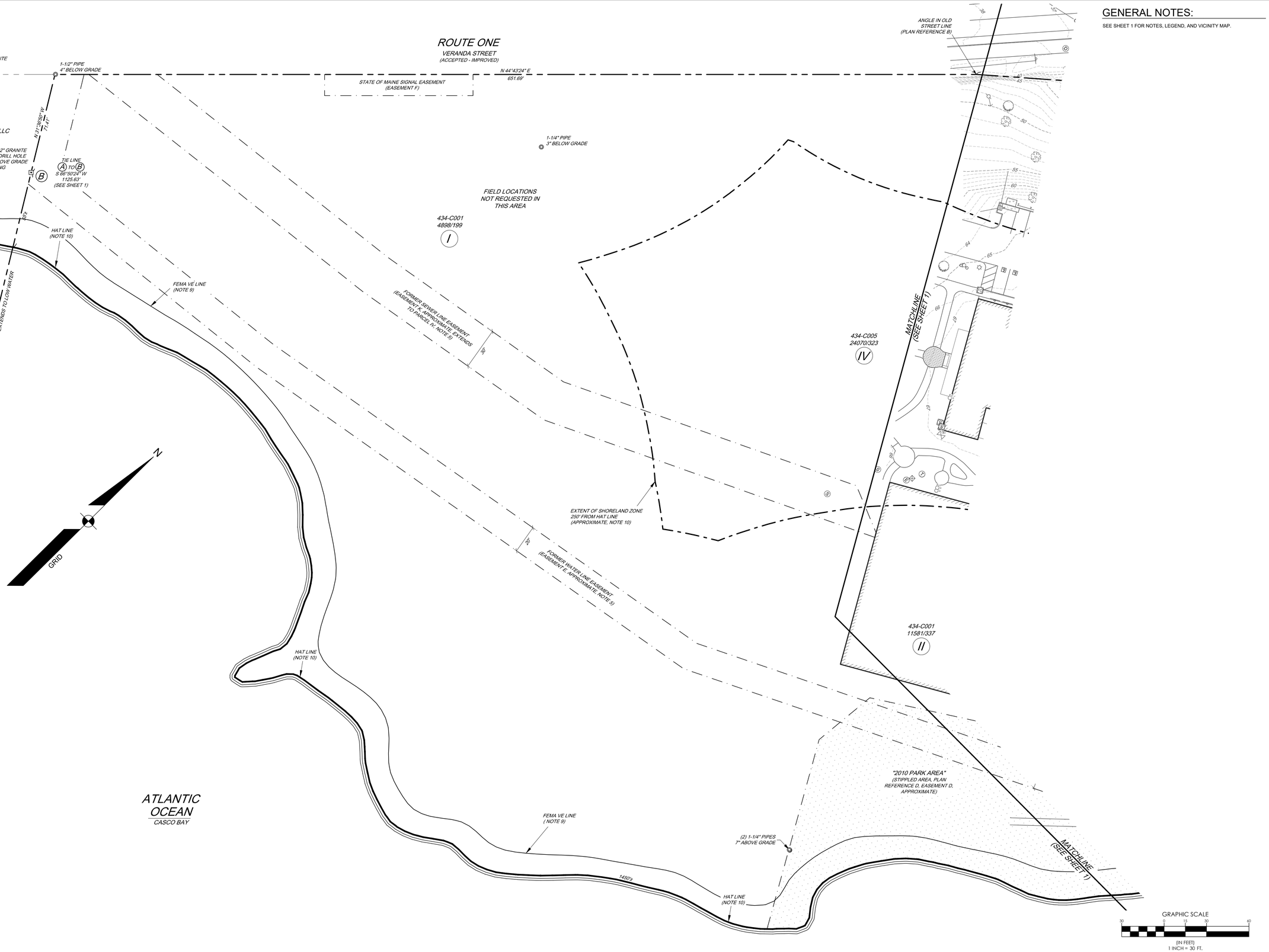
GRAPHIC SCALE
30 0 15 30 60
(IN FEET)
1 INCH = 30 FT.

SHEET 1 OF 2

211026EC-Master.dwg, TAB EC SH-1

GENERAL NOTES:

SEE SHEET 1 FOR NOTES, LEGEND, AND VICINITY MAP.



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JEDIAH M. SCOTT, PLS 2660

STATE OF MAINE
JEDIAH M. SCOTT
#2660
PROFESSIONAL LAND SURVEYOR

REV/	BY:	DATE:	STATUS
4	JMS	1/6/2025	DMH 8421 INVERTS (SH. 1), 25' SHORE SETBACK FOR B-5 ZONE (NOTE 2)
3	JMS	9/10/2024	REVISED TO REFLECT NEW FEMA DESIGNATIONS, EDITED NOTES 9 AND 10
2	JMS	4/10/2024	REVISED NOTE 10
1	JMS	3/13/2024	ADDITIONAL BOUNDARY INFORMATION AND SHEET 2

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AUTOSAVED: 2024-10-02 10:40:00

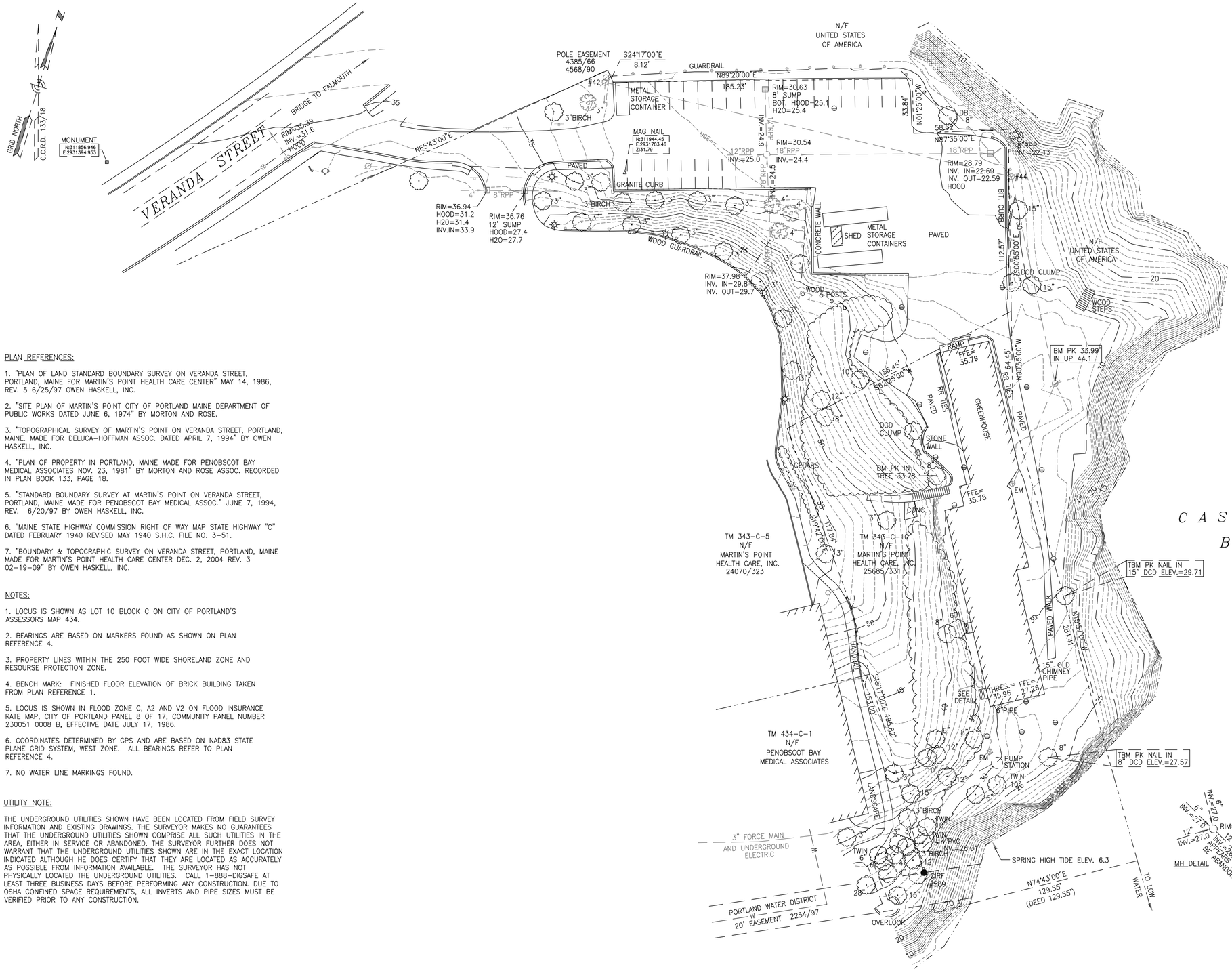
SEBAGO TECHNICS
WWW.SEBAGOTECHNICS.COM
75 John Roberts Rd.
Suite 4A
South Portland, ME 04106
Tel. 207-200-2100

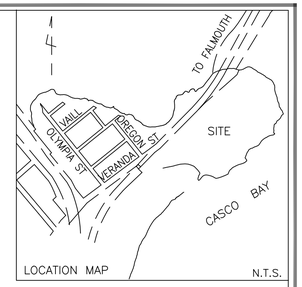
EXISTING CONDITIONS PLAN
OF:
MARTIN'S POINT - PORTLAND CAMPUS
331 VERANDA STREET
PORTLAND, ME
FOR RECORD OWNER:
MARTIN'S POINT HEALTHCARE, INC.
10700 PRAIRIE LAKES DRIVE
EDEN PRAIRIE, MN 55344

DESIGNED	-
DRAWN	CNG
CHECKED	JMS
DATE	12/06/2023
SCALE	1" = 30'
PROJECT	211026

SHEET 2 OF 2

211026EC-Master.dwg, TAB EC SH-2





LEGEND:

- HYDRANT
- UTILITY POLE
- MANHOLE
- CATCH BASIN
- SIGN
- BORING (PROPOSED LOCATION)
- FENCE
- GUARDRAIL
- CURB
- SANITARY SEWER
- STORM DRAIN
- UGE — UNDERGROUND ELECTRIC
- WATER LINE
- 25 — 1' CONTOUR
- DEDIUOUS TREE
- CONIFEROUS TREE

PLAN REFERENCES:

1. "PLAN OF LAND STANDARD BOUNDARY SURVEY ON VERANDA STREET, PORTLAND, MAINE FOR MARTIN'S POINT HEALTH CARE CENTER" MAY 14, 1986, REV. 5 6/25/97 OWEN HASKELL, INC.

2. "SITE PLAN OF MARTIN'S POINT CITY OF PORTLAND MAINE DEPARTMENT OF PUBLIC WORKS DATED JUNE 6, 1974" BY MORTON AND ROSE.

3. "TOPOGRAPHICAL SURVEY OF MARTIN'S POINT ON VERANDA STREET, PORTLAND, MAINE. MADE FOR DELUCA–HOFFMAN ASSOC. DATED APRIL 7, 1994" BY OWEN HASKELL, INC.

4. "PLAN OF PROPERTY IN PORTLAND, MAINE MADE FOR PENOBSCOT BAY MEDICAL ASSOCIATES NOV. 23, 1981" BY MORTON AND ROSE ASSOC. RECORDED IN PLAN BOOK 133, PAGE 18.

5. "STANDARD BOUNDARY SURVEY AT MARTIN'S POINT ON VERANDA STREET, PORTLAND, MAINE MADE FOR PENOBSCOT BAY MEDICAL ASSOC." JUNE 7, 1994, REV. 6/20/97 BY OWEN HASKELL, INC.

6. "MAINE STATE HIGHWAY COMMISSION RIGHT OF WAY MAP STATE HIGHWAY "C" DATED FEBRUARY 1940 REVISED MAY 1940 S.H.C. FILE NO. 3–51.

7. "BOUNDARY & TOPOGRAPHIC SURVEY ON VERANDA STREET, PORTLAND, MAINE MADE FOR MARTIN'S POINT HEALTH CARE CENTER DEC. 2, 2004 REV. 3 02–19–09" BY OWEN HASKELL, INC.

NOTES:

1. LOCUS IS SHOWN AS LOT 10 BLOCK C ON CITY OF PORTLAND'S ASSESSORS MAP 434.

2. BEARINGS ARE BASED ON MARKERS FOUND AS SHOWN ON PLAN REFERENCE 4.

3. PROPERTY LINES WITHIN THE 250 FOOT WIDE SHORELAND ZONE AND RESOURSE PROTECTION ZONE.

4. BENCH MARK: FINISHED FLOOR ELEVATION OF BRICK BUILDING TAKEN FROM PLAN REFERENCE 1.

5. LOCUS IS SHOWN IN FLOOD ZONE C, A2 AND V2 ON FLOOD INSURANCE RATE MAP, CITY OF PORTLAND PANEL 8 OF 17, COMMUNITY PANEL NUMBER 230051 0008 B, EFFECTIVE DATE JULY 17, 1986.

6. COORDINATES DETERMINED BY GPS AND ARE BASED ON NAD83 STATE PLANE GRID SYSTEM, WEST ZONE. ALL BEARINGS REFER TO PLAN REFERENCE 4.

7. NO WATER LINE MARKINGS FOUND.

UTILITY NOTE:

THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING DRAWINGS. THE SURVEYOR MAKES NO GUARANTEES THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH HE DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES. CALL 1–888–DIGSAFE AT LEAST THREE BUSINESS DAYS BEFORE PERFORMING ANY CONSTRUCTION. DUE TO OSHA CONFINED SPACE REQUIREMENTS, ALL INVERTS AND PIPE SIZES MUST BE VERIFIED PRIOR TO ANY CONSTRUCTION.

GRAPHIC SCALE

0 15' 30' 60' 120'

STATE OF MAINE
RANDY R. LOUBIER
2407
PROFESSIONAL LAND SURVEYOR

REV.	1	7-3-12	ADD BENCHMARKS

EXISTING CONDITIONS SURVEY

ON

VERANDA STREET, PORTLAND, MAINE

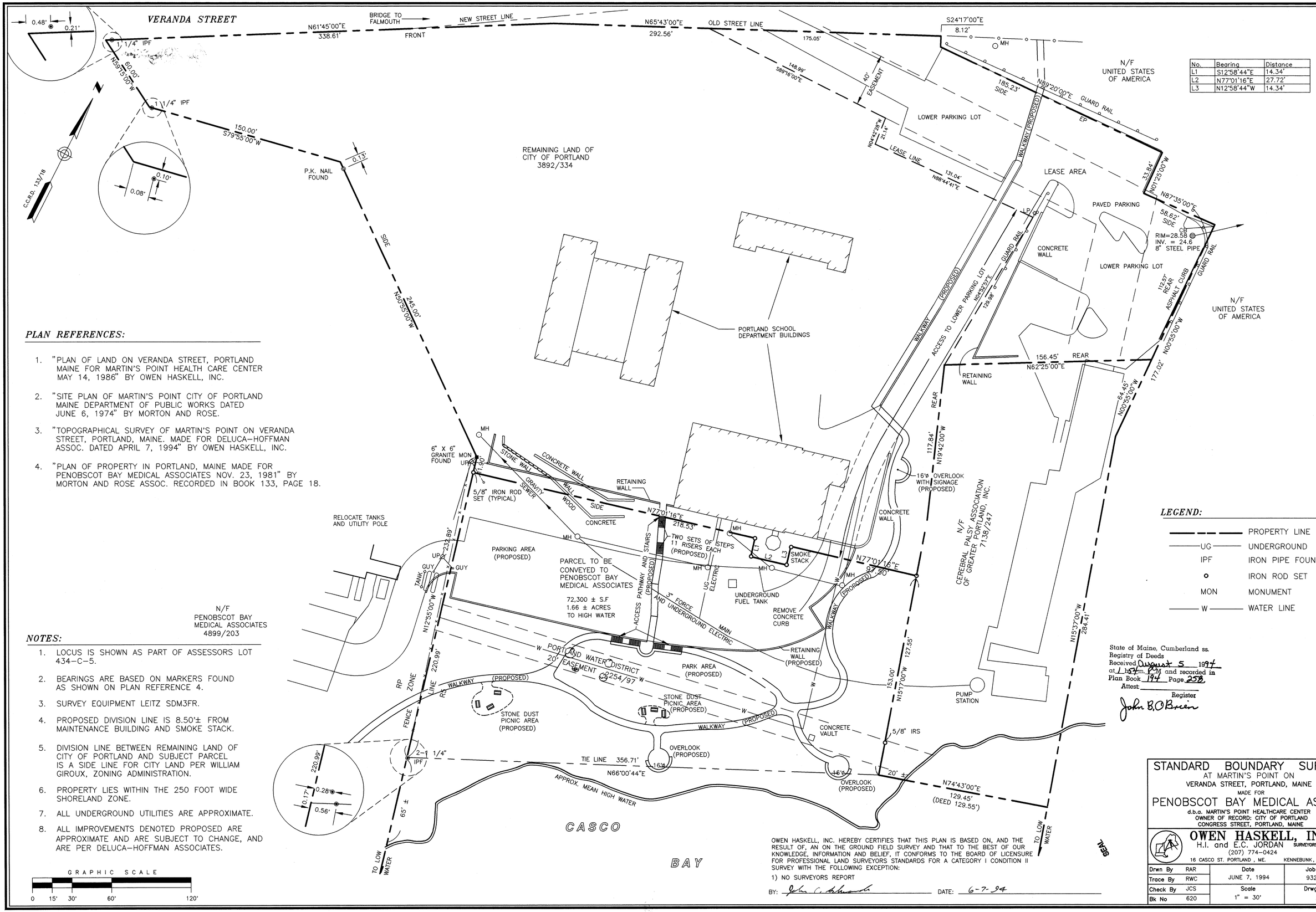
MADE FOR

MARTIN'S POINT HEALTH CARE CENTER

331 VERANDA STREET, PORTLAND, MAINE

OWEN HASKELL, INC.
390 U.S. ROUTE ONE, FALMOUTH, ME 04105 (207)774-0424
PROFESSIONAL LAND SURVEYORS

Drwn By	RS	Date	Job No.
Trace By	JLW	FEB. 22, 2012	86044P
Check By	JWS	Scale	Drwg. No.
Book No.	FILE	1" = 30'	1EC



No.	Bearing	Distance
L1	S12°58'44"E	14.34'
L2	N77°01'16"E	27.72'
L3	N12°58'44"W	14.34'

PLAN REFERENCES:

1. "PLAN OF LAND ON VERANDA STREET, PORTLAND MAINE FOR MARTIN'S POINT HEALTH CARE CENTER MAY 14, 1986" BY OWEN HASKELL, INC.
2. "SITE PLAN OF MARTIN'S POINT CITY OF PORTLAND MAINE DEPARTMENT OF PUBLIC WORKS DATED JUNE 6, 1974" BY MORTON AND ROSE.
3. "TOPOGRAPHICAL SURVEY OF MARTIN'S POINT ON VERANDA STREET, PORTLAND, MAINE. MADE FOR DELUCA–HOFFMAN ASSOC. DATED APRIL 7, 1994" BY OWEN HASKELL, INC.
4. "PLAN OF PROPERTY IN PORTLAND, MAINE MADE FOR PENOBSCOT BAY MEDICAL ASSOCIATES NOV. 23, 1981" BY MORTON AND ROSE ASSOC. RECORDED IN BOOK 133, PAGE 18.

NOTES:

1. LOCUS IS SHOWN AS PART OF ASSESSORS LOT 434–C–5.
2. BEARINGS ARE BASED ON MARKERS FOUND AS SHOWN ON PLAN REFERENCE 4.
3. SURVEY EQUIPMENT LEITZ SDM3FR.
4. PROPOSED DIVISION LINE IS 8.50'± FROM MAINTENANCE BUILDING AND SMOKE STACK.
5. DIVISION LINE BETWEEN REMAINING LAND OF CITY OF PORTLAND AND SUBJECT PARCEL IS A SIDE LINE FOR CITY LAND PER WILLIAM GIROUX, ZONING ADMINISTRATION.
6. PROPERTY LIES WITHIN THE 250 FOOT WIDE SHORELAND ZONE.
7. ALL UNDERGROUND UTILITIES ARE APPROXIMATE.
8. ALL IMPROVEMENTS DENOTED PROPOSED ARE APPROXIMATE AND ARE SUBJECT TO CHANGE, AND ARE PER DELUCA–HOFFMAN ASSOCIATES.

GRAPHIC SCALE
0 15' 30' 60' 120'

LEGEND:

- PROPERTY LINE
- UG — UNDERGROUND
- IPF — IRON PIPE FOUND
- IRON ROD SET
- MON — MONUMENT
- W — WATER LINE

State of Maine, Cumberland ss.
Registry of Deeds
Received August 5 1994
at 1 h 57 m. P.M. and recorded in
Plan Book 194 Page 252
Attest: _____ Register
John B. O'Brien

OWEN HASKELL, INC. HEREBY CERTIFIES THAT THIS PLAN IS BASED ON, AND THE RESULT OF, AN ON THE GROUND FIELD SURVEY AND THAT TO THE BEST OF OUR KNOWLEDGE, INFORMATION AND BELIEF, IT CONFORMS TO THE BOARD OF LICENSURE FOR PROFESSIONAL LAND SURVEYORS STANDARDS FOR A CATEGORY I CONDITION II SURVEY WITH THE FOLLOWING EXCEPTION:

1) NO SURVEYORS REPORT

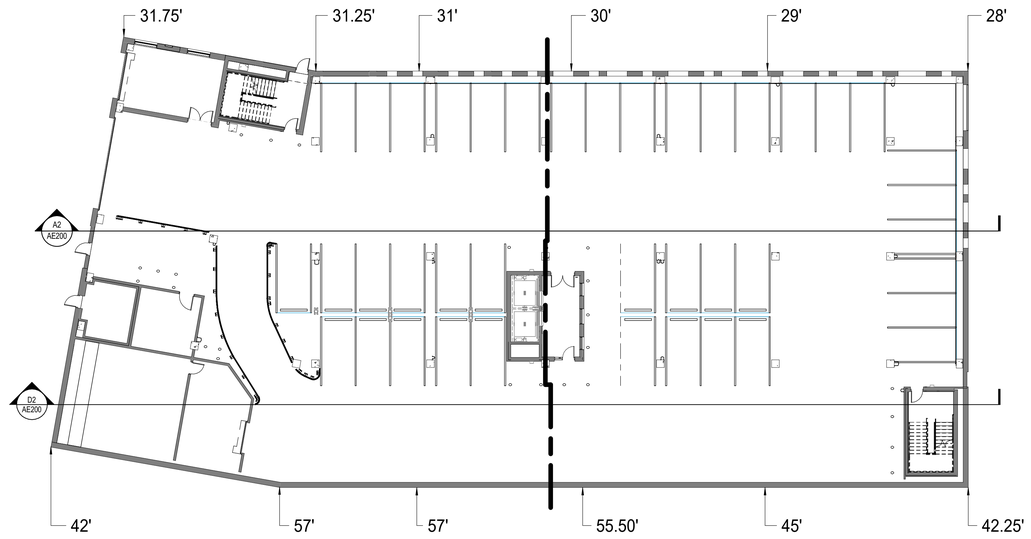
BY: John C. Edwards DATE: 6-7-94

STANDARD BOUNDARY SURVEY

AT MARTIN'S POINT ON
VERANDA STREET, PORTLAND, MAINE
MADE FOR
PENOBSCOT BAY MEDICAL ASSOC.
d.b.a. MARTIN'S POINT HEALTHCARE CENTER
OWNER OF RECORD: CITY OF PORTLAND
CONGRESS STREET, PORTLAND, MAINE

OWEN HASKELL, INC.
H.I. and E.C. JORDAN SURVEYORS
(207) 774–0424
16 CASCO ST. PORTLAND , ME. KENNEBUNK, ME.

Drwn By	RAR	Date	Job No.
Trace By	RWC	JUNE 7, 1994	93252P
Check By	JCS	Scale	Drwg. No.
Bk No	620	1" = 30'	2



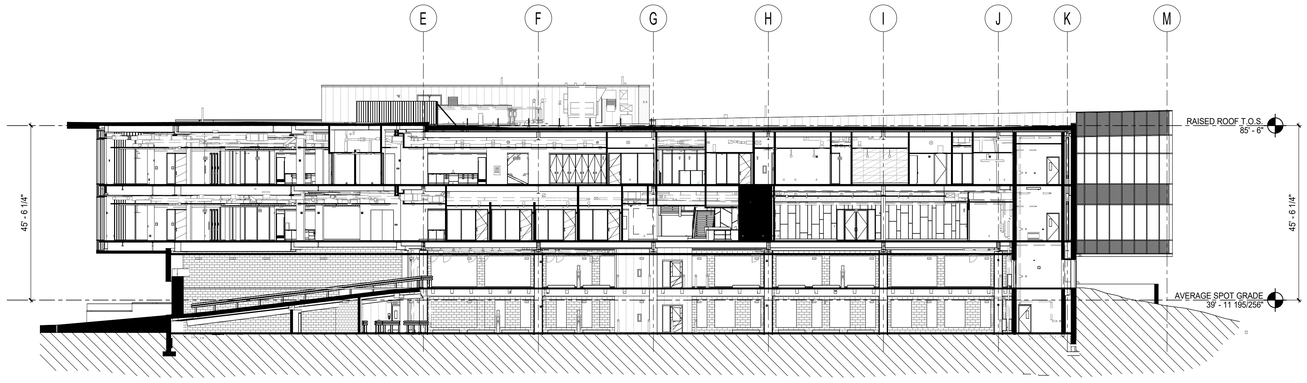
SPOT GRADES: 31.75'
31.25'
31.00'
30.00'
29.00'
28.00'
42.25'
45.00'
55.50'
57.00'
57.00'
+ 42.00'

SUM: 479.75'
/ 12.00

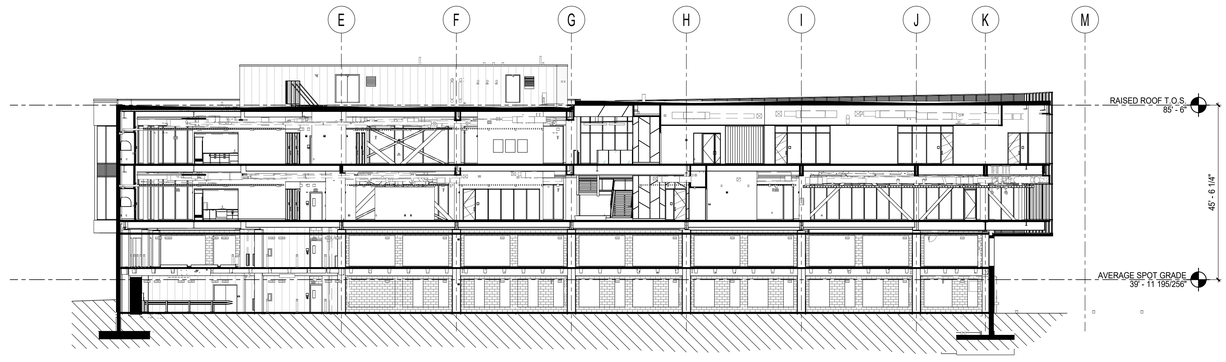
AVERAGE SPOT GRADE: 39.98'

NOTE: SEE THE SITE/CIVIAL OVERALL GRADING PLAN FOR SPOT POINT REFERENCE.

BUILDING PLAN H2
1/16" = 1'-0"



BUILDING SECTION D2
1/16" = 1'-0"



BUILDING SECTION A2
1/16" = 1'-0"

REV	DESCRIPTION	DATE

ISSUE FOR CONSTRUCTION
10-10-2024
CURRENT ISSUE STATUS:

LICENSED ARCHITECT
MATTHEW D. RANGER
ARC4030
10-10-24
STATE OF MAINE

SMRT
Architecture • Engineering • Planning
SMRT Architects and Engineers
75 Washington Ave., Suite 3A
Portland, Maine 04101
1.877.700.7678
www.smrtinc.com

Martin's Point Health Care
Building 7 - OFFICE BUILDING

BUILDING HEIGHT ANALYSIS

SHEET TITLE:

SCALE: AS NOTED

PROJECT MANAGER:	MDR	PROJECT NO:	23033
A/E OF RECORD:	MDR		
JOB CAPTAIN:	RLS		
DRAWN BY:	RLS		
SMRT FILE:	AE200-23033	SHEET No.	AE200

©COPYRIGHT 2023 SMRT INC

NOT FOR CONSTRUCTION

ROUTE ONE (VERANDA STREET)

ENSURE SMOOTH TRANSITION TO EXISTING NATURAL GRADE

CB-18 RIM: 31.65
CB-19 RIM: 29.75
DMH-3 RIM: 32.10
CB-23 RIM: 30.15
JELLYFISH FILTER RIM: 29.70
CASCADE SEPERATOR RIM: 29.50
DMH-5 RIM: 29.95
FEMA VE LINE
CB-16 RIM: 37.50
CB-15 RIM: 37.50
DMH-2 RIM: 40.50
CB-17 RIM: 32.15
CB-22 RIM: 30.30
CB-13 RIM: 52.50
CB-14 RIM: 52.50
DMH-4 RIM: 30.82
CB-21 RIM: 32.65
CB-20 RIM: 30.40
CB-12 RIM: 61.65
CB-11
CB-4 RIM: 62.90
CB-3 RIM: 65.34
CB-2 RIM: 62.90
CB-10 RIM: 58.75
CB-9
CB-1 RIM: 65.65
DMH-1 RIM: 57.00
CB-8 RIM: 53.90
CB-6 RIM: 54.90
CB-7 RIM: 54.90
CB-5 RIM: 55.30
TRENCH DRAIN 2 RIM: 66.90
DMH 8421 RIM=66.23 *
EXISTING BUILDING 5
EXISTING DMH TO REMAIN, RIM=66.70
EXISTING CB TO REMAIN, RIM=66.28
EXTENT OF SHORELAND ZONE (250' FROM HIGHEST ASTRONOMICAL TIDE LINE)
EXISTING BUILDING 6 FFE:67.17
PROPOSED BUILDING 7
25,000 SQ FT
4 STORIES
OFFICE LEVEL 2 = 70.17'
OFFICE LEVEL 1 = 55.50'
PARKING LEVEL 2 = 43.17'
PARKING LEVEL 1 = 31.50'
INSTALL EROSION CONTROL BLANKET, TYP.
HIGHEST ASTRONOMICAL TIDE LINE
FEMA VE LINE

42 ft
31.75 ft
57 ft
31.25 ft
31 ft
57 ft
30 ft
55.50 ft
29 ft
45 ft
28 ft
42.25 ft

GRAPHIC SCALE
0 10 20 40
(IN FEET)
1 INCH = 20 FT.

TAX PARCELS: 434-C-1,434-C-5 & 434-C-10

REV:	BY:	DATE:	STATUS:
D	KSM	11/14/2024	RESPONSE TO CITY REVIEW COMMENTS
C	KSM	04/26/2024	RESPONSE TO CITY REVIEW COMMENTS
B	KSM	03/14/2024	RESPONSE TO CITY REVIEW COMMENTS
A	KSM	12/20/2023	ISSUED TO CITY OF PORTLAND FOR SITE PLAN REVIEW

THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM SEBAGO TECHNICS, INC. ANY ALTERATIONS, APPROVED OR OTHERWISE, SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO SEBAGO TECHNICS, INC.

KYLIE S. MASON, RLA 3335
PAUL D. OSTROWSKI, PE 11175

SEBAGO TECHNICS
WWW.SEBAGOTECHNICS.COM
75 John Roberts Rd.
Suite E
South Portland, ME 04106
Tel: 207-200-2100

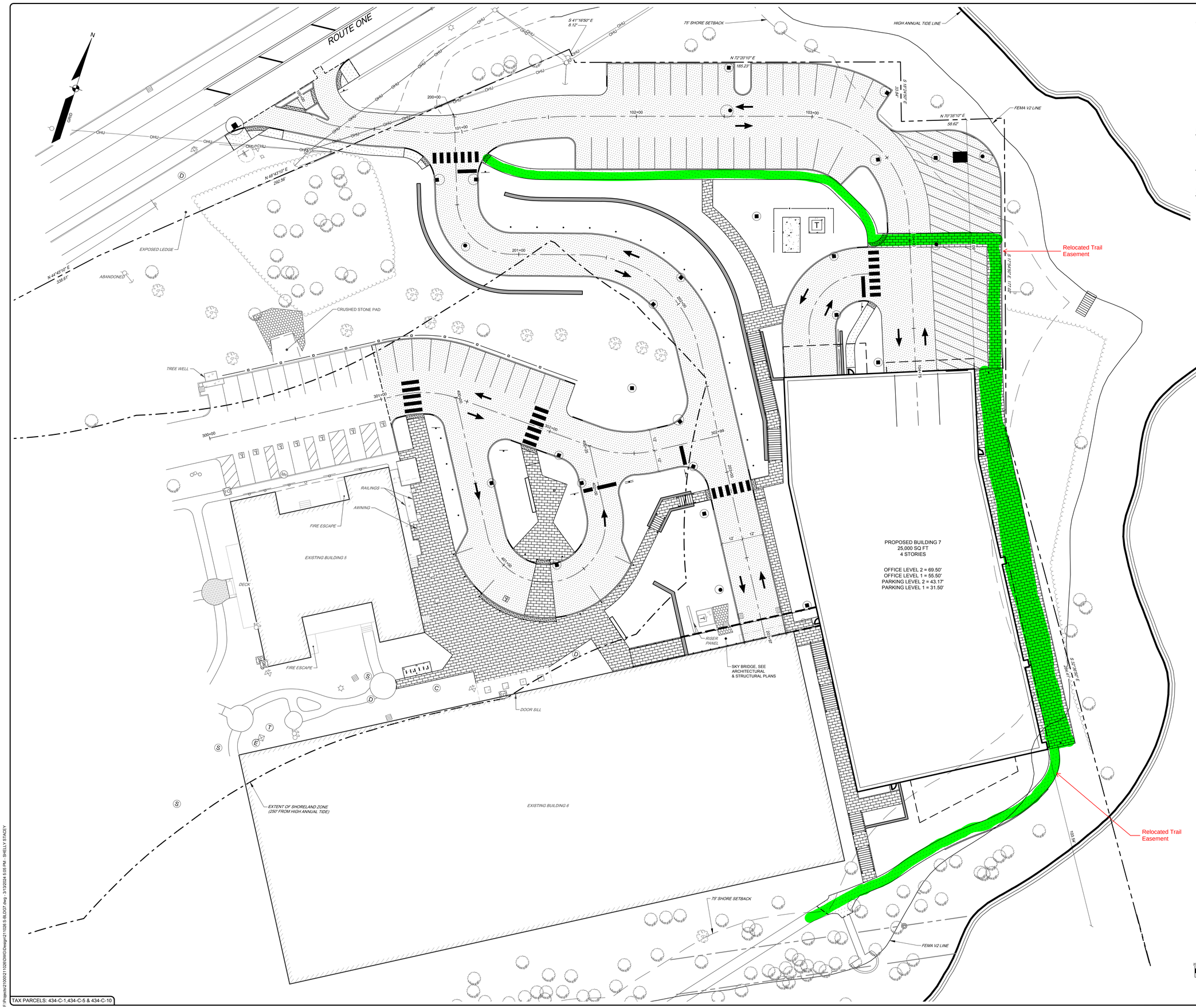
OVERALL GRADING PLAN
MARTIN'S POINT HEALTH CARE VERANDA CAMPUS
331 VERANDA STREET
PORTLAND, ME 04103
MARTIN'S POINT HEALTH CARE, INC.
PO BOX 9746
PORTLAND, ME 04103

DESIGNED	BAM/PDO
DRAWN	CJC
CHECKED	PDO
DATE	04/10/2023
SCALE	1" = 20'
PROJECT	211026

SHEET 11 OF 37

F:\Projects\211000\211026\DWG\Design\211026-G-BLDG7.dwg - 11/13/2024 9:29 AM - PAUL OSTROWSKI

211026-G-BLDG7.dwg, TAB:OVERALL GRADING PLAN



TAX PARCELS: 434-C-1,434-C-5 & 434-C-10

SITE SURFACE LEGEND

- VEHICULAR PAVEMENT
- PEDESTRIAN PAVEMENT
- CONCRETE PAD
- UNIT PAVERS - A & B

CURB ABBREVIATIONS

VGC	-	VERTICAL GRANITE CURB [SALVAGED]
SGC	-	SLOPED GRANITE CURB
FGC	-	FLUSH GRANITE CURB [SALVAGED]
GTC	-	GRANITE TRANSITION CURB

TIPDOWN ABBREVIATIONS

TD1	-	VERTICAL GRANITE TIPDOWN
TD2	-	SLOPED GRANITE TIPDOWN

SIGN SCHEDULE

S-1	-	STOP SIGN
S-2	-	DO NOT ENTER SIGN
S-3	-	ACCESSIBLE SIGN [MOUNTED ON BOLLARD]
S-4	-	DROP OFF ONLY SIGN [MOUNTED ON BOLLARD]
S-5	-	R3-2 SIGN [NO LEFT TURN]

PAUL D. OSTROWSKI, PE 11175

STATE OF MAINE
PAUL D. OSTROWSKI
No. 11175
LICENSED
PROFESSIONAL ENGINEER
03/14/2024

KYLIE S. MASON, RLA 3335

REGISTERED LANDSCAPE ARCHITECT
KYLIE S. MASON
No. 3335
STATE OF MAINE

REV:	BY:	DATE:	STATUS:
B	KSM	03/14/2024	RESPONSE TO CITY REVIEW COMMENTS
A	KSM	12/20/2023	ISSUED TO CITY OF PORTLAND FOR SITE PLAN REVIEW

THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM SEBAGO TECHNICS, INC. ANY ALTERATIONS, AUTHORIZED OR OTHERWISE, SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO SEBAGO TECHNICS, INC.

SEBAGO TECHNICS
WWW.SEBAGOTECHNICS.COM
75 John Roberts Rd.
Suite 4A
South Portland, ME 04106
Tel. 207-200-2100

OVERALL SITE PLAN

MARTIN'S POINT HEALTHCARE VERANDA CAMPUS
331 VERANDA STREET
PORTLAND, ME 04103

MARTIN'S POINT HEALTH CARE, INC.
PO BOX 9746
PORTLAND, ME 04103

DESIGNED	BAM/KGK
DRAWN	CJC
CHECKED	PDO
DATE	04/10/2023
SCALE	1" = 20'
PROJECT	211026

211026 S-BLDG7.dwg, TAB:SITE PLAN

SHEET 5 OF 37

F:\Projects\21000\211026\DWG\Design\211026 S-BLDG7.dwg - 3/13/2024 5:05 PM - SHELLY STACEY

197 Oxford Street
Major Site Plan Application
PL-002885-2024
Avesta Housing & Reveler Development, Applicant

Submitted to:	Portland Planning Board	**Prepared By:**	Eric Freeman
Public Hearing Date:	January 14, 2024	**Date:**	January 8, 2024

I. INTRODUCTION

Reveler Development and Avesta Housing have submitted a joint phased Major Site Plan application. This application proposes the redevelopment of several parcels located entirely within the R-6 zone, in the Bayside neighborhood, into 96 total residential units. The first phase will consist of 48 units, to be developed by Avesta Housing, and will include 28 "Housing First" units as well as 20 workforce units at 197 Oxford Street. The second and third phases will consist of 48 market-rate rental units; with 24 units being located in Phase II at 50 Cedar Street, and an additional 24 units being located in Phase III at 158 Lancaster Street.

This application is being referred to the Planning Board for compliance with the City of Portland's Land Use Code Site Plan Standards, Section 14.6 and is considered a phased site plan as defined in Article 14.9.1 of the City of Portland's Land Use Code. Additionally, this application is required to meet the City of Portland's inclusionary zoning requirements outlined in Section 18.2 of the City's Land Use Code.

The Planning and Urban Development Department mailed 176 notices advertising this meeting to property owners within 500 feet of the site. A legal advertisement ran in the January 2 and January 3, 2025 edition of the Portland Press Herald.

II. PENDING PROCEEDING STATUS

This application holds pending proceeding status under the previous version of the City's Land Use Code (Attachment S5), as it was initially submitted on April 10, 2024. The Planning Board held two workshops on the application, on June 25, 2024, and November 11, 2024, both of which occurred prior to the adoption of ReCode Phase II, effective December 5, 2024. Applications with pending proceeding status are governed by the ordinances and regulations in effect when such status is conferred. For a major site plan, this occurs at the first Planning Board meeting, which took place on June 25, 2024. Staff have provided the applicable land use code (Attachment S5). and technical regulations (Attachment S6) from that time for reference by the Board and the public.

Applicant: Reveler Development, Avesta Housing
Applicant Representatives: Acorn Engineering, Ryan Senatore Architecture, CWS Architecture.



Figure 1: Overall Site Plan

III. PLANNING BOARD WORKSHOPS

A. June 25, 2024 Workshop

The Planning Board held a workshop for this application on June 25, 2024, where the Board focused primarily on:

1. Continuity of phasing and cohesiveness of site.

Board members asked the applicant to consider additional improvements to connect the three phases of the application in order to create a more cohesive development that better met the intent of the City's phased site plan provisions.

In response to this feedback from the Board, the applicant has committed to fully reconstructing sidewalks along Cedar Street in order to better connect all three phases. The applicant also considered and explored improvements to Hall Court, a private way that bisects phases one and three of the development, however upon completing title research, the applicant was unable to confirm that Reveler Development held fee title to the property, and is no longer pursuing or considering such improvements.

2. Usage of density bonus

The Board questioned the applicants use of two separate density bonus calculations for the first phase and

later two phases. The Board was not supportive of the applicant's use of 1.4x base density for the second and third phases, as they contained no affordable units.

The applicant has since reduced the scale of the third phase from 51 to 24 units and is no longer seeking to utilize a 1.4x base density for the second or third phase of the development.

B. November 12, 2024 Workshop

The Planning Board held a second workshop for this application on November 12, 2024, where the Board discussion focused primarily on:

1. Public Safety and Housing First Operations

Board members asked the applicant to further detail public safety measures for the housing first units.

The applicant has provided a lighting and security plan detailing how the common areas of the housing first units will be monitored and maintained. This plan also details the location of exterior lighting and security cameras.

2. Parking

The Board questioned whether there was adequate capacity in the Cumberland Avenue Garage to meet the expected parking demand of this application.

The applicant stated that there is adequate space within the Cumberland Avenue Garage to meet anticipated needs and that parking would be separated from rents for all market-rate units.

- Design and Landscaping

The Board encouraged the applicant to explore additional opportunities for landscaping and open space.

The applicant has revised the design of the Phase I building to respond to design comments from the Board and staff. The applicant has also provided additional planting and landscaping in phases II and III.

IV. PROJECT DATA

Review	*Applicable Standards*
Site Plan	Section 14.6
Inclusionary Zoning	Section 18.2
R-6 Design Review Standards	City of Portland Design Manual (k)

Project Data	
Existing Zoning	R-6

Property Size	15,224 SF (Phase I) 23,250 SF (Phase II) 17,748 SF (Phase III)
Existing Use	Vacant Oxford Street shelter buildings (Phase I) Surface parking (Phases 2 & 3)
Proposed Development Program	Three-phase Site Plan with 48 affordable housing units and 48 market-rate units.

Waver Requests	Applicable Standards
1. Preservation of Natural Features	**Land Use Code Article 14.6.2** *All development subject to zoning setbacks shall preserve a minimum of 30% of existing trees 10 inches DBH or greater within the required setback area unless trees are non-native invasive species, as identified in the landscaping and landscape preservation standards of the Technical Manual, or are deemed unsalvageable by the Portland City Arborist or their designee.*
2. Drive Aisle Width.	**Technical Manual Section 1.10.3** *Minimum two-way drive aisle width is 24 feet for right-angle parking. The applicant is requesting a 22-foot drive aisle width.*
3. Electric Vehicle Charging	**Technical Manual Section 1.14** *New structured and surface parking lots of five or more spaces shall include energized electrical outlets or installed chargers capable of providing Level 2 EV charging or higher to 20% of parking spaces (rounded down to the nearest whole number). An additional 50% of spaces must be made EV-ready, meaning that they are served by sufficient conduit and electrical service to allow for future installation of electric vehicle supply equipment at every space.*

V. EXISTING CONDITIONS AND SURROUNDING AREA

The subject properties are located in the Bayside neighborhood, within the R-6 zone, with approximate site boundaries for each of the three phases depicted in Figure 2, below. All three phases are bordered by Oxford, Chestnut, Cedar and Lancaster streets, and are intersected by Hall Court, a private right-of-way. The surrounding neighborhood consists of a wide variety of land uses and housing types, ranging from single-family homes to larger multifamily buildings. The site is bordered by commercial uses along Lancaster Street. The Bayside Community Garden is located along Chestnut St. between phases 1 and 3 of this application.

This phased site plan application exists in close proximity to the Bayside Master Development Plan (MDP) (PL-002315-2022) which was approved by the Planning Board in 2023. The first phase of the Bayside MDP, 89 Elm Street (PL-002403-2023), directly abuts phase II of this site plan application and was approved by

the Planning Board on October 24, 2023.

The phase I site is bordered by Oxford, Chestnut and Cedar Streets. The site currently features two vacant structures, previously occupied by the Oxford Street Shelter. These buildings would be demolished as part of Phase I. There was formerly a community garden at the corner of Oxford and Chestnut Streets, which has become overgrown and disused.

The phase II site is located at the southwest corner of Cedar and Lancaster streets. The site is currently occupied by surface parking. A portion of the lot had been occupied by a single-family home until it was demolished in 2019.

The phase III property is located at the southwest corner of Chestnut and Lancaster Streets. The site is currently occupied by surface parking.

All three sites abut or are located in close proximity to Cedar Street and Hall Court. City Staff have noted the poor condition of sidewalks and road surface along Cedar Street. and have identified that the applicant will be responsible for improvements along the entirety of Cedar Street as part of the holistic redevelopment proposed for abutting blocks.



Figure 2: The existing site

VI. PROPOSED DEVELOPMENT

The proposed phased site plan development consists of three distinct parcels located at 197 Oxford Street (Phase I) 50 Cedar Street (Phase II) and 158 Lancaster Street (Phase III), which are either connected by public rights-of-way or by land owned by the applicant.

PHASE I – 197 Oxford Street

Phase I involves the demolition of two existing vacant buildings formerly occupied by the Oxford Street Shelter and the construction of a five-story, 48-unit affordable housing building. The proposed building would be developed by Avesta Housing and would contain 20 traditional workforce housing units and 28 "Housing First" units, with associated on-site services and staff. The building would be divided internally between traditional workforce housing units and "Housing First" units, and would function as two separate buildings, with the traditional workforce housing units located on the eastern side of the building, and "Housing First" units on the western side. Each portion of the building would have its own independent stairwells and elevators.

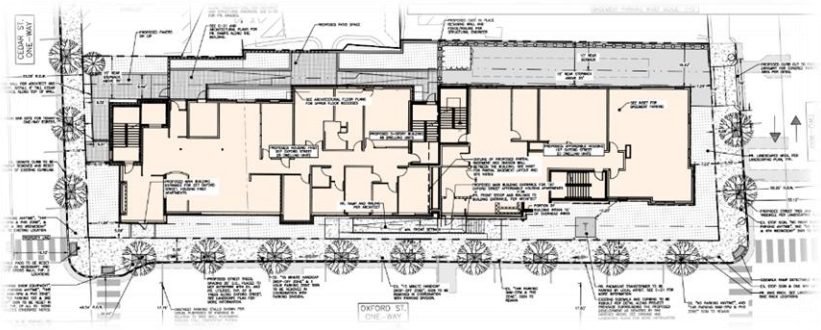


Figure 3: Phase I Site Plan

Within the Housing First portion of the building, all staff offices and supportive services for the residents would be located on the ground floor. The ground floor would also feature a community kitchen, open seating areas, a shared laundry room and staff conference space. The upper floors would include 28 Housing First units, with each unit being a studio apartment.



Figure 4: Phase I Rendering as seen from the corner of Chestnut and Oxford Street

The workforce housing portion of the building would feature a mixture of 20 studio and 1-bedroom units, with shared laundry and amenity space, along with a community kitchen located on the ground floor.

Phase I would include five parking stalls located at the basement level, which would be accessed from a new curb cut on Chestnut Street. These parking spaces would be used by on-site staff and service providers for Housing-First services. The building would have two primary entrances located along Oxford Street. The eastern portion of the building would articulate back away from Oxford Street to create a landscaped area at the corner of Oxford and Chestnut Streets.

Phase I would involve the reconstruction of approximately 220 feet of sidewalk along Oxford Street, 70 feet of sidewalk reconstruction along Chestnut Street and 160 feet of new sidewalk on Cedar Street. All sidewalks would be rebuilt with concrete pavers and granite curbing. Phase I would also involve the planting of 10 new street trees along Oxford and Chestnut Streets. The applicant has requested a waiver of Article 14.6.2 for this phase in order to remove several trees greater than 10" DBH (diameter at breast height), along the rear property line, which are in poor condition and causing damage to an existing retaining wall.

The applicant is proposing to connect the Phase I building to the existing 12-inch water main within Oxford Street using four 2-inch service lines and a single 6-inch fire service connection going to each portion of the building. This building would also connect into the existing 18-inch combined sewer on Oxford Street. Additionally, the covered parking area would include an oil-water separator.



Figure 5: Phase I Oxford Street Elevation

PHASE II – 50 Cedar Street

Phase II involves the construction of a three-story, 24-unit market-rate residential building located at 50 Cedar Street. The site is currently undeveloped and is used as surface parking with grassed open space areas. The property had been occupied by a single-family home until 2019, when that structure was demolished. The proposed building would include 18 one-bedroom units and six studio units, and would feature multiple entryways on both Cedar and Lancaster Streets. Units facing Lancaster Street would feature "Juliet balconies".



Phase II involves the reconstruction of approximately 40 feet of sidewalk along Lancaster Street using brick and granite curbing, and 300 feet of sidewalk along Cedar Street using concrete pavers. A new curb extension would be installed at the corner of Lancaster and Cedar Streets.

Phase II would include three off-street parking stalls accessed via a narrow 9-foot driveway and drive aisle connected to Cedar Street. One of these parking stalls would be ADA-accessible.

There is no enclosed bicycle parking or trash/waste room associated with phase II, with both trash storage to be located within the adjacent 89 Elm Street property.

Phase II proposes over 1,000 SF of new impervious surface. On-site stormwater would be managed using Storm-filter cartridges, that would discharge into a proposed R-Tank subsurface detention system. The outfall would tie into the previously engineered and approved 89 Elm Street drainage system, which ultimately drains to the upstream end of the MS4 extension on Lancaster Street.

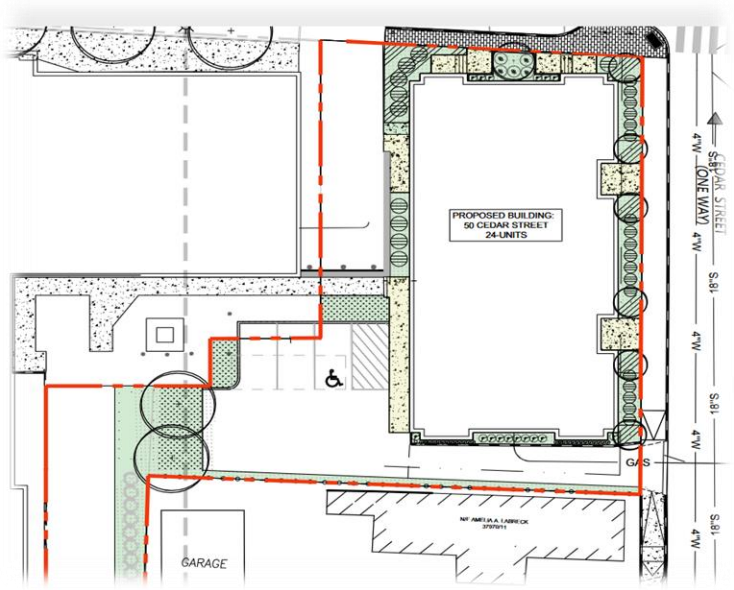


Figure 6 & 7 Phase II Site Plan and perspective

PHASE III – 158 Lancaster Street

Phase III involves the construction of a three-story, 24-unit market-rate residential building located on the corner of Chestnut and Lancaster Street. The Phase III building is proposed to be similar in scale and design to the second phase at 50 Cedar Street. The site is currently undeveloped and is used as surface parking with small amounts of landscaping. The existing surface parking lot is bordered by a retaining wall, which would remain as part of this application.

The proposed building would include 16 one-bedroom units and eight studio units. The building's primary entrance would be located on Lancaster Street. The ground floor would feature a lobby, mail room and trash room. The first floor would also include a bike storage room with space for up to 20 bicycles. Phase III would include 13 off-street angled parking spaces, accessed via a 16-foot wide driveway off of Lancaster Street. Planning Staff are not supportive of a 16-foot driveway for this location, and have added a Condition of Approval requiring the applicant to widen the Phase III driveway to 20 feet.

Phase III involves the reconstruction of approximately 220 feet of sidewalk along Lancaster St. and 115 feet along Chestnut Street between Lancaster Street and Hall Court. All sidewalk reconstruction would utilize concrete pavers and granite curbing. A total of six new street trees would be planted along Lancaster and Chestnut Streets, with two existing street trees being preserved. Three new trees would be planted along the rear of the property abutting Hall Court to help buffer the subject property from an abutting multifamily building.

There are currently eight trees 10" DBH or larger on the site. The project proposes to maintain three of those trees which meets landscape preservation standards.

Phase III would connect to the existing 18-inch sewer main on Chestnut Street. Phase III would not create more than 1,000 SF of new impervious area and therefore no treatment is proposed as part of this phase. As part of the previously approved Bayside MDP, the water main on Lancaster Street would be upgraded to a 12-inch ductile iron main. Phases 2 and 3 would connect to this new 12-inch main.



Figure 8: Perspective rendering of Phase III seen from the corner of Chestnut and Lancaster Streets

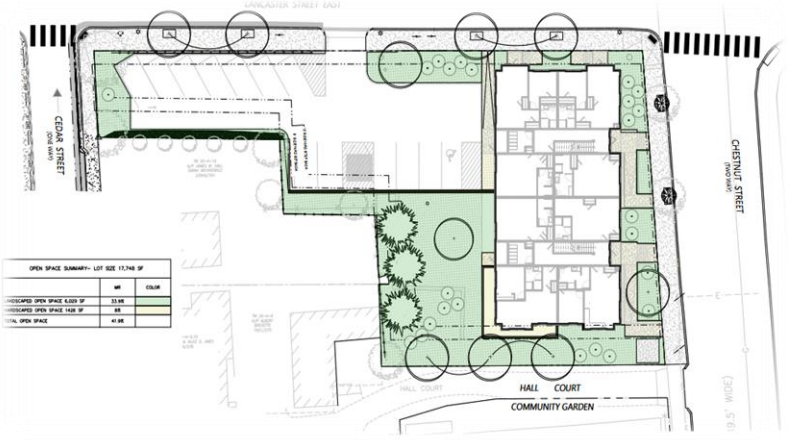


Figure 9: Phase III Site Plan

VII. RIGHT, TITLE, & INTEREST

The Co-Applicants of this phased application are Reveler Development and Avesta Housing Development Corporation d/b/a Avesta Oxford Street LP. Reveler Development manages all entities who own the parcels under this application. Avesta has an option agreement with Reveler to purchase the 197 – 203 Oxford Street lot (Phase I) The Phase I parcel will be managed and operated by Preble Street Resource Center, however Preble Street is not an applicant and will be a strictly managerial entity after 197 Oxford Street receives a Certificate of Occupancy.

Phase 1: 197 Oxford Street (39779/239), and 31 Cedar Street (39779/241) are both owned by 197 OXFORD STREET LLC.
Phase II: 50 Cedar Street (39779/246), and 89 Elm Street (39779/236) are both owned by 89 ELM STREET LLC.
Phase III: 158 Lancaster Street (39779/223), which is owned by WBP COMMERCIAL LLC

Full Right, Title and Interest documentation, including Deeds and Option Agreements for all three phases are included as attachment C.

VIII. FINANCIAL & TECHNICAL CAPACITY

The applicant intends to submit this application to MaineHousing this fall, for consideration for a 9% allocation award for Low Income Housing Tax Credits (LIHTC). The tax credits would generate equity to help fund the proposed redevelopment. The applicant has provided letters of financial capacity from Bangor Savings Bank and Bar Harbor Bank & Trust demonstrating that Avesta Housing and Reveler have the financial capacity to build and maintain the application as proposed. Full financial capacity documentation is included as attachment G

Reveler Development has completed several development projects within the City including 82 and 52 Hanover St and 132 Marginal Way – The Linden. Reveler has demonstrated experience in building and maintaining multifamily rental properties. Avesta Housing is Northern New England's largest affordable housing developer, with experience building and managing dozens of affordable housing properties across

Maine and New Hampshire.

CWS Architecture + Interior Design has extensive experience in residential development in Portland and has been the Architect of Record on many residential projects including 58 Boyd Street and Huston Commons. Acorn Engineering and Ryan Senatore Architecture have demonstrated capacity and experience working on commercial and residential projects of a similar scale throughout Maine and New England. Full technical capacity documentation is included as attachment H

IX. ZONING ANALYSIS

All three phases lie within the Residential-6 (R-6) zone. Relevant sections of the R-6 purpose statements include:

- R-6: *To set aside areas on the peninsula for housing characterized primarily by multi-family dwellings at a high density providing a wide range of housing for differing types of households;....*

PHASE I -197 Oxford St.	Required	Proposed
Lot Size	2,000 SF	15,224 SF
Area Per Dwelling Unit	290 SF / Unit with 2.5x base density bonus	317 SF / Unit
Maximum Height (ft)	55 ft.	54.9 ft.
Front Yard Minimum	5 ft	8 ft
Rear Setback	10 ft.	10.2 ft.
Side Setback	5 ft	7 ft
Stepback	15 ft.	15 ft. (rear)
Lot Coverage	60%	59.7%
Maximum Impervious area	80%	79.8%
Landscaped Open Space	20%	20.1%
Off-street parking spaces	None (with exemption applied)	5

PHASE II – 50 Cedar St.	Required	Proposed
Lot Size	2,000 SF	23,250 SF
Area Per Dwelling Unit	725 SF / Unit	1,092 / Unit
Maximum Height (ft)	55 ft.	35 ft.
Rear Setback	10 ft.	21.5 ft.
Side Setback	5 ft.	12.5 ft.
Lot Coverage	60%	21%
Landscaped Open Space	20%	20%
Off-street parking spaces	20	4 with additional off-site
Maximum Impervious Area	80%	80

PHASE III – 158 Lancaster St.	Required	Proposed
Lot Size	2,000 SF	17, 748 SF
Area Per Dwelling Unit	725 SF / Unit	740 SF / Unit
Maximum Height (ft)	55 ft.	35 ft.
Rear Setback	10 ft.	13.1 ft.
Side Setback	5 ft.	13.7 ft.
Stepback	15 ft.	15 ft. (rear)
Lot Coverage	60%	29%
Landscaped Open Space	20%	34.7%
Off-Street parking spaces	20	13 with additional off-site

Inclusionary Zoning

New residential projects totaling 10 or more residential units are subject to the City's Inclusionary Zoning (IZ) requirements, which require that 25% of new units be workforce housing units, affordable to households earning 80% of the Area Median Income (AMI). The applicant is seeking to satisfy the IZ requirements for Phases 2 and 3 by using the IZ off-site provisions as outlined in the City's *Inclusionary Zoning Implementation Guidelines for Developers of Rental Housing (*Attachment S4), with the 20 affordable units proposed at 197 Oxford Street to be considered 'workforce units' for the 48 market rate units proposed as part of phases 2 and 3. As currently proposed, Phase 1 of this application is exempt from IZ standards per Article 18.2.3.B.

The City's inclusionary zoning requirements allow the workforce units requirement to be met by providing units on-site, off-site, or through financial contributions to the City's Jill C. Duson Housing Trust Fund

As part of fulfilling their intent to use units at 197 Oxford Street to meet the workforce housing requirements, the Applicant will have to:

- Demonstrate how the units are comparable in quality and size to the market-rate units constructed in the market rate projects.

- Execute affordable housing agreements as part of the deeds for 197 Oxford Street and each of the market rate sites.

Density Bonus

The applicant intends to utilize a density bonus outlined in Table 18-C of the City of Portland's Land Use Code. As presented, the applicant intends to apply a 2.5X base density bonus to phase I of the application, which is allowable for Phase 1, as it is 100% affordable and thus eligible for a 2.5x base density.

X. SITE PLAN STANDARDS (Section 14.6)

The proposed development has been reviewed by staff for conformance with the relevant review standards of the City of Portland's Site Plan Ordinance, Section 14.6. Staff comments are below.

1. Transportation Standards (Section 14.6.1

A. Impact on surrounding street systems

This application proposes to rebuild and upgrade sidewalks along the frontages of all three phases. Additionally, the applicant intends to fully reconstruct sidewalk on both sides of Cedar Street. There are no changes proposed to traffic patterns or on-street parking as part of this Site Plan application.

As part of the approved Traffic Movement Permit (TMP) of the Bayside Master Development Plan, Reveler Development will be required to study the possibility of converting Oxford Street to two-way traffic, upon the of the completion of the abutting 89 Elm Street project. The applicant has met with City Staff to discuss how phase 1 of this application has been designed to accommodate potential future changes in traffic patterns along Oxford Street.

This application involves three significant multifamily projects which all have frontage along Cedar Street. Given the generally poor condition of sidewalks and road surface along Cedar Street, the applicant will be responsible for sidewalk and other improvements within the right-of-way.

B. Access and circulation

The applicant proposes to reconstruct sidewalks along the frontages of all three phases using concrete pavers and granite curbing. Additionally, the applicant is proposing to reconstruct sidewalks along both sides of Cedar Street using concrete pavers. Sidewalks would be rebuilt to city standards and would be constructed in phases.
Internal walkways are proposed for each phase and will connect to the existing sidewalks along Cedar Street, Chestnut Street and Lancaster Street.



Figure 10: Scope and phasing of sidewalk improvements

C. Public transit access

All three phases are within 1/4 mile of METRO Routes 2,4 and 8. Phase I is within 1,000 feet of the METRO "Pulse" on Elm Street and Phases II and III are directly served by METRO Route 8. No transit amenities are proposed as part of this application.

D. Parking

Each phase of this application involves a limited amount of dedicated off-street parking. According to the applicant they intend to include three-off street parking spaces within Phase II for existing off-site parking tenants and eight off-street parking spaces within Phase III for off-site parking tenants. Per Table 6-A off-street parking is a conditional use in the R-6 zone and is only permitted for passenger cars for uses permitted in the R-6 zone.

Phase I: Includes five basement-level parking spaces accessed via a new curb cut on Chestnut Street. These spaces would be utilized by Housing First Staff. No additional on-site parking is provided for the residents of Phase I. According to the applicant, if tenants wish to pursue dedicated off-site parking, there is capacity within the Cumberland Avenue parking garage which is owned by Co-Applicant, Reveler Development.

Phase II: Includes three off-street parking spaces accessed from Cedar Street.

Phase III: Includes 13 angled off-street parking spaces accessed via an existing curb cut on Lancaster Street.

The applicant intends to provide off-site parking for all 48 market-rate units in the nearby Cumberland Avenue Garage on an as-requested basis. Reveler Development owns this garage and included supply calculations as part of the previously approved Master Development Plan in 2023

A minimum of 39 bicycle spaces are required for the proposed 96 residential units, following the ratio (2 bike spaces/ 5 units) provided in Table 19-A of the Land Use Code. All three phases include dedicated bike storage rooms which meet this standard.

Additionally, new structured and surface parking lots of five or more spaces are required to include energized electrical outlets or installed chargers capable of providing Level 2 EV charging or higher to 20% of parking spaces. An additional 50% of spaces must be made EV-ready. Phase I of this Site Plan application is requesting a waiver from the EV requirement for their 5 parking spaces. Based upon the amount of new parking being created for phases II and III, these phases are not required to provide any EV infrastructure.

A full parking analysis has been provided by the applicant and is included as attachment S

E. Transportation demand management (TDM)

This application does not require a TDM plan, However, the applicant has provided a traffic analysis (Attachment T).

In order to utilize the transit-proximate exemption for on-site parking, the applicant will be required to complete a TDM plan to be reviewed and approved by City Staff.

Staff is requesting further information in order to make a finding on this standard.

2. Environmental Quality Standards (Section 14.6.2)

A. Preservation of significant natural features

All three parcels associated with this phased site plan are urban infill lots. There are no known significant natural features on any of the three parcels.

B. Landscape preservation

Phase I: Several mature trees are located along the rear of the property line. Due to the location and condition of the trees, as well as their impact to a nearby retaining wall, the applicant has requested a waiver of Article 14.6.2 related to tree preservation.

Phase II: No trees or significant landscaping features are being removed

Phase III: Eight trees of 10" DBH or greater exist on site. The project will maintain three of those trees which meets landscape preservation standards.

C. Site landscaping and buffers

Within the R-6 zone, one shade tree or six plantings are required per every 30 linear feet along all the property frontages, per the City of Portland Technical Manual standards. Where the replacement of trees onsite is not feasible, the applicant intends to contribute the proportionate cost of the replacement trees to the City of Portland Tree Fund. In total, the applicant will plant 34 new trees between the three phases of this application. Per Section 4.6.1 of the Technical Manual, the applicant is required to provide a minimum of one street tree per residential unit along public rights-of-way. The applicant intends to contribute to the tree fund to compensate for the remaining 62 required trees.

Each phase will include both grassed and landscaped open space with a mixture of bushes and native plantings. The applicant has provided detailed landscaping plans included as attachments 12, 13 and 14



Figure 11: Perspective view of the phased site plan application and 89 Elm Street

D. Water quality/storm water management/erosion control

The project is required to provide for stormwater management in accordance with Maine DEP Chapter 500 and City of Portland Technical Manual Section 5 standards for stormwater management. The Applicant has submitted a stormwater management report and grading and drainage plans for each phase to indicate erosion and sedimentation control measures and stormwater treatment for the proposed development.

The Applicant has evaluated the requirements for stormwater treatment for each phase of this application. Phases 1 and 2 both involve the creation of greater than 1,000 square feet of new impervious surface, and therefore both of these phases are subject to the City's stormwater management requirements. In Phase III, the amount of impervious surface would be reduced beyond what is there currently, and so this phase would be exempt from stormwater quality and quantity management. Subsurface stormfilter systems have been provided for Phases 1 and 2.

The applicant has submitted a full stormwater management plan demonstrating compliance with Section 5 of the Technical manual and Maine DEP chapter 500 standards for all phases of this application.

Phase 1: Treatment will be accomplished using Storm-filter cartridges, which will discharge into a proposed R-Tank subsurface detention system. The detention system is sized to store an inch

across the entire roof area as well as some ancillary impervious ground surfaces, which is a larger volume than the new sewer flows created by the project. The stormwater will outlet into the combined 18-inch sewer within Chestnut Street.

Phase II: Treatment will be accomplished using Storm-filter cartridges which will discharge into a proposed R-Tank subsurface detention system. The detention system is sized to store an inch of rainfall across the site's impervious area, which exceeds the new sewer flows. The outfall will tie into the previously engineered and approved 89 Elm drainage system which ultimately drains to the upstream end of the MS4 extension that has been designed as part of the Bayside MDP

Phase III: The project will not create more than 1,000 SF of new impervious area and therefore no treatment is proposed. The site will detain the new sewer flows because its volume exceeds an inch across the site's impervious area.

The stormwater detention will be provided by an R-tank system and treatment will be via a Stormfilter BMP.

3. Public Infrastructure and Community Safety Standards (Section 14.6.3)

A. Consistency with City Master Plans

This Phased Site Plan is adjacent to the previously approved Bayside Master Plan, and proposes infill development in an area accessible to services and public transit supporting many of the City's goals of complete neighborhood and sustainable development patterns.

B. Availability and capacity of public utilities

All three phases will be served via underground electrical conduits. Utility providers have been contacted for their ability to serve the proposed project. The applicant has requested ability to serve letters from Central Maine Power and Portland Water district

All three phases will be served by connection to the public sewer system within Chestnut Street and Cedar Street, furthermore, intercepted by the Lancaster Street Combined Sewer. The proposed stormwater management systems have been designed to meet the City standards as well as the applicable standards outlined in Chapter 500.

Phases II and III will rely on the completion of the planned MS4 extension along Lancaster Street. Further coordination with the Department of Public Works will be required.

Phases I and III propose internal trash storage for tenants. While Phase II will share its solid waste with the adjacent 89 Elm project outside in a privately, screened enclosure. Given each of the residential developments proposes 20 or more units within the building, trash collection and disposal will be coordinated by the property/landowner of each site with a private hauler.

4. Site Design Standards (Section 14.6.4)

A. Massing, ventilation, and wind impact

All three phases meet relevant zoning and dimensional standards and are similar in scale to surrounding buildings.

B. Shadows
No adverse shadow impacts are anticipated with this application. Planning staff have encouraged the applicant to provide additional detail as to how Phase I may impact the Community Garden located on Chestnut Street.

Staff consider this standard to be met.

C. Snow and ice loading
The proposed buildings are not anticipated to create snow or ice loading impacts on abutting properties or rights-of-way. The applicant has detailed snow storage locations on included plans.

Staff consider this standard to be met.

D. View corridors
This development is not within a protected view corridor.

E. Historic resources
Not applicable. No portion of this phased site plan is within 100 feet of a historic district and no historic resources are impacted by this application.

F. Exterior lighting
The proposed development includes full cutoff / dark sky compliant light fixtures to minimize light spillover. The applicant has designed light fixtures to avoid impact to abutting residential properties as much as possible. Shielding will be implemented where necessary as depicted in the lighting plan. No architectural or specialty lighting is proposed. Street lighting has been proposed in accordance with the City Technical Manual and is to include the required peninsula decorative lighting when along Lancaster Street. A full photometric plan has been included as attachment N

Staff consider this standard to be met.

G. Noise and vibration
HVAC, air handling units, and other necessary equipment will be installed on building rooftops. Given the location of the buildings, the placement of HVAC, generators and other equipment is not anticipated to interfere with abutting residential properties.

Staff consider this standard to be met.

H. Signage and wayfinding
No wayfinding signage is proposed as part of this application.

I. Zoning-related design standards
All three phases were reviewed under the Land Use Code section 14.6.4.I.e for multi-family residential development and shall also comply with the following development standards under the Land Use Code section 8.1.4 for R6 zone. A full design review can be found as S1 and S2

XI. NEIGHBORHOOD MEETING & PUBLIC COMMENT

The applicant held a neighborhood meeting on May 16, 2024 at 5:30 PM. The in-person meeting was held in the community room at 409 Cumberland Avenue. 17 members of the public were in attendance. Public comment included:

- Construction timing in relation to the abutting 89 Elm Street project.
- Parking for all phases
- Density calculations
- Operations and management of the Housing First units.
- The condition of streets and sidewalks
- Public safety
- Building design and open space

A full sign-in sheet and meeting minutes are included as attachment V.

XII. STAFF RECOMMENDATION

Subject to the proposed motions and conditions of approval listed below, Planning & Urban Development Department staff recommends that the Planning Board find that the Major Site Plan and Conditional Use application at 197 Oxford Street (PL-002885-2024 and CU-002904-2024) meets the applicable standards of Portland's Land Use Code.

XIII. PROPOSED MOTIONS

A. WAIVERS

On the basis of the application, plans, reports and other information submitted by the applicant, findings and recommendations contained in the Planning Board Report for the public hearing held on January 14, 2025 for application PL-002885-2024 relevant to the Site Plan Standards of the Land Use Code and Portland's Technical and Design Standards, and other regulations, and testimony presented at the Planning Board public hearing:

1. Drive Aisle Width

   The Planning Board [finds/does not find] based upon the Planning Staff's review that extraordinary conditions exist or undue hardship may result from strict compliance with Technical Manual Section 1.10.3. which states that the minimum two-way drive aisle width must be 24 feet, that substantial justice and the public interest are secured with the proposed variation in this standard, and that variation is consistent with the intent of the ordinance. The Planning Board [waives/does not waive] Technical Manual Section 1.10.3 to allow two-way drive aisle widths of 21 and 22 feet.

2. Landscape Preservation

   The Planning Board [finds/does not find] based upon the City Staff's Review, that extraordinary conditions exist or undue hardship may result from strict compliance with Section 14.6.2.B.3 of the City of Portland's Land Use Code, which states that all development subject to zoning setbacks shall preserve a minimum of 30% of existing trees of 10 inches DBH or greater within the setback area. That substantial justice and the public interest are secured with the proposed variation in this standard, and that variation is consistent with the intent of the ordinance. The Planning Board

[waives/does not waive] Land Use Code Section 14.6.2.B.3 to allow the applicant to remove trees within the rear setback of 197 Oxford Street.

3. Electric Vehicle Charging
   The Planning Board [finds/does not find] based upon City Staff Review, that extraordinary conditions exist or undue hardship may result from strict compliance with Technical Manual Section 1.14. which states that new structured and surface parking lots of five or more spaces shall include energized electrical outlets or installed chargers capable of providing Level 2 EV charging our higher to 20% of parking spaces, that substantial justice and the public interest are secured with the proposed variation in this standard, and that variation is consistent with the intent of the ordinance. The Planning Board [waives/does not waive] Technical Manual Section 1.14 to remove the requirement to install EV charging infrastructure in the Phase I covered parking area.

B. CONDITIONAL USE

On the basis of the application, plans, reports and other information submitted by the applicant; findings and recommendations contained in the Planning Board Report for the public hearing on January 14, 2025 for application # CU-002904-2024 at 197 Oxford Street relevant to the site plan regulations; and the testimony presented at the Planning Board hearing, the Planning Board [finds/does not find] that the plan is in conformance with the site plan standards of the land use code, subject to the following conditions of approval:

PRIOR TO ISSUANCE OF A BUILDING PERMIT

1. The Applicant shall submit a draft affordable housing agreement as part of the deed for 197 Oxford Street, outlining the proposed inclusionary zoning implementation for the second and third phases of the Site Plan Application, to be reviewed and approved by Corporation Counsel, Department of Housing & Community Development, and the Department of Planning and Urban Development. The agreement, shall include an exhibit with floor plans for all three phases of the development, detailing the correlation between the workforce units and the market rate units; specifically related to the number of workforce units required, the size of the proposed workforce units, amenities, and fit and finish, as required in the *City of Portland Inclusionary Zoning Implementation Guidelines for Rental Housing*

2. The Affordable Housing Agreement (AHA) shall be filed as covenant to the 197 Oxford Street property's deed with the Cumberland County Registry of Deeds. This shall also be filed as covenant to the deeds of 50 Cedar Street and 158 Lancaster Street.

3. In the event that the applicant elects to provide a fee in-lieu of providing a portion or all of the required workforce units, the applicant shall pay into the City's Jill C. Duson Housing Trust Fund in accordance with Ch. 14, Sec. 18.2.3.C.6.

C. SITE PLAN REVIEW

On the basis of the application, plans, reports and other information submitted by the applicant; findings and recommendations contained in the Planning Board Report for the public hearing on January 14, 2025 for application # PL-002885-2024 at 197 Oxford Street relevant to the site plan regulations; and the testimony presented at the Planning Board hearing, the Planning Board

[finds/does not find] that the plan is in conformance with the site plan standards of the land use code, subject to the following conditions of approval:

PRIOR TO APPLYING FOR A BUILDING PERMIT

1. The applicant shall provide ability to serve letters from the Portland Water District and Central Maine Power for all three phases.

2. The applicant shall provide Wastewater Capacity authorizations for all three phases.

3. The applicant shall revise the Phase III Site Plan to provide a 20-foot primary driveway entrance.

4. The applicant shall submit a complete Transportation Demand Management plan to be reviewed and approved by the Planning Authority.

PRIOR TO ISSUANCE OF A CERTIFICATE OF OCCUPANCY

1. The applicant shall contribute $24,800 to the City's Tree Fund, in lieu of planting 62 of the required street trees.

XIV. PLANNING BOARD DECISION

On the basis of the findings, conclusions and recommendations contained in the Planning Board report for the public hearing on January 14, 2025 related to application PL-002885-2024 and CU-002904-2024 for 197 Oxford Street, which is attached to the draft approval letter and incorporated therein, the Planning Board [adopts/does not adopt] the approval letter as drafted as the Planning Board's decision for application PL-002885-2024 and CU-002904-2024, and authorizes the Planning Board Chair to sign the approval letter as drafted.

ATTACHMENTS

Public Comment

PC1. Underkuffer, Laura

Report Attachments

S1. Design Review Memo (1.4.24)
S2. Design Review Memo (10.23.2024)
S3. Site Plan Worksheet (11.6.2024)
S4. Inclusionary Zoning Implementation Guidelines for Developers of Rental Housing
S5. October 2024 Land Use Code
S6. October 2024 Technical Manual

Drawings

1. COVER SHEET AND LEGEND
2. GENERAL NOTES
3. TOPOGRAPHIC SURVEY
4. PH1 - CONSTRUCTION MANAGEMENT PLAN

5. PH2 - CONSTRUCTION MANAGEMENT PLAN
6. PH3 - CONSTRUCTION MANAGEMENT PLAN
7. OVERALL SITE PLAN
8. PH1 - SITE PLAN
9. PH2 - SITE PLAN
10. PH3 - SITE PLAN
11. PH1 - LANDSCAPE HARDSCAPE AND MATERIALS PLAN
12. PH1 - LANDSCAPE PLANTING PLAN
13. PH2 - LANDSCAPE PLANTING PLAN
14. PH3 - LANDSCAPE PLANTING PLAN
15. PH1 - UTILITY PLAN
16. PH2 - UTILITY PLAN
17. PH3 - UTILITY PLAN
18. PH1 - GRADING AND DRAINAGE PLAN
19. PH2 - GRADING AND DRAINAGE PLAN
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21. SITE DETAILS - 1
22. SITE DETAILS - 2
23. UTILITY DETAILS - 1
24. UTILITY DETAILS - 2
25. DRAINAGE DETAILS - 1
26. DRAINAGE DETAILS - 2
27. EROSION & SEDIMENTATION CONTROL DETAILS
28. PH1 - LANDSCAPE DETAILS
29. PH2 & PH3 - LANDSCAPE DETAILS
30. PH1 - A1.00 BASEMENT PARKING LEVEL PLAN
31. PH1 - A1.10 FIRST FLOOR PLAN
32. PH1 - A1.20 SECOND FLOOR PLAN
33. PH1 - A1.30 THIRD FLOOR PLAN
34. PH1 - A1.40 FOURTH FLOOR PLAN
35. PH1 - A1.50 FIFTH FLOOR PLAN
36. PH1 - A3.01 NORTH ELEVATION PLAN
37. PH1 - A3.02 EAST ELEVATION PLAN
38. PH1 - A3.03 WEST ELEVATION PLAN
39. PH1 - A3.04 SOUTH ELEVATION PLAN
40. PH2 - A1-1 FIRST FLOOR PLAN
41. PH2 - A1-2 SECOND FLOOR PLAN
42. PH2 - A1-3 THIRD FLOOR PLAN
43. PH2 - A2-0 WEST ELEVATION PLAN
44. PH2 - A2-1 NORTH ELEVATION PLAN
45. PH2 - A2-2 EAST ELEVATION PLAN
46. PH2 - A2-3 SOUTH ELEVATION PLAN
47. PH2 - P1 PERSPECTIVE 1 PLAN
48. PH2 - P2 PERSPECTIVE 2 PLAN
49. PH2 - P3 PERSPECTIVE 3 PLAN
50. PH2 - P4 PERSPECTIVE 4 PLAN

51. PH2 - P5 PERSPECTIVE 5 PLAN
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71. Overall JSPA LA Site Map
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79. PH1 - SAFETY PLAN
80. PH1 - BIRDS EYE VIEW
81. PH1 - Perspective View Oxford and Cedar Street
82. MDP & JSPA OVERALL PLAN

Applicant Submittal

A. Cover Letter
B. Major Site Plan Checklist
C. Right, Title Interest
D.1 Zoning Analysis - Phase 1
D.2 Zoning Analysis - Phase 2
D.3 Zoning Analysis - Phase 3
D.4 Zoning Analysis - Density Overview
E. Easements
F. Waivers
G. Financial Capacity
H. Technical Capacity

I. Conformity with Land Use Ordinance
J. Stormwater Management Report
K. Erosion & Sedimentation Control Report
L. Fire Department Letter - Phase 1
L.2 Fire Department Letter - Phase 2
L.3 Fire Department Letter - Phase 3
M. Wastewater Capacity
M.1 Wastewater Capacity Form - Phase 1
M.2 Wastewater Capacity Form - Phase 2
M.3 Wastewater Capacity Form - Phase 3
N. Lighting
O. Architectural Narrative
P. Utility Narrative
Q. Construction Management Plan
R. Solid Waste Disposal
S. Parking Analysis
T. Traffic Anaylsis
U. Pre-App Neighborhood Meeting Documentation
V. Neighborhood Meeting #2 Documentation
W. Open Space Narrative
Y. Comment Response Letter
Z. Comment Response Letter 2

Design Review
Planning and Urban Development Department

Subject:	197 Oxford Street, 50 Cedar Street, 158 Lancaster Street – Phased site plan
Zone:	R-6
Date of Review:	Friday, January 3, 2025
Reviewer(s):	Eric Freeman (Planner), Zach Powell (Senior Planner), Sean King (Urban Designer)
Project ID:	PL-002885-2024

I. DESIGN REVIEW CRITERIA

The proposed phased site plan development is subject to the site design standards, Land Use Code section 14.6.4(I) Design standards. The property sites are located in the R-6 residential zone with property sizes that exceed 10,000 square feet to not require strict compliance with the R-6 infill development principles and standards under the City's Design Manual, Section (k) and contained in Appendix 7.

The proposed multi-family developments are subject to the multi-family design standards from the City's Design Manual, Section (l) to consist of three phases, herein known as:

- Phase 1: 197 Oxford Street for 48 residential units
- Phase 2: 50 Cedar Street for 24 residential units
- Phase 3: 158 Lancaster Street for 24 residential units.

II. DESIGN REVIEW COMMENTS: **bold** text denotes recent updates met, red text denotes standards not met which require resubmission.

*(i) Two-family, special needs independent living units, **multiple-family,** lodging houses, bed and breakfasts and emergency shelters.*

MULTIPLE-FAMILY STANDARDS. Multiple-family shall meet the following standards:

1. *The exterior design of the proposed structure .... shall be designed to complement and enhance the nearest residential neighborhood.*

Staff comment: The built context of the surrounding area contains a variety of building types, architectural styles, and a mix of uses that vary in height and proximity to the street typically found throughout Portland's Bayside neighborhood. The north side of Chestnut Street includes a larger 7-story multi-family building with flat roof. The south side includes an existing 2.5-story residential building with open gable roof style. Cedar Street includes a mix of smaller-scale residential structures with a mix of roof types including, box gable, intersecting/overlaid hip, and open gable. Buildings tend to have a masonry base, predominantly brick, with clapboard siding. Along Oxford Street includes a mix of building typologies including Unity Village, a community of 33 townhouse style, 3-story apartment buildings, with pitched roofs, brick base and clapboard siding with balconies on the second floor. Adjacent R-7, B-3 & B-7 zoning districts are within close proximity to the proposed project. The existing buildings within the surrounding context are located close to the street with direct access to building entries from public sidewalks.

The proposed phased site plan varies in architectural style and generally deviates from the surrounding residential neighborhood due to the larger lot size and large building footprint to accommodate the proposed high density of residential units. The proposed buildings include flat roofs to maximize structure height. Flat roofs are common for multi-family buildings in the neighborhood and throughout the city.

Phase 1 – 197 Oxford Street: The applicant has resubmitted plans with revisions to the building design that further articulate the façade at the ground level facing the street with a consistent storefront window pattern and canopies that identify the primary entries that Staff finds appropriate to the surrounding context. In addition, the revised building design includes paneling above the storefront windows to distinguish a more cohesive composition with the ground level communal interior spaces from the residential units at the upper floors.

The applicant has resubmitted plans that further articulate the upper stories facing the street with material and trim detailing that express the window arrangement as bay projections that Staff finds appropriate to provide façade variation. **The applicant has resubmitted plans that express a pronounced cornice above facades with lap siding that Staff finds appropriate as a significant termination to the building.**

The Applicant has resubmitted plans that include additional landscape screening of appropriate heights within the transitional space between the building and sidewalk that Staff finds to reduce the expanse of unarticulated walls at the ground level. Staff encourages the applicant to apply an anti-graffiti coating at the foundation wall to reduce occurrences and consider a painted mural to complement the treatment proposed for the transformer at Oxford Street.

Phase 2 – 50 Cedar Street: Staff finds the building design provides massing variation and mitigates the existing grade along Cedar Street appropriately with the location of multiple entries that are recessed and articulated with an overhead canopy.

Phase 3 – 158 Lancaster Street: The applicant has resubmitted plans for a building design Staff finds the building design provides massing variation and mitigates the existing grade along Chestnut Street appropriately with the location of multiple entries that are recessed and articulated with an overhead canopy. **The applicant has resubmitted plans and comment response letter that address Staff's request to provide an accessible route to rear parking areas that Staff finds sufficient.**

2. *The proposed development shall respect the existing relationship of buildings to public streets.*

Staff comment: The prevailing surrounding context includes buildings within close proximity to the street, to allow direct access to building entries directly from the public sidewalk. The arrangement of smaller properties and existing structures at different finished floor elevations allows for individual structures to mitigate changes in grade along sloped public streets.

Phase 1 – 197 Oxford Street: **The applicant has resubmitted plans that maintain the building placement based on feasibility and coordination with utility provided that Staff finds is sufficient to locate the building as proposed. Staff finds the resubmitted plans include**

additional planting of various heights within a transitional space between the building and sidewalk is appropriate as a buffer that contributes to the Phase 1 landscape open space ratio. In addition, the applicant has included street furnishings (bike racks and street trees) along Oxford Street and street trees along Cedar & Chestnut Street that enhance the streetscape character to promote pedestrian activity along the street.

Phase 2 – 50 Cedar Street: Staff finds the proposed building placement promotes street activation along Lancaster Street and Cedar Street that is appropriate to the surrounding neighborhood context. The applicant has resubmitted plans and precedent images to catalog existing conditions within the surrounding neighborhood that Staff finds to respect the existing relationship of the proposed building frontages to the streets. In addition, the applicant has included street furnishings (bike racks, street lighting and street trees) along Lancaster Street and street trees along Cedar Street that enhance the streetscape character to promote pedestrian activity along the street.

Phase 3 – 158 Lancaster Street: The applicant has resubmitted plans and precedent images to catalog existing conditions within the surrounding neighborhood that Staff finds to respect the existing relationship of the proposed building frontages to the streets. In addition, the applicant has included street furnishings (bike racks, street lighting and street trees) along Lancaster Street and street trees along Chestnut Street that enhance the streetscape character to promote pedestrian activity along the street.

3. *Open space on the site for all … multiple-family development shall be integrated into the development site.*

Staff comment: The applicant has resubmitted plans and an open space narrative that begin to respond to the accessibility and the function of open space throughout the phased site plans. In general, Staff finds the open space is sufficiently met primarily by the perimeter plantings proposed at each building phase.

Phase 1 – 197 Oxford Street: The Applicant has indicated new street trees along Oxford Street, Chestnut Street & Cedar Street under the City's Technical Manual, Section 4 standards, along with walkways, courtyards and planting areas at the rear of the property. The applicant has resubmitted plans that indicate the screening at adjacent properties to allow for secured gathering spaces at the rear of the property that Staff finds to be appropriate.

Phase 2 – 50 Cedar Street: The Applicant has indicated new street trees along Lancaster Street and Cedar Street under the City's Technical Manual, Section 4 standards, along with minimal perimeter building planting areas. The applicant has resubmitted plans that remove the lawn areas adjacent to the public sidewalk for shrub plantings that Staff finds appropriate based on the surrounding context. Addition, the applicant has indicated several residential units with balconies that Staff finds to contribute to the overall building design while provide private open space.

Phase 3 – 158 Lancaster Street: The Applicant has indicated new street trees along Lancaster Street and Chestnut Street under the City's Technical Manual, Section 4 standards, along with landscape buffering around the perimeter of the property and lawn area for communal gathering at the rear of the property. The applicant has resubmitted plans that remove the lawn areas adjacent to the

public sidewalk for shrub plantings that Staff finds appropriate based on the surrounding context. Addition, the applicant has indicated several residential units with balconies that Staff finds to contribute to the overall building design while provide private open space.

4. *The design of proposed dwellings shall provide ample windows to enhance opportunities for sunlight and air in each dwelling in principal living areas and shall also provide sufficient storage areas.*

Staff comment: Staff finds the proposed phased site plan buildings provide ample windows and sufficient storage within each residential unit to meet this design standard. The applicant has resubmitted plans with a revised fenestration pattern at the ground level and upper floors that Staff finds appropriate to the surrounding context.

5. *The scale and surface area of parking and driveways and paved areas are arranged and landscaped to properly screen vehicles from adjacent properties and streets.*

Staff comment:

Phase 1 – 197 Oxford Street: The applicant has resubmitted plans to propose a six-foot six-inch height retaining wall with a four-foot tall mounted fence. **The applicant has resubmitted plans that indicate the screening at adjacent properties to allow for secured gathering spaces at the rear of the property that Staff finds to be appropriate.**

Phase 2 – 50 Cedar Street: The applicant has included landscape buffering and fencing around to sufficiently screen abutting properties. **The applicant has resubmitted plans that do not sufficient screening parked vehicles facing the street, Staff requests that the applicant provide contextual fencing adjacent to the existing sidewalk that is at least 50% opaque.**

Phase 3 – 158 Lancaster Street: The applicant has included landscape buffering and fencing around to sufficiently screen abutting properties. **The applicant has resubmitted plans that do not sufficient screening parked vehicles facing the street.**

6. *Two-family or multi-family dwellings shall not be converted to lodging houses unless all units in the building have been vacant for at least one (1) year prior to the date conversion is sought or unless the individual multiple-family units are less than one thousand (1,000) square feet in size. In no event shall any single-family dwelling in the R-5 or R-6 zone be converted in whole or in part to a lodging house.*

Staff comment: Not applicable as the proposed development does not include a lodging house conversion.

Design Review
Planning and Urban Development Department

City of portland

Subject:	197 Oxford Street, 50 Cedar Street, 158 Lancaster Street – Phased site plan
Zone:	R-6
Date of Review:	Wednesday, October 23, 2024
Reviewer(s):	Eric Freeman (Planner), Zach Powell (Senior Planner), Sean King (Urban Designer)
Project ID:	PL-002885-2024

I. DESIGN REVIEW CRITERIA

The proposed phased site plan development is subject to the site design standards, Land Use Code section 14.6.4(I) Design standards. The property sites are located in the R-6 residential zone with property sizes that exceed 10,000 square feet to not require strict compliance with the R-6 infill development principles and standards under the City's Design Manual, Section (k) and contained in Appendix 7.

The proposed multi-family developments are subject to the multi-family design standards from the City's Design Manual, Section (l) to consist of three phases, herein known as:

- Phase 1: 197 Oxford Street for 48 residential units
- Phase 2: 50 Cedar Street for 24 residential units
- Phase 3: 158 Lancaster Street for 24 residential units.

II. DESIGN REVIEW COMMENTS: **bold** text denotes recent updates met, red text denotes standards not met which require resubmission.

(i) Two-family, special needs independent living units, ***multiple-family,*** *lodging houses, bed and breakfasts and emergency shelters.*

MULTIPLE-FAMILY STANDARDS. Multiple-family shall meet the following standards:

1. *The exterior design of the proposed structure …. shall be designed to complement and enhance the nearest residential neighborhood.*

Staff comment: The built context of the surrounding area contains a variety of building types, architectural styles, and a mix of uses that vary in height and proximity to the street typically found throughout Portland's Bayside neighborhood. The north side of Chestnut Street includes a larger 7-story multi-family building with flat roof. The south side includes an existing 2.5-story residential building with open gable roof style. Cedar Street includes a mix of smaller-scale residential structures with a mix of roof types including, box gable, intersecting/overlaid hip, and open gable. Buildings tend to have a masonry base, predominantly brick, with clapboard siding. Along Oxford Street includes a mix of building typologies including Unity Village, a community of 33 townhouse style, 3-story apartment buildings, with pitched roofs, brick base and clapboard siding with balconies on the second floor. Adjacent R-7, B-3 & B-7 zoning districts are within close proximity to the proposed project. The existing buildings within the surrounding context are located close to the street with direct access to building entries from public sidewalks.

The proposed phased site plan varies in architectural style and generally deviates from the surrounding residential neighborhood due to the larger lot size and large building footprint to accommodate the proposed high density of residential units. The proposed buildings include flat roofs to maximize structure height. Flat roofs are common for multi-family buildings in the neighborhood and throughout the city.

Phase 1 – 197 Oxford Street: The applicant has resubmitted plans with revisions to the building design that further articulate the façade at the ground level facing the street with a consistent storefront window pattern and canopies that identify the primary entries that Staff finds appropriate to the surrounding context. In addition, the revised building design includes paneling above the storefront windows to distinguish a more cohesive composition with the ground level communal interior spaces from the residential units at the upper floors.

The applicant has resubmitted plans that further articulate the upper stories facing the street with material and trim detailing that express the window arrangement as bay projections that Staff finds appropriate to provide façade variation. Staff recommends greater articulation associated with the residential units, in particular a more pronounced cornice above the horizontal siding.

In addition, Staff has concerns about the large expanses of blank façade at the ground level that face the street. The applicant is requested to provide further justification for the revised building design, in particular the vestibule wall facing Cedar Street, Mechanical Room wall projection facing Oxford Street, and the Basement level wall that wraps the corner of Oxford and Chestnut Street.

Staff recommends the applicant include greater articulation to minimize these blank facades or an alternative (e.g., vine system screening, tall-layered landscaping or artwork) that reduce the visual presence along the ground level.

Phase 2 – 50 Cedar Street: Staff finds the building design provides massing variation and mitigates the existing grade along Cedar Street appropriately with the location of multiple entries that are recessed and articulated with an overhead canopy. The proposed design does not provide direct resident access from the parking lot through the rear of the building, which requires residents using mobility devices to walk a longer distance without a pedestrian facility to access the building from the designated ADA-accessible space. Staff recommends that the applicant identify an ADA-accessible entry at the rear of the building that consolidates and/or provides an alternative location for either the utility or bike room for residents to access an interior corridor from the parking lot to the building.

Phase 3 – 158 Lancaster Street: The applicant has resubmitted plans for a building design Staff finds the building design provides massing variation and mitigates the existing grade along Chestnut Street appropriately with the location of multiple entries that are recessed and articulated with an overhead canopy. The proposed design does not provide direct resident access from the parking lot through the rear of the building, which requires residents using mobility devices to walk a longer distance without a pedestrian facility to access the building from the designated ADA-accessible space. Staff recommends that the applicant identify an ADA-accessible entry at the rear of the building that consolidates and/or provides an alternative location for either the utility or bike room for residents to access an interior corridor from the parking lot to the building.

2. *The proposed development shall respect the existing relationship of buildings to public streets.*

Staff comment: The prevailing surrounding context includes buildings within close proximity to the street, to allow direct access to building entries directly from the public sidewalk. The arrangement of smaller properties and existing structures at different finished floor elevations allows for individual structures to mitigate changes in grade along sloped public streets.

Phase 1 – 197 Oxford Street: The applicant has resubmitted plans to adjust the building location, with Staff continuing to recommend a stronger proximity at the corner of Oxford and Chestnut Streets. Staff encourages the residential units fronting Oxford Street be located closer to the street and to explore an alternative transformer location at the Basement parking level. Staff has provided a markup for the applicant's consideration in an effort to create a more cohesive building design that projects the facades associated with the residential units to diminish or setback the fiber cement paneled facades where the elevator and stairwells are located.

Phase 2 – 50 Cedar Street: Staff finds the proposed building placement promotes street activation along Lancaster Street and Cedar Street that is appropriate to the surrounding neighborhood context. Staff continues to recommend a reorientation the proposed entry stoops and railings along the Lancaster Street building frontage to include recessed entries and stairs that are perpendicular to the street. Staff requests that the applicant explore a finish floor elevation to reduces the amount of ramp and stair transition from the public sidewalk. As envisioned in the adjacent approved 196 Lancaster Street MDP, Lancaster Street is proposed as a neighborhood main street with Staff recommendation to create a more conducive street-level entry along Lancaster Street that contributes to the future streetscape design.

Phase 3 – 158 Lancaster Street: The applicant has resubmitted plans for a 24-residential unit building that is oriented towards the corner of Lancaster and Chestnut Street, Staff recommends a building orientation with primary frontage along Lancaster Street to reinforce the surrounding neighboring building proximity to the street. Staff suggest an orientation of the building with greater frontage along Lancaster Street, to allow for primary entries that are at-grade, recessed and with direct access to the public sidewalk. Staff finds the residential unit stoops more contextual along Chestnut Street and promotes direct access with stairs to make up grade change along the street. Furthermore, the Applicant is requested to identify the pole-mounted transformer on the plans as an alternative to the pad mounted transformer, as suggested in their response letter based on the reduction of units.

3. *Open space on the site for all … multiple-family development shall be integrated into the development site.*

Staff comment: The applicant has resubmitted plans and an open space narrative that begin to respond to the accessibility and the function of open space throughout the phased site plans. In general, Staff finds the open space is partially met by the perimeter plantings proposed at each building phase. However, in regards to the total amount of units proposed, Staff finds that access to private and shared open space is limited and only successfully captured within the balcony units of Phase 2 and Phase 3 and the pollinator garden of Phase 3. Staff recommends that the applicant provide an accessible route and entry from the rear parking area with direct access for residents of Phase 2 and Phase 3.

Phase 1 – 197 Oxford Street: The Applicant has indicated new street trees along Oxford Street, Chestnut Street & Cedar Street under the City's Technical Manual, Section 4 standards, along with walkways, courtyards and planting areas at the rear of the property. Staff does not support the proposed seeded lawn areas due to maintenance and viability concerns and lack of contextuality with the surrounding neighborhood.

Phase 2 – 50 Cedar Street: The Applicant has indicated new street trees along Lancaster Street and Cedar Street under the City's Technical Manual, Section 4 standards, along with minimal perimeter building planting areas. The applicant has resubmitted plans that remove the lawn areas adjacent to the public sidewalk for shrub plantings that Staff finds appropriate based on the surrounding context. Staff suggests open space programming at the corner of Lancaster and Cedar Street that contributes to the street activation along Lancaster Street. Open space can function for the residents may include but not limited to communal outdoor gathering spaces, seating, planting and lawn areas. The applicant may consider the addition of balconies to provide private open space for residents.

Phase 3 – 158 Lancaster Street: The Applicant has indicated new street trees along Lancaster Street and Chestnut Street under the City's Technical Manual, Section 4 standards, along with landscape buffering around the perimeter of the property and lawn area for communal gathering at the rear of the property. The applicant has resubmitted plans that remove the lawn areas adjacent to the public sidewalk for shrub plantings that Staff finds appropriate based on the surrounding context. Staff suggests open space programming at the rear of the property given the proposed twenty-four residential units. Open space can function for the residents may include, but is not limited to, communal outdoor gathering spaces, seating, planting, and lawn areas.

4. *The design of proposed dwellings shall provide ample windows to enhance opportunities for sunlight and air in each dwelling in principal living areas and shall also provide sufficient storage areas.*

Staff comment: Staff finds the proposed phased site plan buildings provide ample windows and sufficient storage within each residential unit to meet this design standard. The applicant has resubmitted plans with a revised fenestration pattern at the ground level and upper floors that Staff finds appropriate to the surrounding context.

5. *The scale and surface area of parking and driveways and paved areas are arranged and landscaped to properly screen vehicles from adjacent properties and streets.*

Staff comment:

Phase 1 – 197 Oxford Street: The applicant has resubmitted plans to propose a six-foot six-inch height retaining wall with a four-foot tall mounted fence. Staff requests the applicant illustrate this proposed condition from the abutting property at 72 Chestnut Street with rendered views from the public sidewalk. In addition, the applicant is requested to provide specifications for the fencing for each building phase.

Phase 2 – 50 Cedar Street: The applicant has included landscape buffering and fencing around to sufficiently screen abutting properties. Staff request that applicant provide specifications for the fencing for each building phase.

Phase 3 – 158 Lancaster Street: Staff suggests relocating parking, service and driveway at the rear of the property and provide landscape buffering at property boundaries and from the street. If the applicant intends to provide fencing to sufficiently screen abutting properties, Staff request that applicant provide specifications for the fencing for each building phase.

6. *Two-family or multi-family dwellings shall not be converted to lodging houses unless all units in the building have been vacant for at least one (1) year prior to the date conversion is sought or unless the individual multiple-family units are less than one thousand (1,000) square feet in size. In no event shall any single-family dwelling in the R-5 or R-6 zone be converted in whole or in part to a lodging house.*

   Staff comment: Not applicable as the proposed development does not include a lodging house conversion.

PLANTING NOTES

1. LANDSCAPE ARCHITECT TO APPROVE PLANT MATERIAL PRIOR TO DELIVERY TO SITE.
2. PLANT MATERIAL PROVIDED BY THE CONTRACTOR IS TO CONFORM TO THE HIGHEST STANDARD AS ADOPTED BY THE AMERICAN STANDARD FOR NURSERY STOCK PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN, INC. (ANSI). PLANT MATERIAL IS TO BE HEALTHY SPECIMENS, FREE FROM DISEASE OR DAMAGE.
3. THE CONTRACTOR IS TO FURNISH PLANTS AND SOD SHOWN ON THE DRAWINGS. PLANTS ARE TO CONFORM WITH THE BOTANICAL IDENTIFICATIONS. PLANTS ARE TO BE SOURCED FROM A NURSERY WITHIN THE SAME CLIMATIC ZONE AS THE SITE LOCATION. NO SUBSTITUTIONS OF PLANT SPECIES ARE PERMITTED WITHOUT PRIOR APPROVAL OF THE OWNER OR OWNER'S REPRESENTATIVE & THE LANDSCAPE ARCHITECT.
4. SUBSTITUTIONS OF PLANT SPECIES SHALL BE A PLANT OF EQUIVALENT OVERALL FORM, HEIGHT AND BRANCHING HABIT, FLOWER, LEAF, FRUIT, COLOR, TIME OF BLOOM & CLIMATIC LOCATION AS APPROVED BY LANDSCAPE ARCHITECT.
5. LOCATE AND VERIFY EXISTING & PROPOSED UTILITY LINE LOCATIONS PRIOR TO STAKING AND REPORT CONFLICTS TO LANDSCAPE ARCHITECT.
6. PLANTING DEMOLITION DEBRIS, GARBAGE, LUMPS OF CONCRETE, STEEL AND OTHER MATERIALS DELETERIOUS TO PLANT'S HEALTH AS DETERMINED BY LANDSCAPE ARCHITECT SHALL BE REMOVED FROM PLANTING AREAS.
7. THE CONTRACTOR IS TO VERIFY SITE LAYOUT & GRADES & INFORM THE LANDSCAPE ARCHITECT OF ANY DISCREPANCIES OR CHANGES IN LAYOUT AND/OR GRADING PRIOR TO CONSTRUCTION. NO PLANTING IS TO BE INSTALLED BEFORE ACCEPTANCE OF ROUGH GRADING.
8. ALL PROPOSED TREE LOCATIONS SHALL BE STAKED OR LAID OUT IN THEIR APPROXIMATE LOCATION BY THE CONTRACTOR. THE CONTRACTOR SHALL ADJUST THE LOCATIONS AS REQUESTED BY THE LANDSCAPE ARCHITECT TO ACCOUNT FOR SUBSURFACE UTILITIES AND OTHER FIELD CONDITIONS. FINAL LOCATIONS OF PLANTS MUST BE APPROVED BY THE LANDSCAPE ARCHITECT PRIOR TO PLANTING.
9. INSTALL PLANTS WITH ROOT FLARES FLUSH WITH FINISHED GRADE. IMMEDIATELY REPLANT PLANTS THAT SETTLE OUT OF PLUMB OR BELOW FINISHED GRADE. PLANT AND STAKES ARE TO BE SET PLUMB UNLESS OTHERWISE NOTED. PLANT UNDER FULL TIME SUPERVISION OF CERTIFIED ARBORIST, NURSERYMAN, OR LICENSED LANDSCAPE ARCHITECT. PROVIDE WRITTEN VERIFICATION OF CERTIFICATION AND/OR LICENSE FOR LANDSCAPE ARCHITECT'S APPROVAL.
10. WATER PLANTS THOROUGHLY AFTER INSTALLATION, A MINIMUM OF TWICE WITHIN THE FIRST 24 HOURS.
11. CONTRACTOR SHALL BE RESPONSIBLE TO MAINTAIN PLANT MATERIALS INCLUDING SODSEED AREAS IN A HEALTHY STATE DURING CONSTRUCTION AND DURING REQUIRED WARRANTY PERIODS. ANY DAMAGE TO PLANT MATERIAL DUE TO NEGLECT BY THE CONTRACTOR SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE.
12. REPAIR DAMAGE DUE TO LANDSCAPE INSTALLATION OPERATIONS INSIDE AND OUTSIDE OF LIMIT OF WORK.
13. SOAK ALL PERENNIALS FOR 24 HOURS PRIOR TO INSTALLATION.
14. A LIST OF PLANTS INCLUDING BOTANICAL NAMES, SIZES, AND SPACING ARE SHOWN ON THE DRAWINGS. QUANTITIES ARE PROVIDED FOR CONTRACTOR'S CONVENIENCE AND ARE TO BE VERIFIED. IN THE EVENT THAT QUANTITIES OR OMISSIONS OCCUR THE PLAN DRAWINGS ARE TO BE FOLLOWED.
15. IRRIGATION: A TEMPORARY UNDERGROUND DRIP AND SPRINKLER IRRIGATION SYSTEM IS TO BE PROVIDED FOR ALL PLANT MATERIAL AND SOD OR SEEDED AREAS.
16. DISTURBED SITE AREAS ARE TO BE DRESSED WITH 6" MIN. OF AMENDED TOPSOIL FOR LAWNS AND 12" MIN. FOR PLANT BEDS. TOPSOIL FOR SEEDED AND/OR SEEDED AREAS IS TO BE TWO PARTS SHARP SAND, ONE PART LOAM AND ONE PART ORGANIC COMPOST.
17. PLANT BEDS ARE TO BE MULCHED TO A DEPTH OF 2" MIN. WITH NATURAL BARK MULCH WITH BARK SIZES NO LARGER THAN 3". PERENNIAL PLANT BEDS ARE TO BE MULCHED WITH BARK SIZES NO MORE THAN 1". TREES IN LAWN AREAS ARE TO HAVE MULCH RINGS OF 5' DIA.
18. TREES ADJACENT TO PEDESTRIAN ROUTES AND WITHIN PARKING ISLANDS ARE TO BE LIMBED TO 6' ABOVE GRADE.
19. ALL TREE SPECIES SHALL BE WATERED AT LEAST 2-4 TIMES EACH WEEK WITH 10-15 GALLONS ADMINISTERED TO EACH TREE DEPENDING ON THE WEATHER AND CURRENT MOISTURE LEVEL. WATERING WILL CONSIST OF 10-15 GALLONS ADMINISTERED TO EACH TREE EVERY TIME THEY ARE WATERED.

PLANTING SCHEDULE

CODE	BOTANICAL NAME	COMMON NAME	QTY.	SIZE	SPACING	NOTES
DECIDUOUS TREES - 50 Cedar Street						
MI	*Malus 'Ivory Spear'*	Ivory Spear Crabapple	1	1.75-2" cal	as shown	
LS	*Liquidambar styraciflua 'Slender Silhouette'*	Slender Silh Sweet Gum	6	2.75-3" cal	as shown	Seedless variety only
QP	*Quercus palustris*	Pin Oak	2	2.5-3" cal	as shown	
DECIDUOUS SHRUBS						
HH	*Hypericum 'Hidcote'*	St. John's Wort	5	24"-36" ht.	36" O.C.	
IV	*Itea virginica*	Little Henry Sweetspire	18	24"-36" ht.	36" O.C.	
LB	*Lindera Benzoin*	Spice Bush	1	24"-36" ht.	36" O.C.	
EVERGREEN SHRUBS						
IXSH	*Ilex glabra 'Shamrock'*	Shamrock Inkberry	10	30"-36" ht.	60" O.C.	
PERENNIAL						
AMH	*Amsonia hubrichtii*	Thread-leafed Bluestar	tbd	tbd	36" O.C.	
ABB	*Astilbe 'Bressingham Beauty'*	Bressingham Beauty Astilbe	tbd	tbd	18" O.C.	
COM	*Coreopsis 'Moonbeam'*	Moonbeam Coreopsis	tbd	tbd	18" O.C.	
GRC	*Geranium x 'Rozanne'*	Rozanne Cranesbill	tbd	tbd	24" O.C.	
HAH	*Hemerocallis 'Heavenly Angel Ice'*	Heavenly Angel Ice Daylily	tbd	tbd	24" O.C.	
HEC	*Heuchera 'Caramel'*	Caramel Coral Bells	tbd	tbd	18" O.C.	
RFA	*Rudbeckia fulgida 'American Gold Rush'*	Gold Rush Black-Eyed Susan	tbd	tbd	24" O.C.	
SMH	*Salvia 'May Night'*	May Night Salvia	tbd	tbd	24" O.C.	
GRASSES, VINES & GROUND COVERS						
AG	*Allium gladiator*	Ornamental Onion	tbd	Bulb	12" O.C.	
AU	*Arctostaphylos uva-ursi*	Bearberry	tbd	1" ht.	36" OC.	
PVS	*Panicum virgatum 'Shenandoah'*	Shenandoah Switchgrass	tbd	#2	24" O.C.	
SS	*Schizachyrum scoparium*	Little Bluestem	tbd	#2	18" O.C.	
DECIDUOUS TREES - Cedar Street Sidewalk Improvements Sheet L2						
ZS	*Zelkova Serrata*	City Sprite Zelkova	3	2.75-3" cal	as shown	

SITE SOIL NOTES

1. CONTRACTOR SHALL COORDINATE WITH OWNER'S REPRESENTATIVE FOR LOCATION OF STOCKPILE AREAS FOR STRIPPED TOPSOIL AND PLANTING SOIL PRODUCTS. CONTRACTOR SHALL ENSURE AREA IS PROTECTED AND CONTAMINATION OR DISTURBANCE OF STORED PRODUCTS IS NOT ALLOWED.
2. CONTRACTOR SHALL ENSURE SUBGRADE IS SCARIFIED PRIOR TO INSTALLING PLANTING SOIL AND BLEND WITH INITIAL LIFT OR PLACEMENT OF PROPOSED PLANTING SOIL.
3. COORDINATE PLACEMENT OF PLANTING SOIL WITH OTHER WORK, ESPECIALLY UTILITIES. PLACEMENT SHOULD OCCUR AFTER INSTALLATION OF ALL HARDSCAPE IMPROVEMENTS, IRRIGATION SYSTEM, UTILITIES, ETC. AND BEFORE INSTALLATION OF PLANTS.
4. SILVA CELL SOIL FOR STREET TREE PLANTING SHALL BE HIGH QUALITY LOAM-BASED PLANTING SOIL FOR FILLING THE SILVA CELLS.

SITE LANDSCAPING & BUFFERS

PARKING & SCREENING:
THE SITE HAS 3 PROPOSED PARKING SPACES WHICH REQUIRE THE PLANTING OF TWO TREES (OR ONE TREE AND THREE SHRUBS) PER FIVE PARKING SPACES.

PROPOSED TREES & SHRUBS = 2 TREES, 6 SHRUBS.

PLANTING REQUIREMENTS PER FRONTAGE:
THE SITE HAS 270 FEET OF FRONTAGE IN THE R-6 DISTRICT, WHICH REQUIRES 9 SHADE TREES OR THE EQUIVALENT OF A SHADE TREE VIA 6 PLANTINGS (1 PER 30 FEET)

PROPOSED STREET TREES = 8
EXISTING TREES=1
TOTAL STREET TREES = 9

TREE PLANTING REQUIRE
REQUIREMENT - ONE STREET TREE

PROPOSED TREES (SITE) = 10

PROPOSED TREES IN COORDINATION WITH 89 ELM STREET DEVELOPMENT = 16 (SEE SHEET L2)

PROPOSED TREES CEDAR SIDEWALK IMPROVEMENTS = 2*

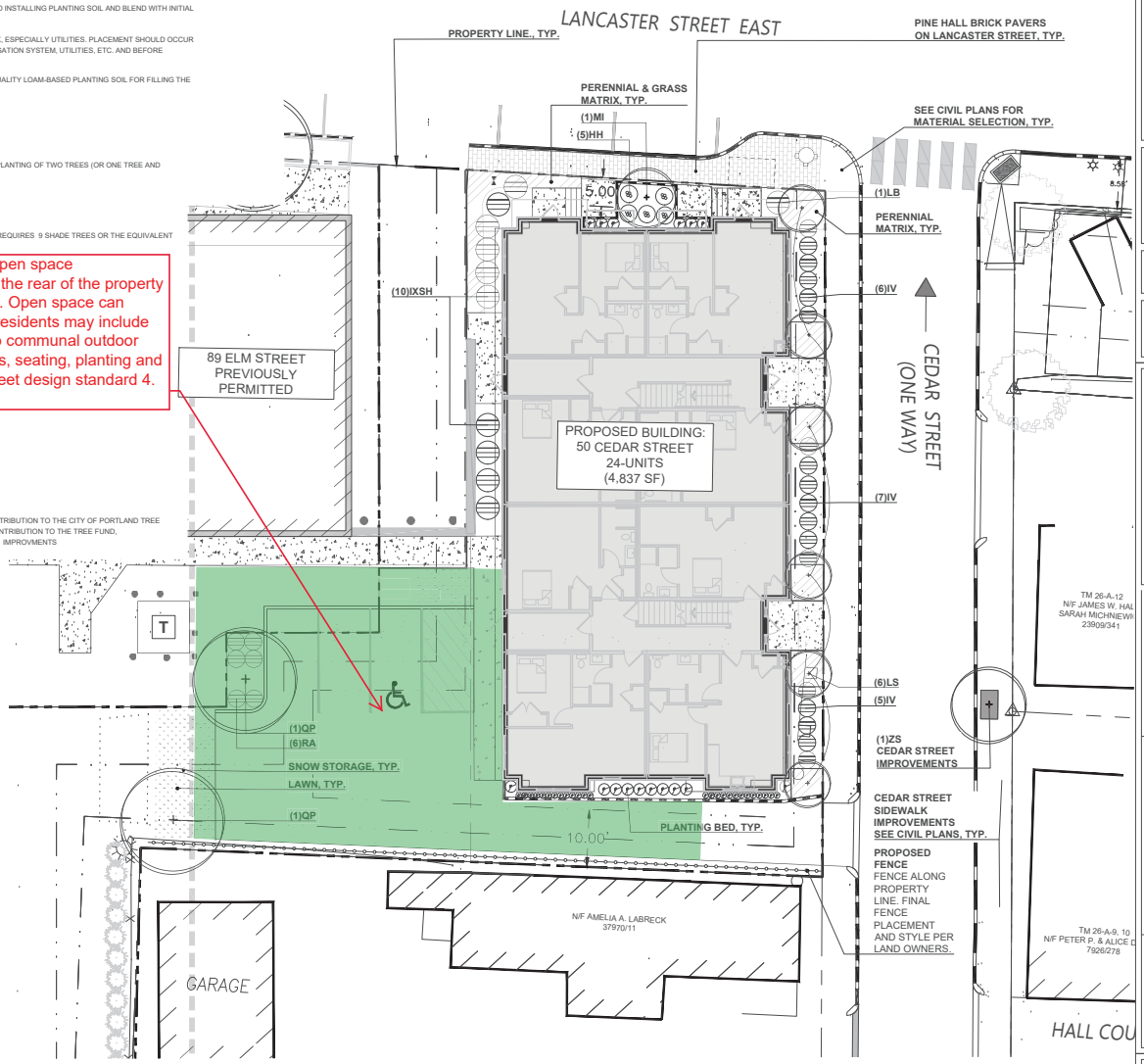
EXISTING TREES = 1

TOTAL PROPOSED TREES = 29*

TOTAL REQUIRED - 24

THE REMAINING STREET TREES WILL BE PROVIDED THROUGH A CONTRIBUTION TO THE CITY OF PORTLAND TREE FUND. THROUGH THE PLANTINGS OF THE PROPOSED TREES AND CONTRIBUTION TO THE TREE FUND,
* PROPOSED TOTAL INCLUDES CEDAR STREET SIDEWALK IMPROVMENTS

Staff suggests open space programming at the rear of the property for the residents. Open space can function for the residents may include but not limited to communal outdoor gathering spaces, seating, planting and lawn areas to meet design standard 4.



PLANTING LEGEND

EXISTING TREE
PROPOSED SHRUB
PERENNIAL MATRIX
PROPOSED DECIDUOUS TREE
PROPOSED PERENNIAL BEDS

NOTE: This drawing is PRELIMINARY REVIEW ONLY. It is NOT intended for use as a construction document.

Prepared For:
REVELER, LLC
188 STATE STREET, 3RD FLOOR
PORTLAND, ME 04101

Prepared By:
Dry landscape architecture, l.l.c
31 miller ave.
biddeford, me 04005

Date:
APRIL 17, 2023

Issued For:
PERMITTING DOCUMENTS

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Title:
PLANTING PLAN

50 Cedar Street
PHASE 2
Portland ME 04103

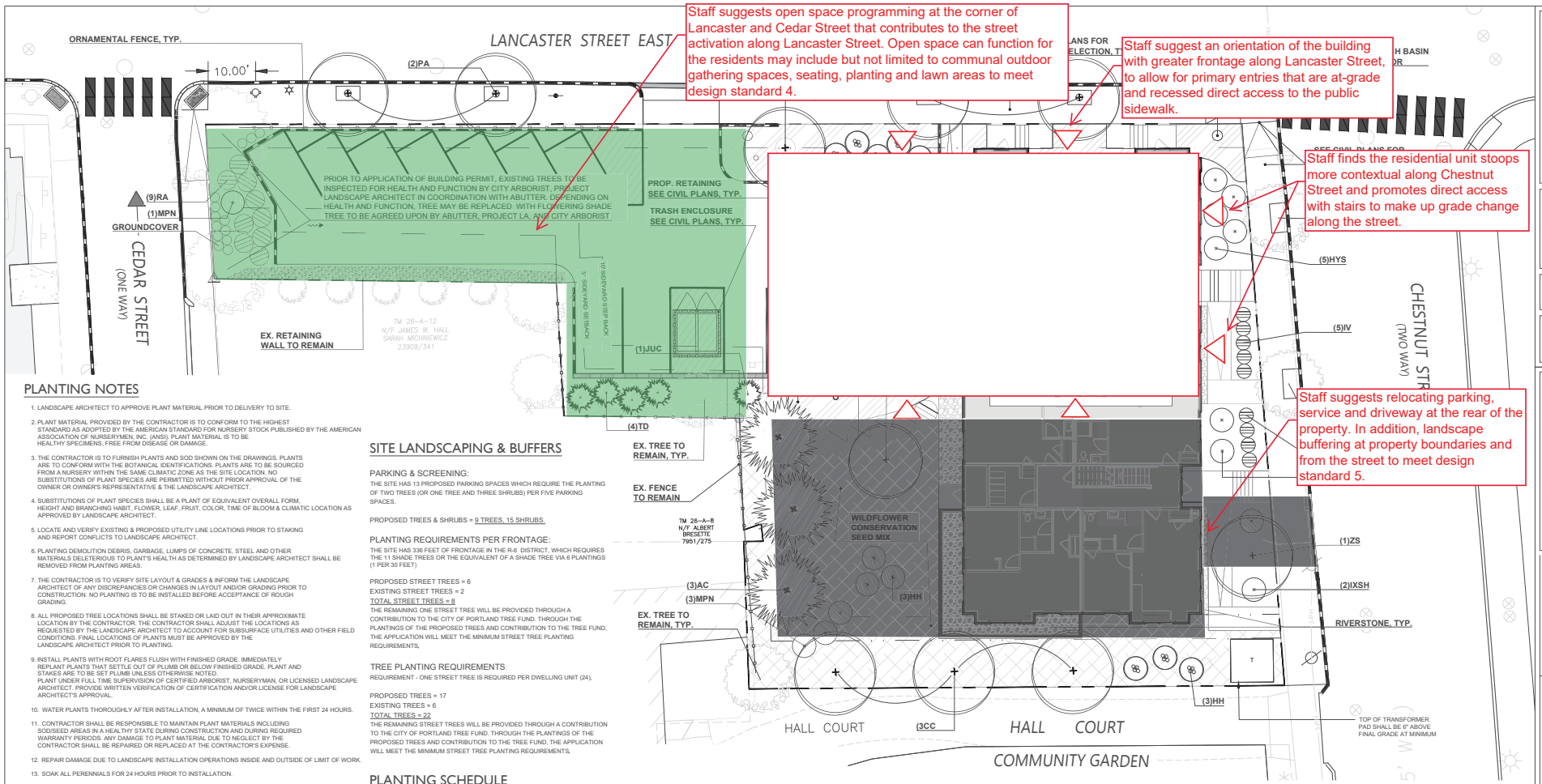
Revisions:
1ST WORKSHOP COMMENTS REV.1 - 09.30.2024

North:

Sheet No.:
L1

Scale: 1" = 20'-0"
0 10 20 40

C:\Users\DRY\OneDrive\Documents\Cloud\ar\DRY LA Projects\50 Cedar - 188 Lancaster\CAD\50 Cedar Street sketch Plan Submission REV 1 09.30.2024.dwg by DRY 09/30/2024



Staff suggests open space programming at the corner of Lancaster and Cedar Street that contributes to the street activation along Lancaster Street. Open space can function for the residents may include but not limited to communal outdoor gathering spaces, seating, planting and lawn areas to meet design standard 4.

Staff suggest an orientation of the building with greater frontage along Lancaster Street, to allow for primary entries that are at-grade and recessed direct access to the public sidewalk.

Staff finds the residential unit stoops more contextual along Chestnut Street and promotes direct access with stairs to make up grade change along the street.

Staff suggests relocating parking, service and driveway at the rear of the property. In addition, landscape buffering at property boundaries and from the street to meet design standard 5.

PLANTING NOTES

1. LANDSCAPE ARCHITECT TO APPROVE PLANT MATERIAL PRIOR TO DELIVERY TO SITE.
2. PLANT MATERIAL PROVIDED BY THE CONTRACTOR IS TO CONFORM TO THE HIGHEST STANDARD AS ADOPTED BY THE AMERICAN STANDARD FOR NURSERY STOCK PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN, INC. (ANSI). PLANT MATERIAL IS TO BE HEALTHY SPECIMENS, FREE FROM DISEASE OR DAMAGE.
3. THE CONTRACTOR IS TO FURNISH PLANTS AND SOD SHOWN ON THE DRAWINGS. PLANTS ARE TO CONFORM WITH THE BOTANICAL IDENTIFICATIONS. PLANTS ARE TO BE SOURCED FROM A NURSERY WITHIN THE SAME CLIMATIC ZONE AS THE SITE LOCATION. NO SUBSTITUTIONS OF PLANT SPECIES ARE PERMITTED WITHOUT PRIOR APPROVAL OF THE OWNER OR OWNER'S REPRESENTATIVE & THE LANDSCAPE ARCHITECT.
4. SUBSTITUTIONS OF PLANT SPECIES SHALL BE A PLANT OF EQUIVALENT OVERALL FORM, HEIGHT AND BRANCHING HABIT, FLOWER, LEAF, FRUIT, COLOR, TIME OF BLOOM & CLIMATIC LOCATION AS APPROVED BY LANDSCAPE ARCHITECT.
5. LOCATE AND VERIFY EXISTING & PROPOSED UTILITY LINE LOCATIONS PRIOR TO STAKING AND REPORT CONFLICTS TO LANDSCAPE ARCHITECT.
6. PLANTING DEMOLITION DEBRIS, GARBAGE, LUMPS OF CONCRETE, STEEL AND OTHER MATERIALS DELETERIOUS TO PLANT'S HEALTH AS DETERMINED BY LANDSCAPE ARCHITECT SHALL BE REMOVED FROM PLANTING AREAS.
7. THE CONTRACTOR IS TO VERIFY SITE LAYOUT & GRADES & INFORM THE LANDSCAPE ARCHITECT OF ANY DISCREPANCIES OR CHANGES IN LAYOUT AND/OR GRADING PRIOR TO CONSTRUCTION. NO PLANTING IS TO BE INSTALLED BEFORE ACCEPTANCE OF ROUGH GRADING.
8. ALL PROPOSED TREE LOCATIONS SHALL BE STAKED OR LAID OUT IN THEIR APPROXIMATE LOCATION BY THE CONTRACTOR. THE CONTRACTOR SHALL ADJUST THE LOCATIONS AS REQUESTED BY THE LANDSCAPE ARCHITECT TO ACCOUNT FOR SUBSURFACE UTILITIES AND OTHER FIELD CONDITIONS. FINAL LOCATIONS OF PLANTS MUST BE APPROVED BY THE LANDSCAPE ARCHITECT PRIOR TO PLANTING.
9. INSTALL PLANTS WITH ROOT FLARES FLUSH WITH FINISHED GRADE. IMMEDIATELY REPLANT PLANTS THAT SETTLE OUT OF PLUMB OR BELOW FINISHED GRADE. PLANT AND STAKES ARE TO BE SET PLUMB UNLESS OTHERWISE NOTED. PLANT UNDER FULL TIME SUPERVISION OF CERTIFIED ARBORIST, NURSERYMAN, OR LICENSED LANDSCAPE ARCHITECT. PROVIDE WRITTEN VERIFICATION OF CERTIFICATION AND/OR LICENSE FOR LANDSCAPE ARCHITECT'S APPROVAL.
10. WATER PLANTS THOROUGHLY AFTER INSTALLATION, A MINIMUM OF TWICE WITHIN THE FIRST 24 HOURS.
11. CONTRACTOR SHALL BE RESPONSIBLE TO MAINTAIN PLANT MATERIALS INCLUDING SOD/SEED AREAS IN A HEALTHY STATE DURING CONSTRUCTION AND DURING REQUIRED WARRANTY PERIODS. ANY DAMAGE TO PLANT MATERIAL DUE TO NEGLECT BY THE CONTRACTOR SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE.
12. REPAIR DAMAGE DUE TO LANDSCAPE INSTALLATION OPERATIONS INSIDE AND OUTSIDE OF LIMIT OF WORK.
13. SOAK ALL PERENNIALS FOR 24 HOURS PRIOR TO INSTALLATION.
14. A LIST OF PLANTS INCLUDING BOTANICAL NAMES, SIZES, AND SPACING ARE SHOWN ON THE DRAWINGS. QUANTITIES ARE PROVIDED FOR CONTRACTOR'S CONVENIENCE AND ARE TO BE VERIFIED. IN THE EVENT THAT QUANTITIES OR OMISSIONS OCCUR THE PLAN DRAWINGS ARE TO BE FOLLOWED.
15. IRRIGATION: A TEMPORARY UNDERGROUND DRIP AND SPRINKLER IRRIGATION SYSTEM IS TO BE PROVIDED FOR ALL PLANT MATERIAL AND SOD OR SEEDED AREAS.
16. DISTURBED SITE AREAS ARE TO BE DRESSED WITH 6" MIN. OF AMENDED TOPSOIL FOR LAWNS AND 12" MIN. FOR PLANT BEDS. TOPSOIL FOR SEEDED AND/OR SEEDED AREAS IS TO BE TWO PARTS SHARP SAND, ONE PART LOAM AND ONE PART ORGANIC COMPOST.
17. PLANT BEDS ARE TO BE MULCHED TO A DEPTH OF 2" MIN. WITH NATURAL BARK MULCH WITH BARK SIZES NO LARGER THAN 3". PERENNIAL PLANT BEDS ARE TO BE MULCHED WITH BARK SIZES NO MORE THAN 1". TREES IN LAWN AREAS ARE TO HAVE MULCH RINGS OF 3' DIA.
18. TREES ADJACENT TO PEDESTRIAN ROUTES AND WITHIN PARKING ISLANDS ARE TO BE LIMBED TO 6' ABOVE GRADE.
19. ALL TREE SPECIES SHALL BE WATERED AT LEAST 2-4 TIMES EACH WEEK WITH 10-15 GALLONS ADMINISTERED TO EACH TREE DEPENDING ON THE WEATHER AND CURRENT MOISTURE LEVEL. WATERING WILL CONSIST OF 10-15 GALLONS ADMINISTERED TO EACH TREE EVERY TIME THEY ARE WATERED.

SITE SOIL NOTES

1. CONTRACTOR SHALL COORDINATE WITH OWNER'S REPRESENTATIVE FOR LOCATION OF STOCKPILE AREAS FOR STRIPPED TOPSOIL AND PLANTING SOIL PRODUCTS. CONTRACTOR SHALL ENSURE AREA IS PROTECTED AND CONTAMINATION OR DISTURBANCE OF STORED PRODUCTS IS NOT ALLOWED.
2. CONTRACTOR SHALL ENSURE SUBGRADE IS SCARIFIED PRIOR TO INSTALLING PLANTING SOIL AND BLEND WITH INITIAL LIFT OR PLACEMENT OF PROPOSED PLANTING SOIL.
3. COORDINATE PLACEMENT OF PLANTING SOIL WITH OTHER WORK, ESPECIALLY UTILITIES. PLACEMENT SHOULD OCCUR AFTER INSTALLATION OF ALL HARDSCAPE IMPROVEMENTS, IRRIGATION SYSTEM, UTILITIES, ETC. AND BEFORE INSTALLATION OF PLANTS.
4. SILVA CELL SOIL FOR STREET TREE PLANTING SHALL BE HIGH QUALITY LOAM-BASED PLANTING SOIL FOR FILLING THE SILVA CELLS.

SITE LANDSCAPING & BUFFERS

PARKING & SCREENING:

THE SITE HAS 13 PROPOSED PARKING SPACES WHICH REQUIRE THE PLANTING OF TWO TREES (OR ONE TREE AND THREE SHRUBS) PER FIVE PARKING SPACES.

PROPOSED TREES & SHRUBS = 9 TREES, 15 SHRUBS.

PLANTING REQUIREMENTS PER FRONTAGE:

THE SITE HAS 336 FEET OF FRONTAGE IN THE R-6 DISTRICT, WHICH REQUIRES THE 11 SHADE TREES OR THE EQUIVALENT OF A SHADE TREE VIA 6 PLANTINGS (1 PER 30 FEET)

PROPOSED STREET TREES = 6
EXISTING STREET TREES = 2
TOTAL STREET TREES = 8

THE REMAINING ONE STREET TREE WILL BE PROVIDED THROUGH A CONTRIBUTION TO THE CITY OF PORTLAND TREE FUND. THROUGH THE PLANTINGS OF THE PROPOSED TREES AND CONTRIBUTION TO THE TREE FUND, THE APPLICATION WILL MEET THE MINIMUM STREET TREE PLANTING REQUIREMENTS.

TREE PLANTING REQUIREMENTS:

REQUIREMENT - ONE STREET TREE IS REQUIRED PER DWELLING UNIT (24).

PROPOSED TREES = 17
EXISTING TREES = 6
TOTAL TREES = 22

THE REMAINING STREET TREES WILL BE PROVIDED THROUGH A CONTRIBUTION TO THE CITY OF PORTLAND TREE FUND. THROUGH THE PLANTINGS OF THE PROPOSED TREES AND CONTRIBUTION TO THE TREE FUND, THE APPLICATION WILL MEET THE MINIMUM STREET TREE PLANTING REQUIREMENTS.

PLANTING SCHEDULE

DECIDUOUS TREES

CODE	BOTANICAL NAME	COMMON NAME	QTY.	SIZE	SPACING
CC	*Cercis canadensis*	Eatern Redbud	4	2.5-3" cal	as shown
PA	*Prunus 'accolade'*	Accolade Cherry	3	2.5-3" cal	as shown
ZS	*Zelkova Serrata*	City Sprite Zelkova	3	2.5-3" cal	as shown

EVERGREEN TREES

CODE	BOTANICAL NAME	COMMON NAME	QTY.	SIZE	SPACING
AC	*Abies concolor*	White Fir	3	8-10'	as shown
TD	*Thuja occidentalis "Degroots Spire"*	Degroot's Spire Arborvitae	4	#7 CONT.	as shown

DECIDUOUS SHRUBS

CODE	BOTANICAL NAME	COMMON NAME	QTY.	SIZE	SPACING
HH	*Hypericum 'Hidcote'*	St. John's Wort	11	24"-36" ht.	48" O.C.
HYS	*Hydrangea quercifolia 'Snow Queen'*	Snow Queen Oakleaf Hydrangea	5	24"-36" ht.	60" O.C.
IV	*Itea virginica*	Little Henry Sweetspire	7	24"-36" ht.	36" O.C.
MPN	*Myrica pensylvanica*	Northern Bayberry	4	24"-30" ht.	60" O.C.
RA	*Rhus aromatica*	Lo-gro Sumac	14	24"-30" ht.	48" O.C.

EVERGREEN SHRUBS

CODE	BOTANICAL NAME	COMMON NAME	QTY.	SIZE	SPACING
IXSH	*Ilex glabra 'Shamrock'*	Shamrock Inkberry	4	30"-36" ht.	48" O.C.
JUC	*Juniperus conferta 'Emerald Sea*	Emerald Sea Shore Juniper	1	18"-24" ht.	48" O.C.

PERENNIAL MATRIX

CODE	BOTANICAL NAME	COMMON NAME	QTY.	SIZE	SPACING
AMH	*Amsonia hubrichtii*	Thread-leafed Bluestar	tbd	tbd	36" O.C.
ABB	*Astilbe 'Bressingham Beauty'*	Bressingham Beauty Astilbe	tbd	tbd	18" O.C.
COM	*Coreopsis 'Moonbeam'*	Moonbeam Coreopsis	tbd	tbd	18" O.C.
GRC	*Geranium x 'Rozanne'*	Rozanne Cranesbill	tbd	tbd	24" O.C.
HAH	*Hemeocallis 'Heavenly Angel Ice'*	Heavenly Angel Ice Daylilly	tbd	tbd	24" O.C.
HEC	*Heuchera 'Caramel'*	Caramel Coral Bells	tbd	tbd	18" O.C.
RFA	*Rudbeckia fulgida 'American Gold Rush'*	Gold Rush Black-Eyed Susan	tbd	tbd	24" O.C.
SMM	*Salvia 'May Night'*	May Night Salvia	tbd	tbd	24" O.C.
PVS	*Panicum virgatum 'Shenandoah'*	Shenandoah Switchgrass	tbd	tbd	24" O.C.
SS	*Schizachryum scoparium*	Little Bluestem	tbd	tbd	18" O.C.

PLANTING LEGEND

EXISTING TREE
PROPOSED DECIDUOUS TREE
PROPOSED SHRUB
PROPOSED EVERGREEN TREE
PERENNIAL MATRIX
WILDFLOWER SEED MIX

NOTE: This drawing is PRELIMINARY REVIEW ONLY. It is NOT intended for use as a construction document.

Prepared For:
REVELER, LLC
188 STATE STREET, 3RD FLOOR
PORTLAND, ME 04101

Prepared By:
Dry landscape architecture, l.l.c
31 miller ave.
biddeford, me 04005

Date:
APRIL 16, 2024

Issued For:
PERMITTING DOCUMENTS

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Title: PLANTING PLAN

158 Lancaster Street
PHASE 3
Portland ME 04103

Revisions:
1ST WORKSHOP COMMENTS REV.1 - 09.30.2024

North:

Sheet No.:
L3

Scale: 1" = 10'-0"
0 5 10 20

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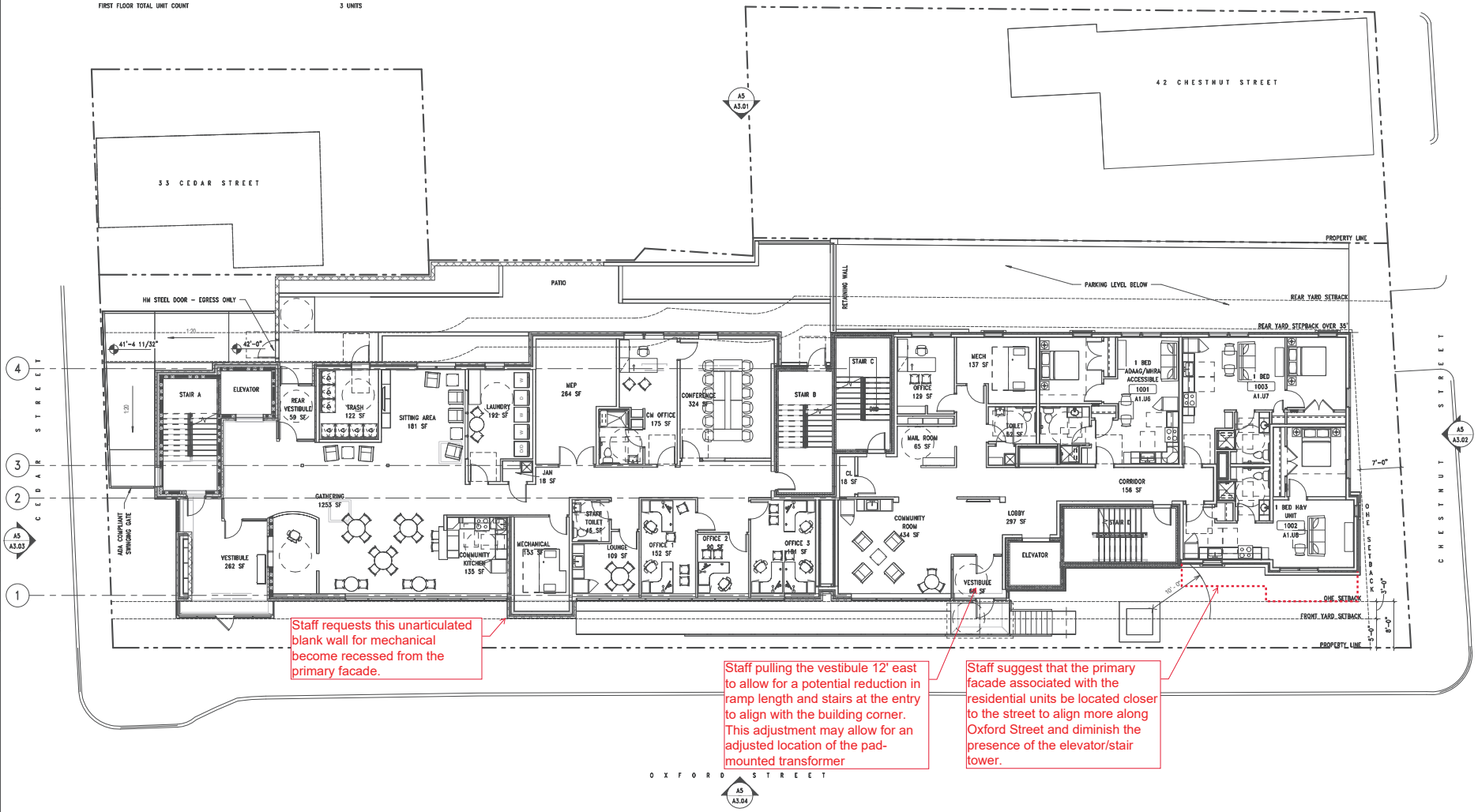
FIRST FLOOR SQ FT CALCULATIONS

FIRST FLOOR GROSS TOTAL	8,904 SQ FT (5,016 SF H-1 + 3,888 SF AH)

FIRST FLOOR UNIT COUNTS

0 BEDROOM	0 UNITS (0 H-1 + 0 AH)
1 BEDROOM	3 UNITS (0 H-1 + 3 AH)
FIRST FLOOR TOTAL UNIT COUNT	3 UNITS



Staff requests this unarticulated blank wall for mechanical become recessed from the primary facade.

Staff pulling the vestibule 12' east to allow for a potential reduction in ramp length and stairs at the entry to align with the building corner. This adjustment may allow for an adjusted location of the pad-mounted transformer

Staff suggest that the primary facade associated with the residential units be located closer to the street to align more along Oxford Street and diminish the presence of the elevator/stair tower.

A5 01 FIRST FLOOR
SCALE: 1/8" = 1'-0"

CWS ARCHITECTURE + INTERIOR DESIGN
PLANNING + DESIGN CONSTRUCTION SERVICES

DESIGNER
CWS ARCHITECTURE + INTERIOR DESIGN
244 US ROUTE ONE, SUITE 100-2A
SCARBOROUGH, ME 04074
207.774.4441
CWSARCH.COM

OWNER
AVESTA
OWNER ADDRESS

PROJECT
AVESTA OXFORD
PROJECT ADDRESS

DRAWING
FIRST FLOOR PLAN
CWS PROJECT NUMBER: 23039

REVISIONS

DRAWING NUMBER
A1.10

SCALE: 1/8" = 1'-0"
DATE: 2024 | 09 | 26

MUNICIPAL SUBMISSION No. 2

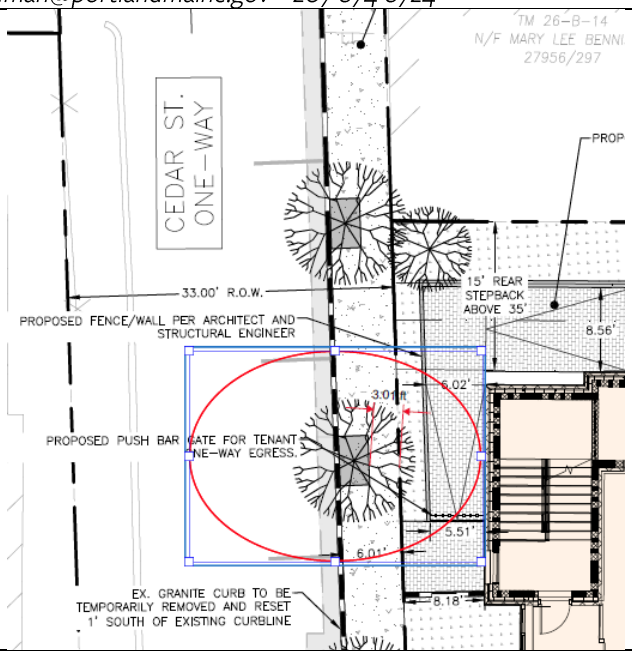
C:\Users\BrenReed\Documents\23039_Avesta Oxford St_R23_CENTRAL_brenedRCBFW.rvt

Site Plan Worksheet | 11/04/2024/2024 | **PL-002885-2024|** *197 Oxford Street.*
Submission #: ***04-2024***
Planner: Eric Freeman – efreeman@portlandmaine.gov – 207-874-8724

Site Plan Review Standards (Sec. 14.6)

Transportation Standards (Sec. 14.6.1)

Standard	*Discussion*	*Finding*
Impact on Surrounding Street Systems	Overview: Phase I is bordered by Oxford, Chestnut and Cedar Streets Phase II is located at the southwest corner of Cedar and Lancaster Streets Phase III is located at the southwest corner of Chestnut and Lancaster streets All three phases share frontages along Cedar Street and Hall Court, A private RoW. The applicant proposes to install a curb extension at the intersection of Oxford and Boyd Streets. The curb extension would extend approximately 20 feet along Boyd Street, removing one on-street parking space. Updates Requested • The applicant shall provide all back up calculations for their trip generation methodology.	Not Met
Access and Circulation	Overview: The applicant proposes to reconstruct sidewalks along the frontages of all three phases using concrete pavers and granite curbing. Additionally, the applicant proposed to reconstruct sidewalk along both sides of Cedar Street using concrete pavers. Sidewalks will be rebuilt to city standards and will be constructed in phases. Internal walkways are proposed for each phase and will connect to the existing sidewalks along Cedar Street, Chestnut Street and Lancaster Street. Updates Requested • Provide site plan dimensions for proposed work along Cedar Street • Minimum of 4' clearance between tree wells and edge of sidewalk. Along Cedar Street only 3' is being provided. Look at shifting the curb line on both sides of Cedar 1' to maintain 20' road width while also allowing for appropriate clearance for street trees and sidewalk clearance. The tree grate does not satisfy the 4' accessible walking path requirement.	



Parking

Overview:

Each phase of this application involves a limited amount of dedicated off-street parking.

Phase I: Includes five basement-level parking spaces accessed via a new curb cut on Chestnut Street. These spaces would be utilized by Housing First Staff. No additional on-site parking is provided for the residents of Phase I. if tenants wish to pursue dedicated off-site parking, there is capacity within the Cumberland Avenue parking garage, which is owned by Co-Applicant, Reveler Development.

Phase II: Includes three off-street parking spaces accessed from Cedar Street.
Phase III: Includes 13 angled off-street parking spaces accessed via an existing curb cut on Lancaster Street.

The applicant intends to provide off-site parking for all 48 market-rate units in the nearby Cumberland Avenue Garage on an as-requested basis.
Reveler Development owns this garage and included supply calculations as part of the previously approved Master Development Plan in 2023

Updates Requested

- The applicant shall provide information demonstrating adequate parking supply will be provided in the garage.
- Phase I site plan shall include the parking aisle width
- Turning templates shall be provided for the Second and third phase. For the third phase, turning templates should be provided for the westernmost angled space.

Transportation Demand Management (TDM)	Overview: The applicant has not provided a TDM plan. Updates Requested • None	Met
Environmental Quality Standards (Sec. 14.6.2)		
Standard	*Discussion*	*Finding*
Preservation of Significant Natural Features and Landscape Preservation	Overview: There are no significant natural features located in the vicinity of this project Updates Requested • None	Met
Site Landscaping and Buffers	Overview: **Phase I:** Several mature trees are located along the rear of the property line. The applicant has requested a waiver of Article 14.6.2 related to tree preservation. **Phase II:** No trees or significant landscaping features are being removed **Phase III:** Eight trees of 10" DBH or greater exist on site. The project will maintain three of those trees which meets landscape preservation standards. Within the R6 zone, one shade tree or plantings are required per every 30 linear feet along all the property frontages, per the City of Portland Technical Manual standards. Where the replacement of trees onsite is not feasible, the applicant intends to contribute the proportionate cost of the replacement trees to the City of Portland Tree Fund. In total, the applicant will plant 23 new trees between the three phases of this application. Updates Requested Phase I: • The applicant should demonstrate how the 20% open space is being determined. Phase II: • The applicant should provide a narrative for the three off-street parking spaces. Staff would be supportive of removing these spaces in favor of the creation of private open space for residents. • The applicant should demonstrate how the 20% open space is being determined.	Not Met
Water Quality, Stormwater Management and Erosion Control	Overview: Phase I: Treatment will be accomplished using Storm-filter cartridges, which will discharge into a proposed R-Tank subsurface detention system. The detention system is sized to store an inch across the entire roof area as well as some ancillary impervious ground surfaces, which is a larger volume than the new sewer flows created by the project. The stormwater will outlet into the combined 18 inch sewer within Chestnut Street.	Not Met

	Phase II: Treatment will be accomplished using Storm-filter cartridges which will discharge into a proposed R-Tank subsurface detention system. The detention system is sized to store an inch of rainfall across the site's impervious area, which exceeds the new sewer flows. The outfall will tie into the previously engineered and approved 89 Elm drainage system which ultimately drains to the upstream end of the MS4 extension that has been designed as part of the Bayside MDP **Phase III:** The project will not create more than 1,000 SF of new impervious area and therefore no treatment is proposed. The site will detain the new sewer flows because its volume exceeds an inch across the site's impervious area. The stormwater detention will be provided by an R-tank system and treatment will be via a Stormfilter BMP. Updates Requested • The Applicant is still waiting for confirmation of utility ability to serve. It is also noted that most utility service locations are noted as approximate pending coordination with various utilities.	

Public Infrastructure and Community Safety Standards (Sec. 14.6.3)		
Standard	*Discussion*	*Finding*
Consistency with City Master Plans	Overview: There are no City Master Plans applicable to this application Updates Requested: • None	Met
Public Safety and Fire Prevention	Overview: A life safety plan was included with this submittal. Updates Requested • None	Met
Public Utilities	Overview: All three phases will be served via underground electrical conduits. New Utility providers have been contacted for their ability to serve the proposed project. The applicant has requested ability to serve letters from Central Maine Power and Portland Water district All three phases will be served by connection to the public sewer system within Chestnut Street and Cedar Street, furthermore, intercepted by the Lancaster Street Combined Sewer. The proposed stormwater management systems have been designed to meet the City standards as well as the applicable standards outlined in Chapter 500. Updates Requested **Phase I :** It appears that the catch basin at the corner of Chestnut street can be installed with a new headstone since it is outside the 7' tip down zone. Please	Not Met

	revise the note on sheet C-31 to reflect this. **Phase II :** Notes clarifying and describing the proposed easement with 89 Elm Street should be added to the site plan or Utility plan so it can be easily referenced in the future. **Phase III :** It appears there is enough room to install a 7' foot tip without having to remove the existing City CB headstone at the corner of Lancaster Street and Chestnut Street.	
Site Design Standards (Sec. 14.6.4)		
Standard	*Discussion*	*Finding*
Massing, Ventilation and Wind Impact	Overview: All three phases meet relevant zoning and dimensional standards and are similar in scale to surrounding buildings.	Not Met
	Updates Requested • The applicant shall provide average grade calculations and methodologies for Phase I • The applicant shall provide calculations used to determine lot coverage and landscaped open space for Phase I **Phase II:** The applicant should provide screening for rooftop utilities **Phase III:** The applicant should provide screening for rooftop utilities	
	Updates Requested • None	
Design Standards	Overview: See attached design review	Met
	Updates Requested • See design review.	

Inclusionary Zoning Implementation Guidelines for Developers of Rental Housing

Applicability/Conditional Use Requirement

Chapter 14, Article 18.2 of the City's Zoning Ordinance requires that development projects creating ten (10) or more new dwelling units for rent or for sale through new construction, substantial rehabilitation of existing structures, adaptive reuse or conversion of a non-residential use to residential use, or any combination of these elements set aside a portion of the project as Workforce Housing. This provision does not apply to projects that have submitted complete Master Development Plan, Level III Site Plan, or comparable applications to move forward prior to November 18, 2015.

All developments of ten (10) units or more are conditional uses subject to Planning Board review on the condition that they comply with the requirements set forth in Chapter 14, Article 18.2.

Workforce Housing Minimum

At least twenty-five percent (25%) of the units in the development shall meet the definition of Workforce Housing Unit for rent. The number of units required is rounded down to a whole number whether the Workforce Units are provided on- or off-site. A fractional fee-in-lieu would result when the calculation of a project's inclusionary obligation results in a fractional unit. The fractional unit obligation would be provided in the form of a proportional fee-in-lieu. For example, a 19 unit project that provides one Workforce Unit would also pay 75% of the fee-in-lieu. If a Developer prefers to pay a fee-in lieu of each Workforce Unit, than the Workforce obligation will be calculated on a fractional value to one tenth. For example, a project creating 45 units of housing would be required to provide eleven (11) Workforce Units and a fractional obligation of 25% as a fee-in-lieu. If the Developer instead prefers to pay the fee-in lieu of providing Workforce Units the Developer would be required to pay 11.25 times the current rate as established by the City.

Household Income Limits

In accordance with Article 18.2 of the City's Zoning Ordinance, the rental of Workforce Units will be restricted to households at or below 80% of the area median income (AMI). The City will reference Area Median Income figures published annually by HUD for the Portland Metropolitan Statistical Area (MSA) or other income limits as deemed reasonable by the City. The City will make available on its website a list of income limits by household size. If at a time in the future HUD no longer provides these annual figures, the City will identify another similar method of determining income guidelines for affordability.

Eligibility of Households for Workforce Rental Units

At the time the lease is finalized, a tenant must be a member(s) of an Eligible Household as defined within the Background & Definition section of the City's Inclusionary Zoning Guidelines. The

Household must occupy the Workforce Rental Unit (Workforce Unit) as its primary residence.

Household size/composition upon the unit's rental should be appropriate to the size of the unit as outlined in the charts below. For the qualification of households by unit size, the head of the household and spouse/partner are assumed to share a bedroom. Two children, whose ages are not excessively disparate, may share a bedroom. Legal custody is required for households including one or more minor children. A household that consists of a pregnant woman will be treated as a two people for income and household size determinations. On average, there will be no fewer than one, nor more than two persons per bedroom.

The City will consider households eligible based on their gross income. The City will use a process similar to what HUD recommends for the HOME program to determine gross income or another method as deemed reasonable by the City. The Owner or their representative will collect and compile all of the relevant paperwork needed to assess a household's eligibility.

Verification will require sufficient proof of household size and income in the form of official tax statements, W-2 forms, pay stubs, credit reports, bank statements, birth certificates, and any other reasonable documents requested by the City or Owner to aid in their efforts to verify whether or not a household is eligible. The City may request additional information as needed. The City shall have the final approval of whether or not a household meets the income or size requirements of each Workforce Unit prior to the signing of the lease.

The chart below indicates the minimum household size for each unit type based on bedroom count.

	Studio/One-Bed	**Two-Bed**	**Three-Bed**	**Four-Bed**
Minimum Household Size By Bedroom	1	2	3	4

Workforce Units will also be subject to maximum household sizes based on bedroom counts.
The following chart outlines the maximum persons allowable per bedroom assuming the occupants meet all other requirements related to qualifications for determining a household such as age of children sharing bedrooms.

	Studio/One-Bed	**Two-Bed**	**Three-Bed**	**Four-Bed**
Maximum Household Size By Bedroom	2	4	6	8

Eligible Households may not qualify if at the time of application any member of the household owns residential real estate.

The City reserves the right to perform an asset test to help determine a household's income. This may include making certain assumptions about the average returns that would be reasonable to expect from certain investments including stocks, bonds, annuities, mutual funds, dividends, trusts, money market accounts, certificates of deposit (CD's) or other financial instruments. The City may request documentation for the three most recent years to help determine a household's income.

The City reserves the right to place an asset limitation test for eligibility.

If Owners find it difficult to rent a Workforce Unit to an Eligible Household who meets the established minimum size requirements they may ask for approval in writing from the City to rent the unit in this singular instance to an Eligible Household smaller than the minimum household size described herein. Reasonable marketing efforts to find Eligible Households of a qualified size should be taken for at least 30 days prior to the City granting a household minimum size waiver. The waiver is only for a single applicant and that household's recertification. Rent shall be calculated based on this smaller household size. Once the Workforce Unit is vacant, minimum household sizes shall apply to future tenants. The City shall determine if the efforts of the owner to rent the unit to an appropriately sized household have been reasonable. Under no circumstances will households be allowed to exceed the maximum household size.

Primary Residence

At the time of occupancy, the Workforce Unit must be the Eligible Household's primary residence. The Unit may not be rented out for short or long term periods to other households.

A household must notify the City if it is absent from the Workforce Unit for 30 days in any 45-day period. If the Household is absent from the Unit for a period exceeding 60 days in one consecutive 365 day period for reasons other than work obligations, health, or emergency reasons than the Household's eligibility will be terminated and their lease shall not be renewed.

Where absences in excess of the above limitation are caused by work obligations, or health reasons or other emergency, the City may require verification of the reasons for the tenants' absence. Households must comply with such requests for verification work, health, or emergency reasons or their lease will not be renewed. For the purposes of this section, incarceration does not constitute a health or other emergency justifying prolonged absence from the home.

Determination of Affordable Monthly Rent

In accordance with Article 18.2, rental of Workforce Units will be restricted to households with income at or below 80% of the Area Median Income (AMI). When determining income eligibility, the City will reference income limits and/or in the AMI figures published annually by HUD for the Portland Metropolitan Statistical Area. The City will make available on its website a list of income limits by household size. If at a time in the future HUD no longer provides these annual figures, the City will

identify another similar method of determining income guidelines for affordability.

To maintain consistency of Workforce Units within the City, rents will be based on the minimum household size per bedroom rather than the income level of a particular applicant. For example, the minimum household size for a two-bedroom Workforce Unit is two (2) persons. The income of a two (2) person household will be used to calculate the maximum allowable monthly rent but a family of four (4) would still be eligible to live in the unit assuming they meet the income restrictions for a four

(4) person household. To calculate the maximum allowable rent of a Workforce Unit the City will take 30% gross income per month of the minimum household size allowed per bedroom less utilities. By factoring utilities, the formula accounts the maximum amount an Eligible Household could afford to devote to housing related expenses. The formula to calculate maximum allowable Workforce Rents is as follows:

0.30 X (annual income based on minimum household size / 12) less utilities = Workforce Rent

To determine the maximum allowable rent for studio Workforce Units the City will calculate 85% of the allowable housing related expenses for an Eligible Household using the following formula:

0.30 X ((annual income based on minimum household size / 12) X 0.85) less utilities = Workforce Studio Rent

Owners may choose to include some or all utilities within the total rent. Utilities that effect rent calculations include electricity, heat, hot water, cooking energy, sewer, water, and trash collection. For all utilities listed that are not included by the Owner in the rent the City shall make reasonable assumptions based on a Unit's bedroom count as to the monthly cost of each utility. To determine what is reasonable the City may utilize the figures estimated by HUD and distributed through the Portland Housing Authority annually for similar utility allowances based on a unit's bedroom count. The City shall reserve the right to determine a different metric should these figures from HUD at any point be unavailable or a better metric be determined.

The Owner may request first, last, and security deposit from applicants. These three expenses shall not exceed the value of one month of rent and together shall not exceed three months of rent.

Households may choose to pay for on-site parking but shall not be required to pay separately for this amenity. If the Owner requires a parking spot(s) be leased with the Workforce Unit and charges a separate fee than parking may be counted similarly to the utilities above and shall be subtracted from housing related expenses for calculating the maximum allowable rent.

Owners may not rent to household's utilizing other rental subsidies such as vouchers without the City's approval and never shall the total rent paid be in excess of the allowable Workforce Unit rent for a determined bedroom size.

Phasing

Projects shall not be segmented or phased to avoid compliance with these provisions. In cases where projects are completed in phases, Workforce Units shall be provided in proportion to the development of market rate units unless otherwise permitted through regulations.

Integration of Units

Workforce Units are encouraged to be integrated with the rest of the development, should use a common entrance, and should provide no indications from common areas that these units are Workforce Housing Units.

Size and Bedroom Count

Workforce Units need not be the same size as other units in the development but the number of bedrooms in such units, either on- or off-site, shall be ten percent (10%) of the total number of bedrooms in the development. For the purposes of this section, every 400 square feet in a market rate unit will count as a bedroom if the actual number of bedrooms in the unit is lower.

Interior Standards

The design, quality, and materials of Workforce Units interiors need not be the same as market rate units. However, the Workforce Units may not be strategically designed to avoid offering basic amenities similar to what are included in the market rate units such as the following:

<u>Kitchen</u>

- Refrigerator
- Stove or separate cook top and oven
- Sink Disposal
- Cabinets
- Range
- Hood
- Microwave (if provided in market rate units)
- Washer Dryer (if provided in market rate units)
- Countertop: Minimum Counter Space not including sink and stove
    - Studio – 4 linear feet
    - 1BR – 6 linear feet
    - 2BR – 8 linear feet
    - 3BR – 10 linear feet

<u>Bathroom</u>

- Sink
- Shower
- Toilet
- Shower Curtain Rod or Shower Door

Medicine Cabinet with Mirror or other storage space with a separate mirror

Flooring

All living space and storage areas shall have a finished floor. The Workforce Units should have the same or comparable floor finishes to the market rate units. However, in order to promote respiratory health, living and dining areas and at least one bedroom should have a surface other than carpet.

Closets

All units shall have adequate storage (including common space storage if provided to the market rate units)

All bedrooms shall have at least one closet including at least one closet for a studio All closets shall have a shelf and pole

Public Funding Sources

Projects that propose greater levels of affordability than what is required in Article 18.2 in terms of income levels, term of affordability, or number of units may be eligible for some financial resources through the City at the City's discretion.

Tax Increment Financing Eligibility

If at least thirty-three percent (33%) of the units in a development are Workforce Units, the development is eligible to request subsidy funding through an Affordable Housing Tax Increment Financing (TIF) deal, subject to City Council approval.

Affordable Housing Agreement

The Owner will be required to sign and record in the Cumberland County Registry of Deeds an Affordable Housing Agreement (AHA) with the City and to include the affordability restrictions as a covenant in the project's deed(s). The Affordable Housing Agreement shall be referenced directly in the property's deed unless prohibited by federal, state, or local law. In order to guarantee affordability, this recorded covenant will limit increases in rent according to the calculation defined by the City and the Eligible Household requirements as they relate to increases in median income. It will limit the incomes of subsequent tenants to the same income limits initially applied.

Minimum Term of Affordability

The term of affordability for the required Workforce Units provided shall be defined as follows:

Percentage of Workforce Units Provided	Minimum Term of Affordability
25%	30 Years
50%	20 Years
100%	10 Years

For Workforce Rental Units the reduced terms of affordability will apply to all proposed Workforce Units including those in excess of the required minimum 25% of units. For example, if a rental project proposed to develop 40 units of housing of which 20 units, or 50%, would be reserved as Workforce Units, than all 20 Workforce Units would have a 20 year term of affordability.

Dwelling units created or redeveloped by non-profit educational institutions for use as housing exclusively for enrolled students of educational institutions shall not be subject to the set aside requirement of Article 18.2. If the units are no longer used exclusively by enrolled students the building will be required to meet the workforce housing standards set forth in Article 18.2

Reduction of Fees & Priority Review

Notwithstanding any other provision of Chapter 14 or Chapter 6 of the City's Zoning Ordinance to the contrary, development fees shall be reduced by the City for an eligible project in the manner described in the chart below:

Percentage of new units that are low-income or Workforce Units	**Percentage discount of development fees**
25% or more	25% reduction

Household Preference

Household preference for Workforce Units shall be given, to the extent permitted under law to Eligible Households, in the following order:

1) Current residents of the City who have lived in Portland as their primary residence for the past two years
2) Previous residents of the City who were displaced within the last 12 months prior to the Workforce Unit becoming available
3) Persons employed full time by the City
4) All others

The applicant for housing will be responsible for documenting their preferred status under any of the above noted categories. Documentation may include confirmed leases, bank statements, utility bills, voter registration, tax returns, insurance statements, and other reasonable documents as requested by the City or Owner to demonstrate preferred status. The City or Owner may request more than one form of documentation.

Household preference does not preclude Owners from renting to non-preferred applicants assuming applicants meet the necessary eligibility requirements and there are more Workforce Units available than eligible preferred applicants. Other preference categories may be added to specific projects or to the City's standards at a later date as appropriate.

Marketing / Selection Process

In each instance that an Owner intends to rent a Workforce Unit, prior to listing the property for rent or renewing a lease, an owner shall first give the City written notice of such intent (the "Notice of Intent") addressed to the City's Housing and Community Development Office. The City shall make the final determination whether or not a potential household is qualified as well as the maximum allowable rental price as determined in accordance with the calculation parameters determined by the City.

Unless otherwise agreed to with the City, the following system will be followed. The Owner will place an advertisement, approved by the City, in one or more newspapers designated by the City. Interested parties will be given sufficient time to request and return a preliminary application. The City shall have the opportunity to list the property on its website for a minimum of 60 days for initial occupancy and 30 days for subsequent rentals during the marketing process to solicit interest from potential Eligible Households. The City will forward any inquiries to the Owner or their designated representative.

The Owner shall collect all necessary supporting documents for the City's final approval. The City will, at a minimum, monitor the process and review buyer qualifications, but may work collaboratively with Owners on marketing, selection, qualification, and orientation. All determinations regarding eligibility and rental amount are subject to review and final approval by the City.

Maintenance of a Waiting List

The Owner is encouraged to maintain a waiting list of Eligible Households by preferred status who have filed an application or a letter and who meet the qualifications defined herein. Such applications should include the following in order to classify the applicant: the ages, genders, and relationships of household members, gross household income, and information related to preferred status and household eligibility. It is understood that it is the responsibility of the applicant to update information, which will affect their income, household eligibility, or preferred status, and that it is not the responsibility of the Owner to verify actual status until a unit becomes available. Final approval of Eligible Households, Workforce Units, and maximum allowable rent will be decided by the City.

Leases

All leases will be a year in length with the rent consistent throughout the term of the lease. The maximum rent allowable will be determined at initial application and during any recertification process prior to the renewal of a lease. Tenant leases for Workforce Units shall include the method for updating rents set forth in these guidelines and as a condition of continued eligibility, obligate the household to report all information required by these guidelines, including providing copies of applications, recertifications, and supporting documentation used by administrators of rental subsidies and the City. The lease shall also include the method and implications of the recertification

process for Workforce Units as outlined in these guidelines. Eligible Households renting workforce units will be recertified annually with final approval from the City before renewing a lease.

Tenant leases shall include the method for updating of rents set forth in these guidelines and, as a condition to continued eligibility, obligate the household to report all information required by the guidelines, including providing copies of applications, recertifications, and supporting documentation used by administrators of rental subsidies. The Owner shall enforce the lease, if necessary to the point of terminating Eligible Household status, requiring market rents, and initiating and prosecuting eviction proceedings against renters of workforce units who do not report as required or whose eligibility lapses.

"Floating" Workforce Units

Prior to the Project's approval, the Owner and City shall agree to the distribution, size, and bedroom type of the Workforce Units in order to include these details in the Affordable Housing Agreement (AHA). Owners are encouraged to distribute workforce units equally throughout the project. Designated Workforce Units within any development may be "floating" i.e. changed by substitution, that is, the designation of a unit as affordable does not necessarily stay with the same unit over the life of the development. The Project shall maintain the required number of bedrooms and Workforce Units as outlined in the AHA and may only switch which unit is reserved as a Workforce Unit with City approval following certain recertification situations as described in greater detail below.

Recertification of Workforce Units

Prior to the renewal of a Workforce Unit's lease, the tenant shall recertify that their household meets the eligibility and household size requirements for the unit. The same process and documentation will occur as with the initial lease up of the Unit. Unless the Owner can substantiate claims that the tenant has violated terms of the lease or is refusing to adequately comply with the recertification process no other households may be considered to lease the Workforce Unit unless the current tenant chooses not to renew their lease. The Owner or their representative shall collect and compile the necessary recertification documentation. The City shall have the right of final approval. The Owner or their representative shall maintain records of the recertification process as described in greater detail in the Administration & Record Keeping section below.

Loss of Household Eligibility

A unit shall lose its designation as a Workforce Unit when it no longer houses an Eligible Household. This will occur upon two consecutive recertifications wherein a once Eligible Household's income is greater than the allowed AMI and is no longer considered eligible. The recertification of all applicants may be subject to final approval from the City. In this scenario, an Owner may, with 90 days' notice, charge Market Rent. The tenant is then eligible for continued occupancy in the particular unit for one additional year following the date of the most recent recertification. After any adjustment in accordance with the above, the next available appropriate unit should be rented to an Eligible

Household, so as to restore and maintain the unit size, type, and mix originally intended. The City shall have final approval that any substitute unit is appropriate for satisfying the requirements intended for Workforce Units within the Project as defined within the AHA.

If no suitable alternative unit becomes available to rent as a Workforce Unit within a year of the former Eligible Household now paying Market Rent than the Owner shall not renew the former Eligible Household's lease and shall return the unit to its use as a Workforce Unit for Eligible Households. The Owner shall cooperate with the City and with any documentation that it deems necessary to approve the substitute Workforce Unit or Eligible Household.

In the case where the tenant has been accepted as a market rate tenant, the Owner shall pay to the City's Housing Trust the cash value of the difference between the maximum allowable Workforce rent and the market rent until such time as another unit has been approved by the City as an acceptable substitute Workforce Unit and occupied by an Eligible Household. Occupancy during this transition period by an over-income household will not constitute default under the conditions set forth in the AHA.

Household Failure to Participate in Recertification

A household is considered to have failed to participate in the recertification process after not sufficiently responding to three written requests by the Owner or City within a 60 day period. Tenants may not be asked to participate in a recertification process more than one time per 365 day period. The City shall have final approval in regards to whether sufficient evidence has been provided to substantiate a household's failure to participate in the recertification process.

Eviction

Assuming the lease meets all federal, state, and local requirements, nothing in these guidelines are meant to restrict the right of the Owner to evict any tenant who fails to participate in the recertification process or breaches the lease with the Owner in any way. In no case shall the Owner be required to support an overall higher level of subsidy than intended by the initial distribution as outlined in the AHA. Any and all costs associated with said enforcement or eviction shall be born by the Owner.

Enforcement

The Owner will be required to record the AHA and conditions contained therein and shall file a copy of the recorded Agreement which copy shows the usual recording date, with the Cumberland County Registry of Deeds. In the case of off-site Workforce housing, the Owner shall record the AHA in the chain of title for both properties. No occupancy permit shall be issued until complete certified copies of the AHA with any attachment thereto and with the recording date(s) noted thereon, are filed with the County and suitable evidence provided to the City.

Without limitation on any other rights of the City, in the event there is a violation of any conditions

contained within the AHA, the City may take any one or combination of the following steps to ensure compliance and these enforcement provisions shall be expressly authorized by and contained within the AHA:

- Revocation or the Project's approval, Building Permit, or Certificate of Occupancy;
- Modification of the AHA;
- Injunctive relief to enforce the terms of the AHA;
- Payment of money damages to the City in an amount at least equal to and as much as double the required rent and the rent being charged for the period of non-compliance;
- Any and all legal expenses incurred by the City or aggrieved tenant(s); and
- A cash payment, as provided for in Division 30 related to fee-in lieu payments, pro-rated to the number of required affordable units, made to the City if the Owner is unable to provide Workforce Units for occupancy as described in the AHA.

The Owner may request a certificate from the City stating that the Owner is in compliance with the terms and conditions of the AHA, or stating non-compliance and the actions necessary to come into compliance. The City will execute and deliver such certificate within thirty (30) business days or receipt of a written request for such a certificate. Certificates of compliance shall not be required for the leasing of any Workforce Units.

Administration & Record Keeping

The Eligible Household's application, recertification forms and documentation, and any third party verifications must be maintained by the Owner throughout the Eligible Household's occupancy and for a period of at least seven (7) years thereafter. These records must be available to the City within ten (10) business days if requested. Applications and waiting lists shall also be kept on file for a period of at least seven (7) years or some other period of time if deemed reasonable by the City.

The Owner will file an annual report to the City within 60 days of the end of each calendar year providing information related to Workforce Unit vacancies, waitlists, household turnover, household size, household income, market rate rents, recertifications, and any other relevant information.

Cash Payment In Lieu of Affordable Units

All projects including ten (10) or more residential units created through new construction, substantial rehabilitation of existing structures, adaptive reuse or conversion of a non-residential use to residential use, or any combination of these elements must comply with Article 18.2 of the Code. The projects will be required to provide 25% of the total number of units as Workforce housing as defined in Article 18.2 of the Code. Developers of such units are encouraged to provide Workforce Units on-site. However, in accordance with subsection 18.2.3 C 6, developers may choose to make a cash contribution to Portland's Housing Trust Fund.

The payment is the same for rental and homeownership projects. The fee for Workforce Units not

provided shall be $150,000 per unit, adjusted annually in the same manner as the fee under Article 18.1 for Housing Preservation and Replacement. For projects that are building more than one building in phases, the fee- in lieu payment shall be paid proportionally to the project's phasing. The fee is calculated up to one tenth of a fractional unit. For example, if a project is proposing 25 units and prefers to pay the fee for all units the Developer would be required to pay 6.25 times the current rate as established by the City.

All money shall be due prior to the issuance of a Certificate of Occupancy or another payment method approved by the City.

Off-Site Units

A Developer may choose to satisfy the Workforce Unit requirements by providing these units off-site through the construction of new units, the restriction of existing market rate units, or the conversion of non-residential uses. In addition to the foregoing, all off-site units shall be consistent with the following provisions:

1. Be located within the same Census Block Group as the parcel from which the Project triggering the creation of Workforce Units is located or within 1,500 feet of the Project;
2. Be comparable or larger in size and bedroom count to the average units being created within the associated Project.
3. Be similar in quality to the units being created within the project and if needed, as determined by the City, shall be rehabbed to be similar in quality to a newly constructed unit.

The Developer shall determine the intent for full or partial off-site placement of Workforce Units prior to a project's approval by the City. The City shall not accept off-site units that are run down or show signs of substantial wear and deterioration. This includes heating systems, appliances, plumbing, roofing, siding, flooring, common areas, windows, landscaping/hardscape, electrical wiring, and fixtures, kitchen/bath countertops, fixtures, cabinets, bath/shower, or other typical elements of a unit or building that are nearing the end of their expected life cycle and may soon need replacement or maintenance. If other amenities, such as air conditioning, dishwasher or washer and dryer are provided for the new market rate units than comparable amenities shall be provided for the off-site Workforce Units.

Off-site units shall be delivered safe in accordance with all federal, state and local environmental regulations pertaining to lead paint, asbestos, mold, radon, and any other hazardous conditions common to residential structures. All reasonable tests, including but not limited to lead paint tests and radon tests shall be completed prior to the sale or lease of a unit.

Appeals

A Developer or Owner or Tenant may appeal to the City Manager if they believe that City misinterpreted Division 30 or any subsequent agreements restricting the Workforce Units. All such appeals shall be made in writing and include a description of the City action which is being appealed

and the grounds for the appeal.

Non-Eligibility/Disqualification

No employee, agent, stockholder, officer, director, servant, or family member of the Owner or its Management Company, or its employees, agents, or servants thereof, related either by blood, marriage, or operation of law may qualify for a Workforce Unit or receive any benefit related in any way to the administration or compliance with the AHA conditions contained therein.

Employees of the Planning Authority will not be eligible for a Workforce Unit in the City.

Waiver

The City reserves the right to waive or amend portions of these regulations on a case by case basis where an Owner is able to sufficiently demonstrate that the need for a waiver is due to the unique circumstances of the property (e.g. in order to make Workforce Units similar in design or size to market rate units) or due to unique physical constraints of the property. The applicant shall bear the burden of presenting substantial evidence to support the grant of a waiver from any portion of these regulations.

Waivers shall not be granted that will have the effect of removing or reducing the minimum of 10% of the total units proposed as Workforce Units available, altering the income limits on eligible households, increasing the maximum allowable sale price or rental rate, or decreasing any fee owed outside of what is stipulated in the above regulations.

Waivers shall be determined by the City's Planning Authority. Owners may appeal the Planning Authority's decision regarding waivers to the City Manager. All such appeals shall be made in writing and include a description of the City action which is being appealed and the grounds for the appeal.

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CITY OF PORTLAND
LAND USE CODE



5/6/24

RECORD OF AMENDMENTS

Date	Section(s)	Order No.
11/3/20	Article 3 Definitions Section 18.2.3 Ensuring Workforce Housing	By Referendum
1/4/21	Article 3 Definitions Article 6 Table 6-C	146-20/21
2/22/21	Article 6 Table 6-C	163-20/21
3/15/21	Section 18.3.2 Establishment of the Housing Trust	178-20/21
3/15/21	Article 7 Table 7-E	180-20/21
7/19/21	Article 3 Definitions Article 6 Table 6-A Article 7 Table 7-B	303-20/21
3/7/22	Article 9 Table 9-C Section 9.1.7(A)(1)(a) Height bonus applicability	153-21/22
6/22/22	Article 6 Table 6-A Article 7 Table 7-A	260-21/22
6/22/22	Table of Contents, Table 5-A, Table 7-A Section 8.7 Munjoy Hill Neighborhood Conservation	284-21/22
11/8/22	Section 18.4.5 Conversion Permit	By Referendum
2/6/23	Section 8.5.7 The Roux Institute at Northeastern University Overlay	125-22/23
12/18/23	Article 3 Definitions Article 6 Table 6-A, Sections 6.4.2, 6.4.12, 6.6.2(A) Article 7 Tables 7-A, 7-D Article 18 Table 18-C, Section 18.2.4 Article 19 Table 19-B	85-23/24
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1 INTRODUCTORY PROVISIONS

1.1 TITLE

The title of this chapter of the City of Portland Code of Ordinances is the City of Portland Land Use Code and is referred to as the City of Portland Land Use Code or the Land Use Code.

1.2 ZONING MAP

The City of Portland zoning map is incorporated by reference.

1.3 PURPOSE

The intent of the Land Use Code is to protect the health, safety, and general welfare of the residents of Portland, consistent with the City's Comprehensive Plan, through standards that govern the orderly and compatible use of land, the form and mass of buildings, and the relationship of development to the public realm, Portland's open spaces, and the environment.

1.4 APPLICABILITY

No building or structure shall be erected, structurally altered, enlarged, repaired, moved, rebuilt, or used, and no land shall be sold, leased, conveyed, used, developed, or altered except in conformity with the provisions of this Land Use Code.

1.5 ENFORCEMENT

1.5.1 Enforcement

The Building Authority and/or a City of Portland Code Enforcement Officer is authorized to institute or cause to be instituted by the Corporation Counsel in the name of the City any and all actions, legal or equitable, that may be appropriate or necessary for the enforcement of the Land Use Code.

1.5.2 Violations

Any person being the owner or occupant of, having control of, or having the use of any building or premises or part thereof, who violates any of the provisions of this Land Use Code, shall be guilty of an offense and subject to the penalties and remedies provided in Chapter 1, Section 1-15 of the City of Portland Code of Ordinances and 30-A M.R.S. § 4452.

1.6 RELATIONSHIP WITH OTHER LAWS

1.6.1 Federal and state law

Where conditions, standards, or requirements imposed by any provision of this Land Use Code are found to be inconsistent with a provision listed in the law or regulations of the State of Maine or federal government, the more restrictive provision shall control.

1.6.2 City of Portland Land Use Code

If any provision of this Land Use Code contains an actual, implied, or apparent conflict with another provision of this code, the more restrictive provision shall control.

1.6.3 Fair Housing accommodation

The City of Portland may make reasonable modifications to the requirements of the Land Use Code to accommodate the needs of persons with disabilities as so defined in Title VII of the Civil Rights Act of 1968, as amended by the Fair Housing Amendments Act of 1988.

1.6.4 Comprehensive Plan

The Comprehensive Plan serves as the basic policy guide for this Land Use Code. Amendments to this Land Use Code shall be generally consistent with the current Comprehensive Plan.

1.6.5 Current versions and citations

All references to other regulations or manuals in this Land Use Code refer to the most current version and citation for those regulations or manuals, unless expressly indicated otherwise. When the referenced regulations or documents have been repealed and not replaced by other regulations or manuals, Land Use Code requirements for compliance are no longer in effect.

1.6.6 Private agreement

This Land Use Code does not nullify any private agreement or covenant. However, where this code is more restrictive than a private agreement or covenant, this code controls. The City does not enforce private agreements.

1.7 DELEGATION OF AUTHORITY

Whenever a provision requires the head of a department to perform an act or duty, that provision will be interpreted as authorizing the department head or officer to delegate that responsibility to others over whom he or she has authority.

1.8 RULES OF INTERPRETATION

1.8.1 Meaning of words and terms

All words and terms shall have the meanings shown in Article 3, unless otherwise expressly stated. For words or terms not specifically defined in this Land Use Code, they are interpreted by their common dictionary meaning or customary usage consistent with their context.

1.8.2 Graphics and illustrations

Graphics and illustrations are included to illustrate the intent of the text. In the case of a conflict between the text and any graphic or illustration, the text controls.

1.8.3 Lists and examples

Unless otherwise expressly indicated, lists of items or examples that use "including," "such as", or similar terms are intended to provide examples only, and shall not be construed as being limited to the items or examples listed.

1.8.4 Time

When a number of days is specified as a period from a certain day within which or after or before which an act is authorized or required to be completed, time is computed as the number of calendar days excluding the calendar day when the act is authorized or required to be completed. Business days shall be interpreted as days on which the City of Portland is open for business.

1.8.5 Obligatory terms and conjunctions

The terms in the text of the Land Use Code shall be interpreted in accordance with the following rules of construction:

A. The terms "must", "shall", or "will" are mandatory terms that express a requirement or impose an obligation.
B. The terms "must not", "shall not", "will not", and "may not" express a prohibition.
C. The term "should" expresses a recommendation or suggestion and does not express a requirement or imposition.

D. The term "may" is permissive and does not express a requirement or imposition.
E. The conjunction "and" indicates that all connected words or provisions apply.
F. The conjunction "or" indicates that the connected words or provisions may apply singly or in any combination.
G. The conjunction "either [...] or" indicates that the connected words or provisions apply singly, but not in combination.

1.8.6 Gender

Words denoting one gender apply to all genders.

1.8.7 Abbreviations

Building Authority. Either the Department of Permitting and Inspections, its director, or their designee.

Council. The Portland City Council.

Planning Authority. Either the Department of Planning and Urban Development, its director, or their designee.

Public Works Authority. Either the Department of Public Works, its director, or their designee.

1.9 SUCCESSIVE APPLICATIONS

Whenever any application, appeal, or other request filed pursuant to this Land Use Code has been finally denied on its merits, a second application, appeal or other request seeking essentially the same relief, whether or not in the same form or on the same theory, shall not be brought within one year of such denial unless, in the opinion of the authority or board before which it is brought, there has been a substantial change in circumstance or substantial new evidence is available.

1.10 AMENDMENTS

1.10.1 Authority

The City Council may amend this Land Use Code and the zoning map incorporated herein.

1.10.2 Procedure

A. An application for a text or zoning map amendment shall be filed with the Planning Authority. A payment of a nonrefundable application fee, as established by the City Council to cover administrative costs and costs of a hearing, shall accompany each application. The fee for text or zoning map amendment applications may be waived or reduced by the Planning Authority in the case of an application submitted by a governmental body or where an applicant can establish financial hardship. If a text or zoning map amendment application is withdrawn by an applicant prior to the submission of the advertisement copy to the newspaper to announce the public hearing, a refund of half of the amount of the application fee will be made to the applicant by the City provided that all costs incurred by the City have been paid in full by the applicant.
B. Once it is determined that the application is complete, the Planning Authority shall give a dated receipt to the applicant and, in the case of a map amendment, shall notify, by mail, all property owners within the limits of the proposed zoning map amendment and all property owners 500 feet beyond said area, except that for map amendments to a site located within industrial zone designations the notice range shall be 1,000 feet. The notice

hereunder shall include a brief description of the application, the address or location of the property involved, and contact information where additional information may be obtained. The cost of noticing shall be charged to the applicant.

C. A private applicant for a map amendment that would permit a development subject to major site plan review shall conduct neighborhood outreach according to the provisions for neighborhood meetings under Article 14.

D. The Planning Authority shall review the application against the standards of this article and make a recommendation to the Planning Board.

E. The Planning Board shall hold a public hearing in accordance with the provisions of Article 2 and make a recommendation to adopt, adopt with modifications, or not adopt the proposed map or text amendment, and forward the recommendation to the City Council.

F. The City Council shall review the proposed amendment and determine whether and how to amend the Land Use Code or zoning map.

1.10.3 Review fees

The applicant shall pay a fee to cover the professional and administrative costs for review and analysis associated with the amendment, including but not limited to planning, legal, engineering, or other services. The fee shall be based on the hours of review and processing time and the prevailing hourly rate for reimbursement of City costs. The City shall periodically invoice the applicant for such costs incurred by the City, which invoice shall be paid promptly by the applicant.

1.10.4 Review standards

Except as otherwise required by law, amendments to the City's Land Use Code shall be pursuant to and consistent with the Comprehensive Plan.

1.11 TRANSITION RULES

A permitted use established prior to the effective date of the Land Use Code that is now classified as a conditional use shall be deemed a lawful conditional use. Any subsequent addition, enlargement, or expansion of that use shall conform to the procedural and substantive requirements for conditional uses in Article 6. A permitted or conditional use established prior to the effective date of this Code that is now classified as a prohibited use shall be deemed a nonconforming use and is controlled by the provisions of Article 4.

2 ADMINISTRATION

2.1 PLANNING BOARD

2.1.1 Composition

There shall be a Planning Board of seven members. Members of the Planning Board shall be residents of the city and shall not be officers or employees of the City. Members shall serve without compensation.

2.1.2 Appointments

A. **Terms.** The members of the Planning Board shall be appointed by the City Council for terms of three years. Such members shall serve until their successors are duly appointed and qualified. Such terms shall be staggered so that the terms of not more than three members shall expire in any calendar year; providing, however, such service shall not extend to over 120 days after expiration of their term. Members may serve for three consecutive three-year terms.

B. **Vacancies.** Permanent vacancies on the Planning Board shall be filled by the City Council, in the same manner as other appointments hereunder, for the unexpired term of the former member.

2.1.3 Removal of members

Any member of the Planning Board may be removed for cause by the City Council at any time, provided, however, that before any such removal, such member shall be given an opportunity to be heard in their own defense at a public hearing.

2.1.4 Officers

A. **Chair.** The members of the Planning Board shall annually elect one of their number as chair to preside at all meetings and hearings and to fulfill the customary functions of that office. The chair may administer oaths.

B. **Vice chair.** The members of the Planning Board shall annually elect one of their number as vice chair. In the absence of the chair, the vice chair shall act as chair and shall have all the powers of the chair. The vice chair shall have such other powers and duties as may be provided by the rules of the Planning Board.

2.1.5 Committees

The chair of the Planning Board shall assign the members of the board to such regular and special committees as may be established by the board. Such committees shall have no final authority but shall assist the board in the conduct of its business by making recommendations to it concerning such specific items as may be assigned to them for study and report. The board shall adopt such rules as it shall deem appropriate to govern the organization and operation of its committees. Committee meetings deliberative in nature shall be open to the public in accordance with Title 1 M.R.S. § 401 et seq.

2.1.6 Quorum and necessary vote

As to any matter requiring a hearing, no business shall be transacted by the Planning Board without a quorum, consisting of four members, being present. The vote of at least four members shall be necessary to authorize any action by the board. If less than a quorum is present, the hearing may be adjourned for a period not exceeding three weeks at any one time. The Planning Authority shall notify

in writing all members of the date of the adjourned hearing and shall notify such other interested parties as may be directed in the vote of adjournment.

2.1.7 Conflicts

No member of the Planning Board shall participate in the hearing or disposition of any matter in which he or she has an interest. Any question of whether a member has a conflict of interest sufficient for a member to be recused shall be decided by a majority vote of the members present, except the member whose possible conflict is being examined. Where such vote results in a tie, the subject member shall be recused from the matter.

2.1.8 Meetings and procedures

A. **Meetings.** Regular meetings of the Planning Board shall be held at the call of the chair or as provided by rule of the board. Special meetings may be called by the chair or any four members of the Board or at the request of the City Council.

1. *Workshops.* Workshops of the Planning Board or any of its committees may be held at the call of the board or committee chair, as the case may be, for the presentation of information by the Director of the Department of Planning & Urban Development, their staff, an applicant, or others. These meetings will be open for public comment according to the rules of the Planning Board. Such meetings, unless open to the public as provided in Title 1 M.R.S. § 401 et seq. shall be informational only and shall not result in final decisions on any matter.
2. *Public hearings.* Public hearings shall be held as required by the various statutes, codes, and ordinances pursuant to which matters are brought before the Planning Board and shall be conducted in accordance with relevant state law, the Land Use Code, and the rules of the board.

B. **Notice.** The Planning Authority shall give notice of the time and place of public workshops and hearings, including a brief description of the application(s) to be considered, as follows:

1. *Site plan and subdivision.* Notice shall be given to the general public by publication in a newspaper of general circulation in the City of Portland at least two times, the date of the first publication to be at least 10 calendar days prior to the workshop or hearing. Notice shall also be sent by regular United States mail at least 10 calendar days in advance of the workshop or hearing date to the applicant, the owner(s) of the subject property, and all owners of property located within 500 feet of the subject property, except that for subdivisions within industrial zones the notice range shall be 1,000 feet.
2. *Land Use Code or zoning map amendment.* Notice of public hearing shall be publicly posted in the municipal office at least 13 days before the public hearing on such application. In addition, notice of said public hearing must be published at least two times in a newspaper of general circulation in the City of Portland. The date of the first publication must be at least 12 days prior to any public hearing and the date of the second publication must be at

least seven days prior to the public hearing. For map amendments, notice shall be sent by regular United States mail to at least 13 calendar days in advance of any workshop or hearing date to all property owners within the area proposed for rezoning and all property owners 500 feet beyond said area, except that rezoning to industrial zone designations the notice range shall be 1,000 feet.

3. *Contract or conditional zoning.* Notice of public hearing shall be posted in the City Clerk's office at least 13 days prior to the public hearing and shall be published in a newspaper of general circulation within the city at least two times, the date of the first publication to be at least seven days prior to the hearing. Notice shall also be sent to the owners of all property abutting the property to be rezoned at their last known address. This notice shall contain a copy of the proposed conditions and restrictions, with a map indicating the property to be rezoned.

The cost of noticing shall be charged to the applicant.

C. **Procedures.** The Planning Board shall adopt its own rules for the conduct of its business not inconsistent with the statutes of the state and this article. Such rules shall be filed with the Planning Authority and with the City Clerk. Any and all rule changes shall be placed on a City Council public agenda as a communication requiring a public hearing. Any rule may be vetoed, in whole or in part, by order of the Council within 45 days of the date of filing with the City Clerk. No rules change shall take effect until that time period has elapsed. If a part of a rule is vetoed, the remainder shall continue in effect. Any rule so adopted, which is not required by the statutes of the state or by this article, may be waived by the chair upon good cause being shown. Except as otherwise provided in Subsection 2.1.8(A)(1), all meetings, hearings, and deliberations of the Planning Board and its committees shall be open to the public in accordance with Title 1 M.R.S. § 401 et seq. Testimony at any hearing may be required by the Planning Board to be given under oath.

D. **Keeping of records.** The Director of the Department of Planning & Urban Development shall designate a member of their staff who shall attend all Planning Board proceedings. The staff shall provide for the keeping of minutes of the proceedings of the Board, showing the vote of each member on every question, or their absence or failure to vote, and shall maintain the permanent records and decisions of all Board meetings, hearings, and proceedings and all correspondence of the Board, as required by statute. Such records shall be public records open to inspection during working hours upon reasonable notice.

2.1.9 Record and decisions

A. **Record.** The minutes of the staff, and the transcript if one is made, and all exhibits, papers, applications, and requests filed in any proceeding before the Planning Board and the decision of the Board shall constitute the record.

B. **Decision.** Every final decision of the Planning Board and every recommendation of the Planning Board to the City Council shall include written findings of fact, and shall specify the reason or reasons for such decision or

recommendation. The Planning Authority shall mail notice of any decision of the Planning Board to the applicant.

2.1.10 Jurisdiction and authority

In addition to the jurisdiction conferred on it by other provisions of state law and the ordinances of the City and in accordance therewith, the Planning Board shall have the following jurisdiction and authority:

A. To prepare and recommend a Comprehensive Plan to the City Council.
B. To prepare and recommend to the City Council changes in and amendments to the Comprehensive Plan.
C. To aid and assist the City Council and departments and agencies of the City in implementing general plans and in planning, developing, and completing specific projects.
D. To hear, review, and approve, conditionally approve, or deny master development plans and major site plans.
E. To hear, review, and approve, conditionally approve, or deny applications for subdivision approval.
F. To hear, review, and approve or deny applications for conditional uses listed in Article 6.
G. To hear, review, and offer its recommendations to the City Council on applications for amendments to, or revisions of, this Land Use Code.
H. To review and offer its recommendations to the City Council on certain public projects.
I. To review and approve, conditionally approve, or disapprove site plans for regulated projects in shoreland areas.
J. To prepare and offer its recommendations to the City Council with regard to the City's annual Capital Improvement Program.
K. Upon reasonable request, to make its special knowledge and expertise available to any official, department, board, or agency of the city, county, state, or federal governments to aid them in the performance of their respective duties relating to the planning and development of the city and its region, including request from the City Council to review proposed developments in which the developer does not have the right, title, or interest in all the property necessary for the proposed development because some or all of that property is owned by the City.
L. To make such investigations, maps and reports, and recommendations in connection therewith, relating to the planning and development of the city as seem desirable.
M. To employ or contract with such experts and other assistants as may be necessary or convenient to carry out its duties hereunder and to pay for their services and for such other expenses as may be necessary and proper, provided, however, that such expenditures shall not exceed such funds as may be appropriated for such purposes by the City Council.
N. To hear, review, and offer its recommendations to the City Council on petitions for street vacations and discontinuances.
O. To hear, review, and decide appeals where it is alleged there is an error in any decision, requirement, or determination made by the Planning Authority.
P. To approve, following a public hearing and at the recommendation of the Public Works Authority and the Planning Authority, *Technical*

Manual and *Design Manual* standards, provided that such standards shall be additional to and consistent with the provisions of this Land Use Code, necessary and reasonable, and in accordance with sound engineering and urban design practice.

2.1.11 Administrative appeals

A. **Application procedures.** An appeal may be taken to the Planning Board by any person affected by a final decision of the Planning Authority except as provided elsewhere in this Land Use Code. Such appeal shall be taken within 30 days of the action complained of by filing with the Planning Authority an application for appeal specifying the grounds thereof. The application shall be in such form as specified by the Planning Authority. A payment of a nonrefundable filing fee, as established by the City Council to cover administrative costs and costs of hearing, shall accompany each application. The Planning Authority shall forthwith transmit to the Planning Board all of the papers constituting the record upon which the action appealed from was taken.

B. **Public hearing.** A public hearing shall be set, advertised and conducted by the Planning Board in accordance with the provisions of this article.

C. **Action**. Within 30 days following the close of the public hearing, the Planning Board shall render a decision on the appeal in the manner and form specified in the provisions of this article and the statutes of the state. The failure of the board to act within 30 days shall be deemed a denial of the appeal unless mutually extended in writing by the appellant and the board. Within five days of such decision or failure to act notice thereof shall be mailed to each party.

D. **Conditions and limitations.** Any right granted by the reviewing board on appeal shall be subject to the same conditions and limitations as if secured without the necessity of an appeal.

2.1.12 Planning Board appeals

An appeal from any final decision of the Planning Board as to any matter over which it has final authority may be taken by any party or by any authorized officer or agent of the City to the superior court in accordance with Rule 80B of the Maine Rules of Civil Procedure. No appeal shall lie concerning any matter as to which the power of the Board is limited to the making of a recommendation.

2.2 HISTORIC PRESERVATION BOARD

2.2.1 Composition

The Historic Preservation Board shall consist of seven voting members who shall serve without compensation. Members shall not be officers or employees of the City. Members shall have demonstrated interest, knowledge, ability, experience, or expertise in restoration, rehabilitation, or neighborhood conservation or revitalization and shall be residents of the city.

2.2.2 Appointments

A. **Terms.** Members shall be appointed by the Council for terms of three years. Appointments shall be staggered so that the terms of not more than three members expire in any calendar year. Members may serve for three consecutive three-year terms.

B. **Vacancies.** Vacancies on the Historic Preservation Board shall be filled within 60 days. However, every member shall continue in office after expiration of the term until a

successor has been appointed. Vacancies on the Historic Preservation Board shall be filled for the unexpired term of the former member.

2.2.3 Removal of members

Members may be removed for cause by the Council. Cause shall include, but is not limited to, the failure to attend meetings without good cause. Any member proposed to be removed shall be given written notice and an opportunity to be heard prior to final action.

2.2.4 Officers

A. **Election and terms.** Officers of the Historic Preservation Board shall consist of a chair and vice chair. Officers shall be elected by the Historic Preservation Board and shall serve a term of one year and shall be eligible for re-election.

B. **Chair.** The chair shall preside at all meetings and hearings and fulfill the customary functions of that office.

C. **Vice chair.** In the absence of the chair, the vice chair shall act as chair and shall have all the powers of the chair. The vice chair shall have such other powers and duties as may be provided by the rules of the Historic Preservation Board.

2.2.5 Conflicts

No member of the Historic Preservation Board shall participate in the hearing or disposition of any matter in which he or she has an interest.

2.2.6 Meetings and procedures

A. **Meetings.** Regular meetings of the Historic Preservation Board shall be held no less frequently than monthly. Special meetings may be called by the chair or any four members or at the request of the chair of the Planning Board.

B. **Notice.** The Planning Authority shall give notice of the time and place of Historic Preservation Board public workshops and hearings, including a brief description of the application(s) to be considered, as follows:

1. *Landmark or district nomination.* Notice shall be given to the general public by publication in a newspaper of general circulation in the City of Portland at least two times, the date of the first publication to be at least 10 calendar days prior to the workshop or hearing. Notice shall be sent by regular United States mail at least 10 calendar days in advance of the workshop or hearing date to the applicant and to the owner(s) of the subject property or properties.
2. *Certificate of Appropriateness review.* Notice shall be given to all property owners within 100 feet of the property at least seven days prior to the date of the workshop or public hearing.
3. *Major site plan review.* For alteration or new construction that is classified as a major site plan under Article 14, notice shall be given to all property owners within 500 feet of the property at least seven days prior to the date of the workshop or hearing.

The cost of noticing shall be charged to the applicant.

C. **Procedures.** The Historic Preservation Board may adopt procedural rules for the conduct of its business not inconsistent with this article, including the creation of a subcommittee

structure to enhance efficiency in consideration of Historic Preservation Board business. Such rules shall be filed with the Planning Authority and with the City Clerk. All such rules shall be subject to veto, in whole or in part, by the Council within 45 days of such filing. The initial rules shall take effect when filed, subject to veto as provided above. Amendments to the rules shall take effect upon expiration of said veto period. Any rule may be waived by the chair upon good cause being shown.

2.2.7 Record and decisions

A. The Director of the Department of Planning & Urban Development or their designated staff representative shall attend all Historic Preservation Board meetings. The staff shall provide for the keeping of tape recordings or minutes of the proceedings of the Historic Preservation Board, showing the vote of each member on every question or their absence or failure to vote, and shall maintain the records and decisions of all meetings, hearings, and proceedings and all correspondence of the Historic Preservation Board. Copies of permanent records shall be filed with the City Clerk. Staff shall publish and distribute copies of the records, reports, and decisions of the Historic Preservation Board to Historic Preservation Board members and to others upon approval of the Historic Preservation Board.

B. No final action shall be taken by the Historic Preservation Board which could in any manner deprive or restrict the owner of a property in its use, alteration, maintenance, disposition, or demolition until such owner either has knowledge of the proceeding or is sent notice offering opportunity to be heard. This paragraph shall not affect the interim protection provisions of Section 17.6.

C. Every recommendation or recommended decision of the Historic Preservation Board shall include written findings of fact and shall specify the reason or reasons for such action.

D. Staff shall mail notice of any final determination or recommendation of the Historic Preservation Board to the applicant and property owner(s).

2.2.8 Responsibilities

The Historic Preservation Board shall have the following responsibilities:

A. To conduct or administer an ongoing survey to identify historically, culturally, architecturally, and archaeologically significant areas, sites, structures, and objects.

B. To review all areas, sites, structures, and objects listed in the National Register of Historic Places, including the boundaries of areas so listed, and make recommendations to the Planning Board and City Council for the designation of those areas, sites, structures, and objects as local landmarks or districts.

C. To investigate and recommend to the Planning Board and City Council the designation of areas, sites, structures, and objects not listed in the National Register of Historic Places as local landmarks and districts and to make recommendations to the Planning Board concerning sites, structures, and objects that have contributing significance or are intrusions within nominated or designated districts.

D. To keep and make available to the public a register of all areas, sites, structures, and

objects that have been designated as landmarks or districts, including all information required as part of each designation.

E. Upon request, to advise and assist owners of landmarks and property, sites, structures, or objects within districts on physical and financial aspects of preservation, renovation, rehabilitation, and reuse and for procedures for inclusion on other registers of significant areas, sites, structures, and objects, including the National Register of Historic Places.

F. To recommend to the Planning Board the nomination of areas, sites, structures, and objects to the National Register of Historic Places or to any State of Maine Register of Historic Places that may be established.

G. To participate in the Certified Local Government Program of the National Historic Preservation Act Amendments of 1980 and the Maine Historic Preservation Commission, and carry out any responsibilities delegated to it under that program, including review and comment on any National Register nominations submitted to the Historic Preservation Board.

H. To seek funding for which the City of Portland is eligible through the Certified Local Government Program to assist in local preservation projects, including projects undertaken by local non-profit organizations.

I. To, upon request by the City Council, participate in any review of federal actions or undertakings pursuant to Section 106 of the National Historic Preservation Act, attend informational and educational programs sponsored by the Maine Historic Preservation Commission, and prepare an annual report of the activities of the Historic Preservation Board.

J. To inform and educate the citizens of Portland concerning the cultural, historic, architectural, and archeological heritage of the city by publishing appropriate maps, newsletters, brochures, and pamphlets and by sponsoring programs and seminars.

K. To hold meetings and public hearings to review applications for Certificates of Appropriateness affecting proposed or designated landmarks and districts and to recommend approval or disapproval of Certificates of Appropriateness.

L. To provide testimony to the Board of Appeals in connection with any application for a Certificate of Economic Hardship.

M. To develop design guidelines affecting landmarks or districts for review and approval by the Planning Board.

N. To advise the Planning Board as to recommendations on any preservation or conservation easements that the City of Portland may have or be offered as a gift or otherwise.

O. To advise the Planning Board as to the administration of such gifts, grants, and money as may be appropriated for the purposes of this article upon authorization and approval by the City Council.

P. To provide comment, as appropriate, to the Planning Board and/or City Council on matters pertaining to historic preservation in Portland.

Q. To confer recognition upon the owners of landmarks or properties, sites, structures, or objects within districts by means of certificates, plaques, or markers.

R. To assist the Planning Board in the development of a preservation component in the Comprehensive Plan of the City of Portland.

S. To periodically review the Land Use Code and to make recommendations to the Planning Board concerning any amendments appropriate for the protection and continued use of landmarks or properties, sites, structures, or objects within districts.

2.2.9 Administrative appeals

A. **Application procedures.** An appeal may be taken to the Historic Preservation Board by any person affected by a decision of the Planning Authority relative to Article 17. Such appeal shall be taken within 30 days of the action complained of by filing with the Planning Authority an application for appeal specifying the grounds thereof. The application shall be in such form as specified by the Planning Authority. A payment of a nonrefundable filing fee, as established by the City Council to cover administrative costs and costs of hearing, shall accompany the application. The Planning Authority shall forthwith transmit to the Historic Preservation Board all of the papers constituting the record upon which the action appealed from was taken.

B. **Public hearing.** A public hearing shall be set, advertised, and conducted by the Historic Preservation Board in accordance with the provisions of this article.

C. **Action.** Within 30 days following the close of the public hearing, the Historic Preservation Board shall render a decision on the appeal in the manner and form specified in the provisions of this article and the statutes of the state. The failure of the board to act within 30 days shall be deemed a denial of the appeal unless mutually extended in writing by the appellant and the Board. Within five days of such decision or failure to act notice thereof shall be mailed to each party.

D. **Conditions and limitations.** Any right granted by the board on appeal shall be subject to the same conditions and limitations as if secured without the necessity of an appeal.

2.2.10 Historic Preservation Board appeal

A. **Historic Preservation Board decision.** An appeal from any final decision of the Historic Preservation Board as to any matter over which it has final authority may be taken by any party or by any authorized officer or agent of the City to the Planning Board, adhering to the requirements of Subsection 2.1.11 of this article.

B. The Planning Board shall deny the appeal unless it finds that the action of the Historic Preservation board was arbitrary or capricious or was not based on substantial evidence. Review by the Planning Board under this subsection is intended to be appellate in nature. Except where the Planning Board determines that injustice would result, the Planning Board shall determine the appeal without considering any facts or arguments which were not presented to the Historic Preservation Board. Where the Planning Board finds it necessary to consider such new evidence in order to do substantial justice, it shall remand the matter to the Historic Preservation Board for further consideration, unless it determines that the resulting delay is likely to result in undue hardship to the applicant.

C. **Planning Board decision. T**he Planning Board's decision on an appeal from a decision of the Historic Preservation Board shall be final with respect to the application or matter initially

presented to the Historic Preservation Board. An appeal from any final decision of the Planning Board as to any matter over which it has final authority may be taken by any party or by any authorized officer or agent of the city to the superior court in accordance with Rule 80B of the Maine Rules of Civil Procedure. No appeal shall lie concerning any matter as to which the power of the board is limited to the making of a recommendation.

2.3 ZONING BOARD OF APPEALS

2.3.1 Composition

There shall be a Board of Appeals of seven members. Members of the Board shall be residents of the city and shall not be officers or employees of the City or any of its agencies or departments. Members shall serve without compensation.

2.3.2 Appointments

A. **Terms.** The members of the Board of Appeals shall be appointed by the City Council for terms of three years. Terms shall be staggered so that the terms of no more than three members shall expire in any calendar year. Such members shall serve until their successors are duly elected and qualified provided, however, that such service shall not extend to over 120 days after expiration of their term. Members may serve for three consecutive three-year terms.

B. **Vacancies.** Permanent vacancies on the Board of Appeals shall be filled by the City Council, in the same manner as other appointments under this article, for the unexpired term of a former member whose place has become vacant.

2.3.3 Removal of members

Any member of the Board of Appeals may be removed for cause by the City Council at any time, provided, however, that before any such removal, such member shall be given an opportunity to be heard in their own defense at a public hearing.

2.3.4 Officers

A. **Chair.** The members of the Board of Appeals shall annually elect one of their number as chair to preside at all meetings and hearings and to fulfill the customary functions of that office. In the absence of the chair, the secretary shall act as chair and shall have all the powers of the chair.

B. **Secretary.** The members of the Board of Appeals shall annually elect one of their number as secretary. The secretary shall fulfill the duties provided by statute and this article and have such other duties as may be provided by the rules of the board.

C. **Pro tempore officers.** In the absence of both the chair and the secretary, the board shall elect a chair pro tempore from among its number and the chair pro tempore shall have all the powers of the chair during the chair's and the secretary's absence. In the absence of the secretary, or when the secretary is serving as chair, the board shall elect a secretary pro tempore from among its number and the secretary pro tempore shall have all the powers of the secretary during the secretary's absence or service as chair.

2.3.5 Quorum and necessary vote

No business shall be transacted by the Board of Appeals without a quorum, consisting of four members, being present. The concurring vote of at

least four members of the board shall be necessary to grant any request or application or to sustain any appeal. Any matter that receives fewer than four votes shall be deemed to have been denied.

2.3.6 Conflicts

No member of the Board of Appeals shall participate in the hearing or disposition of any matter in which he or she has an interest. Any question of whether a member has a conflict of interest sufficient to disqualify him or her shall be decided by a majority vote of the members, except the member who is being challenged. Where such a vote results in a tie, the challenged member shall be deemed disqualified.

2.3.7 Meetings and procedures

A. **Staff.** The Building Authority or their designee shall serve as staff to the Board of Appeals.

B. **Meetings.** Regular meetings of the Board of Appeals shall be held at the call of the chair or as provided by the rules of the board. Special meetings shall be called by the chair at the request of any two members of the board or at the request of the City Council. All meetings and hearings of the board shall be open to the public. For all matters properly brought before the Board of Appeals, the board shall select a reasonable time and place for a public hearing following the submission of the subject application.

C. **Notice.** The Building Authority shall give notice of public hearings in the form and manner and to the persons herein specified. The notice shall include the time and place of such hearing, a description of the contents of the matter to be heard and the address or location of the property involved. Where notice by mail is required, it shall be mailed at least seven days in advance of the hearing date by regular United States mail. Notices shall be given to each of the following as specified:

1. In all cases, to the petitioner.
2. In all cases, to all residents of the city by publication in a newspaper of general circulation in the city at least once, not more than 30 nor less than five days before the date of the hearing, and by mail to the applicant.
3. In the case of hearings relating to zoning appeals, a variance, or a conditional use, to the Planning Board and City Council by reasonable means.
4. In the case of hearings relating to a variance request from the provisions of Article 11, the application and all supporting information supplied by the applicant shall be forwarded to the State of Maine Commission of the Department of Environmental Protection at least 20 days prior to action by the board.
5. In the case of hearings related to a variance or conditional use, by mail to the owners of all the property within 500 feet of such parcel or tract.
6. In the case of hearings related to all other appeals, by mail to the owners of property directly abutting, and directly across a street or alley from the subject property.

For purposes of this subsection, the owners of property shall be considered to be the parties listed by the Assessor's Department as those against whom taxes are assessed. Failure of any property owner to receive a notice of public hearing shall not necessitate another hearing and shall not invalidate any action of the board.

The cost of noticing shall be charged to the applicant.

D. **Procedures.** The Board of Appeals shall adopt its own rules of procedure for the conduct of its business not inconsistent with the statutes of the state and this article. Such rules shall be filed with the City Clerk. Any rule so adopted which relates solely to the conduct of hearings, and which is not required by the statutes of the state or by this article, may be waived by the board upon good cause being shown.

1. *Conduct of hearings.*
   a. Any person may appear and testify at a public hearing, either in person or by a duly authorized agent or attorney, and may submit documentary evidence, provided, however, that the Board shall exclude irrelevant, immaterial and unduly repetitious evidence.
   b. The applicant and any abutter or similar person with standing shall in addition have the right to present witnesses on their own behalf and offer rebuttal evidence, to cross examine all witnesses testifying in opposition to their position through the chair, and to examine and introduce any documents produced at the hearing.
2. All other matters pertaining to the conduct of hearings shall be governed by the provisions of the relevant state statutes, this article, and the rules promulgated by the Board of Appeals.

2.3.8 Records and decisions

A. **Record.** The recording of testimony, if any, and all exhibits, papers, applications, and requests filed in any proceeding before the Board of Appeals and the decision of the board shall constitute the record.

B. **Decision.** Every decision of the Board of Appeals shall include findings of the fact, shall refer to the evidence in the record and the exhibits, plans or specifications upon which such decision is based, shall specify the reason or reasons for such decision, and shall contain a conclusion or statement separate from the findings of fact setting forth the specific relief granted or denying relief. The Building Authority shall hand deliver or mail a copy of the decision to the applicant, the Planning Board, and City Council within seven days of such decision, and shall also file the decision with the City Clerk.

2.3.9 Jurisdiction and authority

The Board of Appeals shall have the following jurisdiction and authority:

A. To hear and decide appeals from the granting or denial of any permit required by Chapter 6, Article II or Chapter 10 of the City of Portland Code of Ordinances.

B. To hear and decide appeals from any decision or order made by the Building Authority pursuant to the provisions of this chapter, except that decisions relating to enforcement of the Shoreland Zone provisions of this chapter may not be appealed to the Board of Appeals and may only be appealed directly to Superior Court in accordance with M.R. Civ. P. 80B and 30-A M.R.S. §§ 2691 & 4483.

C. To review interpretations of the Zoning Administrator or their designee, except that decisions on such interpretations shall be advisory only and shall not be appealable.

D. To hear and grant or deny applications for variances from the terms of this Land Use Code, including but not limited to terms related to use; dwelling unit conversion; space and bulk, such as lot size, density, and setbacks; parking; loading; and signs.

E. To hear and grant or deny applications for conditional uses, as specified in Article 6.

2.3.10 Administrative appeals

A. **Application procedures.** Application for any appeal to the board shall be submitted to the Building Authority. A payment of a nonrefundable application fee, as established by the City Council to cover administrative costs and costs of a hearing, shall accompany each application. The application shall be in such form as prescribed by the Building Authority.

B. **Public hearing.** A public hearing shall be set, advertised and conducted by the Board of Appeals in accordance with Subsection 2.3.7.

C. **Standard of review.** The standard of review for appeals pursuant to Subsections 2.3.9(A), (B), and (C) shall be de novo. The appellant shall bear the burden of proof.

D. **Conditions and limitations on rights granted by appeal.** Any right granted by the Board of Appeals on appeal shall be subject to the same conditions and limitations as if secured without the necessity of an appeal.

2.3.11 Variances

A. **Application procedures**

1. Application for a variance shall be submitted to the Building Authority. A payment of a nonrefundable application fee, as established from time to time by the City Council to cover administrative costs and costs of a hearing, shall accompany each application. The application shall be in such form as prescribed by the Building Authority.
2. A public hearing shall be set, advertised, and conducted by the Board of Appeals in accordance with Subsection 2.3.7.
3. All decisions by the board shall be rendered in a manner and form not inconsistent with the statutes of this state.

B. **Undue hardship variance.** An undue hardship variance may be granted by the board only where strict application of the ordinance, or a provision thereof, to the petitioner and his or her property would cause undue hardship. The words "undue hardship" as used in this subsection mean the following:

1. The land in question cannot yield a reasonable return unless a variance is granted.
2. The need for a variance is due to the unique circumstances of the property and not to the general conditions in the neighborhood.
3. The granting of a variance will not alter the essential character of the locality.
4. The hardship is not the result of action taken by the applicant or prior owner.

C. **Disability variance**

1. *By the Board of Appeals.* Notwithstanding the provisions of subsection (B) above, the

board may grant a variance to an owner of a residential dwelling for the purpose of making that dwelling accessible to a person with a disability who resides in or regularly uses the dwelling. The board shall restrict any variance granted under this subsection solely to the installation of equipment or the construction of structures necessary for access to or egress from the dwelling by the person with the disability. The board may impose conditions on the variance, including limiting the variance to the duration of the disability or to the time that the person with the disability lives in the dwelling. The term "structures necessary for access to or egress from the dwelling" shall include railing, wall, or roof systems necessary for the safety or effectiveness of the structure. For the purpose of this subsection, a disability has the same meaning as a physical or mental disability under 5 M.R.S. § 4553.

2. *By the Building Authority.* Notwithstanding the provisions of subsections (B) and (C(1)) above, the Building Authority may issue a permit to the owner of a dwelling for the purpose of making a dwelling accessible to a person with a disability who resides in or regularly uses the dwelling. If the permit requires a variance, the permit is deemed to include that variance solely for the installation of equipment or the construction of structures necessary for access to or egress from the dwelling for the person with a disability.

D. **Practical difficulty variance.** Notwithstanding the provisions of subsections (B) and (C) above, the Board of Appeals may grant a variance from the dimensional standards of this Land Use Code that relate to lot area, lot coverage, frontage, and setback requirements when strict application of these standards would both preclude a permitted use of the property and result in significant economic injury to the applicant. Significant economic injury shall mean that the value of the property if the variance were denied would be substantially lower than its value if the variance were granted. To satisfy this standard, the applicant need not prove that denial of the variance would mean the practical loss of all beneficial use of the land. In granting a practical difficulty variance, all of the following conditions must be found to exist:

1. The need for a variance is due to the unique circumstances of the property, and not to the general conditions in the neighborhood.
2. The granting of the variance will not produce an undesirable change in the character of the neighborhood and will not have an unreasonably detrimental effect on either the use or fair market value of abutting properties.
3. The practical difficulty is not the result of action taken by the applicant or a prior owner.
4. No other feasible alternative is available to the applicant, except a variance.
5. The granting of a variance will not have an unreasonably adverse effect on the natural environment.
6. The property is not located, in whole or in part, within a shoreland area, as defined in 38 M.R.S. § 435, nor within a Shoreland

Zone or flood hazard area, as defined in this Land Use Code.

E. Specified variances prohibited

1. No use permitted in medium- and high-density residential zones shall be permitted in low-density residential zones. No use permitted in mixed-use or office zones shall be permitted in any residential zone. No use permitted in industrial and airport zones shall be permitted in any mixed-use, office, or residential zone. No use permitted in residential zones shall be permitted in any industrial or airport zone. The general use categories are listed below:
   a. Low-density residential: IR-1, IR-2, IR-3, R-1, R-2, R-3.
   b. Medium- and high-density residential: R-4, R-5/R-5a, R-6/R-6a.
   c. Mixed-Use/Office: B-1/B-1b, B-2/B-2b/B-2c, B-3/B-3b/B-3c, B-4, B-5/B-5b, B-6, B-7, I-B, R-P, O-P.
   d. Industrial: I-L/I-Lb, I-M/I-Ma/I-Mb, I-H/I-Hb, A-B.
2. A variance may only be granted with respect to the generally applicable space and bulk requirements of the zone in which the property is located and not from any provision that allows a deviation from those requirements.
3. No variance shall be granted which would permit the creation of a lot or parcel that cannot be developed in compliance with the zoning, subdivision, and other regulations applicable thereto.
4. No variance shall be granted which would result in a use or development of the lot or parcel in question which would not be in harmony with the general purpose and intent of this Land Use Code or the Comprehensive Plan; which would be materially detrimental to the public welfare or materially injurious to the enjoyment, use, or development of property or improvement permitted in the vicinity; or which would materially impair an adequate supply of light and air to properties and improvements in the vicinity, substantially increase congestion in the public streets, increase the danger of flood or fire, or endanger the public safety.
5. No variance shall be granted which would be greater than the minimum variance necessary to relieve the undue hardship or the hardship of the applicant.
6. No variance shall be granted from the minimum lot sizes set forth in Subsection 4.3.1 for lots in the IR-1 and IR-2 zones.
7. No variance shall be granted from the requirements in Subsection 6.4.1.

F. Conditions on variances; variances less than requested. Reasonable conditions and safeguards relating to construction, character, location, landscaping, screening, and other matters may be imposed upon the premises benefited by a variance as considered necessary to prevent injurious effects upon other property and improvements in the vicinity or upon public facilities and services. Such conditions shall be expressly set forth in the resolution granting the variance and in the notice informing the applicant thereof. Violation of such conditions and safeguards shall be a violation of this article. A variance less than or different from that requested may be granted when the record supports the

applicant's right to some relief but not to the relief requested.

G. **Limitations on variances.** No variance permitting the erection or alteration of a building shall be valid for a period longer than two years, unless a building permit for such erection or alteration is issued and construction is actually begun within that period and is thereafter diligently pursued to completion. No variance relating to the establishment or maintenance of a use not involving a building or structure shall be valid for a period longer than two years, unless an occupancy permit is issued and a use commenced within such period.

H. **Recording of variances.** No variance shall be valid unless, within 90 days of final approval of the variance, a certificate describing the variance has been recorded by the applicant for the variance in the registry of deeds as required by 30 M.R.S. § 4353(5).

2.3.12 Violations

In addition to any other remedies available, the Board of Appeals after notice and hearing may revoke any variance or other relief granted under this section when the provisions of this chapter or the conditions under which the relief was granted have not been complied with.

2.3.13 Appeals

An appeal from any final decision of the Board of Appeals may be taken by any aggrieved party to the superior court in accordance with Rule 80B of the Maine Rules of Civil Procedure and 30-A M.R.S. §§ 2691 & 4483., except as otherwise specifically provided in this article.

3 DEFINITIONS

Accessory dwelling unit. A dwelling unit subordinate in size to the principal residential structure(s) on a lot and located either within the principal residential structure(s) or in an accessory structure.

Adjacent grade (within the floodplain). For the purposes of calculating floor elevation in areas of special flood hazard, the natural elevation of the ground surface prior to the construction next to the proposed wall of a structure.

Adult business establishment. Any business, including but not limited to any bookstore, newsstand, novelty store, nightclub, bar, cabaret, amusement arcade, or theater, which:

A. Keeps for public patronage or permits or allows the operation of any adult amusement device as defined in Chapter 4 of the City of Portland Code of Ordinances; or

B. Customarily, meaning more often than an average of one calendar week during any calendar month of operation, exhibits motion pictures or displays any other visual representation described or advertised as being "X rated" or "for adults only," or which customarily excludes persons from any portion of the premises by reason of immaturity of age by the use of such, or similar, phrases; or

C. Is adjudged to be in violation of 17 M.R.S. §§ 2911, 2912.

Affordable housing. Housing for which the percentage of income a household is charged in rent and other housing expenses or must pay in monthly mortgage payments (including condominium/HOA fees, mortgage insurance, other insurance and real estate taxes), does not exceed 30% of a household's income, or other amount established in City regulations that does not vary significantly from this amount.

After-hours entertainment license. Any of the music, dancing, and special entertainment licenses required or authorized by Chapter 4, Article III of the City of Portland Code of Ordinances.

Agriculture. The practice of farming, including the cultivation of the soil for the growing of crops and rearing of animals to provide food and other products. Agriculture may include nurseries, greenhouses, and truck gardens, provided that there is no sale of products not produced on the premises.

Airport restricted access areas. Runways, taxiways, and other areas of the Jetport accessible to aircraft, whether access is restricted by the Federal Aviation Administration or not.

Alley. Any way designed primarily for vehicular and pedestrian or utility access to the back or side of premises otherwise abutting on a street, except driveways unless officially designated otherwise.

Animal-related services. Establishments principally for the training or boarding of animals. Such uses shall not include veterinary services.

Approval. An affirmative decision on an application, including an approval with conditions.

Appurtenance. A device or structure not designed for human occupancy and attached to the exterior of a building.

Area of shallow flooding. Area designated AO and AH zone on the Flood Insurance Rate Map (FIRM) with a 1 % or greater annual chance of flooding to an average depth of one to three feet where a clearly defined channel does not exist, where the path of flooding is unpredictable, and where velocity flow may be evident. Such flooding is characterized by ponding or sheet flow.

Area of special flood hazard. The land in the floodplain having a 1% or greater chance of flooding in any given year as specifically identified in the most recently adopted FEMA Flood Insurance Study for the City of Portland.

Auto service station. A business selling gasoline, diesel, or propane fuel, providing services specific to electric vehicles, or providing motor vehicle repairs including, but not limited to, tune-ups, engine repair, brake work, muffler replacement, tire repair, or similar activities. Such businesses may also include car-washes and/or vacuums.

Back office use. An office-related use with minimal public visitation and minimal direct service to the general public, primarily to provide support services to larger organizations such as educational institutions, social service agencies, or business headquarters.

Bar. Any establishment required to be licensed to sell alcoholic beverages for on-premises consumption, which is not regularly used for the purpose of providing full-course meals, as defined in Title 28-A of the Maine Revised Statutes, on the premises.

Base flood. The flood having a 1% chance of being hereof or exceeded in any given year (i.e., a 100-year storm).

Basement. Area of building that includes a floor that is subgrade (below ground level) on all sides.

Bed and breakfast. A building that contains between two and nine guest rooms; is used to provide or offer overnight accommodations for transient guests; has an owner, manager, or operator living in the building as a permanent resident; does not provide cooking facilities in any of the guest rooms; and does not provide meals other than breakfast, which shall be offered only to overnight guests.

Blasting operations. The use of explosives for purposes of breaking up and removing soil, rock, and ledge, related to construction and development of real estate within the city.

Breakaway wall. A wall that is not part of the structural support of the building and is intended through its design and construction to collapse under specific lateral loading forces, without damage to the elevated portion of the building or supporting foundation system.

Building. A roofed and walled structure built for permanent use.

Building, accessory. A detached roofed and walled structure that is incidental and subordinate in area and extent, and/or use to the principal building(s) on

the property. A lot may have more than one accessory building.

Building addition. Any increase to footprint, floor area, or volume of an existing building.

Building alteration. A change or rearrangement in the structural supports, exterior appearance, or removing from or otherwise affecting the exterior appearance of a building.

Buildings, attached. Two or more independent buildings that share at least one common party wall but have full building separation and independent principal entries; not free-standing. Attached buildings may or may not have common ownership.

Building, principal. The main roofed and walled structure on a lot having the predominant area, extent, and/or use. A lot may have more than one principal building. When a garage is attached to the principal building in a substantial manner as by an enclosed area with roof or common wall, it shall be considered as a part of the principal building.

Clinics. Any establishment where patients are examined and treated by one or more health care providers, such as, but not limited to, physicians, dentists, psychologists, or social workers. Clinics may include laboratory services and facilities for ambulatory or outpatient surgical procedures.

Coastal AE Zone. The portion of the coastal high hazard area with wave heights between 1.5 feet and 3.0 feet and bounded by a line labeled the "Limit of Moderate Wave Action" (LiMWA) on a Flood Insurance Rate Map (FIRM). VE Zone floodplain construction standards are applied to development, new construction, and substantial improvements in the Coastal AE Zone.

Coastal high hazard area. An area of special flood hazard extending from offshore to the inland limit of a primary frontal dune along an open coast and any other area subject to high velocity wave action from storms or seismic sources. Coastal high hazard areas are designated as Zone VE and Zone AE bounded by a line labeled "Limit of Moderate Wave Action" (LiMWA) on a Flood Insurance Rate Map (FIRM).

Coastal wetland. All tidal and subtidal lands; all lands with vegetation present that is tolerant of salt water and that occurs primarily in a salt water or estuarine habitat; and/or any swamp, marsh, bog, beach, flat, or other contiguous low land that is subject to tidal action during the highest tide level for the year in which an activity is proposed as identified in tide tables published by the National Ocean Service. Coastal wetlands may include portions of coastal sand dunes.

Containment wall. Wall surrounding all sides of an above ground tank to contain any spills or leaks.

Commercial vessel. Any watercraft used principally in a business or trade, including common carriers of passenger or freight, whether for governmental, nonprofit, or emergency purposes, but not including pleasure craft used principally for recreational purposes.

Common areas. Portions of a lodging house which are available for use by all residents of the lodging house. Common areas shall include, but are not limited to, one or more of the following: kitchens,

living rooms, recreation rooms, improved basements, and finished porches. Bathrooms, stairways, hallways, and storage areas shall not be counted as common areas.

Communication studio. A commercial or public communication facility, including radio and television broadcasting and receiving stations and studios.

Community hall. A building or portion of a building used for social, recreational, artistic, civic, or educational community functions. Such a facility would be open to the public for such functions, which, for example, could include but not be limited to performances, dance, exhibitions, cultural exchange, training programs and workshops, neighborhood meetings, or gatherings. As part of these functions and activities, it shall be permissible to serve food, subject to other applicable codes and ordinances.

Condominium. Any interest in real estate created pursuant to the Unit Ownership Act, 33 M.R.S. § 560 et seq., or its equivalent, as it may from time to time be amended.

Congregate care facility. A residential development intended to facilitate aging in place that includes individual dwelling units with support services which provide assistance to residents. The population of a congregate care facility shall consist of persons 55 years of age or older and their spouses. A congregate care facility may also accommodate the needs of persons with disabilities and their spouses that are younger than 55 years of age, provided the majority of the residents are 55 years of age or older. Services to be provided shall include the following:

A. Transportation for essential support activities.
B. Provision of at least one meal per day.
C. Programmed social activities which are facilitated by staff.
D. Provision of personal care services including, but not limited to, housekeeping, laundry, and minimal health monitoring.
E. Installation of emergency call buttons or systems in each unit.

Correctional pre-release facility. A facility housing up to 12 persons, plus staff, serving a primary clientele of persons in correctional pre-release programs.

Drive-through. A facility which provides a service directly to a motor vehicle occupant and where the customer drives a motor vehicle onto the premises and to a window or mechanical device through or by which the customer is served with or without exiting the vehicle. Drive-throughs do not include major or minor auto service stations.

Drive-through features. Features associated with drive-throughs including but not limited to designated travel or stacking lanes, intercom systems, menu boards, service windows, kiosks, mechanical devices, etc.

Dwelling unit. One or more rooms forming a single unit for habitation by one family, including food preparation, living, sanitary, and sleeping facilities.

Dwelling, multi-family. A building or portion thereof containing three or more dwelling units.

Dwelling, single-family. A single building containing one dwelling unit.

Dwelling, two-family. A single building containing two dwelling units.

Earth-moving activity. Any removal or placement, excavation, filling, stockpiling, or grading of soil, earth, loam, sand, gravel, rock, and other mineral deposits.

Easement. A right, privilege, or liberty which one has in land owned by another for some special and definite purpose.

Elevation certificate. An official form (FEMA form FF-206-FY-22-152, as amended) that is used to verify compliance with the floodplain management regulations of the National Flood Insurance Program.

Emergency operations. Operations conducted for the public health, safety, or general welfare, such as protection of resources from immediate destruction or loss, law enforcement, and operations to rescue human beings and livestock from the threat of destruction or injury.

Emergency shelter. A facility providing temporary overnight shelter to homeless individuals in a dormitory-style or per-bed arrangement.

Entrance, principal. The main point of access for pedestrians into a building. A building may have more than one principal entrance.

Esplanade. That portion of a street which is located between the curbline and the edge of the sidewalk closest to the street.

Essential services. The construction, alteration, or maintenance of gas, electrical, or communication facilities; steam, fuel, electric power, or water transmission or distribution lines, towers and related equipment; telephone cables or lines, poles, and related equipment; gas, oil, water, slurry, or other similar pipelines; municipal sewage lines, collection, or supply systems; and associated storage tanks. Such systems may include towers, poles, wires, mains, drains, pipes, conduits, cables, fire alarms and police call boxes, traffic signals, hydrants, and similar accessories, but shall not include service drops or buildings which are necessary for the furnishing of such services.

Explosives. Any material or container containing a chemical compound or mixture that is commonly used or intended for the purpose of producing an explosion and that contains any oxidizing and combustible materials or other ingredients in such proportions, quantities, or packaging that an ignition by fire, by friction, by compound or mixture may cause such a sudden generation of highly heated gasses that the resultant gaseous pressures are capable of producing destructive effects on contiguous objects, but shall not mean the components for handloading rifle, pistol and shotgun ammunition, or fireworks.

Family. One or more individuals related by blood, marriage, civil union, adoption, or guardianship and/or up to eight unrelated individuals living together in a dwelling unit as a single nonprofit housekeeping unit.

Fill. Soil, earth, loam, sand, gravel, rock and other mineral deposits.

Filling. The placement of soil, earth, loam, sand, gravel, rock and other mineral deposits. Filling shall include stockpiling.

Fixture, fully shielded. A light fixture or luminous tube constructed and mounted such that all light emitted by the fixture or tube, either directly from the lamp, tube, or a diffusing element, or indirectly by reflection or refraction from any part of the light fixture, is projected below the horizontal. If the lamp or tube, any reflective surface, or lens cover (clear or prismatic) is visible when viewed from above or directly from the side, from any angle around the fixture or tube, the fixture or tube is not fully shielded.

Flag. A fabric sheet of square, rectangular, or triangular shape having no enclosing or supporting framework that is typically mounted on a pole.

Flood or flooding.

A. A general and temporary condition of partial or complete inundation of normally dry land areas from:
   1. The overflow of inland or tidal waters.
   2. The unusual and rapid accumulation or runoff of surface waters from any source.

B. The collapse or subsidence of land along a shore of a lake or other body of water as a result of erosion or undermining caused by waves or currents of water exceeding anticipated cyclical levels or suddenly caused by an unusually high water level in a natural body of water, accompanied by a severe storm, or by an unanticipated force of nature, such as a flash flood or an abnormal tidal surge, or by some similarly unusual and unforeseeable event which results in flooding as defined above.

Flood elevation study. An examination, evaluation, and determination of flood hazards and, if appropriate, corresponding water surface elevations.

Flood Insurance Rate Map (FIRM). The official map on which the Federal Emergency Management Agency (FEMA) has delineated both the areas of special flood hazard and the risk premium zones applicable to the city.

Floodplain or floodprone area. Any land area susceptible to being inundated by water from any source (see Flood or Flooding).

Floodplain management. The operation of an overall program of corrective and preventive measures for reducing flood damage, including but not limited to emergency preparedness plans, flood control works, and floodplain management regulations.

Floodplain management regulations. Zoning ordinances, subdivision regulations, building codes, health regulations, special purpose ordinances (such as a floodplain ordinance, grading ordinance, and erosion control ordinance), and other applications of police power. The term describes such state or local regulations, in any combination thereof, which provide standards for the purpose of flood damage prevention and reduction.

Floodproofing. Any combination of structural or nonstructural additions, changes, or adjustments to structures which reduce or eliminate flood damage

to real estate or improved real estate, to water and sanitary facilities, structures, and their contents.

Floodway encroachment lines. The lines marking the limits of floodways on federal, state, and local floodplain maps.

Foundation. The supporting substructure of a building or other structure, excluding wooden sills and post supports, but including basements, slabs, frost walls, or other base consisting of concrete, block, brick, or similar material.

Freeboard. A factor of safety usually expressed in feet above a flood level for purposes of floodplain management. Freeboard tends to compensate for the many unknown factors, such as wave action, bridge openings, and the hydrological effect of urbanization of the watershed, which could contribute to flood heights greater than the height calculated for a selected size flood and floodway conditions.

Freshwater wetland. Freshwater swamps, marshes, bogs, and/or similar areas which are both:

F. Of ten or more contiguous acres or of less than ten contiguous acres and adjacent to a surface water body except for any river, stream or brook such that, in a natural state, the combined surface area is in excess of ten acres or of less than ten acres that is depicted on the Shoreland Zoning map.

G. Inundated or saturated by surface or ground water at a frequency and for a duration sufficient to support, and which under normal circumstances do support, a prevalence of wetland vegetation typically adapted for life in saturated soils.

Freshwater wetlands may contain small stream channels or inclusions of land that do not conform to the criteria of this definition.

Functionally-dependent use (within the floodplain). A use that cannot perform its intended purpose unless it is located or carried out in close proximity to water. The term includes only docking facilities, port facilities that are necessary for the loading and unloading of cargo or passengers, and ship building and ship repair facilities, but does not include long-term storage or related manufacturing facilities.

General office. An office for the conducting or managing of a business or the practice of a profession, including that of a licensed health care provider, so long as such office does not include laboratory services and facilities for ambulatory surgical procedures.

General services. Establishment primarily engaged in rendering services to persons or business on a fee basis, including but not limited to banks, health clubs, laundries, employment services, management services, personnel services, or maintenance services.

Handicapped family unit. A dwelling unit which provides living facilities for handicapped persons. A handicapped family unit may also provide counseling and support services. Staff members may also be included in the population.

Helistop. An area used for the landing of helicopters at any location other than an airport. Such area shall include a landing area or pad, and may include parking required for access to the

landing area or pad, a loading and unloading area for emergency vehicles, and other related facilities other than maintenance and repair facilities.

Hospital. An institution providing health services, primarily on an inpatient basis, and medical or surgical care of the sick or injured, including as an integral part of the institution such related facilities as laboratories, outpatient departments, training facilities, central service facilities, and staff offices.

Hostel. An overnight lodging facility for transient guests that provides sleeping rooms and common spaces for cooking. A hostel shall not be used as an emergency shelter.

Hotel. A building used for more or less temporary occupancy of individuals who are lodged with or without meals.

Impervious surface. Area covered with low-permeability material that is highly resistant to infiltration by water, such as asphalt, concrete, or rooftop, and areas such as gravel roads and unpaved parking areas that will be compacted through design or use to reduce their permeability.

Industrial, high-impact. Industrial activity involving the manufacturing, packaging, assembly, or distribution of finished products from either raw materials or previously prepared material which are generally incompatible with residential, commercial, and lower-impact industrial uses and sensitive natural areas due to their high generation of traffic, noise levels, emissions, lighting, and odors.

Industrial, low-impact. Industrial activity involving the manufacturing, packaging, assembly, or distribution of finished products from previously prepared material, including but not limited to the following: artist studios, bakeries; breweries; distilleries; bottling; coffee roasters; commercial kitchens; pharmaceuticals; machine shops; watchmakers; makers of precision instruments, musical instruments, toys and sporting goods, pottery and ceramics using only previously pulverized clay, wood products, jewelry; assembly of electrical components; canteen services; tool and die shops; plant and tree nurseries; and the packaging of foods. Low-impact industrial uses do not include the processing of raw materials or salvaging operations. Low-impact industrial uses are generally compatible, due to their size and nature of impact, with residential, commercial and other low impact industrial uses.

Intermediate care facility. A facility which provides, on a regular basis, health-related care and services for more than 13 individuals who do not require the degree of care and treatment which a hospital or extended care facility is designed to provide but who, because of their mental or physical condition, require such care and services above the level of room and board. Said facility must be licensed as a board care, residential care facility or equivalent pursuant to the regulations promulgated by the State of Maine Department of Health and Human Services.

Kitchen facilities. Facilities used for the preparation of meals, including refrigerators and devices used for the cooking and preparation of food.

Limit of Moderate Wave Action (LiMWA). The landward limit of the 1.5 foot breaking wave within a

Coastal AE Zone. These areas are bounded by a line labeled "Limit of Moderate Wave Action" (LiMWA) on a Flood Insurance Rate Map (FIRM). The LiMWA line delineates that portion of the Special Flood Hazard Area (SFHA) landward of a VE zone in which the principal sources of flooding are astronomical high tides, storm surges, or tsunamis, not riverine sources. These areas may be subject to wave effects, velocity flows, erosion, scour, or combinations of these forces. The floodplain development and construction standards for VE Zones will be applied in the Coastal AE Zone.

Locally-established datum. For purposes of the floodplain ordinance, an elevation established for a specific site to which other elevation at the site are referenced. This elevation is generally not referenced to the National Geodetic Vertical Datum (NGVD), North American Vertical Datum (NAVD), or any other established datum and is used in areas where mean sea level data is too far from a specific site to be practically used.

Lodging house. A house, building or portion thereof containing two or more rooming units, as well as common areas, and providing such units to individuals on not less than a monthly basis for compensation.

Long-term or extended care facility. An institution or a distinct part of an institution that is licensed or approved to provide full-time convalescent or chronic care, or health care under medical supervision for 24 or more consecutive hours, to nine or more individuals who, by reason of advanced age, illness, or infirmity are unable to care for themselves, and who are not related to the governing authority by marriage, blood, or adoption.

Lot. A parcel or area of land that is designated as an individual unit for use, development, or ownership that is either: a) a parcel or area of land that is separately described in a deed or on a plan recorded in the Cumberland County Registry of Deeds; b) a contiguous combination of such lots under common ownership and designated as one unit for development; or c) a newly established parcel meeting all the dimensional requirements of the zone in which it is located.

Lot of record. A nonconforming parcel or area of land that: a) is separately described in a deed or on a plan recorded in the Cumberland County Registry of Deeds as of the date designated in the relevant provision of this chapter and b) conformed to the requirements of this chapter as of the date designated in the relevant provision of this chapter.

Lowest floor (within the floodplain). The lowest floor of the lowest enclosed area (including basement). An unfinished or flood resistant enclosure, usable solely for parking of vehicles, building access, or storage, in an area other than a basement area, is not considered a building's lowest floor, provided that such enclosure is not built so as to render the structure in violation of the applicable non-elevation design requirements of Article 12.

Low-income household. A household having an income not exceeding 80% of median income for area of residence as set forth in regulations promulgated from time to time by the United States Department of Housing and Urban Development pursuant to 42 U.S.C. sections 1437 et seq.

Low-income housing unit for rent. A dwelling unit for which:

A. The rent is affordable to a household earning 80% or less of Area Median Income (AMI) as defined by the United States Department of Housing and Urban Development (HUD).
B. The unit is rented to a household earning 80% or less of AMI.
C. The requirements of (A) and (B) above are limited by deed restriction or other legally binding agreement for the applicable length of time in this ordinance.

Low-income housing unit for sale. A dwelling unit for which:

A. The sale price is affordable to a household earning 100% or less of Area Median Income (AMI
B. The unit is sold to a household earning 100% or less of AMI.
C. The requirements of (A) and (B) above are limited by deed restriction or other legally binding agreement for future sales for the applicable length of time in this ordinance.

Manufactured housing. A structural unit or units designed for residential occupancy and constructed in a manufacturing facility and then transported by the use of its own chassis or placement on an independent chassis to a building site. The term includes any type of building which is constructed at a manufacturing facility and then transported to a building site where it is utilized for housing and may be purchased or sold by a dealer in the interim. For purposes of this article, two types of manufactured housing are included. They are:

A. Those units constructed after June 15, 1976, which the manufacturer certifies are constructed in compliance with the standards required by the United States Government Department of Housing and Urban Development, as such standards are from time to time revised or amended, meaning structures, transportable in one or more sections, which in the traveling mode are 14 body feet or more in width and are 750 or more square feet, and which are built on a permanent chassis and designed to be used as dwellings, with or without permanent foundations, when connected to the required utilities, including the plumbing, heating, air conditioning, and electrical systems contained therein. This term also includes any structure which meets all the requirements of this subparagraph except the size requirements and with respect to which the manufacturer voluntarily files a certification required by the Secretary of the United States Department of Housing and Urban Development and complies with the standards established under the National Manufactured Housing Construction and Safety Standards Act of 1974, United States Code, Title 42, Section 5401 et seq.; and
B. Those units constructed after June 15, 1976, which the manufacturer certifies are constructed in compliance with the state's Manufactured Housing Act and regulations, meaning structures, transportable in one or more sections, which are not constructed on a permanent chassis and are designed to be used as dwellings on foundations when connected to required utilities, including the plumbing, heating, air conditioning, or electrical systems contained therein.

Any unit which does not fall within the definitions of this section and which is legally sited within the city on December 18, 1989, may be relocated to any

location in the city in which manufactured housing is allowed.

Manufactured housing park. A parcel of land under unified ownership approved by the Planning Board under 30-A M.R.S. § 4358 for the placement of single-component manufactured housing.

Marijuana cultivation facility. A cultivation facility required to be licensed pursuant to 28-B M.R.S. § 201 or any other facility engaged primarily in the business of planting, propagation, growing, harvesting, drying, curing, grading, trimming, or other processing of marijuana, including mature marijuana plants, immature marijuana plants, seedlings, and marijuana seeds, for use or sale.

Marijuana manufacturing facility. A manufacturing facility required to be licensed pursuant to 22 M.R.S. § 2423-F or 28-B M.R.S. § 201.

Marijuana product. As defined by 22 M.R.S. § 2422 or 28-B M.R.S. § 102.

Marijuana retail store. A retail establishment licensed to sell marijuana, marijuana products, immature marijuana plants, and seedlings to adult use or medical marijuana customers. A marijuana retail store is only authorized as a principal use, and is not permitted as an accessory use. A marijuana retail store may not exceed a maximum gross floor area of 2,000 square feet. A marijuana retail store shall not include a registered dispensary.

Marijuana testing facility. A facility licensed to develop, research and test marijuana, marijuana products and other substances as defined by 22 M.R.S. § 2422 or 28-B M.R.S. § 102.

Marina. A commercial operation providing floats, slips, and piers intended primarily for berthing of noncommercial vessels and the provision of related services such as supplies, fuel, equipment and repairs, which may be provided both to tenants and non-tenants.

Mean sea level (within the floodplain). For purposes of the National Flood Insurance Program, the National Geodetic Vertical Datum (NGVD) of 1929, North American Vertical Datum (NAVD), or other datum, to which base flood elevations shown on the City's FIRM are referenced.

Military personnel berthing. A building, or portion thereof, which is primarily used as, and intended for, temporary living quarters for military personnel.

Moderate-income household. A household having an income not exceeding 120% of median income for area of residence as set forth in regulations promulgated from time to time by the United Sates Department of Housing and Urban Development pursuant to 42 U.S.C. sections 1437 et seq.

Multi-family development. The construction or creation of three or more dwelling units on any parcel of land or the addition of two or more dwelling units cumulatively within a three-year period.

Multiplex. A residential development consisting of three or more horizontally or vertically attached dwelling units, or a series of such attached dwelling units, and the construction of at least one building.

National Geodetic Vertical Datum (NGVD). The national vertical datum, a standard established in

1929, which is used by the National Flood Insurance Program (NFIP). NGVD is based upon mean sea level in 1929 and also has been called "1929 Mean Sea Level (MSL)".

Neighborhood center. A building or portion of a building used for recreational, artistic, social, educational, health, culture, or similar activities and services, usually owned and operated by a public or nonprofit group or agency. As part of these functions and activities, it shall be permissible to serve food, subject to other applicable codes and ordinances.

Non-commercial vessel berthing. The use of berthing space for berthing of watercraft other than commercial vessels. Berthing space used in the following manner shall not be included in the calculation of the number of linear feet under this use category:

A. Space used principally for sale or repair of vessels.

B. Commercial vessel tenant space used by a noncommercial vessel for a period not exceeding ten consecutive days while the primary commercial vessel tenant is conducting its business or trade.

Normal high-water line (non-tidal waters). That line which is apparent from visible markings, changes in the character of soils due to prolonged action of the water or changes in vegetation, and which distinguishes between predominantly aquatic and predominantly terrestrial land. Areas contiguous with rivers that support non-forested wetland vegetation and hydric soils and that are at the same or lower elevation as the water level of the river during the period of normal high-water are considered part of the river.

North American Vertical Datum (NAVD). The national datum whose standard was established in 1988, which is the new vertical datum used by the National Flood Insurance Program (NFIP) for all new Flood Insurance Rate Maps. NAVD is based upon vertical datum used by other North American countries such as Canada and Mexico and was established to replace NGVD because of constant movement of the earth's crust, glacial rebound and subsidence, and the increasing use of satellite technology.

Office park. Separate office buildings planned, constructed, or managed on an integrated coordinated basis.

Off-peninsula. All land located north of I-295.

100-year flood. See base flood.

On-peninsula. All land located south of I-295.

Open space. Any park and any other area outside of a building open to the public.

Owner. Any person that has any interest, legal or beneficial, in any parcel or lot.

Piers, docks, wharves, bridges and other structures and uses extending over or beyond the normal high-water line or within a wetland, temporary. Structures which remain in or over the water for less than seven months in any period of 12 consecutive months.

Piers, docks, wharves, bridges and other structures and uses extending over or beyond the normal high-water line or within a wetland, permanent. Structures which remain in or over the water for seven months or more in any period of 12 consecutive months.

Place of assembly. A building or portion of a building used as a community hall, neighborhood center, private club, or fraternal organization, or place of religious assembly. This definition shall not include buildings or portions of buildings used as a community hall, neighborhood center, private and fraternal organization, or place of religious assembly where 15 or fewer people, not including the permanent residents of a single-family dwelling, assemble.

Place of **religious** assembly. A building or portion of a building used for religious worship or instruction including, but not limited to, churches, synagogues, masjids, mosques, and other places of worship.

Planned residential unit development (PRUD). A residential subdivision consisting of attached or detached dwellings intended for separate ownership and land to be owned and used in common, with open spaces, recreational areas, access ways, and buildings which are designed, built, and managed in accordance with a unified development plan.

Planned unit development (PUD). A development consisting of either detached or attached single-family dwelling units and commercial or other uses, on substantially-sized properties of greater than 20 acres and designed to be compatible with the surrounding built and natural environment.

Plant canopy. As defined by 28-B M.R.S. § 102.

Preschool facility. Facility which provides a regular program of care and protection for children generally younger than those attending elementary school, which may also encompass daycare facilities.

Private club or non-profit social and recreational facility. A private club or nonprofit social and recreational facility is open exclusively to members and to their bona fide guests accompanying them, in order to promote fellowship, social living, proper recreation, civic responsibility, neighborhood responsibility, community welfare, or other endeavors. It shall be permissible to serve food and meals on such premises provided adequate dining room space and kitchen facility are available and are provided within all regulations of this Land Use Code and other applicable codes and ordinances.

Recent floodplain soils. Recent floodplain soils include the following soil series as described and identified by the National Cooperative Soil Survey: Alluvial. Charles, Cornish, Fryeburg, Hadley, Limerick, Lovewell, Medomak, Ondawa, Podunk, Rumney, Saco, Suncook, and Winooski.

Recreational vehicle. A vehicle that is:

A. Built on a single chassis;
B. 400 square feet or less when measured at the largest horizontal projection, not including slideouts;
C. Designed to be self-propelled or permanently towable by a motor vehicle; and,
D. Designed primarily not for use as a permanent dwelling but as temporary living quarters for recreational, camping, travel, or seasonal use.

Recreation and amusement centers. Facilities equipped for the conduct of sports or indoor leisure time recreation activities, including games of skill or games of chance licensed either by the City of Portland or by the State of Maine. Such facilities may limit admission either to members or to persons paying an entrance fee.

Registered dispensary. A registered medical marijuana dispensary as defined by 22 M.R.S. § 2422.

Registered patient. As defined by 22 M.R.S. § 2422.

Regulatory floodway. The channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than a designated height. When not designated on the Flood Insurance Rate Map (FIRM), it is considered to be the channel of a river or other watercourse and the adjacent land areas to a distance of 1/2 the width of the floodplain, as measured from the normal high-water mark to the upland limit of the floodplain.

Repair services. Establishments primarily engaged in rendering services related to the maintenance or repair of goods. In industrial zones only, repair services shall include motor vehicle repair services.

Restaurant. Any food service establishment with indoor seating capacity for ten or more patrons.

Retail. Any shop or store offering goods or merchandise to the general public for direct consumption and not for resale, or food service establishment with indoor seating capacity for nine or fewer patrons. Retail shall not include gasoline, diesel, or propane fuel sales.

Riverine. Relating to, formed by, or resembling a river (including tributaries), stream, brook, etc.

Roadway. That portion of a street between the regularly established curblines, or that part of a street or alley devoted to vehicular traffic.

Rooming unit. One or more rooms forming a single unit used, or intended to be used, for living and sleeping purposes by an individual or a family, but not designed for food preparation. In a suite of rooms, each room that provides sleeping accommodations shall be counted as one rooming unit for the purpose of this chapter.

Self-storage facility. A fully enclosed building with individual, secured units (accessed with or without supervision) used for the exclusive purpose of storage of non-hazardous business or personal materials.

Sexually explicit. The display or depiction of sex organs during actual or simulated sexual intercourse or sexual acts as defined in 17 A M.R.S. § 251.

Sheltered care group home. A facility which, in addition to providing food and shelter to a defined population of up to 12 individuals, provides guidance or counseling services as a primary function of the facility.

Shore frontage. The length of a lot bordering on a water body or wetland measured in a straight line between the intersections of the lot lines with the shoreline.

Sidewalk. That portion of a street not included in the roadway, and devoted in whole or part to pedestrian traffic.

Site. All contiguous land under the same ownership or control, whether proposed for development or not, except where development is limited to a lot or lots within a subdivision.

Small-scale marijuana caregiver. A registered caregiver who sells or dispenses marijuana to no more than five individual registered patients in any one calendar month; does not process or manufacture marijuana using chemicals or solvents; and cultivates no more than: 1) 250 square feet of plant canopy where located in a single-family dwelling or commercial space; or 2) 125 square feet of plant canopy where located in a dwelling unit within a two-family or multi-family building.

Solar access. Space open to the sun and clear of overhangs or shade, including orientation of buildings and lots to the sun, so as to permit the use of active and/or passive solar energy systems on individual properties.

Solar energy system. A complete assembly consisting of one or more solar collectors and associated mounting hardware or equipment, intended to provide for the collection, storage, and distribution of solar energy for heating or cooling, electricity generation, or solar/thermal hot water systems. Solar energy systems shall include the following:

A. Accessory solar **energy system.** A system as defined above where power generation is incidental to a principal use, which may take the form of either a building integrated or roof-mounted solar array of any size, or a ground-mounted array occupying less than 1,000 square feet of air-space over ground area.

B. Minor solar **energy system.** A system as defined above where power generation is considered a principal use, which may take the form of either a building- or roof-mounted solar array of any size, or a ground-mounted system occupying between 1,000 and 9,999 square feet of ground area.

C. Major solar **energy system.** A system as defined above where power generation is considered a principal use, which may take the form of either a building or roof-mounted solar array of any size, or a ground-mounted system occupying greater than 10,000 square feet of ground area.

Solar energy system, building-integrated. A solar energy system that is an integral part of a principal or accessory building and include, but are not limited to, photovoltaic or hot water systems that are contained within roofing materials, windows, walls, skylights and awnings.

Solar energy system, ground-mounted. Also known as free-standing solar energy systems, a solar energy system that is structurally mounted to the ground. The panels may be stationary or revolving and of any size.

Solar energy system, roof-mounted. A solar energy system in which solar panels are mounted on top of the structure of a roof either as a flush-mounted system or as modules fixed to frames which can be tilted toward the south at an optimal angle.

Sounds, impulse. Sound events characterized by brief excursions of sound pressure, each with a duration of less than 1 second.

Sounds, tonal. Sound waves usually perceived as a hum or whine because their instantaneous sound pressure varies essentially as a simple sinusoidal function of time.

Special Flood Hazard Area. See area of special flood hazard.

Special needs independent dwelling unit. A dwelling unit developed and managed by a nonprofit organization for habitation by persons with special social, physical or mental needs beyond strictly economic needs. Such persons shall be provided required levels of supervision, care and/or counseling services appropriate to their special needs, and the services shall be provided by either the sponsoring nonprofit agency or through another entity with which the agency has entered into a contractual arrangement.

Sports complex. One or more facilities located on the same parcel of land where athletic events are held and with a combined seating capacity of at least 6,000 seats.

Stockpiling. Any placement or creation of piles or loads of soil, loam, sand, gravel, rock, or other mineral deposits upon a site for the purpose of storage, warehousing, or reserving for future use.

Stormwater retention area. A pond or basin used for the permanent storage of stormwater runoff.

Stormwater detention area. A storage area for the temporary storage of stormwater runoff which does not contain water during non-storm conditions.

Stream. A free-flowing body of water from the outlet of the confluence of two perennial streams as depicted on the most recent edition of a United States Geological Survey 7.5-minute series topographic map, or if not available, a 15-minute series topographic map, to the point where the body of water becomes a river or flows to another water body or wetland within a shoreland area, or any stream designated within a Stream Protection Zone.

Street. A public way established by or maintained under public authority, or a way dedicated to the use of the public and appearing on the official map of the city.

Street line. The line of demarcation between private property and a street.

Street, cul-de-sac or dead end. A street with only one outlet.

Structure. Anything constructed or erected of more than one member having a permanent or semi-permanent location on another structure or in or on the ground, including without limitation buildings, fences, gazebos, signs, antennas, satellite sending or receiving dishes, and swimming pools. Stockpiles shall be considered structures for the purposes of dimensional requirements.

Studios for artists and craftspeople. A facility for the production of arts and crafts products such as

paintings, sculpture, or other arts, or the practice of arts such as music or dance, or the production of custom, hand-crafted, or limited production of products such as furniture, wood, clay, and metal products, publications, and similar low-impact arts and crafts activities.

Subdivider. Any individual, firm, association, syndicate, partnership, corporation, trust, or any other legal entity commencing proceedings under these regulations to effect a subdivision of land hereunder for himself, herself, or for another.

Subdivision. As defined in 30 A M.R.S. § 4401 and 4402.

Tasting room. A facility for the sampling of beer, wine, spirits, other alcoholic or non-alcoholic beverages, or food.

Telecommunication tower. Radio masts or tower structures built primarily to hold telecommunication antennas.

Tenant. Any occupant in lawful possession of a rental unit, whether by lease, sublease, or otherwise.

Theater or performance hall. Any establishment devoted to showing motion pictures, or for dramatic, musical, or live performances.

Transient guest. A person who occupies a facility offering accommodations on an overnight basis for compensation and whose actual occupancy is limited to no more than 15 days out of any 60-day period.

Tributary stream. A channel between defined banks created by the action of surface water, which is characterized by the lack of terrestrial vegetation or by the presence of a bed, devoid of topsoil, containing waterborne deposits or exposed soil, parent material or bedrock; and which is connected hydrologically with other water bodies. Tributary stream does not include rills or gullies forming because of accelerated erosion in disturbed soils where the natural vegetation cover has been removed by human activity.

Upland edge of a wetland. The boundary between upland and wetland. For purposes of a coastal wetland, this boundary is the line formed by the landward limits of the salt tolerant vegetation and/or the highest annual tide level, including all areas affected by tidal action. For purposes of a freshwater wetland, the upland edge is formed where the soils are not saturated for a duration sufficient to support wetland vegetation, or where the soils support the growth of wetland vegetation but such vegetation is dominated by woody stems that are six meters or taller.

Use. The purpose for which land or structures thereon is designed, arranged, or intended to be occupied, or for which it is occupied, maintained, rented, or leased.

Utility substation. Any sewage or water pumping station, electric power substation, transformer station, telephone equipment enclosures, or other similar structures owned or operated by a utility.

Vegetation. All live trees, shrubs, ground cover, and other plants including, without limitation, trees both

over and under four inches in diameter, measured at four and one-half feet above ground level.

Very low-income household. A household having an income not exceeding 50% of median income for area of residence as set forth in regulations promulgated from time to time by the United States Department of Housing and Urban Development pursuant to 42 U.S.C. section 1437 et seq.

Warehousing, storage, and distribution. The storage of goods, wares, and merchandise in a warehouse from which distribution occurs. May include wholesale use, but not retail or direct sales to consumers.

Watercourse. Any natural or artificial stream, river, creek, ditch, channel, swale, canal, conduit, culvert, drain, waterway, gully, ravine, or wash in which water flows in a definite direction or course, either continuously or intermittently, or which has a definite channel, bed, and banks, and includes any area adjacent thereto subject to inundation by reason of overflow or floodwater.

Water-dependent uses. Those uses that require, for their primary purpose, location on submerged lands or that require direct access to, or location in, coastal or inland waters and which cannot be located away from these waters.

Wetlands (outside of shoreland zones). Those areas which have two or more of the following:

A. A water table at or near the surface during the growing season;

B. Very poorly drained soils, including Sebago mucky peat; or

C. Obligate wetland vegetation.

Very poorly drained soils and obligate wetland vegetation shall be as defined and illustrated in the United States Department of Interior, Fish and Wildlife Service publication of Wetland Plants of the State of Maine (1986).

Wind energy system. A wind energy generator and all associated facilities.

Wind energy system, useful life. The period for which the system has been designed by the manufacturer to operate in a safe manner, including the period during which new parts and refurbishment allow it to continue operating safely.

Wholesale. Sale for resale, not for direct consumption.

Workforce housing unit for rent. A dwelling unit for which:

A. The rent is affordable to a household earning 80% or less than of AMI.

B. The unit is rented to a household earning 80% or less of AMI.

C. The requirements of (A) and (B) above are limited by deed restriction or other legally binding agreement for the applicable length of time in this ordinance.

Workforce housing unit for sale. A dwelling unit for which:

A. The purchase price is affordable to a household earning 80% or less of AMI.

B. The unit is sold to a household earning 80% or less of AMI.

C. The requirements of (A) and (B) above are limited by deed restriction or other legally

binding agreement for the applicable length of time in this ordinance.

4 NONCONFORMING USES, STRUCTURES, & LOTS

4.1 CONTINUATION

Any building, structure, lots, or use, that was legally existing at the time of its creation and made nonconforming by the provisions of this Land Use Code or any amendment thereto may be continued although such building, structure, lot, or use does not conform with the provisions of this Land Use Code.

4.2 NONCONFORMING USES

4.2.1 Increase in nonconforming use

A. A structure whose use is wholly nonconforming shall not be altered so as to increase the cubical content or the extent of nonconformity, except as provided for in (C), below.

B. A nonconforming use on premises outside of a building shall not be extended or allowed to occupy additional land area.

C. No alterations, modifications, or additions shall be made so as to increase the cubical content or the degree of nonconforming use, nor shall a nonconforming use be extended to any other part of a structure, unless such extension of a nonconforming use is solely for the purpose of bringing the use into compliance with health or safety codes, or to correct a condition which is determined by the Board of Appeals to constitute a health or safety problem. In either case, the expansion shall be limited to the minimum necessary to accomplish that purpose.

D. Except as expressly provided herein, any alteration, modification, or addition permitted under this subsection shall be in compliance with all other applicable sections of this Land Use Code. Nothing within this subsection shall be construed to permit an increase in the number of units in a building which is nonconforming as to the number of dwelling units or will become nonconforming as a result of such alteration, modification, or addition.

4.2.2 Change of nonconforming use

When a nonconforming use has been changed to a permitted use, it shall not thereafter be changed back to any non-permitted use. For purposes of this subsection, a use shall be deemed to have been so changed when an existing nonconforming use is terminated and a permitted use is commenced and continued for a period of seven days. Any change of use in violation of this article shall be deemed to be an abandonment of the lawfully existing nonconforming use. A lawful nonconforming use shall not be changed to any use other than a use permitted in the zone in which the use is located or to any use other than a nonconforming use of a more restricted zone, as set forth in the following schedule, provided that in no such case shall any structural alterations be made in any building except those required by law, ordinance, or other regulations:

A. In a mixed-use zone, from any use permitted in an industrial zone to any use permitted in a mixed-use zone.

B. In a B-1/B-1b zone, from any use permitted in a B-3 zone to any use permitted in a B-2 zone.

C. In a residential zone, from any use permitted in a B-2 zone to any use permitted in a B-1/B-1b zone.

D. In a residential zone, from any use permitted in any other residential zone to any use permitted in a more restrictive residence zone. For the purpose of this subsection, an R-6 zone shall be

deemed the least restrictive and an R-1 zone shall be deemed the most restrictive, with the intervening zones restricted in order of zone number.

4.2.3 Discontinuance of use of land

A nonconforming use of land where no buildings or only incidental or accessory buildings are employed together with such use shall not be changed to any other nonconforming use, and if such use is discontinued for a period of 90 days, it shall not be reestablished.

4.2.4 Discontinuance of use of property

If a legally nonconforming nonresidential use is discontinued for a period of 12 months or if a legally nonconforming residential use is discontinued for a period of 24 months, such discontinuance shall constitute an abandonment of the use and the property shall not thereafter be occupied or used except in conformity with the provisions of this article. A nonconforming use of land which is incidental or accessory to such nonconforming use shall be considered as being discontinued at the same time as the nonconforming use of the structure. In cases of foreclosure or similar situations involving a legally nonconforming use, the Planning Authority shall be authorized to extend the aforementioned period up to an additional five years provided that the extension is for good cause and the minimum length considered necessary to resume the legally nonconforming use of the structure. If the Planning Authority extends the period for resuming the nonconforming use, any associated existing nonconformities of structures and land shall also be extended. For buildings in the Shoreland Zone, state regulations may also govern and provide for a shorter period of time for nonconforming properties.

4.3 NONCONFORMING LOTS

4.3.1 Lots of record

A. A lot of record that has been held in separate and distinct ownership from adjoining lots as of the relevant date below shall be considered a buildable lot if it meets the following minimum standards:

1. A lot of record as of June 5, 1957 may be considered a buildable lot in the R-1, R-2, R-3, R-4, R-5, R-5a, or R-6 zones provided that: a) the applicable setback dimensions can be met; b) the lot has a minimum street frontage of 40 feet or the applicable street frontage of the zone, whichever is less; and c) the lot has a minimum lot size of 5,000 square feet or the applicable minimum lot size of the zone, whichever is less.
2. A lot of record as of June 5, 1984 may be considered a buildable lot in the R-1, R-2, R-3, R-4, R-5, R-5a, or R-6 zones provided that the applicable setback dimensions can be met.
3. A lot of record as of July 15, 1985 may be considered a buildable lot in the IR-1 and IR-2 zones, provided that the applicable setback dimensions can be met and provided further that a lot in the IR-1 zone has a minimum lot area of 10,000 square feet and a lot in the IR-2 zone has a minimum lot area of 6,500 square feet unless the lot is served by both public sewer and public water, in which case the lot has a minimum area of 5,000 square feet.

B. A lot of record that has been held in common ownership with any adjoining lot(s) at any point after the relevant date below shall be considered a buildable lot only if: 1) none of the lot(s) are in the Shoreland Zone; 2) any existing structure meets, or will be modified to meet, the applicable setback dimensions; and 3) it meets the following minimum standards:

1. A lot of record as of June 5, 1957 may be considered a buildable lot in the R-1, R-2, R-3, R-4, R-5, R-5A, or R-6 zones provided that: a) the applicable setback dimensions can be met; b) the lot has a minimum street frontage of 40 feet or the applicable street frontage of the zone, whichever is less; and c) the lot has a minimum lot size of 5,000 square feet or the applicable minimum lot size of the zone, whichever is less.
2. A lot of record as of June 5, 1984 may be considered a buildable lot in the R-1, R-2, R-3, R-4, R-5, R-5A, or R-6 zones provided that the applicable setback dimensions can be met.
3. So long as the setbacks are met, any nonconformities of structures and buildings, existing prior to June 5, 1957, on developed lots of record shall be considered lawfully existing nonconformities.

4.4 NONCONFORMING BUILDINGS/STRUCTURES

4.4.1 Restoration or reconstruction

A. A lawful nonconforming nonresidential structure may be maintained, repaired, or reconstructed in kind within a one-year period or within a two-year period for a lawful nonconforming residential structure, but no alterations, modifications, or additions shall be made to it, except as provided in Subsections 4.4.2 and 4.4.3.

B. A nonconforming structure damaged by fire, explosion, flood, riot, act of the public enemy, accident of any kind, decay, or otherwise may be maintained, repaired, reconstructed, restored or rebuilt only where:

1. The restoration or reconstruction is of a building which is lawfully nonconforming only as to lot area, setbacks, or any other dimensional requirements.
2. Where the restoration or reconstruction will occur entirely within the existing footprint and previous shell of the building and where no alterations, modifications, or additions will be made except as provided in this article and as permitted in Subsections 4.4.2 and 4.4.3.
3. Restoration or reconstruction is commenced within one year for a nonconforming nonresidential structure, or two years for a nonconforming residential structure, of the initial damage where such damage is sudden and accidental and is diligently pursued to completion without expiration of permits. For buildings in the Shoreland Zone, state regulations may also govern and provide for a shorter period for restoration or reconstruction of nonconforming structures.
4. Restoration or reconstruction necessitated by decay must be commenced within one year of the demolition of the building and diligently pursued to completion without expiration of permits.

5. Any reconstruction, under this provision, in the R-6 zone on a lot with 10,000 square feet or less, other than the exact restoration of a previously existing building on the site, shall comply with the applicable standards contained within the City of Portland *Design Manual*.

4.4.2 Alteration or modification

Alteration or modification may be made to a building which is lawfully nonconforming as to any dimensional requirement where the proposed changes in existing exterior walls and/or roofs would be within the space occupied by the existing shell of the building, and would not create any new nonconformity nor increase any existing nonconformity, except as provided elsewhere in this article and as permitted under Subsection 4.4.3. This subsection shall not apply to buildings located within the Shoreland Zone and existing on June 15, 1992, which are nonconforming only as to setbacks from wetlands, tributary streams, or other water bodies, which shall be regulated in accordance with Subsection 4.4.5.

4.4.3 Building extensions

Existing principal buildings which are lawfully nonconforming as to dimensional requirements may be enlarged subject to the following provisions:

A. No modification to an existing nonconforming building shall increase any existing nonconformity of a lot, use, or structure, except as provided in (D) below.

B. No modification to an existing nonconforming building shall create new noncompliance with any provision of this Land Use Code.

C. Existing buildings that are lawfully nonconforming as to required minimum setbacks may be vertically or horizontally expanded provided that the area of expansion meets all current dimensional requirements, except as provided in (D) below.

D. A vertical expansion above a portion of a building that is lawfully nonconforming as to minimum setbacks may be permitted a one-time increase of one additional story provided that:

1. No portion of the expansion horizontally extends beyond the nonconforming portion of the first story of the structure.
2. Any portion of a vertical expansion above the permitted one additional story shall meet the required minimum setback.

4.4.4 Enclosure of porches in required setbacks

Any open porch existing with a roof over the same on June 5, 1957, and encroaching upon any setback required by this chapter may be enclosed if the major portion of the enclosure is of glass.

4.4.5 Expansions in the Shoreland Zone

A nonconforming structure may be added to or expanded if such addition or expansion does not increase the nonconformity of the structure and is in accordance with the following provisions:

A. After January 1, 1989, if any portion of a structure is less than the required setback from the normal high water line of a water body or tributary stream or the upland edge of a wetland that portion of the structure shall not be expanded, as measured in floor area or volume, by 30% or more, during the lifetime of the structure. If a replacement structure conforms with the requirements of this subsection, and is less than the required setback from a water body, tributary stream, or

wetland, the replacement structure may not be expanded if the original structure existing on January 1, 1989 had been expanded by 30% in floor area and volume since that date.

B. Whenever a new, enlarged, or replacement foundation is constructed under a nonconforming structure, the structure and new foundation must be placed such that the setback requirement is met to the greatest practical extent as determined by Building Authority, basing its decision the criteria specified in (C) below. If the completed foundation does not extend beyond the exterior dimensions of the structure, except for expansion in conformity with (A) above, and the foundation does not cause the structure to be elevated by more than three additional feet as measured from the uphill side of the structure (from original ground level to the bottom of the first floor sill), it shall not be considered to be an expansion of the structure.

C. A nonconforming structure may be relocated within the boundaries of the parcel on which the structure is located, provided that the site of the relocation conforms to all setback requirements to the greatest practical extent as determined by the Building Authority, and provided that the applicant demonstrates that the present subsurface sewage disposal system meets the requirements of state law, the State of Maine Subsurface Wastewater Disposal Rules, or that a new system can be installed in compliance with state law, such rules, and all applicable chapters of the City of Portland Code of Ordinances. In no event shall a structure be relocated in a manner that causes the structure to be more nonconforming. In determining whether the building relocation meets the setback requirements to the greatest practical extent, the Building Authority shall consider the size of the lot, the slope of the land, the potential for soil erosion, the location of other structures on the property and on adjacent properties, the location of septic system and other on site soils suitable for septic systems, and the type and amount of vegetation to be removed to accomplish the relocation. When it is necessary to remove vegetation within the water or wetland setback are in order to relocate a structure, the Building Authority shall require replanting of native vegetation to compensate for the destroyed vegetation. In addition, the area from which the relocated structure was removed must be replanted with vegetation. Replanting shall be required as follows:

1. Trees removed in order to relocate a structure must be replanted with at least one native tree, three feet in height, for every tree removed. If more than five trees are planted, no one species of tree shall make up more than 50% of the number of trees planted. Replaced trees must be planted no further from the water or wetland than the trees that were removed.
2. Other woody and herbaceous vegetation and ground cover that are removed or destroyed in order to relocate a structure must be re-established within the setback area. The vegetation and/or ground cover must consist of similar native vegetation and/or ground cover that was disturbed, destroyed or removed.
3. Where feasible, when a structure is relocated on a parcel the original location

of the structure shall be replanted with vegetation which may consist of grasses, shrubs, trees, or a combination thereof.

D. Buildings in existence on January 1, 1989, and located in the Shoreland Zone may be expanded once during the lifetime of the structure up to 25 feet toward a freshwater wetland or tributary stream, provided that a minimum setback of 40 feet is maintained and that the existing floor area or volume is not increased by more than 30%, and shall not create any undue environmental impact or flood-prone condition.

4.4.6 Nonconformity as to number of dwelling units

A. **Purpose.** The purpose of this provision is to establish a process whereby certain dwellings which contain more dwelling units than the number permitted by the applicable provisions of the Land Use Code may be recognized as legal, nonconforming uses.

B. **Application.** Application for validation of such nonconforming dwelling units shall be on a form provided by the Building Authority, and will be accompanied by:

1. An application fee as established by the City Council to cover administrative costs.
2. A plan, drawn to scale, which shows the location of the building(s) on the lot, parking, easements, dumpsters, fencing, public ways, and any other significant feature.
3. A floor plan for each unit in the dwelling, whether or not it is the subject of the application.

C. **Eligibility.** In order for a nonconforming dwelling unit to be validated by administrative action of the Building Authority as authorized herein, the Building Authority must find, based on competent evidence, supported by public records, that:

1. The nonconforming dwelling units were either in existence April 1, 2005, or the structure in which they are located was originally designed to accommodate more than the number of such units presently in use.
2. The applicant neither constructed nor established the nonconforming dwelling units.
3. The nonconforming dwelling units comply with or can be made to comply with current standards of Chapter 10 of the City of Portland Code of Ordinances, including the National Fire Protection Association Life Safety Code and the National Fire Protection Association 1: Fire Prevention Code, as amended.
4. Each of the nonconforming dwelling units complies with, or can be made to comply with, provisions of the Chapter 6 of the City of Portland Code of Ordinances, as amended, including, but not limited to, the minimum standards for space and occupancy, the minimum plumbing standards, and the minimum ventilation standards.
5. The structure containing the nonconforming dwelling units is located in the R-3, R-4, R-5/R-5a, R-6/R-6a, R-7, B-1/B-1b, B-2/B-2b/B-2c, or IS-FBC zones.

In the absence of legally competent evidence, supported by records (such as, but not limited to, Assessor's records, purchase and sale agreements, affidavits, deeds, mortgages, as

well as reliable secondary sources), that the conditions of (C)(1), (2), (3), (4), or (5) above can be met, the Building Authority may not approve the application, but shall advise the applicant that the matter may be appealed to the Board of Appeals.

D. **Notice to abutters**. Upon receipt of a completed application, the Building Authority will provide the owners of abutting properties and the owners of property situated within 300 feet of the structure notice of the application, along with a notice that they may object to the Building Authority's acting on the application and require the applicant to appeal to the Board of Appeals. The notice shall advise the abutters and owners of property within 300 feet that any objection must be submitted in writing to the Building Authority within 10 days of the date of the notice sent to them. The failure of any property owner to receive the notice described above shall not invalidate any action by the Building Authority. The Building Authority shall promptly notify the applicant of receipt of the objection, that the Building Authority is without authority to proceed, and advise the applicant that, within 30 days from receipt of the letter, an application may be filed to have the matter reviewed by the Board of Appeals as a conditional use.

E. **Approval of application.** The Building Authority may approve the application, provided that the evidence presented satisfies all of the requirements of this subsection and provided that no abutter nor person entitled to notice has requested that the application be referred to the Board of Appeals, instead of the Building Authority. Upon approval of the application, final inspection by the Building Authority certifying the units as in compliance with all applicable codes, and receipt of an inspection fee as established by the City Council for each nonconforming dwelling unit which has been recognized as a lawful, nonconforming use, the Building Authority will issue a certificate of occupancy.

F. **Disapproval of application.** In the event the application is not approved by the Building Authority or in the event of a timely objection filed by a person qualified herein to file such an objection, the applicant, within 30 days from the decision of the Building Authority or objection, may appeal the matter to the Board of Appeals as a conditional use.

G. **Action by Board of Appeals.** The Board of Appeals shall treat applications filed under this subsection as an application for a conditional use, applying the standards applicable to conditional uses under Section 6.5 as well as the requirements of this subsection.

H. **Dimensional and parking requirements**.In making decisions under this subsection, neither the Building Authority nor the Board of Appeals shall apply the dimensional or parking requirements which would otherwise apply in the zones where the nonconforming dwelling units are situated.

I. **Exclusions.** The provisions of this subsection shall not apply to rooming units, but shall apply to efficiency apartments under Chapter 6 of the City of Portland Code of Ordinances. The Board of Appeals is without jurisdiction to grant any relief (including, but not limited to, variances) which would recognize the particular dwelling units which are the subject of this subsection as legal, nonconforming uses,

except in strict compliance with each requirement of this subsection.

J. **Prior judicial and administrative action.** Decisions of any court or administrative body, including but not limited to, the Building Authority, the Planning Board, or the Board of Appeals, made prior to the effective date of this subsection and which addressed the number of nonconforming dwelling units in a particular structure, will not bar relief under this subsection.



5 ZONES

5.1 ESTABLISHMENT OF ZONES

In order to carry out the provisions of this Land Use Code, the City of Portland shall be divided into the zones in Table 5-A.

5.2 ZONING MAP

5.2.1 Zoning map adopted

The zones in Table 5-A are shown upon a map filed in the Department of Planning and Urban Development. Such zoning map, with amendments, is hereby adopted as the official zoning map of the City of Portland and as part of this Land Use Code.

5.2.2 Zone boundaries when uncertain

Where uncertainty exists with respect to the boundaries of the various zones, as shown on the zoning map, the following rules shall apply:

A. Unless otherwise indicated, zone boundary lines are the center lines of streets, alleys, parkways, waterways, or rights-of-way of public utilities and railroads or such lines extended.

B. Unless otherwise shown, lines within blocks less than 200 feet wide are median lines between their sides, and lines within blocks 200 feet or more wide are 100 feet distant from the less restricted side of the block.

C. The depictions of the Shoreland Zone and Stream Protection Zone on the zoning map are illustrative of the general location of such zones. The actual boundaries of these zones shall be determined by measurement of the distance indicated on the map and in this Land Use Code from the normal high-water line of the water body or the upland edge of wetlands. Where such measurement is not the same as the location of the boundary of the zoning

TABLE 5-A: ZONES

Residential	R-1, R-2, R-3, R-4, R-5, R-5a, R-6, R-6a
Island	IR-1, IR-2, IR-3
	I-B Island Business
Mixed-Use	B-1, B-1b Neighborhood Business
	B-2, B-2b, and B-2c Community Business
	B-3, B-3b, and B-3c Downtown Business
	B-4 Commercial Corridor
	B-5 and B-5b Urban Commercial
	B-6 Eastern Waterfront
	B-7 Mixed Development
Office	O-P Office Park
	R-P Residence Professional
Industrial & Airport	I-L and I-Lb Low-Impact
	I-M, I-Ma, and I-Mb Moderate Impact
	I-H and I-Hb High Impact
	A-B Airport Business
Open Space	R-OS Recreation and Open Space
Waterfront	EWPZ Eastern Waterfront Port
	WCZ Waterfront Central
	WPDZ Waterfront Port Development
Overlay Zones	Compact Urban Residential (R-7)
	Downtown Entertainment Overlay
	Fort Sumner Park Height Overlay
	Helistop Overlay
	Institutional Overlay (IOZ)
	Island Transfer Station Overlay
	Pedestrian Activities District Overlay
	Stream Protection Overlay
	University of Southern Maine Overlay
	Waynflete School Overlay
Form-Based	IS-FBC India Street Form-Based Code
Other	Shoreland
	Floodplain Management
	RPZ Resource Protection

map, the measurement shall control, unless the zoning map indicates that the zone boundary shall follow an existing property line.

5.2.3 Extension of zone lines

Where a zone boundary line divides a lot in single or joint ownership of record at the time such line is established, the provisions of this Land Use Code for the less restricted portion of such lot shall extend not more than 30 feet into the more restricted portion, provided that the lot has at least 20 feet of street frontage in the less restrictive zone when taken together with adjacent premises which are under the same or equivalent ownership or control. If such boundary line divides a business or industrial zone from a residential zone, no frontage on a street other than the principal business street in the less restrictive zone may be taken into consideration in connection with the right herein granted. This subsection shall not apply to differing dimensional requirements, including height, within a zoning district.

5.3 CONDITIONAL OR CONTRACT ZONING

5.3.1 Authority and purpose

Pursuant to 30-A M.R.S.§ 4352(8), conditional or contract zoning is hereby authorized for rezoning of property where, for reasons such as the unusual nature or unique location of the development proposed, the City Council finds it necessary or appropriate to impose, by agreement with the property owner or otherwise, certain conditions or restrictions in order to ensure that the rezoning is consistent with the City's Comprehensive Plan. Conditional or contract zoning shall be limited to where a rezoning is requested by the owner of the property to be rezoned. The conditional or contract zoning must be consistent with the Comprehensive Plan, and rezoned areas must be consistent with the existing and permitted uses within the original zone. Nothing in this section shall authorize either an agreement to change or retain a zone or a rezoning which is inconsistent with the City's Comprehensive Plan.

5.3.2 In the I-H zone

A conditional or contract rezoning shall only be approved in the I-H or I-Hb zones if, after public hearing and opportunity for public comment, the reviewing body finds that the applicant has carried the burden of proof to show that the proposed development meets the following standards:

A. The proposed development is consistent with the Comprehensive Plan.
B. The proposed development is consistent with the purposes of the underlying zone.
C. The proposed development is designed and operated so that it will prevent undue adverse environmental impacts, substantial diminution of the value or utility of neighboring structures, or significant hazards to the health or safety of neighboring residents by controlling noise levels, emissions, traffic, lighting, odors, and any other potential negative impacts of the proposal.
D. All plans must include complete information of processes, materials, or methods of storage to be used by the development and shall specify how hazardous impacts to neighboring properties will be prevented.

5.3.3 Hearing

The Planning Board shall conduct a public hearing in accordance with Section 2.1.8 prior to any property being rezoned under this section.

5.3.4 Conditions and restrictions

Conditions and restrictions imposed under the authority of this section shall relate only to the physical development and operation of the property and may include, by way of example:

A. Limitations on the number and types of uses permitted.
B. Restrictions on the scale and density of development.
C. Specifications for the design and layout of buildings and other improvements.
D. Schedules for commencement and completion of construction.
E. Performance guarantees securing completion and maintenance of improvements, and guarantees against defects.
F. Preservation of open space and buffers, and protection of natural areas and historic sites.
G. Contributions toward the provision of municipal services required by the development.
H. Provisions for enforcement and remedies for breach of any condition or restriction.

5.3.5 Amendments

Except as expressly modified in any contract or conditional rezoning agreement, the use and occupancy of any property within the City of Portland used or occupied pursuant to a contract or conditional rezoning agreement otherwise shall be governed by and comply with the provisions of the Land Use Code of the City of Portland and any applicable amendments thereto or replacement thereof.

5.3.6 Enforcement

Notwithstanding language in any contract or conditional zoning to the contrary, any violation of a conditional or contract zone shall be enforced pursuant to 30-A M.R.S. § 4452, as may be amended from time to time, or in any other manner available by law. No alleged violation of a contract or conditional rezoning may be prosecuted until the City has delivered written notice of the alleged violation(s) to the owner or operator of the property that is subject to the contract or conditional rezoning and given the owner or operator an opportunity to cure the violation(s) within 30 days of receipt of the notice. In addition, if such an enforcement action should result in a finding that the terms of the conditional or contract zone have been violated, then the City may act to modify or rescind the conditional or contract zone and to rezone the property.

5.4 BASE ZONE PURPOSE STATEMENTS

Base zone purpose statements shall be as established in Tables 5-B to 5-G.



TABLE 5-B: RESIDENTIAL ZONE PURPOSE STATEMENTS

R-1	To provide for lower density residential development characterized by single-family homes on individual lots in outlying areas of the city and along traffic corridors with limited additional traffic capacity.
R-2	To provide for low-density residential development characterized by single-family homes on individual lots in outlying areas of the city and along traffic corridors with limited additional traffic capacity.
R-3	To provide for medium-density residential development characterized by single-family homes on individual lots and also to provide for planned residential unit developments on substantially sized parcels.
R-4	To preserve the unique character of the Western Promenade area of the city by controlling residential conversions and by allowing the continued mix of single-family, two-family, and low-rise multi-family dwellings and other compatible development at medium densities.
R-5	To provide appropriate areas of the city for medium-density residential development characterized by single-family, two-family and low-intensity multifamily dwellings on individual lots; to ensure the stability of established medium-density neighborhoods by controlling residential conversions; and to provide for planned residential unit development on substantially-sized parcels.
R-5a	To provide for moderate-density residential development in off-peninsula locations that can provide a unique residential living experience with a high degree of natural site amenities; and to provide areas of the city in the general proximity of the peninsula that have the capability for adequate municipal services, including traffic corridors with adequate traffic capacity, that can appropriately accommodate a more intensive use of land than other lower-density zoned land and be compatible with surrounding neighborhoods; and to increase affordable housing opportunities in off-peninsula locations by providing a moderate-density zone.
R-6	To set aside areas on the peninsula for housing characterized primarily by multi-family dwellings at a high density providing a wide range of housing for differing types of households; to conserve the existing housing stock and residential character of neighborhoods by controlling the scale and external impacts of professional offices and other nonresidential uses; and to encourage new housing development consistent with the compact lot development pattern typically found on the peninsula.
R-6a	To encourage neighborhood livability with higher density multi-family housing on large parcels located off the peninsula along major public transportation routes, near service areas, and in redevelopment (underutilized) or infill areas.

TABLE 5-C: ISLAND ZONE PURPOSE STATEMENTS

IR-1	To provide for low-intensity residential, recreational, and rural uses in the less developed areas of the islands in order to preserve the rustic character of the islands, to protect groundwater resources and natural and scenic areas, and to permit only appropriate low-intensity development in areas lacking adequate public facilities and services.
IR-2	To protect the character of existing developed residential neighborhoods on the islands and to allow infill where there are adequate public services. Expansion or extension of an existing IR-2 zone should be strictly limited, generally focused toward areas adjacent to existing village IR-2 areas, and restricted by such factors as adequacy of access, whether adequate water will be available for private use and for fire protection, and whether soils in the area are adequate for subsurface water disposal or whether public sewers are available. IR-2 rezoning on substantially sized parcels should not be considered for those sites that should be more appropriately zoned otherwise.
IR-3	To allow for a planned unit development in a manner compatible with both the natural and built environment, which provides for adequate circulation and waterfront access, adequate water supply for private use and fire protection, and safe and clean disposal of solid and septic wastes. The following guidelines shall be considered, among others, in establishing an IR-3 zone: A. An IR-3 zone should have a minimum land area of 20 acres. B. A site for an IR-3 zone should be able to accommodate higher density development by providing buffers from surrounding areas on a substantially-sized parcel for which natural amenities are capable of being conserved in a development plan for the site. C. IR-3 zones should not be established unless issues of municipal services, including infrastructure, education, and police and fire services and other municipal services can be appropriately and adequately addressed. D. The differences in scale and intensity of uses between existing development and the IR-3 zone, and the cumulative impact on the overall density of the island, should be mitigated by appropriate open space and buffer areas. E. The development plan should have the capability of meeting the development review standards of the zone.
I-B	To provide limited areas on the islands for retail and service establishments that primarily serve the needs of the local island market area.



TABLE 5-D: MIXED-USE ZONE PURPOSE STATEMENTS

B-1	To provide limited areas for the location of small-scale commercial establishments intended to serve a local market. Uses that are complimentary, quiet, and generally do not disturb the comfort and enjoyment of the adjoining neighborhood environment are encouraged, and should be designed for the pedestrian scale and to provide convenient access for nearby residents and workers to walk in to purchase goods and services. Buildings and uses shall be designed with attractive storefronts or similar features, with windows and doors convenient to a public sidewalk. This zone encourages mixed-use buildings, such as commercial first floor with residential uses above or combined retail/office uses in a multi-story structure. The zone also provides the opportunity for high residential density. Suitable locations for this zone may include street intersections and arterial streets with existing or proposed traditional neighborhood retail and service uses.
B-1b	To provide appropriate opportunities for the establishment of small-scale ground floor commercial uses to serve a local market, while supporting mixed-use buildings with residential uses above ground floor commercial space and on the ground floor where the principal street frontage is maintained for active commercial uses. The zone also provides the opportunity for mixed use and high residential density. Suitable locations for this zone may include street intersections, arterial streets, and sites with existing or traditional neighborhood retail and service uses.
B-2	To provide appropriate locations for the development and operation of community centers offering a mixture of commercial uses, housing, and services serving the adjoining neighborhoods and the larger community. The variety, sites, and intensity of the permitted commercial uses in the B-2 zone are intended to be greater than those permitted in the B-1/B-1b zones. The zone provides a broad range of goods and services with a mixture of large and small buildings, such as grocery stores, shops and services located in major shopping centers and along arterial streets. Such establishments should be readily accessible by automobile, by pedestrians and by bicycle. Development in the B-2 zone should relate to the surrounding neighborhoods by design, orientation, and circulation patterns. The zone should provide locations for moderate to high-density housing in urban neighborhoods along arterials.
B-2b	To provide neighborhood and community retail, business and service establishments that are oriented to and built close to the street. The B-2b zone is appropriate in areas where a more compact urban development pattern exists or where a neighborhood-compatible commercial district is established which exhibits a pedestrian scale and character. Such locations may include the peninsula and other arterials and intersections with an existing urban or neighborhood-oriented building pattern. The B-2b should provide locations for moderate to high-density housing in urban neighborhoods along arterials.
B-2c	To protect and enhance the quiet enjoyment of adjoining residential neighborhoods from the impacts of businesses that serve liquor and from other uses that are incompatible with adjoining neighborhoods due to noise.
B-3 & B-3b	To maintain and enhance the role of the downtown as the business and commercial center of the region; to enhance and promote the orderly expansion of retail and service businesses downtown, satisfying the related needs of the city's resident, working, and visitor populations; to encourage increased housing opportunity downtown for a diverse residential population; to enhance the pedestrian environment through the encouragement of intensive mixed-use activities, through the enhancement and maintenance of public and private open space, and through the enlivenment and increased attractiveness of the street environment; to encourage excellence in urban design; to preserve and capitalize on the unique character and historic fabric of the downtown through the encouragement of reuse of significant existing structures; to provide opportunity for an enhanced presence and integration of the arts and cultural activities; to reinforce the role of the downtown as a meeting place for community residents and visitors alike from all walks of life and all socio- economic groups; to provide adequate parking and transportation facilities which promote accessibility, enhance and encourage development opportunity, and enhance and protect the pedestrian environment; In the Pedestrian Activities District (PAD) Overlay Zone, to create continuity of pedestrian-oriented uses along streets where such uses predominate and along streets which, over time, will establish and maintain a strong retail and pedestrian-oriented use pattern; and to provide for the relocation of residents who are displaced by development.

TABLE 5-D (CONT.): MIXED-USE ZONE PURPOSE STATEMENTS

B-3c	In addition to the purpose of the B-3 and B-3b zone, to promote the safety, quiet enjoyment, and general welfare of citizens residing in a dense urban neighborhood by decreasing the conflicts between residential uses and loud late-night activities. The B-3c zone recognizes that the business uses appropriate in this zone are constrained by the proximity of multi-unit elderly housing.
B-4	To provide appropriate locations in the city for the development and operation of businesses catering primarily to highway-oriented trade along major arterials (uses which have market areas which are primarily dependent on the regional highway network or serve a regional or larger market), as well as to provide appropriate locations for large-scale commercial uses that require larger land areas to accommodate their operations.
B-5 & B-5b	To provide areas of the peninsula near the downtown where a mixture of uses, including marine, industrial, commercial, and residential, is encouraged. The B- 5 and B-5b zones are characterized by larger underdeveloped lots with great potential for denser, clustered, urban mixed-use development and more efficient reuse of existing land and buildings. It is anticipated that the dense, mixed-uses of the B-5 and B-5b zones will rely on a shared infrastructure system, including service alleys, parking lots, public transportation facilities, stormwater management, and driveways.
B-6	To establish a zoning district for the upland portion of the Eastern Waterfront area. The B-6 zone encourages this district to acquire a distinctly urban form through development that emphasizes a quality pedestrian experience, promotes public transit, and demonstrates exemplary urban design. The zone promotes a range of uses to achieve 24-hour urban vitality and shared use of parking infrastructure as recommended in the Eastern Waterfront Master Plan for redevelopment. The B-6 zone promotes a mixed-use development pattern envisioned for urban land on Portland's peninsula.
B-7	To establish a zoning district for urban areas in which the City has adopted master plans for redevelopment. Certain areas, including but not limited to Bayside, lie at the perimeter of the established downtown and contain significant redevelopment opportunities. The B-7 zone encourages these districts to acquire a distinctly urban form through dense development featuring a mix of uses such as housing, retail, offices, research and development, and artisan studios and that emphasizes a quality pedestrian experience, promotes public transit, and demonstrates exemplary urban design. Use of multi-modal transportation is strongly encouraged and is advanced by the installation of bicycle amenities, such as bicycle racks and storage areas. The zone promotes a wide range of uses in high quality structures and public open spaces to achieve 24-hour urban vitality and shared parking infrastructure. The B-7 zone promotes a mixed-use development pattern envisioned on Portland's peninsula.

TABLE 5-E: OFFICE ZONE PURPOSE STATEMENTS

O-P	To provide substantial areas for integrated development of offices in a park- or campus-like setting which are of the highest quality, are well-designed and maintained, and are compatible with their natural surroundings.
R-P	To provide appropriate location for the development and operation of low-intensity business uses, including offices on or near major arterials, that are compatible in scale, density and use with surrounding and adjacent residential neighborhoods; or to serve as a transition or buffer zone between residential and more intensive nonresidential zones.



TABLE 5-F: INDUSTRIAL AND AIRPORT ZONE PURPOSE STATEMENTS

I-L & I-Lb	To provide areas in which low-impact industrial uses, and limited other uses serving employees and residents of the surrounding neighborhood, will be compatible with adjacent residential uses, will provide a buffer between residential neighborhoods and higher impact industrial zones, or will stand alone as a smaller scale industrial district. The I-L zone is located adjacent to residential neighborhoods, business uses and other industrial uses where the low-intensity nature of the uses, as well as their strict performance standards, will ensure the compatibility of the uses with other adjacent industrial and nonindustrial uses. Performance standards for uses in the I-L zone are designed to maintain compatibility between low impact industrial uses and neighboring nonindustrial and industrial uses.
I-M, I-Ma, & I-Mb	To provide zones in areas of the city in which low- and moderate-impact industries and transportation-related uses will coexist. I-M and I-Ma zones are located on arterials or collectors. The I-Mb zone is similarly located on the peninsula. These locations provide for direct access onto arterials, thereby protecting residential neighborhoods from drive-through traffic. The purpose of the I-M, I-Ma and I-Mb industrial zones is also to provide for larger industrial buildings and for the limited or controlled use of areas outside of structures for storage of materials and machinery. These facilities often require large volumes of imported materials and products which result in large volumes of shipping and receiving. Often uses may be highway-oriented and transportation-related, thus relying on citywide and regional transportation infrastructure. Industrial uses in these moderate-impact industrial zones may require separation from higher-impact uses.
I-H & I-Hb	To provide areas suitable for higher impact industrial uses than are permitted in other industrial zones and other uses that are capable of demonstrating, through design, layout and topography, their compatibility with, or non-intrusion on, existing or future higher impact industrial uses on adjacent or neighboring I-H zoned properties. Due to the intensity of use, the I-H zones are intended for uses which may require extensive outdoor storage and usage and may utilize heavy equipment. Processes may require separation from residential or sensitive environmental areas. The I-H zones are separated from other nonindustrial uses as well as natural or constructed features. High-impact industrial uses will be of a higher intensity, with a greater lot coverage, than the other zones.
A-B	To provide an area for the development of airport-related enterprises. Appropriate uses permitted in this zone are those customarily associated with the operation of the airport terminal and individual airlines and accessory uses to provide for the comfort and convenience of the airport's patrons and employees.

TABLE 5-G: OPEN SPACE ZONE PURPOSE STATEMENT

R-OS	To preserve and protect open space as a limited and valuable resource; to permit the reasonable use of open space, while simultaneously preserving and protecting its inherent open space characteristics to assure its continued availability for public use as scenic, recreation, and conservation or natural resource area, and for the containment and structuring of urban development; to provide a suitable location for large-scale regional sports and athletic facilities; and to develop an open space system throughout the city, which provides the highest quality parks, plazas, and pedestrian environment. The R-OS zone may include parcels of public property and private property legally restricted from intensive use or development through deed, covenant, or otherwise.

6 USE STANDARDS

6.1 APPLICABILITY

The use of buildings, structures, and land are governed by this article, except when superseded by other applicable laws or ordinances. It is the intent that, when in doubt, this article should be interpreted to accommodate the goals of the City's Comprehensive Plan and other plans.

6.2 DETERMINATION OF USE

6.2.1 Use tables

Tables 6-A to 6-F shall determine if a use is permitted (●), conditional (◐), or not permitted ( ), as a principal use within a zone. Unless otherwise noted, where a use is listed in terms of square footage, square footage figures shall correspond to the total floor area of the use.

6.2.2 Unlisted uses

A. Uses not expressly listed as permitted or conditional in Tables 6-A to 6-F are prohibited as principal uses except that a use may be permitted subject to meeting the following performance-based standards:
   1. The proposed use is consistent with the purposes of the zone.
   2. The proposed use is closely related to a permitted or conditional use in terms of character, scale, and external impacts.
   3. The buildings and structures associated with the proposed use are designed and operated so that it will prevent undue adverse environmental impacts, substantial diminution of the value or utility of neighboring structures, or significant hazards to the health or safety of neighboring residents by controlling noise levels, emissions, traffic, lighting, odor, and any other potential negative impacts.

B. The review authority shall determine whether the uses not listed as permitted or conditional uses meet the above standards. If it is determined that the use does not meet the above criteria, it shall not be permitted.

C. The review authority may impose reasonable conditions of approval on the proposed use to ensure that it is similar in character and impact to a permitted or conditional use.

6.2.3 Multiple uses

A site may contain more than one principal use, so long as each principal use is allowed within the zone.

6.3 CHANGE OF USE

A change of use from one use in these tables to another is governed by the requirements of the new use. The use of any part of any building, structure, or property shall not be changed to any other use, whether principal or accessory and whether alterations in the building, structure, or property are involved or not, until a permit and certificate of occupancy authorizing such change of use has first been secured from the Building Authority in accordance with Chapter 6 of the City of Portland Code of Ordinances.

TABLE 6-A: PERMITTED AND CONDITIONAL USES IN RESIDENTIAL ZONES

		R-1	R-2	R-3	R-4	R-5/R-5a	R-6/R-6a	Use Standards
Residential	Single-family dwellings	●	●	●	●	●	●	
	Two-family dwellings				●	●	●	6.4.2
	Multi-family dwellings			◐		◐[1]/●[2]	●	6.4.2, 6.5.6(G)
	Congregate care facilities					●[2]		
	Handicapped family units	●	●	●	●	●	●	
	Planned Residential Unit Developments			●[4]		●[4]		
	Special needs independent dwelling units				●	●[1]	●	
	Lodging houses					◐[1,3]	●	6.4.10
	Sheltered care group homes	◐	◐	◐	◐	◐	◐	6.5.6(K)
Institutional	Elementary, middle, and secondary schools	◐	◐	◐	◐	◐[1]	◐	6.5.6(F)
	Governmental uses	●	●	●	●	●	●	
	Hospitals			◐		◐[1]	◐	
	Intermediate care facilities	◐	◐	◐		◐[1]/●[2]	◐	
	Long-term and extended care facilities	◐	◐	◐		◐[1]/●[2]	◐	6.5.6(F)
	Places of assembly (<10,000 SF)	◐	◐	◐	◐	◐	◐	
	Places of assembly (>10,000 SF)	◐	◐	◐	◐	◐	◐	
	Preschool facilities	◐	◐	◐	◐	◐	◐	6.5.6(I)
	Post-secondary schools		◐			◐[1]	◐	6.5.6(F)
Comm.	Bed and breakfasts						●/◐[5]	6.4.5
	General offices (<5,000 SF)						◐	6.5.6(C)
	Hostels						●/◐[6]	6.4.9
Other	Agriculture	●	●					
	Cemeteries	◐	◐		●		●	
	Off-street parking			◐	◐	◐[1]	◐	6.5.6(H)
	Parks and open spaces	●	●	●	●	●	●	
	Raising of domesticated animals	◐						6.5.6(J)
	Solar energy system (minor)	●	●	●	●	●	●	6.4.16
	Utility substations	◐	◐	◐	◐	◐	◐	6.5.6(L)

[1] In the R-5 zone only.
[2] In the R-5a zone only.
[3] Conversions of existing two-family structures into lodging houses are permitted as a conditional use, provided that the lodging house shall not be located within 500 ft. of another as measured along street lines.
[4] Must consist of horizontally or vertically attached dwelling units, or a series of such dwelling units, with all land owned and used in common. PRUDs shall be subject to review and approval by the Planning Board under Article 15.
[5] Permitted if a conversion of a structure existing as of 3/3/97 to up to four guest rooms and conditional if a conversion of the same to five to nine rooms.
[6] Permitted if for no more than 10 overnight transient guests and conditional if for between 11 and 20 overnight transient guests. An owner, manager, or operator shall be a permanent resident of the building.



TABLE 6-B: PERMITTED AND CONDITIONAL USES IN ISLAND ZONES

		IR-1	IR-2	IR-3[1]	I-B	Use Standards
Residential	Single-family dwellings	●	●	●[2]	●	
	Two-family dwellings				◐	6.4.2,
	Multi-family dwellings				◐	6.5.6(G)
	Handicapped family unit	●	●	●	●	
	Planned Residential Unit Developments	●	●			
	Lodging houses		◐[3]	●[3]	●[3]	
Institutional	Elementary, middle, and secondary schools	◐	◐	●	◐	
	Educational facilities (including seasonal camps)	◐	◐			
	Governmental uses	◐	◐	●	◐	6.5.6(F)[6]
	Places of assembly (<10,000 SF)	◐	◐	●	◐	
	Places of assembly (>10,000 SF)	◐	◐		◐	
	Preschool facilities	◐	◐	●	◐	6.5.6(I)
Commercial/Service	Auto service stations				◐	6.5.6(A)
	Bed and breakfasts				●[4]	
	General services (<5,000 SF)				●	
	Hotels			●[5]	◐[5]	
	Restaurants			●	●	
	Retail (<10,000 SF)			●	●	
Other	Studios for artists and craftspeople				●	
	Agriculture	●				
	Boathouses and storehouses for fishing equipment	●	●	●	●	
	Campgrounds	◐		●		6.4.6
	Cemeteries	◐	◐			
	Marinas and yacht clubs			●	●	
	Off-street parking				●	
	Parks and open spaces	●	●	●	●	
	Raising of domesticated animals	◐				6.5.6(J)
	Solar energy system (minor)	●	●	●	●	6.4.16
	Utility substations	◐	◐	●		6.5.6(L)
	Wharves, piers, docks, and landing ramps	◐	◐	●	●	

[1] All uses within the IR-3 permitted only within a PUD with a minimum total area of 20 acres of contiguous land subject to the standards of Subsection 6.4.14.
[2] Single-family attached permitted provided that new construction shall be limited to no more than six attached dwellings per building.
[3] With greater than two but no more than nine rooming units.
[4] Permitted on Peaks Island only.
[5] Maximum 50 rooms.
[6] The standards of Subsection 6.5.6(F) shall not apply to institutional uses within the I-B zone. In the IR-1 and IR-2 ones, institutional uses are subject to the standards of Subsection 6.5.6(F) only if the total land area of the use is two acres or more.

TABLE 6-C: PERMITTED AND CONDITIONAL USES IN MIXED-USE ZONES

		B-1/B-1b	B-2/B-2b/ B-2c	B-3/B-3b/ B-3c[11]	B-4	B-5/ B-5b	B-6	B-7	Use Standards
Residential	Single-family dwellings	●	●	●		●	●	●	
	Two-family dwellings	●	●	●		●	●	●	
	Multi-family dwellings	●[1]	●	●		●	●	●	
	Congregate care facilities			●					
	Handicapped family units			●		●	●	●	
	Combined living/working spaces	●	●	●		●	●	●	
	Lodging houses	●[2]	●	●	●	●		●	6.4.10
Institutional	Clinics	●[2]	●	●		●		●	
	Cultural facilities			●		●	●	●	
	Elementary, middle, and secondary schools	●[2]	●	●		●	●	●	
	Emergency shelters			◐	◐	◐			6.5.6(B)
	Governmental uses	●[2]	●	●	●	●		●	
	Intermediate care facilities		●	●					
	Long-term and extended care facilities		●						
	Places of assembly (< 10,000 SF)	●[2]	●	●	●	●	●	●	
	Places of assembly (> 10,000 SF)		●	●	●	●	●	●	
	Preschool facilities	●[2]	●	●	●	●	●	●	
	Post-secondary schools		●	●	●	●	●	●	
Commercial /Service	Adult business establishments		●[3]	●[3]					6.4.3
	Auto, boat, and related dealerships		◐		●				6.5.6(A)
	Auto service stations		◐[4]		●	●			6.5.6(A)
	Bars		●[5]	●[5]	●	●	●	●	6.4.4
	Bed and breakfasts	●	●	●				●	6.4.5
	Exhibition, meeting, and convention halls			●		●	◐	●	
	Funeral homes		●		●				
	General offices (<5,000 SF)	●[2]	●	●	●	●	●	●	6.4.7
	General offices (>5,000 SF)		●	●	●	●	●	●	
	General services (<5,000 SF)	●[2]	●	●	●	●	●	●	6.4.7
	General services (>5,000 SF)		●	●	●	●	●	●	
	Hostels	●		●		●		●	6.4.7, 6.4.9
	Hotels		●	●	●	●	●[13]	●	
	Marijuana retail store		●/◐[6]	●	●			●	6.4.11
	Recreation and amusement centers				●	●		●	
	Registered marijuana dispensary		●/◐[6]	●	●			●	6.4.11
	Restaurants	●[2]	●	●	●	●	●	●	6.4.4, 6.4.7
	Retail (< 5,000 SF)	●[2]	●	●	●	●	●	●	6.4.7, 6.4.15
	Retail (5,000 – 25,000 SF)		●	●	●	●	●	●	6.4.15

TABLE 6-C (CONT.): PERMITTED AND CONDITIONAL USES IN MIXED USE ZONES

		B-1/B-1b	B-2/B-2b/ B-2c	B-3/B-3b/ B-3c[11]	B-4	B-5/ B-5b	B-6	B-7	Use Standards
Industrial	Retail (>25,000 SF)		●	●	●	●	●	●	6.4.15
	Small-scale marijuana caregiver		●	●	●			●	6.4.11
	Theaters and performance halls		●	●	●	●	●	●	
	Veterinary services		●		●			●	
	Communication studios		●	●	●	●	●	●	
	Dairies		●[7]		●				
	High-tech manufacturing							◐	6.5.6(D)
	Intermodal transportation facilities					●	●	●	
	Laboratory and research facilities		◐		●		◐	●	6.5.6(E)
	Low-impact industrial (<10,000 SF)		●[8]	◐	●	●	●	●[8]	6.5.6(E)
	Low-impact industrial (>10,000 SF)		●[8]		●	◐			
	Marijuana testing facilities				●				6.4.11
	Marijuana manufacturing facilities				●				
	Marijuana cultivation facilities (<7,000 SF plant canopy)				●				
	Printing and publishing		◐[9]	●	●	●	●	◐	
	Repair services		●	●	●	●	●	●	
	Studios for artists and craftspeople	●[2]	●	●	●	●	●	●	
	Tow lots				●				6.4.17
	Warehousing, storage, and distribution		◐[10]	◐[10]	●	●[10]	◐[10, 14]	◐[10, 14]	6.5.6(E)
Other	Marine uses					●	●		6.4.12
	Correctional pre-release facilities				●				6.4.8
	Off-street parking			●/◐[12]		●	◐	◐	6.5.6(H)
	Parks and open spaces	●	●	●	●	●	●	●	
	Solar energy system (minor)	●	●	●	●	●	●	●	6.4.16
	Solar energy system (major)				◐				
	Utility substations	●	●	◐	●	●	●	◐	6.5.6(L)
	Wind energy system (minor)		◐	◐	◐	◐	◐	◐	6.4.18

[1] Permitted if permitted in the adjacent or nearest residential zone. In other cases, permitted if located above first floor commercial, or on first floor where a minimum depth of 25 ft. along the principal frontage is maintained for commercial use.
[2] Permitted on the ground floor only in the B-1b zone.
[3] Permitted in the B-2 and B-3 zones only.
[4] Permitted as a conditional use in the B-2 only. Expansion of auto service stations in existence as of 11/15/99 permitted as a conditional use in the B-2b and B-2c zones.
[5] Not permitted in the B-2c and B-3c zones.
[6] Permitted in the B-2 zone. Conditional in the B-2b and B-2c.
[7] Permitted only if an expansion of an existing dairy.
[8] Permitted with a retail component only. Low-impact industrial uses greater than 10,000 SF are permitted in the B-2 only.
[9] Printing and publishing of 10,000 SF or less, or expansion of printing and publishing establishments greater than 10,000 SF in existence as of 4/4/88, shall be treated as a conditional use.
[10] Permitted in the B-2/B-2b/B-2c as a conditional use if 10,000 SF or less. Self-storage permitted in the B-4 zone. Self-storage permitted as a conditional use in the B-5 zone (on-peninsula locations only) in buildings existing as of 12/16/15. Self-storage permitted as a conditional use in the B-3 zone in buildings existing as of 1/1/1995; the area of the building dedicated to self-storage shall not exceed 30% of the total building area and may not be located directly adjacent to or facing a public right-of-way. Self-storage not permitted in the B-2/B-2b/B-2c, B-6, and B-7 zones.
[11] See PAD Overlay for additional use regulations.
[12] Structured parking shall be permitted. Surface parking shall be treated as a conditional use.
[13] Hotels shall be limited to no more than 150 rooms.
[14] Wholesale is allowed as conditional use, providing the wholesale operation is associated with an onsite retail establishment and occupies less than 15,000 SF.

TABLE 6-D: PERMITTED AND CONDITIONAL USES IN OFFICE PARK & RESIDENCE PROFESSIONAL ZONES

		OP[1]	R-P[2]	Use Standards
	Any residential use permitted in the nearest residential zone		●	
	Preschool facilities	●	◐	6.5.6(I)
	Funeral homes		●	
	General offices	●	●	
Industrial	High tech manufacturing	◐		6.5.6(D)
Industrial	Laboratory and research facilities	●		
Industrial	Printing and publishing	●		
Industrial	Studios for artists and craftspeople		●	
Other	Parks and open space	●	●	
Other	Solar energy system (minor)	●	●	6.4.16
Other	Utility substations		●	
Other	Wind energy system (minor)	◐		6.4.18

[1] All permitted and conditional uses in the O-P zone, with the exception of parks and open spaces, solar energy systems, and wind energy systems, shall be allowed only within an office park of at least three acres of contiguous land subject to the standards of Subsection 6.4.13.

[2] Any conditional use that is permitted as a conditional use in the nearest residential zone shall be permitted as a conditional use in the R-P zone. All conditional use standards of the residential zone shall apply.



TABLE 6-E: PERMITTED AND CONDITIONAL USES IN INDUSTRIAL & AIRPORT ZONES

		I-L/I-Lb	I-M/I-Mb	I-H/I-Hb	A-B[7]	Use Standards
Institutional	Airports				●[8]	
	Preschool facilities	●	●			
	Emergency shelters	◐	◐	◐		6.5.6(B)
	Intermediate care facilities		●[4]			
	Places of assembly (<10,000 SF)	●				
Commercial/Services	Bars				●	
	General offices (<5,000 SF)	●[1]	●			
	General offices (>5,000 SF)	●[1]	●			
	General services (<5,000 SF)				●	
	General services (>5,000 SF)				●	
	Hotels				●	
	Recreation and amusement centers	●	●			
	Repair services	●	●	●		
	Restaurants				●	
Industrial	Animal-related services	●[2]				
	Construction & engineering services	●	●	●		
	Dairies	●	●	●		
	Fish waste processing			●		
	Food & seafood processing, packing, and distribution		●	●		
	High-impact industrial uses			●		
	Intermodal transportation facilities	●	●	●		
	Laboratory and research facilities	●	●	●		
	Low-impact industrial	●	●	●		
	Lumber yards	●	●	●		
	Marijuana cultivation facility (<2,000 SF plant canopy)	●	●	●		6.4.11
	Marijuana cultivation facility (2,000-7,000 SF plant canopy)		●	●		
	Marijuana cultivation facility (>7,000 SF plant canopy)			●		
	Marijuana manufacturing facility	●	●	●		
	Marijuana testing facility	●	●	●		
	Printing and publishing	●	●	●		
	Recycling and solid waste disposal facilities		●[5]	●[5]		
	Studios for artists and craftspeople	●	●			
	Telecommunication towers (ground-mounted)		●	●		
	Tow lots		●	●		6.4.17
	Warehousing, storage, and distribution facilities	●[3]	●	●		

TABLE 6-E (CONT.): PERMITTED AND CONDITIONAL USES IN INDUSTRIAL & AIRPORT ZONES

		I-L/I-Lb	I-M/I-Mb	I-H/I-Hb	A-B[7]	Use Standards
	Correctional pre-release facilities		●[6]	●[6]		6.4.8
	Marinas	●				
Other	Off-street parking				●	
	Solar energy system (minor)	●	●	●	●	6.4.16
	Solar energy system (major)		●	●	◐	
	Utility substations	●	●	●		
	Wind energy system (minor)	◐	●	●	●	6.4.18
	Wind energy system (major)		●	●	◐	

[1] Only back office uses permitted.
[2] Not including kennel or boarding facilities.
[3] Must be less than 10,000 SF in floor area. No outdoor storage permitted. Self-storage not permitted in the I-L/I-Lb zone.
[4] Permitted in existing structures not designed for industrial, amusement, warehouse or manufacturing uses as of 9/15/14 or later. Such structures may be reused or expanded to establish a facility of no more than 30 persons plus staff.
[5] Permitted within an enclosed structure only.
[6] Not permitted in the I-Ma, I-Mb, or I-Hb zones.
[7] Permitted uses on lots within airport restricted access areas shall be limited to those which do not require or encourage access or visits by the public and which provide technical administrative or other support to airport operations.
[8] Including airport administration, terminals, carrier operations, concessions, reservations and ticket sales, freight, repair and storage, fueling services, flying schools, car rental operations, and other associated uses.

TABLE 6-F: PERMITTED AND CONDITIONAL USES IN RECREATION OPEN SPACE ZONE

	R-OS[1]	Use Standards
Cemeteries	●	
Marinas	●	
Parks and open space	●[2]	
Solar energy system (minor)	◐	6.4.16, 6.5.7(A)
Solar energy system (major)	◐	
Utility substations	●/◐[3]	6.5.6.L, 6.5.7(A)
Wharves, piers, docks, and landing ramps	●	
Wind energy system (minor)	◐	6.4.18, 6.5.7(A)
Wind energy system (major)	◐	

[1] Accessory uses within structures of 2,500 SF or more shall be treated as a conditional use under Subsection 6.5.7(A).
[2] Including active recreational uses, such as playgrounds, golf courses, fields, pools, courts, community gardens, marinas, and sports complexes and passive uses, such as arboretums and picnic areas.
[3] Sewage pumping and treatment facilities shall be permitted. Water pumping stations shall be treated as a conditional use under Subsection 6.5.7.

6.4 SUPPLEMENTAL USE STANDARDS

The following standards shall apply to the following uses as indicated in Tables 6-A to 6-F, whether permitted or conditional.

6.4.1 In general

A. No building intended for use as a habitation shall be erected on a lot which has its only street frontage on a street less than 35 feet wide. No building shall be erected on a lot, except on the islands in Casco Bay, which does not abut a street meeting the minimum requirements for street improvements set forth in this subsection. For purposes of this subsection, street shall be as defined in Article 3, except that a dedicated street which may no longer be accepted due to lapse of time and an accepted street which may have been discontinued by abandonment shall also be deemed to be streets, provided that an applicant for a building permit respecting any lot abutting such street shall, without compensation or claim for damages, and at his or her own cost and expense, first submit to the Building Authority:

1. A deed from the owner of such lot conveying to the City all his or her right, title, and interest in and to such street or any portion thereof.
2. An agreement by such owner forever releasing the City from any and all claims for damages for the laying out and taking of such street and indemnifying the City against any and all other such claims, both such instruments to be executed and in recordable form acceptable to the Corporation Counsel and to encumber and run with the land.

B. For a lot abutting any portion of a street which is unimproved or improved but not permanently paved, that portion which abuts the lot, and any like portion between such

portion and the nearest permanently paved street or portion which is the principal access to such lot, shall be improved, including sewers, storm drains, pavement, curbs and, if located on a designated school walking route, sidewalks, in accordance with the City of Portland *Technical Manual*. Where the nearest permanently paved street does not have granite curbing, the Public Works Authority may waive the requirement of curbing under this subsection, if it determines that an acceptable alternative drainage plan will be provided. Prior to the issuance of a building permit for erection of a building on a lot abutting any portion of a street which is unimproved or improved but not permanently paved, the following shall occur:

1. A plan of the street improvements required by this subsection shall be submitted to the Public Works Authority.
2. Upon determination by the Public Works Authority that the plan meets the street improvement requirements established by this subsection, a performance guarantee and inspection fee for said improvements shall be submitted to the City as set forth under Articles 14 and 15. Also as set forth in Articles 14 and 15, a one-year defect bond shall be tendered to the City prior to release of the performance guarantee required hereby. The provisions of this paragraph (2) shall not apply to the erection of any single-family dwelling on any lot where the owner of the lot establishes that he or she was the owner of that same lot on November 19, 1984, and at all times thereafter, and states his or her intention under oath to make the structure his or her personal residence.

C. The requirements of this subsection shall not apply to the following city streets upon their construction by the Public Works Authority to such standards as are determined by the authority to be the most feasible:
   1. Dingley Court.
   2. Morgan Court.

6.4.2 Additional residential use permissions

A. *In island zones:* Up to three units are permitted on any lawfully conforming lot. Such units shall comply with all dimensional requirements of the underlying zone except lot coverage and lot area per dwelling unit requirements. This exception shall not allow a lot to exceed 60% lot coverage unless permitted by the underlying zone.

B. *In mainland zones where residential is a permitted or conditional use:* Up to four units are permitted on any lawfully conforming lot. Such units shall comply with all dimensional requirements of the underlying zone except lot coverage and lot area per dwelling unit requirements. This exception shall not allow a lot to exceed 60% lot coverage unless permitted by the underlying zone.

C. Units created under this section 6.4.2 shall not be considered accessory dwelling units under Section 6.6.2(A).

6.4.3 Adult business establishments

A. Adult business establishments shall be located at least 1,000 feet from any other adult business establishment, and at least 500 feet from any residential zone, as measured in a

straight line, without regard to intervening structures or objects.

B. No sexually explicit materials, entertainment, or activity shall be visible from the exterior of the premises.

6.4.4 Bars and restaurants in the B-6 zone

A. No bars located east of Waterville Street shall be permitted within 50 feet of Fore Street.

B. Restaurants located east of Waterville Street within 50 feet of Fore Street shall be limited in hours of operation to between 5 a.m. and 11 p.m. each day and food service and consumption shall be the primary function of the restaurant.

6.4.5 Bed and breakfasts

A. In the R-6 and R-6a zones, the minimum gross floor area for bed and breakfasts shall be 2,000 square feet for the first three guest rooms and 500 square feet for each additional guest room.

B. In all mixed-use zones except the B-1/B-1b zones, bed and breakfasts may include a meeting facility limited to use for private parties, business meetings, weddings, receptions, seminars, or business and educational conferences, provided that:

1. *In the B-2/B-2b/B-2c zones.* The meeting facility must be less than 4,000 square feet.
2. *In the B-3/B-3b/B-3c zones.* The building in which the bed and breakfast and meeting facility will be located must have existed on March 3, 1997 and have been greater than 4,000 square feet in floor area on that date.

6.4.6 Campgrounds

A. Campgrounds shall not include recreational vehicles.

B. Campgrounds shall be licensed by the State of Maine Department of Human Services.

C. No tent shall be located within 75 feet of the perimeter of site.

D. The land area of the campground shall not be less than the equivalent of 5,000 square feet of land area per tent site exclusive of the roadway network.

6.4.7 Commercial uses in the B-1/B-1b zones

A. Commercial uses shall be permitted provided that such uses generate less than 100 peak hour vehicle trips per 2,000 square feet of floor area and less than 100 peak hour vehicle trips in total.

B. Retail and restaurant uses shall not operate between the hours of 11 p.m. and 6 a.m., and shall not accept deliveries or services between the hours of 10 p.m. and 7 a.m. For restaurants, food service and consumption shall be the primary function.

C. No beverage container redemption centers shall be permitted. Beverage dealers shall be permitted as a retail use provided that the maximum total floor area for redemptions as an accessory use, including the storage of spent containers, shall be no greater than 500 square feet or 10% of the total floor area of the facility, whichever is less.

6.4.8 Correctional pre-release facilities

A. No correctional prerelease facility shall be located within 1,000 feet of another, as measured in a radius from the center of the lot.

B. If a facility requires state or federal licensing, staffing of the facility shall be as required by such license. If a facility does not require state or federal licenses, there shall be a minimum of one staff person for every 10 residents or fraction thereof. The facility shall provide 24-hour supervision of program participants.

6.4.9 Hostels

An operations plan must be submitted demonstrating that:

A. No unaccompanied minors under the age of 18 shall be permitted in the facility.

B. The length of stay for transient guess shall not exceed 15 days within any 60-day period.

C. In the R-6 zone, for hostels greater than 10 guests, a minimum of 250 square feet of land area shall be required per hostel guest.

D. In the B-1/B-1b zones, no more than 20 overnight transient guests shall be permitted.

6.4.10 Lodging houses

A. Lodging houses, except for lodging houses located in the IR-2, IR-3, and I-B zones, shall contain common areas for use by all residents, including a kitchen. A kitchen need not be available as a part of the common areas where all meals are provided on a daily basis.

B. Lodging houses shall provide a minimum of 200 square feet of combined rooming unit and common area per rooming unit.

C. Each individual rooming unit shall be a minimum of 70 square feet.

6.4.11 Marijuana-related uses

A. The following standards apply to the following marijuana-related uses:

1. Marijuana cultivation facilities.
2. Marijuana manufacturing facilities.
3. Marijuana products.
4. Marijuana retail stores.
5. Marijuana testing facilities.
6. Small-scale marijuana caregivers.
7. Registered dispensaries.

B. Location criteria

1. No marijuana cultivation facility, marijuana manufacturing facility, marijuana testing facility, small-scale marijuana caregiver, marijuana store, or registered dispensary may be located within 500 feet of a pre-existing public school, private school, or a public preschool program, as defined by 20-A M.R.S. § 1. Distance shall be measured from nearest property line of the respective marijuana-related use and the property line of the lot containing the public school, private school, or public preschool program.
2. No marijuana cultivation facility, marijuana manufacturing facility, or marijuana testing facility may be located within 300 feet of the following residential zones: R-1, R-2, R-3, R-4, R-5/R-5A, R-6/R-6A, or R-7. Distance shall be measured from the nearest outer wall of the building housing the marijuana cultivation, manufacturing, or testing facility to the nearest applicable residential zone boundary. If the marijuana-related facility leases a room or suite of rooms within a building, including, without limitation, individual units within a shopping plaza or shopping mall, the

nearest outer wall of the room or suite of rooms within which the facility is located shall constitute the nearest outer wall of the building housing that facility.

C. Supplemental standards
   1. Marijuana-related uses may only be permitted within a fully enclosed building.
   2. No outside storage of marijuana, marijuana products, or related supplies is permitted.
   3. No drive-through service is permitted for marijuana-related uses.
   4. No marijuana or marijuana product shall be smoked, eaten, or otherwise consumed or ingested on the premises where sold.
   5. An operating plan for marijuana cultivation facilities and marijuana manufacturing facilities shall be provided that, at a minimum, addresses wastewater, disposal of waste, and security at the premises.
   6. A ventilation plan shall be included for marijuana cultivation facilities, marijuana manufacturing facilities, and small-scale marijuana caregivers that provides for adequate ventilation so as to prevent pesticides, insecticides, or other chemicals used in the cultivation or processing of marijuana or marijuana-related products from being dispersed or released outside the premises. The plan shall further provide for resulting smoke, vapor, fumes, gases, and particulate matter from marijuana or its processing or cultivation to be effectively confined to the premises.
   7. Marijuana-related uses shall provide odor control measures so that odor generated on site is mitigated at the property line of the lot containing the marijuana-related use. Applications must demonstrate appropriate measures, such as carbon filtration, ventilation and exhaust systems, facility plans, or other additional practices adequate to mitigate odors for the scale of operations for the uses proposed.

D. For purposes of this ordinance, any approval issued for a marijuana cultivation facility, marijuana manufacturing facility, or marijuana testing facility operated pursuant to 22 M.R.S. § 2421 et seq. shall be deemed to constitute approval for the same corresponding marijuana cultivating, manufacturing, or testing facility use operating under 28 M.R.S. § 101 et seq. Notwithstanding the above, no marijuana cultivation facility, marijuana manufacturing facility, or marijuana testing facility may operate without the applicable state and City license.

6.4.12 Marine uses

A. In the B-5/B-5b and B-6 zones, marine uses shall include marine products wholesaling and retailing and harbor and marine supplies and services.

B. In the B-5/B-5b zones, marine uses shall include marine repair services and machine shops; shipbuilding and facilities for the construction, maintenance, and repair of vessels; marine museums and aquariums; boat repair yards; boat storage; and seafood processing, packing, and distribution for human consumption.

C. In the B-6 zone, marine uses shall include underground marine fuel storage provided that such storage shall be used solely for the purpose of fueling vessels.

6.4.13 Office parks in the O-P zone

An office park shall be approved only if the development meets the following development standards:

A. Office parks shall have a minimum gross area of three acres of contiguous land, consisting of either an Office Park Planned Unit Development (OPPUD) on one lot with one or more buildings and with driveways and open areas to be owned and maintained in common, or an office park subdivision (OPS) on one parcel with two or more lots intended for separate ownership.

B. Development proposals shall include a master plan of the office park. The master plan shall include the following:

1. *For an OPPUD proposal.* The location of the building(s) on the site; infrastructure of the site; identification of common areas; traffic circulation, architectural character and treatment of the building(s); proposed building envelopes; phasing and timing of the development; private development restrictions; and such other information necessary and sufficient to ensure compliance with the standards in this subsection.
2. *For an OPS proposal.* Delineation of the subdivision of land; infrastructure of the site; identification of common areas, if any; traffic circulation; desired architectural character, including private development restrictions to ensure compatibility of architectural character of future buildings with each other; phasing and timing of the development; private development restrictions; and such other information as necessary and sufficient to ensure compliance with the standards in this subsection.

C. Development proposals shall demonstrate a reasonably unified design of the site, including the architecture, the layout of the buildings, pedestrian and vehicular circulation plan, open space, drainage, and the topography, soil conditions, vegetation and other natural features of the site. Integration of open spaces and natural features shall be achieved by incorporation of outdoor amenities for the benefit of users of the site, such as jogging and walking trails, gardens, and benches.

D. Development proposals shall include a landscape program. All land areas not covered by structures, parking areas, or circulation facilities shall be landscaped and maintained. In order to soften the visual impact of large expanses of pavement in parking lots, vegetation shall be planted or retained in islands or planting strips where required by the site plan or subdivision ordinance.

E. Parking may not be located in the required front setback. If parking is provided in the area between the building and minimum setback line, the parking area must be adequately screened with landscaping materials and permanently maintained.

F. Development proposals shall include internal sidewalks, illustrating the manner in which the developer will provide this amenity to take advantage of the topography and natural features of the site.

G. Development proposals shall include buffering yard areas abutting a residential zone or residential use and to screen parking lots and driveways from public view, identifying the location, composition, and maintenance of the

buffer. The buffer and screening shall be of a dense and continuous nature and shall incorporate trees, shrubs, fencing, berms, and related elements deemed necessary.

H. Development proposals shall identify the extent to which the developer shall preserve natural features including, but not limited to, existing vegetation, flood plains, rock outcroppings, surface water bodies, drainage swales and courses, and wetlands; provided any such program shall consider and be sensitive to the need to preserve such natural features.

I. Development proposals shall identify all proposed traffic controls, parking areas, interior traffic circulation, and demonstrate that additional traffic generated by the project itself can be reasonably accommodated on existing public streets.

J. All buildings shall be designed or approved by a registered architect in the State of Maine and shall be in conformance with the proposed master plan. The scale, texture, color and massing of the buildings shall be coordinated. The full range of high quality, permanent, and traditional or contemporary building materials and technology may be incorporated in a manner so that the development as a whole embodies distinguishing attributes that achieve the developer's desired degree of excellence and are in conformance with the architectural guidelines provided in the private development restrictions. Particular emphasis shall be placed on the appearance of building facades from public streets, from driveway and parking areas, and from other nearby buildings. Building elevation drawings shall be submitted which indicate architectural style, exterior finishes and color, building height and scale, and location and scale of window and door openings. Samples of exterior building materials shall also be submitted.

K. Development proposals shall identify the location and style of lighting to be used in the development. All light fixtures shall be hooded or shielded so that the light shines downward.

L. Development proposals shall identify all proposed signage. Signs shall be designed in proportion and character with the building facades. All signs shall be constructed of permanent materials and shall be coordinated with the building and landscaping design through the use of appropriate materials and finishes.

6.4.14 Planned unit development in the IR-3 zone

In addition to other applicable reviews, no development shall occur nor shall any new use be established in the IR-3 zone unless the Planning Board finds that the final development plan for the site is in compliance with the following standards:

A. The development shall demonstrate a reasonably unified response to the design possibilities of the site, by virtue of such elements as the design and layout of buildings and lots, circulation plan, open space, drainage, and orientation to achieve energy conservation or solar access, to form a functionally integrated whole.

B. The design and layout of the development and buildings shall be reasonably compatible with the surrounding neighborhood by virtue of such features as architectural style, exterior finish, scale, circulation, open space, landscaping, and preservation of natural site amenities.

C. All open spaces on the site shall be functionally integrated into the development plan by virtue of such features as accessibility to residents, recreation, conservation of existing public rights of access to shoreland areas and scenic natural areas, orientation to achieve energy conservation or solar access, preservation of natural site amenities, and use as a buffer between the development and the surrounding neighborhood.

D. The development shall be designed primarily with a pedestrian orientation to minimize the use of and dependency on private motor vehicles. Appropriate areas on the site shall be designated, as necessary, for parking of common service vehicles, golf carts or bicycles to serve the transportation needs of residents and visitors. The internal circulation plan shall also be coordinated with the existing island street network to ensure adequate access for emergency and service vehicles.

E. A project construction plan shall be developed indicating the anticipated number and types of vehicles such as construction equipment, supply delivery and service vehicles needed for undertaking the construction of the project. Documentation shall be provided as to the proposed transportation route such as roads, piers, beaches, sand bars and the impact of construction related activities on the routes.

F. The development shall not have a substantial adverse impact on the capacity of existing island docking facilities. The developer shall demonstrate that an adequate water transportation system, including docking facilities, exists or will be provided.

G. Adequate provision for off island solid waste disposal shall be demonstrated such that the impact on municipal solid waste disposal is minimized. A development shall incorporate methods such as the following to reduce the amount of solid waste generated by the project: compaction and reduction in waste volume, recycling, incineration or baler system, and private collection and transfer to an off-island location. It shall be demonstrated that there will be no significant environmental impacts from the solid waste disposal system.

H. All sanitary waste from the development shall be disposed of by a public sewer, private community sewer system providing at least secondary treatment, or subsurface sewerage system, in compliance with federal, state and local regulations. The developer shall demonstrate that the project will comply with all applicable federal, state and local water quality and groundwater standards.

I. The proposed development shall have sufficient water for the reasonably foreseeable needs of the development and shall not cause an unreasonable burden on existing water supply nor adversely affect groundwater resources. Unless the development is to be served entirely by public water and secondary treatment sewer systems, the determination of compliance with this provision shall be based upon one or more comprehensive groundwater analyses and reports prepared by qualified professionals and including assessment of current groundwater aquifer conditions, the impact of the proposed development on the groundwater aquifer, and recommendations for mitigation of potential impacts caused by the development.

J. The development shall preserve the natural features of the shoreland area by minimizing



the disturbance of existing vegetation and slopes, avoiding development in areas subject to erosion and sedimentation, and conserving scenic views and vistas to and from the site.

K. The development plan shall preserve significant resources of the site by integrating open space into the development plan and by conserving such features as scenic vistas, historic man made or natural features, existing vegetation, wetland areas, shoreland areas, ground water, natural wildlife habitat, and recommended or registered State of Maine Critical Land Areas, as well as other environmentally sensitive areas.

L. All open spaces on the site shall be functionally integrated into the development plan by virtue of such features as passive and active recreational opportunities, accessibility to residents, preservation of natural site amenities and resources, orientation to achieve energy conservation or solar access, use as a buffer between housing clusters and to screen the development from surrounding areas.

M. The applicant shall demonstrate sufficient financial and technical capability for undertaking the proposed project. Financial capability shall include a cost estimate of the proposed improvements, proposed construction and permanent financing, and terms of sale or lease of dwellings and commercial space. Technical capacity shall include the experience and expertise of the developer in implementing projects of similar scope.

N. The applicant shall develop an environmental impact analysis including an inventory of existing environmental conditions at the project site and in the surrounding area with an assessment of the development's probable impact upon the environment. The inventory shall include such resources as air, water quality, water supply, surface water and shoreline, geology, soils, topography, wildlife, botanical and aquatic, including rare and endangered species, historic, archeological and aesthetic. The analysis shall include the direct and cumulative adverse impacts of the project on these resources. The analysis shall also include what steps the applicant proposes to take to identify and minimize adverse environmental impacts during construction, management and use of the property and whether there are alternatives for the project which would decrease the impact of the development.

O. If the project is to be completed in phases, the applicant shall indicate the schedule for completing and implementing infrastructure improvements as well as other improvements, agreements or services required for compliance with the development standards of this subsection, planned unit development standards, and site plan and subdivision review requirements.

P. The development shall not place an unreasonable burden on the ability of the City to provide police, fire, and other emergency services.

6.4.15 Retail in the B-3/B-3b/B-3c and B-5/B-5b zones

Retail shall not include wholesale and bulk purchase lumber and construction supply sales.

6.4.16 Solar energy systems

A. All solar energy systems shall meet the technical, safety, and maintenance standards in the City of Portland *Technical Manual*.

B. Solar panel placement should minimize or negate any solar glare impacting nearby properties or roadways, without unduly impacting the functionality or efficiency of the solar energy system.

C. All applicants are encouraged to ensure the maximum solar energy generation from their system by obtaining solar access easements. Solar access easements may be filed consistent with Maine state law.

D. Solar energy systems shall be located away from and screened from public ways and nearby residential/institutional uses to the extent possible and shall be designed so as to minimize impacts on significant scenic views.

E. Layout and fencing shall be integrated with existing landscape and minimize removal of vegetation to the extent possible.

F. Where any part of the proposed solar energy system (including associated facilities) is within a historic district, such development shall be reviewed and approved by the Planning Authority in accordance with Article 17. Where any part of the proposed solar energy system (including support structures and associated facilities) is within 100 feet of any designated landmark, historic district, or historic landscape district, such development shall meet the standards of Article 14 regarding compatibility with the landmark or historic district.

G. Solar energy systems shall minimize impacts resulting from construction and maintenance of the solar energy system, including lighting, security measures, traffic, and grid connections.

H. Where permitted in residential zones, and in the B-1/B-1b, B-2/B-2b/B-2c, B-3/B-3b/B-3c, B-7 and waterfront zones, all solar energy systems shall be co-located with other land uses.

I. Major solar energy systems shall be located on areas already paved or built upon, or where other development is documented to be unlikely due to local conditions.

6.4.17 Tow lots

Tow lots must be at least 300 feet from any residential zone or conforming residential use.

6.4.18 Wind energy systems

A. All wind energy generation equipment shall be approved under a certification program approved by the U.S. Department of Energy such as the Underwriters Laboratories, Germanishcer Lloyd Wind Energies, or other similar certifying organizations. Experimental, homebuilt, and prototype models shall not be permitted.

B. Wind energy systems and associated facilities, including foundations and support structures, electrical connections and control equipment, associated site improvements, and construction techniques, shall be designed, engineered, and installed to comply with all applicable local, state, and federal construction and electrical regulations and Federal Aviation Administration regulations. Applicable state and local approvals shall be obtained prior to installation of any wind energy system.

C. The support structure (e.g. tower, pole) for freestanding wind generating systems shall not be climbable for a minimum height of 12 feet above the surrounding ground level or accessible surface. All ground-mounted

electrical and control equipment shall be labeled and secured to prevent unauthorized access.

D. All moving components of a wind energy system shall be a minimum of 12 feet from ground level or accessible surface.

E. All on-site electrical wiring associated with the proposed wind energy system shall be located within the tower/pole/supporting structure and underground. Above ground on-site connections near substations or to the electric grid shall be allowed.

F. The use of guy wires is discouraged. If required, they shall be located away from pedestrian routes/access points and marked with visible, reflective, colored objects, such as flags, reflectors, or tape, which shall be placed on the anchor points of guy wires and along the guy wires up to a height of ten feet from the ground.

G. No wind energy system shall be located within 250 feet of any significant wildlife habitat, as defined by Maine Department of Environmental Protection/Maine Department of Inland Fisheries and Wildlife under provisions of the Natural Resources Protection Act (38 M.R.S. § 480 et seq.) including wildlife habitat for species appearing on the official state and federal list of endangered or threatened animal species.

H. For all wind energy systems over 45 feet in height above the ground or over 100kW, evidence shall be provided that the Environmental Coordinator of the Maine Department of Inland Fisheries and Wildlife and the Maine Natural Area Program have been notified of the location, height, and design of the proposed wind energy system at least three weeks prior to any final determination under this subsection. Any comments received therefrom shall be addressed to the satisfaction of these state authorities prior to any final determination under this provision.

I. Wind energy systems shall be designed to avoid electromagnetic interference with the transmission or reception of radio, telephone, television, microwave, navigational, or similar signals to neighboring areas.

J. Wind energy systems and associated facilities shall use non-reflective materials and neutral colors and textures that blend in with the surrounding environment. Ground-mounted systems and associated facilities shall be landscaped to integrate the proposed wind energy system into the existing landscape/streetscape.

K. No part of the system may be illuminated, except as required by the Federal Aviation Administration (FAA) or other authorities for safety and security purposes. Where lighting is required, it shall be at the lowest intensity allowable with fixtures shielded and directed to minimize glare and visibility from the ground.

L. There shall be no signs, advertisements, flags, or decorative items on a wind energy system or any associated facilities, except for the manufacturer's/installer's/owner's identification (not exceeding one square feet in size), appropriate warning signs, or lights if required by the FAA.

M. Wind energy systems shall be prohibited within any historic landscape district, any historic cemetery, any historic district, except the Congress Street Historic District where it coincides with the B-3 zone, or within 1,000 feet of any designated historic landmark, which

shall include Portland Observatory, Cathedral of Immaculate Conception, St. Dominic's Cathedral, St. Luke's Cathedral, State Street Church, and City Hall.

N. Wind energy systems within R-OS zones are allowed only where they are co-located within public industrial or utility facilities.

O. Systems shall be screened with a vegetated buffer from public areas and residential buildings.

6.5 CONDITIONAL USES

6.5.1 Conditional use review procedure

A. **Review authority.** The Zoning Board of Appeals shall review all conditional use applications, with the exception that the Planning Board shall review:

1. All conditional use applications in the B-3/B-3b/B-3c, B-5/B-5b, B-6, and B-7 zones.
2. All conditional use applications associated with projects that are otherwise before the Planning Board.
3. Conditional use applications for specific uses for which the Planning Board is identified as the review authority under Subsection 6.5.6.

B. **Application.** Applications for conditional use review shall be submitted to the Building Authority for all Zoning Board of Appeals reviews and the Planning Authority for all Planning Board reviews. A nonrefundable application fee, as established from time to time by the City Council to cover administrative costs and costs of a hearing, shall accompany each application. The application shall be in such form and shall contain such information and documentation as shall be prescribed from time to time by the review authority.

C. **Public hearing.** A public hearing shall be set, advertised, and conducted by the review authority in accordance with Article 2 of this Land Use Code.

D. **Action**. Within 30 days following the close of the public hearing, the review authority shall render its decision, in a manner and form specified by Article 2 of this chapter, approving the conditional use, approving the conditional use subject to conditions as specified in Subsection 6.5.3, or denying it. The failure of the review authority to act within 30 days shall be deemed an approval of the conditional use, unless such time period is mutually extended in writing by the applicant and the review authority. Within five days of such decision or the expiration of such period, the Building Authority or Planning Authority shall mail notice of such decision or failure to act to the applicant and, if a conditional use is authorized, list therein any and all conditions imposed by the review authority.

6.5.2 General conditional use standards

The review authority shall, after review of the application, approve a conditional use upon a finding that the proposed conditional use, at the size and intensity contemplated at the proposed location, will not have substantially greater negative impacts than would normally occur from surrounding uses or other allowable uses in the same zone. The review authority shall find that this standard is satisfied if it finds that:

A. The volume and type of vehicle traffic to be generated, hours of operation, expanse of pavement, and the number of parking spaces required are not substantially greater than would normally occur at surrounding uses or other allowable uses in the same zone.

B. The proposed use will not create unsanitary or harmful conditions by reason of noise, glare, dust, sewage disposal, emissions to the air, odor, lighting, or litter.

C. The design and operation of the proposed use, including but not limited to landscaping, screening, signs, loading, deliveries, trash or waste generation, arrangement of structures, and materials storage will not have a substantially greater effect/impact on surrounding properties than those associated with surrounding uses or other allowable uses in the zone.

D. The proposed use will meet any additional zone or use-specific standards identified in Tables 6-A to 6-F and Subsections 6.5.6 and 6.5.7.

6.5.3 Conditions on conditional use approvals

The review authority may impose such reasonable conditions upon the premises benefited by a conditional use as may be necessary to prevent or minimize adverse effects therefrom upon other property in the neighborhood. Such conditions shall be expressly set forth in the resolution authorizing the conditional use. Violation of such conditions shall be a violation of this article.

6.5.4 Effect of issuance of a conditional use approval

The approval of a conditional use shall not authorize the establishment or extension of any use nor the development, construction, reconstruction, alteration, or moving of any building or structure, but shall merely authorize the preparation, filing. and processing of applications for any permits or approvals which may be required by the City of Portland Code of Ordinances, including but not limited to a building permit, a certificate of occupancy, subdivision approval, and site plan approval.

6.5.5 Limitations on conditional use approvals

No conditional use approval shall be valid for a period longer than six months from the date of approval, or such other time, not to exceed two years, as may be fixed at the time granted, unless the conditional use has been commenced or a building permit is issued and construction has begun within that period and is thereafter diligently pursued to completion, provided, however, that one or more extensions of said time may be granted if the facts constituting the basis of the decision have not materially changed and the two year period is not exceeded thereby. A conditional use approval shall be deemed to authorize only the particular use for which it was issued and such approval shall automatically expire and cease to be of any force or effect if such use shall for any reason be discontinued for a period of 12 consecutive months or more.

6.5.6 Supplemental use-specific conditional use standards

In addition to the general conditional use standards, the following standards shall apply to specific conditional uses:

A. Automobile, boat, and related dealerships and auto service stations

1. The Planning Board shall be the review authority.
2. Signs shall not adversely affect visibility at intersections or access drives. Such signs shall be constructed, installed, and maintained so as to ensure the safety of the public. Such signs shall advertise only

services or goods available on the premises.

3. No ingress and egress driveways shall be located within 30 feet from an intersection. No entrance or exit for vehicles shall be in such proximity to a playground, school, church, other places of public assembly, or any residential zone that the nearness poses a threat or potential danger to the safety of the public.
4. A landscaped buffer, no less than five feet wide, shall be located along street frontages (excluding driveways). The, buffer shall consist of a variety of plantings in accordance with the City of Portland *Technical Manual*.
5. Car washes shall be designed to avoid the tracking of residual waters into the street.

B. Emergency shelters

1. The facility shall provide adequate space for conducting security searches and other assessments.
2. The facility shall be designed with a centralized shelter operations office on each level providing sight lines to sleeping areas.
3. A management plan adequately outlining the following areas shall be provided: management responsibilities; process for resolving neighborhood concerns; staffing; access restrictions; on-site surveillance; safety measures; controls for resident behavior and noise levels; and monitoring reports.
4. Adequate access to and from METRO service shall be provided. The facility shall be within a ¼ mile of a METRO line, or shall be within ½ mile of a METRO line and provide adequate indoor space to permit all shelter guests day shelter, as well as implement strategies to help residents utilize transit.
5. The facility shall provide on-site services to support residents, such as case management, life skills training, counseling, employment and educational services, housing assistance, or other programs.
6. Suitable laundry, kitchen, pantry, bicycle storage, and secure storage facilities for shelter stayers shall be provided on-site.
7. An outdoor area for guest use shall be provided on-site with adequate screening to protect privacy of guests.

C. General office in the R-6 & R-6a zones

1. Offices shall serve a member of a recognized profession and be maintained for the conduct of that profession. Professional office uses do not include veterinary offices.
2. For the use of any building designed or constructed for residential use, which was in use as a residence on April 18, 1984, or thereafter:
   a. A professional office shall not be located within 500 feet of another as measured along the street line to the respective property lines.
   b. A building with one or more professional offices shall have at least 50% of the total floor area of the building devoted to residential uses.
   c. The total number of individuals working in a building of professional offices shall not exceed the equivalent of four full time employees.

d. Any additions or exterior alterations shall be compatible with the architecture of the building and maintain the residential appearance of the building. Construction of a new building shall be compatible with the architectural character of the surrounding area.

3. The scale and surface area of parking, driveways, and paved areas shall be arranged and landscaped to be compatible in size and scale with neighboring properties in the area and to properly screen vehicles from adjacent properties and streets.

D. High-tech manufacturing

1. A minimum of 1/3 of the total square footage devoted to manufacturing shall be conducted in a laboratory environment, in a controlled environment with specialized air handling systems that exceed levels for pressurization and filtration found in office environments and traditional manufacturing facilities.
2. Rooftop equipment shall be integrated into the overall building design and shall be screened as necessary.
3. In the B-7 zone, accessory warehousing is permitted. Where warehousing cannot be located on the same lot because the land area is too small to accommodate the warehousing on the same lot, one remote warehouse may be located within 600 feet of the principal use referenced above.
4. In the O-P zone, truck traffic serving a single manufacturing business or institution shall not exceed, on a regular basis, more than two tractor-trailer truck deliveries per week. No deliveries shall be accepted between 7:00 p.m. and 7:00 a.m.

E. Industrial uses

1. *In the B-2/B-2b/B-2c zones*
   a. The Planning Board shall be the review authority.
   b. The site shall have an adequate traffic circulation pattern designed to avoid hazards to vehicular circulation on adjoining streets. All stacking of motor vehicles shall be on site, and loading facilities shall be located to the rear of the building and shall not be visible from the street.
   c. The exterior design of the structures, including architectural style, facade materials, roof pitch, building form, established setbacks, and height shall be of a commercial rather than industrial character. The site shall contain screening and landscaping which shall meet the requirements of Article 14 for screening between land uses and the City of Portland *Technical Manual*.
2. *In the B-3/B-3b/B-3c zones*
   a. The floor area devoted to industrial use shall not exceed 10,000 square feet. For a building in existence on March 11, 1991, the floor area shall not exceed 10,000 square feet or 50 percent of the total floor area, whichever is greater.
   b. The associated vehicular loading, unloading, parking, circulation, and traffic volumes on the site and on adjacent public streets shall not have a

more intensive impact than any use on the site within the last five years.

c. Any buildings located in a PAD Overlay Zone shall be subject to the requirements of Section 8.7 in addition to the requirements of this subsection.

d. For buildings that either were not in existence on March 11, 1991, or were in existence on that date but were either in use for any permitted use in the B-3 zone or were designed or constructed for any such use:

i. No tractor trailer trucks or longer vehicles shall be associated with the proposal.

ii. The proposal shall exclude warehousing and storage as a principal use.

iii. The use shall not generate more than six delivery or service trips per day between 7:00 a.m. and 7:00 p.m.

3. *In the B-5/B-5b zones*

a. Truck loading and access and vehicle parking shall be located in the rear or side yard of the site where possible.

b. Street frontage shall be designed for pedestrian scale or interest.

c. Shared infrastructure to the extent practicable, including, but not limited to, service alleys, parking areas, stormwater treatment, public transportation facilities, and driveways, shall be utilized.

4. *In the B-6 zone.* No brew pubs or microbreweries east of Waterville Street shall be permitted within 50 feet of Fore Street.

F. Institutional uses (excluding preschools)

1. The Planning Board shall be the review authority.

2. In the case of expansion of existing institutional uses onto land other than the lot on which the principal use is located, it shall be demonstrated that the proposed use cannot reasonably be accommodated on the existing site through more efficient utilization of land or buildings, and will not cause significant physical encroachment into established residential areas.

3. The proposed use shall not cause significant displacement or conversion of residential uses existing as of June 1, 1983, or July 15, 1985 in the IR-1 and IR-2 zones, or thereafter.

4. In the case of a use or use expansion which constitutes a combination of the conditional institutional uses with capacity for concurrent operations, the applicable minimum lot sizes shall be cumulative.

5. In the case of community halls:

a. The structure shall have been in existence as of January 4, 2010.

b. The structure shall have been built for institutional or other non-residential uses.

c. The structure shall be operated by, or operated subject to the control of, a not-for-profit entity in accordance with its not-for-profit purposes.

d. A parking management plan shall be submitted for review and approval by the Planning Board.

6. In the case of private club or fraternal organizations, any such establishment serving alcoholic beverages or in possession of a license for serving alcoholic beverages shall meet the minimum lot size requirement for places of assembly greater than 10,000 square feet.
7. Post-secondary schools in the R-2 zone shall only be permitted on a collector or arterial road.
8. In the case of a post-secondary school within the R-5 zone and not including the USM Overlay Zone, such school may build principal structures to a height of 55 feet if the following standards can be met:
    a. Minimum lot size: 10 acres which may include adjacent land owned by the institution on both sides of a public street.
    b. Minimum setback between buildings on-site: 20 feet.
    c. Minimum setback from external property boundary: 30 feet, except that parking garages over 35 feet in height must be located 50 feet from external property boundaries when adjacent to an adjoining residential use.
    d. The area between the structure and adjoining residential uses must be adequately screened with appropriate landscaping or other features to buffer the building and effects thereof (i.e. noise, light, etc.) from abutting properties.

G. Multi-family

1. *In the R-3 and R-5 zones.* Alteration of a structure existing and not in residential use as of January 1, 1984 to three or more dwelling units shall be permitted as a conditional use provided that:
    a. No open outside stairways or fire escapes above the ground floor shall be constructed or have been constructed in the immediately preceding five years.
    b. 3,000 square feet of land area per dwelling unit shall be required.
    c. A lower level dwelling unit shall have a minimum of one-half of its floor-to-ceiling height above the average adjoining ground level.
    d. Any addition or exterior alteration, such as change in façade materials, building form, or roof pitch, shall be designed to be compatible with the architectural style of the structure.
    e. In the R-3 zone, any addition or exterior alteration shall be limited to a gross floor area equal to or less than 25% of the total existing floor area as of June 13, 2018.
    f. Paved areas shall be designed to be compatible in size and scale with neighboring properties in the area and properly screened from adjacent streets.
2. *In the I-B zone*
    a. Multi-family buildings shall have a maximum of four units.
    b. No open outside stairways or fire escapes above ground floor shall be constructed or have been constructed in the immediately preceding five years.

c. A below grade dwelling unit shall be permitted only if access is provided directly to the outside of the building.
d. Density shall be determined by the most restrictive abutting residential zone, except for those lots which are served by public water and sewer, where density shall be determined by the least restrictive abutting residential zone. If no residential zone is abutting, density shall be determined by the nearest residential zone. Residential uses shall meet the requirements of such abutting or nearest residential zone.
e. Any additions or exterior alterations shall be compatible with the original architecture of the building. The exterior design of new construction, including the architectural style, facade materials, roof pitch, building form, and height shall be compatible with neighboring properties.
f. No existing dwelling unit shall be decreased to less than 1,000 square feet of floor area.
g. No additional dwelling unit shall have less than 600 square feet of floor area, exclusive of common hallways and storage in basement and attic.
h. All sanitary waste shall be disposed of by a public sewer, subsurface sewerage system, or other method in compliance with all applicable federal, state and local regulations.
i. There shall be sufficient water for the needs of the dwellings such that the use does not cause an unreasonable burden on an existing water supply nor adversely affect groundwater resources.

H. Off-street parking

1. *In the R-3, R-4, and R-5 zones*
   a. Off-street parking must be designed to satisfy the parking requirement of a use located in and conforming with the provisions of a nearby mixed-use or industrial zone.
   b. The lot on which the parking is proposed must be located wholly within 300 feet, measured along lines of public access, from the use which requires the off-street parking.
   c. The lot where the off-street parking is proposed shall be under the control of the owner of the use which requires the off-street parking. Evidence of such control by deed or lease shall be required before the certificate of occupancy is issued. If such control should be abrogated, the parking use thus allowed shall automatically revert to a nonconforming use in violation of this article and shall be terminated forthwith.
   d. Conditions may be imposed to insure development compatible with that of the immediate neighborhood notwithstanding the provisions of any other section of this Land Use Code. Such conditions may include limits on the period of such use.
2. *In the R-6 zone.* Off-street parking shall be for passenger cars for uses permitted in the R-6 zone.

3. *Structured parking in the B-6 and B-7 zones*
    a. Parking garages shall incorporate first floor retail space or other non-parking and active use along all street frontages.
    b. The Planning Board may waive the requirement for first floor mixed-use upon demonstration that the project meets one or more of the following criteria:
        i. The applicant demonstrates that steepness of grade or the character of the adjacent street will not support retail or first-floor mixed use in the foreseeable future.
        ii. The first floor of the garage is set back a minimum of 35 feet from the street right-of-way and its design does not provide an impediment for development of such space for mixed-use in the future. Such space (between the garage and the street) shall, in the interim, not be used for surface parking.
        iii. The applicant can demonstrate to the satisfaction of the Planning Board that a market for first floor mixed uses currently does not exist, provided that the structure of the garage is designed to accommodate retail and or mixed-uses in the future. In these cases, the Planning Board will need to find that, on the street-level deck of a proposed parking garage, a minimum of 20 feet horizontal distance of depth from the street and nine feet finished floor-to-finished ceiling clearance could house future retail and or mixed use. The applicant will further need to demonstrate that the garage design anticipates the future development of utilities and circulation necessary for non-parking uses. Where a parking garage fronts on more than one public street and where there is an existing change in grade elevation of over 5% across the footprint of the garage, the nine-foot floor-to-ceiling requirement only applies to the street with higher traffic volumes.
    c. Where the Board allows a waiver of first floor mixed use, garages shall display architecture that enhances the pedestrian experience and disguises the parking use to the extent possible. Use of traditional storefront design concepts and traditional building materials is encouraged.
4. *Surface parking in the B-3, B-6, and B-7 zones*
    a. Surface lots shall be laid out in a manner conducive to development of future buildings, and/or structured parking.
    b. Surface parking, including parking aisles, shall be located at least 35 feet from a street. The 35-foot setback shall not apply to driveways

perpendicular to the street providing access to the site.

c. In the B-7 zone, surface parking that does not meet the 35-foot parking setback may be permitted as a conditional use, provided that:
   i. All or a portion of the 35-foot setback area had a gravel surface on September 29, 2015.
   ii. The total gravel surface area on the lot and any contiguous lots did not exceed 15,000 square feet on September 29, 2015.
   iii. The parking spaces provide parking to a principal building on a contiguous lot.
   iv. One of the buildings described in (iii) above meets the minimum height requirements of the Bayside Height Overlay Map and/or a building on the site has a floor area of 25,000 square feet or greater.
   v. The total number of spaces within 35-foot setback in combination with other spaces on the lot does not exceed the minimum parking spaces required.
   vi. The proposed parking spaces meet the landscape and buffer requirements of Subsection 6.8.8.
   vii. Parking spaces within the 35-foot setback shall provide stormwater quality treatment if required by the City of Portland Stormwater Management Standards and the Maine DEP Chapter 500 Stormwater Management Standards. If not required, an alternative low impact development treatment system approved by the Planning Board shall be provided.

I. Preschool facilities

1. *In all zones*
   a. Outdoor play areas shall be screened and buffered from surrounding residences with landscaping and/or fencing to minimize visual and noise impacts.
   b. Solid waste shall be stored in covered containers. Such containers shall be screened on all sides.
2. *In the R-P zone.* Facilities for more than 12 children shall meet the following additional standards:
   a. The facility shall provide a minimum of 75 square feet of outdoor play area per child.
   b. The play area shall be located in the side and rear yards only and shall not be located in front yards.
   c. Outside play areas shall be separated from abutting properties by a fence at least 48 inches in height.
   d. A 10-foot-wide landscaped buffer shall be required outside of the fenced play area, and shall be established in accordance with the landscaping standards of the City's *Technical Manual*.
3. *In residential and island zones*
   a. The facility shall be located in a structure in which there is one or more occupied residential units or in

an existing accessory structure, unless the facility is located in a principal structure that has not been used as a residence in whole or in part within the five years immediately preceding the application for a preschool use, or in a nonresidential structure accessory to the principal nonresidential use.

b. There shall be no maximum limit on the number of children in a facility located in a principal structure that has not been used as a residence in whole or in part within the five years immediately preceding the application for a preschool use, or in a nonresidential structure accessory thereto.

c. The maximum capacity shall be 12 children for facilities located in residential or existing structures accessory thereto, unless the additional standards in paragraph (d) below are met.

d. Preschool facilities located either in structures that have been in residential use within the past five years or in existing accessory structures and that serve between 13 and 24 children shall meet the following additional standards:

   i. The facility shall provide a minimum of 75 square feet of outdoor play area per child.

   ii. The play area shall be located in the side and rear yards only and shall not be located in front yards.

   iii. Outside play areas shall be separated from abutting properties by a fence at least 48 inches in height.

   iv. A 10-foot-wide landscaped buffer shall be required outside of the fenced play area, and shall be established in accordance with the landscaping standards of the City's *Technical Manual*.

   v. The minimum lot size for a preschool located in a residential or existing accessory structure and serving more than 12 children shall be 20,000 square feet.

   vi. The maximum number of children in a preschool facility located in a residential or existing accessory structure shall be 24.

   vii. Any additions or exterior alterations such as facade materials, building form, roof pitch, and exterior doors shall be designed to be compatible with the architectural style of the building and preserve the residential appearance of the building.

J. Raising of domesticated animals for non-commercial purposes

1. No animals shall be kept on any lot less than three acres or closer than 100 feet to any street or lot line, except domesticated chickens as regulated in Chapter 5 of the City of Portland Code of Ordinances.
2. This use shall not create any odor, noise, health, or safety hazards, or other nuisance to neighboring properties.
3. Raising of pigs or reptiles is not permitted.

K. Sheltered care group homes

1. A sheltered care group home shall not be located within 500 feet of another, as measured along street lines to the respective property lines.
2. The facility shall make provision for adequate on-site staffing and supervision in accordance with applicable state licensing requirements. If a facility is not licensed by the state, there shall be a minimum of one staff person for every 10 residents or fraction thereof.
3. The Board of Appeals or Planning Board may impose conditions upon a conditional use permit concerning the creation or operation of a sheltered care group home including but not limited to the following: site and building maintenance; lighting, fencing, and other appropriate security measures; screening and buffering of parking areas; compatibility of any additions or alterations with the existing residential structure; compatibility of new structures with the architectural character of the surrounding area; and limitation on the duration of a sheltered care group home permit.

L. Utility substations

1. Utility substations shall be as small in size as practicable.
2. Substations shall be suitably screened and landscaped so as to ensure compatibility with the surrounding neighborhood. The remainder of the lot not consumed by the utility substation and its related access shall be designed and designated for future development.
3. If greater than 100 square feet in the B-7 zone, the structure shall be set back at least 35 feet from the street right-of-way except in the case of a lot having frontage on Marginal Way and I-295, provided the minimum 35-foot setback is met along Marginal Way.
4. In the B-7 zone, the substation equipment shall be fully enclosed within a structure.

6.5.7 Supplemental zone-specific conditional use standards

In addition to the general conditional use standards and supplemental use-specific conditional use standards, the following standards shall apply to conditional uses within certain zones:

A. R-OS Zone

1. The use shall be in conformity with or satisfy a deficiency identified in a federal, state, regional, or city recreation and open space plan, including but not limited to the state *Comprehensive Outdoor Recreation Plan*, as such plans may from time to time be created or revised.
2. Buildings and structures shall not obstruct significant scenic views presently enjoyed by nearby residents, passersby, or users of the site.
3. Indoor recreation or nonrecreational uses shall serve a significant public purpose that cannot reasonably be accommodated outside of the recreation and open space zone.

6.6 ACCESSORY USES

6.6.1 In general

A. Accessory uses shall be permitted in conjunction with permitted or conditional principal uses. Accessory uses must be:
   1. Customarily found in association with the principal uses.
   2. Generally consistent with the impacts of the primary use.
   3. Secondary in nature, clearly incidental and subordinate to the principal uses in terms of area and function.
   4. Located on the same lot as the principal use unless otherwise permitted.
   5. Consistent with the intent of the zone.

B. No accessory use or uses within a building shall occupy more than a combined total of 25% of the floor area of the principal building, with the exception of required off-street parking, unless otherwise provided in Subsection 6.6.2 below.

C. No accessory use or uses not within a building shall occupy more than a combined total of 25% of the unbuilt lot area, or of the required rear yard area, with the exception of off-street parking or as otherwise provided in Subsection 6.6.2.

6.6.2 Standards for specific accessory uses

A. Accessory Dwelling Units (ADUs)
   1. Accessory Dwelling Units (ADUs) shall be permitted on all lawfully conforming and nonconforming lots with legal residential uses. ADUs shall comply with all dimensional standards of the underlying zone unless otherwise provided below.
   2. Up to two ADUs shall be permitted per qualifying property.
   3. At the time of an ADU's initial construction or legal creation, the owner(s) of the property on which the accessory dwelling unit is created must occupy at least one of the dwelling units, with the exception of legally nonconforming lots on Peaks Island.
   4. When an ADU is significantly visible from public ways, the building design shall:
      a. Be clearly subordinate to the principal structure(s) in scale and position in relationship with the street and principal structure(s).
      b. Not include outside stairways or fire escapes above the ground floor.
   5. Under circumstances where an existing nonconforming structure is converted to an ADU, the design of the ADU shall take into consideration to the extent practicable the privacy of adjacent properties.
   6. The developer of an ADU shall record a deed restriction requiring that the ADU and at least one other non-accessory unit on-site remain under common ownership.
   7. ADUs shall comply with all dimensional requirements of the underlying zone except lot coverage and lot area per dwelling unit requirements.
   8. An ADU shall be limited to a gross floor area of 2/3 of the gross floor area of the principal unit(s). In no circumstance shall the height of detached ADUs on a lot exceed the height of the primary structure. Additionally, the aggregate square footage of detached ADUs on a lot shall not exceed the gross floor area of the primary structure.

B. **Amusement devices.** Except where the principal use consists of the sale of alcoholic beverages for consumption on premises or where the principal structure is an airline terminal, pinball machines or amusement devices shall not be considered to be accessory uses whenever there are more than a total of two such machines or devices on the premises.

C. **Antennas, discs, transmitting and receiving equipment.** Building-mounted antennas, discs, and other transmitting and receiving equipment shall be:
   1. No taller than 15 feet above the highest structural steel of the building roof.
   2. Setback no less than 15 feet from the building perimeter.
   3. Integrated into the architecture of the building in placement, form, color, and material so as to screen or camouflage such equipment from public view.

D. **Drive-throughs.** Drive-throughs shall be permitted as an accessory use in the B-4 zone. Drive-throughs shall be reviewed as conditional accessory uses in the B-2/B-2b/B-2c zones, B-3/B-3b/B-3c zones, B-6 zone, and B-7 zone. In all other zones, drive-throughs shall be prohibited. Where a conditional use, drive-throughs shall be subject to the provisions of Section 6.5 and the following additional review standards:
   1. *In general*
      a. The Planning Board shall be the review authority.
      b. Features such as windows, vacuum cleaners, menu/order boards, and stacking lanes must be placed, where practicable, to the side and rear of the principal building except where such placement will be detrimental to an adjacent residential zone or use, and shall be located no nearer than 40 feet from any adjoining property located in a residential zone. This distance shall be measured from the outermost edge of the outside drive-through feature to such property line. In addition, drive-through features shall not extend nearer than 25 feet from the right-of-way.
      c. The site must have adequate stacking capacity for vehicles waiting to use these service features without impeding vehicular circulation or creating hazards to vehicular circulation on adjoining streets.
      d. Any speakers, intercom systems, or other audible means of communication shall not play pre-recorded messages. Any speakers, intercom systems, audible signals, computer prompts, or other noises generated by the drive-through services or fixtures shall not exceed 55 dB or shall be undetectable above the ambient noise level as measured by a noise meter at the property line, whichever is greater.
      e. Site and vehicular light sources shall not unreasonably spill over or be directed onto adjacent residential properties and shall otherwise conform to the lighting standards set forth in the City of Portland *Technical Manual*.
      f. Where automobiles may queue, waiting for drive-through services, their impacts must be substantially

mitigated to protect adjacent residential properties from headlight glare, exhaust fumes, and noise. As deemed necessary by the review authority, mitigation measures shall consist of installation of solid fencing with landscaping along any residential property line which is exposed to the drive-through or the enclosure of the drive-through fixtures and lanes so as to buffer abutting residential properties and to further contain all associated impacts.

g. Drive-through lanes shall be designed and placed to minimize crossing principal pedestrian access-ways or otherwise impeding pedestrian access.

h. The board, as part of its review, may take into consideration the impact hours of operation may have on adjoining uses.

2. *In the B-2/B-2b/B-2c zones.* Drive-throughs shall only be permitted when accessory to a pharmacy or banking facility use. Drive-throughs shall not be permitted for restaurant, bakery, or other food or beverage service uses. Drive-throughs are only permitted in buildings of three or more stories where a majority of the upper stories is devoted to three or more dwelling units. The drive-through shall be screened as much as practical from the front of the building and shall be no closer than 40 feet from abutting residential zones and 25 feet from the street line.

3. *In the B-3/B-3b/B-3c zones.* Drive-throughs shall only be permitted when accessory to a bank. Drive-throughs shall be subject to the Downtown Urban Design Guidelines.

4. *In the B-6 zone.* Drive-throughs shall only be permitted when accessory to a bank and located in the interior of parking structures. Drive-through vehicle circulation shall not create an impediment for retail or mixed-use development for the first floor of the subject garages along any adjacent public streets.

5. *In the B-7 zone*

   a. The drive-through must be accessory to a bank occupying a minimum floor area of 4,000 square feet.

   b. The drive-through must be attached to or included within a building with a minimum floor area of 20,000 square feet, except that for lots of less than 20,000 square feet and in existence as of March 9, 2005, a drive-through may be included in a building of less than 20,000 square feet.

   c. The drive-through facility must be attached or included within a building and/or addition meeting the minimum height of four stores in the Bayside Height District A and three stories in the Bayside Height Districts B and C. For the purposes of this conditional use, the minimum height exceptions for the B-7 zone shall not apply.

   d. The first floor of the building must include banking or other retail storefront uses with storefront windows, entries, and interior public space oriented to and visible from the street, with front entry access facing

the street and directly accessible from the public sidewalk.

e. Drive-through vehicle circulation shall not be located between the building and any adjacent public streets.

f. The drive-through shall be limited to two vehicle drive-through lanes.

g. The location of any drive-through shall be limited to the geographic area between Somerset/Kennebec Streets/I-295/Franklin Street/Forest Avenue.

E. Heliports. Heliports shall meet the following minimum specifications:

1. *Roof heliport*
   a. Take-off area (min.): 200 feet x 250 feet
   b. Parking area (min.): 30 feet x 90 feet
2. *Ground heliport*
   a. Take-off area (min.): 300 feet x 700 feet
   b. Parking area and station building shall be located out of flight area.
3. *Elevation of operational area above street (max.):* 100 feet
4. *Clearance from lateral obstruction (min.):* 100 feet
5. *Width of approach and departure path (min.*): 500 feet at landing area, tapering outward 15 degrees on each side to a width of 1,000 feet
6. *Slope with emergency landing areas:* 1:8
7. *Slope without emergency landing areas:* 1:20
8. *Curved approach:* Minimum radius to turn, 650 feet
9. *Approach zone transition area slope:* 1:2

F. Home occupations

1. The purpose of home occupations is to allow the secondary and incidental use of a residence for the conduct of appropriate occupations whose external activity levels and impacts are so limited as to be compatible with the residential character of the neighborhood.
2. Home occupations must be conducted entirely within the dwelling unit by one or more persons residing within the dwelling unit.
3. In connection with the operation of a home occupation, the following requirements shall be met:
   a. A home occupation shall not occupy more than 500 square feet of floor area or more than 25% of the total floor area of such a dwelling unit, whichever is less, or in the case of licensed family day care homes or home babysitting services, to accommodate not more than six children plus two children after school and having no nonresidential employees.
   b. There shall be no outside storage of goods and materials nor shall there be exterior displays, or display of goods visible from the outside.
   c. Storage of materials related to the home occupation shall count as a part of the occupancy limitations above, but shall not constitute a dominant part of such occupancy, provided, however, storage of such materials or products in garages or other accessory structures is prohibited.



d. Exterior signs shall be limited to one non-illuminated sign not exceeding a total area of two square feet, affixed to the building and not projecting more than one foot beyond the building.
e. Any exterior alterations to the residence shall be compatible with the architecture of the building and maintain the residential appearance by virtue of exterior materials, lighting, and signs.
f. The home occupation shall not produce offensive noise, vibration, smoke, dust, or other particulate matter, odorous matter, heat, humidity, glare, or other objectionable effects.
g. There shall be no more than one nonresident employed in the home occupation, provided, however, family day care or home babysitting services shall have no nonresident employees.
h. No traffic shall be generated by the home occupation in greater volumes than would normally be expected in a residential neighborhood.
i. No motor vehicle exceeding a gross vehicle weight of 6,000 pounds shall be stored on the property in connection with the home occupation.

4. No residence shall be occupied, altered or used for any home occupation except the following:
   a. Accountants and auditors.
   b. Answering services (telephone).
   c. Architects.
   d. Artists and sculptors.
   e. Authors and composers.
   f. Computer programming.
   g. Custodial services.
   h. Custom furniture repair and upholstering.
   i. Dentists, doctors, therapists, and health care practitioners.
   j. Direct mail services.
   k. Dressmakers, seamstresses and tailors.
   l. Engineers.
   m. Family planning services.
   n. Hairstylists (limited to no more than two hair dryers).
   o. Home crafts, such as model making, rug weaving, lapidary work, cabinet making, weaving, ceramics.
   p. Interior designers.
   q. Lawyers, justices of the peace, and notary publics.
   r. Licensed family day care home or babysitting services.
   s. Musicians or music teachers, including group instruction not to exceed six students at any time but not including performances or band rehearsals, which shall meet the following additional requirements:
      i. Electronic amplification is prohibited.
      ii. The applicant shall demonstrate that noise attenuation is provided which minimizes perception of sound at property lines at all times during the use. Noise attenuation measures may include, but are not limited to,

insulation, double-pane windows, air conditioners, or any combination of these or similar noise attenuation measures.

iii. Hours of operation shall be limited to 8:30 a.m. to 9:30 p.m.

t. Office facility of a minister, rabbi, or priest.

u. Photographic studios.

v. Professional counseling and consulting services.

w. Professional research services.

x. Sales persons provided that no retail or wholesale transactions are made on the premises.

y. Small appliance repair.

z. Snow plowing provided that only one snow plow vehicle is stored on or generated from the site.

aa. Special tutoring or instruction (not to exceed three pupils at any given time).

bb. Clerical services.

cc. Small-scale marijuana caregiver, except that no more than one small-scale caregiver may operate out of any one dwelling unit.

5. A home occupation that is not listed in (4) above but is similar to and no more objectionable than those home occupations listed, shall be permitted as a conditional use subject to the requirements of Section 6.5 of this article. This provision shall not include veterinarians, kennels, animal raising, funeral homes, retail uses including antique shops, restaurants, dancing studios, towing services, repair and painting of automobiles as home occupations.

G. **Letting of rooms.** The letting of rooms within an existing dwelling unit in any residential zone shall be permitted as an accessory use provided that:

1. There shall be no more than two persons occupying such room or rooms.
2. There shall be not more than two rooms per dwelling unit occupied for such use.
3. There shall be no increase in the bathroom and/or kitchen facilities in the dwelling, and no such facility shall have been constructed in the immediately preceding two years.

H. **Makers' markets in the IL-b zone.** Makers' markets, including periodic or seasonal sale of handcrafted and limited production products for final consumption, which may include prepared or raw foods, shall be permitted as an accessory use in the IL-b zone, provided that:

1. Such sales are located within a lawfully conforming principal permitted use.
2. Such sales occupy an area no larger than 45% of the floor area devoted to the principal use.
3. Such sales by any single vendor or group of vendors shall occur for no more than a total of 28 hours a week collectively.
4. Such products are produced or permitted to be produced in the IL/IL-b zone.
5. Such products are sold by the producer of the product or their designee.

I. **Tasting rooms in industrial zones.** Tasting rooms shall be permitted as accessory uses on the premises of facilities where beer, wine, spirits, other alcoholic or non-alcoholic beverages, or food are produced, provided that:

1. Service of food in the facility is limited to that which does not constitute a full course meal.
2. No more than 10% of the beverage menu in tasting rooms accessory to beverage production or 10% of the food menu in tasting rooms accessory to food production is produced or manufactured off-site.

Tasting rooms shall not be subject to the limitations on the use of unbuilt lot or yard area in Subsection 6.6.1(C).

J. **Solar energy generation**. Roof-mounted, building-integrated, or small-scale ground-mounted solar energy systems shall be permitted as accessory uses within all zones except the Stream Protection Zone and within cemeteries. Accessory solar energy systems are only permitted within the Recreation and Open Space Zone where co-located with public industrial or utility infrastructure and are subject to historic preservation review when such systems are either located within or less than 100 feet from an identified historic district or historic landscape district. All accessory solar energy systems are subject to the following conditions:

1. Accessory solar energy systems shall comply with all general use standards for solar energy systems as stated under Subsection 6.4.16 of this article and with the dimensional requirements as stated under Article 7.
2. Small-scale ground-mounted solar arrays shall occupy less than 1,000 square feet of ground area.

K. **Wind energy generation.** Freestanding and roof-mounted wind energy systems shall be permitted as accessory uses within all zones except the Stream Protection Zone, within historic districts except where the Congress Street Historic District coincides with the B-3 zone, within historic cemeteries or historic landscape districts, or within 1,000 feet of any designated historic landmark (Portland Observatory, Cathedral of Immaculate Conception, St. Dominic's Cathedral, St. Luke's Cathedral, State Street Church, and City Hall), subject to the following conditions:

1. Accessory wind energy systems shall comply with all general use standards for wind energy systems as stated under Subsection 6.4.18 of this article.
2. Properties shall be limited to one free-standing wind energy system and/or three roof or building mounted wind energy systems.
3. Accessory wind energy systems shall either be located on the rear half of a building or structure, or within the rear yard and shall be sited to maximize existing vegetative or other screening from nearby residential buildings and public ways. The location shall minimize changes to existing topography and natural vegetation which would result from construction or maintenance of the system.

6.7 TEMPORARY USES

6.7.1 In general

Temporary uses may be permitted from time to time as determined by the Planning Authority. In addition to regulations pertaining to temporary uses contained elsewhere in the City of Portland Code of Ordinances, the following standards shall apply for specific temporary uses.

6.7.2 Standards for specific temporary uses

A. **Temporary parking.** Parking of vehicles may be permitted by a temporary certificate of occupancy for a limited period of time not to exceed one year in anticipation of future development.

B. **Temporary private tenting.** Temporary private tenting with one tent accessory to a principal residential use is permitted in the IR-1 and IR-2 zones provided that adequate water supplies and sanitation facilities are available in connection with the principal residential use.

C. **Temporary sales.** No "garage sale," "lawn sale," "attic sale," "rummage sale," or other similar casual sale of tangible personal property which is advertised by any means whatsoever whereby the public at large is or can be made aware of such sale, shall be deemed to be accessory or temporary if such sale occurs after sales have been conducted on the same premises for six or more days previously during the calendar year.

D. **Temporary stands**

1. No premises shall be used for business purposes consisting of temporary stands, booths, platforms, or vehicles intended for the sale of merchandise or other mercantile purposes if any part of such stand, booth, platform, or vehicle is proposed to be located nearer than 125 feet to any residential zone, except that a single stand with no more than 200 square feet of floor area for the sale of agricultural products produced on the premises shall be permitted as accessory to a permitted agricultural use.
2. A single produce stand shall be permitted on the premises of a community garden for the sale of flowers, vegetables, herbs, or fruit produced on the premises, provided that the stand is no more than 100 square feet in floor area or open table area and is located a minimum of five feet from any property line; that sales are limited to two days per week between the hours of 9:00 a.m. and 6:30 p.m. during the growing season from May 25 through October 31; and that the stand has received all necessary permits. The use of produce stands shall be seasonal and temporary. Any properly permitted structure may remain on the premises year-round. If the community garden is owned or operated by a non-profit organization, sales of flowers, vegetables, herbs, or fruit produced in other gardens or farms in Maine owned or operated by said organization shall be permitted within the same limitations listed above. For purposes of this subsection, community garden means a parcel of open land used for the cultivation of flowers, vegetables, herbs, or fruit by a group of city residents either jointly as a single plot or through individual garden plots or beds.
3. A single produce stand shall be permitted on the premises of a non-profit organization incorporated pursuant to the laws of the State of Maine with the permission of the owner and on the premise of public schools with the permission of the school department; provided that the stand is for the sale of local fruit, vegetables, flowers, seedlings, and plants produced by the seller; that the stand is no more than 100 square feet in

floor area or open table area and is located a minimum of five feet from any property line; that sales on the premises are limited to two days per week between the hours of 9:00 a.m. and 6:30 p.m. during the growing season from May 25 through October 31; and that the stand has received all necessary permits. The use of produce stands shall be seasonal and temporary. Any properly permitted structure may remain on the premises year-round.

4. In the IR-1 and IR-2 zones, a single stand with no more than 200 square feet of floor area for the sale of agricultural products produced on the premises or the sale of fish or shellfish caught by the occupant of the premises shall be permitted as a temporary use.

E. **Truck load sales.** Truck load sales shall not extend beyond three consecutive days nor occur more frequently than three times a calendar year.

6.8 PERFORMANCE STANDARDS

6.8.1 Design

A. In the B-3 zone, all development, all building and site alterations, and all provision of landscaping or other pedestrian amenities shall be consistent with the Downtown Urban Design Guidelines.

B. In the B-7 zone, all buildings shall have a minimum of one operable public pedestrian entrance facing the street frontage of the lot. Such building entrances shall comply with the B-7 design standards.

6.8.2 Development in the R-OS zone

All development in the Recreation and Open Space Zone shall comply with the following development standards:

A. All ground areas not used for parking, loading, vehicular, or pedestrian areas and not left in their natural state shall be suitably landscaped and designed with quality materials that are consistent with adopted City policy or master plans, and which provide a comfortable, durable, accessible, readily maintainable, and aesthetically pleasing environment.

B. Natural features, such as mature trees and natural surface drainageways, shall be preserved to the greatest possible extent consistent with the uses of the property.

C. Loading areas shall be screened and parking areas shall be screened and landscaped so as to avoid a large continuous expanse of paved area.

D. Buildings and structures shall be sited to avoid obstructing significant scenic views presently enjoyed by nearby residents, passersby, and users of the site.

E. Storage of commodities and equipment shall be completely enclosed within buildings or provided with screening by a fence, wall, or landscaping.

F. The outer perimeter of playfields, play lots, and other active recreational areas shall be screened, or shall be located a reasonable distance from any residential use.

6.8.3 Discharges

No discharge shall be permitted at any point into any private sewage disposal system, or stream, or into the ground, of any materials in such a way or of such nature or temperature as to contaminate any water supply, or otherwise cause the emission of

dangerous or objectionable elements, except in accordance with standards approved by the Public Health Authority or by the Public Works Authority. No discharge into harbor water areas shall be permitted, unless permitted by the Maine Department of Environmental Protection under a waste discharge license and as approved by the Department of Public Works in accordance with Chapter 24 of the City of Portland Code of Ordinances. All private sewage disposal or private wastewater treatment facilities shall comply with the provisions of Chapter 24.

6.8.4 Electromagnetic interference

In any industrial zone, there shall be no electromagnetic interference that adversely affects the operation of any equipment other than that belonging to the creator of such interference.

6.8.5 Exterior lighting

All exterior lighting shall be designed and installed with full cut-off fixtures to direct illumination onto the site and to prevent illumination from such fixtures on neighboring properties.

6.8.6 Heat, glare, radiation

Heat, glare, or radiation shall be imperceptible without instruments at lot boundaries and shall not present a safety hazard.

6.8.7 Historic resources

The exterior design of proposed or renovated structures located within historic districts shall be subject to the historic preservation provisions of Article 17. The exterior design of proposed or renovated structures located adjacent to historic districts or historic resources shall be subject to historic preservation requirements of Article 14.

6.8.8 Landscaping and screening

A. In all mixed-use zones, the O-P zone, the R-P zone, and the A-B zone outside of restricted access areas, sites shall be landscaped to screen parking and accessory site elements, including storage and solid waste receptacles, from the right-of-way, public open space, or abutting residential zones.

B. In the I-H and I-Hb zones, where a front yard abuts an arterial or a major collector street, it shall be landscaped. Rear yards, side yards, and the perimeter of any parking area for greater than 15 vehicles shall be landscaped if visible from a right-of-way, public open space, or residential zone.

6.8.9 Noise

A. The maximum permissible sound level of any continuous, regular, or frequent source of sound produced by an activity shall be as shown in Table 6-G.

B. For any noise generated by a use in the B-5/B-5b, B-6, B-7, I-L/I-Lb, I-M/I-Mb, and I-H zones, sound shall be measured at or within the boundaries of any residential zone. For any noise generated by a use in the B-1/B-1b, B-2/B-

2b/B-2c, I-B, R-P, O-P, A-B, and IS-FBC zones, sound shall be measured at lot boundaries. For any noise generated by a use in the B-3/B-3b/B-3c, sound shall be measured at lot boundaries or within publicly accessible pedestrian open space. For any noise generated by a use in the B-4 zone, sound shall be measured off premises at the source of complaint.

C. In addition to the sound level standards established in Table 6-G, all uses shall employ best practicable sound abatement techniques to prevent tonal sounds, or sound waves usually perceived as a hum or whine because their instantaneous sound pressure varies essentially as a simple sinusoidal function of time, and impulse sounds, or sound events characterized by brief excursions of sound pressure, each with a duration of less than one second. If such tonal and impulse sounds cannot be prevented, uses shall employ best practicable sound abatement techniques to minimize the impact of such sounds in residential zones.

D. Sound levels shall be measured with a sound level meter with a frequency weighting network manufactured according to standards prescribed by the American National Standards Institute (ANSI) or its successor body. Measurements shall be made at all major lot lines of the site, at a height of at least four feet above the ground surface. In measuring sound levels under this subsection, sounds with a continuous duration of less than 60 seconds shall be measured by the maximum reading on a sound level meter set to the A weighted scale and the fast meter response (L maxfast). Sounds with a continuous duration of 60 seconds or more shall be measured on the basis of the energy average sound level over a period of 60 seconds (LEQ1).

E. Wind energy systems

1. Where the underlying zone is residential and does not specify sound requirements, or where the system will be within 100 feet of a residential building, the audible sound levels generated by the wind energy system shall not exceed 45 decibels on the A scale between the hours of 9:00 p.m. and 7:00 a.m., and 50 decibels on the A scale between 7:00 a.m. and 9:00 p.m., as measured at the nearest property line in accordance with this provision and technical standards set out in the City of Portland *Technical Manual*.

TABLE 6-G: NOISE STANDARDS

Zone	Daytime/Evening (7 a.m.-9 p.m.)	Night (9 p.m.-7 a.m.)
I-B	60 dBA	55 dBA
R-P	55 dBA	55 dBA
O-P	60 dBA	60 dBA
B-1/B-1b	55 dBA	55 dBA
B-2/B-2b/B-2c	60 dBA	55 dBA
B-3/B-3b/B-3c	60 dBA	55 dBA
B-4	65 dBA	60 dBA
B-5/B-5b, B-6, B-7[1]	60 dBA	50 dBA
I-L/I-Lb[1]	60 dBA	50 dBA
I-M/I-Mb[1]	70 dBA	55 dBA
I-H/I-Hb[1]	75 dBA	55 dBA
A-B	60 dBA	60 dBA
IS-FBC	60 dBA	55 dBA

[1] Daytime/evening noise regulations shall extend until 10 pm, after which time nighttime noise regulations shall apply.

2. For any system over 45 feet in total height not in the Recreation and Open Space, Resource Protection, or Island Transfer Station Overlay Zones, the maximum sound levels allowed by this ordinance shall not be exceeded at the nearest property boundary and at the nearest point vertically above the property line that coincides with the maximum building height allowed in the abutting zone.
3. Any system located within the Recreation and Open Space, Resource Protection, or Island Transfer Station Overlay Zones and more than 100 feet from a residential building shall not exceed 55 decibels on the A scale as measured 50 feet from the base of the tower.
4. Audible sound levels of wind energy systems shall include sounds generated in all conditions including low and high winds (furling, yawing, and flutter) and power outages (freewheeling). If after installation, the system is determined to be operating at levels above these limits (as measured at the property lines in accordance with this provision and applicable technical standards, the owner shall take (at the owner's cost) remedial action to ensure compliance with these limits. Required action may include relocation or removal of the system.

F. Exemptions

1. Noises created by construction and maintenance activities between 7:00 a.m. and 10:00 p.m. are exempt from the maximum permissible sound levels set forth above. Construction activities on a site abutting any residential use between the hours of 10:00 p.m. and 7:00 a.m. shall not exceed 50 dBA.
2. The following uses and activities shall also be exempt from the requirements of Table 6-G:
   a. The noises of safety signals, warning devices, emergency pressure relief valves, and any other emergency devices.
   b. Traffic noise on public roads or noise created by aircraft and railroads.
   c. Noise created by refuse and solid waste collection, provided that the activity is conducted between 6:00 a.m. and 7:00 p.m.
   d. Emergency construction or repair work by public utilities, at any hour.
   e. Noise created by any recreational activities which are permitted by law and for which a license or permit has been granted by the City, including but not limited to concerts, parades, sporting events, and fireworks displays.

6.8.10 Odor

A. It shall be a violation of this article to create an odor nuisance.

1. An odor nuisance shall be considered to exist when 10 confirmed complaints occur in an area within two separate 24-hour periods. The 10 confirmed complaints must originate from 10 different households in an area zoned residential or from 10 different individuals in a commercial or industrial facility. The Building Authority shall only respond to a complainant who confirms that the odor is

detectable at the time of the actual complaint. In order to confirm a complaint, the Building Authority or its designee shall first determine that an odor is detectable in the area of the complaint. The Building Authority or its designee shall interview the complainant to verify that the detectable odor is in fact the odor that resulted in the complaint. If the complainant verifies the odor as the source of the complaint, then the Building Authority shall notify the owner or operator of the alleged odor source either in person or by telephone within one working day, with a written confirmation within seven working days of the complaint. In the event that the Building Authority is unable to contact the owner or operator of the alleged odor source in person or by telephone within one working day, then the Building Authority shall send written notice to the operator within seven working days of the complaint.

2. In the event that 10 complaints are confirmed as set forth in paragraph (1) above in two separate 24-hour periods within a 90-day period, the Building Authority shall cause a certified odor inspector to investigate any odor complaints received in the next 30 days following the receipt of the tenth confirmed complaint from the second 24 hour period. If the odors remain under the ambient intensity standard as established in this subsection for the next 30 days, then a new odor nuisance must be established after that time in accordance with the requirements of this subsection. The certified odor inspector shall do the following in response to a complaint under this subsection:
   a. Verify that an odor is detectable in the area of the complaint and confirm that it is the odor that resulted in the complaint.
   b. Quantify the intensity of the odor on the eight point in butanol intensity scale as defined in regulations promulgated by the Planning & Urban Development Director to establish training and technical standards to support this subsection.
   c. Track the odor to its source.

B. When the certified odor inspector determines that a violation has occurred because an odor has exceeded the maximum ambient odor levels set forth in this subsection, the Building Authority shall notify the owner or operator either by telephone or in person of the violation within one working day of the violation. The Building Authority shall confirm this notification in writing within seven working days of this initial notice. In the event that the Building Authority is unable to contact the owner or operator by telephone or in person within the required time period, then it will send written notification within seven working days of the violation.

C. Upon receipt of the written notice of violation, the owner or operator of the odor source shall do the following:
   1. Implement odor reduction procedures immediately upon notification by the Building Authority that the facility has violated this subsection wherever odor

reduction can be achieved by operational or procedural changes at the facility.

2. Submit to the Building Authority, within 30 days of the written notice of violation, an odor reduction plan which is designed to reduce ambient odors attributable to emissions from that source to the maximum allowable intensity for that zone. The plan shall include a detailed summary of the measures that the owner or operator will take to mitigate the community annoyance and estimated dates for completion of those measures. In the event that it will take longer than 30 days to develop the odor reduction plan, the owner or operator of the facility shall submit within the 30-day time period a schedule for the development of the odor reduction plan. The Building Authority shall review this plan to determine whether it will be adequate to resolve the odor nuisance in a reasonable time period.
3. Implement the plan in accordance with the schedule approved by the Building Authority.

D. The maximum ambient intensity standard for odors generated by uses located in the industrial zones shall not exceed the following levels when the odor is measured in the zone indicated:

1. 4.0 in any industrial or mixed-use zone for odors resulting from uses in industrial or mixed-use zones.
2. 3.0 in any residential zone for odors resulting from uses in industrial or mixed-use zones.

6.8.11 Outdoor effects

A. In all mixed-use, office, and industrial zones and the IS-FBC zone, uses shall be operated within a completely enclosed structure, except for those customarily operated in open air.

B. In the mixed-use and IS-FBC zones, open air activities shall be those licensed by the city.

C. There shall be no outdoor kennels.

D. No open exterior stairways or fire escapes shall be constructed above the ground floor, except that the Building Authority may permit the installation of an exterior egress stair or an upgrade of an existing exterior fire escape for a conforming or lawfully nonconforming dwelling unit existing as of January 5, 1998, if such egress is required to meet current fire or other life safety codes, provided that the owner demonstrates to the Building Authority that:

1. There is no practical and economically reasonable way to provide such egress within the interior of the building, as demonstrated by the submission of detailed floor plans showing the projected cost of and the impact on the existing dwelling from an interior stair.
2. The stairway and associated landings and other building fixtures are designed and will be constructed to have a minimal visual impact upon the building, especially as viewed from any public way or public open space, as demonstrated by photographs of the front and any other affected facades of the building and plans or drawings of the proposed egress stairs.

6.8.12 Outdoor storage

Outdoor storage shall comply with the requirements of Table 6-H.

6.8.13 Relocation of displaced residents

In the B-3, B-3b, and B-3c zones, any development which results in the displacement of residents of dwelling units currently located on the development site shall meet the requirements of Section 18.5.

6.8.14 Smoke

Smoke shall not be emitted at a density in excess of the opacity level designated in Table 6-I, as classified in Method 9 (Visible Emissions) of the Opacity Evaluation System of the U.S. Environmental Protection Agency.

TABLE 6-H: OUTDOOR STORAGE STANDARDS

B-1/B-1b, B-2/B-2b/B-2c, B-3/B-3b/B-3c, O-P, R-P, A-B[1], and IS-FBC	There shall be no exterior storage with the exception of fully enclosed receptacles for solid waste disposal.
B-4, B-5/B-5b, B-6, B-7, and Industrial	Outdoor storage of materials shall be done in such a manner as to prevent the breeding and harboring of insects or vermin, to prevent the transfer of such materials from the site by natural causes or forces and to contain fumes, dust, or other materials which constitute a fire hazard. This storage shall be accomplished within enclosed containers or by raising materials above ground, separating materials, preventing stagnant water, or by some other means. In the B-4, B-5/B-5b, B-6, and B-7 zones, no outdoor storage shall be permitted in the front setback, except for storage for plant and tree nurseries or lumber yards if listed as a permitted use. In the B-4, B-5/B-5b, B-6, and B-7 zones, any storage of new materials, finished products, or related equipment must be suitably screened from the public way and abutting properties by a landscaped buffer or solid fence at least five feet in height.
B-1/B-1b and B-2/B-2b/B-2c	Vehicles or truck trailers with or without wheels shall not be used for on-site storage. In the B-2/B-2b/B-2c zone, there shall be an exception where such storage is located in a designated loading zone identified on an approved site plan or such storage is not visible from the street or adjacent residences during winter.
B-5	Outdoor storage of rental and moving equipment shall be located on the site and not within a public right-of-way or sidewalk. A curb, guard rail or other barrier shall be provided to contain such equipment and storage on the site as well as out of landscape buffer areas. A landscape buffer shall be provided. Outdoor storage of rental and moving equipment must be accessory to a building in existence as of the date of this ordinance. Exterior lighting shall not exceed that which is necessary for security purposes.

[1] Does not apply to airports.

TABLE 6-I: SMOKE STANDARDS

Zone	Opacity Level
R-P	20%
O-P	
B-1/B-1b	
B-2/B-2b/B-2c	
B-3/B-3b/B-3c	
B-4	30%
B-5/B-5b	40%
B-6	
B-7	
Industrial and A-B zones	
IS-FBC	20%

6.8.15 Storage and repair of vehicles

A. In all residential zones, all island zones, the R-P zone, and the B-3 zone, only one unregistered motor vehicle may be stored outside for a period not exceeding 30 days.

B. In other mixed-use zones, storage of unregistered motor vehicles for more than 10 days and outdoor storage of used automobile tires shall be prohibited.

C. No building in any zone shall be erected, altered or used as a garage for the storage of more than three motor vehicles or for the business of repairing motor vehicles if any part of either old or new building when completed would be closer than five feet to any part of any church, public or private hospital, or school or if any part of either old or new building when completed would be less than 15 feet from the boundary line of any lot upon which any part of any church, public or private hospital, or school is located. No existing garage used for the storage of more than three motor vehicles or for the business of repairing motor vehicles shall be deemed to become a nonconforming use through the subsequent erection of such church, hospital, or school closer than the aforesaid distance to such a garage.

6.8.16 Traffic

Development in the I-M, I-Ma and I-Mb zones shall utilize streets classified as arterials by the Maine Department of Transportation to the greatest extent possible.

6.8.17 Waste disposal

A. All solid waste disposal, including materials which might cause fumes or dust, or constitute a fire hazard if stored out-of-doors, shall be only in fully enclosed, covered containers or receptacles. In all nonresidential zones with the exception of the industrial zones, such containers or receptacles shall be within designated, screened areas. In industrial zones and the B-4 zone, outdoor storage of refuse, debris, or previously used materials awaiting reuse shall either be in an appropriate container or located within a designated, screened area.

B. Containers or receptacles shall not leak or otherwise permit liquids or solids to escape from the container or be transferred beyond lot boundaries by natural causes or forces. Areas attracting large numbers of insects or vermin are prohibited.

C. Where food processing is permitted, all food processing waste shall be stored within a completely enclosed structure and if not refrigerated shall be removed from the site in an enclosed container within 48 hours of its generation. All enclosed and exterior food

processing waste storage areas shall be cleaned and sanitized on a regular basis.

6.8.18 Vibration

A. In any mixed-use zone, the O-P, and the R-P zones, vibration inherently and recurrently generated shall be imperceptible without instruments at lot boundaries. This shall not apply to vibration resulting from activities aboard a vessel or from railroad vehicle activities, or from activities on a pile-supported pier.

B. In all industrial zones, any use creating earthshaking vibrations, with the exception of airports, shall be controlled in such a manner as to prevent transmission beyond lot lines of vibrations causing a displacement of .003 or greater on one inch, as measured by a vibrograph or similar instrument at the property boundaries.

7 DIMENSIONAL STANDARDS

7.1 APPLICABILITY

Construction, alterations, and additions to structures and buildings are governed by this article, except when superseded by other applicable laws or ordinances. It is the intent that, when in doubt, this article should be interpreted to accommodate the goals of the City's Comprehensive Plan and other plans.

7.2 RULES OF MEASUREMENT

Building footprint. The lot area contained within the outermost perimeter of the building envelope including cantilevered portions of the building, projections, and porches, decks, and similar attached structures integral to the building and contributing to its mass, but excluding roof overhangs.

Floor area. The total floor space enclosed by exterior or standard fire walls of a building, exclusive of vent shafts and courts.

Grade, pre-development. Average grade, existing on October 1, 2000, at the corners of the foundation of the proposed structure.

Height. The vertical measurement from grade, or the pre-development grade on the islands, to the highest point of a structure. For buildings, height shall be measured to the roof beams in flat roofs, to the highest point of the roof beams or the highest point on the deck of mansard roofs, to a level midway between the level of the eaves and highest point of pitched roofs or hip roofs, or to a level two-thirds of the distance from the level of the eaves to the highest point of gambrel roofs. For this purpose, the level of the eaves shall be taken to mean the highest level where the plane of the roof intersects the plane of the outside wall on a side containing the eaves.

Impervious surface ratio. The proportion of a site covered by impervious surfaces, calculated by dividing the total impervious surface area by the lot area. For the purposes of this measurement, impervious surface shall be as defined by the Maine Department of Environmental Protection.

Landscaped open space ratio. The proportion of lot area covered by landscaped open space, calculated by dividing the total landscaped open space area by the lot area. For the purposes of this measurement, landscaped open space shall not include rooftop gardens or structured or engineered surfaces.

Lot area. The area of a lot enclosed within the boundary lines of a lot.

Lot coverage. The proportion of lot area covered by building footprint and the footprint of accessory detached structures.

Lot width. The distance measured between side lot lines through that part of the principal building where the lot is narrowest.

Net land area. The land area arrived at by subtracting from lot area the square footage of the following: a) areas of special flood hazard; b) existing watercourses measured by the area between the top of the banks at the normal high-water mark; c) wetlands; and d) slopes of 25% or greater. Where a slope of 25% or greater was altered to less than 25%

within the two years immediately preceding a development proposal, such slope shall also be subtracted from the lot area.

Setback. A space on a lot which is required by this article to be maintained open, unoccupied, and unobstructed between lot lines and any structure, except as otherwise permitted in this code of ordinances. A setback shall be measured from a line parallel to the lot line drawn through the point of a structure nearest to such lot line. This measurement shall be taken at right angles from such parallel line. When measuring setbacks, setbacks shall be interpreted to include setbacks of structures from property lines and setbacks of principal structures from one another. No principal structure shall occupy the minimum setback of another principal structure. Setbacks shall not apply to fences, flagpoles, raised garden beds, and other similar structures. When setbacks are established in relationship to height, the height in stories or feet of that part of the principal structure adjoining a yard shall be used in determining the required setback.

Setback, front. A setback along the front lot line, extending between side lot lines, the depth of which shall be the shortest horizontal distance between the front lot line and any structure. In the case of lots with frontages on two or more streets, the orientation of the principal entry to the principal building shall prevail. In the case of lots without frontage on a street, the property line that parallels the nearest developed street shall be considered the front.

Setback, rear. A setback along the rear lot line, extending between side lot lines, the depth of which shall be the shortest horizontal distance between the rear lot line and any structure.

Setback, side. A setback along a side lot line extending from the front lot line to the rear lot line, the width of which shall be the shortest horizontal distance between the side lot line and any structure.

Stepback. A space on a lot which is required by this article to be maintained open, unoccupied, and unobstructed between lot lines and any structure that occurs at a prescribed height above the ground. Stepbacks shall apply to all attached accessory structures, including the minimum necessary housing of elevators, stairways, tanks fans, or other building operating equipment not intended for human occupancy.

Story. That portion of a building included between the surface of any floor and the surface of the floor, or the roof, next above. A half story is a story situated under a sloping roof, the area which at a height four feet above the floor does not exceed two-thirds of the floor area of the story immediately below it. A story which exceeds 18 feet in height shall be counted as two stories. A basement shall be counted as a story for the purpose of height measurement where more than one-half of its height is above the average level of the adjoining ground.

Street frontage. The distance for which a lot line adjoins a public street, from one lot line intersecting said street to the furthest distant lot line intersecting the same street.

7.3 DIMENSIONAL STANDARDS

Tables 7-A to 7-H shall establish the dimensional standards for each zone.



TABLE 7-A: RESIDENTIAL ZONE DIMENSIONAL STANDARDS

			R-1	R-2	R-3[2]	R-4	R-5[2,3]	R-5a[4]	R-6[6,7]	R-6a[13]
Lot area (min.)		**Governmental**	15,000 SF	10,000 SF	6,500 SF	6,000 SF	6,000 SF			
		Hospital			10 ac.		5 ac.		2 ac.	
		Intermediate or long-term, extended care facility	3 ac.	3 ac.	2 ac.		2 ac.	1.5 ac.	1 ac.[8]	
		Lodging house					9,000 SF		2,000 SF	
	Place of assembly	**<10,000 SF**	1 ac.	1 ac.	1 ac.	15,000 SF	.5 ac.	.5 ac.	10,000 SF	
		>10,000 SF	2 ac.	2 ac.	2 ac.	30,000 SF	1 ac.	1 ac.	15,000 SF	
		Post-secondary school		2 ac.			2 ac.		2,000 SF	
		Elementary, middle, and secondary school	2 ac.	2 ac.	2 ac.	30,000 SF	30,000 SF		30,000 SF	
		Raising of animals	3 ac.							
		Residential	15,000 SF	10,000 SF	6,500 SF	6,000 SF	6,000 SF[3]	6,000 SF /2 ac. max[5]	2,000 SF	4 ac.
		All other uses	15,000 SF	10,000 SF	6,500 SF	6,000 SF	6,000 SF		2,000 SF	
Lot area per dwelling unit (min.)			15,000 SF	10,000 SF	6,500 SF	3,000 SF	3,000 SF	1,600 SF	725 SF	
Lot area per rooming unit (min.)							1,000 SF		250 SF[9]	
Lot area per SNIDU[1] (min.)						2,400 SF	3,600 SF			
Street frontage (min.)			75 ft.	50 ft.	50 ft.	50 ft.	50 ft.	50 ft.	20 ft.	
Lot width (min.)			100 ft.	80 ft.	65 ft.	60 ft.	60 ft.	60 ft.	20 ft.	
Front setback (min.)			25 ft.	25 ft.	25 ft.	25 ft.	20 ft.	25 ft.	5 ft.	
			Or average depth of adjacent front yards							
Rear setback (min.)			25 ft.	25 ft.	25 ft.	25 ft.	20 ft.	25 ft.	10 ft.	
	Detached accessory (< 250 SF footprint)		5 ft.	5 ft.	5 ft.	5 ft.	5 ft.	5 ft.	5 ft.	
Side setback (min.)		**<1.5 stories to 1.5 stories**	12 ft.	12 ft.	8 ft.	10 ft.	8 ft.	10 ft.	5 ft.[10]	<45 ft. in height: 10 ft.
		2 stories	14 ft.	14 ft.	14 ft.	14 ft.	12 ft.	14 ft.		
		2.5 stories	16 ft.	16 ft.	16 ft.	16 ft.	14 ft.	16 ft.		>45 ft. in height: 15 ft.
	Detached accessory (< 250 SF footprint)		5 ft.	5 ft.	5 ft.	5 ft.	5 ft.	5 ft.		
		On side street (min.)	20 ft.	20 ft.	20 ft.	20 ft.	15 ft.	20 ft.	None	
			Or depth of front yard directly abutting the lot.							

TABLE 7-A (CONT.): RESIDENTIAL ZONE DIMENSIONAL STANDARDS

		R-1	R-2	R-3[2]	R-4	R-5[2, 3]	R-5a[4]	R-6[6, 7]	R-6a[13]
Stepbacks (above 35 ft. when property line abuts a residential zone)(min.)								10 ft. from side property line and 15 ft. from rear property line[11]	
Structure height (max.)		35 ft.	35 ft.	35 ft.	35 ft.	35 ft.	35 ft.	45 ft.[12]	65 ft.
	Detached accessory	18 ft.	18 ft.	18 ft.	18 ft.	18 ft.	18 ft.	18 ft.	
Lot coverage (max.)		20%	20%	35%	30%	40%	30%	60%	
Landscaped open space ratio (min.)								20%	
Width of garage opening on front façade (max.)								9 ft. or 40% of the front facade, whichever is greater, and in no case more than 20 ft.	

[1] Special needs independent dwelling unit.
[2] See Table 7-B for PRUD standards.
[3] Single-family homes may be built on small lots in the R-5 under small residential lot dimensional requirements under certain conditions. See Table 7-C for R-5 Small Residential Lot dimensional requirements.
[4] For R-5a, PRUD standards shall apply to PRUDs, multi-family development of 4 or more units, congregate care, and intermediate, extended, or long-term care facilities, unless noted otherwise in the table above. See Table 7-B for additional standards that apply to these uses.
[5] Applies to 1-, 2-, and 3-family dwellings only.
[6] Alterations to single-family, two-family, and multi-family dwellings in existence as of 6/15/15 shall not result in the creation of any additional dwelling unit of less than 600 square feet of floor area, exclusive of common hallways and storage in basement and attic; and shall not result in any existing dwelling unit being reduced in size to less than 1,000 square feet of floor area, exclusive of common areas and storage in basement and attic.
[7] Subdivisions consisting of horizontally attached dwellings on individual lots are not required to have side yards between such dwellings where a party wall condition will exist. Horizontally attached dwellings located within a single lot shall be required to meet the applicable side setback requirements at the external lot boundaries of the subdivision and internal lot boundaries between such dwellings that are not attached to each other. No minimum lot size or width shall be required for individual lots underlying townhouse (horizontally attached) dwelling types. The applicable minimum lot area per dwelling shall apply to each lot.
[8] Except for long-term and extended care facilities: 10,000 SF for the first 9 residents plus 750 SF for each additional resident, up to a total of 2 ac.
[9] A minimum lot area per intermediate care resident of 250 SF also applies.
[10] Except that a side setback in the R-6 zone may be reduced to zero, provided that the cumulative side yards are not less than 10 ft. A permanent maintenance easement a minimum of 5 ft. in width shall be provided on the parcel adjacent to the lot line with the reduced side setback.
[11] Does not apply on side streets.
[12] Except as provided under the Fort Sumner Park Height Overlay and the Bayside Height Overlay.
[13] All R-6 dimensional standards apply in the R-6a unless otherwise indicated.

TABLE 7-B: PRUD DIMENSIONAL STANDARDS

	R-3	R-5	R-5a[3]
Lot area[1] (min.)	3 ac.	2 ac.	2 ac.[4]
Net land area per dwelling unit (min.)	6,500 SF	3,000 SF	1,600 SF[4, 5]
Units per building (max.)	PRUD < 5 ac.: 2 PRUD > 5 ac.: 6	12	
Average number of units per building (max.)	PRUD > 5 ac.: 5		
Structure height (max.)	35 ft.	35 ft.	55 ft.
Building length (max.)	Without garages: 100 ft. With integral garages: 140 ft.	140 ft.	
Length of accessory garage structure (max.)		60 ft.	
Building setback from external subdivision property lines (min.)	3 or fewer D.U. in building: 25 ft. 4 or more D.U. in building: 35 ft.	Bldg. Length 100 ft. or less: 25 ft. Bldg. Length >100 ft.: 35 ft.	Bldg. Length 100 ft. or less: 25 ft. Bldg. Length >100 ft.: 35 ft.
Distance between detached PRUD dwelling units (min.)	16 ft.		
Common recreation open space area[2] (min.)	300 SF/D.U.	300 SF/D.U	200 SF/D.U.[4]
Habitable space elevation	No habitable space in a PRUD shall be below grade, except basements that are a part of and below above-ground units.		

[1] Areas of special flood hazard as defined in Article 12 shall be excluded from lot area calculations.
[2] Common open space shall be designated on the site. The primary purposes of such open space areas shall be for passive or active recreation. Such spaces may include natural, landscaped or hardscaped elements. At a minimum, a contiguous area of 6,000 SF shall be provided.
[3] In the R-5a zone, PRUD standards shall apply to PRUDs, multi-family development of 4 or more units, congregate care, and intermediate, extended, or long-term care facilities unless otherwise noted.
[4] Does not apply to intermediate, extended, or long-term care facilities but does apply to PRUDs, congregate care, and multi-family development of 4 or more units.
[5] Minimum land area per intermediate care facility resident: 8,000 SF lot area for first 35 residents, plus 350 SF for each additional resident.
[6] For PRUD standards in island zones, see Table 7-D.

TABLE 7-C: R-5 SMALL RESIDENTIAL LOT DEVELOPMENT DIMENSIONAL STANDARDS[1]

Lot area (min.)		5,000 SF
Side setback (min.)		7 ft.[2]
	Detached accessory (< 250 SF footprint)	5 ft.
	Side yard on side street	10 ft.
Lot width (min.)		40 ft.
Street frontage (min.)		40 ft.
Lot coverage (max.)		50%

[1] Single-family homes may be built on small lots in the R-5 under small residential lot development dimensional requirements if the lot is: vacant; or used exclusively for parking; or contains structure(s) not used for residential purposes; or is created from a single lot division of a developed lot and results in a lot meeting the small residential lot dimensional requirements with the remaining developed portion meeting the standard dimensional requirements of the R-5 zone.
[2] The width of one side setback may be reduced 1 ft. for every foot that the other side yard is correspondingly increased, but no side yard shall be less than 4 ft. in width.

TABLE 7-D: ISLAND ZONE DIMENSIONAL STANDARDS

			IR-1	IR-2	IR-3	I-B[10]	
						Served by Public Water & Sewer	*Not Served by Public Water & Sewer*
Lot area (min.)[11]	Bed and breakfast					5,000 SF for 3 guest rooms plus 5,000 SF/ additional room	10,000 SF/ guest room
	Campground		10 ac.		5,000 SF/ campsite, but not less than 10 ac.		
	Hotel				10,000 SF/ guest room	5,000 SF for 3 guest rooms plus 5,000 SF/ additional room	10,000 SF/ guest room
	Lodging house			10,000 SF/ rooming unit	10,000 SF/ rooming unit	5,000 SF for 3 rooming units, plus 5,000 SF/ additional rooming unit	10,000 SF/ rooming unit
	Place of assembly	>10,000 SF	30,000 SF	30,000 SF	35,000 SF	20,000 SF	
		<10,000 SF	15,000 SF	15,000 SF			
	PRUD/PUD		5 ac.[1]	5 ac.[1]	20 ac.		
	Raising of animals		3 ac.				
	Residential		40,000 SF[2,3]	20,000 SF[3]	42,500 SF[6]	20,000 SF	
	Restaurant				35,000 SF	10,000 SF	20,000 SF
	Retail				35,000	None	20,000 SF
	Seasonal camp		10 ac.		35,000 SF		
	School/educational facility		40,000 SF	20,000 SF	35,000	20,000 SF	
	All other uses				35,000 SF	20,000 SF	
Lot area per dwelling unit (min.)			40,000 SF[4]	20,000 SF[4]	42,500 SF[7]		
Street frontage (min.)			100 ft.[5]	70 ft.[5]	70 ft.[8]	40 ft.	
Lot width (min.)			100 ft.[5]	80 ft.[5]	80 ft.	40 ft.	
Front setback (min.)			30 ft.[5]	25 ft. or the average of adjacent front yards[5]	25 ft.[9]	20 ft. or avg. depth of adjacent front yards	
Rear setback (min.)			30 ft.[5]	25 ft.[5]	25 ft.[9]	10 ft.	
	Detached accessory (< 250 SF footprint)		10 ft.[5]	10 ft.[5]	10 ft.[9]		

TABLE 7-D (CONT.): ISLAND ZONE DIMENSIONAL STANDARDS

		IR-1	IR-2	IR-3	I-B[10] *Served by Public Water & Sewer*	I-B[10] *Not Served by Public Water & Sewer*
Side setback (min.)		20 ft.[5]	20 ft.[5]	20 ft. [9]	10 ft.	
	Detached accessory (< 250 SF footprint)	15 ft.[5]	15 ft. [5]	15 ft. [9]	10 ft.	
	On side street	20 ft.[5]	20 ft.[5]	20 ft. [9]	10 ft.	
Structure height (max.)		35 ft.	35 ft. For Little Diamond Island: 27 ft.	35 ft.	35 ft.	
	Accessory detached	18 ft.	18 ft.	18 ft.	18 ft.	
	Lot coverage (max.)	20%	20%	20%	50%	

[1] PRUDs shall consist of detached dwellings.
[2] 60,000 SF if not served by public water.
[3] For PRUDs, minimum lot area shall be reduced up to 50% provided there is an equivalent corresponding increase in common or public open space that is usable for passive or active recreational opportunities or that serves as a buffer between buildings or between the development and the surrounding neighborhood.
[4] In the case of PRUDs, lot area per dwelling unit shall be calculated based on net land area..
[5] For PRUDS, standard shall be reduced up to 50%. For accessory structures in the IR-1, IR-2, and I-B zones, side setbacks from principal structures shall be 5 feet.
[6] Except that the minimum lot size per dwelling unit shall be reduced by the amounts specified below, to a minimum lot size of 35,000 SF per dwelling unit, provided that the Planning Board finds that the development meets the following criteria: a. The minimum lot size per dwelling unit shall be reduced by 5,000 SF if a public off-island water source provides 75% of the water needs of the development. b. The minimum lot size per dwelling unit shall be reduced by 2,500 SF if the development provides appropriate permanent restrictions or other agreements precluding the use, maintenance and parking of all private motor vehicles exclusive of construction and common service vehicles.
[7] The maximum density for a PUD shall be based on the applicable minimum lot size for each use as measured in terms of net area. For purposes of calculating density, if separately described lots exceed the applicable minimum lot size, the excess area shall not be credited toward the minimum lot size for any other use.
[8] Except where the Planning Board finds that the development has an adequate street network to permit access for pedestrians and emergency service vehicles.
[9] When adjoining any external property boundary.
[10] All I-B standards apply for lots served by public water and sewer and lots not served by public water and sewer unless otherwise indicated.
[11] In the IR-3, the minimum lot area for buildings containing both residential and nonresidential uses shall be cumulative. Where there are two or more residential uses contained in a building, the minimum lot area shall be the larger of the applicable minimum lot sizes.

TABLE 7-E: MIXED-USE ZONE DIMENSIONAL STANDARDS

		B-1/B-1b	B-2/B-2b/B-2c	B-3/B-3b/B-3c	B-4	B-5/B-5b	B-6	B-7
Lot area (min.)	**School**	20,000 SF			10,000 SF			
	Place of assembly	10,000 SF						
Lot area per dwelling unit (min.)	**On-peninsula**	435 SF	435 SF					
	Off-peninsula	1,000 SF	1,000 SF, except 435 SF if active street frontage[3]					
Lot area per rooming unit (min.)	**On-peninsula**	150 SF	150 SF					
	Off-peninsula	350 SF	350 SF					
Street frontage (min.)		20 ft.	20 ft.	15 ft.	60 ft.			
Front setback (from all street frontages) (max.)		10 ft., or the average front yard depth of nearest developed lots if < 10 ft.	10 ft.	5 ft.	20 ft.	None, except 10 ft. in B-5b	10 ft.[7]	10 ft.
Rear setback (min.)	**Principal**	None, except 10 ft. if abutting a residential zone	10 ft.		20 ft.			
	Accessory	None, except 5 ft. if abutting a residential zone	5 ft.		7 ft.			
Side setback (min.)	**Principal**	None, except 5 ft. if abutting residential zone	None		10 ft.			
	Accessory		5 ft.		5 ft.			
Stepbacks (above 35 ft. when property line abuts a residential zone) (min.)		Side: 10 ft.	Side: 5 ft.					
		Rear: 15 ft.	Rear: 15 ft.					
Length of building wall at maximum setback (min.)							70% of street frontage or 25% of building perimeter[8]	75% of street frontage or 25% of building perimeter[9]
Length of undifferentiated blank wall along publicly accessible way (max.)				30 ft., except 15 ft. within PAD Overlay				
Floor area (max.)		Non-residential uses on first floor: 10,000 SF total[1]	Laboratory and research facilities, warehousing, 10,000 SF	None, except 15,000 SF for each floor above 125 ft.			Laboratory and research facilities and warehousing: 15,000 SF	
		Restaurants (public area): 2,000 SF					Exhibition and meeting halls: 20,000 SF	
		Clinics: 3,000 SF						

TABLE 7-E (CONT.): MIXED-USE ZONE DIMENSIONAL STANDARDS

	B-1/B-1b	B-2/B-2b/B-2c	B-3/B-3b/B-3c	B-4	B-5/B-5b	B-6	B-7
Structure height (max.)	On-Peninsula: 45 ft., except 50 ft. along Congress Street if commercial first floor and residential above[2] Off-Peninsula: 35 ft.	45 ft., except 50 ft. if first floor is in commercial use, 65 ft. in B-2 and B-2c on lots >5 ac. if required side and rear setbacks are increased by 1 foot for each foot of height over 45 ft., or as otherwise governed by the Bayside Height Overlay Map	See Downtown and Bayside Height Overlay Maps	65 ft.	65 ft., except in B-5b along W. Commercial St. south of Danforth St.[5] and 120 ft. on Thompson's Point[6]	65 ft. or as otherwise governed by the B-6 Building Height Overlay Map	See Bayside Height Overlay Map
Lot coverage (max.)			25% of lot area for portions of structures exceeding 125 ft. in height[4]				
Impervious surface ratio (max.)	90%	Residential: None Other uses in B-2 and B-2c: 80% Other uses in B-2b: 90%		80%			

[1] Uses in structures which existed prior to the date of enactment of the B-1/B-1b zones are exempt.
[2] The commercial first floor uses shall utilize at least 75 % of the first-floor frontage along Congress Street and shall have an average depth of at least 20 ft.
[3] A building will be determined to have an active street frontage upon meeting the following guidelines to the greatest extent practicable: the primary building façade shall be within 10 ft. feet of the front lot line; there shall be no parking on the lot within 35 ft. of the front lot line; no more than 25% of the first floor primary façade shall consist of access to garages, unutilized space, service entrances, storage or mechanicals and the remaining minimum 75% shall have an average depth of a minimum of 20 ft. for residential or commercial uses; and all primary ground floor entries to multi-family buildings must orient to street, not to interior blocks or parking lots.
[4] Except that no floor area shall be required to be less than 10,500 SF, gross.
[5] For parcels of land in the B-5b zone located along W. Commercial St. south of Danforth St.: West of the projection of the centerline of the Fletcher St. right-of-way, the maximum building height shall be 45 ft.; and, east of the projection of the centerline of the Fletcher St. right-of-way and west of the projection of the centerline of the Emery St. right-of-way, the maximum building height shall be 55 ft. A projection of the centerline of a street is defined by extending the centerline of the referenced street right-of-way along its most southerly block to the centerline of W. Commercial St. Furthermore, notwithstanding Subsection 7.5.1, no rooftop structure located between the projections of the centerlines of Emery St. and Fletcher St., as described above. shall exceed a height of 62 ft as measured from average grade of the building at its foundation.
[6] Applies only to parcels subject to an approved master development plan. Thompson's Point is defined as the contiguous parcels of upland occupying the peninsula bounded on the east by Route 295, on the north by the Mountain Division Rail right-of-way, and on the south and west by the Fore River and its associated wetlands. Nearby lands accessed from Hobart and Osgood Streets are not included.
[7] Does not apply to parking garages and public transportation facilities. Notwithstanding required setbacks, new structures located in the blocks located south of Fore Street and north of Commercial Street and its extension shall build to the key building envelopes shown on the B6 Building Height Overlay & Building Envelopes map. Buildings located in the area east of the Fore Street Connector shall not have a maximum front setback and shall not be required to build to the key building envelope perimeter. Parking structures and the buildings for public transportation facilities may, however, be set back beyond the key building envelopes (toward the interior of blocks), but may not occupy the land between the key building envelope and the street right-of-way.
[8] For buildings fronting on two or more streets, the minimum building wall on one street may be decreased so long as the frontage is proportionally increased on other streets in so far that the building wall on the secondary street is not reduced to less than 25 ft. Buildings in the area east of the Fore Street Connector shall not be subject to this requirement.
[9] Does not apply to additions to or relocations of designated historic structures or structures determined to be eligible by the Historic Preservation Board.

TABLE 7-F: OFFICE PARK & RESIDENCE PROFESSIONAL ZONE DIMENSIONAL STANDARDS

		O-P	R-P[1]
Lot area (min.)		1.5 ac.	6,000 SF
Street frontage (min.)		100 ft.	60 ft.
Lot width (min.)		150 ft.	60 ft.
Front setback (min.)		50 ft.	20 ft., or avg. depth of adjacent front yards[2]
Rear setback (min.)	**Principal**	50 ft	20 ft.
	Accessory		7 ft.
Side setback (min.)	**Principal**	25 ft., except 40 ft. where side yard abuts residential zone or use	1 story: 10 ft.
			2 stories: 12 ft.
			3+ stories: 14 ft.
	Accessory		7 ft.
	On side street		1-2 stories: 15 ft.
			3+ stories: 18 ft.
Structure height (max.)		55 ft., except 75 ft., including rooftop appurtenances, on lots within office park subdivisions which are > 50 ac. if each minimum setback is increased by 1 ft. for each 1 ft. of height above 55 ft.	45 ft.
Floor area (max)		High-tech manufacturing: 20,000 SF	
Impervious surface ratio (max.)		60%	70%
Pavement setback (min.)		15 ft.	

[1] Residential uses shall meet the dimensional requirements of the nearest residential zone.
[2] The front yard of a lot existing as of April 4, 1988, which lot is less than 100 ft. deep, need not be deeper than 10% of the depth of the lot.

TABLE 7-G: INDUSTRIAL & AIRPORT ZONE DIMENSIONAL STANDARDS

	I-L/I-Lb		I-M/I-Ma/I-Mb		I-H/I-Hb		A-B
Lot area (min.)							20,000 SF
Street frontage (min.)	60 ft.		60 ft.		60 ft.		50 ft.[2]
Lot width (min.)							50 ft.
Front setback (min.)	I-L	25 ft.	I-M/I-Ma	1 ft. for each ft. of building height	I-H	25 ft.	None, except 20 ft. if property has frontage on Westbrook St.
	I-Lb	None	I-Mb	None	I-Hb	None	
Rear setback (min.)	I-L	25 ft., except 40 ft. when abutting residential zone	I-M/I-Ma	1 ft. for each ft. of building height up to 25 ft., except 35 ft. when abutting residential zone	I-H	35 ft.	None., except 50 ft. if abutting residential zone or use[3]
	I-Lb	None, except 25 ft. when abutting residential zone	I-Mb	None, except 25 ft. when abutting residential zone	I-Hb		
Side setback (min.)	I-L	25 ft., except 40 ft. when abutting residential zone	I-M/I-Ma	1 ft. for each ft. of building height up to 25 ft., except 35 ft. when abutting residential zone	I-H	35 ft.	None, except 25 ft. if abutting residential zone or use[3]
	I-Lb	None, except 25 ft. when abutting residential zone	I-Mb	None, except 25 ft. when abutting residential zone	I-Hb		
Structure height (max.)	45 ft.		I-M/I-Mb	75 ft.	75 ft.		75 ft., except 45 ft. within 100 ft. of a residential zone
			I-Ma	45 ft.			
Impervious surface ratio (max.)	I-L	65%	I-M/I-Ma	75%	I-H	85%	70%[2]
	I-Lb	100%	I-Mb	100%	I-Hb	100%	
Pavement setback (min.)[1]	15 ft.		10 ft.		10 ft.		

[1] Shall not apply to entrance drives.
[2] Except for lots in airport restricted access areas, which shall not be subject to this provision.
[3] No structure may extend beyond the building line established for any runway or taxiway. If provided, rear and side yards must not be less than 5 ft. in width.

TABLE 7-H: RECREATION OPEN SPACE ZONE DIMENSIONAL STANDARDS

		R-OS[1]
Front setback (min.)		25 ft.
Rear setback (min.)		25 ft.
Side setback (min.)	**Principal**	12 ft.
	Accessory	
	On side street	
Structure height (max.)	**Principal**	35 ft., except 45 ft. if more than 1,000 ft. from a shoreland zone.
	Accessory	
Floor area ratio (max.)		.5
Impervious surface ratio (max.)		25%[2]

[1] Public open spaces less than 2 ac. and on the peninsula are not required to meet the R-OS dimensional standards.
[2] Except 75% for sports complexes and 100% for sewage treatment facilities.

7.4 SUPPLEMENTAL DIMENSIONAL STANDARDS

7.4.1 Corner clearance

No shrub, wall, fence, sign, or pile of material higher than 3 1/2 feet above the lowest elevation at the curbline shall be permitted on a corner lot within the area of a triangle formed by a line connecting the curblines of the intersecting streets at points 25 feet from the corner, unless said obstruction is reviewed by the Public Works Authority and found not to be a traffic or public safety hazard.

7.4.2 Fences

In residential zones, no wall or fence within 15 feet of the street shall be more than four feet in height, unless said fence is located in the side or rear yard.

7.4.3 Solar energy systems

A. Setbacks

1. Solar energy systems shall be located in side or rear yards wherever possible.
2. Minor solar energy systems shall be setback 50 feet from residential, R-P, B-1/B-1b, and B-2/B-2b/B-2c zones.
3. Major solar energy systems shall be setback 75 feet from residential, RP, B-1/B-1b, and B-2/B-2b/B-2c zones.

B. Height

1. *Ground-mounted solar energy systems.* Where the total height of the support structure plus the solar energy system is equal to or below the zone-based height maximum, the absolute height of the solar energy system shall be 20 feet above the ground as measured from the base of the support.
2. *Roof-mounted solar energy systems.* Where the total height of the support structure/building plus the solar energy system is equal to or below the zone-based height maximum, the absolute height of the solar energy system shall be:
   a. In all residential and R-P zones: 5 feet above the roof and set back from the edge of the roof by one foot for every one foot of solar energy system height.

b. In B-4 and industrial zones: No limit
c. In all other zones: 8 feet above the roof and set back from the edge of the roof by one foot for every one foot of solar energy system height.

7.4.4 Swimming pools

Outdoor swimming pools as accessory uses shall be subject to the following dimensional standards:

A. No swimming pool shall be sited in the front yard.

B. No part of any swimming pool shall be located closer than 10 feet from the principal structure, nor closer than 10 feet from side or rear lot lines.

7.4.5 Wind energy systems

A. Setbacks

1. Wind energy systems and associated facilities shall meet all setbacks for principal structures for the zone in which the system is located. Where setbacks vary, the largest setback shall apply. All parts of the wind energy system, including associated facilities and guy wires, shall be at least 10 feet from the property line (except where connecting to the grid), any utility line (in any direction), or other easement/right-of-way. The setback from utility lines, easements, and right-of-way lines may be reduced where the owner/benefitted party provides written permission.
2. Roof-mounted wind energy systems shall be set back from property boundaries and street right-of-way lines by a distance equal to or greater than four times the height of the system as measured from the roof surface at the point of attachment. For systems in and adjacent to waterfront zones, mixed-use zones (except B-1/B-1b and I-B), OP zone, industrial zones, the Island Transfer Station Overlay zone, and the R-OS zone, the setback from property boundaries and street right-of-way lines may be reduced to a minimum distance of 1.0 times the height of the system, where the system is incorporated into the architecture of the building and a certified engineer confirms that it would not present and public safety risk. The setback shall be measured to the center of the wind generator base.
3. Freestanding wind energy systems with a total height of less than 85 feet shall be set back from property boundaries and street right-of-way lines by a distance equal to or greater than 1.1 times the total height of the system, and from residential buildings and hospitals on other properties by a distance equal to or greater than twice the total height of the system. The setback distance shall be measured to the center of wind generator base.
4. Freestanding wind energy systems with a total height of greater than 85 feet shall be set back away from property boundaries and street right-of-way lines by a distance equal to or greater than twice the total height of the system, and from residential buildings and hospitals on other properties by a distance equal to or greater than four

times the total height of the system.

5. For freestanding wind energy systems in and adjacent to waterfront zones, mixed-use zones (except B-1/B-1b and I-B), the O-P zone, industrial zones, the Island Transfer Station Overlay Zone, and the R-OS zone, the setback from property boundaries and street right-of-way lines may be reduced to a minimum distance of 1.0 times the total height of the system where determined that the minimum required setback would be contrary to the public interest.
6. In residential zones, the B-1/B-1b zones, the I-B zone, and the R-P zone, where the lot is less than 0.5 acres, any vertical element of the wind energy system (tower/pole) shall be located in the rear yard or on the rear half of the existing building. Wind energy systems and associated facilities shall be sited to maximize existing vegetative or other screening from nearby residential buildings and public ways. The location shall minimize changes to existing topography and existing natural vegetation which would result from construction or maintenance of the system.

B. Height

1. Heights of wind energy systems, permitted as either freestanding or roof-mounted structures, shall be as shown in Table 7-I.
2. Roof-mounted wind energy systems shall measure no higher than 10 feet above the highest part of the roof.

TABLE 7-I: WIND ENERGY SYSTEM HEIGHT

Zone	Height (max.)
RPZ	10 ft.
Residential Zones[1], R-P, B-1/B-1b, and I-B	25 ft.
Historic Districts[2] and within 1,000 ft. of designated landmarks	45 ft.
EWPZ, WPDZ, WCZ, B-2/B-2b/B-2c, B-5, and B-6	65 ft.
B-3, B-4, B-7, and O-P	85 ft.
ROS, I-M, I-Mb, I-H, and A-B	160 ft.

[1] Permitted up to 65 ft within USM Overlay Zone or on other sites with institutional uses measuring over 5 acres.
[2] Permitted up to 85 ft in B-3 part of Downtown Historic District.

7.5 SPACE AND BULK EXCEPTIONS

7.5.1 Height

A. In the B-3/B-3b/B-3c zones. Minimum height provisions as depicted on the Downtown Height Overlay Map shall not apply to:

1. Accessory building components and structures such as truck loading docks covered parking, mechanical equipment enclosures and refrigeration units.
2. Information kiosks and ticketing booths.
3. Public transportation facilities of less than 10,000 square feet, or additions of less than 5000 square feet to existing public transportation facilities provided that the cumulative additions as of June 4, 2007 do not exceed 10,000 SF.
4. Additions to buildings existing as of June 4, 2007 provided that the cumulative additions since June 4, 2007 do not exceed 10% of the building footprint on June 4, 2007, except building additions on those portions of the lot located closer to the street line than the building footprint

existing as of June 4, 2007 shall not be included in this 10% limitation.

5. Utility substations, including sewage collection and pumping stations, water pumping stations, transformer stations, telephone electronic equipment enclosures, and other similar structures.
6. Additions to and/or relocation of designated historic structures or structures determined by the Historic Preservation Board to be eligible for such designation.
7. Parking attendant booths or bank remote teller facilities.
8. Structures accessory to parks and plazas.
9. Buildings or building additions of less than 2,500 square feet footprint, on lots or available building sites of less than 3,000 square feet.

B. **In the B-6 zone.** Minimum height provisions as depicted on the B-6 Building Height Overlay and Building Envelopes map shall not apply to:

1. Buildings located in the area east of the Fore Street Connector.
2. Parking attendant booths.
3. Information kiosks and ticketing booths.
4. Parking garages.
5. Public transportation facilities.
6. Additions to buildings existing as of December 8, 2004 provided that the cumulative additions since December 8, 2004 do not exceed 25% of the building footprint on December 8, 2004, except that such restriction shall not apply to those portions of the building addition that are constructed closer to the street line than the building footprint existing as of December 8, 2004.
7. Buildings or building additions of less than 2,000 square feet footprint on lots or available building sites of less than 2,000 square feet.
8. Utility substations, including sewage collection and pumping stations, water pumping stations, transformer stations, telephone electronic equipment enclosures and other similar structures.
9. Additions to and/or relocations of designated historic structures.

C. **In the B-7 zone.** Minimum floor provisions as depicted on the Bayside Height Overlay Map shall not apply to:

1. Accessory building components such as truck loading docks, mechanical equipment enclosures and refrigeration units.
2. Information kiosks and ticketing booths.
3. Parking garages.
4. Public transportation facilities.
5. Additions to buildings existing as of March 9, 2005 provided that the cumulative additions since March 9, 2005 do not exceed 50% of the ground floor building footprint on March 9, 2005, except that such restriction shall not apply to those portions of the building addition(s) that are constructed closer to the street line than the building footprint existing as of March 9, 2005.
6. Utility substations, including sewage collection and pumping stations, water pumping stations, transformer stations,

telephone electronic equipment enclosures, and other similar structures.

7. Additions to and/or relocation of designated historic structures or structures determined by the Historic Preservation Board to be eligible for such designation.
8. Portions of buildings more than 50 feet from the street line.

D. In the Bayside Gateway Urban Height District

A. Buildings in the Bayside Gateway Urban Height District A as depicted on the Bayside Height Overlay Map may be greater than 125 feet but no more than 165 feet in height provided that:

1. Such buildings shall be reviewed by the Planning Board as conditional uses under Section 6.5 of this Land Use Code.
2. Such buildings shall be sited to minimize encroachment into designated view corridors and visual landmarks to and from the downtown or that do not substantially further obstruct such corridors blocked by existing development as referenced in the Bayside Height Study Map and the B-7 design standards.
3. Portions of such buildings higher than 125 feet shall be stepped back at upper levels to provide light and air to adjacent streets, trails, and open spaces, with a ratio of no less than the ratio of building height to width of adjacent streets, trails and open spaces equivalent to 1.5 to 1. The Planning Board may modify this requirement for master development plans or major site plans provided that the following conditions are met:
   a. Each building exceeding 125 feet shall contain at least 20 dwelling units per building.
   b. Building wall stepback requirement along public street frontage for buildings with frontage on one street: Minimum 10-foot stepback between third and fifth stories and a minimum 10-foot stepback between the 125 and 145 foot level.
   c. Building wall stepback requirement along public street frontage for buildings with frontage on multiple streets: Above paragraph (b) requirement along longest building façade street wall, and of the remaining street walls the same requirement as paragraph (b) or a 15 foot wide streetscape improvement area containing a public sidewalk, landscaping, and other streetscape improvements within the abutting street right-of-way and/or private property along the remaining street frontage. A building with frontage on four streets shall meet the above requirement except that two of the streets shall have the stepback requirement.
   d. The Planning Board shall have the authority to waive one or more of the required stepbacks provided that one of the following conditions is met:

i. The depth of the building lot precludes a building having an average minimum lot depth dimension of 170 feet.

ii. The proposed building has an architecturally significant design that is articulated to avoid a monolithic appearance and emphasizes slender, vertically-oriented proportions while employing a variety of scales, materials, fenestration, and massing to assure a rich, visually interesting experience as viewed within the context of the downtown skyline and provide visual interest and human scale at the pedestrian level.

e. In the event such a waiver is granted, the Planning Board may require the applicant to mitigate the impacts of the waiver by requiring the following:

i. Along all public street frontages and public open spaces, all buildings (regardless of height) shall maintain a pedestrian scale through the use of building elements at the street level as listed in this standard along no less than 60% of the building's horizontal length.

ii. Along all public street frontages and public open space for the building(s) over 125 feet, a canopy, awning, or similar permanent architectural feature to provide pedestrian protection and wind mitigation shall be provided within the first 35 feet of height.

iii. In order to preserve view corridors and to maintain a varied skyline, all buildings above 125 feet within a single development site should be separated to avoid the appearance of a tall, solid block massing. In accordance with this policy, on development sites of 500 feet or greater as measured parallel to Marginal Way, the aggregate building façade widths above 85 feet shall not exceed 50% of the total development site distance parallel to Marginal Way. Buildings over 125 feet in height that are being reviewed as separate phases of a master development plan shall be entitled to meet the 50% building requirement in aggregate for all such buildings over 125 feet in height in the master development plan, provided that view corridors are retained as each phase is built.

iv. The applicant shall demonstrate building design elements and location will reasonably mitigate downdraft effects of the proposed building or buildings.

4. Such buildings provide publicly accessible and usable open space, meeting the B-7 design standards, of at least 10% of the building lot area.

5. If located on lots including or adjacent to planned or proposed street or pedestrian way connections, land dedication to such street or connection shall be credited toward the 10% open space requirement. Buildings over 125 feet in height that are being reviewed as separate phases of a master development plan shall be entitled to meet the 10% percent open space requirement in aggregate for all such buildings over 125 feet in height, provided that the open space shall not fall below 10% percent at any built phase or combination of built phases.
6. Such development shall comply with all other requirements and design standards as required by this article.

E. Roof-mounted solar energy systems. Photovoltaic panels and thermal water heating panels, whether parallel or angled to a pitched or gable roof, may be erected above the height limitation for principal or accessory buildings as follows:

1. *In all residential zones.* Up to three feet above the maximum height allowed in the underlying zone. In the case of flat roofs, the solar energy system may be up to five feet above the maximum height allowed in the underlying zone. All roof-mounted solar energy systems shall be set back from the edge of the roof by one foot for every one foot of solar energy system height.
2. *In B-4 and industrial zones.* Up to four feet above the maximum height allowed in the underlying zone. In the case of flat roofs, there are no height limits.
3. *In all other zones.* Up to three feet above the maximum height allowed in the underlying zone. In the case of flat roofs, the solar energy system may be up to eight feet above the maximum height allowed in the underlying zone. All roof-mounted solar energy systems shall be set back from the edge of the roof by one foot for every one foot of solar energy system height.

F. Public art. Except in residential zones, public art that has been individually accepted by the City Council for inclusion within the public art collection pursuant to Article 21 shall not be subject to the height limitations within the underlying zone.

G. Rooftop appurtenances. Unless otherwise noted, rooftop appurtenances for the housing of elevators, stairways, tanks, fans, or other building operating equipment not intended for human occupancy, deck railings, skylights, steeples, flag poles, chimneys, smokestacks, radio or television masts, water tanks, or silos may be erected above the height limitations herein prescribed.

H. Telecommunication towers. Where permitted, ground-mounted telecommunication towers may be erected above the height limitations within the underlying zone.

7.5.2 Length of building wall at maximum setback

A. In the B-6 zone. Buildings located area east of the Fore Street Connector shall not be subject to the building wall requirement.

B. **In the B-7 zone.** Additions to and relocations of designated historic structures or structures determined to be eligible under Article 17 shall be exempt from the building wall requirement.

7.5.3 Lot area

A. **Institutional uses in residential zones.** No minimum lot area shall be required for institutional uses in residential zones in the following cases:
   1. Uses existing as of June 1, 1983.
   2. Expansion on to land abutting the lot on which the principal use is located.
   3. Expansion onto land other than the lot on which the principal use is located to the extent that such expansion consists of the reuse of surface parking area or nonresidential structures existing and in nonresidential use as of June 1, 1983, provided that such reuse is contained within the lot of such structure or parking area as of June 1, 1983.
   4. Expansion onto land other than the lot on which the principal use is located of no more than 15% of the total contiguous land area of the existing use, or one acre, whichever is less, within any five-year period.

B. **Residential lots not served by public sewers.** A lot in an unsewered residential district shall meet the provisions of the state Minimum Lot Size Law, 12 M.R.S. § 4807 et seq., or the applicable minimum lot area, whichever is larger, except that the minimum lot size may be reduced on the islands in Casco Bay as provided in (C) below.

C. **In island zones.** In issuing any permit for new development in island zones:
   1. The Building or Planning Authority shall require that any lot located in the IR-1 zone shall be at least 40,000 square feet in area and in the IR-2, IR-3, and I-B zones be at least 20,000 square feet in area when the lot is to be serviced by a subsurface wastewater disposal system, except those lots which are located in a subdivision approved by the Planning Board after June 8, 1968 and excluding Peaks Island.
   2. Excluding Peaks Island from this paragraph (2), any property owner whose lot does not meet the minimum lot size requirements outlined in (1) above may, for purposes of this subsection only, merge two or more separate lots on the same island in order to meet these requirements. Where the lots so merged are not contiguous, the property owner shall grant to the city as holder a conservation easement upon the lot or lots which will not contain the principal structure. The conservation easement shall contain both an existing legal description and a city assessor's chart, block, and lot description. The Planning Authority shall be authorized to accept such conservation easements on behalf of the city. Said easement shall be recorded by the applicant in the registry of deeds. A copy of the recorded easement and copies of the deeds for both lots shall be submitted to the Planning Authority prior to issuance of a building permit. The property over which the conservation easement has been

granted shall be used for passive recreational and conservation purposes only, and shall be subject to the following restrictions:

a. No structure shall be permitted on this property.
b. No parking or storage of vehicles or machinery shall be permitted on this property at any time.
c. No area of this property shall be paved.
d. No exterior storage for commercial use shall be permitted on this property.
e. The easement deed shall reference the lot which is benefited by this conservation easement. No conservation easement shall be used to benefit more than one lot.

3. Conservation easements shall only be granted over lots which conform either to the provisions of Subsection 4.3.1 or to the minimum lot sizes set forth in Table 7-D. Conservation easements shall not be granted over any lot which is encumbered by any other easement which prohibits all construction on that lot. A conservation easement may also name as a holder or grant a third-party right of enforcement to a nonprofit corporation or charitable trust, the purposes or powers of which include retaining or protecting the natural, scenic, or open space values of real property; assuring the availability of real property for agricultural, forest, recreational, or open space use; protecting natural resources; or maintaining or enhancing air or water quality of real property. Nothing in this subsection shall be construed to allow an owner of a currently existing and developed lot to convey or permit a portion of that lot to be used to fulfill the requirements of this subsection if such conveyance would render the existing lot nonconforming under the terms of this Land Use Code. The lot upon which a building is to be constructed shall meet the minimum lot size requirements of Subsection 4.3.1.
4. Where an existing subsurface wastewater disposal system serving an existing structure requires replacement, the replacement system shall meet the applicable state requirements. The land area requirements in paragraph (1) above shall not apply to such a replacement system.
5. For purposes of this subsection, the mean high tide mark shall be considered to be the shoreline lot line.

7.5.4 Lot coverage

A. **Lot surrounded by streets or alleys.** Where a lot containing ten thousand 10,000 square feet or less is completely surrounded by streets or alleys, the lot coverage may be increased 20%.

7.5.5 Setbacks

A. **Setbacks in residential and R-P zones.** In any residential zone and the R-P zone, the width of one side setback may be reduced one foot for every foot that the other side setback is

correspondingly increased, but no side setback shall be less than the minimum required for a one-story building.

B. **Setbacks in the O-P zone.** The Planning Board may reduce by up to 50% the minimum setback if another yard within the lot is correspondingly increased so that the combined minimum yards on all four sides equal 150 feet. If two or more buildings are located on one lot, only the requirements of the front, rear or side setbacks that adjoin any external property boundary must be met, provided a sufficient fire line is provided.

C. **Projections in required setback areas.** Any setback may be occupied by a one-story entrance porch not enclosed, with or without a roof, if the area of the porch does not exceed 50 square feet nor the projection from the building exceed six feet. A basement bulkhead of similar size, but not more than 24 inches in height, is also permitted. A cornice eave, sill, canopy, chimney, bay window, balcony, or other similar architectural feature may project into any required setback a distance of not more than two feet.

D. **Pavement setbacks.** Pavement setbacks shall not apply to entrance drives.

E. **Corner lot setbacks.** In case a principal residential structure has its front yard upon the long side of a corner lot, the rear setback may be reduced to a depth not less than the required side setback on the lot, provided that the aggregate of the widths of both sides and depths of front and rear yards is not less than the similar aggregate of required dimensions of all setbacks if the front yard were faced on the short side of the lot.

F. **Maximum front setbacks**

1. Maximum front setbacks shall not apply to utility substations and secondary building components.
2. *In the B-1/B-1b zone.* Building additions are encouraged but not required to meet front setbacks.
3. *In the B-2/B-2b/B-2c zones*
   a. Building additions do not have to meet maximum front setback requirements.
   b. The Planning Board or Planning Authority may approve a different front setback for irregularly shaped lots or lots with frontage greater than 40 feet in width provided the front setback is met to the maximum extent practicable.
   c. If a lot has less than 40 feet of frontage and is more than 100 feet deep, then no maximum setback is required.
   d. If existing structures are within 20 feet of the street or meet the front setback maximum and the remainder of the lot has less than 40 feet of frontage, then no maximum setback is required.
   e. The Planning Board or Planning Authority may waive the maximum front setback for utility substations and alternative energy installations.
   f. Where setbacks exceed 10 feet, a continuous, attractive, and pedestrian-scaled edge treatment shall be constructed along the street,

consisting of street trees spaced at no more than 15 feet on center, approved by the City arborist, and a combination of landscaping no less than four feet deep, ornamental brick or stone walls, or ornamental fencing.

4. *In the B-3/B-3b/B-3c zones.* The Planning Board may require or approve an additional setback to comply with the design standards of Article 14 and the City of Portland *Design Manual*.
5. *In the B-6 zone.* For lots fronting on more than one street in the B-6 zone, the front setback can be increased more than 10 feet if all of the following conditions are met:
    a. The increased setback occurs at the intersection of the streets.
    b. The increased setback area is the primary pedestrian entrance to the building.
    c. 75% of the total building wall length facing the abutting streets shall be setback no greater than 10 feet. All building wall segments which make up the increased setback shall be included in the calculation of the total building wall length.
    d. For new construction on a lot abutting three or more streets, the maximum setback shall apply only to the two streets with the highest traffic volume.
6. *In the B-7 zone*
    a. Parking structures, public transportation facilities, utility substations, secondary building components such as truck loading docks, mechanical equipment enclosures, and refrigeration units are not subject to the maximum front setbacks.
    b. The maximum front setback may be increased to more than 10 feet if all of the following conditions are met:
        i. 75% of the total building wall length of an individual building facing the abutting streets is setback no greater than 10 feet.
        ii. The increased setback area shall include a functional and accessible public pedestrian entrance into the building that faces the street, unless a public pedestrian entrance already exists along the same street.
        iii. The increased setback shall not be used for surface parking.
    c. For a corner lot having frontage on two streets, the maximum setback shall apply to both streets. In the case of a lot having frontage on two or more street corners, newly constructed buildings shall be sited at street corners and meet the maximum setback requirement prior to other freestanding buildings being constructed on the lot which shall also meet the maximum street setback. In the case of a corner lot having frontage on a third street (but not a corner) the maximum setback need not apply to the third street.

d. In the case of a lot having frontage on two streets but not on a corner, the maximum setback shall apply to all streets but in the case of a lot having frontage on three streets but not on a corner, the maximum setback shall apply to only two streets. For purposes of this subsection only, the first building on a lot shall meet the maximum setback on at least one street with future buildings required to meet the maximum setback on the remaining street(s).

e. In the case of a lot in which a minimum 75% of the total lot frontage has a building within ten feet of the street, other buildings may be located on the lot more than 10 feet from the street. In the case of a lot having frontage on Marginal Way and I-295, the property edge along I-295 shall not be considered street frontage.

f. The maximum building setback shall not apply to vertical building expansions in the following cases:
   i. The upper floors of a building in which the lower floors meet the maximum setback and the minimum height requirement.
   ii. The building existed as of March 9, 2005 and meets the minimum height requirement.
   iii. A building not meeting the maximum street setback and the minimum height requirement may vertically expand a total of one floor from March 9, 2005.
   iv. In the case of a building in which at least 50% of the building wall(s) abutting street(s) is within 20 feet of the street.
   v. Additions to parking garages existing as of March 9, 2005.

g. Additions to buildings existing as of March 9, 2005 that are nonconforming as to the maximum setback need not conform to the maximum street setback provided the cumulative building footprint since March 9, 2005 does not exceed 50% of the existing building footprint. Such restriction shall not apply to those portions of the building addition that are constructed closer to the street line than the building footprint existing as of March 9, 2005 and to vertical expansions as provided for in (f) above.

h. Lots having frontage on streets in which the curve of the street frontage precludes a rectangular-shaped building along the street line, for purposes of calculating the setback, the average setback of the building from the street line may be used, but in no event shall the average setback along the length of the building edge exceed an average setback of 15 feet nor shall the maximum setback exceed 20 feet. The increased setback shall not be used for surface parking, vehicular loading or vehicular circulation.

i. Additions to and relocations of designated historic structures or structures determined to be eligible by the Historic Preservation Board shall be exempt from the maximum setback requirement.

G. Minimum setback exceptions for lots of record

1. In the case of a lot of record existing as of June 5, 1957 in the R-1, R-2, R-3, R-4, R-5, R-5a, and R-6 zones and less than 100 feet deep, the front setback need not be deeper than 20% of the depth of the lot.
2. In the case of a lot of record existing as of June 5, 1957 in a residential zone, the required side setback for principal structures may be reduced in order to provide a buildable width of up to 24 feet, but in no case shall the resulting side yards be less than the following:
   a. R-1, R-2: 12 ft.
   b. R-3, R-5: 8 ft.
   c. R-4, R-5a: 10 ft.

7.5.6 Stepbacks

A cornice eave, sill, canopy, chimney, bay window, balcony, or other similar architectural feature may project into any required stepback a distance of not more than two feet.

7.5.7 Street frontage

In the IR-1 and IR-2 zones, a lot of record that is buildable pursuant to Subsection 4.3.1 and lots created after July 15, 1985, which are not part of a subdivision need not provide street frontage if access is available by means of a permanent easement or right-of-way which existed as of July 15, 1985. Such easement or right-of-way shall have a minimum width of 16 feet and a minimum travel width of eight feet except that an easement or right-of-way providing access for three or more lots or providing the only means of access to a parcel or parcels of three acres or more, shall meet the construction requirements of Chapter 25, Article III of the City of Portland Code of Ordinances. In the IR-1 zone, such easement or right-of-way shall conform to the requirements contained within the City of Portland *Technical Manual*. In the IR-2 zone, such easement or right-of-way shall be a minimum of 32 feet wide. Such easement or right-of-way shall be sufficient to permit municipal service delivery.

8 OVERLAY ZONES

8.1 COMPACT URBAN RESIDENTIAL OVERLAY (R-7)

8.1.1 Purpose

The purpose of the R-7 Compact Urban Residential Overlay Zone is to encourage and accommodate compact residential development on appropriate locations on the Portland peninsula, pursuant to the *New Vision for Bayside* and housing plans of the City of Portland. Suitable sites should be within walking distance of downtown or other work places, shopping and community facilities, and have access to public or private off-site parking or transit service. The intent of this zone is to foster increased opportunities for compact living for owners and renters representing a variety of income levels and household types.

Locations for siting the R-7 zone are intended to be located on the peninsula of Portland, in the area encompassed in the *New Vision for Bayside* plan, other peninsula R-6 locations characterized by moderate- to high- density multi-family housing in a form and density exceeding that allowed in the R-6 zone and where infill development opportunities exist, and areas on the peninsula with mixed business and residential zoning and uses which can accommodate higher density infill residential development without negatively impacting the existing neighborhood or adjacent properties. It may be appropriate in some cases to apply the R-7 Overlay Zone through conditional or contract zoning to ensure that the new development is architecturally appropriate and compatible with the surrounding neighborhood.

TABLE 8-A: R-7 DIMENSIONAL STANDARDS

Lot area (min.)		None
Street frontage (min.)		None
Setbacks (min.)	**Front**	None
	Rear and side	5 ft.
	Side yard on side street	None
Lot coverage (max.)		100%
Lot area per dwelling unit (min.)		435 SF
Structure height (max.)		50 ft.
Dwelling unit size (min.)		400 SF

8.1.2 Permitted Uses

Permitted uses in the R-7 Compact Urban Residential Overlay Zone shall be the uses permitted in the R-6 zone.

8.1.3 Dimensional standards

Residential uses shall comply with the dimensional requirements in Table 8-A. All other uses in the R-7 zone shall observe the dimensional requirements of the R-6 zone.

8.1.4 Design standards

Residential development shall be reviewed by the Planning Board under Article 14. Such development shall also comply with the following development standards. The general intent of these development standards is to achieve an attractive and comfortable city neighborhood environment. Varied and human-scaled building facades are key to making a place "pedestrian-oriented." Building designs should provide a high level of visual interest, without creating a chaotic image. Residences should include design elements that enhance the streetscape and address the street.

A. Porches and bays should face the street.
B. Primary ground floor residential entries to multi-family buildings must orient to street, not to interior blocks or parking lots. Secondary and upper-floor entries from the interior of a block are acceptable. The front door to single-family homes, duplexes, and townhouses must be visible from the street.
C. The design approach shall provide an architecture that will be a visible and permanent expression of the character of the neighborhood.
D. The facade shall be varied and articulated to provide visual interest to pedestrians.
E. The design shall reinforce the public realm of the public open space, sidewalks, and streets through appropriately scaled entries, porches, fenestration, landscaping, and architectural details.
F. The design shall provide visual and acoustical privacy between units.
G. The design shall maximize natural light and ventilation within units.

8.2 DOWNTOWN ENTERTAINMENT OVERLAY

8.2.1 Purpose

The purpose of the Downtown Entertainment Overlay Zone is to regulate the location of businesses with entertainment licenses in order to maintain and improve public safety and the quality of life of Portland residents by preventing an over-concentration of businesses with entertainment licenses, particularly those which also have liquor licenses, and the public safety problems that have and will be experienced when too many of these businesses are located too close to each other. These problems include large late-night crowds within which fights and assaults, disorderly conduct and other breaches of the peace occur and that are difficult to effectively police and that expose not only innocent bystanders but also police officers to danger and personal injury.

8.2.2 Applicability

For the purposes of this section, the Downtown Entertainment Overlay Zone includes and is defined by the boundaries of the following zones as shown on the Downtown Entertainment Overlay Zone map: the B-3, B-3c, and WCZ zones. Any property that lies partly within the Downtown Entertainment Overlay Zone shall be subject to the regulations of the overlay.

8.2.3 Dispersal requirement

A business with an entertainment license as required or authorized by Chapter 4, Section 4-51(a) of the City of Portland Code of Ordinances within the Downtown Entertainment Overlay Zone may not be located within 100 feet of another business with an entertainment license, as measured along or across public ways from the main entrance or entrances of each.

8.2.4 Exemption

A. A business with an entertainment license located in the Downtown Entertainment Overlay Zone on or before January 3, 2006 shall not have to comply with the requirements of this section and if located within 100 feet of another licensee shall be considered a nonconforming use controlled by Article 4. Such a business is considered an entertainment business for the purpose of calculating dispersion requirements under Subsection 8.2.3 for a new or relocating entertainment business in the Downtown Entertainment Overlay Zone.

B. A business with an entertainment license that does not allow amplified entertainment shall not have to comply with the dispersal requirement of Subsection 8.2.3.

8.2.5 Separate business entities

Where two or more entertainment businesses operate on one site, and where each business entity requires or has a separate business license, or displays in a manner visible from public property separate business trademarks, logos, service marks, or other mutually identifying names or symbols, each business entity shall be counted as a separate entertainment business for the purpose of this section.

8.2.6 Conditions

Following a hearing held pursuant to Chapter 15, Section 15-10 of the City of Portland Code of Ordinances, the City Clerk may impose conditions to maintain or improve public safety on the food service license of any business in the Downtown Entertainment Overlay Zone that operates between 1:00 a.m. and 4:00 a.m., following a written recommendation from the Portland Police Department that such conditions are necessary. The City Clerk's decision may be appealed to the City Manager pursuant to Chapter 15, Section 15-9 of the City of Portland Code of Ordinances. Nothing in this section shall be construed to limit the City Clerk's authority in Chapter 15 to deny, suspend, or revoke any license pursuant to the standards and process in that chapter.

8.3 FORT SUMNER PARK HEIGHT OVERLAY

8.3.1 Applicability

The Fort Sumner Park Height Overlay is established to protect the public interest by limiting the impact of development on the quintessential views of natural resources and the changing Portland skyline from Fort Sumner Park. There is established a key apex point in Fort Sumner Park at 43° 40' 2.3359" N. 70° 15' 4.3687" W. The Fort Sumner Park Height Overlay includes all land within 200 feet, or the R-6 zone boundary, whichever is closer, of this key apex point that is located closer to the middle line of Sheridan Street than said apex point.

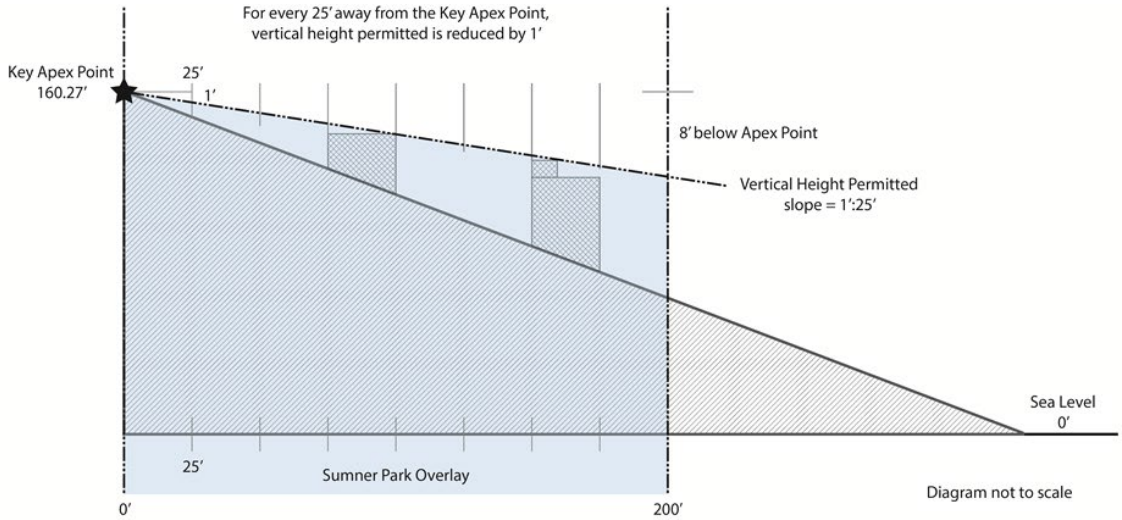


FIGURE 8-A: FORT SUMNER PARK OVERLAY PERMISSIBLE HEIGHT

8.3.2 Standards

Notwithstanding any other section of this Land Use Code, development in the Fort Sumner Park Height Overlay shall be subject to the following additional provisions:

A. The top of structures, including rooftop appurtenances, within the overlay shall not exceed the baseline vertical height of the apex point (160.27' City of Portland Datum (Mean Tide)). For each 25' radially away from the apex point, the vertical height permitted in the overlay is reduced by 1 foot. (See Figure 8-A.)

B. The minimum building setback from the park property shall be 15 feet.

8.3.3 Review process

Any project within the Fort Sumner Park Overlay shall go before the Parks Commission for a recommendation to the Planning Board regarding potential impacts on Fort Sumner Park.

8.4 HELISTOP OVERLAY

8.4.1 Purpose

The intent of the Helistop Overlay is to allow for helicopter landing areas on individual sites in addition to those uses permitted in the underlying zone. The purpose of this zone is to protect the public health and safety by allowing helicopters serving medical needs to land in certain areas, while protecting surrounding areas from any negative effects associated with such a use.

8.4.2 Helistop standards

A. High volume helistops (more than five landings per month)

1. All take-off, landing, and parking areas shall be surfaced with grass or with a dust-proof material.
2. Each landing pad shall be set back at least 200 feet from any residence, school or church. Each landing pad shall be set back at least 50 feet from any commercial or industrial structure. All setbacks shall be measured from the edge of the landing pad.
3. The area in which a landing pad is located shall be enclosed by a fence or other barrier of not less than three feet in height or shall be secured by a locked gate, as approved by the Fire Department.
4. All high-volume helistops shall be subject to review under Article 14.

B. Low-volume helistops (five or fewer landings per month)

1. All low volume helistops shall be subject to approval by the Building Authority and the Fire Department.

8.5 INSTITUTIONAL OVERLAY (IOZ)

8.5.1 Purpose

The Institutional Overlay Zone (IOZ) designation provides a regulatory mechanism available to the city's five major medical and higher education campuses where an improved regulatory structure is needed to facilitate a consistent, predictable, and clear growth management process. The purposes of the Institutional Overlay Zone are to:

A. Acknowledge that the city's major academic and medical institutions play a prominent role in the health and well-being of the local and regional community, and in order to sustain that role, these institutions need flexibility to change and grow.

B. Encourage proactive planning for institutional change and growth which identifies and addresses likely long-term institutional needs

and cumulative impacts while leveraging potential benefits at the neighborhood, city, and regional level.

C. Ensure that institutional change and growth both complements and, as appropriate, integrates adjacent or surrounding neighborhoods through carefully planned transitions.

D. Support the formation and continuation of mutually beneficial public-private cooperation.

E. Support an ongoing public engagement process that benefits both the institutions and nearby neighborhoods.

F. Reflect Comprehensive Plan and other policy objectives.

G. Provide a consistent regulatory approach to all major institutions which allows unique regulatory requirements that balance the particular needs of institutions with the needs of the surrounding neighborhood and wider community.

8.5.2 Location and applicability

The city's five major medical and higher education institutions are eligible to apply for designation as Institutional Overlay Zones. The eligible institutions are the two major hospital institutions of Maine Medical Center and Mercy Hospital and the three major academic institutions of University of Southern Maine and University of New England, and The Roux Institute at Northeastern University, their successors and assigns. Designation as an IOZ is the preferred mechanism where the eligible institution's proposed development is inconsistent with the existing zoning.

8.5.3 Establishment

A. **Application for an Institutional Overlay Zone.** Where the eligible institution seeks designation as an IOZ, they shall submit a zone change application consisting of two components:

1. An Institutional Development Plan (IDP) in accordance with Subsection 8.5.4.
2. A regulatory framework in accordance with Subsection 8.5.5 that would, when and if adopted, be the text and map amendment to the City's Land Use Code and zoning map.

B. **Required public involvement**. At least two neighborhood meetings shall be required. The first shall be held prior to the formal submission of a zone change application for an Institutional Overlay Zone and the second shall be held during the City's review. Meetings shall identify the concerns, if any, of affected residents and property owners, and inform the development of the Institutional Development Plan (IDP) and regulatory framework. Meetings shall be held in a convenient location proximate to the institution. The applicant shall provide written notification to property owners of record within 500 feet of the proposed IOZ boundary at least ten days prior to the meeting dates and maintain written records of the meetings.

C. **Required scoping meeting.** The eligible institution shall meet with the Planning Authority after the first required neighborhood meeting and prior to submission of the zone change application to confirm the focus of the Institutional Development Plan (IDP) and regulatory framework, including associated study areas that may be outside of the proposed IOZ boundary. The IDP and

regulatory framework will vary in detail and focus depending on the eligible institution and its particular context. The content requirements in Subsections 8.5.4 and 8.5.5 and the comments from neighborhood meeting(s) shall provide direction for the content of the IDP. The Planning Authority or Planning Board may require additional information or modify content requirements as is relevant to the eligible institution.

D. **Reviewing authority.** The Planning Board shall review the zone change application, including the IDP and regulatory framework. At least one public workshop and a public hearing before the Planning Board are required. Upon recommendation of the Planning Board, the City Council shall review and consider adoption of the Institutional Overlay Zone and the accompanying regulatory framework as an amendment to the City's Code of Ordinances.

E. **Future institutional development.** All new development by the eligible institution within the boundary of the IOZ shall be compliant with the IOZ and accompanying regulatory framework, consistent with the IDP, consistent with the Comprehensive Plan, and meet applicable site plan standards, unless such standards are superseded by the regulatory framework. Any use/development proposed by the eligible institution outside the IOZ boundary that complies with the zoning for permitted uses in that location shall be reviewed under the standards of that zone. Any use/development proposed by an eligible institution outside of the IOZ boundary that is proposed in a residential zone and is functionally related to the operations within the IOZ shall be addressed by the IDP and require an amendment to the IDP.

8.5.4 Institutional Development Plan (IDP)

A. **Purpose.** Any use conducted by an eligible institution and any construction by an eligible institution in an Institutional Overlay Zone shall be consistent with an Institutional Development Plan (IDP) approved by the Planning Board in accordance with this ordinance. The purpose of the IDP is to establish baseline data about institutional land uses, facilities, and services and measure, analyze, and address the anticipated or potential impacts of planned institutional growth and change. The IDP shall serve as a background document that supports the proposed regulatory framework and frames subsequent site plan review(s).

B. **Planning horizon.** An IDP shall provide the City and abutting neighborhoods with a clear outline of the anticipated or potential growth and change of the eligible institution for the short- to medium-term (e.g. 1-5 and 5-10 years respectively), as well as a conceptual growth plan for the long-term (e.g. 10 years or more). however, the specific planning horizons for each institution will be determined as part of the IDP approval process.

C. **Content.** The IDP submission shall address the following elements unless specifically modified by the Planning Authority or Planning Board, with the scope and level of detail to be clarified at the required scoping meeting:

1. Context information, including:
    a. The institution's adopted mission, vision, or purpose statement.
    b. A summary of relevant baseline data on the institution, including:

i. A neighborhood context plan.
ii. An inventory of current programs and services.
iii. A current census of the number of people using the institution (e.g., employees, enrollment, patients), with an indication of maximums and minimums over time.
iv. An inventory and/or plan of all existing property holdings within the main campus and within the City of Portland, including an indication of functional land use links between off-campus properties and the main campus (e.g. remote parking).
v. An inventory and/or plan of existing facilities, including data on use, floor area, and any existing functional connections between facilities.

c. A summary of the baseline characteristics of the existing campus and context of the institution, based on identified study areas, including:
i. A summary of existing resources, such as historic, open space, and natural resources.
ii. A summary of the existing transportation system, including vehicular, pedestrian, transit, bicycle, and parking supply, demand, and utilization.
iii. A summary of existing public infrastructure supporting the institution, including demand, utilization and any capacity issues.
iv. Relevant municipal plans, projects, and studies that may influence the IDP study area and opportunities for integrating institutional growth.

d. A summary of public involvement in the development of the IDP, including major areas of public concern.

2. Assessment of future institutional growth and change, including:
a. A description of institutional needs and areas of future institutional growth and change, with:
i. A projected census of users (e.g., enrollment /employment/patient/ visitor figures and anticipated variations over time).
ii. Institutional objectives for property both within and outside the IOZ boundary (e.g. acquisition and/or disposition), including an indication of any functional land use connection for sites outside the IOZ boundary to the main campus.
iii. A development plan addressing anticipated or potential institutional needs and physical improvements, including the proposed boundary of the IOZ and any phasing of the development.

b. Analysis and associated plans that address the following elements in terms of anticipated growth or potential impacts within the identified study area, and support the

development parameters as set out in the regulatory framework, including:

i. Transportation and access, with:
   a) An analysis of the projected changes in parking demand, supply, and impacts to the off-street and on-street parking capacity, including an explanation of the proposed parking plan.
   b) An analysis of the projected changes in vehicular, pedestrian, transit, and bicycle access routes and facilities, their capacity, and safety.
   c) A transportation, access, and circulation plan, representing the synthesis of the analysis, and including a program of potential improvements or set of guidelines to address access deficiencies to and within the IOZ. The plan should outline proposed mechanisms and potential strategies to meet transportation objectives, including transportation demand management, phasing, and when a Traffic Movement Permit (TMP) may be required.

ii. Environment, with:
   a) An analysis of potential cumulative impacts on natural resources and open spaces.
   b) An analysis of projected energy consumption, hazardous materials generation, noise generation, and similar issues as relevant.
   c) An environmental plan, representing the synthesis of the analysis and including a proposed program or set of guidelines for future preservation, enhancement, conservation, and/or mitigation.

iii. Infrastructure, with:
   a) An analysis of projected public utility demand and the capacity of associated infrastructure.
   b) An analysis of projected public safety needs and projected impacts to the capacity of these services.
   c) An infrastructure plan, representing the synthesis of the analysis and including a proposed program or set of guidelines to support sustainable growth.

iv. Design, with:
   a) An analysis of projected impacts to neighboring properties and public spaces, including potential shadow, wind, and lighting impacts, impacts of height

and massing, and impacts to historic resources.

b) An analysis of transition areas between the institution and adjoining neighborhoods, including identification of key character defining components of the surrounding context.

c) An analysis of existing Crime Prevention Through Environmental Design issues and identification of how these principles would be addressed as part of the proposed campus development.

d) A conceptual built environment/public realm plan, representing the synthesis of the analysis and including a set of guidelines for urban design, landscape, open space, and streetscape treatments, with particular attention to the treatment of edges (both within and abutting the IOZ boundary) to achieve compatible transitions.

v. Neighborhood engagement, with:

a) A plan for ongoing community engagement that represents best practices, promotes collaborative problem solving around community concerns, fosters transparency, and identifies mechanisms for neighborhood feedback and institutional accountability.

b) A property management framework that identifies the institution's process for handling operational property issues with neighbors.

c) Strategies for assuring communication pertaining to property acquisition and disposition in surrounding neighborhoods.

d) A set of construction management principles to apply to all institutional construction, that represent best practice, aim to minimize short- and long-term construction impacts on surrounding residents and businesses, and ensure a clear communication strategy is in place in advance of construction.

D. Standards of review. The IDP shall:

1. Address all content requirements, unless explicitly modified by the Planning Authority or Planning Board.
2. Reflect the issues/topics identified in the required public process.

3. Demonstrate consistency with the City's Comprehensive Plan and the purpose of this ordinance.
4. Demonstrate how the property ownership, proposed growth, and requested regulatory framework relate to the institution's mission.
5. Demonstrate that traffic and parking impacts have been anticipated and that the proposed parking provision is justified as based on an assessment of options for reducing traffic and parking demands.
6. Outline an approach to open space, natural, and historic resources that supports preservation and enhancement.
7. Demonstrate that potential cumulative environmental impacts have been anticipated and can be minimized or satisfactorily mitigated.
8. Demonstrate that utility impacts have been anticipated and can be minimized or satisfactorily mitigated.
9. Reflect a comprehensive design approach that ensures appropriate transitions with the existing or future scale and character of the neighboring urban fabric.
10. Promote compatibility with existing or future uses in adjacent neighborhoods, maintain housing, and support local amenities.
11. Anticipate future off-site improvements that would support the integration of the institution into the community and city-wide infrastructure.
12. Conform with the standards of Article 17 for designated landmarks or for properties within designated historic districts or designated historic landscapes, if applicable. When proposed adjacent to or within 100 feet of designated landmarks, historic districts, or historic landscapes, the IDP shall be generally compatible with the major character-defining elements of the landmark or portion of the district in the immediate vicinity.
13. Incorporate strategies to support clear communication and ongoing public engagement between institutions and nearby neighbors.

E. Approval. Upon finding that an eligible institution's IDP meets the standards of review, the Planning Board shall approve, approve with conditions, or deny an IDP.

F. Monitoring. The IDP shall establish a schedule for reporting on IDP implementation at regular intervals of not more than ten years from the date of approval of the initial or amended IDP, and identify thresholds for IDP amendments.

G. Amendments. An approved IDP shall guide campus development unless and until amended. If at any time the eligible institutions request minor amendments to an approved IDP, the Planning Authority may approve such minor amendments, provided that they do not constitute a substantial alteration of the IDP and do not affect any condition or requirement of the Planning Board. The applicant shall apply with a written statement of the proposed amendment and proposed amended IDP to the Planning Authority, whose decision as to whether the amendment is minor shall be final. Major amendments shall be reviewed by the Planning Board. When the IDP is amended, the baseline data in the IDP shall be updated as appropriate.

8.5.5 Regulatory framework

A. **Purpose.** The regulatory framework translates the IDP into a set of clear and specific zoning requirements for the IOZ that constitute the text and map amendments to the City's Land Use Code and zoning map. The zoning requirements are anticipated to include parameters that guide the growth and change of the institution as well as broad strategies to address potential impacts, with plans and details to be developed under site plan review.

B. **Applicability.** The regulatory framework shall apply only to properties that are within the IOZ boundary and to which the eligible institution holds right, title, or interest. For these properties, the Institutional Overlay Zone shall supersede the underlying zoning, and all new institutional development shall be conducted in compliance with the regulatory framework and the approved Institutional Development Plan. Properties located within the Institutional Overlay Zone not subject to right, title, or interest of the eligible institution shall continue to be governed by the regulations of the underlying zoning designation.

C. **Uses.** Institutional uses, including hospitals and higher education facilities, shall be permitted, as shall uses that are functionally integrated with, ancillary to, and/or substantively related to supporting the primary institutional use, consistent with the applicable approved IDP.

D. **Content.** The regulatory framework shall reflect the information and analysis of the IDP. The content shall be tailored to address the particular issues associated with the institution and its neighborhoods. The regulatory framework should be succinct and use tables and graphics as possible to address the following, if applicable:

1. *Zoning boundary of the IOZ.* The area to which the regulations apply, as shown on the zoning map, subject to other provisions of this ordinance (i.e. the map amendment to the City's zoning map).
2. *Phasing and schedules.* Requirements that relate to particular proposed phases; a chart showing the schedule or thresholds for submitting an amended IDP (or elements of an IDP, such as a Transportation Demand Management (TDM) Plan).
3. *Uses.* Clarification, as necessary, on permitted uses.
4. *Dimensional requirements.* Graphics, sketches, or standards, including details for transition zones within the IOZ boundary.
5. *Transportation.* Elements such as Transportation Demand Management Plan (TDM) trip reduction targets or contribution to area-wide TDM measures; broad parameters for ensuring pedestrian, vehicular, bicycle and transit access and safety; parking ratios and management strategies; thresholds for access improvements.
6. *Environment.* The approach to the inclusion of open space and preservation of environmentally-sensitive areas.
7. *Mitigation measures.* The broad approach to identified mitigation measures, which would be addressed in greater detail in the site plan review process; thresholds for addressing deficiencies; goals for preservation/protection.

8. *Design.* Graphics and standards to clarify building placement and envelope (height and massing); guidelines for integration of site features; required treatments for transition zones and treatment for all edges (both within and abutting the IOZ boundary); guidelines for establishing campus identity.
9. *Neighborhood integration.* Thresholds and strategies for neighborhood engagement; mitigation of impacts on neighboring properties, including construction impacts; buffering requirements; objectives for pedestrian linkages and safety; other requirements that address community concerns.
10. *Monitoring.* A schedule for regular monitoring reports on IDP implementation in accordance with the IDP.

E. Standards of review: The regulatory framework shall:

1. Be consistent with the Comprehensive Plan and the Institutional Development Plan.
2. Provide a clear zoning framework, using graphics and tables as appropriate, to apply to future site plan reviews.
3. Provide specific regulatory statements as appropriate that respond to concerns raised during the required public involvement.
4. Outline measurable goals and thresholds for improvements or other actions identified in the IDP to be advanced in subsequent site plan applications.

F. Approval/adoption. The Planning Board shall review the proposed regulatory framework against the standards of review and make a recommendation on the institution's IOZ designation and regulatory framework to the City Council for adoption as part of this Land Use Code.

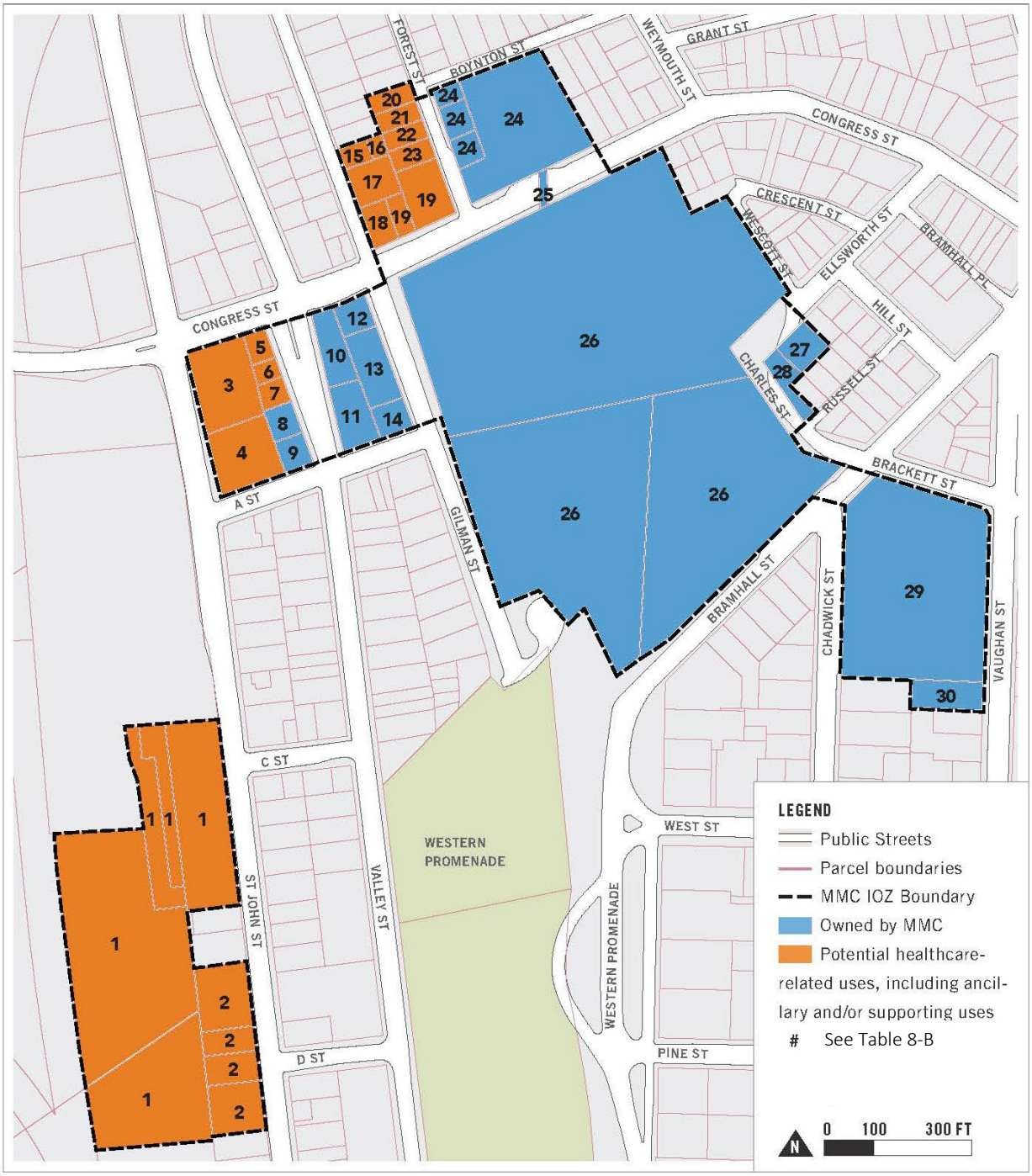
G. Amendments. A regulatory framework and IOZ boundary as adopted by the City Council shall remain in force unless and until amended. Amendments to a regulatory framework and/or IOZ boundary may be brought forth by the City or eligible institution. Proposed amendments to the IOZ boundary or regulatory framework shall be reviewed by the Planning Board and adopted by the City Council subject to the provisions of this ordinance.

8.5.6 Maine Medical Center Institutional Overlay Zone Regulatory Framework

A. Applicability. All development proposed by Maine Medical Center (MMC) within the boundary of the MMC Institutional Overlay Zone (IOZ) shall be consistent with the approved Institutional Development Plan (IDP), consistent with the Comprehensive Plan, and meet applicable standards of the Land Use Code, unless such standards are superseded by the following regulatory framework. This regulatory framework shall govern future development by MMC within the IOZ unless amended by the Portland City Council upon formal application of MMC. The MMC Institutional Overlay Zone shall have the boundaries depicted in Figure 8-B, below, and shall include the properties listed in Table 8-B.

B. Updates and amendments

1. It is intended that the IDP will be updated on a regular basis to ensure that the data is current and that the document remains accurate. Accordingly, monitoring reports



Note: Refer to Table 8-C for a list of permitted uses.

FIGURE 8-B: MMC IOZ BOUNDARY

TABLE 8-B: LIST OF PROPERTIES INCLUDED IN THE MMC IOZ

Map#	Legal Description	Address	Acreage	Ownership
1	64-A-2-8-9-11/74-A-7/75-A-6	222 St John St.	4.6516	Owned by others
2	68-D-1-3-13-14-16	180 St John St.	0.9494	Owned by others
3	65-G-1	950 Congress St.	0.4628	Owned by others
4	64-B-1	275 St John St.	0.4163	Owned by others
5	65-G-2	942 Congress St.	0.0659	Owned by others
6	65-G-3	940 Congress St.	0.0482	Owned by others
7	65-G-4	274 Valley St.	0.0667	Owned by others
8	65-G-5	268-270 Valley St.	0.0978	MMC
9	64-B-2	262-266 Valley St.	0.0895	MMC
10	65-H-1	932 Congress St.	0.1864	MMC
11	65-H-9	261 Valley St.	0.2185	MMC
12	65-H-2	930 Congress St.	0.1040	MMC
13	65-H-5	52 Gilman St.	0.2384	MMC
14	65-H-8	44 Gilman St.	0.1128	MMC
15	65-E-22	85 Gilman St.	0.0565	Owned by others
16	65-E-32	85 Gilman St.	0.0282	Owned by others
17	65-E-24	81 Gilman St.	0.1653	Owned by others
18	65-E-28	919 Congress St.	0.1059	Owned by others
19	65-E-29-30	909 Congress St.	0.3233	Owned by others
20	65-E-19	22 Forest St.	0.0826	Owned by others
21	65-E-21	18 Forest St.	0.0831	Owned by others
22	65-E-23	14 Forest St.	0.0826	Owned by others
23	65-E-25	12 Forest St.	0.0883	Owned by others
24	53-I-1-2-3-12	887 Congress St.	1.3400	MMC
25	53-X-1	Congress St. Pedestrian Walkway	---	MMC
26	53-D-7/54-H-1/64-C-1	22 Bramhall St.	12.563	MMC
27	54-C-6	34 Ellsworth St.	0.1341	MMC
28	54-C-10	40 Ellsworth St.	0.1155	MMC
29	54-I-1	308 Brackett St.	2.5200	MMC
30	63-B-8	214 Vaughan St.	0.1983	MMC

Notes:

Properties owned by MMC are listed under MMC or MMC Realty Corp.

MMC will not extend its functionally-related Bramhall campus hospital operations beyond the boundary of the IOZ within the City of Portland without further amendment to the IDP. This includes any expansion of functionally-related operations that displace residential uses outside of the IOZ boundary. A functional relationship is defined as uses or activities that are traditionally or customarily linked to the day-to-day operations of the MMC Bramhall Campus that would relocate a significant proportion of the total employee population or activities.



will be filed every three years and shall include a summary of progress on IDP implementation and of acquisitions and divestment since the date of IDP approval. At the time of the submission of the monitoring report, MMC shall identify any updates to the IDP which may result from updated master planning, changes in baseline information, or changes in the adjacent neighborhoods which affect MMC, to allow the IDP to remain current. Updates and minor amendments not described below shall be reviewed administratively by the Planning Authority.

2. Minor amendments that impact phasing of the long-term development blocks or change the approach to parking, transportation, neighborhood engagement or design shall be reviewed by the Planning Board for consistency with the objectives of the IDP. In addition to consistency with the objectives of the IDP, review of phasing and development program amendments shall focus on integration with the campus and impacts on transportation or infrastructure. This review may occur simultaneously with the site plan review of an anticipated project.
3. Major amendments shall be reviewed by the Planning Board and are required under the following circumstances:
    a. A change to the regulatory framework is required.
    b. The IDP is no longer representative of the institutional mission or approach to community as a result of redevelopment in the area or City upgrades to neighborhood planning (such as roadway changes, infrastructure upgrades, community design, lighting).
    c. Development proposed by MMC is inconsistent with the master facility plan, transportation plan intent, design plan intent, or environment and infrastructure plan intent identified in the IDP.
4. Annual monitoring reports will be submitted for MMC's Transportation Demand Management (TDM) Plan. TDM monitoring reports shall include a summary of progress towards targets established in the TDM Plan.

C. **Uses.** In addition to the uses permitted in the underlying zone, the uses in Table 8-C are permitted as a matter of right. In recognition that MMC is part of a mixed-use area of the city, with important existing services and businesses that serve the local and wider community, healthcare facility development fronting onto Congress Street and St. John Street shall activate the public realm, to the extent able, with uses such as service and retail/restaurant, landscaping, active building entrances, pocket parks, etc., on the ground or other publicly accessible level, consistent with the design intent contained in the approved IDP. In areas identified in the IDP as "Priority zone for commercially oriented/retail uses," usable ground floor retail, restaurant, or comparable community-oriented use that provides services to local residents and employees both during the day and evening hours is required. In areas labeled "Street activation through location of windows, entrances, etc.," usable ground floor retail,

restaurant, or community-oriented use is encouraged to the extent practicable. Such uses, where constructed or facilitated as part of a healthcare related development, are expressly permitted whether ancillary or supporting the healthcare facility or not, and shall be open and welcoming to the general public in addition to employees or visitors of MMC.

TABLE 8-C: PERMITTED USES

Healthcare facilities, including but not limited to the following ancillary and/or supporting uses:

- Hospital
- Medical Office/Clinic
- Laboratory Center / Services
- Research and Development (R&D) Laboratory or Facility
- Educational Facility / Conference Center
- Administrative / Business Office
- Accessory Service or Trade Uses
- Guest House
- Multi-family Housing for Healthcare Staff and Students
- Rehab / Skilled Nursing Facility
- Retail
- Restaurant/Cafe
- Employee Service Amenities
- Day Care Center
- Fitness Center or Gymnasium
- Parking Lot or Garage
- Bicycle Storage
- Heliport
- Antenna Station
- Outdoor use areas, such as green areas, parks, gardens, art installations, and other active and passive non-commercial recreation spaces

D. **Dimensional requirements.** The MMC Institutional Overlay Zone shall have the dimensional requirements listed in Table 8-D and depicted in Figures 8-C and 8-D.

E. **Design.** New buildings within the IOZ shall adhere to the Design Guidelines set forth in Chapter 5: Design of the IDP and the site plan standards of Article 14.

F. **Signs**

1. At the time of first site plan review following IDP approval, a unified campus-wide signage plan shall be submitted for review and approval by the Planning Authority. Any update to such plan due to a change in name or logo shall not require amendment to the IDP.
2. Signs shall be designed in accordance with the campus-wide signage plan. All signs shall be designed in proportion and character with building facades and adjacent street typology. All signs shall be coordinated with the building and landscaping design and be constructed of appropriate permanent, high quality materials and finishes.

G. **Transportation**

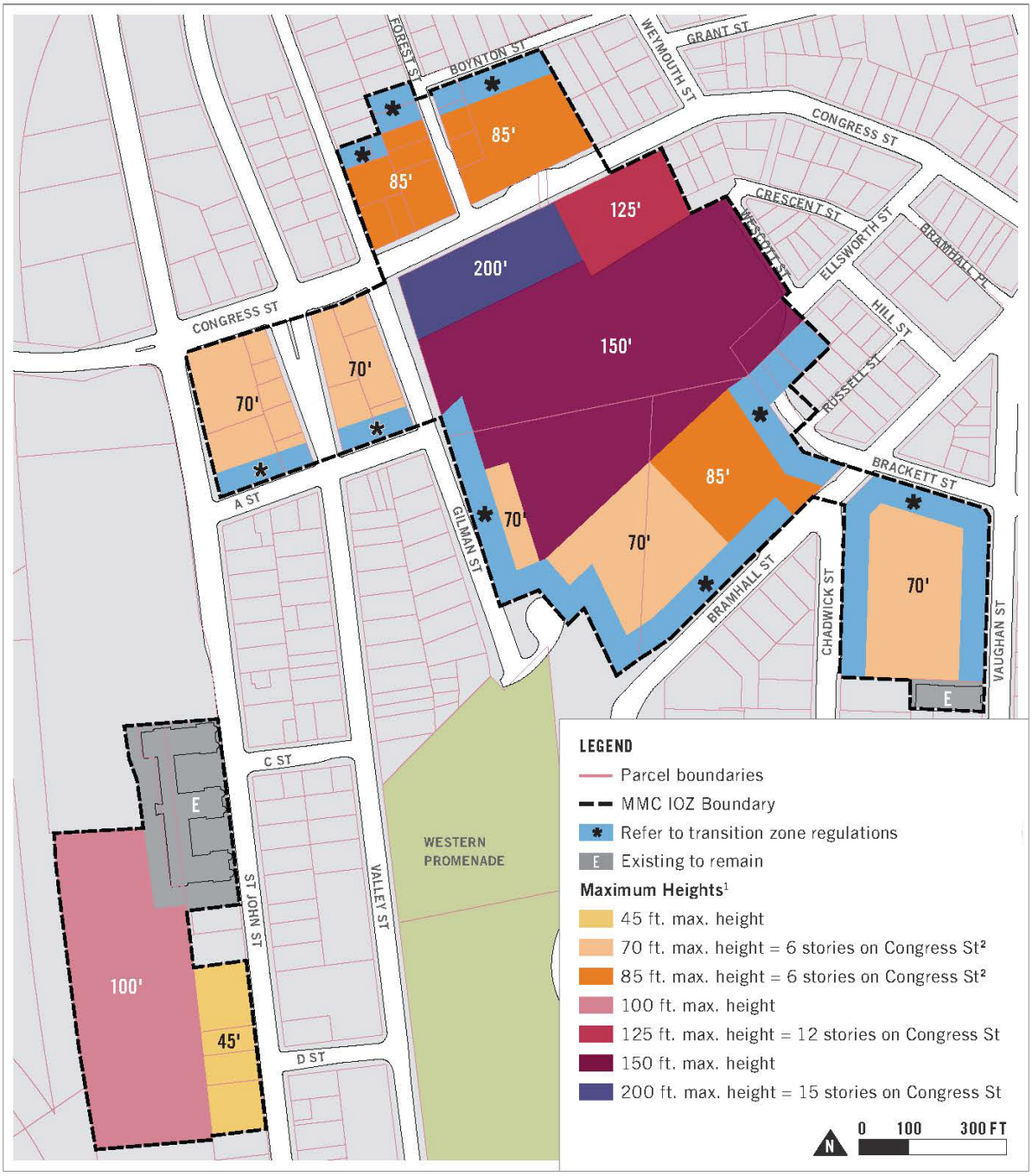
1. *Transportation Demand Management* (*TDM*)
   a. At the time of the first site plan review following IDP approval, MMC shall submit a campus-wide TDM Plan substantially in accordance with those TDM objectives and strategies identified in the approved Institutional Development Plan. The TDM Plan may be phased into short-, mid-, and long-term actions to allow for progressive implementation over time.



TABLE 8-D: MMC IOZ DIMENSIONAL REQUIREMENTS

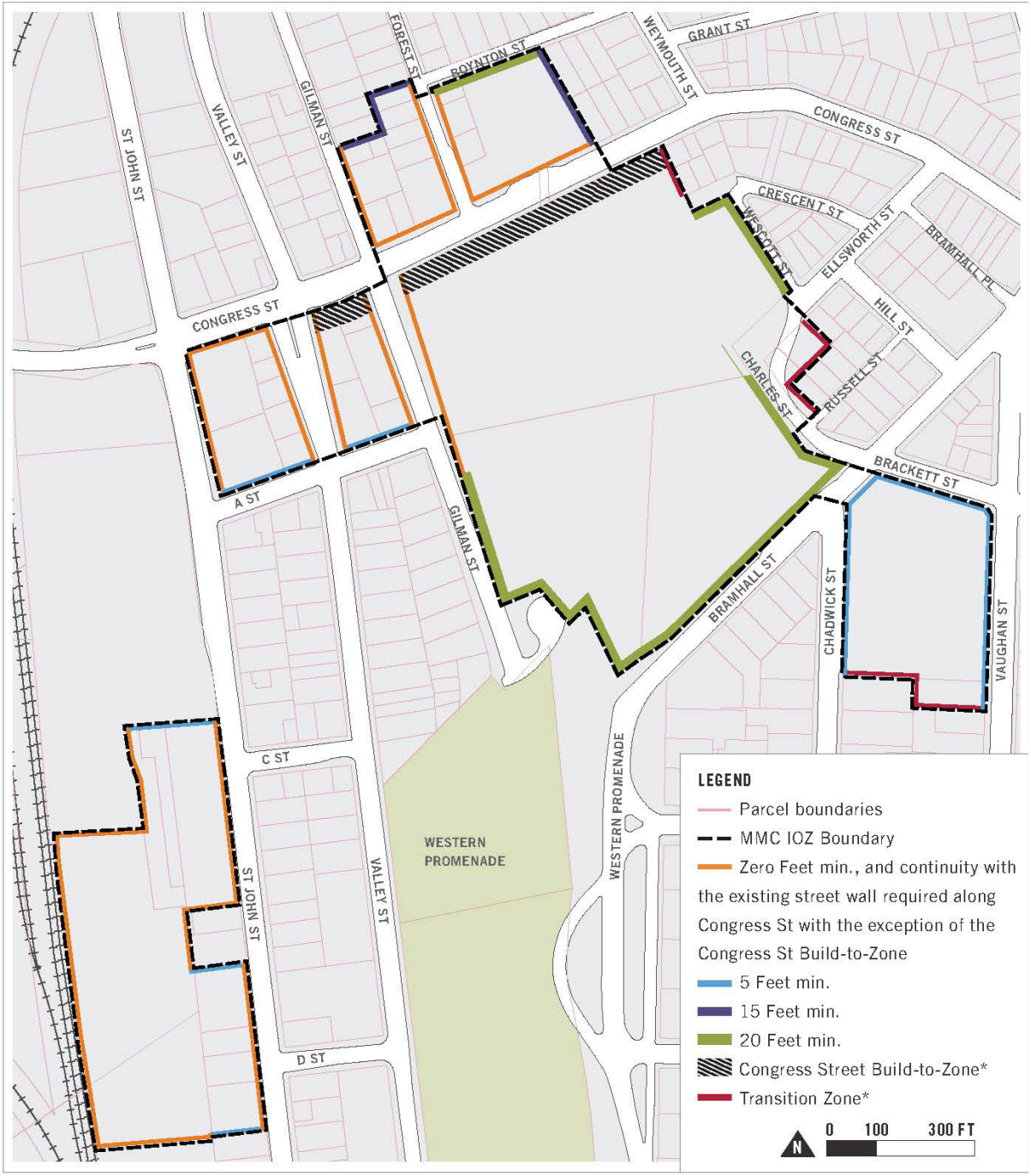
Building heights (max.)	Max. building heights for new buildings within the IOZ shall be governed by the Maximum Building Heights Map in Figure 8-C, or by the transition zones clause of this table for those buildings located in transition zones. Refer to IDP "Chapter 5. Design" for methodology on determining heights.
Building heights (min.)	Three stories, except in transition zones, where the minimum building height shall be two stories. Minimum building heights shall not apply to building awnings, associated kiosks, pavilions or similar building components.
Building length (max.)	Length of proposed parking garage at 222 St John St shall not exceed 500 feet as measured roughly parallel to St John St.
Building setbacks (min.)	Minimum building setbacks shall be governed by the Minimum Setbacks Map in Figure 8-D. Additional requirements are listed in the transition zones and Congress Street build-to zone sections of this table.
Congress Street build-to zone[1]	A build-to zone is identified for some properties that abut Congress Street. See Minimum Setbacks Map in Figure 8-D for the location of build-to zone. i. The Congress Street build-to zone extends between 0 to 40 feet from the right-of-way boundary. ii. Buildings located in these parcels must have a minimum of 70% of the façade facing Congress Street located within the build-to zone.
Transition zones	Transition zones are identified inside the IOZ boundary in areas where the IOZ abuts or is located across a public right-of-way from a residential zone or a historic-designated district. See Maximum Building Heights Map in Figure 8-C for location of transition zones. i. Transition zones shall extend 50 feet into the parcel from the parcel boundary. ii. Transition zones that abut a Residential zone with or without an intervening public right-of-way shall have a maximum height limit that matches the maximum height permitted within that Residential zone. iii. In areas where the IOZ abuts a residential zone without an intervening public right-of-way, minimum side and rear yard requirements of the abutting residential zone apply within the IOZ boundary, unless noted otherwise in Minimum Setbacks Map in Figure 8-D.

[1]A "build-to zone" is the area on the lot where all or a portion of the street-facing building facade must be located, measured as a minimum and max. yard (setback) range from the public right-of-way boundary.



Notes: 1. Minimum building heights also apply. Refer to Table 8-D.
2. For buildings with residential use above the ground floor, the following height maximums apply: 70 ft. maximum height = 7 stories, and 85 ft. maximum height = 8 stories.

FIGURE 8-C: MAXIMUM BUILDING HEIGHTS



* Refer to Table 8-D Dimensional Requirements

FIGURE 8-D: MINIMUM SETBACKS

b. The TDM Plan shall be designed to provide transportation choice with the goal of reducing parking demand and single-occupancy vehicle trips to and from MMC by employees and visitors.

c. The TDM Plan shall establish parking and trip reduction targets associated with the short-term (0-2 years), mid-term (2-5 years), and the long-term (5+ years), as well as a data collection plan.

2. *Parking*. Parking requirements in the IOZ shall be established at the time of site plan review based on a parking study that includes a campus-wide analysis of demand and supply. The parking demand study shall determine parking requirements and shall be sufficient to alleviate parking pressure on surrounding neighborhoods. Parking studies developed by MMC shall integrate parking and trip reduction achievements and data contained in the TDM Plan.

H. **Environment.** Development proposed by MMC shall be designed to integrate with the surrounding context, including open space and pedestrian networks and infrastructure.

I. **Mitigation measures.** MMC shall mitigate site plan impacts to off-premise infrastructure in a manner proportionate to those impacts. Mitigation may include financial or in-kind contributions to existing or planned City projects focused on mitigating the impacts of MMC development. Mitigation contribution shall be determined based on the City's standard procedure in effect at the time of site plan review.

J. Neighborhood integration and engagement

1. For the purpose of keeping surrounding residential areas appraised of its future development plans, and to address any neighborhood issues related to the operations of the MMC Bramhall campus, MMC shall adhere to the ongoing community engagement principles identified in the approved Institutional Development Plan.

2. MMC shall conduct ongoing community engagement, including the formation of a Neighborhood Advisory Committee comprised of representatives of MMC, the Parkside neighborhood, the West End neighborhood, the Western Promenade Neighborhood Association, the St. John Valley neighborhood, the Libbytown neighborhood, and the City.

K. Construction management

1. At the time of site plan review, MMC shall submit a construction management plan substantially in accordance with those construction management principles identified in the approved Institutional Development Plan for review and approval by the Planning Authority.

2. The construction management plan shall include a construction schedule, as well as strategies for managing neighborhood communication and noise, air quality, traffic, and parking impacts associated with the construction as set forth on the construction management template developed by the City and attached and incorporated to the IDP as Appendix A.

L. Other requirements

1. *Helipad.* MMC shall be governed by the provisions of the Helistop Overlay Zone with the following exceptions:
   a. Setback requirements of Subsection 8.4.2(A)(2).
   b. Fencing requirements of Subsection 8.4.2(A)(3).
2. *Snow ban parking.* When the City of Portland declares a snow parking ban, MMC shall make parking available to neighbors in a designated parking area on or near its campus upon the following condition: Due to the patterns of patient flow in the hospital, the hours of snow ban parking for registered vehicles during an announced City of Portland snow parking bans are 6:00 p.m. until 6:00 p.m. Vehicles that are not moved out of these parking areas by the applicable time each morning are subject to towing at the owner's expense.
3. *Healthy communities.* Recognizing that a stable residential and commercial environment is key to the health of any neighborhood, MMC commits to supporting its existing and future neighbors in the St. John Valley, Parkside, West End, Western Prom, and Libbytown neighborhoods. Accordingly, MMC shall implement and participate in the healthy communities programs as described below.
   a. Caring Community Grants. MMC shall develop an annual grant program with available funds of up to $30,000. Goals, priorities, eligibility requirements, program guidelines, and allocation approach will be developed by the MMC Neighborhood Advisory Committee, as described in Chapter 6 of the IDP approved on September 26, 2017. Neighborhood associations or other entities located or operating in the St. John Valley, Parkside, West End, Western Promenade, and Libbytown neighborhoods may apply for grant funding relating to the following initiatives:
      i. Neighborhood investment and Infrastructure: Focused on creating strong, safe, accessible and vibrant neighborhoods.
      ii. Quality of life: Focused on improving access to recreation, arts or cultural experiences in the neighborhoods.
      iii. Diversity and inclusion: Focused on fostering the building of relationships and understanding among diverse groups, including capacity building and outreach activities.
      iv. Public Safety: Focused on supporting public safety programs through training programs, equipment or other means in the neighborhoods.
      v. Environmental sustainability: Focused on preventing waste, increasing recycling or supporting other programs that work to improve the environment.
   b. Healthy Neighborhoods Program. MMC shall initiate and adopt a memorandum of understanding

(MOU) by and between the MMC, the City of Portland, an identified Community Housing Development Organization and any other community partners that may be identified later establishing a Healthy Neighborhoods program. Such a program shall be designed to fund and execute housing and community improvement and development programs in St. John Valley and the other neighborhoods surrounding MMC's Bramhall Campus.

8.5.7 The Roux Institute at Northeastern University Overlay Zone Regulatory Framework

A. **Applicability**. All development proposed by the Roux Institute at Northeastern University ("Roux Institute") within the boundary of the Roux Institutional Overlay Zone (IOZ) shall be consistent with the approved Institutional Development Plan (IDP), consistent with the Comprehensive Plan, and meet applicable standards of the Land Use Code, unless such standards are superseded by the following regulatory framework. This regulatory framework shall govern future development by the Roux Institute within the IOZ unless amended by the Portland City Council upon formal application of the Roux Institute. The Roux Institutional Overlay Zone shall have the boundaries depicted below and shall include the approximately thirteen-acre property located at 1 Bean Pot Circle and identified as parcels 447-A001 and A002 in the City's assessing records.



FIGURE 8-E: ROUX INSTITUTIONAL OVERLAY ZONE BOUNDARY

B. Phasing and monitoring

1. The Roux Institute campus will be developed in phases, as set forth in the IDP. The IDP will be updated on a regular basis to ensure that the data is current and that the document remains accurate. Accordingly, monitoring reports will be filed every three years and shall include a summary of progress on IDP implementation and of acquisitions and divestment since the date of IDP approval. At the time of the submission of the monitoring report, any updates to the IDP shall be identified which may result from updated master planning, changes in baseline information, or changes in the adjacent neighborhood which affect the campus, to allow the IDP to remain current. Updates and minor amendments not

described below shall be reviewed administratively by the Planning Authority.

2. At completion of each phase, the Roux Institute campus shall have the appearance of a complete and comprehensive design. Permanent and meaningful public space shall be established in the first phase to ensure public benefit. Interim conditions shall be designed for a pleasant pedestrian experience through planting, lighting, wayfinding, graphics, artwork, or ornamental fencing to provide screening, buffers, and enhancement. Interim areas of the site which are not actively used for parking or construction staging will be appropriately landscaped or accommodate gathering on lawns or other aesthetically hardened spaces.
3. Minor amendments that change the approach to parking, transportation, neighborhood engagement or design shall be reviewed by the Planning Board for consistency with the objectives of the IDP. This review may occur simultaneously with the site plan review of a proposed project.
4. Major amendments shall be reviewed by the Planning Board and are required under the following circumstances:
    a. A change to the regulatory framework is required.
    b. The IDP is no longer representative of the institutional mission or approach to community as a result of redevelopment in the area or City upgrades to neighborhood planning (such as roadway changes, infrastructure upgrades, community design, lighting).
    c. A change in approach to parking, transportation, neighborhood engagement or design is inconsistent with the objectives of the IDP, resulting in a modification to the applicable objectives.

Review of major amendments may occur simultaneously with the site plan review of the proposed project.

C. Uses

1. The Roux Institute campus will encompass a variety of uses to support the mission of the Roux Institute to spur innovation, build talent, and drive economic growth. Partnerships with industry, academia, and government are essential components of the institute's success. Campus uses will include classrooms and laboratories, housing, faculty offices, dining areas, convening spaces, fitness centers, retail facilities, entrepreneurial spaces, light manufacturing, incubator space, research and design facilities, hotel, and office space. The uses on the campus will support collaboration with private industry, other institutions, and community organizations, which is essential to the Roux Institute's approach to learning through integrated research, student work opportunities, and entrepreneurial endeavors. Hotel rooms will cater to prospective students, faculty and staff, visiting lecturers, specialists, and business partner guests, providing multiple opportunities for informal and unplanned interactions and collaboration that would otherwise not be available if staying in a hotel miles away from campus. A range of

rental housing options will foster community and provide on-site opportunities for students, faculty, staff, and their families. These units will ease some of the housing pressure and traffic that might otherwise result from new residents attracted to Portland by the institute. Housing units not occupied by residents affiliated with the Roux Institute may be made available to the public to further assist in easing the housing pressure.

2. Recognizing the community value of a larger waterfront parcel in close proximity to a primary bike and pedestrian trail system, the Roux Institute campus will be designed to include those uses that will welcome the neighbors to the campus, including publicly available open space, waterfront access, recreational opportunities, restaurant, dining, small neighborhood grocery, and/or other limited retail options. These uses will provide a means for serving the residents and other users of the campus, as well as welcoming the neighborhood to foster connectivity and community engagement, activating the public realm, and reducing dependence on automobiles.
3. In addition to the uses permitted in the underlying zone, the uses in Table 8-E shall also be permitted as a matter of right in all buildings that are located within the IOZ and on land owned or leased by the Roux Institute. In recognition that the Roux Institute is a graduate-level educational and research institution with a number of corporate partners, and in recognition of its location outside of the downtown, the uses in Table 8-E and many that are permitted in the underlying zone, such as multi-family housing, hotels, offices and retail, are ancillary to and support the vision and mission of the institution. In addition, ground floor retail, restaurant, or comparable community-oriented uses that provide services to local residents, students, faculty and staff shall be provided. Such uses are expressly permitted whether ancillary to or supporting the educational institution, and shall be open and welcoming to the general public in addition to students, faculty, staff, or visitors of the Roux Institute.

TABLE 8-E: PERMITTED USES

- Laboratory and research facilities
- Low-impact industrial (>10,000 SF)
- High-tech manufacturing

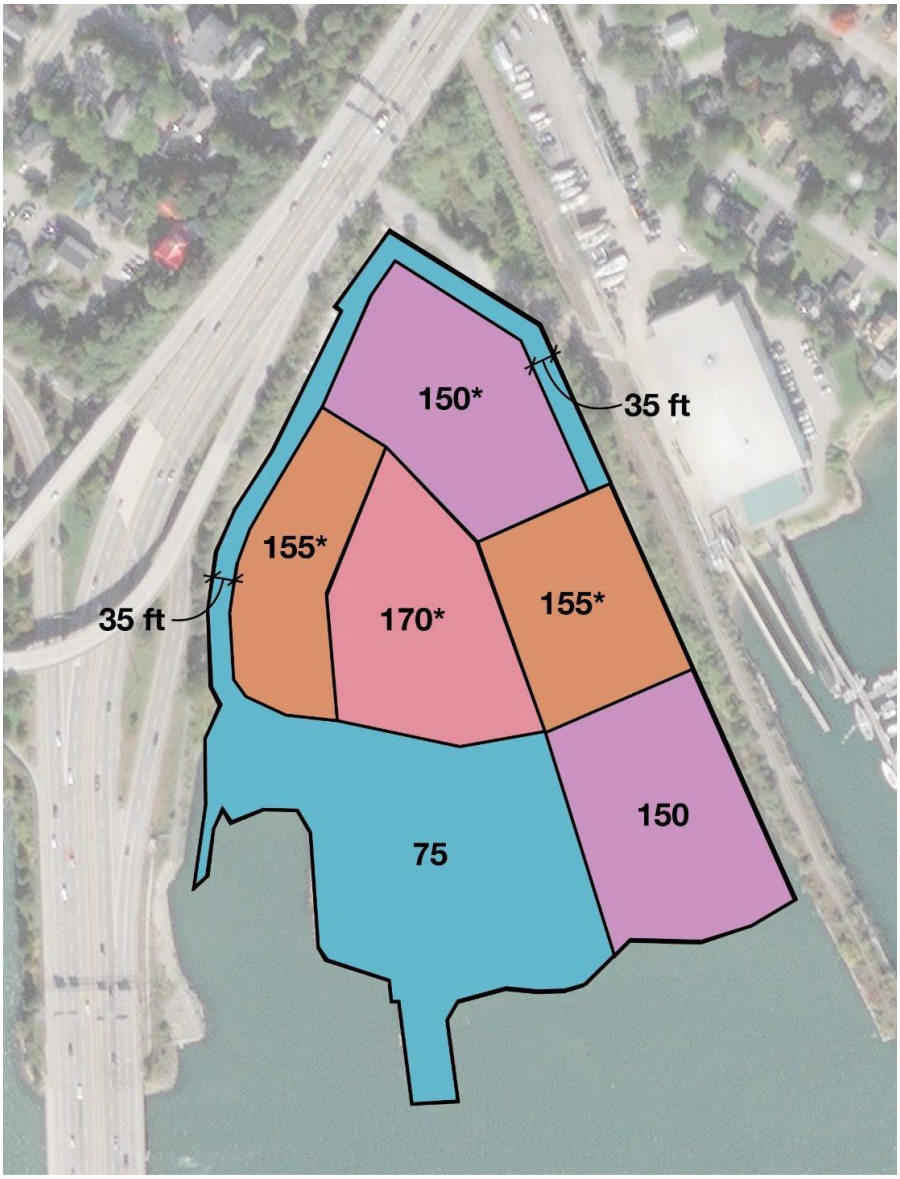
4. Within the boundary of the IOZ, hotels shall be limited as follows:
   a. No more than one hotel shall be located in the IOZ.
   b. The hotel shall contain no more than 130 rooms.
   c. The hotel shall be no more than eight stories in height, not including structured parking. There shall be no more than two levels of above grade structured parking beneath the first floor of the hotel. Nothing herein is intended to preclude the co-location of hotel use and structured parking on one or more levels of the hotel.

TABLE 8-F: DIMENSIONAL REQUIREMENTS

Building heights (max.)	Maximum building heights for new principal buildings in the IOZ shall be governed by the Roux IOZ Height Map (Figure 8-F)

D. Dimensional requirements

1. *Applicability.* All principal buildings and structures located within the IOZ and located on land owned or leased by the Roux Institute shall be subject to the dimensional requirements of the underlying zone, except where modified by the provisions of this section.
2. *Rules of measurement*
   a. Publicly accessible corridor: A corridor accessible to the general public that is open to the sky or enclosed with a minimum width of 20 feet. Enclosed portions of publicly accessible corridors shall have a minimum height of 30 feet.
   b. Street wall: Within the Roux IOZ the term "street wall" shall mean a wall or portion of a wall that includes the principal entry to a building facing a street, public right-of-way, major pedestrian access routes, or open spaces. Orientation of the principal entry to a building shall be determined by the applicant.
3. *Minimum and maximum street wall heights.* New principal buildings in the IOZ shall rise to a minimum street wall height of 45 feet and may rise to a maximum street wall height of 105 feet.
4. *Stepback requirements*. At a height not lower than the minimum street wall height or higher than the maximum street wall height, a stepback with a minimum depth of at least 10 feet shall be provided. Required stepbacks shall only apply to a building's street wall.
5. *Building length requirements*
   a. For buildings with a length greater than 250 feet, a continuous, publicly accessible corridor that connects two streets, public rights-of-way, major pedestrian access routes, or open spaces shall be provided, with the precise location to be identified, defined, and reviewed under site plan review. Building length shall be measured at grade in a straight line between the outer corners of the designated street wall.
   b. Publicly accessible corridors need not be linear and may have necessary grade changes.
   c. Any building wall situated along a publicly accessible corridor shall be designed to provide sufficient architectural and graphic amenities to provide visual interest, transparency between interior activities and pedestrian activity, or active uses and relate the building, and its use to passersby.
   d. Publicly accessible corridors shall:
      i. Include pedestrian amenities such as benches and other seating;
      ii. Be illuminated to levels that are adequate but not excessive for the safety, comfort, and conveniences of occupants and users of the site, and
      iii. Provide access to the public during regular operating hours of the institute.



Notes:

1. Applies to zones shown with an asterisk (*): above height of 75 feet, no building floorplate shall exceed 35,000 square feet.
2. Above height of 50 feet, no two buildings shall be closer than 40 feet apart.
3. Building heights for buildings that span two or more height zones shall be measured by calculating the highest point (as defined in the Land Use Code) of that portion of the building within a particular height zone. If the roof is sloped, height is measured at the midpoint of that portion of the slope located within the particular height zone.

FIGURE 8-F: HEIGHT OVERLAY MAP

e. The Roux Institute may close off public access to a publicly accessible corridor during special events or when determined necessary by the institute for security or public safety purposes.

6. *Transitions and buffers*
   a. The campus is surrounded by existing buffers, with I-295 to the west, state-owned vacant parcels to the north, the rail corridor and marine business to the east, and Casco Bay to the south. In addition to the existing buffers, development shall further ease the transition to and from the campus through the design methods in areas shown on Figure 8-G.
   b. Public open space will ease transition from the smaller scale of Sherwood Street. A transition onto the campus will also be accomplished through thoughtful façade design at the pedestrian level. Potential nuisance features like dumpsters, air handlers, and parking will be appropriately screened. Buildings will avoid blank walls to respect the adjacent neighborhood and facilitate a sense of permeability and welcome.
   c. The shoreline transition area between the buildings and the water will serve as meaningful public open space. Building facades facing the water will be considered public-facing, with views



FIGURE 8-G: TRANSITION AREAS AND BUFFERS

designed for interest from the water and Eastern Promenade Trail.

d. The transition area between the campus and I-295 contains a height limitation of 75 feet along the edge and between the highway and the B&M Cannery Building, preserving the historic view of the building from the highway and easing the transition to the greater allowable building heights in the center of campus.

e. The transition area along the edge of the campus adjacent to the rail corridor also contains a height limitation of 75 feet along the edge of the property closest to the residential neighborhood, further easing the transition to the greater allowable building heights at the center of campus, mitigating shadow impacts to adjacent properties.

E. Transportation

1. *Transportation demand management* (*TDM*)

a. At the time of the first site plan review following IDP approval, the developer shall submit a campus-wide TDM Plan substantially in accordance with those TDM objectives and strategies identified in the approved IDP. The TDM Plan may be phased into short-, mid-, and long term actions to allow for progressive implementation over time.

b. The TDM Plan shall be designed to provide transportation choice with the goal of reducing parking demand and single-occupancy vehicle trips to and from the Roux Institute campus by students, faculty, staff, institutional partners, and visitors.

c. The TDM Plan shall establish parking, mode share, and trip reduction targets associated with each phase of development, as well as a data collection plan.

d. Annual monitoring reports will be submitted for the TDM Plan. TDM monitoring reports shall include a summary of progress towards targets established in the TDM Plan. If deficiencies are identified, they will be resolved in accordance with the site plan approval.

2. *Traffic movement permit* (*TMP*)

a. Any development that will generate over 100 passenger car equivalents will trigger TMP review which will determine applicable mitigation for that development program. There are contributions anticipated to area-wide elements to support trip reduction targets, such as contribution to the development of shared use path infrastructure and support for additional transit service to the campus. The TMP review may consider an individual site plan or may cover more than one site plan. Each of the TMP submissions and review will continue to contemplate capacity for multimodal connections to continue to reduce automobile trips.

b. Mode shares and trip reduction targets have been identified in the IDP

and will be updated and modified with each TMP submission as necessary.

3. *Bicycle and pedestrian access and safety*
   a. A Transportation, Access, and Circulation Plan has been provided in the IDP. At the time of the first site plan review, the developer shall submit an updated Plan. Where possible, the bicycle and pedestrian access routes shall connect to established bicycle and/or pedestrian facilities. The developer shall look to establish new bicycle and pedestrian bicycle and/or pedestrian facilities where feasible.
   b. The site and building design shall not prohibit the enhancement of transit service to and from the site.
   c. Bicycle, pedestrian, transit, and motorized vehicular facilities proposed to and from the site shall provide sufficient capacity and allow for safe connections for modes of transportation.
   d. Sherwood Street shall be improved to accommodate bicycles and pedestrians within the existing right-of-way. Separate sidewalks and bicycle lanes shall be provided where feasible.
4. *Parking*. Parking requirements in the IOZ, including but not limited to parking ratios, shall be established at the time of site plan review for each phase of development based on a parking study that includes a campus-wide analysis of demand and supply. Parking studies shall integrate parking and trip reduction achievements and data contained in the TDM Plan. Parking requirements shall be determined in accordance with the requirements in the Land Use Code in effect at the time of site plan review.
5. *Circulation*
   a. The campus shall contain a bike and pedestrian circulation network which includes a perimeter access loop, an internal system of pathways and a major campus "promenade" which will link campus developments, the upland, and the waterfront.
   b. The perimeter access path for bicycle and pedestrians will serve to connect the campus to primary site entry points from the community and provide a continuous recreational loop. Where appropriate, the perimeter access path will be enhanced by wayfinding, lighting, landscaping, and safe crossings at vehicular intersections. Where possible, building facades will respond to the perimeter access path for views into the building and periodic activation to building entrances.
   c. Internal campus circulation pathways will connect major open spaces, buildings entrances, and outdoor plazas to create a network of multiple pathways including the perimeter access path. Pathways will be located along or oriented toward facades that have active programs, architectural articulation, appropriately scaled entrances, and windows. Pathways will avoid traveling along stretches of undifferentiated or blank facades back

doors or service areas. Pathways will be generally lower-velocity systems than the access loop. Where appropriate, the internal campus circulation pathways will be enhanced by wayfinding, lighting, landscaping, and safe crossings at vehicular intersections.

d. The campus promenade will serve as a major organizing feature connecting the upland and the water and providing access to open spaces, allowing views of the principal campus of buildings, and connecting to the internal campus circulation pathways and perimeter access path. The promenade will be enhanced by lighting, wayfinding, landscape buffers, and open spaces. Viewsheds and topography along the promenade will emphasize the Roux Institute and Burnham & Morrill (B&M) Cannery Building, pier, and other principal buildings and spaces.

F. Environment

1. The IOZ shall contain a minimum of three acres of public open space designed to enhance waterfront access and provide bicycle/pedestrian network connectivity. This open space requirement shall be met at the completion of construction of the first site plan approval and shall be maintained at all phases of development. The three acres need not be contiguous and may be provided in new and/or different locations following completion of development phases. The public open space shall be meaningful space, functioning as recreation areas, social gathering spaces, or natural buffers. The method of assuring public access to the public open space shall be determined at site plan review.
2. A Sustainability and Resilience Charter will be created by the Roux Institute for the campus. The charter shall contain sustainability goals related to development categories such as energy, water, transportation, equity, and resilience and may be revised over time in response to evolving technology and industry standards. The charter will require all development on the campus to utilize critical components of industry standard benchmarking systems such as LEED, SITES, WELL, ILFI, and Passive House. The charter will be submitted to the Planning Authority prior to submission of the first site plan application. Proposed site plans shall be consistent with the goals outlined in the charter.
3. Development shall utilize lighting designs required for safety and comfort and that minimize impact to the night sky in accordance with light pollution reduction standards in ANSI/ASHRAE/IESNA 90.1-2007 or its most current edition.
4. Development shall be carried out in such a way as to minimize the impacts of sea level rise, protecting infrastructure and site features by designing to a minimum of 2-feet above the Base Flood Elevation (BFE) as shown on the most current FEMA Flood Insurance Rate Map.
5. The shoreline edge and immediate adjacent upland shall be protected through

shoreline armoring and vegetation to prevent erosion and enhance natural resource protection. Work in coastal wetlands and significant wildlife habitats (as defined by the Maine Department of Environmental Protection) will be minimized to the maximum extent practicable and shall comply with all applicable local, state and federal permitting requirements in effect at the time.

6. Design of exterior building envelopes will be in developed in conjunction with the American Bird Conservancy and Cornell Ornithology Lab standards to mitigate bird strikes to the extent practicable.

G. Mitigation measures

1. Site plan impacts to off-premise infrastructure shall be mitigated in a manner proportionate to those impacts. Mitigation may include financial or in-kind contributions to existing or planned City projects focused on mitigating the impacts of the development. Mitigation contribution shall be determined based on the City's standard procedure in effect at the time of site plan review.
2. Impacts to natural resources shall be mitigated in accordance with local, state and federal permitting standards in effect at the time.

H. Design

1. *Introduction and intent.* New development in the IOZ shall adhere to the following design guidelines and the site plan standards of the City of Portland. All new development shall be designed to create a visual connection with the goal of achieving a cohesive campus appearance with a strong identity and sense of place. New development may be contemporary and forward looking in architectural style, but shall be informed by or responsive to the iconic B&M Cannery Building as an example of Portland's unique legacy of innovation, adaptation and durability. Reference to the Cannery Building specifically and in general to the early 20th century industrial factory building type may inform the architectural principles of highly functional yet articulated human-centered facades and details, a combination of local and innovative materials, use of natural daylighting, high degree of flexibility and scalability and capacity for long service life. New development shall be characterized by excellence in architectural design, craftsmanship, materials, streetscape, resilience, sustainability and landscape improvements, signage, and lighting appropriate for a campus development on a coastal site. These principles and standards are intended to regulate the future build out of the Roux Institute campus while ensuring that new development is sensitive to adjacent residential neighborhoods and commercial areas and successfully integrates the existing site into the public realm while establishing a global beacon for thought leadership in artificial intelligence, computer and data sciences, digital engineering, and advanced life sciences.
2. *Standards*
   a. Waterfront

i. The waterfront will be publicly accessible to provide a variety of open spaces throughout all phases of development that foster social interaction.
ii. New principal buildings on the waterfront shall include a publicly accessible entrance to interior public space, if provided, from the waterfront side and upland side of the building along an anticipated desire line. Said interior public space, if provided, may be closed to the public during special events, outside normal operation hours, and when necessary for security or public safety purposes.

b. Cohesive campus
   i. The overall composition and experience of the campus will be considered for cohesive identity from approaches along I-295 and views from the East Deering neighborhood.

c. Historic preservation
   i. Buildings, site development, circulation, and open space will respect the B&M Cannery Building, a designated historic landmark.

d. Connectivity
   i. Prioritize the bicycle and pedestrian circulation network on campus while providing connectivity for auto, public transit, service and emergency vehicles at each development phase.
   ii. Surface parking lots shall be located to the maximum extent practicable toward the rear or side of a building not occupied by a principal entry to a building facing a street, public right-of-way, major pedestrian access routes, open space, and/or the waterfront.

e. Open space
   i. Open space will be publicly accessible to provide multiple functions for recreation, social gathering, and buffers that integrate within the overall composition and experience of the campus at each development phase.

f. Sustainable practice
   i. Buildings and site development will incorporate sustainable technologies in building design, orientation, energy production, and sensitivity to natural resources at each development phase.

g. Resilience
   i. Buildings and site development will incorporate resilience strategies to account for flooding, severe weather events, and integration of publicly accessible spaces at each development phase.

h. Building design

i. Building façade materials will be of high quality, durable to the marine climate and contribute to an attractive public realm. The first 35 feet of building height shall complement the pedestrian character in materiality, transparency, and detailing.
ii. Rooftop appurtenances will be incorporated, screened, and set back from roof edges to reduce visual impact from the surrounding neighborhood.

i. Building entrances
i. Building entrances will include prominent facades and be oriented toward, located adjacent to, or accessible from rights-of-way, major pedestrian access routes, or open spaces.

j. Mitigation of impacts
i. Buildings and site development will endeavor to minimize potential negative impacts related to shadows, wind, noise, heat, glare, lighting, contaminants, and the environment.

I. Neighborhood integration

1. *Neighborhood engagement*
a. For the purposes of keeping surrounding residential areas apprised of its future development plans, and to address any neighborhood issues related to the operations of the Roux Institute campus, the Roux Institute shall adhere to the ongoing neighborhood engagement principles identified in the IDP.
b. Ongoing community engagement shall be conducted, including the continuation of neighborhood forums and maintenance of the Roux Institute campus website.
c. A Community Advisory Group shall be created for the purpose of sharing information on project development, planning, and seeking input. To the extent practicable, the group shall be comprised of representatives of interested groups such as the East Deering Neighborhood, East Deering Neighborhood Association, East Deering Neighborhood for Responsible Development, Front Street Area Neighborhood, a tenant representative from Portland Housing Authority's Washington Gardens and Front Street developments, recreation, parks and trails, including the Friends of Payson Park, from sustainability, rail, bicycle/pedestrian, public transit, Portland Harbor, Portland Public Schools, including a Presumpscot School parent, higher education, and the business community.
d. A designated community contact shall be engaged to be the point of contact for providing information to the neighborhood and receiving feedback.

2. *Construction management.* At the time of site plan review, Northeastern University shall submit a Construction Management Plan substantially in accordance with the construction management principles identified in the Institutional Development

Plan for review and approval by the Planning Authority.

J. Historic preservation

1. *Historic preservation review.* The B&M Cannery Building has been designated as a local historic landmark. The area of designation includes the B&M Cannery Building, as well as the area of the former Codfish Building and pier. The Historic Preservation Board's review of activity within the site of the former Codfish Building and pier is limited to review of any activity that would require a Certificate of Appropriateness that is proposed on a newly constructed pier. A Certificate of Appropriateness will not be required for the demolition of the Codfish Building or construction of a new pier and related infrastructure, including future alterations to the pier structure.
2. *Required interpretive elements.* Northeastern University shall include interpretive element(s) on top of or within the surface of the new pier that convey the history and significance of the Codfish Building. Prior to construction of said elements, the University shall submit the proposal to the Historic Preservation Board for its review and approval. The interpretive elements shall be designed in a manner that does not interfere with the use and functionality of the pier as a marine passenger facility and for water access by the Roux Institute and the public.
3. *100-foot review exemption.* The B&M Cannery Building is exempt from Subsection 14.6.4(E)(2) for review of development within 100 feet of a landmark.

8.6 ISLAND TRANSFER STATION OVERLAY

8.6.1 Purpose

The purpose of the Island Transfer Station Overlay Zone is to establish a location for a transfer station for municipal solid waste and municipal public works activities. This zone shall be established through a conditional rezoning process in order to ensure the imposition of appropriate conditions for the protection of neighboring properties.

8.6.2 Permitted uses

A. Municipal solid waste facilities, including compactors and storage bins, provided that the compactor shall be located within a fully enclosed structure.
B. Recycling facilities, provided that all recycling areas shall be buffered and screened from neighboring properties.
C. Municipal garages, material storage, and parking for vehicles.
D. Maintenance of municipal vehicles and equipment.
E. Minor wind energy systems co-located with public industrial or utility facilities, subject to the standards of Subsection 6.4.18.

8.6.3 Conditions

Requirements for setbacks and any operational limitations shall be established as part of the conditional rezoning process.

8.7 PEDESTRIAN ACTIVITIES DISTRICT (PAD) OVERLAY

The following restrictions shall apply in the Pedestrian Activities District (PAD) Overlay Zone,

which shall include street frontages as delineated on the PAD Overlay Zone map.

8.7.1 Permitted uses

A. At least 75% of the street level frontage of a building on a street located within the PAD Overlay Zone must be occupied, and, at minimum, the floor area to be occupied shall be 75% of the street level frontage multiplied by a 20 foot depth, by:
   1. Retail as permitted in the B-3 zone.
   2. General services.
   3. Hotels.
   4. Restaurants as permitted in the B-3 zone.
   5. Bars.
   6. Theaters and performance halls, provided that only ticket and refreshment sales, lobbies, lounges and entrances shall be located within this area.
   7. Cultural facilities.
   8. Governmental uses.
   9. Studios for artists and craftspeople including, but not limited to, carpenters, cabinetmakers, and silk screeners.
   10. Other uses where the applicant can demonstrate to the Building Authority that the proposed use will not differ substantially from a required ground floor retail use in its effect on the continuity of pedestrian-oriented use and that the proposal establishes a ground floor use that generates pedestrian interest and activity.

B. For those buildings which have frontage on more than one street located within the PAD overlay zone, the street level area of each such frontage shall meet the above requirements.

8.7.2 Conditional uses

Any use permitted in the B-3 and B-3b zone may be authorized as a conditional use subject to the floor area requirements of Subsection 8.7.1, provided that the Planning Authority shall be substituted for the Board of Appeals as the reviewing authority. Such uses shall meet the following conditions and standards:

A. The applicant can prove by competent evidence (including but not limited to reliable documentation of advertising, real estate brokerage efforts, and other sales mechanisms) that the space has been actively marketed, and, in the case of new construction, available for permitted uses in the PAD Overlay Zone for a period of six months and that it has been unable to market the space for a permitted use in accordance with Subsection 8.7.1.

B. The approval of any conditional use under this subsection shall be for the specific tenant proposed for the conditional use approval and shall not run with the space to subsequent tenants. A conditional use approval shall expire at the end of each tenant's use, and a new approval shall be required for new tenants. However, where a conditional use has been approved under this subsection and the term of the effected tenancy is five years or less, the tenant may sublet the area for the approved conditional use which approval may run with said lease but may not be extended without review by the Planning Authority.

C. The Planning Authority may impose reasonable conditions concerning the design, appearance, use, and extent of use of the space along the street frontage to ensure maximum pedestrian compatibility and interest.

D. Notwithstanding the above, the Planning Authority may authorize a reduction in the percentage of required ground floor pedestrian-oriented uses where the physical limitations of an existing building so require. Any such reduction shall be the least necessary to provide relief and shall include mitigating design factors.

E. The Planning Board shall adopt rules and regulations governing the Planning Authority's review of an applicant's marketing efforts under this subsection.

8.7.3 Prohibited uses

In no event shall any required retail frontage area be used for any of the following:

A. Storage.

B. Service entrances, including loading docks, dumpsters and compactors, except as provided in Subsection 8.7.4.

C. Food preparation areas, unless such preparation areas are visually oriented toward pedestrians on streets located within a PAD Overlay Zone.

8.7.4 Exceptions

For those buildings which have 40 feet or less of frontage on a street within the PAD Overlay Zone, the ground floor area requirements for permitted uses under Subsection 8.7.1 shall be reduced to 50% of the frontage where required to accommodate a service entrance. For buildings which have frontage on more than one street located within a PAD Overlay Zone, only one such frontage shall be permitted to reduce the required retail area to 50% of the frontage.

8.8 STREAM PROTECTION OVERLAY (S-P)

8.8.1 Purpose

The purpose of the Stream Protection Overlay Zone is to preserve and protect significant streams outside of the Shoreland Zone by providing a buffer from land development activities in order to conserve stream channel capacity and to minimize siltation and stream bank erosion.

8.8.2 Applicability

The Stream Protection Overlay Zone includes all land areas within 75 feet, horizontal distance, of the normal high-water line of a stream as shown on the City of Portland zoning map. These standards apply only to areas within the Stream Protection Overlay Zone. Streams within the Shoreland Zone are subject to the provisions of Article 11.

8.8.3 Development standards

A. **Minimum building setback from normal high-water line of stream:** 75 feet. Notwithstanding this requirement, when a lot is a lot of record under Subsection 4.3.1 or cannot otherwise meet the setback requirement of this subsection due to physical limitations of the site, the Planning Board may approve a reduction of the setback requirement for a principal structure to the least amount necessary to achieve a building dimension of 28 feet, provided that the setback is not reduced to less than 40 feet. Structures in existence on June 15, 1992 may be expanded once during the lifetime of the structure up to 25 feet toward a stream or tributary stream, provided that the setback is not reduced to less than forty 40 feet and the floor area or volume is not increased by more than 30%.

B. **Filling of material.** Filling of material within a Stream Protection Zone shall require site plan review under the provisions of Article 14.

C. **Minimum parking setback from normal high-water line of stream:** 75 feet. Notwithstanding this requirement, the Planning Board may reduce the parking setback where the required setback cannot be met to the least extent necessary, provided that such setback shall not be less than the setback of the principal structure from the stream.

8.9 UNIVERSITY OF SOUTHERN MAINE OVERLAY

8.9.1 Purpose

The intention of the University of Southern Maine Overlay Zone is to establish an overlay zone in which an existing university campus can be continued and reasonably expanded within defined boundaries, in addition to those uses permitted in the underlying zone or zones. The purpose of this section is to recognize the unique qualities of a university campus while at the same time protecting the value and integrity of established neighborhoods.

8.9.2 Location and applicability

The University of Southern Maine Overlay Zone is intended to encompass and define the University of Southern Maine campus west of Forest Avenue. Properties in the University of Southern Maine Overlay Zone shall continue to be governed by the regulations applicable to the underlying zone except as specifically modified by this section.

8.9.3 Permitted uses

A. In addition to the permitted uses allowed in the underlying zones and notwithstanding anything to the contrary in the use regulations for the underlying zones, post-secondary schools and university uses are permitted in the University of Southern Maine Overlay Zone, including, but not limited to:

1. Classrooms.
2. Laboratory and research facilities.
3. Student unions.
4. Dining halls.
5. Bookstores.
6. Auditoriums.
7. Concert and lecture halls.
8. Gymnasiums.
9. Libraries.
10. Outdoor use areas, such as “quads”, greens, parks, gardens, art installations, and other active and passive noncommercial recreation spaces.
11. Faculty and student housing.
12. Parking lots and garages.
13. Community meeting spaces.
14. Administrative and faculty offices.
15. Transportation facilities.
16. Maintenance facilities.
17. Utility buildings.
18. Student health services.
19. Daycare facilities, nursery schools and kindergartens operated in conjunction with university programs or serving students, faculty or employees of the university and their families, with associated outside play areas.
20. Other buildings, structures and uses customarily incidental to a university.

B. On lots fronting on Chamberlain Avenue and Exeter Street, university uses shall be limited to faculty housing, graduate student housing, faculty offices and administrative offices, and

buildings containing such uses shall be designed and maintained so as to complement the residential character of the street as required in Subsection 8.9.9

C. No change of use permit shall be required for any of the above uses in actual existence as of the date of enactment of the University of Southern Maine Overlay Zone.

8.9.4 Conditional uses

The following uses are permitted as provided in Section 6.5:

A. Minor wind energy systems, subject to the standards of Subsection 6.4.18.

8.9.5 Dimensional requirements

University buildings and structures shall be subject to the dimensional requirements of the underlying zone, except as follows:

A. **Minimum setbacks.** Minimum setbacks shall be the same as in the underlying zone, except as shown on the University Campus Overlay Setback Map, incorporated herein by reference. Side and rear setbacks shall not be required between buildings on contiguous lots owned by the university on the condition that such contiguous lots shall be considered merged and shall not be separately conveyed unless required setbacks in the underlying zones are provided.

B. **Maximum building height.** Maximum building height shall be the same as in the underlying zone, except as shown on the University Campus Overlay Height Map, incorporated herein by reference.

C. **Minimum building height.** All new freestanding buildings in height zone B and height zone C must be built to a height of at least 35 feet or designed and constructed so that they can be expanded to 35 feet or higher. As used in this paragraph, the term "new freestanding building" means any building which is not an addition to or expansion of a building which existed on the date of enactment of the University of Southern Maine Overlay Zone.

D. **Maximum impervious surface ratio**. A maximum of 66% of the total land area within the University of Southern Maine Overlay Zone, exclusive of public streets, shall be impervious.

E. **Maximum coverage by buildings**. 40% of the total land area within the University of Southern Maine Overlay Zone, exclusive of public streets, shall be covered by building footprint.

8.9.6 Parking

The amount of parking required for any university building or building addition shall be determined by the Planning Board during site plan review, based on an analysis of campus-wide parking demand and supply, pursuant to a comprehensive university parking management plan, and treating all contiguous land (including land on opposite sides of the street) owned by the university as one lot. In determining the amount of parking required for any university building, the Planning Board may take into account such factors as:

A. The availability of off-campus parking and shuttle transportation to and from such off-campus facilities.

B. The ratio of commuter students to resident students.

C. The use of centrally located on-campus parking facilities so situated that students, faculty, staff and visitors arriving on campus can reasonably

be expected to park in the central facilities and walk to their various on-campus destinations during the course of a school day.

D. Shared use of a single parking facility by two or more buildings when the peak parking demand period for such buildings do not overlap.

E. Development and implementation of a parking management plan which discourages on-street parking. On-street parking shall not be used to satisfy the university's parking demand.

F. Development and implementation of programs designed to reduce the number of automobiles parking on campus, such as ride share programs and incentives for use of bicycles and public transportation.

8.9.7 Loading

The amount of loading area required for any university building shall be determined by the Planning Board during site plan review, based on a campus-wide analysis, treating all contiguous lots owned by the university as one lot. In determining the amount of loading space required for any university building, the Planning Board may take into account such factors as:

A. The use of centrally located on-campus loading facilities so situated that vehicles making deliveries can load and unload in the central facilities, provided no single location is overburdened with loading facilities.

B. Shared use of a single loading facility by two or more buildings.

C. Impacts of the loading area on adjacent uses outside the University of Southern Maine Overlay Zone.

8.9.8 Signage

Signs shall comply with the requirements of Article 20, except as those regulations are modified or augmented below:

A. Signs shall be designed in accordance with signage standards promulgated by the university, providing for a unified and ADA-compliant campus-wide system for identification, orientation, and regulatory signage.

B. Banners are allowed as follows:

1. Generic banners containing the logo and colors of the university, used for decorative purposes.
2. Banners used for advertising university events, which can be displayed for a maximum of four weeks prior to and one week following the event.

8.9.9 Design principles and standards

All development in the University of Southern Maine Overlay Zone is subject to the requirements contained within the City of Portland *Design Manual*.

8.9.10 Campus housing

For any development requiring major site plan review, the university shall submit to the Planning Board a campus housing analysis. The analysis shall include a description of housing demand and supply at the time of the application, a projection of housing demand expected to arise from the proposed development and/or as a result of program changes anticipated to occur concurrently with the proposed development, and a description of how the university intends to meet any increased housing demand through on-campus housing, off-

campus housing developed by the university, and/or off-campus housing developed by others.

8.9.11 Required review for change of use, additions, and renovations

In the case of properties fronting Chamberlain Avenue, Exeter Street, and the northerly side of Bedford Street from Surrender Street to Deering Avenue, minor site plan review shall be required of all changes of use and all building additions and renovations affecting an area equivalent to 25% or more of the existing floor area of a structure, unless major site plan review is otherwise required under Article 14.

8.10 WAYNFLETE SCHOOL OVERLAY

8.10.1 Purpose

The intent of this section is to establish a Waynflete School Overlay Zone which protects the value and integrity of established residential neighborhoods, establishes clearly defined boundaries beyond which residential conversions cannot occur and results in no net loss of dwelling units, while allowing Waynflete School, an existing private day school, to continue and reasonably augment its existing uses and programs, thereby maintaining compatible development at medium densities appropriate to the existing neighborhood patterns. As used in this section, the term "Waynflete School" includes any successor institution that operates as a private day school.

8.10.2 Location and applicability

The Waynflete School Overlay Zone, as shown on the zoning map, is intended to encompass and define Waynflete School's principal campus on the Portland peninsula. Properties in the Waynflete School Overlay Zone shall continue to be governed by the regulations applicable to the underlying zone except as specifically modified by this section.

8.10.3 Subdistricts

The Waynflete School Overlay Zone consists of two subdistricts. Except where otherwise specified in this Section 8.10, all provisions of this Waynflete School Overlay Zone apply in both subdistricts. The subdistricts, as shown on the Waynflete School Overlay Zone subdistrict map, incorporated herein by reference, are as follows:

A. The Campus Core subdistrict defines the interior core of the campus and is intended to allow compact development of school uses, with specific space and bulk regulations designed to accommodate school uses.

B. The Campus Edge subdistrict is intended to preserve residential character along the streets bordering the campus by limiting the amount of residential space which can be converted to school uses, by maintaining a number of dwelling units within the subdistrict which equals the number of dwelling units existing in the subdistrict at the time of enactment of this Overlay Zone, and by encouraging mixed-use buildings along the street frontages. The space and bulk regulations of the R-4 zone continue to apply within the Campus Edge subdistrict.

8.10.4 Permitted uses

In addition to the permitted uses allowed in the underlying zones and notwithstanding anything to the contrary in the use regulations for the underlying zones, the following uses are permitted in the Waynflete School Overlay Zone:

A. **School uses.** Elementary, middle and secondary school uses including, but not limited to, the following:

1. Classrooms.
2. Laboratory facilities.
3. Dining halls.
4. Auditoriums.
5. Concert and lecture halls.
6. Gymnasiums.
7. Libraries.
8. Outdoor use areas, such as "quads", greens, parks, gardens, art installations, and other active and passive recreation spaces.
9. Parking lots and structures.
10. Community meeting spaces.
11. Administrative and faculty offices.
12. Transportation facilities.
13. Maintenance facilities.
14. Utility buildings.
15. Student health services.
16. Bookstores.
17. Accessory uses which are customarily incidental and subordinate to the location, function and operation of a private day school.

B. **Residential uses.** Faculty or staff housing, which shall be considered a residential use, and not a school use, for all purposes under this overlay zone.

8.10.5 Prohibited uses

A. Boarding schools.

B. Dormitories.

8.10.6 Residential conversions prohibited

A. Conversions of existing residential buildings within the Waynflete School Overlay zone shall be prohibited.

B. The existing houses at 11 Fletcher Street, 3 Storer Street, 305 Danforth Street, and 299 Danforth Street shall not be relocated from their locations existing as of January 20, 2010. This provision shall not apply to garages.

C. At no time shall the number of dwelling units within the Waynflete School Overlay Zone be reduced below four (the number existing at the time of enactment of this Overlay Zone).

8.10.7 Dimensional requirements

Buildings and structures in the Waynflete School Overlay Zone shall be subject to the applicable dimensional requirements of the underlying zones, except as follows:

A. Minimum setbacks shall be the same as in the underlying zone, except that side and rear setbacks shall not be required between buildings on contiguous lots owned or occupied by Waynflete School on the condition that such contiguous lots shall be considered merged and shall not be separately conveyed unless required yard dimensions in the underlying zones are provided.

B. Minimum street frontage shall be the same as in the underlying zone, except that all the land within the Waynflete School Overlay Zone owned or occupied by Waynflete School shall be considered a single lot for the purpose of complying with minimum street frontage.

C. Maximum coverage by buildings shall be the same as in the underlying zone, except that in the Campus Core subdistrict the maximum coverage by buildings shall be 40% and all the land within the Campus Core subdistrict owned or occupied by Waynflete School shall be considered a single lot for the purpose of calculating maximum coverage by buildings.

8.10.8 Parking

The amount of parking required for any change of use, new building, or building addition within the zone shall be determined during site plan review, based on an analysis of school-wide demand and supply, pursuant to a comprehensive school-wide Transportation Demand Management Plan (TDM), and treating all land owned by Waynflete School within the Waynflete School Overlay Zone as one lot. Any existing parking management or TDM plan approved as part of a previous approval shall remain in effect until revised or updated pursuant to this section. In determining the amount of parking required for any building within the Waynflete School Overlay Zone, the Planning Authority or the Planning Board may take into account such factors as:

A. The use of centrally located on-campus parking facilities so situated that students, faculty, staff and visitors arriving on campus can reasonably be expected to park in the central facilities and walk to their various on-campus destinations during the course of a school day.
B. Shared use of a single parking facility by two or more buildings when the peak parking demand periods for such buildings do not overlap.
C. Development and implementation of a parking management plan which discourages on-street parking.
D. Development and implementation of a TDM plan subject to the review and approval of the Planning Authority or the Planning Board. The TDM plan shall employee elements such as public transit initiatives, parking cash-out, car sharing, car and van pooling incentives, provision of bicycle and pedestrian commuting accommodations, guaranteed ride home programs, employee surveys, newsletters, alternative transportation information sharing, and other such strategies that reduce single occupancy vehicle trips to and from Waynflete school. Waynflete School shall follow the standards and guidelines for developing a TDM plan found in the TDM section of the City of Portland *Technical Manual*.

8.10.9 Loading

The amount of loading area required for any building within the Waynflete School Overlay Zone shall be determined by the Planning Board during site plan review, based on a campus-wide analysis, treating all land owned by Waynflete School within the Waynflete School Overlay Zone as one lot. In determining the amount of loading space required for any building within the Waynflete School Overlay zone, the Planning Board may take into account such factors as:

A. The use of centrally located on-campus loading facilities so situated that vehicles making deliveries can load and unload in central facilities, provided no single location is overburdened with loading facilities.
B. Shared use of a single loading facility by two or more buildings.
C. Impacts of the loading area on adjacent uses outside the Waynflete School Overlay Zone.

8.10.10 Signage

Signs shall comply with the requirements of Article 20.

8.10.11 Restrictions

Notwithstanding the conditional use provisions for institutional uses within the R-4 or R-6 zones, Waynflete School cannot locate a school use listed in Subsection 8.10.4 on any lot in the R-4 or R-6



zones outside the boundaries of the Waynflete School Overlay Zone that was occupied by a residential use or structure on or after January 20, 2010. This restriction does not prevent Waynflete School from seeking a conditional use permit for a school use, where otherwise allowed by the zoning regulations, on lots outside the Waynflete School Overlay Zone that were not occupied by a residential use or structure on or after January 20, 2010.

9 FORM-BASED ZONES

9.1 INDIA STREET FORM-BASED ZONE

9.1.1 Purpose

The India Street Form-Based Code is different than traditional zoning, placing the primary emphasis on a building's physical form and its relationship to the street, and de-emphasizing land use. The intent of the India Street Form-Based Code Zone is to establish a zone that encourages a vibrant, walkable, mixed-use urban district, preserves and values the existing historic neighborhood fabric, and fosters and supports local businesses and residential areas. The goal of the India Street Form-Based Code is the creation and preservation of an active and human-scale public realm and the reinforcement of existing neighborhood character through good street space design. The components of the form-based code include the guiding principles, Regulating Plan, subdistricts, general development standards, dimensional requirements, building design standards, diagrams, and definitions.

9.1.2 General guiding principles

The general guiding principles set forth here shall be applicable to all subdistricts within the India Street Form-Based Code Zone:

A. The street is a coherent space, with consistent building and streetscape character on both sides of the street. This agreement of buildings and streetscape across the street contributes to a clear public space and district identity.

B. The street wall is visually well defined. Land should be clearly public or private. Buildings contribute to the vital and safe public space while providing a clear boundary to the private, protected realm.

C. Street walls are engaged with the street environment. Buildings are inviting places that interact with and contribute to the street vitality. Inactive edges, vehicle storage, garbage, and mechanical equipment should be kept away from the street. Shared infrastructure, to the extent practicable, including, but not limited to, service alleys, parking areas, stormwater treatment, public transportation facilities, and driveways, shall be utilized.

D. Buildings are designed for the urban environment. Buildings must be designed for the urban situation within the subdistrict which often includes mixed-uses. Buildings are positioned near the street and facades are oriented to the street.

E. Respect historic character. If a property is within the India Street Historic District, Article 17 is applicable. New construction, building additions, or alterations in the India Street Historic District shall reflect and complement the character-defining features and elements of the existing historic development to which it is visually related.

9.1.3 Applicability

A. The requirements set forth in this Section 9.1 shall apply to all new development, primary and accessory structures, including building additions within the India Street Form-Based Code Zone as designated on the India Street Regulating Plan.

B. A partial waiver of the requirements listed below may be granted if it can be demonstrated to the satisfaction of the

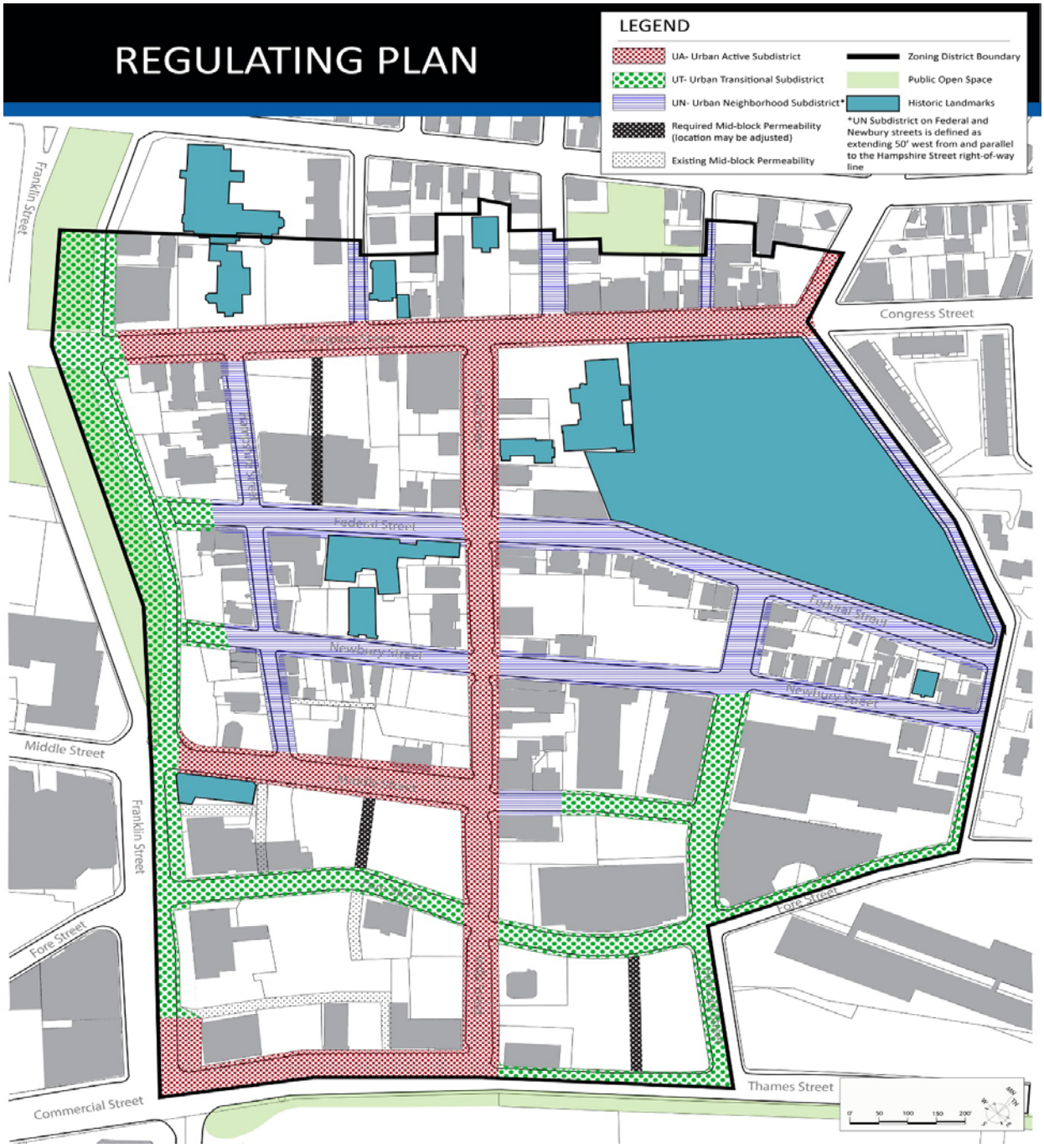


FIGURE 9-A: IS-FBC REGULATING PLAN

Planning Authority that the requirements in Subsection 9.1.3(C) below have been met:

1. Building orientation.
2. Blank façade length (max.).
3. Fenestration, ground floor facade area.
4. Building entry frequency, orientation, or elevation.
5. Garage door setback or width.
6. Additional building length – ground floor partition or module requirements.

C. A partial waiver request must meet the following requirements:

1. The intent of the IS-FBC zone as stated in Subsections 9.1.1 and 9.1.8.
2. Be the least adjustment necessary to satisfy the practical, programmatic, or functional needs of the proposed development.
3. At least one of the following applies:
   a. The proposed zoning alternative better achieves the zone and subdistrict intent.
   b. The zone or subdistrict intent will not be met by applying the requirement in this particular circumstance.
   c. There is a legal or practical necessity or unique conditions.
   d. Unique site factors make the zoning requirement impractical or cost prohibitive.

9.1.4 Establishment of subdistricts

The India Street Form-Based Code Zone as shown on the Regulating Plan is divided into three subdistricts:

A. Urban Neighborhood (UN) Subdistrict.
B. Urban Transitional (UT) Subdistrict.
C. Urban Active (UA) Subdistrict.

9.1.5 Regulating Plan

The Regulating Plan shows the location of the zone boundary and subdistricts subject to regulation by the IS-FBC zone.

9.1.6 Definitions

Terms used throughout this India Street Form-Based Code Zone may be defined in Article 3 or in Article 7. Terms not so defined shall be accorded their commonly accepted meanings. In the event of any conflict between the definitions in this section and those in Article 3, Article 7, or any other local land use ordinances, rules, or regulations, those of this India Street Form-Based Code Zone shall take precedence. For reference, terms are illustrated in Figure 9-B.

Building, accessory. A detached structure that is incidental and subordinate in area and extent, and/or use to the principal building(s) on the property. A lot may have more than one accessory building.

Building addition. Any increase to footprint or volume of an existing structure.

Building, principal. The main structure(s) on a lot having the predominant area and extent, and/or use. A lot may have more than one principal building.

Buildings, attached. Two or more independent buildings that share at least one common party wall but have full building separation and independent principal entries; not free-standing. Attached buildings may or may not have common ownership.

Building Design Standard (BDS). The basic design parameters governing building form, including

intent, guidelines, and standards for architectural elements such as proportion, articulation, fenestration, entries, roof lines, and materials.

Elevation. An exterior wall of a building not along a frontage line.

Entrance, principal. The main point of access for pedestrians into a building. A building may have more than one principal entrance.

Façade. Any exterior wall of a structure exposed to public view from a public right-of-way.

Façade, blank. A building façade that contains expanses of wall area with no windows, no entrances, no articulation, and no other elements or features, or is otherwise undifferentiated.

Green roof. A roof of a building that is partially or completely covered with vegetation and designed to meet the Maine Stormwater Best Management Practices Manual standards and recommendations. A green roof installation must serve the purpose of reducing stormwater runoff through retention or slowing and consist of an assembly that at a minimum includes a root repellent system, a drainage system, a filtering layer, a growing medium and plants, and shall be installed on a waterproof membrane. The vegetated area of a green roof may be considered pervious for zoning impervious calculations.

Mid-block permeability. A continuous, open-air corridor at least 20' in width that connects two streets or public rights-of-way and physically provides a break in the street wall. The corridor must be unobstructed and open to the sky for the majority of its length.

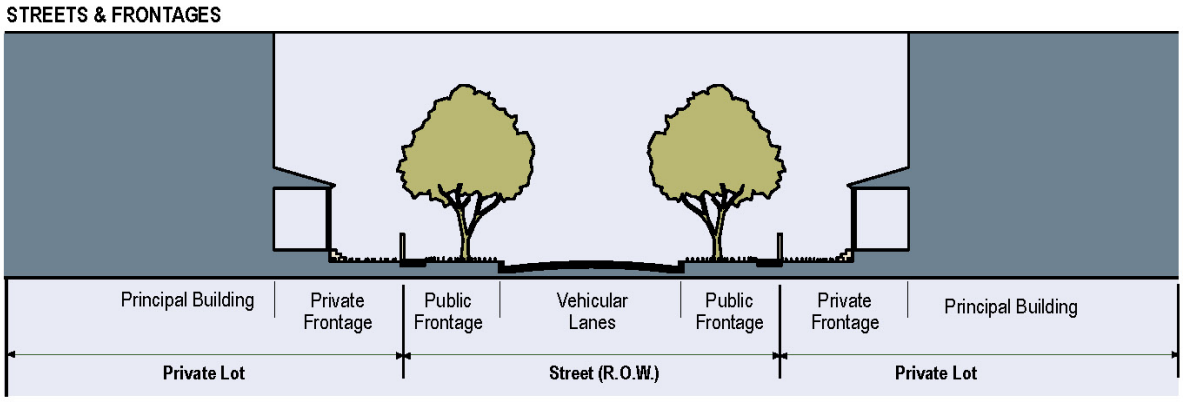
Party wall. Any partition wall common to two adjacent or attached buildings.

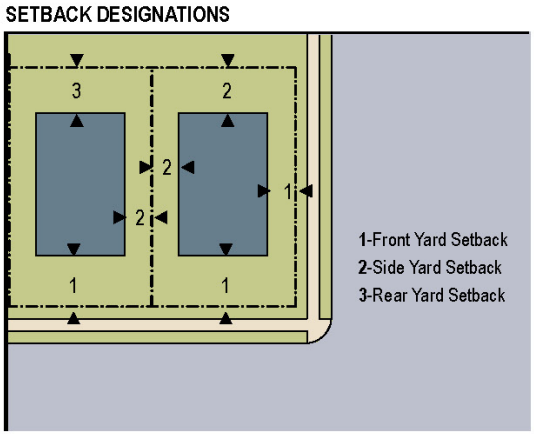
Regulating plan. A zoning map that shows the boundary of the area and subdistricts subject to regulation by the India Street Form-Based Code.

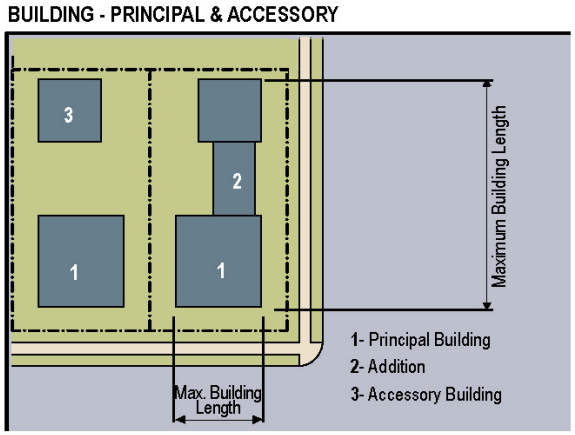
Stepback. A building setback of a specified distance measured from the ground floor building face that occurs at a prescribed number of stories or height above the ground and excludes the minimum necessary housing of elevators, stairways, tanks, fans, or other building operating equipment not intended for human occupancy.

Yard, side. A yard adjoining a side lot line extending from the front yard to the rear yard, the width of which shall be the shortest horizontal distance between the side lot line and any structure. On corner lots, non-frontage yards shall be considered side yards.

Zero lot line. The location of a structure on a lot such that one or more of the structure sides rests directly on a lot line.







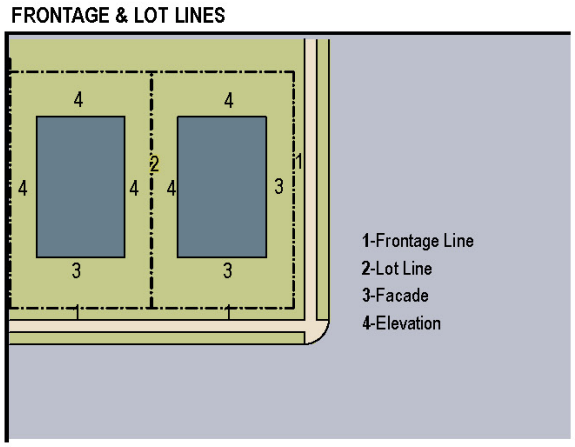


FIGURE 9-B: IS-FBC TERMS ILLUSTRATED

A. Prohibited uses

1. Correctional pre-release facilities.
2. Funeral homes.
3. Drive-through facilities.
4. High-impact industrial uses.
5. Auto service stations.
6. Truck terminals.
7. Recycling and solid waste disposal services.
8. Storage and parking facilities for Class 1 flammable and combustible liquids (having an aggregate total of more than 100 gallons) but excluding storage that is part of a motorized vehicle or pleasure craft facility.

B. Siting standards

1. *Mid-block permeability*
   a. On lots with frontage on two streets roughly parallel to Commercial/Thames Street, for each and every 200 feet in street line length of lot, a full break between structures of at least 20 feet in width shall be provided roughly perpendicular to Commercial/Thames Street and within the middle third of the applicable street frontage. (See Figure 9-G.)
   b. Is encouraged in any location that connects existing public or private alleys, passages, or streets.
   c. Any development providing mid-block permeability with public access between two streets is eligible for one additional story of up to 12 feet in height under the provisions of Subsection 9.1.7(C). Public access shall be defined through a legal agreement such as an easement or license.
   d. Refer to Regulating Plan for identified required mid-block permeability locations.
2. *Frontage requirements*
   a. Minimum street frontage: 30 feet
   b. Building length measurement shall not include porches, decks, or balconies that are appended to the principal structure.
   c. In the case of a corner lot or lot bounded by at least three streets, maximum building lengths may not be exceeded in order to meet front yard setbacks.
   d. Additional building length is allowed beyond the maximum building length under the following circumstances and according to Table 9-A:

TABLE 9-A: ADDITIONAL BUILDING LENGTH

Subdistrict	Attached Buildings	Ground Floor Partitions	Massing Variation	Structured Parking Exception
UN	unlimited run	Not allowed	Not allowed	Not allowed
UT	unlimited run	200 ft. max. length; 2 modules	200 ft. max. length	200 ft. max. length
UA	unlimited run	150 ft. max. length; 3 modules	Not allowed	150 ft. max. length

i. Attached buildings: An unlimited number of attached buildings having up to 30 feet of street-facing building length is allowed. A party wall condition is required at least every 30 feet and for the entire height of each building. (See Table 9-A Additional Building Length – Attached Buildings.)

ii. Ground floor partitions: Additional building length is permitted with the provision of ground floor partitions where the following conditions are met. (See Table 9-A Additional Building Length – Ground Floor Partitions.):

a) Partitions must extend from the facade at least 2/3rds of the building depth.

b) Partitions must be architecturally expressed on the building exterior.

c) Each module created by partition must have at least one functional, street-facing entry.

d) Modules created by partition shall be sized to have reasonable function and proportion in relation to overall building length.

e) In the UA subdistrict, number of modules are required based on building length. In a building with a length greater than 50 feet but less than 100 feet, at least two modules are required. In a building with a length greater than 100 feet but less than or equal to 150 feet, at least three modules are required.

f) Massing Variation: Additional building length is permitted where at least 30% and up to 40% of the total façade building length is set back at least 20 feet. (See Table 9-A Additional Building Length – Massing Variation.)

g) Structured Parking Exception: Additional building length for one facade without partition walls is allowed for the use of ground-level structured parking.

3. *Setbacks*

a. Lots with a street frontage of less than 35 feet are exempt from providing side yards but only where required yard is perpendicular to the frontage that is less than 35 feet.

b. Where new construction or building additions create a side yard of less than five feet, a maintenance easement is required where a combination of the side yard and

easement must be at least five feet. Party wall conditions are exempt from providing a maintenance easement. Corner lots may only apply the side yard reduction to one required side yard.

c. Building facades within 10 feet of a corner are exempt from setback requirements in order to allow special corner architectural treatments.

d. Subdivision developments consisting of horizontally attached buildings on individual lots are not required to have side yards between buildings where a party wall condition will exist, but shall be required to meet the applicable side setbacks at the external and internal subdivision lot boundaries between buildings that are not attached to each other.

4. *Landscaping and screening*

a. Surface parking areas shall be screened from view from sidewalks, public rights-of-way, and public open spaces using landscaping, walls, fencing, or a combination thereof.

b. Walls and fences shall meet the dimensional requirements in Table 9-B.

TABLE 9-B: WALL/FENCE DIMENSIONAL REQUIREMENTS

Location	Height	Visual Permeability
Within front yard	6 ft. max.	Required above 2 ft. from sidewalk grade
Side or rear yard	8 ft. max.	n/a

5. *Building additions*

a. Building additions which exceed the footprint of the existing building to which it is an addition or which exceeds 50,000 square feet shall be subject to major site plan review.

b. Exemptions

i. A building addition may not cause the building to exceed the maximum building length requirement except in the case that the building addition is located between a street frontage and an existing building with a legally non-conforming length. In such an instance, a building addition length may match but not exceed the legally non-conforming length of the existing building to which it is an addition. (See Figure 9-G.)

ii. Building additions are exempt from story minimums or maximums in order to match existing building in number of stories. All other subdistrict height standards shall apply including height minimum and maximums in feet.

TABLE 9-C: HEIGHT BONUSES

Subdistrict	Pre-Bonus Height (max.)	Mid-Block Permeability[1]	Residential Density	Green Roof	Affordable Housing	Height With Bonus (max.)	Bonus Floor Stepback[2] (min.)
UN	45 ft. and 4 stories	n/a	n/a	n/a	1 story up to 12 ft.	57 ft. up to 5 stories	15 ft.
UT	65 ft. and 6 stories	1 story up to 12 ft.	1 story up to 12 ft.	1 story up to 12 ft.	1 story up to 12 ft.	77 ft. up to 7 stories	15 ft.
UA (Congress Street and Commercial Street only)	50 ft. and 4 stories	1 story up to 12 ft.	1 story up to 12 ft.	1 story up to 12 ft.	1 story up to 12 ft.	62 ft. up to 5 stories	15 ft.

[1] Must be publicly accessible.
[2] Measured from the ground floor building edge facing any public right-of-way.

C. Height standards

1. *Height bonus applicability*
   a. If a frontage faces a UT street, UN street, or allowed UA street according to Table 9-C, then the portion of the building facing that street is eligible for a height bonus. For lots with multiple frontages where a frontage faces an ineligible street, bonus story must be stepped back at least 35 feet from ineligible street line. (See Subsection 9.1.8(D).)
   b. Only one height bonus may be applied per structure.
2. One additional story of up to 12 feet in height is allowed if one of the following provisions is met:
   a. For residential development with residential density equal to or greater than 150 dwelling units per acre (density may be achieved with the bonus floor).
   b. For any development providing a green roof, where:
      i. At least 50% of the cumulative lot area is pervious.
      ii. At least 50% of the cumulative roof area is a green roof. Green roof area may be applied towards the 50% lot area requirement.
   c. For residential development where 20% of the units meet the definition of either "Workforce Housing Unit for Sale" or "Low-income Housing Unit for Rent" as per Article 3.

D. Parking standards

1. Parking shall be provided as per Article 19.
2. Structured parking must meet the Building Design Standard for structured parking. (See City of Portland *Design Manual.*)
3. In the case of a building addition, non-conforming existing surface parking may remain. In the case of new construction, surface parking must be brought into conformance with IS-FBC standards.

9.1.8 Subdistrict dimensional requirements

A. Urban Neighborhood (UN) subdistrict

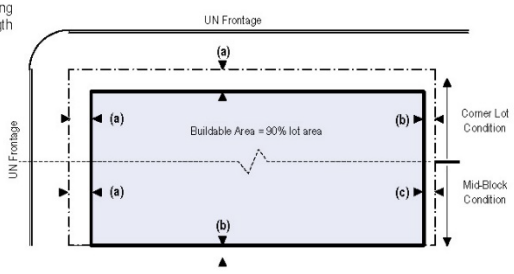
The intent of this subdistrict is to maintain and promote a small-scale, less active urban fabric. Buildings may be more private in character and have smaller footprints with building types including, but not limited to, single-family, rowhouses, duplexes, triple-deckers, and double-triples. Building frontages may be less transparent and entries may be raised above sidewalk level with frontage types including raised, recessed doorways, porches, and stoops. The streetscape has variable setbacks and landscaping with many buildings within one block and streets tend to be narrow.

SITING STANDARDS	
Orientation - Principal Frontage	determined by applicant
Lot Coverage	90% max
FRONTAGE REQUIREMENTS	
Building Length - Principal facade	50' max.
Building Length - Secondary fac.	50' max.
BLANK FACADE length (max)	15'
Additional Building Length	(see also Table 9-A)
ATTACHED BUILDINGS	unlimited run
Ground Floor Partitions	not allowed
Massing Variation	not allowed
Structured Parking Exception	not allowed
SETBACKS	
Principal Building	
(a) Front Yard	5' max.
Setback Applicability (see Figure 9-G)	75% of total building length must meet front yard setback
(b) Side Yard*	5' min. - May be reduced provided that the cumulative side yards are not less than 10'
(c) Rear Yard	10' min.
Accessory Building Front Yard	5' min.
Side Yard	5' min.
Rear Yard	5' min.
BUILDING ENTRIES (SEE ALSO BDS)	
Frequency at frontage	at least 35'
Principal Entries	
Orientation	any orientation allowed
Elevated Stoop (> 1 step)	allowed
HEIGHT STANDARDS	
Principal Building	
Building Height Min.	25', at least 2 stories
Building Height Max.	45', up to 4 stories
Accessory Building	
Building Height Max.	25'
PARKING STANDARDS	
Surface Parking Location	35' min. setback from street
Within Side Yard	20' max in width per lot; may not exceed 50% of frontage length
Garage at frontage (attached or detached)	
Garage Door Setback (min)	5'
Garage Door Opening (max)	9' up to 40% of facade length
	20' max. limit
Notes and Exceptions	

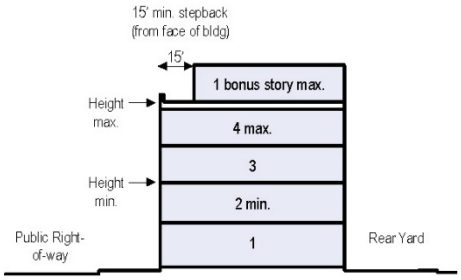
* Reduced side yards and zero lot lines are allowed under certain conditions (see Subsection 9.1.7(B)(3) Setbacks)

UN

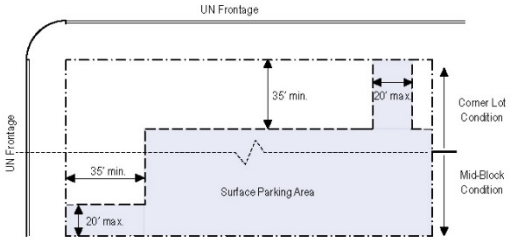
SITING STANDARDS
1. The FACADES and ELEVATIONS of Principal Buildings shall be distanced from the lot lines as shown.
2. FACADES shall be built along the frontage lines to the length specified in the table.



HEIGHT STANDARDS
1. Height shall be measured as specified in Article 7.
2. Number of stories excludes attics and raised basements.



PARKING STANDARDS
1. Surface parking areas may be provided within the shaded area shown.



B. Urban Transitional (UT) subdistrict

The intent of this subdistrict is to encourage higher density, mixed-use building types that accommodate any use. Building frontages are a mix of activity level, have larger footprints, and the most flexibility of height and scale. Building ground floor spaces tend to accommodate flexible and changing uses with frontage types including doorways, forecourts, arcades, and storefronts. The streetscape may be less active than the UA subdistrict with wide sidewalks, street trees, and setbacks and stepbacks providing relief from large building masses.

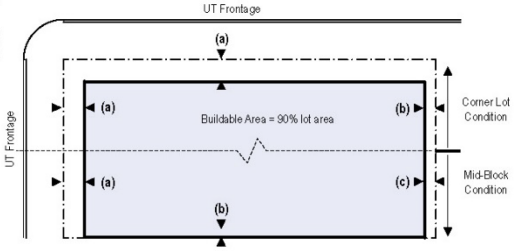
SITING STANDARDS	
Orientation - Principal Frontage	determined by applicant
Lot Coverage	90% max
FRONTAGE REQUIREMENTS	
Building Length	100' max.
BLANK FACADE length (max)	30'
Additional Building Length	(see also Table 9-A)
ATTACHED BUILDINGS	unlimited run
Ground Floor Partitions	200' max., 2 modules
Massing Variation	200' max.
Structured Parking Exception	200' max.
SETBACKS	
Principal Building	
(a) Front Yard	10' max.
Setback Applicability (see Figure 9-G)	75% of total building length must meet front yard setback
(b) Side Yard*	10' min. - May be reduced provided that the cumulative side yards are not less than 20'
(c) Rear Yard	10' min.
(d) STEPBACK (adjacent to UN)	10' min. stepback after 45' height
Accessory Building Front Yard	5' min.
Side Yard	5' min.
Rear Yard	5' min.
BUILDING ENTRIES (SEE ALSO BDS)	
Frequency at frontage	at least 95'
Principal Entries	
Orientation	any allowed
Elevated Stoop (>1 step)	allowed
HEIGHT STANDARDS	
Principal Building	
Building Height Min.	3 stories
Building Height Max.	65', up to 6 stories
Ground Story Height	n/a
Accessory Building	
Building Height Max.	25'
PARKING STANDARDS	
Surface Parking Location	35' min. setback from street
Garage at frontage (attached or detached)	
Garage Door Setback (min)	10'
Garage Door Opening (max)	9' up to 40% of facade length
	20' max. limit
Notes and Exceptions	

* Reduced side yards and zero lot lines are allowed under certain conditions (see Subsection 9.1.7(B)(3) Setbacks)

UT

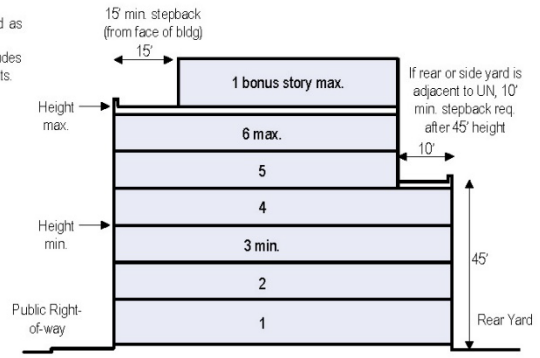
SITING STANDARDS

1. The FACADES and ELEVATIONS of Principal Structures shall be distanced from the lot lines as shown.
2. FACADES shall be built along the frontage lines to the length specified in the table.



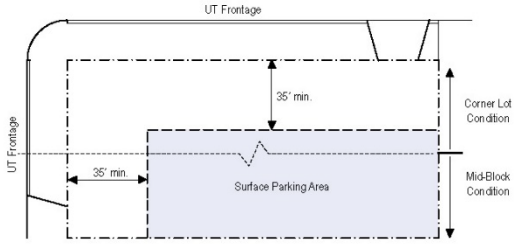
HEIGHT STANDARDS

1. Height shall be measured as specified in Article 7.
2. Number of stories excludes attics and raised basements.



PARKING STANDARDS

1. Surface parking areas may be provided within the shaded area as shown.



C. Urban Active (UA) subdistrict

The intent of this subdistrict is to maintain and promote a moderate-scale, diverse, mixed-use neighborhood with vibrant streets and active ground floor spaces. Buildings are more active and engage the street at the ground level. Building frontages are transparent and entries are at sidewalk level with frontage types including storefronts and recessed doorways. The streetscape has steady street planting, and buildings set close to the street providing a consistent street wall.

UA

SITING STANDARDS

Orientation - Principal Frontage	face a UA street
Lot Coverage	90% max

FRONTAGE REQUIREMENTS

Building Length	50' max.
BLANK FACADE length (max)	15'
Additional Building Length	(see also Table 9-A)
ATTACHED BUILDINGS	unlimited run
Ground Floor Partitions	150' max., up to 3 modules
Massing Variation	not allowed
Structured Parking Exception	150' max.
Fenestration, ground floor	60-90% (see BDS) facade area

SETBACKS

Principal Building	
(a) Front Yard*	5' max.
Setback Applicability (see Figure 9-G)	75% of total building length must meet front yard setback
(b) Side Yard**	5' min. - May be reduced provided that the cumulative side yards are not less than 10'
(c) Rear Yard	10' min.
Accessory Building Front Yard	5' min.
Side Yard	5' min.
Rear Yard	5' min.

BUILDING ENTRIES (SEE ALSO BDS)

Frequency at frontage	at least 40'
Principal Entries	
Orientation	at least 1 facing UA street or corner
Elevated Stoop (>1 step)	not allowed

HEIGHT STANDARDS

Principal Building	
Building Height Min.	3 stories
Building Height Max.	50', up to 4 stories
Accessory Building	
Building Height Max.	25'

PARKING STANDARDS

Surface Parking Location	35' from street
Garage at frontage (attached or detached)	
Garage Door Setback	20' min. from street
Garage Door Opening (max)	n/a

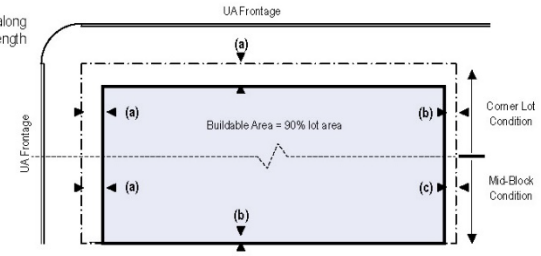
Notes and Exceptions

* Up to 10'0" max. front yard setback is allowed if ground plane at frontage is a continuation of the accessible public right-of-way

** Reduced side yards and zero lot lines are allowed under certain conditions (see Subsection 9.1.7(B)(3) Setbacks)

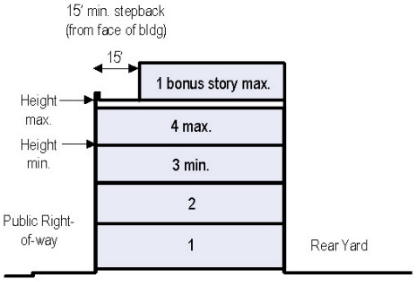
SITING STANDARDS

1. The FACADES and ELEVATIONS of Principal Buildings shall be distanced from the lot lines as shown.
2. FACADES shall be built along the frontage lines to the length specified in the table.



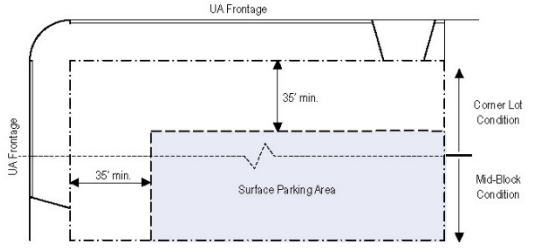
HEIGHT STANDARDS

1. Height shall be measured as specified in Article 7.
2. Number of stories excludes attics and raised basements.



PARKING STANDARDS

1. Surface parking areas may be provided within the shaded area as shown.



D. Corner conditions

For corner lots where two subdistricts intersect at a street corner, the dimensional requirements and building design standards of the "dominant" subdistrict shall apply 35 feet deep into the lot measured from the dominant lot line along its associated street frontage or public ways including required mid-block permeability. Otherwise, dimensional requirements shall be according to the subdistrict onto which the building façade faces.

ORIENTATION

- Corner lots shall be treated as having street frontage on all streets regardless of building orientation
- Principal Building shall designate a Principal Frontage and Secondary Frontage*
- In the case of a corner lot having UA frontage, the Principal Frontage must face a UA street*

SETBACKS

(a) Front Yard (1st Lot Layer)	according to subdistrict
(b) Side Yard	according to subdistrict

Building facades within 10' of a corner are exempt from setback requirements in order to allow special architectural treatments.

UA INTERSECTS UT

Dominant Subdistrict (35' deep)	UA
Orientation - Principal Frontage	UA street
Dominant Building Design Standards (applicable 35' deep)	
Ground Story Height	12' min. clear
Fenestration, ground floor	60-90% (see BDS) facade area

(measured as a percentage of the FACADE that is 2' above sidewalk grade)

UA INTERSECTS UN

Dominant Subdistrict (35' deep)	UA
Orientation - Principal Frontage	UA street
Building Length - UN FACADES	100' max.
Dominant Building Design Standards (applicable 35' deep)	
Ground Story Height	12' min. clear
Fenestration, ground floor	60-90% (see BDS) facade area

(measured as a percentage of the FACADE that is 2' above sidewalk grade)

UT INTERSECTS UN

Dominant Subdistrict (35' deep)	UN
Orientation - Principal Frontage	determined by applicant

- Corner lots shall be treated as having street frontage on all streets regardless of building orientation

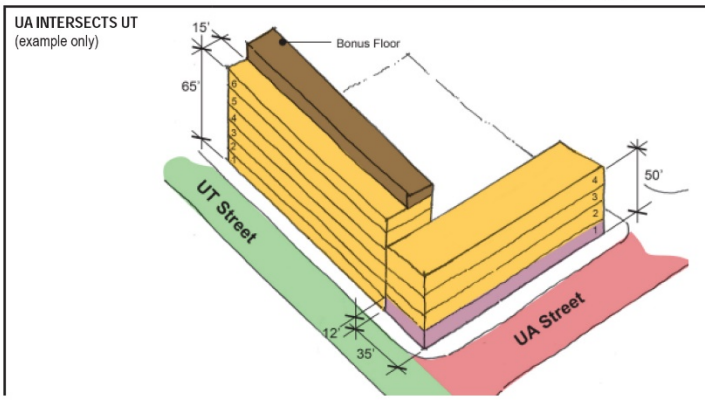
UN INTERSECTS UN

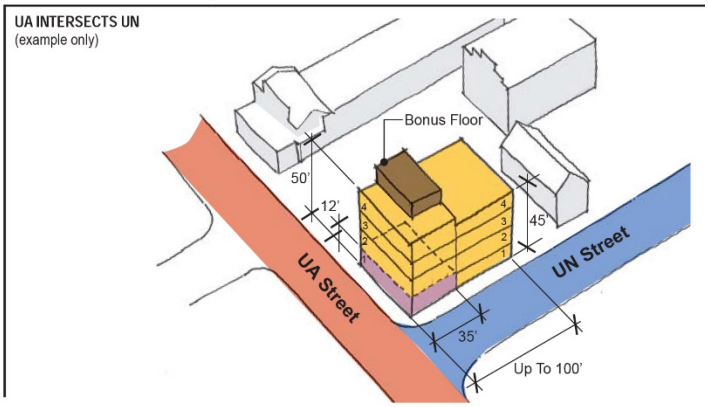
Building Length maximums:	
Principal Frontage	30' max.
Secondary Frontage	50' max.

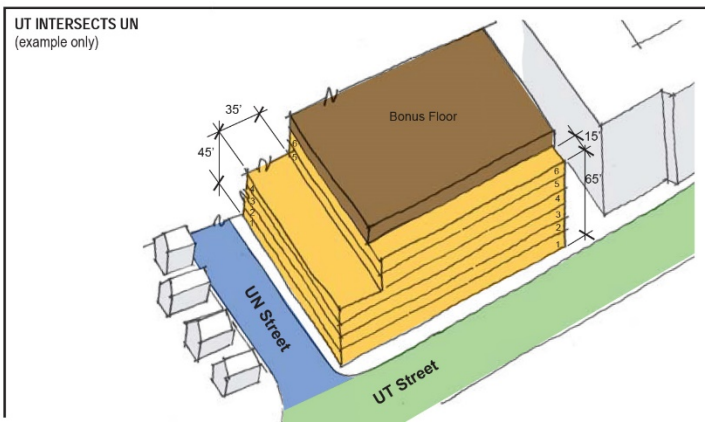
Notes and Exceptions

* Does not have to correspond to legal building address

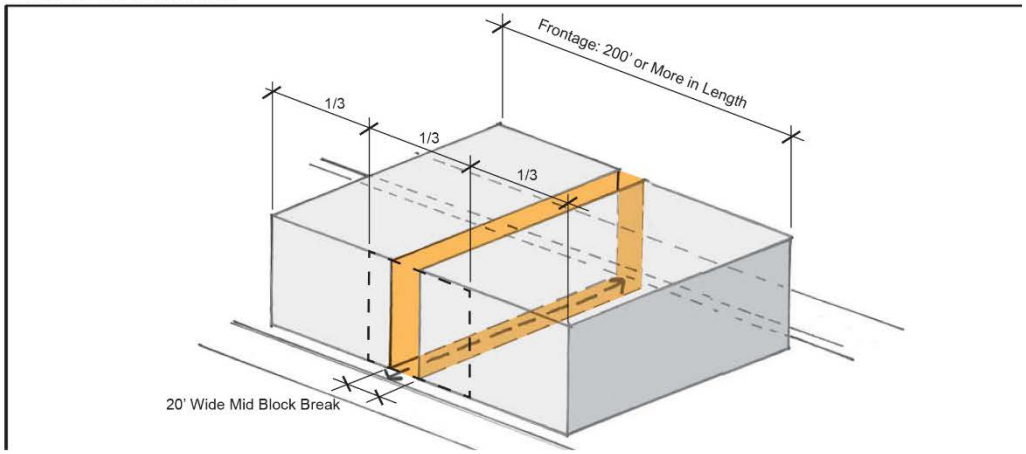
CORNER



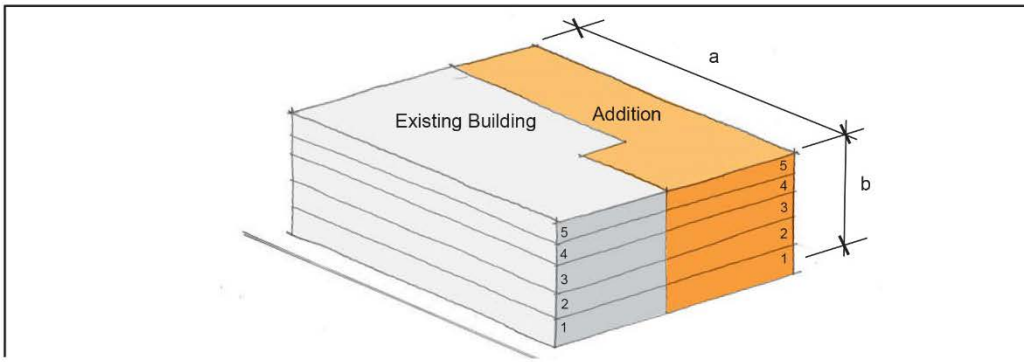




MID-BLOCK PERMEABILITY



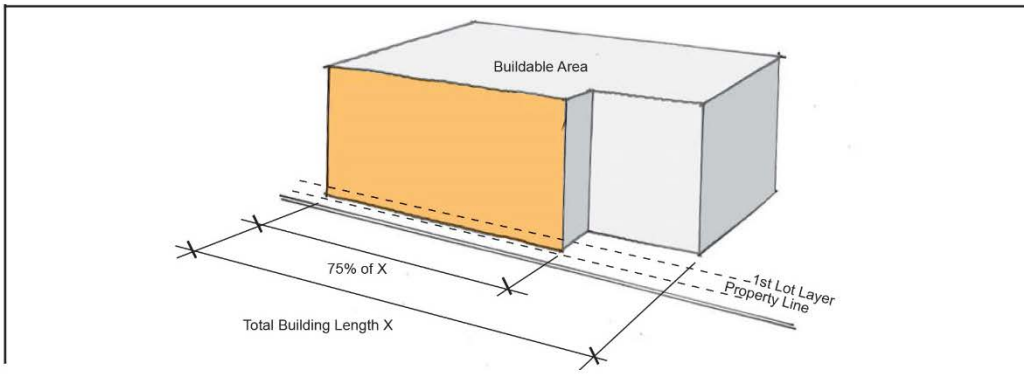
ADDITION



a - Addition length may match but not exceed the length of existing building to which it is an addition. All other Subdistrict Dimensional Requirements apply.

b - Addition height may match existing building in number and height of stories. All other Subdistrict Height Standards apply.

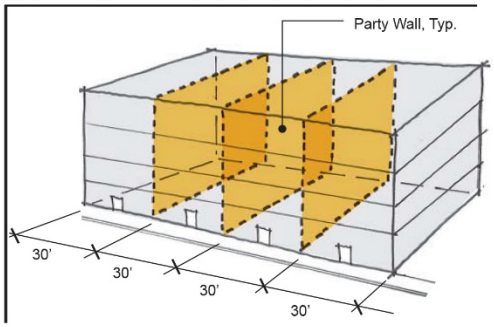
BUILDING LENGTH - 1st LOT LAYER



At least 75% of the total building length must be within the 1st LOT LAYER.

FIGURE 9-G: DIMENSIONAL REQUIREMENTS ILLUSTRATED

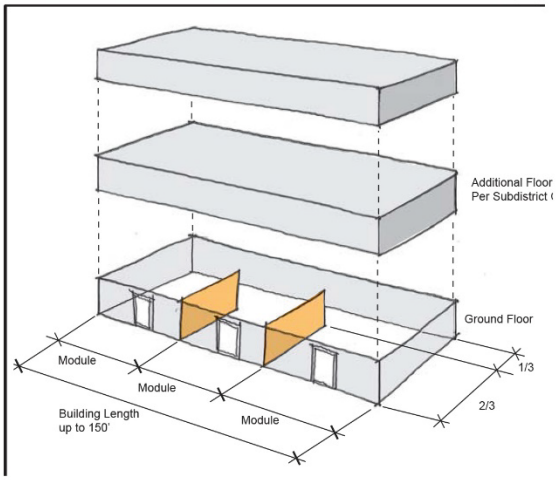
ADDITIONAL BUILDING LENGTH - ATTACHED BUILDINGS



An unlimited number of ATTACHED BUILDINGS having up to 30' street-facing building length is allowed.

A PARTY WALL condition is required at least every 30' and for the entire height of each building.

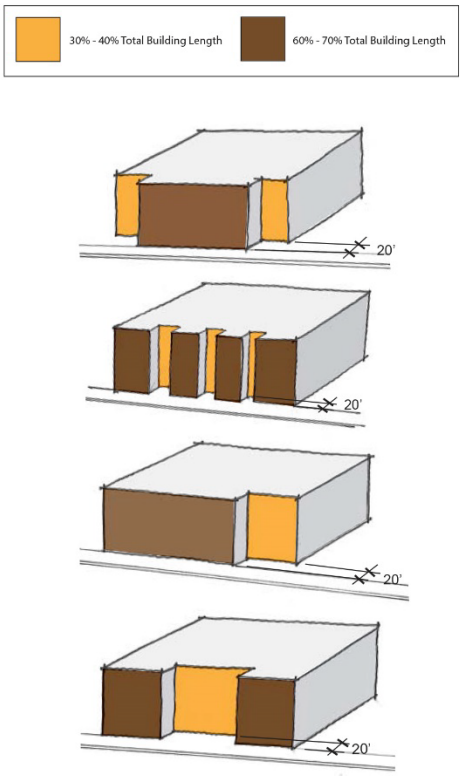
ADDITIONAL BUILDING LENGTH - GROUND FLOOR PARTITIONS (UA)



Additional Building Length is permitted up to 150' with the provision of a least two Ground Floor Partitions

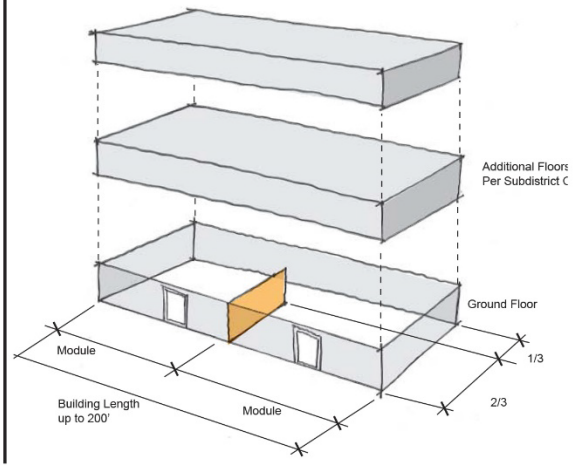
See General Development Standards and BDS for additional requirements.

ADDITIONAL BUILDING LENGTH - MASSING VARIATION (UT)



Additional building length is permitted where at least 30% and up to 40% of the total building length is setback to the 3rd LOT LAYER (20').

ADDITIONAL BUILDING LENGTH - GROUND FLOOR PARTITIONS (UT)



Additional Building Length is permitted up to 200' with the provision of at least one Ground Floor Partition.

See General Development Standards and the BDS for additional requirements.

FIGURE 9-G (CONT.): DIMENSIONAL REQUIREMENTS ILLUSTRATED



10 WATERFRONT ZONES

10.1 IN GENERAL

Portland's waterfront zones were developed to support a wide range of industries unique to the city's maritime environment that rely upon access to the working waterfront. Competing demands for limited access require a more exhaustive use list, specialized performance standards, and a unique set of dimensional restrictions that are unlike those of other zones. Given this high degree of specialization, Article 10 should generally be viewed in isolation from other articles within the Land Use Code, with the exception of waterfront-specific definitions, listed within Article 3. Uses specific to Article 10 may feature some degree of overlap with other defined uses allowed elsewhere within the city. However, in such instances, the use as referenced within this article shall control.

10.2 EASTERN WATERFRONT PORT ZONE (EWPZ)

10.2.1 Purpose

A. The Eastern Waterfront Port Zone is created to nurture deepwater-dependent activity within the context of the established waterfront. The transport of goods and passengers by water is an important component of both the local and regional economies and this transport and other forms of marine industry are dependent upon land and piers with direct access to Portland Harbor. Given the existing pier infrastructure, proximity to deep water, and urban context, Portland's Eastern Waterfront is uniquely situated to support a wide range of water-dependent industry and commerce through a variety of marine activities.

B. The support and expansion of Portland's marine industry requires piers, uplands, and circulation consistent with the transportation purpose and use of marine facilities. The growth of Portland's marine passenger industry also requires supporting services and activities to provide a safe, convenient, and enjoyable travel experience for users of marine passenger facilities. Non-marine uses that complement the marine passenger industry, are compatible with existing and future water-dependent uses, and provide opportunities for residents and visitors alike to enjoy the Eastern Waterfront throughout the year, are encouraged.

C. The primary use of the deep-water resources must be for the berthing and support of large vessels. Non-marine uses that complement and support the deepwater infrastructure and do not conflict or compete for limited space with existing or anticipated deepwater-dependent uses are encouraged. Existing and future pier infrastructure and upland support areas should be designed and maintained to support a variety of marine uses and be responsive to future technologies and trends in the marine industry.

D. Given the need to nurture and support deepwater-dependent uses and the need for non-deepwater-dependent uses to complement the marine passenger industry and to support the maintenance and repair of pier infrastructure, the Eastern Waterfront Port Zone recognizes the following hierarchy of uses:

1. The first priority of this zone is to protect and nurture existing and potential deepwater-dependent uses (those uses

requiring a minimum of 15 feet of water depth).

2. The second priority is to allow shallow water-dependent and other permitted marine uses, so long as they do not interfere with deepwater-dependent uses, either directly by displacement or indirectly by placing incompatible demands on the zone's infrastructure.
3. Other uses specified herein are allowed only if they do not interfere with and are not incompatible with higher priority uses.

10.2.2 No adverse impact on marine uses

No use shall be permitted, approved or established in this zone if it will have an impermissible adverse impact on future marine development opportunities. A proposed non-water-dependent component of a development will have an impermissible adverse impact if it will result in any one or more of the following:

A. The proposed use will displace an existing water-dependent use.
B. The proposed use will reduce existing commercial vessel berthing space.
C. The proposed use, structure or activities, including but not limited to access, circulation, parking, dumpsters, exterior storage or loading facilities, and other structures, will unreasonably interfere with the activities and operation of existing water-dependent uses or significantly impede access to vessel berthing or other access to the water by water-dependent uses.
D. The siting of a proposed use will substantially reduce or inhibit existing public access to marine or tidal waters.

10.2.3 Permitted uses

Subject to a determination that the proposed use meets the standards of Subsection 10.2.2, the following uses are permitted in the Eastern Waterfront Port Zone:

A. Marine passenger
   1. Intermodal marine passenger facilities.
   2. Cruise ship home port and port-of-call berthing and support.
   3. International and domestic ferries.
B. Marine commercial
   1. Transient and long-term commercial berthing.
   2. Marine-related warehousing.
   3. Marine-related construction, manufacturing, fabrication, salvage, and repair.
   4. Storage and repair of fishing equipment.
   5. Ship and other marine vessel construction, building, servicing, and repair.
   6. Boat and marine equipment storage.
   7. Harbor and marine supplies and services, chandleries, and ship supply such as fueling and bunkering of vessels.
   8. Public, non-profit, or commercial marine transportation and excursion services, including captained charter services, sport fishing and water taxis.
   9. Ship and off-shore support services, including but not limited to tug boats, pilot boats, and chandleries.
   10. Facilities for marine pollution control, oil spill cleanup, and servicing of marine sanitation devices.
   11. Marinas located east of the eastern boundary of the parcel of land owned by the City of Portland pursuant to a deed from the State of Maine dated February

1982 and recorded in the Cumberland County Registry of Deeds at Book 4916, Page 26.

12. Marine office, including but not limited to offices of owners of marinas, wharves or their agents, and naval architects, and seafood brokers.

C. Commercial

1. Professional, business, government, and general office located in upper floors of structures existing as of September 18, 2006.

**Editor's Note - On-site parking for non-marine commercial uses are permitted as conditional uses subject to the provisions of Subsection 10.2.4.*

2. Temporary events, except festivals as otherwise governed under paragraph (3) listed below. Buildings, piers and lands within the EWPZ may be used for temporary public and private events including but not limited to exhibitions, conferences, meetings, and trade shows under the following conditions:
   a. Temporary events occupying more than 10,000 square feet of building or outdoor space shall not exceed a combined total of 60 days between May 1st to October 31st.
   b. No temporary event may continue for more than 14 days of continuous operation.
   c. Any temporary event that anticipates more than 5,000 people in attendance on any single day must provide and be subject to a parking management plan. The parking management plan must be submitted for the review and approval of the public works authority at least 60 days prior to the first day of the event.
3. Festivals subject to City license.
4. Street vendors licensed pursuant to Chapter 19 of the City of Portland Code of Ordinances.

D. Public

1. Fire, police, and emergency services.
2. Governmental agency emergency operations/crisis centers.
3. Research, military and visiting attraction vessel berthing.
4. Landscaped pedestrian parks, plazas and other similar outdoor pedestrian spaces, including without limitation pedestrian and/or bicycle trails.

E. Other

1. A facility for non-profit organizations whose facility may include offices, classrooms, equipment, equipment rentals, storage, and bathrooms for the public.

10.2.4 Conditional uses

A. The following uses shall be permitted as conditional uses in the Eastern Waterfront Port Zone, provided that, notwithstanding Subsection 6.5.1, or any other provision of this code, the Planning Board shall be substituted for the Board of Appeals as the review authority, and provided further that in addition to the provisions of Subsection 6.5.2, such uses will not impede or preclude existing or potential water-dependent development within the zone, will allow for adequate right-of-way access to the water, are compatible with marine uses, and meet all additional standards set forth below.

B. Conditional use standards

1. *Marine compatibility.* The proposed use shall be compatible with existing and potential marine uses in the vicinity, as required by Subsection 10.2.8(M) and (N).
2. *Parking and traffic circulation.* All applications for conditional use in the EWPZ shall submit a parking and circulation plan for review and approval by the Planning Board. The parking and circulation plan shall show the location of all existing and proposed structures, travel ways, and parking under the common ownership and/or control of the subject pier or property. The plan shall demonstrate that the parking and circulation of the conditional use does not interfere with the functional marine utility of the property and otherwise meets the standards and conditions of the EWPZ.

C. Conditional uses

1. *Marine*
   a. Marine products, wholesaling, and retailing.
   b. Ice-making services.
   c. Marine freight facilities providing service for, and/or intermodal transfer of, container and breakbulk freight.
   d. Marine educational facilities.
   e. Seafood retailing, wholesaling, packaging, and shipping.
   f. Seafood processing for human consumption, subject to the performance standards applicable to the I-L zone as listed in Section 6.8.
   g. Commercial marinas serving commercial and recreation boats located west of the eastern boundary of the parcel of land owned by the City of Portland pursuant to a deed from the State of Maine dated February 1982 and recorded in the Cumberland County Registry of Deeds at Book 4916, Page 26, provided that such facilities are located in areas that do not conflict with the navigation and handling of deepwater-dependent vessels accessing existing or potential deepwater berthing.
   h. Fish byproducts processing, provided that:
      i. Any fish byproducts processing facility has a valid rendering facility license under Chapter 12 of the Portland City Code of Ordinances.
      ii. Any fish byproducts facility shall employ current and appropriate odor control technology to eliminate or minimize detectable odors from such a process, and in no case shall odors exceed the odor limitation performance standards of the IM zone in Subsection 6.8.10.
      iii. The processing other material wastes or byproducts shall not be deemed a lawful accessory use permitted herein.
2. *Commercial*
   a. Structured parking available to the general public.
   b. Professional, business, government and general offices uses in upper floors of structures constructed after September 18, 2006.



c. Passenger support services supporting a marine passenger use listed under Subsection 10.2.3(A). The total ground floor area occupied by any combination of the following uses (regardless of ownership) shall not exceed 35% of the gross floor area of the principal associated marine passenger use and no more than 35,000 square feet cumulative within the EWPZ:
   i. Retail.
   ii. Restaurants/food service other than street vendors.
   iii. Retail service.
   iv. Passenger information services.

3. *Industrial.* The following industrial uses are permitted provided that such uses shall conform to the IM zone performance standards set forth in Section 6.8 in addition to the performance standards of Subsection 10.2.8. Where redundant or contradictory performance standards exist, the more restrictive standard applies.
   a. Non-marine-related warehousing in structures existing as of September 18, 2006.
   b. Facilities for combined marine and general construction.
   c. Low impact industrial uses as permitted in the IL zone in structures existing as of September 18, 2006, excluding all auto repair service facilities.

4. *Public*
   a. Utility substations. Public utility substations, including but not limited to electrical transformers, sewage and stormwater pumps and telecommunication switching stations, are permitted under the following conditions:
      i. The facility is located more than 100 feet from the water's edge.
      ii. The facility occupies no more than 50 square feet of structure above ground.
      iii. The facility provides no dedicated on-site parking and all subsurface elements of the facility are installed and operated such that land occupied by the facility is otherwise useable and made available for marine-related uses, including but not limited to parking, travel ways, and/or storage.
      iv. The facility shall be sized, sited and screened to minimize visual impact and prominence from public ways.
   b. Maritime museums, limited to 5,000 square feet of ground floor footprint.

**Editor's Note - On-site parking for non-marine commercial and industrial uses are permitted as conditional uses subject to the following provisions.*

5. *Parking for non-marine uses.* Notwithstanding Subsection 19.1.6 and Article 14 of this Land Use Code, no parking shall be allowed in this zone for non-marine uses unless the applicant can demonstrate that the number of parking spaces on-site exceeds the number of parking spaces needed to accommodate the demand for marine and water-

dependent uses that are permitted by Subsections 10.2.3 and 10.2.4 which are or may be located on the subject property. (See editor's note below.) The remainder of parking required, if any, for such non-marine uses shall be provided off-site.

**Editor's Note - Vacant ground floor space should be considered to have a parking demand similar to other space housing an existing water-dependent use elsewhere on the subject property or on a comparable property.*

D. The following use shall be permitted only upon the issuance of a conditional use permit subject to the provisions of Section 6.5, and any special provisions, standards, or requirements specified below:

1. Wind energy systems.
2. Solar energy systems.

10.2.5 Prohibited uses

Uses, whether floating or fixed to land, which are not enumerated in Subsections 10.2.3 or 10.2.4 as permitted or conditional uses are prohibited. Those uses that are specifically prohibited shall include, without limitation:

A. Residential uses.
B. Amusement/theme parks.
C. Bulk freight facilities.
D. On-site gambling casinos not accessory to and located aboard either a ferry or inter-port cruise ship.

10.2.6 Contract or conditional rezoning

In addition to those marine and non-marine uses authorized in Subsections 10.2.3 and 10.2.4, an applicant may apply to locate a non-marine use not otherwise permitted, if the reviewing body finds the applicant has met the standards of Subsection 10.2.2, the performance standards of Subsection 10.2.8, the applicable standards of contract/conditional rezoning contained in Section 5.3, and conforms to the following requirements:

A. Standards for contract or conditional rezoning:

1. All non-marine uses are either permitted or conditionally permitted in the B-5 zone, and are not specifically prohibited in Subsection 10.2.5 above. Any hotel, inn, or other similar transient lodging establishment proposed must be located landward of the spring tide line and westerly of the extension of the India Street right-of-way.
2. The aggregate ground floor area of any development permitted hereunder located within 100 feet of the pier edge or working edge of the hardened shoreline shall be occupied by at least 50% of one or more marine uses set forth in Subsections 10.2.3 and 10.2.4. Note: the circulation areas and areas occupied for accessory parking serving marine uses shall not be used as the basis for calculating the 50% provision above.
3. The development is consistent with the Comprehensive Plan and without the non-marine use component authorized herein, the site could not otherwise support an economically viable water-dependent use.
4. The project's public benefits outweigh its potential negative impacts, provided that such public benefits include one or more of the following: protection of existing water-dependent uses, preservation of future water-dependent use development opportunities, contribution to the development of and/or on-going

maintenance of the marine infrastructure for commercial vessels, and visual and physical access to the waterfront for the general public.

5. The non-marine portion of the development will not significantly restrict air or light for marine uses located in the immediate vicinity; will not create significant adverse local climatic effects on marine uses such as an undue increase of winds or shadowing; and will not adversely affect the efficient operation of marine uses, such as by producing less efficient traffic, parking or circulation patterns.
6. The rezoning contains adequate provisions and/or conditions to ensure that on-site water-dependent infrastructure remains occupied by commercial marine use(s) listed in Subsections 10.2.3 and 10.2.4 and that said use is not abandoned after the project is developed.

B. Notwithstanding Subsection 10.2.8(H) and off-street parking standards of Article 14, all on-site parking constructed or used for non-marine uses allowed only by contract or conditional rezoning shall be subject to the conditional use provisions Subsection 10.2.4(C)(5). Additionally, the total amount of parking shall be established by the City Council in the conditional or contract rezoning agreement after consideration of the Planning Board's recommendation on the same.

10.2.7 Dimensional requirements.

In addition to the generally applicable provisions of Section 7.5 of this Land Use Code, lots in the EWPZ shall be subject to the following requirements:

A. Minimum lot size: None

B. Minimum frontage: None

C. Minimum yard dimensions:

1. *Front setback:* None
2. *Side setback:* None
3. *Rear setback:* None
4. *Setback from pier line:* Notwithstanding the above requirements, a minimum setback of 25 feet from the edge of any pier, wharf or working edge of the hardened shoreline shall be required for any structure, provided that marine offices, as defined in Section 10.2.3(B)(12), may be located up to five feet from the edge of any pier, wharf, or working edge of the hardened shoreline. The setback area may be utilized for water-dependent uses and public uses and activities, subject to the provisions of Subsections 10.2.2 and 10.2.4, and shall not be utilized for restaurant, drinking, or other non water-dependent uses or for off-street parking. The edge of any pier, wharf or bulkhead shall include any attached apron(s).

D. Maximum impervious surface: 100%

E. Maximum building height: 45 feet, except as follows:

1. For purposes of this subsection only, moveable elements such as cranes and gantries, connection devices such as conveyors or bridges, and floating vessels shall not be subject to the space and bulk requirements, but shall be subject to a determination by the Federal Aviation Administration that the location of such equipment will not create a hazard to air traffic.

2. Rooftop appurtenances may exceed the maximum height limits of 45 feet providing that their design and placement is either fully screened or integrated into the architecture of the structure on which they sit.
3. The applicant must provide a determination from the Federal Aviation Administration that structures and equipment in excess of 45 feet will not exceed the applicable height guidelines for the runway approach and will not create a conclusive evidence that the proposed development will not create a hazard.

10.2.8 Performance standards

Development in the Eastern Waterfront Port Zone shall comply with the following standards:

A. **Outdoor storage of materials.** Outdoor storage of commodities and materials accessory to normal conduct of business shall be entirely contained, including runoff contaminants and residual material, within a designated area.

B. **Noise**

1. The level of sound, measured by a sound level meter with frequency weighting network (manufactured according to standards prescribed by the American National Standards Institute, Inc.), inherently and recurrently generated within the EWPZ between the hours of 7:00 p.m. and 7:00 a.m. from facilities or operations commenced on or after July 1, 1988, shall not exceed 55 decibels on the A scale at or within the boundaries of any residential zone, except for sound from construction activities, sound from traffic on public streets, sound from temporary activities such as festivals, sound created as a result of, or relating to, an emergency, including sound from emergency warning signal devices, and maritime navigation signals.
2. In measuring sound levels under this subsection, sounds with a continuous duration of less than 60 seconds shall be measured by the maximum reading on a sound level meter set to the A weighted scale and the fast meter response (L maxfast). Sounds with a continuous duration of 60 seconds or more shall be measured on the basis of the energy average sound level over a period of 60 seconds (LEQ1).
3. In addition to the sound level standards otherwise established, facilities or operations established or built in the EWPZ on or after July 1, 1988, shall employ best practicable sound abatement techniques to prevent tonal sounds and impulse sounds or, if such tonal and impulse sounds cannot be prevented, to minimize the impact of such sounds in residential zones. Tonal sound is defined as a sound wave usually perceived as a hum or which because its instantaneous sound pressure varies essentially as a simple sinusoidal function of time. Impulse sounds are defined as sound events characterized by brief excursions of sound pressure, each with a duration of less than one second.

C. **Vibration.** Vibration inherently and recurrently generated shall be imperceptible without instruments at lot boundaries. This shall not



apply to vibration resulting from activities aboard a vessel or from railroad vehicle activities, or from activities on a pile-supported pier.

D. **Federal and state environmental regulations**. All uses shall comply with federal and state environmental statutes and regulations regarding emissions into the air, except where provisions of this code are more stringent.

E. **Discharges into harbor areas.** No discharge into harbor water areas shall be permitted, unless permitted by the Maine Department of Environmental Protection under a waste discharge license and as approved by the Department of Public Works in accordance with Chapter 24, Article III of the City of Portland Code of Ordinances. All private sewage disposal or private wastewater treatment facilities shall comply with the provisions of Chapter 24, Article II of the City of Portland Code of Ordinances and federal and state environmental statutes and regulations regarding wastewater discharges.

F. **Storage of vehicles.** Storage of any unregistered automotive vehicle on the premises for more than 10 days shall not be permitted.

G. **Landfill of docking and berthing areas.** Landfill of docking and berthing areas shall be governed by 38 M.R.S. § 471-478, and permitted only if the landfill does not reduce the amount of linear berthing areas or space, or berthing capacity. If approved, construction shall be undertaken using methods approved by the Department of Public Works and shall be accomplished in a manner so as to ensure that a stable and impermeable wall of acceptable materials will completely contain the fill material and will not permit any fill material to leach into docking areas or navigable waters.

H. **Off-street parking and loading**. Off-street parking and loading is subject to provisions as provided in Article 19.

I. **Shoreland and Flood Plain Management regulations.** Any lot or a portion of a lot located in a Shoreland Zone as identified on the City zoning map or in a flood hazard area shall be subject to the requirements of Articles 11 and 12.

J. **Lighting.** All lighting on the site shall be shielded such that direct light sources shall not interfere with vessels transiting the harbor, nor have an unreasonable adverse impact on adjacent residential zones, and shall be compliant with the site lighting standards of the City of Portland *Technical Manual*.

K. **Signs.** Signs shall be permitted as set forth in Article 20.

L. **Storage of pollutants and oily wastes**. On-premises storage of pollutants and oily wastes shall not be permitted for more than 45 days.

M. **Compatibility of non-marine uses with marine uses.** Non-marine uses, structures, and activities, including but not limited to access, circulation, parking, dumpsters, exterior storage, and loading facilities or other structures shall neither unreasonably interfere with the existence or operation of marine uses nor significantly impede access to vessel berthing or other access to the water by existing or potential marine uses.

N. **Functional utility of piers and access to the water's edge.** All development, whether for marine or non-marine uses, must anticipate current and future needs of water-dependent uses to functionally access the water's edge for

the transfer of goods, materials, and passengers between berthed vessels and land bound vehicles. Provisions for the storage and movement of goods, materials, and passengers must be designed into all waterside development and internal circulation routes must be maintained or otherwise provided as an element of any development.

10.3 WATERFRONT CENTRAL ZONE (WCZ)

10.3.1 Purpose

A. The Waterfront Central Zone was created to protect and nurture water-dependent and marine-related support uses so that they may grow and prosper in the present and into the future in an environment and area dedicated to this purpose. The following priority of uses is recognized:

1. The first priority of this zone is to protect and nurture existing and potential water-dependent uses in a setting that enforces their continued economic viability.
2. The second priority is to encourage other marine and marine-related support uses so long as they do not interfere with water-dependent uses, either directly by displacement or indirectly by placing incompatible demands on the zone's infrastructure.
3. Non-marine uses are encouraged provided that they do not interfere with and are not incompatible with first and second priority uses. Non-marine uses are beneficial to the waterfront economy because they provide the financial return to property owners necessary for the maintenance and improvement of the marine infrastructure.

B. Water-dependent and marine-related support uses by their nature have activities and operational needs that are unique to this area and are not shared by other commercial and industrial uses in the city. These first and second priority uses and related activities may result in noise, odor, dust, hours of operation, parking, and traffic patterns and traffic control needs that are necessary for the convenient and successful conduct of such uses. Other uses may not be compatible with these types of effects. Other specified uses are permitted in the Waterfront Central Zone, provided that they do not significantly interfere with the activities and operation of water-dependent and marine-related support uses. Such uses must be, and are assumed to be, aware of the impacts associated with marine uses and therefore must accept and be tolerant of them. Other specified uses in the zone shall accommodate to those patterns and needs of the higher priority uses so long as those higher priority uses are not detrimental to public health and safety and the higher priority activities are conducted in accordance with sound practices or practices customary in the trade.

C. Commercial Street is recognized as an important economic center for the city and region. Marine-compatible uses are encouraged to locate and grow along Commercial Street while higher priority marine uses are protected on the waterfront.

10.3.2 Definitions

For the purposes of the Waterfront Central Zone only, the following terms shall have the following definitions:



Common circulation drives. Private driveways, roadways and circulation areas accessible to all on-site tenants and/or occupants of a lot within the Waterfront Central Zone providing access from/to the public street network.

Lot. Any abutting property under common ownership.

Commercial Street Overlay Zone (CSOZ). The Commercial Street Overlay Zone (CSOZ) is a portion of the Waterfront Central Zone, as described below, where new and existing development may be occupied with 100% non-marine use tenants listed under Subsection 10.3.3(B), subject to the standards and use limitations provided in Subsection 10.3.7(B). The geographic limits of the CSOZ are defined by parcels of land and piers within the Waterfront Central Zone located on the landward side of a line established 125 feet south of the southerly sideline of Commercial Street and modified as follows: the seaward limit of the CSOZ extends to a line 300 feet south of the southerly sideline of Commercial Street in the area between the easterly and westerly sideline of Long Wharf. Additionally, all areas subject to this provision are set back landward at least 25 feet from the average high tide line of Portland Harbor and associated coastal wetlands. Where the 125 foot offset intersects with the footprint of a building existing as of May 2019 and such intersection leaves 75% or more of the building within the CSOZ, the entire building shall be considered included in the CSOZ. All offset distances are measured horizontally. All applicants for development within the CSOZ are responsible for demonstrating their location within CSOZ according to the findings of a site specific land survey conducted by a professional land surveyor licensed by the State of Maine. The limits of the CSOZ shall be shown on all site plans and subdivision plats for proposed development within the CSOZ.

On-site. That portion of any lot included within or directly impacted by a proposed development.

10.3.3 Permitted uses

Subject to a determination that the proposed use meets the standards of Subsection 10.3.7, as applicable, the following uses listed under Subsection 10.3.3(A), (B), (C), and (D) are permitted anywhere in the Waterfront Central Zone. Uses listed under Subsection 10.3.3(E) are only permitted in the CSOZ.

A. Marine

1. Marine products wholesaling, distribution and retailing.
2. Marine repair services and machine shops.
3. Tugboat, fireboat, pilot boat and similar services.
4. Harbor and marine supplies and services, chandleries, and ship supply such as fueling and bunkering of vessels.
5. Marine industrial welding and fabricating.
6. Shipbuilding and facilities for construction, maintenance, and repair of vessels.
7. Commercial marine transport and excursion services, including ferries, captained charter services, sport fishing, and water taxis.
8. Cargo handling facilities, including docking, loading, and related storage.
9. Boat repair yards.

10. Boat storage facilities, excluding rack storage facilities (Boat rack storage facilities are included as a conditional use).
11. Seafood processing and retailing.
12. Seafood packing and packaging.
13. Seafood loading and seafood distribution.
14. Fabrication, storage, and repair of fishing equipment.
15. Ice-making services.
16. Facilities for marine construction and salvage.
17. Facilities for marine pollution control, oil spill cleanup, and servicing of marine sanitation devices.
18. Fabrication of marine-related goods.
19. Fishing and commercial vessel berthing.
20. Non-commercial berthing of a maximum of 50 linear feet per pier. A non-commercial berth may not displace a commercial berth. Parking for any non-commercial berthing is subject to the provisions of Subsection 10.3.9(G).
21. Marine office, including but not limited to offices of owners of wharves or their agents, and naval architects, and seafood brokers.
22. Public landings.
23. Marine research, education, and laboratory facilities.
24. Bait sales and processing.
25. Harbor security and emergency response services including but not limited to Harbor Master, Marine Patrol and Coast Guard.
26. Commercial parking for water-dependent use business owners and employees.

B. Non-marine commercial and industrial uses. Non-marine uses permitted by this subsection are subject to the standards listed in Subsection 10.3.7.
   1. Professional, business, government, and general offices, except for offices for health care practitioners or health clinics which are only permitted in the CSOZ.
   2. Cabinet and carpentry shops, studios for artists and crafts people.
   3. Intermodal transportation facilities.
   4. Cold storage facilities.
   5. Commercial kitchens.
   6. Outside accessory activities.

C. Public
   1. Landscaped pedestrian parks, plazas, and other similar outdoor pedestrian spaces, including without limitation pedestrian and/or bicycle trails.

D. Other
   1. Interior accessory uses customarily incidental and subordinate to the location, function, and operation of permitted uses. Food service establishments, newsstands, and other similar retail and service support uses shall only be permitted as accessory uses if they are part of and located within the lot lines of a use set forth in Subsections 10.3.3(A)(1), (7), (11) or (22); such uses do not exceed 2,000 square feet in total floor area of the building, or 25% of the total floor area of the building, whichever is less, and each individual accessory use does not exceed 1,000 square feet in total floor area of the building; and further provided that such accessory uses provide goods or services that are supportive of the principal use and



its clientele. Exterior accessory uses shall be otherwise subject to the provision of Subsection 10.3.7(A).

2. Interior meeting or classroom space accessory to uses permitted in Subsection 10.3.3(A)(23) may be rented out for meeting use by marine-related or non-marine-related groups or organizations, or the general public, and such accessory uses shall not be subject to the limitations contained in (B) above, but shall only be permitted as accessory uses if the total of all support uses, including interior meeting or classroom space, does not exceed 3,000 square feet in total floor area per building, or 15% of the total floor area per building, whichever is less.

E. **Uses permitted only within the Commercial Street Overlay Zone (CSOZ).** Uses permitted by this subsection are subject to the standards listed in Subsection 10.3.7(B).

1. Retail and service establishments, including craft and specialty shops.
2. Restaurants provided that full course meal food service and consumption shall be the primary function of the restaurant, and full course meal service shall be continued up until the hours of closing.
3. Banking services without drive-up services.
4. Museums and art galleries.
5. Street vendors licensed pursuant to Chapter 19.
6. Offices of health care practitioners or health care clinics.
7. Personal service establishments.

10.3.4 Conditional use

The uses listed herein shall be permitted as conditional uses in the Waterfront Central Zone, provided that, notwithstanding Section 6.5, or any other provision of this code, the Planning Board shall be substituted for the Board of Appeals as the review authority, and further provided that in addition to the provisions of Subsection 6.5.2, they shall also meet the applicable Waterfront Central Zone development standards in Subsection 10.3.7:

A. **Commercial marine conditional uses**

1. Fish by-products processing, provided that:
   a. Any fish by-products processing facility has a valid rendering facility license under Chapter 12 of the City of Portland Code of Ordinances.
   b. Any existing fish by-products facility shall employ current and appropriate odor control technology (and any new fish by-product use shall employ current, available odor control technology) to eliminate or minimize detectable odors from such a process, and in no case shall odors exceed the odor limitation performance standards of the I-M zone.
   c. The processing of other material wastes or by-products shall not be deemed a lawful accessory use under any other provision of this article.
2. Boat rack storage facilities, provided that:
   a. Parking shall be provided for 100% of the demand generated by the use (nothwithstanding Subsection 10.3.9(G), and such parking shall be provided off-site, in another zone permitting such use.

b. Boat rack structures shall not exceed 10,000 square feet of building footprint.

B. **Utility substations.** Public utility substations, including but not limited to electrical transformers, sewage, and stormwater pumps, and telecommunication switching stations, are permitted under the following conditions:
   1. The facility is located more than 100 feet from the water's edge.
   2. The facility occupies no more than 50 square feet of structure above ground.
   3. The facility provides no dedicated on-site parking and all subsurface elements of the facility are installed and operated such that land occupied by the facility is otherwise usable and made available for marine uses, including but not limited to parking, travel ways, and/or storage.
   4. The facility shall be sized, sited and screened to minimize visual impact and prominence from public ways.

C. **Wind energy systems.**

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10.3.5 Prohibited uses

Uses which are not enumerated in either Subsections 10.3.3 or 10.3.4 as permitted or conditional uses are prohibited. Uses enumerated in Subsection 10.3.3(E) shall be considered prohibited uses outside of the CSOZ. Those uses that are prohibited shall include, without limitation:

A. Residential uses.
B. Hotels, motels, hostels, bed and breakfasts, inns, lodging houses, tourist homes, short-term rentals, or boatels.
C. Auditoriums, civic centers, convention centers, or other meeting facilities not accessory to an otherwise permitted use.
D. Drinking establishments, private clubs, or non-profit social and recreational clubs.
E. Ground mounted telecommunication towers, antennas, and/or disks.
F. Drive-up services for any use other than a permitted use listed under Subsections 10.3.3(A) or 10.3.4(A)(1).
G. Auto service stations.
H. Laundry and dry-cleaning services.
I. Convenience stores with gas pumps.
J. Commercial parking for non-marine uses.

10.3.6 Dimensional requirements

In addition to the generally applicable provisions of Section 7.5 of this Land Use Code, lots in the Waterfront Central Zone shall be subject to the following requirements:

A. **Minimum lot size:** None
B. **Minimum frontage along Commercial Street:** 75 feet
C. **Minimum lot width within the CSOZ:** 50 feet measured parallel with Commercial Street and such lot width shall be continuous for the full depth of the lot located within the CSOZ.
D. **Minimum yard dimensions:**
   1. *Front setback:* None
   2. *Side setback:* None
   3. *Rear setback:* None
   4. *Setback from pier edge:* Notwithstanding the above requirements, a minimum first-floor setback of 10 feet from the edge of any pier, wharf, or bulkhead shall be required for any structure, exclusive of structurally necessary posts supporting upper floors, and deck-mounted equipment for loading and unloading vessels. The edge of any pier, wharf, or bulkhead shall include any attached



apron(s). Floats, rafts, and/or barges not structurally integral to the pier, wharf, or bulkhead may not be used to satisfy this requirement. Parking for non-marine uses shall not occupy the 10-foot setback.

E. **Maximum lot coverage:** 100%

F. **Maximum building height:** 50 feet. Except as provided in (H) below, a structure in the Waterfront Central Zone shall provide no more than three habitable floors, however, typical rooftop appurtenances and/or enclosed or open mechanical installations shall be allowed over the third floor.

G. **Minimum ground floor clearance:** Any new building proposed to be larger than 300 square feet and located more than 35 feet from the southerly sideline of Commercial Street shall provide no less than 15 feet of first floor to ceiling vertical clearance to promote marine industrial use potential. New buildings less than 300 square feet or additions to existing multistory buildings are exempt from this provision but shall provide the maximum ground floor clearance practicable.

H. **New non-marine use building exception for usable floors and minimum ground floor clearance:** Notwithstanding provisions (F) and (G) above, for new non-marine use buildings permitted within the CSOZ, four usable floors are allowed and ground floor clearance minimums do not apply.

10.3.7 Development standards

A. **Standards for non-marine uses located outside of the CSOZ.** Non-marine uses listed above in Subsection 10.3.3(B) and 10.3.4(B) that are located outside of the CSOZ shall be subject to the performance standards listed in Subsection 10.3.9 as well as the following standards:

1. *55% marine use required on ground floors.* At least 55% of the leasable ground floor area of all buildings on a lot (defined in Subsection 10.3.2 above), shall be occupied by marine uses, as listed under Subsection 10.3.3(A) or 10.3.4(A)(1).
2. *55% marine use required for all open areas.* After subtracting areas used for common circulation drives (defined in Subsection 10.3.2 above), at least 55% of unbuilt area (meaning area not occupied by a building) on the lot, when calculated using the aggregate of all such unbuilt areas, shall be occupied by marine uses as listed under Subsection 10.3.3(A) or 10.3.4(A)1.
3. *Ground floor vacancies and change of occupancy offered to water-dependent/marine uses.* Ground floor vacant space and areas proposed for a change of occupant outside of the CSOZ shall not be filled with any non-marine use without adequate opportunity for marine uses to occupy the space.
   a. Ground floor vacancy and change of occupant outside of the CSOZ advertised to marine users: In any lot or portion of lot outside of the CSOZ, each time a ground floor occupant departs or gives notice to depart from the lot, the space, along with any associated parking spaces to be vacated, must be made available to new marine occupants. Prior to renting to a non-marine user the property owner shall advertise for a new marine occupant for not less than

a 180-day period in targeted media and by other means reasonably calculated to reach marine users (e.g. local marine trade publications, marine trade websites, waterfront bulletins.) Should one or more marine users apply, the property owner shall make the space available to a marine occupant, in accordance with terms and rates generally consistent with comparable space in the 55% marine use portion of the zone (outside of the CSOZ.) The property owner may stop advertising sooner than the end of the 180-day period if a lease is signed with a marine user. Should no marine user apply by the end of the 180-day period, the owner may fill the space with a non-marine user provided that the new non-marine occupant will not cause the lot to exceed the non-marine use occupancy maximum of 45% of the ground floor area or open area.

b. Uses inventoried: To demonstrate adherence to the 55% marine use requirement, the applicant shall submit to the Planning Authority, upon request, an inventory which lists each occupant (tenant or otherwise), as well as a map which depicts the location of each occupant. The map shall show all ground level space, including buildings, parking, open areas and submerged lands associated with the subject lot. For each occupant, the property owner must indicate the square footage of area occupied and whether the occupant is a marine use as defined herein. For vacant space, the last previous occupant shall be listed, along with the date of departure.

c. Prior to changes of occupancy and/or as part of applications for new development outside of the CSOZ, the property owner or applicant shall provide proof of compliance with the requirements of this section as a condition of approval.

4. *Pier or bulkhead edge reserved for marine uses.* Notwithstanding any provision of this ordinance to the contrary, excepting only the portion of any pier which might be used for non-commercial berthing pursuant to Subsection 10.3.3(A)(20), all berthing and/or dockage space and associated floats plus the entire linear edge of that portion of every pier or bulkhead which is adjacent to greater than zero feet of water depth at mean low water, to a minimum setback line of at least 10 feet from the edge of the pier, bulkhead, or engineered shoreline may only be used or occupied by one or more marine uses as defined in Subsection 10.3.3(A) or 10.3.4(A). Said edge shall be the seaward extent of any engineered shoreline or working deck of any pier or wharf.

B. CSOZ standards. Non-marine uses listed under Subsections 10.3.3(B), 10.3.3(E) and 10.3.4 located within the CSOZ, as defined in Subsection 10.3.2, shall be subject to the performance standards listed in Subsection 10.3.9 as well as the following standards:

1. *Vessel access.* Non-marine uses allowed under this provision shall not disrupt or block access to vessel berthing and shall otherwise adhere to the performance standards of this zone described in Subsection 10.3.9.
2. *Maximum setback for new development on lots with 75 or more feet of Commercial Street frontage.* Any new non-marine development constructed subject to this provision which is located on a lot with 75 or more feet of frontage along the Commercial Street right-of-way shall be located with its front façade no further than 35 from the southerly sideline of the Commercial Street right-of-way. Furthermore, any such development shall orient its front façade and its primary pedestrian entrance toward Commercial Street and no vehicular circulation or parking may occupy the land or pier area between the front façade of the building and Commercial Street. Non-marine development subject to this provision on lots with fewer than 75 feet of frontage along the Commercial Street right-of-way, changes of use within existing buildings, and/or building additions of less than 5,000 square feet of new development to existing buildings are exempt from the maximum setback provisions established herein.
3. *Investment in marine infrastructure.* All applicants for site plan review or a change of use permit for non-marine development in the CSOZ are required to invest in marine infrastructure as a condition of development, provided that the total project costs exceed $250,000. The value of the investment shall be not less than 5% of total project costs over $250,000 for constructing non-marine space and associated site improvements in the CSOZ. Required investment may occur by one or both the following methods:
   a. Direct investment in marine infrastructure located on the same lot: Investment shall be for the benefit of marine uses listed in Subsection 10.3.3(A) within the same lot as the proposed non-marine development. Investment may include dredging, pile replacement, new or replaced structural decking (but not pavement resurfacing), new or replaced fendering systems, new or replaced floats, pier expansions, permanent conversions of recreational berthing to commercial berthing, bulkhead or seawall repair or improvements, or any combination of similar improvements. Plans for the marine infrastructure investment shall be submitted to the Planning Authority with the application for site plan review or change of use permit and shall include details and a commitment as to how the marine infrastructure will be utilized by marine users. The marine infrastructure improvements shall be completed prior to the issuance of a certificate of occupancy for the non-marine development project.
   b. Financial contribution: If direct investment in marine infrastructure is

not made, the developer shall make a financial contribution to the City's Waterfront Loan and Investment Fund.

10.3.8 No contract or conditional rezoning permitted

A. This section is intended to accomplish goals from *Portland's Plan 2030.* Specifically, these changes will:
   1. Prioritize and promote Portland's unique mix of water-dependent, marine-related and compatible non-marine uses.
   2. Recognize and reinforce the respective roles of the Eastern, Central, and Western Waterfronts.
   3. Celebrate, promote, and protect Portland's lobster and fishing industry as a foundation of the region's economy and a feature of civic pride.

B. In light of these goals and the significance of the Central Waterfront to the City's future, no contract or conditional rezoning applications may be approved in the Waterfront Central Zone.

10.3.9 Performance standards

All uses in the Waterfront Central Zone shall comply with the following standards:

A. **Outdoor storage of materials.** Outdoor storage of commodities and materials accessory to normal conduct of business, except pilings and/or cranes, shall be permitted to a maximum height of 45 feet, and such materials shall be entirely contained, including runoff contaminants and residual material, within a designated area within the lot boundaries.

B. **Noise**. The level of sound, measured by a sound level meter with frequency weighting network (manufactured according to standards prescribed by the American National Standards Institute, Inc.), inherently and recurrently generated within the Waterfront Central Zone shall not exceed 75 decibels on the A scale at the boundaries of any lot, except for sound from construction activities, sound from traffic on public streets, sound from temporary activities such as festivals, and sound created as a result of, or relating to, an emergency, including sound from emergency warning signal devices. In measuring sound levels under this subsection, sounds with a continuous duration of less than 60 seconds shall be measured by the maximum reading on a sound level meter set to the A weighted scale and the fast meter response (L maxfast). Sounds with a continuous duration of 60 seconds or more shall be measured on the basis of the energy average sound level over a period of 60 seconds (LEQ1).

C. **Vibration.** Vibration inherently and recurrently generated shall be imperceptible without instruments at lot boundaries. This shall not apply to vibration resulting from activities aboard a vessel or from railroad vehicle activities, or from activities on a pile supported pier.

D. **Discharges into harbor areas**. No discharge into harbor water areas shall be permitted, unless permitted by the Maine Department of Environmental Protection under a waste discharge license and as approved by the



Department of Public Works in accordance with Chapter 24, Article III of the City of Portland Code of Ordinances. All private sewage disposal or private wastewater treatment facilities shall comply with the provisions of Chapter 24, Article II of the City of Portland Code of Ordinances and federal and state environmental statutes and regulations regarding wastewater discharges.

E. **Storage of vehicles**. Storage of any unregistered automotive vehicle on the premises for more than 60 days shall not be permitted.

F. **Landfill of docking and berthing areas**. Landfill of docking and berthing areas shall be governed by 38 M.R.S. § 480-A through 480-HH, and permitted only if the landfill does not reduce the amount of linear berthing areas or space, or berthing capacity. If approved, construction shall be undertaken using methods approved by the Department of Public Works and shall be accomplished in a manner so as to ensure that a stable and impermeable wall of acceptable materials will completely contain the fill material and will not permit any fill material to leach into docking areas or navigable waters.

G. **Off-street parking and loading.** No off-street parking or loading shall be required under Article 19.

H. **Lighting**. All lighting on the site shall be shielded such that direct light sources shall not unreasonably interfere with vessels transiting the harbor nor have an unreasonable adverse impact on adjacent residential zones.

I. **Storage of pollutants and oily wastes**. On-premises storage of pollutants and oily wastes shall not be permitted for more than 45 days.

J. **Urban design**. Construction of new structures located within 35 feet of the southerly edge of Commercial Street between Maine Wharf and the easterly property line of the City fish pier shall conform to the guidelines set forth in the Downtown Urban Design Guidelines, unless such structures are also located within 100 feet of the water. Such structures that are also located within 100 feet of the water shall conform to the extent practicable to the Downtown Urban Design Guidelines.

K. **Pier and wharf expansions.** In addition to meeting Harbor Commission and Coast Guard requirements for navigation, any expansion or extension of a pier and or wharf in the Waterfront Central Zone shall demonstrate its compatibility with fixed route ferry service and emergency vessel operations.

L. **Public view protection**

1. Any new development in the Waterfront Central Zone shall perform a public view impact analysis for review and approval by the Planning Board or Planning Authority as a condition of site plan approval. The analysis shall:
   a. Demonstrate the project's adherence to the Portland View Corridor Protection Plan (City of Portland Comprehensive Plan, 2002) to the extent practicable.
   b. Promote the public's visual access to the water through sensitive building placement.

2. The Planning Board or Planning Authority shall find at a minimum that the proposed development:
    a. Retains street corridor views as extended across Commercial Street from the Portland peninsula.
    b. Retains panoramic views of the water from Commercial Street to the extent practicable.
    c. Where loss of existing public views to the water is shown to be necessary for the reasonable development of the site, the developer provides alternative public views to the water through newly established view corridors or publicly accessible pedestrian ways. Such pedestrian ways shall not interfere with existing or potential water-dependent uses, nor shall they endanger the public through uncontrolled proximity to industrial activity.

M. Operations and access management plan

1. Any new development, including changes of use or expansion of uses in the Waterfront Central Zone, shall submit a scaled plan and accompanying narrative that demonstrates waterfront access and functional accommodation for water-dependent uses. In accordance with *Portland's Plan 2030,* the plan shall demonstrate consistency with the hierarchy of waterfront uses, as further detailed in Subsection 10.3.1, with non-marine and marine-related uses being subordinate in placement and disposition to water-dependent uses, and designed so as not to impede access to the pier edge and vessel berthing nor interfere with marine operations.
2. The plan shall, at a minimum, illustrate the following information:
    a. Location of all existing and proposed structures, rights-of-way, common circulation drives as defined in Subsection 10.3.2, access-ways, sidewalks, pier edges, floats, and docks, showing the entire lot in the context of its respective pier.
    b. Existing and proposed off-street parking, labeled with associated uses.
    c. Facilities for the loading and unloading of goods and materials.
    d. Regularly occurring exterior activities including but not limited to the storage of material, equipment and vehicles, yard area, outdoor seating, and on-site waste management.
    e. Signage showing parking use, wayfinding, and posted operational restrictions.
    f. Plan narrative detailing how the standards listed below are achieved, tenant/landlord communication protocols, private enforcement actions to be employed to ensure plan compliance, and the responsible parties representing the property owner.
3. The operations and access management plan shall be reviewed by the Planning Authority.
4. In addition to the information above, the plan shall demonstrate compliance with the following standards:

a. Off-street parking is subject to the limitations described in Subsection 10.3.7 (A)("55% Rule"). Off-street parking spaces intended for use by water-dependent uses shall be sited as close as reasonably possible to associated vessels and/or ground-floor lease area.
b. Proposals for new non-marine parking, accessory to an otherwise permitted use in the WCZ, shall submit a parking analysis for all uses on the subject lot, justifying the number of non-marine spaces based upon the proposed use and demonstrating sufficient parking supply for marine uses. If sufficient parking is not available to marine uses, off-street parking for non-marine uses shall not be permitted.
c. Off-street parking, loading facilities, and access ways designated for water-dependent uses shall be exclusive to such uses, except that, if not being occupied by water-dependent tenants, such parking may be made available to non-marine uses between the hours of 5:00 p.m. and 2:00 a.m. Any such shared parking arrangements shall be documented in the operations and access management narrative described above, and clearly signed on-site.
d. All properties providing commercial berthing shall demonstrate reasonable opportunities to load and unload vessels from the subject lot.
e. Facilities for the loading and unloading of goods shall account for the frequency of use and vehicle type and, to the extent possible, minimize impacts to pedestrian and vehicle circulation patterns.
f. Provisions for the storage and movement of goods and materials shall be designed into all pier edge development. Circulation routes must be maintained or otherwise provided as an element of all development. The siting, design, and circulation of non-marine uses, particularly those allowed on first floors, shall accommodate reasonable access for pedestrians, vehicles, and freight transfer to and from berthed vessels.
g. Non-marine uses shall provide a dedicated pedestrian route between the proposed use and Commercial Street, and shall seek to minimize conflict with vehicle traffic.

10.4 WATERFRONT PORT DEVELOPMENT ZONE (WPDZ)

10.4.1 Purpose

Transport of goods by water to and from Portland is an important component of both the local and regional economy. This commerce is dependent upon land with direct access to the dredged deep-water channel of the Fore River and Portland Harbor. The Port of Portland is integral to the City's economic, cultural and fiscal health. This zone exists to ensure the continued viability of the Port of Portland. Uses in the Waterfront Port Development Zone, while governed by the similar performance standards as other industrial zones, are primarily

limited to those uses which are dependent upon deep water and which contribute to port activity. Non-marine activity may be allowed to the extent it will not have any adverse impact on marine uses.

10.4.2 No adverse impact on marine uses

No use shall be permitted, approved or established in this zone if it will have an impermissible adverse impact on future marine development. A proposed development will have an impermissible adverse impact if it will result in any one or more of the following:

A. The proposed non water-dependent use will displace an existing water-dependent use.
B. The proposed use will reduce existing commercial vessel berthing space.
C. The proposed nonwater-dependent use, structure, or activities, including but not limited to access, circulation, parking, dumpsters, exterior storage, or loading facilities, and other structures, will unreasonably interfere with the activities and operation of existing water-dependent uses or significantly impede access to vessel berthing or other access to the water by water-dependent uses.
D. The siting of a proposed nonwater-dependent use will substantially reduce or inhibit existing public access to marine or tidal waters.

10.4.3 Permitted uses

Subject to a determination that the proposed use meets the standards of Subsection 10.4.2, the uses in Table 10-A are permitted (●) or conditional (◐) in the Waterfront Port Development Zone.

10.4.4 Conditional use standards

Conditional uses shall be permitted in the Waterfront Port Development Zone, provided that, notwithstanding Section 6.5 or any other provision of this code, the Planning Board shall be substituted for the Board of Appeals as the review authority. In addition to the provisions of Section 6.5, such uses will:

A. Not impede or preclude existing or potential water-dependent development on other lots.
B. Allow for adequate access to the water.
C. Be compatible with water-dependent and marine uses.
D. Operationally support one or more water-dependent use(s), or be located in a building or structure that is physically adaptable or relocatable to make way for future development of water-dependent uses.
E. Meet any additional performance and dimensional standards set forth below.

10.4.5 Prohibited uses

Uses which are not enumerated in Table 10-A as permitted or conditional uses are prohibited. Those uses that are prohibited shall include, without limitation:

A. Residential uses.
B. Hotels, motels, or boatels.
C. Auditoriums, civic centers, convention centers, or other meeting facilities.
D. Restaurants and drinking establishments.
E. Marinas, including marina associated boat storage facilities.
F. Truck terminals.



TABLE 10-A: WPDZ PERMITTED AND CONDITIONAL USES

Marine	Marine repair services and machine shops	●
	Tugboat, fireboat, pilot boat, and similar services	●
	Harbor and marine supplies and services and ship supply, such as fueling and bunkering of vessels	●
	Shipbuilding and facilities for construction, maintenance, and repair of vessels	●/◐[1]
	Marine cargo handling facilities, including docking, loading and related storage	●/◐[1]
	Boat repair yards	●/◐[1]
	Facilities for marine construction and salvage	●/◐[1]
	Facilities for marine pollution control, oil spill cleanup, and servicing of marine sanitation devices	●
	Marine retail and wholesale sales, including yacht brokerage	◐
	Boat storage facilities	●/◐[1]
	Seafood processing	◐
	Seafood packing and packaging	◐
	Fabrication, storage, and repair of fishing equipment	◐
	Ice-making services	◐
	Fabrication of marine-related goods	◐
	Fish by-products processing, provided that any fish by-product processing facility has a valid rendering facility license under Chapter 12 and the processing of other material wastes or by-products shall not be deemed a lawful accessory use under any other provision of this article.	◐
	Commercial berthing	●
Industrial	Intermodal transportation facilities principally for vessels with regularly scheduled destination service or for railroad transportation service	●/◐[1]
	Marine cargo container and chassis maintenance and repair	●
	Facilities for combined marine and general construction	◐[1]
	Cold storage facility, warehousing, and storage of goods which are awaiting shipment via cargo carriers	◐[1]
	Low impact industrial uses, including but not limited to bakeries, breweries, bottling, printing and publishing, pharmaceuticals, machine shops, manufacture of products, assembly of electrical components, tool and die shops, and the packaging of food, provided that such uses shall be subject to the performance standards of the I-M zone	◐
Public	Public uses including pedestrian and bicycle trails	●
	Utility substations, including sewage collection and pumping stations, water pumping stations, transfer stations, telephone electronic equipment enclosures and other similar structures, provided that such structures are located more than 100 feet from the water.	◐
Other	Off-street parking lots, excluding parking structures	◐
	Accessory uses customarily incidental and subordinate to the location, function, and operation of permitted uses[2]	●
	Minor solar energy systems	●
	Minor wind energy systems	◐

[1] Uses that may be located in buildings that exceed the maximum permitted height. Uses marked ●/◐ will be considered permitted uses when occupying buildings with a maximum height equal to or less than the maximum applicable height allowable under the permitted use dimensional standards, and conditional Uuses when above that height.

[2] Food service establishments, including food trucks and other similar retail and service support uses shall only be permitted as accessory uses if all such uses do not exceed 2,000 SF in total floor area of the building and each individual use does not exceed 1,000 SF in total floor area of the building; and further provided that such accessory uses provide goods or services that are supportive of the principal use and its clientele.



TABLE 10-B: WPDZ DIMENSIONAL REQUIREMENTS

	Permitted Use Dimensional Standards	Conditional Use Dimensional Standards
Setbacks (min.)	N/A	N/A
Lot size (min.)	N/A	5 acres, limited to 1 building greater than the maximum applicable height allowed under the permitted use dimensional standards.
Setback from pier line, wharf, or bulkhead (including any attached aprons)(min.)[1]	5 ft.	5 ft.
Lot coverage (max.)	50% east of a line projected due south from the centerline intersections of W. Commercial Street and the easterly most Cassidy Point Drive.	50% east of a line projected due south from the centerline intersections of W. Commercial Street and the easterly most Cassidy Point Drive.
	100% west of a line projected due south from the centerline intersections of W. Commercial Street and the easterly most Cassidy Point Drive.	100% west of a line projected due south from the centerline intersections of W. Commercial Street and the easterly most Cassidy Point Drive.
Building height (inclusive of roof forms and rooftop appurtenances)(max.)[2]	55 ft. east of a line projected due south from the centerline intersections of West Commercial Street and the easterly most Cassidy Point Drive and west of Casco Bay Bridge.	60 ft. west of the Casco Bay Bridge[7], except as follows: 75 ft. in the area east of a line projected due south from the centerline intersections of W. Commercial Street and the easterly most Cassidy Point Drive and west of Casco Bay Bridge, on lots 5 contiguous acres or larger. [4] 130 ft. for bulk storage[3] facilities west of the projection of the westerly most Cassidy Point Drive segment.
	60 ft. west of a line projected due south from the centerline intersections of West Commercial Street and the easterly most Cassidy Point Drive.	
	In no case may any permitted heights exceed 50ft within 100ft of W.Commercial Street and all area of the WPDZ east of the Casco Bay Bridge. [5]	In no case may any conditionally permitted heights exceed 50ft within 100ft of W. Commercial Street and all area of the WPDZ east of the Casco Bay Bridge.[5]
Building length (max.)[6]	450 ft.	450 ft.
		300 ft. within 100ft of W. Commercial Street and all area of the WPDZ east of the Casco Bay Bridge.
	300 ft. within 100 ft. of W. Commercial Street and all area of the WPDZ east of the Casco Bay Bridge.	300 ft. for buildings or portions of buildings exceeding the maximum applicable height allowed under the permitted use dimensional standards.

[1] The setback area may be used for activities related to the principal uses in the structure, but shall not be used for off-street parking.
[2] Buildings and/or structures shall be limited to an absolute height measured from average grade with no portion of the structural roof system or roof top appurtenances exceeding the limits set forth under Table 10-B with the exception of moveable elements or connection devices as listed under Subsection 10.4.7
[3] Bulk storage dedicated to materials delivered or awaiting transportation to a site by waterborne transportation.
[4] A projection of the street centerline shall consist of an extension of the centerline to the water side boundary of the WPDZ.
[5] Height limitations east of the Casco Bay Bridge are intended to protect vistas of the harbor from public open space.
[6] As measured by a line parallel with the southern edge of the West Commercial Street right-of-way.
[7] Only those conditional uses so designated in Note 1 of the Waterfront Port Development Zone Use Table 10-A may be located in buildings taller than 60 ft.



10.4.6 Dimensional requirements

In addition to the generally applicable provisions of Section 7.5 of this Land Use Code, lots in the Waterfront Port Development Zone shall be subject to the requirements of Table 10-B.

10.4.7 Additional bulk, height, and location standards.

A. For structures exceeding the maximum applicable height allowed under the permitted use dimensional standards:
   1. Moveable elements such as cranes and gantries, and connection devices such as conveyors or bridges shall not be subject to the space and bulk requirements, but shall be subject to a determination by the Federal Aviation Administration that the location of such equipment will not create a hazard to navigation.
   2. The applicant must provide a determination from the Federal Aviation Administration that structures and equipment will not exceed the applicable height guidelines for the runway approach and will not create a hazard to navigable airspace. Such a determination shall be accepted as conclusive evidence that the proposed development will not create a hazard.
   3. For each lot, at least one view corridor of at least 90 feet in width shall be left unbuilt to preserve a clear line of sight between West Commercial Street and the water.

10.4.8 Performance standards

Proposals in the Waterfront Port Development Zone that qualify for site plan review shall submit, in addition to site plan submission requirements (if applicable), an impact mitigation narrative summarizing how the project meets the applicable performance standards. All uses in the Waterfront Port Development Zone shall comply with the following standards:

A. **Outdoor storage of materials.** Outdoor storage of commodities and materials accessory to normal conduct of business, except pilings and/or cranes, shall be permitted to a maximum height of 45 feet, and such materials shall be entirely contained, including runoff contaminants and residual material, within a designated area within the lot boundaries.

B. **Noise.**
   1. The level of sound, measured by a sound level meter with frequency weighting network (manufactured according to standards prescribed by the American National Standards Institute, Inc.), inherently and recurrently generated within the Waterfront Port Development Zone between the hours of 7:00 p.m. and 7:00 a.m. from industrial facilities or operation commenced on or after July 1, 1988, shall not exceed 55 decibels on the A scale at or within the boundaries of any residential zone, except for sound from construction activities, sound from traffic on public streets, sound from temporary activities such as festivals, and sound created as a result of, or relating to, an emergency, including sound from emergency warning signal devices.
   2. In measuring sound levels under this subsection, sounds with a continuous duration of less than 60 seconds shall be measured by the maximum reading on a

sound level meter set to the A weighted scale and the fast meter response (L maxfast). Sounds with a continuous duration of 60 seconds or more shall be measured on the basis of the energy average sound level over a period of 60 seconds (LEQ1).

3. In addition to the sound level standards otherwise established, facilities or operations established or built in the Waterfront Port Development Zone on or after July 1, 1988, shall employ best practicable sound abatement techniques to prevent tonal sounds and impulse sounds or, if such tonal and impulse sounds cannot be prevented, to minimize the impact of such sounds in residential zones. Tonal sound is defined as a sound wave usually perceived as a hum or which because its instantaneous sound pressure varies essentially as a simple sinusoidal function of time. Impulse sounds are defined as sound events characterized by brief excursions of sound pressure, each with a duration of less than one second.

C. **Vibration.** Vibration inherently and recurrently generated shall be imperceptible without instruments at lot boundaries. This shall not apply to vibration resulting from activities aboard a vessel or from railroad vehicle activities, or from activities on a pile supported pier.

D. **Federal and state environmental regulations.** All uses shall comply with federal and state environmental statutes and regulations regarding emissions into the air, except where provisions of this Land Use Code are more stringent.

E. **Discharges into harbor areas.** No discharge into harbor water areas shall be permitted, unless permitted by the Maine Department of Environmental Protection under a waste discharge license and as approved by the Department of Public Works in accordance with Chapter 24, Article III of the City of Portland Code of Ordinances. All private sewage disposal or private wastewater treatment facilities shall comply with the provisions of Chapter 24, Article II of the City of Portland Code of Ordinances and federal and state environmental statutes and regulations regarding wastewater discharges.

F. **Storage of vehicles.** Storage of any unregistered automotive vehicle on the premises for more than 60 days shall not be permitted.

G. **Landfill of docking and berthing areas.** Landfill of docking and berthing areas shall be governed by 38 M.R.S. § 471 through 478, and permitted only if the landfill does not reduce the amount of linear berthing areas or space, or berthing capacity. If approved, construction shall be undertaken using methods approved by the Department of Public Works and shall be accomplished in accordance with the provisions of this Land Use Code and in a manner so as to ensure that a stable and impermeable wall of acceptable materials will completely contain the fill material and will not permit any fill material to leach into docking areas or navigable waters.

H. **Off-street parking.** Off-street parking is required as provided in Article 19.

I. **Shoreland and Flood Plain Management regulations.** Any lot or portion of a lot located in a Shoreland Zone as identified on the City



zoning map or in a flood hazard area shall be subject to the requirements of Articles 11 and 12.

J. **Lighting.** All lighting on the site shall be shielded such that direct light sources shall not unreasonably interfere with vessels transiting the harbor nor have an unreasonable adverse impact on adjacent residential zones.

K. **Signs.** Signs shall be permitted as set forth in Article 20.

L. **Storage of pollutants and oily wastes.** On-premises storage of pollutants and oily wastes shall not be permitted for more than 45 days.

M. **Compatibility of non-marine uses with marine uses.** Non-marine uses, structures and activities, including but not limited to access, circulation, parking, dumpsters, exterior storage and loading facilities or other structures shall neither unreasonably interfere with the existence or operation of marine uses nor significantly impede access to vessel berthing or other access to the water by existing or potential marine uses.

N. **Design.** Design and visual character shall:

1. In building design, including placement and screening of mechanical equipment, take into consideration long views to minimize negative visual impact and provide visual interest, and architecturally integrate exposed industrial systems and equipment where practical.
2. Organize massing to emphasize certain parts of the building such as entries, corners, or different uses.
3. Treat all facades, including the roof, with equal level of detail and articulation.
4. Vary and articulate building facades to add scale and avoid large monotonous walls. Treatments such as texture, color, material changes, or shadow lines or murals must be used to add visual interest and avoid dull, flat, repetitive facades.
5. Use a scaling or articulation element such as stepback, canopy, or fenestration as required for any street-facing façade within 50 feet of West Commercial Street.

11 SHORELAND ZONE

11.1 PURPOSE

The purpose of this article is to further the maintenance of safe and healthful conditions; prevent and control water pollution; protect fish spawning grounds, aquatic life, bird and other wildlife habitat; protect buildings and lands from flooding and accelerated erosion; protect archaeological and historic resources; protect commercial fishing and maritime industries; protect freshwater and coastal wetlands; control building sites, placement of structures, and land uses; conserve shore cover and visual as well as actual points of access to inland and coastal waters and natural beauty, as appropriate in an urbanized environment; and to anticipate and respond to the impact of development in shoreland areas.

11.2 APPLICABILITY

A. This article applies to all land areas, uses, structures, and land use activities within:
   1. 250 feet, horizontal distance, of the normal high-water line of any river.
   2. 250 feet, horizontal distance, of the upland edge of a coastal wetland, including all areas affected by tidal actions.
   3. 250 feet, horizontal distance, of the upland edge of a freshwater wetland.
   4. 75 feet, horizontal distance, of the normal high-water line of a stream.

B. This article also applies to any structure built on, over or abutting a dock, wharf, or pier, or other structure extending beyond the normal high-water line of a water body, meaning for the purposes of this article any river or stream, or within a wetland.

C. For the purposes of this article, wetlands shall include coastal and freshwater wetlands as defined in Article 3.

D. The regulations and controls of this article apply to all land areas, uses, structures, and land use activities cited within this subsection in all zones of the city.

11.3 REVIEW PROCEDURE

Development activities within the Shoreland Zone are reviewed by the Building Authority for compliance with the requirements of Section 11.4. Submission of plans for such development activity shall be prepared by qualified professionals, based upon a boundary survey.

11.4 USE-SPECIFIC LAND USE STANDARDS

11.4.1 Principal and accessory structures

A. All principal and accessory structures shall be set back at least 75 feet horizontal distance from the normal high-water line of water bodies, the upland edge of a wetland or associated tributary streams within a Shoreland Zone, except that in the following zones the setback shall be as indicated below:
   1. *B 3, B-5/B-5b, I-L on-peninsula, and I-M on-peninsula:* 25 feet.
   2. *I-B, WCZ, WPDZ, EWPZ:* No setback required. However, pier edge setbacks apply in the EWPZ, the WCZ, and the WPDZ.

B. For principal structures, setback measurements shall be taken from the top of a coastal bluff that has been identified on coastal bluff maps as being "highly unstable" or "unstable" by the Maine Geological Survey, as adopted on the City of Portland zoning map.

C. Notwithstanding this requirement, when a lot is a lot of record as defined in Subsection 4.3.1 or cannot otherwise meet the setback requirement of this subsection due to physical limitations of the site, the Planning Board may approve a reduction of the setback requirement for a principal structure to the least amount necessary to achieve a building dimension of 28 feet, provided that the setback is not reduced to less than 40 feet. Structures in existence on June 15, 1992, may be expanded once during the lifetime of the structure up to 25 feet toward a freshwater wetland, stream or tributary stream, provided that the setback is not reduced to less than 40 feet and the floor area or volume is not increased by more than 30%. In no event shall the setback from a coastal wetland be reduced to less than 75 feet, except as set forth in Subsection 11.4.1(A), above.

D. In all cases, accessory detached structures of less than 100 square feet of floor area shall be permitted with no setback, provided that such structures shall be used only for the storage of fish, bait, and related equipment. No setback shall be required for piers, docks, retaining walls, or any other structures which require direct access to the water as an operational necessity.

E. The lowest floor elevation or openings of all buildings and structures including basements shall be elevated at least one foot above the elevation of the 100-year flood, the flood of record, or in the absence of these, the flood as defined by soil types identified as recent flood plain soils.

F. Notwithstanding the requirements of this section, stairways or similar structures may be allowed with a permit from the Building Authority to provide shoreline access in areas of steep slopes or unstable soils, provided that:

1. The structure is limited to a maximum of four feet in width.
2. The structure does not extend below or over the normal high-water line of a water body or upland edge of a wetland, unless permitted by the Department of Environmental Protection pursuant to 38 M.R.S. § 480 C.
3. The applicant demonstrates that no reasonable access alternative exists on the property.

11.4.2 Piers, docks, wharves, bridges, and other structures and uses extending over or below the normal high-water line of a water body or within a wetland

A. Access from shore shall be developed on soils appropriate for such use and constructed so as to control erosion.

B. The location shall not interfere with existing developed or natural beach areas.

C. The facility shall be located so as to minimize adverse effects on fisheries.

D. The facility shall be no larger in dimension than necessary to carry on the activity and shall be consistent with surrounding character and uses.

E. New permanent structures, and expansions thereof, projecting into or over water bodies shall require a permit from the Department of Environmental Protection pursuant to the National Resources Protection Act, 38 M.R.S. § 480-C. Permits may also be required from the Army Corps of Engineers and Board of Harbor Commissioners if located in navigable waters.

F. Except in the WCZ, EWPZ, WPDZ, and I-B zones, no new structure shall be built on, over or abutting a pier, wharf, dock or other structure extending beyond the normal high-water line of a water body or within a wetland unless the structure requires direct access to the water as an operational necessity.

G. No existing structures built on, over or abutting a pier, dock, wharf, or other structure extending beyond the normal high-water line of a water body or within a wetland shall be converted to residential dwelling units in any zone.

11.4.3 Clearing or removal of vegetation

A. In all shoreland areas in Resource Protection Zones, the cutting or removal of vegetation shall be limited to that which is necessary for uses expressly authorized in that zone.

B. The clearing or removal of vegetation standards of this subsection shall not apply to the following zones: EWPZ, WCZ, WPDZ, B-3, B-5/B-5b, B-6, B-7, I-L (on-peninsula), and I-M zones (on-peninsula).

C. The clearing or removal of vegetation standards of this subsection shall not apply to those portions of public recreational facilities adjacent to public swimming areas. Cleared areas in these locations shall be limited to the minimum amount necessary.

D. Other than cutting or removal of vegetation as provided for in this subsection, timber harvesting shall not be permitted. For purposes of this subsection, timber harvesting is defined as the cutting and removal of timber for the primary purpose of selling or processing forest products. The cutting or removal of trees in the Shoreland Zone on a lot that has less than two acres within the Shoreland Zone shall not be considered timber harvesting. Cutting or removal of such trees shall be regulated pursuant to this subsection.

E. For purposes of this subsection, vegetation is defined as all live trees, shrubs, and other plants including without limitation, trees both over and under 4 inches in diameter, measured at 4 ½ feet above ground level.

F. In all areas other than the Resource Protection Zone, a buffer strip of vegetation shall be preserved, except where clearance is required for development of permitted uses, within a strip of land extending 75 feet, horizontal distance, from the normal high-water or upland edge of a coastal wetland, river, stream, or tributary stream within a Shoreland Zone, in accordance with the following:

1. There shall be no cleared opening greater than 250 square feet in the forest canopy or other existing vegetation if a forested canopy is not presented as measured from the outer limits of the tree or shrub crown. Notwithstanding this limitation, a footpath not to exceed six feet in width as measured between tree trunks and/or shrub stems is allowed provided that a cleared line of sight to the water through the buffer strip is not created.
2. Selective cutting of trees within the buffer strip is allowed provided that a well distributed stand of trees and other vegetation is maintained. For the purposes of this subsection, a "well distributed stand of trees" adjacent to a water body, tributary stream or wetland shall be defined as maintaining a minimum rating

TABLE 11-A: SHORELAND TREE STAND RATING SYSTEM

Diameter (at 4½ ft. above ground level)	Points
2 in. ≤ 4 in.	1
4 in. ≤ 8 in.	2
8 in. – 12 in.	4
12 in. or greater	8

score of 16 or more in any 25-foot by 50-foot rectangle area as determined by the rating system in Table 11-A. The following shall govern in applying the point system in Table 11-A:

a. The 25-foot by 50-foot rectangular plots must be established where the landowner or lessee proposes clearing within the required buffer;

b. Each successive plot must be adjacent to, but not overlap a previous plot.

c. Any plot not containing the required points must have no vegetation removed except as otherwise allowed by this ordinance.

d. Any plot containing the required points may have vegetation removed down to the minimum points required or as otherwise allowed by this ordinance.

e. Where conditions permit, no more than 50% of the points on any 25-foot by 50-foot rectangular area may consist of trees greater than 12 inches in diameter.

For the purposes of this subsection, "other natural vegetation" is defined as retaining existing vegetation under three feet in height and other ground cover and retaining at least five saplings less than two inches in diameter at 4 ½ feet above ground level for each 25-foot by 50-foot rectangular area. If five samplings do not exist, no woody stems less than two inches in diameter can be removed until five samplings have been recruited into the plot. Notwithstanding the above provisions, no more than 40% of the total volume of trees four inches or more in diameter, measured at 4 ½ feet above ground level may be removed in any ten-year period.

3. In order to protect water quality and wildlife habitat, existing vegetation under three feet in height and other groundcover, including leaf litter and the forest duff layer, shall not be cut, covered, or removed, except to provide a footpath or other permitted uses as described in this subsection.

4. Pruning of tree branches on the bottom one third of the tree is allowed.

5. In order to maintain a buffer strip of vegetation when the removal of storm damaged, diseased, unsafe or dead trees results in the creation of cleared openings, these openings shall be replanted with native tree species unless existing new tree growth is present.

G. Selective cutting of not more than 40% of the volume of trees four inches or more in diameter, measured at 4 1/2 feet above ground level, shall be allowed within any ten-year period at distances greater than 75 feet, horizontal distance, from the normal high-water line of any other water body, tributary

stream, or the upland edge of a wetland, except to allow for the development of permitted uses. Tree removal in conjunction with the development of permitted uses shall be included in the 40% calculation. For the purposes of these standards, volume may be considered to be equivalent to basal area. In no event shall cleared openings for any purpose, including but not limited to, principal and accessory structures, driveways, lawns, and sewage disposal areas, exceed in the aggregate 25% percent of the lot area within the Shoreland Zone, including land previously cleared.

H. Legally existing nonconforming cleared openings may be maintained but shall not be enlarged, except as allowed by this article.

I. Fields and other cleared openings which have reverted to primarily shrubs, trees, or other woody vegetation shall be regulated under the provisions of this subsection.

11.4.4 Erosion and sedimentation control

A. All activities which involve filling, grading, excavation or other similar activities which result in unstabilized soil conditions and which require a permit shall require a written soil erosion and sedimentation control plan in accordance with Maine Erosion and Sediment Control Handbook for Construction: Best Management Practices, published by the Cumberland County Soil and Water Conservation District and the Maine Department of Environmental Protection and the City of Portland *Technical Manual*. The plan shall be submitted to the Building Authority for approval and shall include, where applicable, provisions for:

1. Mulching and revegetation of disturbed soil.
2. Temporary runoff control features such as hay bales, silt fencing, or diversion ditches.
3. Permanent stabilization structures such as retaining walls or riprap.

B. In order to create the least potential for erosion, development shall be designed to fit with the topography and soils of the site. Areas of steep slopes where high cuts and fills may be required shall be avoided wherever possible, and natural contours shall be followed as closely as possible.

C. Erosion and sedimentation control measures shall apply to all aspects of the proposed project involving land disturbance and shall be in operation during all stages of the activity. The amount of exposed ground area at every phase of construction shall be minimized to reduce the potential for erosion.

D. Any exposed ground area shall be temporarily or permanently stabilized within one week from the time it was last actively worked, by use of riprap, sod, seed, and mulch, or other effective measures. In all cases, permanent stabilization shall occur within nine months of initial exposure. The following standards shall also be met:

1. Where mulch is used, it shall be applied at a rate of at least one bale per 500 square feet and shall be maintained until a catch of vegetation is established.
2. Anchoring the mulch with netting, peg, and twine or other suitable method may be required to maintain the mulch cover.
3. Additional measures shall be taken where necessary in order to avoid siltation into

the water. Such measures may include the use of staked hay bales, and/or silt fences.

E. Natural and man-made drainage ways and drainage outlets shall be protected from erosion from water flowing through them. Drainage ways shall be designed and constructed in accordance with the City of Portland *Technical Manual*.

11.4.5 Soils

All land uses shall be located on soils in or upon which the proposed uses or structures can be established or maintained without causing adverse environmental impacts, including severe erosion, mass soil movement, improper drainage, and water pollution, either during or after construction. Proposed uses requiring subsurface wastewater disposal and commercial or industrial development or other similar intensive land uses shall require a soils report based on an on-site investigation and prepared by state certified professionals. Certified persons may include Maine Certified Soil Scientists, Maine Registered Professional Engineers, Maine State Certified Geologists and other persons who have training and experience in the recognition and evaluation of soil properties. The report shall be based upon the analysis of the characteristics of the soil and surrounding land and water areas, maximum ground water elevation, presence of ledge, drainage conditions, and other pertinent data which the evaluator deems appropriate. The soils report shall include recommendations for a proposed use to counteract soil limitations where they exist.

11.4.6 Water quality

No activity shall deposit on or into the ground or discharge to the waters of the state any pollutant that by itself or in combination with other activities or substances will impair designated uses or the water classification of the water body, tributary stream or wetland.

11.4.7 Archaeological sites

Any proposed land use activity involving structural development or soil disturbance on or adjacent to sites listed on, or eligible to be listed on, the National Register of Historic Places, as determined by the Department of Planning and Urban Development, shall be submitted by the applicant to the Maine Historic Preservation Commission for review and comment at least 20 days prior to action being taken by the Planning Authority. The Planning Authority shall consider comments received from the commission prior to rendering a decision on the application. Such sites shall also comply with all applicable provisions of Article 17 of this chapter.

11.4.8 Installation of public utility service

No public utility of any kind shall install services to any new structure located in the Shoreland Zone unless written authorization attesting to the validity and currency of all local permits required under this Code has been issued by the appropriate municipal authorities. Following installation of service, the public utility shall forward the written authorization to the appropriate municipal authorities, indicating that installation has been completed.

11.4.9 Essential services

Where feasible, the installation of essential services shall be limited to existing public ways and existing service corridors. The installation of essential services, other than road-side distribution lines and within existing service corridors, is not allowed in a Resource Protection or Stream Protection Zone,

except where the applicant demonstrates that no reasonable alternative exists. Damaged or destroyed public utility transmission and distribution lines, towers, and related equipment may be replaced or reconstructed without a permit.

11.4.10 Roads and driveways

A. Roads and driveways shall be setback a minimum of 75 feet from the normal high-water or upland edge of a coastal wetland, freshwater wetland, river or tributary stream within a Shoreland Zone, except:
   1. In the EWPZ, WCZ, WPDZ, B-3, B-5/B-5b, I-L (on-peninsula) and I-M (on-peninsula) roads and driveways shall be setback as established for structures in those zones as specified in Subsection 11.4.1(A).
   2. If no other reasonable alternative exists, the Planning Board may reduce the road and/or driveway setback requirement to no less than 50 feet, horizontal distance, upon clear showing by the applicant that appropriate techniques will be used to prevent sedimentation of the water body, tributary stream or wetland. Such techniques may include, but are not limited to, the installation of settling basins, and/or effective use of additional ditch relief culverts and turnouts place so as to avoid sedimentation of the water body, tributary stream, or wetland.

B. Existing public roads may be expanded within the legal road right of way regardless of their setback from a waterbody, tributary stream, or wetland.

C. New roads and driveways are prohibited in a Resource Protection Zone except that the Planning Board may grant a permit to construct a road or driveway to provide access to permitted uses within the district. A road or driveway may also be approved by the Planning Board in a Resource Protection Zone, upon a finding that no reasonable alternative route or location is available outside the district. When a roadway or driveway is permitted in a Resource Protection Zone the road and/or driveway shall be setback as far as practicable from the normal high-water line of a water body, tributary stream, or upland edge of wetland.

D. Road and driveways banks shall be no steeper than slope of two horizontal to one vertical and shall be graded and stabilized in accordance with the provisions for erosion and sedimentation control contained in Subsection 11.4.4.

E. Road and driveway grades shall be no greater than 10% except segments of less than 200 feet.

F. In order to prevent road and driveway surface drainage from directly entering water bodies, tributary streams, or wetlands, roads and driveways shall be designed, constructed, and maintained to empty onto an unscarified buffer strip at least 50 feet plus two times the average slope, in width between the outflow point of the ditch or culvert and the normal high-water line of a water body, tributary stream, or upland edge of a wetland. Surface drainage which is directed to an unscarified buffer strip shall be diffused or spread out to promote infiltration of the runoff and to minimize channelized flow of the drainage through the buffer strip.

G. Ditch relief (cross drainage) culverts, drainage dips, and water turnout shall be installed in a manner effective in directing drainage onto

unscarified buffer strips before the flow gains sufficient volume or head to erode the road, driveway, or ditch. To accomplish this, the following shall apply:

1. Ditch relief culverts, drainage dips, and associated water turnouts shall be spaced along the road or driveway at intervals no greater than indicated in Table 11-B.
2. Drainage dips may be used in place of ditch relief culverts only where the grade is 10% or less.
3. On sections having slopes greater than ten 10%, ditch relief culverts shall be placed at approximately a 30 degree angle downslope from a line perpendicular to the centerline of the road or driveway.
4. Ditch relief culverts shall be sufficiently sized and properly installed in order to allow for effective functioning, and their inlet and outlet ends shall be stabilized with appropriate materials.
5. Ditches, culverts, bridges, dips, water turnouts, and other storm water runoff control installations associated with roads and driveways shall be maintained on a regular basis to assure effective functioning.

TABLE 11-B: DRAINAGE SPACING

Grade (%)	Spacing
0-2	250 ft.
3-5	200-135 ft.
6-10	100-80 ft.
11-15	80-60 ft.
16-20	60-45 ft.
21+	40 ft.

11.4.11 Parking areas

Parking areas shall be set back a minimum of 75 feet from the normal high-water or upland edge of a coastal wetland, freshwater wetland, river, or tributary stream within a Shoreland Zone except:

A. In the EWPZ, WCZ, WPDZ, B-3, B-5/B-5b, I-L, and I-M zones, parking setbacks shall be as established for structures in those zones, as specified in Subsection 11.4.1(A).

B. Where the Planning Board finds that no other reasonable alternative exists further from the shoreline or tributary stream, the board may reduce the parking setback requirement to no less than 50 feet in the R-OS and I-B zones to the least amount necessary for construction, provided that the applicant proves by a preponderance of the evidence that appropriate techniques will be used to prevent sedimentation of the water body.

11.4.12 Septic waste disposal

All subsurface sewage disposal systems shall be installed in conformance with the State of Maine Subsurface Wastewater Disposal Rules and the following:

A. Clearing or removal of woody vegetation necessary to site a new system and any associated fill extensions, shall not extend closer than 75 feet, horizontal distance, from the normal high-water line of a water body or the upland edge of a wetland.

B. A holding tank is not allowed for a first-time residential use in the Shoreland Zone.

11.4.13 Stormwater runoff

All new construction and development shall be designed to be in compliance with the City of Portland *Technical Manual* to minimize stormwater

runoff from the site in excess of the natural predevelopment conditions. Where possible, existing natural runoff control features, such as berms, swales, terraces, and wooded areas shall be retained in order to reduce runoff and encourage infiltration of stormwater. Stormwater runoff control systems shall be maintained as necessary to ensure proper functioning.

11.4.14 Agriculture

A. All spreading or disposal of manure shall be accomplished in conformance with the Manure Utilization Guidelines published by the Maine Department of Agriculture on November 1, 2001, and the Nutrient Management Law (7 M.R.S. §§ 4201-4209).
B. Manure shall not be stored or stockpiled within 75 feet, horizontal distance, of water bodies, tributary streams, or wetlands. All manure storage areas within the Shoreland Zone must be constructed or modified such that the facility produces no discharge of effluent or contaminated stormwater.
C. Agricultural activities involving tillage of soil greater than 40,000 square feet in surface area within the Shoreland Zone shall require a conservation plan to be filed with the Planning Authority.
D. There shall be no new tilling of soil within 75 feet, horizontal distance, from water bodies and coastal wetlands or within 25 feet, horizontal distance, of tributary streams and freshwater wetlands when such new tilling, by itself or combined with all other contiguous tillage, shall exceed 40,000 square feet in surface area. Operations in existence on the effective date of this section and not in conformance with these provisions may be maintained but shall not be expanded. When the new tilling, by itself or combined with all other contiguous tillage, shall total 40,000 square feet or less, the tillage shall be set back a minimum of 25 feet from all water bodies, tributary streams, or wetlands.
E. Newly established livestock grazing areas shall not be permitted within 75 feet, horizontal distance, of water bodies and coastal wetlands or within 25 feet, horizontal distance, of tributary streams and wetlands. Livestock grazing associated with ongoing farm activities and which are not in conformance with the above setback provisions may continue, provided such grazing is conducted in accordance with a soil and water conservation plan filed with the Planning Authority.

11.5 SUPPLEMENTAL SITE PLAN STANDARDS

11.5.1 Site plan standards

The Planning Board or Planning Authority shall approve a site plan located within a Shoreland Zone if it finds that the following standards, in addition to the standards set forth in Article 14, are met:

A. The proposal will maintain safe and healthful conditions.
B. The proposal will not result in water pollution, erosion, or sedimentation to surface waters.
C. The proposal will adequately provide for the disposal of all wastewater.
D. The proposal will not have an adverse impact on spawning grounds, fish, aquatic life, bird, or other wildlife habitat.
E. The proposal will conserve shore cover and visual, as well as actual, points of access to inland and coastal waters.
F. The proposal will protect archaeological and historic resources.



G. The proposal will not adversely affect existing commercial fishing or maritime activities.

H. The proposal will avoid problems associated with flood plain development and use.

I. The proposal is in conformance with the standards set forth in this article.

12 FLOODPLAIN MANAGEMENT

12.1 PURPOSE

Certain areas of the City of Portland, Maine are subject to periodic flooding, causing serious damage to properties within these areas. Relief is available in the form of flood insurance as authorized by the National Flood Insurance Act of 1968. Therefore, the City of Portland, Maine has chosen to become a participating community in the National Flood Insurance Program and agrees to comply with the requirements of the National Flood Insurance Act of 1968 (P.L. 90-448), as amended from time to time an as delineated in this article. It is the intent of the City of Portland to require the recognition and evaluation of flood hazards in all official actions relating to land use in the floodplain areas having special flood hazards.

The National Flood Insurance Program, established in the aforesaid act, provides that areas of the city having a special flood hazard be identified by the Federal Emergency Management Agency and that floodplain management measures be applied in such flood hazard areas. This article establishes a Flood Hazard Development Permit system and review procedure for development activities in the designated flood hazard areas of the city. The purposes of this article are to reduce future flood risks and losses, protect against financial and human loss resulting from flood disasters, and to control the placement of structures, construction materials, and methods used to minimize potential property damage due to flooding. The City of Portland has the legal authority to adopt land use and control measures to reduce future flood losses pursuant to Title 30-A M.R.S. § 2001-3007, 4352, 4401-4407, and Title 38 M.R.S. § 440.

12.2 APPLICABILITY

This article applies to all land areas, uses, structures, and land use activities lying in the special flood hazard areas, Zones A, AE, AO, AH, and VE, as identified by the Federal Emergency Management Agency in a report entitled *Flood Insurance Study - Cumberland County, Maine,* with accompanying "Flood Insurance Rate Map," dated June 20, 2024. This *Flood Insurance Study* with accompanying maps, and any subsequent amendments thereto, including Letters of Map Revision approved by FEMA, is hereby adopted by reference and declared to be a part of this Land Use Code.

12.3 STRUCTURE AND DEVELOPMENT TYPES

12.3.1 Structure types

A. For the purposes of this article, structure shall mean a walled and roofed building. A gas or liquid storage tank that is principally above ground is also a structure.

B. Accessory structure shall mean a structure which is on the same parcel of property as a principal structure and the use of which is incidental to the use of the principal structure.

C. The following types of structures shall have the following meanings:

1. *Agricultural structure*. Structures that are used exclusively for agricultural purposes or uses in connection with the production, harvesting, storage, raising, or drying of agricultural commodities and livestock. Structures that house tools or equipment used in connection with these purposes or uses are also considered to have agricultural purposes or uses.
2. *Elevated building*. A non-basement building that is:

a. Built, in the case of a building in Zones A, AE, AO, or AH, so that the top of the elevated floor, or in the case of a building in Zones VE or Coastal AE, to have the bottom of the lowest horizontal structural member of the elevated floor, elevated above the ground level by means of pilings, columns, posts, or piers; and,

b. Adequately anchored to not impair the structural integrity of the building during a flood of up to two feet above the magnitude of the base flood.

In the case of Zones A, AE, AO, or AH, elevated building also includes a building elevated by means of fill or solid foundation perimeter walls with hydraulic openings sufficient to facilitate the unimpeded movement of flood waters, as required in Subsection 12.4.5(N) In the case of Zones VE or Coastal AE, elevated building also includes a building otherwise meeting the definition of elevated building, even though the lower area is enclosed by means of breakaway walls, if the breakaway walls meet the standards of subsection 12.4.5(R)(2)(c)(iii).

3. *Historic structure*. Any structure that is:

a. Listed individually in the National Register of Historic Places (a listing maintained by the Department of Interior) or preliminarily determined by the Secretary of the Interior as meeting the requirements for individual listing on the National Register;

b. Certified or preliminarily determined by the Secretary of the Interior as contributing to the historical significance of a registered historic district or a district preliminarily determined by the Secretary of the Interior to qualify as a registered historic district;

c. Individually listed on a Maine state inventory of historic places at such time that one is created; or,

d. Designated as a local landmark or identified as a contributing property under Article 17.

4. *Manufactured home*. A structure, transportable in one or more sections, which is built on a permanent chassis and is designed for use with or without a permanent foundation when connected to the required utilities. For floodplain management purposes the term manufactured home also includes park trailers, travel trailers, and other similar vehicles placed on a site for greater than 180 consecutive days.

5. *Manufactured home park or subdivision*. A parcel (or contiguous parcels) of land divided into two or more manufactured home lots for rent or sale. Existing manufactured home park or subdivision shall mean a manufactured home park or subdivision that was recorded in the deed registry prior to July 17, 1986.

12.3.2 Development classifications

A. **Development.** Any human-made change to improved or unimproved real estate. This includes, but is not limited to, buildings or other structures; mining, dredging, filling, grading, paving, excavation, drilling operations or storage

of equipment or materials; and the storage, deposition, or extraction of materials.

B. **New construction.** Structures for which the "start of construction" commenced on or after July 17, 1986 and includes any subsequent improvements to such structures. For purposes of this article, start of construction shall mean the date the building permit was issued, provided the actual start of construction, repair, reconstruction, rehabilitation, addition, placement, substantial improvement or other improvement was within 180 days of the permit date. The actual start means either the first placement of permanent construction of a structure on a site, such as the pouring of slab or footings, the installation of piles, the construction of columns, or any work beyond the stage of excavation; or the placement of a manufactured home on a foundation. Permanent construction does not include land preparation, such as clearing, grading and filling; nor does it include the installation of streets and/or walkways; nor does it include excavation for basement, footings, piers, or foundations or the erection of temporary forms; nor does it include the installation on the property of accessory buildings, such as garages or sheds not occupied as dwelling units or not part of the main structure. For a substantial improvement, the actual start of construction means the first alteration of any wall, ceiling, floor, or other structural part of a building, or modification of any construction element, whether or not that alteration affects the external dimensions of the building.

C. **Minor development.** All development that is not new construction or a substantial improvement, such as repairs, maintenance, renovations, or additions, whose value is less than 50% of the market value of the structure. It also includes, but is not limited to: accessory structures as provided in subsection 12.4.5(L), mining, dredging, filling, grading, paving, excavation, drilling operations, storage of equipment or materials, deposition or extraction of materials, public or private sewage disposal systems or water supply facilities that do not involve structures; and non-structural projects such as bridges, dams, towers, fencing, pipelines, wharves, and piers

D. **Substantial damage.** Damage of any origin sustained by a structure whereby the cost of restoring the structure to its before damage condition would equal or exceed 50% of the market value of the structure before the damage occurred.

E. **Substantial improvement.** Any, reconstruction, rehabilitation, addition, or other improvement of a structure, the cost of which equals or exceeds 50% of the market value of the structure before start of construction of the improvements. This term includes structures which have incurred substantial damage, regardless of the actual work performed. The term does not, however, include:

   1. Any project for improvement of a structure to correct existing violations of state or local health, sanitary, or safety code specifications which have been identified by the local code enforcement official and which are the minimum necessary to assure safe living conditions.
   2. Any alteration of a historic structure, provided that the alteration will not preclude the structure's continued

designation as a historic structure, and a variance is obtained from the Zoning Board of Appeals.

12.4 FLOOD HAZARD DEVELOPMENT PERMIT

12.4.1 Permit required

A. The Zoning Administrator shall be designated as the local floodplain administrator. The floodplain administrator shall have the authority to implement the commitment made to administer and enforce the requirements for participation in the National Flood Insurance Program.

B. Before any construction or other development as defined Subsection 12.3.2, including the placement of manufactured homes, begins within any areas of special flood hazard, a Flood Hazard Development Permit shall be obtained from the Building Authority, except as established in Section 12.5. This permit shall be required prior to issuance of a building permit, if one is required, and shall be in addition to any other permit, site plan, and subdivision review which may be required pursuant to the codes and ordinances of the City of Portland. If only a site plan is required for a development, the Flood Hazard Development Permit shall be obtained prior to approval of the site plan.

12.4.2 Filing of application

The application for a Flood Hazard Development Permit shall be submitted in writing to the Building Authority and shall include the following:

A. A final site plan, where applicable, showing information as required by Article 14.

B. A final subdivision plat, where applicable, providing information as required in Article 15.

C. The name, address, and phone number of the applicant, owner, and contractor.

D. A map with address indicating the location of the development site.

E. A plan showing the location of existing and proposed development, including but not limited to specific dimensions of existing and proposed structure(s), wastewater disposal facilities, water supply facilities, areas to be cut and filled, and the dimensions of the lot.

F. A statement of the intended use of any structure and/or development.

G. A statement of the cost of the development including all materials and labor.

H. A statement of the type of wastewater disposal system proposed.

I. Specification of dimensions of the proposed structure and/or development.

J. For new construction and substantial improvements, the elevation in relation to the National Geodetic Vertical Datum (NGVD), North American Vertical Datum (NAVD), or to a locally established datum for Zone A only, of the:

1. Base flood at the proposed site of all new or substantially improved structures, which is determined:
   a. In Zones AE, AO, AH, , and VE from data contained in the *Flood Insurance Study — Cumberland County, Maine*.
   b. In Zone A:
      i. From any base flood elevation data from federal, state, or other technical sources (such as FEMA's Quick-2 model, FEMA 265), including information obtained pursuant to Subsection 12.4.5(M) and 12.4.4.(B)4, or
      ii. In the absence of all data described in Subsection

12.4.2(J)(1)(b)(i), information to demonstrate that the structure shall meet the elevation requirement in Subsections 12.4.5(H)(4)(b), 12.4.5(I)(4)(b), or 12.4.5(J)(4)(b).

2. Highest and lowest grades at the site adjacent to the walls of the proposed building.
3. Lowest floor, including basement, and whether or not such structures contain a basement.
4. Lowest machinery and equipment servicing the building.
5. Level, in the case of nonresidential structures only, to which the structure will be floodproofed.

K. For new construction and substantial improvements, a description of an elevation reference point established on the site of all new developments for which elevation standards apply as required in Subsection 12.4.5.

L. For new construction and substantial improvements, a written certification by:

1. A professional land surveyor that the grade elevations shown on the application are accurate.
2. A professional land surveyor, registered professional engineer or architect that the base flood elevation shown on the application is accurate

M. For new construction and substantial improvements, the following certifications as required in Subsection 12.4.5 by a registered professional engineer or architect:

1. A floodproofing certificate (FEMA form FF-206-FY-22-153, as amended) to verify that the floodproofing methods for any nonresidential structures will meet the floodproofing criteria of Subsection 12.4.5(I); and other applicable standards of Subsection 12.4.5.
2. A V-Zone Certificate to verify that the construction in coastal high hazard areas, Zones VE and Coastal AE, will meet the criteria of Subsection 12.4.5(R); and other applicable standards in Subsection 12.4.5.
3. A Hydraulic Openings Certificate to verify that engineered hydraulic openings in foundation walls will meet the standards of Subsection 12.4.5(N)(2)(a)

N. A certified statement from a registered professional engineer or architect that bridges will meet the standards of Subsection 12.4.5(O)

O. A certified statement from a registered professional engineer or architect that containment walls will meet the standards of Subsection 12.4.5(P).

P. A description of the extent to which any watercourse will be altered or relocated as a result of the proposed development.

Q. A statement of construction plans describing in detail how each applicable development standard in Subsection 12.4.5 will be met.

R. Cross section(s) of the site acceptable to the Public Works Authority.

12.4.3 Fee

A nonrefundable Flood Hazard Development Permit fee as established by the City Council for all minor development and for all new construction and substantial improvements shall be paid to the Building Authority, and a copy of a receipt for the same shall accompany the application. An

additional fee may be charged if the Code Enforcement Officer, Planning Board, and/or Board of Appeals needs the assistance of a professional engineer or other expert. The expert's fee shall be paid in full by the applicant within 10 days after the City submits a bill to the applicant. Failure to pay the bill shall constitute a violation of the ordinance and be grounds for issuance of a stop work order. An expert shall not be hired by the City at the expense of an applicant until the applicant has either consented to such hiring in writing or been given an opportunity to be heard on the subject. An applicant who is dissatisfied with a decision to hire expert assistance may appeal that decision to the Board of Appeals.

12.4.4 Review procedure

A. Upon determination by the Building Authority that an application is complete, the Building Authority shall coordinate review of the application by the City to assure that proposed developments are reasonably safe from flooding. No permit shall be issued until the Building Authority finds that the development proposal is in compliance with the standards of this article. Compliance with the provisions of this article shall be required prior to beginning any development as defined herein.

B. The Building Authority shall, when reviewing subdivisions under Article 15 and other proposed developments that require review under Article 14 or federal law, state law, or local ordinances or regulations and all projects on five or more acres, or in the case of manufactured home parks divided into two or more lots, assure that:
   1. All such proposals are consistent with the need to minimize flood damage.
   2. All public utilities and facilities, such as sewer, gas, electrical and water systems are located and constructed to minimize or eliminate flood damages.
   3. Adequate drainage is provided so as to reduce exposure to flood hazards.
   4. All proposals include base flood elevations, flood boundaries and, in a riverine floodplain, floodway data. These determinations shall be based on engineering practices recognized by the Federal Emergency Management Agency.
   5. Any proposed development plan must include a condition of plan approval requiring that structures on lots in the development be constructed in accordance with Subsection 12.4.5 of this article. Such requirement shall be included in any deed, lease, purchase and sale agreement, or document transferring or expressing an intent to transfer any interest in real estate or structure, including but not limited to a time-share interest. The condition shall clearly articulate that the municipality may enforce any violation of the construction requirement. The construction requirement shall also be clearly stated on any map, plat, or plan as part of the approval process.

C. In the review of all Flood Hazard Development Permit applications for compliance with the standards herein:
   1. The Building Authority shall utilize:
      a. The base flood and floodway data contained in the *Flood Insurance Study – Cumberland County, Maine,* as described in Section 12.2.

b. In special flood hazard areas where base flood elevation and floodway data are not provided in the above cited study, the Building Authority shall obtain, review, and reasonably utilize any base flood elevation and floodway data available from federal, state, or other technical sources, including information obtained pursuant to Subsection 12.4.2(J)(1)(b)(i), 12.4.5(M), and 12.4.4(B)(4), in order to administer this article.

c. When a base flood elevation is established in a Zone A by methods outlined in Section 12.4.2(J)(1)(b)(ii), that data shall be submitted to the Maine Floodplain Management Program.

2. The Building Authority shall make interpretations of the location of boundaries of special flood hazard areas shown on the maps described in Section 12.2.

3. Prior to approval of issuance of the Flood Hazard Development Permit, the Building Authority shall determine that all necessary permits have been obtained from those federal, state, and local authorities from which prior approval is required by federal or state law, including but not limited to Section 404 of the Federal Water Pollution Control Act Amendments of 1972 (33 U.S.C. 1344 as may be amended from time to time), provided, however, that conditional approval may be granted pending proof of receipt of any required permits, but no Flood Hazard Development Permit shall be finally issued until proof of issuance of all such other permits is received by the Building Authority.

4. The Building Authority shall notify adjacent municipalities, the Maine Department of Environmental Protection and the Maine Floodplain Management Program, prior to any alteration or relocation of a watercourse, and submit copies of such notifications to the Federal Emergency Management Agency.

5. The Building Authority shall maintain, as a permanent record, copies of all Flood Hazard Development Permit applications, corresponding permits issued, and data relevant thereto, including reports of the Board of Appeals on variances granted under the provisions of Section 12.7 of this article, and copies of elevation certificates, floodproofing certificates, certificates of compliance, and certifications of design standards required under the provisions of Sections 12.4 and 12.6.

12.4.5 Review standards

All development in areas of special flood hazard shall meet the following standards:

A. All development. All development shall:

1. Be designed or modified and adequately anchored to prevent flotation (excluding piers and docks), collapse, or lateral movement of the structure resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy.

2. Use construction materials that are resistant to flood damage.

3. Use construction methods and practices that will minimize flood damage.

4. Use electrical, heating, ventilation, plumbing, and air conditioning equipment, and other service facilities that are designed and/or located so as to prevent water from entering or accumulating within the components during flooding conditions.

B. **Water supply.** All new and replacement water supply systems shall be designed to minimize or eliminate infiltration of flood waters into the systems.

C. **Sanitary sewage systems.** All new and replacement sanitary sewage systems shall be designed and located to minimize or eliminate infiltration of flood waters into the system and discharges from the system into flood waters.

D. **On-site waste disposal systems.** On site waste disposal systems shall be located and constructed to avoid impairment to them or contamination from them during floods.

E. **Altered or relocated watercourses.** All development associated with altered or relocated portions of a watercourse shall be constructed and maintained in such a manner that no reduction occurs in the flood carrying capacity of the watercourse.

F. **Utilities.** New construction or substantial improvement of any structure (including manufactured homes) located within:

1. Zones A, AE, AO, and AH shall have the bottom of all electrical, heating, plumbing, ventilation and air conditioning equipment, permanent fixtures and components, HVAC ductwork and duct systems, and any other utility service equipment, facilities, machinery, or connections servicing a structure, elevated to at least two feet above the base flood elevation.

2. Zone VE shall meet the requirements of Subsection 12.4.5(R)(2)(a).

G. **Physical changes to the natural landscape.** Certain development projects, including but not limited to, retaining walls, sea walls, levees, berms, and rip rap, can cause physical changes that affect flooding conditions.

1. All development projects in Zones AE and VE that cause physical changes to the natural landscape shall be reviewed by a professional engineer to determine whether or not the project changes the base flood elevation, zone, and/or the flood hazard boundary line.
   a. If the professional engineer determines, through the use of engineering judgement, that the project would not necessitate a Letter of Map Revision (LOMR), a certified statement shall be provided.
   b. If the professional engineer determines that the project may cause a change, a hydrologic and hydraulic analysis that meets current FEMA standards shall be performed.
2. If the hydrologic and hydraulic analysis performed indicates a change to the base flood elevation, zone, and/or the flood hazard boundary line, the applicant may submit a Conditional Letter of Map Revision (C-LOMR) request to the Federal Emergency Management Agency for assurance that the as-built project will result in a change to the Flood Insurance Rate Map. Once the development is completed, a request for a Letter of Map Revision (LOMR) shall be initiated.

3. If the hydrologic and hydraulic analysis performed show a change to the base flood elevation, zone, and/or the flood hazard boundary line, as soon as practicable, but no later than six months after the completion of the project, the applicant shall submit the technical data to FEMA in the form of a Letter of Map Revision request.

H. **Residential.** New construction or substantial improvement of any residential structure located within:

1. Zones AE, AO, and AH shall have the lowest floor (including basement) elevated to at least two feet above the base flood elevation.
2. Zones AO and AH shall have adequate drainage paths around structures on slopes, to guide flood water away from the proposed structures.
3. Zone AO shall have the lowest floor (including basement) elevated above the highest adjacent grade:
   a. At least two feet higher than the depth specified in feet on the Flood Insurance Rate Map, or
   b. At least three feet if no depth number is specified.
4. Zone A shall have the lowest floor (including basement) elevated:
   a. To at least two feet above the base flood elevation utilizing information obtained pursuant to Subsections 12.4.2(J)(1)(b)(i))(), 12.4.4(C), or 12.4.4(B)(4), or
   b. In the absence of all data described above, to at least two feet above the highest adjacent grade to the structure.
5. Zones VE and Coastal AE shall meet the requirements of Subsection 12.4.5(R).

I. **Nonresidential.** New construction or substantial improvement of any nonresidential structure located within:

1. Zones AE, AO, and AH shall have the lowest floor (including basement) elevated to at least two feet above the base flood elevation, or together with attendant utility and sanitary facilities shall:
   a. Be floodproofed to at least two feet above the base flood elevation so that below that elevation the structure is watertight with walls substantially impermeable to the passage of water;
   b. Have structural components capable of resisting hydrostatic and hydrodynamic loads and the effects of buoyancy; and
   c. Be certified by a registered professional engineer or architect that the design and methods of construction are in accordance with accepted standards of practice for meeting the provisions of this section. Such certification shall be provided with the application for a Flood Hazard Development Permit, as required by Subsection 12.4.2(M)(N), and (O) and shall include a record of the elevation above mean sea level to which the structure is floodproofed.
2. Zones AO and AH shall have adequate drainage paths around structures on slopes, to guide flood water away from the proposed structures.

3. Zone AO shall have the lowest floor (including basement) elevated above the highest adjacent grade:
    a. At least two feet higher than the depth specified in feet on the Flood Insurance Rate Map; or
    b. At least three feet if no depth number is specified; or
    c. Together with attendant utility and sanitary facilities be floodproofed to meet the elevation requirements of this subsection and floodproofing standards of Subsection 12.4.5(I).
4. Zone A shall have the lowest floor (including basement) elevated:
    a. To at least two feet above the base flood elevation utilizing information obtained pursuant to Subsections 12.4.2(K)(1)(b)(i), 12.4.4(C), 12.4.4(B)(4); or
    b. In the absence of all data described in Subsection 12.4.5(I)(4)(a), to at least two feet above the highest adjacent grade to the structure, or
    c. Together with attendant utility and sanitary facilities, be floodproofed to two feet above the base elevation established in Subsection 12.4.5(I)(4)(a) or (b) above and meet the floodproofing standards of Subsection 12.4.5(I)(1)(a), (b), and (c).
5. Zones VE and Coastal AE shall meet the requirements of Subsection 12.4.5(R).

J. **Manufactured homes.** New or substantially improved manufactured homes located within:
1. Zones AE, AO, and AH shall:
    a. Be elevated such that the lowest floor is at least two feet above the base flood elevation;
    b. Be on a permanent foundation, which may be poured masonry slab or foundation walls, with hydraulic openings, or may be reinforced piers or block supports, any of which support the manufactured home so that no weight is supported by its wheels and axles; and
    c. Be securely anchored to an adequately anchored foundation system to resist flotation, collapse, or lateral movement. Methods of anchoring may include, but are not limited to:
        i. Over the top ties anchored to the ground at the four corners of the manufactured home, plus two additional ties per side at intermediate points (manufactured homes less than 50 feet long require one additional tie per side).
        ii. Frame ties at each corner of the home, plus five additional ties along each side at intermediate points (manufactured homes less than 50 feet long require four additional ties per side).
        iii. All components of the anchoring system shall be capable of carrying a force of 4,800 pounds.
2. Zones AO and AH shall have adequate drainage paths around structures on slopes, to guide flood water away from the proposed structures.

3. Zone AO shall have the lowest floor (including basement) elevated above the highest adjacent grade:
    a. At least two feet higher than the depth specified in feet on the Flood Insurance Rate Map, or
    b. At least three feet if no depth number is specified, and
    c. Meet the anchoring requirements of Subsection 12.4.5(J)(1)(c).
4. Zone A shall:
    a. Be elevated on a permanent foundation, as described in Subsection 12.4.5(J)(1)(b), such that the lowest floor (including basement of the manufactured home is at least two feet above the base flood elevation utilizing information obtained pursuant to Subsection 12.4.2(J)(1)(b)(i), 12.4.4(C), or 12.4.4(B)(4), or
    b. In the absence of all data described in Section 12.4.5(J)(4)(a), to at least two feet above the highest adjacent grade to the structure, and
    c. Meet the anchoring requirements of Subsection 12.4.5(J)(1)(c).
5. Zones VE and Coastal AE shall meet the requirements of Subsection 12.4.5(R).

K. **Recreational vehicles.** Recreational vehicles located within:
1. Zones A, AE, AO, and AH shall either:
    a. Be on the site for fewer than 180 consecutive days, and
    b. Be fully licensed and ready for highway use. A recreational vehicle is ready for highway use if it is on its wheels or jacking system, is attached to the site only be quick disconnect type utilities and security devices, and has no permanently attached additions, or
    c. Be permitted in accordance with the elevation and anchoring requirements for manufactured homes in Subsection 12.4.5(J)(1).
2. Zones VE and Coastal AE shall meet the requirements of either Subsection 12.4.5(K)(1)(a) and(b), or 12.4.5(R).

L. **Accessory structures.** New construction or substantial improvement of accessory structures, as defined in Subsection 12.3.1, shall be exempt from the elevation criteria required Subsections 12.4.5(H) and (I) if all other requirements of Subsection 12.4.5 and all the following requirements are met.
1. Accessory structures located within Zones A, AE, AO, AH shall:
    a. Meet the requirements of Subsection 12.4.5(A)(1) to (4) as applicable.
    b. Be limited in size to a one-story two-car garage.
    c. Have unfinished interiors and not be used for human habitation.
    d. Have hydraulic openings, as specified in Subsection 12.4.5(N)(2), in at least two different walls of the accessory structure.
    e. Be located outside the floodway.
    f. When possible be constructed and placed on the building site so as to offer the minimum resistance to the flow of flood waters and be placed further from the source of flooding than is the primary structure.
    g. Have only ground fault interrupt electrical outlets. The electric service

disconnect shall be located above the base flood elevation and when possible outside the special flood hazard area.

h. Be located outside the Coastal AE Zone.

2. Accessory structures in Zones VE and Coastal A shall meet the requirements of Subsection 12.4.5(R).

M. Floodways

1. In Zone AE riverine areas, encroachments, including fill, new construction, substantial improvement, and other development shall not be permitted within a regulatory floodway designated on the Flood Insurance Rate Map unless a technical evaluation certified by a registered professional engineer is provided demonstrating that such encroachments will not result in any increase in flood levels within the city during the occurrence of the base flood discharge.

2. In Zones A and AE riverine areas for which no regulatory floodway is designated, encroachments, including fill, new construction, substantial improvement, and other development shall not be permitted in the floodway as determined in (3) below, unless a technical evaluation certified by a registered professional engineer is provided demonstrating that the cumulative effect of the proposed development, when combined with all other existing development and anticipated development:

a. Will not increase the water surface elevation of the base flood more than one foot at any point within the city.

b. Is consistent with the technical criteria contained in FEMA's guidelines and standards for flood risk analysis and mapping.

3. In Zones A and AE riverine areas for which no regulatory floodway is designated, the regulatory floodway is determined to be the channel of the river or other watercourse and the adjacent land areas to a distance of 1/2 the width of the floodplain as measured from the normal high-water mark to the upland limit of the floodplain. Encroachments, including fill, new construction, substantial improvement, and other development shall not be permitted unless a technical evaluation certified by a registered professional engineer is provided meeting the requirements of (2) above.

N. Hydraulic openings/flood vents. New construction or substantial improvement of any structure in Zones A, AE, AO, and AH that meets the development standards of Subsection 12.4.5, including the elevation requirements of Subsection 12.4.5(H), (I), or (J) and is elevated on posts, columns, piers, piles, or crawl spaces may be enclosed below the base flood elevation requirements provided all the following criteria are met or exceeded:

1. Enclosed areas are not basements as defined in Article 3.

2. Enclosed areas shall be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of flood water. Designs for meeting this requirement must either:

a. Be engineered and certified by a registered professional engineer or architect, or
b. Meet or exceed the following minimum criteria:
    i. A minimum of two openings having a total net area of not less than one square inch for every square foot of the enclosed area;
    ii. The bottom of all openings shall be below the base flood elevation and no higher than two feet above the lowest grade.
    iii. Openings may be equipped with screens, louvers, valves, or other coverings or devices provided that they permit the entry and exit of flood waters automatically without any external influence or control such as human intervention, including the use of electrical and other non-automatic mechanical means.

3. The enclosed area shall not be used for human habitation.
4. The enclosed areas are usable solely for building access, parking vehicles, or storing of articles and equipment used for maintenance of the building.

O. **Bridges**. New construction or substantial improvement of any bridge in Zones A, AE, AO, AH, and VE shall be designed such that:
1. When possible, the lowest horizontal member (excluding the pilings, or columns) is elevated to at least two feet above the base flood elevation.
2. A registered professional engineer shall certify that:
    a. The structural design and methods of construction shall meet the elevation requirements of this section and the floodway standards of Subsection 12.4.5(M).
    b. The foundation and superstructure attached thereto is anchored to resist flotation, collapse, and lateral movement due to the effects of wind and water loads acting simultaneously on all structural components. Water loading values used shall be those associated with the base flood.

P. **Containment walls.** New construction or substantial improvement of any containment wall shall meet the following requirements by zone:
1. Zones A, AE, AO, AH, and VE shall:
    a. Have the containment wall elevated to at least two feet above the base flood elevation;
    b. Have structural components capable of resisting hydrostatic and hydrodynamic loads and the effects of buoyancy.
    c. Be certified by a registered professional engineer or architect that the design and methods of construction are in accordance with accepted standards of practice for meeting the provisions of this section. Such certification shall be provided with the application for a Flood Hazard Development Permit, as required by Subsection 12.4.2(M), (N), and (O).
2. Zones AO and AH shall have adequate drainage paths around containment walls

on slopes, to guide flood water away from the proposed walls.

3. Zone AO shall have the top of the containment wall elevated above the highest adjacent grade:
   a. At least two feet higher than the depth specified in feet on the Flood Insurance Rate Map, or
   b. At least three feet if no depth number is specified, and
   c. Shall meet the requirements of Subsection 12.4.5(P)(1)(b) and (c).

Q. **Wharves, piers, and docks.** New construction or substantial improvement of wharves, piers, and docks are permitted in and over water and seaward of the mean high tide if the following requirements are met:

1. In Zones A, AE, AO, and AH, wharves, piers, and docks shall comply with all applicable local, state, and federal regulations, or
2. In Zone VE, wharves, piers, and docks shall have a registered professional engineer develop or review the structural design, specifications, and plans for construction.

R. **Coastal floodplains**

1. All new construction located within Zones AE and VE shall be located landward of the reach of mean high tide except as provided in Subsection 12.4.5(R)(6).
2. New construction or substantial improvement of any structure located within Zones VE or Coastal AE shall:
   a. Have the bottom of all electrical, heating, plumbing, ventilation and air conditioning equipment, permanent fixtures and components, HVAC ductwork and duct systems, and any other utility service equipment, facilities, machinery, or connections servicing a structure, elevated to at least two feet above the base flood elevation. Systems, fixtures, equipment, and components shall not be mounted on or penetrate through walls intended to break away under flood loads.
   b. Be elevated on posts or columns such that:
      i. The bottom of the lowest horizontal structural member of the lowest floor (excluding the pilings or columns) is elevated to two feet above the base flood elevation.
      ii. The pile or column foundation and the elevated portion of the structure attached thereto is anchored to resist flotation, collapse, and lateral movement due to the effects of wind and water loads acting simultaneously on all building components.
      iii. Water loading values used shall be those associated with the base flood. Wind loading values used shall be those required by applicable state and local building standards.
   c. Have the space below the lowest floor:
      i. Free of obstructions, or
      ii. Constructed with open wood lattice work or insect screening intended to collapse under wind and water without causing collapse, displacement, or other structural damage to the elevated

portion of the building or supporting piles or columns, or

iii. Constructed with non-supporting breakaway walls which have a design safe loading resistance of not less than 10 or more than 20 pounds per square foot.

d. Require a registered professional engineer or architect to:

i. Develop or review the structural design, specifications, and plans for the construction, which must meet or exceed the technical criteria contained in the *Coastal Construction Manual* (FEMA-55).

ii. Certify that the design and methods of construction to be used are in accordance with accepted standards of practice for meeting the criteria of Subsections 12.4.5(R)(2)(b), (c), and (d).

3. The use of fill for structural support in Zones VE and Coastal AE is prohibited.
4. Human alteration of sand dunes within Zones VE and Coastal AE is prohibited unless it can be demonstrated that such alterations will not increase potential flood damage.
5. The area below the lowest floor may be used solely for parking vehicles, building access, and storage.
6. Lobster sheds and fishing sheds may be located seaward of mean high tide and shall be exempt from the elevation requirement in Subsection 12.4.5(I) only if reviewed and approved as a conditional use by the Zoning Board of Appeals, as provided in Section 12.5, and if all the following requirements of Subsections 12.4.5(A), (M), and (N) are met:

a. The conditional use shall be limited to low value structures such as metal or wood sheds 200 square feet or less and shall not exceed more than one story.

b. The structure shall be securely anchored to the wharf or pier to resist flotation, collapse, and lateral movement due to the effect of wind and water loads acting simultaneously on all building components.

c. The structure will not adversely increase wave or debris impact forces affecting nearby buildings.

d. The structure shall have unfinished interiors and shall not be used for human habitation.

e. Any mechanical, utility equipment and fuel storage tanks must be anchored and either elevated or floodproofed to two-feet above the base flood elevation.

f. All electrical outlets shall be ground fault interrupt type. The electrical service disconnect shall be located on shore above the base flood elevation and when possible outside the special flood hazard area. If a flood hazard permit application is granted, the applicant shall be notified in writing that flood insurance is not available for structures located entirely over water or seaward of mean high tide.

12.4.6 Permit

A. Upon determination that the development or substantial improvement plan is in compliance with this article, the Building Authority shall issue one of the following Flood Hazard Development Permits based on the type of development:

1. *Two-part Flood Hazard Development Permit for elevated structures*. Part I shall authorize the applicant to build a structure to and including the first horizontal floor only above the base flood level. At that time the applicant shall provide the Code Enforcement Officer with an "under construction" elevation certificate (FEMA form FF-206-FY-22-152) completed by a professional land surveyor based on the Part I permit construction, "as built," for verifying compliance with the elevation requirements of Subsections 12.4.5(H), (I), (J), or (R). Following review of the elevation certificate data, which shall take place within 72 hours of receipt of the application, or as soon as practicable thereafter, the Code Enforcement Officer shall issue Part II of the Flood Hazard Development Permit. Part II shall authorize the applicant to complete the construction project.
2. *Flood Hazard Development Permit for floodproofing of nonresidential structures*. This permit shall apply for nonresidential structures that are new construction or substantially improved nonresidential structures that are not being elevated but that meet the floodproofing standards of Subsection 12.4.5(I)(1). The application for this permit shall include a floodproofing certificate signed by a registered professional engineer or architect.
3. *Flood Hazard Development Permit for minor development*. This permit shall apply for all other development and building permits that are not new construction or a substantial improvement, such as repairs, maintenance, renovations, or additions, whose value is less than 50% of the market value of the structure. This includes, but is not limited to: accessory structures as provided for in Subsection 12.4.5(L), mining, dredging, filling, grading, paving, excavation, drilling operations, storage of equipment or materials, deposition or extraction of materials, public or private sewage disposal systems or water supply facilities that do not involve structures, and nonstructural projects such as bridges, dams, towers, fencing, pipelines, wharves, and piers.

B. For development that requires review and approval as a conditional use, as provided for in this article, the Flood Hazard Development Permit application shall be acted upon by the Zoning Board of Appeals as required under Section 12.5.

12.5 CONDITIONAL USE REVIEW

12.5.1. Review authority

The Zoning Board of Appeals shall hear and approve, approve with conditions, or disapprove all applications for conditional uses provided for in this article. An applicant informed by the Building Authority that a conditional use approval is required shall file an application for the permit with the Zoning Board of Appeals.

12.5.2 Review procedure

A. The Flood Hazard Development Permit application with additional information attached addressing how each of the conditional use criteria specified in this article will be satisfied may serve as the application for the conditional use review.

B. Before deciding any application, the Zoning Board of Appeals shall hold a public hearing on the application within thirty days of their receipt of the application.

C. If the Zoning Board of Appeals finds that the application satisfies all relevant requirements of this article, the Zoning Board of Appeals must approve the application or approve with conditions within 45 days of the date of the public hearing.

D. A conditional use approval issued under the provisions of this article shall expire if the work or change involved is not commenced within 180 days of the approval by the Zoning Board of Appeals.

E. The applicant shall be notified by the Zoning Board of Appeals in writing over the signature of the Chair of the Board of Appeals that flood insurance is not available for structures located entirely over water or seaward of mean high tide.

12.5.3 Expansion of conditional uses

No existing building or use of premises may be expanded or enlarged without approval under this section if that building or use was stablished or constructed under a previous conditional use approval or if it is a building or use which would require a conditional use approval if being newly-established or constructed under this article.

12.6 CERTIFICATE OF COMPLIANCE

A. A certificate of compliance shall be signed by the Building Authority stating that a structure is in compliance with all of the provisions of this article.

B. No land in an area of special flood hazard shall be occupied or used in violation of this article, and no structure in such an area which is developed or substantially improved shall be occupied until a certificate of compliance is issued by the Building Authority. Said certificate of compliance shall be issued only after the Building Authority has received all permits and certificates from the applicant as required by this article.

C. For new construction or substantial improvement of any elevated structure, the applicant shall submit to the Building Authority:

1. An elevation certificate (FEMA form FF-206-FY-22-152) completed by a professional land surveyor for compliance with Subsection 12.4.5(H), (I), (J), or (R).
2. For structures in Zones VE and Coastal AE, a written certification by a registered professional engineer or architect shall be provided to the Building Authority stating that the design and methods of construction used are in compliance with the applicable provisions of Subsection 12.4.5(R)(2)(b), (c), and (d).

D. The applicant shall submit written notification to the Building Authority that the development is complete and complies with the provisions of this article.

E. Within 10 working days, the Building Authority shall review the elevation certificate (FEMA form FF-206-FY-22-152) and the applicant's written notification and, upon determination

that the development conforms with the provisions of this article, shall issue a certificate of compliance.

12.7 VARIANCES AND APPEALS

12.7.1 Authority

A. The Zoning Board of Appeals of the City of Portland may, upon written application of an aggrieved party, hear and decide appeals where it is alleged that there is an error in any order, requirement, decision, or determination made, or failure to act, in the administration or enforcement of the provisions of this article.

B. The Board of Appeals may authorize variances, meaning the granting of relief from the provisions of this article, as authorized in Subsection 2.3.11 except:

1. As otherwise expressly provided in Subsection 2.3.11(E).
2. Variances shall not be granted within any designated regulatory floodway if any increase in flood levels during the base flood discharge would result.

12.7.2 Standards

Subsection 2.3.11 notwithstanding, variances from the requirements of this article shall be granted only upon:

A. A showing of good and sufficient cause.

B. A determination that should a flood comparable to the base flood occur, the granting of a variance will not result in increased flood heights, additional threats to public safety, or public expense, or create nuisances, cause fraud or victimization of the public, or conflict with existing local laws or ordinances.

C. A showing that the issuance of the variance will not conflict with other state, federal, or local laws or ordinances.

D. A determination that failure to grant the variance would result in "undue hardship," which in this subsection means:

1. That the land in question cannot yield a reasonable return unless a variance is granted.
2. That the need for a variance is due to the unique circumstances of the property and not to the general conditions in the neighborhood.
3. That the granting of a variance will not alter the essential character of the locality.
4. That the hardship is not the result of action taken by the applicant or a prior owner.

E. Variances shall only be issued upon a determination that the variance is the minimum necessary, considering the flood hazard, to afford relief, and the Zoning Board of Appeals may impose such conditions to a variance as is deemed necessary.

12.7.3 Standards for specific variances

A. Variances may be issued for new construction, substantial improvements, or other development for the conduct of a functionally-dependent use provided that:

1. The criteria in Subsection 12.7.2 and 12.4.5(M) are met.
2. The structure or other development is protected by methods that minimize flood damage during the base flood and create no additional threats to public safety.

B. Variances may be issued for the repair, reconstruction, rehabilitation, or restoration of

historic structures upon the determination that:

1. The development meets the criteria of Subsection 12.7.2.
2. The proposed repair, reconstruction, rehabilitation, or restoration will not preclude the structure's continued designation as a historic structure and the variance is the minimum necessary to preserve the historic character and design of the structure.

C. Variances may be issued for new construction and substantial improvement of agricultural structures being used for the conduct of agricultural uses provided that:

1. The development meets the criteria of Subsection 12.7.2 and Subsection 12.4.5 are met.
2. The development meets the criteria of Subsection 12.4.5(M) and (N).

12.7.4 Notice to applicants

Any applicant who meets the criteria of Subsections 12.7.2 and 12.7.3(A), (B), or (C) shall be notified by the Board of Appeals in writing with the signature of the Chair of the Board of Appeals that:

A. The issuance of a variance to construct a structure below the base flood level will result in greatly increased premium rates for flood insurance up to amounts as high as $25 per $100 of insurance coverage.

B. Such construction below the base flood level increases risks to life and property.

C. The applicant agrees in writing that the applicant is fully aware of all the risks inherent in the use of land subject to flooding, assumes those risks and agrees to indemnify and defend the municipality against any claims filed against it that are related to the applicant's decision to use land located in a floodplain and that the applicant individually releases the municipality from any claims the applicant may have against the municipality that are related to the use of land located in a floodplain.

12.7.5 Record of variances

The Board of Appeals shall submit to the Building Authority a report of all variance actions, including justification for the granting of the variance and an authorization for the Building Authority to issue a Flood Hazard Development Permit, which includes any conditions to be attached to said permit.

12.7.6 Appeal procedure

A. An administrative appeal may be taken to the Board of Appeals by an aggrieved party within 30 days after receipt of a written decision of the Building Authority.

B. Upon being notified of an appeal, the Building Authority shall transmit to the Board of Appeals all of the documents constituting the record of the decision appealed from.

C. The Board of Appeals shall hold a public hearing on the appeal within 35 days of its receipt of an appeal request.

D. The person filing the appeal shall have the burden of proof.

E. The Board of Appeals shall decide all appeals within 35 days after the close of the hearing and shall issue a written decision on all appeals.

F. Any aggrieved party who participated as a party during the proceedings before the Board of Appeals may take an appeal to Superior Court in accordance with state laws within 45 days from the date of any decision of the Board of Appeals.

12.8 RECORDS & REPORTING

A. The Building Authority shall maintain, as a permanent record, copies of all Flood Hazard Development Permits issued, certificates of compliance and data relevant thereto, including reports of the Board of Appeals on variances granted hereunder.

B. The Building Authority shall be responsible for filing such annual reports regarding participation in the National Flood Insurance Program as may be required by FEMA. Said annual reports shall include, but not be limited to, a report on implementation of this article and on any variances granted hereunder. A copy of such annual reports shall also be sent to the Maine Floodplain Management Program.

12.9 PENALTIES

It shall be the duty of the Building Authority to enforce the provisions of this ordinance pursuant to Title 30-A M.R.S. § 4452. The penalties contained in Title 30-A M.R.S. § 4452 shall apply to any violation of this ordinance. In addition to any other actions, the Building Authority, upon determination that a violation exists, shall submit a declaration to the Administrator of the Federal Insurance Administration requesting a denial of flood insurance. The valid declaration shall consist of:

A. The name of the property owner and address or legal description of the property sufficient to confirm its identity and location.

B. A clear and unequivocal declaration that the property is in violation of a cited state or local law, regulation, or ordinance.

C. A clear statement that the public body making the declaration has authority to do so and a citation to that authority.

D. Evidence that the property owner has been provided notice of the violation and the prospective denial of insurance. A clear statement that the declaration is being submitted pursuant to Section 1316 of the National Flood Insurance Act of 1968, as amended.

12.10 DISCLAIMER OF LIABILITY

The degree of flood protection required by the ordinance is considered reasonable but does not imply total flood protection.

13 RESOURCE PROTECTION ZONE

13.1 USE

No building shall be erected, altered, enlarged, rebuilt or used, and no premises shall be used, in a Resource Protection Zone except for the following uses:

A. Non-intensive recreational uses not requiring structures, such as fishing and hiking.
B. Motorized and non-motorized vehicular traffic on existing roads, trails, and rails, as appropriate.
C. Bikeways, pedestrian trails, and walkways.
D. Fire prevention activities.
E. Wildlife management activities.
F. Soil and water conservation activities.
G. Surveying and natural resource analysis.
H. Emergency operations as defined in Article 3.
I. Harvesting of wild crops.
J. Nonresidential structures for educational, scientific, or nature interpretation purposes, containing a maximum floor area of not more than 10,000 square feet.
K. Public and private parks and recreational areas, including one or more structures containing a total maximum floor area of not more than 10,000 square feet.
L. Permanent and temporary piers, docks, wharves, bridges and uses projecting into water bodies, as allowed in Subsection 11.4.2.
M. Storehouses for fishermen's gear.
N. Essential services as defined in Article 3 accessory to the uses permitted herein.
O. Signs, as allowed in Article 20.
P. Road construction, in accordance with the provisions of Section 11.4.
Q. Parking facilities for uses permitted under this section.
R. Landfill and other earth-moving activity, as allowed in Subsection 11.4.4.

13.2 DIMENSIONAL REQUIREMENTS

No building or structure shall be erected, altered, enlarged, rebuilt, or used in a Resource Protection Zone which does not comply with the following requirements:

TABLE 13-A: RPZ DIMENSIONAL STANDARDS

Lot area (min.)		20,000 SF
Lot width (min.)		100 ft.
Lot frontage on street or shoreline (min.)		100 ft.
Front setback (min.)		25 ft.
Rear setback (min.)		75 ft.[1]
Side setback (min.)	**Principal**	15 ft.
	Accessory	5 ft.
Side setback on side street (min.)		20 ft.
Shoreline setback (min.)		75 ft.[2]
Structure height (max.)	**Principal**	2 stories or 25 ft.
	Accessory	1 story or 15 ft.
Building area (max.)		10% of lot area[3]

[1] Does not apply to boathouses or storehouses for fishing gear.
[2] Does not apply to permitted piers, docks, wharves, breakwaters, causeways, bridges, boathouses, and storehouses for fishing gear.
[3] For principal building or group of buildings.

13.3 OFF-STREET PARKING

Any off-street parking in a Resource Protection Zone is required as provided in Article 19.

13.4 SHORELAND AND FLOOD PLAIN MANAGEMENT REGULATIONS

Any lot or portion of a lot located in a Shoreland Zone as identified on the City zoning map or in a flood hazard area shall be subject to the requirements of Articles 11 and 12.



14 SITE PLAN

14.1 PURPOSE

Pursuant to Portland's Comprehensive Plan, this article advances the vision for a sustainable city with shared goals for the environment, community, and economy. This article complements the zoning and subdivision regulations of this Land Use Code.

14.2 APPLICABILITY

14.2.1 Site plan approval required

All development meeting the thresholds of Table 14-A shall require site plan approval prior to commencing any work or undertaking any alteration or improvement of the site. A final, approved site plan is a prerequisite to issuance of building, street opening, or certificate of occupancy permits for development subject to the provisions of this article. No such permit shall be issued until such permit is determined to be consistent with the final, approved site plan and any conditions of approval. In the event of any inconsistency between the approved site plan and any permit issued, the approved site plan shall control, provided, however, site plan approval shall not excuse failure to meet any independent requirement of any other law or ordinance. Neither the acceptance of any application nor any determination or approval hereunder shall authorize the issuance of a permit under Chapter 6 of the City of Portland Code of Ordinances for any use which would violate the provisions of Articles 6 and 7 of this Land Use Code.

14.2.2 Exceptions

The Planning Authority may grant written authorization for the release of a demolition or interior building permit for a development subject to this article upon written request of the applicant describing the extent of proposed work. Any exterior demolition requires a performance guarantee for site stabilization.

14.3 PROJECT CLASSIFICATION

14.3.1 Site plan classifications

The Planning Authority shall classify each development proposal as a major or minor site plan application according to the classifications in Table 14-A. The Planning Authority may, due to the scope or anticipated impacts of a project, classify any project a review level higher than otherwise indicated in Table 14-A.

14.3.2 Master development plan

A. An applicant may elect to submit a master development plan application for a large, multi-phase development program consisting of multiple buildings and site improvements on a site of one acre or more of total land area which is designed as a cohesive and integrated whole. The master development plan option shall not apply in residential zones, except for institutional, multi-family, congregate care, and intermediate, extended, and long-term care uses in the R-5a and R-6a zones.

B. A master development plan approval, including an approval of waivers, establishes the general parameters for the development, including the general development program, massing, open space plan, and infrastructure plan. A master development plan approval shall not be construed as final authorization of the development. Approval shall confer pending proceeding status upon the development with the effect of maintaining the applicability of regulations in effect at the time of approval for as long as the master development plan



SITE PLAN

TABLE 14-A: SITE PLAN CLASSIFICATIONS

	Minor[1]	Major
New construction or additions[2]	Single- or two-family structures 500 – 10,000 SF 500 – 20,000 SF in industrial zones 500 – 50,000 SF in IS-FBC zone	Multi-family development of 3 or more units[3, 4] > 10,000 SF > 20,000 SF in industrial zones > 50,000 SF in IS-FBC zone
Stripping, grading, grubbing, filling, or excavation	1,000 SF - 3 ac.	> 3 ac.
Site alterations	Alteration of watercourse or wetland	
Creation of impervious surface	1,000 SF – 1 ac.	> 1 ac.
Construction or paving of existing parking	5 – 75 parking spaces	> 75 vehicles
Construction of structures[5] in the Shoreland Zone	Rehabilitation, reconstruction or new construction	
Change of use[6]	10,000 – 20,000 SF	> 20,000 SF
Other	Auto service station	Development with drive-through facilities

[1] For purposes of fee assignment and submission requirements, the minor application includes two exceptions: "minor residential" and "low-impact site development." See Section 16 of the *Technical Manual* for more information.
[2] Includes cumulative expansion of building floor area within a three-year period.
[3] Includes any division of a new or existing structure into 3 or more dwelling units whether the division is accomplished by sale, lease, development, or otherwise.
[4] Addition of one or two units to any residential development shall trigger minor site plan review.
[5] Includes piers, docks, wharves, bridges, retaining walls, and other structures
[6] Includes any change in use of an existing building, whether or not alterations are involved, from any use in the following list to any other uses on the list:

A. Industrial
B. Residential
C. Institutional
D. Commercial/Service
E. Water-dependent use and marine use

approval remains valid, including permissible extensions if granted. Subsequent site plan approvals shall be required.

14.4 REVIEW AND APPROVAL AUTHORITY

The review and approval authority for site plans and master development plans shall be determined based on the classification of the project as shown in Table 14-B. At any point in the review process, the applicant may request that Planning Authority reclassify the application to the next highest review level.

14.5 REVIEW PROCEDURES

14.5.1 Pre-application meeting

Applicants for site plan or master development plan review are encouraged to schedule a pre-application meeting. The purpose of this meeting is to familiarize the applicant with the City of Portland, site plan submittal requirements, review procedures, and applicable review standards. A pre-application meeting shall not confer pending proceeding status under Title 1 MRSA 302. No decisions relative to the plan shall be made at the pre-application meeting, nor shall any advice or information provided by the City be construed as a decision.

TABLE 14-B: REVIEW AND APPROVAL AUTHORITY

Plan Classification	Review Authority
Minor	Planning Authority
Major	Planning Board
Master Development Plan	Planning Board

14.5.2 Application, plans, and submittals

All applicants shall submit a site plan or master development plan application to the Planning Authority in such form as prescribed by the Planning Authority. A payment of a nonrefundable application fee, as established by the City Council to cover administrative costs and costs of a hearing, shall accompany each application.

14.5.3 Staff completion check

A. The Planning Authority shall determine whether the application, plans, and submittals meet the submittal requirements of the *Technical Manual*. If the application is deemed incomplete or not in compliance with Articles 6

TABLE 14-C: SITE PLAN REVIEW PROCEDURES

	Minor	Major	Master Development Plan	Public Notice Requirement
Pre-application meeting	◐	◐	◐	
Site plan, application, plans, and submittals	●	●	●	
Staff completion check	●	●	●	●
Staff review	●	●	●	
Neighborhood outreach		●	●	●
Planning Board workshop		◐	●	●
Revised plans and submittals	●			
Final staff review & recommendation	●*	●	●	
Planning Board public hearing		●*	●*	●

● Required ◐Recommended * Decision point: approve/approve with conditions/deny

or 7, the Planning Authority shall inform the applicant in writing of the finding and the additional plans or submittals required to complete the application. A review of the application will not be conducted until the application is found complete.

B. Once the application is determined to be complete, receipt of application notices shall be sent to all property owners within 500 feet of the subject property lines, unless the Planning Authority, in its discretion, chooses to notice a larger area and incur the additional expense for the expanded notification. Notices shall be sent to all others, including neighborhood organizations, as may be required by the Planning Authority.

14.5.4 Staff review

When the application is determined to be complete, the plans and submittals shall be reviewed by the Planning Authority and other departments of the City of Portland as appropriate against the review standards of this article. Written comments from reviewers shall be provided to the applicant and shall include a staff recommendation to either provide a revised plan and submittals, schedule a Planning Board workshop, or schedule a public hearing.

14.5.5 Neighborhood meeting

Applicants for major site plan and master development plan review shall conduct at least one neighborhood meeting in accordance with the following:

A. **Timing and location.** The meeting shall be conducted within 30 calendar days of an application being deemed complete and no less than seven calendar days before a public hearing. The meeting shall be held at a convenient location within the City of Portland neighborhood surrounding the proposed site. All costs associated with the neighborhood outreach shall be borne by the applicant.

B. **Notice.** The applicant shall mail notice to all property owners within 500 feet of the subject property lines, and to all others, including neighborhood organizations, as may be required by the Planning Authority at least 10 calendar days prior to the neighborhood meeting or event. The notice shall contain a brief description of the proposal and the date, time, and place of the neighborhood meeting or event. A digital copy of the neighborhood notice shall be sent to the Planning Authority, which shall be distributed to the City's list of interested citizens.

C. **Meeting procedures**

1. *Record of participants.* The applicant shall keep a record of neighborhood participants in the outreach. A copy of this record shall be submitted to the Planning Authority prior to final review.
2. *Record of presenters and/or representatives.* The applicant shall keep a record of all presenters and/or representatives of the applicant participating in the outreach.
3. *Content.* The neighborhood outreach shall include an explanation of the proposal and provide an opportunity for public questions and comment.
4. *Record of feedback.* The applicant shall keep a record of feedback generated through the neighborhood outreach. In addition to any comments, questions, data, or other feedback collected, this record

shall also include the start and end time(s) of the outreach and a list of the specific plans, documents, or drawings that were shared. A copy of this record shall be submitted to the Planning Authority prior to final review. Any other individual or entity also may submit comments on the neighborhood meeting to the Planning Authority.

14.5.6 Review costs

A. Applicants shall pay a fee to cover the review costs and administrative costs incurred by the City. The fee shall be based upon the actual hours of review time and prevailing hourly rate for reimbursement of City costs, and shall be invoiced periodically by the City.

B. No land use permits or applications of any kind shall be processed, reviewed or issued, and no building permits of any kind shall be issued, for any project whose permit fee is governed by this article unless all charges due under this article have been paid and the developer is otherwise in compliance with the City Code of Ordinances.

14.5.7 Notice of public meeting

A. For all applications that are subject to Planning Board review, the applicant shall be responsible for posting a notice of public meeting sign on the property where the development is to occur. The dimensions, construction, and content of the sign shall be in accordance with standards established by the Planning Authority.

B. The sign shall be posted at least ten days prior to the public workshop or hearing date, and shall be removed from the site no more than three days following the date of the meeting.

C. Once the required notice of public meeting signage is posted, the applicant shall submit a completed certification of posting form to the Planning Authority.

D. In the event that a required notice of public meeting sign is knocked over or made illegible, it shall be the responsibility of the applicant to promptly reset or replace the sign, though failure to do so shall not invalidate the review.

14.5.8 Planning Board workshop

Applicants for major site plan and master development plan review may request a workshop with the Planning Board. The workshop will be scheduled on a date that follows the neighborhood meeting and initial staff review. The workshop shall be informational and shall not result in any formal approval or disapproval of the project. At the workshop, the Planning Board shall discuss the plans and submittals, consider the staff review with respect to the review standards of this article, hear public comments and questions, and provide direction to the applicant regarding issues to be addressed.

14.5.9 Revised plans and submittals

All applicants shall provide revised plans and submittals to the Planning Authority. The Planning Authority shall determine whether the revised plans and submittals meet the submittal requirements of the City of Portland *Technical Manual*.

14.5.10 Final staff review and recommendation

When determined to be complete, the revised plans and submittals shall be reviewed by the Planning Authority and other City departments as

appropriate against the review standards of this article. Written comments from reviewers shall be provided to the applicant. In the case of a major site plan or master development plan review, comments shall include a staff recommendation to either approve, approve with conditions, or deny the revised site plan and submittals. In the case of a minor site plan application, following staff review, the Planning Authority shall approve, approve with conditions, or deny the revised site plan application based on the review standards of this article.

14.5.11 Planning Board public hearing

Applicants for major site plan or master development plan review must appear before the Planning Board for a public hearing. The hearing shall be scheduled on a date that meets all public noticing requirements contained in Article 2. At the hearing, the Planning Board shall approve, approve with conditions, or deny an application, based upon the review standards of this article.

14.5.12 Lapse in application

A site plan or master development plan application must be diligently pursued from the date of submission. Notwithstanding the submission of a complete application, any applicant shall provide additional information, studies, or reports from qualified professionals when determined by the Planning Board or the Planning Authority to be reasonably necessary to make any of the determinations required by this article. Failure to submit required information within 120 days of the date upon which the written request was made shall cause the application to expire and be deemed null and void.

14.6 SITE PLAN REVIEW STANDARDS

The reviewing authority shall not approve a site plan application unless the development proposal meets applicable standards of the City of Portland *Technical Manual* and the City of Portland *Design Manual* and the criteria below.

14.6.1 Transportation standards

A. **Impact on surrounding street systems.** The provisions for vehicular loading and unloading, parking, and vehicular and pedestrian circulation on the site and onto adjacent public streets and ways and the incremental volume of traffic will not:
   1. Create or aggravate any significant hazard to safety on the surrounding street network.
   2. Substantially increase congestion on any street which is already at a level of service below Level "D" without mitigation proportionate to the level of impact.

B. **Access and circulation**
   1. *In general*
      a. All development subject to this article shall provide safe and reasonable access and internal circulation for all users of the site and shall comply with the transportation systems and street design standards of the *Technical Manual*.
      b. Continuous internal walkways shall be provided between existing or planned public sidewalks adjacent to the site, transit stops and street crossings, and building entrances on the site.
      c. Points of access and egress shall be located to avoid conflicts with turning movements and traffic flows.

d. The site must have stacking capacity for vehicles waiting to use these service features without impeding on-site vehicular circulation or creating hazards to vehicular circulation on adjoining streets.

2. *Loading and servicing*. All developments served by delivery or other service vehicles shall provide access that permits safe turning and backing for all vehicles that would service the development. Loading and servicing access shall not impede vehicle circulation, bicycle or pedestrian movements, or parking.

3. *Curb and sidewalks*
   a. All development shall provide curb and sidewalks along all frontages, installed to specifications as described in the transportation systems and street design standards of the *Technical Manual*.
   b. Where sidewalks already exist but are in substandard condition, they shall be repaired or replaced in conformance with Chapter 25 of the City of Portland Code of Ordinances and the transportation systems and street design standards of the *Technical Manual*
   c. An applicant may request a waiver from sidewalk installation requirements if they meet two or more applicable waiver criteria as listed below:
      i. There is no reasonable expectation for pedestrian usage coming from, going to, and traversing the site.
      ii. There is no sidewalk in existence or expected within 1000 feet and the construction of sidewalks does not contribute to the development of pedestrian-oriented infrastructure.
      iii. A safe alternative walking route is reasonably available, for example, by way of a sidewalk on the other side of the street that is lightly traveled.
      iv. The reconstruction of the street is specifically identified and approved in the first or second year of the current Capital Improvement Program (CIP) or has been funded through an earlier CIP or through other sources.
      v. The street has been constructed or reconstructed without sidewalks within the last 24 months.
      vi. Strict adherence to the sidewalk requirement would result in the loss of significant site features related to landscaping or topography that are deemed to be of a greater public value.
   d. An applicant may request a waiver from curb installation requirements if they meet two or more applicable waiver criteria as listed below:
      i. The cost to construct the curbing, including any applicable street opening fees, is in excess of 5% of the overall project cost.

ii. The reconstruction of the street is specifically identified and approved in the first or second year of the current CIP or has been funded through an earlier CIP or through other sources.
iii. The street has been rehabilitated without curbing in the last 60 months.
iv. Strict adherence to the curb requirement would result in the loss of significant site features related to landscaping or topography that are deemed to be of a greater public value.
v. Runoff from the development site or within the street does not require curbing for stormwater management.

C. Public transit access

1. All residential development consisting of 20 or more dwelling units and all commercial and institutional developments of at least 20,000 square feet gross floor area shall provide a transit shelter adjacent to or within the public right-of-way along its frontage when the following criteria are met:
   a. The development is proposed along an existing public transit route on a principal or minor arterial roadway, as shown in the Federal Street Classification Map.
   b. The nearest existing transit shelter on the route is more than ¼ mile from the site, measured along rights-of-way.
2. Transit facilities shall be connected to the public sidewalk system.
3. All or some of this standard may be waived if the review authority determines one or more of the following:
   a. That some or all of the required improvements cannot reasonably be made due to site constraints and/or insufficient right of way width.
   b. That the development is not anticipated to generate public transit usage due to particular characteristics of the development or proposed use.

D. Parking

1. *Vehicular parking*
   a. All developments shall provide off-street parking in accordance with the parking requirements of this Land Use Code.
   b. Where a parking study is required, the City encourages Transportation Demand Management (TDM) strategies to be employed.
   c. Developments proposing to exceed minimum parking requirements by 10% or more must demonstrate through a parking study that the amount of parking is appropriate for the proposed use of the site.
   d. Parking spaces and aisles shall meet applicable dimensional standards as detailed in the transportation systems and street design standards of the *Technical Manual*.
2. *Bicycle parking*
   a. All development shall provide secure bicycle parking in accordance with the parking requirements of this Land Use Code and the transportation systems

and street design standards of the *Technical Manual*.

b. Waiver: The review authority may reduce the required number of bicycle parking spaces if it is determined, based on evidence submitted by the applicant, that the proposed development is expected to generate reduced demand for bicycle parking due to particular site characteristics or proposed uses.

3. *Snow storage*
   a. All developments shall include areas for snow storage or provide an acceptable snow removal plan.
   b. Snow storage areas may not encroach on areas designed to meet minimum parking requirements or on pedestrian walkways and shall not be located where they would adversely impact the functionality of stormwater management systems. Landscaping in designated snow storage areas shall be such that it can withstand the snow pile.
4. *Electric Vehicle (EV) charging*
   a. All development shall adhere to applicable EV standards as provided in Section 1 of the *Technical Manual*.

E. Transportation Demand Management (TDM)

1. The following types of development shall design and implement a Transportation Demand Management (TDM) plan:
   a. All major site plan triggering development in the B-7 zone.
   b. All commercial, institutional, or mixed-use developments of 50,000 square feet or more total floor area.
   c. All commercial or institutional uses designed to accommodate 100 or more employees or, for educational institutions, 100 or more students.
2. The TDM Plan shall comply with the transportation systems and street design standards of the *Technical Manual*.

14.6.2 Environmental quality standards

A. Preservation of significant natural features

1. All development shall preserve and protect significant natural features by incorporating them into site design. Significant natural features shall be defined as:
   a. Populations of trees and plants listed on the Official List of Endangered and Threatened Plants in Maine, published by the Maine Natural Areas Program.
   b. Habitat for species appearing on the official state or federal list of endangered or threatened animal species.
   c. High and moderate value waterfowl and wading bird habitat including nesting and feeding areas, as defined by the Department of Inland Fisheries and Wildlife.
   d. Aquifers on islands in Casco Bay, as identified in the City of Portland Island Groundwater Management Study and/or by the Maine Geological Survey.
   e. Waterbodies including wetlands, watercourses, significant vernal pools and floodplains.
2. Where areas set aside for preservation are part of a larger existing habitat block

extending beyond the boundaries of the site, the contiguity of these features shall be preserved where possible.

3. Waiver: Where complete preservation of significant natural features substantially compromises development of the site as otherwise permitted by zoning, the review authority may reduce the requirement to accommodate development provided that the applicant demonstrates compliance with applicable state and federal regulations and implements preservation measures to the extent practicable.

B. Landscape preservation

1. Site development shall be designed to incorporate, limit disturbance to, and limit removal of existing trees.
2. The site plan shall include adequate measures to protect vegetation to be preserved from construction impacts, in accordance with the landscaping and landscape preservation standards of the *Technical Manual*.
3. All development subject to zoning setbacks shall preserve a minimum of 30% of existing trees 10 inches DBH or greater within the required setback area unless trees are non-native invasive species, as identified in the landscaping and landscape preservation standards of the *Technical Manual*, or are deemed unsalvageable by the Portland City Arborist or their designee.
4. Waiver: Where the applicant can demonstrate that preservation of existing vegetation would compromise development of the site, the review authority may permit the substitution of landscaping in other areas of the site as described in Table 14-D and/or a financial contribution to the City of Portland Tree Fund for an amount proportionate to the cost of trees removed. Replacement trees shall be of a species identified on the City of Portland Recommended Tree List as described in the landscaping and landscape preservation standards of the *Technical Manual*.

TABLE 14-D: TREE REPLACEMENT REQUIREMENTS

Size of Tree Removed	Replacement Requirement
10 – 16" DBH	1 tree
> 16" DBH	2 trees

5. Where the planting of replacement trees on the site is not feasible, the applicant shall contribute an amount proportionate to the cost of required replacement trees to the City of Portland Tree Fund, as described in the Landscaping and landscape preservation standards of the *Technical Manual*.

C. Site landscaping and buffers

1. *Landscaping*. All development subject to required zoning setbacks shall include a minimum of one shade tree or six plantings per 30 linear feet of all frontages as measured along the property line. A planting shall be defined as one shrub, one ornamental grass, and/or three perennials. Required plantings may be installed anywhere on the site, including a green roof, if proposed, and may be planted in any arrangement. Existing vegetation to be preserved on the site may be counted towards this requirement as described in the landscaping and landscape

preservation standards of the *Technical Manual*.

2. *Buffers*
   a. Loading and servicing areas, trash and recycling areas, storage areas, and roof- and ground-mounted utility structures, except for renewable energy systems, shall be screened from view from public sidewalks, streets and adjacent properties by dense evergreen landscaping, fencing, architectural screening products, masonry walls, building walls, or a combination thereof.
   b. For nonresidential development abutting a residential zone, an evergreen, densely landscaped buffer of not less than 10 feet wide and six feet tall is required along the side abutting the residential zone. Where site constraints prevent such a buffer from being established, the width of the landscaped buffer may be reduced but shall include architectural fencing of not less than six feet tall and a mix of evergreen and deciduous trees spaced no further than 20 feet apart abutting the residential zone.
   c. All residential development shall provide and/or preserve evergreen vegetated buffers where necessary to buffer the development from detrimental impacts of existing surrounding development.
3. *Parking and vehicle display lot landscaping*
   a. Developments shall include at least two trees (or one tree and three shrubs) per five parking spaces planted in landscaped islands to screen, shade, and break up parking. Trees and shrubs in parking lots may be in informal groups, straight rows, or concentrated in clusters as described in the landscaping and landscape preservation standards of the *Technical Manual*.
   b. Landscaped islands shall be distributed so that uninterrupted pavement does not exceed forty parking spaces.
   c. Where site constraints prevent implementation of all or a portion of required parking lot landscaping, as determined by the review authority, the requirements may be all or partially waived and the applicant shall contribute an amount proportionate to the cost of required parking lot trees to the City of Portland Tree Fund.
4. *Street trees*
   a. All development shall include street trees in numbers and locations as specified in the Landscaping and landscape preservation standards of the *Technical Manual*. Street trees are intended to benefit public spaces by providing green and natural elements that contribute to the streetscape and the urban forest ecosystem, provide health benefits, and increase the tree canopy to maximize shade and reduce energy use. Street trees shall be of a species identified on the City of Portland Recommended Tree List, unless otherwise approved by the City

Arborist or his/her designee. The provision of measures to enhance tree survival (such as raised planters, irrigation, and structural soils as recommended by the City Arborist) shall be required.

b. Where the applicant can demonstrate that site constraints prevent the planting of required street trees in the city right-of-way, the review authority may permit the following to be counted towards the street tree requirement, subject to the standards set out in the *Technical Manual*:
   i. The preservation of existing healthy trees that are six inches or more DBH on the site within twenty feet of the property line, and visible from the right-of-way.
   ii. The planting of street trees on the site within 20 feet of the property line where visible from the right-of-way.
   iii. The installation of other planted features in the right-of-way or within 10 feet of the right-of-way and visible from the right-of-way, which are documented to the satisfaction of the City Arborist and Planning Authority to meet the objectives of the street tree requirement.
   iv. The planting of new street trees on public land or public facilities in the neighborhood where a reasonable chance of good health and longevity is documented.
   v. Where other alternatives are not feasible, a contribution for each required street tree made to the City of Portland's Tree Fund. The contribution would primarily be for new trees in the neighborhood of the development, but would include an element of maintenance.
   vi. Where the proposed development includes the removal of an existing street tree determined by the City Arborist to be a heritage or feature tree, the applicant shall be required to contribute to the Tree Fund at the designated rate in the *Technical Manual* so that the total replacement cost is significantly higher than planting a new street tree/contributing for a new street tree.

D. Water quality, stormwater management, and erosion control

1. All development shall be designed to minimize total area of impervious surface on the site and both the volume and rate of runoff from the lot. Provisions for stormwater management shall demonstrate the following:
   a. Any stormwater draining onto or across the lot in its pre-improvement state will not be impeded or re-directed so as to create ponding on, or flooding of, adjacent lots.
   b. Any increase in volume or rate of stormwater draining from the lot onto an adjacent lot or City property

following the improvement can be handled on the adjacent lot or City property without creating ponding, flooding or other drainage problems and that the owner of the lot being improved has the legal right to increase the flow of stormwater onto the adjacent lot or City property.

c. Any increase in volume or rate of stormwater draining from the lot into the City's separated storm sewer system can be accommodated in the system without creating downstream problems or exceeding the capacity of the storm sewer system.

2. All development shall comply with the Stormwater management standards of the *Technical Manual*.

3. Development shall not pose a risk of groundwater contamination either during or post-construction, as described in the stormwater management and water supply standards of the *Technical Manual*.

14.6.3 Public infrastructure and community safety standards

A. Consistency with City master plans

1. All developments shall be designed so as to be consistent with City Council-approved master plans and facilities plans and with off-premises infrastructure.

2. The site plan shall include suitable easements, rights, and improvements to connect or continue off-premises public infrastructure as may be required by the review authority.

B. Public safety and fire prevention

1. All development shall incorporate the following public safety principles for Crime Prevention through Environmental Design (CPTED) into site design to enhance the security of public and private spaces and to reduce the potential for crime:

   a. Natural surveillance that promotes visibility of public spaces and areas.

   b. Access control that promotes authorized and/or appropriate access to the site.

   c. Territorial reinforcement that promotes a sense of ownership and responsibility through environmental design.

2. All developments shall be designed to provide adequate emergency vehicle access to the site and comply with the Public Safety standards of the *Technical Manual*.

C. Public utilities

1. The development shall not overburden sanitary sewers and storm drains, water lines or supply, or other public infrastructure and utilities. Development shall provide adequate utility infrastructure on-site and in connection to surrounding locations and facilities.

2. Electrical service shall be underground unless otherwise specified for industrial uses, or if it is determined to be unfeasible due to extreme cost, the need to retrofit properties not owned by the applicant or complexity of revising existing overhead facilities.

3. All sanitary sewer lines, storm drains, water lines, and other utilities proposed as part

of the development shall be designed to conform with the sanitary sewer and storm drain and water supply standards of the *Technical Manual*.

4. All development within 200 feet of a public sanitary collection and treatment system shall connect sanitary sewer lines into the nearest available public sewer. If a public sanitary collection and treatment system is not available, a private wastewater system may be used according to the requirements of Chapter 24 of the City Code and the sanitary sewer and storm drain standards of the *Technical Manual*.
5. All residential development of 20 units or more, commercial development, and industrial development shall provide for the temporary storage and timely removal of all trash and recyclable materials including, at a minimum, paper, corrugated cardboard, plastics, and metals. Storage containers for recyclable materials shall be separated from trash containers. All exterior storage of trash and recyclables shall be screened from view from public sidewalks, streets, and adjacent properties.

14.6.4 Site design standards

A. Massing, ventilation, and wind Impact

1. The bulk, location, or height of proposed buildings and structures shall not result in health or safety problems from a reduction in ventilation to abutting structures or changes to the existing wind climate that would result in unsafe wind conditions for users of the site and/or adjacent public spaces.
2. The bulk, location, or height of proposed buildings and structure shall minimize, to the extent feasible, any substantial diminution in the value or utility to neighboring structures under different ownership and not subject to a legal servitude in favor of the site being developed.
3. Development shall locate all HVAC venting mechanisms to direct exhaust away from public spaces and residential properties directly adjacent to the site.

B. Shadow. All development outside the B-3, B-5, B-6 and B-7 zones shall be designed to avoid and/or mitigate the adverse impacts of shadows cast by new structures or building additions from falling on publicly accessible open space in accordance with the shadow standards of the *Technical Manual*.

C. Snow and ice loading. All development shall be designed to prevent significant amounts of accumulated snow and ice from loading or falling onto adjacent properties or public ways.

D. View corridors. The massing, location, and height of development shall not substantially obstruct public view corridors identified in the *Downtown Vision View Corridor Protection Plan.*

E. Historic resources

1. When developments affect designated landmarks or lie within designated historic districts or historic landscape districts, such development shall be required to obtain a Certificate of Appropriateness under Article 17.
2. When any part of a proposed development is within 100 feet of any designated landmark, historic district, except the India



Street Historic District, or historic landscape district, such development shall be generally compatible with the major character-defining elements of the landmark or portion of the district in the immediate vicinity of the proposed development. Character-defining elements of landmarks and historic districts are identified in the historic resources inventory and respective historic district designation reports. For the purposes of this provision, "compatible" design shall be defined as design which respects the established building patterns and visual characteristics that exist in a given setting and, at the same time, is a distinct product of its own time. To aid the review authority in its deliberations, Historic Preservation staff shall provide a written analysis of the proposed development's immediate context, identifying the major character-defining elements and any established building patterns that characterize the context.

3. All development shall document and protect state or local archaeological resources known to exist or discovered on the site.
   a. Protection shall include leaving archaeological resources untouched beneath a new development through adaptation of foundation design or architectural layout.
   b. Where the applicant can demonstrate that complete protection is not feasible, the applicant shall excavate and document archeological resources. Such measures shall be conducted in consultation with the City's historic preservation program and Maine Historic Preservation Commission. For resources of state significance, excavation and documentation shall be conducted by a qualified professional, in coordination with Maine Historic Preservation Commission. Local archeological resources may or may not be recognized by the Maine Historic Preservation Commission as significant and shall include the following:
      i. Original seawall structure located landward of Commercial Street.
      ii. Inactive historic family cemetery plots.
      iii. Historic railroad beds including but not limited to the Portland-Lewiston interurban railroad.
      iv. Original structure and/or landforms associated with the Cumberland and Oxford Canal.
      v. Buried portions of colonial and post-colonial period structures or built features located on the Portland Peninsula predating the Great Fire of 1866.
      vi. Pre-colonial occupation sites identified by shell middens or other evidence.
      vii. Sites listed or eligible for listing on the National Register of Historic Places.
   c. In order to preserve archeological resources, the review authority may

waive standards listed in the City of Portland *Technical Manual* where necessary if it is determined that such a waiver would not jeopardize the health, safety, or welfare of the development's occupants, the public, or the natural environment.

F. Exterior lighting

1. *Site lighting*
   a. All exterior site lighting shall be full cutoff with no light emitted above the horizontal plane or spilled onto adjacent properties and streets. Illumination levels shall be adequate but not excessive for the safety, comfort, and convenience of occupants and users of the site, and shall conform to the lighting standards of the *Technical Manual*.
   b. Where light from a proposed development may adversely impact adjacent residential properties, exterior lighting shall employ house-side shielding.
2. *Architectural and specialty lighting.*
   a. Architectural and specialty lighting of such features as architectural details, monuments, public art, or other site features shall be designed to illuminate specific details or attributes only and shall meet the lighting standards of the *Technical Manual*.
   b. Up-lighting by any method is prohibited except for public buildings and parklands; clock towers and steeples; landscape features; designated historic landmarks; flags of state, federal, or national jurisdictions; and public art. Such light fixtures, brackets, conduits, and all other components shall be designed by a lighting professional and shall be scaled and placed to minimize their visibility and installed in accordance with the lighting standards of the *Technical Manual*.
3. *Street lighting.* All development shall provide municipal street lighting adequate for the safety and comfort of pedestrians and motorists and, where applicable, conforming to specific lighting district requirements as specified in the street lighting standards of the *Technical Manual*.

G. Noise and vibration. All heating, ventilation and air conditioning equipment (HVAC), air handling units (AHU), emergency generators, and similar equipment shall meet applicable state and federal emissions requirements and shall be located to the interior of the site, away from abutting residential properties

H. Signage and wayfinding

1. The size, scale, proportions, design, materials, placement, and source and intensity of illumination of all permanent building or freestanding signs shall be designed to complement the subject building and its immediate context, as follows:
   a. Signage shall not conceal architectural features such as window sills, lintels or cornices from view.
   b. Signs shall be designed and sized to fit the scale and proportions of the building and the feature or area of the building to which it is affixed.



c. Freestanding signs shall not adversely affect visibility at intersections or access drives.
d. Sign lighting shall be downwardly directed, internally-illuminated and/or shielded to avoid glare and light spillover towards the sky.
e. Signs shall not be affixed to rooftop mechanicals, mechanical penthouses or other rooftop appurtenances unless those appurtenances have been screened and integrated into the architecture of the development.

2. On-site directional traffic signage may be provided to enable users to safely and easily navigate into, around and out of the site. Directional signage shall not adversely affect visibility at intersections on or off the site.

I. Design standards

1. Development of certain types and/or proposed in certain zones, as specified below, are subject to the design standards of the City of Portland *Design Manual* in order to ensure that building and site design contribute to and enhance the goals and policies for specific zones within the City. The City of Portland design standards are listed in the City of Portland *Design Manual*, which is incorporated by reference as part of the City of Portland Land Use Code. If the development is located in a historic district or associated with a historic landmark, City of Portland Historic Preservation standards shall supersede:
   a. Development in the B-3, B-5, B-5b, and B-7 zones and in the B-6 and EWPZ zones shall be designed to support the development of dense, mixed-use neighborhoods with attractive, safe, and convenient street-level pedestrian environments. New development along the Eastern Waterfront should avoid large monolithic massing along all street frontages and should promote permeability through and within the development at a scale compatible with the existing street networks of the Eastern Waterfront. Where new structures are larger than buildings characteristically found in Portland's waterfront, horizontal and vertical variation should be used to break large expanses of building into components that are in scale with the context to which they most closely relate.
   b. Development in the R-P Residential Professional Zone, where there is a discernable architectural style or character to existing structures in the immediate vicinity in which the development is proposed, shall not be incongruous to that established style or character.
   c. Development in the B-1/B-1b, B-2, and B-2b zones shall provide an established street wall with entrances and public portions of the building oriented to and directly accessible from the public sidewalk and shall be designed and scaled to be compatible with surrounding residential and commercial development.
   d. Development in the University of Southern Maine (USM) Overlay Zone shall be designed to support a cohesive

campus environment that integrates with and respects the residential character of surrounding neighborhoods.

e. Residential developments, as listed below, shall integrate with and respect the character of surrounding residential development in terms of architectural form, landscaping and open space, façade materials, roof pitch, massing, and height.
   i. Planned Residential Unit Developments (PRUDS) in the R-3, R-5, and R-5a residential zones.
   ii. Multiple family and multiplex developments in the R-5 zone.
   iii. Small residential lot development of single-family homes in the R-5 zone.
   iv. All residential development in the R-6 zone.
   v. Residential development of the following types: manufactured housing parks, two-family and multiple family housing not already specified above, special needs independent dwelling units, lodging houses, bed and breakfasts, and emergency shelters.

14.7 MASTER DEVELOPMENT PLAN REVIEW STANDARDS

The Planning Board shall not approve a master development plan unless the development proposal meets the review standards below.

14.7.1 In general

A. **Integration with the surrounding context.** A master development plan shall be designed to integrate with the surrounding context with respect to land use, architecture, open space and pedestrian networks, vehicular access and circulation, off-site public facilities and all other infrastructure.

B. **Consistency with City plans.** A master development plan shall be consistent with the objectives of this ordinance, consistent with the City's Comprehensive Plan, and consistent with City Council-approved master plans and facility plans for off-premise infrastructure.

14.7.2 Natural features and open space

A. **Preservation of natural features.** A master development plan shall locate buildings and improvements in a manner that considers the existing topography, provides usable open space, preserves significant natural features as defined in Subsection 14.6.2, and preserves existing trees to the maximum extent possible.

B. **Provisions for open space.** A master plan shall include provisions for the ownership and maintenance of usable open space as appropriate

14.7.3 Historic Preservation

A. A master development plan shall be developed so as to conform with standards for designated landmarks or for properties within designated historic districts or historic landscape districts as found in Article 17.

B. When proposed adjacent to or within 100 feet of a designated landmark, historic district, or historic landscape, the master development plan shall be developed so as to be generally

compatible with the major character-defining elements of the landmark or portion of the district in the immediate vicinity of the proposed development.

14.7.4 Infrastructure

A. **Adequacy of infrastructure capacity.** A master development plan shall be designed with sizing of street and other infrastructure systems to accommodate the overall service demand of the plan.

B. **Continuation of street grid.** A master development plan shall be designed to create a street grid pattern that reflects average city block sizes of the surrounding neighborhood.

14.7.5 Design

A. **Creation of a cohesive identity.** A master development plan shall be designed to create a cohesive identity through building scale, massing, and articulation; use of quality exterior materials and architectural detailing at pedestrian scale; consistency of design and materials for streetscape and pedestrian amenities; framing of outdoor open space and linkages; a clear conveyance of the function and significance of various buildings, entrances, and features; and to generally comply with design and development standards of the zone in which it is located.

14.8 WAIVERS

14.8.1 Waiver requests

An applicant may request a waiver with respect to the submittal requirements or review standards of this article. If a waiver is requested, the applicant shall document the rationale for the waiver request within the application.

14.8.2 Waiver criteria

Except for where waiver criteria are provided for individual review standards, the review authority, if it finds that extraordinary conditions exist or that undue hardship may result from strict compliance with the submittal requirements or review standards of this article, may vary these regulations so that substantial justice may be done and the public interest secured, provided that such variation will not have the effect of nullifying the intent of this article.

14.9 PHASING

14.9.1 Site plan

A major site plan may be divided into up to three phases. Each phase must be at least 20% of the total development and in addition, show the entire tract or parcel. Each phase of such project shall be independent of subsequent phases and shall conform to all standards of this article in the event that subsequent phases do not go forward.

14.9.2 Master development plan

An applicant proposing a master development plan is seeking approval for an overall concept of development that may subsequently be brought for site plan approval in two or more phases and in a phase sequence that extends beyond the timeframes allowed for site plan approvals. Site plans for each phase of a master development plan shall generally conform with the master development plan. For areas proposed as future development phases, the proposed interim conditions shall be managed and maintained to ensure stable, safe, and attractive site conditions. One or more phases of the master development plan may be reviewed as a site plan concurrently

with the review and approval of the master development plan.

14.10 CONDITIONS OF APPROVAL

Notwithstanding the review standards of this article, the review authority may impose any condition upon its approval of any site plan or master development plan to minimize or abate any adverse impact of the proposed development on the value or utility of other private property, or public property or facilities, to the extent feasible; to bring the development into compliance with the review standards of this article; or to minimize any other adverse environmental effects of the proposed development.

14.11 POST-APPROVAL PROCEDURES

14.11.1 Advanced site work

No alterations shall be made to a site with a pending or approved site plan until:

A. The performance guarantee has been posted and final site plans have been submitted to the Planning Authority.

B. Written permission has been received from the Planning Authority. Such permission shall be granted only after submission of a written request describing the proposed scope of work to be conducted on the site and a determination by the Planning Authority that the request is reasonable, time is imperative, and the work will not compromise any aspect of the ensuing review process. All such work shall be done in compliance with information provided with the site plan application including, but not limited to, an erosion control plan. Such written permission shall not be required if the only work proposed is the digging of test pits.

14.11.2 Final plans

Following final site plan approval and prior to issuance of any building permit, the developer shall submit final plans meeting all the conditions of the site plan approval, including without limitation all streets, sewers, drainage structures, and landscaping. Thereafter, limited and minor departures from the approved site plan shall be approved by the Public Works Authority and/or Planning Authority as field changes pursuant to Section 14.14. Amendments or revisions to the approved site plan shall be reviewed by the Planning Authority pursuant to Section 14.14.

14.11.3 Performance and defect guarantees

The following performance and defect guarantee requirements shall apply:

A. **Performance guarantee required.** Following approval of site plan applications and prior to the issuance of a building permit, the developer shall post with the City a performance guarantee in the form and amount specified herein, specifying the completion of the required site plan improvements within two years from the origination date of such guarantee. In no case shall the term of such guarantee be for a period of less than one year, nor shall any performance guarantee expire between October 20 and April 15 of the following year.

B. **Inspection fees.** At the same time that the developer posts a performance guarantee, the developer shall also pay to the City an inspection fee as determined by the City Council. If a performance guarantee is extended beyond its original expiration date, then an additional inspection fee in an amount to be determined by the City shall be required.

C. **Minor residential development.** All minor residential development, which for the purposes of this section shall be defined as single- or two-family development and any associated site improvements, is exempt from performance guarantee requirements except when those projects complete construction in the winter, and site work is incomplete due to weather conditions. A performance guarantee will then be required that is sufficient to complete the remaining site work as approved on the site plan. The performance guarantee must be reviewed and approved by the Planning Authority prior to the release of a certificate of occupancy. All minor residential development is subject to inspection fees, as specified herein.

D. **Performance guarantee amount**

1. The performance guarantee shall be equal in value to 100% of the estimated cost of the required site improvements as shown on the approved site plans, as a condition of planning approval, as required in the City of Portland Code of Ordinances, and/or as required by the City of Portland *Technical Manual*.
2. The performance guarantee amount shall be estimated by the applicant or representative using the cost estimate spreadsheet provided by the City and shall be submitted for review and approval to the Planning Authority. Costs to be included in the estimate, and which shall be covered by the performance guarantee, include but are not limited to: street and sidewalk improvements including street lights, monuments, curbing, ramps and detectible warning panels, and striping; earth work and grading; utilities infrastructure and connections including sewer, stormwater, and water service; exterior site lighting; erosion control measures as shown on the approved erosion and sedimentation control plan; open space and recreation amenities; and final site stabilization and landscaping.
3. The Planning Authority may waive all or any portion of this requirement if it determines that the developer has a proven record of satisfactory performance and sufficient financial capability.

E. **Phased projects.** If a project is reviewed and approved as a phased project, the corresponding performance guarantee may also be phased. A separate performance guarantee shall be posted for each phase. Each phase of such project shall be independent of subsequent phases and shall conform to all standards of this article in the event that subsequent phases do not go forward.

F. **Advanced site work**

1. No public utility, water district, sanitary district or any utility company of any kind shall install services to any lot in a subdivision which has not received Planning Board approval.
2. On a case-by-case basis, permission for advanced site work may be granted by the Director of Planning and Urban Development. Such permission is solely within the discretion of the Director of Planning and Urban Development and shall be granted only after submission of a written request setting forth the work proposed to be done on the site. Such written permission shall not be required

when the only work proposed is the digging of test pits.

G. **Acceptable forms of performance guarantee.** The performance guarantee, in the amount approved by the Planning Authority, shall be a letter of credit, an escrow account with a responsible financial institution, or the deposit to the City of Portland Finance Department and shall be in conformance with the templates and forms made available by the City. If the performance guarantee is a deposit to the City, the City shall hold such funds in a noninterest bearing account until criteria for performance guarantee release have been satisfied. The performance guarantee shall be in the name of the City and shall be approved by the finance director as to financial sufficiency and the corporation counsel as to proper form and legal sufficiency.

H. **Performance guarantee reductions.**

1. Up to three times during the construction of a project, upon request of the developer, a performance guarantee may be reduced by the value equal to the estimated cost of the completed improvements. In no case shall any performance guarantee be reduced by any line item on the cost estimate spreadsheet where improvements remain to be completed. Requests shall be submitted on the cost estimate spreadsheet for review and approval by the Planning Authority.
2. In no case shall any performance guarantee be reduced to an amount equal to or less than the required defect guarantee until all criteria set forth for converting to the defect guarantee have been met, as approved by the Planning Authority.

I. **Extension of the performance guarantee.** If the Planning Authority and/or the Public Works Authority has reasonable doubt concerning the stability or proper construction of the required site improvements, the developer shall be required to reconstruct or otherwise address the issues to the City's satisfaction. If the performance guarantee is scheduled to expire before the extent or necessity for such further work can be determined, the developer shall be required to extend the performance guarantee covering such improvements, or secure a new guarantee, for a period and amount deemed necessary by the Planning Authority and/or the Public Works Authority.

J. **Performance guarantee release/conversion to defect guarantee.**

1. No performance guarantee shall be released until all fees generated by the project are paid to the City, including but not limited to engineering, inspection, and administrative fees. The guarantor shall not be released from the guarantee except and until authorized in writing by the Planning Authority.
2. For roadway extension projects, no performance guarantee shall be released until the Department of Public Works has performed a final inspection of the roadway and determined satisfactory completion of the required improvements. Additionally, no performance guarantee shall be released until the City in receipt of a petition for street acceptance, deemed complete and satisfactory by Corporation Counsel and/or the Department of Public



Works. The petition for street acceptance must include a warranty deed (with metes and bounds description) to the property within each street of the subdivision or roadway extension and any other improvements intended for City maintenance.

3. Upon the satisfactory completion of the required site improvements and compliance with all conditions of approval including the submission of as-built drawings as applicable, the Planning Authority will authorize in writing, conversion to the defect guarantee. The defect guarantee shall be 10% of the original performance guarantee amount and shall remain in place for a period of one year. The defect guarantee shall ensure the workmanship and the durability of all materials used in the construction of the required site improvements. The Planning Authority may authorize the defect guarantee to be released at any time within the one-year period, provided all required site improvements have been constructed and in-place for one year or more and the workmanship and the durability of all materials has been inspected and confirmed to be satisfactory.

K. **Acceptable forms of defect guarantee.** The defect guarantee, 10% of the original performance guarantee amount approved by the Planning Department, shall be a letter of credit, an escrow account with a responsible financial institution, or the deposit to the City of Portland finance department and shall be in conformance with the templates and forms made available by the City. If the defect guarantee is a deposit to the City, the City shall hold such funds in a noninterest bearing account until the criteria for performance guarantee release have been satisfied. The performance guarantee shall be in the name of the City and shall be approved by the finance director as to financial sufficiency and the corporation counsel as to proper form and legal sufficiency.

L. **Abandoned site**. In the event that a development site is abandoned or the site improvements do not meet City standards as approved in the site plan, the performance guarantee may be utilized to stabilize, secure, complete construction, and/or restore the site as may be necessary, including, but not limited to, revegetation of areas, grading, and fencing.

14.11.4 Inspection fee

At the same time that the developer posts a performance guarantee, the developer shall also pay to the City a site plan improvement inspection fee equal to two percent of the estimated costs of required site improvements for which a performance guarantee is to be posted. At the conclusion of the project, and before a temporary or permanent certificate of occupancy is issued, the developer shall pay to the City the balance of any inspection fees actually incurred by the City in its review of the project.

14.11.5 As-built plans

Upon completion of a development (excluding minor residential and low-impact site development as specified in Section 16 of the *Technical Manual*), the applicant shall submit the as-built plans as specified in the *Technical Manual*.

14.11.6 Certificates of occupancy

No certificate of occupancy shall be issued to any portion of development where, in the opinion of the Planning Authority, the site conditions or work required to complete the development will endanger the health or safety of persons visiting or inhabiting the completed portion. Certificates of occupancy may be granted as follows:

A. Temporary certificates of occupancy

1. Notwithstanding any other provision of the Land Use Code, a certificate of occupancy may be issued for a development or portion of a development which has otherwise been completed in accordance with final site plan approval and all applicable provisions of this Land Use Code where the applicant submits a written request to the Planning Authority stating those improvements which remain to be completed, the reasons why such improvements have not been completed, and the cost and time to complete the remaining work. In no event shall any temporary or permanent certificate of occupancy be issued where:
    a. Conditions exist which would justify denial of a certificate of occupancy under Chapter 6 of the City of Portland Code of Ordinances.
    b. Required improvements to the City right-of-way remain to be completed by the developer.
    c. All access roads and any other roads and driveways required for the building or building(s) for which the certificate(s) are requested have not been improved to a passable condition.
    d. A remaining balance for fees incurred by the City exists.
    e. The developer otherwise is in violation of the City Code of Ordinances.
2. Where a temporary certificate of occupancy is sought for a portion of any development prior to the completion of the entire development, the following standards shall be met, in addition to all applicable requirements set forth above, prior to the issuance of any certificate of occupancy:
    a. Those parking areas required for the portion of the development for which a certificate of occupancy is sought shall be available for use. Alternative arrangements must be made on-site for parking for any periods during which such parking areas will not be available for use.
    b. All foundation plantings and other landscaping required for the portion of a development for which a certificate of occupancy is sought shall be installed prior to the issuance of a certificate of occupancy. This requirement may only be waived where, in the opinion of the Public Works Authority, landscaping improvements cannot practically be completed due to seasonal weather conditions.
    c. A performance guarantee shall be in place and in an amount sufficient to cover all remaining required improvements and not less than 10% of the initial performance guarantee amount.

B. **Final certificate of occupancy.** All improvements which are not completed prior to the issuance of any temporary certificate of occupancy must be completed prior to the completion date specified in the performance guarantee or in the temporary certificate of occupancy, whichever occurs first, in order for a final certificate of occupancy to be issued by the City. Where any person accepts a temporary certificate of occupancy and does not complete the improvements as specified in the certificate, the City is authorized to enter upon such property itself or through its agents or contractors to complete such improvements with no liability therefore and may recover the costs thereof through the mechanic's lien procedure for the improvement of real property to the extent that the performance guarantee may be inadequate.

14.12 EXPIRATION OF APPROVALS

14.12.1 Site plan

Site plans approved under this article shall expire 12 months from the date of approval unless development has been undertaken in accordance with the approved site plan and site work or building construction is ongoing. Any lapse in construction for a period in excess of 12 months shall result in an expiration of the site plan.

14.12.2 Master development plan

Master development plans approved under this article shall expire six years from the date of approval if no site work or building construction has commenced.

14.13 EXTENSION OF APPROVALS

14.13.1 In general

Extension requests must be made in writing by the applicant prior to the expiration of the approval. An extension may not be granted if changes to the City's zoning, subdivision, or site plan ordinance, the *Technical Manual* or the *Design Manual* would render the development nonconforming in any respect or significantly impact the approved site plan or master development plan as determined by the Planning Authority.

14.13.2 In case of appeal

Where the approval or any related land use approval granted to the same applicant by any agency of the City with respect to the same development is appealed to any court by an opponent of the development, the applicant shall be granted extensions, beyond the expiration of said approval, where the applicant has exercised due diligence with respect to defending such appeal, which extensions shall not last beyond one year from entry of final judgment.

14.13.3 Site plan

Site plan approvals may be extended by the Planning Authority for up to three years from the date of approval.

14.13.4 Master development plan

Master development plan approvals may be extended by the Planning Authority up to two times, for up to two years from the date of expiration of the original master development plan approval.

14.14 AMENDMENTS TO APPROVED PLANS

14.14.1 Field changes

Changes associated with unforeseen difficulties that arise during the course of construction and involving such technical detail as utility location and substitution of equivalent plantings shall be approved by the Public Works Authority and/or the Planning Authority. Field changes shall not involve substantial alteration of the approved plan or conditions imposed by the review authority.

14.14.2 Minor amendments

The Planning Authority is authorized to approve minor amendments to site plans and master development plans. An applicant may request a minor amendment to an approved site plan or master development plan by submitting a written statement of the proposed amendments and proposed amended plans to the Planning Authority. Minor amendments:

A. Are generally consistent with the approved plan.
B. Do not impact the layout of buildings and open space.
C. Do not propose new uses.
D. Do not increase building ground coverage, floor area ratio, or residential density.
E. Do not substantially change access, circulation, or infrastructure on or adjacent to the site.
F. Do not involve new waiver requests.
G. Do not affect any condition or requirement of the Planning Board.

14.14.3 Major amendments

An applicant may request approval by the review authority of a major amendment to an approved site plan or master development plan by submitting an application for the amendment to the Planning Authority. Major amendments include changes that exceed the limited criteria for a minor amendment under Subsection 14.14.2. Review procedures shall follow those for major site plan review.

14.15 CONSISTENCY WITH APPROVED SITE PLANS

A. Sites shall be developed and maintained as depicted in the approved final site plan and the written submission of the applicant. Any deviations from an approved site plan, including, but not limited to, changes in topography, vegetation and impervious surfaces as shown on the final site plan or alteration of a parcel which was the subject of site plan approval after May 20, 1974, shall require the prior approval of a revised site plan by the Planning Board or the Planning Authority pursuant to the terms of this article. Any such parcel lawfully altered prior to the enactment date of these revisions shall not be further altered without approval as provided herein. Modification or alteration shall mean and include any deviations from the approved site plan including, but not limited to, topography, vegetation, and impervious surfaces shown on the site plan.
B. All construction or alterations to the site performed under authorization of building permits or certificates of occupancy issued for development within the scope of this Land Use Code shall be in conformance with the approved final site plan or an amendment thereto under Section 14.14. The Planning Authority shall institute or cause to be instituted any and all actions, legal or equitable, that may be appropriate or necessary for the enforcement of this article.

C. Where work is required pursuant to the terms of Chapters 24 or 25 as part of an approval granted under this article, such work shall be accomplished in the sequence established by the Public Works Authority. Where the Public Works Authority determines that work has been completed prior to the receipt of all approvals required by this article or which is out of sequence or is not in compliance with the standards of Chapters 24 and 25 of the City of Portland Code of Ordinances, a stop work order may be issued. Work shall recommence only after such order has been lifted by the Department of Public Works or the Building Authority on the basis of an approved mitigation plan or action by the developer.

D. Where construction, alteration, or modification to a site is performed without a valid site plan approval, an after-the-fact review shall be performed by the Planning Board or Planning Authority, as applicable.

14.16 APPEALS

14.16.1 Site plan

A. When the Planning Authority has approved, approved with conditions, or disapproved a minor site plan, any person aggrieved may appeal the decision to the Planning Board within 30 calendar days of the date of the written decision of the Planning Authority. Upon the taking of such an appeal, the application shall be reviewed as a new application.

B. When the Planning Board has approved, approved with conditions, or disapproved a major site plan, any person aggrieved or the City may appeal the decision to the Superior Court, pursuant to Rule 80B of the Maine Rules of Civil Procedure and 30-A M.R.S §§ 2691 & 4483. Decisions of the Planning Board are final as of the date the written decision is issued.

15 SUBDIVISIONS

15.1 PURPOSE

This article is adopted pursuant to the terms and provisions of 30-A M.R.S. § 3001 and 4403, as amended. The purpose of this article is to provide for the harmonious and economic development of the city; for the orderly subdivision of land and its development; for the orderly development of the general area surrounding such subdivision; for the coordination of streets within the general area; for adequate provisions for drainage, flood control, light, air, and other public purposes; for the adequate and proper installation of streets, drainage, sanitary sewers, water, and other utilities and facilities; for the dedication to the City of land for streets, alleys, or other public purposes or the transfer to the City of easements or other rights or privileges; for the reservation for the City of land to be acquired for public facilities; and to protect public safety.

15.2 APPLICABILITY

15.2.1 Jurisdiction

A. This article shall govern each and every subdivision of land as defined under 30-A M.R.S. § 4401 and 4402 within the limits of the city unless specifically exempted under this article.

B. When application is made for the resubdividing of a previously recorded subdivision under the provisions of these regulations, it shall be treated as a new subdivision provided the applicant is the owner of rights in the recorded subdivision.

15.2.2 Enforcement, conveyance, markers, and recording

A. No person may sell, lease, develop or build upon, or convey for consideration, offer or agree to sell, lease, develop or build upon, or convey for consideration any land in a subdivision unless the subdivision has been approved by the Planning Board, and unless a recording plat showing permanent marker locations at all lot corners has been recorded in the county registry of deeds.

B. No subdivision plan shall be recorded by the registry of deeds which has not been approved as required by this article. Approval for the purpose of recording shall appear in writing on the recording plat.

C. No public utility, water district, sanitary district, or any utility company of any kind shall install services to any lot in a subdivision which has not received Planning Board approval.

D. Any person who sells, leases, develops or builds upon, or conveys for consideration any land in a subdivision which has not been approved as required by this article shall be punished by a fine of not more than $500 for each such occurrence. The City may institute proceedings to enjoin any violation of this section.

15.3 REVIEW PROCEDURES

15.3.1 Application

To obtain approval of a proposed subdivision the subdivider or applicant shall submit an application to the Planning Authority in such form as prescribed by the Planning Authority. The application shall meet the submission requirements of the City of Portland *Technical Manual,* including the provisions for a subdivision plat for presentation to the Planning Board and public, all engineering data and

plans necessary for the completion of the required improvements, supplemental submission items, a recording plat, and written submittals demonstrating compliance with the review criteria of this article. A payment of a nonrefundable application fee, as established by the City Council to cover administrative costs and costs of a hearing, shall accompany each application.

15.3.2 Receipt of application notice

A. When an application for subdivision is received or generated by the Planning Authority, it shall give a dated receipt to the applicant and shall notify, by mail, the following, where applicable.
   1. All property owners within 500 feet of the proposed subdivision, except that for subdivisions within industrial zones, the notice range shall be 1,000 feet.
   2. The clerk and the reviewing authority of municipalities that abut or include any portion of a proposed subdivision.
   3. A public drinking water supplier if the subdivision is within its source water protection area.

B. The notice hereunder shall include a brief description of the application, the address or location of the property involved and a telephone number at the City where additional information may be obtained. The cost of noticing shall be charged to the applicant.

15.3.3 Neighborhood meeting

An applicant for the subdivision of five or more lots shall conduct a neighborhood meeting according to the provisions of Subsection 14.5.5.

15.3.4 Notice of public meeting

A. Prior to any Planning Board workshop or hearing on the subdivision application, the applicant shall be responsible for posting a notice of public meeting sign on the property where the subdivision is to occur. The dimensions, construction, and content of the sign shall be in accordance with standards established by the Planning Authority.

B. The sign shall be posted at least ten days prior to the public workshop or hearing date, and shall be removed from the site no more than three days following the date of the meeting.

C. Once the required notice of public meeting signage is posted, the applicant shall submit a completed certification of posting form to the Planning Authority.

D. In the event that a required notice of public meeting sign is knocked over or made illegible, it shall be the responsibility of the applicant to promptly reset or replace the sign, though failure to do so shall not invalidate the review.

15.3.5 Review costs

A. The subdivider shall pay a fee to cover the engineering review costs and administrative costs to be incurred by the City. The fee shall be based upon the actual hours of review time and prevailing hourly rate for reimbursement of City costs, and shall be invoiced periodically by the City.

B. No land use permits or applications of any kind shall be processed, reviewed, or issued, no signed subdivision plats shall be released or recorded, and no building permits of any kind shall be issued, for any project whose permit fee is governed by this article unless all charges due have been paid and the developer is

otherwise in compliance with the City of Portland Code of Ordinances.

15.3.6 Timing of subdivision review

A. Within 30 days of receiving an application, staff shall notify the applicant in writing either that the application is complete or, if it is determined to be incomplete, the specific additional materials needed to make it a complete application. After the review authority has determined that a complete application has been filed, it shall notify the applicant and begin its full evaluation of the proposed subdivision.

B. A public hearing shall be commenced within 30 days following the receipt of a complete subdivision application by the review authority. The Planning Board shall render its decision on any application submitted to it within 30 days of a public hearing or such other time as may be mutually agreed to by the Planning Board and the applicant.

15.3.7 Subdivision approval

The Planning Board shall approve, approve conditionally, or disapprove such subdivision application at a public hearing. If approved conditionally, the conditions and reasons shall be stated and given in writing to the subdivider and, if necessary, the Planning Board may require the subdivider to submit a revised subdivision plat. If the Planning Board should disapprove the subdivision plat, the reasons for such action shall be stated and given in writing to the subdivider, and the board may state the conditions under which the proposed subdivision would be approved.

15.3.8 Effect of subdivision approval

Receipt of the approved copy of the subdivision plat of the subdivider is not authorization that the developer may proceed with the construction of any improvements. No construction will proceed until the recording plat, meaning a completed subdivision plat in form for approval and recording, including all waivers and a surveyor's stamp, has been approved by the Planning Board and has been properly recorded as required in Subsections 15.3.9 and 15.3.10.

15.3.9 Recording plat approval

Consideration of the recording plat shall not take place until the subdivision plat is approved.

15.3.10 Recording

A. Prior to the release of a signed, approved recording plat, all current charges due under this article shall be paid.

B. When the recording plat, meeting the requirements of the City of Portland *Technical Manual,* is approved, the subdivider shall pay the actual cost of recording and reproduction.

C. The recording plat shall be recorded in the office of the Cumberland County Registry of Deeds by the subdivider.

D. The registry book and page numbers shall be transcribed on one mylar copy of the recording plat to be sent to the Public Works Authority. Unless the subdivider shall record his or her approved recording plat within three years after the Planning Board has approved the subdivision plat, the recording plat approval shall become null and void. The preceding sentence notwithstanding, if the Planning Board's initial approval of a subdivision is based in part upon the granting of a waiver from any

of the applicable subdivision approval standards, no such waiver shall be valid unless that fact shall be expressly noted on the face of the recording plat and shall be noted in a certificate, each of which shall conform to 30-A M.R.S. § 4406, and such recording plat or such certificate or both of them are recorded in the Cumberland County Registry of Deeds within two years of final subdivision approval.

15.3.11 Sectional recordings

Following subdivision plat approval, the Planning Board may permit the subdivision to be divided into two or more sections for recording purposes subject to any conditions that the board deems necessary in order to insure the orderly development of the plan. The applicant may seek approval of and record a sectional recording plat with the Cumberland County Registry of Deeds only if the section constitutes at least 20% of the total number of lots contained in the approval plat and, in addition, shows the entire tract or parcel. For the purposes of this article, tract or parcel shall mean all contiguous land in the same ownership, provided that lands located on opposite sides of a public or private road shall be considered each a separate tract or parcel of land unless such road was established by the owner of land on both sides thereof. In these circumstances, if the first section of the plat has been recorded within three years after Planning Board approval, subdivision plat approval of the remaining sections of the plat shall remain in effect for five years after Planning Board approval.

15.4 REVIEW STANDARDS

15.4.1 Standards of review

Before granting approval, the Planning Board shall determine that the proposed subdivision:

A. Will not result in undue water or air pollution. In making this determination the Planning Board shall at least consider the elevation of land above sea level and its relation to the flood plains, the nature of soils and subsoils and their ability to adequately support waste disposal, the slope of the land and its effect on effluents, the availability of streams for disposal of effluents, and the conformity to the applicable state and local health and water resources regulations.

B. Has sufficient water available for the reasonably foreseeable needs of the subdivision.

C. Will not cause unreasonable burden on an existing water supply.

D. Will not cause unreasonable soil erosion or reduction in the capacity of the land to hold water so that a dangerous or unhealthy condition may result.

E. Will not cause unreasonable highway or public road congestion or unsafe conditions with respect to use of the highway or public roads existing or proposed.

F. Will provide for adequate sanitary waste and storm water disposal and will not cause an unreasonable burden on municipal services if they are utilized.

G. Will not cause an unreasonable burden on the ability of the City to dispose of solid waste and sewage if municipal services are to be utilized.

H. Will not have an undue adverse effect on the scenic or natural beauty of the area, aesthetics, historic sites, significant wildlife habitat identified by the Department of Inland Fisheries

and Wildlife or by the City, rare and irreplaceable natural areas, or any public rights for physical or visual access to the shoreline. For subdivisions within local historic districts, the Planning Board shall apply the standards of Subsection 17.8.3(C). The Planning Board may request that the Historic Preservation Board prepare an evaluation of the proposed subdivision based upon the standards of Subsection 17.8.3(C).

I. Is in conformance with the Comprehensive Plan or its successor.

J. The subdivider has adequate financial and technical capacity to meet the standards of this subsection.

K. Whenever situated, in whole or in part, within the watershed of any pond or lake or within 250 feet of any wetland, great pond, or river as defined in Title 38, Chapter 3, Subchapter I, Article 2B, will not adversely affect the quality of such body of water or unreasonably affect the shoreline of such body of water.

L. Will not, alone or in conjunction with existing activities, adversely affect the quality or quantity of groundwater.

M. Is or is not in a flood prone area, based on the Federal Emergency Management Agency's flood boundary and floodway maps and flood insurance rate maps, and information presented by the applicant. If the subdivision, or any part of it, is in such an area, the subdivider shall determine the 100-year flood elevation and flood hazard boundaries within the subdivision. The proposed subdivision plan must include a condition of plan approval requiring that principal structures in the subdivision will be constructed with their lowest floor, including the basement, at least one foot above the 100-year flood elevation.

N. Will provide for adequate stormwater management.

O. Will not have lots with a lot depth-to-shore frontage ratio greater than 5 to 1 if any lots in the proposed subdivision have shore frontage on a river, stream, brook, great pond, or coastal wetland as these features are defined in Title 38 § 480-B.

P. For any proposed subdivision that crosses municipal boundaries, will not cause unreasonable traffic congestion or unsafe conditions with respect to the use of existing public ways in an adjoining municipality in which part of the subdivision is located.

15.5 TECHNICAL AND DEVELOPMENT STANDARDS

15.5.1 Technical standards

All subdivisions and associated improvements, excluding subdivisions exempted under Section 15.12 of this article, shall, in addition to the criteria listed herein, adhere to all applicable standards of the City of Portland *Technical Manual*, unless formally waived by the Planning Board.

15.5.2 Timing of subdivision improvements

The Department of Public Works shall establish the sequence in which work is to be accomplished. Where it is determined by the Public Works Authority that work has been completed prior to the receipt of all approvals required by this article or which is out of sequence or is not in compliance with the standards of this section and of Chapter 25, the Director of Public Works or an inspector from the Public Works Authority may issue a stop work order. Work shall recommence only after the stop

work order has been lifted by the Director of Public Works or an inspector from the Public Works Authority. Violation of the stop work order shall be considered an offense.

15.5.3 Subdivision names

Subdivision names for plats shall be subject to approval by the Planning Board and not duplicate the name of any plat already recorded.

15.5.4 Streets

A. All streets shall be platted along contour elevations which result in minimum grades and greatest visibility whenever practicable, with consideration given for anticipated use of the land. Street grades in all proposed subdivisions shall be subject to the approval of the Public Works Authority.

B. The proposed street layout shall be coordinated with the street system of the surrounding areas. All streets must provide for the continuation or appropriate projection of streets in surrounding areas and provide means of ingress and egress for surrounding tracts.

C. When connecting streets within residential neighborhoods, new streets shall contribute to a neighborhood street system characterized by a network of interconnected streets, which minimizes through-traffic in residential neighborhoods. The layout of subdivision lots, streets, and pedestrian ways shall promote multiple paths of travel to get to destinations within and between neighborhoods by foot and bicycle, as well as auto.

D. The interconnection of new and existing streets is further subject to the following provisions to minimize and mitigate through-traffic in residential neighborhoods:

1. Where a determination is made that a proposed street connection will result in substantial increases in traffic volume and speed on the effected public streets, the Planning Board may require appropriate traffic calming solutions as set forth in Chapter 28 of the City of Portland Code of Ordinances. The Public Works Authority may by regulation and amendment to the *Technical Manual* establish standards for determining what is a "substantial increase in traffic volume and speed."
2. In any circumstances where a street connection is allowed, the Planning Board may condition subdivision approval to require the developer to monitor future traffic patterns to determine whether, using existing traffic calming standards, new or additional traffic calming measures should be employed. The extent and design of traffic calming shall be determined by the Public Works Authority to mitigate the post development impact of connecting new and existing streets.
3. In cases where post-development monitoring shows that increased traffic volume and speed is such that further traffic calming would be insufficient to mitigate traffic negative impacts of through-traffic, the DPW may require that the connection be modified to exclude regular vehicular traffic, while retaining bicycle, pedestrian, and where needed, emergency vehicle connections. The Public Works Authority shall develop typical standards and specifications for bicycle, pedestrian, and emergency vehicle connections and/or turnarounds.

4. Where a determination is made by the Public Works Authority that a proposed street connection will result in substantial increases in traffic volume and speed on the affected public streets, the Planning Board may disallow a proposed street connection for vehicular purposes in favor of a connection for non-vehicular purposes in situations where a proposed residential street connection meets all of the following criteria:
    a. The new street would result in the connection of two arterials.
    b. The street would be located in a neighborhood where there is no existing public through-street network connecting the same arterials.
    c. There is no likelihood that other public street connections will be developed in the future that would connect the arterials, whether because of topography limitations, existing development patterns, or other similar reason.
5. In circumstances where vehicular connections are disallowed, the Planning Board shall require that adequate right-of-way is reserved to permit the extension of the street for pedestrian, bicycle, emergency use, and potential vehicle connections as may develop in the future.

E. Reserve strips or spite strips for unspecified or unacceptable purposes are prohibited.

F. Street right-of-way widths shall be as provided in Chapter 25 of the City of Portland Code of Ordinances and the City of Portland *Technical Manual.* However, private streets within PRUDs shall be exempt from the street right-of-way and roadway width requirements established in the City's *Technical Manual*, provided that no such street shall be accepted by the City unless it is first improved to City standards at the expense of those persons requesting the street acceptance. Private streets within a PRUD or a shall meet specifications established by the Public Works Authority. All private streets shall be designed by a professional engineer and shall be built according to accepted engineering standards.

G. Proposed subdivisions along existing, or dedicated, or platted streets where rights-of-way are inadequate shall provide additional land to meet the minimum standards.

H. Streets shall not occupy more land than needed to provide access nor create unnecessary fragmentation of the subdivision into small blocks. Streets will be designed to discourage outside traffic from traversing the development.

I. All dead-end streets shall provide for a cul-de-sac or, in the case of a dead-end street which will be extended, a temporary turn around at the end of the street, subject to the approval of the Public Works Authority.

J. Sidewalks shall be constructed on each side of each street in accordance with Chapter 25 of the City of Portland Code of Ordinances. Sidewalks to be used by pedestrians are to be so located as to minimize contacts with normal automotive traffic, with preference given to interior walks away from streets in common open space in block interiors.

K. Curbs shall be constructed on each side of each street. The curbing shall be constructed as provided in Chapter 25 of the City of Portland Code of Ordinances.

L. Street names for all subdivisions shall appear on the subdivision plat and be subject to approval by the Planning Board.

15.5.5 Sewers and storm drains

A. All subdivisions shall be provided with adequate storm drain systems within the subdivision separate from any sanitary sewer system required in Chapter 25 of the City of Portland Code of Ordinances. The design of all sewers and storm drains shall be subject to approval by the Public Works Authority.

B. Any natural or manmade areas, systems or facilities designated for stormwater control purposes and intended for City maintenance shall, except for detention or retention ponds or basins and regularly free flowing watercourses, be structurally enclosed in accordance with the standards of the Public Works Authority, and shall be dedicated with sufficient land for maintenance purposes. Warranty deeds to such areas shall be submitted for acceptance by the City Council at the same time as the acceptance of streets. All such areas as are not intended for City maintenance shall be permanently protected and maintained by private agreement, deed covenant or restriction, as appropriate, in form approved by the Corporation Counsel.

C. The subdivider shall be responsible for the construction of all sewers and storm drains including manholes, catch basins and any other appurtenances as may be deemed necessary by the Public Works Authority. All work shall be in accordance with public works specifications.

15.5.6 Blocks

A. A maximum block length of 800 feet, measured from the nearest street lines of intersecting streets, shall be observed except where, in the opinion of the Planning Board, conditions justify a departure from this standard. In general, block size should be the maximum consistent with the use and shape of the site and the convenience and safety of the occupants.

B. In blocks exceeding 800 feet in length, measured from the nearest street lines of intersecting streets, the Planning Board may require where feasible the reservation of a 20 foot wide easement to the City through the block to provide for the crossing of underground utilities and pedestrian traffic where needed or desirable and may further specify, at its discretion, that a four foot wide paved foot path be included.

C. The length, width and shape of blocks shall be determined on the basis of:

1. Provision of adequate building sites suitable to the special needs of the type of use contemplated.
2. Zoning requirements as to lot sizes, setbacks and dimensions.
3. Needs for convenient access, circulation, control and safety of street traffic.
4. Limitations and opportunities of topography.

D. Blocks with lots having double frontage on streets shall be avoided.

E. The foregoing dimensions may be adjusted by the Planning Board where type of use or topography requires such modification.

15.5.7 Lots

A. Lots shall conform to the provisions of Article 7 and all other relevant provisions of the City of Portland Code of ordinances.

B. Where easements for public utilities, storm drains, or sanitary sewers are contemplated, the lot lines shall be located in such a manner as to facilitate construction of such facilities and the maintenance thereof.

C. Lots which are reserved or laid out for business, commercial, or industrial purposes shall have sufficient width and depth to accommodate the off-street parking and loading facilities required for the type of use and development contemplated, as established in Article 19.

D. Where feasible, side lot lines shall be at right angles to street lines (or radial to curving street lines).

15.5.8 Public open space

A. In all subdivisions open space may be provided for parks, recreational and other public areas. Where no public open space or recreational areas exist in close proximity to the subdivision, or where a lack of such areas in the subdivision would require its disapproval under Section 15.4, the Planning Board may require provision of land for park or recreational purposes. Such lands may be designated for public or private ownership in accordance with the conditions stated in this subsection, subject to the approval of the Planning Board.

B. If a tract or parcel is intended for public ownership and is so designated on the subdivision plat, the acceptance of such land shall be first recommended by the various departments and the Planning Board and sent to the City Council for final determination.

C. If a tract or parcel is designed or intended to be owned and used in common for recreational or other public or semi-public purposes and such intent is so designated on the subdivision plat, appropriate documents in form approved by the Corporation Counsel shall be submitted to the Planning Board. Such documents shall clearly:

1. Set forth the nature of the permanent organization under which common ownership is to be established, including its purpose, how it shall be governed and administered, the provisions made for permanent care and maintenance of the common property for its share of the cost of administering and maintaining such common property.
2. Set forth the extent of common interest held by the owner of each individual parcel in the tract held in common with others.

15.5.9 Access to shoreline

A. In all subdivisions having shore frontage on the island of Casco Bay, existing legal rights of public access to the shoreline shall be preserved. The proposed street layout and circulation plan shall be suitably integrated with such existing public access in a manner that reasonably promotes the public use of such access. The proposed street layout and circulation plan shall also be designed to preserve any legal rights to any significant water views and scenic vistas from such rights-of-way.

B. In all subdivisions having any lots within the Shoreland Zone, legal rights of private access to

waters shall, to the extent reasonably feasible, be established for the benefit of all lots within the subdivision not otherwise having such access.

15.5.10 Additional requirements for nonresidential subdivisions

All nonresidential subdivisions, meaning subdivisions not intended for human habitation, such as a commercial or industrial subdivision, must meet the following additional requirements, except as waived by the Planning Board due to the commercial or industrial nature of the development:

A. Proposed industrial parcels shall be suitable in area and dimensions to the commercial or industrial development anticipated.

B. Street rights-of-way and pavement shall be adequate to accommodate the type, weight, and volume of traffic anticipated to be generated.

C. The design and installation of public utilities including water, sewers, and storm water drainage, shall be adequate to accommodate the anticipated usage.

D. Streets carrying truck traffic shall not normally be extended to the boundaries of adjacent existing or potential residential areas.

15.6 WAIVERS

15.6.1 Request for waivers

A waiver of plat requirements or technical standards shall be applied for in writing by the subdivider. The decision of the Planning Board on such request shall be final.

15.6.2 Waiver standards

A. Except for the requirements set forth Subsection 15.5.4 pertaining to the provision and construction of curbs and sidewalks, the Planning Board, if it finds that extraordinary conditions exist or that undue hardship may result from strict compliance with these regulations may vary the regulations so that substantial justice may be done and the public interest secured, provided that such variation will not have the effect of nullifying the intent and purpose of the Comprehensive Plan and the regulations of this article.

B. Where the Planning Board or Planning Authority finds that, for each of the requirements listed in (1) and (2) below, two or more of the conditions exist with respect to compliance with the requirements set forth Subsection 15.5.4 pertaining to the provision and construction of curbs and/or sidewalks, it may waive, in whole or in part, the regulations so that substantial justice may be done and the public interest secured.

1. *Sidewalks*
   a. There is no reasonable expectation for pedestrian usage coming from, going to and traversing the site.
   b. There is no sidewalk in existence or expected within 1000 feet and the construction of sidewalks does not contribute to the development of a pedestrian oriented infrastructure.
   c. A safe alternative-walking route is reasonably and safely available, for example, by way of a sidewalk on the other side of the street that is lightly traveled.
   d. The reconstruction of the street is specifically identified and approved in the first or second year of the current Capital Improvement Program or has

been funded through an earlier CIP or through other sources.

e. The street has been constructed or reconstructed without sidewalks within the last 24 months.

f. Strict adherence to the sidewalk requirement would result in the loss of significant site features related to landscaping or topography that are deemed to be of a greater public value.

2. *Curbing*

a. The cost to construct the curbing, including any applicable street opening fees, is in excess of 5% of the overall project cost.

b. The reconstruction of the street is specifically identified and approved in the first or second year of the current Capital Improvement Program or has been funded through an earlier CIP or through other sources.

c. The street has been rehabilitated without curbing in the last 60 months.

d. Strict adherence to the curb requirement would result in the loss of significant site features related to landscaping or topography that are deemed to be of a greater public value.

e. Runoff from the development site or within the street does not require curbing for stormwater management.

C. In no event shall the waiver have the effect of creating potentially hazardous vehicle and pedestrian conflict or nullifying the intent and purpose and policies of the Comprehensive Plan relating to transportation and pedestrian infrastructure and the regulations of this article.

D. At its discretion, the Planning Authority may refer any petition for a waiver from the curb and sidewalk requirement to the Planning Board for decision.

15.6.3 Modifications for Planned Unit Developments

The standards and requirements of this article may be modified by the Planning Board in the case of a plan and program for a planned unit development which in the judgment of the Planning Board provides adequate public spaces and improvements for the circulation, recreation, light, air, and service needs of the tract when fully developed and populated, and which also provides such covenants or other legal provisions as will assure conformity to and achievement of the Comprehensive Plan.

15.6.4 Modifications approved by Public Works

If at any time before or during the construction of the required improvements the subdivider demonstrates to the satisfaction of the project engineer and the Public Works Authority that unforeseen conditions make it necessary or preferable to modify the design of the required improvements, the Public Works Authority may authorize modifications provided that the modifications do not amount to a waiver or substantial alteration of the function of any improvements required by the Planning Board.

15.6.5 Conditions

In granting waivers and modifications, the Planning Board and City Council may require such conditions as will, in their judgment, secure substantially the

objectives of the standards or requirement so waived or modified.

15.7 GUARANTEES AND ASSOCIATED FEES

15.7.1 Performance guarantee required

Following subdivision approval and prior to the release of the signed recording plat, the subdivider shall post with the City a performance guarantee in the form and amount specified herein, specifying the completion of the required subdivision improvements within two years from the origination date of such guarantee. In no case shall the term of such guarantee be for a period of less than one year, nor shall any performance guarantee expire between October 30 and April 15 of the following year.

15.7.2 Inspection fees

At the same time that the developer posts a performance guarantee, the developer shall also pay to the City an inspection fee as determined by the City Council. If a performance guarantee is extended beyond its original expiration date, then an additional inspection fee in an amount to be determined by the City shall be required.

15.7.3 Establishing the performance guarantee amount

A. The performance guarantee shall be equal in value to 100% of the estimated cost of the required subdivision improvements as shown on the approved subdivision plat, as a condition of Planning Board approval, as required in the City of Portland Code of Ordinances, and/or as required by the City of Portland *Technical Manual*.

B. The performance guarantee amount shall be estimated by the applicant or representative on a form provided by the City and shall be submitted for review and approval to the Planning Authority. Costs to be included in the estimate, and which shall be covered by the performance guarantee, include but are not limited to: street and sidewalk improvements including street lights, monuments, curbing, ramps, detectible warning panels, and striping; earth work and grading; utilities infrastructure and connections including sewer, stormwater, and water service; exterior site lighting; erosion control measures as shown on the approved erosion and sedimentation control plan; open space and recreation amenities; and final site stabilization and landscaping.

C. The Planning Authority may waive all or any portion of this requirement if it determines that the subdivider has a proven record of satisfactory performance and sufficient financial capability.

15.7.4 Phased projects

If a project is reviewed and approved as a phased project, the corresponding performance guarantee may also be phased. A separate performance guarantee shall be posted for each phase. Each phase of such project shall be independent of subsequent phases and shall conform to all standards of this article in the event that subsequent phases do not go forward.

15.7.5 Advanced site work

On a case-by-case basis, permission for advanced site work may be granted by the Planning Authority. Such permission is solely within the discretion of the Director of Planning and Urban Development and shall be granted only after submission of a written request setting forth the work proposed to

be done on the site. Such written permission shall not be required when the only work proposed is the digging of test pits.

15.7.6 Alterations to pending subdivisions

Alterations may be made to a site with a pending subdivision application if:

A. At minimum, a performance guarantee for the proposed site alterations has been posted and final plans have been submitted to the Planning Authority.

B. Written permission has been received from the Planning Authority or his/her designee that such site alterations may proceed pending subdivision approval. Such permission is solely within the discretion of the Planning Authority and shall be granted only after submission of a written request setting forth the work proposed to be done on the site. All such work shall be done in compliance with information provided with the subdivision application. An erosion control plan shall also be submitted when deemed necessary by the Planning Authority. Such written permission shall not be required when the only work proposed is the digging of test pits.

15.7.7 Acceptable forms for the performance guarantee

The performance guarantee, in the amount approved by the Planning Authority, shall be a letter of credit, an escrow account with a responsible financial institution, or the deposit to the City of Portland Finance Department and shall be in conformance with the templates and forms made available by the City. If the performance guarantee is a deposit to the City, the City shall hold such funds in a noninterest-bearing account until criteria for performance guarantee release have been satisfied. The performance guarantee shall be in the name of the City and shall be approved by the finance director as to financial sufficiency and the Corporation Counsel as to proper form and legal sufficiency.

15.7.8 Reductions of the performance guarantee

A. Up to three times during the construction of a project, upon request of the subdivider, a performance guarantee may be reduced by the value equal to the estimated cost of the completed improvements. In no case shall any performance guarantee be reduced by any line item on the cost estimate where improvements remain to be completed. Requests shall be submitted on a form provided by the City for review and approval by the Planning Authority.

B. In no case shall any performance guarantee be reduced to an amount equal to or less than the required defect guarantee until all criteria set forth for converting to the defect guarantee have been met, as approved by the Planning Authority.

15.7.9 Extension of the performance guarantee

If the Planning Authority and/or the Public Works Authority has reasonable doubt concerning the stability or proper construction of the required site improvements, the developer shall be required to reconstruct or otherwise address the issues to the City's satisfaction. If the performance guarantee is scheduled to expire before the extent or necessity for such further work can be determined, the developer shall be required to extend the performance guarantee covering such improvements, or secure a new guarantee, for a period and amount deemed necessary by the

Planning Authority and/or the Public Works Authority.

15.7.10 Release of the performance guarantee

A. No performance guarantee shall be released until all fees generated by the project are paid to the City, including but not limited to engineering, inspection, and administrative fees. The guarantor shall not be released from the guarantee except and until authorized in writing from the Planning Authority.

B. For subdivisions, no performance guarantee shall be released until the Public Works Authority has performed a final inspection of the roadway and determined satisfactory completion of the required improvements. Additionally, no performance guarantee shall be released until the City is in receipt of a petition for street acceptance, deemed complete and satisfactory by Corporation Counsel and/or the Public Works Authority. The petition for street acceptance must include a warranty deed (with metes and bounds description) to the property within each street of the subdivision or roadway extension and any other improvements intended for City maintenance.

C. Upon the satisfactory completion of the required site improvements and satisfactory compliance with all conditions of approval including the submission of as-built drawings as applicable, the Planning Authority shall authorize, in writing, conversion to the defect guarantee. The defect guarantee shall be 10% of the original performance guarantee amount and shall remain in place for a period of one year. The defect guarantee shall ensure the workmanship and the durability of all materials used in the construction of the required site improvements. The Planning Authority may authorize the defect guarantee to be released at any time within the one-year period, provided all required site improvements have been constructed and in-place for one year or more and the workmanship and the durability of all materials has been inspected and confirmed to be satisfactory.

15.7.11 Improvements required prior to release of guarantee

Prior to the release of the performance guarantee, the subdivider shall have completed the following improvements:

A. All streets shall be graded in conformity with the requirements set out Section 15.5 and in accordance with Chapter 25 of the City of Portland Code of Ordinances.

B. On all streets, side streets, and alleys, a suitable hard surfaced permanent pavement shall be installed meeting the requirements set forth in Chapter 25 of the City of Portland Code of Ordinances.

C. Water, gas, sanitary sewer mains, and storm drains shall be constructed prior to the installation of paving with all mains being extended from all lots having sufficient stub outs to avoid subsequent breaking of pavement.

D. Sidewalks and curbs shall be constructed as required in Section 15.5.

E. Adequate storm drains shall be constructed subject to the provisions of Section 15.5 and in accordance with the Public Works Authority specifications.

F. A total of two trees per lot, which shall be street trees, shall be planted near the street line in full public view on private property, as

directed by the City Arborist. Existing healthy trees may be credited toward this requirement, subject to the approval of the City Arborist.

G. Permanent markers shall be set as prescribed by the Public Works Authority.

H. All utility lines shall be placed underground unless otherwise approved by the Planning Board.

I. Street lighting shall be installed in accordance with the standards of the Public Works Authority.

J. A public water supply shall be installed subject to the approval of the Portland Water District.

K. Erosion control measures shall be taken both during and after construction in accordance with the standards of the Public Works Authority.

15.7.12 Acceptable forms for the defect guarantee

The defect guarantee, 10% of the original performance guarantee amount approved by the Planning Authority, shall be a letter of credit, an escrow account with a responsible financial institution, or the deposit to the City of Portland finance department and shall be in conformance with the templates and forms made available by the City. If the defect guarantee is a deposit to the City, the City shall hold such funds in a noninterest-bearing account until criteria for performance guarantee release have been satisfied. The performance guarantee shall be in the name of the City and shall be approved by the finance director as to financial sufficiency and the Corporation Counsel as to proper form and legal sufficiency.

15.7.13 Abandoned site

In the event that a development site is abandoned or the site improvements do not meet City standards as approved in the subdivision plat, the performance guarantee may be utilized to stabilize, secure, complete construction, and/or restore the site as may be necessary, including, but not limited to, revegetation of areas, grading, and fencing.

15.8 CONSTRUCTION RECORDS AND INSPECTION

15.8.1 Inspection of construction

The project engineer and City Engineer shall have the right to enter and inspect the construction site during all phases of the project to ensure compliance with this article.

15.8.2 Required construction records

After approval of the subdivision plat and prior to the construction of any of the subdivision's public improvements, the subdivider shall supply the City Engineer with a complete set of engineering drawings showing all streets, sanitary sewers, and surface water drains, and all appurtenant work within the subdivision.

15.9 TRANSFER OF OWNERSHIP

The purchasing party or other succeeding owner of a subdivision for which a recording plat has received prior approval, but which has not yet been accepted by the City, shall assume full responsibility for completion of the subdivision's improvements until the subdivision street or streets are accepted by the City. The purchaser or other succeeding owner of an unaccepted subdivision shall be required to comply with all the provisions of this article as if he were the original subdivider, and shall become responsible for completing such improvements in the same manner as the original subdivider.

15.10 PLAT AMENDMENTS

The Planning Authority may approve alterations to an approved recording plat when all of the following conditions are met. Otherwise, a new subdivision plat must be submitted to the Planning Board:

A. The rearrangement of lot lines does not increase the number of lots within a block or other subdivision unit or area.
B. The alteration will not affect any street, alley, utility easement or drainage easement.
C. The alteration meets all of the minimum requirements of this Land Use Code and other applicable state and local codes.
D. The alteration is approved by the Public Works Authority and the Fire Department.

Such approved alterations shall be properly recorded in the registry within 30 days thereof or they shall be null and void. Recording of approved alterations also shall be in accordance with the requirements of 30 A M.R.S. § 4406.

15.11 VACATION OF PLATS

Any such plat recorded, or any portion thereof, may be vacated with the consent of the City Council as follows:

A. At any time before the sale of any lot therein, by written instrument, signed by the City and the owners of such subdivision, declaring the same to be vacated and describing therein the part or portion to be so vacated.
B. At any time after the sale of any lot therein and by written instrument, signed by the City and all owners of record of lots shown on the plat, declaring the same to be vacated and describing therein the part or portion to be so vacated.
C. Any instrument so executed vacating all or a portion of any plat shall be duly filed and recorded in the Cumberland County Registry of Deeds. The execution and recording of the instrument described in (B) above shall vest fee simple title to the centerline of the street, alley or easement for public passage so vacated in the owners of abutting properties. Title to property located within the vacated streets, alleys, or easements for public passage shall pass to abutting property owners free and clear of any rights of the public or other owners of lots shown in the plan, but subject to the rights of the owners of any public utility installations which have been previously erected therein.

15.12 EXEMPTIONS

15.12.1 Subdivisions prior to 1979

This article does not apply to subdivisions approved prior to June 6, 1979, nor to subdivisions in existence prior to June 6, 1979, nor to subdivisions which have been legally recorded in the Registry of Deeds prior to June 6, 1979.

15.12.2 Division by demise, condemnation, order, or gift

A division accomplished by devise; condemnation; order of court; gift to a person related to the donor by blood, marriage, or adoption, unless the intent of such gift is to avoid the objectives of this article; or by transfer of any interest in land to the owner abutting thereon shall not be considered to create a lot or lots for purposes of this article.

15.13 APPEALS

An appeal from any final decision of the Planning Board regarding subdivision approval may be taken by the applicant or his or her authorized agent to superior court in accordance with Rule 80B of the Maine Rules of Civil Procedure.

16 IMPACT FEES

16.1 PURPOSE

The purpose of this article is to ensure that new development in the City of Portland bears a proportional or reasonably-related share of the cost of new, expanded, or replacement infrastructure necessary to service that development through the payment of impact fees dedicated to funding improvements made necessary by development, or the construction of improvements as provided for herein. This ordinance is enacted pursuant to the authority of 30-A M.R.S. § 4354 and 30-A M.R.S. § 3001.

16.2 APPLICABILITY

The following shall be subject to impact fees, with the exception of municipal buildings, which shall be considered exempt:

A. Any new building or addition to existing buildings which results in net new residential dwelling units, nonresidential building square footage, or water/wastewater meters, and

B. Any change of use which results in a net increase in impact fee per Subsection 16.3.6.

16.3 CALCULATION OF IMPACT FEE

16.3.1 In general

Impact fees shall be calculated based on the impact fee schedule in effect at the time of submittal of a complete application for a building permit.

16.3.2 Determination of use

The determination of the applicable land use category in the impact fee schedule shall be made by the Department of Permitting and Inspections with reference to the City of Portland's most recent *Impact Fee Study*. If the proposed development is of a type not listed in the impact fee schedule, then the impact fees applicable to the most nearly comparable type of land use listed in the impact fee schedule shall be used.

16.3.3 Mixed use development

In the event that there is more than one use within a building, impact fees shall be calculated separately for each use.

16.3.4 Redevelopment

In calculating the impact fee for a new building that involves the full or partial demolition of a building housing an existing, legally established use or uses, such new building shall be credited with an amount equal to the fee that would have been charged to the use or uses which occupied the structure at the time of demolition permit. If the impact fee calculation for the post-development condition is greater than the credit, the applicant shall pay the difference. If the impact fee calculation for the post-development condition is less than the credit, then the applicant shall not be required to pay an impact fee. The City shall not grant credits for demolitions for which a permit was issued more than 10 years prior to the complete application for a building permit.

16.3.5 Building additions

In calculating the impact fee for building additions, each developed property shall be credited with an amount equal to the fee that would have been charged to the existing use at the time of the addition of floor area. If the impact fee calculation for the post-development condition is greater than

the credit, the applicant shall pay the difference. If the impact fee calculation for the post-development condition is less than the credit, then the applicant shall not be required to pay an impact fee.

16.3.6 Changes of use

In calculating the impact fee for changes of use, each developed property shall be credited with an amount equal to the fee for the use in the highest fee category that has existed on the developed property within the previous 10 years. If the impact fee calculation for the proposed use is greater than the credit, the applicant shall pay the difference. If the impact fee calculation for the proposed use is less than the credit, then the applicant shall not be required to pay an impact fee.

16.4 ANNUAL ADJUSTMENT OF IMPACT FEE

To account for inflation, there shall be an automatic annual increase in the impact fee schedule reflected in this ordinance every January 1 based on the change in the construction cost index as published by *Engineering News Record*. The fee adjustment shall be calculated by dividing the index amount published on January 1 of the current year by the index amount published on January 1, 2018 and multiplying the resulting ratio by each fee amount. Annual adjustments shall be made available for public reference.

TABLE 16-A: PARKS & RECREATION AND TRANSPORTATION IMPACT FEE SCHEDULE[1]

Land Use Type	Unit of Measure	Parks/Recreation Impact Fee	Transportation Impact Fee
Single-family/Two-family	per unit	$1,126	$2,159
Multi-family	per unit	$752	$1,023
Retail/Service	per 1,000 SF GFA	$534	$8,248
Office	per 1,000 SF GFA	$677	$2,800
Industrial	per 1,000 SF GFA	$363	$1,130
Institutional	per 1,000 SF GFA	$645	$3,082
Hotel/Motel	per room	$875	$2,404

[1] Land use types included impact fee schedule correspond to those in the City's most recent *Impact Fee Study*.

TABLE 16-B: WASTEWATER IMPACT FEE SCHEDULE

Meter Size	Capacity Ratio	Impact Fee
⅝ inch	1.00	$1,886
¾ inch	1.50	$2,829
1 inch	2.50	$4,715
1 ½ inches	5.00	$9,430
2 inches	8.00	$15,088
3 inches	16.00	$30,176
6 inches	50.00	$94,300
8 inches	80.00	$150,880

16.5 MODIFICATION OF IMPACT FEES

16.5.1 Equivalent improvements

A. A required impact fee may be modified, in whole or in part, by formal vote of the Planning Board in cases when an applicant is otherwise before the Planning Board, or by the Planning Authority in all other cases, if the reviewing authority finds that:

   1. The developer or property owner who would otherwise be responsible for the payment of the impact fee voluntarily agrees to make infrastructure improvements for which the impact fee would be collected or an equivalent improvement approved by the reviewing authority, or
   2. The developer or property owner is required, as part of a development approval by the City or a state or federal agency, to make or to pay for infrastructure improvements for which the impact fee would be collected or an equivalent improvement.

B. Credit amounts shall be determined based on plans, details, and cost estimates for the proposed infrastructure improvements for which the credit is requested. Such plans, details, and cost estimates shall be prepared by a licensed professional engineer and submitted at the time of site plan, subdivision, or building permit application. The applicant shall pay for any third-party review of plans, details, or cost estimates. On-site or immediately adjacent improvements providing direct service to a site as required under subdivision or site plan regulations shall not be considered eligible under this subsection.

16.5.2 Substantially-reduced demand

The Planning Board may by formal vote modify the payment of a required impact fee, in whole or in part, if it finds that documentation is provided to demonstrate that a proposed use will impose no or substantially-reduced demands on capital facilities for which impact fees have been adopted. Such documentation shall be prepared by a licensed professional engineer or other qualified professional and include a written analysis of the demand for capital facilities generated by the proposed use based on industry standards and the most recent *Impact Fee Study*. Documentation shall be submitted at the time of site plan, subdivision, or building permit application. The applicant shall pay for any third-party review of plans, details, or cost estimates.

16.6 REDUCTION IN FEES FOR AFFORDABLE HOUSING

Any residential development including low-income or workforce housing units and qualifying as an eligible project under Subsection 18.2.2 shall receive a reduction of fees in accordance with Subsection 18.2.2.

16.7 COLLECTION OF IMPACT FEE

The City of Portland shall not issue any certificate of occupancy required under the Land Use Code until the applicant has paid any impact fees required by this ordinance.

16.8 SEGREGATION OF IMPACT FEES FROM GENERAL REVENUES

Impact fees collected pursuant to this ordinance shall be maintained in separate, non-lapsing impact fee accounts for each of the facilities for which impact fees are assessed, and shall be segregated from the City's general revenues. These accounts

shall be dedicated for funding of the improvements for which the fee is collected, as determined through the City's most recent *Impact Fee Study*. Funds from these accounts shall be distributed to City departments solely for the purpose of capital projects identified in the City of Portland's most recent *Impact Fee Study*.

16.9 USE OF IMPACT FEES

Impact fees collected by the City pursuant to this ordinance may be used only for financing facility improvements which the City Council, through the City of Portland's most recent *Impact Fee Study*, has determined are made necessary by new development. The City Council has determined that fees imposed by schedules in this ordinance are reasonably related to the demands created by new development. Impact fees collected pursuant to this ordinance shall be used exclusively for capital improvements, and the City of Portland shall expend funds collected from impact fees solely for the purposes for which they were collected.

16.10 REFUND OF UNUSED IMPACT FEES

Impact fees collected pursuant to this ordinance shall be used by the City according to the schedules for the completion of specific capital improvements as specified in the City of Portland's most recent *Impact Fee Study*, but in no event later than ten years after the date upon which the impact fee was collected. Any impact fees which are not so used and any impact fees collected which exceed the City's actual costs of implementing the infrastructure improvements for which such fees were collected shall be refunded. Refunds shall be paid to the owner of record of the property for which the impact fee was collected, determined as of the date the refund is made.

16.11 REVIEW AND REVISION

The impact fees established in this ordinance are based upon the best estimates of the costs of the construction of the facilities for which the fees are collected as determined through the City's most recent *Impact Fee Study*. The Council may, by amendments to this ordinance, change the amounts of the impact fees from time to time as warranted by new information or changed circumstances.

16.12 ADMINISTRATIVE RULES AND REGULATIONS

The Planning Board is hereby authorized to develop rules and regulations governing the administration of impact fees collected pursuant to this ordinance.

16.13 EFFECTIVE DATE

The provisions of this article shall apply to all building permit applications submitted following December 19, 2018, with the exception that any development for whom site plan approval has been granted as of December 19, 2018 shall be considered exempt. Master development plan approval prior to the effective date shall not confer exempt status.

17 HISTORIC PRESERVATION

17.1 PURPOSE

The purpose of this article is to promote the educational, cultural, economic, and general welfare of the City of Portland by:

A. Creating a mechanism to identify, preserve and enhance distinctive areas, sites, structures, and objects that have historic, cultural, architectural, and archaeological significance.

B. Providing a resource of information and expertise to help those interested in rehabilitation or new construction in a district or restoring a landmark.

C. Applying review standards in a reasonable and flexible manner to prevent the unnecessary loss of the community's historical features and to ensure compatible new construction and rehabilitation in historic districts while not stifling change and development or forcing modern recreations of historic styles.

D. Fostering civic pride in the city's history and development patterns as represented in such distinctive areas, sites, structures, and objects.

E. Protecting and enhancing neighborhood character.

F. Stabilizing and improving the values of designated properties and areas.

G. Protecting and enhancing the attractiveness of the city to its home buyers, home owners, residents, tourists, visitors, businesses and shoppers.

H. Fostering and encouraging preservation, restoration, and rehabilitation that respects the historic, cultural, architectural, and archaeological significance of distinctive areas, sites, structures, and objects.

17.2 DEFINITIONS

Alteration. Any act or process requiring a building permit and any other act or process not requiring a building permit but specifically listed in this article as a reviewable action, including without limitation the repair, reconstruction, demolition, or relocation of any structure or object, or any part of a structure or object.

Certificate of Appropriateness. A certificate issued by the Planning Authority evidencing approval of specific plans for alteration of a structure, site, or designated historic landscape or new construction on a site in accordance with this article.

Certificate of Economic Hardship. A certificate issued by the Planning Authority evidencing a hardship variance approved by the Zoning Board of Appeals in accordance with Article 2.

Certificate of Non-Applicability. A certificate issued by the Planning Authority evidencing a determination that specific plans for alteration of a structure, site, or designated historic landscape or new construction on a site do not require approval under this Article.

Contributing. A classification applied to a site, structure, or object within a historic district signifying that it contributes generally to the qualities that give the historic district cultural, historic, architectural, or archaeological significance as embodied in the criteria for designating a historic district.

Demolition. Any act or process that partially or totally destroys a structure or object.

District. A historic district or historic landscape district.

Historic district. A geographically definable area possessing a significant concentration, linkage, or continuity of sites, buildings, structures, or objects united historically or by past events or aesthetically by plan or physical development. A district may also comprise individual elements separated geographically but linked by association or history.

Historic landscape district. A geographically definable area possessing a significant concentration, linkage, or continuity of landscape components which are united by human use and past events or aesthetically by design, plan or physical development.

Historic Resources Design Manual. A manual including guidelines for meeting historic preservation ordinance review standards and other information.

Landmark. Any property, site, structure, or object of particular historic, architectural, or archaeological significance to Portland, the State of Maine and/or the United States relating to its cultural, social, economic, political, or architectural heritage, or which is associated with historic persons, important events or themes in local, state, or national history.

New construction. The adding to a structure by an addition, the erection or placement of any new structure on a lot or property, or the comprehensive redesign/renovation of an existing structure.

Noncontributing. A classification applied to a site, structure, object, or portion thereof, within a historic district signifying that: 1) it does not contribute generally to the qualities that give the historic district cultural, historic, architectural, or archaeological significance as embodied in the criteria for designating a historic district; 2) was built within 50 years of the date of district designation unless otherwise designated in the historic resources inventory; or 3) where the location, design, setting, materials, workmanship, and association have been so altered or have so deteriorated that the overall integrity of the site, structure, or object has been irretrievably lost. A portion of an otherwise contributing or landmark structure may be determined by the Historic Preservation Board to be non-contributing if it meets one or more of the above conditions.

Object. Anything constructed, fabricated, or created, the use of which does not require permanent or semi-permanent location on or in the ground.

Ordinary maintenance. Acts of maintenance or repair which do not include a change in the design, material, or outer appearance of a structure, including without limitation repainting, replacement of materials or windows of the same scale, texture and color, and landscaping other than within an historic landscape district.

Preservation. The act or process of applying measures necessary to sustain the existing form, integrity, and materials of an historic property. Work, including preliminary measures to protect and stabilize the property, generally focuses upon the ongoing maintenance and repair of historic

materials and features rather than the extensive replacement and new construction.

Rehabilitation. The act or process of returning a property to a state of utility through repair or alteration which makes possible an efficient contemporary use while preserving those portions or features of the property which are significant to its historical, architectural, and cultural value.

Relocation. Any removal or relocation of a structure on its site or to another site.

Restoration. The act or process of accurately depicting the form, features, and character of the property as it appeared at a particular period of time by means of the removal of features from other period in its history and reconstruction of missing features from the restoration period.

Site. The location of a significant event, an archaeological site, a landscape or traditional cultural property, or a building or structure, whether standing, ruined or vanished, where the location itself maintains historical or archaeological value regardless of the value of any existing structure.

17.3 ADMINISTRATIVE PROCEDURES

17.3.1 Costs

A. Any project may be subject to fees as established by the City Council to cover administrative costs and the costs of Historic Preservation Board review. Applicants shall also pay a fee to cover the professional and administrative costs for analysis associated with project review, including but not limited to planning, legal, or other services. The fee shall be based on the hours of review and processing time and prevailing hourly rate for reimbursement of City costs. The City shall periodically invoice the applicant for such costs incurred by the City, which invoice shall be paid promptly by the applicant.

B. Every applicant shall bear the entire expense of giving notice by mail and publication in accordance with this article.

C. No Certificate of Appropriateness, building, demolition, or other permit shall issue until all current charges due under this article have been paid. The balance of any remaining review and administrative costs invoiced or incurred after a permit has been issued shall be paid in full by the developer prior the issuance of any temporary or permanent certificate of occupancy.

17.3.2 Notice of public meeting

A. For all Certificate of Appropriateness applications that are subject to Historic Preservation Board review, the applicant shall be responsible for posting a notice of public meeting sign on the property where the development is to occur. The dimensions, construction, and content of the sign shall be in accordance with standards established by the Planning Authority.

B. The sign shall be posted at least 10 days prior to the public workshop or hearing date, and shall be removed from the site no more than three days following the date of the meeting.

C. Once the required notice of public meeting signage is posted, the applicant shall submit a completed certification of posting form to the Planning Authority.

D. In the event that a required notice of public meeting sign is knocked over or made illegible, it shall be the responsibility of the applicant to promptly reset or replace the sign, though failure to do so shall not invalidate the review.

17.3.3 Notices and public comment

A. Except as provided in Subsection 17.7.5, notice of proceedings upon any application for a Certificate of Appropriateness shall be given only when the proposed activity otherwise constitutes major site plan. Notice of such proceedings also shall be furnished to any persons interested in historic preservation who have registered with the Planning Authority, and to the Historic Preservation Board and/or the Planning Board when the proceeding is pending before a different body. The failure to give any notice required by this article shall not affect the validity of any action taken.

B. The Historic Preservation Board, the Planning Board, the Board of Appeals, and the City Council shall each invite public comment at a public meeting in accordance with their respective rules, prior to any final action being taken under this article.

C. The Planning Authority shall advise the Historic Preservation Board and the Planning Board of any demolition permit application received by the Planning Authority as to structures or objects that have been classified as noncontributing within nominated or designated districts, but there shall be no Historic Preservation Board review of such permit applications.

17.4 CATEGORIES AND CRITERIA FOR DESIGNATION

17.4.1 Minimum criteria for designation

A. The Historic Preservation Board shall limit its consideration to the following criteria in making a determination on a proposed nomination of an area, site, structure, or object for designation by ordinance as a landmark or district:

1. Its value as a significant example of the cultural, historic, architectural, archaeological, or related aspect of the heritage of the City of Portland, State of Maine, New England region, or the United States.
2. Its location as a site of a significant historic or prehistoric event or activity which may have taken place within or which involved the use of any existing structure on the property.
3. Its identification with a person or persons who significantly contributed to the cultural, historic, architectural, archaeological, or related aspect of the development of the City of Portland, State of Maine, New England region, or the United States.
4. Its exemplification of a significant architectural type, style, or design distinguished by innovation, rarity, uniqueness, or overall quality of design, detail, materials, or craftsmanship.
5. Its identification as the work of an architect, designer, engineer, or builder whose individual work is significant in the history or development of the City of Portland, the State of Maine, the New England region, or the United States.

6. Its representation of a significant cultural, historic, architectural, archaeological, or related theme expressed through distinctive areas, sites, structures, or objects that may or may not be contiguous.

B. In the case of a nominated historic district, the Historic Preservation Board shall also determine whether there is an interrelationship of resources within it which creates an identifiable entity, even if composed of a wide variety of resources. A district must convey a visual sense of the overall historic environment or be a grouping of historically or functionally related properties. A historic district can comprise both individually distinctive historic resources and historic resources that may lack individual distinction but which contribute to the significance and visual character of the district as a whole.

C. In the case of a nominated historic landscape district, the Historic Preservation Board shall also consider its significance as a geological, natural, or designed landscape associated with the development, heritage, or culture of the City of Portland, State of Maine, New England region, or the United States.

D. The Planning Board and City Council shall apply the criteria of (A), (B), and (C) above as well as historic preservation goals included in the Comprehensive Plan, but shall also consider the effect of such designation on other aspects of the Comprehensive Plan of the City.

17.4.2 Integrity of landmarks and historic districts

Any area, structure, or object that meets the criteria in Section 17.4.1 must also have sufficient integrity of location, design, condition, materials, and workmanship to make it worthy of preservation or restoration.

17.4.3 Designation of historic landscape districts

An historic landscape district may be nominated and considered for designation only if the entire area of the district is owned by a unit of federal, state, or local government, or any combination of such ownership.

17.5 NOMINATION, CONSIDERATION AND DESIGNATION

17.5.1 Procedure

The provisions of this section shall govern the nomination, consideration, and designation of landmarks and districts.

17.5.2 Initiation of nomination

A. Nomination of an area, site, structure, or object for consideration of designation as a landmark, historic district, or historic landscape district shall be submitted to the Planning Authority by the following:

1. Any two members of the Historic Preservation Board on their own initiative, by written notice to the Planning Authority, or
2. By written petition of any owner, in the case of a landmark, or
3. By written petition of one or more owners of affected property in the case of a district, provided two members of the Historic Preservation Board must sponsor the petition.

B. A nomination shall be completed and filed with the Planning Authority with all required signatures for the nomination to be pending.

C. Upon nomination, the Planning Authority shall notify the owner or owners of the nomination and shall transmit the nomination to the Historic Preservation Board for its preliminary consideration at a scheduled meeting, which in no event shall be held later than 60 days following nomination.

D. If documentation and analysis that is necessary for the consideration of a given designation has not been provided at the time of nomination, such documentation shall be completed prior to further consideration by the Historic Preservation Board of the nominated landmark, district, or historic landscape.

E. At any time after a complete nomination is filed for an historic district, the owner of a structure who seeks a permit for demolition may apply to the Historic Preservation Board for a determination that the structure to be demolished is noncontributing and eligible for a demolition permit. The determination of the Historic Preservation Board that the structure is eligible for a permit shall be conclusive.

17.5.3 Notification of nomination and public hearing

A. A public hearing on the nomination shall be held by the Historic Preservation Board following one or more preliminary workshops of the Historic Preservation Board.

B. The hearing shall be conducted in accordance with procedures adopted by the Historic Preservation Board. The Historic Preservation Board shall consider all testimony or evidence relating to the designation criteria in Section 17.4 from any person who makes written submissions or appears at the public hearing. The owner of a nominated landmark or of property within a nominated district shall be allowed reasonable opportunity to present testimony or evidence concerning the applicability of the designation criteria in Section 17.4.

17.5.4 Recommendation by Historic Preservation Board

A. Within 45 days following the close of the public hearing, the Historic Preservation Board shall make recommendation to the City Council in the case of a landmark, or to the Planning Board in the case of a district, upon the evidence as to whether the nominated landmark or district meets the criteria for designation in Section 17.4. Such recommendation shall be approved by at least four members of the Historic Preservation Board and shall be accompanied by a report to the City Council and/or Planning Board containing the following information:

1. Explanation of the significance or lack of significance of the nominated landmark or district as it relates to the criteria for designation.
2. Explanation of the integrity or lack of integrity of a nominated landmark or historic district.
3. Proposed design guidelines for review of alteration or construction may be recommended. The specific design guidelines may provide explanation by text and/or schematic examples of visual compatibility for purposes of complying with Section 17.8.
4. Relationship of the nominated landmark or district to the ongoing effort by the Historic Preservation Board to identify and

nominate areas, sites, structures, and objects that meet the criteria for designation.

5. A map showing the location of the nominated landmark and/or the boundaries of the nominated district.
6. A list, including the address, of every site, structure, and object in each nominated historic district indicating their degree of cultural, historic, architectural, or archaeological significance by classification as a landmark, contributing, or noncontributing,

B. Where a motion either in favor of a recommendation or in opposition to a recommendation results in a vote of fewer than four members, the item shall automatically be tabled to the next regularly scheduled meeting.

17.5.5 Notification of Historic Preservation Board recommendation

A. The recommendation of the Historic Preservation Board, including a copy of the report, shall be transmitted to the City Council in the case of a landmark and to the Planning Board in the case of a district. Notice of the recommendation shall be sent by mail to the owner of a nominated landmark and to all owners within a nominated district within 14 days following adoption of the recommendation and report.

B. If the recommendation of the Historic Preservation Board is that the property or district not be designated, the nomination process shall terminate and no new nomination shall be submitted for the identical property or area for a period of one year from the date of termination, except upon a showing of substantial and material newly discovered information.

17.5.6 Determination by Planning Board

A. The Planning Board, upon receipt of a recommendation and a report from the Historic Preservation Board concerning nomination of a district, may hold one or more workshops pursuant to the provisions of Article 2. After review of the Historic Preservation Board recommendation and report, the Planning Board shall hold a public hearing.

B. All meetings, hearings, and deliberations of the Planning Board to consider the recommendation and report of the Historic Preservation Board shall be held in conformity with Article 2.

C. The Planning Board may request the chair of the Historic Preservation Board, or a member designated by the chair, to appear at any meeting, hearing or deliberation to explain any recommendation or report.

D. A public hearing shall be scheduled within 30 days of the Planning Board's final workshop. At the conclusion of the public hearing, the Planning Board shall make its final determination including written findings as to whether the nominated district meets the criteria for designation in Section 17.4. A copy of the determination of the Planning Board shall be sent by regular mail to all owners within a nominated district within 14 days following the determination.

17.5.7 Planning Board recommendation to City Council

The recommendation of the Planning Board regarding a nominated district shall be filed with the

City Clerk within 14 days. It shall be accompanied by a copy of the report and recommendation of the Historic Preservation Board, including any specific proposed design guidelines applicable to the nominated landmark or district. The recommendation of the Planning Board may include proposed changes in other City ordinances, policies, infrastructure, or recommendations with respect to the Comprehensive Plan of the City relating to the proposed designation.

17.5.8 Action by City Council

A. Within 60 days after the filing of a Planning Board recommendation, or Historic Preservation Board recommendation in the case of a landmark, on the nomination with the City Clerk pursuant to Section 17.5.6, the City Council shall designate the landmark or district or reject designation. Any designation may include specific design guidelines for the designated landmark or district.

B. Designation of a district shall be accompanied by a list, including the address, of every site, structure and object in the district. Every site, structure, or object shall be assigned a classification of landmark, contributing, or noncontributing, indicating their degree of cultural, historic, architectural, or archaeological significance. This list may be amended thereafter by the City Council upon recommendation from the Historic Preservation Board and Planning Board under the same procedures as set forth above. Where there are no express findings by the City Council in the designation ordinance, there shall be a presumption that the City Council found that all requirements of Section 17.4 were met.

C. Notice of the proposed action of the City Council shall be provided by mail to the nominator and the owner of the nominated landmark and/or of all properties adjacent thereto prior to City Council action.

D. Notice of City Council action to the same persons shall be sent within 14 days following the City Council action. A copy of each designation and any design guidelines shall be sent to the Planning Board, the Historic Preservation Board, and the Planning Authority.

E. A complete schedule of all landmarks and districts, including design guidelines and a listing of landmark and contributing structures, shall be maintained by the Planning Authority and shall be available online or for public inspection and copying during ordinary business hours.

17.5.9 Amendment or rescission of designation

Amendment or rescission of any designation shall be upon the request of a person or persons authorized to nominate the property or properties affected, or upon request of the City Council, and shall follow the procedure set forth in Section 17.5 for designation. The City Council may rescind or amend a designation only after all of these procedures have been followed. The standards for rescission or amendment applied by the Historic Preservation Board, Planning Board, and City Council shall be limited to those provided in Subsections 17.4.1(A) and (B) and Subsection 17.4.2. Amendments may include reclassification of a portion of a contributing property to noncontributing status, refinement or correction of design guidelines, maps, and other parts of any designation.

17.5.10 Time limits

If any time limit in the nomination and designation process as provided in Sections 17.4 or 17.5 is not met, the validity of any designation and the interim protection provided by Section 17.6 shall not be affected, provided the Historic Preservation Board, Planning Board or City Council announce the delay and the basis for such in a public meeting, as well as the date to which the matter will be rescheduled.

17.6 INTERIM PROTECTION FOR NOMINATIONS

17.6.1 Nominated landmarks and districts

A. From the time of nomination until the Historic Preservation Board acts upon such nomination, a site, structure, object or area nominated but not yet designated as a landmark or district shall be subject to all of the provisions of Sections 17.9 and 17.10 governing demolition and minimum maintenance, to the same extent as if designated. Upon final action of the Historic Preservation Board recommending designation, the site, structure, object, or area nominated shall be subject to all of the protections of this article until a final decision on designation by the City Council becomes effective. If the City Council rejects designation or fails to designate a property, that property shall no longer be subject to the provisions of Sections 17.9 and 17.10 of this article.

B. Alteration or new construction commenced pursuant to a building permit issued prior to nomination shall not require a Certificate of Appropriateness, unless such permit has expired, been canceled or revoked. No project for which any application is pending and which has received substantive review by the Planning Board prior to nomination shall be affected by nomination. Substantive review, as used in this paragraph, shall include workshop review of any completed application under Article 14 and Article 15 of the Land Use Code.

17.6.2 National Register of Historic Places

Upon notice to the City that a property or area has been listed in the national register after the adoption of this article, a nomination shall be deemed submitted to the Historic Preservation Board for designation of such property or area as a landmark, historic district, or historic landscape district under this article, and the procedures of Section 17.6 shall be applicable thereto.

17.6.3 Properties eligible for listing on national register or for local designation

A Certificate of Economic Hardship shall be obtained prior to demolition of any structure which has not been designated in accordance with this article but which has been determined by the Maine Historic Preservation Commission as eligible for listing in the National Register of Historic Places under the criteria established by 16 U.S.C. Section 470(a) or its successor statute and/or regulations made thereunder or which has been determined to be eligible for local listing under the criteria for designation of this article. The determination of eligibility for listing shall be made by the Planning Authority, which may refer such a determination to the Historic Preservation Board, and by the Board of Appeals if an appeal is taken. Upon determination of eligibility, the structure so determined shall also be subject to the provisions of Section 17.10 until a final decision by the City Council on designation becomes effective. If the City Council rejects designation or fails to designate a structure which has been determined to be eligible under the terms of this section, that structure shall no longer be

subject to the provisions of Sections 17.9 and 17.10 of this article.

17.7 CERTIFICATES OF APPROPRIATENESS AND NON-APPLICABILITY

17.7.1 Certificate of Appropriateness

A. Except as provided in Subsections 17.7.2 and 17.7.3, a Certificate of Appropriateness shall be required before the following actions affecting any landmark, contributing or noncontributing structures, objects, sites, or property in a district may be undertaken and shall be a condition precedent to the issuance of any permit authorizing such work:

1. Any exterior alteration or new construction requiring a building permit from the City of Portland, including, but not limited to the following:
    a. Removal and replacement of architectural detailing including, but not limited to, porch spindles and columns, railings, window moldings, and cornices.
    b. Moving of structures or objects on the same site or to another site.
    c. Construction of rooftop additions or decks.
    d. Alteration of accessory structures such as garages.
    e. Porch replacement or new construction of porches.
    f. Installation of exterior access stairs.
    g. Window or door replacement requiring enlargement of openings.
    h. Installation of antennas and satellite receiving dishes.
    i. Installation of solar collectors.
2. Any exterior alteration that does not require a building permit but which involves any one of the following activities:
    a. Installation or replacement of either roofing or gutters where the roofing or gutters are a significant and integral feature of the structure including, but not limited to, mansard roofs, cupola roofs, ornamental slate roof features, and built-in gutter systems and the installation or replacement of siding.
    b. Window and door replacement whether or not it requires enlargement of openings.
    c. Masonry work including, without limitation, tuckpointing, sandblasting, chemical cleaning.
    d. Site features other than vegetation including, without limitation, fencing, walls, paving, and grading. However, required review for alterations to cemeteries designated under this article shall not include review of alterations to headstones made for the purpose of recognition of additional decedents or installation of grave markers and/or tombs.
    e. Streetscape and pedestrian improvements within historic districts, including but not limited to installation of pedestrian lighting, alteration to road or intersection alignment, installation of public signage (other than public-safety-related signage.
    f. Landscaping within an historic landscape district.
    g. Exterior lighting where proposed in conjunction with commercial and

institutional signage or awnings or architectural lighting.

h. Exterior utilities including mechanical, HVAC, plumbing, and electrical, where placed on elevations readily visible from a public way.

3. Installation or alteration of any exterior sign.

4. Any relocation of a landmark or contributing structure within a district.

B. There shall be a rebuttable presumption that all structures within a district shall be contributing unless the designation report and Historic Resources Inventory expressly identifies otherwise. Where the Planning Authority or the owner believes that the identification is erroneous, the Historic Preservation Board shall determine whether the structure is noncontributing.

17.7.2 Exceptions to requirement of Certificate of Appropriateness

A Certificate of Appropriateness is not required:

A. Where a Certificate of Non-Applicability has been issued within the previous 12 months.

B. Where the work consists solely of ordinary maintenance and/or restoration, provided that there is no substitution of materials or alteration of architectural details.

C. Where the work consists solely of emergency repair of a temporary nature.

D. Where a Certificate of Economic Hardship has been issued and remains valid.

E. In the case of either alteration of a structure (other than a landmark) or of new construction within a district, a Certificate of Appropriateness shall not be required where the Planning Authority determines that the proposed exterior changes to a structure are not readily visible at pedestrian heights from any public way or public open space. Where a Certificate of Appropriateness is required for such changes, it shall be limited to those portions of the structure or structures so visible.

17.7.3 Alterations or new construction within historic landscape districts

A Certificate of Appropriateness shall be obtained before any site alteration or new construction within a historic landscape district may be undertaken, except where a Certificate of Non-Applicability has been issued or where construction or alteration is pursuant to a master plan approved by a prior Certificate of Appropriateness within five years of commencement and where the master plan is sufficiently detailed to guide the specific work

17.7.4 Applications for Certificate of Appropriateness

A. Application for a Certificate of Appropriateness shall be made on a form prepared by the City and shall be submitted to the Planning Authority along with the applicable fee. Upon receipt of an application, the Planning Authority shall determine whether the application is complete. The Planning Authority shall determine whether the scope, nature, or scale of the proposed project requires review by the Historic Preservation Board or whether it is a minor or routine project that is appropriately reviewed at the administrative level.

B. If the Planning Authority determines that the project should be reviewed by the Historic Preservation Board, the item shall be scheduled for the next available Historic Preservation

Board meeting, provided that the notice requirements of this article can be met prior to that meeting. The Planning Authority shall transmit a copy of the complete application to the Historic Preservation Board at least four days prior to their next scheduled meeting. The Planning Authority shall not issue or act upon the application until the Historic Preservation Board has completed its review and approval process. An application for a Certificate of Appropriateness shall be treated as an application for a Certificate of Economic Hardship under Section 17.9 whenever the Historic Preservation Board or the Planning Board, as applicable, determines that the proposed alteration includes any demolition which would:

1. Have the effect of causing the structure to no longer meet the criteria for designation of Section 17.4, or
2. Materially impair the significance and integrity of the structure.

C. Where a determination under (B) above is made by the Historic Preservation Board, the Planning Board shall review that decision as a preliminary matter, whether the Historic Preservation Board has taken final action with respect to the application or not. Upon any final determination that an application for a Certificate of Appropriateness is required to be treated as an application for a Certificate of Economic Hardship, no further action shall be taken with respect to the application until that certificate is applied for and is granted.

D. Where the applicant has done work or caused work to be done on a structure or a property for which a Certificate of Appropriateness is sought and such work is either not done in compliance with an approval received under this article or was performed without the approvals required under this article, no application for such structure or property shall be considered by the Planning Authority or by the Historic Preservation Board until the work done without approval is brought into compliance with the requirements of this article. The Historic Preservation Board may waive this requirement if the Historic Preservation Board determines that the work does not alter the essential character of the structure or district and one or more of the following standards are also met:

1. The work was needed to bring a building into conformance with any building or safety code.
2. The applicant can demonstrate a good faith belief that necessary approvals had been received for the work at issue prior to the commencement of the work.
3. The applicant can demonstrate a good faith belief that the work done was not subject to review under this article.

E. Review of any application by the Planning Authority or by the Historic Preservation Board shall not constitute waiver of any future claims by the City concerning violations and shall not stop the City from prosecuting any violation.

F. Once a completed application has been submitted, it shall be diligently pursued. Failure of an applicant to attend two or more Historic Preservation Board meetings at which an application is scheduled for review shall cause the application to expire and to be deemed null and void, unless the Planning Authority determines that good cause is shown for the failure to attend. Where good cause is shown

for a failure to attend, the Historic Preservation Board shall table an application to a date mutually agreed upon in writing.

G. In determining the existence of the circumstances specified in this article, the Historic Preservation Board, Planning Board, or Board of Appeals may require such additional documentation or evidence as they may respectively determine to be necessary, including plans, drawings, and elevations, and notwithstanding any time limit for action or decision specified in this article, it may continue a proceeding for such additional time as it reasonably takes an applicant or any other party to comply with the request for additional relevant documentation or evidence and may draw a negative inference with regard to the content of any material evidence not produced upon reasonable request.

H. Prior to issuance of any Certificate of Appropriateness, any applicant shall demonstrate sufficient right, title, or interest in the property, technical capacity, and financial capacity to complete any change proposed to be undertaken under the Certificate of Appropriateness, upon reasonable request of the Planning Authority. If the Planning Authority determines that the applicant has failed or refused to demonstrate an ability to complete the proposed activity, it shall refer the issuance to the Planning Board which shall make a final determination as to whether the applicant has demonstrated a sufficient capability to complete the proposed activity. Notwithstanding any other provision of this article, the Historic Preservation Board or Planning Board may include reasonable conditions, including the provision of adequate financial security, to ensure that actions taken under a Certificate of Appropriateness will be successfully prosecuted to completion, as approved, in a timely manner.

17.7.5 Review process for Certificate of Appropriateness

The process for review of an application for a Certificate of Appropriateness shall be as follows, except to the extent specifically provided elsewhere in this Section 17.7:

A. **For administrative-level reviews.** An application for a Certificate of Appropriateness for installation or alteration of any exterior sign; minor or routine alterations; and temporary alterations, construction, or improvements shall be reviewed by the Planning Authority for compliance with the standards of Section 17.8 and the *Historic Resources Design Manual*. Where staff determines that such an application meets these requirements, the Certificate of Appropriateness shall be issued by staff without presentation to the Historic Preservation Board for approval. Staff shall provide the Historic Preservation Board with written notice of staff approvals on a quarterly basis.

   1. If staff approves an application with conditions, the applicant may request review by the Historic Preservation Board. The application shall then be subject to review by the Historic Preservation Board pursuant to Subsection 17.7.5(B).
   2. Staff may elect to forward to the board an application found by staff to meet review standards but for which board confirmation is sought. The application shall be placed upon the next consent

agenda of the Historic Preservation Board. Any member of the Historic Preservation Board may remove an application from the consent agenda for the purpose of giving it a public hearing.

3. If the Planning Authority determines that the application does not meet the requirements of Section 17.8 and the *Historic Resources Design Manual*, the application shall be scheduled for review by the Historic Preservation Board pursuant to Subsection 17.7.5(B), unless the applicant withdraws the application.
4. For purposes of this subsection only, temporary is defined as either a one-time occurrence that does not exceed 30 days or as an annual occurrence that does not exceed one 30-day period each year. Minor or routine alterations are defined as incidental changes or additions to a building, site features, or exterior utilities which require building permits but will neither result in substantial changes to any significant historic features nor obscure such features. In no event shall any change be deemed minor when, in the opinion of the Planning Authority, such change shall alter the historic character of the building or site.

B. **For Historic Preservation Board-level reviews.** The Planning Authority shall review the application and prepare a report for the Historic Preservation Board's consideration which addresses the proposed project's compliance with the review standards in Section 17.8. The Planning Authority may schedule one or more preliminary workshops on the application prior to a public hearing.

1. Following any preliminary workshop(s) and upon determination by the Historic Preservation Board that the application is complete, the application shall be scheduled for a public hearing at the next available meeting of the Historic Preservation Board which allows for adequate notice.
2. Following a public hearing, the Historic Preservation Board shall make a decision on the application.
3. The Historic Preservation Board shall enter findings of fact concerning the relationship between the application and the applicable standards of Section 17.8 immediately following a denial or conditional approval of any Certificate of Appropriateness. Written notice of the determination of staff or the Historic Preservation Board on the application, including a copy of the findings of fact, shall be sent by regular mail to the applicant.

C. **Review process involving major site plans.** The process for review of an application for alteration or new construction that is also a major site plan as defined in Article 14 shall be as follows:

1. Site plan review by the Planning Board and historic preservation review by the Historic Preservation Board shall, to the extent feasible, proceed concurrently. Any proposed major site plan required to obtain a Certificate of Appropriateness under this article shall be exempt from the design standards included in Article 14, and shall comply with the applicable design standards listed within Article 17.

2. Upon receipt of the application for a Certificate of Appropriateness, the Planning Authority shall review the application and schedule a workshop for preliminary review by the Historic Preservation Board. The Planning Authority shall prepare an analysis of the application based upon the standards in Section 17.8 for consideration at the workshop. Additional workshops may be scheduled by the Historic Preservation Board with the consent of the applicant.
3. Following preliminary workshop(s) and upon determination by the Historic Preservation Board that the application is complete, the Historic Preservation Board shall conduct a public hearing and make a final decision on the application.
4. If the Historic Preservation Board finds that the application meets the applicable standards of Section 17.8, it shall issue a Certificate of Appropriateness, with or without conditions. If the action by the Historic Preservation Board is a denial or conditional approval, the Historic Preservation Board shall make findings of fact concerning the relationship between the application and the applicable standards of Section 17.8.
5. Written notice of the determination of the Historic Preservation Board on the application, including a copy of the findings of fact, if any, shall be sent by regular mail to the applicant within 14 days following its determination.

17.7.6 Issuance of Certificate of Appropriateness

A. The Planning Authority shall issue the Certificate of Appropriateness within 14 days following a proposed affirmative decision by the Historic Preservation Board becoming final.

B. Unless work authorized by a Certificate of Appropriateness shall be commenced within six months of the date of issuance of the Certificate of Appropriateness, the Certificate of Appropriateness shall expire and shall become null and void. The Planning Authority may approve additional extensions of this six-month period, not to exceed a total of two years, provided that a written request for extension is received prior to the expiration date of the Certificate of Appropriateness. In the event of litigation arising out of the granting of a Certificate of Appropriateness, the certificate shall remain valid until one year after the entry of final judgment in the litigation or until the end of the two-year period, whichever is later.

C. An approval shall expire and become null and void upon the expiration of the authorization for the work, or for the development, under the applicable provisions of Chapter 6 of this Code of Ordinances or Articles 14 or 15.

17.7.7 Certificate of Non-Applicability

A. The Planning Authority shall issue a Certificate of Non-Applicability as to property subject to this article when requested to do so when:
   1. The Planning Authority determines that none of the proposed work requires a Certificate of Appropriateness.
   2. The Planning Authority determines that all of the proposed work is ordinary

maintenance, restoration, or a combination thereof.

3. In the case of the alteration of a structure other than a landmark or of new construction within a district, where the Planning Authority determines that the proposed exterior changes to a structure are not readily visible at pedestrian heights from any public way. Where a Certificate of Appropriateness is required for such changes, a Certificate of Non-Applicability shall be issued upon request for those portions of the structure or structures not visible at such heights, provided, however, this paragraph shall not apply to alteration of a landmark or to any demolition.
4. After any appeal where the Historic Preservation Board, Planning Board or any court determines that paragraphs (1), (2) or (3) of this subsection are applicable.

B. The Planning Authority shall act upon any application for a Certificate of Non-Applicability within 14 days of receiving a complete written description of all work to be undertaken.

17.7.8 Amendments to approved certificates of appropriateness

A. If at any time before or during work approved under the procedures set forth in this Section 17.7 the applicant requests minor amendments to approved work, the Planning Authority may approve such minor amendments under the procedures set forth in Subsection 17.7.5, provided that such amendments will not result in a waiver or substantial alteration of the approval or any condition attached to the approval. The applicant shall supply a written statement of the proposed amendment and amended plans or drawings to the Planning Authority. The decision of the Planning Authority as to whether an amendment may be reviewed under this subsection shall be final.

17.7.9 Review process for demolition of landmarks or contributing structures within a district

A. Any applicant seeking demolition of a landmark or contributing structure must apply for a Certificate of Economic Hardship to the Board of Appeals in accordance with Section 17.9 of this article. Said application must be approved by the Board of Appeals before a demolition permit can be issued.

B. Any applicant seeking demolition of a noncontributing building as defined in this article may apply directly for a demolition permit without receiving approval from the Historic Preservation Board or a Certificate of Economic Hardship from the Board of Appeals.

C. Any applicant seeking demolition of a portion of a contributing or landmark structure may request that the Historic Preservation Board make a determination as to whether such portion of the structure is noncontributing based on the definition of that classification contained in this article. If the board determines the portion to be noncontributing, the applicant may apply directly for a demolition permit.

17.8 STANDARDS FOR REVIEW OF APPLICATION FOR CERTIFICATE OF APPROPRIATENESS

17.8.1 *Historic Resources Design Manual*

A. The Historic Preservation Board may provide further guidance on how to meet the standards

of this article in the *Historic Resources Design Manual*, which shall supplement this article. The *Historic Resources Design Manual* may include but need not be limited to maps and descriptions of landmarks and districts, a listing of properties which have been determined to be eligible for listing on the national register or for local designation, a glossary of terms and architectural styles, descriptions, and illustrations of how the standards of this article will be interpreted, and all designation ordinances, reports, and design guidelines. All provisions of the *Historic Resources Design Manual* shall be consistent with the standards of this article and any designation ordinance adopted hereunder.

B. Amendments to the *Historic Resources Design Manual* shall be forwarded to the City Council as a communication and shall become effective 45 days from the date on which said amendments are sent to the City Council, unless the City Council takes official action disapproving the amendments, in whole or in part, prior to the expiration of the 45-day period.

C. The *Historic Resources Design Manual* shall be maintained by the Planning Authority.

17.8.2 Standards for review of alteration

In considering an application for a Certificate of Appropriateness involving alteration, the Historic Preservation Board and the Planning Board shall apply the following general standards, as further described in the *Historic Resources Design Manual,* and any design guidelines accompanying the specific designation:

A. Every reasonable effort shall be made to provide a compatible use for a property which requires minimal alteration to the character defining features of the structure, object, or site and its environment or to use a property for its originally intended purpose.

B. The distinguishing original qualities or character of a structure, object, or site and its environment shall not be destroyed. The removal or alteration of any historic material or distinctive architectural features should be avoided when possible.

C. All sites, structures, and objects shall be recognized as products of their own time, place, and use. Alterations that have no historical basis or create a false sense of historical development, such as adding conjectural features or elements from other properties, shall be discouraged.

D. Changes which may have taken place in the course of time are evidence of the history and development of a structure, object, or site and its environment. Changes that have acquired significance in their own right shall not be destroyed.

E. Distinctive features, finishes, and construction techniques or examples of skilled craftsmanship which characterize a structure, object, or site shall be treated with sensitivity.

F. Deteriorated historic features shall be repaired rather than replaced wherever feasible. Where the severity of deterioration requires replacement of a distinctive feature, the new feature should match the feature being replaced in composition, design, texture, and other visual qualities and, where possible, materials. Repair or replacement of missing historic features should be based on accurate duplications of features, substantiated by documentary, physical, or pictorial evidence

rather than on conjectural designs or the availability of different architectural elements from other structures or objects.

G. The surface cleaning of structures and objects, if appropriate, shall be undertaken with the gentlest means possible. Chemical or physical treatments, such as sandblasting, that cause damage to historic materials shall not be undertaken.

H. Every reasonable effort shall be made to protect and preserve significant archaeological resources affected by or adjacent to any project. If resources must be disturbed, mitigation measures shall be undertaken.

I. Contemporary design for alterations and additions to existing properties shall not be discouraged when such alterations and additions do not destroy significant cultural, historical, architectural, or archaeological materials that characterize the property. The new work shall be differentiated from the old and shall be compatible with the size, scale, color, material, and character of the property, neighborhood or environment.

J. Wherever possible, new additions or alterations to structures and objects shall be undertaken in such a manner that, if such additions or alterations were to be removed in the future, the essential form and integrity of the historic property would be unimpaired.

17.8.3 Standards for review of new construction

In considering an application for a Certificate of Appropriateness involving new construction, the Historic Preservation Board and the Planning Board shall apply the following general standards as may be applicable to the context of the proposed construction. The intent and application of the following standards are further described in the *Historic Resources Design Manual* and shall guide the board in its review.

A. Scale and form

1. *Height.* The proposed height shall be visually compatible with surrounding structures when viewed from any street or open space and in compliance with any design guidelines.
2. *Width.* The width of a building shall be visually compatible with surrounding structures when viewed from any street or open space and in compliance with any design guidelines.
3. *Proportion of principal facades.* The relationship of the width to the height of the principal elevations shall be visually compatible with structures, public ways, and open spaces to which it is visually related.
4. *Roof shapes.* The roof shape of a structure shall be visually compatible with the structures to which it is visually related.
5. *Scale of a structure.* The size and mass of structures in relation to open spaces, windows, door openings, porches, and balconies shall be visually compatible with the structures, public ways, and places to which they are visually related.
6. *Applicability to Congress Street Historic District.* In the Congress Street Historic District, for new construction within the B-3 zone, the Historic Preservation Board shall not impose conditions more restrictive than the dimensional requirements of the B-3 zone.
7. *Applicability to India Street Historic District.* For new construction within the

India Street Historic District, the Historic Preservation Board shall not impose conditions more restrictive than the dimensional requirements of the IS-FBC zone, except for in the case of a building addition which proposes to change the height of a contributing historic structure.

8. *Applicability to the Portland Company Historic District.* For new construction within the Portland Company Historic District, the height requirements of the B-6 Building Height Overlay & Building Envelopes map shall be controlling and the Historic Preservation Board shall not impose conditions more restrictive than the building height requirements of the B-6 zone.

B. Composition of principal facades

1. *Proportion of openings*. The relationship of the width to height of windows and doors shall be visually compatible with structures, public ways, and places to which the building is visually related.
2. *Rhythm of solids to voids in facades.* The relationship of solids to voids in the facade of a structure shall be visually compatible with structures, public ways, and places to which it is visually related.
3. *Rhythm of entrance porch and other projections*. The relationship of entrances and other projections to sidewalks shall be visually compatible with the structures, public ways, and places to which they are visually related.
4. *Relationship of materials.* The relationship of the color and texture of materials (other than paint color) of the facade shall be visually compatible with the predominant materials used in the structures to which they are visually related.
5. *Signs.* Any new sign, and any change in the appearance of an existing sign located on a landmark, within a historic district, or within an historic landscape district, which is readily visible from any street or open space shall not be incongruous to the historic character of the landmark or district and shall comply with the criteria and guidelines specified in the *Historic Resources Design Manual*.

C. Relationship to street

1. *Walls of continuity.* Facades and site structures, such as masonry walls, fences, and landscape masses, shall, when it is a characteristic of the area, form cohesive walls of enclosure along a street to ensure visual compatibility with the structures, public ways, and places to which such elements are visually related.
2. *Rhythm of spacing and structures on streets.* The relationship of a structure or object to the open space between it and adjoining structures or objects shall be visually compatible with the structures, objects, public ways, and places to which it is visually related.
3. *Directional expression of principal elevation*. A structure shall be visually compatible with the structures, public ways, and places to which it is visually related in its directional character, whether this be vertical character, horizontal character, or nondirectional character.
4. *Streetscape, pedestrian improvements.* Streetscape and pedestrian improvements and any change in the appearance thereof

located adjacent to or on a landmark, within a historic district, or within a historic landscape district which is readily visible from any street or open space shall not be incongruous to the historic character of the landmark or district and shall comply with the criteria and guidelines specified in the *Historic Resources Design Manual*.

D. Other standards

1. *Compatible use.* Every reasonable effort shall be made to provide a compatible use for a property which requires minimal alteration to the character defining features of the structure, object, or site and its environment or to use a property for its originally intended purpose.
2. *Distinguishing original character.* The distinguishing original qualities or character of a structure, object, or site and its environment shall not be destroyed. The alteration of any historic material or distinctive architectural features should be avoided when possible.
3. *Archeological resources.* Every reasonable effort shall be made to protect and preserve significant archaeological resources affected by or adjacent to any project. If resources must be disturbed, mitigation measures shall be undertaken.
4. *Contemporary design.* Contemporary design for additions to existing properties shall not be discouraged when such alterations and additions do not destroy significant cultural, historical, architectural, or archaeological materials that characterize the property. The new work shall be differentiated from the old and shall be compatible with the size, scale, material, and character of the property, neighborhood and environment.
5. *Additions.* Wherever possible, new additions to structures and objects shall be undertaken in such a manner that, if such additions were to be removed in the future, the essential form and integrity of the structure would be unimpaired.

17.8.4 Standards for review of alterations to or redesign of noncontributing structures

A. In considering an application for a Certificate of Appropriateness involving alteration(s) to a noncontributing structure the standards for review of alterations set forth in Subsection 17.8.2 shall apply as applicable. The intent of the review shall be to ensure no further erosion of any existing architectural character of the subject structure determined to be significant by the Planning Authority or Historic Preservation Board and, where practicable, to guide projects toward a more compatible relationship with the surrounding context.

B. In considering an application for a Certificate of Appropriateness involving comprehensive redesign of a noncontributing structure, the standards for review of construction set forth in Subsection 17.8.3 shall apply.

17.8.5 Standards for review of relocation

In acting upon an application for a Certificate of Appropriateness involving relocation, the Historic Preservation Board and the Planning Board shall apply the following general standards and any design guidelines in the ordinance designating the landmark or district:

A. Whether the historic or urban design character and aesthetic interest of the structure or object contribute to its present setting.
B. If located within a district, whether there are definite plans for the area to be vacated and what the effect of those plans is on the character of the surrounding area. In such cases, consideration of additional design guidelines for construction to be imposed as a condition of approval is appropriate.
C. Whether the relocation of the structure or object can be accomplished without significant damage to its physical integrity.
D. Whether the proposed relocation area is compatible with the cultural, historical or architectural character of the structure or object.

17.8.6 Standards for review of signage

In considering an application for a Certificate of Appropriateness involving the installation or modification of sign(s), including awning(s) which incorporate signage, signs shall be compatible with the subject building and its surrounding context as detailed in the signage design guidelines included in the *Historic Resources Design Manual*. If there is a conflict between this standard and the requirements of Article 20, the stricter standard shall apply.

17.9 CERTIFICATE OF ECONOMIC HARDSHIP

17.9.1 Applicability

A. Any applicant seeking demolition of a landmark or a contributing structure within a district may make application for a Certificate of Economic Hardship from the Board of Appeals. The application shall be submitted to the Planning Authority, together with the applicable fee.
B. The Planning Authority shall transmit a copy of the application to the Board of Appeals, with copies to the Planning Board and the Historic Preservation Board, within 14 days following receipt of a properly completed application.

17.9.2 Standard to be applied

A. The Board of Appeals shall approve an application for a Certificate of Economic Hardship only upon a determination that the denial of approval of the proposed activity or of the proposed demolition will result in the loss of all reasonable use of the structure as required by Subsections 17.9.5 and 17.9.7.
B. In applying this standard, the Board of Appeals shall consider among other things any evidence presented concerning the following:
    1. Any opinions from a licensed engineer or architect with experience in renovation, restoration, or rehabilitation as to the structural soundness of the structure and its suitability for continued use, renovation, restoration, or rehabilitation.
    2. Any estimates of the cost of the proposed alteration, construction, demolition, or removal and an estimate of any additional cost that would be incurred to comply with the recommendations of the Planning Board for changes necessary for it to be approved.
    3. Any estimates of the market value of the property in its current condition; after completion of the proposed alteration, construction, demolition, or removal; after any expenditures necessary to comply with the recommendations of the Planning Board for changes necessary for it to approve a Certificate of Appropriateness;

and in the case of a proposed demolition, after renovation of the existing structure for continued use.

4. In the case of a proposed demolition, any estimates from architects, developers, real estate consultants, appraisers, or other real estate professionals experienced in rehabilitation as to the economic feasibility of restoration, renovation, or rehabilitation of any existing structures or objects.

17.9.3 Information to be supplied by applicant

A. The applicant shall submit by affidavit the following information for an application to be considered to be complete:

1. The assessed value of the property and/or the structure in the case of a demolition for the two most recent assessments.
2. Real property taxes paid for the previous two years.
3. The amount paid for the property by the owner, the date of purchase, and the party from whom purchased, including a description of the relationship, if any, between the owner and the person from whom the property was purchased.
4. The current balance of any mortgages or any other financing secured by the property and the annual debt service, if any, for the previous two years.
5. All appraisals obtained within the previous two years by the owner or applicant in connection with purchase, offerings for sale, financing, or ownership of the property, or state that none were obtained.
6. All listings of the property for sale or rent, price asked and offers received, if any, within the previous four years, or state that none were obtained.
7. All studies commissioned by the owner as to profitable renovation, rehabilitation, or utilization of any structures or objects on the property for alternative use, or a statement that none were obtained.
8. For income-producing property, itemized income and expense statements from the property for the previous two years.
9. Estimate of the cost of the proposed alteration, construction, demolition, or removal and an estimate of any additional cost that would be incurred to comply with the recommendations of the Planning Board for changes necessary for it to approve a Certificate of Appropriateness.
10. Form of ownership or operation of the property, whether sole proprietorship, for profit or not for profit corporation, limited partnership, joint venture, or other.

B. In the event that the information required to be submitted by the applicant is not reasonably available, the applicant shall file with the affidavit a statement of the information that cannot be obtained and shall describe the reasons why such information is unavailable.

C. Notwithstanding the submission of the above information, the Board of Appeals may require additional evidence as provided in Subsection 17.7.4(G).

17.9.4 Public hearing

A. The Board of Appeals shall hold a public hearing on the application within 30 days following receipt of the completed application form. Where the application requests the demolition of a landmark or a contributing

structure within a district, the public hearing shall not be held less than 90 days following receipt of the completed application, unless the applicant makes a clear showing that the delay will result in undue hardship of a unique or exceptional character which could not reasonably be or have been avoided. Upon such a showing, the Planning Authority may waive all or any part of the 90-day period and schedule the hearing before the board. Undue hardship shall not include mere inconvenience or incidental financial loss. No such waiver shall be granted without the Planning Authority giving best practical notice to all persons entitled to notice of the hearing.

B. Where the application requests the demolition of a landmark or a contributing structure within a district, the Planning Authority shall promptly notify any persons interested in historic preservation, who have registered in writing with him or her, give notice by mail to all owners of property within 500 feet of the structure, and shall require that the applicant immediately place a notice, to be supplied by the building official, in a prominent place on the structure and to maintain it there at all times during the pendency of the demolition application. The notice shall state that the structure has been proposed to be demolished by its owner and provide contact information for further information. The failure to give any notice required hereunder shall not affect the validity of any action taken by the Planning Authority or the Board of Appeals.

C. The Planning Board may provide a report or any other information, documentation or evidence or request the Historic Preservation Board to assist the Board of Appeals in considering the extent of variance necessary, an appropriate incentive plan, or reasonable condition to be imposed.

D. The Board of Appeals may continue a proceeding for such additional time as it reasonably takes an applicant, any other interested person, the Historic Preservation Board, or the Planning Board to comply with a request for additional information or evidence. The applicant shall be afforded the right to present rebuttal evidence.

17.9.5 Determination by the Board of Appeals

A. The determination by the Board of Appeals shall be made within 45 days following close of the public hearing and submission of all information, documentation, or evidence requested by the board. The determination shall be accompanied by findings of fact.

B. The Board of Appeals shall not grant approval of an application involving demolition unless the board determines, upon clear and convincing evidence, that one or more of the following circumstances apply:

1. The structure is not subject to this article.
2. Denial of a demolition permit would result in a hardship to the property owner so great that it would effectively deprive the owner of all reasonable use of the structure. The extent of any demolition permitted shall be limited to the amount necessary to allow reasonable use of the structure. Where the condition of the structure is claimed to prevent any reasonable use, the applicant shall establish that such condition is not the result of the acts or neglect of the owner or his

predecessors in title occurring in whole or in part after August 1, 1988.

17.9.6 Disapproval by Board of Appeals

If the determination of the Board of Appeals is to disapprove the application for a Certificate of Economic Hardship, the applicant shall be notified within five business days. The notice shall include a copy of the findings of fact and report.

17.9.7 Determination of no reasonable use

A. If the determination of the Board of Appeals is that the denial of the Certificate of Appropriateness has resulted in the denial of all reasonable use of the structure, or the entire property in the case of new construction, then the Certificate of Economic Hardship shall be issued by the Planning Authority 90 days following the determination unless during that time the City Council approves an incentive plan pursuant to Subsection 17.9.8.

B. A copy of the determination of the Board of Appeals, together with the findings of fact, shall be mailed to the applicant and filed with the City Clerk, the Planning Board, and the Historic Preservation Board within 14 days following the determination of economic hardship.

17.9.8 Incentive plan

The purpose of an incentive plan is to provide a mechanism to allow a reasonable use without the demolition of the complete structure or important architectural elements. The Planning Board, in cooperation with the Historic Preservation Board and the owner, may prepare a report and recommend to the Board of Appeals an incentive plan to assure reasonable use of the structure. This incentive plan may include, but is not limited to, loans or grants from the City of Portland or other public or private sources; acquisition by purchase or eminent domain; building and safety code modifications to reduce cost of maintenance, restoration, rehabilitation, or renovation; changes in applicable zoning regulations, including a transfer of development rights; or relaxation of the provisions of this article sufficient to allow reasonable use of the structure.

17.9.9 City Council consideration of incentive plan

A. Upon receipt of a report from the Board of Appeals recommending an incentive plan to assure reasonable use of the property, the City Council shall give prompt consideration to the determination of economic hardship and the report of the board, including the recommended incentive plan. The City Council shall approve or disapprove the incentive plan determined by the Board of Appeals to allow reasonable use of the structure within 90 days following the determination by the Board of Appeals.

B. A copy of the ordinance enacted by the City Council, together with the incentive plan, if any, shall be mailed to the applicant and transmitted to the Board of Appeals, the Planning Board, and the Historic Preservation Board within five business days following the enactment of the ordinance.

17.9.10 Issuance of Certificate of Economic Hardship

A. Upon receipt by the Board of Appeals of a copy of City Council action disapproving an incentive plan, or upon failure of the City Council to act to either approve or disapprove an incentive

plan within the time specified, the Board of Appeals shall approve a Certificate of Economic Hardship to the applicant within 30 days. The certificate may be subject to conditions including design guidelines for subsequent new construction not inconsistent with the standards set forth in this article and the *Historic Resources Design Manual*. The Certificate of Economic Hardship shall be valid for a period of 120 days from approval by the Board of Appeals, except as provided in Subsection 17.9.7 where an incentive plan has been proposed. Certificates of Economic Hardship shall not be transferable from the applicant to another subsequent owner of the same property.

B. Upon presentation by the applicant of a valid Certificate of Economic Hardship to the Planning Authority, the Certificate of Appropriateness shall be issued to the applicant within 14 days.

17.10 MAINTENANCE

17.10.1 Preservation of protected structures

A. All landmarks, and all contributing structures located in an historic district, shall be preserved against decay and deterioration by being kept free from the following structural defects by the owner and any other person or persons who may have legal custody and control thereof:

1. Deteriorated or inadequate foundation which jeopardizes its structural integrity.
2. Defective or deteriorated floor supports or any structural members of insufficient size to carry imposed loads with safety which jeopardize its structural integrity.
3. Members of walls, partitions, or other vertical supports that split, lean, list, or buckle due to defective material or deterioration which jeopardize its structural integrity.
4. Structural members of ceilings and roofs, or other horizontal structural members, which sag, split, or buckle due to defective materials or deterioration or are of insufficient size to carry imposed loads with safety which jeopardize its structural integrity.
5. Fireplaces or chimneys which list, bulge, or settle due to defective material or deterioration or are of insufficient size or strength to carry imposed loads with safety which jeopardize its structural integrity.
6. Lack of weather protection which jeopardizes the structural integrity of the walls, roofs, or foundation.

B. The owner or such other person shall repair such building, object, or structure within a specified period of receipt of a written order to correct defects or repairs to any structure as provided by (A) above, so that such structure shall be preserved and protected in accordance with the purposes of this article.

C. Any such order shall be in writing, shall state the actions to be taken with reasonable particularity and shall specify dates for compliance, which may be extended by the Planning Authority for reasonable periods to allow the owner to secure financing, labor or materials.

17.11 PENALTIES

17.11.1 Fines for violation

Failure to perform any act required by this article or performance of any act prohibited by this article or of any conditions or any certificate issued hereunder shall constitute a violation and be subject to a fine as provided in 30 A M.R.S. §4452. Each day on which there is failure to perform a required act or on which a violation exists shall constitute a separate violation for purposes of this section.

17.11.2 Additional penalties for willful violation or gross negligence

A. In addition to the penalties authorized by Subsection 17.11.1, a violation which is intentional, or occurs through gross negligence, shall be subject to the following provisions:
   1. No permit shall be issued under Chapter 6 of this Code of Ordinances for any alteration or new construction affecting such property for a period of five years following the last date of the violation, other than permits necessary to correct the violation. However, upon presentation of evidence satisfactory to the Planning Authority that the violation has been corrected, any remaining portion of the five-year prohibition on issuance of a permit may be waived.
   2. For a period of 25 years, any alteration or new construction on the property shall be subject to this article, whether or not any remaining structure or object on the property continues to have the cultural, historical, architectural, or archaeological character and integrity that caused it to be nominated or designated as a landmark or part of a district.
   3. As a condition for any new land use approval, the owner may be required to rebuild, reconstruct, restore, or replicate the structure or object on the property.

B. Paragraphs (A)(1) and (2) above shall not apply to violations which are limited to noncontributing structures.

17.11.3 Other remedies

Notwithstanding the provisions of Subsections 17.11.1 and 17.11.2, the City may institute appropriate proceedings in law and equity to prevent or remedy any violation of this article.

17.11.4 Liberal construction of article

This article shall be liberally applied and construed to effectuate the purpose of preservation set forth in Section 17.1.

17.11.5 Exception for dangerous buildings

This article shall not apply to any structure which has been ordered demolished by the municipal officers or a court, in accordance with 17 M.R.S. § 2851 et seq., its equivalent, as it may be amended from time to time, or to any structure which has been partially destroyed and is determined by the Planning Authority to represent an immediate hazard to the public health or safety, which hazard cannot be abated by reasonable measures specified by the Planning Authority, including without limitation securing apertures and/or erecting fencing.

17.12 APPEALS

The applicant, or any person who has participated in opposition to the application and demonstrates a particularized harm caused by the approval of any

application associated with this article, may appeal that decision in accordance with Article 2.

18 HOUSING

18.1 HOUSING PRESERVATION AND REPLACEMENT

18.1.1 Purpose

The purpose of the housing preservation and replacement ordinance is:

A. To promote and facilitate an adequate supply of housing, particularly affordable housing for all economic groups.

B. To limit the net loss of housing units in the city.

C. To preserve housing in zones where housing is permitted in the city for all residents in order to promote the health, safety, and welfare of its citizens.

18.1.2 Applicability

A. Except as otherwise provided in this section, the housing preservation and replacement ordinance shall apply to the loss of three or more dwelling units in a five-year period, provided that such dwelling units were a legally registered residential use as of July 1, 2002. For the purposes of this section, dwelling units shall be as defined in Article 3, but also include rooming units that people rent in or sleep in within lodging houses, dormitories, shelters, and sheltered care group homes.

B. Except as otherwise provided in this section, the housing preservation and replacement ordinance shall also apply to proposals that result in the loss of fewer than three dwelling units which were legally registered residential use as of July 1, 2002 for the purposes of creating surface parking.

C. For the purposes of this section, loss of dwelling units shall mean the elimination or conversion to nonresidential use of a dwelling unit and dwelling units that remain vacant for three years or more or are lost due to demolition unless the vacancy or demolition results from accidents outside of the owner's control, fire, natural disasters, or acts of war.

D. Determination of number of the dwelling units within a structure or structures and the number of units lost will be based on the records of the Building Authority indicating the legal, registered use of the property since July 1, 2002 through the time of application. The actual use of the property for purposes of applicability of this section may be rebutted by the owner by proof of documentary evidence including but not limited to photographs, letters, and sworn affidavits. The Planning Authority may conduct its own investigation of the actual use and shall determine the applicability of this section based on the totality of the evidence.

18.1.3 Exemptions

This section does not apply to:

A. Consolidation, elimination, or reconfiguration of one or more dwelling units within an existing structure, as long as all the resulting units remain as dwelling units after such consolidation, elimination, or reconfiguration, except as provided by (E) below. Conversion of a dwelling unit to a hotel or motel room shall not qualify for the exemption provided by the paragraph.

B. Proposals that result in a number of units equal to or greater than the number of units lost as determined by the Planning Authority.

C. Legally nonconforming dwelling units existing in zones which no longer permit residential uses.

D. Property which has been ordered demolished by the City, pursuant to 17 M.R.S. § 2851, et seq.,

as amended, except where it is determined by the Building Authority that the deterioration was caused by neglect or lack of maintenance.

E. Paragraph (A) above notwithstanding, the conversion to a nonresidential use of any dwelling units located on the ground floor of a building within a mixed-use zone.

18.1.4 Planning Authority approval required

Notwithstanding any other provision of this section, a proposal to demolish or to convert three or more dwelling units to a nonresidential use in a zone where such use is otherwise permitted must first obtain approval from the Planning Authority. In addition to any other requirements of the Land Use Code, the applicant must submit a statement certifying the number of dwelling units to be demolished or converted to nonresidential use, as well as a description of the characteristics of each of those units.

18.1.5 Tenant notification requirements

Prior to elimination as a result of demolition or conversion to nonresidential use, the owner shall:

A. Provide the Planning Authority a list containing the name of each tenant currently residing in the dwelling units to be demolished or converted to nonresidential use, as well as verification of compliance with tenant notice requirements of this subsection.

B. Deliver to each tenant who occupies such a dwelling unit a written notice to vacate the unit. The notice shall either be sent by certified mail, return receipt requested, or served in-hand. The notice will grant the tenant not less than 90 days from the date of receipt of the notice to vacate the unit.

C. File proof of service of the notice with the Planning Authority.

18.1.6 Housing replacement requirements

A. The Planning Authority shall require, as a condition of approval, that an owner shall replace any dwelling units that are demolished or converted to nonresidential use.

B. This requirement may be satisfied in any one of the following ways, which may be used in combination:

1. *Construction of units.* The construction of housing units within a new structure or a new addition either on site or off-site.
2. *Residential conversion.* The conversion of a nonresidential building to residential use.

18.1.7 Replacement unit requirement

In addition to the foregoing, all replacement units built pursuant to Subsection 18.1.6.B above shall:

A. Be located within the same United States census block group as the parcel from which the dwelling units are being removed or within 1,500 feet of the dwelling units being removed.

B. Not previously have been on the market as of the date of application.

C. Be situated within a development which has not been a candidate for site plan approval as of the date of the application.

D. Be comparable in size to the units replaced. For the purpose of this section, "comparable in size" means that the aggregate size of the replacement units will be no less than 80% of the size of the aggregate of the original units to be replaced.

18.1.8 Contribution to the Housing Trust Fund

A. The applicant may meet the requirements of this housing replacement ordinance by depositing $50,000 for each dwelling unit into the City's Housing Trust Fund.

B. Beginning on January 1, 2004 and annually thereafter, the amount of the contribution shall be adjusted by multiplying this amount originally deposited for each unit by a fraction, the denominator of which shall be the "Consumer Price Index for Urban Wage Earners and Clerical Workers ("CPI-W")," U.S. City Average, "All Items Index," as published by the United States Bureau of Labor Statistics ("the index") for January 1, 2003 year, and the numerator of which shall be the index for the same month in each subsequent year. In the event that the index is not then in existence, the parties shall use such equivalent price index as is published by any successor governmental agency then in existence, or, if none, then by such nongovernmental agency as may then be publishing an equivalent price index, in lieu of and adjusted to the index. If the index shall cease to use 1982-84 equals 100 as the basis of calculation, or if a substantial change is made in the terms or number of items contained in the index, the base index shall be adjusted to conform to such change, using such computation thereof, if available, as shall be employed by the United States Department of Labor in computing same. Notwithstanding anything herein to the contrary, contributions made after January 1, 2004 shall not be less than the amount originally required to be deposited for each rooming or dwelling unit.

18.1.9 Performance guarantee

Owners or affiliates must post a performance guarantee in the form of a letter of credit, or other security acceptable to the City attorney, in the amount equivalent to the amount the applicant would have been required to contribute to the City's Housing Trust Fund if the applicant had chosen that option pursuant to Subsection 18.1.8. Such a performance guarantee shall be valid for no more than three years, after which the full amount due shall be provided to the City's Housing Trust Fund if replacement units satisfying the conditions of this housing replacement ordinance do not have certificates of occupancy.

18.1.10 Partial waiver of replacement requirements

A. Any owner who has applied for site plan review for elimination or conversion to nonresidential use of dwelling units may apply to the Zoning Board of Appeals for a partial waiver from the housing replacement requirements of this section. Such waiver may be a downward adjustment of up to 50% of the owner's housing replacement obligation if the owner establishes to the board's satisfaction that:

1. The proposed development is consistent with the Comprehensive Plan.
2. The proposed development provides significant value and benefit to the immediate and surrounding neighborhood, including, but not limited to, community enhancement, social benefits or job creation.
3. The applicant demonstrates with objective evidence that the imposition of the requirements of this section would impose such an economic burden upon the

project relative to its scope that it renders the project impossible to develop.

4. The requested relief does not constitute a grant of a special privilege inconsistent with the limitations upon similar properties.

B. The Zoning Board of Appeals must make positive findings on each of the four criteria above in order for any such adjustment to be valid. An applicant aggrieved of a decision of the Zoning Board of Appeals may appeal a decision under this subsection pursuant to the provisions of Article 2.

18.1.11 Effect of other City ordinances

A. Nothing in this section shall permit the demolition or conversion to nonresidential use of dwelling units in residential property protected by Article 17, except as permitted by that ordinance.

B. A conditional zone may not be used to circumvent the application of this section. The terms of this section shall apply to any conditional zone which involves dwelling units affected by this section. Notwithstanding the foregoing, nothing herein shall be deemed to prevent the City and the applicant from agreeing to terms which exceed those imposed by this section by means of a conditional zone.

18.1.12 Appeals

Any applicant aggrieved by a decision of the Planning Authority under this section may appeal to the Zoning Board of Appeals within 30 days of that decision.

18.2 AFFORDABLE HOUSING

18.2.1 Purpose

It is in the public interest to promote an adequate supply of housing that is affordable to a range of households at different income levels. The purpose of this section therefore is to offer incentives to developers to include units of affordable and workforce housing within development projects, thereby mitigating the impact of market rate housing construction, or the demonstrated increase in affordable housing needs resulting from the creation of new lower-income jobs, on the limited supply of available land for suitable housing, and helping to meet the housing needs of all economic groups within the city. The City believes that this section will assist in meeting the City's comprehensive goals for affordable housing, in the prevention of overcrowding and deterioration of the limited supply of affordable housing, and by doing so promote the health, safety, and welfare of its citizens.

TABLE 18-A: AFFORDABLE HOUSING FEE REDUCTIONS

% of New Units That are Low-Income or Workforce	Development Fee Discount	Cost of Work (Building Permit) Fees
5% up to but not including 10%	5% reduction	$10.50 per $1,000
10% up to but not including 15%	10% reduction	$9.90 per $1,000
15% up to but not including 20%	15% reduction	$9.35 per $1,000
20% up to but not including 25%	20% reduction	$8.80 per $1,000
25% or more	25% reduction	$8.25 per $1,000

18.2.2 Reduction of fees

A. Notwithstanding any other provision of this Land Use Code or Chapter 6 to the contrary, development fees shall be reduced by the City for an eligible project in the manner described in Table 18-A.

B. Development fees shall include:
   1. Site plan review and inspection fees.
   2. Subdivision review and inspection fees.
   3. Impact fees.
   4. Administrative fees.
   5. Construction and permit fees as described in Chapter 6 of the City of Portland Code of Ordinances.

   Development fees do not include any fees charged for review conducted by any party other than the City.

C. Eligible project shall mean a development project:
   1. That is permissible under the provisions of this Land Use Code in the zone in which it is proposed.
   2. That will be a single-family or multi-family dwelling, or subdivision consisting of a group of dwellings, and will not be located in an R-1 or R-2 zone.
   3. That creates new dwelling units, among which is at least one low-income or workforce housing unit for rent or sale, through new construction, substantial rehabilitation of existing structures, adaptive reuse or conversion of a nonresidential use to residential use, or any combination of these elements. Affordable housing units for sale or rent may not differ in exterior design from other units within an eligible project.
   4. Projects shall not be considered "eligible projects" solely because they are subject to Subsection 18.2.3.

D. The Planning Authority shall perform its review of an eligible project in as expedited a manner as is practical, without impairing the scope or thoroughness of the review. The Planning Authority may adopt administrative procedures to prioritize review of eligible projects and facilitate this expedited review.

E. The Planning Board shall make its best efforts to give priority in scheduling workshops and public hearings related to any plans or applications required for an eligible project that are within the Planning Board's jurisdiction, without impairing the scope or thoroughness of its review. At the conclusion of these public meetings, the Planning Board shall promptly issue a decision on all such plans and applications before it for consideration.

18.2.3 Ensuring workforce housing

A. **Purpose.** Based on the City's Comprehensive Plan and the City's 2015 housing study, it is in the public interest to promote an adequate supply of housing that is affordable to a range of households at different income levels. The purpose of this subsection is to ensure that housing developments over a certain size provide a portion of workforce housing units and, by doing so, promote the health, safety, and welfare of Portland citizens.

B. **Applicability.** This subsection shall apply to development projects that create ten or more net new dwelling units for rent or for sale through new construction, substantial rehabilitation of existing structures, adaptive reuse or conversion of a nonresidential use to

residential use, or any combination of these elements, with the exception that projects using public financing requiring affordability restrictions, as defined by tax increment financing, U.S. Department of Housing and Urban Development funds such as HOME or CDBG, other federal, state, or local housing program, or the Low-income Housing Tax Credit program, shall be considered exempt.

C. **Standards.** Development projects subject to this subsection shall be subject to the following requirements:

1. Notwithstanding any language to the contrary in this Land Use Code, all developments of ten units or more are conditional uses subject to Planning Board review on the condition that they comply with the requirements of this subsection, unless they are within the India Street Form-Based Code Zone, in which case the review will be conducted administratively or by the Planning Board in accordance with the thresholds of site plan review for the district.
2. At least 25% of the units in the project shall meet the definition of workforce housing unit for sale or for rent as defined in Article 3. The project shall have the option of paying a partial fee-in-lieu as per (6) below or providing an additional unit on-site for any fractional value.
3. Projects shall not be segmented or phased to avoid compliance with these provisions. In cases where projects are completed in phases, affordable units shall be provided in proportion to the development of market rate units unless otherwise permitted through regulations.
4. Workforce units must be integrated with the rest of the development, must use a common entrance, and must provide no indications from common areas that these units are workforce housing units.
5. Workforce units need not be the same size as other units in the development but the number of bedrooms in such units, either on- or off-site, shall be no less than 10 percent of the total number of bedrooms in the development. For the purposes of calculating the number of bedrooms in a development, every 400 square feet in each market rate unit will count as a bedroom if the Planning Authority determines this method is appropriate in lieu of counting actual bedrooms.
6. As an alternative to providing workforce housing units, projects may pay a fee-in-lieu of some or all of the units. In-lieu fees shall be paid into the Housing Trust Fund. The fee for affordable units not provided shall be $150,000 per unit, adjusted annually in the same way as the fee under Subsection 18.1.8.
7. Workforce housing units for sale, if converted to workforce housing units for rent, shall become subject to the income limits and other requirements of such units.
8. If at least 33% of the units in a development are workforce units, the development is eligible for subsidy through an Affordable Housing TIF, subject to City Council approval.
9. The term of affordability for the required 25% workforce units provided shall be defined as shown in Table 18-B.

TABLE 18-B: MINIMUM TERM OF AFFORDABILITY FOR REQUIRED WORKFORCE UNITS

% of Workforce Units Provided	Minimum Term of Affordability
25%	30 years
50%	20 years
100%	10 years

TABLE 18-C: BONUSES FOR ELIGIBLE PROJECTS

% Low-income or Workforce Units	Density Permitted[1]	Additional Height Permitted[2]	Setback Reductions[3]
10-19%	1.1 x base	N/A	N/A
20-29%	1.2 x base	10 ft.	N/A
30-49%	1.3 x base	10 ft.	5 ft.
50-74%	2.5 x base	15 ft.	5 ft.
> 75%	2.5 x base	25 ft.	10 ft.

[1] "Base" is the number of units allowed under the zoning without this bonus but with any other bonuses applied. In R-P zones, multifamily is permitted with a "base" no less than 1 unit per 1,500 SF of land area.
[2] The maximum additional height permitted in the B-1/B-1b zones and the R-P zone shall be 15 feet. In addition, the maximum structure height is 50 feet within 750 feet of the Portland Observatory.
[3] Setback reductions are absolute reductions in front, side, and/or rear setback requirements. The maximum setback reductions in the B-1/B-1b and R-P zones shall be 5 ft.

D. **Implementing regulations.** Regulations to further specify the details of this subsection shall be developed, including, but not limited to:
   1. Specific methodology for income verification.
   2. Situations where less than permanent affordability might be considered.
   3. Guidelines for meeting the requirement that off-site units be "in the same neighborhood."

E. **Reporting to City Council.** In conjunction with the annual report on the Housing Trust Fund, the Planning Authority shall annually report on developments subject to this subsection, the number of units produced, the amount of fee-in-lieu collected, and the overall effectiveness of this subsection in achieving its stated purpose.

18.2.4 Density and dimensional bonuses and reductions

Notwithstanding any other provision of this Land Use Code to the contrary, in order to encourage low-income and workforce units in designated growth areas, eligible projects as defined under Subsection 18.2.2 may avail themselves of the following options:

A. **Density and dimensional bonuses.** The maximum number of units that would otherwise be allowed under this Land Use Code shall be increased for an eligible project in the manner described in Table 18-C, applicable where multi-family is allowed as a permitted or conditional use, with the exception of the I-B zone. Other dimensional bonuses related to height and setbacks shall only be applicable in in the B-1/B-1b, B-2/B-2b/B-2c, B-3/B-3b/B-3c, B-5, R-7, and R-P zones.

B. **Planned Residential Unit Developments (PRUDs).** In the R-3, R-5, and R-5a zones, any PRUD in which more than 50% of the units are low-income or workforce units for rent or for sale may utilize the following dimensional bonuses and changes:
   1. The maximum number of units that would otherwise be allowed under this land use code shall be increased by 2.5.
   2. Maximum number of units and maximum length of buildings do not apply but may be set through site plan review.

3. Minimum building setbacks may be reduced to 10 feet.
4. The PRUD may cross public rights of way provided that the right of way does not count towards minimum lot size nor towards any open space requirements.
5. Minimum recreation open space area is reduced to 200 square feet per dwelling unit of common area designated for recreational purposes by the residents. Minimum contiguous size and setbacks do not apply and shall be set through site plan review.
6. The Planning Board's *Design Manual*, design standards, and guidelines with respect to PRUDs shall apply in full to PRUDs utilizing this subsection.

C. **Unit size.** In order to be eligible for this subsection, the low-income and workforce housing units must meet Subsections 18.2.3(C)(3), (4), and (5).

D. **Term of affordability**. Affordable units under this section shall be deed-restricted to remain affordable for 30 years or the longest term permitted under federal, state, and local laws, whichever is longer. Such deed restrictions shall be recorded in the Cumberland County Registry of Deeds.

E. **Required public process.** The developer of the project must also commit to a good faith effort to communicate openly with affected properties as their process moves forward. At a minimum, no less than 30 days prior to application for site plan review, any project that wishes to take advantage of this subsection must hold a public meeting noticed to all properties within 500 feet of their site and post a sign on the property in question describing the proposed project, intent to submit an application to the City in 30 days (cite anticipated submission date), and contact information for the developer and the Planning Authority. The Planning Board may adopt regulations regarding the content and processes for noticing as part of the *Technical Manual*.

F. **Projects under 18.2.3.** Projects that are subject to Subsection 18.2.3 that choose to provide the required workforce housing units on site are eligible for a 25% increase in total permitted units. If an eligible project as defined under Subsection 18.2.2 is also subject to Subsection 18.2.3, the applicant shall have the option of utilizing either this bonus or any bonuses they are eligible for under Subsections 18.2.4(A) and (B) but not both.

18.2.5 Inclusionary zoning for hotel projects

A. **Purpose.** This subsection is based on City analysis, most specifically the analysis documented in the Greater Portland Council of Government study *Proposed Hotel Linkage Fee: Supportable Range* dated August 29, 2018, that finds that new hospitality developments create a need for new affordable housing. This need is the result of the fact that hospitality developments necessarily create a number of jobs that do not pay employees at a rate sufficient to allow those employees to afford market-rate housing in the City of Portland.

B. **Hotel projects.** For the purposes of this subsection, hotel projects shall include any hotel as defined in Article 3 consisting of 10 or more guest rooms for rent. Any expansion of an existing hotel by 10 or more rooms within

any five-year period will also be considered a hotel project.

C. **Hotel projects conditional uses**. Notwithstanding anything to the contrary in this Land Use Code, all hotel projects are conditional uses subject to Planning Board review on the condition that they comply with the requirements of this Subsection 18.2.5.

D. **Low-income housing minimum.** All hotel projects shall provide one unit of low-income housing for rent in the City of Portland for every 28 rooms in the hotel project, which shall meet the standards outlined in Subsections 18.2.3(C)(3), (4), and (5) and in the implementing regulations governing low-income units. This amount shall be rounded up to the nearest increment of 28 rooms. These units shall be deed restricted for the longest period permitted by law, shall not be used for short-term rentals of less than 30 days, and must be provided with distinct entrances from the street to delineate them from the hotel itself.

E. **Fee-in-lieu alternative.** As an alternative to providing low-income housing units under Subsection 18.2.5(D) above, a hotel project may pay a fee-in-lieu of $3,806 per hotel guest room. This amount shall be paid into the City's Housing Trust Fund and used for the purposes set forth in the ordinance and regulations applicable to that trust.

F. **Annual adjustments.** The amounts in Subsection 18.2.5(E) above shall be adjusted annually in the same way as the fee under Section 18.1.8.

G. **Regulations.** The Planning Board may promulgate implementing regulations based on this subsection.

18.3 JILL C. DUSON HOUSING TRUST FUND

18.3.1 Purpose

The purpose of enacting this section is:

A. To establish a City of Portland Housing Trust Fund for the promotion, retention, and creation of an adequate supply of housing, particularly affordable housing, for all economic groups and to limit the net loss of housing units in the city.

B. To serve as a vehicle for addressing very low, low, and median income housing needs through a combination of funds as set out in this article.

18.3.2 Establishment of the Jill C. Duson Housing Trust Fund

The City Council shall establish a special revenue account under the name "City of Portland Jill C. Duson Housing Trust Fund" (Housing Trust Fund). Deposits into the fund shall include:

A. Contributions from the City's housing replacement ordinance under Subsection 18.1.8.

B. In-lieu fees under Subsections 18.2.3 and 18.2.5.

C. Funds appropriated to be deposited into the fund by vote of the City Council.

D. Voluntary contributions of money or other liquid assets to the fund.

E. Any federal, state, or private grant or loan funds provided to the fund.

F. Interest from fund deposits and investments.

G. Repayments of loans made from the fund.

18.3.3 Management of the trust fund

The City Manager, or his or her designee, shall serve as the manager of the Housing Trust Fund. The responsibilities of the manager, subject to the orders of the City Council, shall include:

A. Maintaining the financial and other records of the Housing Trust Fund.

B. Disbursing and collecting Housing Trust Fund monies in accordance with the Housing Trust Fund annual plan.

C. Monitoring the use of monies distributed to successful applicants for Housing Trust Fund support to assure on-going compliance with the purposes of the fund and the conditions under which these monies were granted or loaned.

18.3.4 Housing Trust Fund annual plan

A. Each fiscal year, the City Council shall adopt a Housing Trust Fund annual plan. The City Manager shall submit to the City Council a recommended Housing Trust Fund annual plan, utilizing the revenues of the Housing Trust Fund as well as any other funds the manager may propose as appropriate. The housing committee of the City Council or such other committee as the council shall designate shall conduct public hearings on the recommended plan and refer the matter to the council for action.

B. The Housing Trust Fund annual plan shall include:

1. A description of all programs to be funded in part or in full by the Housing Trust Fund.
2. A description of how funds from the Housing Trust Fund will be distributed among very low-income, low-income and moderate-income households.
3. The amount of funds budgeted for programs funded in part or in full from the Housing Trust Fund.

C. Priority for the expenditure of funds collected pursuant to Section 18.1 shall be given to the creation of new housing stock, through either new construction or conversion of nonresidential buildings to residential use.

18.3.5 Distribution and use of the Housing Trust Fund's assets

A. All distribution of principal, interest, or other assets of the Housing Trust Fund shall be made in furtherance of the public purposes set out in Section 18.1.

B. During each year, the Housing Trust Fund shall disburse as grants or loans so much of the Housing Trust Fund's assets as the City Council in its discretion has approved in the Housing Trust Fund annual plan.

C. Funds shall not be used for City administrative expenses.

D. Funds shall not be used for property operating expenses or supporting services.

E. No grants or loans shall be awarded by the Housing Trust Fund to corporations, partnerships, or individuals who are delinquent at the time of application in the payment of property taxes or other fees to the City of Portland, who have been convicted of arson, who have been convicted of discrimination in the sale or lease of housing under the fair housing laws of the State of Maine, or who have pending violations of current City electrical, plumbing, building, or housing codes or zoning ordinances.

18.3.6 Term of affordability

A. Whenever funds from the Housing Trust Fund are used for the acquisition, construction, or substantial rehabilitation of an affordable rental or cooperative unit, the City of Portland shall impose enforceable requirements on the owner of the housing unit that the unit remain

affordable for the remaining life of the housing unit, assuming good faith efforts by the owner to maintain the housing unit and rehabilitate it as necessary. The remaining life of the housing unit shall be presumed to be a minimum of 30 years.

B. Whenever funds from the Housing Trust Fund are used for the acquisition, construction, or substantial rehabilitation of ownership housing, the City of Portland shall impose enforceable resale restrictions on the owner to keep the housing unit affordable for the longest feasible time, while maintaining and equitable balance between the interests of the owner and the interests of the City of Portland.

C. The affordability restriction requirements described in this subsection shall run with the land and the City of Portland shall develop appropriate procedures and documentation to enforce these requirements and shall record such documentation in the Cumberland County Registry of Deeds.

18.4 CONDOMINIUM CONVERSION

18.4.1 Purpose

The purpose of this section is to regulate the conversion of rental housing to condominiums, to minimize the potential adverse impacts of such conversion on tenants, to ensure that such converted housing is safe and decent, and to maintain a reasonable balance of housing alternatives within the city for persons of all incomes.

18.4.2 Applicability

This section shall apply to the conversion of any rental unit to a condominium unit. For the purposes of this section, developer shall mean any person or other legal entity, but not including an established lending institution unless it is an active participant in a common promotional scheme, who, whether acting as principal or agent, records a declaration of condominium that includes real estate, any portion of which was previously a rental unit.

18.4.3 Protection of tenants

A. **Notice of intent to convert.** A developer shall give to each tenant, meaning any occupant in lawful possession of a rental unit, whether by lease, sublease, or otherwise, written notice of intent to convert at least one 120 days before the tenant is required by the developer to vacate. If a tenant has been in possession of any unit within the same building for more than four consecutive years, the notice period shall be increased by 30 additional days for each additional year, or fraction thereof, to a maximum of 240 additional days. The notice shall set forth specifically the rights of tenants under (A), (B), and (C) of this subsection and Subsection 18.4.4, and shall contain the following statement:

If you do not buy your apartment, the developer of this project is required by law to assist you in finding another place to live and in determining your eligibility for relocation payments. If you have questions about your rights under the law, or complaints about the way you have been treated by the developer, you may contact the Department of Permitting & Inspections, City of Portland, 389 Congress Street, Portland, Maine 04101.

B. If the notice specifies a date by which the tenant is required to vacate, the notice may

also serve as a notice of termination under the applicable law of forcible entry and detainer, if it meets the requirements thereof. The notice shall be hand delivered to the tenant or mailed, by certified mail, return receipt requested, postage prepaid, to the tenant at the address of the unit or such other address as the tenant may provide. The notice shall be effective when actually received. No tenant may be required by a developer to vacate without having been given notice as required herein, except for the reasons specified in the applicable law of forcible entry and detainer, and in accordance with the procedures thereof. The terms of a tenancy, including rent, may not be altered during the notice period, except as expressly provided in a preexisting written lease. If, within 120 days after a tenant is required by a developer to vacate, the developer records a declaration of condominium without having given notice as required herein, the developer shall be presumed to have converted in violation of this article.

C. **Option to purchase.** For a 60-day period following the giving of notice as required in Subsection 18.4.3(A), the developer shall grant to the tenant an exclusive and irrevocable option to purchase the unit of which the tenant is then possessed, which option may not be assigned. If the tenant does not purchase or contract to purchase the unit during the 60-day period, the developer may not convey or offer to convey the unit to any other person during the following 180 days at a price or on terms more favorable than the price or terms previously offered to the tenant, unless the more favorable price or terms are first offered exclusively and irrevocably to the tenant for an additional 60-day period. This subsection shall not apply to any rental unit that, when converted, will be restricted exclusively to nonresidential use. If, within two years after a developer records a declaration of condominium, the use of any such unit is changed such that but for the preceding sentence, this subsection would have applied, the developer shall be presumed to have converted in violation of this article.

18.4.4 Relocation payments

If the tenant does not purchase the unit, the developer shall, before the tenant is required by the developer to vacate, make a cash payment to the tenant in an amount equal to the amount of rent paid by the tenant for the immediately preceding two months, provided that this requirement shall not apply to any tenant whose gross income exceeds 80% of the median income of the Portland SMSA, adjusted for family size, as determined by the U.S. Department of Housing and Urban Development at the time notice is given as required in Subsection 18.4.3. Additionally, the developer shall, upon demand, provide assistance to the tenant in the form of referrals to other reasonable accommodations and in determining the tenant's eligibility for relocation payments as provided herein.

18.4.5 Conversion permit

Before conveying or offering to convey a converted unit, the developer shall obtain a conversion permit from the Building Authority. The permit shall issue only upon receipt of a completed application therefore in a form to be devised for that purpose, payment of a fee of $25,000 per converted unit, to be adjusted annually in the same way as the fee

under Chapter 14, Section 18.1.8 of this code, at least $1,000 of which shall be appropriated to the Housing Safety Office for the administration and enforcement of the Rent Stabilization Ordinance, Chapter 6, Articles XII and XIII of this code, and the remainder of which shall be paid into the Jill C. Duson Housing Trust Fund, and a finding, upon inspection, that each unit, together with any common areas and facilities appurtenant thereto, is in full compliance with all applicable provisions of Chapter 6, Articles II, III, and V and Chapter 10, Article II of the City of Portland Code of Ordinances, and the Life Safety Code as adopted by the state. The developer shall post a copy of the permit in a conspicuous place in each unit and shall make copies available to prospective purchasers upon request.

18.4.6 Variation by agreement

No provision of or right conferred by this Section 18.4 may be waived by a tenant, by agreement or otherwise, and any such waiver shall be void. Any attempt to require, encourage, or induce a tenant to waive any provision hereof, or right conferred hereby, shall be a violation of this article. Nothing herein shall be construed to void any term of a lease which offers greater rights than those conferred hereby.

18.5 RELOCATION OF DISPLACED TENANTS

18.5.1 Purpose

The purpose of this section is to encourage the retention of a diverse housing supply throughout the downtown and in areas readily accessible to the downtown, to ensure that persons displaced as the result of redevelopment of residential units to nonresidential uses within the B-3 Downtown Business zone are treated fairly and consistently, and to ensure that persons so displaced will be relocated at the reasonable expense of the developer to comparable housing at a location providing comparable access to services and amenities.

18.5.2 Notice and eligibility for relocation assistance

When a proposed development will result in the displacement of residents of an existing structure, the developer of the property shall give all tenants written notice as set forth below and shall provide relocation assistance as set forth below for any tenant whose gross income is 80% or less of the median income of the Portland SMSA, adjusted for family size, as determined by the U.S. Department of Housing and Urban Development at the time the developer gives the tenant written notice of intent to cause removal of the residential unit. Such written notice shall be given to the tenant at least 120 days before the tenant shall be required to vacate the premises and shall contain the following statement:

> *The developer of this project is required by law to assist you in finding another place to live and in determining your eligibility for relocation payments. If you have questions about your rights under the law, or complaints about the way you have been treated by the developer, you may contact the Department of Planning and Urban Development, City of Portland, 389 Congress Street, Portland, Maine 04101.*

18.5.3 Relocation assistance for all tenants

The developer shall provide, upon demand, assistance to all tenants who will be displaced by the development in the form of referrals to other

reasonable accommodations and in determining the tenants' eligibility for relocation payments as provided herein. The developer shall make relocation payments to eligible tenants in accordance with the schedule adopted by the City Council in Subsection 18.5.4.

18.5.4 Schedule of relocation payments for eligible tenants

The developer shall, before the tenant is required by the developer to vacate, make a cash payment to the tenant in an amount equal to the amount of rent paid by the tenant for the immediately preceding two months.

19 OFF-STREET PARKING & LOADING

19.1 OFF-STREET PARKING

19.1.1 General

Off-street parking, either by means of structured or surface spaces, in addition to being a permitted principal use in certain zones, shall be considered as an accessory use when required or provided to serve principal uses. The provisions of this article shall apply to parking as an accessory use.

19.1.2 Uses requiring off-street parking

Except as provided in Table 19-B and as provided elsewhere in this article, minimum off-street parking requirements shall be as provided in Table 19-A. For any use not listed in Table 19-A, the parking provisions for the most similar use, as determined by the Building Authority or the Planning Authority, shall apply.

19.1.3 Rules of calculation

A. **Floor area.** Unless otherwise stated, all square footage-based off-street parking standards shall be computed on the basis of gross floor area used or intended to be used for service to customers, patrons, clients, or patients. It need not include floors or parts of floors used principally for non-public purposes, such as bulk storage, cellar, or food preparation areas. These provisions notwithstanding, the "floor area" used as the basis for computing off-street parking requirements shall never be less than 80% of the total gross floor area.

B. **Fractions.** Any fraction greater than or equal to 0.5 will be rounded up to the nearest whole number. Any fraction less than 0.5 will be rounded down to the nearest whole number.

C. **Multiple uses.** When two or more principal uses or separate establishments are located within the same lot, off-street parking shall be provided for each principal use or separate establishment according to Table 19-A, unless joint use is approved under Subsection 19.1.5.

D. **Accessory uses.** Off-street parking shall not be calculated separately for accessory uses.

E. **New construction.** In the case of new construction, the minimum off-street parking requirements in Table 19-A shall be met.

F. **Changes of use.** In the case of changes of use, the only additional off-street parking required shall equal the difference between the parking required for the new use and the parking required for the existing use.

G. **Building additions or alterations.** In the case of additions or alterations which increase the number of units or square footage of a given use, the only additional off-street parking required shall equal the difference between the parking required for the use in the post-development condition and the parking required for the use in the pre-development condition.

19.1.4 Shared use vehicles

The required parking for multi-family residential buildings may be partially met through provision of shared-use vehicles, which are vehicles available for use on a fee basis to the residents of the building. One shared use vehicle shall be deemed to satisfy eight required car spaces, but in no case shall more than 50% of the parking requirement be satisfied by a shared vehicle use.

TABLE 19-A: OFF-STREET PARKING MINIMUMS

	Vehicular		Bicycle
Single-, two-, or multi-family units	1 space/ dwelling unit		2 spaces/5 units
Lodging house	1 space/5 rooming units[1]		
Special needs independent dwelling unit	1 space/4 dwelling units, plus 1 space/staff member normally present at any one time		
Sheltered care group home	1 space/2 employees		
Congregate care facilities	1 space/3 dwelling units		
Emergency shelters	1 space/2 employees		2 spaces/10 vehicle parking spaces for the first 100 vehicle spaces required, plus 1 space/20 vehicle parking spaces thereafter[4]
Long-term, extended care, and intermediate care facilities	1 space/5 beds, plus 1 space/employee normally present during weekday morning shift		
Governmental uses	1 space/400 SF of floor area		
Hospitals and clinics	1 space/500 SF of floor area		
Places of assembly	1 space/150 SF of floor area used for assembly purposes[2]		
Preschool facilities	1 space/staff member normally present at any one time		
Schools	For students up to 15 years	1 space/room used for instruction purposes	
	For students 16 years and older	1 space/10 seats used for instruction purposes or, if no fixed seats, 1 space/100 SF used for instruction purposes	
Bed and breakfasts	1 space/2 guest rooms for first 4 guest rooms, plus 1 space/additional room thereafter[3]		
General offices	1 space/400 SF of floor area		
Hostels	1 space/8 beds or, if within ¼ mi. of a transit stop, 1 space/12 beds		
Hotels	1 space/4 guest rooms		
Retail	1 space/200 SF of first floor area in excess of 2,000 SF, plus 1 space/700 SF for each floor above		
Restaurants and bars	1 space/150 SF of floor area		
Theaters, performance halls, funeral homes	1 space/5 seats or, if no fixed seats, 1 space/100 SF of assembly space		
Industrial uses	1 space/1,000 SF of floor area in excess of 3,000 SF not including area catering to retail		

[1] Except in the R-5 zone, where the requirement shall be 1 space/2 rooming units.
[2] Except for neighborhood centers which primarily serve clientele from the surrounding neighborhood, where the parking requirement shall be 1/1,000 SF of floor area
[3] Except in the I-B zone, where no off-street parking shall be required for beds and breakfasts.
[4] Development with under 10 required vehicular parking spaces shall provide at least two bicycle parking spaces.

TABLE 19-B: CATEGORICAL EXCEPTIONS TO OFF-STREET PARKING MINIMUMS

Categorical Vehicular Exceptions	
Major site plans	The Planning Board shall establish the off-street parking requirement based on a parking study.
Affordable housing	Two spaces are required for every 3 units, except that the Planning Board may establish a lesser parking requirement regardless of the size of the structure.
Multi-family housing	The Planning Board may establish a parking requirement that is less than the normally required number of spaces upon a finding of unique conditions that result in a lesser parking demand, such as housing for persons who cannot drive, housing that participates in a Transportation Demand Management program, or housing which includes permanent restrictions on automobile usage, and which is permanently restricted from utilizing resident on-street parking stickers.
Historic structures	No off-street parking in excess of that existing on or servicing the lot as of March 15, 1999 shall be required.[1]
Accessory Dwelling Units	No off-street parking shall be required.
Transit proximate development and uses	No off-street parking shall be required within ¼ mile of fixed route transit service. New uses or changes of use of more than 10,000 SF taking advantage of this exception shall be required to provide a Transportation Demand Management Plan if they use this provision in lieu of parking requirements.
Residential uses	No off-street parking shall be required for the first four dwelling units, not counting accessory dwelling units, except as otherwise specified herein.

Zone-Based Vehicular Exceptions		
	Residential	**Nonresidential**
IR-1/I-B		Off-street parking requirements for nonresidential uses shall be reduced by 75%.
IR-3	No off-street parking required.	
R-OS	Off-street parking shall be adequate to serve projected employee and visitor needs.	
B-2/B-2b/B-2c		For changes of use of 10,000 SF or less, no off-street parking shall be required for nonresidential uses.[2]
IS-FBC	No off-street parking required for first three dwelling units.	For changes of use of 10,000 SF or less, no off-street parking shall be required for nonresidential uses.[2]
B-3	No off-street parking required for changes of use.	
B-5	No off-street parking required.	
B-6	Off-street parking requirement shall be determined based on a parking study.	
B-7	Off-street parking requirement shall be determined based on a parking study.	
Waterfront Zones	Off-street parking requirements shall be reduced by 50%. No off-street parking required in the WCZ.	

[1] Exception applies for uses within any contributing structure in a local or national register historic district or locally-designated or national register landmark building under Article 17. However, parking may not be decreased from that existing on or servicing the lot on March 15, 1999 except to the extent necessary to meet the requirements of the Americans with Disabilities Act.

[2] If the number of existing parking spaces serving the site is less than the requirements of this article, that number of parking spaces may not be reduced lower than the required amount prior to the change of use except to the extent necessary to meet the requirements of the Americans with Disability Act, to the extent it is a requirement or a condition of site plan review, or to the extent the change of use requires less parking than the previous use and the total number of parking spaces serving the site exceeds the parking requirements of this article for all uses on the site including the change of use. A newly constructed building, a building addition, or a change of the use of a building exceeding 10,000 SF of floor area, shall provide parking as required by this article.

19.1.5 Joint use

The joint use of a parking facility by two or more principal uses may be permitted where it is clearly demonstrated that the parking facility will substantially meet the intent of the off-street parking requirements by reason of variation in the probable time of maximum use by patrons or employees among such establishments.

19.1.6 Off-site parking

Required off-street parking shall be located on the same lot with the principal use, except as follows:

A. **For uses in residential zones.** Off-street parking may be located off-site upon an applicant demonstrating the following:
   1. Off-street parking cannot reasonably be provided on the same lot with the principal use.
   2. Off-site parking is proposed to be located no more than 300 feet from the principal use, measured along lines of public access.
   3. The premises to be used for off-site parking are held, either under the same ownership or by lease, by the applicant. Evidence of such control, either by deed or lease, shall be provided.
   4. The premises to be used for off-site parking have adequate parking supply to meet any parking required for existing uses on those premises.
   5. The premises to be used for off-street parking are located in the same or less restrictive zone as that of the building or use served.

B. **For uses in nonresidential zones.** Off-street parking may be located off-site at a distance of no more than 100 feet from the principal use, measured along lines of public access. Off-street parking may be located further than 100 feet from the principal use provided the applicant demonstrates the following:
   1. Off-site parking is proposed to be located no more than 1,500 feet from the principal use, measured along lines of public access.
   2. The premises to be used for off-site parking are held, either under the same ownership or by lease, by the applicant. Evidence of such control shall be provided by showing, at a minimum, a signed letter of intent, purchase and sale agreement, or option for sale or lease at the time of approval, and an executed deed or lease prior to issuance of any certificate of occupancy for review and approval by Corporation Counsel. Off-site parking leases shall be for a term of not less than five years with an option to renew.
   3. The premises to be used for off-site parking have adequate parking supply to meet any parking required for existing uses on those premises.

19.1.7 Fee-in-lieu of parking

A. **Applicability.** Any development subject to site plan review shall either provide the required parking on- or off-site or pay a fee-in-lieu of parking of not less than $5,000 per space not provided. Fees shall be deposited into the Sustainable Transportation Fund, as established in Section 19.3 of this article. The fee shall be paid on or before the date upon which a certificate of occupancy is issued. Payment shall be secured by a bond at the time the amount of the fee is set.

B. **Annual adjustment.** The value of the fee shall be adjusted annually according to the

Engineering News Record construction index as published on January 1st of the current calendar year. The fee adjustment shall be calculated by dividing the index amount published on January 1st of the current year by the index amount published on January 1, 2010 ($8,660), multiplied by the minimum fee amount of $5,000. The base fee, the adjustment index, or the calculation method may be otherwise amended by action of the City Council from time to time.

19.1.8 Location of vehicular parking

A. In general

1. Tandem vehicular parking shall be permitted for residential uses, and for developments where managed parking is part of an approved site plan.
2. Parking shall be prohibited in the front yard, which shall mean the open space between the street line and building, except for parking within driveways on lots containing single- or two-family dwellings. "Driveway," as used in this paragraph, shall not include any turnaround area.
3. Where an existing front yard exceeds a maximum front setback, a maximum of 10% of the total parking area provided on the site may be located between the principal structure and the street.

B. In residential zones

1. Where off-street parking for six or fewer vehicles is required or provided, parking located within five feet of any lot line shall be located 50 feet or greater from any street line, except for in the R-6 zone, and parking in all residential zones shall maintain the minimum front setback from any street line, except on a corner lot where parking shall maintain the side setback on a side street.
2. Where off-street parking for more than six vehicles is required or provided:
   a. Parking for nonresidential uses shall be located 25 feet or greater from any residential structure on an adjoining lot.
   b. Where vehicles are to be or may be parked within a required setback:
      i. A continuous, permanently-anchored curb guard, at least five feet from the lot line, shall be provided between such off-street parking and that lot line involved, the top of which shall be at least 20 inches in height so that bumpers of vehicles cannot project beyond its face.
      ii. Where such off-street parking abuts a lot in residential use or an unoccupied lot located in a residential zone, a fence, not less than 48 inches in height, shall be provided and maintained between such off-street parking and that part of the lot line involved.

C. In mixed-use zones

1. Where off-street parking for more than six vehicles is required or provided:
   a. Where vehicles are to be or may be parked within 10 feet of any street line, a continuous, permanently-anchored curb guard shall be provided and maintained between such off-street parking and that part of the street line involved so that vehicle

bumpers cannot project beyond its face toward the street line involved.

b. Where such off-street parking abuts a lot in a residential zone or in residential use, a fence, not less than 48 inches in height, shall be provided and maintained between such off-street parking and that part of the lot line involved.

2. In the B-7 zone, off-street surface parking shall be located 35 feet or greater from any street, except in the case of:

a. A lot where 80% of the frontage has a building within 10 feet of that frontage.

b. A lot where all or a portion of the 35-foot setback area had a gravel surface not exceeding 15,000 square feet as of 9/29/15 and the principal use served is in a building meeting the minimum height requirements of the Bayside Height Overlay or of 25,000 square feet or greater. In these cases, the total number of spaces within the 35-foot setback and elsewhere on site shall not exceed parking requirements. Parking within the 35-foot setback shall provide stormwater quality treatment.

c. The 35-foot setback requirement shall not apply to a driveway located perpendicular to the site.

19.1.9 Off-street parking restricted

Off-street parking shall not include:

A. More than one commercial motor vehicle in any residential zone, the R-P zone, or the B-1/B-1b zones.

B. More than six commercial motor vehicles in the B-2/B-2b/B-2c zone.

C. Loading, sales, dead storage, repair, or servicing of any kind, except when customarily incidental or accessory to a conforming principal use when located in an industrial zone.

D. Notwithstanding Section 19.1.9(A), any truck body, commercial trailer, or similar commercial vehicles in any residential zone or the R-P zone.

19.2 OFF-STREET LOADING

19.2.1 Uses requiring off-street loading

Off-street loading is not required in the B-6, B-7 or WCZ zones. In all other zones, the minimum off-street loading bays or loading berths shall be as provided in Table 19-C. These minimum requirements shall be met and maintained in the case of new construction, alterations, and change of use.

19.2.2 Design of off-street loading

Each loading bay shall have minimum dimensions of 50 feet by 14 feet and may be located either within a building or outside and adjoining an opening in the building, except that in the case of hospitals and intermediate, long-term, and extended care facilities, the off-street loading area provided for ambulance and other emergency vehicles shall be exempt from the minimum dimensional requirement but shall be of sufficient width and depth to permit expeditious access and egress from the loading area. Every part of such loading bay shall be located completely off the street. In case trucks, trailers, or other motor vehicles larger than the dimensions of the minimum loading bay habitually serve the building in question, additional space shall be provided so that such vehicle shall park or stand completely off the street.

TABLE 19-C: OFF-STREET LOADING REQUREMENTS

Use and Size (Gross Floor Area)		Minimum Number of Bays or Berths
General offices and hotels (> 100,000 SF)		1
Retail and industrial	5,000 - 40,000 SF	1
	40,000 - 100,000 SF	2
	100,000 - 160,000 SF	3
	160,000 - 240,000 SF	4
	240,000 - 320,000 SF	5
	320,000 - 400,000 SF	6
	Each 90,000 over 460,000 SF	1 additional
Hospitals and intermediate, long-term, and extended care facilities		2 off-street loading areas shall be provided whereby one service area for ambulance and other emergency vehicles shall be separate from one service area accommodating supply vehicles, and whereby both off-street loading areas shall be separate from parking and entrance locations.

19.2.3 Requirements for additional bays, alterations, or modifications

Any additional loading bays which are provided in excess of the requirements of this article or any loading bays otherwise established shall meet the requirements of Subsection 19.2.2, and no alterations or modifications shall be made in an existing building or structure whereby loading openings or platforms are constructed or established unless the provisions of Subsection 19.2.2 are met.

19.2.4 Nonconformity as to off-street loading

A building which is nonconforming as to the requirements for off-street loading shall not be enlarged or added to, unless off street loading is provided sufficient to satisfy the requirements of Article 19 for both the addition or enlargement and the original building or structure.

19.3 SUSTAINABLE TRANSPORTATION FUND

19.3.1 Establishment

By act of the Portland City Council, the Sustainable Transportation Fund is hereby established.

19.3.2 Purpose

The purpose of the Sustainable Transportation Fund is to implement those provisions of the *Peninsula Transit Study Report and Action Plan*, as adopted by the Portland City Council on August 3, 2009, which recommended creation of a Sustainable Transportation Fund. The *Peninsula Transit Study Report and Action Plan* established a goal to reduce the number and impact of single-occupancy vehicle trips to and from the Portland Peninsula. Achieving this goal requires transportation choice for residents, businesses, and visitors. This ordinance establishes a funding source for broadening transportation choice and facilitating development with lower traffic impacts and reduced parking requirements. The mechanism and protocol for collecting fees and spending funds

are consistent with state requirements for utilizing transportation-related impact fees.

19.3.3 Deposits and expenditures

A. **Deposits.** The City shall establish a Sustainable Transportation Fund to be set up as a separate account within the City. Deposits into the fund shall include:
   1. 100% of the revenue generated by the fee in-lieu of parking program, as established in Subsection 19.1.7 of this article.
   2. Funds appropriated for deposit into the fund by vote of the City Council.
   3. Voluntary contributions of money or other liquid assets to the fund.
   4. Any federal, state or private grant or loan funds provided to the fund.

B. **Accounting of deposits**. Funds from the fee in-lieu of parking program, as established in Subsection 19.1.7, shall be individually collected and accounted for by project and the geographic fee in-lieu of parking subdistrict in which it is located.

C. **Funds to be used within 10 years of deposit.** Funds collected under the fee in-lieu of parking ordinance shall be spent on eligible infrastructure and/or capital improvements or expenses within 10 years of the date of collection. Any funds which are not so utilized and which exceed the City's actual costs of implementing the infrastructure improvement or improvements for which such fees were collected shall be refunded. Refunds shall be paid to the owner of records of the property for which the funds were collected, determined as of the date the refund is made.

D. **Use of funds by subdistrict.** Funds collected under the fee in-lieu of parking ordinance shall be spent on permitted expenditures of the fund within the same geographic fee in-lieu of parking sub-district as the contributing project. However, for projects located within 250 feet of an abutting subdistrict, contributed fees can be used for eligible infrastructure projects in either abutting subdistrict.

E. **Permitted expenditures of the fund.** The Sustainable Transportation Fund may only be expended on the activities as described below:
   1. Funds collected as fees in-lieu of parking shall be expended toward capital transportation improvements. Such capital improvements shall include but are not limited to the following:
      a. Parking infrastructure:
         i. Shared use, publicly accessible parking facilities.
         ii. Publicly accessible bicycle racks and bicycle parking shelters.
      b. Transit capital improvements and expenses:
         i. Bus shelters, bus turnouts, transit signage and other transit amenities.
         ii. Buses and transit vehicles.
         iii. Transit and transportation information systems.
         iv. Fixed guide way and/or rail transit systems.
      c. Pedestrian and bicycle infrastructure:
         v. Multi-use trails and non-vehicular transportation corridors.
         vi. Pedestrian infrastructure and amenities located on publicly accessible rights-of-way including but not limited to crosswalks, signalization, landscaping, street

furniture, wayfinding signage, traffic calming, and lighting.

vii. New public sidewalks and new bicycle lanes along publicly accessible rights of way or corridors where such facilities are not previously provided.

d. Other such improvements intended to enhance transportation choice and promote transit and non-automotive transport.

2. Funds collected or appropriated by means other than from a fee in-lieu of parking may be used for any of the capital transportation improvements listed above, and for any of the following uses:

a. Transportation Demand Management program administration.

b. On- or off-peninsula transit and/or non-automotive transportation capital or operating expenses.

c. Transit and/or non-automotive transportation promotion and education material.

d. Other such programs or improvements intended to enhance transportation choice and promote transit and non-automotive transport for the City of Portland.

F. **Annual Sustainable Transportation Plan and appropriations schedule.** Annually, the City Manager shall submit to the City Council a recommended sustainable transportation plan and appropriations schedule, utilizing the revenues of the Sustainable Transportation Fund. The Transportation Committee of the City Council or such other committee as the council shall designate shall recommend and refer the plan and appropriations schedule to the City Council for action.



20 SIGNS

20.1 PURPOSE

This article has been adopted to ensure that all signs installed in the city are compatible with the unique character and environment of the community through a comprehensive system of reasonable, effective, consistent, content-neutral, and nondiscriminatory sign standards and requirements. More specifically, this article is intended to:

A. Ensure that all signs are compatible with the unique character and environment of the City of Portland, and that they support the desired urban design and development patterns of the various zones, overlay zones, and historic areas within the city.

B. Balance public and private objectives by allowing adequate avenues for both commercial and non-commercial messages.

C. Improve pedestrian and traffic safety by promoting the free flow of traffic and the protection of pedestrians and motorists from injury and property damage caused by, or which may be fully or partially attributable to, cluttered, distracting, and/or illegible signage.

D. Prevent property damage, personal injury, and litter caused by signs that are improperly constructed or poorly maintained.

E. Protect property values, the local economy, and quality of life by preserving and enhancing the appearance of the streetscape.

F. Provide consistent sign design standards that enable the fair and consistent enforcement of these sign regulations.

20.2 DEFINITIONS

Sign. A structure, device, figure, display, message placard, or other contrivance, or any part thereof, situated outdoors or indoors, which is designed, constructed, intended, or used to advertise, provide information in the nature of advertising, provide historical, cultural, archeological, ideological, political, religious, or social information, or direct or attract attention to an object, person, institution, business, product, service, message, event, or location by any means, including words, letters, figures, designs, symbols, fixtures, colors, or illumination.

Sign, animated. Flashing, blinking, reflecting, revolving, or other similar sign with visibly moving or rotating parts or visible mechanical movement of any kind.

Sign, awning. Any sign that is part of or attached to an awning, canopy, or other fabric, plastic, or structural protective cover over a door, entrance, window, storefront, or outdoor service area.

Sign, A-Frame. A pedestrian-oriented self-supporting sign that is not permanently affixed to a structure or the ground.

Sign, bandit. Any advertising sign that is placed on public property or on private property without the consent of the property owner or as authorized in this article.

Sign, blade. A permanent, pedestrian-scaled sign mounted either to the wall of building by means of a bracket or attached to the underside of a lintel,

arch, or other overhead structure above a porch or walkway and which is typically hung perpendicular to the wall of the building.

Sign, building identification. A sign consisting of letters or numbers applied to a building wall, engraved into the building material, or consisting of a sculptural relief which contains the name of the building or describes its function, but which does not advertise any individual tenant of the building or any products or services offered.

Sign, building-mounted. Sign attached to, connected to, erected against the wall, parapet, or fascia of a building or structure.

Sign, bus shelter. As specified in 23 M.R.S.A. §1908-A, any outdoor sign visible to the traveling public from public right-of-way that is affixed to a publicly-owned bus shelter operated by a transit agency.

Sign, cabinet. A permanent building-mounted or freestanding sign with its text and/or logo symbols and artwork on a translucent face panel that is mounted within a metal frame or cabinet either that contains the lighting fixtures which illuminate the sign face from behind.

Sign, canopy. A sign that is printed, painted, or affixed to a canopy, typically used to accent building entries.

Sign, center identification. A sign identifying the name of a building, office park, or shopping center only.

Sign, changeable copy. A sign that is designed so that characters, letters, numbers, or illustrations can be manually or mechanically changed or rearranged without altering the face or surface of the sign. For the purposes of this article, a sign whose message changes more than eight times per day is considered an animated sign and not a changeable copy sign.

Sign, directional. A sign erected to inform the viewer of the approximate route, direction, or location of a facility or use.

Sign, direct illumination. Illumination resulting from light emitted directly from a light bulb or light fixture, and not light diffused through translucent signs or reflected from other surfaces such as the ground or building face.

Sign, directory. A permanent sign which provides information in a list, roster, or directory format.

Sign, Electronic Message. A sign or portion of a sign that utilizes computer-generated messages or some other electronic means of changing its characters, letters, numbers, illustrations, display, color, and/or light intensity, including animated graphics and video, by electronic or automatic means. An Electronic Message Sign is not a Single- or Two-Color LED Sign.

Sign, externally-illuminated. A sign whose illumination is reflected from its source by the sign surface to the viewer's eye, the source of light not being visible to the viewer.

Sign, feather banner. A temporary sign that is taller than it is wide and made of a flexible material (typically cloth, nylon, or vinyl) and mounted to a pole to fly freely.

Sign, freestanding. A permanent sign that is erected or mounted on its own self-supporting permanent structure or base detached from any supporting elements of a building.

Sign, fuel pump topper. A temporary sign affixed to the top of an operable fuel dispensing pump used to advertise goods offered for sale on the same parcel on which the fuel pump is located.

Sign, incidental. A sign which provides incidental information, including security, credit card acceptance, business hours, open/closed, directions to services and facilities, or menus.

Sign, individual letter. A cut-out or etched letter or logo which is individually mounted on a building wall or freestanding sign.

Sign, internally illuminated. Any sign in which the source of light is entirely enclosed within the sign and not directly visible.

Sign, landmark. A permanent sign indicating individual historic landmarks, local historic districts, or otherwise determined by the City to have attained a high degree of community, cultural, aesthetic, or historic significance.

Sign, logo. A stylized group of letters, words, numbers, or symbols used to represent and distinguish a business, product, or organization.

Sign, marquee. A permanent sign structure placed over the entrance to a building and typically used for a theater or other entertainment use.

Sign, monument. A permanent freestanding sign with a solid base that is at least 60% the width of the sign face.

Sign, off-premise. Any sign that directs attention to a business, commodity, service, entertainment, product, structure, use, or property different from a structure or use existing on the property where the sign is located, and/or any sign on which space is rented, donated, or sold by the owner of said sign or property for the purpose of conveying a message.

Sign, permanent. A sign constructed of durable materials and intended to exist for the duration of time that the use or occupant is located on the premises.

Sign, pole. An elevated permanent sign typically supported by one or two poles, posts, or columns that do not meet the base width requirements for a monument sign.

Sign, projecting. A permanent sign that is attached to and extends perpendicular from a building from the wall.

Sign, service island canopy. A permanent sign mounted on or under a service island canopy, including on a fascia.

Sign, single-color or two-color LED. A permanent or temporary sign or portion of a sign composed of single-color or two-color LEDs that displays static or changeable sign messages using characters, letters, and numbers only. Examples of these signs include, but are not limited to, "open" or "closed" signs, time

and temperature" signs, or signs indicating the number of available spaces in a parking garage.

Sign, temporary. A sign constructed of paper, cloth, or similar expendable material, which is intended for a definite and limited period of display and which is designed to be moved easily and is not permanently affixed to a structure, sign area, or window.

Sign, wall. A permanent sign affixed to or erected against the wall or fascia of a building or structure, with the exposed face of the sign parallel to the plane of wall or fascia to which it is affixed or erected.

Sign, wall banner. A temporary sign constructed of cloth, bunting, plastic, paper, or similar non-rigid material, and securely attached to the wall or support structure for which it is advertising. Flags are not considered temporary wall banners.

Sign, window. A permanent or temporary sign posted, painted, placed, or affixed in or on a window, or otherwise exposed to public view through a window.

Sign, Yard, Type I. A small temporary sign typically constructed of corrugated plastic and supported on a wire frame used, for example, for advertising by local businesses or by election campaigns.

Sign, Yard, Type II. A temporary sign mounted on a single post installed securely in the ground with a small sign hanging from a cross-bar mounted parallel to the ground.

Sign, Yard, Type III. A temporary large sign mounted on two posts installed securely in the ground.

Sign copy. Any graphic, word, numeral, symbol, insignia, text, sample, model, device, or combination thereof that is primarily intended to advertise, identify, or notify.

Sign face. The exterior surface of a sign, exclusive of structural supports, on which is placed the sign copy.

Sign substructure. The supports, uprights, bracing and/or framework of a sign.

20.3 APPLICABILITY

20.3.1 Applicability

This article applies to all permanent and temporary signs within the city unless specifically exempted.

A. The provisions of this article shall be applied in a content-neutral manner. Non-communicative aspects of all signs, not related to the content of the sign, must comply with the provisions of this article. "Non-communicative aspects" include the time, place, manner, location, size, height, illumination, spacing, and orientation of signs.

B. Nothing in this article shall be construed to prohibit a person from holding a sign while picketing or protesting on public property.

20.3.2 Substitutions and interpretations

This article is not intended to, and does not, restrict speech on the basis of its content, viewpoint, or message. No part of this article shall be construed to favor commercial speech over non-commercial speech. A non-commercial message may be

substituted for any commercial or non-commercial message displayed on a sign without the need for any approval or permit from the City, provided that the sign is otherwise permissible under this article. To the extent any provision of this subsection is ambiguous, the term will be interpreted not to regulate on the basis of the content of the message.

20.3.3 Exemptions

The following signs are not regulated under this article and are not subject to the permitting requirements of Section 20.4:

A. Numerals and letters identifying an address from the street to facilitate emergency response compliant with City requirements.

B. Building identification signs not exceeding two square feet in area for residential buildings and four square feet in area for nonresidential and mixed-use buildings.

C. Any sign, posting, notice, or similar signs placed, installed, or required by law by a city, county, or a federal or state governmental agency in carrying out its responsibility to protect the public health, safety, and welfare, including the following:
   1. Emergency and warning signs necessary to warn of dangerous and hazardous conditions and that serve to aid public safety or civil defense.
   2. Numerals and letters identifying an address from the street to facilitate emergency response and compliant with City requirements.
   3. Traffic signs and signs at bus stops and in bus shelters.
   4. Signs required to be displayed by any applicable federal, state, or local law, regulation, or ordinance.
   5. Signs directing the public to points of interest.
   6. Signs showing the location of public facilities.
   7. Signs subject to the provisions of 23 M.R.S. § 1913-A.

D. Historic plaques and commemorative signs erected and maintained by non-profit organizations, building cornerstones, and date-constructed stones not exceeding four square feet in area.

E. Non-illuminated incidental signs which provide information including, but not limited to, credit card acceptance, business hours, open/closed, no soliciting, directions to services and facilities, or menus, provided these signs do not exceed an aggregate of two square feet in sign area in the Residential Sign District and six square feet in sign area in all other sign districts.

F. Landmark signs.

G. Signs posted on a community bulletin board, not to exceed 11 inches by 17 inches.

H. Signs not readable from the public right-of-way, such as:
   1. Signs or displays located entirely inside of a building and not visible
   2. from the building's exterior.
   3. Signs intended to be readable from within a parking area but not readable beyond the boundaries of the lot or parcel upon which they are located or from any public right-of-way.
   4. Signs located within City recreation facilities.
   5. Signs that are an integral part of an allowed vending machine or similar facility located outside of a business.

I. Temporary signs placed within the public right-of-way, subject to the provisions of 23 M.R.S.A. §1913-A.

20.4 REVIEW PROCEDURES

20.4.1 Review Authority

Table 20-A establishes the final review authority for sign-related applications.

20.4.2 Applications and fees

A. **Filing of applications.** An application for a permanent or temporary sign permit must be submitted to the Building Authority on an application form or in accordance with the application specifications published by the Building Authority. Each application must be accompanied by the applicable fee, which shall be established by the City Council.

B. **Review and approval**

1. Following receipt of a complete application, the Building Authority shall review all sign permit applications and supporting documentation for compliance with the standards of this article.
2. The Building Authority shall either:
   a. Issue the sign permit if the sign that is the subject of the application conforms to the requirements of this article, and also provided that any other required permits as determined by the Building Authority have been obtained, or
   b. Deny the sign permit if the sign that is the subject of the application fails to conform to the requirements of this article. If the sign permit application is denied, the reason shall be stated in writing.

TABLE 20-A: REVIEW AUTHORITY

Application Type	Building Authority	Planning Authority – Historic Preservation
Sign permit	●	-
Signs in historic districts	●	●

20.4.3 Permanent sign permits

A. **Sign permit required.** A sign permit is required to erect, install, construct, move, alter, replace, suspend, display, or maintain (i.e., removal of the sign so that structural elements supporting the sign may be maintained) any permanent sign, unless otherwise specified in this article. Each sign and change of copy (i.e., changing of the face or letters on a sign) requires a separate sign permit except as allowed in Subsection 20.7.4. Exceptions to the requirement for a sign permit include the exemptions listed in Subsection 20.3.3, as well as building-mounted directional signs, building-mounted directory signs, and window signs. Refer to Section 20.8 for permanent sign standards that apply even when no sign permit is required. Any sign not authorized pursuant to this article is not allowed.

B. **Assignment of permanent sign permits.** A current and valid permanent sign permit issued under this article shall be freely assignable to a successor as owner of the property or operator of the premises. The assignment shall not require approval by the Building Authority.

C. **Expiration.** A permanent sign permit will expire and become null and void if the work authorized in compliance with the permit is not commenced within 180 days

from the date of issuance of the permit, or if work is suspended or abandoned for a period of 180 days or more at any time after the work has commenced.

20.4.4 Temporary sign permits

A. **Sign permit required.** A temporary sign permit is required to display a temporary wall banner sign and an A-frame sign placed in the public right-of-way. All other temporary sign types do not require a sign permit.

B. **Duration of temporary sign permit**. A temporary sign permit for a wall banner is valid for 60 days from the date of issuance. There are no time limitations for A-frame signs installed in public right-of-way.

20.4.5 Signs in historic districts

A. **Applicability**. The standards established in this subsection shall be applied within historic districts in addition to the standards otherwise established in this article.

B. **Review.** In addition to being subject to the other provisions of this article, all permanent signs proposed in historic districts must be reviewed for approval by the Planning Authority in accordance with the sign standards included in Subsection 17.8.6 as detailed in the *Historic Resources Design Manual*. If there is a conflict between the standards included in Article 17 and the requirements of this article, the stricter shall apply.

20.4.6 Appeals

Appeals of sign permit decisions are within the jurisdiction of the Zoning Board of Appeals.

20.5 SIGN DISTRICTS ESTABLISHED

Table 20-B combines the zones established in Article 5 into sign districts based on similarity of use, building form, and character. For sign standards specific to overlay zones, see Article 8. If no sign standards exist within the overlay zone, the standards of the underlying zone shall apply.

20.6 GENERAL RESTRICTIONS FOR ALL SIGNS

20.6.1 Location restrictions

Except where specifically authorized in this article, signs may not be placed in the following locations:

A. **Public right-of-way.** Within, on, or projecting over public property, City rights-of-way, or waterways, except signs specifically authorized in this article.

B. **Obstructing traffic signals.** Any location that obstructs the view of any authorized traffic sign, signal, or other traffic control device.

C. **Obstructing intersection visibility.** At the intersections of streets or streets and driveways where the visual lines of sight for drivers of motor vehicles are obstructed. Signs shall observe corner clearance requirements as listed in Subsection 7.4.1.

D. **Ingress and egress.** Areas allowing for ingress to or egress from any door, window, vent, exit way, or fire lane required by Chapter 6 of the City of Portland Code of Ordinances or Fire Department regulations currently in effect.

E. **Landscape elements or utilities.** Tacked, painted, burned, cut, pasted, or otherwise affixed to trees, rocks, light and utility poles, posts, fences, ladders, benches, or

similar supports that are visible from a public way.

F. **Off-premises.** Off the premises of the business to which the commercial advertising sign refers, except as provided in Section 20.9.

G. **Roof-mounted.** Mounted on the roof of a building or structure.

TABLE 20-B: SIGN DISTRICTS ESTABLISHED

Sign District	Zones	Description
Residential Sign District	R-1 Residential Zone R-2 Residential Zone R-3 Residential Zone R-4 Residential Zone R-5/R-5a Residential Zone R-6/R-6a Residential Zone IR-1 Island Residential Zone IR-2 Island Residential Zone IR-3 Island Residential Zone	These zones comprise the vast majority of residential land in Portland. Signage is limited in these zones, as a variety of sign types could detract from the desired residential character.
Small Mixed-Use Sign District	R-P Residence-Professional Zone B-1/B-1b Neighborhood Business Zone B-2b & B-2c Community Business Zone IS-FBC UA, UN, and UT Zones I-B Island Business Zone O-P Office Park Zone	These zones allow a variety of sign types to achieve a diverse, mixed-use character appropriate for neighborhood residential, office, service, and retail uses.
Large Mixed-Use Sign District	B-2 Community Business Zone B-4 Commercial Corridor Zone EWPZ Eastern Waterfront Port Zone	These zones comprise the major commercial centers in Portland and allow a variety of sign types to achieve a diverse character appropriate for major office, service, and retail uses.
Downtown Sign District	B-3/B-3b/B-3c Downtown Business Zone B-5/B-5b Urban Commercial Mixed-Use Zone B-6 Eastern Waterfront Mixed Zone B-7 Mixed Development Zone WCZ Waterfront Central Zone	The downtown core zones allow a variety of sign types to achieve a diverse, mixed-use character appropriate for office, service, retail and mixed-uses in the Downtown.
Industrial and Transportation Sign District	A-B Airport Business Zone I-L/I-Lb Industrial Zone I-H/I-Hb Industrial Zone I-M/I-Ma/I-Mb Industrial Zone WPDZ Water Port Development Zone	These zones allow a number of sign types to achieve a character appropriate for industrial manufacturing, warehousing, and transportation uses.
Open Space Sign District	R-OS Recreation and Open Space Zone RPZ Resource Protection Zone	These zones prohibit most sign types, allowing only those necessary to provide information for primarily open space and recreation uses.

H. **Storage containers and receptacles.** On fuel tanks, storage containers, and/or solid waste receptacles or their enclosures, except for a manufacturer's or installer's identification, appropriate warning signs and placards, and information required by law.

20.6.2 Prohibited signs

Except as otherwise provided in this article, the following signs are prohibited:

A. Billboards.
B. Signs that could be confused with any authorized traffic signal or device or that interfere with, obstruct, confuse, or mislead traffic.
C. Bandit signs.
D. Signs or other devices that are inflatable or affected by the movement of the air or other atmospheric or mechanical means, including inflatable balloons, spinners, strings of flags and pennants, feather banners, fixed aerial displays, streamers, tubes, and inflated characters used as signs, whether attached to a sign or to vehicles, structures, poles, trees and other vegetation, or similar support structures, except as allowed in Section 20.9.
E. Any sign which advertises a business no longer in existence or a product or service no longer being sold, except for landmark signs.
F. Any temporary sign, other than those signs allowed pursuant to Section 20.9.
G. Any other signs not specifically allowed by the provisions of this article.

20.6.3 Display restrictions

Except as otherwise provided in this article, the following display features are prohibited:

A. Animated features which rotate, move, or give the appearance of moving by mechanical, wind, or other means. Barber poles no more than three feet in height and 10 inches in diameter and clocks are excepted from this restriction.
B. Sound, odor, or any particulate matter including bubbles, smoke, fog, confetti, or ashes.
C. Lighting devices with intermittent, flashing, rotating, blinking, or strobe light illumination, animation, motion picture, or laser or motion picture projection, or any lighting effect creating the illusion of motion, as well as laser or hologram lights.
D. Search lights or laser light displays when used as attention-attracting devices.
E. Strings of lights used in connection with commercial premises, except when used for temporary lighting for decoration, and lights arranged in the shape of a product, arrow, or any commercial message.

20.7 GENERAL REQUIREMENTS FOR ALL SIGNS

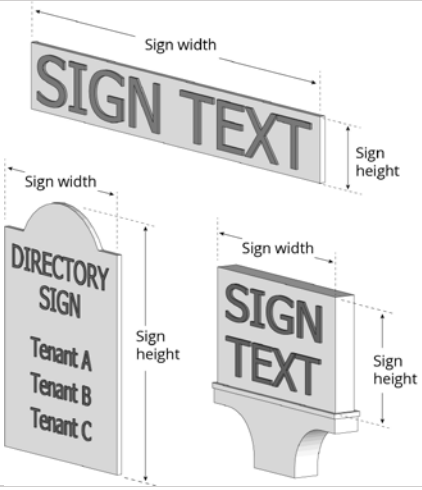
20.7.1 Sign measurement

Sign area and height shall be measured as described in Tables 20-C and 20-D.

20.7.2 Computation of the number of signs

When determining the number of signs, a single sign shall be considered either enclosed within a single frame or composed of modular parts with identical frame elements designed to be joined together to form a single composite sign.

TABLE 20-C: SIGN AREA MEASUREMENT

Signs on background panel	Sign copy mounted, affixed, or painted on a background panel or surface distinctively painted, textured, or constructed as a background for the sign copy, is measured as that area contained within the sum of the smallest rectangle(s) that will enclose both the sign copy and the background.	
Signs as individual letters	Sign copy mounted as individual letters or graphics against a building surface that has not been painted, textured, or otherwise altered to provide a distinctive background for the sign copy, is measured as a sum of the smallest rectangle(s) that will enclose each word and each graphic in the sign.	

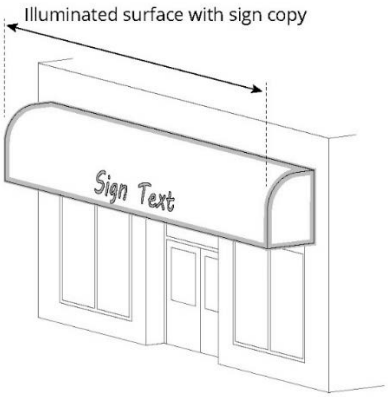
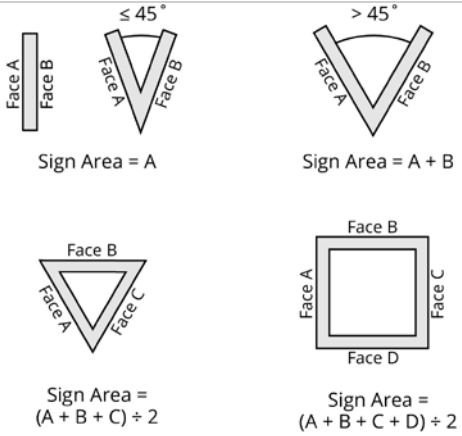
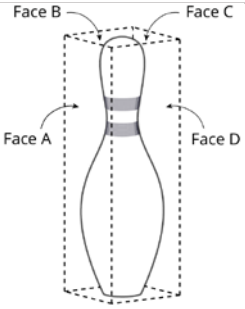
Signs on illuminated surface	Sign copy mounted, affixed, or painted on an illuminated surface or illuminated element of a building or structure, is measured as the entire illuminated surface or illuminated element, which contains sign copy. Such elements may include lit canopy fascia signs, and/or interior lit awnings.	

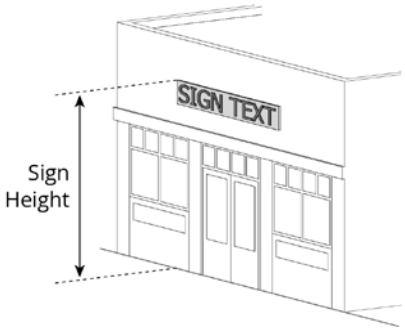
TABLE 20-C (CONT.): SIGN AREA MEASUREMENT

Irregular-shaped signs	Sign area for irregular shaped signs is determined by dividing the sign into squares, rectangles, triangles, circles, arcs, or other shapes the area of which is easily calculated.	
Multi-face signs	For two-face signs, if the interior angle between the two sign faces is 45 degrees or less and the sign faces are less than 42 inches apart, the sign area is determined by the measurement of one sign face only. If the angle between the two sign faces is greater than 45 degrees, the sign area is the sum of the areas of the two sign faces. For three- or four-face signs, the sign area is 50 percent of the sum of the areas of all sign faces.	

Spherical, free-form, or sculptural signs	Spherical, free-form, or sculptural signs are measured as 50% of the sum of the areas of the four vertical sides of the smallest four-sided polyhedron that will encompass the sign structure. Signs with greater than four polyhedron faces are prohibited.	 Sign Area = (A + B + C + D) ÷ 2

Note: Numerals and letters used to identify an address are not included in the determination of sign area.

TABLE 20-D: SIGN HEIGHT MEASUREMENT

Building-mounted signs	The height of signs mounted on a building is the vertical distance measured from the base of the wall on which the sign is located to the top of the sign or sign structure.	
Freestanding signs	Sign height is measured as the vertical distance from the finished grade at the base of a sign to the top of the sign exclusive of any filling, berming, mounding, or landscaping solely for the purpose of locating the sign and excluding decorative embellishments as permitted in Section 20.8.	

20.7.3 Sign illumination

A. Sign illumination by sign district

1. Table 20-E identifies the type of illumination permitted (●) or not permitted ( ) by sign district. All allowed permanent signs may also be non-illuminated. All permanent signs for single-family residences or duplexes and all temporary signs must be non-illuminated.
2. The illumination level of a sign must be reduced if the Building Authority determines the light output to be excessive. The Building Authority shall use the following criteria to determine if the illumination is excessive:
   a. The amount of illumination is substantially greater than the illumination level of other nearby signs.
   b. The sign's illumination interferes with the visibility of other signs or with the perception of objects or buildings in the vicinity of the sign.
   c. It directs glare toward streets or motorists.
   d. It adversely impacts nearby residents or neighborhoods.
   e. The illumination reduces the night time readability of the sign.

B. Internal illumination. To minimize glare, internally-illuminated signs must either be constructed with an opaque background and translucent text and symbols, or with a colored background. Backgrounds must not be white, off-white, light gray, cream, or yellow.

TABLE 20-E: SIGN ILLUMINATION BY SIGN DISTRICT

Sign District Name / Type of Illumination	External	Direct	Internal (Cabinet Sign)	Internal (Individual Letters /Logo)	Neon	Single or Two-Color LED	Electronic Message Signs
Residential Sign District	-- [1]			-- [1]			-- [1]
Small Mixed-Use Sign District	●	● [2]	● [3]	●	●	●	
Large Mixed-Use Sign District	●	●	●	●	●	●	●
Downtown Sign District	●	●	●	●	●	●	
Industrial and Transportation Sign District	●	●	●	●	●	●	● [4]
Open Space Sign District	●						

[1] Allowed for institutional uses only.
[2] Only allowed in B-1/B-1b, B-2b/B-2c, IS-FBC, and I-B zones.
[3] Only allowed in B-2b, B2-c, and OP zones.
[4] Only allowed in I-L, I-Lb, I-M, I-Ma, I-Mb, I-H, and I-Hb zones.

C. External illumination

1. Externally-illuminated signs must be illuminated only with steady, stationary, fully-shielded light sources directed solely onto the sign without causing glare.
2. The light source for externally-illuminated signs must be arranged and shielded to substantially confine all direct light rays to the sign face and away from streets and adjacent properties as illustrated in Figure 20-A.

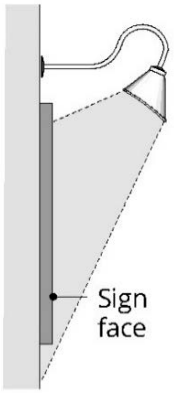


FIGURE 20-A: EXTERNAL ILLUMINATION

D. **Direct illumination.** All direct illumination must be turned off daily at the close of business or 10 p.m., whichever occurs last.

E. **Neon.** Exposed neon sign lighting must be turned off daily at the close of business or 10 p.m., whichever occurs last.

F. **Single-color or two-color LED signs.**

1. Single or two-color LED signs are exempt from the sign area limitations for window signs and building-mounted signs.
2. Single or two-color LED signs must be turned off daily at the close of business or 10 p.m., whichever occurs last.

G. **Electronic Message Signs**

1. One electronic message sign is allowed per lot.
2. Electronic message signs must not flash, blink, flutter, include intermittent or chasing lights, or display video messages (i.e., any illumination or message that is in motion or appears to be in motion). Electronic message signs may display changing messages provided that each message is displayed for no less than 30 seconds.
3. Electronic message signs must be equipped with photocell technology to control and vary the intensity of light output depending on the amount of ambient light that is present to prevent overly bright luminance at night. Automatic controls must limit night luminance to a maximum of 100 nits when the display is set to show maximum brightness in 100 percent full white mode.
4. The applicant shall provide a written certification from the sign manufacturer that the night time luminance has been factory pre-set not to exceed 100 nits as described in (3) above, and that this setting is protected from end-user modification by password-protected software or other method as deemed appropriate by the Building Authority.
5. Electronic message signs must be turned off daily at the close of business or 10 p.m., whichever occurs first.

20.7.4 Changeable sign copy

Changeable sign copy must comply with the following standards:

A. **Maximum area.** The maximum area of changeable sign copy shall be limited to 50% of

the total sign area, except for marquee signs. This does not apply to any signs required by law.

B. **Sign design.** The changeable sign copy must be an integral part of a permanent building-mounted or freestanding sign.

C. **Illumination.** Changeable sign copy may be non-illuminated or internally-illuminated.

20.7.5 Structure and installation

A. **Authority.** The construction of signs shall be enforced and administered by the Building Authority. All signs and advertising structures must be designed to comply with the provisions of this article and applicable provisions of Chapter 6 of the City of Portland Code of Ordinances and constructed to withstand wind loads, dead loads, and lateral forces.

B. **Electrical features.** Where electrical service is provided to freestanding signs or landscape wall signs, all such electrical service must be placed be underground and concealed. Electrical service to building-mounted signs, including conduit, housings, and wire, must be concealed or, when necessary, painted to match the surface of the structure upon which they are mounted. An electrical permit shall be issued prior to installation of any new signs requiring electrical service.

C. **Raceway cabinets.** Raceway cabinets, as illustrated in Figure 20-B, shall only be used in building-mounted signs when access to the wall behind the sign is not feasible, shall not extend in width and height beyond the area of the sign, and shall match the color of the building to which it is attached. Where a raceway cabinet provides a contrast background to sign copy, the colored area is counted in the total allowable sign area allowed for the site or business. A raceway cabinet is not a cabinet sign.

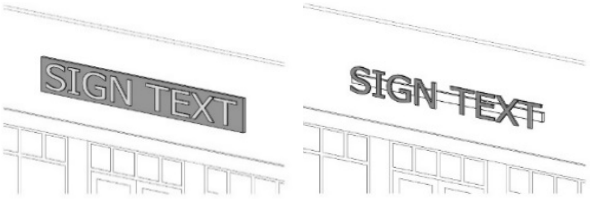


FIGURE 20-B: RACEWAY CABINET EXAMPLES

D. **Materials.** All permanent signs allowed by this article must be constructed of durable materials capable of withstanding continuous exposure to the elements and must be permanently attached to the ground, a building, or another structure by direct attachment to a rigid wall, frame, or structure.

20.7.6 Sign maintenance

All signs must be maintained by any property owner, lessor, lessee, manager, agent, or other person having lawful possession or control over a building, structure, or parcel of land, in a condition or state of equivalent quality to which was approved or required by the City. All signs together with their supports and appurtenances must be maintained in good structural condition, in compliance with applicable provisions of Chapter 6 of the City of Portland Code of Ordinances, and in conformance with this article. Maintenance of a sign includes periodic cleaning, replacement of flickering, burned out, or broken light bulbs or fixtures, repair or replacement of any faded, peeled, cracked, or

otherwise damaged or broken parts of a sign, and any other activity necessary to restore the sign so that it continues to comply with the requirements and contents of the sign permit issued for its installation and provisions of this article.

20.8 STANDARDS FOR PERMANENT SIGNS

20.8.1 Permitted sign types by sign district

Table 20-F establishes which sign types are permitted (●) or not permitted ( ) in each sign district. Any combination of allowed sign types may be used within a given sign district unless specifically prohibited.

20.8.2 Permanent building-mounted sign standards

The maximum total area for all building-mounted signs is established in Table 20-G. The area of all building-mounted signs is included in the maximum total sign area, except when specifically exempted. All permanent building-mounted signs shall comply with the corresponding sign type standards provided in Tables 20-H to 20-Q.

20.8.3 Permanent freestanding sign standards

All permanent freestanding signs shall comply with the standards of Table 20-R and the corresponding sign type standards established in Tables 20-S to 20-V. Unless specifically indicated, standards applicable within a sign district apply to single- and multi-tenant buildings. There is no setback requirement for permanent freestanding signs, provided that the sign is entirely located on the property where the sign is permitted, and the sign is located in compliance with Table 20-F.



TABLE 20-F: ALLOWED SIGN TYPES BY SIGN DISTRICT

	Sign Type	Residential Sign District [1]	Small Mixed-Use Sign District	Large Mixed-Use Sign District	Downtown Sign District	Industrial Sign District	Open Space Sign District
Building-Mounted	Awning Sign		●[2]	●	●	●	●
	Canopy Sign		●[2]	●	●	●	
	Blade Sign		●	●	●		
	Directional Sign		●[2]	●	●	●	●
	Directory Sign	●[3]	●	●	●	●	
	Marquee Sign			●	●		
	Projecting Sign		●[2]	●	●	●	
	Service Island Canopy Sign			●	●	●	
	Wall Sign	●	●	●	●	●	●
	Window Sign		●	●	●	●	●
Freestanding	Freestanding Directional Sign	●	●	●	●[4]	●	●
	Freestanding Directory Sign	●[3]	●	●	●[4]	●	●
	Monument Sign		●	●	●[5]	●	
	Pole Sign			●	●[5]	●	

[1] For institutional uses in residential zones, all permanent sign types are allowed except for the following: awning sign, blade sign, canopy sign, marquee sign, pole sign, projecting sign, service island canopy sign; and window sign.
[2] Not allowed in the R-P Zone.
[3] Not allowed in the R-1, R-2, R-4, IR-1, and IR-2 zones.
[4] Not allowed in the B-3 zone.
[5] In the B-3 and B-5 zones, freestanding signs are permitted only if the front façade of the building is set back a distance of at least 20 ft. from either of the front facades of abutting buildings. In the case of a multi-tenant building, the individual tenants' frontage must be set back a distance of at least 20 ft. from other tenant's frontages.

TABLE 20-G: DIMENSIONAL STANDARDS FOR BUILDING-MOUNTED SIGNS BY SIGN DISTRICT

Sign District			Total Area for All Signs (per Tenant or Façade)	Number of Signs (max.)
Residential	Single-family lots		2 SF max.	1 per lot (either freestanding or building-mounted)
	PRUDs, multi-family lots		10 SF max.	1 per street frontage
	Institutional use in all residential zones		1.5 SF per linear foot of building façade where the sign is placed 150 SF max.	1 per street frontage, plus 2 additional
Small Mixed-Use	Single-tenant building		I-B zone: 1 SF per linear foot of building façade where the sign is placed; Max. 40 SF All other zones: 1.5 SF per linear foot of building façade where sign is placed; Max. 100 SF	1 per street frontage, plus 1 additional
	Multi-tenant building		1.5 SF per linear foot of building façade where the sign is placed 150 SF max.	1 per tenant[5,6], plus 1 additional for the building.
Large Mixed-Use	Single-tenant building		2 SF per linear foot of building façade where the sign is placed 200 SF max.[1]	1 per street frontage, plus 2 additional
	Multi-tenant building		1.5 SF per linear foot of tenant façade where the sign is placed 150 SF max.	1 per tenant[6], plus 1 additional for the building.
Downtown	Single-tenant building		2 SF per linear foot of building façade where the sign is placed	1 per street frontage, plus 2 additional
	Multi-tenant building	Ground floor tenants	2 SF per linear foot of tenant frontage where the sign is placed	1 per tenant[5, 6]
		Building ID and upper floor tenants	5% of building wall area where sign is placed max.	1 per tenant, plus 2 additional for the building
Industrial & Trans.	Single-tenant building		2 SF per linear foot of building façade where sign is placed 250 SF max.	1 per street frontage, plus 2 additional
	Multi-tenant building		2 SF per linear foot of tenant frontage where the sign is placed 200 SF max.	1 per tenant, plus 2 additional for the building
Open Space	Commercial signs/facility signs[2, 3]		1 SF per linear foot of building façade where the sign is placed 20 SF max.[4]	1 per use (either freestanding or building-mounted)
	Sign placement		The total sign area for signs on single-tenant or multi-tenant buildings may be placed on any building elevation, provided that at least 1 sign must be placed above or associated with the building entry or tenant's building entry, in the case of a multi-tenant building.	

[1] Where a building features two principal entry facades facing parallel streets, each entry façade shall be eligible for the full amount of signage relative to its frontage, notwithstanding the total area.
[2] Standards do not apply to municipal stadiums with more than 6,000 seats. The standards for the Small Mixed-Use Sign District shall apply instead.
[3] Building signs shall be visually related to the building on which they are located in terms of materials, color, scale, etc., as determined by the Building Authority.
[4] Product trademarks limited to 5 percent of total sign area.
[5] On the peninsula, each tenant may have two signs, provided that one sign is a blade sign and one sign is placed parallel to the building façade.
[6] If a tenant faces additional street frontages, one additional sign is allowed per frontage for that tenant.

TABLE 20-H: STANDARDS FOR AWNING SIGNS

Standard	Requirements
Sign area (max.)	1 SF per linear foot of awning width
Mounting height	7 ft. min. from the bottom of the awning to the nearest grade or sidewalk 25 ft. max.
Sign placement	Must be placed above the doors and windows of the ground floor of a building. Awnings shall not project above, below, or beyond the edges of the face of the building wall or architectural element. Sign width shall not be greater than 60% of the width of the awning face or valance on which it is displayed (if an awning is placed on multiple storefronts, each business is permitted signage no greater than 60% of the width of the storefront). May project into public right-of-way with permit approval.
Valance height (max.)	6 in.
Horizontal distance from back of curb (min.)	2 ft.
Illumination	Illumination allowed under the awning.

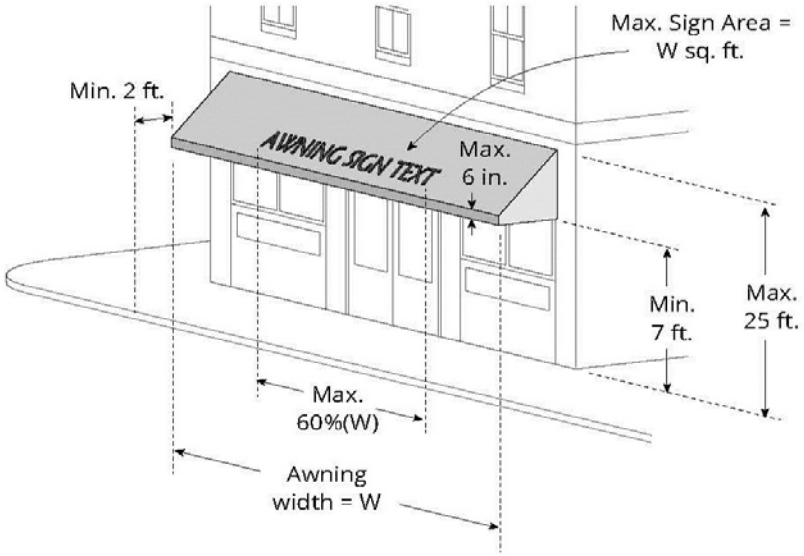


TABLE 20-I: STANDARDS FOR CANOPY SIGNS

Standard	Requirements
Sign area (max.)	1 SF per linear foot of canopy width
Mounting height	8 ft. min. from the bottom of the sign to the nearest grade or sidewalk 20 ft. max.
Sign placement	Must be placed above the doors and windows of the ground floor of a building. Sign width shall not be greater than 60% of the width of the canopy on which it is displayed (if a canopy is placed on multiple store fronts, each business is permitted signage no greater than 60% of the store width or tenant space). May project into public right-of-way with permit approval.
Horizontal distance from back of curb (min.)	2 ft.
Illumination	Direct illumination or internal illumination

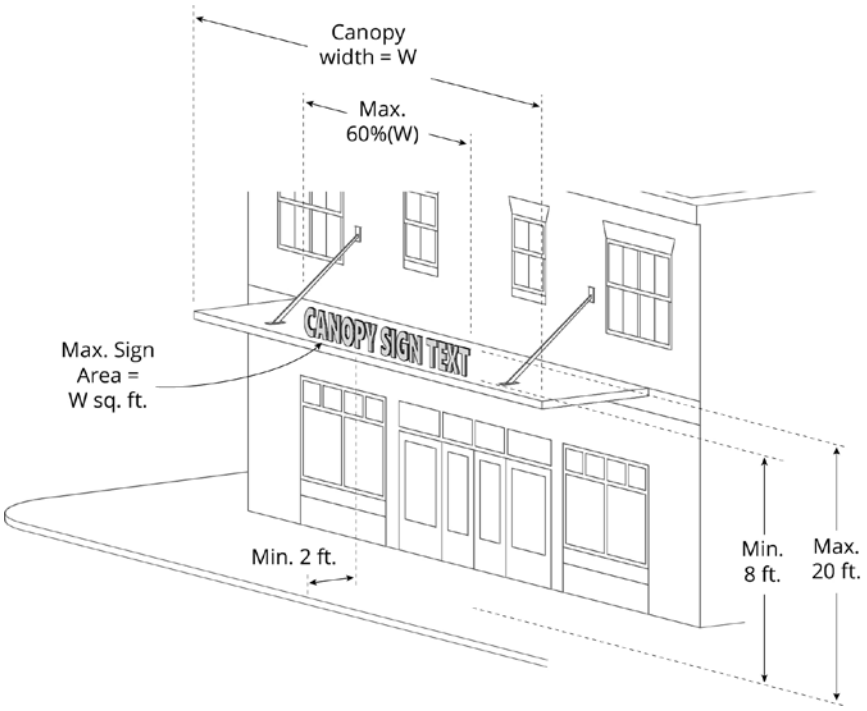


TABLE 20-J: STANDARDS FOR BLADE SIGNS

Standard	Requirements
Sign area (max.)	12 SF
Mounting height	8 ft. min. from the bottom of the sign to the nearest grade or sidewalk Must be mounted perpendicular to the building face or corner of the building.
Sign placement	If mounted below the underside of a walkway or overhead structure, must not extend beyond the edge of the structure on which it is located. May project into public right-of-way with permit approval.
Illumination	External illumination

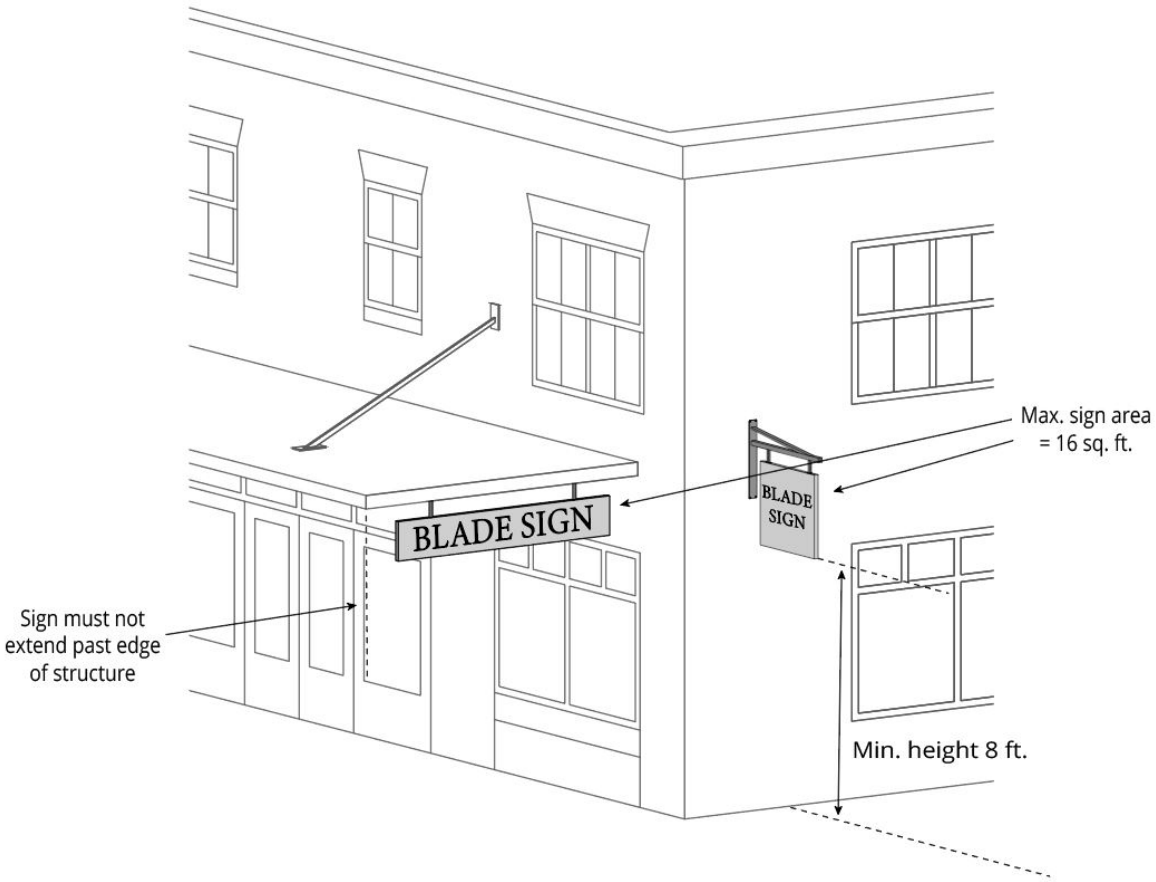


TABLE 20-K: STANDARDS FOR DIRECTIONAL SIGNS (BUILDING-MOUNTED)

Standard	Requirements
Sign area (max.)	3 SF per sign face (excluded from the total allowed sign area for all building-mounted signs)
Mounting height	6 ft. max. from nearest grade
Number of signs (max.)	1 at each driveway, drive-through lane, or alley, not to exceed 3 signs per lot (excluded from the total number of allowed signs for all building-mounted signs)
Illumination	Internal illumination

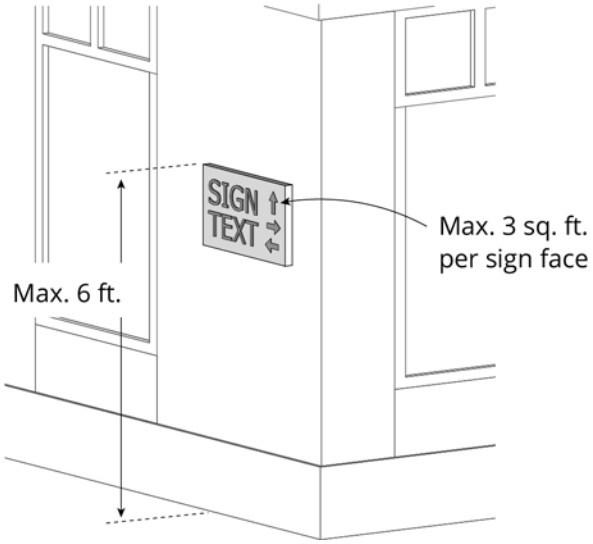


TABLE 20-L: STANDARDS FOR DIRECTORY SIGNS (BUILDING-MOUNTED)

Standard	Requirements
Sign area (max.)	1 SF per occupant of tenant space and 16 SF total max. (excluded from the total allowed sign area for all building-mounted signs)
Mounting height	8 ft. max. from nearest grade
Number of signs (max.)	1 per primary building entrance (excluded from the total number of allowed signs for all building-mounted signs)
Illumination	External illumination or internal illumination

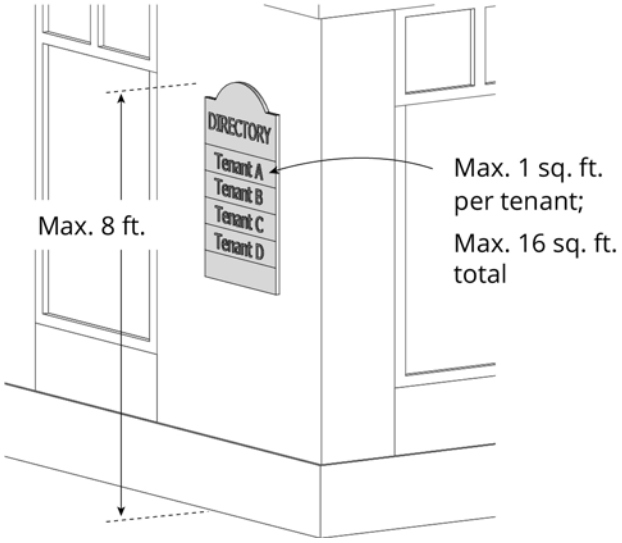


TABLE 20-M: STANDARDS FOR MARQUEE SIGNS

Standard	Requirements
Sign area (max.)	1 SF to 1 linear foot of marquee width
Mounting height	12 ft. min. from the bottom of the marquee to the nearest grade or sidewalk
Number of signs (max.)	1 per business
Sign placement	May project into public right-of-way with permit approval.
Horizontal distance from back of curb (min.)	2 ft.
Illumination	Direct illumination or internal illumination

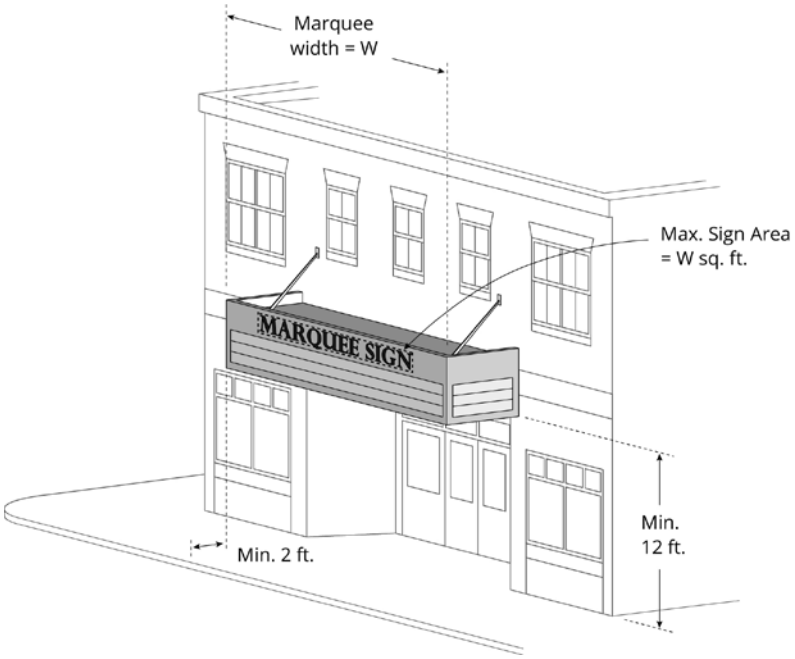


TABLE 20-N: STANDARDS FOR PROJECTING SIGNS

Standard	Requirements
Sign area (max.)	24 SF
Mounting height	8 ft. min. from the bottom of the sign to the nearest grade or sidewalk.
Sign placement	Only on the wall of a building. May project into public right-of-way with permit approval.
Number of signs (max.)	1 per business
Projection (max.)	4 ft. from the building wall to the outer edge of the sign
Illumination	External illumination, direct illumination, neon, or internal illumination of individual letters or graphics only.

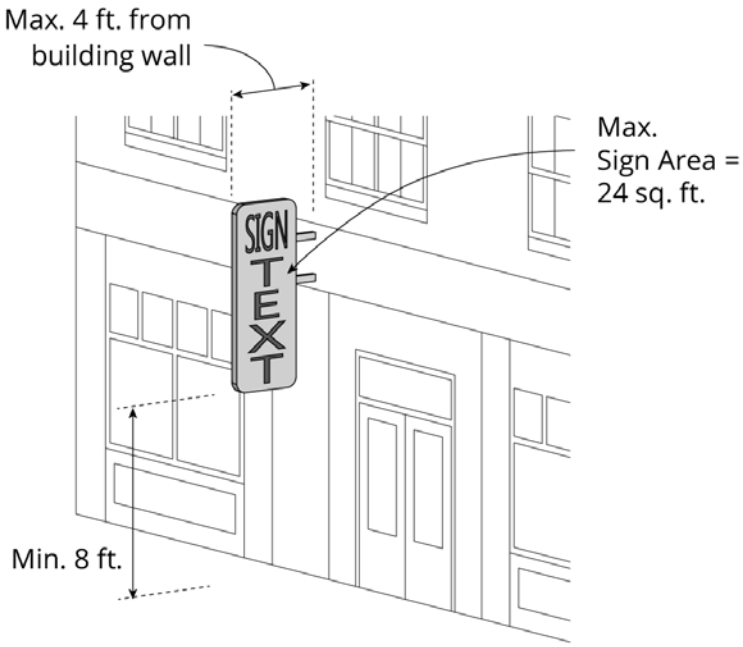


TABLE 20-O: STANDARDS FOR SERVICE ISLAND CANOPY SIGNS

Standard	Requirements
Sign area (max.)	20 SF
Number of signs (max.)	1 per canopy façade, not to exceed 2 signs total
Illumination	Internal illumination

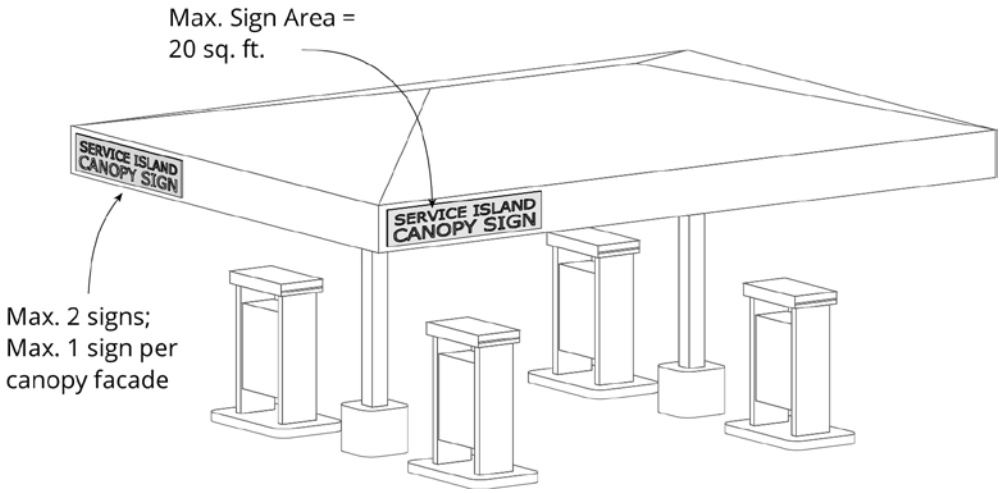


TABLE 20-P: STANDARDS FOR WALL SIGNS

Standard	Requirements
Sign area (max.)	As provided in Table 20-G
Number of signs (max.)	As provided in Table 20-G
Illumination	External illumination, direct illumination, internal illumination, or neon
Special provisions	Painted wall signs are allowed on any exterior building wall of an individual tenant space or building. The allowable area for painted wall signs shall be increased by 10% over the normal allowable sign dimensions for the zone.

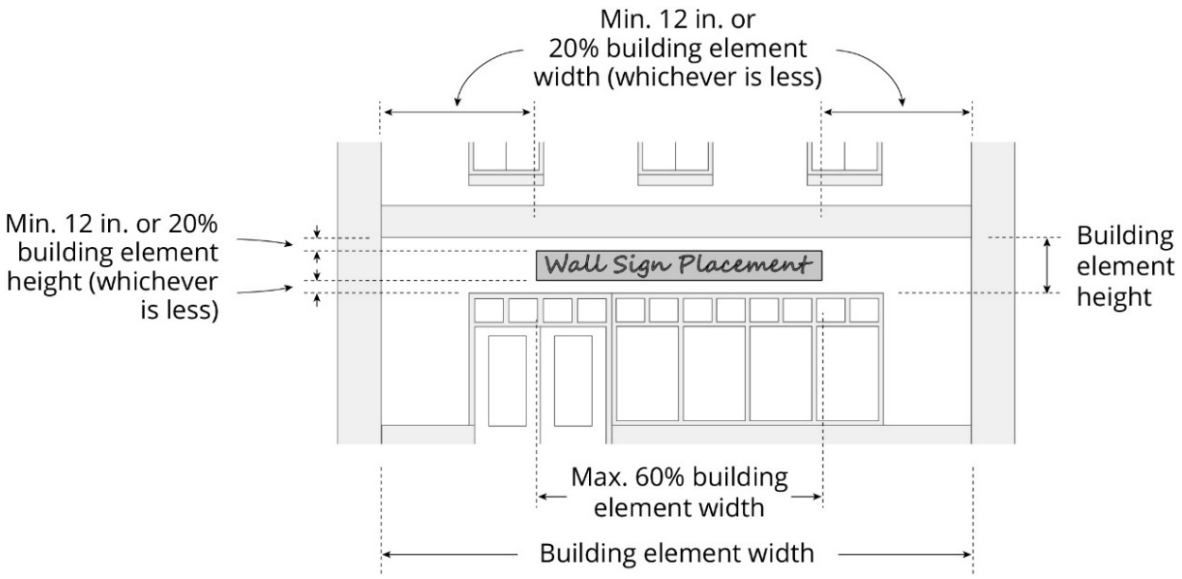
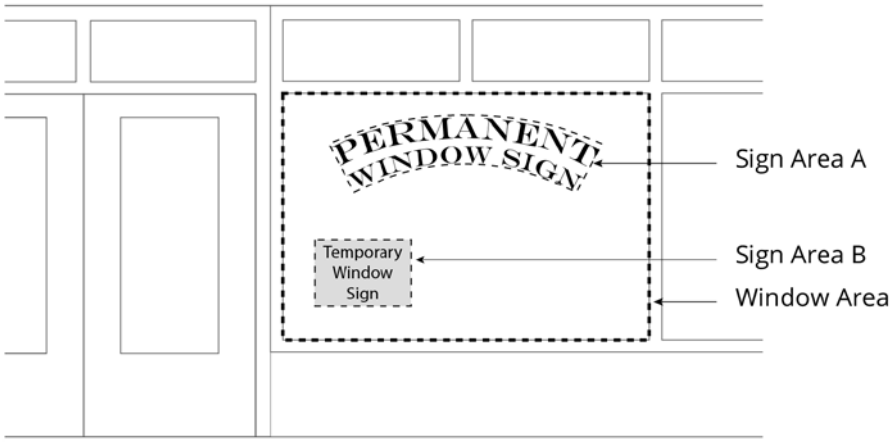


TABLE 20-Q: STANDARDS FOR WINDOW SIGNS

Standard	Requirements
Sign area (max.)	Combined area of temporary and permanent window signs must not exceed 50% of the area of the window on which they are displayed. Painted window signs or perforated vinyl signs are included in this calculation. Excluded from the total allowed sign area for all building-mounted signs.
Sign placement	Must be mounted or displayed on the interior of the window. Allowed on 1st and 2nd story windows only.
Illumination	Neon or single- or two-color LED signs



Sign Area A + Sign Area B ≤ 50% Window Area

TABLE 20-R: DIMENSIONAL STANDARDS FOR FREESTANDING SIGNS BY SIGN DISTRICT

Sign District				Area (max.)	Height (max.)	Number of Signs
Residential			Single-family lots	2 SF	5 ft.	1 per lot (freestanding or building-mounted)
			PRUDs, multi-family lots	15 SF	5 ft.	1 per major vehicular entrance
	Institutional		Street frontage ≤ 100 ft.	15 SF	6 ft.	1 per frontage[1, 2]
			Street frontage 100 – 250 ft.	25 SF	8 ft.	1 per frontage[1, 2]
			Street frontage ≥ 250 ft.	50 SF	8 ft.	1 per frontage[1, 2]
Small Mixed-Use			Single-tenant building	32 SF	B-1/B-1b, B-2b/B-2c zones: 16 ft. In all other zones: 8 ft.	1 per lot[1]
		Multi-tenant building	< 1 acre lot	32 SF		
			1 – 2.5 acre lot	100 SF		
			> 2.5 acre lot	140 SF		
			I-B Zone[3]	20 SF	10 ft.	1 per use
	OP zone		Center identification sign	50 SF	8 ft.	1 per major vehicular entrance
			Tenant sign	15 SF	5 ft.	1 per tenant[2]
Large Mixed-Use	Single-tenant building		Street frontage ≤ 200 ft.	65 SF	B-4 zone: 25 ft. In all other zones: 18 ft.	1 per lot[1]
			Street frontage > 200 ft.	100 SF		
	Multi-tenant building		< 1 acre lot	65 SF	B-4 zone: 25 ft. In all other zones: 18 ft.	1 per lot[1]
			1 - 2.5 acre lot	100 SF		
			> 2.5 acre lot	140 SF		
Downtown				16 SF	6 ft.	1 per frontage[1]
Industrial & Transportation			Single-tenant building	35 SF	10 ft.	1 per lot[1]
			Multi-tenant building	70 SF	15 ft.	1 per lot[1]
	AB zone	Single-tenant building	Street frontage ≤ 200 ft.	32 SF	16 ft.	1 per lot[1]
			Street frontage > 200 ft.	65 SF	16 ft.	1 per lot[1]
		Multi-tenant building	< 1 acre	32 SF	16 ft.	1 per lot[1]
			1 - 2.5 acres	100 SF		
			≥ 2.5 acres	140 SF		
Open Space[4]			Park identification signs[5]	20 SF	5 ft.	1 per major vehicular entrance
			All other signs[5]	16 SF[6]	8 ft.	1 per use (building-mounted or freestanding)

[1] Lots with multiple street frontages are allowed one freestanding sign for each frontage, provided that the signs are not concurrently visible from the public right-of-way.

[2] Where a lot contains more than one affiliated use or tenant, uses and tenants may be allocated space on a shared sign. Individual uses or tenants are not allowed to have individual freestanding signs.

[3] Only allowed for marine-related uses serving vessel traffic.

[4] Standards do not apply to municipal stadiums with more than 6,000 seats. The standards for the Small Mixed-Use Sign District shall apply instead.

[5] All signs must be integrated into existing landscape features or visually related to the materials, colors, scale, etc. of existing buildings as determined by the Building Authority.

[6] Product trademarks limited to 5% of total sign area.

TABLE 20-S: STANDARDS FOR DIRECTIONAL SIGNS (FREESTANDING)

Standard	Requirements
Sign area (max.)	3 SF per sign face (excluded from the total allowed sign area for all freestanding signs)
Height (max.)	6 ft. from nearest grade, except 4 ft. at driveway or drive-through lanes
Number of signs (max.)	1 at each driveway or drive-through lane, not to exceed 3 signs per lot (excluded from the total number of allowed signs for all freestanding signs)
Illumination	Internal illumination

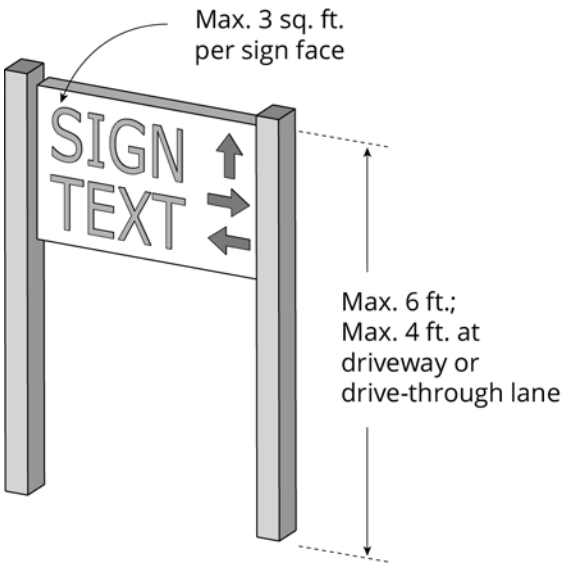


TABLE 20-T: STANDARDS FOR DIRECTORY SIGNS (FREESTANDING)

Standard	Requirements
Sign area (max.)	12 SF total 1 SF max. per occupant or tenant space (excluded from the total allowed sign area for all freestanding signs)
Height (max.)	6 ft. from nearest grade, except 4 ft. at driveway or drive-through lanes
Number of signs (max.)	1 per building (excluded from the total number of allowed signs for all freestanding signs)
Illumination	External illumination or internal illumination

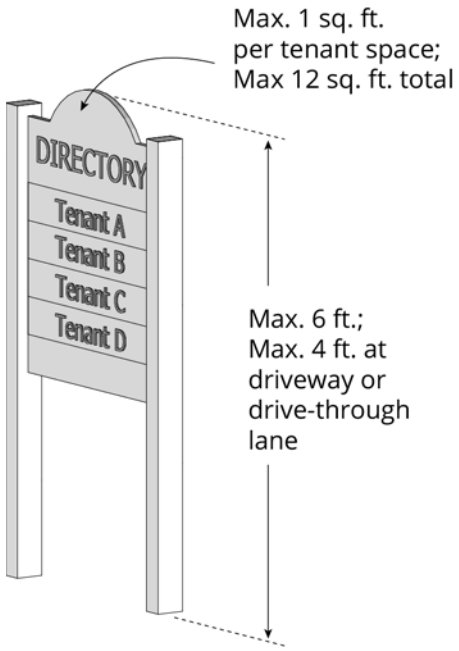
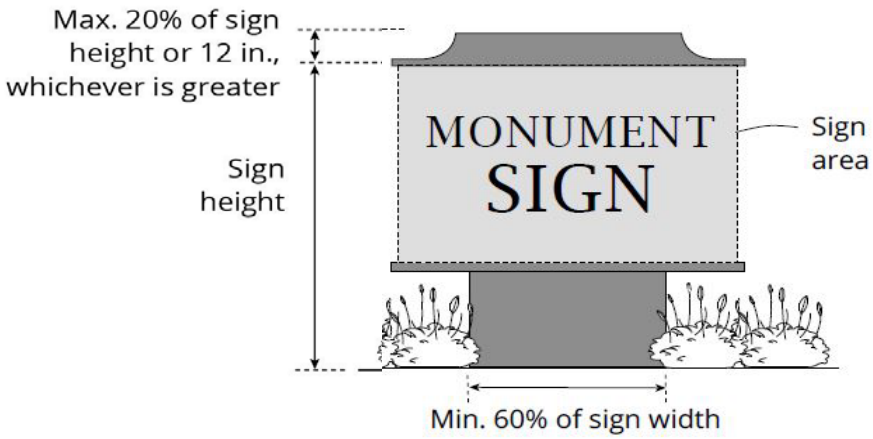


TABLE 20-U: STANDARDS FOR MONUMENT SIGNS[1]

Standard	Sign District					
	Residential Sign District[2]	Small Mixed-Use Sign District	Large Mixed-Use Sign District	Downtown Sign District	Industrial Sign District	Open Space Sign District
Sign area (max.)	50 SF	50 SF	140 SF	50 SF	70 SF	20 SF
Height (max.)	8 ft.	8 ft.	18 ft.	6 ft.	16 ft.	5 ft.
Base width (max.)	The base of a monument sign must be at least 60% of the width of the sign.					
Illumination	Non-illuminated, internal illumination, or external illumination					
Special provisions for sign height	Elements to enhance the design of a sign structure may extend above the sign to a max. of 20% of the sign's allowed height, or 12 inches, whichever is greater.					

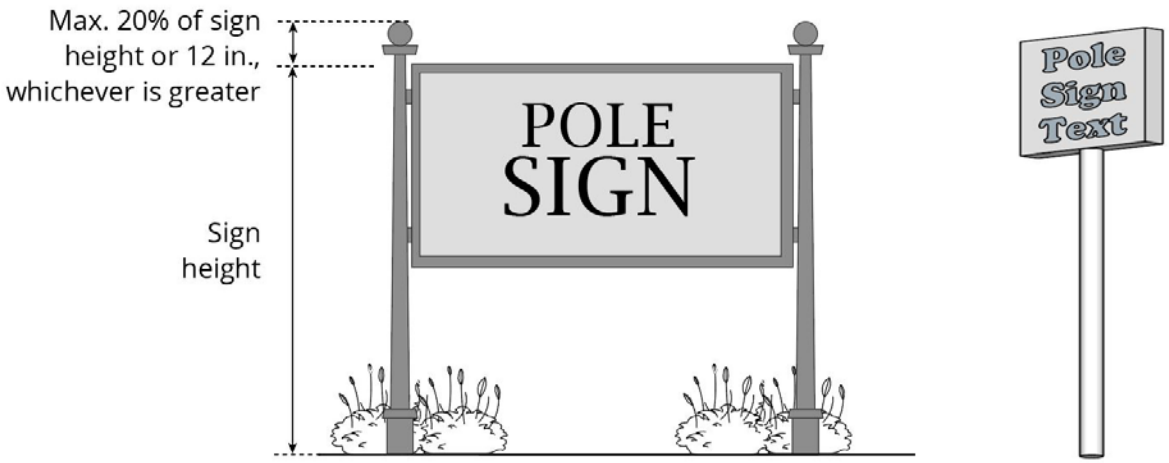


[1] The maximum sign area and sign height standards may be further limited by the standards established in Table 20-R. If no value is included in the table below, then a monument sign is not allowed in that sign district

[2] Allowed for institutional uses in residential zones only.

TABLE 20-V: STANDARDS FOR POLE SIGNS[1]

Standard		Sign District					
		Residential Sign District	Small Mixed-Use Sign District	Large Mixed-Use Sign District	Downtown Sign District	Industrial Sign District	Open Space Sign District
Sign area (max.)	Signs ≤ 8 ft. High	15 SF	24 SF	24 SF	24 SF	24 SF	20 SF
Height (max.)		5 ft.	8 ft.	8 ft.	6 ft.	8 ft.	8 ft.
Sign area (max.)	Signs 8 - 25 ft. high			140 SF		140 SF	
Height (max.)				25 ft.		16 ft.	
Illumination		Non-illuminated or internal illumination Signs ≤ 8 ft. in height may have external illumination					
Sign placement		Signs ≥ 8 ft. in height must have minimum 75 foot separation from other pole signs ≥ 8 ft. on the same side of the street.					
Sign height		Elements to enhance the design of a sign structure ≤ 8 ft. in height may extend above the sign to a max. of 20% of the sign's allowed height, or 12 inches, whichever is greater.					



1 The maximum sign area and sign height standards may be further limited by the standards established in Table 20-R.

20.9 STANDARDS FOR TEMPORARY SIGNS

20.9.1 In general

Temporary signs are allowed only in compliance with the provisions of this section.

A. **Information required for display.** All temporary signs are required to display the name and address of the entity placing the sign, and the date the sign was erected.

B. **Not included in permanent sign allowances.** Temporary signs are not counted toward the maximum total sign area established in Section 20.8.

C. **General time, place, and manner restrictions.** Unless specifically exempted by this section, temporary signs must be placed in compliance with Subsection 20.6.1. Temporary signs must not be placed to create a hazard for pedestrian or vehicular traffic and must allow for a 4-foot wide sidewalk to comply with the Americans with Disabilities Act.

D. Any form of illumination, including flashing, blinking, or rotating lights; animation; reflective materials; and attachments such as balloons, ribbons, and loudspeakers are prohibited.

E. Temporary signs must be of sufficient weight and durability to withstand wind gusts, storms, and other exterior elements.

20.9.2 Additional standards for temporary signs

All temporary signs shall comply with the standards of Tables 20-W and 20-X.

TABLE 20-W: TEMPORARY SIGN STANDARDS BY SIGN DISTRICT

	Standard	Requirement
Residential	**Total area of all temporary signs at any one time** (max.)	16 SF per lot.
	Number of signs (max.)	Unlimited except that the total sign area must not exceed 16 SF
	Time limit (max.)	None
Other	**Total area of all temporary signs at any one time** (max.)	24 SF per tenant, with a total of max. 72 SF per lot (excludes the area of temporary window signs and permitted wall banner signs) Exception: In the Downtown Sign District and historic districts, max. 12 SF per tenant (excludes the area of temporary window signs and permitted wall banner signs)
	Number of signs (max.)	1 wall banner per tenant in a multi-tenant building. All other temporary sign types unlimited, except that the total sign area of all temporary signs (excludes the area of temporary window signs and permitted wall banner signs) must not exceed the total square footage provided above. Exception: In multi-tenant shopping centers or offices, max. 2 temporary wall banner signs per 150 linear feet of property frontage, not to exceed 24 SF combined.
	Time limit (max.)	60 days per temporary sign permit, and up to 180 days per calendar year.

TABLE 20-X: STANDARDS FOR TEMPORARY SIGN TYPES

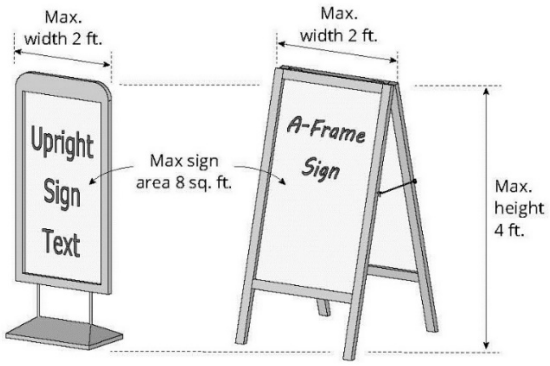
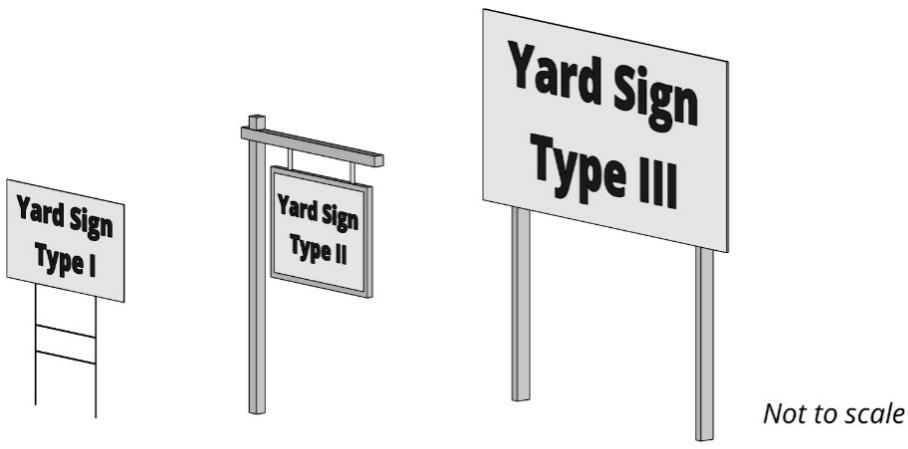
Temporary Sign Type[1]	Standard: Height	Standard: Width (max.)	Standard: Area (max.)	Other Requirements
	Min. 30 in. Max. 4 ft.	2 ft.	8 SF	Prohibited in residential zones. Must not be placed in public right-of-way except as permitted by the City. [3] If advertising a business, only permitted during regular business hours.
A-frame or upright sign[2]				
			32 SF	Prohibited in residential zones. Must be mounted on a building wall or on T-posts or stakes installed ≤ 6" from a wall on which the wall banner will be hung. Mounting height (max.): 25 ft. to top of banner.
Wall banner				

TABLE 20-X (CONT.): STANDARDS FOR TEMPORARY SIGN TYPES

Temporary Sign Type[1]	Standard: Height (max.)	Standard: Width (max.)	Standard: Area (max.)	Other Requirements
Window sign			See End Note[4]	Mounting height (max.): Placed no higher than second story windows. Inside mounting required. Not included in the total sign area for all temporary signs.
Yard sign (Type I)	4 ft.	2 ft.	3 SF	Installation requirements: Installed securely in the ground.
Yard sign (Type II)	6 ft.	2 ft.	4 SF	Installation requirements: Installed securely in the ground.
Yard sign (Type III)	6 ft.	8 ft.	32 SF	Installation requirements: Installed securely in the ground.



[1] Other temporary sign types may be allowed (e.g. fuel pump topper signs; wrap around waste receptacles) provided the max. area limitation for all temporary signs is not exceeded.
[2] These signs may be used to identify businesses located down a wharf in the EWPZ and WCZ Zones that have no street frontage and where no other options for on-site permanent signage are available.
[3] A min. 4-foot wide pedestrian walkway must be maintained at all times.
[4] The area of temporary and permanent window signs combined (including signs constructed of perforated vinyl or painted on the window) must not exceed 50% of the area of the window on or within which they are displayed.

20.10 NONCONFORMING SIGNS

20.10.1 Applicability

A. **Maintenance.** Nonconforming signs may be maintained, expanded upon, and/or reduced only in accordance with the provisions of this section.

B. **Continuation.** All lawfully nonconforming signs may be continued, subject to this section.

1. Lawfully nonconforming permanent directional signs for existing nonconforming businesses that are established and operational in any residential zone may continue to be used subject to this section.
2. Lawfully nonconforming permanent signs for nonconforming uses established and operational in any residential zone may continue to be used subject to this section.

20.10.2 Removal or replacement of a nonconforming sign

Lawfully nonconforming signs must be made to conform or shall be removed if any of the following occurs, unless the improvements are required to achieve compliance with applicable federal, state, or local regulations, other than the provisions of this article, and the improvements do not require replacement of the nonconforming sign. In no event will the degree of nonconformity of any sign or type of signage on any lot be increased.

A. **Major site plan review.** Major site plan review is sought for any new structures or building additions on the site, except as provided in (E) below.

B. **New building permit for rehabilitation.** A building permit is sought for a rehabilitation of a building where the value of the rehabilitation exceeds 50% of the assessed value of the building, or $100,000, whichever is less, provided that where rehabilitation is of a multi-tenant building, only the tenant or tenants whose building or area is being rehabilitated shall be required to come into conformance with this article.

C. **New sign permit.** An application is filed for a new sign permit in accordance with the following:

1. When an application is filed for a new building-mounted sign, all building-mounted signs on the lot must come into compliance with all requirements of this article for building signs.
2. When an application is filed for a new freestanding sign, all freestanding signs on the lot must come into compliance with all requirements of this article for freestanding signs.

D. **Modification of sign.** A sign is modified in any way, except for routine maintenance or repair of sudden and accidental damage, or for a change in the message panel only, unless otherwise required to conform under this subsection. Repair of sudden and accidental damage will not include replacement of the entire sign, which is treated as a modification under this subsection. Letters on nonconforming signs designed for changeable messages may be changed without triggering the terms of this subsection as long as no other change is made to the sign.

Replacement of an awning covering with substantially the same material and text is not considered a modification.

E. Signs on multi-tenant properties

1. In the case of nonconforming freestanding shared signs for multi-tenant properties, signs may be added or modified to reflect a change in individual tenants without triggering the terms of this subsection, provided that the degree of nonconformity is not increased.
2. In the case of building signs on multi-tenant properties, this subsection shall apply only to the individual business tenant that is adding or modifying a sign or seeking major site plan review and shall not trigger the conformance requirement for other tenants' building signs.

F. Abandoned or vacant site. Removal of a nonconforming sign, or replacement of a nonconforming sign with a conforming sign, is required when the use of the sign and/or the property on which the sign is located has been abandoned, ceased operations, become vacant, or been unoccupied for a period of 180 consecutive days or more, as long as the period of non-use is attributable at least in part to the property owner, tenant, or other person or entity in control of the use. For purposes of this section, rental payments or lease payments and taxes are not considered as a continued use. In the event this should occur, such conditions will be considered as evidence of abandonment, requiring removal of such sign by the owner of the property, his or her agent, or person having the beneficial use of the property, building, or structure upon which such sign or sign structure is erected within 30 days after written notification from the Planning Authority. If such sign(s) is (are) not removed within the 180-day period, enforcement action will be pursued consistent with Section 20.11.

20.10.3 Permanent directional signs in residential zones

A. A lawfully existing business located in a residential zone is allowed an off-premise sign in the public right-of-way if it meets the following requirements:

1. The business is not a home occupation.
2. The business is not located within 500 feet of a major or minor arterial.
3. The off-premise sign will be no larger than 12 inches by 48 inches and complies with the requirements established in the *MDOT/MUTCD Standard Sign Manual*.

B. Such lawfully existing retail business may qualify for one two-sided or two one-sided off-premise signs that must be located within the public right-of-way of a major or minor arterial in a location determined safe by the City Traffic Engineer and upon the payment of an initial fee of $300, with an annual renewal fee of $30.

C. In the event the sign is damaged or destroyed, the replacement of the sign shall be the sole responsibility of the permittee. The permittee shall be required to obtain a permit for the replacement sign from the Planning Authority, after securing $400,000 insurance and naming

the City of Portland as an additional insured.

20.10.4 Nonconforming signs in residential zones

A. Lawfully-existing permanent signs for lawfully existing nonconforming uses in any residential zone may continue to be used.

B. If an application is filed for new or replacement building-mounted sign(s) for a lawfully-existing nonconforming use located in a residential zone, the building-mounted sign(s) must either be the same size and number as the lawfully existing building-mounted sign(s), or must comply with the standards established for the Small Mixed-Use Sign District in Table 20-G, whichever is less. Sign types shall be limited to blade, directory, wall, and window signs. Illumination shall be limited to external illumination only.

C. If an application is filed for replacement freestanding sign(s) for a lawfully-existing nonconforming use located in a residential zone, the freestanding sign(s) must be the same size and number as the lawfully existing freestanding signs, or must comply with the standards established for the Small Mixed-Use Sign District in Table 20-R, whichever is less. No new freestanding signs for a nonconforming use in a residential zone shall be permitted. Illumination shall be limited to external illumination only.

20.11 ENFORCEMENT

20.11.1 Authority

The requirements of this article shall be enforced by the Building Authority as stated in Article 1. The Building Authority has the authority to order the repair, maintenance, or removal of any sign or sign structure that has become dilapidated or represents a hazard to public health, safety, or welfare.

20.11.2 Violations

A. It shall be unlawful for any person, firm, or corporation to erect, construct, enlarge, alter, repair, display, maintain, or use a sign within the City contrary to, or in violation of, any provision of this article. Any work commenced without a sign permit, or beyond the authorized scope of a sign permit constitutes a violation of this article and is grounds for the Building Authority to issue a correction notice and/or to stop all work on the sign until appropriate permits are obtained.

B. Permits issued for work commenced without a sign permit, or any work beyond the authorized scope of a sign permit shall be assessed double the required permit fees for the sign(s).

C. Failure to perform any act required by this article, failure to obtain any permit required, or the performance of any act prohibited by this article constitutes a violation and is subject to penalties as set forth in 30-A M.R.S. §4452.

D. Each day on which a violation exists will constitute a separate violation for purposes of this section.

21 PUBLIC ART PROGRAM

21.1 ESTABLISHMENT

It shall henceforth be the policy of the City to provide on an annual basis regular funding for the preservation, restoration, and enhancement of its public art collection. This article and the funding contemplated are in recognition of the fact that only by instituting a steady stream of funding for this effort and standing by that commitment, will the City over time be able to fulfill its role as steward of its public art collection and help nurture and enrich thereby the quality of life in this city.

21.2 PURPOSE

The purpose of this article is to promote the educational, cultural, economic, and general welfare of the City of Portland by providing the means to fund the acquisition and care of art works by the City of Portland, which shall be the City's public art collection. The Public Art Program seeks to:

A. Care for and maintain the public art collection of the City of Portland by documenting, preserving, restoring, and repairing the collection.
B. Commission or acquire works of public art, and to seek donations of art work for the City's public art collection.
C. Provide curatorial expertise and project management for the care of Portland's public art collection.
D. Enhance and enrich the lives of the city's residents, visitors, and employees by incorporating the visual arts into public spaces.
E. Contribute to the city's civic pride and sense of identity.
F. Increase access to works of art for residents and visitors to the area.
G. Enhance Portland's growing reputation as a city which celebrates the arts.
H. Celebrate the multi-cultural and diverse character of Portland's communities with place-specific art.
I. Encourage collaboration between artists, landscape architects, urban planners, architects, engineers, and other designers.

21.3 DEFINITIONS

Art work. For the purposes of the Public Art Program, art work shall include the following:

A. Sculpture, statues, or monuments in any material or combination of materials.
B. Painting.
C. Graphic arts, printmaking, and drawing.
D. Photography.
E. Crafts in clay, fiber and textiles, wood, metal, plastics, glass, and other materials.
F. Mixed media, any combination of forms or media, including collage.
G. Functional art such as street furniture, as described in the *Guidelines for the Public Art Ordinance.*
H. Environmental art consisting of landforms and artistic landscape composition.

The following shall not be considered public art for the purposes of the Public Art Program:

A. Reproductions by mechanical or other means of original works of art, except for limited editions, controlled by the artist, of original prints, cast sculptures, photographs, or other works of art.
B. Decorative, ornamental, or functional elements which are designed by the building architect or consultants engaged by the architect which are

a traditional and typical element of architectural design.

C. Those elements generally considered to be conventional components of a landscape architectural design including, but not limited to, plant materials, pools, paths, benches, receptacles, fixtures, and planters except as allowed by (G) and (H) in the list of included art work above.

D. Art objects which are mass produced or of a standard design, such as playground sculpture or fountains, except pieces of historical significance to the city.

E. Directional or other functional elements, such as supergraphics, signage, color coding, and maps, except where sculptural pieces are used to define gateways in the city.

F. Electrical, water, or mechanical service for activation of the work.

G. Exhibitions and educational programs related to the work.

H. Performing arts.

I. Art that displays slogans, logos, mascots, or commercial advertising.

Public art collection. Art objects that are owned by the City of Portland which are permanently installed in public, accessible locations. Permanent public art must be located in a public place with public visibility and impact, and shall have a permanence at least comparable to associated capital projects.

Public art guidelines. The regulations adopted by the committee and approved by the City Council which establish procedures to carry out the purpose of this article. The guidelines shall include but not be limited to criteria for selection of artists and art works, maintenance of a file of interested artists, procedures for artistic competitions, and requirements for the maintenance of works of art.

21.4 FUNDING

21.4.1 Establishment of Public Art Fund

The City shall establish a special revenue fund designated as the Public Art Fund in the City treasury from which expenditures may be made in accordance with this ordinance. The Public Art Fund shall contain a capital account to fund permanent public improvements in the form of the purchase, acquisition, or commission of new public art, or major restorations, and an operations and maintenance account. Authorized expenditures include, but are not limited to, associated site installation costs, such as lighting and landscaping, and costs associated with the commission, engineering, contract administration, unveiling, and dedication activities. Also authorized are expenditures associated with preservation, conservation, and repair of existing public art. Capital funds may come from any source, including the sale of general obligation bonds. The City's capital improvement program shall contain an annual appropriation for the Public Art Fund calculated in accordance with Subsection 21.4.2. Funds for the operation and maintenance account may come from any source except bonds.

21.4.2 City-funded projects

A percentage of the City's Capital Improvement Program (CIP) shall be calculated and appropriated annually to the Portland Public Art Fund. The annual appropriation shall be .5% of the total annual CIP. Nothing contained herein shall preclude funding the acquisition of art for municipal property in other ways.

21.5 ADMINISTRATION

21.5.1 Public Art Committee responsibilities

The City Public Art Program shall be administered by the Public Art Committee whose members shall be appointed by the City Council, and shall have the following responsibilities:

A. Develop an annual art plan for Portland which shall be presented to the City Council for approval.

B. Establish such guidelines as are necessary to carry out the purpose of this article. The guidelines shall include but not be limited to criteria for selection of artists and art work, maintenance of a file of interested artists, review criteria for proposed gifts of art work to the City, procedures for artistic competitions, and requirements for the maintenance of art work. Any and all guidelines or changes to guidelines shall be placed on a City Council agenda as a communication. The guidelines shall take effect 45 days after the date of placement on the council agenda, unless the City Council takes official action disapproving the guidelines, in whole or in part, prior to the expiration of the 45-day period. If a part of a guideline is vetoed, the remainder shall continue in effect. Any guideline adopted, which is not required by the statutes of the state or by this article, may be waived by the chair upon good cause being shown.

C. Recommend to the City Council the expenditure of funds for the acquisition or commissioning of public art, for maintenance of public art, and for administration of this program.

D. Seek private donations of funds and/or works of art for the purposes of expanding the public art collection or the maintenance of the collection.

E. Oversee the maintenance, care, and repair of the public art collection.

F. Review the appropriateness of proposed public art which is intended to fulfill all or part of the contribution required by this article.

G. Review potential gifts of art to the City on City property, and assist in the development process of such gifts, in accordance with the *Guidelines for the Public Art Ordinance.*

H. Recommend appropriate locations and accessibility to the public for permanent art, with suggestion as to the type of art which is appropriate.

I. Solicit advice from arts professionals, the business community, and from local residents on the appropriateness of proposed art.

J. Recommend revisions to policies and guidelines for the improved implementation of this program.

K. Ensure that the use of funds collected under this program will increase the amount of art in the city that is available to the public.

21.5.2 Public Art Committee structure

A. The Public Art Committee shall be composed of eleven voting members who are appointed by the City Council. The City Council shall appoint one of its members, the City Manager shall recommend a member, and Creative Portland shall recommend one of its members to serve on the Public Art Committee. The City Council shall appoint the remaining eight members who shall be volunteers and have interest and/or expertise in public art. Such experience may include, but shall not be limited to, education and experience as an architect, a

landscape architect, a professional curator, a professional artist, and/or an art educator. Persons appointed to the Public Art Committee must live or work in Portland and shall be appointed through the City's annual appointment process.

B. Each Public Art Committee member shall serve for a period of three years. The appointments shall be staggered so that three appointments terminate each year.

C. Whenever a vacancy shall occur, the vacancy shall be filled by the City Council.

D. The Public Art Committee shall adopt its own rules for the conduct of its business not inconsistent with the statutes of the state and this article. Any and all rules or changes to rules shall be placed on a City Council agenda as a communication. The rule or rules shall take effect 45 days after the date of placement on the council agenda, unless the City Council takes official action disapproving the rules, in whole or in part, prior to the expiration of the 45-day period.

E. The members of the Public Art Committee shall annually elect one of their members as a chair to preside at all meetings and hearings and to fulfill the customary functions of that office, and another of their members as vice-chair.

22 REGULATION OF EXPLOSIVES

22.1 PURPOSE

The purpose of this article is to protect the public's health, safety, and general welfare by regulating and controlling blasting operations within the city.

22.2 APPLICABILITY

This article shall apply to all blasting operations related to construction and development of real estate within the city. The City of Portland *Technical Manual* is incorporated into this article by reference. Standards listed in the *Technical Manual* shall be additional to the provisions of this article.

22.3 REVIEW PROCESS

22.3.1 Permit Required

No person may conduct blasting operations within the city without first obtaining a permit from the Fire Department, as required by the National Fire Protection Association 1 Fire Prevention Code, as adopted and amended in Chapter 10 of the City of Portland Code of Ordinances. Fees for this permit shall be as established by order of the City Council.

22.3.2 Application Requirements

Prior to the issuance of a permit the following information shall be submitted to the City:

A. A blasting plan shall be submitted by the applicant to the Planning Authority for all projects where more than 300 cubic yards of material shall be removed. The blasting plan shall conform to the provisions of this article and of Section 3 of the City of Portland *Technical Manual*.

B. A blasting submittal shall be submitted to the Planning Authority where between 50 and 300 cubic yards of material shall be removed. The blasting submittal shall conform to the provisions of this article and of Section 3 of the City of Portland *Technical Manual*.

C. A blasting application shall be submitted to the Planning Authority where less than 50 cubic yards of material shall be removed, or where utility trench work in the accepted public right of way, including City or Portland Water District infrastructure is proposed. Small blasts where less than 50 cubic yards of material shall be removed are not required to submit either a blasting plan or blasting submittal. Such projects must conform to the National Fire Protection Association Fire Prevention Code and applicants shall submit a monitoring report upon request. Information provided in the blasting application shall confirm that the proposed small blast conforms to all applicable provisions of this ordinance and of Section 3 of the City of Portland *Technical Manual*.

D. A blasting plan or blasting submittal may be required for any blasting operation at the discretion of the Planning Authority when it determines that conditions at or near the site of the blasting operations warrant the provision of a plan.

22.4 STORAGE AND HANDLING

All explosives shall be stored and handled in accordance with the provisions of this code, the laws of the State of Maine, and the National Fire Protection Association 1 Fire Prevention Code.

22.5 ENFORCEMENT

In the event that there are more than three documented violations of the blasting plan, blasting submittal, or blasting permit, or any other violation of this article, a stop work order may be issued on

all construction or development related to the permitted operation. The permittee shall then be required to submit a revised blasting plan to the Planning Authority for review and approval. Work shall not be allowed to continue until the revised blasting plan is approved.

22.6 PENALTIES

In addition to the possibility of a stop work order in the event of a violation, the permittee shall be subject to the following penalties:

1st offense	$500
2nd offense	$1,000
Subsequent offenses	$1,000

22.7 NOTICE REQUIREMENTS

22.7.1 Basic noticing requirements

At least 10 days prior to the start of any blasting operation, notice shall be published in a newspaper of local publication and shall be mailed by first class mail to all property owners within the distance specified below of the perimeter of the blasting site:

A. **Small blast (trench blast or under 50 cubic yards of rock removed).** All property owners within 250 feet of the perimeter of the blasting site.
B. **Medium blast (removal of 50-300 cubic yards of rock material).** All property owners within 500 feet of the perimeter of the blasting site.
C. **Large blast (removal of over 300 cubic yards of rock material).** All property owners within 600 feet of the perimeter of the blasting site.

22.7.2 Content of notice

Notice shall conform to the model notice contained in Section 3 of the City of Portland *Technical Manual* and shall include a description of the proposed blasting operations, estimated schedule and duration of blasting operations, description of the blasting signals to be used during operations, the complaint protocol and the complete address, telephone numbers and email contact for the blasting contractor, the Planning Authority, and Fire Department where neighbors and property owners may request further information and notification.

22.7.3 Additional noticing requirements

A. For medium blasts where 50-300 cubic yards of rock material is to be removed, and large blasts where over 300 cubic yards of rock material is to be removed, additional notification requirements shall apply during construction, as detailed in Section 3 of the City of Portland *Technical Manual*.
B. If blasting operations are to occur within 250 feet of any structure, additional notification requirements shall apply, as detailed in Section 3 of the City of Portland *Technical Manual*, in order to prevent adverse public health and safety impacts due to blasting-related carbon monoxide migration.

22.8 HOURS OF BLASTING

Blasting shall occur Monday through Friday, between the hours of 9 a.m. and 4 p.m., unless otherwise approved by the Planning Authority. Requests for extension of hours of blasting must be submitted by the applicant in writing.

22.9 WAIVERS

Upon written request by the applicant, the Planning Authority, based on a positive recommendation by the Fire Department, may waive all or a portion of the blasting provisions of Section 3 of the City of Portland *Technical Manual*, provided that all waivers

are consistent with the purposes set forth in Section 22.1.

22.10 SUSPENSION OF BLASTING OPERATIONS

If it is determined that blasting operations pose any risk to public health, safety, or general welfare, the Planning Authority or the Fire Chief or their designee shall have the authority to suspend the blasting permit at any time until they deem it safe for blasting operations to continue.

1. TRANSPORTATION SYSTEMS AND STREET DESIGN STANDARDS

1.1. HORIZONTAL ALIGNMENT OF STREETS

The horizontal alignment of all proposed streets shall conform to the following standards:

- Horizontal curves shall have centerline radii of not less than 110 feet.
- The alignment centerline shall be straight for at least 100 feet between reverse curves whenever either curve has a centerline radius of less than 200 feet.
- When two streets intersect and one street is an arterial or collector street, or both streets are arterial or collector streets, the angle of intersection shall be 90 degrees. When two streets intersect and neither street is an arterial or collector street, the angle of intersection shall be at least 75 degrees and no greater than 105 degrees.
- When two streets intersect, adjoining right-of-way lines shall be connected by a circular arc with radius of at least ten (10) feet. The connecting arc shall be tangent to the right-of-way lines on both streets. When the angle of intersection is other than 90 degrees, a radius greater than ten (10) feet may be required.
- All dead-end streets shall provide for a turnaround at the end of the street, subject to approval by the reviewing authority. Turnarounds shall be designed to facilitate future street connectivity and shall always be designed to the right (refer to Figure I-5).
- Street intersections with more than four (4) legs shall be prohibited.
- The minimum distance between intersections on any street shall be as follows unless the Department of Public Works determines that unique conditions of the site necessitate a lesser length. The distance between intersections shall be measured from the intersection of street centerlines at one intersection to the intersection of street centerlines at the other intersection. Streets shall be classified in accordance with the Functional Classification Guidelines as set forth by MaineDOT.

Local Street and Local Street Intersection	200 feet
Local Street and Collector Street Intersection	250 feet
Local Street and Arterial Street Intersection	300 feet
Collector Street and Collector Street Intersection	400 feet
Collector Street and Arterial Street Intersection	500 feet
Arterial Street and Arterial Street Intersection	500 feet

1.2. STREET GRADES

1.2.1. Street grades shall conform to the following standards, as shown in Figures I-1, I-2, and I-3:

- The maximum grade for the centerline of all streets shall not exceed eight (8) percent.
- The minimum grade for the centerline of all streets shall not be less than one- half (0.5) percent.
- The cross slope for local streets shall be three (3) percent. The cross slope for other street classifications shall be two (2) percent.
- Cross slopes for sidewalks shall be one (1) percent minimum and two (2) percent maximum, sloping down and away from the street line to the top of the curb at the gutter line, including pedestrian access routes across driveways, as shown in Figure I-10C.
- Street grades at intersections shall not be more than three (3) percent for a distance of one hundred (100) feet from the center of the intersection.

1.2.2. Curbless “shared streets” shall be considered on a case-by-case basis after consideration of context, design, and maintenance. Approval of any curbless “shared street” shall be subject to review by the Department of Public Works.

1.3. VERTICAL ALIGNMENT

Where two adjacent street segments are proposed to have different straight line centerline finish grades, vertical curves shall be used to connect the adjacent street segments. Vertical curves shall be parabolic and tangent to each of the adjacent grades. The minimum vertical curve length, "L", shall be calculated based on the following formula:

$$L = K \times A$$

where "A" is the absolute value of the algebraic difference between the beginning grade and the ending grade of the vertical curve, with both grades expressed in percent, and "K" is a factor whose value depends on street design speed. The K values corresponding to the minimum vertical curve lengths for the above street classifications and vertical curve types (sag curve or crest curve) are as follows:

Local Streets	
Crest Vertical Curves:	K = 20
Sag Vertical Curves:	K = 30
Collector Streets	
Crest Vertical Curves:	K = 30
Sag Vertical Curves:	K = 40
Arterial Streets	
Crest Vertical Curves:	K = 50
Sag Vertical Curves:	K = 50

1.4. SIGHT DISTANCE

Where driveways or new streets enter an existing street, vehicular sight-distance shall conform to standards established by the Maine DOT as contained in their publication, Chapter 299, Highway Driveway and Entrances Rules. For driveways frequently accessed by large vehicles, greater sight distance will be required according to Maine DOT guidelines.

1.5. DRIVEWAY DESIGN

1.5.1. All driveways shall be designed according to the following table, unless otherwise approved by the Department of Public Works.

Requirement	Minor driveway (serving <10 residential spaces)	All other driveways
A) Number of driveways	No more than one (1) driveway shall be permitted.	No more than two (2) driveways shall be permitted. Adjacent sites under common ownership shall have no more than two (2) driveways combined.
B) Minimum/ maximum driveway width	10 feet minimum, 20 feet maximum, measured at the property line.	For two-way driveways (preferred): • 20 feet minimum, 24 feet maximum for residential/commercial uses • 30 feet maximum for industrial uses Larger driveway openings may be permitted by the Department of Public Works as determined on a case-by-case basis.
C) Driveway spacing	Spacing of new or reconfigured driveways shall take the existing pattern of driveways in the surrounding context into account, and shall limit the impact to on-street parking and existing street trees. Shared driveways are encouraged. Driveway locations may be rejected based on documented or anticipated safety or operational issues	• 50 feet along local streets • 100 feet along arterial and collector streets with posted speeds of 35 mph or less • 150 feet for roadways posted at speeds greater than 35 mph Driveway locations may be rejected based on documented or anticipated safety or operational issues.
D) Driveway separation from intersections	• At least 35 feet along local roads • 50 feet along collectors/ arterials Distance shall be measured from the projection of the right-of-way line at the roadway to the centerline of the driveway. Driveway locations may be rejected based on documented or anticipated safety or operational issues.	• At least 35 feet along local roads • 100 feet along collectors/arterials Distance shall be measured from the projection of the right-of-way line at the driveway to the centerline of the driveway. Driveway locations may be rejected based on documented or anticipated safety or operational issues.

Requirement	Minor driveway (serving <10 residential spaces)	All other driveways
E) Curbing	2-foot granite corner radius "bugs" (also known as a "bullnose") shall be used where possible. Tipdowns may be used if the driveway crosses a narrow sidewalk.	Granite radii (where sufficient esplanade is available) or tipdowns shall be used. Granite radii shall not cross the pedestrian access route.
F) Driveway intersection angle	Perpendicular to the street, where possible. Where necessary, the driveway shall intersect the street between 75 and 105 degrees unless otherwise approved by the Department of Public Works.	
G) Design vehicle	Driveways shall be designed to accommodate site-specific design vehicles, and shall not be designed larger than necessary, as determined by turning movement diagrams and engineering judgment.	
H) Loading	All necessary functions for loading, circulation, and parking maneuvers shall occur within the site and outside of the right-of-way to the extent practicable, given the site context	
I) Circulation	Vehicle circulation shall be completely contained within the site to the extent practicable, given the site context.	
J) Backing maneuvers	Backing maneuvers may be permitted to enter the site. Backing maneuvers from a site may be permitted based on upon site context including functional class of the adjacent street, traffic volumes, and speeds.	Backing maneuvers into and out of the site are prohibited. All vehicles must enter and exit the site facing forward.
K) Parking area size	All driveways shall serve a parking area of at least 8'x16', clear of any encroachment, plus any setbacks required by zoning. Parking areas and parked cars shall not encroach upon the public right-of-way.	

1.5.2. Auxiliary lanes serving driveways: A left-turn lane and/or right-turn lane with appropriate storage and transition may be considered where engineering analysis indicates a need. The need for auxiliary lanes shall be considered within the context of the impacts to sidewalks, bikeways, transit stops, on-street parking, and traffic safety. All new auxiliary lanes are subject to the approval of the Department of Public Works.

1.6. SIDEWALKS AND CURB RAMPS

1.6.1. Sidewalk construction and materials: Sidewalks shall be brick, concrete or hot mix asphalt. The City Sidewalk Materials Policy (Appendix 1) shall be consulted to determine the appropriate type of sidewalk and driveway construction to use on various streets and in different areas of the City. Within the city's historic districts, only brick shall be used. Sidewalk and driveway construction details are illustrated in Figures I-10 and I-11. All new concrete sidewalks which abut

existing concrete sidewalks must be doweled in prior to pouring. All new brick sidewalks shall be constructed with bricks running perpendicular to the path of pedestrian travel, including through driveway crossings.

1.6.2. Sidewalk accessibility: All sidewalks shall meet any minimum standards set forth by current Americans with Disabilities Act (ADA) and Public Right-of-Way Accessibility Guidelines (PROWAG) guidance. There are no exceptions unless technical infeasibilities are identified, documented, and approved by the Department of Public Works**.** In case of conflict, these standards shall supersede this manual.

1.6.2.1. Sidewalk width: The minimum sidewalk clear width shall be five (5) feet. Where obstructions, such as utility poles, are located in sidewalks, a minimum clear and direct pedestrian access route width of five (5) feet shall be provided between the obstruction and one edge of the sidewalk. Wider sidewalks may be required in locations where heavy pedestrian traffic is expected, based on the site context. New sidewalks shall be at least as wide within the right-of-way as the sidewalk(s) along the adjacent properties.

1.6.2.2. Level changes: The maximum allowable vertical level change at any point is ¼-inch. A level change of ¼-inch to ½-inch shall be formed with a beveled slope no steeper than 26.6 degrees (2:1). Level changes greater than ½-inch shall be designed as ramps.

1.6.2.3. Running slope: Sidewalks shall be designed with a running slope no greater than the adjacent street slope.

1.6.2.4. Cross-slope: Sidewalks, including pedestrian access routes across driveways, shall be constructed with a minimum cross slope of 1% and a maximum cross-slope of 2% post-construction. Finished cross-slopes of greater than 2% shall not be acceptable. Designed cross-slopes of 1.5% are encouraged. Cross-slopes shall be consistent across the width of the sidewalk.

1.6.3. Curb ramps: ADA-compliant curb ramps are required on all projects involving construction of new streets or new sidewalks, and on all projects involving alterations to the abutting street, including repaving of existing streets and sidewalks.

Curb ramps shall be designed to prevent ponding of water at the base of the ramp. Ramp designs and details will indicate how positive drainage away from the landing in the vicinity of curb ramps will be achieved.

1.6.3.1. Applicability: ADA-compliant curb ramps are required at all marked and unmarked crossing locations. -Ramps shall not be provided only where there is

no crossing present due to safety concerns or a lack of pedestrian facilities on the opposite corner.

1.6.3.2. Orientation: Curb ramps shall be designed with the direction of travel on the ramp perpendicular to the curb line and parallel to the crosswalk, where feasible. Where existing conditions, such as narrow right-of-way width or utility constraints, preclude such layouts, parallel ramps, where the entire sidewalk ramps down, are acceptable. Diagonal ramps are not desirable, but may be approved by DPW on a case-by-case basis. Ramp design standards are provided in Figure I-6.

1.6.3.3. Detectable warning panels: All pedestrian curb ramps shall include truncated dome warning panels as shown in Figure I-7. Any curb ramp that is not intended to be used by pedestrians (e.g. ramps serving bikeways) shall not include warning panels. Warning panels shall also be provided where a crossing is present without a curb ramp (for example, where pedestrian facilities are at the same grade as the street, within a median refuge, etc.). All warning panels shall be uncoated cast iron, as detailed in Figure I-7. DPW reserves the right to require the installation of warning panels at driveway locations in such situations where volume or configuration of traffic may necessitate their placement.

1.6.4. Shared use paths: Shared use paths and other pedestrian access routes in the right-of-way shall conform to the same ADA requirements as sidewalks discussed herein. The appropriate material for shared use paths may differ from the material prescribed in the Sidewalk Material Policy. The appropriate material shall be determined by the Department of Public Works if not already documented in a transportation plan or master plan. Shared use paths shall be 10 feet in width or greater to allow for two-way traffic and passing.

1.6.5. Curb extensions: Curb extensions (also known as bump-outs, bulb-outs, or neckdowns) describe any localized narrowing of the roadway, typically at pedestrian crosswalk locations. The installation of any curb extension is subject to the approval of the Department of Public Works.

1.6.5.1. Applicability: Curb extensions may be considered where one or more of the following conditions are met:

- There is a documented speeding issue confirmed by a speed study;
- Curb extensions are necessary to construct one or more ADA-compliant curb ramps at an existing or proposed crosswalk;
- As determined necessary at uncontrolled midblock crossings;

- At signalized intersections, where reducing the pedestrian crossing time improves signal timing;

- At locations where there is a history of crashes involving pedestrians and/or crashes involving right-turning vehicles; or

- Where they are prescribed in a master plan or transportation plan.

1.6.5.2. Curb extension design: Curb extensions, where permitted, shall be constructed to achieve the applicable goal(s) without disrupting the functionality of the roadway or intersection. Curb extensions:

- Shall not impede necessary turning movements for trucks or emergency vehicles or winter operations;

- Shall not negatively impact drainage without adequate mitigation;

- Shall not impede upon, or narrow to an unacceptable degree, the adjacent travel or bicycle lanes; and

- Shall be constructed with radial curb (typically 10-foot radius or greater) at transition points to assist with drainage and maintenance, as shown in Figure I-19.

- Curb extensions that encompass on-street parallel parking lanes should generally not exceed six (6) feet in width, as shown in Figure I-19.

1.6.6. Non-compliance: ADA-compliance is required both within and outside of the public right-of-way. Any construction within the public right-of-way that is not built to ADA-compliance shall be reconstructed at the Applicant's expense.

Where strict compliance with ADA is technically infeasible in an alteration of an existing condition, the alteration must be made to the maximum extent technically feasible. The extent to which compliance is technically infeasible shall be documented, and an acceptable design shall be approved by the Department of Public Works. This process should occur during the design phase.

1.7. DRIVEWAY APRONS

Any driveway, or section thereof, located within any public street right-of-way shall be designed and built according to the following specifications.

1.7.1. Construction and materials: The portion of the driveway within the public right-of-way within the pedestrian access route shall be comprised of the same

material as the abutting sidewalk as identified in the Sidewalk Material Policy (Appendix 1) and constructed according to Figures I-10 through I-12.

1.7.2. Pedestrian access route: Where a driveway crosses a sidewalk, shared use path, or other pedestrian access route, a pedestrian access route shall be constructed across the driveway apron with a maximum cross-slope of 2% (1.5% preferred). The pedestrian access route shall be designed and constructed to meet the elevation of the adjacent sidewalk or shared use pathway to the extent feasible.

The pedestrian access route shall be constructed at the same width as the adjacent sidewalk or shared use path to the extent feasible. For pedestrian access routes connecting to adjacent sidewalks, the minimum width is four (4) feet, with five (5) feet preferred.

1.7.3. Driveway apron slope: The driveway apron shall ramp up to the grade of the sidewalk, where feasible. The portion of the driveway between the roadway and the pedestrian access route shall be designed to a maximum slope of 15%, unless otherwise approved by the Department of Public Works. This slope should be minimized to the extent possible while maintaining ADA-compliance and continuity of travel along the pedestrian access route.

1.7.4. Driveway design: Where feasible, driveways shall be designed to keep the pedestrian access route at a consistent elevation for continuity of travel. The portion of the driveway between the roadway and pedestrian access route shall be sloped to provide the full transition between the roadway and sidewalk elevations where feasible. Along roadways where the sidewalk width plus esplanade width is less than seven (7) feet, the sidewalk may be transitioned using ADA-compliant ramps in order to create a suitable driveway crossing.

1.8. ROADWAY CONSTRUCTION, SURFACE, AND AGGREGATES

1.8.1. All roadways shall be constructed in accordance with Chapter 25 of the City of Portland Code of Ordinances and the most current edition of the MaineDOT Standard Specifications unless otherwise indicated herein or otherwise directed in writing by the Department of Public Works.

1.8.2. Aggregates used in concrete mixes and in the construction of streets, sidewalks and aprons shall meet the requirements in SECTION 703 - AGGREGATES of the most current edition of the *State of Maine Department of Transportation Standard Specifications* with the following clarifications, additions and modifications:

1.8.3. 703.06 (a) Aggregate Base Gravels shall adhere to Maine DOT standard specifications listed in sections 304 and 703 for type “A” material.

1.8.4. 703.06 (c) Aggregate Subbase Gravels shall adhere to Maine DOT standard specifications listed in sections 304 and 703 for type "D" material.

1.8.5. 703.18 Common Borrow shall not contain any particle of bituminous material.

1.8.6. 703.19 Granular Borrow shall adhere to Maine DOT standard specification 703.19 for Granular Borrow material.

1.8.7. 703.20 Gravel Borrow shall adhere to Maine DOT standard specification 703.20 for Gravel Borrow material.

Minimum thicknesses for pavement structure materials

Street Classification	Minimum Materials Thicknesses (Inches)			
	Wearing Course Pavement	Base Course Pavement	Agg. Base Course	Agg. Subbase Course
Minor Residential	1 ½	2	3	15
Residential	1 ½	2	3	15
Collector	1 ½	2 ½	3	18
Commercial/Industrial	2	3	3	18

Minimum placement temperatures for hot mix asphalt pavement

Base Temp. °f	Mat Thickness, Inches					
	½	¾	1	1 ½	2	3+
40 - 50*	--	--	--	--	285	275
50 - 60	--	310	300	295	280	270
60 - 70	310	300	290	285	275	265
70 - 80	300	290	285	280	270	265
80 - 90	290	280	275	270	265	260
90+	280	275	270	265	260	255

** Surface course pavement shall not be placed when the air or road base temperature is less than 50 degrees F.*

1.9. STREETS ON ISLANDS IN CASCO BAY

Reserved.

1.10. PARKING LOT AND PARKING SPACE DESIGN

1.10.1. Parking lots, except for temporary lots to be used for less than one year, shall be constructed of a permanent and durable hard surface that is not subject to ponding or erosion, both onsite and within the right-of-way, and shall meet accessibility standards. Any proposed permanent parking lot surface must allow for delineation of parking spaces and circulation aisles.

1.10.2. Parking spaces shall meet the following dimensional requirements:

- Standard parking space: 9 feet wide by 18 feet long, except that low turnover parking spaces, such as those used by residents or employees, may be designed with a width of 8'-6" and considered a standard parking space.

- Compact parking space: 8 feet wide by 15 feet long.

- Motorcycle/motorized scooter parking space: 4 feet wide by 8 feet long.

Obstructions within parking areas, including columns and other permanent fixtures, shall not be located within the dimensions of a parking space. Where these obstructions are present, parking shall be striped and dimensioned to omit these obstructions. Such obstructions should not significantly impact vehicle maneuverability, visibility, ability to open doors, etc.

All spaces provided shall be safely accessible. Substandard and specialty spaces that are open to the general public shall be labeled as such using signage or pavement markings to inform users.

1.10.2.1. Compact spaces: Any parking lot with five or more spaces may contain a mix of standard and compact spaces. Up to 20% of parking spaces in a parking area may be compact. Compact parking spaces should be limited in high-turnover parking areas or locations where the typical vehicle is likely to be larger than a typical passenger vehicle. Vehicle turning analysis may be required for review by the Department of Public Works to ensure that spaces function as designed.

1.10.2.2. Accessible Parking: All parking areas shall provide accessible parking per ADA and the Maine Fair Housing Act. ADA standards for number of spaces, dimensions, buffers, cross-slopes, materials, pedestrian accessibility, and other requirements shall apply with no exceptions. Accessible spaces shall be considered "standard" parking spaces for the purposes of calculating the allowable number of compact spaces.

1.10.3. Vehicular access shall be provided by one or more aisles. The minimum two-

way drive aisle width is 24 feet for standard, right-angle parking, and is otherwise dependent on parking space orientation, as illustrated in Figure I-16A. Accessible parking spaces shall be served by at least one aisle of standard width or greater.

1.11. MOTORCYCLE/MOTORIZED SCOOTER/MOPED PARKING (ON-STREET):

To distinguish motorcycle/motorized scooter/moped parking spaces from standard parking spaces the spaces shall be painted and delineated with signage. These painted spaces shall be angled and shall be four (4) feet wide by eight (8) feet long. The dimensions for on-street motorcycle/motorized scooter/moped parking are outlined in Figure I-16B. On-street motorcycle/motorized scooter/moped parking may also be located where standard vehicle parking would be prohibited because of sight restrictions, such as adjacent to a crosswalk or an approach to a traffic control device. Motorcycles/motorized scooter/mopeds do not create the same sight impediment as a standard vehicle.

1.12. BICYCLE PARKING

1.12.1. Bicycle parking shall:

- Provide secure, durable racks that maintain bicycles in an upright position and to which bicycles can be affixed with customary lock and cable mechanisms. Fence-type ("wheel bender") racks designed to secure the front wheel only and wave racks are prohibited from counting toward bicycle parking requirements.

- Be installed on a hard surface that is suitably sized and provides sufficient clearance from obstacles.

- Be separated from car parking by a physical barrier such as curbing, wheel stops, parking bollards or similar features.

- Be adequately illuminated where nighttime use is anticipated.

- Be provided under covered areas and/or in secure storage lockers or rooms, if intended for long-term use.

- Be provided within the public right-of-way or be publicly accessible if intended for uses that expect visitation, customers, or short-term usage.

1.12.2. Placement of off-street bicycle parking racks shall conform to the bicycle parking rack placement criteria (*drawn from the Bicycle Facility Design Guide of the District Department of Transportation, 2006*) as illustrated in Figure I-24.

1.12.3. For commercial or industrial uses requiring more than ten (10) bicycle parking spaces:

- A minimum of ten percent (10%) of required bicycle parking shall be provided within fifty (50) feet of the main entry point of the structure, or shall be no further from such entry than the nearest five (5) non-handicapped parking spaces.

- Where there is more than one structure on a site, or where a structure has more than one main entrance, the parking shall be distributed to adequately serve all structures or main entrances.

1.12.4. Directional Signage: If bicycle parking is not directly visible from the public right-of-way, directional signage shall be provided indicating the availability and location of bicycle parking facilities.

1.12.5. Approved Bicycle Racks:

1.12.5.1. Design: Bicycle racks that are required to meet site plan requirements shall:

- Provide multiple points of contact between the rack and the bicycle;

- Allow bicycles to be locked without the need to lift the bicycle into the rack; and

- Be placed in such a way as to allow the intended number of bikes to be securely locked.

1.12.5.2. Approved Racks by Location:

- Private property: A variety of commercially available racks are acceptable for installation on private property, including but not limited to those catalogue listings identified herein (Figures I-24 and I-25).

- In the Public Right-of-Way: Bicycle parking may be located within a public right-of-way where site conditions cannot reasonably accommodate bicycle parking on private property or in the case of sites that expect high-turnover or short-term bike parking usage. Bike parking may be placed either adjacent to or within reasonable walking distance of the site, if such areas are available that meet the bicycle parking rack placement criteria (*drawn from the Bicycle Facility Design*

Guide of the District Department of Transportation, 2006) as illustrated in Figure I-24. Bicycle racks within the public right-of-way shall be placed to allow for the safe storage of bicycles while limiting encroachment onto adjacent sidewalks. If no location within the right-of-way is available, a financial contribution commensurate with the cost for purchase and installation of the required number of bicycle racks shall be made to the Sustainable Transportation Fund.

The following approved brands, installed according to company specifications, shall be permitted in the public right-of-way. Equivalent bicycle racks by other manufacturers are acceptable upon prior approval by the reviewing authority.

- DERO 'Downtown Rack' Inverted U-Rack (Figure I-25)
- DERO 'Bike Hitch' (Figure I-24)
- Old Port District, including Commercial Street: DERO Bike Hitch only (Figure I-24)

Bicycle racks in the public right-of-way shall become the property of the City of Portland.

Bicycle racks in the public right-of-way shall match the designated street furniture color for that location as described in the Municipal Street Lighting Standards in this manual. Where there is no designated street furniture color, bicycle racks in the public right-of-way shall be black (manufacturer's specification).

1.13. BICYCLE ROUTES AND LANES

The City has developed bike network plans to show present and proposed bikeways, including neighborhood byways, dedicated bicycle lanes, and shared use pathways. Positive identification of bikeways shall be provided by pavement markings, bike lane symbols, and/or signage. The following standards shall be applied to the installation of bike facilities:

1.13.1. Design: The design of any new or modified bicycle facility shall be reviewed and approved by the Department of Public Works prior to application and shall be consistent with the following design standards:

- Vehicular travel lanes and bicycle lanes shall be separated by a minimum six (6) inch solid white painted edge line adjacent to the travel lane. At intersections the white edge line shall be a dashed line (two (2) foot painted length by four (4) foot opening) across the intersection and for 50 feet to 100 feet in advance of the intersection, as appropriate. Where there is the

potential for right-turning vehicle conflicts with through bicycle movements at intersections, green paint within the bicycle lane is recommended and may be required.

- Bike lanes shall have a minimum width of five (5) feet. Six (6) feet is preferred for bicycle lanes adjacent to curbed street sections. Where sufficient street width exists, a painted buffer of one (1) foot or more may be provided between the bicycle lane and vehicle travel lanes. Where a bicycle lane is adjacent to on-street parking with moderate to high utilization and/or turnover rates, this buffer should be placed between the bicycle lane and parking lane. The location of the buffer shall be determined in consultation with the Department of Public Works. Where a buffer of one foot or greater is provided, the width of the bicycle lane may be reduced to four (4) feet, if necessary, with approval from the Department of Public Works. Design shall take into account the location of potential obstructions, such as catch basins.

- Where the minimum or recommended width for bicycle lanes is not immediately available, reallocation of general travel lane widths or the number and configuration of general travel lanes shall be considered, as appropriate, in consultation with the Department of Public Works.

- On-street bicycle lanes and associated buffers shall not exceed eight (8) feet in total width unless vertical delineation is provided in the buffer area. Applicability and materials of vertical delineation shall be determined by the Department of Public Works.

- Shared use paths shall be designed to facilitate two-way traffic by users of multiple, nonmotorized modes. In general, shared use paths shall be ten (10) feet or greater in width, and free of any obstructions, including a 2 foot clear zone on each side of the pathway. Refer to the AASHTO *Guide for the Development of Bicycle Facilities* for shared use path design considerations.

- On bicycle routes, or other roads with considerable bicycle traffic and insufficient roadway width to provide a bicycle lane, shared lane markings (“sharrows”) may be used. Where used, sharrows shall be placed in the center of the travel lane(s) serving the bike route(s) or where bicyclists are expected.

- On two-way roadways with excess roadway width for one bicycle lane, but not two, installation of a single bicycle lane should be considered. The single bicycle lane should be placed in the uphill direction, if located on a hill. Otherwise, if parking is provided on only one side of the roadway, bicycle lane placement should be prioritized on the side of the street with no

parking. Where possible, streets with bicycle lanes in only one direction should be paired with another lane on an adjacent parallel street to achieve bicycle mobility in both directions, if possible.

- Standard bike lanes and all other on-street bicycle facilities such as separated bike lanes shall be designed in accordance with the most recent version of nationally-recognized design guides, such as the NACTO *Urban Bikeway Design Guide*, the NACTO *Urban Street Design Guide*, the FHWA *Separated Bike Lane Planning and Design Guide*, the Massachusetts DOT's *Separated Bike Lane Planning & Design Guide*, or other best practice as it becomes available.

1.13.2. Bike network considerations: Bicycle facilities shall be designed within the context of the city-wide bicycle network.

1.13.3. Pavement markings and signage:

- Bicycle lanes shall be marked with appropriate pavement markings such as longitudinal lines and stenciled symbols, as illustrated in Figure I-18.

- Bike routes shall be identified by appropriate signage as found in the FHWA 'Manual of Uniform Traffic Control Devices,' as illustrated in Figure I-18.

1.14. ELECTRIC VEHICLE INFRASTRUCTURE

New structured and surface parking lots of five or more spaces shall include energized electrical outlets or installed chargers capable of providing Level 2 EV charging or higher to 20% of parking spaces (rounded down to the nearest whole number). An additional 50% of spaces must be made EV-ready, meaning that they are served by sufficient conduit and electrical service to allow for future installation of electric vehicle supply equipment at every space.

An applicant may request a reduction in the number of required EV-installed or EV-ready parking spaces if Level 3 EV charging is proposed. In this case, spaces served by Level 3 charging may be substituted for Level 2 at a ratio to be determined in consultation with the Department of Public Works.

In the case of new structured and surface parking of greater than 100 spaces, the review authority may establish the EV parking requirements on the basis of an EV parking demand study. Such study shall be prepared by a qualified professional using industry best practice, and account for future growth in EV demand.

1.15. TRAFFIC CONTROL DEVICES

All intersections of two or more roadways shall be controlled by one of the traffic control methods listed herein. All traffic control shall be selected and installed in accordance with the Manual on Uniform Traffic Control Devices (MUTCD).

1.15.1. Traffic signals: All new traffic signals are subject to the approval of the Department of Public Works. Proposed traffic signals are required to meet at least one traffic signal warrant set by the MUTCD. Signals justified using Warrant 3 (Peak Hour Volume), Warrant 7 (Crash Experience), or Warrant 8 (Roadway Network) without meeting at least one other warrant may require additional study. Development projects that trigger, or further exceed, one or more signal warrants at one or more existing or proposed intersections or driveways may be required to install a traffic signal at those locations.

New or modified traffic signals also require the submission of a traffic signal plan, including locations of all equipment, underground utilities, phasing and timing plans, and a specific list of all traffic signal hardware. Plans shall be submitted to the Department of Public Works for review and approval prior to installation.

New traffic signal proposals are subject to review by MaineDOT, as appropriate. All city, state, and federal guidelines with regard to installation, activation, and monitoring shall apply.

Existing traffic signals that do not meet MUTCD signal warrants may be removed if they present operational or safety issues. All removals of existing traffic signals are subject to coordination with and the approval of the Department of Public Works and MaineDOT.

The City of Portland's traffic signal specifications can be found in the City of Portland Traffic Signal Policy and Guidance Manual.

1.15.2. Stop control: Stop signs shall be installed in accordance with MUTCD. Stop signs shall be accompanied by a stop line 12" in width.

Stop control shall not be used for speed control. Stop control should generally not be used on intersection approaches with multiple travel lanes. Stop control shall not be used for intersections with five (5) or more approaches. Such intersections shall be signalized (if warranted), equipped with a roundabout, or otherwise realigned or regulated so that the number of approaches is reduced to four (4) or fewer.

1.15.3. Roundabouts: Where sufficient right-of-way is available, circular intersections (i.e. roundabouts or traffic circles) should be considered. Such intersections may provide operational and safety benefits compared to signalized or stop-controlled intersections. Where selected as the appropriate traffic control measure, roundabouts shall be designed in accordance with the MUTCD Chapter 3C, with signage according to MUTCD Section 2B.07. Neighborhood traffic circles may be considered at stop-controlled intersections as a traffic calming measure. All such treatments are subject to the approval of the Department of Public Works.

1.15.4. Yield control: Yield control should generally only be implemented in the following scenarios:

- At certain channelized turning lanes separated from adjacent travel lanes by an island (even if the adjacent lanes are controlled by a stop sign or signal);
- At the entering roadway for a merging movement, including at a roundabout; or
- Where engineering judgment determines that yield control is appropriate, subject to the approval of the Department of Public Works.

1.16. PUBLIC CROSSWALKS

1.16.1. Public crosswalks shall meet the requirements of The Manual on Uniform Traffic Control Devices (MUTCD), unless City standards specify a stricter measure. Public improvements may include but shall not be limited to any one or combination of the following:

- Crosswalks;
- Curb Bump Outs or Curb Extensions, where warranted;
- Pedestrian Crossing Signs (curbside, overhead or in the street);
- Rectangular Rapid Flashing Beacons (RRFBs);
- Pedestrian Hybrid Beacons;
- Pedestrian Activated Traffic Control Signal (Red, yellow, green); and
- Medians or raised islands

1.16.2. Crossing locations shall be designed to the following standards unless otherwise directed by the Department of Public Works:

- Street markings: Crosswalks on public streets shall consist of 24-inch block style white lines, placed 48 inches apart on center, for an overall width of 8 feet (or wider; at least as wide as the sidewalks served by the crosswalk).

- Street lighting: Crosswalk locations shall be adequately illuminated for visibility at nighttime.

- Signage: Select crosswalk locations may need to be accentuated through the use of signage mounted curbside, overhead, or on the roadway centerline, as described hereinafter. Crosswalk signs shall be placed directly adjacent to crosswalks, and advance warning signs shall be placed in accordance with MUTCD. Standard signs shall be black legend on a fluorescent background.

1.17. PUBLIC TRANSIT FACILITIES

Where required, public transit facilities shall meet the following standards:

1.17.1. Transit pullout bays:

- Transit pullout bays shall be located in the City right-of-way along the property frontage; or

- Where space constraints prevent locating a transit pullout bay along the property frontage, transit pullout bays may be located within reasonable walking distance of the site.

- Where possible, transit pullout bays shall be located at intersections. At signalized intersections, far-side bus stops are preferred. Mid-block bays are not preferred due to impacts to parking and traffic.

- The design of the pullout bay shall provide adequate space for vehicles to maneuver through facilities without causing damage to either the vehicles or facilities, as detailed herein.

1.17.2. Transit shelters:

- Transit shelters shall be located within the site, directly adjacent to the right-of-way on which the public transportation route is established; or

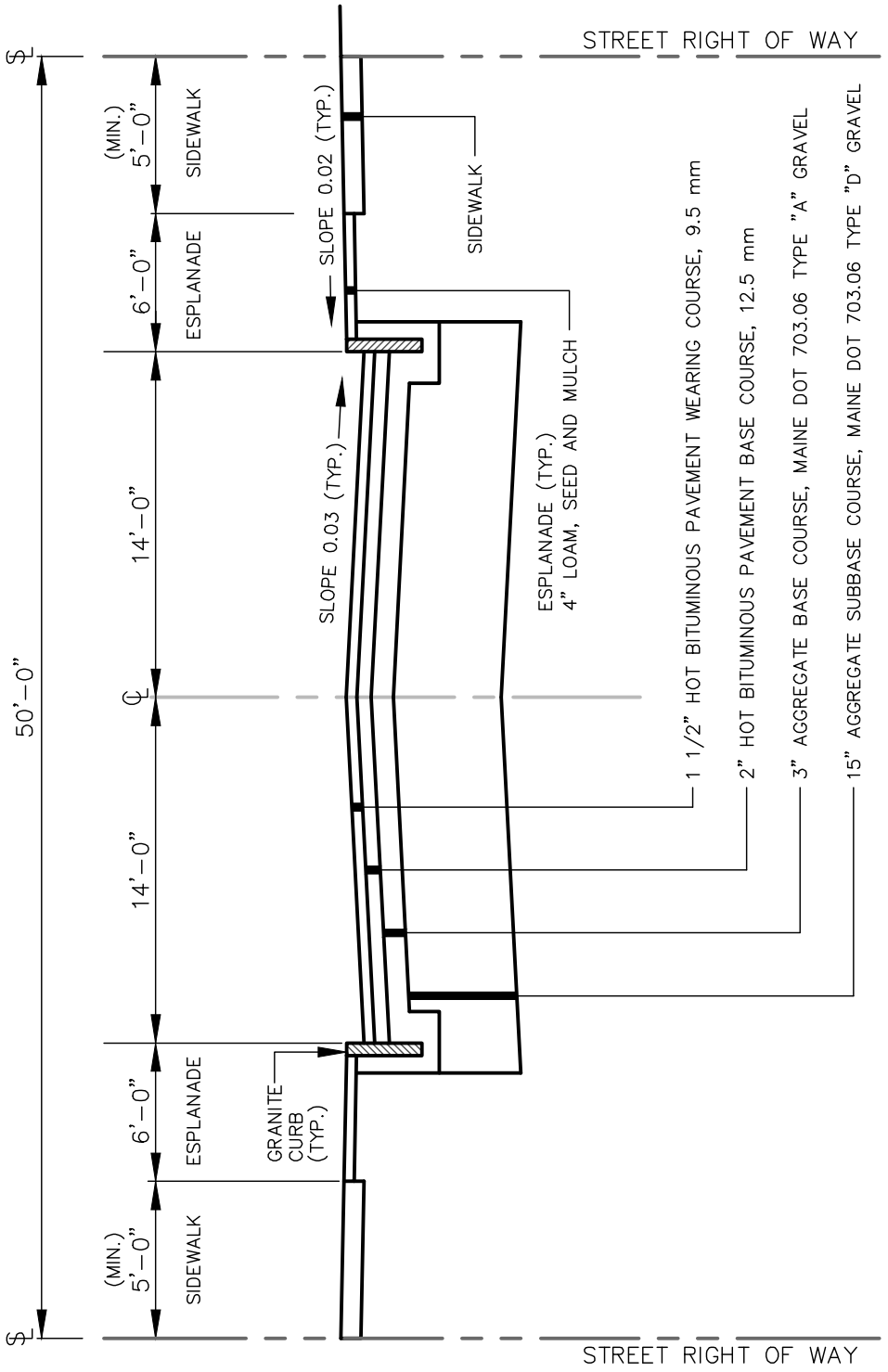
- Where site constraints prevent locating a transit shelter on the site, it shall be located within a public sidewalk area along the property

frontage. If a transit shelter is to be located within a public sidewalk area, City sidewalk clearance requirements shall apply.

- Where space constraints prevent locating a transit shelter within a public sidewalk area along the property frontage, it may be located within reasonable walking distance of the site.

- Installation and ongoing maintenance of transit shelters on private property shall be the responsibility of the property owner. Ongoing maintenance of transit shelters located within the City right-of-way or within an easement held by the City shall be the responsibility of the City or of the local or regional transit authority serving the facility.

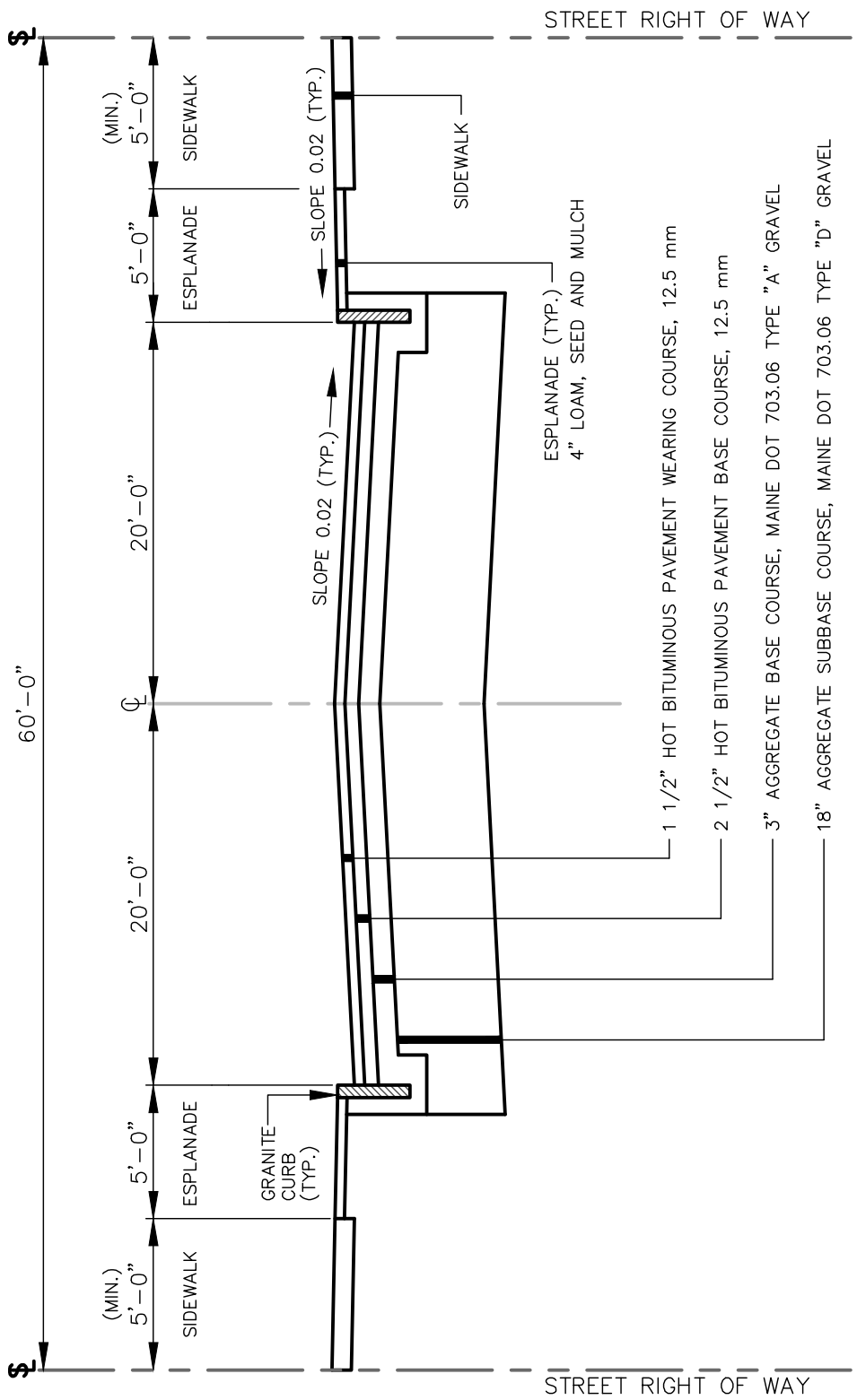
1.17.3. Where necessary, developments shall provide easements to the City, sufficient in size to accommodate public transit infrastructure and access to the transit stop.



LOCAL STREET CROSS SECTION

NOT TO SCALE

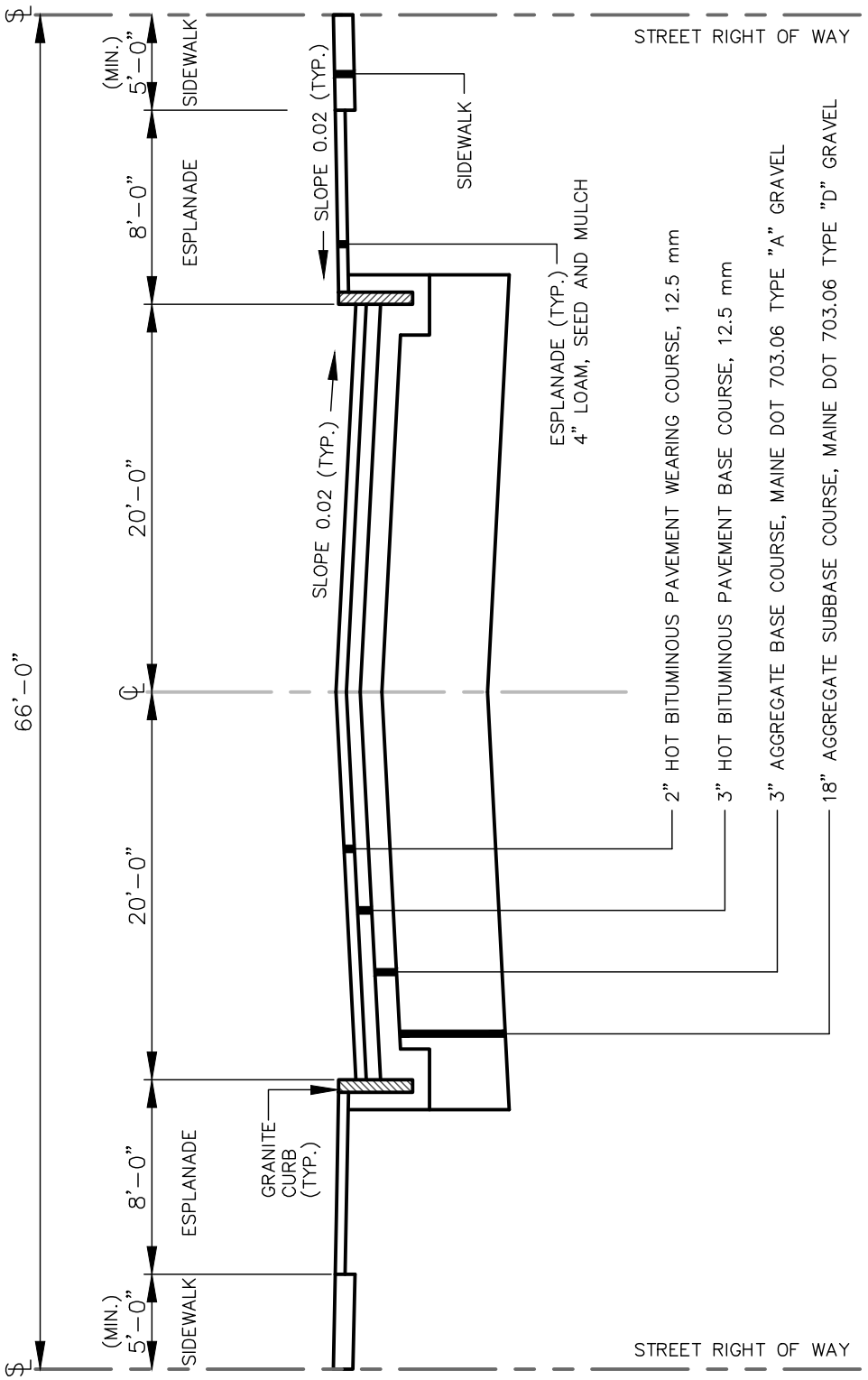
DATE: NOV. 2022 REVISED:	CITY OF PORTLAND, MAINE TECHNICAL STANDARDS MANUAL	**TRANSPORTATION DESIGN STANDARDS** SECTION I	FIGURE: **I-1**
	LOCAL STREET CROSS SECTION		



COLLECTOR STREET CROSS SECTION

NOT TO SCALE

DATE: NOV. 2022 REVISED:	CITY OF PORTLAND, MAINE TECHNICAL STANDARDS MANUAL	**TRANSPORTATION DESIGN STANDARDS** SECTION I	FIGURE: **I-2**
	COLLECTOR STREET CROSS SECTION		



ARTERIAL STREET CROSS SECTION

NOT TO SCALE

DATE: NOV. 2022 REVISED:	CITY OF PORTLAND, MAINE TECHNICAL STANDARDS MANUAL	**TRANSPORTATION DESIGN STANDARDS** SECTION I	FIGURE: **I-3**
	ARTERIAL STREET CROSS SECTION		

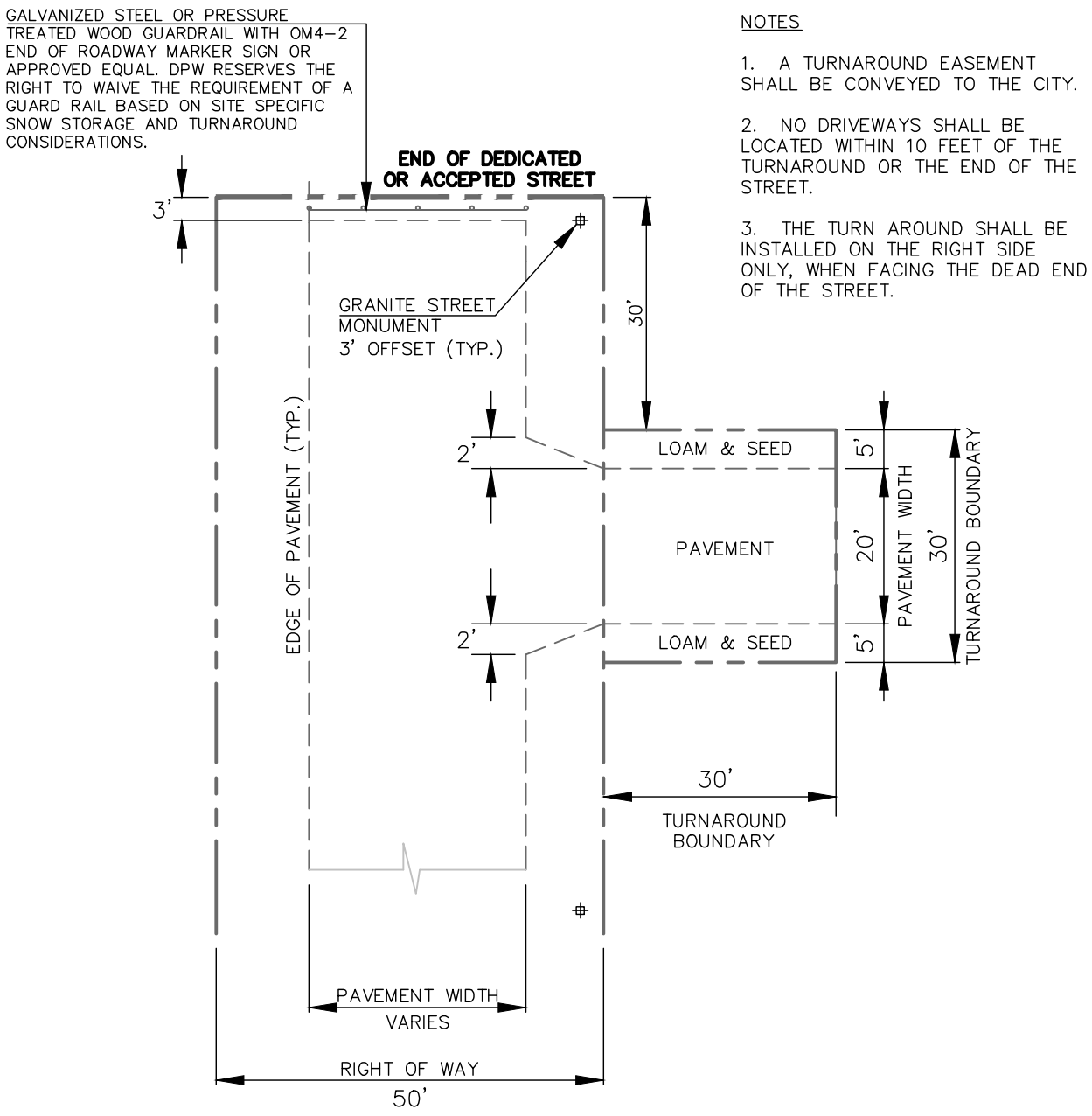
STREET CLASSIFICATION	R.O.W. WIDTH (ft.)	UTILITY LOCATION DIMENSIONS	
		W (ft.)	G (ft.)
LOCAL	50	5	5
COLLECTOR	60	7	7
ARTERIAL	66	8	8

NOTES:
1. DEPTH OF SANITARY SEWER AND STORM DRAIN PER CITY ENGINEER.
2. DEPTH OF UNDER DRAIN SHALL BE 3'-6" FROM GUTTER LINE TO PIPE INVERT.
3. DEPTHS OF ELECTRIC, TELEPHONE, CABLE TELEVISION AND FIRE TO BE AT LEAST 36 INCHES BELOW FINISH GRADE. DEPTHS OF OTHER UTILITIES PER REQUIREMENTS OF APPLICABLE UTILITY COMPANY. WHEN TREES ARE PROPOSED FOR THE ESPLANADE, THE UTILITIES DESIGNATED FOR THAT LOCATION SHALL MAKE NECESSARY PROVISIONS.
4. APPLICABLE WARNING TAPE SHALL BE PLACED OVER EACH UTILITY.
5. RIGID PVC CONDUIT IS REQUIRED FOR STREET AND DRIVEWAY CROSSINGS AND OTHER PAVEMENT CROSSINGS MORE THAN 12 FEET IN LENGTH. CONDUITS CROSSING STREETS SHALL BE ENCASED IN CONCRETE. CONCRETE SHALL BE DESIGNED TO HAVE MINIMUM 3,000 PSI COMP STRENGTH AND SHALL HAVE A MINIMUM 4" THICK ENCASEMENT ON ALL SIDES OF CONDUIT.
6. UTILITY MANHOLES SHALL NOT BE LOCATED WITHIN TRAVEL LANE VEHICLE TRACKING TO THE EXTENT POSSIBLE.

UTILITY LOCATIONS IN STREETS

NOT TO SCALE

DATE: NOV. 2022 REVISED:	CITY OF PORTLAND, MAINE TECHNICAL STANDARDS MANUAL	**TRANSPORTATION DESIGN STANDARDS** SECTION I	**FIGURE:**
	UTILITY LOCATIONS IN STREETS		**I-4**



NOTES

1. A TURNAROUND EASEMENT SHALL BE CONVEYED TO THE CITY.

2. NO DRIVEWAYS SHALL BE LOCATED WITHIN 10 FEET OF THE TURNAROUND OR THE END OF THE STREET.

3. THE TURN AROUND SHALL BE INSTALLED ON THE RIGHT SIDE ONLY, WHEN FACING THE DEAD END OF THE STREET.

TURNAROUND ON DEAD END STREET

NOT TO SCALE

DATE: NOV. 2022 REVISED:	CITY OF PORTLAND, MAINE TECHNICAL STANDARDS MANUAL	**TRANSPORTATION DESIGN STANDARDS** SECTION I	FIGURE: I-5
	TURNAROUND ON DEAD END STREET		

GENERAL NOTES

1. DESIGN OF ACCESSIBLE RAMPS AND ASSOCIATED FACILITIES ARE GOVERNED BY THE 2010 AMERICANS WITH DISABILITIES ACT (ADA) STANDARDS FOR ACCESSIBLE DESIGN, WHICH IS DETAILED IN DOJ SECTION 28 CFR 35.151. ADDITIONAL GUIDANCE AND INFORMATION CAN BE FOUND IN THE PROPOSED PUBLIC RIGHTS-OF-WAY ACCESSIBILITY GUIDELINES PUBLISHED BY THE U.S. ACCESS BOARD. IN ANY CASE WHERE THE DESIGN REQUIREMENTS ARE MORE STRINGENT BETWEEN ADA STANDARDS AND CITY REQUIREMENTS, THE ADA STANDARDS SHALL GOVERN.

2. SIDEWALKS SHALL BE CONSTRUCTED IN BRICK, CONCRETE, OR BITUMINOUS, ACCORDING TO THE SIDEWALK & DRIVEWAY APRON MATERIALS POLICY, UNLESS DIRECTED OTHERWISE BY THE CITY ENGINEER.

3. SIDEWALKS AND RAMPS SHALL BE BUILT ACCORDING TO THE FOLLOWING DIMENSIONS AND GRADES:
   SIDEWALK RUNNING SLOPE: MATCH ADJACENT STREET GRADE
   SIDEWALK CROSS SLOPE: 1.0% MINIMUM, 2.0% MAXIMUM
   SIDEWALK WIDTH: 5'-0" MINIMUM, WIDER PREFERRED
   ESPLANADE (WHERE PROVIDED) 2'-0" MINIMUM, 4'-0" OR GREATER PREFERRED IF LANDSCAPED.

4. TWO CURB RAMPS ARE REQUIRED AT EACH SIDEWALK CORNER. EACH CURB RAMP SHALL CONNECT THE PEDESTRIAN ACCESS ROUTE AT EACH PEDESTRIAN STREET CROSSING. IN ALTERATIONS WHERE PHYSICAL CONSTRAINTS PREVENT TWO CURB RAMPS FROM BEING INSTALLED AT A STREET CORNER, A SINGLE PEDESTRIAN CURB RAMP MAY BE PERMITTED.

5. OPPOSING CURB RAMPS AT A SINGLE CROSSING SHALL ALIGN TO PROVIDE A STRAIGHT PATH OF TRAVEL FROM THE TOP OF THE RAMP TO THE CURB RAMP ON THE OPPOSITE SIDE OF THE ROADWAY TO THE MAXIMUM EXTENT FEASIBLE.

6. ALL SIDEWALKS AND RAMPS SHALL DRAIN TOWARD THE STREET, DRIVEWAY, OR PARKING AREA, WITH A MAXIMUM CROSS SLOPE OF 2.0%.

7. LEVEL LANDINGS (NO GREATER THAN 2.0% SLOPE IN ANY DIRECTION) AT THE BOTTOM OF PERPENDICULAR RAMPS SHALL BE WHOLLY CONTAINED WITHIN MARKED CROSSWALKS.

8. PONDING SHALL NOT BE PERMITTED WITHIN THE CURB RAMP LIMITS. RAMPS SHALL NOT ALTER ROADWAY DRAINAGE PATTERNS.

9. TRANSITION FROM RAMPS TO WALKS OR STREET SURFACE SHALL BE FLUSH AND FREE OF ABRUPT CHANGES. PAVEMENT AT THE STREET SURFACE SHALL BE MILLED AND REPAVED TO ACHIEVE FLUSH CONDITION.

10. CURB RAMP AND FORM WORK SLOPES SHALL BE CHECKED WITH A DIGITAL LEVEL OF AN APPROPRIATE LENGTH. NO PORTION OF A RAMP RUN SHALL EXCEED THE MAXIMUM SLOPE REQUIREMENT.

11. THE COUNTER SLOPE WITHIN 2' OF THE CURB RAMP SHALL BE 5% MAXIMUM. IN ALTERATIONS, IF THE COUNTER SLOPE OF 5% MAXIMUM CANNOT BE ACHIEVED, THE SLOPE ELEVATION MAY BE ADJUSTED SO THAT THE COMBINED COUNTER SLOPE AND RAMP SLOPE DO NOT EXCEED 13.3%.

12. VERTICAL DROP-OFF EDGES TO RAMPS SHALL NOT BE BUILT UNLESS THE RAMP ABUTS AN ESPLANADE OR OTHER AREA NOT TO BE USED BY PEDESTRIANS.

13. AT MARKED CROSSWALKS, THE FULL WIDTH OF THE RAMP OR LANDING SHALL BE CONTAINED WITHIN THE PAVEMENT MARKINGS.

14. DETECTABLE WARNING PANELS SHALL BE PROVIDED ON ALL RAMPS AS PER FIGURE I-7 OF THESE STANDARD DETAILS.

15. RAMP FLARES SHOULD BE LOCATED OUTSIDE THE DIRECT LINE OF TRAVEL MOST LIKELY TO BE FOLLOWED BY THE VISUALLY IMPAIRED.

16. SIGNS, POLES, PLANTERS, MAILBOXES, ETC. SHALL NOT BE LOCATED WHERE THEY WILL INTERFERE WITH THE USE OF SIDEWALK RAMPS.

17. SIDEWALK RAMPS SHALL NOT BE LOCATED WHERE USERS MUST CROSS DROP INLET GRATES, MANHOLE COVERS, OR OTHER ACCESS LIDS. IF THIS CANNOT BE AVOIDED, THEN GRATE DESIGN AND PLACEMENT SHALL CONFORM TO ADA REQUIREMENTS.

18. THE PUBLIC SIDEWALK CURB RAMP STANDARDS DEPICTED HERE MAY NOT BE APPROPRIATE FOR ALL LOCATIONS. FIELD CONDITIONS AT INDIVIDUAL LOCATIONS MAY REQUIRE SPECIFIC DESIGNS. RAMP DESIGNS THAT ARE COMPLIANT WITH ADA BUT NOT LISTED IN THESE DETAILS MAY BE APPROVED BY THE CITY ENGINEER.

19. DESIGNS MUST BE CONSISTENT WITH THE PROVISIONS OF THESE DETAILS AND TO ADA GUIDELINES TO THE MAXIMUM EXTENT FEASIBLE ON ALTERATION PROJECTS, AND WHEN STRUCTURALLY PRACTICABLE ON NEW CONSTRUCTION PROJECTS AS REQUIRED BY THE ADA ACCESSIBILITY GUIDELINES.

20. MAXIMUMS AND MINIMUMS DO NOT HAVE TOLERANCES AND ARE NOT TO BE EXCEEDED OR UNMET.

21. THE STANDARD TURNING SPACE (LEVEL LANDING) IS 4'-0" X 4'-0" SLOPING NO MORE THAN 2.0%. WHERE THE TURNING SPACE SHALL BE 4'-0" MINIMUM BY 5'-0" MINIMUM. THE 5'-0" DIMENSION SHALL BE PROVIDED IN THE DIRECTION OF THE RAMP RUN.

22. DETECTABLE WARNINGS SHALL BE INSTALLED AT ALL SIGNED OR SIGNALIZED INTERSECTIONS. THEY SHALL HAVE A TRUNCATED DOME SURFACE. THE DOMES SHALL BE IN A SQUARE PATTERN AND ALIGNED WITH PEDESTRIAN TRAFFIC WHERE POSSIBLE.

23. DETECTABLE WARNINGS SHALL SPAN THE WIDTH OF THE PEDESTRIAN RAMP. SEE STANDARD DETAIL FIGURE I-7.

24. ALL DETECTABLE WARNING FIELDS PLACED AT THE SAME INTERSECTION SHALL BE MADE UP OF THE SAME UNIFORM MATERIAL TYPE. DETECTABLE WARNINGS SHALL BE CONTRASTING IN COLOR TO THE ADJACENT WALKWAY.

25. A RAMP WITH A RUNNING SLOPE LESS THAN 5.0% IS DEFINED AS A "BLENDED TRANSITION". BLENDED TRANSITIONS DO NOT REQUIRE A LEVEL LANDING AT THE TOP OF THE RAMP.

26. THE RAMP LENGTH SHALL NOT EXCEED 15 FEET. ADJUST RAMP LENGTH OR SLOPE AS NEEDED TO PROVIDE ACCESS TO THE MAXIMUM EXTENT FEASIBLE.

27. ALL CURB RAMP JOINTS AND GRADE BREAKS SHALL BE FLUSH.

28. RAMP GRADE BREAKS SHALL BE PERPENDICULAR TO THE RUNNING SLOPE.

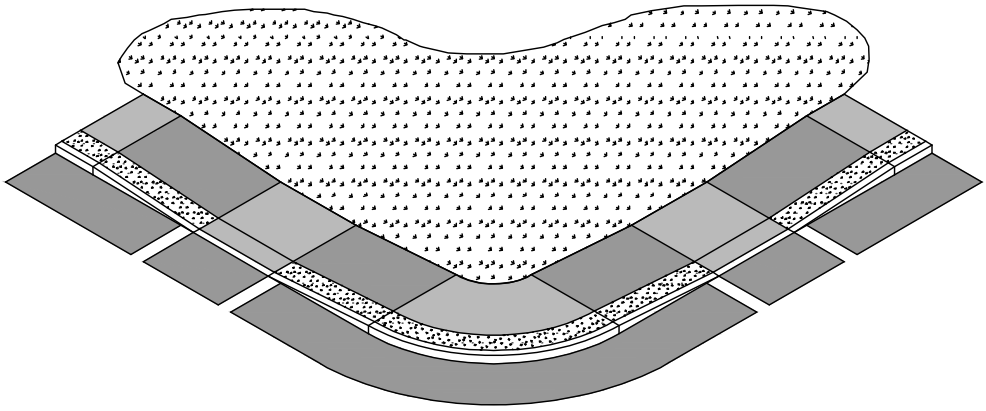
29. THERE SHALL BE A MINIMUM OF 12" AGGREGATE SUBBASE COURSE - GRAVEL UNDER THE SIDEWALK SURFACE ON PEDESTRIAN RAMPS.

30. DRAINAGE STRUCTURES, UTILITY POLES, TRAFFIC SIGNAL EQUIPMENT OR OTHER OBSTRUCTIONS SHALL NOT BE INSTALLED IN THE CURB RAMP OR TURNING SPACE AREAS.

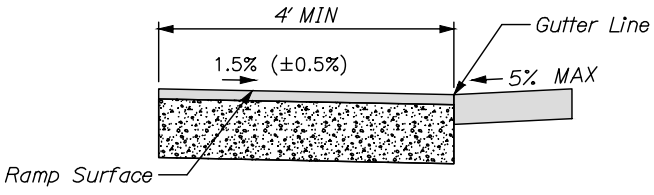
31. BEFORE RETROFITTING RAMPS, THE CONTRACTOR SHALL VERIFY REMOVAL LIMITS ARE SUFFICIENT TO PROVIDE POSITIVE DRAINAGE, MAINTAIN EXISTING DRAINAGE PATTERNS AND AVOID PONDING IN THE FINAL CONFIGURATION.

32. A TEMPORARY PEDESTRIAN ACCESS ROUTE SHALL BE PROVIDED WHENEVER THE EXISTING PEDESTRIAN ACCESS ROUTE IN THE PUBLIC RIGHT OF WAY IS BLOCKED BY CONSTRUCTION, ALTERATION, MAINTENANCE OR OTHER TEMPORARY CONDITIONS. REFER TO MUTCD FOR GUIDANCE.

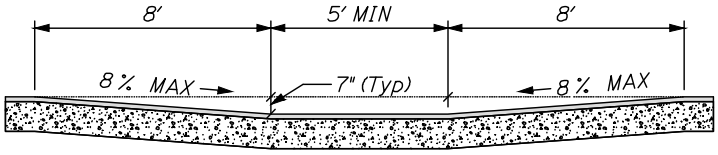
DATE: NOV. 2022	CITY OF PORTLAND, MAINE TECHNICAL STANDARDS MANUAL	**TRANSPORTATION DESIGN STANDARDS** SECTION I	FIGURE:
	ACCESSIBLE RAMP GENERAL NOTES		I-6



~ ISOMETRIC VIEW ~
(NOT TO SCALE)



~ SECTION A-A ~



~ SECTION B-B ~

~ PLAN VIEW ~

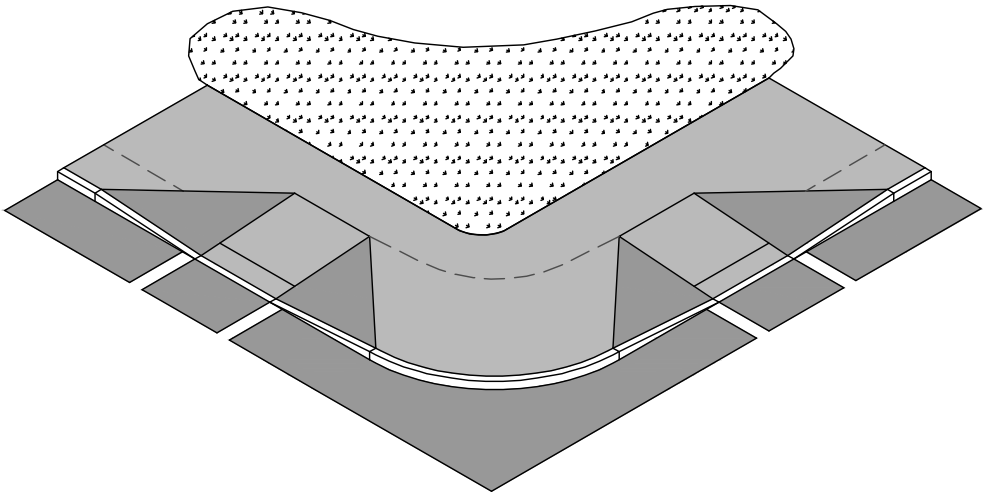
NOTES:

1. THIS DESIGN IS THE PREFERED OPTION WHEN THE SIDEWALK & ESPLANADE WIDTH IS LESS THAN 6.5'. USE OTHER OPTIONS ONLY WHEN REQUIRED BY DESIGN CONSTRAINTS.
2. A MINIMUM CURB REVEAL OF 4" IS REQUIRED AT THE APEX OF THE CURB RADIUS.
3. MINIMUM TERMINAL CURB LENGTH SHALL BE 4 FEET.
4. SIDEWALK MATERIAL PER CITY SIDEWALK MATERIAL POLICY.

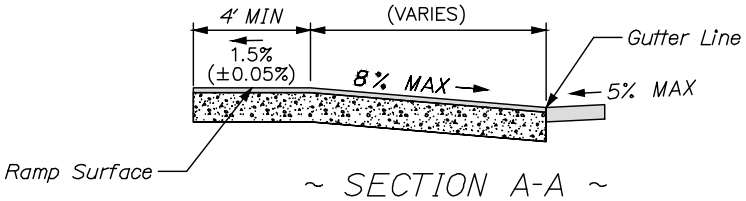
PARALLEL ADA RAMP – SIDEWALK LESS THAN 6.5' WIDE WITH OR WITHOUT ESPLANADE

NOT TO SCALE

DATE: NOV. 2022 REVISED:	CITY OF PORTLAND, MAINE TECHNICAL STANDARDS MANUAL	**TRANSPORTATION DESIGN STANDARDS** SECTION I	FIGURE: I-6A
	PARALLEL ADA RAMP FOR SIDEWALK LESS THAN 6.5' WIDE		



~ ISOMETRIC VIEW ~
(not to scale)



~ SECTION A-A ~
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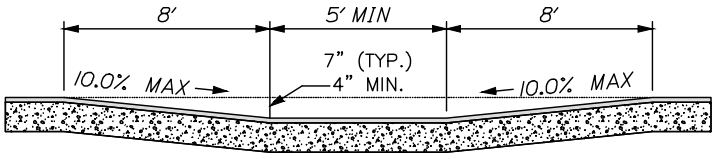


~ SECTION B-B ~
(not to scale)

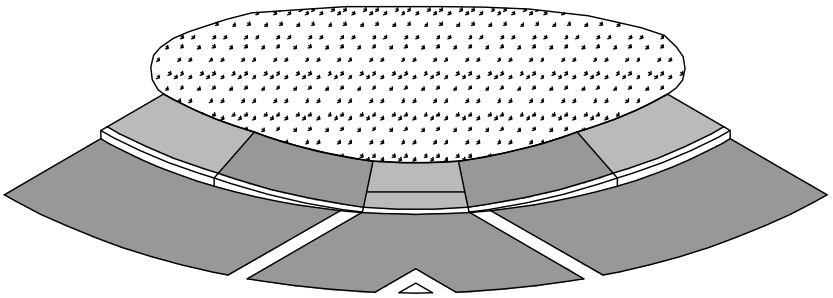
~ PLAN VIEW ~
(not to scale)

NOTES:
1. THIS DESIGN IS THE PREFERRED OPTION WHEN THE SIDEWALK WIDTH IS GREATER THAN 6.5'. USE OTHER OPTIONS ONLY WHEN REQUIRED BY DESIGN CONSTRAINTS.
2. A MINIMUM CURB REVEAL OF 4" IS REQUIRED AT THE APEX OF THE CURB RADIUS.
3. MINIMUM TERMINAL CURB LENGTH SHALL BE 4 FEET.
4. SIDEWALK MATERIAL PER CITY SIDEWALK MATERIAL POLICY.

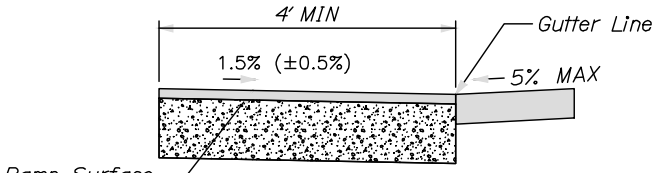
PERPENDICULAR ADA RAMP – SIDEWALK WIDTH GREATER THAN 6.5' WIDE WITH OR WITHOUT ESPLANADE

NOT TO SCALE

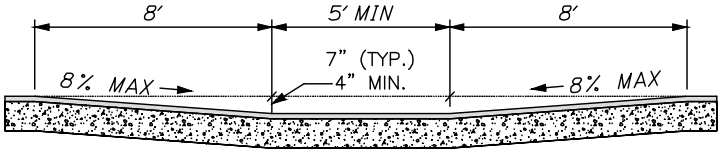
DATE: NOV. 2022 REVISED:	CITY OF PORTLAND, MAINE TECHNICAL STANDARDS MANUAL	**TRANSPORTATION DESIGN STANDARDS** SECTION I	FIGURE: I-6B
	PERPENDICULAR ADA RAMP FOR SIDEWALK GREATER THAN 6.5'		



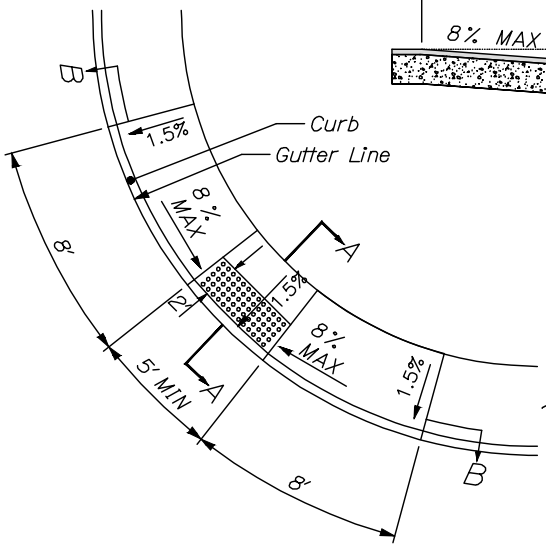
~ ISOMETRIC VIEW ~
(NOT TO SCALE)



~ SECTION A-A ~



~ SECTION B-B ~



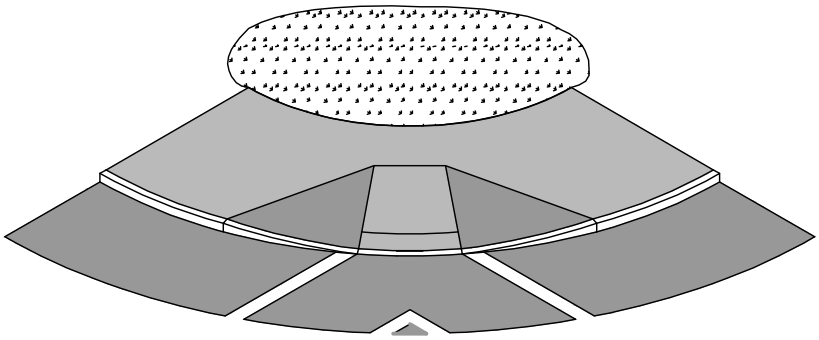
~ PLAN VIEW ~

NOTES:
1. THIS LESS DESIRABLE DESIGN SHOULD NOT BE USED UNLESS REQUIRED BY DESIGN CONSTRAINTS. IT DOES NOT PROVIDE DIRECTIONAL CUES.
2. A MINIMUM CURB REVEAL OF 4" IS REQUIRED AT THE APEX OF THE CURB RADIUS.
3. MINIMUM TERMINAL CURB LENGTH SHALL BE 4 FEET.
4. SIDEWALK MATERIAL PER CITY SIDEWALK MATERIAL POLICY.

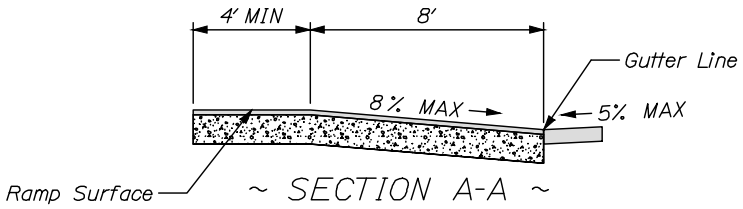
APEX RAMP – SIDEWALKS **LESS THAN** 6.5' WIDE WITH NO ESPLANADE

NOT TO SCALE

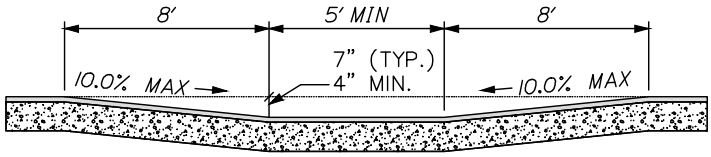
DATE: NOV. 2022 REVISED:	CITY OF PORTLAND, MAINE TECHNICAL STANDARDS MANUAL	**TRANSPORTATION DESIGN STANDARDS** SECTION I	FIGURE: I-6C
	APEX RAMP FOR SIDEWALK LESS THAN 6.5' WIDE		



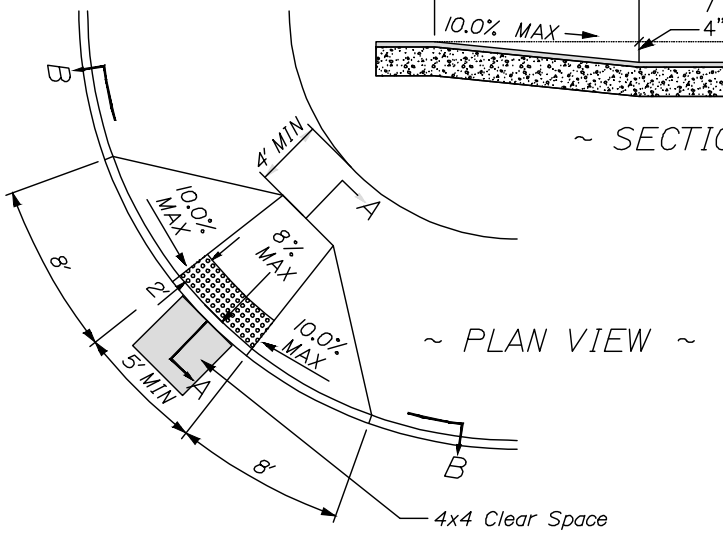
~ ISOMETRIC VIEW ~
(NOT TO SCALE)



~ SECTION A-A ~



~ SECTION B-B ~



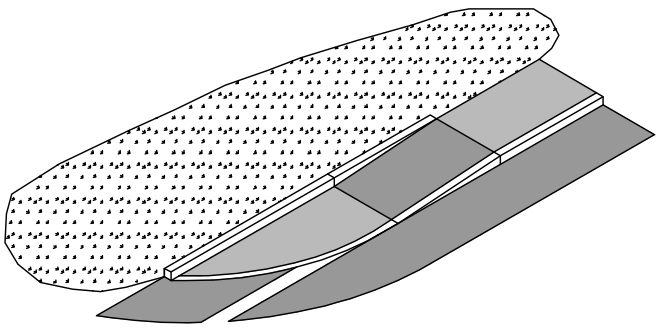
~ PLAN VIEW ~

NOTES:
1. THIS LESS DESIRABLE DESIGN SHOULD NOT BE USED UNLESS REQUIRED BY DESIGN CONSTRAINTS. IT DOES NOT PROVIDE DIRECTIONAL CUES.
2. A MINIMUM CURB REVEAL OF 4" IS REQUIRED AT THE APEX OF THE CURB RADIUS.
3. MINIMUM TERMINAL CURB LENGTH SHALL BE 4 FEET.
4. SIDEWALK MATERIAL PER CITY SIDEWALK MATERIAL POLICY.

APEX RAMP – SIDEWALK GREATER THAN 6.5' WIDE WITH OR WITHOUT ESPLANADE

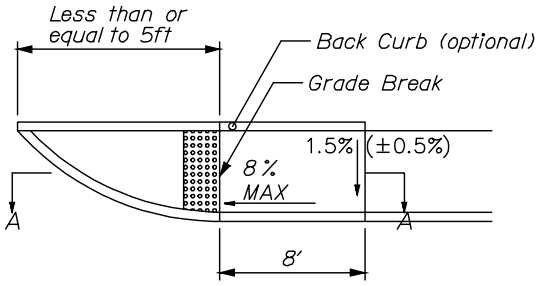
NOT TO SCALE

DATE: NOV. 2022 REVISED:	CITY OF PORTLAND, MAINE TECHNICAL STANDARDS MANUAL	**TRANSPORTATION DESIGN STANDARDS** SECTION I	FIGURE: I-6D
	APEX RAMP FOR SIDEWALK 6.5' WIDE AND GREATER		

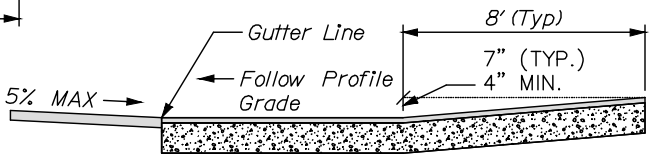


~ PERSPECTIVE VIEW ~

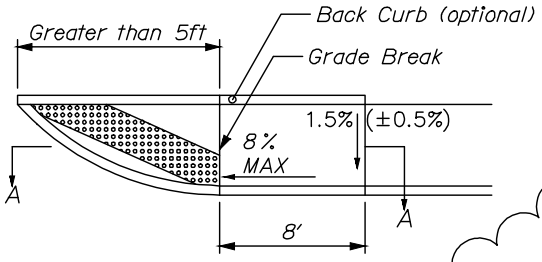
(NOT TO SCALE)



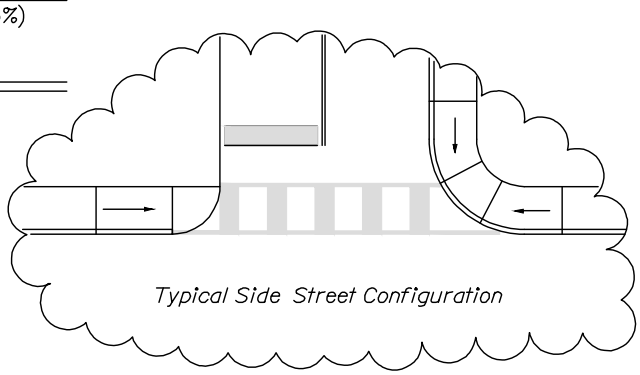
~ *PLAN VIEW* ~



~ SECTION A-A ~



~ **PLAN VIEW** ~



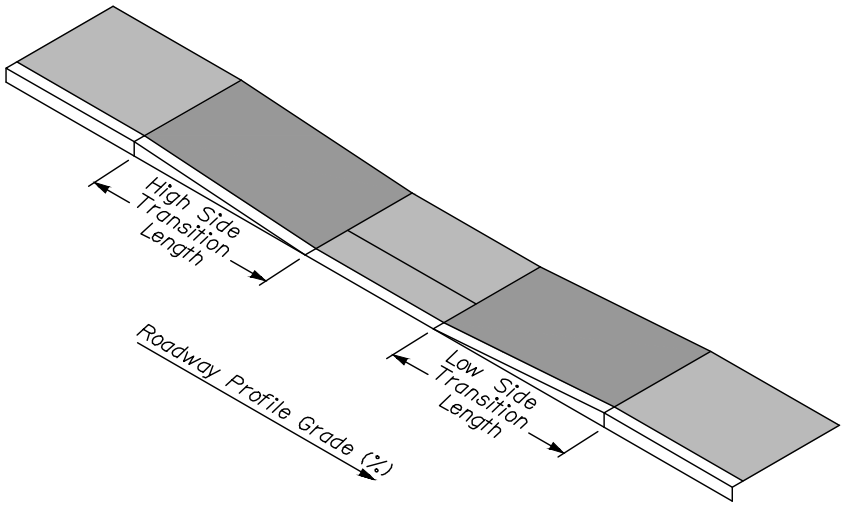
NOTES:

1. FOR USE ONLY WHEN NO SIDEWALK IS PRESENT ON THE SIDE ROAD.
2. USE *THIS* DETECTABLE WARNING PLACEMENT IF THE DISTANCE FROM THE GRADE BREAK TO THE GUTTERLINE IS LESS THAN OR EQUAL TO 5 FEET.
2. USE **THIS** DETECTABLE WARNING PLACEMENT IF THE DISTANCE FROM THE GRADE BREAK TO THE GUTTERLINE IS GREATER THAN 5 FEET.
3. SIDEWALK MATERIAL PER CITY SIDEWALK MATERIAL POLICY.

SIDE STREET RAMP
WITH OR WITHOUT ESPLANADE

NOT TO SCALE

DATE: NOV. 2022 REVISED:	CITY OF PORTLAND, MAINE TECHNICAL STANDARDS MANUAL	**TRANSPORTATION DESIGN STANDARDS** SECTION I	FIGURE: I-6E
	SIDE STREET RAMP WHEN NO INTERSECTING SIDEWALK IS PRESENT		



Pedestrian Ramp Length Table

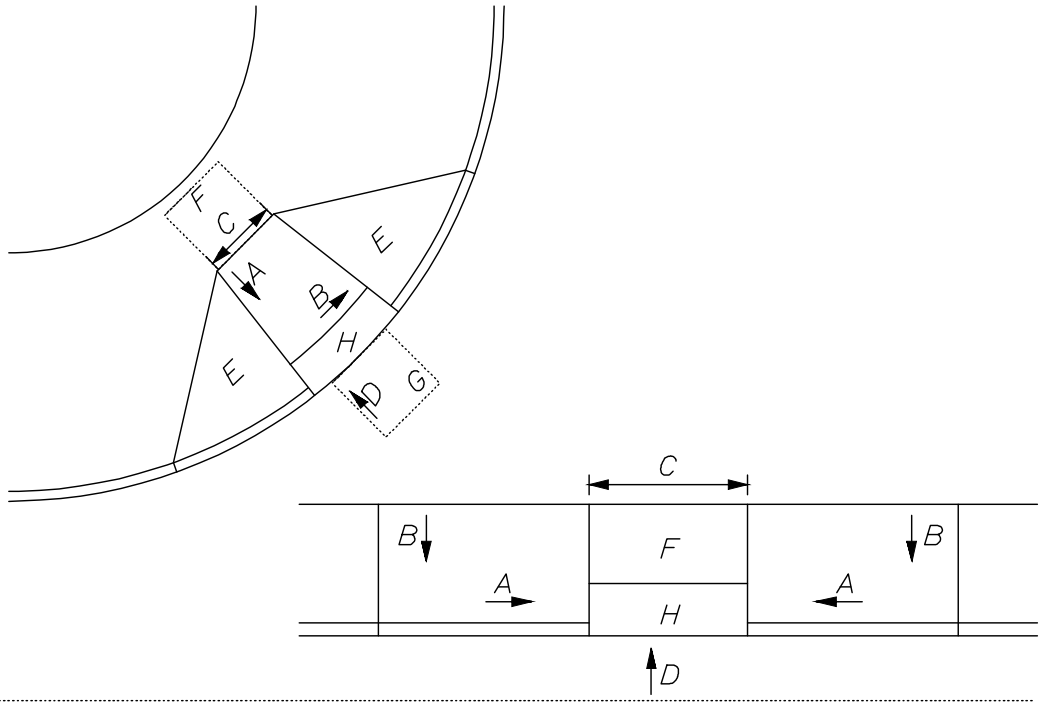
Curb Reveal (Inches)		7	6	5	4	3
	Roadway Profile Grade	Minimum Transition Length Required (Feet)				
Low Side Transition Length	-7% and Lower	4.0	4.0	4.0	4.0	4.0
	-6%	8.0	4.0	4.0	4.0	4.0
	-5%	8.0	4.0	4.0	4.0	4.0
	-4%	8.0	8.0	4.0	4.0	4.0
	-3%	8.0	8.0	4.0	4.0	4.0
	-2%	8.0	8.0	8.0	4.0	4.0
	-1%	8.0	8.0	8.0	4.0	4.0
	0%	8.0	8.0	8.0	8.0	4.0
High Side Transition Length	1%	8.0	8.0	8.0	8.0	4.0
	2%	10.0	8.0	8.0	8.0	4.0
	3%	12.0	10.0	8.0	8.0	8.0
	4%	14.0	12.0	10.0	8.0	8.0
	5%	15.0	15.0	14.0	10.0	8.0
	6%	15.0	15.0	15.0	15.0	12.0
	7% and Hgher	15.0	15.0	15.0	15.0	15.0

Choose roadway profile grade by rounding up for positive grades and down for negative grades. Round to the nearest whole integer. If constraints prevent placement of the ramp length required by the table, place the maximum length possible and check the slope. If above the maximum allowable slope, consider design modifications before considering technical infeasibility.

RAMP LENGTH TABLE
FOR SIDEWALK RAMPS
NOT TO SCALE

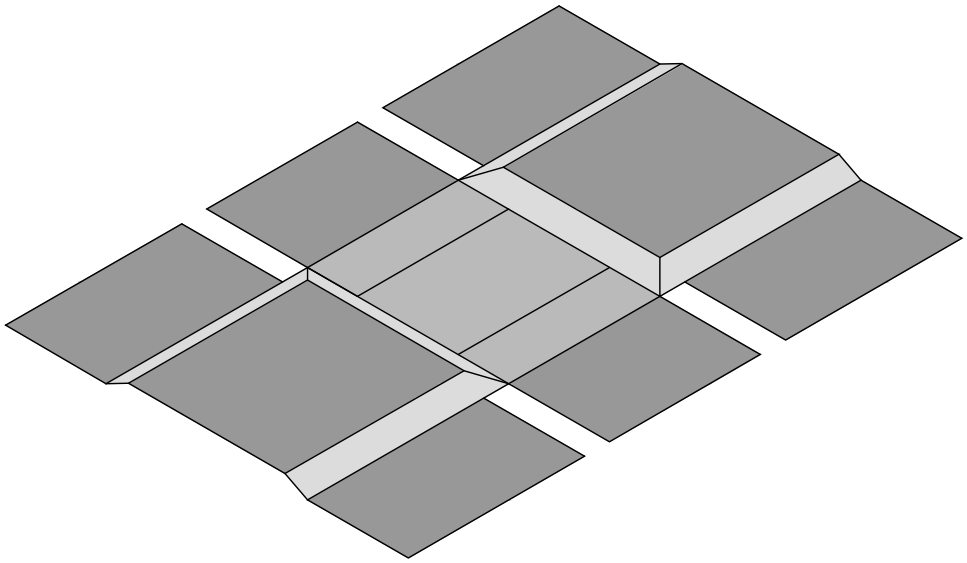
DATE: NOV. 2022	CITY OF PORTLAND, MAINE TECHNICAL STANDARDS MANUAL	**TRANSPORTATION DESIGN STANDARDS** SECTION I	FIGURE:
REVISED:	**PEDESTRIAN RAMP LENGTH TABLE FOR SIDEWALK RAMPS**		I-6F

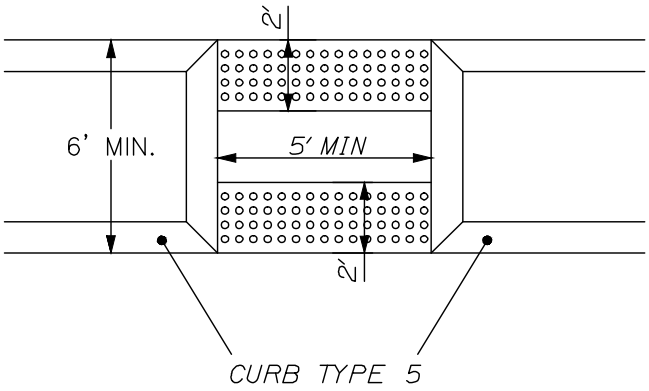
CURB RAMP REQUIREMENTS		
Running Slope	A	Max. 8.33% (1:12)
Cross Slope	B	Max. 2% (1:50) MIN. 1% *Ramp cross slope at street crossings without stop or signal control may match roadway profile.*
Clear Width	C	Min. 5 feet *For existing ramps only, ramp width may remain 4 feet.*
Counter Slope	D	Max. 5% (1:20) *Adjacent surface must be flush with the ramp.*
Flared Sides	E	Max. 10% (1:10)
Turning Space	F	4 feet by 4 feet *Maximum slope of 2% in any direction. May include Detectable Warnings*
Clear Space	G	4 feet by 4 feet *Located at the bottom of the ramp outside active travel lanes.*
Detectable Warnings	H	*Required at traffic controlled intersections and mid-block crossings, full ramp width.*



PEDESTRIAN RAMP REQUIREMENTS
FOR SIDEWALK RAMPS
NOT TO SCALE

DATE: NOV. 2022 REVISED:	CITY OF PORTLAND, MAINE TECHNICAL STANDARDS MANUAL	**TRANSPORTATION DESIGN STANDARDS** SECTION I	FIGURE:
	PEDESTRIAN RAMP REQUIREMENTS FOR SIDEWALK RAMPS		I-6G





NOTES:
1. INSURE POSITIVE DRAINAGE (2% MAXIMUM CROSS SLOPE).

ISLAND PEDESTRIAN CROSSINGS

NOT TO SCALE

DATE: NOV. 2022 REVISED:	CITY OF PORTLAND, MAINE TECHNICAL STANDARDS MANUAL	**TRANSPORTATION DESIGN STANDARDS** SECTION I	FIGURE: I-6H
	ISLAND PEDESTRIAN CROSSINGS		

DATE: NOV. 2022
REVISED:

CITY OF PORTLAND, MAINE
TECHNICAL STANDARDS MANUAL

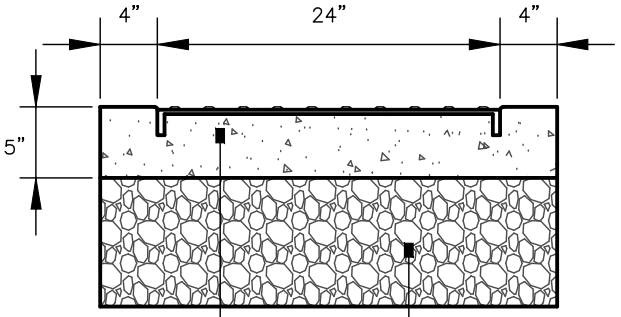
TRANSPORTATION DESIGN STANDARDS
SECTION I

FIGURE: I-7

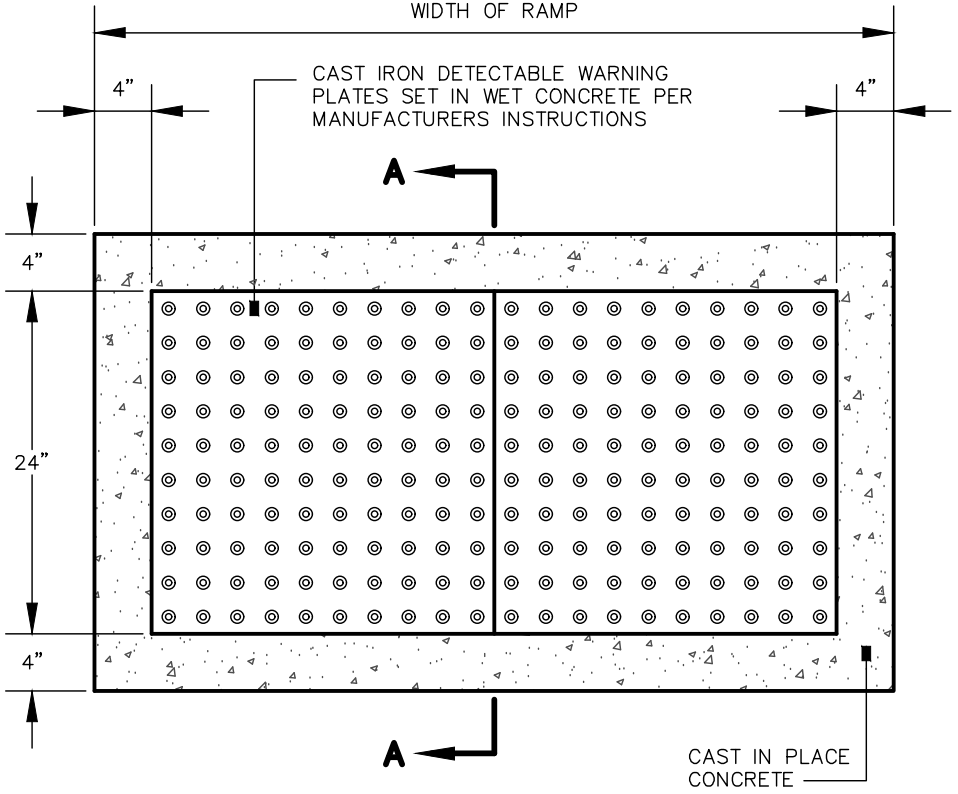
SIDEWALK RAMP DETECTABLE WARNING PANEL

NOTES:

1. ALL DETECTABLE WARNING PLATES SHALL BE UNCOATED CAST IRON. FOLLOW MANUFACTURER'S INSTRUCTIONS FOR INSTALLATION.
2. CAST IN PLACE CONCRETE SHALL MEET SPECIFICATIONS FOR MDOT CLASS A STRUCTURAL CONCRETE, MINIMUM COMPRESSIVE STRENGTH 4,000 PSI. THE EXPOSED CONCRETE BORDER SHALL RECEIVE A UNIFORM BROOM FINISH PERPENDICULAR TO THE FLOW OF PEDESTRIAN TRAFFIC.
3. TRUNCATED DOMES SHALL BE ALIGNED IN ROWS, PARALLEL AND PERPENDICULAR TO THE PREDOMINANT DIRECTION OF TRAVEL. TRUNCATED DOME BRICKS AND GRANITE PAVERS ARE NOT ALLOWED.
4. SIZE: THE DETECTABLE WARNING PLATES SHALL EXTEND 24 INCHES MINIMUM IN THE DIRECTION OF TRAVEL AND THE FULL WIDTH OF THE CURB RAMP, LANDING, OR BLENDED TRANSITION TO THE STREET.
5. ORIENTATION: THE DETECTABLE WARNING PANEL SHALL BE LOCATED SO THAT THE EDGE NEAREST THE CURB LINE IS 6 INCHES MINIMUM AND 8 INCHES MAXIMUM FROM THE CURB LINE. THE PANEL SHALL BE ORIENTED TO THE DIRECTION OF TRAVEL AS IDENTIFIED BY THE POINT OF EGRESS.



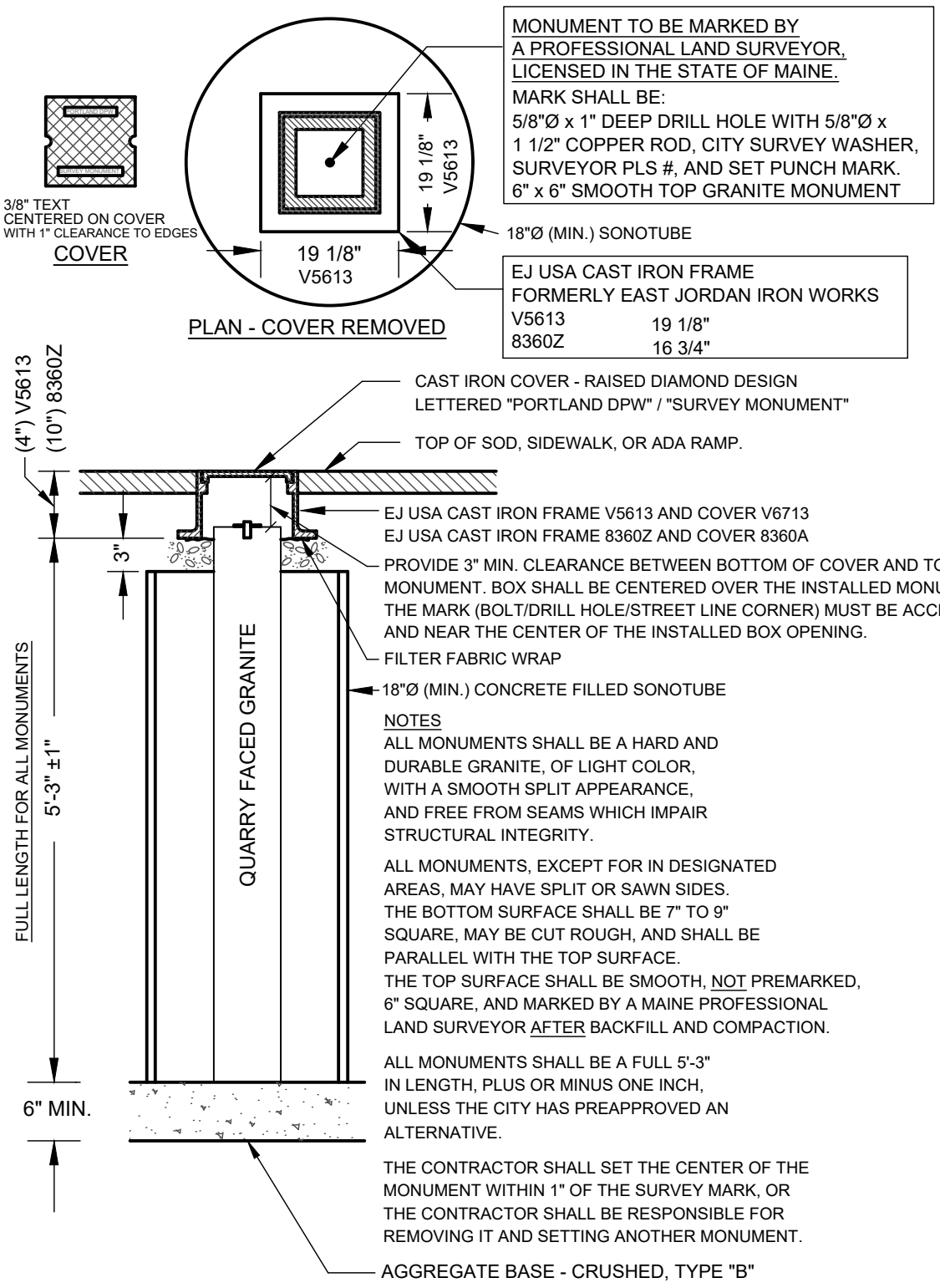
SECTION A–A



PLAN VIEW

SIDEWALK RAMP DETECTABLE WARNING PANEL

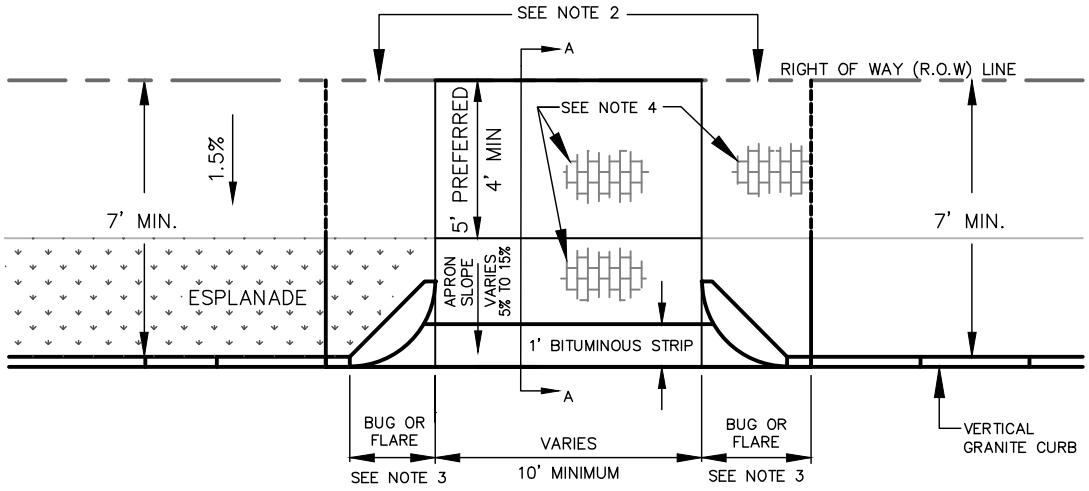
NOT TO SCALE



GRANITE STREET MONUMENTS - NEW OR REPLACEMENT

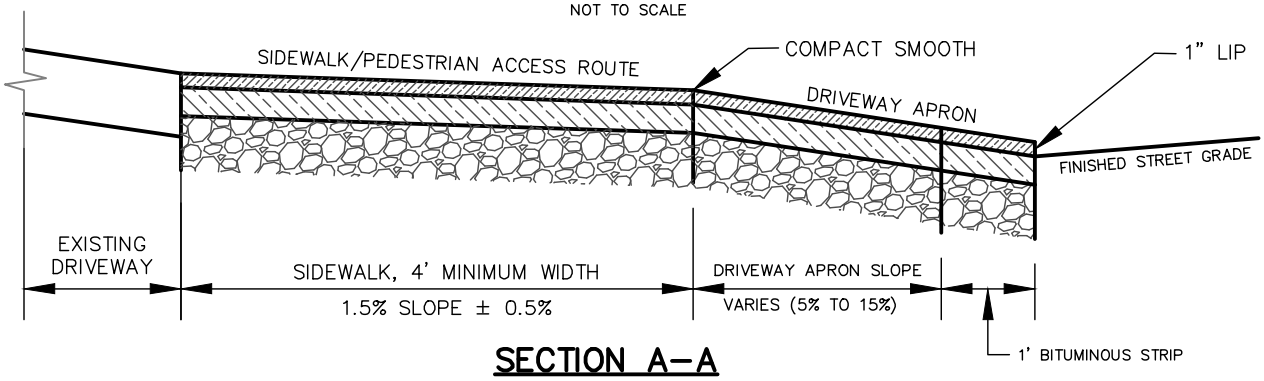
NOT TO SCALE

DATE: NOV. 2022 REVISED:	CITY OF PORTLAND, MAINE TECHNICAL STANDARDS MANUAL	TRANSPORTATION DESIGN STANDARDS SECTION I	FIGURE:
	GRANITE STREET MONUMENT - NEW OR REPLACEMENT		I-8



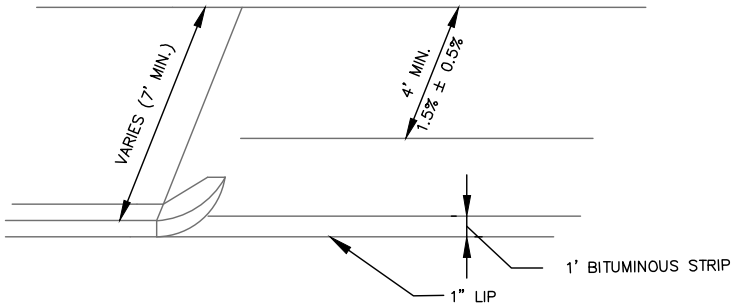
STANDARD RESIDENTIAL DRIVEWAY APRON LAYOUT

NOT TO SCALE



SECTION A–A

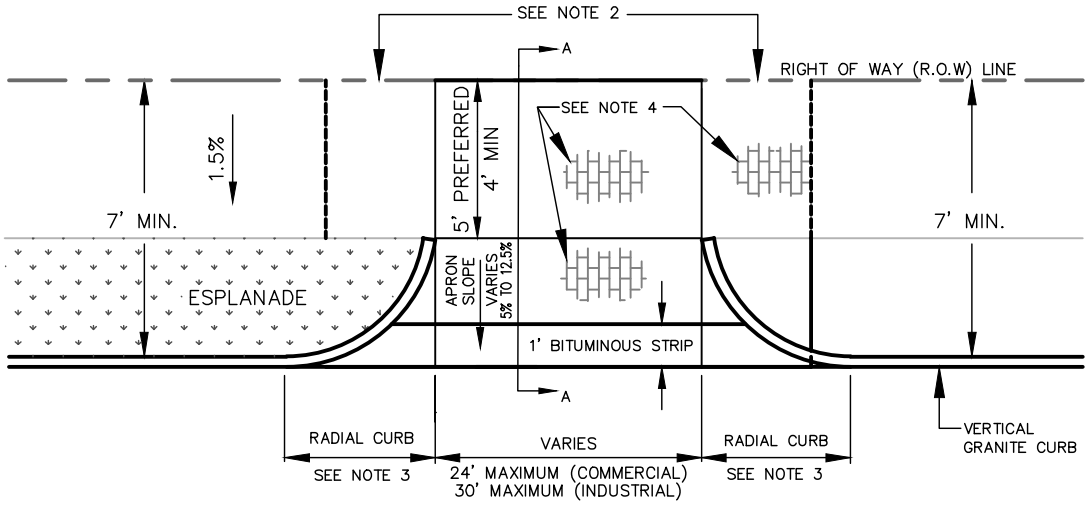
NOT TO SCALE



NOTES:

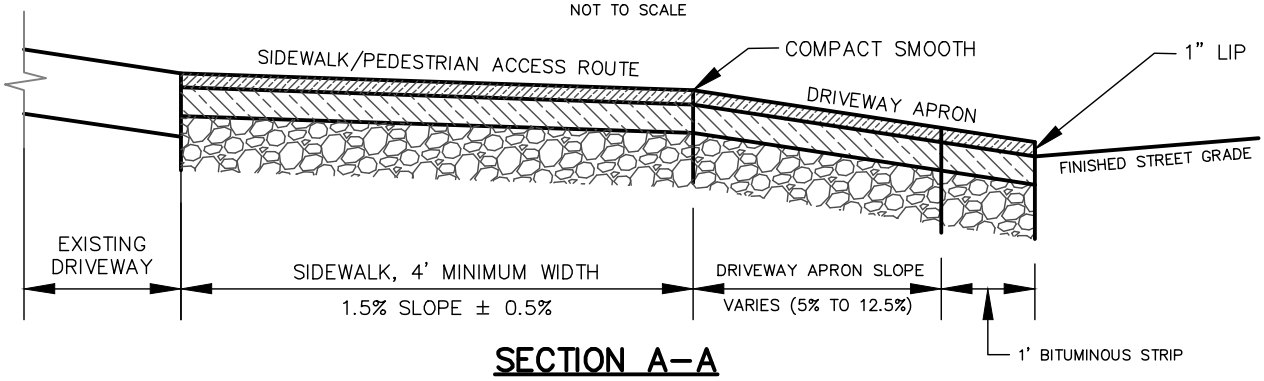
1. MATCH EXISTING GRADE AT R.O.W LINE. WHERE REQUIRED TO MEET A.D.A. AND DRIVEWAY APRON SLOPE REQUIREMENTS, A CONSTRUCTION EASEMENT MAY BE REQUIRED.
2. IF MATCHING THE EXISTING GRADE AT ROW CAUSES APRON SLOPE TO EXCEED RECOMMENDED %, SIDEWALK TRANSITION AREAS MAY BE ADDED, BUT SHALL NOT EXCEED 8.33%.
3. TWO–FOOT RADIUS CORNER GRANITE PIECES ("BUGS") ARE REQUIRED AT LOW–VOLUME DRIVEWAYS UNLESS OTHERWISE DIRECTED BY DPW. AT OTHER DRIVEWAYS, STANDARD FLARE/TIPDOWN TREATMENTS SHALL BE USED.
4. ALL MATERIALS IN ROW TO COMPLY WITH CITY'S SIDEWALK & DRIVEWAY MATERIAL POLICY. BRICK IN DRIVEWAY APRONS, WHERE APPLICABLE, SHALL BE ORIENTED IN THE SAME WAY AS THE ADJACENT BRICK SIDEWALK.
5. THIS LAYOUT MAY BE REQUIRED AT MINOR DRIVEWAYS SERVING COMMERCIAL OR INDUSTRIAL USES.

DATE: NOV. 2022 REVISED:	CITY OF PORTLAND, MAINE TECHNICAL STANDARDS MANUAL	**TRANSPORTATION DESIGN STANDARDS** SECTION I	FIGURE:
	RESIDENTIAL DRIVEWAY APRON		I-9A



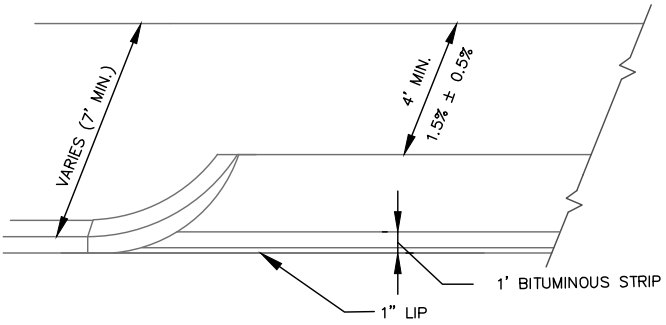
STANDARD COMMERCIAL DRIVEWAY APRON LAYOUT

NOT TO SCALE



SECTION A–A

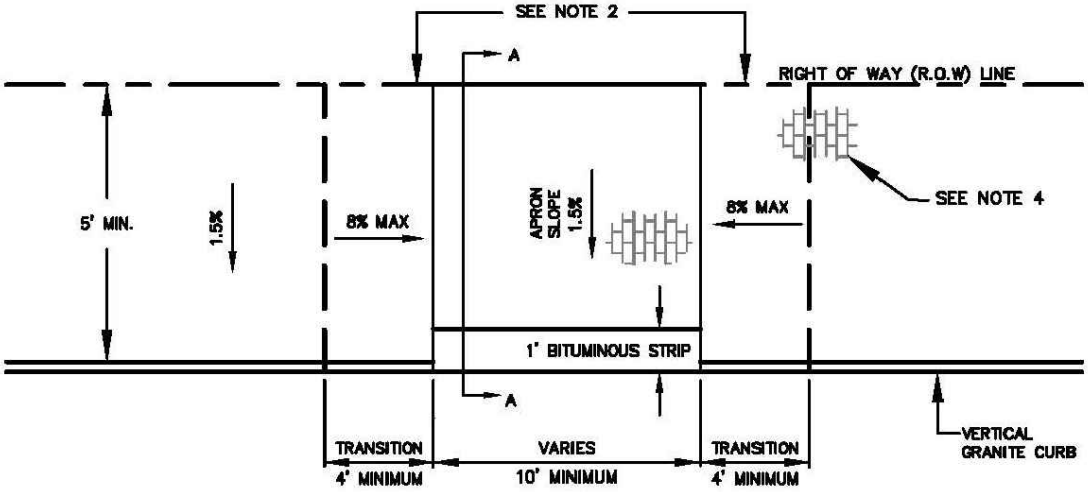
NOT TO SCALE



NOTES:

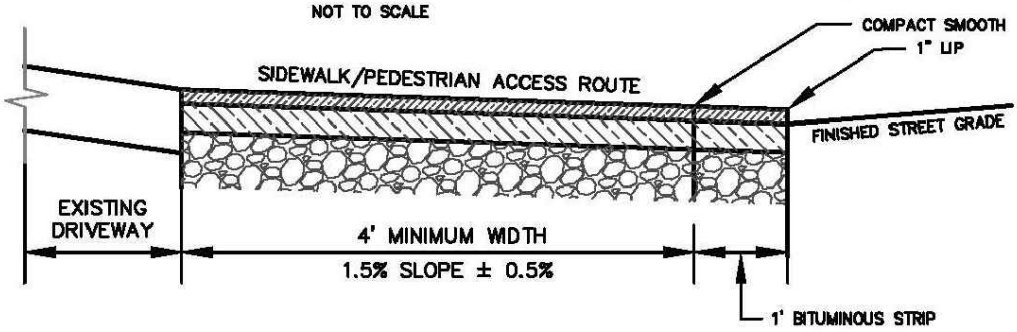
1. MATCH EXISTING GRADE AT R.O.W LINE. WHERE REQUIRED TO MEET A.D.A. AND DRIVEWAY APRON SLOPE REQUIREMENTS, A CONSTRUCTION EASEMENT MAY BE REQUIRED.
2. IF MATCHING THE EXISTING GRADE AT ROW CAUSES APRON SLOPE TO EXCEED RECOMMENDED %, SIDEWALK TRANSITION AREAS MAY BE ADDED, BUT SHALL NOT EXCEED 8.33%.
3. DRIVEWAY CURB RADIUS SHALL NOT BE LARGER THAN REQUIRED BY THE SITE'S DESIGN VEHICLE.
4. ALL MATERIALS IN ROW TO COMPLY WITH CITY'S SIDEWALK & DRIVEWAY MATERIAL POLICY. BRICK IN DRIVEWAY APRONS, WHERE APPLICABLE, SHALL BE ORIENTED IN THE SAME WAY AS THE ADJACENT BRICK SIDEWALK..

DATE: NOV. 2022	CITY OF PORTLAND, MAINE	**TRANSPORTATION DESIGN STANDARDS**	FIGURE:
REVISED:	TECHNICAL STANDARDS MANUAL	SECTION I	
	COMMERCIAL/INDUSTRIAL DRIVEWAY APRON		I-9B



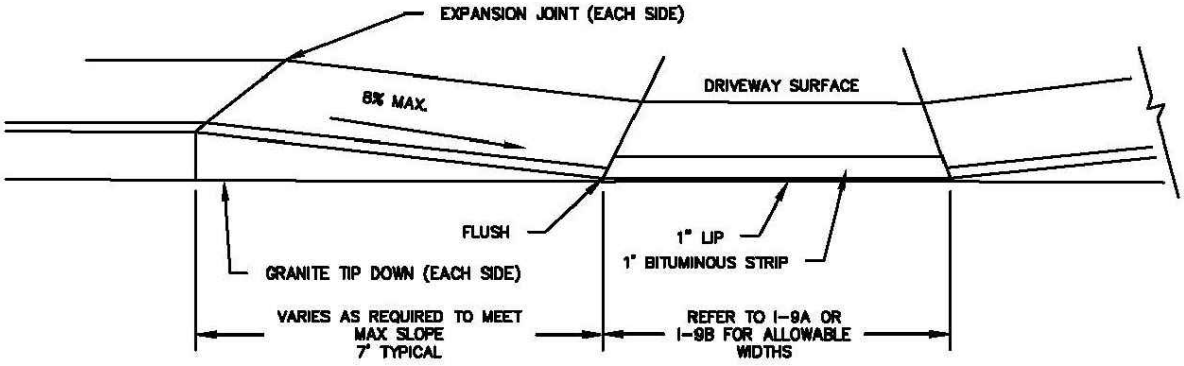
DRIVEWAY APRON AT CONSTRAINED SIDEWALK LAYOUT

NOT TO SCALE



SECTION A–A

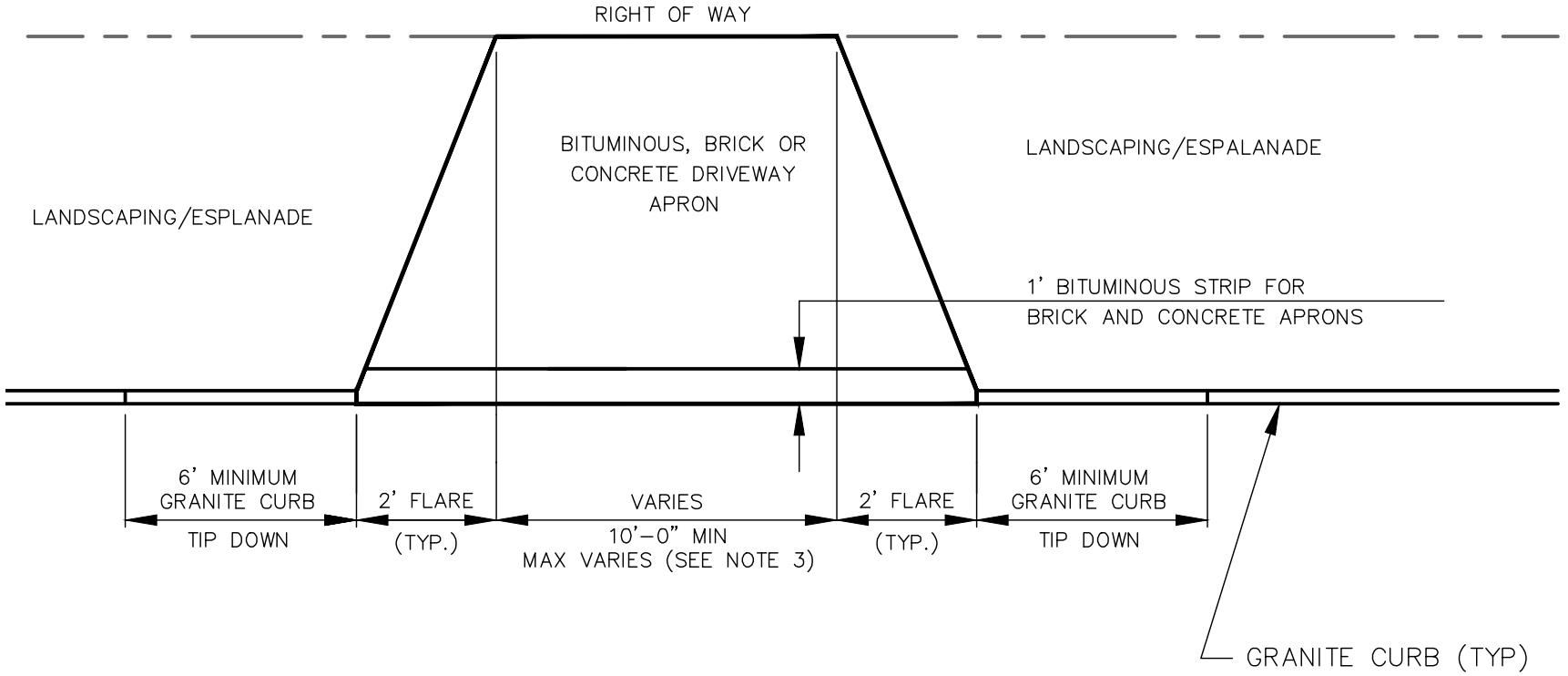
NOT TO SCALE



NOTES:

1. MATCH EXISTING GRADE AT R.O.W LINE. WHERE REQUIRED TO MEET A.D.A. AND DRIVEWAY APRON SLOPE REQUIREMENTS, A CONSTRUCTION EASEMENT MAY BE REQUIRED.
2. SIDEWALK TRANSITION SLOPE SHALL NOT EXCEED 8.33%. RAMP LENGTH SHALL ACCOMMODATE THIS CONSTRAINT UP TO 15 FOOT RAMP LENGTH OR AS OTHERWISE REQUIRED BY ADA STANDARDS.
3. MOUNTABLE CURB (SEE DETAIL I–15) OR INCREASE IF BITUMINOUS LIP IS PREFERRED TO MAINTAIN SIDEWALK GRADE THROUGH APRON.
4. ALL MATERIALS IN ROW TO COMPLY WITH CITY'S SIDEWALK & DRIVEWAY MATERIAL POLICY. BRICK IN DRIVEWAY APRONS, WHERE APPLICABLE, SHALL BE ORIENTED IN THE SAME WAY AS THE ADJACENT BRICK SIDEWALK.

DATE: NOV. 2022 REVISED:	CITY OF PORTLAND, MAINE TECHNICAL STANDARDS MANUAL	**TRANSPORTATION DESIGN STANDARDS** SECTION I	FIGURE:
	DRIVEWAY APRON AT CONSTRAINED SIDEWALKS		I-9C



NOTES:

1. THIS DETAIL SHALL NOT BE USED UNLESS THERE ARE NO EXISTING OR PROPOSED SIDEWALKS ALONG THE FRONTAGE OF THE PROPERTY SERVED BY THE PROPOSED DRIVEWAY.
2. MATCH GRADE OF EXISTING DRIVEWAY AT R. O. W. LINE, EXCEPT WHEN DIRECTED OTHERWISE BY CITY ENGINEER.
3. MAXIMUM DRIVEWAY WIDTH IS 20 FEET FOR MINOR RESIDENTIAL DRIVEWAYS, 24 FEET FOR COMMERCIAL DRIVEWAYS, AND 30 FEET FOR INDUSTRIAL DRIVEWAYS.

DRIVEWAY APRON LAYOUT ALONG FRONTAGE (NO SIDEWALK)

NOT TO SCALE

DATE: NOV. 2022
REVISED:

CITY OF PORTLAND, MAINE
TECHNICAL STANDARDS MANUAL

TRANSPORTATION DESIGN STANDARDS
SECTION I

DRIVEWAY APRON LAYOUT
ALONG STREET FRONTAGE (NO SIDEWALK)

FIGURE:
I-9D

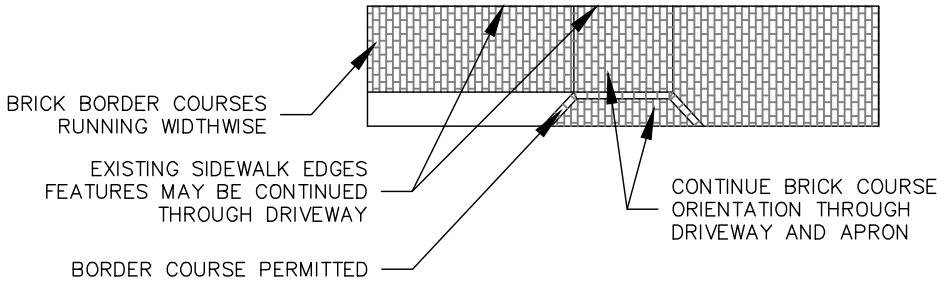
DATE: NOV. 2022
REVISED:

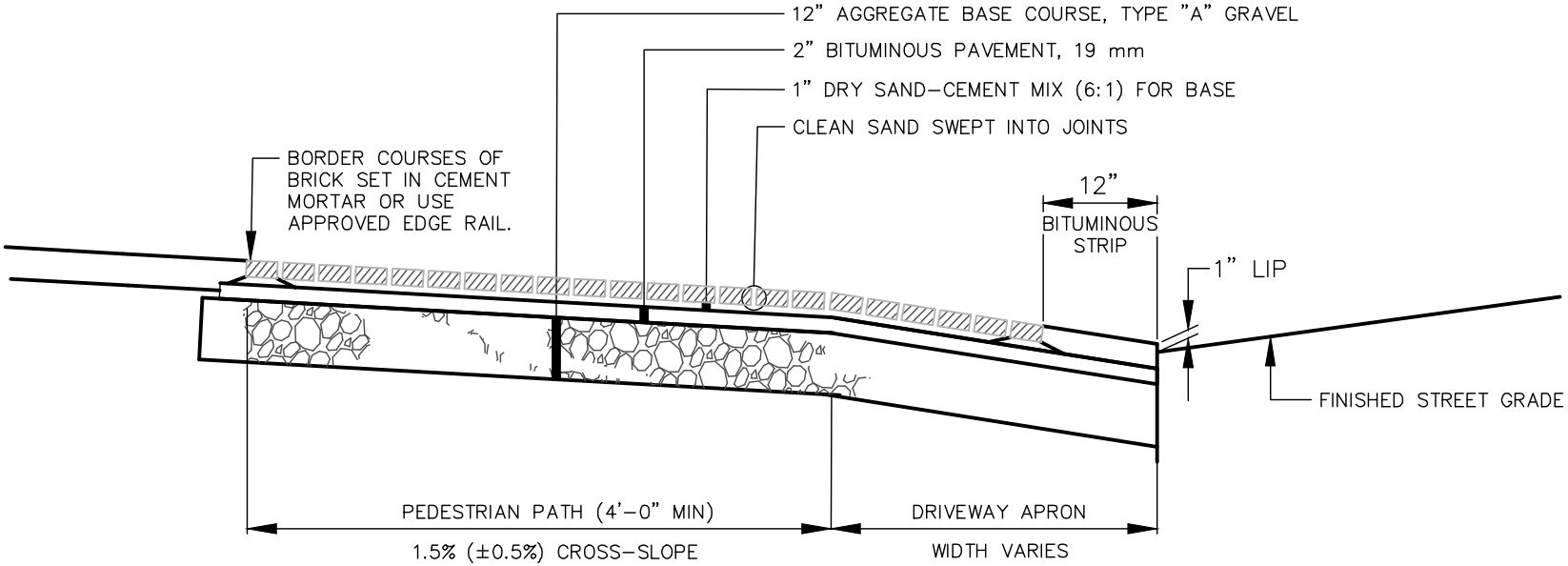
BRICKS TO BE USED:

NEW CONSTRUCTION:
4"x8" PINE HALL PATHWAY PAVER BRICK; MFG. BY PINE HALL BRICK CO., MADISON, NORTH CAROLINA. LACHANCE ITEM # 193623, PINE HALL PATHWAY PAVER BRICK.

REPAIR /MAINTENANCE TO EXISTING BRICK SIDEWALKS: VERMONT PAVER; SUPPLIED BY GAGNE AND SONS.
SPECIFICATION NUMBER:
"VERMONT BACKER BRICK",
ITEM NUMBER # VBBB

BRICK ORIENTATION DETAIL





BRICK DRIVEWAY APRON WITH BITUMINOUS BASE

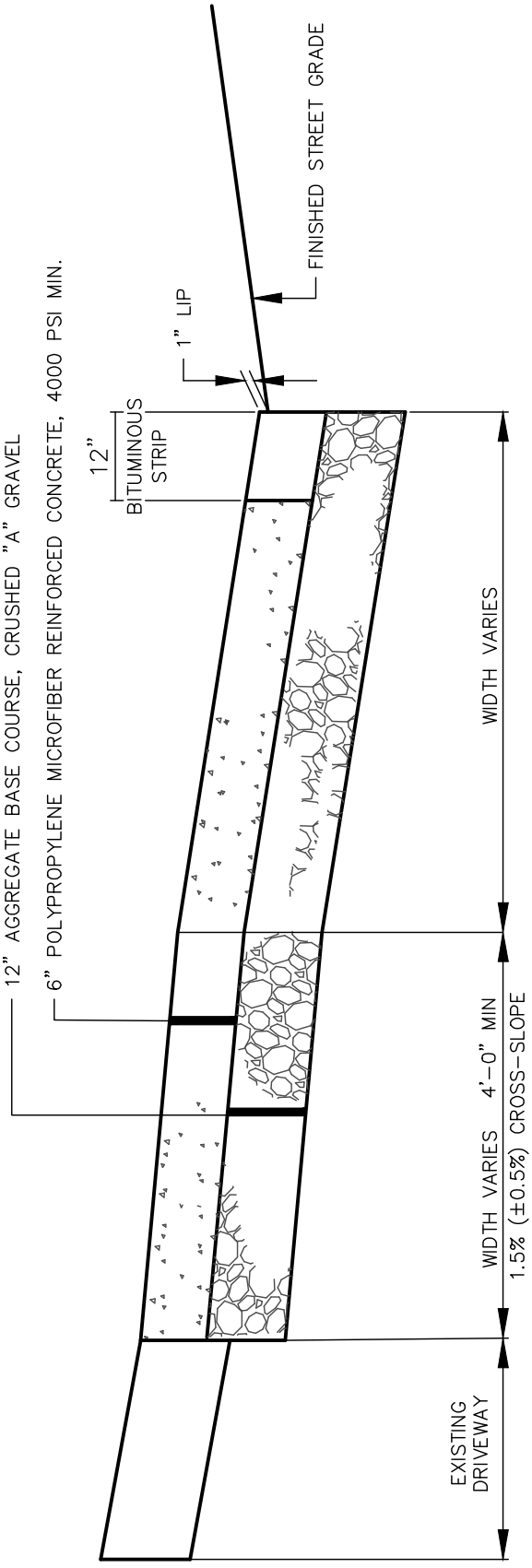
NOT TO SCALE

CITY OF PORTLAND, MAINE
TECHNICAL STANDARDS MANUAL

TRANSPORTATION DESIGN STANDARDS
SECTION I

BRICK DRIVEWAY APRON WITH BITUMINOUS BASE

FIGURE:
I-10A

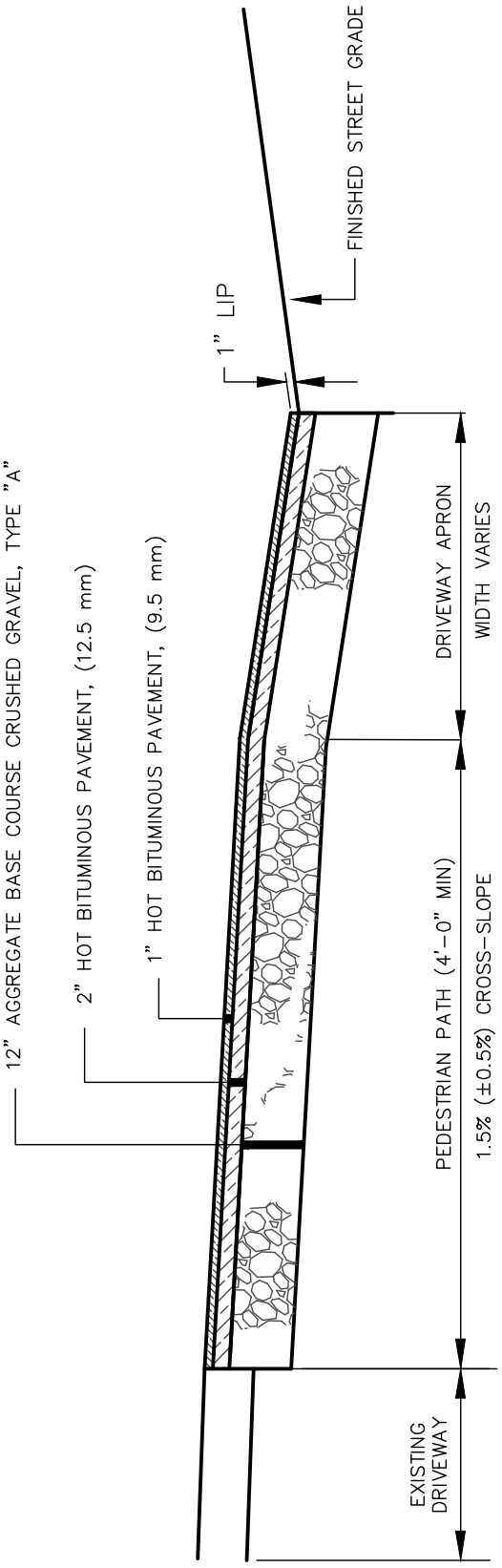


REINFORCED CONCRETE DRIVEWAY APRON

NOT TO SCALE

NOTE
CONCRETE SIDEWALKS TO BE TREATED WITH CONSOLIDECK SALTGUARD WB OR APPROVED EQUAL. FOLLOW MANUFACTURER'S RECOMMENDATIONS FOR APPLICATION.

DATE: NOV. 2022 REVISED:	CITY OF PORTLAND, MAINE TECHNICAL STANDARDS MANUAL	**TRANSPORTATION DESIGN STANDARDS** SECTION I	FIGURE: I-10B
	REINFORCED CONCRETE DRIVEWAY APRON		



BITUMINOUS DRIVEWAY APRON

NOT TO SCALE

DATE: NOV. 2022 REVISED:	CITY OF PORTLAND, MAINE TECHNICAL STANDARDS MANUAL	**TRANSPORTATION DESIGN STANDARDS** SECTION I	FIGURE: I-10C
	BITUMINOUS DRIVEWAY APRON		

BRICKS TO BE USED:

NEW CONSTRUCTION:
4"x8" PINE HALL PATHWAY PAVER BRICK; MFG. BY PINE HALL BRICK CO., MADISON, NORTH CAROLINA, OR APPROVED EQUAL..
LACHANCE ITEM # 193623, PINE HALL PATHWAY PAVER BRICK, OR APPROVED EQUAL..

REPAIR /MAINTENANCE TO EXISTING BRICK SIDEWALKS: VERMONT PAVER; SUPPLIED BY GAGNE AND SONS.
SPECIFICATION NUMBER:
"VERMONT BACKER BRICK",
ITEM NUMBER # VBBB,
OR APPROVED EQUAL

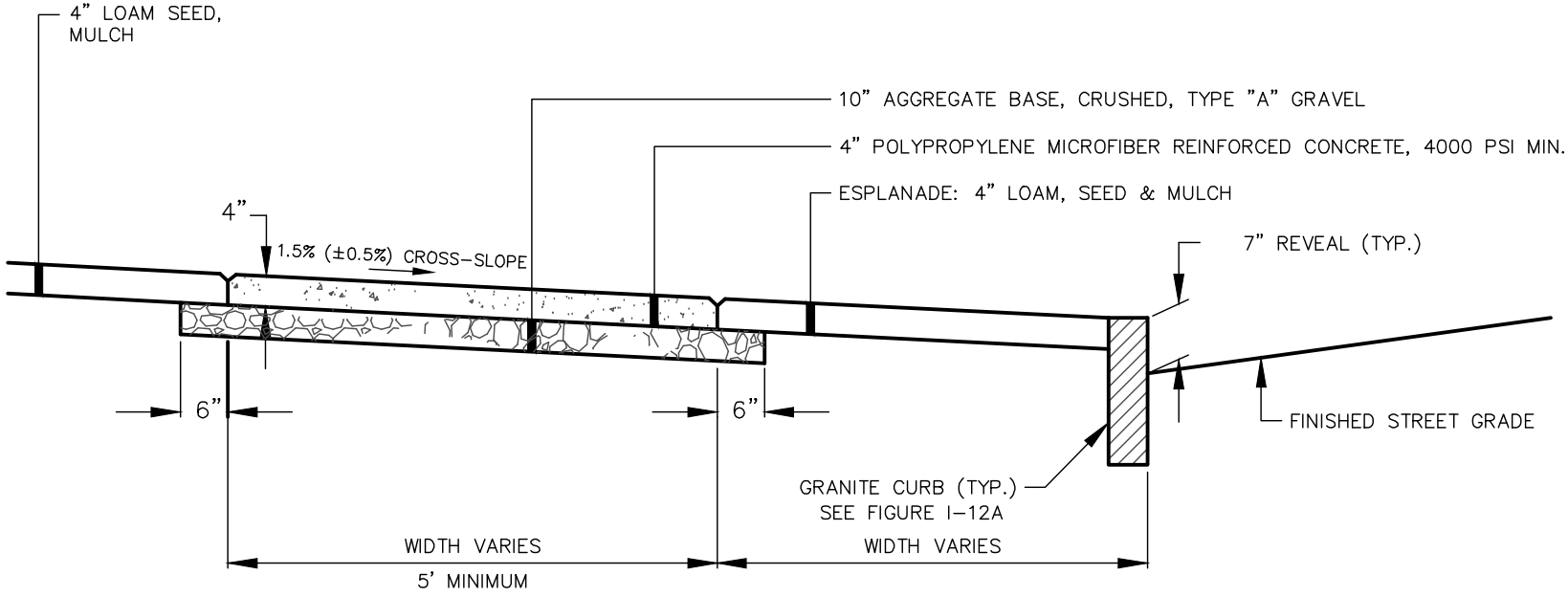
BRICK SIDEWALK WITH BITUMINOUS BASE

NOT TO SCALE

DATE: NOV. 2022 REVISED:	CITY OF PORTLAND, MAINE TECHNICAL STANDARDS MANUAL	**TRANSPORTATION DESIGN STANDARDS** SECTION I	FIGURE: I-11A
	BRICK SIDEWALK WITH BITUMINOUS BASE		

DATE: NOV. 2022
REVISED:

NOTE
CONCRETE SIDEWALKS TO BE TREATED WITH CONSOLIDECK SALTGUARD WB OR APPROVED EQUAL. FOLLOW MANUFACTURER'S RECOMMENDATIONS FOR APPLICATION.



REINFORCED CONCRETE SIDEWALK

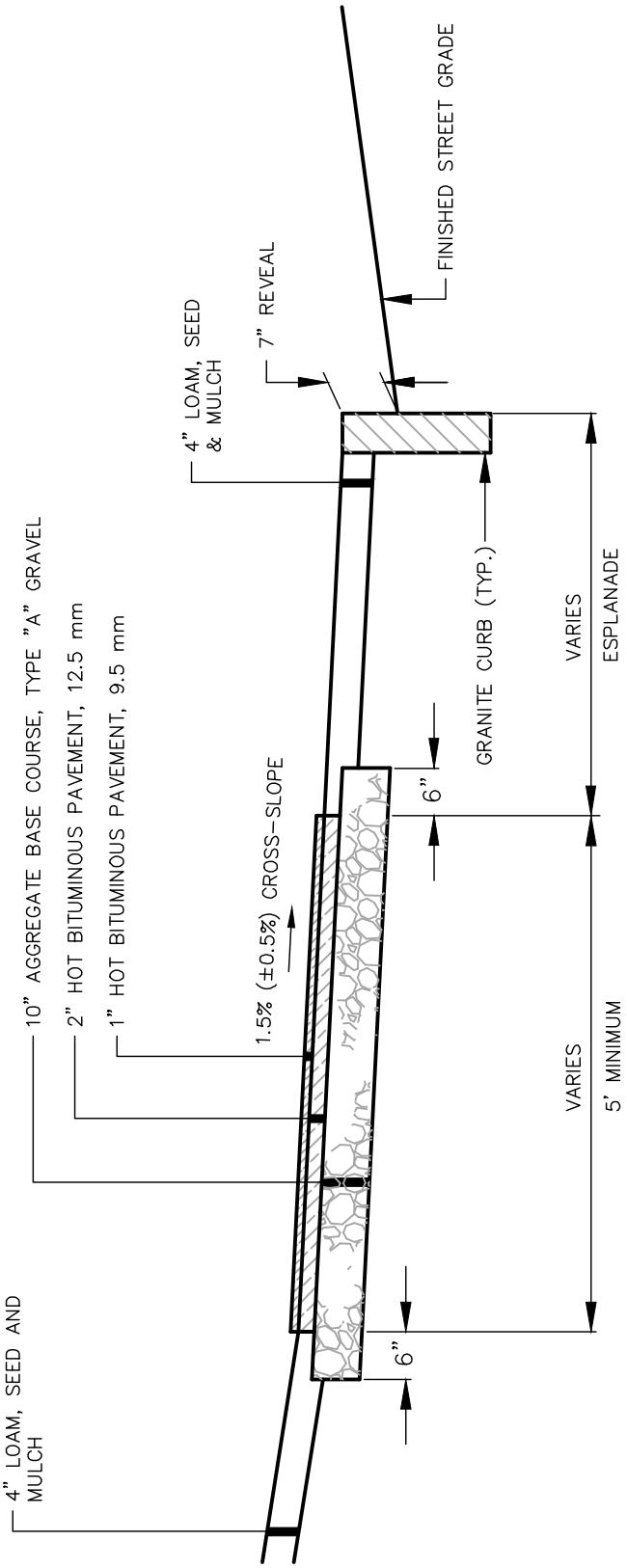
NOT TO SCALE

CITY OF PORTLAND, MAINE
TECHNICAL STANDARDS MANUAL

TRANSPORTATION DESIGN STANDARDS
SECTION I

REINFORCED CONCRETE SIDEWALK

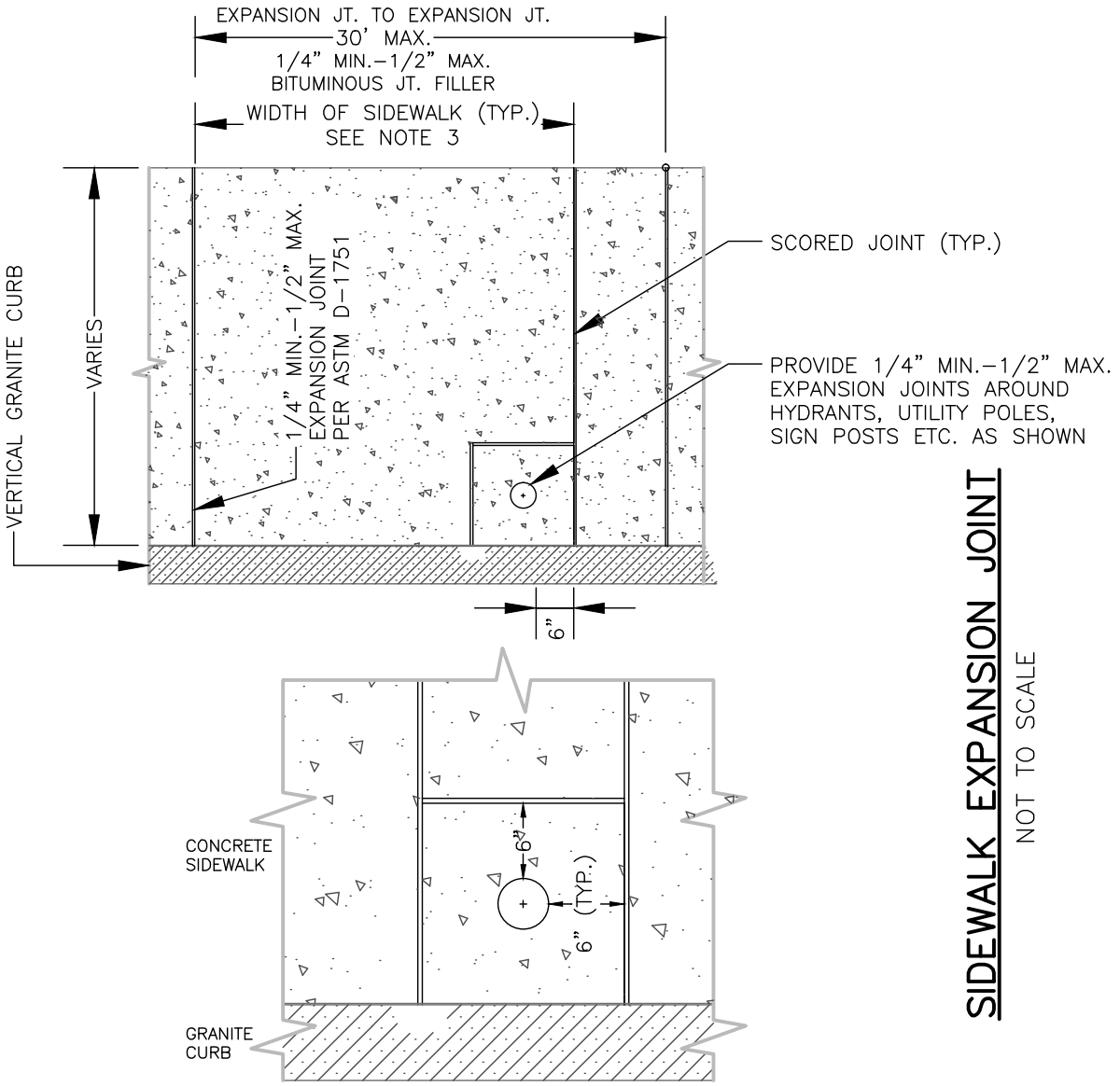
FIGURE:
I-11B



BITUMINOUS SIDEWALK

NOT TO SCALE

DATE: NOV. 2022 REVISED:	CITY OF PORTLAND, MAINE TECHNICAL STANDARDS MANUAL	**TRANSPORTATION DESIGN STANDARDS** SECTION I	FIGURE: I-11C
	BITUMINOUS SIDEWALK		



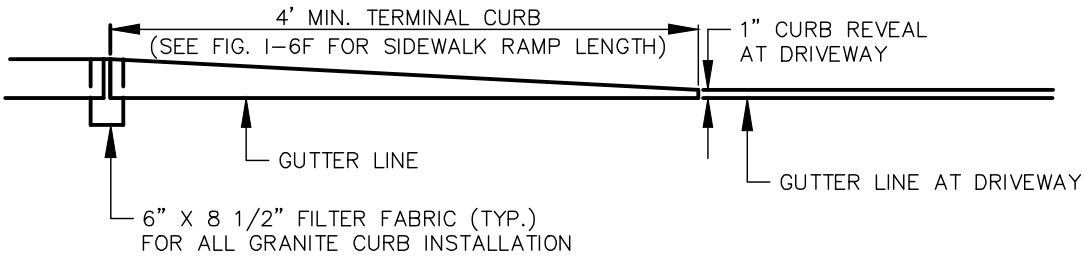
SIDEWALK EXPANSION JOINT

NOT TO SCALE

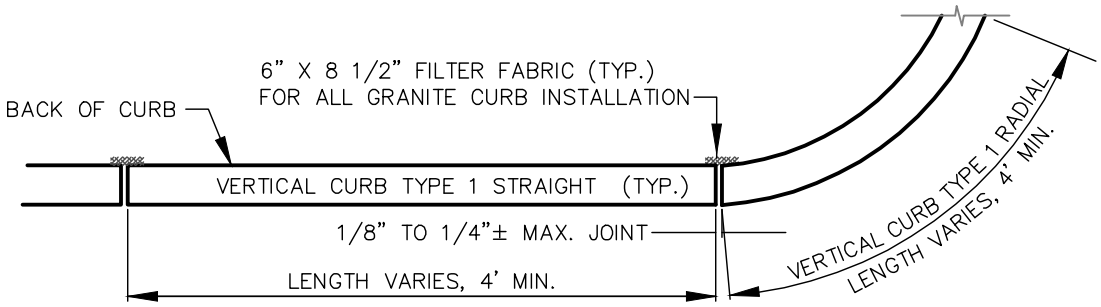
CONCRETE SIDEWALK JOINT NOTES:

1. EXPANSION JOINTS SHALL BE LOCATED WHERE SIDEWALK ABUTS DRIVEWAYS, CURB OR OTHER ADJACENT STRUCTURES.
2. SLABS SHALL BE PLACED ALTERNATELY IN LENGTHS, NOT TO EXCEED 30 LINEAR FEET OR AS DIRECTED AND SHALL BE SEPARATED BY AN EXPANSION JOINT OF PREFORMED EXPANSION FILLER 1/4" MIN.–1/2" MAX. IN THICKNESS AND SHALL EXTEND THE FULL LENGTH/DEPTH OF THE CONCRETE.
3. THE SIDEWALK SURFACE SHALL BE SCORED INTO BLOCK UNITS. THE DEPTH OF SCORING SHALL BE AT LEAST ONE QUARTER OF THICKNESS OF THE SLABS (1" TYP.). SCORED JOINTS MUST BE COMPLETED AS PART OF THE FINISHING PROCESS. SAW CUTTING OF JOINTS IS NOT ALLOWED. SCORED JOINTS SHALL BE PLACED AT THE FOLLOWING LOCATIONS:
   A. IN LOCATIONS TO ENSURE BLOCK UNITS DO NOT EXCEED 36 SQUARE FEET.
   B. AT THE SPACING THAT MATCHES ADJACENT TIP DOWN CURB
   C. EXTENSION OF EXPANSION JOINTS LOCATED AT HYDRANTS & UTILITY POLES.
4. ALL OUTSIDE EDGES OF THE SLAB AND ALL JOINTS SHALL BE ROUNDED WITH A 1/4" RADIUS EDGING TOOL.
5. CONCRETE SHALL BE FINISHED BY MEANS OF A FLOAT, STEEL TROWELED AND BROOMED WITH A FINE BRUSH IN A TRANSVERSE DIRECTION.

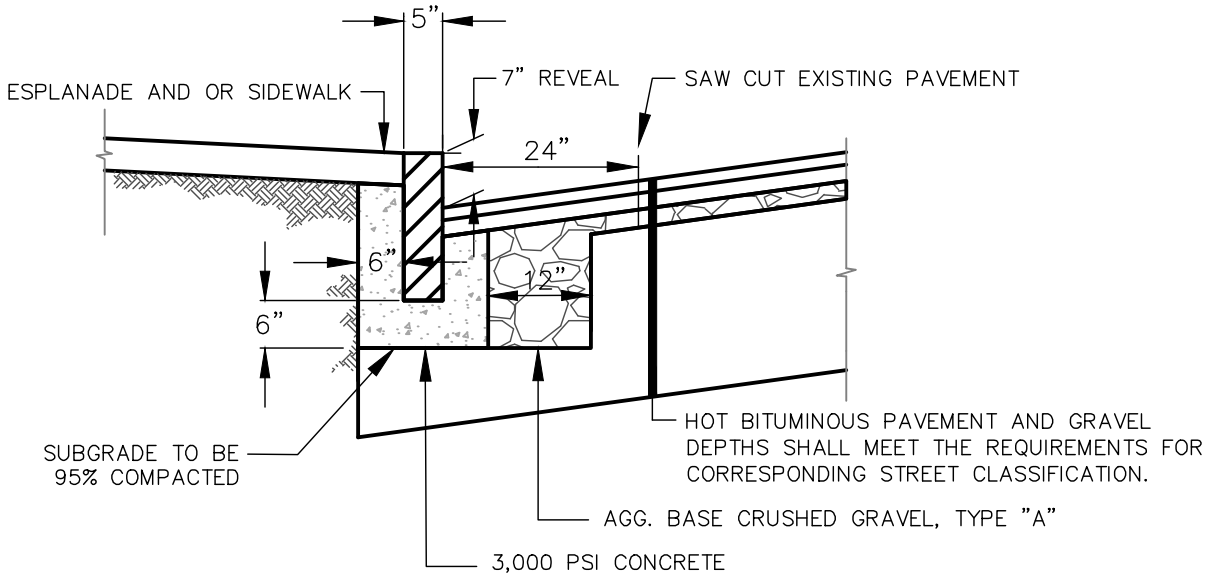
DATE: NOV. 2022	CITY OF PORTLAND, MAINE TECHNICAL STANDARDS MANUAL	**TRANSPORTATION DESIGN STANDARDS** SECTION I	FIGURE:
REVISED:	**SIDEWALK EXPANSION JOINT**		I-11D



TERMINAL CURB PROFILE



VERTICAL GRANITE CURB PLAN VIEW



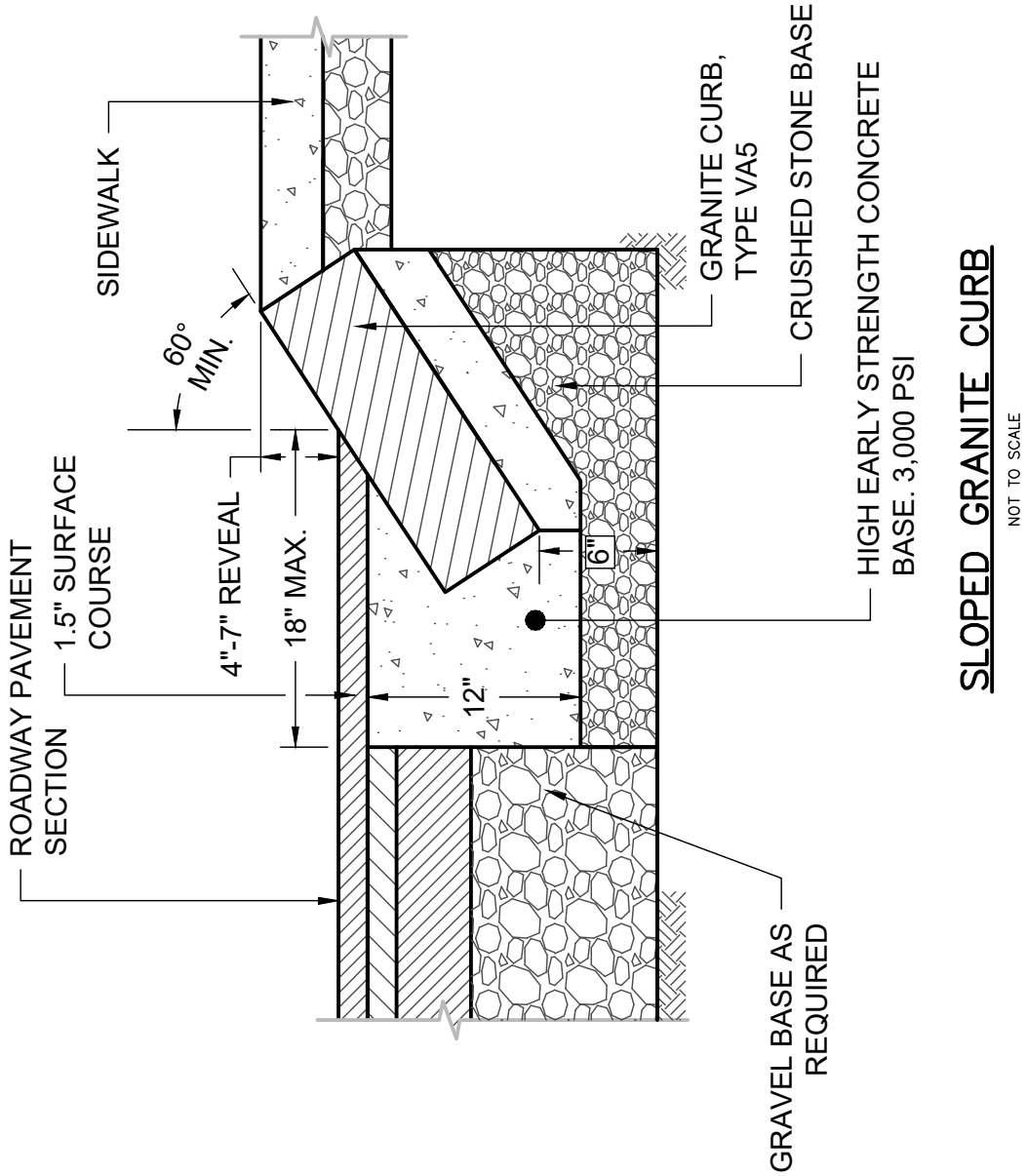
VERTICAL GRANITE CURB CROSS SECTION

NOTES:
1. INDIVIDUAL PIECES OF CURB SHORTER THAN 4 L.F. ARE NOT ALLOWED, WITH THE EXCEPTION OF RADIAL CURB.
2. THE MINIMUM HEIGHT OF THE CONCRETE BACKING SHALL BE 10-INCHES OR TO THE BOTTOM OF THE HOT MIX ASPHALT PAVEMENT, WHICHEVER IS GREATER, MEASURED FROM THE BOTTOM OF CURB.
3. CURBING SHALL BE SET IN A 6-INCH BED OF POURED IN PLACE 3,000 PSI CONCRETE MIX.
4. WOODEN SHIMS MAY BE USED TO SET CURB.

VERTICAL GRANITE CURB

NOT TO SCALE

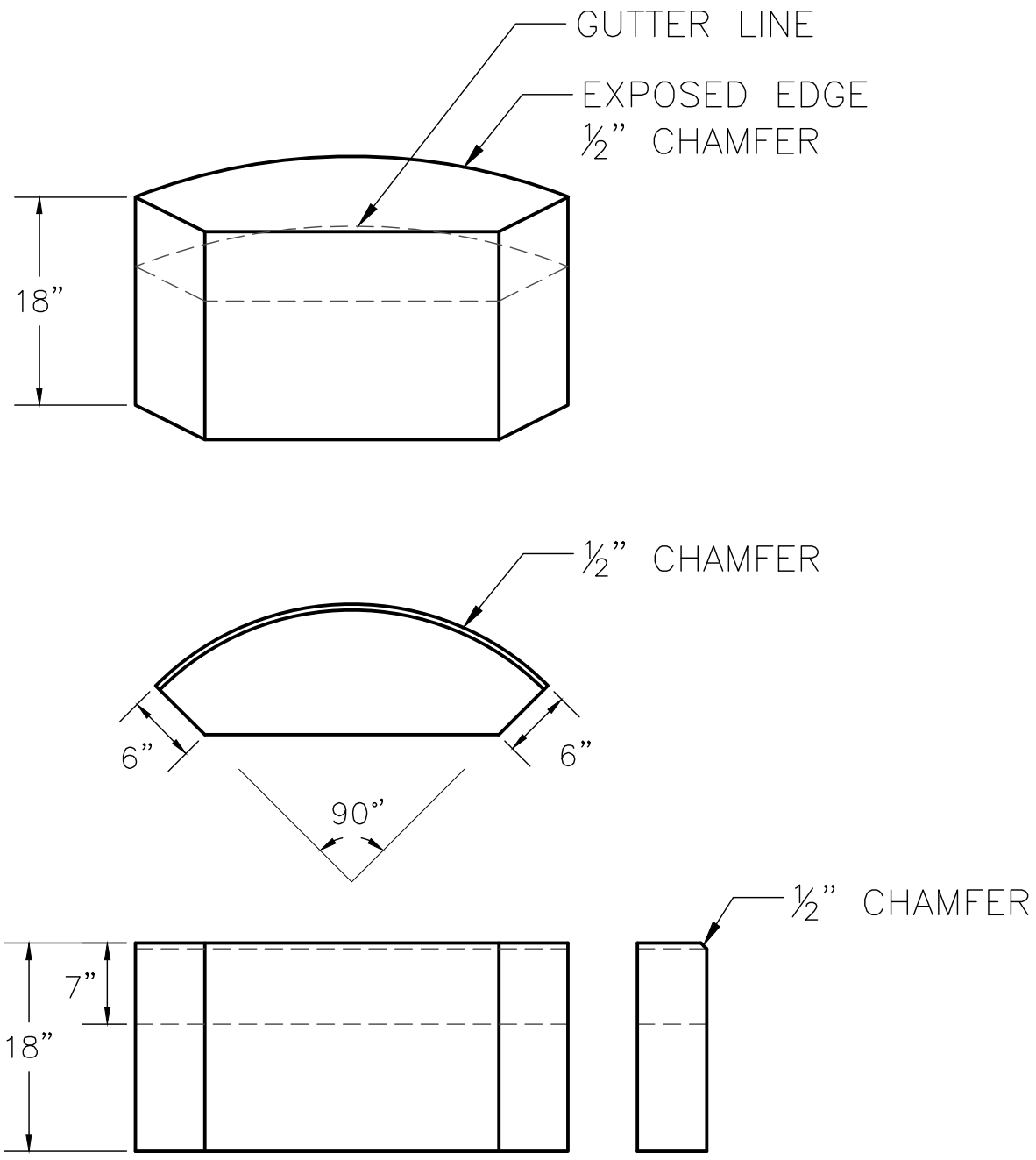
DATE: NOV. 2022 REVISED:	CITY OF PORTLAND, MAINE TECHNICAL STANDARDS MANUAL	**TRANSPORTATION DESIGN STANDARDS** SECTION I	FIGURE: I-12
	VERTICAL GRANITE CURB		



SLOPED GRANITE CURB

NOT TO SCALE

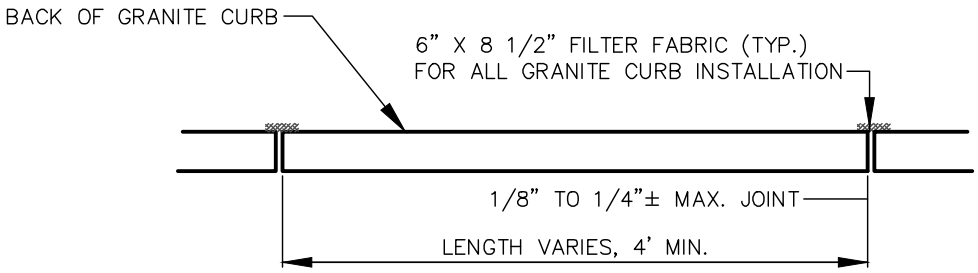
DATE: NOV. 2022 REVISED:	CITY OF PORTLAND, MAINE TECHNICAL STANDARDS MANUAL	**TRANSPORTATION SYSTEMS AND STREET DESIGN** SECTION I	FIGURE: I-13
	SLOPED GRANITE CURB		



GRANITE RADIUS CORNER "BUG"

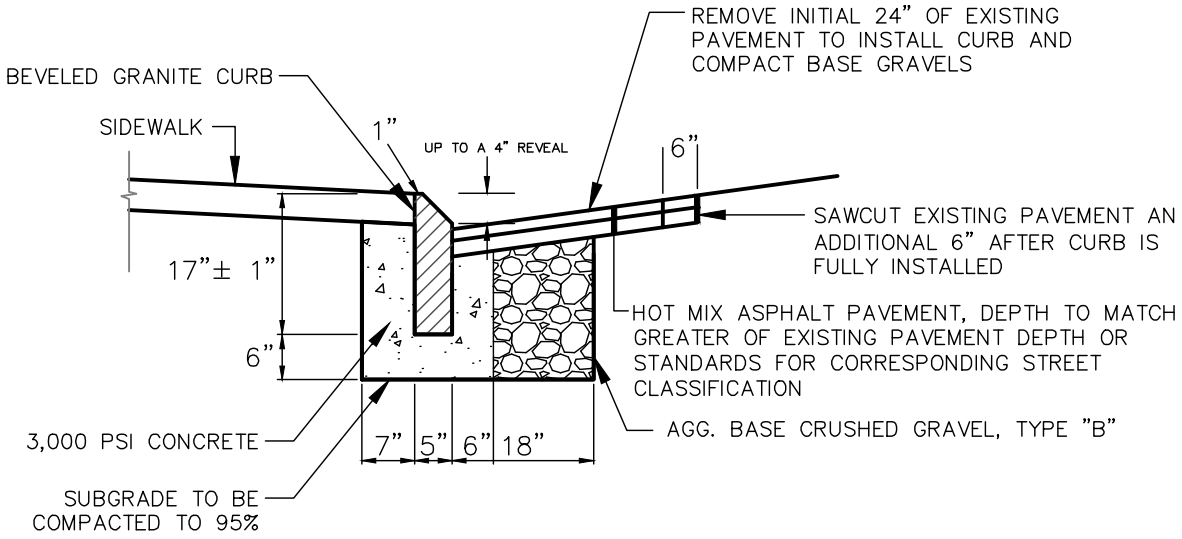
NOT TO SCALE

DATE: NOV. 2022	CITY OF PORTLAND, MAINE TECHNICAL STANDARDS MANUAL	**TRANSPORTATION DESIGN STANDARDS** SECTION I	FIGURE:
	GRANITE RADIUS CORNER "BUG"		I-14



VERTICAL GRANITE CURB PLAN VIEW

NOT TO SCALE



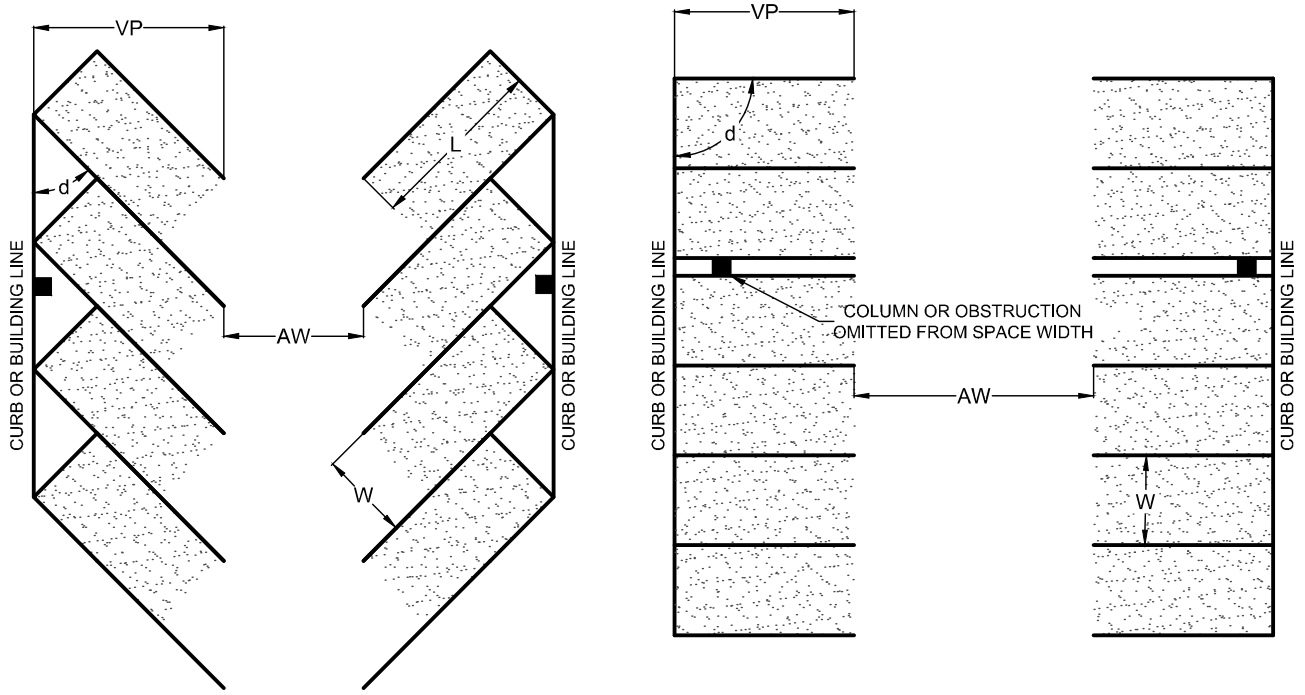
NOTES:

1. INSTALL PER MANUFACTURER'S SPEC'S
2. PROVIDE CUSTOM TRANSITION CURB THAT TIPS DOWN 3" IN BETWEEN MOUNTABLE AND VERTICAL CURBS. SAWCUT TRANSITION STONE IN THE FIELD FOR FLUSH JOINT WITH ADJACENT VERTICAL CURB
3. INDIVIDUAL PIECES OF CURB SHORTER THAN 4 L.F. ARE NOT ALLOWED, WITH THE EXCEPTION OF RADIAL CURB.
4. THE MINIMUM HEIGHT OF THE CONCRETE BACKING SHALL BE 10–INCHES OR TO THE BOTTOM OF THE HOT MIX ASPHALT PAVEMENT, WHICHEVER IS GREATER, MEASURED FROM THE BOTTOM OF CURB.
5. CURBING SHALL BE SET IN A 6–INCH BED OF POURED IN PLACE 3,000 PSI CONCRETE MIX.
6. WOODEN SHIMS MAY BE USED TO SET CURB.

MOUNTABLE BEVELED GRANITE CURB CROSS SECTION

NOT TO SCALE

DATE: NOV. 2022	CITY OF PORTLAND, MAINE TECHNICAL STANDARDS MANUAL	**TRANSPORTATION DESIGN STANDARDS** SECTION I	FIGURE:
REVISED:	**MOUNTABLE BEVELED GRANITE CURB**		I-15



Standard Parking Dimensions

Parking Angle (d)	Space Length (L)	Space Width (W)	Aisle Width (AW)	Vehicle Projection (VP)
90°	18	9	24	18.0
75°	18	9	22	19.7
60°	18	9	19	20.1
45°	18	9	14	19.0
30°	18	9	12	16.7
0° (parallel)	20	8	12	8.0

Compact Parking Dimensions

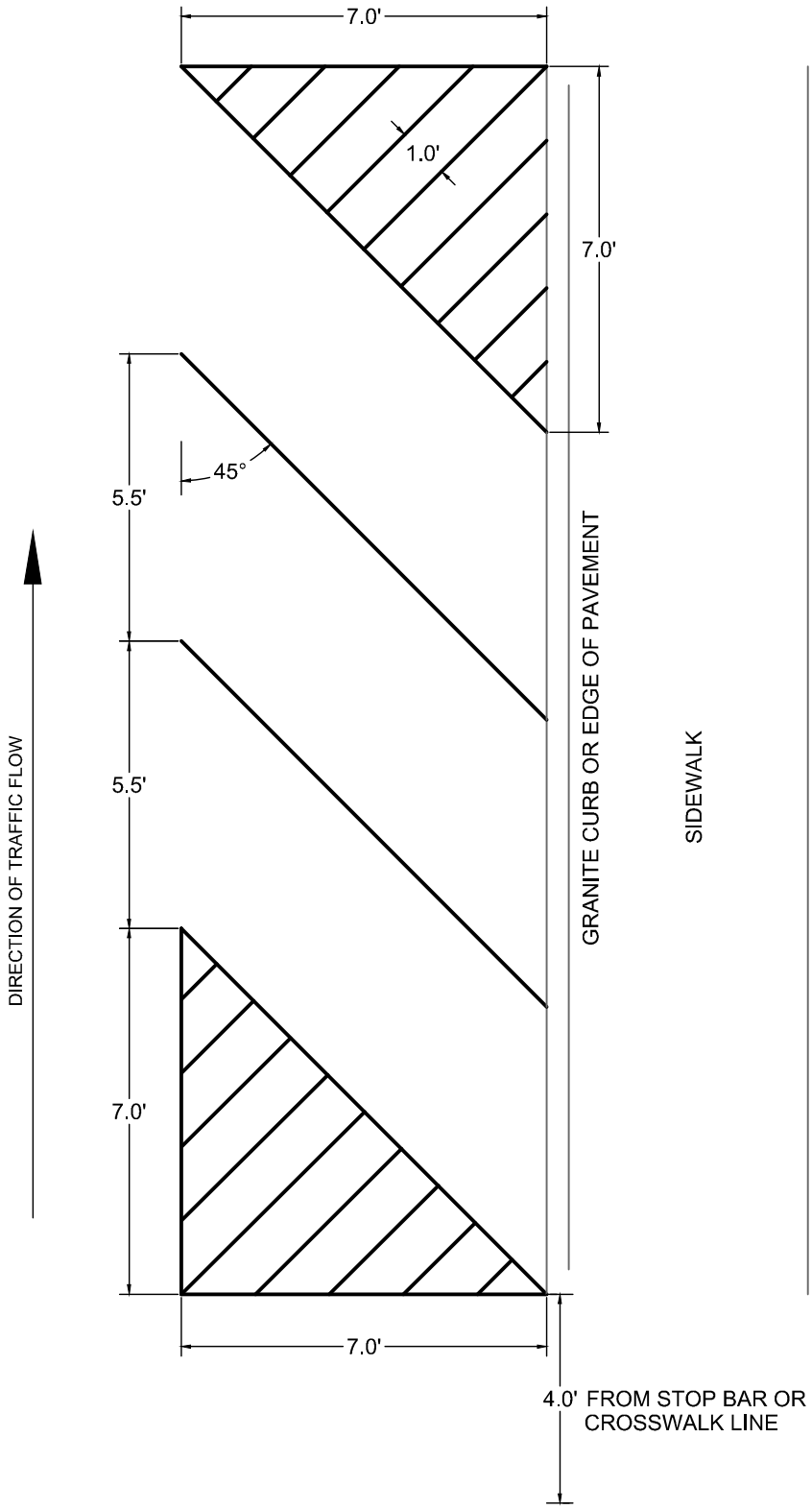
Parking Angle (d)	Space Length (L)	Space Width (W)	Aisle Width (AW)	Vehicle Projection (VP)
90°	15	8	24	15.0
75°	15	8	22	16.8
60°	15	8	19	17.5
45°	15	8	14	16.9
30°	15	8	12	15.2
0° (parallel)	15	7	10	7.0

All dimensions in feet

NOTES:

1. STANDARD SPACE WIDTH MAY BE REDUCED TO 8.5 FEET IN LOW-TURNOVER LOTS.
2. COMPACT SPACES SHOULD BE DESIGNED AS CLOSE TO STANDARD AS POSSIBLE WITHIN SITE CONSTRAINTS.
3. ACCESSIBLE PARKING SPACES SHALL BE PROVIDED IN ACCORDANCE WITH ADA, AND SHALL BE CONSIDERED A STANDARD PARKING SPACE WHEN CALCULATING THE PERMISSIBLE NUMBER OF COMPACT SPACES.
4. DIMENSIONS REPRESENT CLEAR WIDTH AN DO NOT INCLUDE OBSTRUCTIONS SUCH AS STRUCTURAL COLUMNS.

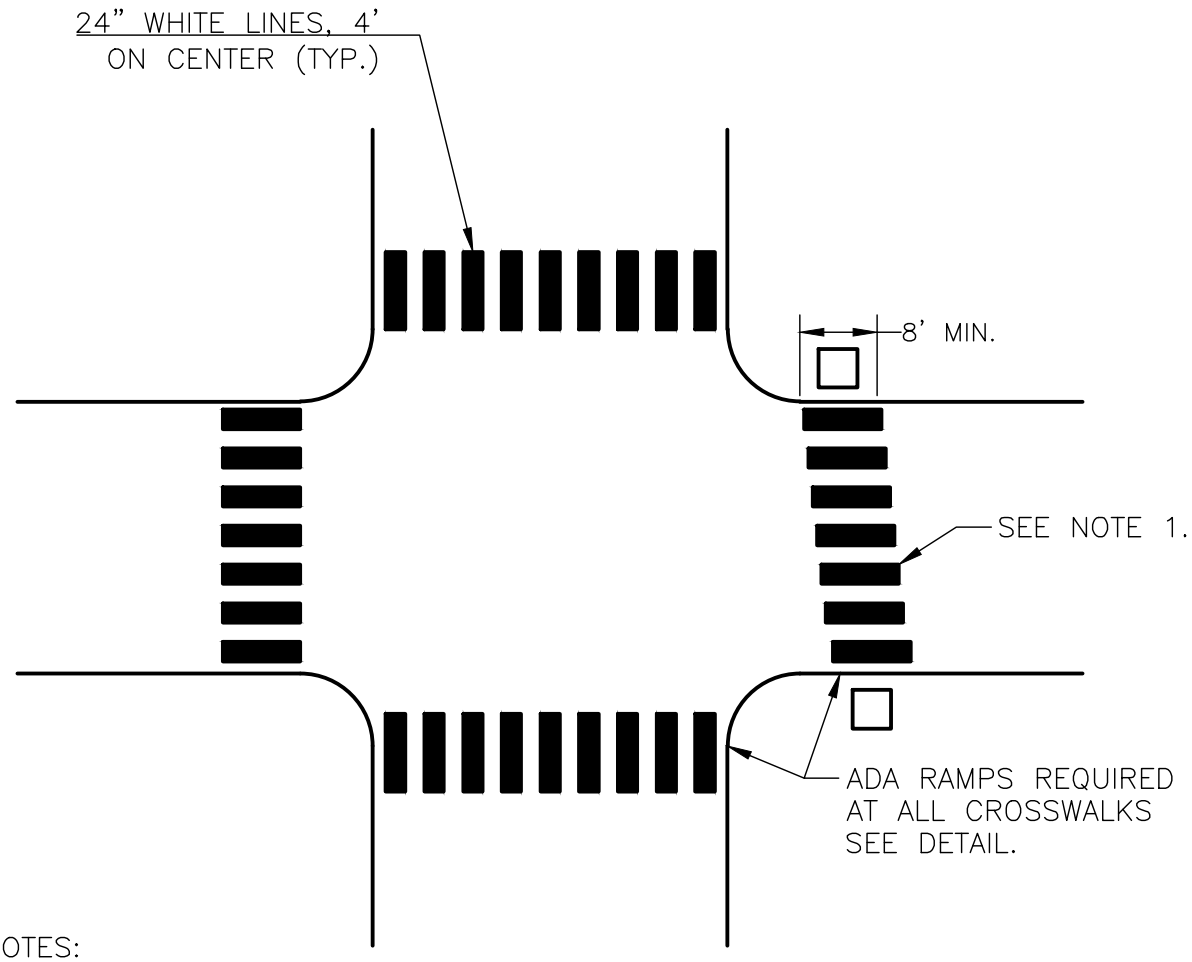
DATE: NOV. 2022	CITY OF PORTLAND, MAINE TECHNICAL STANDARDS MANUAL	**TRANSPORTATION DESIGN STANDARDS** SECTION I	FIGURE:
REVISED:	**VEHICLE PARKING DIMENSIONS**		I-16A



MOTORCYCLE PARKING

*ALL PAVEMENT MARKINGS SHALL BE 4 INCH WIDE WHITE LINES.

DATE: NOV. 2022 REVISED:	CITY OF PORTLAND, MAINE TECHNICAL STANDARDS MANUAL	**TRANSPORTATION DESIGN STANDARDS** SECTION I	FIGURE: I-16B
	MOTORCYCLE PARKING DIMENSIONS		



NOTES:

1.) CROSSWALK BLOCKS SHALL BE STAGGERED AND REMAIN PARALLEL TO THE ROADWAY CENTERLINE AT SKEWED CROSSING LOCATIONS.

2.) CROSSWALK MARKINGS LOCATED ON ARTERIAL STREETS SHALL BE APPLIED WITH A THERMOPLASTIC MATERIAL (OR APPROVED EQUAL) MEETING ALL MANUFACTURER AND MUTCD REQUIREMENTS.

3.) THE ESTABLISHMENT PERIOD FOR CROSSWALK MARKINGS SHALL BE BASED ON MANUFACTURER'S SPECIFICATIONS AND SHALL AT A MINIMUM MEET MAINE DOT STANDARD SPECIFICATION 627.07 ESTABLISHMENT PERIOD REQUIREMENTS.

CROSSWALK MARKINGS

NOT TO SCALE

DATE: NOV. 2022 REVISED:	CITY OF PORTLAND, MAINE TECHNICAL STANDARDS MANUAL	**TRANSPORTATION DESIGN STANDARDS** SECTION I	FIGURE:
	TYPICAL CROSSWALK MARKINGS		I-17

TYPICAL BIKEWAY PAVEMENT MARKINGS



SHARED USE LANE
SYMBOL



BICYCLE LANE
SYMBOL

TYPICAL BIKEWAY ROUTE SIGNAGE



R3–17
30"x24"



R3–17
30"x24"

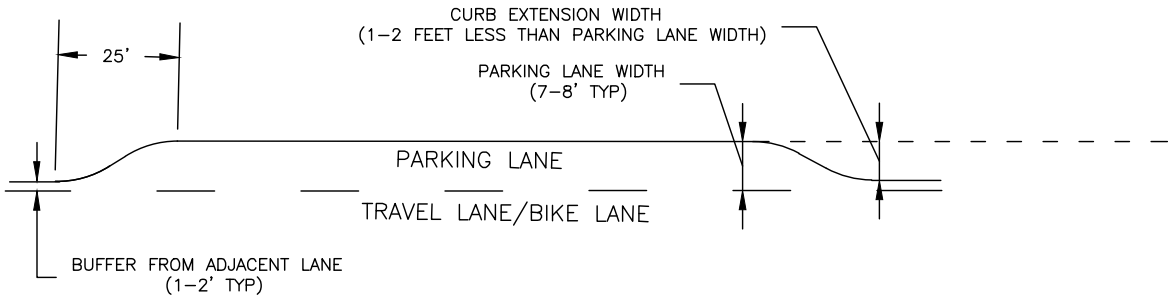


R3–17B
30"x12"



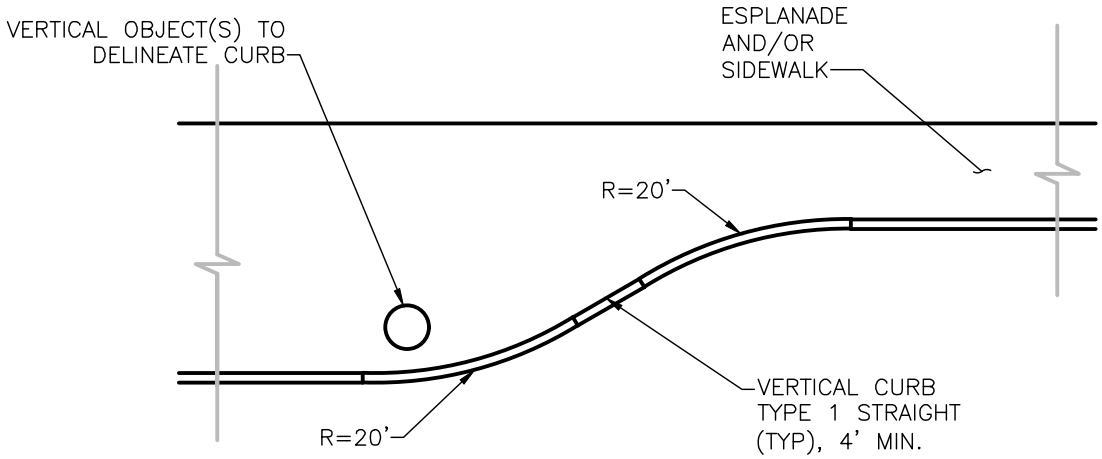


DATE: NOV. 2022 REVISED:	CITY OF PORTLAND, MAINE TECHNICAL STANDARDS MANUAL	**TRANSPORTATION DESIGN STANDARDS** SECTION I	FIGURE:
	TYPICAL BIKEWAY PAVEMENT MARKINGS AND BICYCLE ROUTE SIGNAGE		I-18



NOTES:

1. CURB EXTENSIONS SHOULD NOT IMPEDE THE WIDTH OF THE ADJACENT VEHICLE TRAVEL LANE OR BICYCLE LANE.
2. PROPOSED MATERIALS SHALL BE CONSISTENT WITH THE CITY SIDEWALK MATERIAL POLICY.
3. DRAINAGE MODIFICATIONS SHALL BE MADE SO THAT CURB EXTENSIONS DO NOT IMPEDE STORMWATER FLOW.
4. CURB EXTENSIONS SHALL BE DESIGNED TO FACILITATE SNOW REMOVAL OPERATIONS WHILE MINIMIZING IMPACTS TO DRAINAGE AND ON–STREET PARKING.
5. ALL CURB EXTENSIONS SHALL BE REVIEWED AND APPROVED BY THE CITY ENGINEER.
6. THE POTENTIAL IMPLEMENTATION OF GREEN INFRASTRUCTURE FOR STORMWATER MANAGEMENT SHALL BE CONSIDERED AT EACH CURB EXTENSION LOCATION AND IMPLEMENTED IF FEASIBLE. THE WATER RESOURCES DIVISION OF PUBLIC WORKS MUST REVIEW AND APPROVE GREEN INFRASTRUCTURE SYSTEMS BEFORE BEING INSTALLED WITHIN CITY STREETS.



TYPICAL CURB EXTENSION

NOT TO SCALE

DATE: NOV. 2022 REVISED:	CITY OF PORTLAND, MAINE TECHNICAL STANDARDS MANUAL	**TRANSPORTATION DESIGN STANDARDS** SECTION I	FIGURE: I-19
	TYPICAL CURB EXTENSIONS		



R1-5



R1-5a



R1-6

Unsignalized Pedestrain Crosswalk Signage

DATE: AUGUST 2009 REVISED:	CITY OF PORTLAND, MAINE TECHNICAL STANDARDS MANUAL	**TRANSPORTATION SYSTEMS AND STREET DESIGN** SECTION I	FIGURE:
	UNSIGNALIZED PEDESTRIAN CROSSWALK SIGNAGE		I-20

School Advance Warning Assembly



S1-1



W16-9p

OR



W16-2a

OR



W16-2

School Crosswalk Warning Assembly



S1-1



W16-7p



W11-2

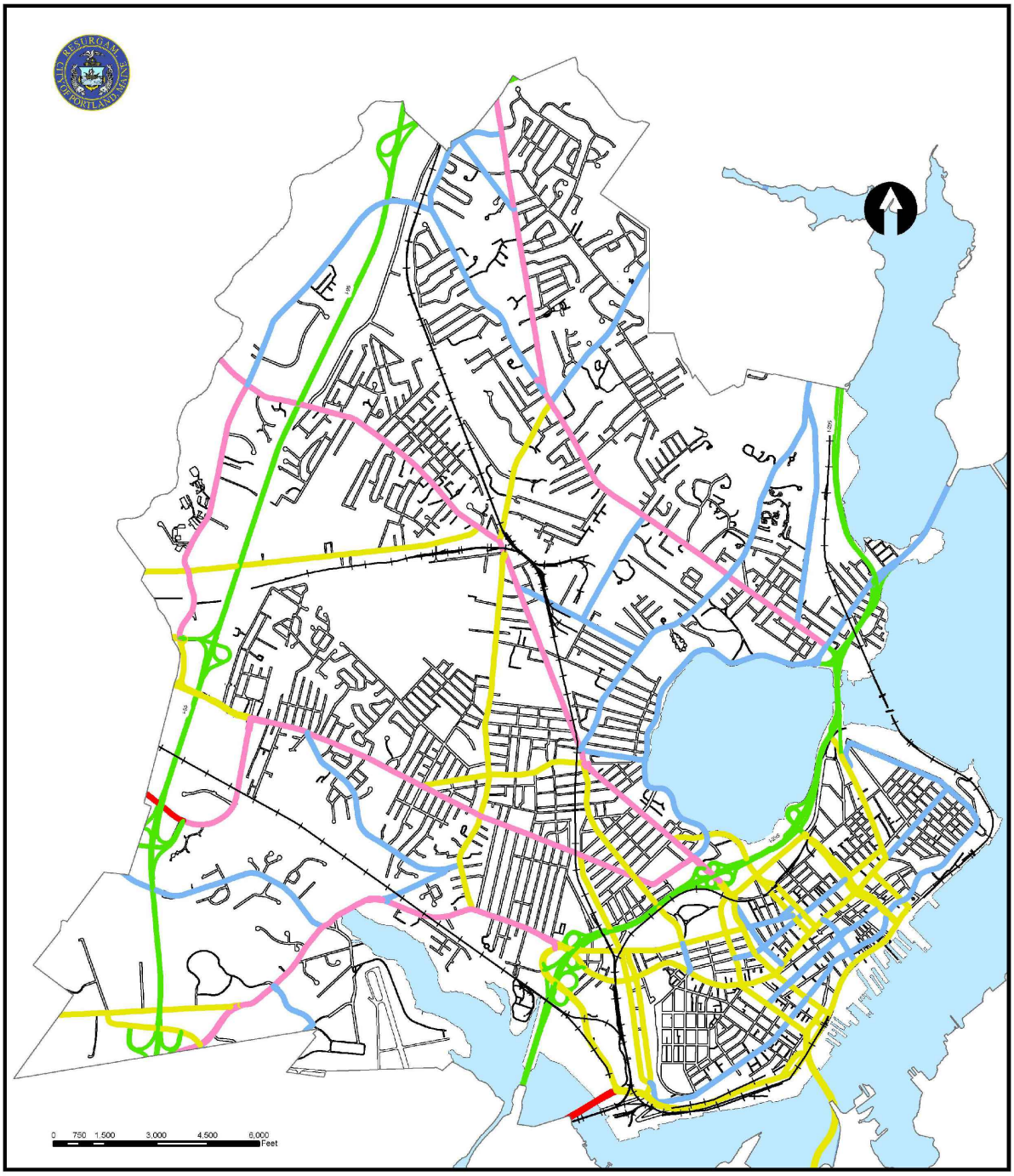
SCHOOL AREA CROSSING SIGNS

PEDESTRIAN CROSSING SIGN

Typical Crosswalk Signage

DATE: AUGUST 2009 REVISED:	CITY OF PORTLAND, MAINE TECHNICAL STANDARDS MANUAL	**TRANSPORTATION SYSTEMS AND STREET DESIGN** SECTION I	FIGURE: I-21
	TYPICAL CROSSWALK SIGNAGE		

DATE: AUGUST 2009	CITY OF PORTLAND, MAINE TECHNICAL STANDARDS MANUAL	**TRANSPORTATION SYSTEMS AND STREET DESIGN** SECTION I	FIGURE:
REVISED:	**GUIDELINES FOR CROSSWALK INSTALLATION AT UNCONTROLLED INTERSECTIONS AND MID-BLOCK CROSSINGS**		I-22



City of Portland, Maine
FEDERAL STREET CLASSIFICATION

Map prepared by City of Portland's Department of Public Works
September 2021

Legend
- Other Principal Arterial - Federal & Expressway
- Principal Arterial - Interstate
- Other Principal Arterial
- Minor Arterial
- Major Urban Collector
- Local

DATE: NOV. 2022 REVISED:	CITY OF PORTLAND, MAINE TECHNICAL STANDARDS MANUAL	**TRANSPORTATION DESIGN STANDARDS** SECTION I	FIGURE: I-23
	FEDERAL STREET CLASSIFICATION		

BICYCLE PARKING RACK PLACEMENT

RACK PLACEMENT RULES:

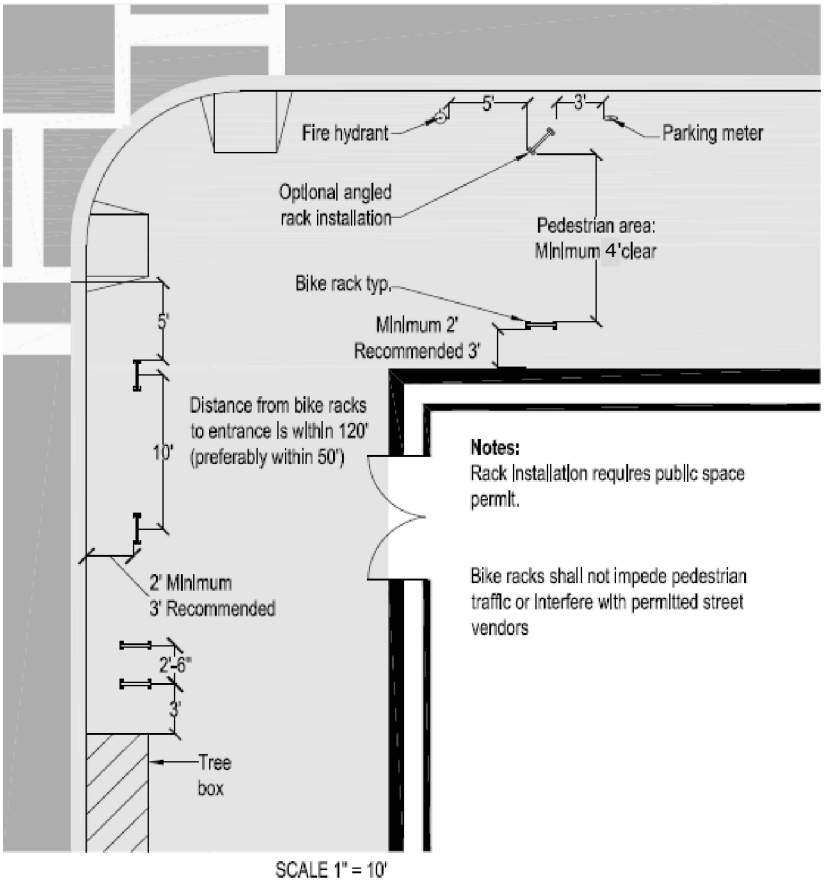
5' from:
Fire hydrant
Crosswalk

4' from:
Loading zone
Bus stop
Bus shelter
Bus bench

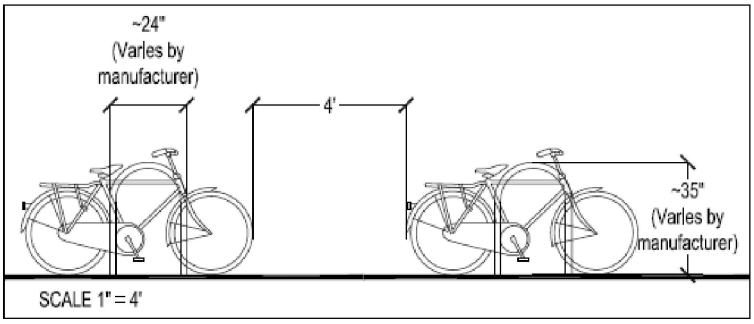
Min. 2', Rec. 3' from:
Curb

3' from:
Parking meter
Newspaper rack
US mailbox
Light pole
Sign pole
Driveway
Tree space
Trash can
Utility meter
Manhole
Other street furniture
Other sidewalk obstructions

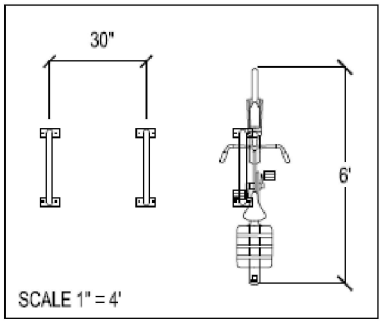
WALL SETBACKS
For racks set parallel to a wall:
Min. 24", Rec. 36"
For racks set perpendicular to a wall:
Min. 28", Rec. 36"



SIDE VIEW



SIDE BY SIDE RACKS:



d. District Department of Transportation

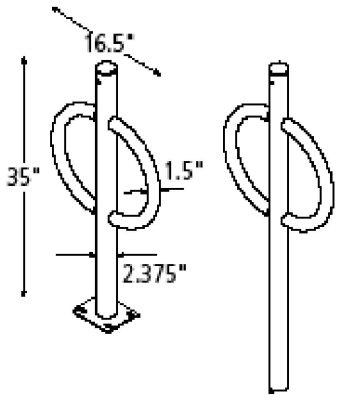
District Department of Transportation
Bicycle Facility Design Guide

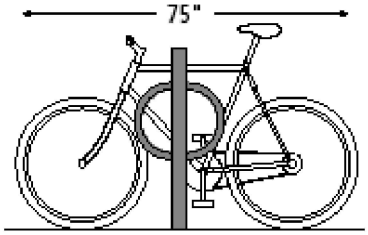
REVISED: Feb. 2006
SCALE: AS NOTED

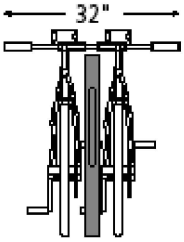
27

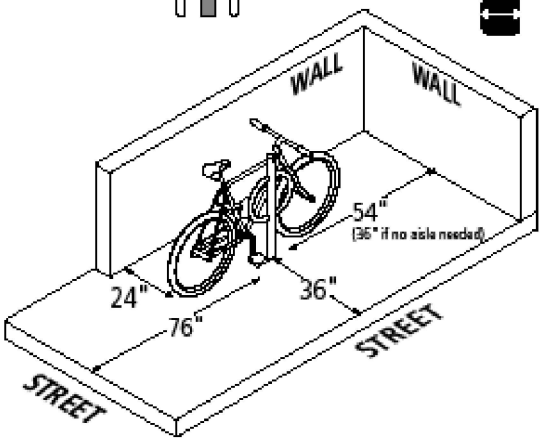
DATE: AUGUST 2009	CITY OF PORTLAND, MAINE TECHNICAL STANDARDS MANUAL	**TRANSPORTATION SYSTEMS AND STREET DESIGN** SECTION I	FIGURE:
REVISED:	**BICYCLE PARKING RACK PLACEMENT GUIDELINES**		I-24

BIKE HITCH — Specifications and Space Use









Product
Dero Bike Hitch
As manufactured by Dero Bike Racks

Capacity
2 Bikes

Materials
Centerbeam: 2" schedule 40 pipe (2.375" OD)
Ring: 1.5" OD 11 gauge tube

Finishes
An after fabrication hot dipped galvanized finish is standard. 250 TGIC powder coat colors, a thermoplastic coating and a stainless steel option are also available.

Our powder coat finish assures a high level of adhesion and durability by following these steps:
1. Sandblast
2. Iron phosphate pretreatment
3. Epoxy primer electrostatically applied
4. Final thick TGIC polyester powder coat

Stainless Steel: 304 grade stainless steel material finished in either a high polished shine or a satin finish.

A rubbery PVC Dip is also available

Installation Methods
In-ground mount is embedded into concrete base.
Surface mount has one 5" x 6" foot which is anchored to the ground with four anchors (included with rack).

Space Use and Setbacks

Wall Setbacks:
For racks set parallel to a wall:
Minimum: 12"
Recommended: 24"

For racks set perpendicular to a wall:
Minimum" 35" (centerline measurement)
Recommended: 38" (54" if aisle is needed between bike and wall)

Distance Between Racks:
Minimum: 24"
Recommended: 38"

Street Setbacks:
Minimum: 36"

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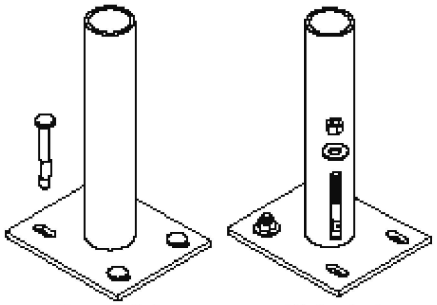
DATE: AUGUST 2009 REVISED:	CITY OF PORTLAND, MAINE TECHNICAL STANDARDS MANUAL	**TRANSPORTATION SYSTEMS AND STREET DESIGN** SECTION I	FIGURE:
	BICYCLE RACK SPECIFICATION - BIKE HITCH		I-24A

BIKE HITCH — Installation Instructions - Surface Mount

Tools Needed for Installation

Tape Measure
Marker or Pencil
Masonry Drill Bit
Drill (Hammer drill recommended)
Hammer
Wrench 9/16"
Level
Washers (for leveling if necessary)

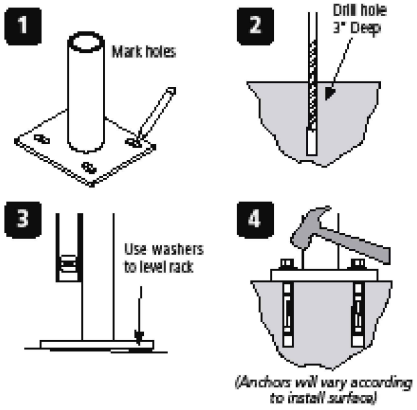


Recommended Base Materials:

Solid concrete is the best base material for installation. Ask your Dero Rack representative which anchor is appropriate for your application to ensure the proper anchors are shipped with your rack. Be sure nothing is underneath the base material that could be damaged by drilling.

Installation:

3/8" anchors are shipped with the rack. Place the rack in the desired location. Use a marker or pencil to outline the holes of the flange onto the base material. Drill the holes in accordance with the specifications shipped with the anchors. Make sure the holes are at least 6" away from any cracks in the base material.



Tamper Resistant Fasteners

The concrete spike is a permanent anchor. The top of the wedge anchor can also be pounded sideways after installation so that it cannot be removed. Other tamper resistant fasteners are also available for purchase.

When using the special tamper resistant nuts, always set and first tighten the anchors. Once the rack is installed, replace two nuts from the bracket (opposite sides from each other) with the tamper resistant fastener. DO NOT OVERTIGHTEN the tamper resistant nut.

If you have any questions about installation or other features of the Bike Bike Rack, please call us toll free at 1-800-298-4915





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DATE: AUGUST 2009	CITY OF PORTLAND, MAINE	**TRANSPORTATION SYSTEMS AND STREET DESIGN**	FIGURE:
REVISED:	TECHNICAL STANDARDS MANUAL	SECTION I	
	BICYCLE RACK SPECIFICATION - BIKE HITCH		I-24B

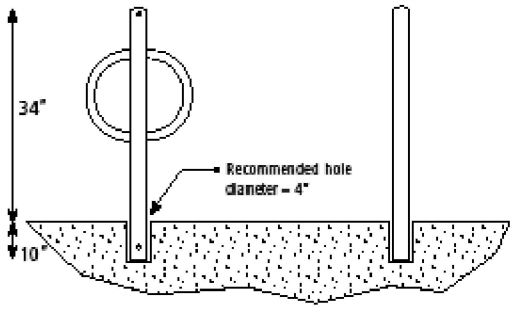
BIKE HITCH — In-ground Installation Instructions

Tools needed for installation

Level	Hole coring machine with 4" bit
Cement mixing tub	Access to water hose
Shovel	Materials to build brace (see "Install Tip"
Trowel	at bottom of page)

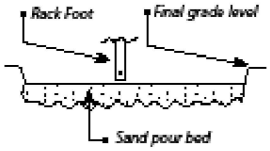
Installing into Existing Sidewalk

Core holes no less than 3" diameter (4" recommended) and no less than 6" deep into sidewalk. Place Bike Hitch into hole making sure the rack is level. Fill hole with Por-Rok or epoxy grout. 34-36" of the Bike Hitch should remain above the surface. Make sure Hitch is level and held in place until the grout has completely set.

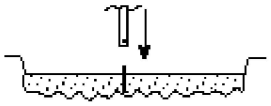


Installing Into a New Sidewalk:

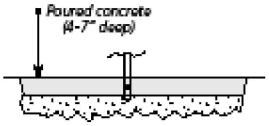
Stake Method:



1. Use rack to measure exact location in pour bed.

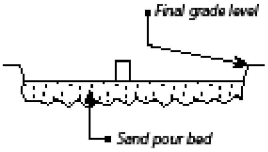


2. Pound stake into pour bed where end of rack will sit. Slide rack end onto stake. You may need to dig the end of the rack into the sand to make sure the rack sits at least 35" above final grade level. The stake keeps the rack straight while the concrete is being poured.

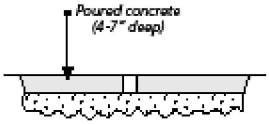


3. Make sure the rack is level and true. Pour concrete around the rack. Make sure the rack is not touched until the concrete has completely set.

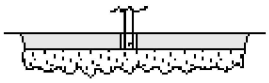
Sleeve Method:



1. Place corrosion resistant sleeve (min. 3" inside diameter) in sand pour bed in exact location where rack will be installed. Make sure top of sleeve is at same level as desired finished concrete surface. Fill sleeve with sand to keep it in place and prevent it from filling with concrete.



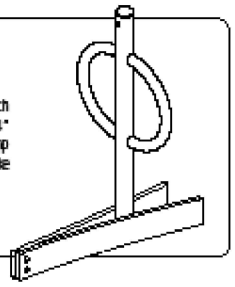
2. Pour concrete and allow to cure.

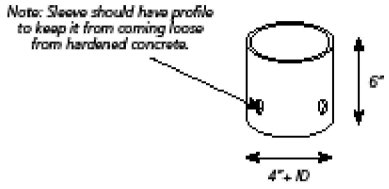


3. After appropriate cure time, dig out sand from sleeves and insert racks, making sure they are level and at the appropriate height. Pour in Por-Rok or epoxy grout and allow to set.

INSTALL TIP

An easy way to brace the Bike Hitch while the grout sets is to bolt two 1x4" boards together at one end and clamp them onto the legs of the Bike Hitch like a clothes pin.





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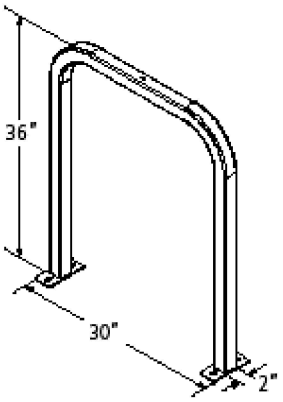
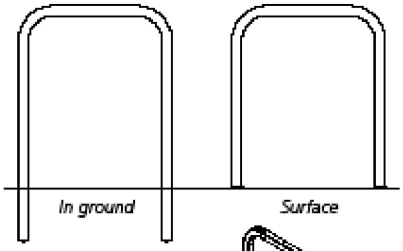
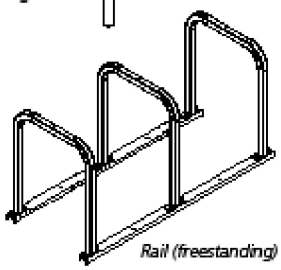
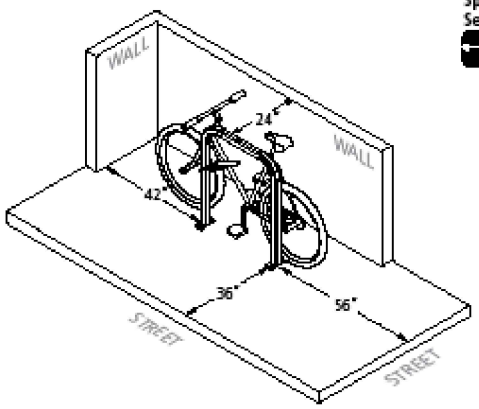
DATE: AUGUST 2009 REVISED:	CITY OF PORTLAND, MAINE TECHNICAL STANDARDS MANUAL	**TRANSPORTATION SYSTEMS AND STREET DESIGN** SECTION I	FIGURE:
	BICYCLE RACK SPECIFICATION - BIKE HITCH		I-24C

DOWNTOWN RACK — Specifications and Space Use









Product — Dero Downtown Rack
As manufactured by Dero Bike Racks

Capacity — 2 Bikes

Materials — 2" x 2" x 3/16" tube

Finishes — An after fabrication hot dipped galvanized finish is standard. 250 TGIC powder coat colors, a thermoplastic coating and a stainless steel option are also available.

Our powder coat finish assures a high level of adhesion and durability by following these steps:
1. Sandblast
2. Iron phosphate pretreatment
3. Epoxy primer electrostatically applied
4. Final thick TGIC polyester powder coat

Stainless Steel: 304 grade stainless steel material finished in either a high polished shine or a satin finish.

A rubbery PVC Dip is also available

Installation Methods — **In ground mount** is embedded into concrete base. Specify in ground mount for this option.
Foot Mount has two 2.5"x6"x.25" feet with two anchors per foot. Specify foot mount for this option.
Rail Mounted Downtown Racks are bolted to two parallel rails which can be left freestanding or anchored to the ground. Rails are heavy duty 3"x1.4"x3/16" thick galvanized mounting rails. Specify rail mount for this option.

Space Use and Setbacks

Wall Setbacks:
For racks set parallel to a wall:
Minimum: 24"
Recommended: 36"

For racks set perpendicular to a wall:
Minimum" 28"
Recommended: 42"

Distance Between Racks:
Minimum: 24"
Recommended: 36"

Street Setbacks:
Minimum: 24"
Recommended: 36"

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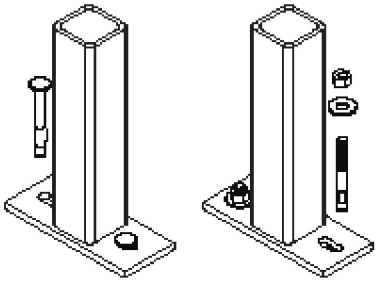
	BICYCLE RACK SPECIFICATION - DOWNTOWN RACK		I-25A

DOWNTOWN RACK — Installation Instructions - Surface Mount

Tools Needed for Installation

Tape Measure
Marker or Pencil
Masonry Drill Bit
Drill (Hammer drill recommended)
Hammer
Wrench 9/16"
Level

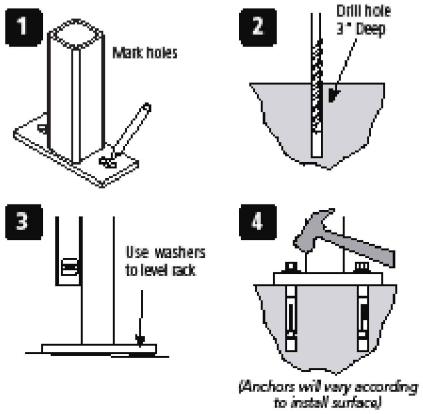


Recommended Base Materials:

Solid concrete is the best base material for installation. To ensure the proper anchors are shipped with your rack, ask your Dero Rack representative which anchor is appropriate for your application. Be sure nothing is underneath the base material that could be damaged by drilling.

Installation:

3/8" anchors are shipped with the rack. Place the rack in the desired location. Use a marker or pencil to outline the holes of the flange onto the base material. Drill the holes in accordance with the specifications shipped with the anchors. Make sure the holes are at least 3" away from any cracks in the base material. Use washers to level rack if necessary. Tap in anchors and follow your specific anchor instructions provided with the rack.



Tamper Resistant Fasteners

The concrete spike is a permanent anchor. The top of the wedge anchor can also be pounded sideways after installation so that it cannot be removed. Other tamper resistant fasteners are also available for purchase.

When using the special tamper resistant nuts, always set and first tighten the anchors. Once the rack is installed, replace two nuts from the bracket (opposite sides from each other) with the tamper resistant fastener. DO NOT OVERTIGHTEN the tamper resistant nut.



If you have any questions about installation or other features of the Downtown Rack, please call us toll free at 1-800-298-4915

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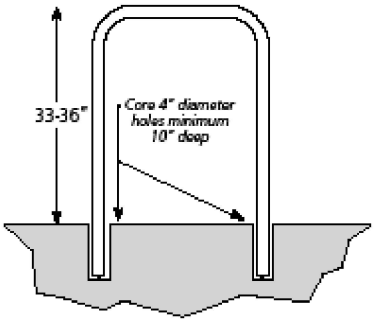
	BICYCLE RACK SPECIFICATION - DOWNTOWN RACK		

DOWNTOWN RACK — Installation Instructions - In Ground Mount

Tools Needed for Installation

Level	Hole coring machine with 4" bit
Cement mixing tub	Access to water hose
Shovel	Materials to build brace (see "Install Tip" at bottom of page)
Trowel	



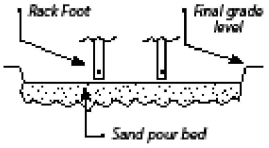
Installing into Existing Sidewalk

Core holes no less than 3" diameter (4" recommended) and no less than 6" deep into sidewalk. Fill holes with Por-Rok or epoxy grout. Place Downtown Rack into holes, making sure the rack is level. 33"-36" of the Downtown Rack should remain above the surface. If the Downtown Rack is less than 33" high, it will not support the bike adequately. Make sure the rack is level and held in place until the grout has set.

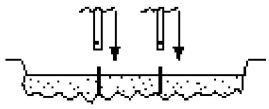
Installing Into a New Sidewalk:

Stake Method:

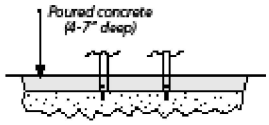
1. Use rack to measure exact location in pour bed.



2. Pound stake into pour bed where end of rack will sit. Slide rack end onto stake. You may need to dig the end of the rack into the sand to make sure the rack sits at least 35" above final grade level. The stake keeps the rack straight while the concrete is being poured.

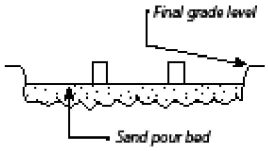


3. Make sure the rack is level and true. Pour concrete around the rack. Make sure the rack is not touched until the concrete has completely set.

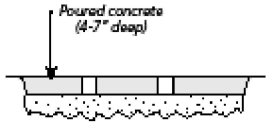


Sleeve Method:

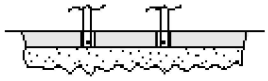
1. Place corrosion resistant sleeve (min. 4" inside diameter) in sand pour bed in exact location where rack will be installed. Make sure top of sleeve is at same level as desired finished concrete surface. Fill sleeve with sand to keep it in place and prevent it from filling with concrete.



2. Pour concrete and allow to cure.

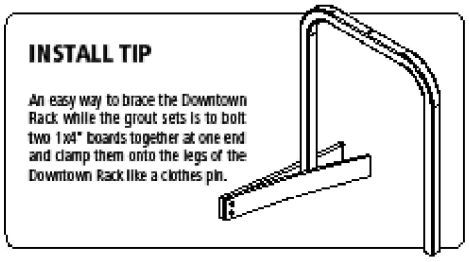


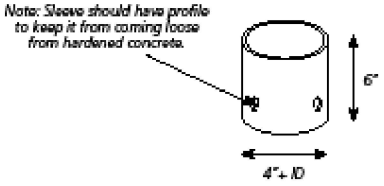
3. After appropriate cure time, dig out sand from sleeves and insert racks, making sure they are level and at the appropriate height. Pour in Por-Rok or epoxy grout and allow to set.



INSTALL TIP

An easy way to brace the Downtown Rack while the grout sets is to bolt two 1x4" boards together at one end and clamp them onto the legs of the Downtown Rack like a clothes pin.





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DATE: AUGUST 2009 REVISED:	CITY OF PORTLAND, MAINE TECHNICAL STANDARDS MANUAL	**TRANSPORTATION SYSTEMS AND STREET DESIGN** SECTION I	FIGURE:
	BICYCLE RACK SPECIFICATION - DOWNTOWN RACK		I-25C

NOTES:

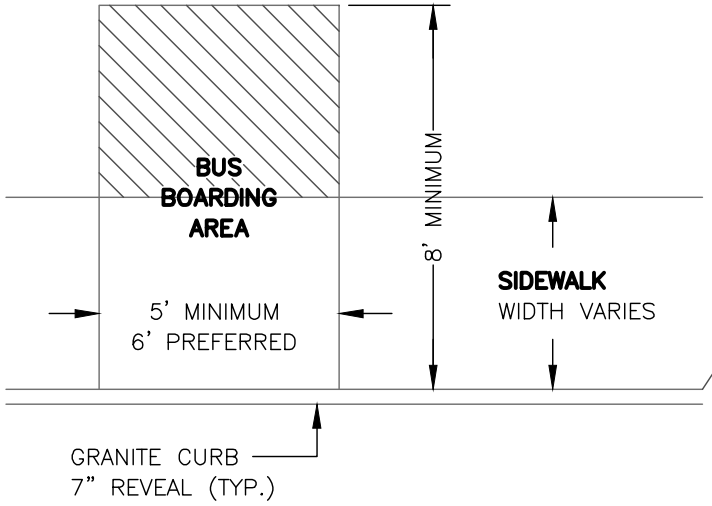
1. SURFACE. BUS STOP BOARDING AREAS SHALL HAVE A FIRM, STABLE SURFACE.

2. DIMENSIONS. BUS STOP BOARDING AREAS SHALL PROVIDE A CLEAR LENGTH OF 8' MINIMUM, MEASURED PERPENDICULAR TO THE CURB OR VEHICLE ROADWAY EDGE, AND A CLEAR WIDTH OF 5' MINIMUM, MEASURED PARALLEL TO THE VEHICLE ROADWAY. THIS AREA SHALL BE CLEAR OF ANY OBSTRUCTIONS, INCLUDING BUT NOT LIMITED TO: BICYCLE RACKS, LIGHT POLES, UTILITY POLES, FIRE HYDRANTS, STREET SIGNS, STREET FURNITURE, NEWSPAPER BOXES OR SIMILAR OBSTACLES.

3. CONNECTION. BUS STOP BOARDING AREAS SHALL BE CONNECTED TO STREETS, SIDEWALKS OR PEDESTRIAN PATHS BY AN ADA ACCESSIBLE ROUTE.

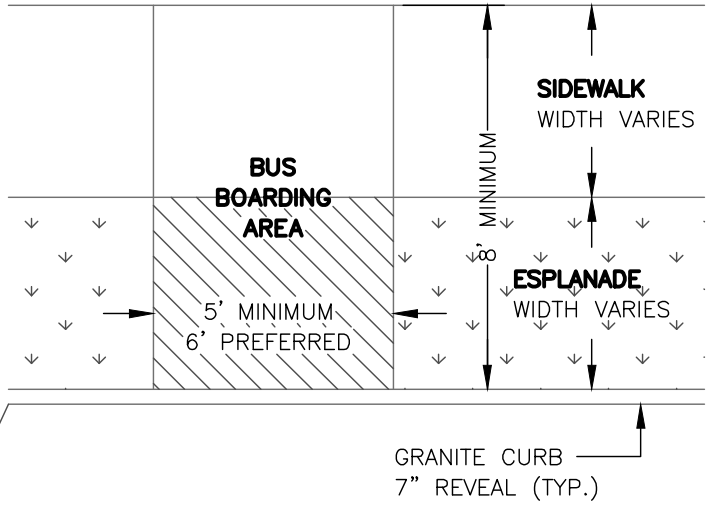
4. SLOPE. PARALLEL TO THE ROADWAY, THE SLOPE OF THE BUS STOP BOARDING AREA SHALL BE THE SAME AS THE ROADWAY, TO THE MAXIMUM EXTENT PRACTICABLE. PERPENDICULAR TO THE ROADWAY, THE SLOPE OF THE BUS STOP BOARDING AREA SHALL NOT EXCEED 2%.

ADDITIONAL WIDENING, AS NEEDED.



BUS BOARDING AREA WITHOUT ESPLANADE

NOT TO SCALE



BUS BOARDING AREA WITH ESPLANADE

NOT TO SCALE

DATE: NOV. 2022
REVISED:

CITY OF PORTLAND, MAINE
TECHNICAL STANDARDS MANUAL

TRANSPORTATION DESIGN STANDARDS
SECTION I

BUS STOP BOARDING AREA LAYOUT FOR SIDEWALK WITH OR WITHOUT ESPLANADE

FIGURE:
I-26

NOTES:

1. DIMENSIONS. MINIMUM CLEAR FLOOR INTERIOR AREA ENTIRELY WITHIN THE PERIMETER OF THE SHELTER IS 2'-6" WIDE BY 4' DEEP TO PERMIT WHEELCHAIR OR MOBILITY AID USER ACCESS. THE MINIMUM SHELTER OPENING FOR WHEELCHAIR ACCESS IS 2'-8".

2. CONNECTION. BUS SHELTER OPENINGS WILL BE CONNECTED TO THE BUS BOARDING AREA BY AN ADA ACCESSIBLE ROUTE.

3. SLOPE. PARALLEL TO THE ROADWAY, THE SLOPE OF THE BUS BOARDING AREA SHALL BE THE SAME AS THE ROADWAY, TO THE MAXIMUM EXTENT PRACTICABLE. PERPENDICULAR TO THE ROADWAY, THE SLOPE OF THE BUS BOARDING AREA SHALL NOT EXCEED 2%.

ADDITIONAL WIDENING, AS NEEDED.

BUS SHELTER AND SHELTER SITING WITHOUT ESPLANADE

NOT TO SCALE

DATE: NOV. 2022 REVISED:	CITY OF PORTLAND, MAINE TECHNICAL STANDARDS MANUAL	**TRANSPORTATION DESIGN STANDARDS** SECTION I	FIGURE: I-27
	BUS SHELTER AND SHELTER SITING LAYOUT FOR SIDEWALK WITHOUT ESPLANADE		

2. SANITARY SEWER AND STORM DRAIN DESIGN STANDARDS

2.1. TECHNICAL REFERENCE

2.1.1. The following technical publications are recognized by the City of Portland for use in the design, construction and testing of sanitary and storm water systems:

- Technical Report #16 (TR-16): Guides for the Design of Wastewater Treatment Works, Prepared by the New England Interstate Water Pollution Control Commission available for review at the Department of Public Works or online at www.neiwpcc.org/tr16guides.asp
- Maine Department of Transportation (MDOT) Standard Specifications for Highways and Bridges, Current Edition.

2.2. SANITARY STANDARDS AND SPECIFICATIONS

2.2.1. Sewer and Storm drain systems shall be planned and constructed in accordance with the regulations contained in Chapter 24 of the City Code of Ordinances.

2.2.2. The information presented below are City of Portland exceptions to the TR-16 or additional required standards.

2.2.3. The introduction of non-contaminated water such as rain water, non-contact cooling water, groundwater from foundation drains, sump pumps, surface drains or any other sources of inflow shall not be allowed to discharge into a sewer which conveys sanitary waste unless approved by the Department of Public Works Water Resources Manager or their designee.

2.2.4. Appeals will be considered by the Director of Public Works. (Refer to Sec. 24-44 of the City Code - Public sewer connection limitations).

2.2.5. It is not permissible to backfill any excavation with frozen materials, organic materials, clay or blasted ledge. The maximum size of backfill material shall not exceed six inch (6”). (Please refer to Division 2, Street Opening Permits in the City Code.)

2.2.6. The Department of Public Works shall be responsible for televising all new sewer construction for acceptability as soon as backfilling has been completed and access is available. The permittee will be invoiced for these services. Information on current rates is available in Chapter 24 Sewer Ordinance.

2.2.7. Permits to connect to the municipal stormwater and sanitary sewer system are required and may be obtained from the Department of Public Works.

2.2.8. Covered or enclosed parking areas, mechanical rooms, garages (parking areas not exposed to rain and snow) shall direct surface drainage to a sanitary sewer. Storm water from outside of these areas shall be directed away from this

covered area so that additional storm water is not directed to the sewer. Drainage from these areas shall be collected by an Oil/ Grit Separator as shown in Figure II-20 or an approved equal.

2.3. SANITARY MANHOLES

2.3.1. All manholes shall be designed in conformance with City of Portland standards as illustrated in Figure II-02.

2.3.2. When constructing sanitary manhole channels, if the vertical difference between the invert elevation of the manhole channel and the invert elevation of the sewer pipe connecting to such manhole is two vertical feet (2') or greater, a standard City of Portland internal drop manhole shall be provided. Such drop manholes shall conform to the engineering specifications illustrated in Figure II-03. A minimum of two stainless steel pipe anchors shall be used and the manhole diameter shall be five feet (5') minimum.

2.3.3. Sanitary service laterals that are four inch (4") or six inch (6") shall not be connected into a sanitary manhole and only into a sanitary sewer main.

2.3.4. Sanitary manholes shall include frames and covers as shown in Figure II-05 or an approved equivalent. Both the frame and riser shall be machined to assure a proper fit.

2.3.5. Manhole covers shall be marked "SEWER".

2.3.6. Manhole frames shall be raised to grade using only brick and mortar as shown in Figure II-02 or approved equal.

2.3.7. Riser Rings without tabs as shown in Figure II-06 may be used to adjust manholes to grade with approval of the Department of Public Works.

2.3.8. All new sanitary manholes shall be vacuum tested before backfilling. Refer to TR-16 for testing standards.

2.3.9. Steps are not required in sewer manholes. Any structures delivered to the site with step "holes" shall be filled with mortar.

2.4. SANITARY GRAVITY PIPES

2.4.1. The types of allowable pipe used for purposes of sanitary sewers shall be:

- PVC Ring Type Sewer Pipe (SDR 35 or equivalent, minimum PS-46 rating)
- PVC Ring Type Sewer Pipe meeting ASTM F 789 or equal to SDR
- Ductile iron Pipe (DIP)
- High Performance Polypropylene Dual Wall Sewer Pipe (ADS SaniTite HP or equal) meeting ASTM F2736 and have a minimum pipe stiffness of 46 psi with pipes sizes twelve inch (12") through thirty inch (30").

- High Performance Polypropylene Triple Wall Sewer Pipe (ADS SaniTite HP or equal) meeting ASTM F2764 and have a minimum pipe stiffness of 46 psI with pipe sizes thirty inch (30”) through sixty inch (60”)

2.4.2. Minimum velocities for sanitary pipes shall not be less than two feet per second (2 ft/s).

2.4.3. All PVC connections shall be made with Solid PVC Couplings.

2.4.4. The classes of pipe indicated shall be minimums, however the actual class of pipe used shall be determined by soil weight and compaction loads applied to such pipe in accordance with standard engineering design criteria and subject to the approval of the Department of Public Works.

2.5. FORCE MAINS

2.5.1. Force mains four inches (4”) or greater shall terminate at a transition manhole and flow by gravity within a minimum sized eight inch (8”) pipe to a City manhole.

2.5.2. Force mains less than four inches (4”) may terminate to the nearest precast concrete manhole as directed by the City.

2.5.3. Cores into existing manholes shall be made with coring machines and have link seal or equivalent wall penetration seals.

2.5.4. Termination of force mains three inches (3”) or less may be permitted into existing City-owned manholes if reconstruction or replacement is performed, depending on the material and condition of the existing manhole as determined by the Department of Public Works.

2.5.5. All force mains shall be at a minimum HDPE SDR-21 made with fully restrained connections or equal. Piping pressure ratings shall be at least two (2) times the operating pressure of the system.

2.5.6. Force main discharge shall be directed into the channel in the direction of gravity flow.

2.6. BUILDING SEWER LATERALS

2.6.1. Construction of building sewers and drains shall conform to Chapter 24 (Sewers) of the City Code of Ordinance.

2.6.2. All building sewer laterals shall have a minimum diameter of four inch (4”) and a minimum slope of one eight inch per foot (1/8 in/ft) installed, as shown in Figure II-12.

2.6.3. Typical Pipe Installation: Where a building sewer lateral is to be installed from the sewer main in the street to a property or building to be served, the lateral shall either extend to the building or to the street line of each lot to be served

and the pipe shall be capped air-tight.

2.6.4. An accurate record of each building sewer, its location and its depth at the street line shall be kept by the developer's engineer and a copy of the same shall be provided to the Department of Public Works.

2.6.5. For new construction, the location of the building sewer at the street line shall be physically marked by the placement of a two inch by four inch (2" x 4") wooden stake placed at the end of the lateral end-cap and extending one foot above finished grade.

2.6.6. Each stake shall be painted with a fluorescent paint and marked as storm or sanitary sewer with the depth indicated from grade to end-cap. A one quarter inch (¼") thick by six inch (6") square ferrous metal plate or equivalent shall be placed horizontally one foot below grade over the end of the storm drain.

2.6.7. Building sewers and drains shall be connected to the main sanitary sewer line by the use of wyes, tee/wyes, Inserta-Tees or similar approved methods as determined by the Department of Public Works. A manhole shall be installed at the sewer main to connect building laterals when the building lateral is eight inches (8") or larger in diameter. The lateral connections shall be installed from the main toward the lot where possible. Inserta-Tees can be installed on pipes when the main receiving pipe is at least twelve inches (12") in size and the lateral is not more than half the size of the main receiving pipe in order to use a coring tee-type connection.

2.6.8. Before connecting new pipes into an existing sewer line, the contractor shall obtain a sewer connection permit from the Department of Public Works.

2.6.9. Accessory Dwelling Units (ADU) sewer laterals: Per Chapter 24 of the City Code of Ordinance "A separate and independent building sewer shall be provided for every new building, and a separate connection shall be made for each building sewer." The Department of Public Works recognizes the following scenarios for the successful connection of the proposed ADU to the public sewer system. See Figure II-21 for additional information.

- The proposed ADU is connected to the primary residence. In this scenario, the ADU may be connected to the primary residence sewer lateral internal to the primary residence.
- The proposed ADU is a separate standalone building: In this scenario, a separate and independent sewer lateral will be provided from both buildings with independent connections to the sewer.
- The proposed ADU is a separate standalone building: In this scenario, a separate and independent sewer lateral will be provided from both buildings with a connection of the two laterals into a sewer manhole at the property line. The sewer manhole will be a minimum two-foot (2') size providing access to each sewer lateral. The sewer manhole may be placed

on the existing sewer lateral from the primary residence with the ADU sewer lateral being fed into it.

2.6.10. Backflow Protection: Fixtures installed on a floor level that is lower than the next upstream manhole cover of the public, or private sewer shall be protected from backflow of sewage by installing an approved type of backwater valve. Fixtures on such floor level that are not below the next upstream manhole cover shall not be required to be protected by a backwater valve. Fixtures on floor levels above such elevation shall not discharge through the backwater valve. Cleanouts for drains that pass through a backwater valve shall be clearly identified with a permanent label stating "backwater valve downstream."

2.6.11. All building floor drains shall discharge to the sanitary sewer system.

2.6.12. Plugging of Abandoned Sewer Laterals: Prior to abandoning any storm water or sanitary sewer lateral, the applicant shall acquire a permit from the Department of Public Works. The applicant shall provide a 48 hour notice to the Public Works Dispatch stating the date and time the applicant wished to complete the work. The Water Resources Division will mobilize to the site and allow one hour to assist the applicant to plug the lateral in the following manner. The location of the lateral to be plugged shall be televised by the applicant and witnessed by Water Resources staff on site. The applicant shall excavate or other means plug the lateral at the main where the lateral connects to the street sewer, as determined by City staff. The lateral must be filled with pumped grout starting at the plug and filling out to the points of excavation.

2.7. STORM WATER MANHOLES

2.7.1. Storm water manholes shall include frames and covers as shown in Figure II-05 or an approved equivalent. Both the frame and riser shall be machined to assure a proper fit.

2.7.2. Manhole frames shall be raised to grade using only brick and mortar as shown in Figure II-02.

2.7.3. Riser Rings without tabs as shown in Figure II-06 may be used to adjust manholes to grade with approval of the Department of Public Works.

2.7.4. Manhole covers shall be marked “DRAIN”.

2.7.5. Steps are not required in storm manholes. Any structures delivered to the site with step “holes” shall be filled with mortar.

2.8. STORM DRAINS

2.8.1. The types of allowable pipe and fittings shall be used for purposes of storm drains:

- All pipes listed for sanitary sewers
- Reinforced Concrete Pipe (RCP) with a minimum strength of Class III;
- Smooth Bore High Performance Polypropylene Dual Wall Storm Drain Pipe. (ADS HP Storm or equal) meeting a minimum PS- 46.

2.8.2. Storm drain lateral may be connected into storm drain mains without the use of a manhole when the lateral is less than half the diameter of the receiving pipe.

2.8.3. Minimum velocities of surface water drains shall not be less than three feet per second (3 ft/s).

2.8.4. Ribbed corrugated polyethylene pipe material, smooth wall interior, is not permitted except for underdrain installation. Underdrain diameter shall be no larger than six inches (6”).

2.8.5. The classes of pipe indicated shall be minimums, however the actual class of pipe used shall be determined by soil weight and compaction loads applied to such pipe in accordance with standard engineering design criteria and subject to the approval of the Department of Public Works.

2.8.6. Pre-fabricated tees are allowable on storm drains. A pre-fabricated tee connection shall be used and installed in accordance with manufacturer specifications.

2.8.7. Connection of catch basin/storm drain lateral leads to storm drain larger than eighteen inch (18”) diameter may be performed with the use of a coring machine and suitable connection device. The connecting pipe shall not be more than half the size of the main receiving pipe in order to use a coring tee-type connection.

2.8.8. Underdrains shall be six inch (6”) diameter perforated pipe SDR 35 PVC or corrugated ADPE with smooth interior wall (AASHTO M252 Type S). They shall have a minimum of two rows of perforations.

2.9. CATCH BASINS

2.9.1. All catch basins and catch basin inlets shall be designed and constructed in accordance with Figures II-07 through II-11.

2.9.2. Catch basin drain pipes of less than ten inches (10”) in diameter are not permitted.

2.9.3. All catch basins shall have a four-foot (4’) granite headstone of catch basin

inlets conforming to City standards as shown in Figure II-11.

2.9.4. No radius catch basin stones shall be permitted.

2.9.5. All catch basins shall be constructed with a minimum sump of three feet (3').

2.9.6. Catch basins shall not be located in driveway openings.

2.9.7. No storm drains or storm drain laterals, with the exception of street underdrains, shall be connected into a catch basin structure.

2.9.8. Catch basin drains and catch basin inlet drain pipe slopes shall be such that minimum flow velocities shall not be less than three feet per second (3 ft/s).

2.9.9. Bee hive casting shall be used on drainage structures located at low points in grassed off road locations.

2.9.10. Field inlets or Type-F catch basins may be used when outside of city street right of ways within lawn areas, with Department of Public Works approval. They must have a minimum of a twelve-inch (12") sump and can be plastic or concrete.

2.9.11. All catch basins are required to have a hood on the outlet pipe as shown in Figure II-09.

2.10. SUBSURFACE WASTEWATER DISPOSAL

2.10.1. To ensure that adequate provisions have been made for subsurface wastewater disposal, developers are required to locate, design, and install all septic systems in accordance with the latest version of the Maine Subsurface Wastewater Disposal Rules,144 CMR minimum 241, as described in Chapter 6, Section 6-18(A) of the City Code.

2.10.2. Developers are required to obtain a permit through the City of Portland Inspections Division prior to the installation of any subsurface wastewater disposal system identified on an approved site plan.

2.11. GREASE INTERCEPTORS

2.11.1. Grease control equipment is required for all food establishments based on the City of Portland's Fats, Oils, and Grease Program found in the Rules and Regulations for Use of the Sewer System.

2.11.2. Concrete grease interceptors must have two chambers. Chamber A, where influent enters, must be two thirds (2/3) of the tank volume.

2.11.3. Concrete grease interceptors must have three twenty-four-inch (24") access points.

2.11.4. Tank must be designed for H-20 traffic wheel load and a concrete strength of 5000 PSI at 28 days.

2.11.5. Joints must be sealed with butyl rubber joint sealant such as CS-102 Butyl Rubber Sealant.

2.11.6. Tees inside grease interceptors must be supported. Galvanized riser clamps on drops must be rodded to tank wall with galvanized fasteners six inch (6") below service weight tee. Tees must be accessible via an unobstructed view for cleaning through top of grease interceptor.

2.11.7. High density polyethylene grease interceptors are accepted as an equivalent to concrete grease interceptors. Polyethylene units shall be properly anchored to prevent floatation.

2.11.8. A control manhole must be installed downstream of the interceptor before it enters the city sewer system.

2.12. AGGREGATE SPECIFICATIONS

2.12.1. The provisions of Section 703 of the State of Maine Department of Transportation (MDOT) *Standard Specifications for Highways and Bridges* shall apply with the following additions and modifications:

2.12.2. 703.18 Common Borrow: Common borrow shall not contain any particle of bituminous material.

2.12.3. 703.19 Granular Borrow: Granular borrow shall contain no particles which will not pass a three inch (3") square mesh sieve.

2.12.4. 703.20 Gravel Borrow: Gravel borrow shall not contain particles of rock which will not pass three inch ("3") square mesh sieve.

2.12.5. 703.13 Crushed Stone ¾" for Pipe Bedding and Underdrain: "Crushed Stone" shall be defined as rock of uniform quality and shall consist of clean, angular fragments of quarried rock, free from soft disintegrated pieces or other objectionable matter. Crushed stone used as a bedding material for pipe and underdrain shall be uniformly graded and shall meet the follow gradations. The stone shall be free from vegetable matter, lumps or balls of clay, and other inappropriate substances.

Sieve Designation	**City of Portland Percentage by Weight Passing Square Mesh Sieve**
1 inch	100
¾ inch	90-100
½ inch	20-55
$^{3}/_{8}$ inch	0-15
No. 4	0-5

FIGURE II–01 = LIST OF DETAILS

FIGURE II–02 = PRECAST CONCRETE MANHOLE

FIGURE II–03 = TYPICAL INSIDE DROP MANHOLE

FIGURE II–04 = GENERAL NOTES FOR MANHOLES AND CATCH BASINS

FIGURE II–05 = CAST IRON MANHOLE COVER AND FRAME

FIGURE II–06 = MANHOLE RISER RING

FIGURE II–07 = PRECAST CONCRETE CATCH BASIN

FIGURE II–08 = CATCH BASIN FRAME AND GRATE

FIGURE II–09 = CATCH BASIN HOOD

FIGURE II–10 = TYPICAL PAVEMENT GRADING FOR CATCH BASIN INLETS

FIGURE II–11 = 4' GRANITE HEADSTONE FOR CATCH BASIN INLET

FIGURE II–12 = TYPICAL PIPE TRENCH INSTALLATION AND NOTES

FIGURE II–13 = PLASTIC PIPE CONNECTION METHODS 1 & 2

FIGURE II–14 = PLASTIC PIPE CONNECTION METHODS 3 & 4

FIGURE II–15 = MASONRY PLUG

FIGURE II–16 = TYPICAL EXISTING LATERAL CONNECTION

FIGURE II–17 = TYPICAL HOUSE LATERAL TEE/WYE CONNECTION

FIGURE II–18 = FORCE MAIN CONCRETE THRUST BLOCK PLACEMENT

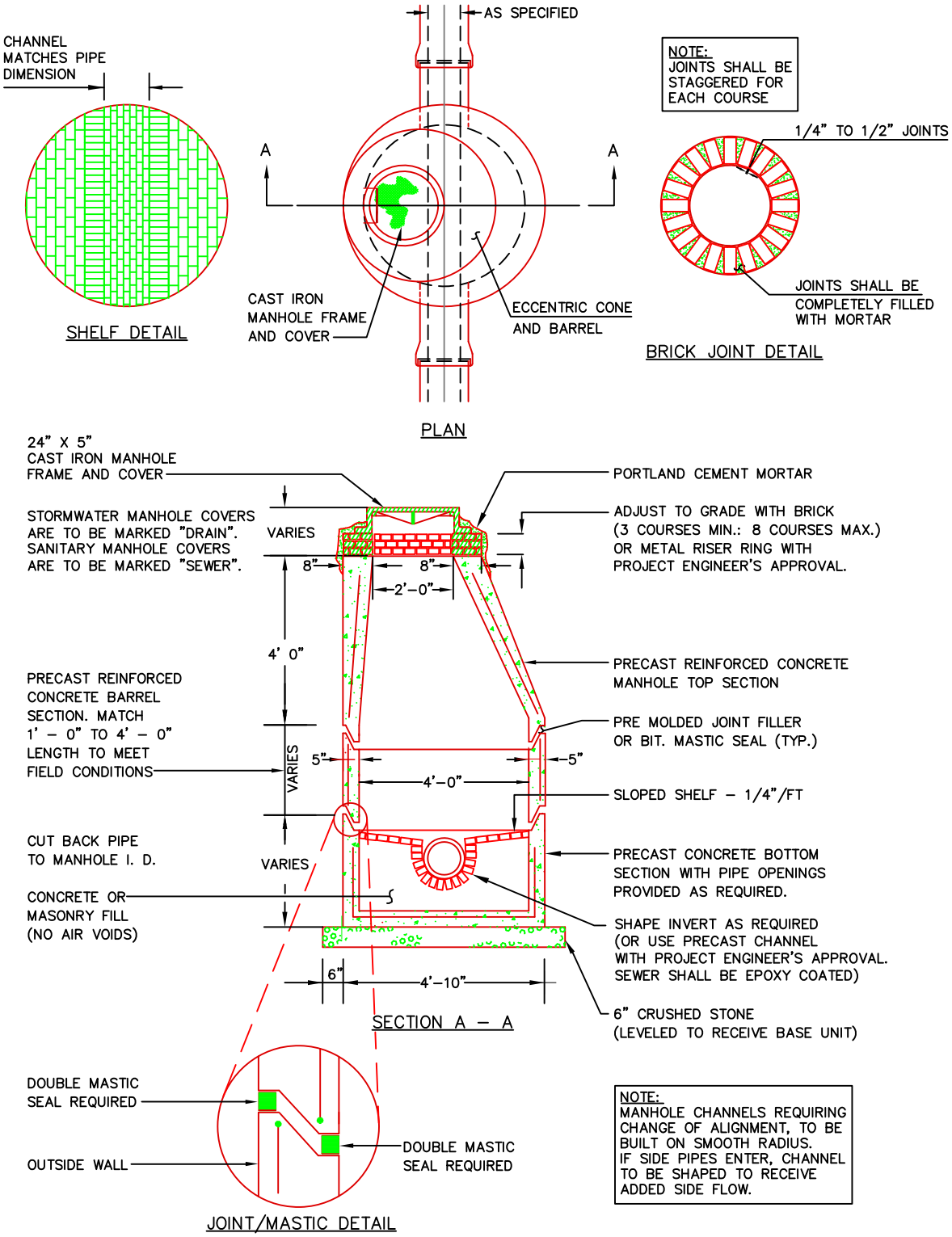
FIGURE II–19 = EXTERNAL GREASE TRAP DESIGN

FIGURE II–20 = OIL / GRIT SEPARATOR

FIGURE II–21 = SEWER LINE CONFIGURATIONS FOR PRIMARY RESIDENCES WITH AN ACCESSORY DWELLING UNIT

FIGURE II–22 = TYPE "B" UNDERDRAIN INSTALLATION ALTERNATIVE A

FIGURE II–23 = TYPE "B" UNDERDRAIN INSTALLATION ALTERNATIVE B



PRECAST CONCRETE MANHOLE

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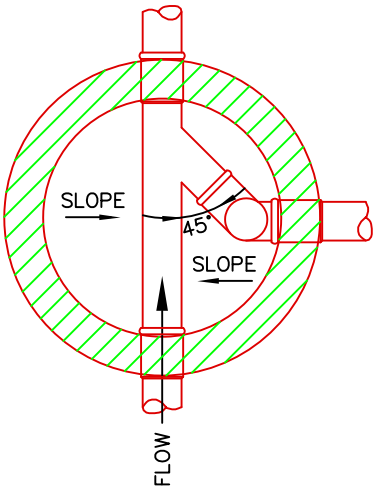
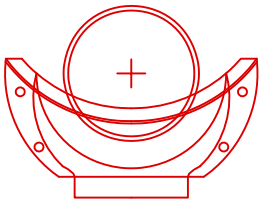
REVISED: DEC. 2021	**PRECAST CONCRETE MANHOLE**		



PLAN VIEW

NOT TO SCALE



DROP BOWL MOUNTING POSITION

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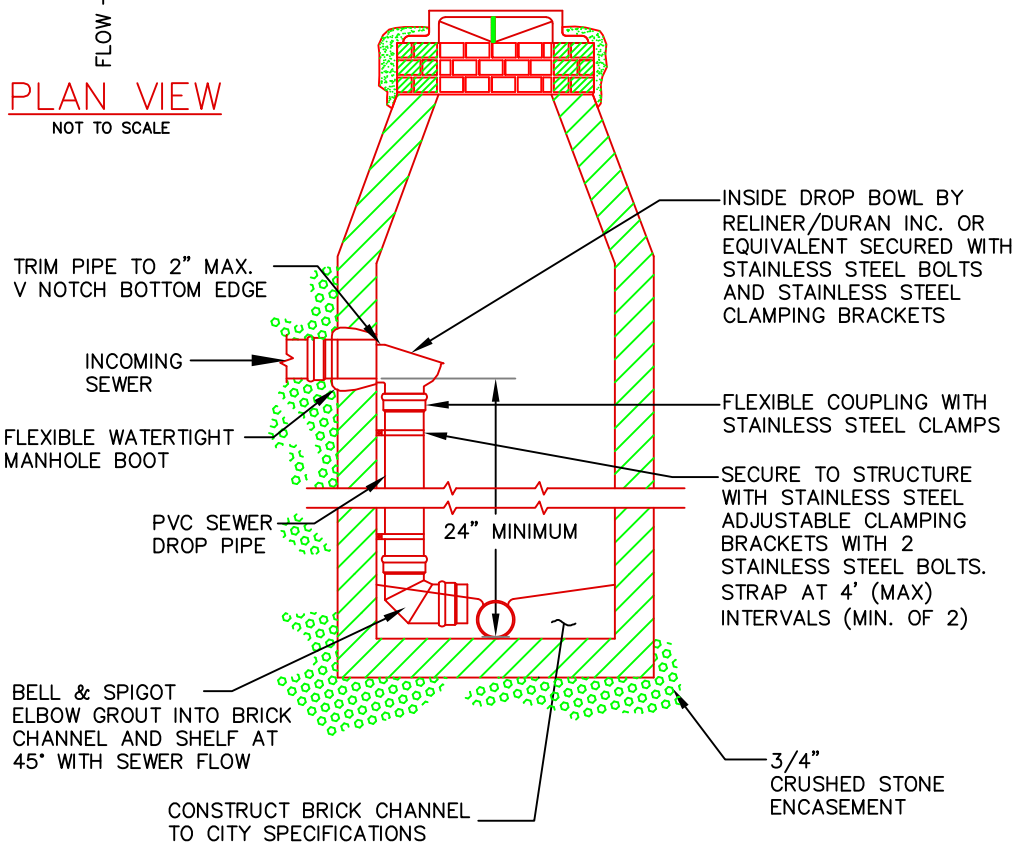


NOTES:

1) DROP MANHOLES ARE NOT REQUIRED FOR STORMWATER SYSTEMS.
2) MANHOLE MUST HAVE A MINIMUM DIAMETER OF 5' TO USE AN INSIDE DROP
3) ALL INSIDE DROP CONNECTIONS FOR SERVICES AND COLLECTOR SEWERS SHALL USE THE DROP BOWL AS SHOWN.

NOT TO SCALE

DATE: APRIL 2022 REVISED:	CITY OF PORTLAND, MAINE TECHNICAL STANDARDS MANUAL	**SANITARY SEWER AND STORM DRAIN DESIGN STANDARDS** SECTION II	FIGURE: II-3
	TYPICAL INSIDE DROP MANHOLE		

1. ALL CONCRETE SHALL HAVE A MINIMUM ULTIMATE COMPRESSIVE STRENGTH OF 4000 lbs. PER SQ. INCH AT THE END OF 28 DAYS, UNLESS OTHERWISE NOTED.

2. MANHOLES MAY BE CONSTRUCTED OF PRECAST REINFORCED CONCRETE, OR CAST IN PLACE.

3. PRECAST REINFORCED CONE BARREL MANUFACTURED PER ASTM SPEC. C–478.

4. ALL PIPES ENTERING MANHOLES AND CATCH BASINS SHALL HAVE FLEXIBLE PIPE CONNECTIONS WITH STAINLESS STEEL BANDS. FILL ANY ANNUAL SPACE WITH NON SHRINK GROUT.

5. ALL STORM AND SEWER MANHOLE COVERS SHALL BE SOLID

6. ALL SANITARY MANHOLE COVERS SHALL HAVE "SEWER" CAST INTO THE COVER. ALL STORMWATER/DRAIN MANHOLE COVERS SHALL HAVE "DRAIN" CAST INTO THE COVER.

7. SEWER BRICK SHALL CONFORM TO ASTM SPEC. DESIGNATE ON C–32–63, GRADE MA AND SA.

8. INVERTS SHALL BE BUILT TO THE HEIGHT OF THE FOLLOWING AS DETERMINED BY THE LARGEST PIPE SIZE.

   8.1. FOR PIPE SIZES 4"–12" INVERTS SHALL GO TO THE TOP OF THE PIPE.
   8.2. FOR PIPE SIZES 15"–36" INVERTS SHALL GO TO THE SPRING LINE.
   8.3. FOR PIPE SIZES 42"–60" INVERTS SHALL GO TO THE 1/3 OF PIPE SIZE

9. ALL SANITARY MANHOLES SHALL HAVE A WATERPROOFING COATING APPLIED TO THE EXTERIOR SURFACE.

10. CASTINGS SHALL CONFORM TO ASTM DESIGNATION A48–CLASS 35.

11. EXISTING MANHOLES, CATCH BASINS, FRAMES, AND COVERS SHALL BE SALVAGED BY THE CONTRACTOR, AND SHALL REMAIN THE PROPERTY OF THE CITY OF PORTLAND.

12. ALL CATCH BASIN OUTLETS SHALL BE INSTALLED WITH A HOOD / CASCO TRAP. SEE FIGURE II–09.

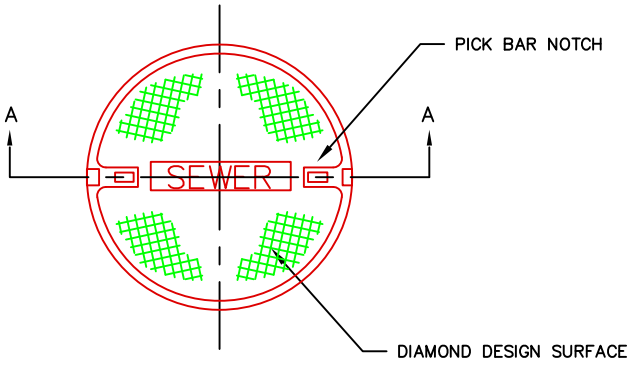
13. ALL MANHOLES AND CATCH BASINS REQUIRE BUOYANCY CALCULATIONS AND THE STRUCTURES SHALL BE MODIFIED AS NECESSARY BASED ON THOSE CALCULATIONS.

GENERAL NOTES FOR MANHOLES AND CATCH BASINS

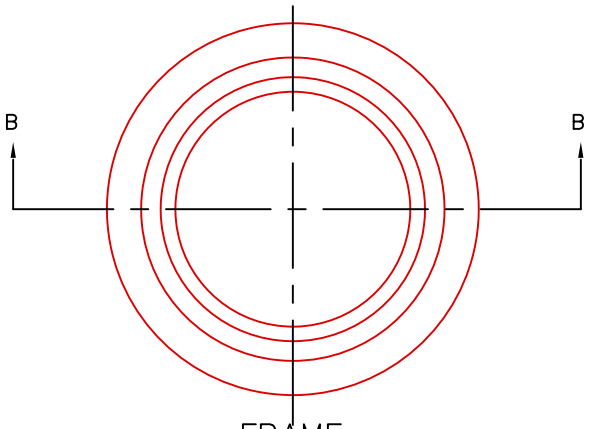
NOTES:
1. ALL SANITARY MANHOLE COVERS SHALL HAVE "SEWER" CAST INTO THE COVER. ALL STORMWATER/DRAIN MANHOLE COVERS SHALL HAVE "DRAIN" CAST INTO THE COVER.

2. APPROVED MANHOLE FRAMES:
   2.1. EAST JORDAN = 1690Z
   2.2. NEENAH = R-1496
   2.3. OR APPROVED EQUAL

3. APPROVED MANHOLE COVERS
   3.1. EAST JORDAN = 2160A
   3.2. NEENAH = R-1496
   3.3. OR APPROVED EQUAL



COVER
PLAN VIEW

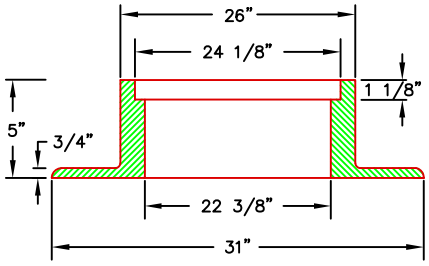


FRAME
PLAN VIEW

NOTE:
ALL SANITARY AND STORMWATER/DRAIN MANHOLE COVERS SHALL BE 24" x 5".



SECTION A – A
COVER



MIN. WGT. 320 LBS.
SECTION B – B
FRAME

CAST IRON MANHOLE COVER AND FRAME

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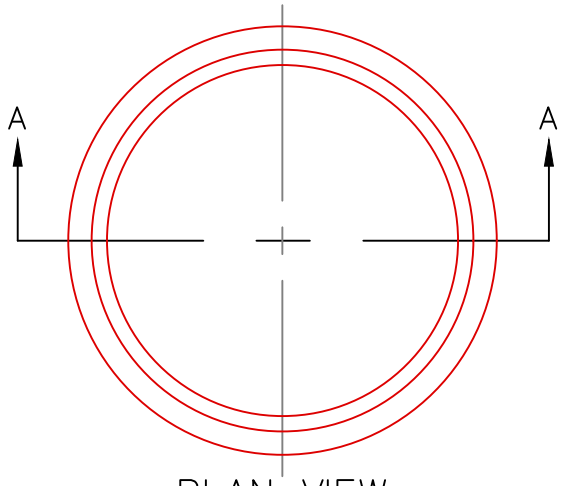
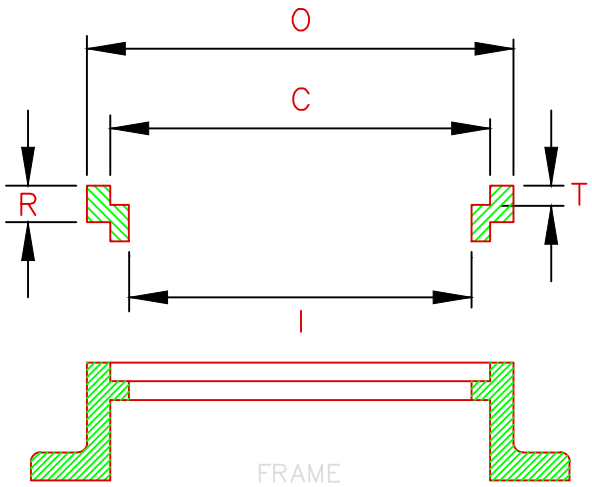
DATE: AUG 2009 REVISED: DEC 2021	CITY OF PORTLAND, MAINE TECHNICAL STANDARDS MANUAL	**SANITARY SEWER AND STORM DRAIN DESIGN STANDARDS** SECTION II	FIGURE: II-5
	CAST IRON MANHOLE COVER AND FRAME		



PLAN VIEW



SECTION A–A

SIZE	C	R	T	O	I	Wt.
R241 1/2	24	1 1/2	1 1/8	26 1/4	22 1/2	60
R242	24	2	1 1/8	26 1/4	22 1/2	80
R242 1/2	24	2 1/2	1 1/8	26 1/4	22	100
R243	24	3	1 1/8	26 1/4	22	120

MANHOLE RISER RING

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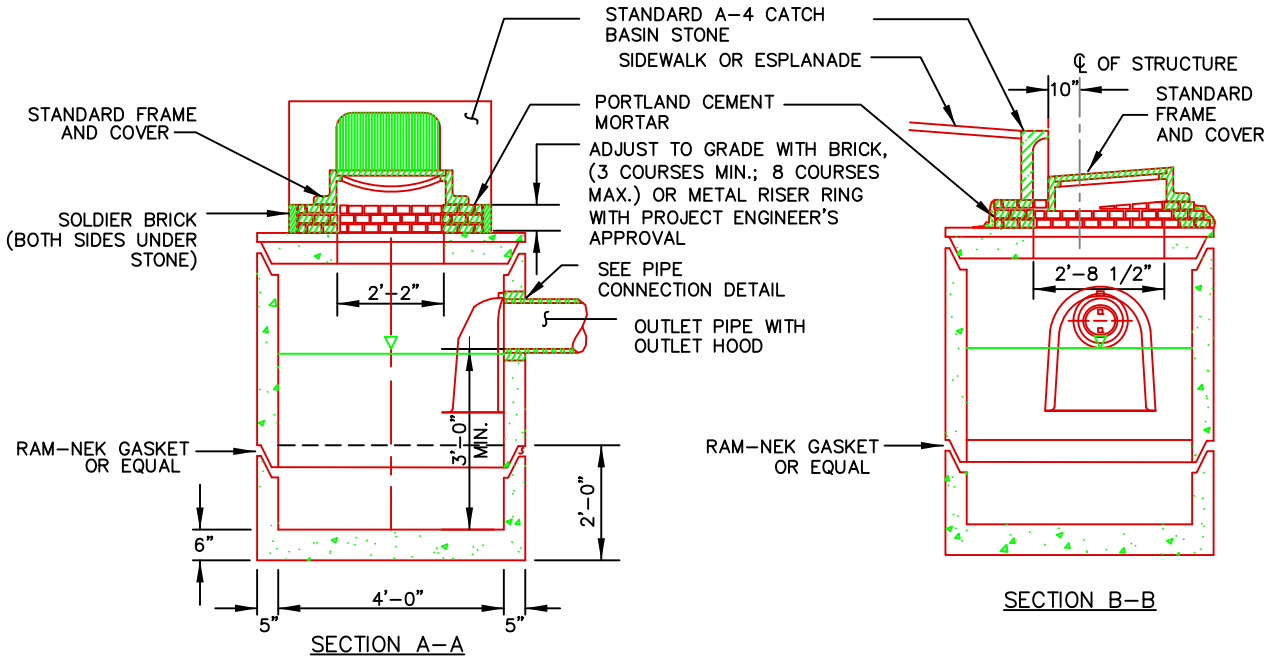
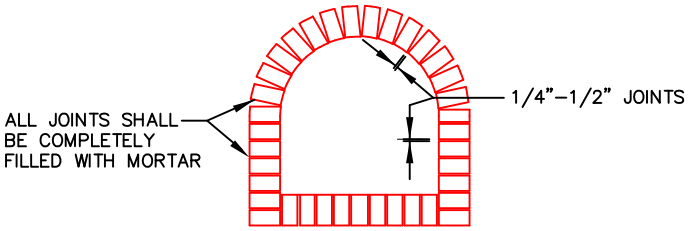
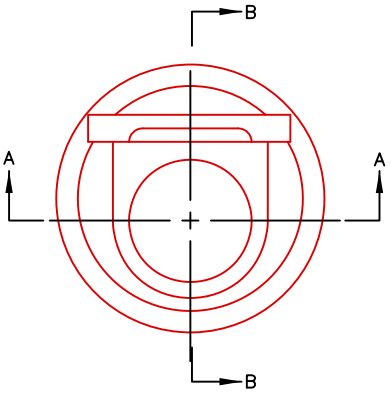
DATE: DEC 2009 REVISED:	CITY OF PORTLAND, MAINE TECHNICAL STANDARDS MANUAL	**SANITARY SEWER AND STORM DRAIN DESIGN STANDARDS** SECTION II	FIGURE: II-6
	MANHOLE RISER RING		

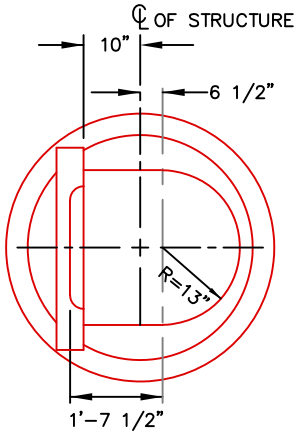




BRICK/JOINT DETAIL



PLAN VIEW
COVER, FRAME AND STONE



PLAN VIEW
TOP SLAB

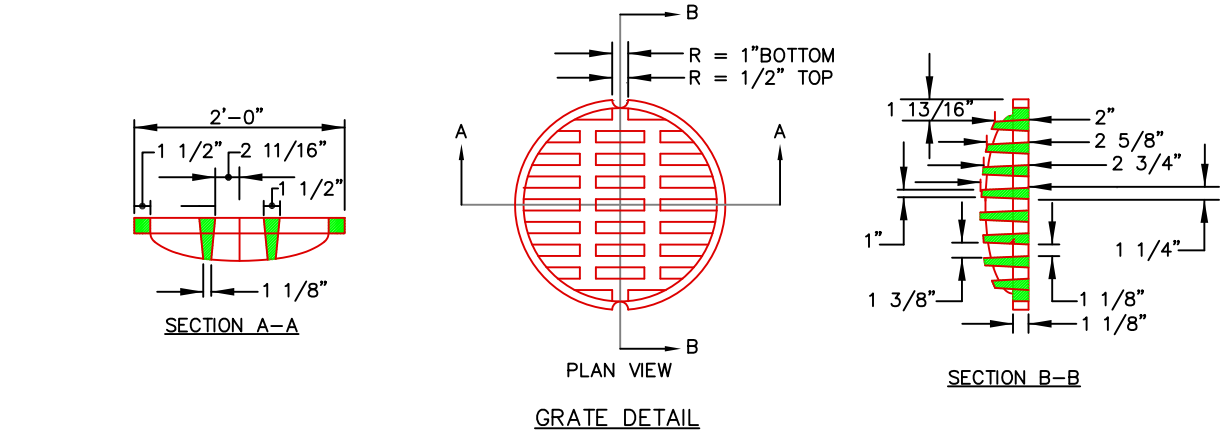
PRECAST CONCRETE CATCH BASIN – TYPE "E"

NOT TO SCALE

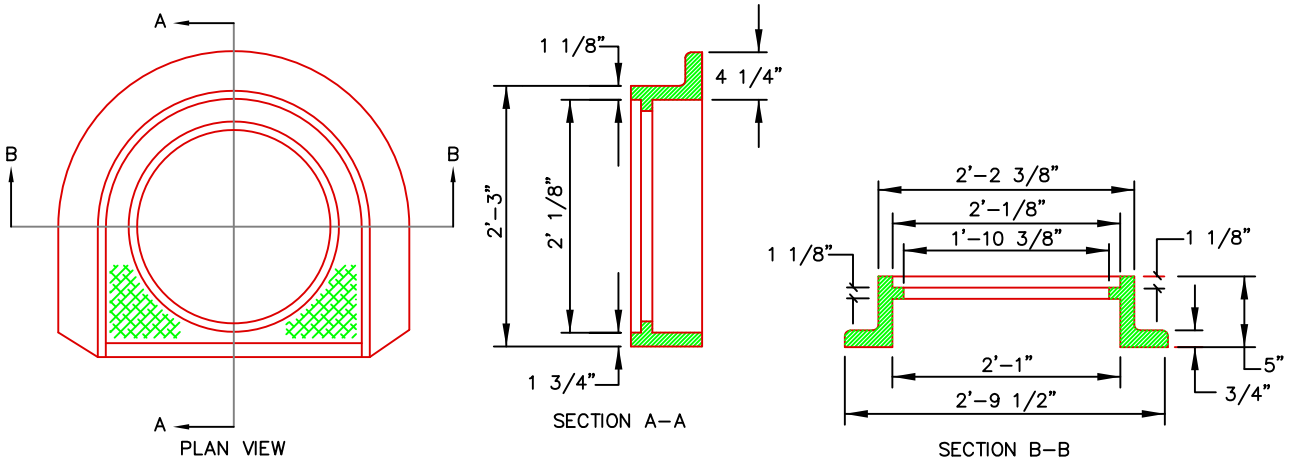
DATE: MARCH 2009 REVISED: AUG 2022	CITY OF PORTLAND, MAINE TECHNICAL STANDARDS MANUAL	**SANITARY SEWER AND STORM DRAIN DESIGN STANDARDS** SECTION II	FIGURE: II-7
	PRECAST CONCRETE CATCH BASIN		

1. APPROVED CATCH BASIN FRAMES:
   1.1. EAST JORDAN = 7375Z
   1.2. NEENAH = R-3248
   1.3. OR APPROVED EQUAL

2. APPROVED CATCH BASIN GRATES
   2.1. EAST JORDAN = 2440M
   2.2. NEENAH = R-3248
   2.3. OR APPROVED EQUAL



GRATE DETAIL

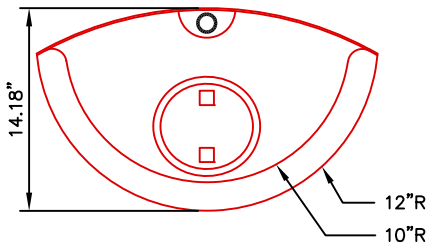


FRAME DETAIL

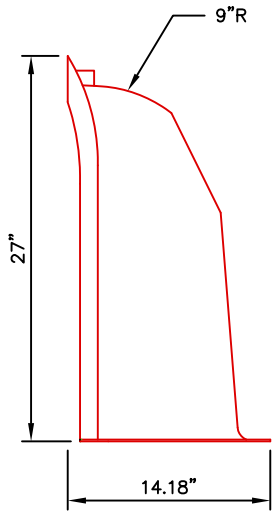
CATCH BASIN FRAME & GRATE

DATE: AUGUST 2009 REVISED: DEC. 2021	CITY OF PORTLAND, MAINE TECHNICAL STANDARDS MANUAL	**SANITARY SEWER AND STORM DRAIN DESIGN STANDARDS** SECTION II	FIGURE: II-8
	CATCH BASIN FRAME AND GRATE		

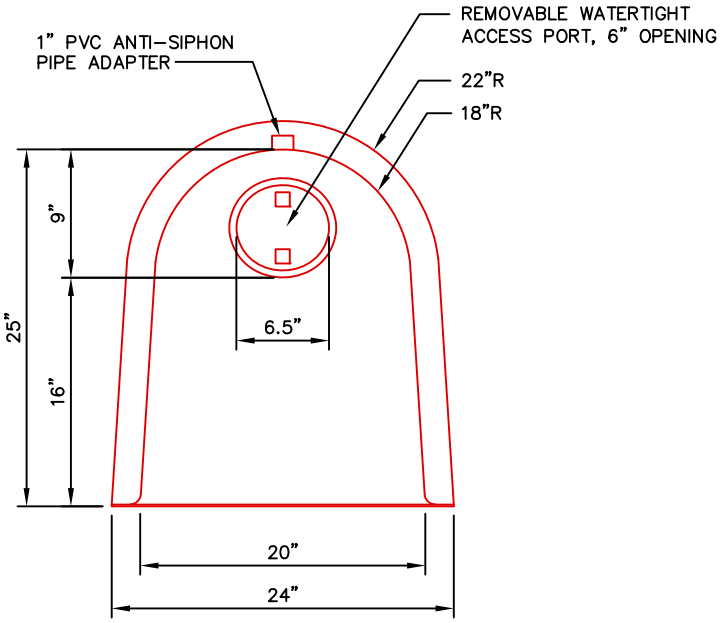
NOTE:
FOR USE ON CATCH BASIN OUTLET
18" IN DIAMETER AND LESS



PLAN



SIDE



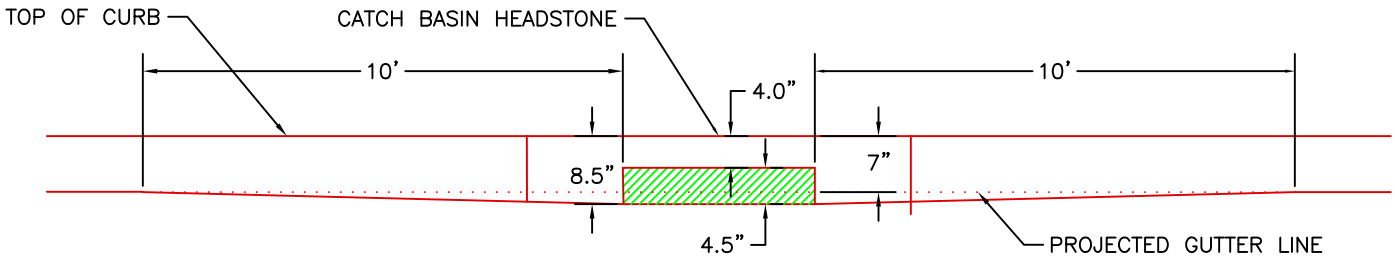
FRONT

CATCH BASIN HOOD

NOT TO SCALE

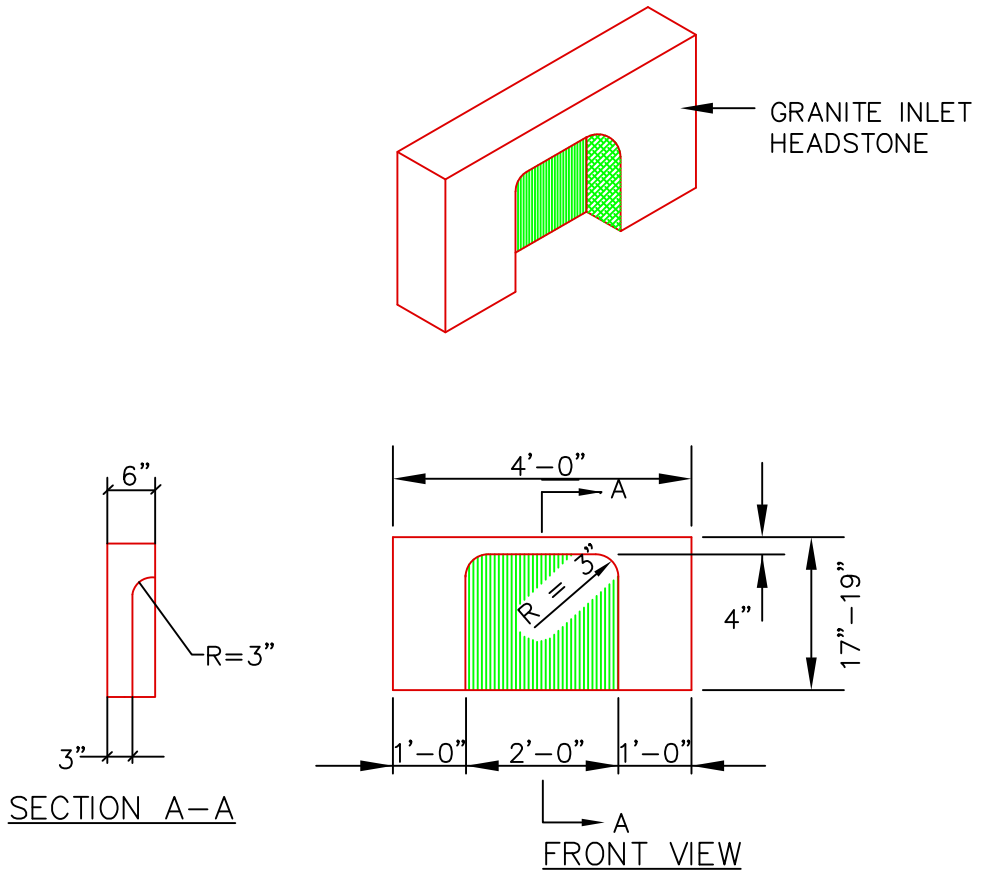
DATE: MARCH 2019 REVISED:	CITY OF PORTLAND, MAINE TECHNICAL STANDARDS MANUAL	**SANITARY SEWER AND STORM DRAIN DESIGN STANDARDS** SECTION II	FIGURE: II-9
	CATCH BASIN HOOD		

NOTE:
DISH 10' EITHER SIDE OF HEADSTONE FOR CATCH BASIN AT LOW POINT



NOT TO SCALE

DATE: AUG 2009 REVISED: DEC. 2021	CITY OF PORTLAND, MAINE TECHNICAL STANDARDS MANUAL	**SANITARY SEWER AND STORM DRAIN DESIGN STANDARDS** SECTION II	FIGURE: II-10
	TYPICAL PAVEMENT GRADING FOR CATCH BASIN INLETS		



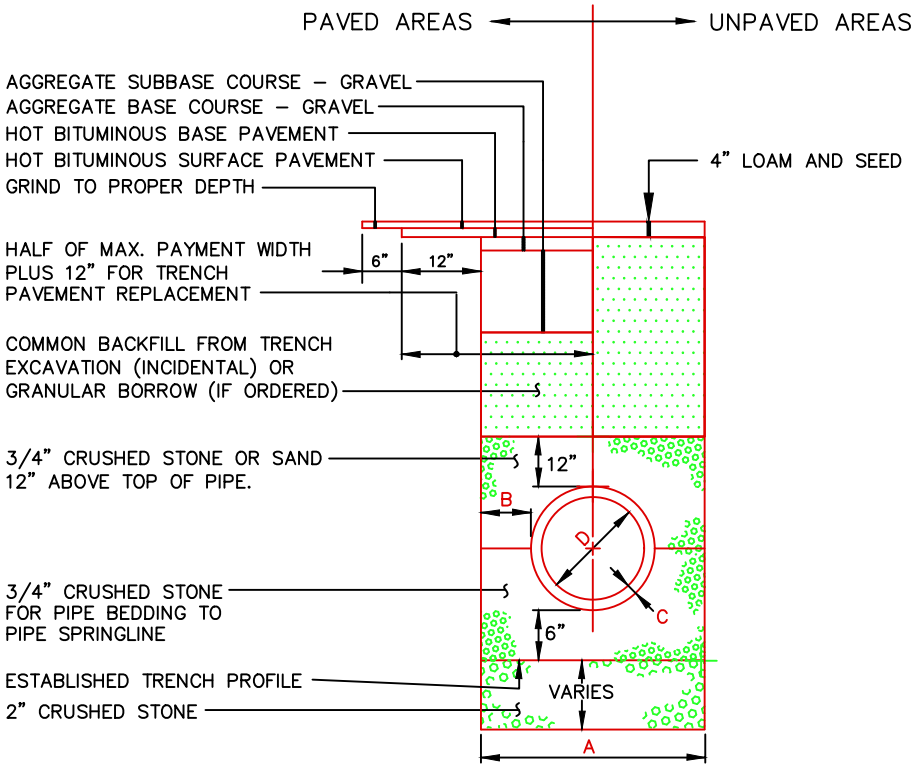
4' GRANITE HEADSTONE FOR CATCH BASIN INLET

NOT TO SCALE

DATE: AUG 2009 REVISED: AUG 2021	CITY OF PORTLAND, MAINE TECHNICAL STANDARDS MANUAL	**SANITARY SEWER AND STORM DRAIN DESIGN STANDARDS** SECTION II	FIGURE: II-11
	4' GRANITE HEADSTONE FOR CATCH BASIN INLET		

NOTES:
DEPTH OF BITUMINOUS PAVEMENT AND AGGREGATE COURSES SHALL BE DETERMINED BY STREET CLASSIFICATION.

ANY ALTERNATE TRENCHING OR PAYMENT METHODS SHALL BE APPROVED IN ADVANCE BY THE CITY OF PORTLAND, DEPARTMENT OF PUBLIC SERVICES..



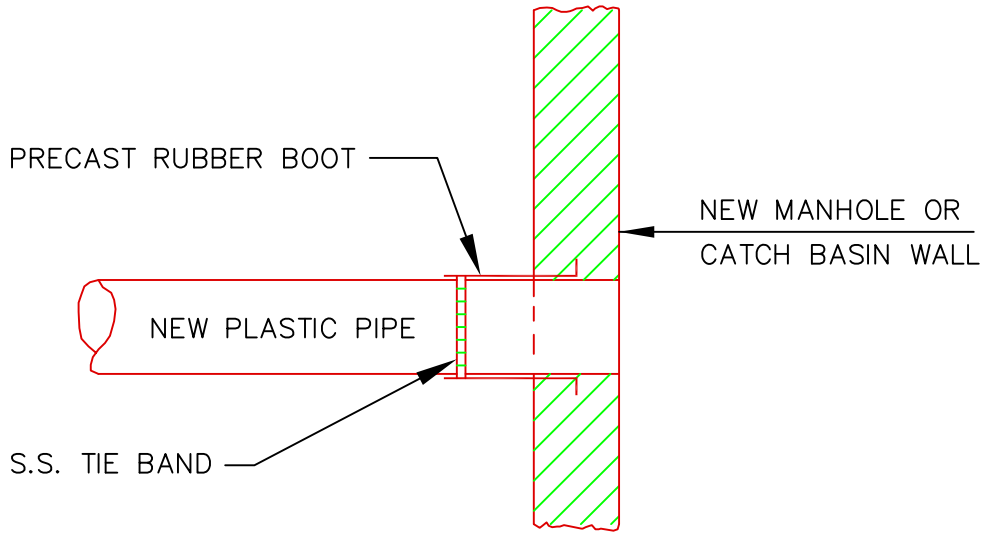
NOTES

1. ALTERNATIVE CONSTRUCTION METHODS OR PAYMENT METHODS SHALL BE APPROVED IN ADVANCE BY THE CITY.
2. IN PAVED AREAS, DEPTHS OF GRAVEL AND HOT MIX ASPHALT PAVEMENT SHALL MATCH THE GREATER OF EXISTING CONDITIONS OR THE REQUIREMENTS FOR THE CORRESPONDING STREET CLASSIFICATION.
3. DIMENSION B SHALL BE SUFFICIENT TO ALLOW CRUSHED STONE BEDDING TO BE PLACED AND COMPACTED UNDER THE HAUNCHES OF THE PIPE; BUT IN ALL CASES DIMENSION B SHALL BE AT LEAST 9".
4. DIMENSION A IS THE MAXIMUM WIDTH ALLOWED FOR CALCULATING PAY QUANTITIES UNDER GRANULAR BORROW, CRUSHED STONE, STRUCTURAL EARTH EXCAVATION, AND STRUCTURAL ROCK EXCAVATION. DIMENSION A SHALL BE BASED ON PIPE DIAMETER D, AS SET FORTH IN THE FOLLOWING TABLE.

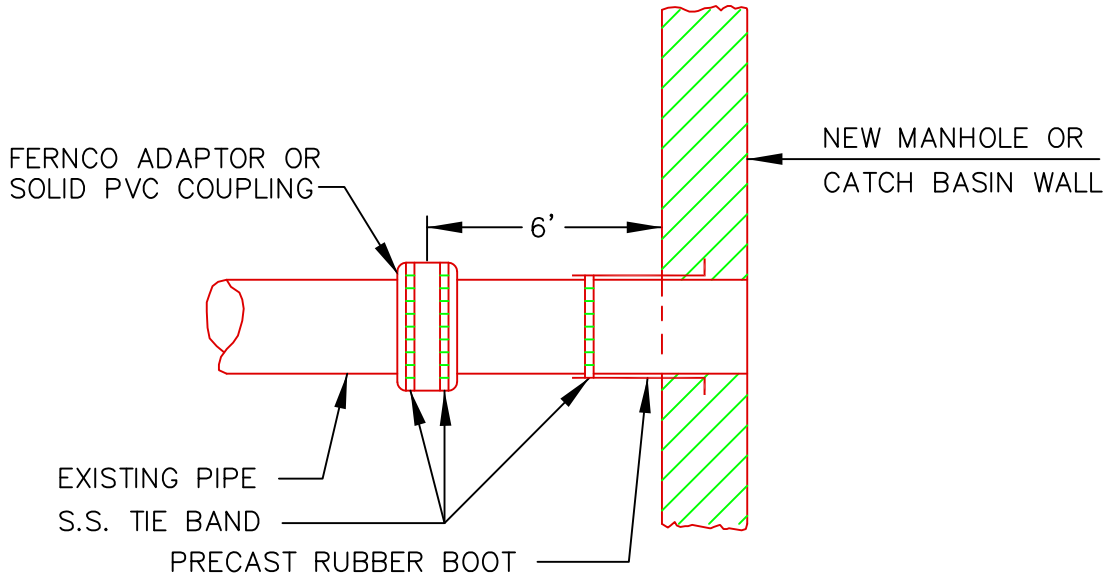
PIPE DIAMETER, D (INCHES)	MAX. TRENCH WIDTH, A (FEET)
4	4.0
6	4.0
8	4.0
10	4.0
12	5.0
15	5.0
18	5.0
21	5.0
24	6.0
27	6.0
30	6.0
36	6.0
42	7.0
48	7.0

TYPICAL PIPE TRENCH INSTALLATION

NOT TO SCALE



METHOD 2 – NEW CONSTRUCTION



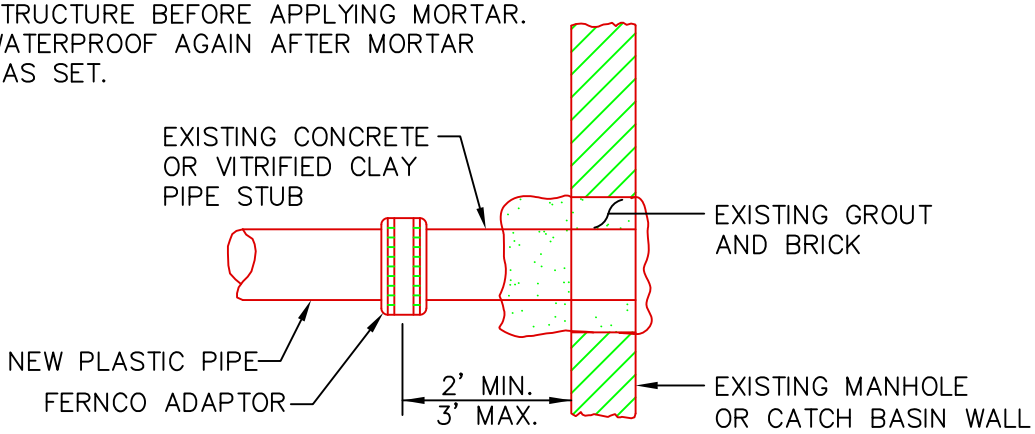
METHOD 1 – EXISTING PIPE INTO NEW STRUCTURE

PLASTIC PIPE CONNECTIONS

NOT TO SCALE

DATE: AUGUST 2009 REVISED:	CITY OF PORTLAND, MAINE TECHNICAL STANDARDS MANUAL	**SANITARY SEWER AND STORM DRAIN DESIGN STANDARDS** SECTION II	FIGURE: II-13
	PLASTIC PIPE CONNECTION METHODS 1 & 2		

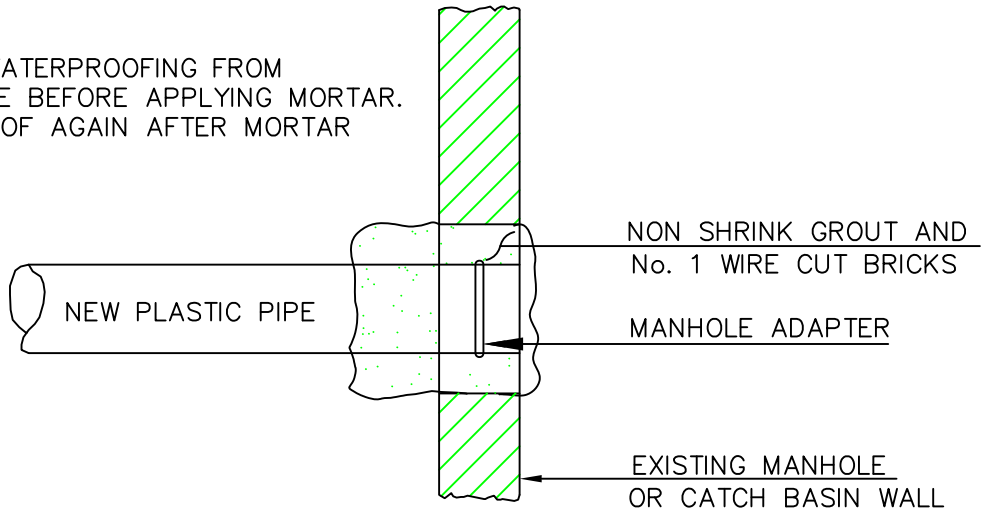
NOTE:
REMOVE WATERPROOFING FROM STRUCTURE BEFORE APPLYING MORTAR. WATERPROOF AGAIN AFTER MORTAR HAS SET.



METHOD 4 – NEW PIPE TO EXISTING STRUCTURE STUB

NOTE: EXISTING MANHOLE OR CATCH BASIN SHALL BE CORE DRILLED FOR PIPE INSTALLATION. IF PIPE DIAMETER IS SO LARGE THAT CORE DRILLING IS PROHIBITED, THE CONTRACTOR MAY SAW CUT THE STRUCTURE TO CREATE PIPE OPENING. THE NEW OPENING MUST THEN BE SEALED AND WATERTIGHT BOTH INSIDE AND OUTSIDE THE STRUCTURE.

NOTE:
REMOVE WATERPROOFING FROM STRUCTURE BEFORE APPLYING MORTAR. WATERPROOF AGAIN AFTER MORTAR HAS SET.

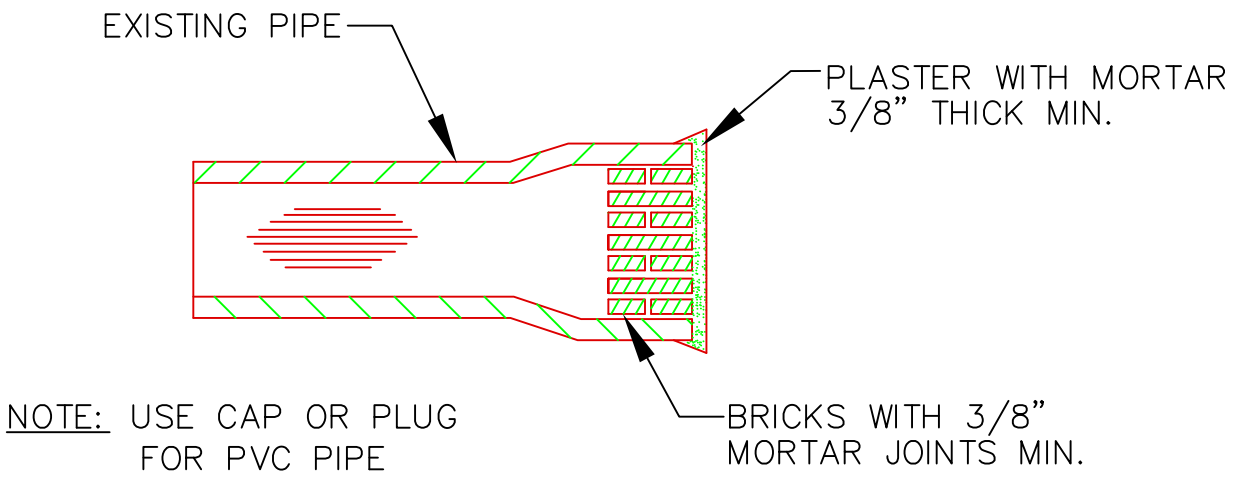


METHOD 3 – NEW PIPE INTO EXISTING STRUCTURE

PLASTIC PIPE CONNECTIONS

NOT TO SCALE

DATE: AUGUST 2009 REVISED:	CITY OF PORTLAND, MAINE TECHNICAL STANDARDS MANUAL	**SANITARY SEWER AND STORM DRAIN DESIGN STANDARDS** SECTION II	FIGURE: II-14
	PLASTIC PIPE CONNECTION METHODS 3 & 4		



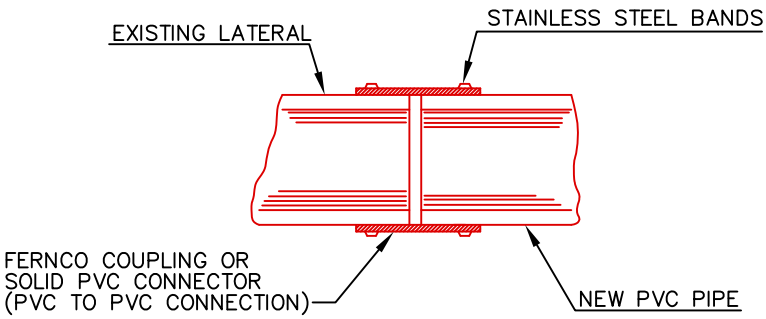
MASONRY PLUG

NOT TO SCALE

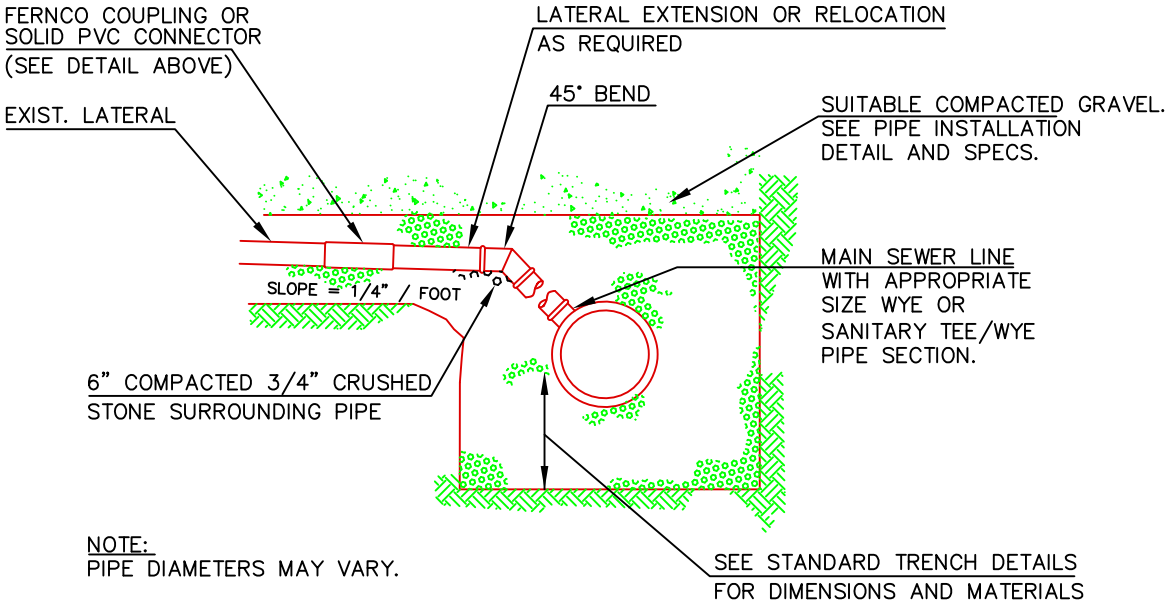
DATE: AUGUST 2009 REVISED:	CITY OF PORTLAND, MAINE TECHNICAL STANDARDS MANUAL	**SANITARY SEWER AND STORM DRAIN DESIGN STANDARDS** SECTION II	FIGURE: II-15
	MASONRY PLUG		

NOTE:
LOCATIONS AND ELEVATIONS OF STUBS SHOWN ON THE PLANS ARE TO BE CONSIDERED AS APPROXIMATE AND MAY BE ADJUSTED AS DIRECTED TO SUIT FIELD CONDITIONS.

HOUSE CONNECTIONS AND CATCH BASINS CONNECTIONS TO THE MAIN LINE OF THE SEWER, SHALL CONSIST OF AN APPROPRIATE WYE BRANCH CONNECTION AS SHOWN ON THE PLANS, OR AS DIRECTED. ACTUAL WYE LOCATIONS FOR HOUSE CONNECTIONS AND CATCH BASIN CONNECTIONS SHALL BE DETERMINED DURING CONSTRUCTION. THE CONTRACTOR SHALL KEEP A COMPLETE RECORD OF WYE LOCATIONS WHICH SHALL BE GIVEN TO THE CITY OF PORTLAND UPON COMPLETION OF THE CONTRACT.
ALL PVC TO PVC COUPLING SHALL BE "SOLID PVC COUPLINGS".



FERNCO COUPLING FOR REPAIR OR REPLACEMENT

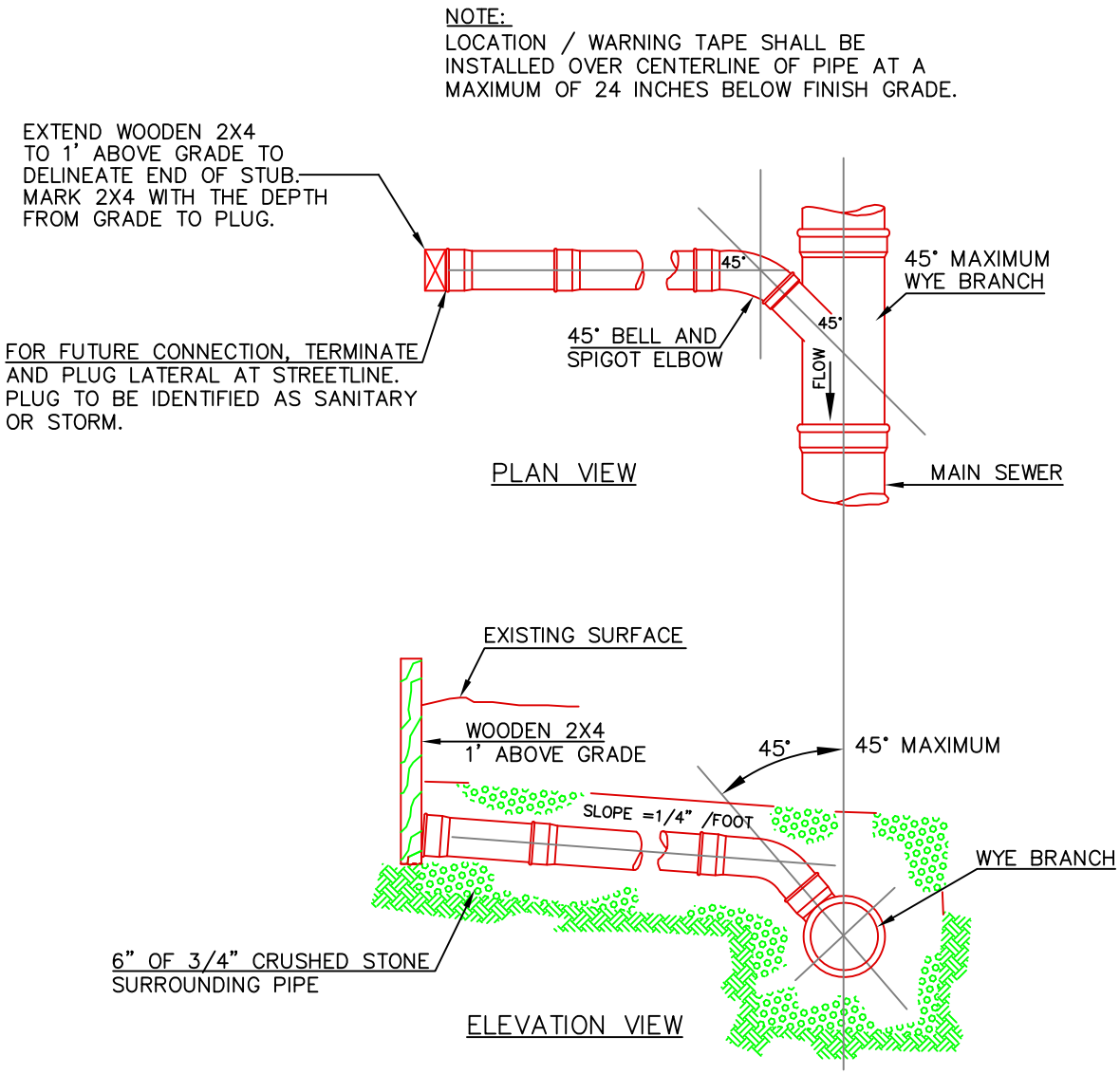


SECTION

TYPICAL EXISTING LATERAL CONNECTION

NOT TO SCALE

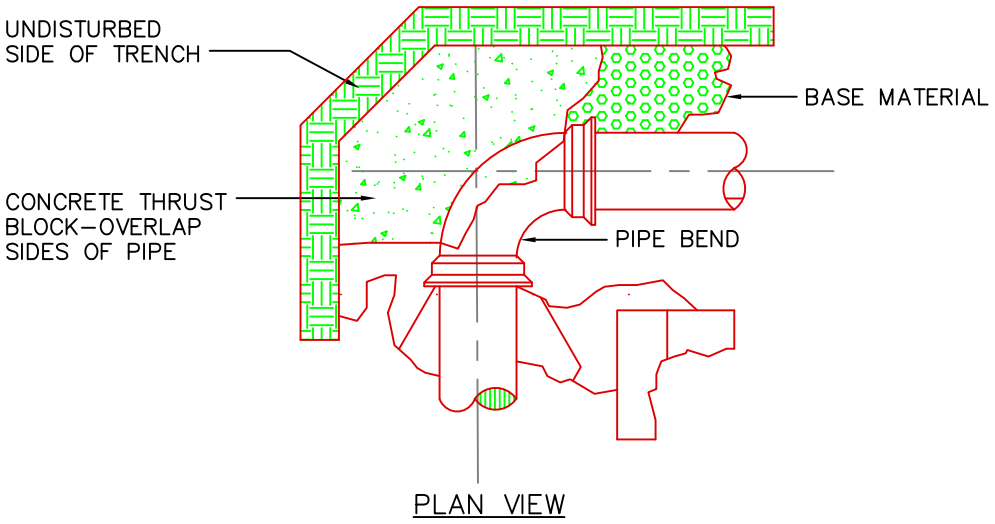
DATE: DEC. 2009 REVISED: DEC. 2021	CITY OF PORTLAND, MAINE TECHNICAL STANDARDS MANUAL	**SANITARY SEWER AND STORM DRAIN DESIGN STANDARDS** SECTION II	FIGURE: II-16
	TYPICAL EXISTING LATERAL CONNECTION		

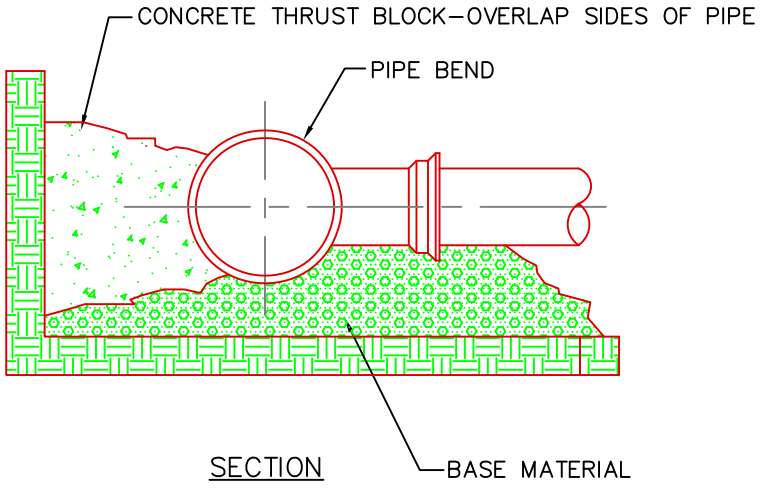


TYPICAL HOUSE LATERAL TEE/WYE CONNECTION

NOT TO SCALE

DATE: AUGUST 2009 REVISED:	CITY OF PORTLAND, MAINE TECHNICAL STANDARDS MANUAL	**SANITARY SEWER AND STORM DRAIN DESIGN STANDARDS** SECTION II	FIGURE: II-17
	TYPICAL HOUSE LATERAL TEE/WYE CONNECTION		





THRUST/RETAINER SCHEDULE		
1/4 BEND	(90°)	USE POURED–IN–PLACE THRUST BLOCK w/RETAINERS
1/8 BEND	(45°)	THRUST BLOCK w/RETAINERS
1/16 BEND	(22 1/2"°)	THRUST BLOCK
1/32 BEND	(11 1/4"°)	THRUST BLOCK

NOTE: KEEP CONCRETE LEAR OF PIPE JOINT, NUTS AND BOLTS

FORCE MAIN – CONCRETE THRUST BLOCK PLACEMENT
ON VERTICAL & HORIZONTAL BENDS

NOT TO SCALE

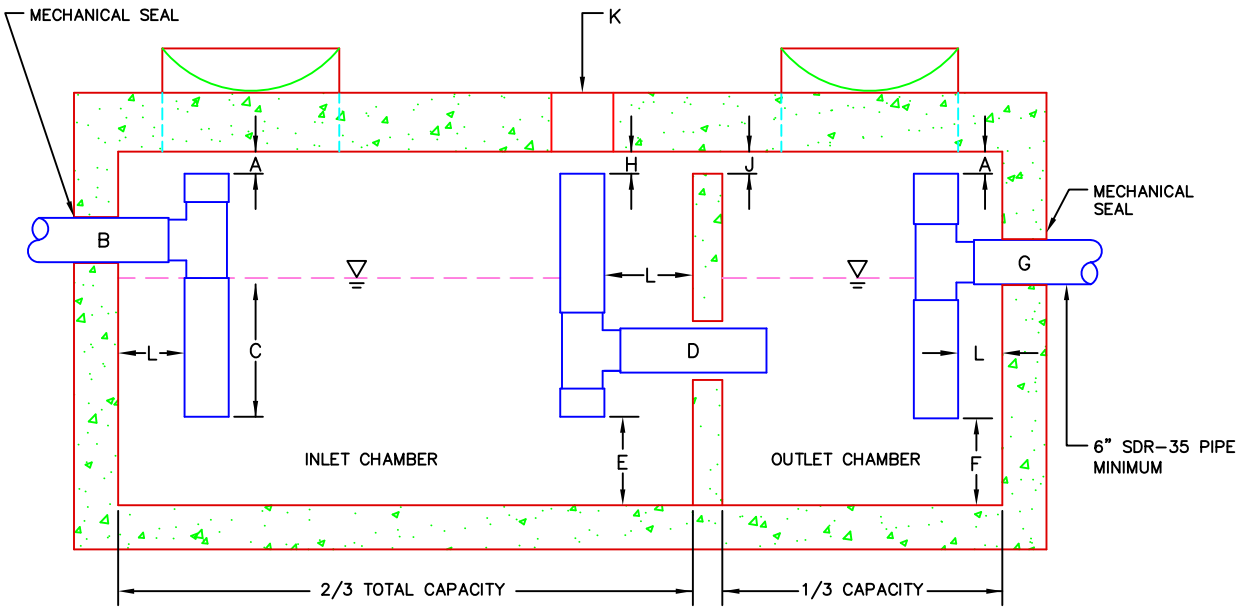
DATE: AUGUST 2009 REVISED:	CITY OF PORTLAND, MAINE TECHNICAL STANDARDS MANUAL	**SANITARY SEWER AND STORM DRAIN DESIGN STANDARDS** SECTION II	FIGURE: II-18
	FORCE MAIN CONCRETE THRUST BLOCK PLACEMENT		

1000 GALLON GREASE INTERCEPTOR:

A) MINIMUM 6", BUT NOT LESS THAN PIPE DIAMETER.
B) INLET PIPE INVERT TO BE 2 1/2" ABOVE LIQUID SURFACE.
C) INLET PIPE TO TERMINATE 2/3 DEPTH OF WATER LEVEL.
D) BAFFLE T
E) 6" FROM FLOOR TO END OF BAFFLE PIPE.
F) 6" FROM FLOOR TO END OF OUTLET PIPE.
G) OUTLET PIPE NO SMALLER THAN INLET PIPE.
H) TOP OF BAFFLE PIPE TERMINATES NO LOWER THAN BAFFLE HEIGHT.
I) INLET CHAMBER IS ⅔ TOTAL CAPACITY; OUTLET CHAMBER IS ⅓ TOTAL CAPACITY.
J) 6" MINIMUM DISTANCE FROM CEILING.
K) MINIMUM 6" CLEANOUT.
L) INLET AND OUTLET PIPES MUST BE SPACED SO THAT CLEAR ACCESS CAN BE MADE FROM MANHOLES.

THIS STRUCTURE MUST DISCHARGE TO A CITY OF PORTLAND STANDARD MANHOLE WITH CHANNEL AND MUST BE RATED.

DAILY PROCESS FLOW FROM THE FACILITY WITH NO SANITARY OR OTHER EXTRANEOUS WASTES FLOWING THROUGH IT.

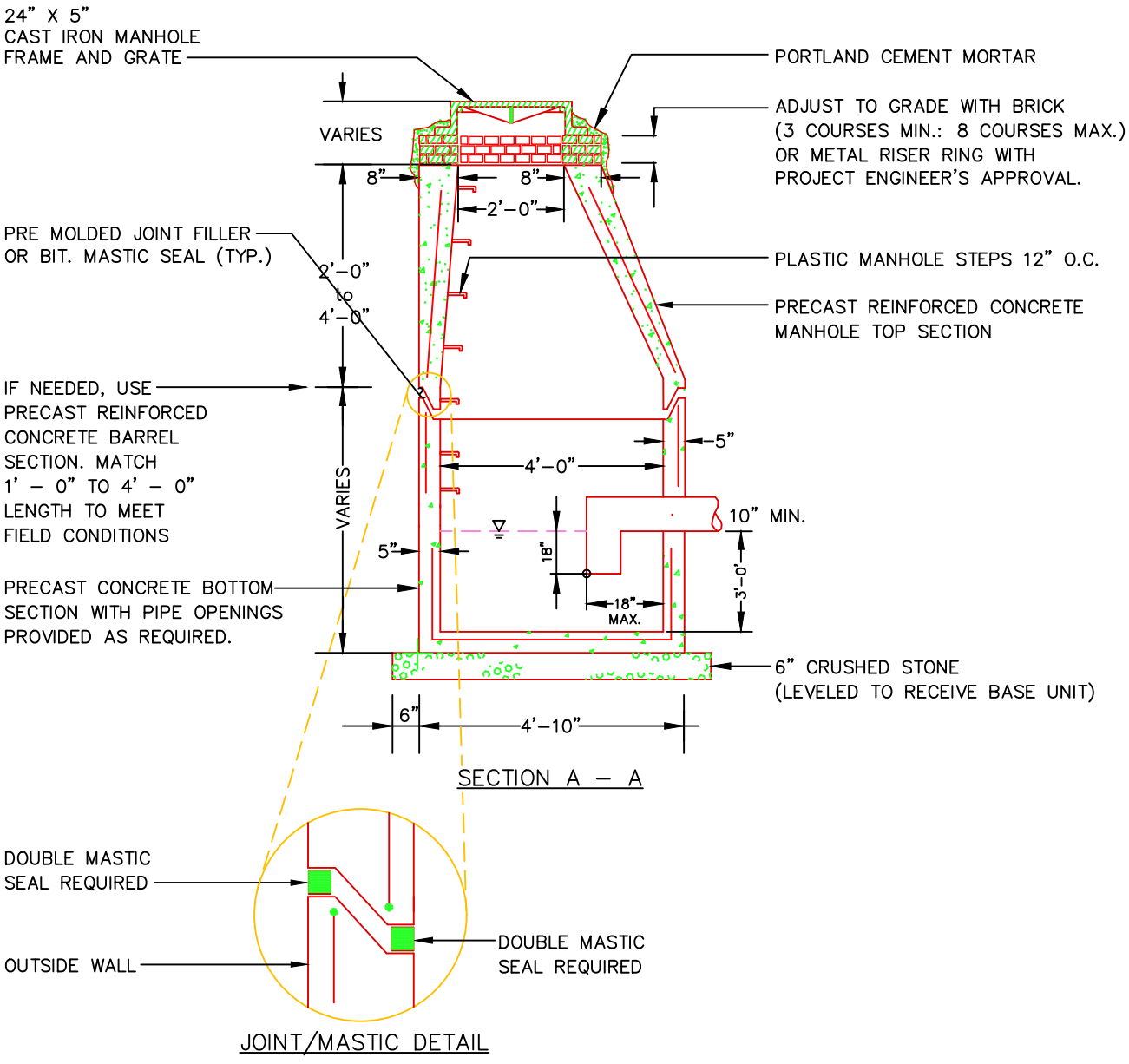


1000 GALLON GREASE INTERCEPTOR

DATE: APRIL 2014 REVISED:	CITY OF PORTLAND, MAINE TECHNICAL STANDARDS MANUAL	**SANITARY SEWER AND STORM DRAIN DESIGN STANDARDS** SECTION II	FIGURE: II-19
	EXTERNAL GREASE TRAP DESIGN		

NOTES:

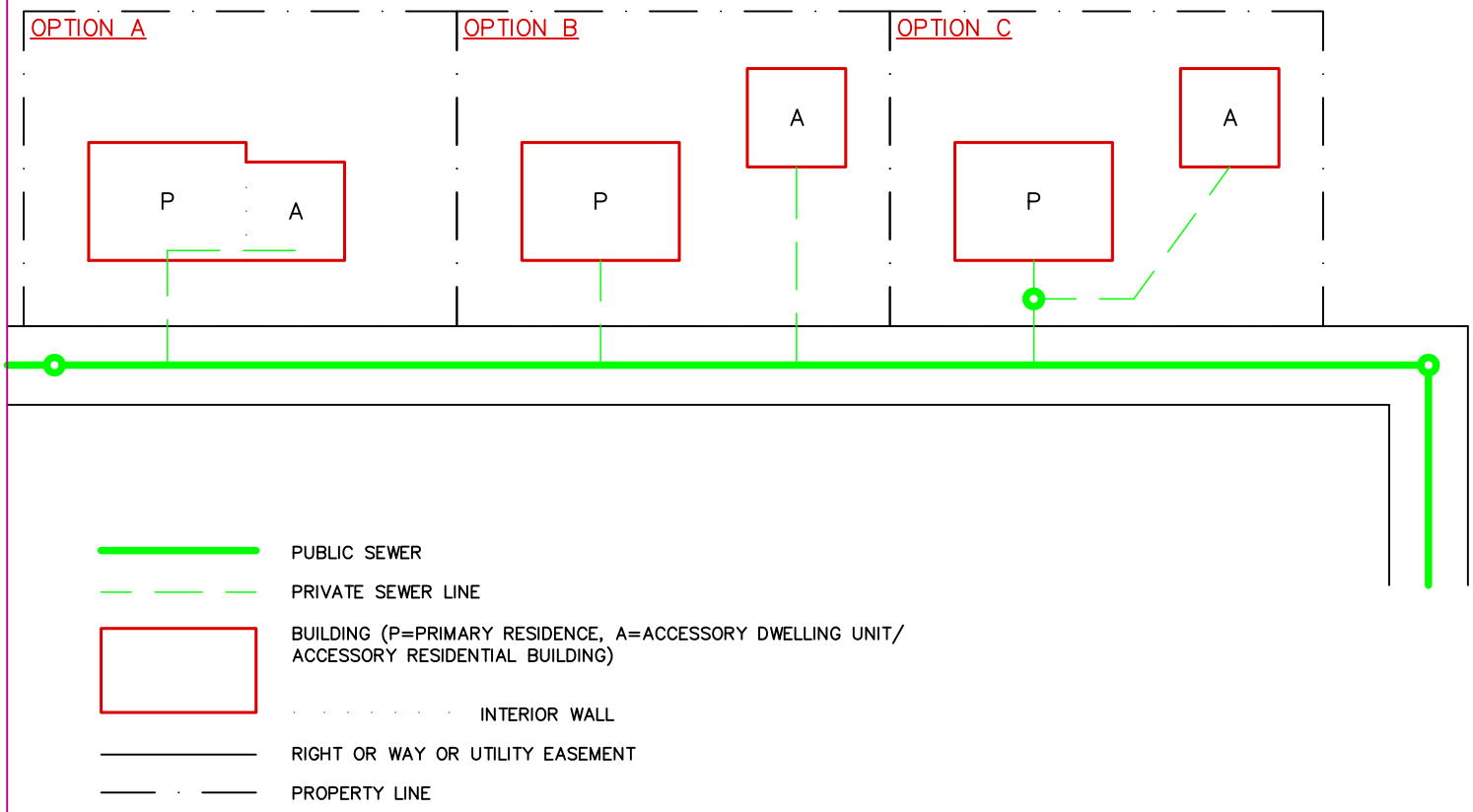
- FOR USE IN PARTIALLY OR TOTALLY ENCLOSED PARKING GARAGES, AUTOMOTIVE REPAIR FACILITIES OR ANY OTHER PROPOSED STRUCTURE WHERE DEEMED APPROPRIATE BY THE CITY ENGINEER.
- DISCHARGE SHALL BE TO SANITARY SEWER.
- A VENT PIPE MAY BE REQUIRED THAT HAS A VERTICAL OUTLET OFF TO THE SIDE OF THE STRUCTURE.
- AN OIL ABSORBENT BOOM IS REQUIRED TO BE PLACED WITHIN THE MANHOLE ON THE WATER SURFACE AND REPLACED AT A MINIMUM ANNUALLY.



OIL / GRIT SEPARATOR

NOT TO SCALE

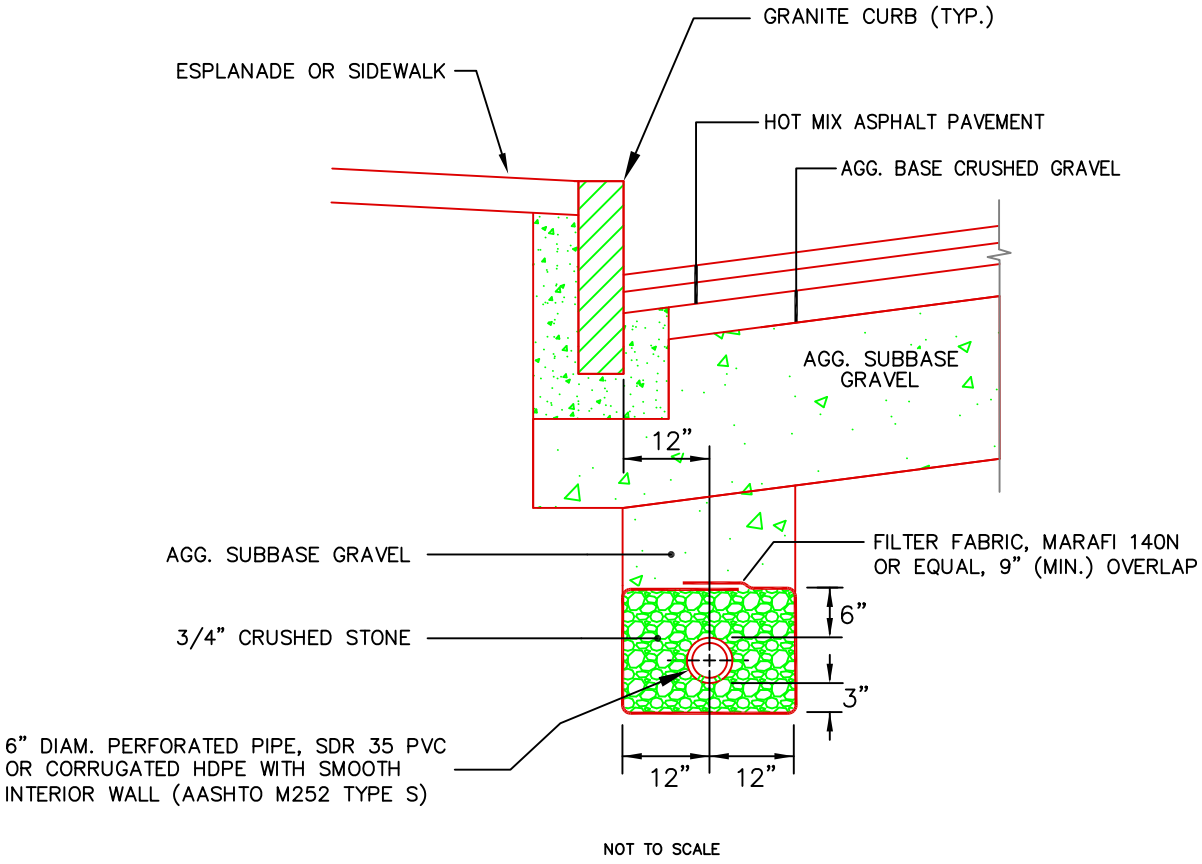
DATE: FEB 2015 REVISED: AUG 2022	CITY OF PORTLAND, MAINE TECHNICAL STANDARDS MANUAL	**SANITARY SEWER AND STORM DRAIN DESIGN STANDARDS** SECTION II	FIGURE: II-20
	OIL / GRIT SEPARATOR		



POTENTIAL SEWER LINE CONFIGURATION FOR PRIMARY RESIDENCES WITH AN ACCESSORY DWELLING UNIT

NOT TO SCALE

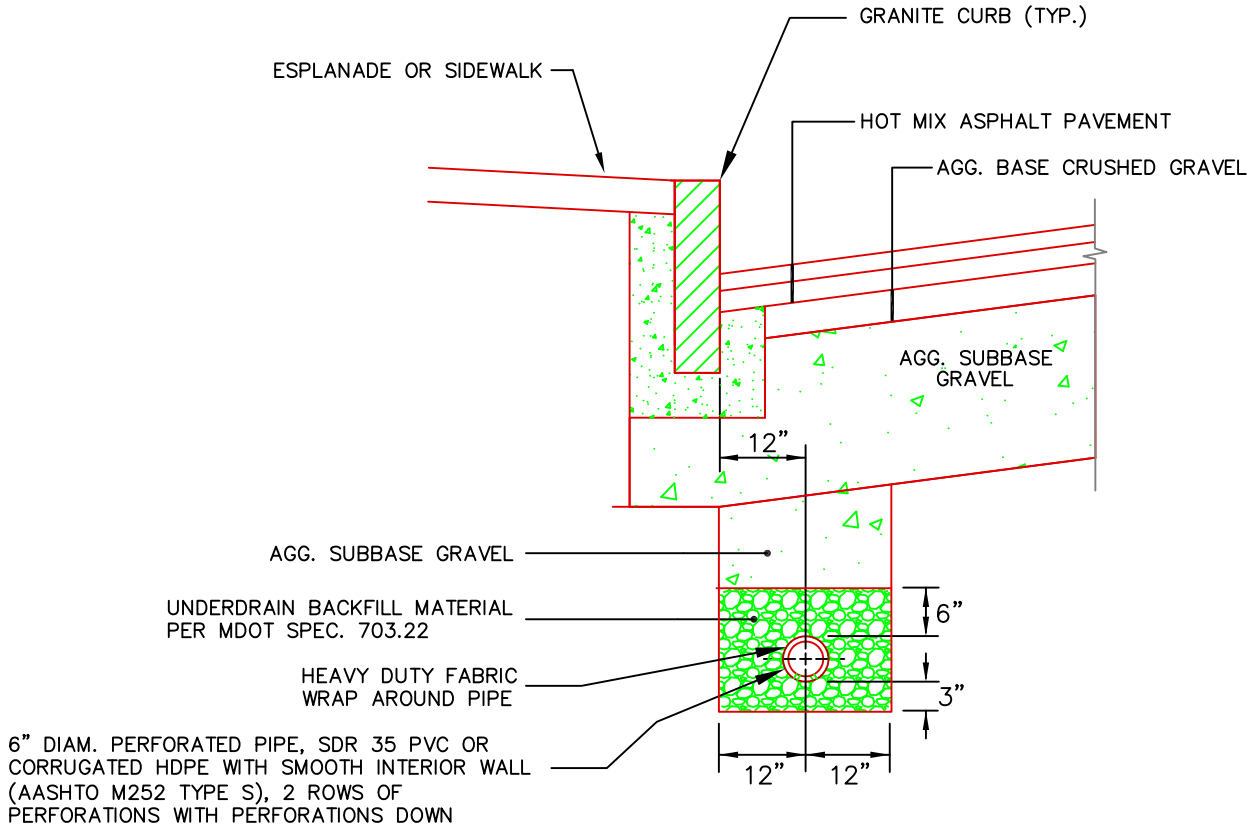
DATE: APRIL 2022 REVISED:	CITY OF PORTLAND, MAINE TECHNICAL STANDARDS MANUAL	**SANITARY SEWER AND STORM DRAIN DESIGN STANDARDS** SECTION II	FIGURE: II-21
	SEWER LINE CONFIGURATIONS FOR PRIMARY RESIDENCES WITH AN ACCESSORY DWELLING UNIT		



NOT TO SCALE

NOTES
1. UNDERDRAIN PIPE INVERT ELEVATIONS SHALL BE AT LEAST 42 INCHES BELOW GUTTER GRADES.
2. PERFORATIONS IN UNDERDRAIN PIPE SHALL BE ORIENTED DOWN.

DATE: AUGUST 2009 REVISED: AUG 2022	CITY OF PORTLAND, MAINE TECHNICAL STANDARDS MANUAL	**SANITARY SEWER AND STORM DRAIN DESIGN STANDARDS** SECTION II	FIGURE: II-22
	TYPE "B" UNDERDRAIN INSTALLATION ALTERNATIVE A		



NOT TO SCALE

NOTES
1. UNDERDRAIN PIPE INVERT ELEVATIONS SHALL BE AT LEAST 42 INCHES BELOW GUTTER GRADES.
2. PERFORATIONS IN UNDERDRAIN PIPE SHALL BE ORIENTED DOWN. THE PIPE SHALL BE FURNISHED WITH A HEAVY DUTY FABRIC WRAP, SUCH AS "FILTER SOCK" BY ADS.

DATE: AUGUST 2009 REVISED: AUG 2022	CITY OF PORTLAND, MAINE TECHNICAL STANDARDS MANUAL	**SANITARY SEWER AND STORM DRAIN DESIGN STANDARDS** SECTION II	FIGURE: II-23
	TYPE "B" UNDERDRAIN INSTALLATION ALTERNATIVE B		

FIGURE II–01 = LIST OF DETAILS

FIGURE II–02 = PRECAST CONCRETE MANHOLE

FIGURE II–03 = TYPICAL INSIDE DROP MANHOLE

FIGURE II–04 = GENERAL NOTES FOR MANHOLES AND CATCH BASINS

FIGURE II–05 = CAST IRON MANHOLE COVER AND FRAME

FIGURE II–06 = MANHOLE RISER RING

FIGURE II–07 = PRECAST CONCRETE CATCH BASIN

FIGURE II–08 = CATCH BASIN FRAME AND GRATE

FIGURE II–09 = CATCH BASIN HOOD

FIGURE II–10 = TYPICAL PAVEMENT GRADING FOR CATCH BASIN INLETS

FIGURE II–11 = 4' GRANITE HEADSTONE FOR CATCH BASIN INLET

FIGURE II–12 = TYPICAL PIPE TRENCH INSTALLATION AND NOTES

FIGURE II–13 = PLASTIC PIPE CONNECTION METHODS 1 & 2

FIGURE II–14 = PLASTIC PIPE CONNECTION METHODS 3 & 4

FIGURE II–15 = MASONRY PLUG

FIGURE II–16 = TYPICAL EXISTING LATERAL CONNECTION

FIGURE II–17 = TYPICAL HOUSE LATERAL TEE/WYE CONNECTION

FIGURE II–18 = FORCE MAIN CONCRETE THRUST BLOCK PLACEMENT

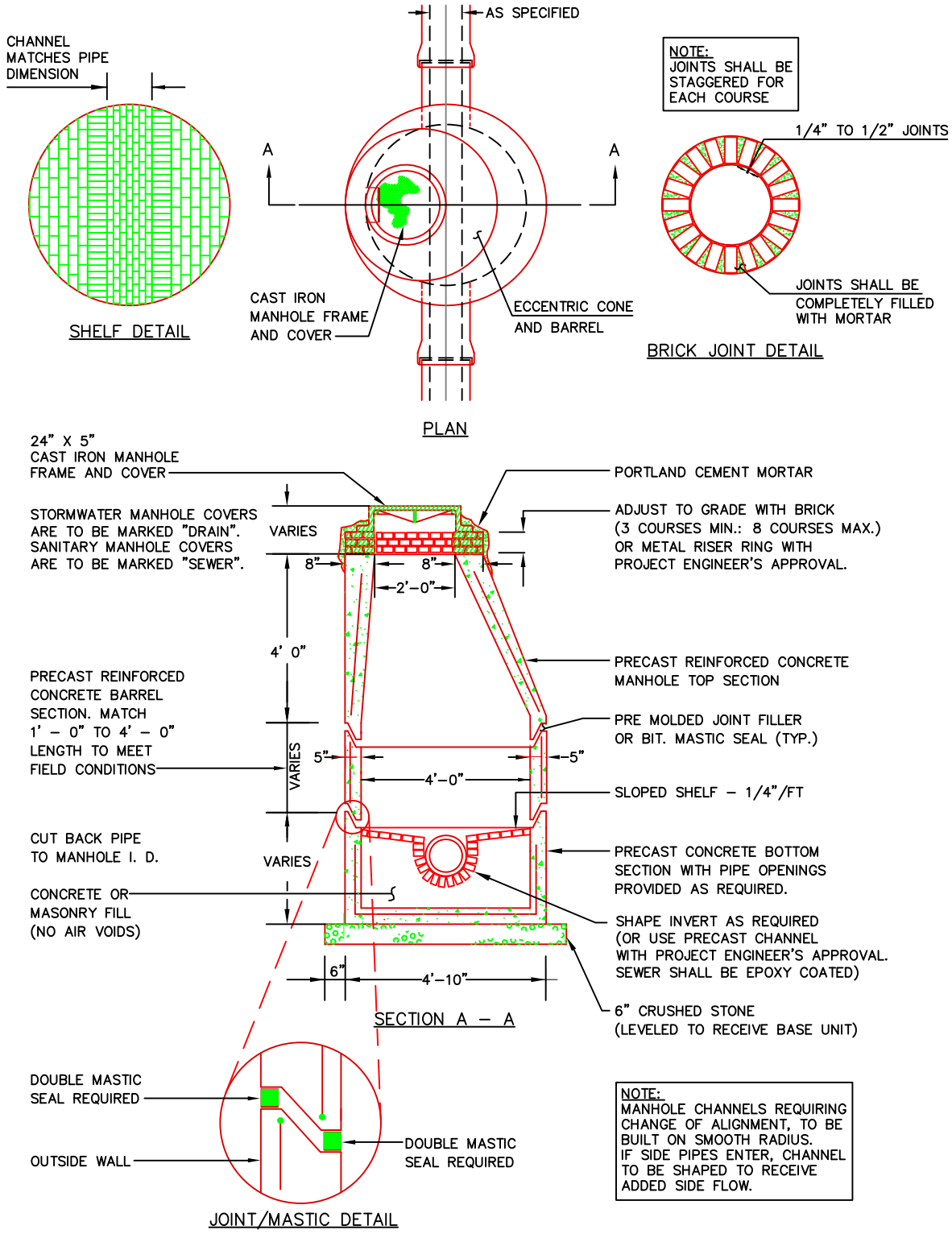
FIGURE II–19 = EXTERNAL GREASE TRAP DESIGN

FIGURE II–20 = OIL / GRIT SEPARATOR

FIGURE II–21 = SEWER LINE CONFIGURATIONS FOR PRIMARY RESIDENCES WITH AN ACCESSORY DWELLING UNIT

FIGURE II–22 = TYPE "B" UNDERDRAIN INSTALLATION ALTERNATIVE A

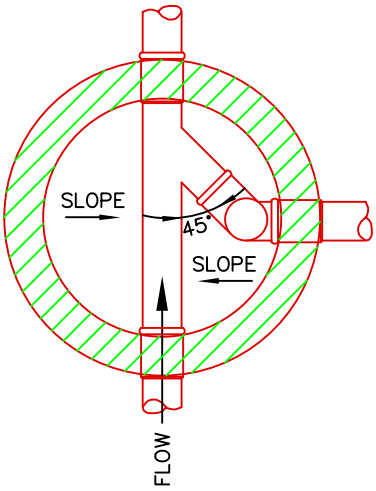
FIGURE II–23 = TYPE "B" UNDERDRAIN INSTALLATION ALTERNATIVE B



PRECAST CONCRETE MANHOLE

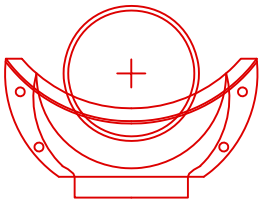
NOT TO SCALE

DATE: DEC. 2009 REVISED: DEC. 2021	CITY OF PORTLAND, MAINE TECHNICAL STANDARDS MANUAL	**SANITARY SEWER AND STORM DRAIN DESIGN STANDARDS** SECTION II	FIGURE: II-2
	PRECAST CONCRETE MANHOLE		



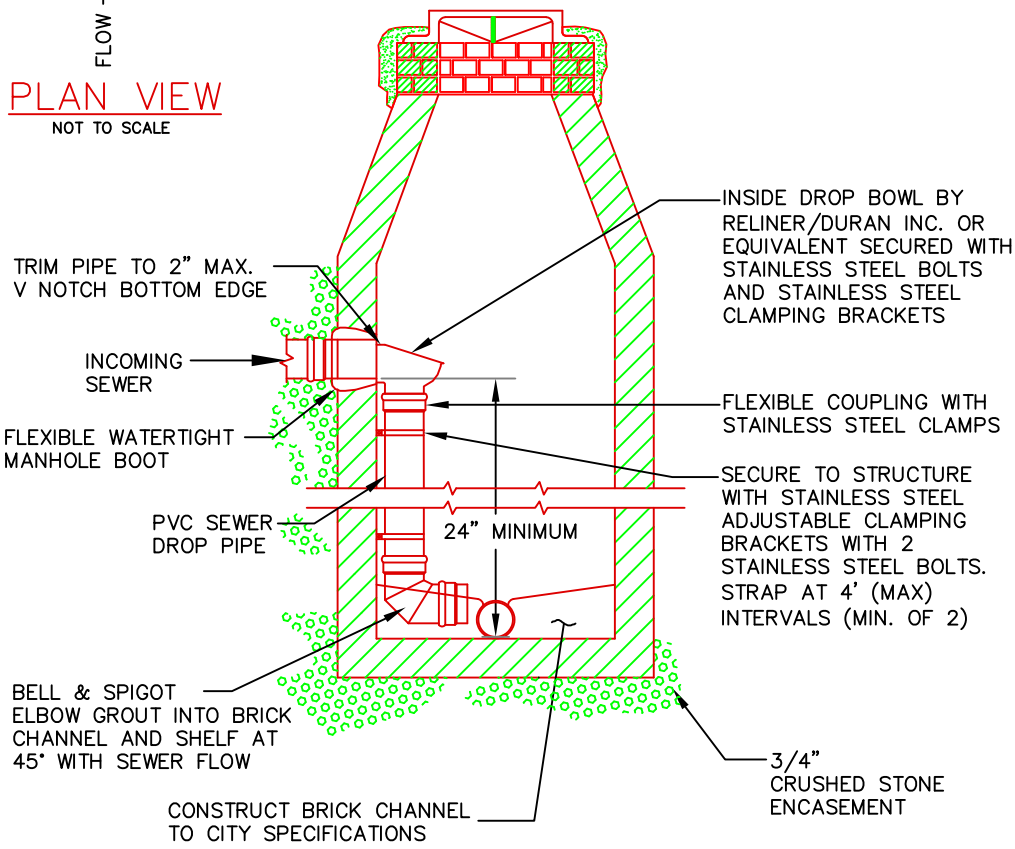
PLAN VIEW

NOT TO SCALE



DROP BOWL MOUNTING POSITION

NOT TO SCALE



NOTES:

1) DROP MANHOLES ARE NOT REQUIRED FOR STORMWATER SYSTEMS.
2) MANHOLE MUST HAVE A MINIMUM DIAMETER OF 5' TO USE AN INSIDE DROP
3) ALL INSIDE DROP CONNECTIONS FOR SERVICES AND COLLECTOR SEWERS SHALL USE THE DROP BOWL AS SHOWN.

NOT TO SCALE

DATE: APRIL 2022 REVISED:	CITY OF PORTLAND, MAINE TECHNICAL STANDARDS MANUAL	**SANITARY SEWER AND STORM DRAIN DESIGN STANDARDS** SECTION II	FIGURE: II-3
	TYPICAL INSIDE DROP MANHOLE		

1. ALL CONCRETE SHALL HAVE A MINIMUM ULTIMATE COMPRESSIVE STRENGTH OF 4000 lbs. PER SQ. INCH AT THE END OF 28 DAYS, UNLESS OTHERWISE NOTED.

2. MANHOLES MAY BE CONSTRUCTED OF PRECAST REINFORCED CONCRETE, OR CAST IN PLACE.

3. PRECAST REINFORCED CONE BARREL MANUFACTURED PER ASTM SPEC. C–478.

4. ALL PIPES ENTERING MANHOLES AND CATCH BASINS SHALL HAVE FLEXIBLE PIPE CONNECTIONS WITH STAINLESS STEEL BANDS. FILL ANY ANNUAL SPACE WITH NON SHRINK GROUT.

5. ALL STORM AND SEWER MANHOLE COVERS SHALL BE SOLID

6. ALL SANITARY MANHOLE COVERS SHALL HAVE "SEWER" CAST INTO THE COVER. ALL STORMWATER/DRAIN MANHOLE COVERS SHALL HAVE "DRAIN" CAST INTO THE COVER.

7. SEWER BRICK SHALL CONFORM TO ASTM SPEC. DESIGNATE ON C–32–63, GRADE MA AND SA.

8. INVERTS SHALL BE BUILT TO THE HEIGHT OF THE FOLLOWING AS DETERMINED BY THE LARGEST PIPE SIZE.

   8.1. FOR PIPE SIZES 4"–12" INVERTS SHALL GO TO THE TOP OF THE PIPE.
   8.2. FOR PIPE SIZES 15"–36" INVERTS SHALL GO TO THE SPRING LINE.
   8.3. FOR PIPE SIZES 42"–60" INVERTS SHALL GO TO THE 1/3 OF PIPE SIZE

9. ALL SANITARY MANHOLES SHALL HAVE A WATERPROOFING COATING APPLIED TO THE EXTERIOR SURFACE.

10. CASTINGS SHALL CONFORM TO ASTM DESIGNATION A48–CLASS 35.

11. EXISTING MANHOLES, CATCH BASINS, FRAMES, AND COVERS SHALL BE SALVAGED BY THE CONTRACTOR, AND SHALL REMAIN THE PROPERTY OF THE CITY OF PORTLAND.

12. ALL CATCH BASIN OUTLETS SHALL BE INSTALLED WITH A HOOD / CASCO TRAP. SEE FIGURE II–09.

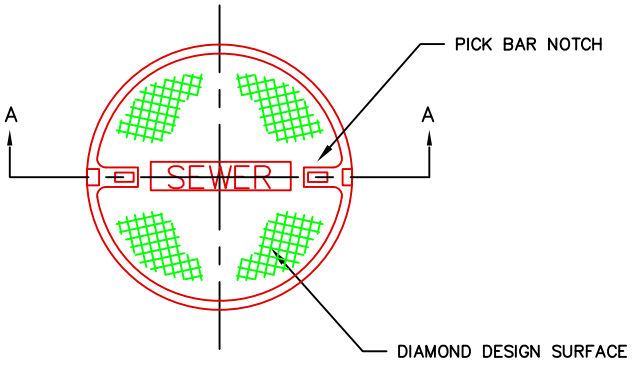
13. ALL MANHOLES AND CATCH BASINS REQUIRE BUOYANCY CALCULATIONS AND THE STRUCTURES SHALL BE MODIFIED AS NECESSARY BASED ON THOSE CALCULATIONS.

GENERAL NOTES FOR MANHOLES AND CATCH BASINS

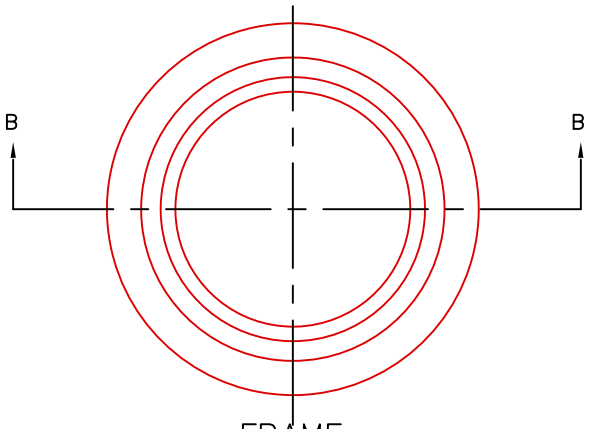
NOTES:
1. ALL SANITARY MANHOLE COVERS SHALL HAVE "SEWER" CAST INTO THE COVER. ALL STORMWATER/DRAIN MANHOLE COVERS SHALL HAVE "DRAIN" CAST INTO THE COVER.

2. APPROVED MANHOLE FRAMES:
   2.1. EAST JORDAN = 1690Z
   2.2. NEENAH = R-1496
   2.3. OR APPROVED EQUAL

3. APPROVED MANHOLE COVERS
   3.1. EAST JORDAN = 2160A
   3.2. NEENAH = R-1496
   3.3. OR APPROVED EQUAL



COVER
PLAN VIEW

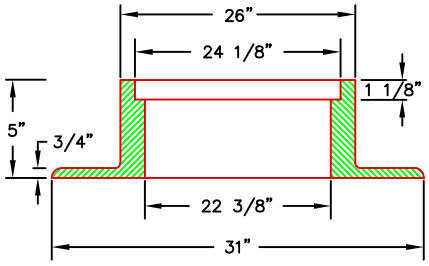


FRAME
PLAN VIEW

NOTE:
ALL SANITARY AND STORMWATER/DRAIN MANHOLE COVERS SHALL BE 24" x 5".



SECTION A – A
COVER

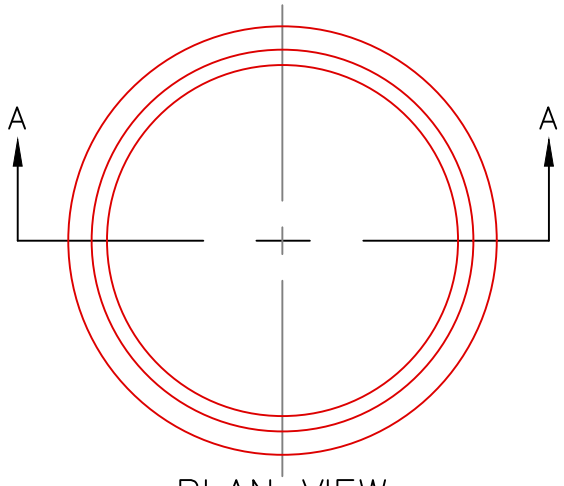


MIN. WGT. 320 LBS.
SECTION B – B
FRAME

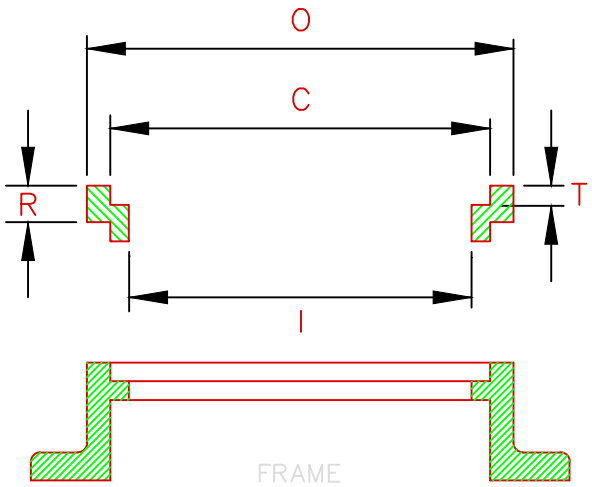
CAST IRON MANHOLE COVER AND FRAME

NOT TO SCALE

DATE: AUG 2009 REVISED: DEC 2021	CITY OF PORTLAND, MAINE TECHNICAL STANDARDS MANUAL	**SANITARY SEWER AND STORM DRAIN DESIGN STANDARDS** SECTION II	FIGURE: II-5
	CAST IRON MANHOLE COVER AND FRAME		



PLAN VIEW



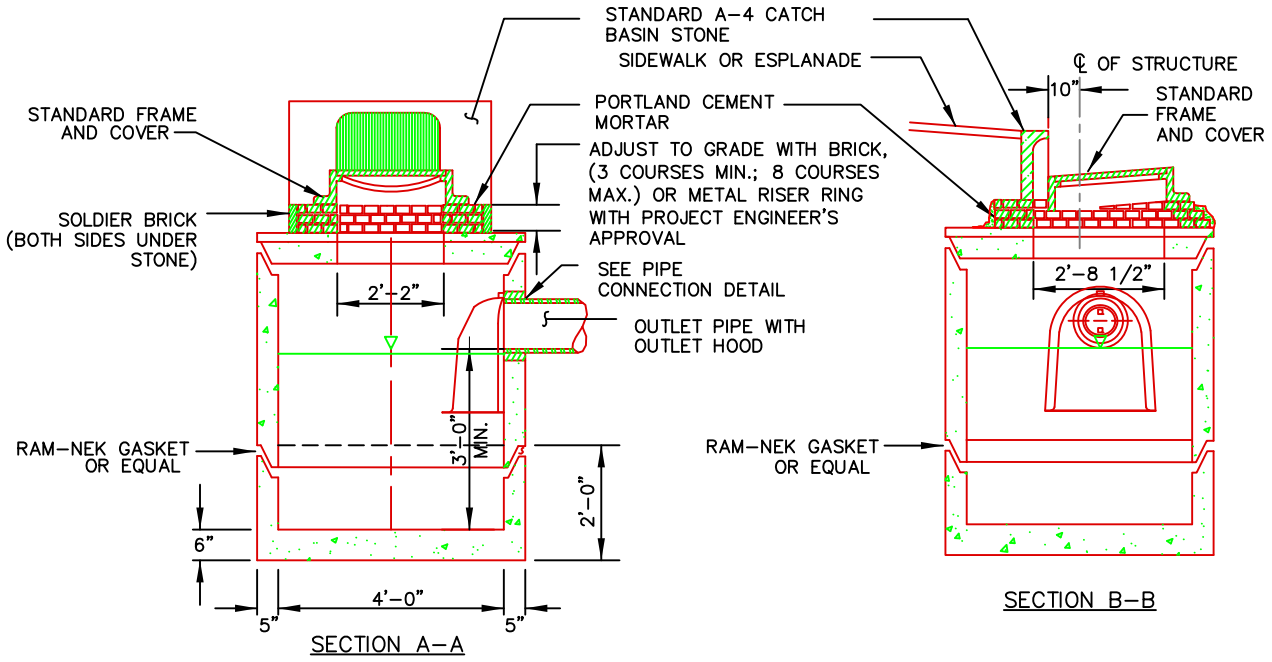
SECTION A–A

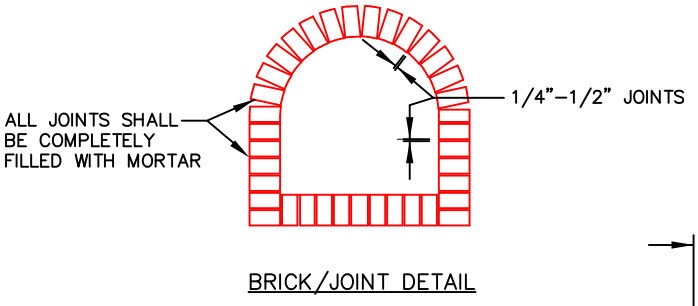
SIZE	C	R	T	O	I	Wt.
R241 1/2	24	1 1/2	1 1/8	26 1/4	22 1/2	60
R242	24	2	1 1/8	26 1/4	22 1/2	80
R242 1/2	24	2 1/2	1 1/8	26 1/4	22	100
R243	24	3	1 1/8	26 1/4	22	120

MANHOLE RISER RING

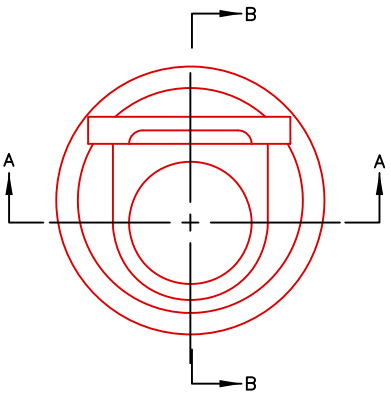
NOT TO SCALE

DATE: DEC 2009 REVISED:	CITY OF PORTLAND, MAINE TECHNICAL STANDARDS MANUAL	**SANITARY SEWER AND STORM DRAIN DESIGN STANDARDS** SECTION II	FIGURE: II-6
	MANHOLE RISER RING		

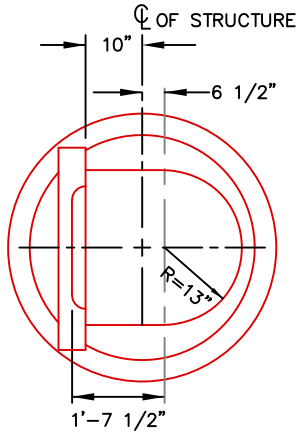




BRICK/JOINT DETAIL



PLAN VIEW
COVER, FRAME AND STONE



PLAN VIEW
TOP SLAB

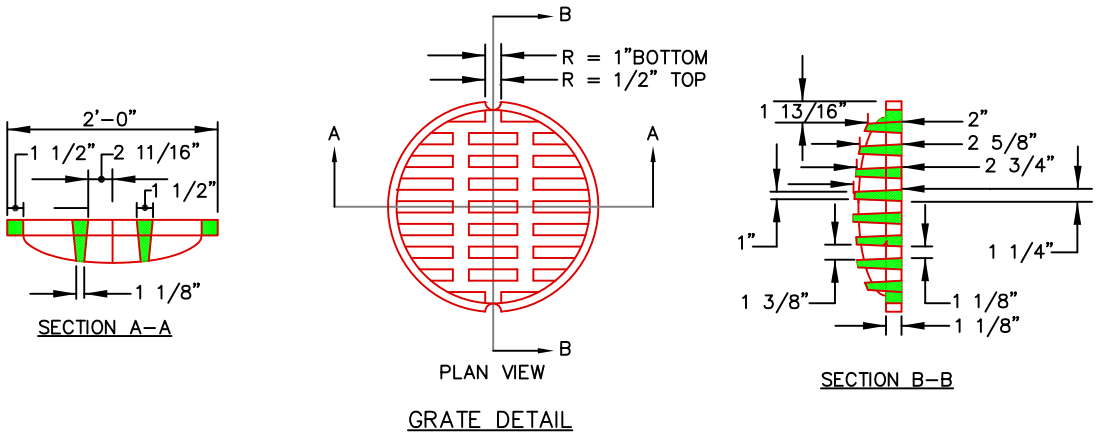
PRECAST CONCRETE CATCH BASIN – TYPE "E"

NOT TO SCALE

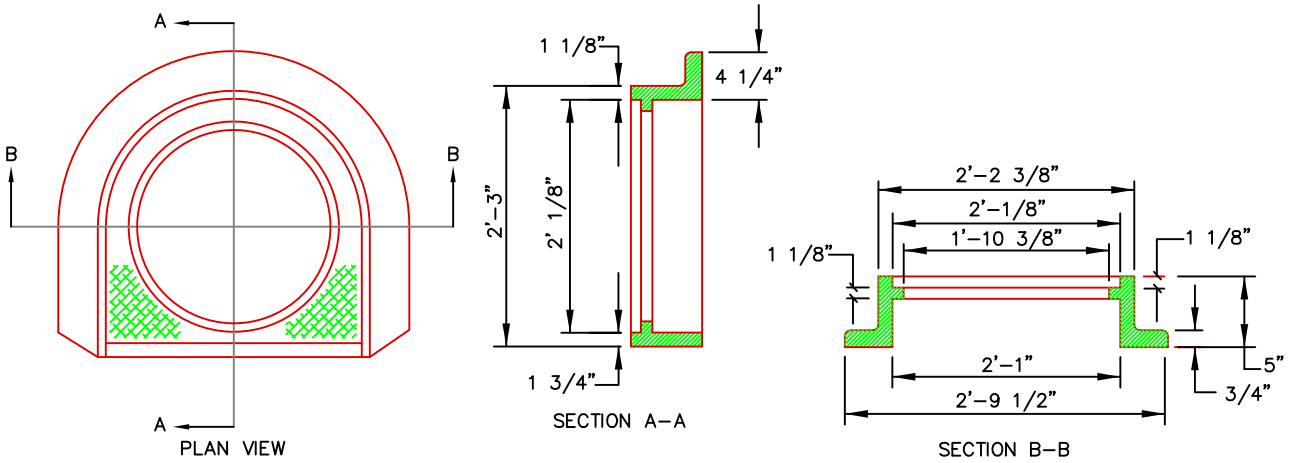
DATE: MARCH 2009 REVISED: AUG 2022	CITY OF PORTLAND, MAINE TECHNICAL STANDARDS MANUAL	**SANITARY SEWER AND STORM DRAIN DESIGN STANDARDS** SECTION II	FIGURE: II-7
	PRECAST CONCRETE CATCH BASIN		

1. APPROVED CATCH BASIN FRAMES:
   1.1. EAST JORDAN = 7375Z
   1.2. NEENAH = R-3248
   1.3. OR APPROVED EQUAL

2. APPROVED CATCH BASIN GRATES
   2.1. EAST JORDAN = 2440M
   2.2. NEENAH = R-3248
   2.3. OR APPROVED EQUAL



GRATE DETAIL

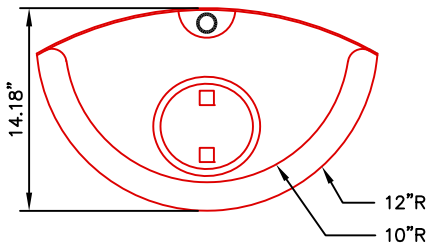


FRAME DETAIL

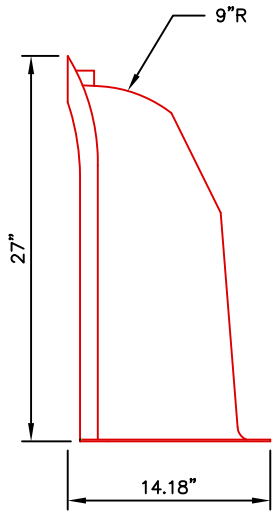
CATCH BASIN FRAME & GRATE

DATE: AUGUST 2009 REVISED: DEC. 2021	CITY OF PORTLAND, MAINE TECHNICAL STANDARDS MANUAL	**SANITARY SEWER AND STORM DRAIN DESIGN STANDARDS** SECTION II	FIGURE: II-8
	CATCH BASIN FRAME AND GRATE		

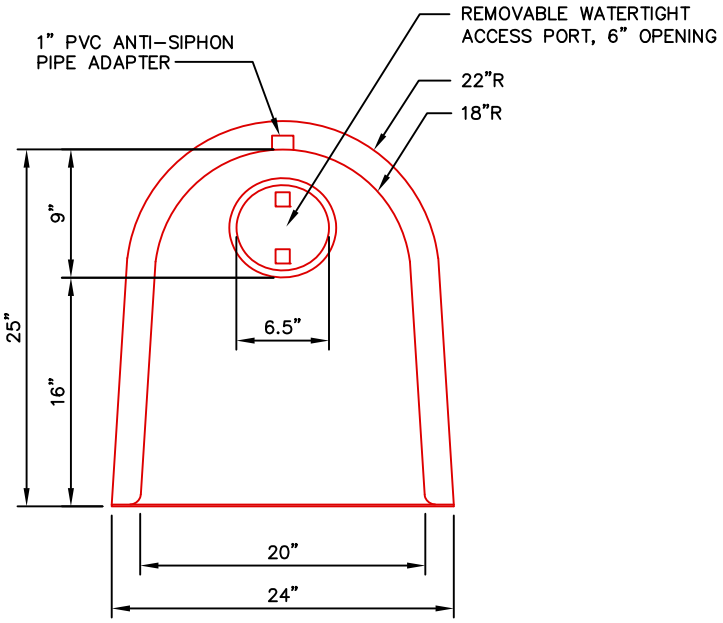
NOTE:
FOR USE ON CATCH BASIN OUTLET
18" IN DIAMETER AND LESS



PLAN



SIDE



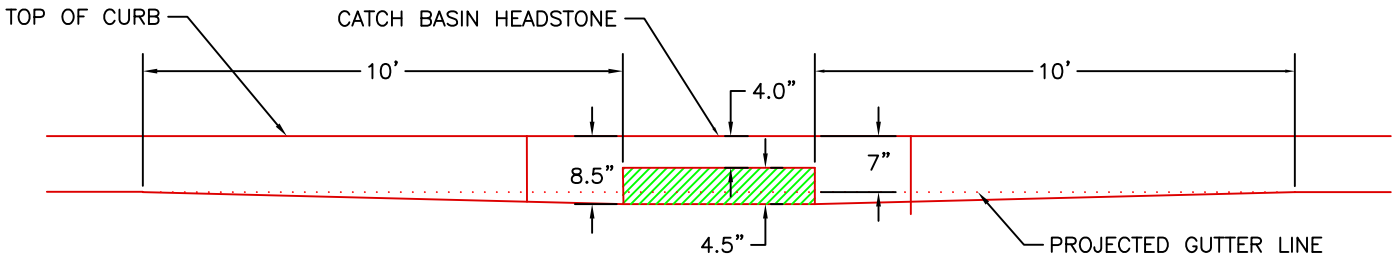
FRONT

CATCH BASIN HOOD

NOT TO SCALE

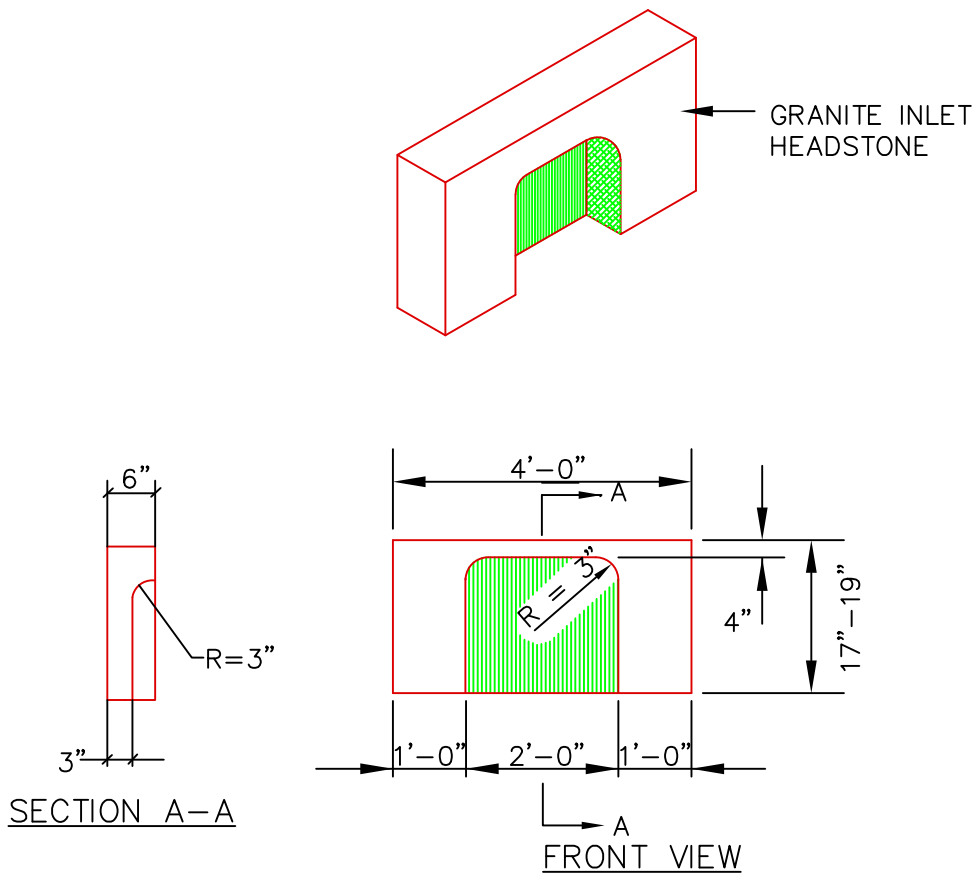
DATE: MARCH 2019 REVISED:	CITY OF PORTLAND, MAINE TECHNICAL STANDARDS MANUAL	**SANITARY SEWER AND STORM DRAIN DESIGN STANDARDS** SECTION II	FIGURE: II-9
	CATCH BASIN HOOD		

NOTE:
DISH 10' EITHER SIDE OF HEADSTONE FOR
CATCH BASIN AT LOW POINT



NOT TO SCALE

DATE: AUG 2009 REVISED: DEC. 2021	CITY OF PORTLAND, MAINE TECHNICAL STANDARDS MANUAL	**SANITARY SEWER AND STORM DRAIN DESIGN STANDARDS** SECTION II	FIGURE: II-10
	TYPICAL PAVEMENT GRADING FOR CATCH BASIN INLETS		



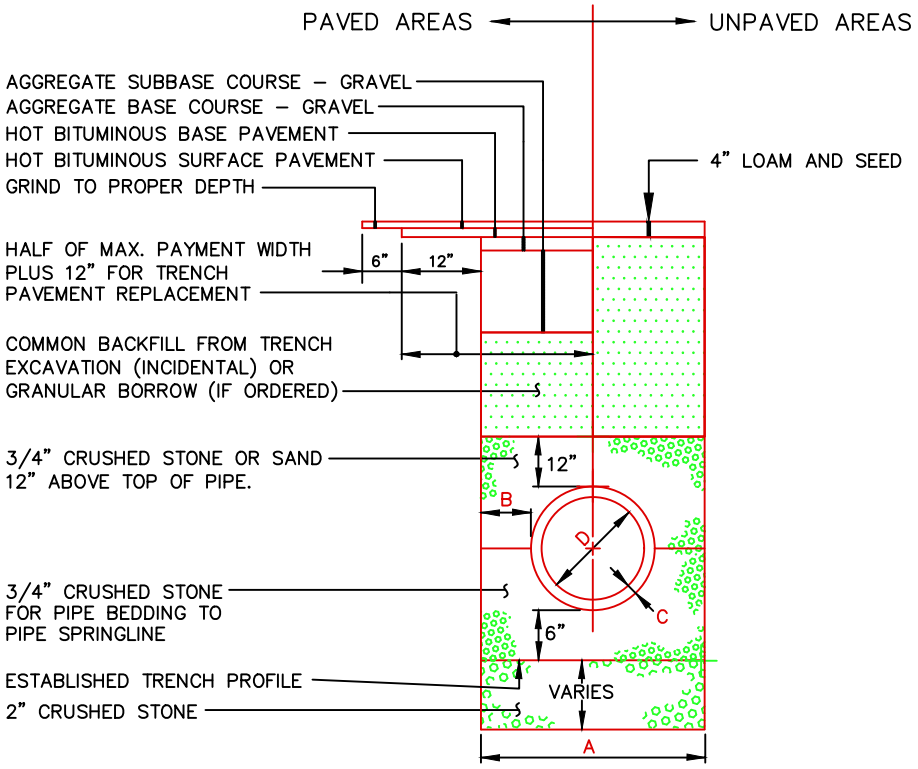
4' GRANITE HEADSTONE FOR CATCH BASIN INLET

NOT TO SCALE

DATE: AUG 2009 REVISED: AUG 2021	CITY OF PORTLAND, MAINE TECHNICAL STANDARDS MANUAL	**SANITARY SEWER AND STORM DRAIN DESIGN STANDARDS** SECTION II	FIGURE: II-11
	4' GRANITE HEADSTONE FOR CATCH BASIN INLET		

NOTES:
DEPTH OF BITUMINOUS PAVEMENT AND AGGREGATE COURSES SHALL BE DETERMINED BY STREET CLASSIFICATION.

ANY ALTERNATE TRENCHING OR PAYMENT METHODS SHALL BE APPROVED IN ADVANCE BY THE CITY OF PORTLAND, DEPARTMENT OF PUBLIC SERVICES..



NOTES

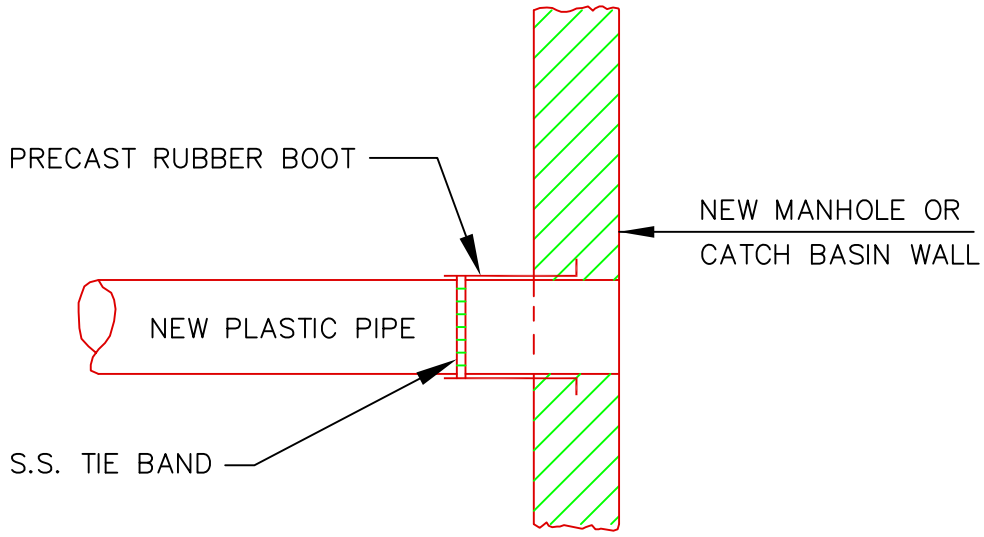
1. ALTERNATIVE CONSTRUCTION METHODS OR PAYMENT METHODS SHALL BE APPROVED IN ADVANCE BY THE CITY.
2. IN PAVED AREAS, DEPTHS OF GRAVEL AND HOT MIX ASPHALT PAVEMENT SHALL MATCH THE GREATER OF EXISTING CONDITIONS OR THE REQUIREMENTS FOR THE CORRESPONDING STREET CLASSIFICATION.
3. DIMENSION B SHALL BE SUFFICIENT TO ALLOW CRUSHED STONE BEDDING TO BE PLACED AND COMPACTED UNDER THE HAUNCHES OF THE PIPE; BUT IN ALL CASES DIMENSION B SHALL BE AT LEAST 9".
4. DIMENSION A IS THE MAXIMUM WIDTH ALLOWED FOR CALCULATING PAY QUANTITIES UNDER GRANULAR BORROW, CRUSHED STONE, STRUCTURAL EARTH EXCAVATION, AND STRUCTURAL ROCK EXCAVATION. DIMENSION A SHALL BE BASED ON PIPE DIAMETER D, AS SET FORTH IN THE FOLLOWING TABLE.

PIPE DIAMETER, D (INCHES)	MAX. TRENCH WIDTH, A (FEET)
4	4.0
6	4.0
8	4.0
10	4.0
12	5.0
15	5.0
18	5.0
21	5.0
24	6.0
27	6.0
30	6.0
36	6.0
42	7.0
48	7.0

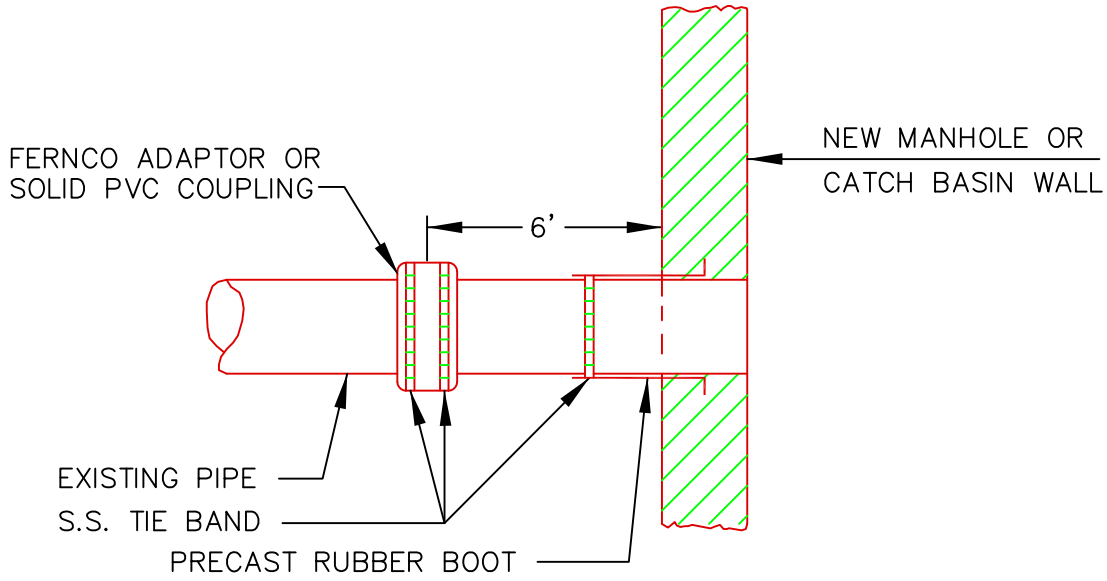
TYPICAL PIPE TRENCH INSTALLATION

NOT TO SCALE

DATE: AUGUST 2009 REVISED: SEPTEMBER 2022	CITY OF PORTLAND, MAINE TECHNICAL STANDARDS MANUAL	**SANITARY SEWER AND STORM DRAIN DESIGN STANDARDS** SECTION II	FIGURE: II-12
	TYPICAL PIPE TRENCH INSTALLATION AND NOTES		



METHOD 2 – NEW CONSTRUCTION



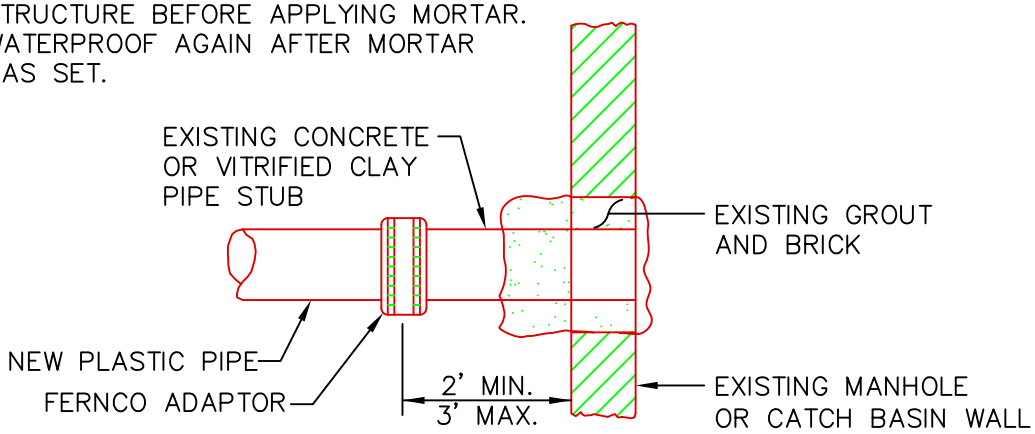
METHOD 1 – EXISTING PIPE INTO NEW STRUCTURE

PLASTIC PIPE CONNECTIONS

NOT TO SCALE

DATE: AUGUST 2009 REVISED:	CITY OF PORTLAND, MAINE TECHNICAL STANDARDS MANUAL	**SANITARY SEWER AND STORM DRAIN DESIGN STANDARDS** SECTION II	FIGURE: II-13
	PLASTIC PIPE CONNECTION METHODS 1 & 2		

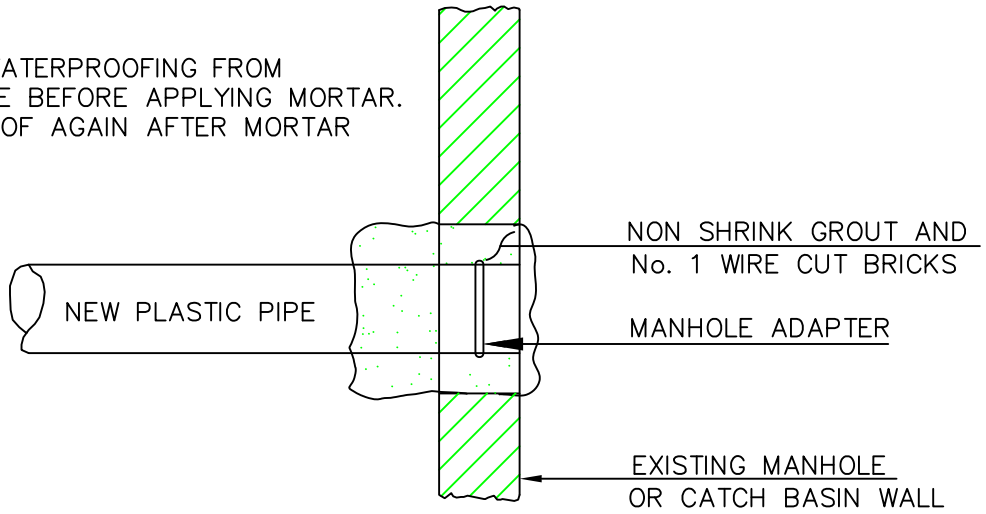
NOTE:
REMOVE WATERPROOFING FROM STRUCTURE BEFORE APPLYING MORTAR. WATERPROOF AGAIN AFTER MORTAR HAS SET.



METHOD 4 – NEW PIPE TO EXISTING STRUCTURE STUB

NOTE: EXISTING MANHOLE OR CATCH BASIN SHALL BE CORE DRILLED FOR PIPE INSTALLATION. IF PIPE DIAMETER IS SO LARGE THAT CORE DRILLING IS PROHIBITED, THE CONTRACTOR MAY SAW CUT THE STRUCTURE TO CREATE PIPE OPENING. THE NEW OPENING MUST THEN BE SEALED AND WATERTIGHT BOTH INSIDE AND OUTSIDE THE STRUCTURE.

NOTE:
REMOVE WATERPROOFING FROM STRUCTURE BEFORE APPLYING MORTAR. WATERPROOF AGAIN AFTER MORTAR HAS SET.

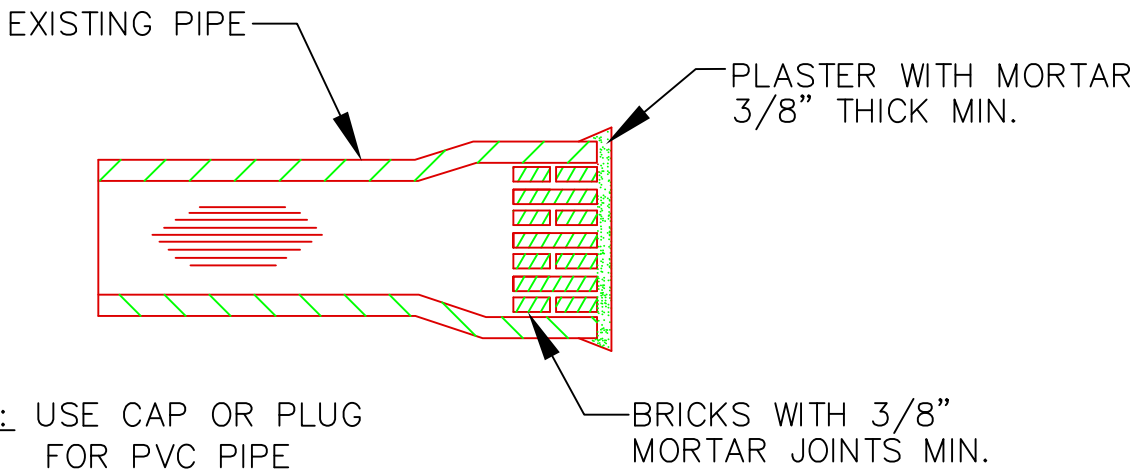


METHOD 3 – NEW PIPE INTO EXISTING STRUCTURE

PLASTIC PIPE CONNECTIONS

NOT TO SCALE

DATE: AUGUST 2009 REVISED:	CITY OF PORTLAND, MAINE TECHNICAL STANDARDS MANUAL	**SANITARY SEWER AND STORM DRAIN DESIGN STANDARDS** SECTION II	FIGURE: II-14
	PLASTIC PIPE CONNECTION METHODS 3 & 4		



NOTE: USE CAP OR PLUG FOR PVC PIPE

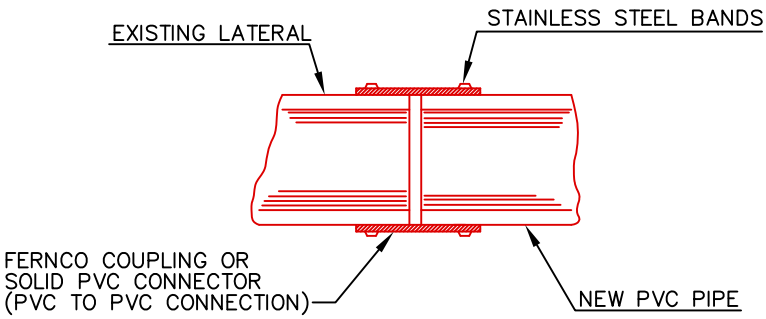
MASONRY PLUG

NOT TO SCALE

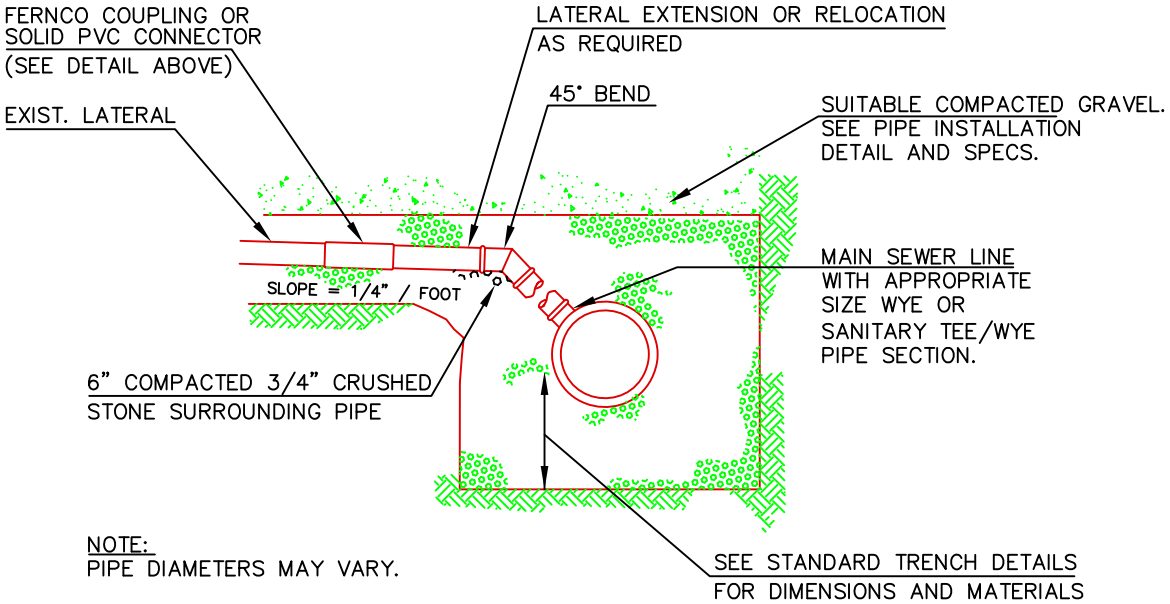
DATE: AUGUST 2009 REVISED:	CITY OF PORTLAND, MAINE TECHNICAL STANDARDS MANUAL	**SANITARY SEWER AND STORM DRAIN DESIGN STANDARDS** SECTION II	FIGURE: II-15
	MASONRY PLUG		

NOTE:
LOCATIONS AND ELEVATIONS OF STUBS SHOWN ON THE PLANS ARE TO BE CONSIDERED AS APPROXIMATE AND MAY BE ADJUSTED AS DIRECTED TO SUIT FIELD CONDITIONS.

HOUSE CONNECTIONS AND CATCH BASINS CONNECTIONS TO THE MAIN LINE OF THE SEWER, SHALL CONSIST OF AN APPROPRIATE WYE BRANCH CONNECTION AS SHOWN ON THE PLANS, OR AS DIRECTED. ACTUAL WYE LOCATIONS FOR HOUSE CONNECTIONS AND CATCH BASIN CONNECTIONS SHALL BE DETERMINED DURING CONSTRUCTION. THE CONTRACTOR SHALL KEEP A COMPLETE RECORD OF WYE LOCATIONS WHICH SHALL BE GIVEN TO THE CITY OF PORTLAND UPON COMPLETION OF THE CONTRACT.
ALL PVC TO PVC COUPLING SHALL BE "SOLID PVC COUPLINGS".



FERNCO COUPLING FOR REPAIR OR REPLACEMENT

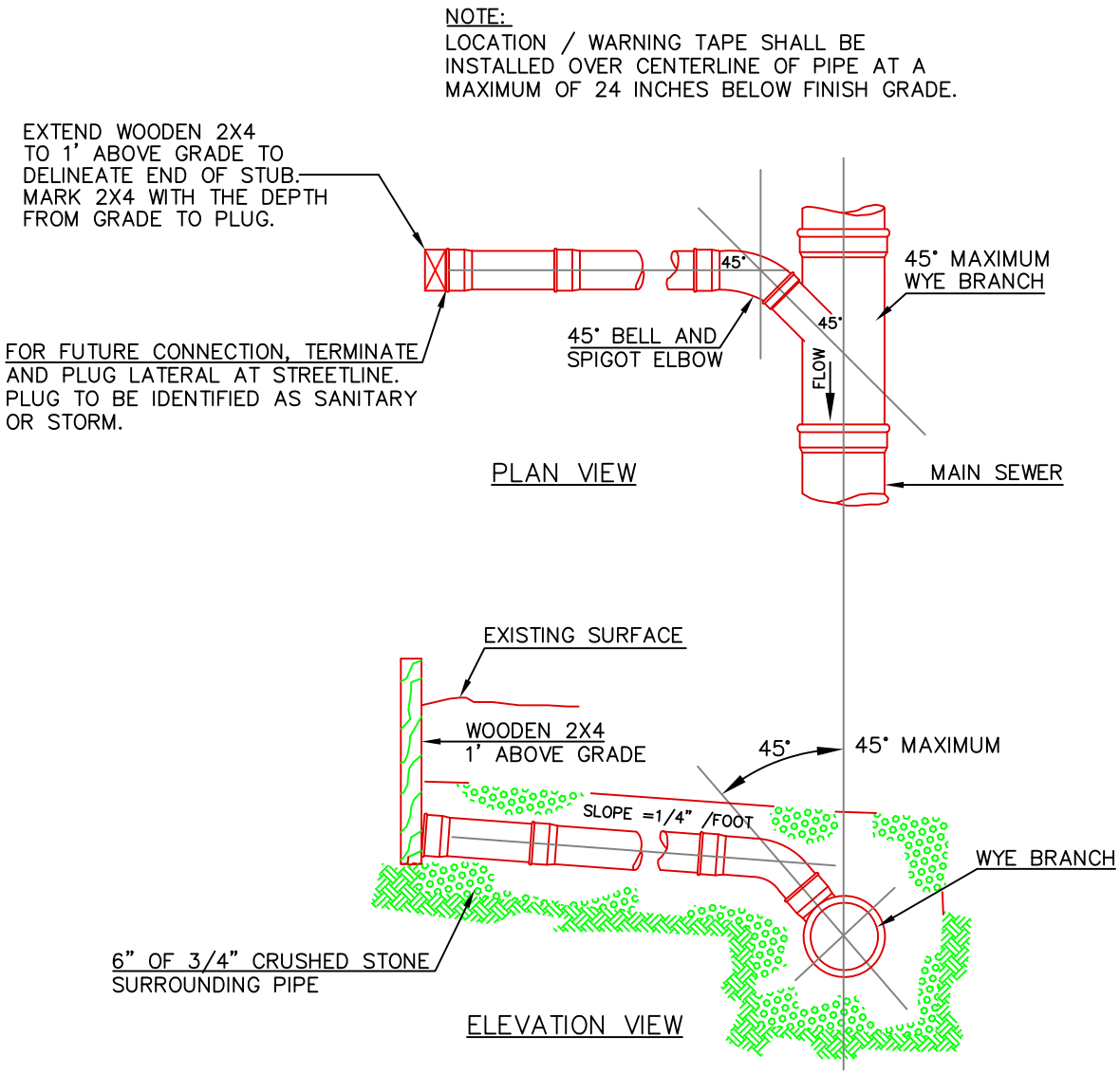


SECTION

TYPICAL EXISTING LATERAL CONNECTION

NOT TO SCALE

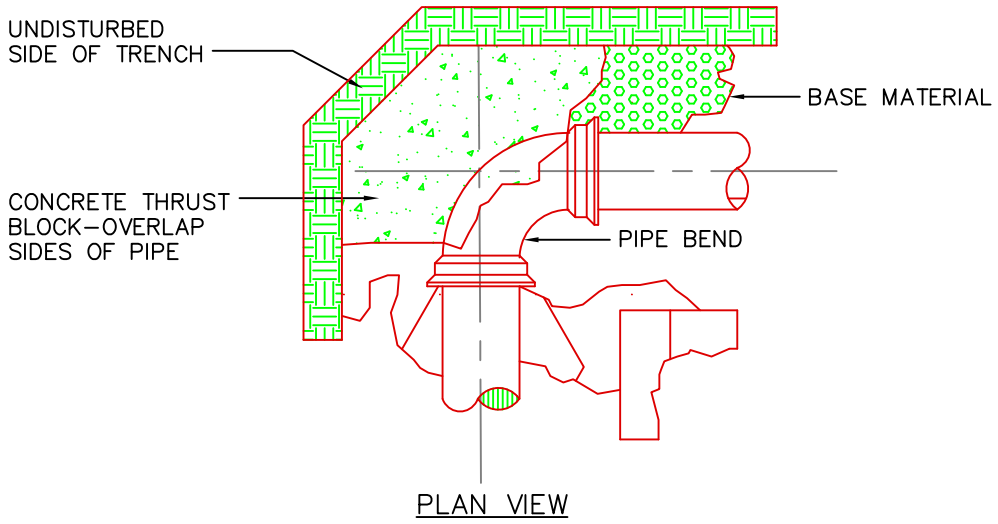
DATE: DEC. 2009 REVISED: DEC. 2021	CITY OF PORTLAND, MAINE TECHNICAL STANDARDS MANUAL	**SANITARY SEWER AND STORM DRAIN DESIGN STANDARDS** SECTION II	FIGURE: II-16
	TYPICAL EXISTING LATERAL CONNECTION		

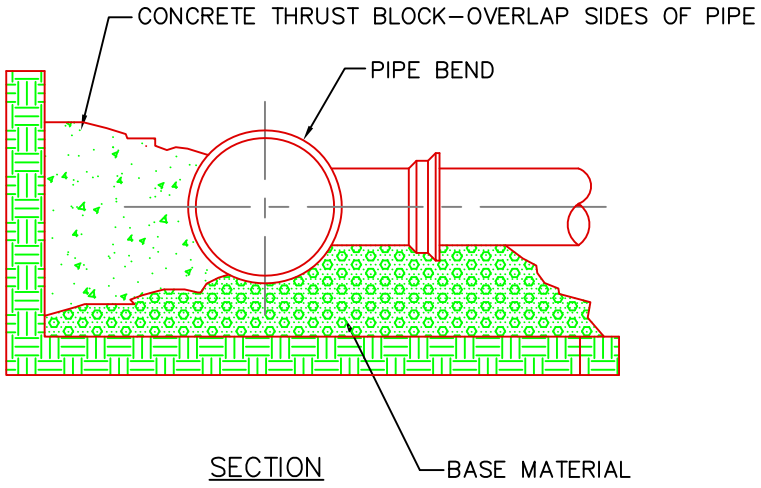


TYPICAL HOUSE LATERAL TEE/WYE CONNECTION

NOT TO SCALE

DATE: AUGUST 2009 REVISED:	CITY OF PORTLAND, MAINE TECHNICAL STANDARDS MANUAL	**SANITARY SEWER AND STORM DRAIN DESIGN STANDARDS** SECTION II	FIGURE: II-17
	TYPICAL HOUSE LATERAL TEE/WYE CONNECTION		





THRUST/RETAINER SCHEDULE		
1/4 BEND	(90°)	USE POURED–IN–PLACE THRUST BLOCK w/RETAINERS
1/8 BEND	(45°)	THRUST BLOCK w/RETAINERS
1/16 BEND	(22 1/2"°)	THRUST BLOCK
1/32 BEND	(11 1/4"°)	THRUST BLOCK

NOTE: KEEP CONCRETE LEAR OF PIPE JOINT, NUTS AND BOLTS

FORCE MAIN – CONCRETE THRUST BLOCK PLACEMENT ON VERTICAL & HORIZONTAL BENDS

NOT TO SCALE

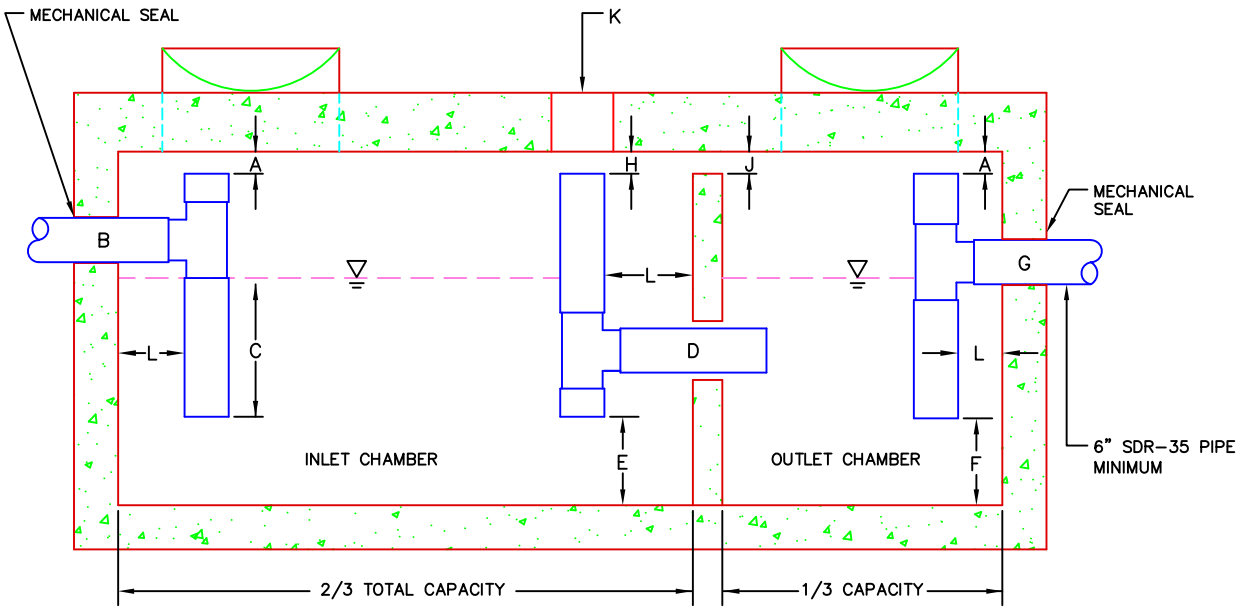
DATE: AUGUST 2009 REVISED:	CITY OF PORTLAND, MAINE TECHNICAL STANDARDS MANUAL	**SANITARY SEWER AND STORM DRAIN DESIGN STANDARDS** SECTION II	FIGURE: II-18
	FORCE MAIN CONCRETE THRUST BLOCK PLACEMENT		

1000 GALLON GREASE INTERCEPTOR:

A) MINIMUM 6", BUT NOT LESS THAN PIPE DIAMETER.
B) INLET PIPE INVERT TO BE 2 1/2" ABOVE LIQUID SURFACE.
C) INLET PIPE TO TERMINATE 2/3 DEPTH OF WATER LEVEL.
D) BAFFLE T
E) 6" FROM FLOOR TO END OF BAFFLE PIPE.
F) 6" FROM FLOOR TO END OF OUTLET PIPE.
G) OUTLET PIPE NO SMALLER THAN INLET PIPE.
H) TOP OF BAFFLE PIPE TERMINATES NO LOWER THAN BAFFLE HEIGHT.
I) INLET CHAMBER IS ⅔ TOTAL CAPACITY; OUTLET CHAMBER IS ⅓ TOTAL CAPACITY.
J) 6" MINIMUM DISTANCE FROM CEILING.
K) MINIMUM 6" CLEANOUT.
L) INLET AND OUTLET PIPES MUST BE SPACED SO THAT CLEAR ACCESS CAN BE MADE FROM MANHOLES.

THIS STRUCTURE MUST DISCHARGE TO A CITY OF PORTLAND STANDARD MANHOLE WITH CHANNEL AND MUST BE RATED.

DAILY PROCESS FLOW FROM THE FACILITY WITH NO SANITARY OR OTHER EXTRANEOUS WASTES FLOWING THROUGH IT.

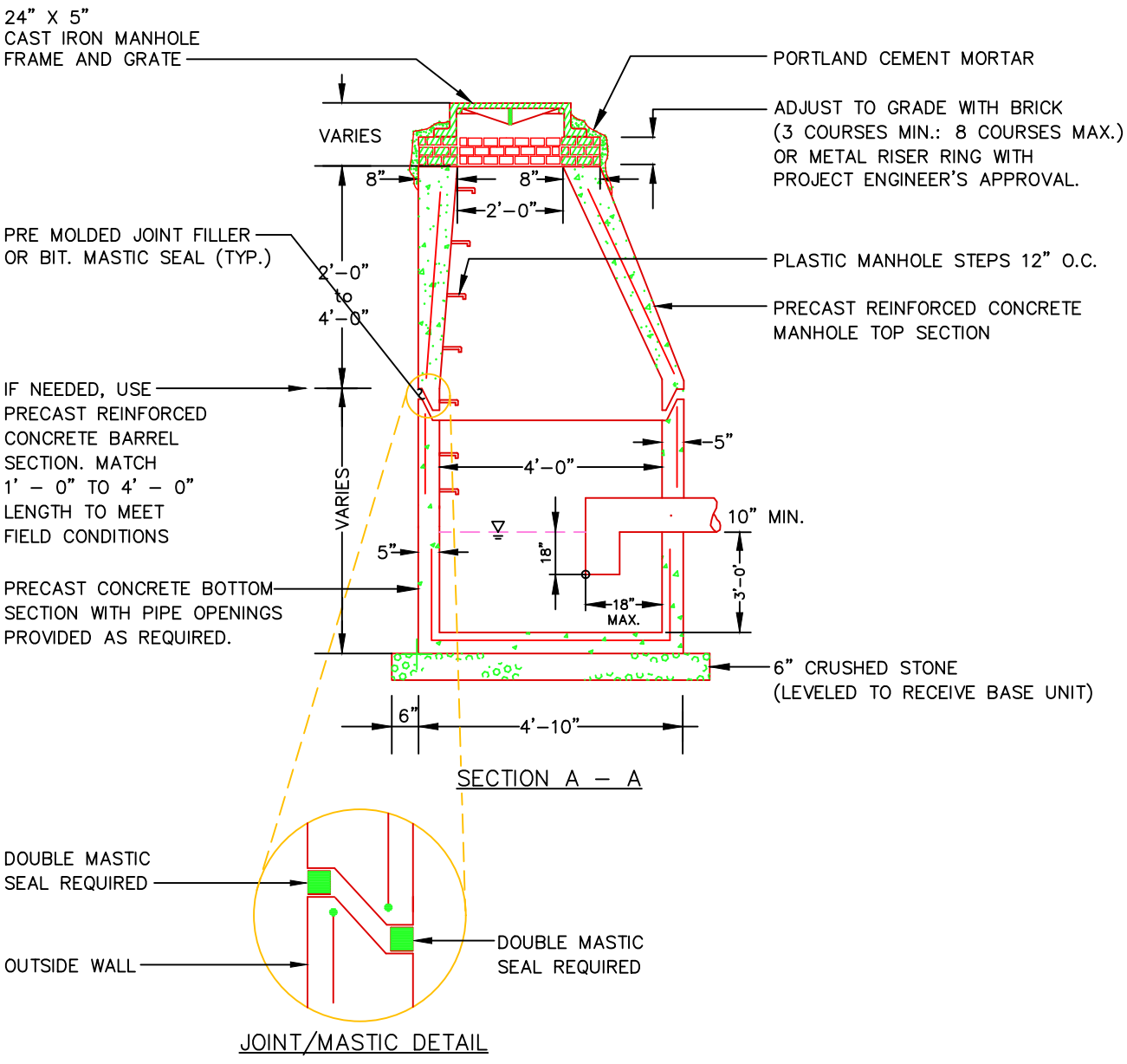


1000 GALLON GREASE INTERCEPTOR

DATE: APRIL 2014 REVISED:	CITY OF PORTLAND, MAINE TECHNICAL STANDARDS MANUAL	**SANITARY SEWER AND STORM DRAIN DESIGN STANDARDS** SECTION II	FIGURE: II-19
	EXTERNAL GREASE TRAP DESIGN		

NOTES:

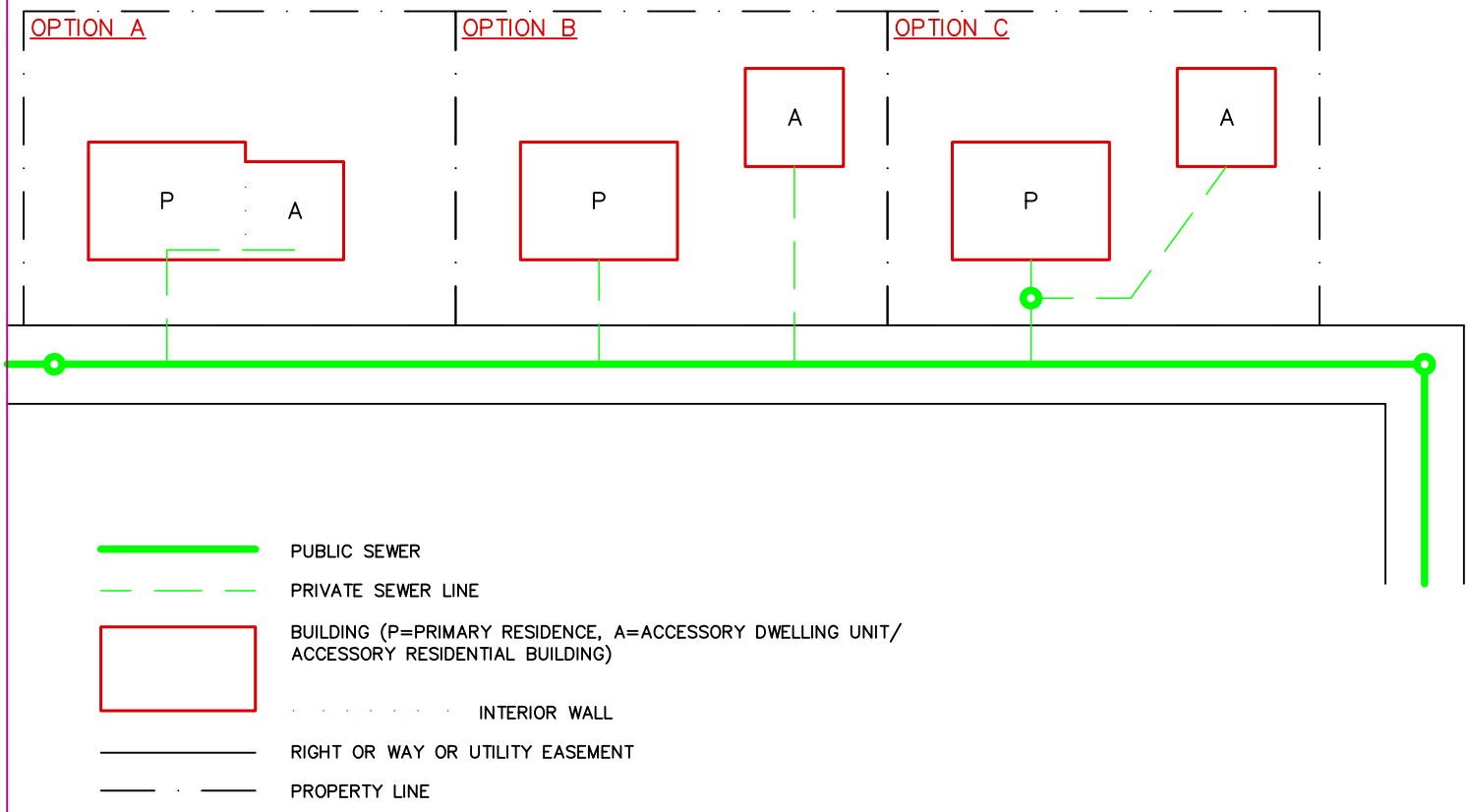
- FOR USE IN PARTIALLY OR TOTALLY ENCLOSED PARKING GARAGES, AUTOMOTIVE REPAIR FACILITIES OR ANY OTHER PROPOSED STRUCTURE WHERE DEEMED APPROPRIATE BY THE CITY ENGINEER.
- DISCHARGE SHALL BE TO SANITARY SEWER.
- A VENT PIPE MAY BE REQUIRED THAT HAS A VERTICAL OUTLET OFF TO THE SIDE OF THE STRUCTURE.
- AN OIL ABSORBENT BOOM IS REQUIRED TO BE PLACED WITHIN THE MANHOLE ON THE WATER SURFACE AND REPLACED AT A MINIMUM ANNUALLY.



OIL / GRIT SEPARATOR

NOT TO SCALE

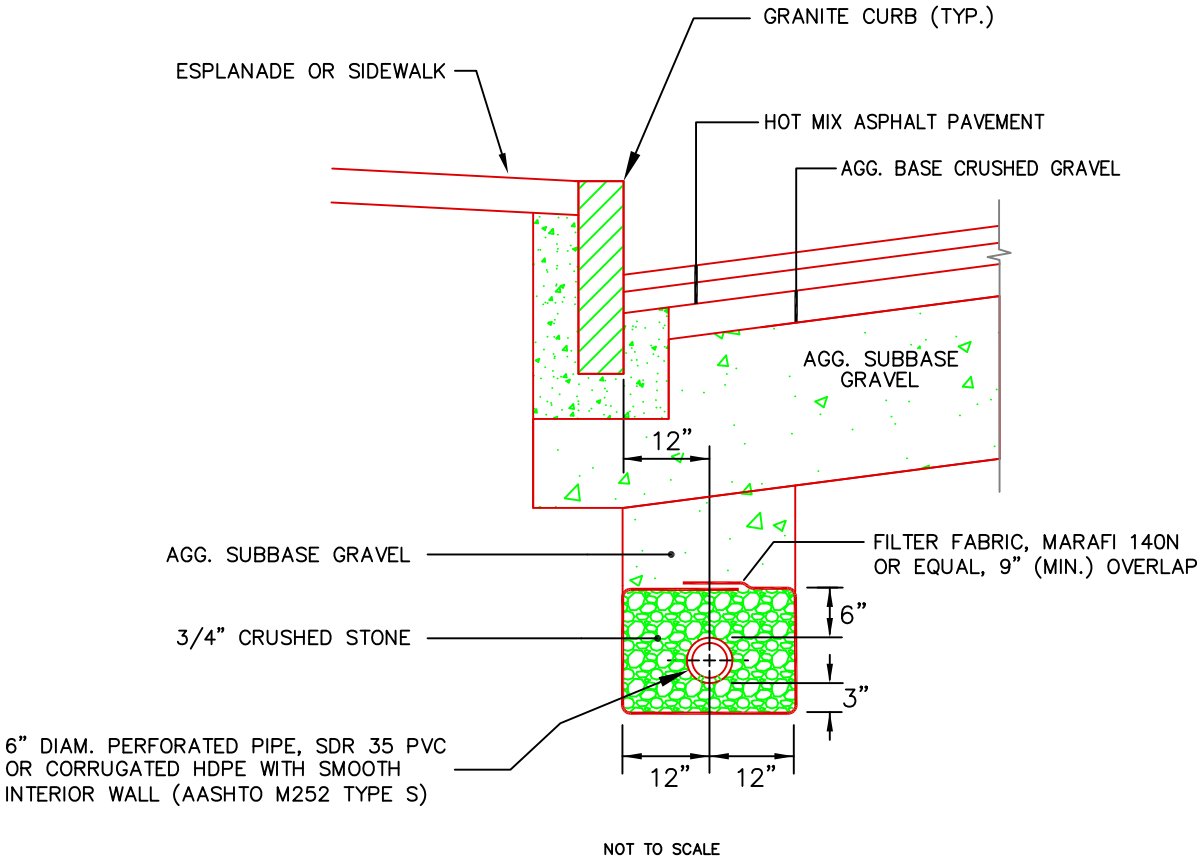
DATE: FEB 2015 REVISED: AUG 2022	CITY OF PORTLAND, MAINE TECHNICAL STANDARDS MANUAL	**SANITARY SEWER AND STORM DRAIN DESIGN STANDARDS** SECTION II	FIGURE: II-20
	OIL / GRIT SEPARATOR		



POTENTIAL SEWER LINE CONFIGURATION FOR PRIMARY RESIDENCES WITH AN ACCESSORY DWELLING UNIT

NOT TO SCALE

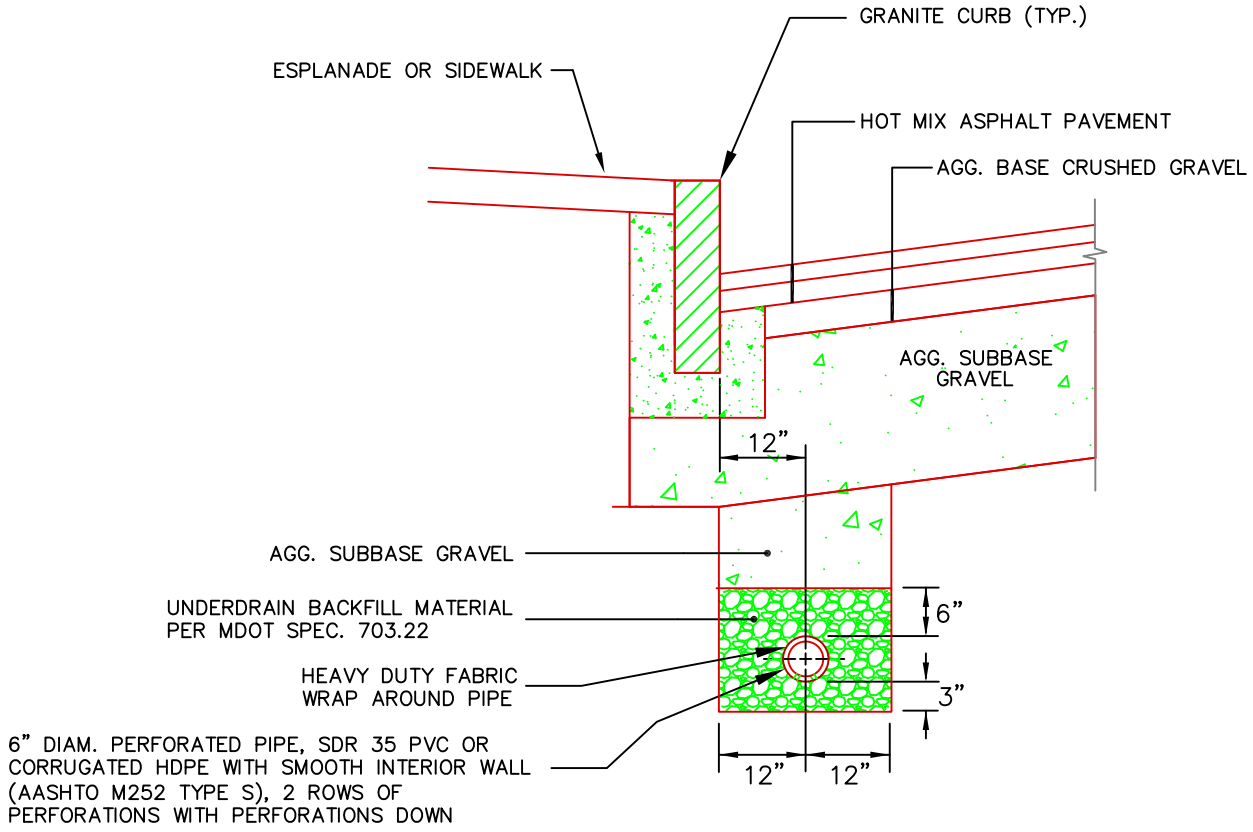
DATE: APRIL 2022 REVISED:	CITY OF PORTLAND, MAINE TECHNICAL STANDARDS MANUAL	**SANITARY SEWER AND STORM DRAIN DESIGN STANDARDS** SECTION II	FIGURE: II-21
	SEWER LINE CONFIGURATIONS FOR PRIMARY RESIDENCES WITH AN ACCESSORY DWELLING UNIT		



NOT TO SCALE

NOTES
1. UNDERDRAIN PIPE INVERT ELEVATIONS SHALL BE AT LEAST 42 INCHES BELOW GUTTER GRADES.
2. PERFORATIONS IN UNDERDRAIN PIPE SHALL BE ORIENTED DOWN.

DATE: AUGUST 2009 REVISED: AUG 2022	CITY OF PORTLAND, MAINE TECHNICAL STANDARDS MANUAL	**SANITARY SEWER AND STORM DRAIN DESIGN STANDARDS** SECTION II	FIGURE: II-22
	TYPE "B" UNDERDRAIN INSTALLATION ALTERNATIVE A		



NOT TO SCALE

NOTES
1. UNDERDRAIN PIPE INVERT ELEVATIONS SHALL BE AT LEAST 42 INCHES BELOW GUTTER GRADES.
2. PERFORATIONS IN UNDERDRAIN PIPE SHALL BE ORIENTED DOWN. THE PIPE SHALL BE FURNISHED WITH A HEAVY DUTY FABRIC WRAP, SUCH AS "FILTER SOCK" BY ADS.

DATE: AUGUST 2009 REVISED: AUG 2022	CITY OF PORTLAND, MAINE TECHNICAL STANDARDS MANUAL	**SANITARY SEWER AND STORM DRAIN DESIGN STANDARDS** SECTION II	FIGURE: II-23
	TYPE "B" UNDERDRAIN INSTALLATION ALTERNATIVE B		

3. PUBLIC SAFETY STANDARDS

3.1. CRIME PREVENTION THROUGH ENVIRONMENTAL DESIGN (CPTED) PRINCIPLES

3.1.1. Natural Surveillance: Site plans shall be designed so that they create formal and informal natural surveillance networks on the site to increase on-site visibility and the safety of legitimate users and to deter potential offenders.

a. Physical Features – The placement and design of physical features shall maximize visibility to allow for surveillance opportunities to and from site features such as entrances and exits, walkways, assembly areas, corridors, stairways, windows, parking lots, landscaping, fences or walls, and any other physical attributes.

b. Lighting – The lighting of the site and building shall meet the City's technical standards for site lighting, as detailed in Section 12 of this manual, and enable users to observe movement and activities on the site during the day and at night. Motion sensor activated lighting is permitted to provide adequate illumination of the site at night while still complying with applicable lighting curfew standards of Section 12 of the Technical Manual. Specifically, the lighting plan should satisfy the following criteria:

i. Create nighttime illumination of pedestrian travel paths and gathering areas, entrances and exits, and parking lots and garages by achieving the following:
   - Provide a clear view of an area from a distance and enable anyone moving in or immediately around it to be easily seen.
   - Deny potential hiding spaces adjacent to existing and proposed pedestrian travel routes.
   - Permit facial identification at a distance of at least 30' and create the perception of being identified.

c. Mechanical Surveillance Systems – If necessary, mechanical surveillance systems such as CCTV may be installed to monitor areas not easily observed such as parking lots and garages.

3.1.2. Access Management**:** Site plans shall be designed to provide visible pathways and to offer proper guidance for legitimate users to access the site and to discourage unauthorized use of the site.

a. Orientation and Wayfinding – The site shall be designed so that the layout, features and/or signage clearly guide the movement of vehicles and pedestrians along safe and predictable paths both during the daytime and nighttime. Specifically, the site plan shall satisfy the following criteria:

- Placement of signage, lighting fixtures, landmarks, and landscape design features shall clearly guide users to and from the facility.
- Site features shall be designed to avoid the creation of entrapment zones that afford users no opportunity to escape or retreat from an approaching hazard.

b. Mechanical Access Control – If necessary, mechanical access control systems may be implemented such as assigning personnel at key building entry points or establishing other procedures such as mechanical auto closing devices, key cards, gates and other locking devices.

3.1.3. **Territorial Reinforcement:** Proposed developments shall be designed to clearly delineate private, semi-private, and public space.

3.2. FIRE HYDRANT STANDARDS

3.2.1. All development constructed within the limits of the City of Portland shall have a hydrant within five hundred (500') feet of all structures.

3.2.2. All hydrants, private and public, shall comply with city code Chapter 10 and Portland Water District standards.

3.2.3. Private hydrants shall be maintained by the property owner. A maintenance agreement, or other documentation if deemed acceptable by the Reviewing Authority, shall be required for all private hydrants. A follow-up will be conducted and a financial penalty will be levied for non-compliance. All compliances shall meet city code Chapter 10, which adopts by reference National Fore Protection Association (NFPA) #1 and #101.

3.2.4. A 6 ft. clear space shall be maintained around the circumference of fire hydrants, private or public, except as otherwise required or approved.

3.3. SINGLE AND TWO FAMILY RESIDENTIAL DEVELOPMENT

3.3.1. As of September 16, 2010 all new construction of one- and two-family homes are required to be sprinkled in compliance with adopted NFPA code.

3.4. SITE ACCESS STANDARDS

3.4.1. Every dead-end roadway more than one hundred fifty (150') feet in length shall provide a turnaround at the closed end. Turnarounds shall be designed to facilitate future street connectivity and shall always be designed to the right (refer to Figure I-5).

3.4.2. Where possible, developments shall provide access for Fire Department vehicles to at least two sides of all structures. Access may be from streets, access roads, emergency access lanes, or parking areas.

3.4.3. Building setbacks, where required by zoning, shall be adequate to allow for emergency vehicle access and related emergency response activities and shall be evaluated based on the following factors:

- Building Height.
- Building Occupancy.
- Construction Type.
- Impediments to the Structures.
- Safety Features Provided.

3.4.4. Fire Dept. access roads shall extend to within 50' of an exterior door providing access to the interior of the structure.

3.4.5. Site access shall provide a minimum of nine (9) feet clearance height to accommodate ambulance access.

3.4.6. Elevators shall be sized to accommodate an 84 x 24 inch stretcher.

3.4.7 Street name and street numbering shall be determined during development / subdivision review and shall comply with Portland's 911 numbering system.

3.4.8. All structures are required to display the assigned street number. Numbers shall be clearly visible from the public right of way.

3.5. STANDARDS FOR EMERGENCY ACCESS LANES AND GATES

3.5.1. No inside turning radius shall be less than twenty-five (25') feet.

3.5.2. No outside turning radius shall be less than one hundred (100') feet.

3.5.3. New emergency access lanes shall be a minimum of sixteen (16') feet wide but may be required to be up to twenty (20') feet wide where one or more of the following conditions occur:

- The access is likely to be used by Fire Department ladder trucks to set up for buildings adjacent to the lane or;
- The access lane is likely to be used by Fire Department Engine companies to set up pumping operations to fight a fire at buildings adjacent to the

lane.

3.5.4. Access lanes shall be engineered and maintained to support the weight of emergency vehicles during all weather conditions.

3.5.5. Appropriate “No Parking” signs shall be posted in accordance with instructions from the Fire Department having jurisdiction, and a method of enforcing such provisions shall be provided.

3.5.6. All gates shall be located a minimum of thirty (30’) feet from the public right-of-way and shall open inward to the site.

3.5.7. Fire department personnel shall have ready access to locking mechanisms on any gate restricting access to a fire lane. Proposed changes to access shall be pre-approved by the Reviewing Authority.

3.5.8. The clear opening provided through all gates shall be two (2’) feet wider than the traveled way.

3.5.9. Blockading of any emergency lane shall be done by gates which are secured by chain and padlock. Padlocks shall be a “Knox” lock.

3.5.10. Emergency lanes shall be maintained and made accessible for emergency use at all times. No parking of vehicles or other use that might obstruct the emergency access lane shall be permitted. An access maintenance agreement or other suitable document acceptable to the Reviewing Authority shall be required (please refer to attached model access maintenance agreement at the end of this section).

3.5.11. The use of automatic gates such as the “Click2enter” systems requires prior approval from the Reviewing Authority.

3.5.12. Reserved

3.6. SUBDIVISION STANDARDS

3.6.1. Subdivisions shall comply with the following minimum street access requirements:

- 1-34 units: A single access road.
- 35-67 units: Two (2) access roads or a single access road and an emergency access lane.
- 68 or more units: Two (2) access roads.

3.6.2. Where residential units are provided with an approved sprinkler system designed to NFPA #13D, the following minimum street access requirements shall apply:

- 1-67 units: One (1) access road.
- 68-99 units: One (1) access road and an emergency access lane.
- 100 units or more: Two (2) access roads.

3.6.3. All planned building groups shall meet the requirements of NFPA 1141.

3.6.4. Reserved.

3.7. STANDARDS FOR BLASTING AND REGULATION OF EXPLOSIVES

3.7.1. Definitions

Small Blast: Trench blast or removal of under fifty (50) cubic yards of rock material.
Medium Blast: Removal of 50-300 cubic yards of rock material.
Large Blast: Removal of over 300 cubic yards of rock material.

3.7.2. Submittal Requirements:

3.7.2.1. All Blast Operations:

Applicants for all blasting operations shall obtain a blasting permit from the Planning and Urban Development Department prior to any blasting. Application forms may be obtained through the Inspections Division or can be downloaded from the City of Portland website.

3.7.2.2. Medium Blast Operations:

For medium blast operations, the blasting contractor will also be required to submit a blasting submittal with the blasting application form. The blasting submittal must include, at a minimum, the following information:

- Description of Test Blast, Drill Pattern
- Description of Production Blasting, Drill Pattern
- Explosives to be used during wet and dry conditions
- Stemming material and depth
- Description of matting used to prevent fly rock
- Description and location of blasting signs
- Type of seismograph to be used
- Description of proposed transportation and storage of explosives
- Signature of blasting contractor testifying to the accuracy of the above information

3.7.2.3. Large Blast Operations:

For large blast operations, the blasting contractor will also be required to submit a drilling pattern and loading plan, referred to herein as a blasting plan, with the blasting application for review and approval. Blasting plans must be submitted at least two weeks prior to the start of any drilling and/or blasting operations. A model blasting plan is provided at the end of this section and shall include, at a minimum, the following information:

- The sequence and schedule of blasting rounds, including a general description of the proposed approach for developing each bedrock excavation area.
- A diagrammatic description of the typical blast pattern to be used,

including pre-splitting pattern if pre-splitting is required.

- Diameter, spacing, burden, depth and orientation of each drill hole relative to the "free face", along with details of the delay pattern.
- A diagrammatic description of the loading plan for a typical production hole including charge weights and distribution of primer, explosives and stemming within a typical hole.
- Estimation of ground vibration levels at nearest adjacent structures.
- Written evidence of the licensing, experience, and qualifications of the blaster who will be responsible for loading and firing each shot.
- A listing of the number and type of instrumentation proposed to be used to monitor vibrations and airblast overpressures.
- Safety procedures, security measures, and warning sequences.

3.7.3. Pre-Blast Survey

Pre-blast surveys are required for all blasting operations. The blasting contractor will hire an independent seismologist or blasting consultant to perform pre-blast surveys on all structures (contingent upon property owner agreement) within the distances specified below. The independent seismologist or blasting consultant shall not be an employee of the contractor, subcontractor, explosives manufacturer, or explosives distributor.

Size of Blast	Scope of pre-blast survey
Small Blast	Within 250 feet of the perimeter of the blasting site
Medium Blast	Within 500 feet of the perimeter of the blasting site
Large Blast	Within 600 feet of the perimeter of the blasting site

3.7.3.1. Pre-Blast Survey Offer Notice:

Prior to commencement of the pre-blast surveys, the contractor shall provide the following documentation to the Planning and Urban Development Department:

- A list of property owners to be contacted (in accordance with the distances listed in the table, above).
- Verification that the subject property owners were notified of the pre-blast survey work.
- A copy of the pre-blast survey offer notice.
- Whether each offer to conduct a pre-blast survey was either accepted, rejected, or there was no response.

The contractor shall retain a copy of each pre-blast survey offer notice for their records until the development project receives a final certificate of occupancy or is otherwise deemed complete by the City. Nothing herein shall be construed to discourage repeated efforts by the blasting contractor to contact eligible property owners via phone, hand delivery, or other method in addition to provision of the required offer notice letter.

3.7.3.2. Pre-Blast Survey Documentation:

All pre-blast surveys shall include documentation of interior subgrade and above grade accessible walls, ceilings, floors, roof and visible exterior as viewed from the grade level. Where significant cracks or damage exist, or for more complex structural defects, photographs or video shall be taken.

A high- quality videotape survey with appropriate audio description of the locations, conditions, and defects may substitute for a written pre-blast survey. Where necessary, notes and sketches may also be submitted as part of a video pre-blast survey in order to highlight or elaborate on certain aspects of the video documentation.

3.7.3.3. Pre-Blast Survey Conditions Report:

The pre-blast surveys shall include a conditions report for each property. The conditions report may be presented as narrative, photographs, video or a combination thereof. Conditions reports shall summarize the condition of each building and define areas of concern, including deteriorated structures or utilities, structures housing sensitive equipment, and/or manufacturing processes that are sensitive to vibrations.

3.7.3.4. Verification:

Verification that all pre-blast surveys and conditions reports have been completed shall be submitted to the Planning and Urban Development Department at least two weeks prior to commencing any drilling and/or blasting operations.

3.7.4. Notification to Neighbors

Notice of blasting operations shall be provided in accordance with the requirements listed in Section VIII of the Land Use Code. For medium and large blasts, please also refer to the additional notification requirements during construction, described in Section 3.7.8 of this section (*Blasting Schedule*).

3.7.5. Complaint Protocol

The blasting contractor shall be solely and completely responsible for the safety of all persons and property during the performance of work. The blasting contractor shall have full and complete responsibility for the handling, discharging, or settling of any and all damage or annoyance claims resulting from the blasting activities on the project.

Complaints may be submitted to the Blasting Contractor and to the Planning and Urban Development Department or to the Fire Department throughout the duration of blasting operations. If a property owner submits a complaint regarding alleged blasting- related damages, the independent seismologist or blasting consultant shall meet with the property owner within 24 hours of receiving the complaint to discuss the basis for the complaint, review applicable blasting

records, and evaluate the reasonableness of the complaint. If a reasonable basis for the complaint is verified, the independent seismologist or blasting consultant shall conduct a second condition survey of the property within 48 hours of receiving the complaint to identify any changes in the property conditions. A condition survey report summary shall be submitted to the Applicant, and verification that the condition survey was completed shall be submitted to the Planning and Urban Development Department within two weeks of the second condition survey being conducted.

3.7.6. Hours of Blasting and Storage of Explosives

3.7.6.1. Hours of blasting operations shall be limited to those defined in Chapter 14, Section VIII, *Regulation of Explosives* of the City Code of Ordinances.

3.7.6.2. Only the amount of explosives necessary for the day's work shall be brought to the site, and explosives shall be transported and stored in approved magazines when not in use.

3.7.7. Blast Warning

3.7.7.1. International Blast Warnings shall be utilized for all blasting operations, as described below:

3 horns	5 minutes before blast
2 horns	1 minute before blast
1 horn	All clear

3.7.7.2. Large Blasts:

For large blasts, all persons within 600 feet of the blasting area shall be notified of the "warning" and "all-clear" signals through notices left in mailboxes and signs posted in the vicinity of the blasting site.

3.7.8. Blasting Schedule (Medium and Large Blasts, only)

For medium and large blasts, the blasting contractor shall prepare and submit a blasting schedule to the property owner, the general contractor and the Planning and Urban Development Department at least 10 business days prior to commencing blasting operations. The schedule shall include name and contact information for the blasting contractor, blasting area locations, planned dates and times of blasts, access restrictions to the blast areas, and warning signal protocols.

During construction, the blasting contractor shall coordinate the blasting schedule with the property owner, the general contractor, the Planning and Urban Development Department and the Fire Department on a weekly basis.

The morning of a planned detonation, the blasting contractor shall notify the Fire Department and the Planning and Urban Development Department of the planned time of the blast (+/- one hour), the location where the blasting is to occur, and the amount of explosives to be used.

At least 24 hours prior to any blast, the blasting contractor shall inform all property owners who requested notice of the blasting schedule (+/- one hour).

3.7.9. Vibration Limits and Ground Vibration Monitoring

The seismograph must be set up at the closest structure to record each blast event. Ground vibration from all blasting operations shall be measured in terms peak particle velocity (inches per second, ips) and frequency (Hertz). The permissible maximum ground vibration at existing nearby structures shall be limited to values established by the U.S. Bureau of Mines[3] to avoid cracking or structural damage in residential structures. Particle velocity shall be recorded in three mutually perpendicular directions. Ground vibration for residential structures shall not exceed the following limits:

Type of Structure	Maximum PPV (ins/s)	
	Frequencies below 40 HZ	Frequencies 40 HZ or greater
Modern Homes (drywall interior)	.75	2.0
Older Homes (Plaster on wood lath for interior walls)	.50	2.0

Deteriorated structures or utilities, structures housing sensitive equipment, and/or manufacturing processes that are sensitive to vibrations may require lower PPV limits than those listed above. If information obtained from the pre-blast surveys indicates lower limits are required for certain structures, the independent seismologist or blasting consultant shall identify the limits applicable to a specific structure, and the blasting contractor shall incorporate such provisions in the features of the blasting plan.

In the event the blasting contractor's blasting round results in ground vibrations closely approaching the stated limits, the blasting operations shall be modified to reduce ground vibrations.

In the event the blasting contractor's blasting round results in ground vibrations exceeding the stated limits at structures, the blasting contractor shall cease all blasting activities and submit a written report to the property owner and the general contractor, copied to the Planning and Urban Development Department and the Fire Department. This report shall describe corrective action to be taken on the next shot. The next shot shall not be loaded until the property owner and the general contractor acknowledge, in writing, copied to the Planning and Urban Development Department and the Fire Department, that a design change is being attempted.

[3] United States Bureau of Mines. *Structure Response And Damage Produced By Ground Vibration From Surface Mine Blasting*. Prepared by D.E. Siskind, M.S. Stagg, J.W. Kopp, and C.H. Dowding, Report of Investigations #8507, Appendix B, 1980.

3.7.10. Flyrock Control (Large Blasts, only)

For large blasts, blasting mats, soil, or other equally serviceable material shall be utilized for all blast rounds to prevent the throw of flyrock from the blasting area.

3.7.11. Pre-Blast Safety Meeting (Medium and Large Blasts, only)

For medium and large blasts, prior to any blasting the blasting contractor will conduct a pre-blast safety meeting with all contractors to familiarize them with blast signals and precautions.

3.7.12. Test Blasts (Large Blasts, only)

For large blasts, prior to commencing full-scale blasting, the blasting contractor shall demonstrate the adequacy of the proposed blasting plan by drilling, blasting, and excavating short test sections using small charges and the required monitoring instruments. The blasting contractor shall develop site specific scaled distance relationships from the test blast rounds to determine the allowable charge weight of explosives to be detonated per delay.

3.7.13. Personnel

All employees of the blasting contractor working on site during the blasting operation shall be trained in the use and handling of explosives.

3.7.13.1. Large Scale Blasts:

For large scale blasts, the blasting contractor shall be required to carry liability insurance (XCU) coverage in an amount no less than $2,000,000.

For large blasts, the blasting contractor shall a company specializing in the use of explosives for breaking rock and licensed in the State of Maine. The blaster or foreman responsible for the loading and firing of each shot, as well as the person responsible for designing and directing the blasting operation, shall have at least five years of documented experience with similar work responsibilities. If controlled blasting methods are required, these individuals shall have at least five years of documented experience in controlled blasting techniques.

At least two weeks prior to the commencement of pre-blast surveys, the contractor will submit the name and qualifications of the independent seismologist or blasting consultant proposed to conduct the pre-blast surveys to the Planning and Urban Development Department and the applicant, if other than the blasting contractor.

At least two weeks prior to the commencement of drilling and blasting operations, the contractor will submit to the City of Portland and applicant the name and qualifications of the independent seismologist or blasting consultant proposed to monitor and report blasting vibrations.

3.7.14. Record Keeping and Reporting

3.7.14.1. For large blasts, Blast monitoring and analysis shall be conducted by the independent seismologist or blasting consultant. A minimum of two (2) seismograph instruments will be used to monitor vibrations and airblast pressures for each blast. The seismographs used by the seismologist or blasting consultant for blast monitoring shall comply with the following requirements:

- Velocity range: 0.005 to 10.0 inches per second.
- Seismic frequency range: 2 to 250 Hz, within zero to -3 dB of an ideal flat response.
- Acoustic frequency range: 2 to 250 Hz flat, -3 dB at 2 Hz ± 1 dB.
- Sound range: 100 to 140 dB (linear).
- Measure, display, and provide a permanent time history record of the event, including both ground vibration and airblast.
- Measure the three mutually perpendicular components of particle velocity in directions vertical, radial, and perpendicular to the vibration source.
- The seismograph shall display and provide a record of:
  - the date and time of the event
  - identifying information concerning the company
  - the location of the seismograph and of the blast
  - trigger levels
  - verification the instrument was set for “continuous” and not “manual” readings
  - instrument serial number
  - the date of the most recent calibration
- The seismograph shall be calibrated as often as necessary, but at least once every 12 months, and must be performed to a standard traceable to the National Institute of Standards and Technology.

Blast monitoring data obtained by the independent seismologist or blasting consultant must be available for inspection on the blasting site, be submitted in writing to the Applicant within 24 hours following each blast, and be submitted to the Planning and Urban Development Department on a weekly basis. A model blast monitoring report is included at the end of this section.

3.7.14.2. Blasting Log:

A blasting log summarizing details of the round as shot, weather conditions, proximity of the blast location to nearest structures, exact locations of monitoring instruments, and the results of blast monitoring at each instrument location shall be maintained daily for every blast. The blasting log shall be available for inspection on-site, shall be submitted in writing to the Applicant within 24 hours following each blast, and shall be submitted to the City on a weekly basis.

3.7.15. Airblast Overpressure Limits

The peak airblast overpressure at any inhabited building not owned or controlled by the developer shall not be allowed to exceed 133 decibels (linear) when measured by an instrument with a high pass system and a lower frequency limit of 2 Hz.

The seismologist or blasting consultant shall monitor, record, analyze and report airblast pressure resulting from the blasting activities. In the event the blasting contractor's blasting round results in airblast overpressures approaching the stated limits, the Applicant may require the blasting contractor to modify the blasting operations to reduce airblast overpressures. In the event the blasting contractor's blasting round results in airblast overpressures exceeding the stated limits at structures, the blasting contractor shall cease all blasting activities and submit a written report to the Applicant, and copied to the City. This report shall discuss the corrective action to be taken on the next shot, and the next shot shall not be loaded until the Applicant acknowledges, in writing, that a design change is being attempted.

3.7.16. Carbon Monoxide (CO) Control

If any blasting operations are to occur within two hundred and fifty (250) feet of any structure, the blasting company shall:

- Submit a carbon monoxide (CO) management plan to the Planning and Urban Development Department with the Blasting Application for review and approval. The plan shall detail strategies that will be employed by the blasting company throughout blasting operations to prevent and mitigate the health and safety risks associated with possible CO migration away from the blast site and into abutting structures. CO management plans shall be tailored to the specific nature of blasting operations but shall include, at a minimum, two or more of the following actions:

    - Effort to determine the presence and location of one or more operable Carbon Monoxide detector(s) within abutting structures. Where operable Carbon Monoxide detectors are not present, they shall be temporarily provided and placed in the basement of the structure, or on the first floor if there is no basement, until at least 24 hours after completion of blasting operations.
    - Immediate excavation of individual shots, with holes remaining vented for an adequate time to allow any CO produced by the blast to dissipate into the atmosphere. Safe CO levels in the blast hole shall be confirmed by a CO detector before the hole is backfilled.
    - Identify and document active and abandoned sewer connection locations and sealed drains locations for abutting

structures as part of the pre-blast survey in order to identify structures that may pose an increase risk for CO migration. This information is available through the City of Portland Department of Public Services.

- Notify all commercial and residential abutters of the blast site at least 24 hours prior to the start of blasting by means of door hangers left at both front and rear primary building entrances. Reasonable effort shall be made to also provide face-to-face notification to all building owners and/or occupants of abutting buildings. Door hangers shall be provided to the blasting company by the City of Portland and are available through the Fire Department or the Inspections Division. The language provided on the door hangar is provided at the end of this section.

If a carbon monoxide detector is in alarm during blasting operations, the blasting company or building occupant shall call 911 immediately. In addition to calling 911, the blasting company shall contact the Fire Department at (207) 874-8405 to notify them of the emergency. The blast location shall be excavated immediately and shall remain open to the atmosphere until CO is no longer detectable in the blast hole.

3.8. MODEL BLASTING PLAN

Removal of over 300 cubic yards of rock material

The purpose of the Blasting Plan is to describe anticipated rock excavation requirements for the project, and outline proposed blasting operations, vibration control criteria, and monitoring/reporting protocols, and to protect surrounding properties from damage related to proposed blasting activities.

1. Project:

2. Project Location:

3. Estimated Quantity (cubic yards in-ground measurement) of Rock to be Blasted:

4. Project Description
Describe the project for which blasting is required. Include lot size, building construction type, number of units, etc. Refer to site/grading plans. Specify anticipated depth of fills and cuts.

5. Site and Subsurface Conditions
Provide a detailed description of the site, including but not limited to existing conditions, elevations, terrain character, topography, soil conditions, groundwater depths, depth of bedrock, etc.

6. Surrounding Properties, Utilities and Wells
Describe surrounding properties, specifying use and type of construction. Include a vicinity map with the outlines of existing structures located within a site radius equal to the minimum radius required for pre-blast condition surveys.

Indicate the location of all utilities in the vicinity, including water, sewer, stormwater, and natural gas.

Indicate the location of drinking wells in a 2000ft radius of the property.

7. Anticipated Project Areas Requiring Blasting
Indicate on a site plan the areas where blasting is expected to occur. Provide a narrative characterizing the blasting/excavation work, the estimated total number of cubic yards of material to be removed by blasting, and an estimate of the number of blasts required to remove the specified amount of material.

Include a proposed Bedrock Excavation Plan showing approximate bedrock excavation areas, variations in the depth of bedrock excavation requiring blasting, and areas where controlled perimeter blasting methods will be used (if any).

Describe the distance of proposed blasting to the nearest structures and underground utilities.

Attachments:
A. Site Plan
B. Radius Plan
C. Proposed Bedrock Excavation Plan
D. Model Notification Letter
E. Model Offer of Pre-Blast Survey Notice
   Blasting Log
F. Model Blast Monitoring Report

3.9. MODEL NOTIFICATION LETTER

Date

Dear Neighbor:

We are sending you this letter to inform you that we will be blasting ledge in preparation for the _____project on _____Street.

As required by City Ordinance, prior to any blasting, neighbors within (250, 500, 600)feet of the blast area shall be notified in writing prior to the blast.

We will begin blasting on _____. We expect the blasting to last for _____. By City Ordinance, blasting will occur between 9:00am – 4:00pm, Monday through Friday.

The procedure for the blast will be as follows: Just before the blasting is due to begin, a horn will sound to signal people in the immediate area of the upcoming blast. The horn will blow in the following sequence:

3 long horns – 5 minutes before the blast
2 long horns – 1 minute before the blast
1 long horn - All clear for the blast to proceed.

Please Note: Toxic gases, including carbon monoxide (CO), are a byproduct of the detonation of explosives. Carbon monoxide is a poisonous, colorless, odorless, and tasteless gas. Exposure to raised levels of carbon monoxide can be hazardous or deadly. It is possible, in instances of incomplete combustion of explosives and where an open pathway is present, for carbon monoxide to travel from the blast site into nearby buildings. The Portland Fire Department encourages all Portland residents to install carbon monoxide detectors in their homes and workplaces to prevent exposure to hazardous levels of carbon monoxide. Carbon monoxide detectors should be installed in the basement or on the first floor of structures.

If you have any questions, please call any of the following numbers:

Blasting Contractor	_____
City of Portland Fire Prevention Bureau	(207) 874-8405
City of Portland Development Review Coordinator	(207) 874-8719
City of Portland Inspections Division	(207) 874-8703

For damage complaints, please call the Fire Prevention Bureau at (207) 874-8405 to log the complaint and request inspection and documentation of the damage.

Please do not hesitate to call if you have any questions or concerns.

Sincerely,

Blasting Contractor

3.10. MODEL OFFER OF PRE-BLAST SURVEY NOTICE

Date

Dear Neighbor:

We are sending you this letter to inform you that we will be blasting ledge in preparation for the _____project on _____Street.

As required by City Ordinance, prior to any blasting, a pre-blast survey of all structures within (250, 500, 600)feet of the blast area shall be conducted to establish a base line against which any claims of damage caused by this blasting can be judged.

Your property is within the (250, 500, 600) ft radius. A pre-blast survey will be performed at no cost to you if you would like to have it done.

To request that a pre-blast survey be done of your residence, please complete the enclosed survey form in its entirety and mail it back in the enclosed stamped envelope no later than_____.

Pre-blast condition surveys for this project will be performed by _____. A representative from _____ will call you to set up an appointment to perform the survey. A seismologist or a qualified technician working under the direction of a seismologist from _____ will then make a videotape of the interior and exterior condition of your residence. The pre-blast survey records will be kept in a locked file for a period of _____after the completion of blasting at which time they will be destroyed.

If you have any questions, please contact _____at _____.

Thank you,

Blasting Contractor

3.11. Door Hanger Model Language

Fact Sheet

This notice serves as a reminder that blasting operations will be occurring in your neighborhood in the next day or two. By now you should have also been notified in writing by the Blasting Company who will be doing this work. For the public's safety, theC ity of Portland requires contractors of blasting operations to monitor for the release of a ny carbon monoxide gas traveling into occupied buildings. This notice describes what c arbon monoxide is, identifies potential signs of carbon monoxide build-up and steps for y ou to follow.

What is carbon monoxide?

Carbon monoxide (CO) is an odorless, colorless gas that can cause sudden illness or death.

Where is CO found?

CO is found in combustion fumes, such as those produced by cars and trucks, small gasoline engines, stoves, lanterns, burning charcoal and wood, and gas ranges and heating systems. ***CO is also a byproduct of blasting operations in the ground***. CO from any of these sources can build up in enclosed or semi-enclosed spaces. People and animals in these spaces can be poisoned by breathing it.

Protection from CO

The best protection from CO poisoning is early detection through the installation of a working carbon monoxide detector in your home.

What are the symptoms of CO poisoning?

The most common symptoms of CO poisoning are headache, dizziness, weakness, nausea, vomiting, chest pain, and confusion. High levels of CO inhalation can cause loss of consciousness and death. Unless suspected, CO poisoning can be difficult to diagnose because symptoms mimic other illnesses. People who are sleeping or intoxicated can die from CO poisoning before ever experiencing symptoms.

Emergency Contact

If you or anybody in the building experiences any of the symptoms or your CO detector goes into alarm ***please call 911 immediately***.

If you have general questions regarding blasting operations in your neighborhood or carbon monoxide, please contact the Portland Fire Department Fire Prevention Bureau.

Portland Fire Department
Fire Prevention Bureau
380 Congress Street
Portland, ME 04101
874-8405

3.12. MODEL EMERGENCY ACCESS LANE MAINTENANCE AGREEMENT

IN CONSIDERATION OF the Subdivision approval granted by the Planning Board of the City of Portland to a plan entitled

dated , 20 and recorded in the Cumberland County Registry of Deeds in Plan Book , Page and pursuant to a conditions thereof,

_____

(Applicant, Nature of Applicant's Business-Corporation, Partnership or sole proprietorship and principal of business)

The owner of the subject premises, does hereby agree, for itself, its successors and assigns (the "Owner") as follows:

1. That the Owner shall be responsible for the maintenance and repair of, snow removal from, preservation of, and removal of obstructions and encumbrances including but not limited to debris, junked vehicles and other refuse, from the Emergency Access Lane depicted on the Plat (the "Emergency Access Lane") so that the Emergency Access Lane shall remain reasonably passable for fire-fighting and preventive apparatus and vehicles and other public emergency vehicles owned or operated by or on behalf of the City of Portland.

2. That the Owner shall remove snow from Emergency Access Lane so that at no time shall the snow accumulate thereto to an average depth in excess of four (4) inches and shall also remove snow from the Emergency Access Lane of a depth of less than four (4) inches if subsequent rain, hail or temperatures below thirty-two (32º) degrees Fahrenheit shall result in the snow accumulated on the Emergency Access Lane becoming so frozen as to render the Emergency Access drive impassable by such fire-fighting and public emergency vehicles. If the Owner shall fail to remove such non-frozen snow accumulating in excess of four (4) inches in depth within twenty-four (24) hours after the cessation of the storm creating such snow, or if the Owner shall fail to remove such ice within twenty-four (24) hours after ice has accumulated or formed to the state as to render the Emergency Access Lane impassable for said purposes, or if the Owner shall fail to remove said obstructions and encumbrances on the Emergency Access Lane (that are not the result of precipitation) which render the Emergency Access Lane (that are not the result of precipitation) which render the Emergency Access Lane impassable for said purposes within thirty-six (36) hours after such obstructions and up the Emergency Access Lane and adjacent land as necessary with men and machines in order to plow and clear, or cause to be plowed and cleared, such snow and ice and to remove said obstructions and encumbrances from the Emergency Access Lane and bill the Owner for the expense of the same. The City of Portland shall submit its itemized bill for such expenses to the Owner which the Owner shall pay to the City of Portland within sixty (60) days of receipt, or such longer period of time as the City of Portland shall agree to. The expenses billed to the Owner shall include the time spent for travel to and from the Property.

This Agreement shall bind the undersigned only so long as it retains any interest in said premises, and shall run with the land and be binding upon its successors and assigns as their interests may appear.

Date at Portland, Maine this ____ day of _____, 20__

(Applicant)

BY _____

Its

State of Maine

Cumberland, ss _____, 20

Then personally appeared the above named _____,

and acknowledged the foregoing instrument to be his free act and deed in his said capacity, and the free act and deed of said Corporation.

Before me,

_____

Notary Public/Attorney-at-Law

_____

(Print or Type Name)

*If the approval is of a site plan, this clause should read "IN CONSIDERATION OF THE SITE PLAN APPROVAL granted by the Planning Board of the City of Portland to a site plan entitled , dated FORMTEXT , 20 , and file with the City of Portland, Department of Planning and Urban Development, 389 Congress Street, Portland, Maine,…"

4. LANDSCAPING AND LANDSCAPE PRESERVATION STANDARDS

4.1. DEFINITIONS

Feature mature tree: A tree that meets at least one of the following criteria:

1.) Any tree that is on the Register of Big Trees promulgated by the Maine Department of Agriculture, Conservation & Forestry (the "Big Tree List")

2.) Certain trees 24" in diameter or greater (diameter at breast height or DBH) as identified by the City Arborist

3.) Ornamental trees 12" in diameter or greater (diameter at breast height or DBH) as identified by the City Arborist

4.) Rare tree specimen to include either a tree species classified as rare or endangered at either the state or federal level, and/or stands of native trees that are rare or threatened as identified by the City Arborist.

4.2. PRESERVATION OF SIGNIFICANT SITE FEATURES

The applicant shall clearly identify all significant natural features on the site, as defined in Article 14 of the Land Use Code, on the submitted boundary survey and site plan, and shall clarify the proposed measures for the preservation and protection of all such features both during and after construction.

4.3. PRESERVATION OF EXISTING VEGETATION

4.3.1. The applicant shall provide a tree survey performed by a licensed land surveyor, arborist, forester, or landscape architect. The tree survey shall clearly indicate forest type and the location, size and species of all existing trees 10" diameter at breast height (DBH) or greater on the site and in the right-of-way, and all feature mature trees on the site and in the right-of-way. For sites with a high density of existing trees, the survey shall identify all existing shade and ornamental trees that may have been part of a prior landscape scheme for the site and the location, average size and species of groves of trees, and individual trees greater than 16" DBH.

4.3.2. Trees or groups of trees to be preserved shall be inspected and approved by the City Arborist or their designee and shall be clearly identified on the Site Plan, Subdivision Plat, Landscape Plan and Grading Plan. Where required by the reviewing authority, property deeds shall include language and plans to help ensure that current and future landowners are aware of all preservation requirements tied to the property.

4.3.3. Tree preservation efforts shall include posted signs clearly identifying the 'Tree Protection Zones' or 'Limit of Work Zones'.

4.3.4. Fencing or other protective barriers and signage shall be erected outside the drip line of individual, groupings of or perimeter trees to be preserved.

- No storage of construction equipment, digging, trenching or other soil disturbance shall be permitted within the drip-line of trees to be preserved.
- Areas of trees or other vegetation to be preserved shall not be used for temporary stormwater runoff storage during construction.
- Protective barriers and signage shall remain in place until completion of the project.

During the pre-construction meeting and prior to the onset of any construction including site work, the Department of Public Works or their designee shall inspect all installed protective barriers.

4.3.5. Tree preservation locations and measures to protect preserved vegetation shall be identified or noted in detail on the Landscape Plan and cross-referenced on the Site Plan, Subdivision Plat and Grading Plan.

4.3.6. Upon completion of the project, plant material that has been designated for preservation shall be subject to the maintenance and inspection requirements outlined in this section. Preserved vegetation that show signs of construction damage within a one year period following construction, including but not limited to bark damage or excessive root damage, grade changes other than those originally indicated in the approved grading plan, soil compaction due to heavy equipment traversing closely, or general decline due to mechanical or natural conditions shall be rejected and must be replaced prior to the release of any defect guarantee. Any rejected tree will be subject to the following replacement requirements:

- For every existing tree rejected that is between 10” and 16” in caliper DBH, one (1) replacement tree listed on the City of Portland approved list (Figure IV-1) shall be planted on the site.
- For every existing tree rejected that is 16” or more in caliper DBH, two (2) replacement trees listed on the City of Portland approved list (Figure IV-1) shall be planted on the site.

4.3.7. The developer shall be responsible for making all contractors aware of preservation requirements prior to any construction activities. See Figure IV-2 for typical tree preservation detail.

4.3.8 Where a waiver is requested under the landscape preservation standards of the land use code and planting of replacement trees is not feasible, financial contributions proportionate to the cost of required replacement trees shall be as indicated below.

Contribution per required replacement tree	$400.00
Contribution per existing feature mature tree removed*	$100.00 per inch diameter
Contribution where applicant plants a tree to replace feature mature tree*	$100.00 per inch diameter of removed existing feature mature tree less $400.00

*In cases of removal of a feature mature tree, these contribution amounts supersede the base replacement tree fee of $400.

4.4. Reserved.

4.5. SITE LANDSCAPING

4.5.1. All landscape design: Site landscaping should establish attractive, low-maintenance outdoor spaces that incorporate site definition and screening and be selected to achieve one or more of the following outcomes; promote a healthy and biodiverse urban ecosystem, further City goals around climate resiliency and mitigation, create or enhance areas of native habitat, improve stormwater treatment, and/or increase local food production.

4.5.2. Screening and buffers: Where required, buffer areas shall be comprised of existing trees and vegetation, new landscaping or a combination thereof to create a dense, mixed buffer incorporating both understory and tree canopy layers. While primarily of benefit from a ground level pedestrian viewpoint, such screening should also effectively provide screening when viewed from upper floors of surrounding properties, where applicable. New shrubs shall be approximately three (3) feet in mature height and shall be spaced six (6) to eight (8) feet apart. Figure IV-3 provides an example of buffering between compatible uses.

Buffers between land uses: Buffers between contrasting land uses may incorporate earthen berms not exceeding 4:1 slope, opaque fencing of high architectural quality, masonry wall or a combination thereof, in addition to landscape plantings. Where fencing or masonry wall is proposed as part of a buffer, less landscaping density is acceptable; however, buffers shall still include trees, shrubs and other vegetation.

Buffers between site components: Landscaped buffers within the site shall complement and enhance structures and site amenities, provide screening between structures, and buffer undesirable views from general public areas, from existing structures and from residents of proposed units. Accessory site elements such as parking and loading areas, utility structures, dumpsters, storage areas and other hardscaped or unvegetated areas, shall be located and screened from view from public areas and adjacent properties. Screening shall be accomplished with opaque fencing of high architectural quality, masonry wall and/or dense evergreen landscaping. Where fencing or masonry wall is proposed as part of a buffer, less landscaping density is acceptable; however, buffers shall still include trees, shrubs and other vegetation. Figures IV-6 and IV-7 provide an example of screening of accessory site elements.

4.5.3. Industrial and commercial development: In addition to other requirements of the City Code and of this section, industrial and commercial developments shall incorporate landscaping that:

- Enhances proposed buildings with foundation plantings in the vicinity of public entrances to all buildings and in areas with uninterrupted or predominantly blank facades (Figure IV-5 provides an example of interior site landscaping).

- Defines roadways and driveway entrances.

4.5.4. Planned Residential Unit Development (PRUDs): Required trees to be planted and/or preserved shall separate and screen proposed buildings and separate and screen proposed recreational uses. Where cul de sacs are provided, landscaping consisting of native or adapted low maintenance vegetation shall be provided.

4.5.5. Parking areas: Landscaping shall be incorporated into the development of surface parking to reduce adverse environmental and aesthetic impacts, to shade pavement to reduce heat island effect and to screen parking areas from public view. Plant materials shall be selected for appearance, durability, and tolerance to salt. Figures IV-6a and IV-6b provide examples of parking lot screening.

Landscaping that abuts areas of vehicular use shall be adequately protected and separated from vehicles. Protection should take the form of physical or visual separation, such as curb stops, bollards, or continuous curbing. Protection shall be designed with adequate visibility and durability in order to withstand normal snow plowing operations.

Landscaped islands shall be curbed and a minimum of eight (8) feet in width, not including curbing. The incorporation of bioretention into landscaped islands is strongly encouraged.

4.5.6. Snow storage: Snow storage areas may be located in landscaped areas provided that appropriate landscape materials are selected which can withstand such snow storage. Snow storage shall not be located where it would adversely impact the functionality of bioretention or other stormwater management systems.

4.5.7. Walls and fences: Fences and walls within public view must be of high architectural quality. Chain link and wire mesh fences shall be vinyl coated, dark in color, out of direct public view and shall be complemented with landscaping.

- For residential development, chain link fence shall be a minimum of 6-gauge fence fabric.
- For commercial or industrial development chain link fence shall be 9-gauge fence fabric mounted on schedule 40 pipe posts.

Masonry walls shall be constructed of stone, brick or other durable and attractive materials.

Concrete block walls are not permitted except where variety in color, design and detailing of the materials are of high architectural quality. Electrified or barbed fencing is not permitted.

4.5.8. Slope stabilization: Stabilization of slopes between 5% and 50% shall incorporate installation of a mixture of vegetation, organic mulch and/or erosion control seed mix.

Stabilization of slopes greater than 50% must incorporate biotechnical and/or structural methods including but not limited to terracing rip rap or retaining walls in addition to vegetation. Retaining walls, if four (4) feet in height or greater from the bottom of the footing to the top of the wall and/or if supporting a surcharge, must be designed by a licensed engineer and require a City of Portland Building Permit.

4.5.9. Low Impact Development (LID) practices: It is the City's policy to encourage Low Impact Design (LID) strategies and practices to capture and infiltrate stormwater runoff. LID is the process of developing land to mimic the natural hydrologic regime. It incorporates land planning and design practices and technologies to achieve this goal. LID is also discussed in Section V of this Technical Manual.

LID strategies and practices relating to site landscaping requirements include but are not limited to bioretention, grassed filter strips, green roofs, rain gardens and vegetated swales.

4.5.10. Climate positive planting: Site landscaping should be selected in part to further

the City's goals around mitigating the effects of a locally changing climate, with consideration given to the viability of species in a warming environment, the equitable extension of tree canopy to address the urban heat island effect, and the use of landscaping elements to reduce energy consumption.

4.6. STREET TREES

Arrangement and spacing of trees proposed in the City right of way and/or private roadway, shall be coordinated with the Portland City Arborist or their designee. Tree species shall be selected according to the City of Portland recommended tree list (Figure IV-1). Trees proposed in the sidewalk shall be planted in tree wells~~,~~ as shown in Figures IV-4a, 4b, and 4c and as required by the City Arborist based upon site context and prospects for tree survival. Adequate soil volume to ensure tree survival shall also be required, as determined by the City Arborist.

4.6.1. Residential development:

Single-family residential: Single-family residential developments shall provide a minimum of two (2) street trees per unit, planted in the City right of way and/or along private roadways unless otherwise approved and spaced twenty-five (25) to thirty-five (35) feet on center.

Multi-family residential: Multi-family residential developments shall provide a minimum of one tree per unit, planted in the City right of way and/or along private roadways unless otherwise approved and spaced twenty-five (25) to thirty-five (35) feet on center.

Single-family residential subdivisions: Single-family residential subdivisions shall provide a minimum of two (2) trees per lot, planted in the City right of way and/or along private roadways unless otherwise approved and spaced twenty-five (25) to thirty-five (35) feet on center.

4.6.2. Planned Residential Unit Developments (PRUDs): Where a manufactured housing park or subdivision is also a planned residential unit development (PRUD), the development shall provide a minimum of two (2) street trees per unit, planted within ten (10) feet of the City right of way and/or private roadway proposed as part of the development.

4.6.3. Commercial, industrial and institutional development: Commercial, industrial and institutional developments shall provide street trees twenty-five (25) to thirty-five (35) feet on center in the City right of way along all street frontages unless otherwise approved.

4.6.4. Street tree alternatives: Section 14.6.2 of the Land Use Code states that where

the applicant can demonstrate that site constraints prevent the planting of required street trees in the City right-of-way and/or along private roadways, the review authority may permit the following to be counted towards the street tree requirement. The alternatives to a street tree in the right-of-way should help achieve the objectives of a street tree and contribute to the street environment. The following specifications are provided to guide the applicant; the acceptability of the alternative to a street tree shall be at the discretion of the City Arborist.

- Existing healthy street trees located in the right-of-way along the frontage of the site may be counted as street trees. Plans for protection and preservation of these trees during construction shall be included as part of the development review.

- Existing healthy trees that are six (6) inches or more in caliper, visible from the right of way and on the site within twenty (20) feet of the property line may be counted as street trees. Plans for the protection and preservation of these trees during construction shall be included as part of the development review.

- New street trees may be planted where visible from the right-of-way within twenty (20) feet of the property line, subject to the species being appropriate to the location and from the Recommended Tree List (Figure IV-1). Applicants should note that trees planted within the site would be subject to the Performance Guarantee defect period provisions and should be documented on deed plans for future preservation.

- The preferable location for new street trees that cannot be located in the right-of-way along the frontage of the site is on public land elsewhere in the neighborhood or in areas of the City with minimal tree coverage. Locations may include esplanades, sidewalks and existing empty street tree wells or planting strips, and also places such as parks, playgrounds, and other areas where public benefit would be derived from the addition of new trees. Evidence that the planting site was unlikely to be redeveloped in the near future and that the trees would be protected and maintained are required.

- Where the other alternatives are demonstrated to be infeasible, a contribution for each required street tree may be made into the City of Portland's Tree Fund in accordance with the table below. The contribution shall be used by the City to provide street trees in the right of way or in the neighborhood of the proposals site or in other areas of the City with minimal tree coverage. The contribution would be considered a "one-time" infrastructure contribution which is payable prior to the issuance of a building permit.

- Where the proposed development involves the removal of an existing street tree determined by the City Arborist to be a feature mature tree, the applicant shall be required to contribute to the tree fund as indicated below.

Contribution for new street tree	$400.00
Contribution for tree to replace feature mature tree	$100.00 per inch diameter of the removed existing feature mature tree
Contribution where applicant plants a tree to replace feature mature tree	$100.00 per inch diameter of removed existing feature mature tree less $400.00

4.7. PLANT SELECTION

4.7.1. All trees and shrubs shall comply with the standards set forth by the American Standard for Nursery Stock (ANSI Z60.1 - 2004). These standards are available through the Department of Public Works.

4.7.2. All trees and shrubs shall be nursery grown, healthy, free of disease and insect pests, and shall have a well-developed and compact root system. Plant material showing signs of a lack of proper nursery care or a lack of pruning or cultivation, or which is not true to name will be classified as collected stock regardless of its source and shall be rejected.

4.7.3. Proposed trees and shrubs installed as part of the landscaping plan shall be comprised of at least 50% native species.

4.7.4. The developer shall be responsible for preventing the spread of existing or the introduction of new invasive species on the site, as identified below. If, within one (1) year following construction, invasive species are identified on the site or if such species are pre-existing on the site but are determined to have spread by the City Arborist, the applicant shall be required to implement appropriate control measures prior to the release of the defect guarantee. Accepted mechanical and chemical control methods are provided by the Maine Natural Areas Program (MNAP) of the Maine Department of Conservation in their Invasive Plant Fact Sheets (available through the Department of Public Services and through the MNAP program website: http://www.maine.gov/doc/nrimc/mnap/features/invasives.htm.

The following plant species are recognized as invasive species that are characteristically adaptable, aggressive, and have a high reproductive capacity.

1) Asiatic Bittersweet (*Celastrus orbiculata*);
2) Autumn and Russian Olive *(Elaeagnus umbellata and Elaeagnus angustifolia*);
3) Black Swallowwort *(Cynanchum louiseae*);
4) Brazilian Waterweed *(Egeria densa);*
5) Common and Glossy Buckthor*n (Rhamnus cathartica and Frangula alnus*);
6) Common Reed *(Phragmites australis);*
7) Eurasian Milfoil *(Myriophyllum spicatum*);
8) Fanwort (*Cabomba caroliniana);*
9) Garlic Mustard (*Alliaria petiolata*);
10) Hydrilla (*Hydrilla verticillata);*
11) Japanese Barberry *(Berberis thunbergii*);
12) Japanese Honeysuckle *(Lonicera japonica*);
13) Japanese Knotweed *(Fallopia japonica);*
14) Japanese Stilt Grass *(Microstegium vimineum);*
15) Lesser Celandine *(Ranunculus ficaria*);
16) Mile-a-Minute Weed *(Polygonum perfoliatum*);
17) Morrow and Tartarian Honeysuckle *(Lonicera morrowii and Lonicera tartarica*);
18) Multiflora/Rambler Rose *(Rosa multiflora*);
19) Porcelainberry (*Ampelopsis*
20) Milfoil *(Myriophyllum heterophyllum*);
21) Water Chestnut *(Trapa natans);*
22) Norway Maple (*Acer platanoides*)
23) Yellow-flag Iris (*Iris pseudacorus).*

4.7.5. Trees selected from the Recommended Tree List (Figure IV-1) shall conform, at a minimum, to the sizes specified on the list.

4.7.6. All upright deciduous and evergreen shrubs shall be a minimum of 3 feet tall at mature height. All spreading evergreen and deciduous shrubs shall be a minimum of 2-2.5 feet in width at maturity.

4.7.7. Ground covers planted in lieu of grass shall be planted at a level of coverage equivalent to one complete growing season. Grass areas shall be planted with Kentucky Bluegrass (*Poa pratensis*), Red Fescue (*Festuca rubra*), Tall Fescue (*Festuca arundinacea*) or Perennial Ryegrass (*Lolium perenne L.).* Rolled turf, erosion reducing net or suitable vegetation along with landscaping shall be used in swales or other areas subject to erosion.

4.7.8. Mulching material shall be a minimum of three (3) inch deep wood chip or bark mulch. Inorganic mulches are not permitted.

4.7.9. No plantings used to satisfy City landscaping requirements shall be comprised of inorganic materials.

4.8 INSTALLATION AND MAINTENANCE OF PLANTINGS

4.8.1. Landscaping, earth moving and grading activities shall be performed according to standards accepted good planting and grading procedures and in accordance with the approved Site Plan, Subdivision Plat, Grading Plan and Landscape Plan.

4.8.2. No plant shall be moved after the bud break unless so authorized by the City Arborist or their designee. Planting periods are between April 1st and to July 1st and/or September 1st and November 1st.

4.8.3. Tree planting and other landscaping for subdivisions that cannot be installed prior to release of the performance guarantee must be insured by a defect bond as described in Section Article 15 of the City Land Use Code.

4.8.4. All bare soil areas shall be vegetated and/or mulched prior to the issuance of a Certificate of Occupancy.

4.8.5. New vegetation that shows signs of construction damage within a one year period following construction, including but not limited to bark damage or excessive root damage, grade changes other than those originally indicated in the approved grading plan, soil compaction due to heavy equipment traversing closely, or general decline due to mechanical or natural conditions shall be rejected and must be replaced prior to the release of any defect guarantee.

Figure IV-1: City of Portland Recommended Tree List

Small Trees - (Mature Height < 25')

Common Name	*Botanical Name*	Cultivars	Uses	Native	Notes
Amelanchier or Shadbush	*Amelanchier*	"Autumn Brilliance", "Cumulus", "Robin Hill Pink"	Street tree/ Naturalize	x	Single stem tree forms
European Hornbeam	*Carpinus betulus*	Upright forms available	Street tree		
American Hornbeam	*Carpinus caroliniana*		Lawn/Landscape	x	
Hawthorn	*Crataegus crusgalli*	"Cusgali", "Winter King"	Street tree		Thornless
Flowering Crabapple	*Malus x*	"Adirondack", "Springsnow"	Street tree		
Sargent Cherry	*Prunus sargentii*	"Accolade","Pink Flair"	Street tree & Ornamental		
Striped Maple	*Acer pennsyvanicum*		Naturalize	x	Naturalizing in shaded areas
Magnolia	*Magnolia spp.*	Many cultivars	Ornamental		
Hop-Hornbeam	*Ostrya virginiana*		Naturalize	x	Tolerates shade / understory
Sourwood	*Oxydendrum*		Ornamental	x	Interesting lat summer flower
"Arnold's Promise" Witchhaz	*Hamamelis*				

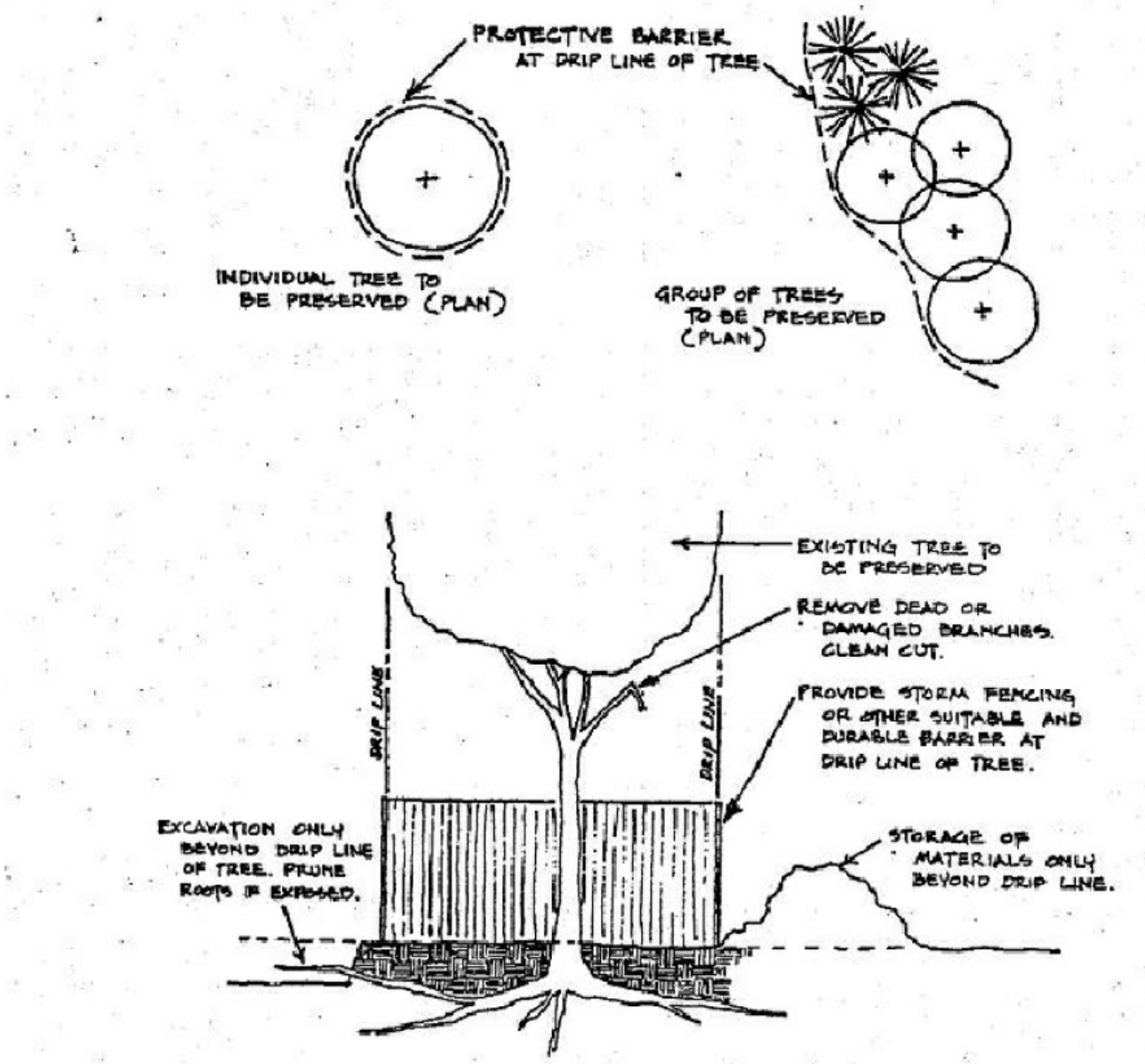
Medium Trees to Large trees 25' > 45'

Common Name	*Botanical Name*	Cultivars	Uses	Native	Notes
Red Maple	*Acer rubrum*	"Armstrong", "Bowhall", "Karpick", "Red Pointe"	Street tree/ Landscape	x	Cultivars from upright to oval shape
Sugar Maple	*Acer saccharum*	"Green Mountain"	Naturalize Landscape use	x	
White Birch	*Betula papyrifera 'Renc*	"Renaissance Reflection"	Naturalize	x	
River Birch	*Betula nigra*	"Heritage"	Naturalize	x	
Yellow Birch	*Betula lenta*		Naturalize	x	
Hackberry	*Celtis laevigata*		Street tree		
Gingko	*Ginkgo biloba*	"Mygar", "Autumn Gold"	Street tree		
Thornless Honeylocust	*Gleditsia inermis*	"Streetkeeper" (Upright form)	Street tree		
Tuliptree	*Liriodendron*		Street tree		
Tupelo	*Nyssa sylvatica*		Naturalize		
Swamp White Oak	*Quercus bicolor*		Street tree/Naturalize		
Red Oak	*Quercus rubra*		Street tree/Naturalize		
Upright-Growing Oaks	*"Beacon" Oak* *"Urban Pinnacle" Oak* *"Kindred Spirit" Oak* *"Regal Prince"*		Street tree/Naturalize Street tree/Naturalize Street tree/Naturalize Street tree/Naturalize		
American Elm	*Ulmus americana*	"Accolade", "Princeton"	Street tree	x	
Lacebark Elm	*Ulmus parvifolia*		Street tree		Interesting bark
Zelkova	*Zelkova serrata*	Musashino Zelkova	Street tree		

Conifers

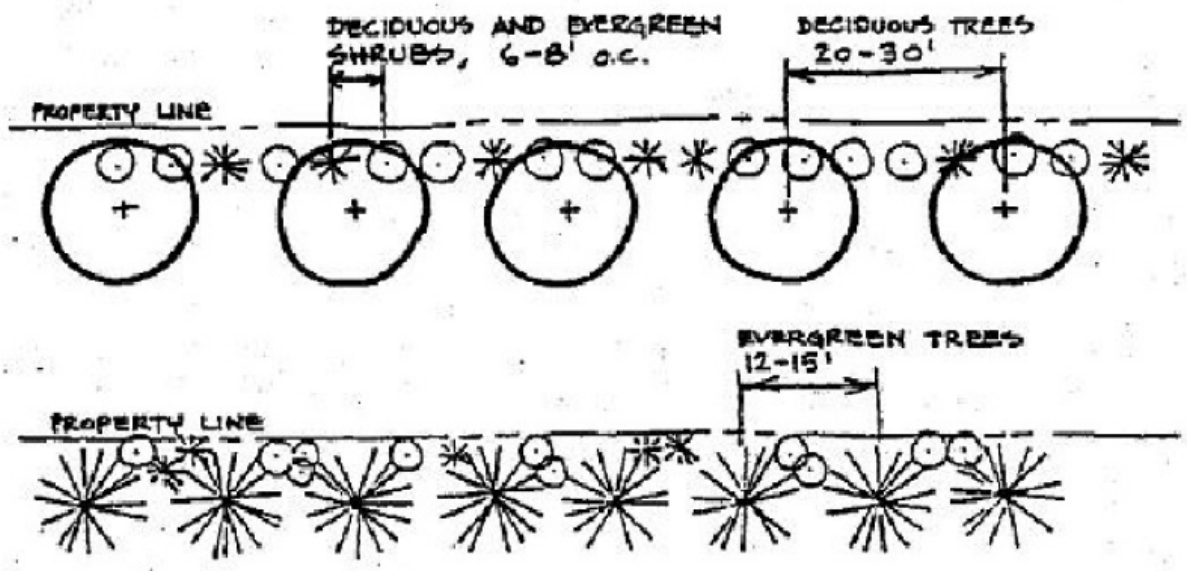
Common Name	*Botanicanal Name*	Cultivars	Uses	Native	Notes
Alaska Cedar	*Callitropsis nootkatens*	Alaska Weeping Cedar	Buffer planting		Fast growing
Red Cedar	*Juniperus virginiana*		Naturalize/ Ornamental	x	
Eastern Larch or Tamarack	*Larix larcina*		Naturalize/ Ornamental	x	Deciduous
Dawn Redwood	*Metasequoia*		Ornamental		Deciduous
White Spruce	*Picea glauca*		Naturalize	x	
Serbian Spruce	*Picea omorika*		Ornamental		Upright / good for narrow locations
Pitch Pine	*Pinus rigida*	Small sizes available	Naturalize	x	Full sun, sandy soils
White Cedar	*Tuja occidentalis*	"Dark American", "Techny"	Naturalize	x	Can be pruned into hedge

Notes:
In the case of street trees, small trees (<25') are preferred in locations with overhead utilities, and fruiting varieties should generally be avoided.

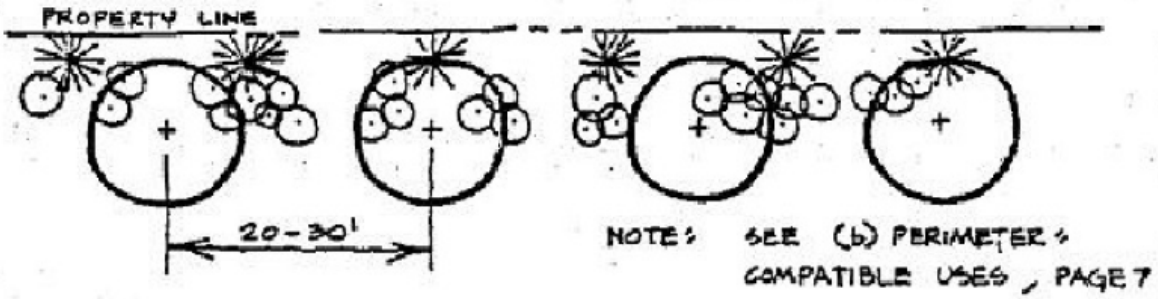


NOT TO SCALE

DATE: AUGUST 2009	CITY OF PORTLAND, MAINE TECHNICAL STANDARDS MANUAL	**STDS FOR LANDSCAPING AND PRESERVATION OF EXISTING VEGETATION** SECTION IV	**FIGURE:** **IV-2**
REVISED:	**TREE PRESERVATION DETAIL**		



A. Commercial/Industrial Screening

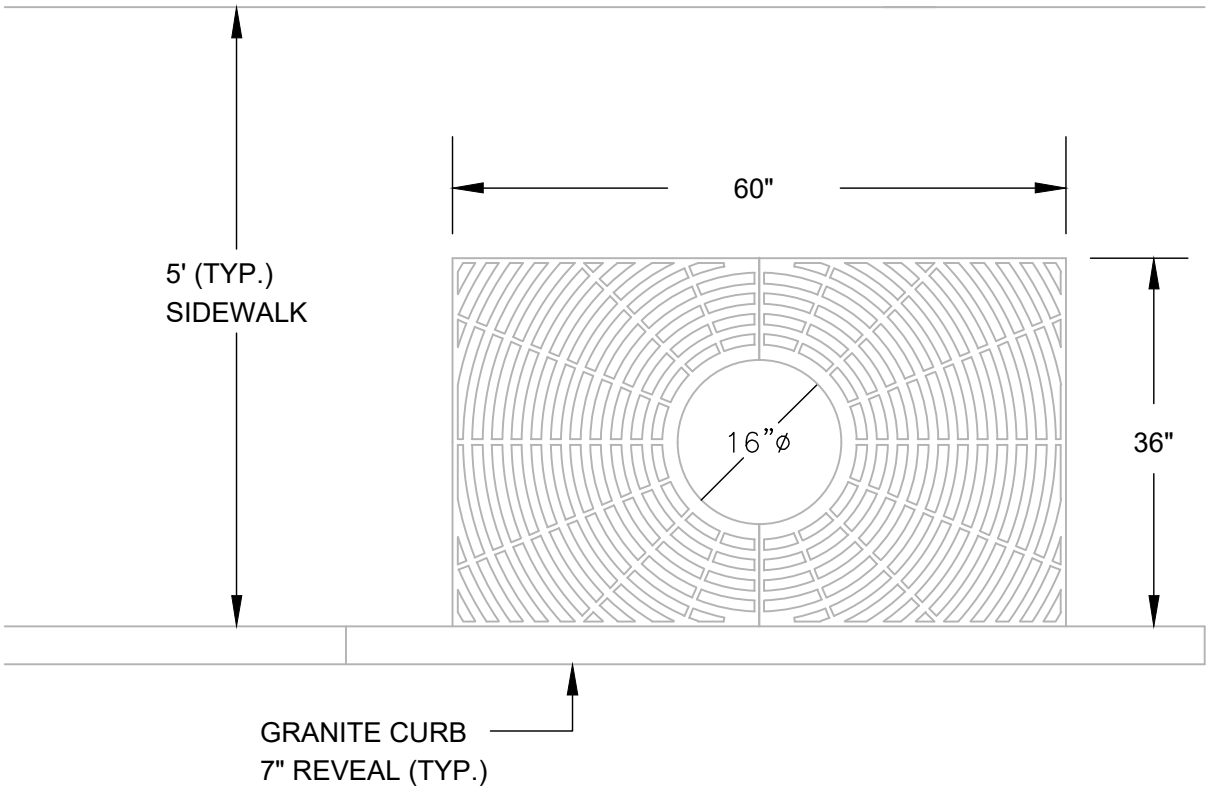


NOT TO SCALE

DATE: AUGUST 2009	CITY OF PORTLAND, MAINE TECHNICAL STANDARDS MANUAL	**STDS FOR LANDSCAPING AND PRESERVATION OF EXISTING VEGETATION** SECTION IV	**FIGURE:** **IV-3**
REVISED:	**LANDSCAPING BETWEEN COMPATIBLE USES**		

NOTES:

1. 16"Ø EXPANDABLE TREE OPENING. 0.25" SLOT OPENINGS.
2. ALL TREE GRATES SHALL COMPLY WITH CITY TECHNICAL STANDARDS AND MUST BE APPROVED BY THE CITY ARBORIST.
3. FINAL PLACEMENT LOCATION OF TREE GRATES SHALL BE APPROVED BY DPW AND SHALL CONSIDER SIDEWALK WIDTH AND ADA COMPLIANCE, ON-STREET PARKING CONFIGURATIONS, ABOVE AND BELOW GROUND UTILITIES AND OTHER OBSTRUCTIONS.
4. SIDEWALK MATERIAL PER CITY SIDEWALK MATERIAL POLICY. SEE SIDEWALK CONSTRUCTION DETAILS IN SECTION 1 OF THE TECHNICAL MANUAL.
5. WHEN THE TREE GRATE IS INSTALLED IN A CONCRETE SIDEWALK, A NOTCH MUST BE INSTALLED ALONG THE EDGE TO HOLD THE GRATE, WHEN INSTALLED IN A BRICK SIDEWALK IT REQUIRES A FRAME TO BE INSTALLED TO HOLD THE GRATE IN PLACE.



PLAN VIEW

EXPANDABLE TREE GRATE WITH FRAME
NEENAH MODEL R-8810

NOT TO SCALE

http://www.nfco.com/literature/TreeGrateCatalog22/Avenue.pdf

DATE: NOV. 2022 REVISED:	CITY OF PORTLAND, MAINE TECHNICAL STANDARDS MANUAL	**LANDSCAPE AND LANDSCAPING PRESERVATION EXISTING VEGETATION** STANDARDS - SECTION IV	FIGURE: IV-4A
	EXPANDABLE TREE GRATE WITH FRAME FOR NARROW RESIDENTIAL URBAN STREETS		

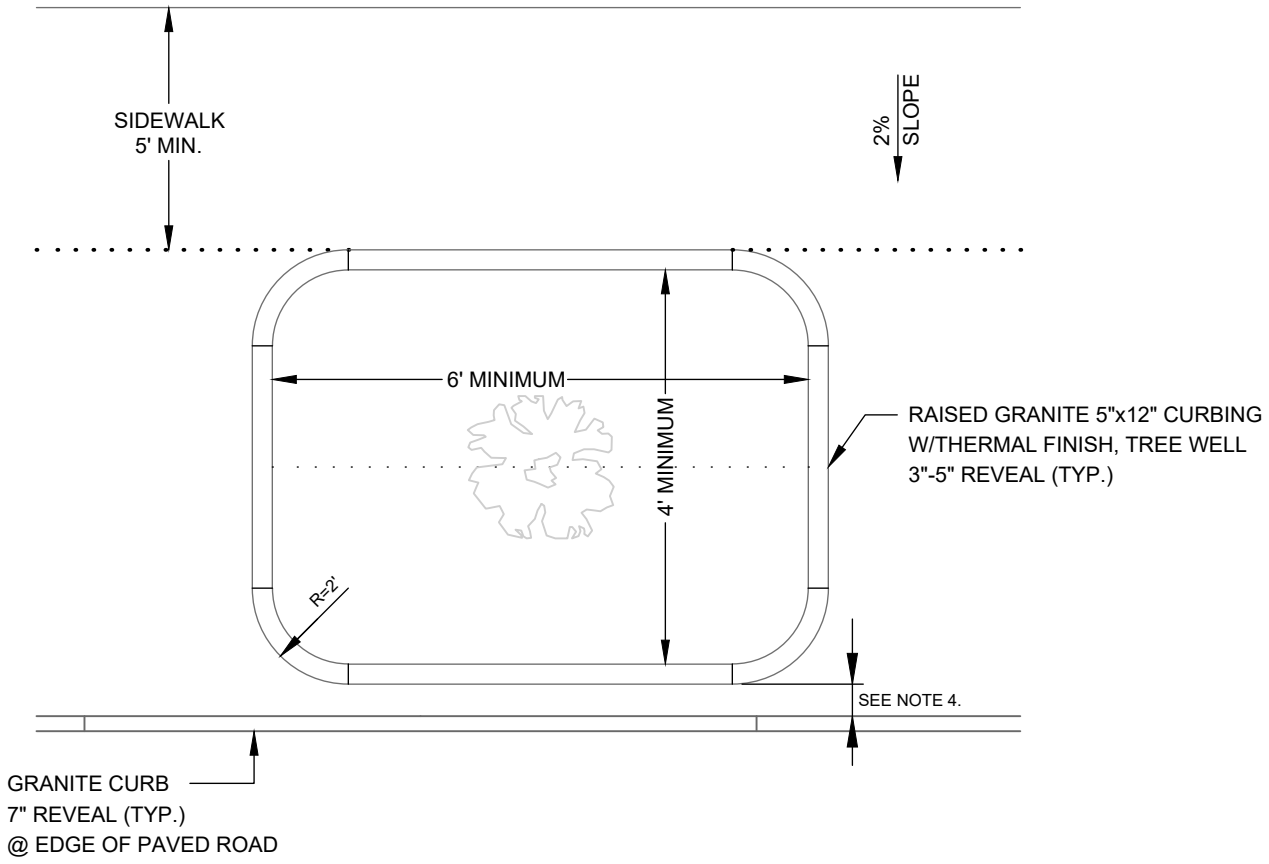
NOTES:

1. ALL TREE WELLS SHALL COMPLY WITH CITY TECHNICAL STANDARDS AND MUST BE APPROVED BY THE CITY ARBORIST.

2. FINAL PLACEMENT LOCATION OF THE GRANITE CURB TREE WELL SHALL BE APPROVED BY DPW AND SHALL CONSIDER SIDEWALK WIDTH, STREET PARKING STATUS, ABOVE AND BELOW GROUND UTILITIES AND OTHER OBSTRUCTIONS.

3. SIDEWALK MATERIAL PER CITY SIDEWALK MATERIAL POLICY. SEE SIDEWALK CONSTRUCTION DETAILS IN SECTION 1 OF THE TECHNICAL MANUAL.

4. RAISED CURB TREE WELL OFFSETS FROM THE CURB LINE SHALL TAKE THE LOCATION OF ON-STREET PARKING INTO ACCOUNT. WHERE ADJACENT TO ON-STREET PARKING AND SIDEWALK WIDTH ALLOWS, A MINIMUM OFFSET OF 2 FEET IS PREFERRED, UNLESS IT CAN BE DEMONSTRATED THAT THE PLACEMENT OF THE TREE WELLS WILL NOT INTERFERE WITH THE OPENING OF VEHICLE DOORS.



PLAN VIEW

GRANITE BORDER TREEWELL IN SIDEWALK WITH NO ESPLANADE

NOT TO SCALE

DATE: NOV. 2022 REVISED:	CITY OF PORTLAND, MAINE TECHNICAL STANDARDS MANUAL	**LANDSCAPING AND LANDSCAPE PRESERVATION** STANDARDS - SECTION IV	FIGURE: IV-4B
	GRANITE BORDER TREE WELL IN SIDEWALK WITH NO ESPLANADE		

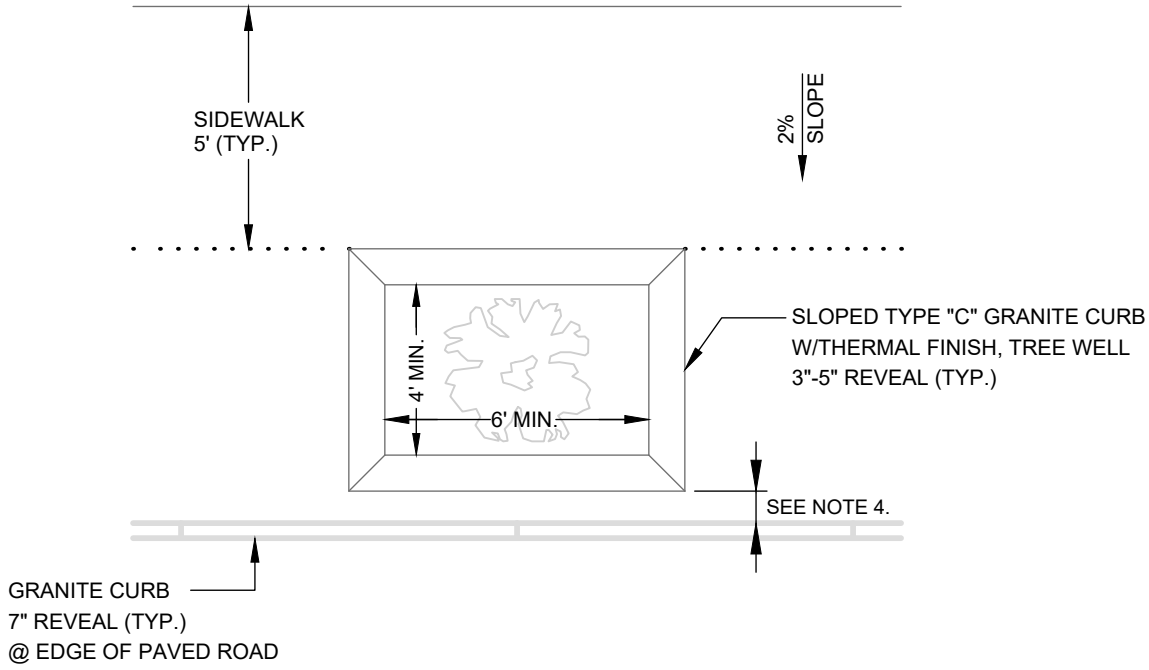
NOTES:

1. ALL TREE WELLS SHALL COMPLY WITH CITY TECHNICAL STANDARDS AND MUST BE APPROVED BY THE CITY ARBORIST.

2. FINAL PLACEMENT LOCATION OF THE GRANITE CURB TREE WELL SHALL BE APPROVED BY DPW AND SHALL CONSIDER SIDEWALK WIDTH, STREET PARKING STATUS, ABOVE AND BELOW GROUND UTILITIES AND OTHER OBSTRUCTIONS.

3. SIDEWALK MATERIAL PER CITY SIDEWALK MATERIAL POLICY. SEE SIDEWALK CONSTRUCTION DETAILS IN SECTION 1 OF THE TECHNICAL MANUAL.

4. RAISED CURB TREE WELL OFFSETS FROM THE CURB LINE SHALL TAKE THE LOCATION OF ON-STREET PARKING INTO ACCOUNT. WHERE ADJACENT TO ON-STREET PARKING AND SIDEWALK WIDTH ALLOWS, A MINIMUM OFFSET OF 2 FEET IS PREFERRED, UNLESS IT CAN BE DEMONSTRATED THAT THE PLACEMENT OF THE TREE WELLS WILL NOT INTERFERE WITH THE OPENING OF VEHICLE DOORS.

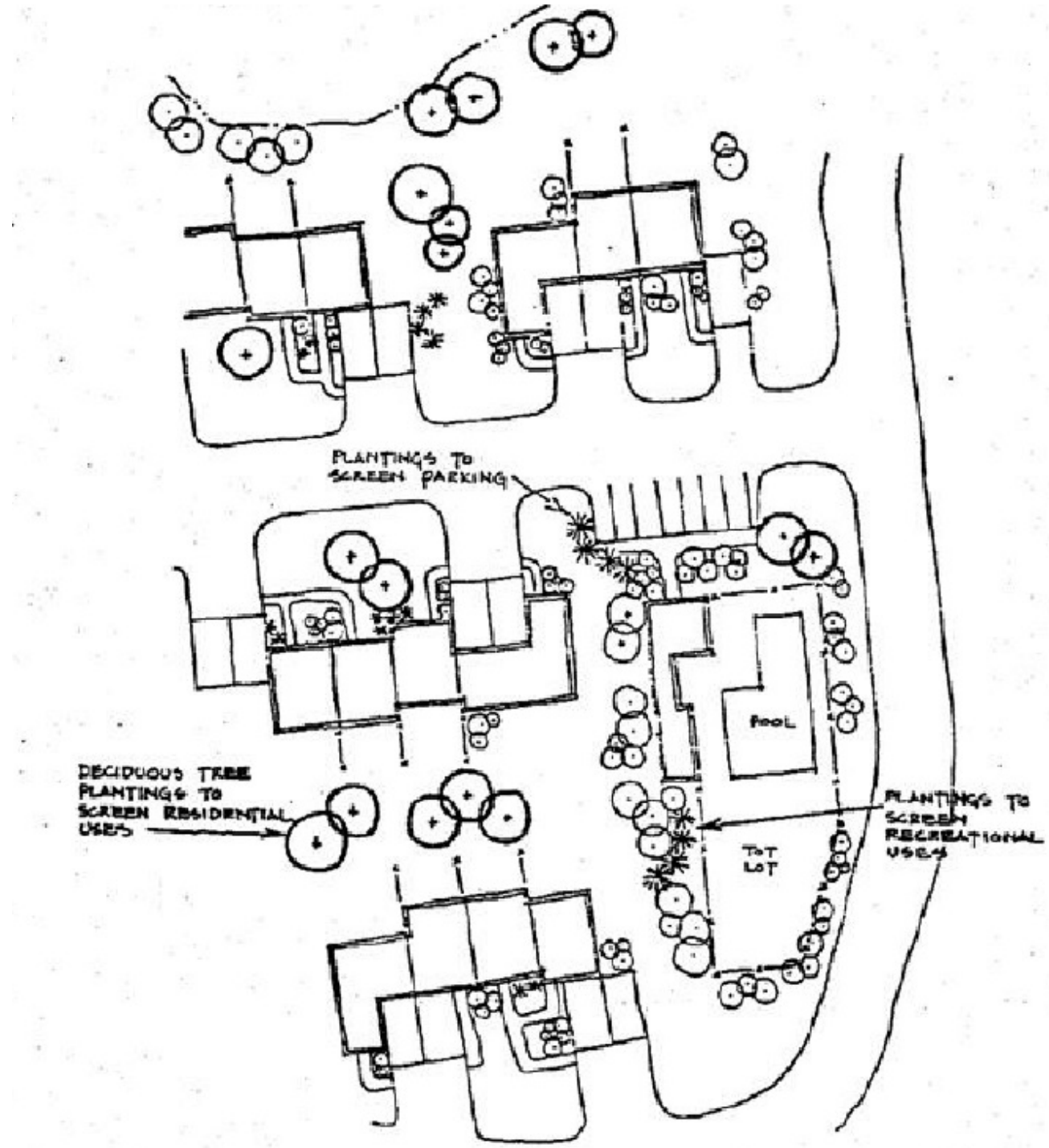


PLAN VIEW

SLOPED TYPE "C" TREE WELL IN SIDEWALK WITH NO ESPLANADE

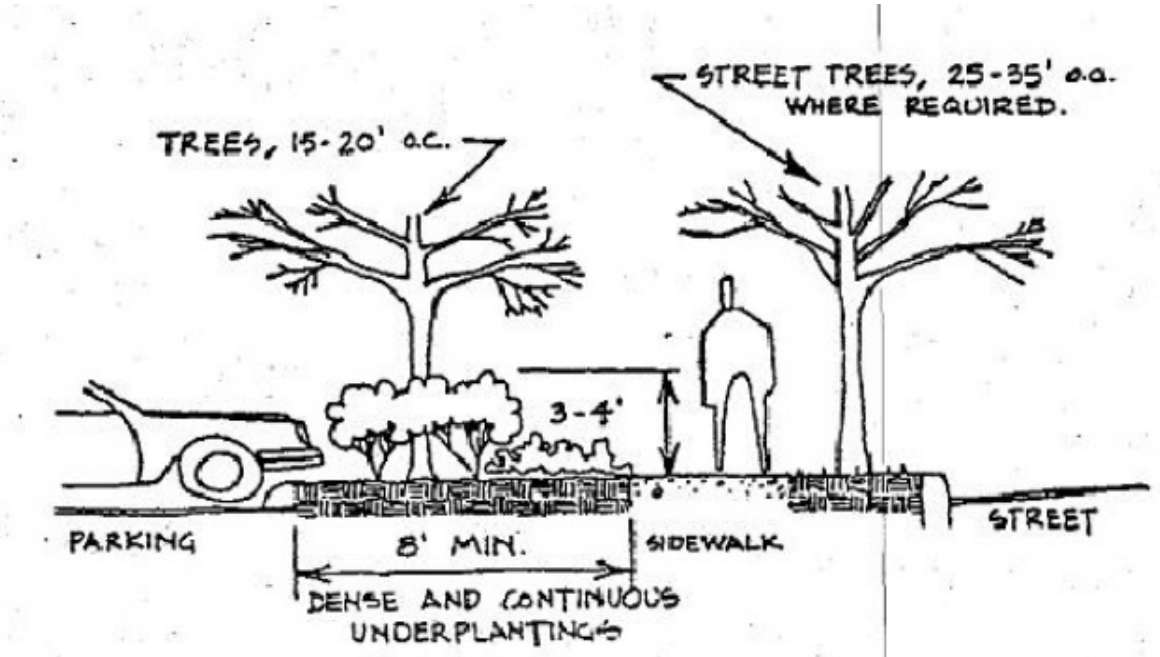
NOT TO SCALE

DATE: NOV. 2022 REVISED:	CITY OF PORTLAND, MAINE TECHNICAL STANDARDS MANUAL	**LANDSCAPING AND LANDSCAPE PRESERVATION** STANDARDS - SECTION IV	FIGURE: IV-4C
	SLOPED TYPE "C" GRANITE TREE WELL IN SIDEWALK WITH NO ESPLANADE		

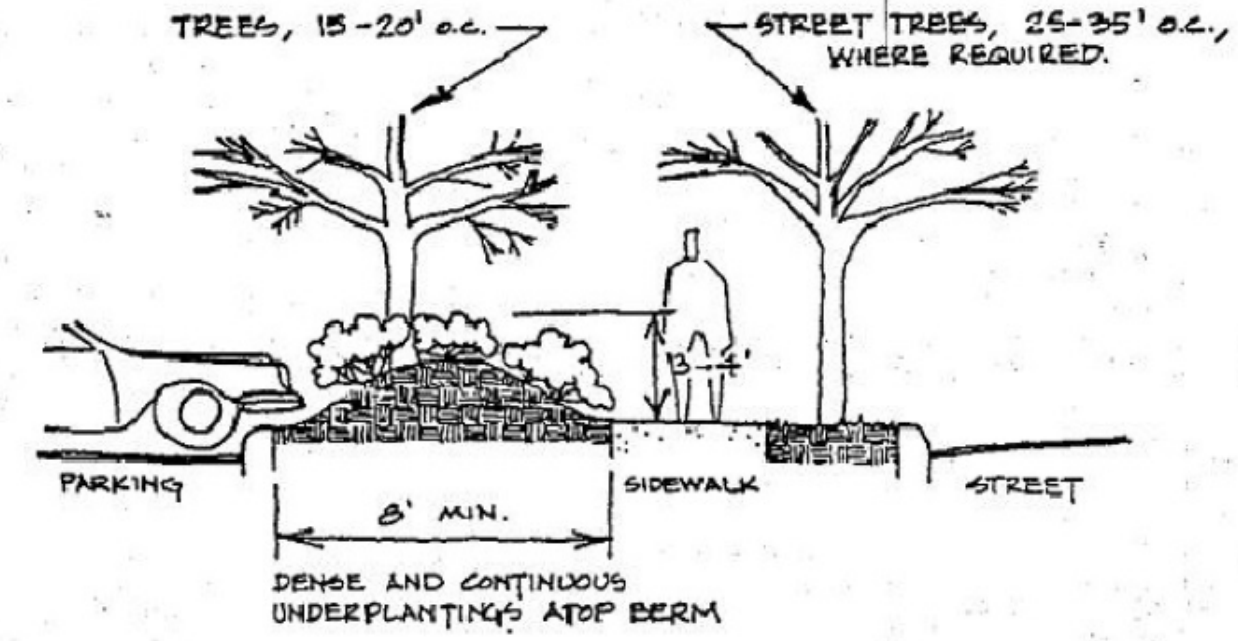


NOT TO SCALE

DATE: AUGUST 2009	CITY OF PORTLAND, MAINE TECHNICAL STANDARDS MANUAL	**STDS FOR LANDSCAPING AND PRESERVATION OF EXISTING VEGETATION** SECTION IV	**FIGURE:** **IV-5**
REVISED:	**INTERIOR SITE LANDSCAPING**		



A. Screening from Street (section)



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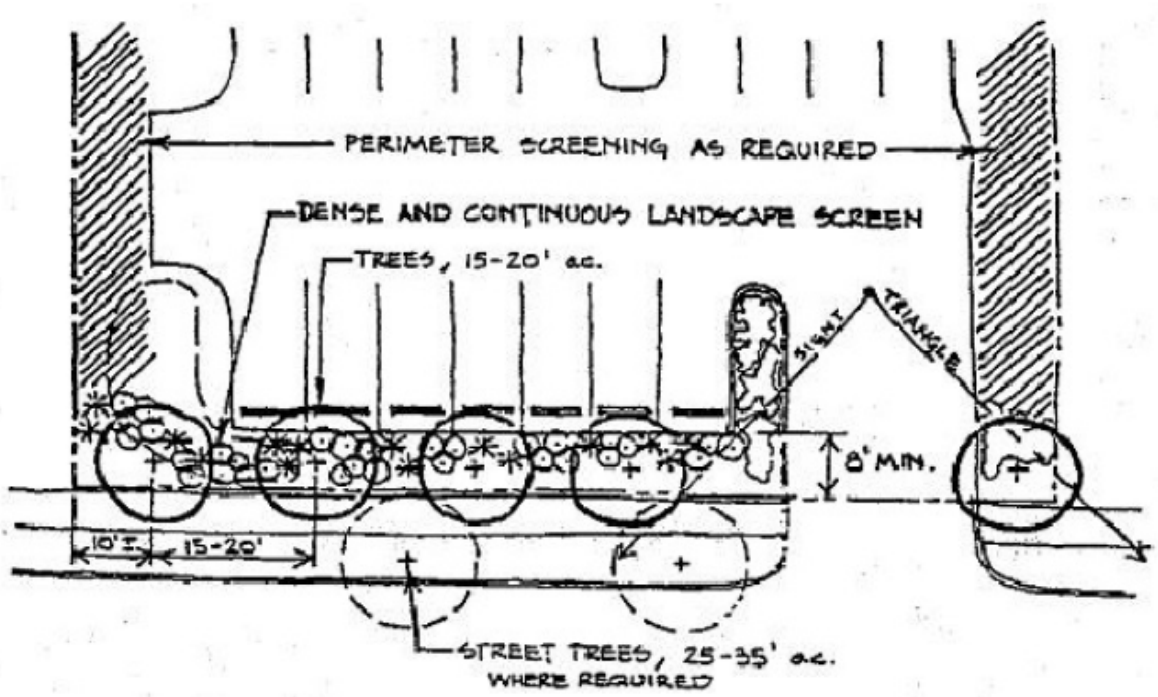
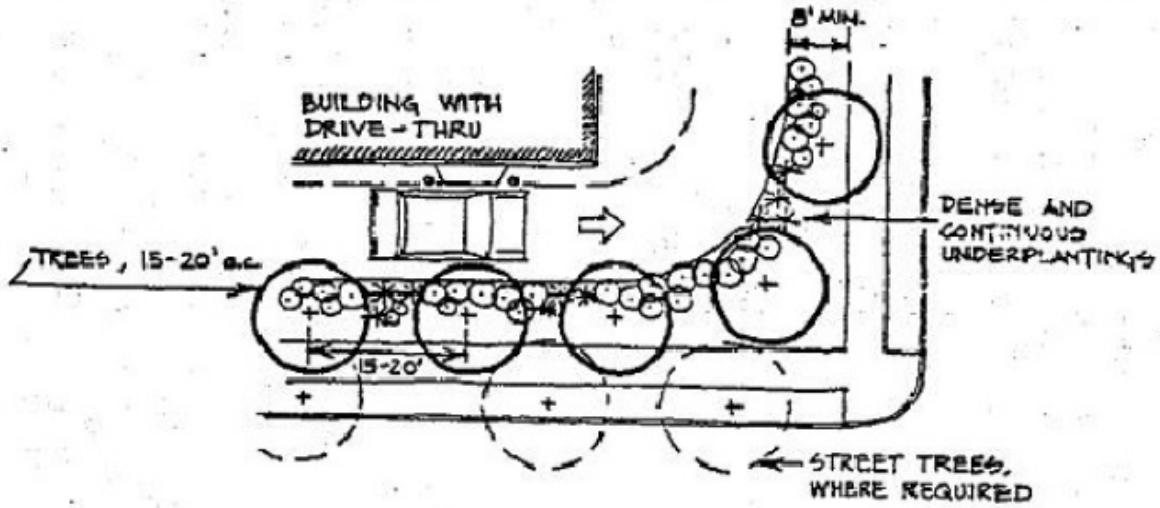
DATE: AUGUST 2009	CITY OF PORTLAND, MAINE TECHNICAL STANDARDS MANUAL	**STDS FOR LANDSCAPING AND PRESERVATION OF EXISTING VEGETATION** SECTION IV	**FIGURE:**
REVISED:	**PARKING LOT SCREENING FROM PUBLIC VIEW**		**IV-6A**



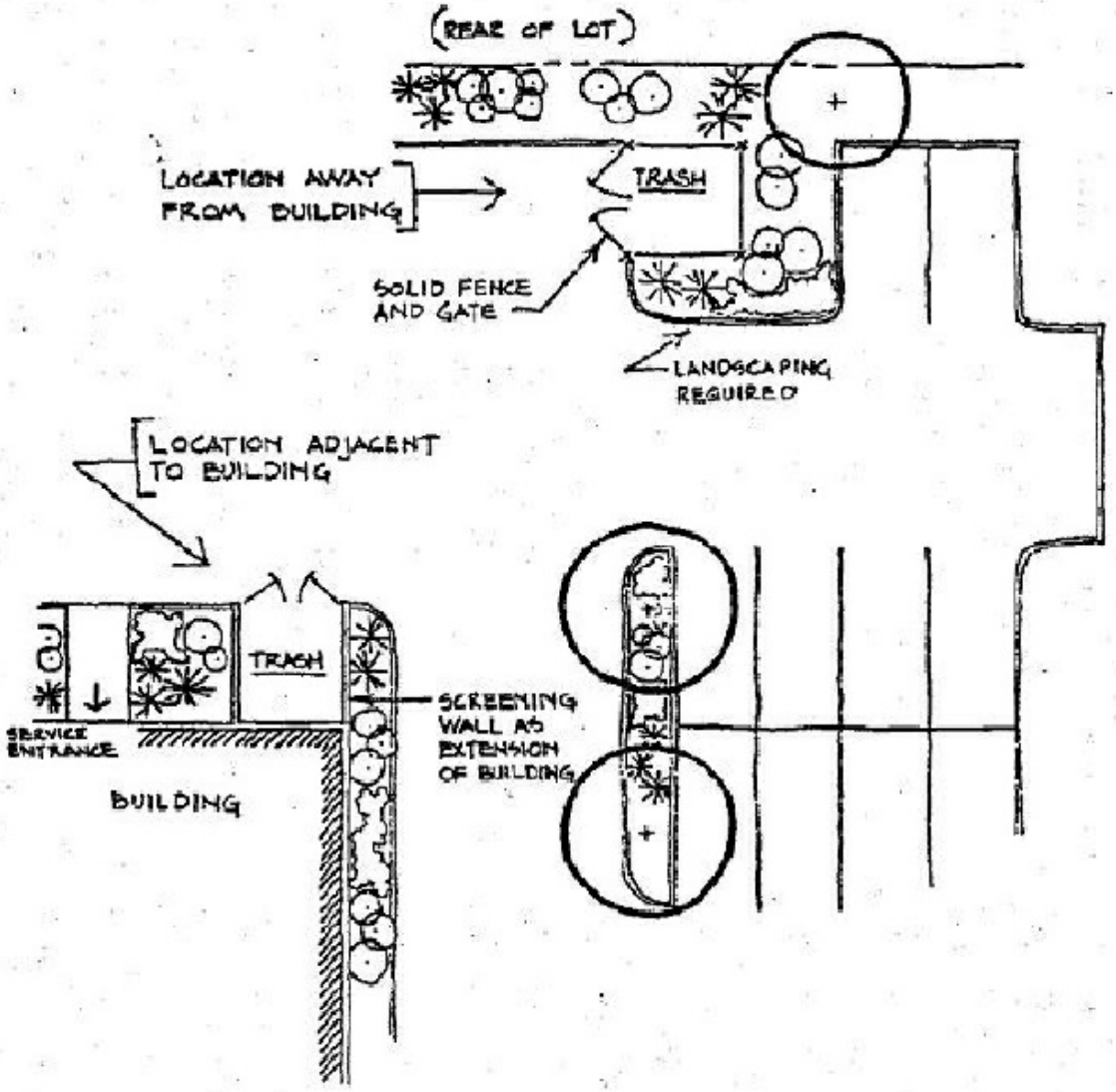
C. Screening from Street (plan)



D. Screening of Drive-Thru (plan)

NOT TO SCALE

DATE: AUGUST 2009	CITY OF PORTLAND, MAINE TECHNICAL STANDARDS MANUAL	**STDS FOR LANDSCAPING AND PRESERVATION OF EXISTING VEGETATION** SECTION IV	**FIGURE:** **IV-6B**
REVISED:	**PARKING LOT SCREENING FROM PUBLIC VIEW**		



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DATE: AUGUST 2009	CITY OF PORTLAND, MAINE TECHNICAL STANDARDS MANUAL	**STDS FOR LANDSCAPING AND PRESERVATION OF EXISTING VEGETATION** SECTION IV	**FIGURE:** **IV-7**
REVISED:	**SCREENING OF ACCESSORY SITE ELEMENTS**		

5. PORTLAND STORMWATER MANAGEMENT STANDARDS AND MAINE DEP CHAPTER 500 STORMWATER MANAGEMENT

I. INTENTION

The goal of the City of Portland's Stormwater Management Program is to address the effects of development on both the quantity and quality of stormwater runoff in order to protect and improve water quality and meet Clean Water Act requirements. The Technical Manual standards support the review criteria contained in Portland's site plan and subdivision ordinances and with the stormwater management requirements within Chapter 32. Please see Chapter 32 of the City Code of Ordinances for regulations governing stormwater systems, illicit discharges and Post-Construction Stormwater Management Plans in Portland.

II. APPLICABILITY IN PORTLAND

PROJECTS REQUIRING STATE PERMITS:

Projects that require a Stormwater Permit pursuant to 38 M.R.S.A. Sec. 420-D (Stormwater Management Law) and projects that may substantially affect the environment and require a site location of development (Site Law) permit pursuant to 38 M.R.S. A Sec 481-490 shall be reviewed for conformance with Chapter 500 under the City's Delegated Review Authority or by the Maine Department of Environmental Protection.

PROJECTS REQUIRING MUNICIPAL REVIEW IN PORTLAND:

The City of Portland's applicability requirements for all development within Portland, which are specified below, supersede the applicability thresholds specified within the Chapter 500 Rules. The City of Portland conducts reviews under the City's Code of Ordinances, specifically Chapter 32 Stormwater and Chapter 14 Land Use Code. With the intent of improving water quality within Portland's urban environment, the City has adopted codes and regulations that require development proposals of a scale smaller, than the thresholds established under the state laws, to comply with the provisions of Chapter 500.

As outlined in the Article 14 of the City of Portland Land Use Code, the developments specified below shall comply with the Urban Impaired Stream, Basic, General, and Flooding Standards of the most recent version of the Maine Department of Environmental Protection (Maine DEP) Chapter 500 Rules for Stormwater Management (http://www.maine.gov/dep/land/stormwater/storm.html)

A. Development within Urban Impaired Stream Watersheds: All development, except single and two-family homes subject to City of Portland review under the minor residential site plan application, shall be required to comply with the Urban Impaired Stream Standard pursuant to Maine DEP Chapter 500 Stormwater Management Rules if they are located within the following watersheds:

- Capisic Brook,
- Fall Brook,
- Nasons Brook,
- As listed in the most recent version of the Maine DEP Chapter 502 Rules.

Developments which will result in the creation of up to 1,000 square-feet of new impervious area or up to 10,000 square-feet of new non-impervious developed area, as defined under Definitions in the Maine DEP Chapter 500, are considered de minimis and are exempt from the Urban Impaired Stream Standard. Development within the Long Creek watershed shall be subject to the requirements set forth by the Long Creek Watershed Management District.

The City of Portland has an approved Compensation Fee Utilization Plan (CFUP) and can therefore receive in-lieu-fee payments to meet the UIS Standard.

B. Basic Erosion and Sedimentation Control Standards for all Development: All development subject to City of Portland site plan review, including but not limited to minor and major site plans, shall comply with the Basic Standard pursuant to Maine DEP Chapter 500 Stormwater Management Rules; single and two-family homes (minor residential applications) shall be exempt from the Inspection and Maintenance Documentation Requirements of Appendix B1c.

C. Stormwater Management Plans for New Development: Except as provided in below, the following development proposals shall submit a stormwater management plan pursuant to the regulations of Maine DEP Chapter 500 Stormwater Management Rules, including General and Flooding standards:

1. Minor site plans which will result in the creation of more than 1,000 square-feet of new impervious area or 10,000 square-feet of new non-impervious developed area, as defined under Developed Area and listed under Definitions of Chapter 500.
2. Major site plans.
3. Subdivisions as defined in Article 15 of the Land Use Code, except for those projects which do not result in the creation of more than 1,000 square-feet of new impervious area or 10,000 square-feet of new non-impervious developed area, as defined under Developed Area and listed under Definitions of Chapter 500.

4. Other projects that the Planning Authority determines that special conditions warrant a stormwater management plan; and
5. Projects that require a Stormwater Permit pursuant to 38 M.R.S.A. Sec. 420-D (Stormwater Management Law), a development that may substantially affect the environment and requires a site location of development (Site Law) permit pursuant to 38 M.R.S.A. Sec 481-490; and certain projects that may be eligible for license by rule for the infiltration of stormwater pursuant to 38 M.R.S.A. Sec 413.

Exemption:

1. Minor residential, as defined in the Technical Manual - Section 16.

D . Redevelopment Projects: All projects not subject to requirements of an existing Site Law or Stormwater Management Law Permit that include redevelopment of non-roof impervious area greater than 5,000 square-feet and are subject to City of Portland review shall provide stormwater quality treatment in accordance with the General Standards for no less than 50% of the redeveloped impervious area. The runoff from any upgradient area must be either directed away from the stormwater treatment measure or that measure must be sized to treat the runoff from the upgradient area.

E. Low Impact Development and Stormwater Quality Treatment: Developments that are not required to comply with the General and Flooding standards are encouraged to incorporate Low Impact Development (LID) and stormwater quality treatment techniques in their design to the maximum extent practicable; however, only projects that meet or exceed the General and Flooding Standards may qualify for a credit from the Stormwater Service Charge in accordance with the Stormwater Credit Manual. A separate application must be completed and submitted to the City for consideration of Stormwater Service Charge credits.

III. STORMWATER MANAGEMENT STANDARDS

Developments as specified under Section II Applicability in Portland must comply with the most recent version of the Maine Department of Environmental Protection (Maine DEP) Chapter 500 Rules for Stormwater Management (http://www.maine.gov/dep/land/stormwater/storm.html), including but not limited to the standards for Urban Impaired Stream, Basic, General, and Flooding Standards for the suitability, design, installation, and maintenance of systems to comply with the General and Flooding Standards are provided in Volume III of the Maine Stormwater Best Management Practices Manual.

Developments shall also comply with Chapter 32 Stormwater of the City Code and with the Subdivision and Site Plan Ordinances contained in the Land Use Code.

IV. SUBMISSION REQUIREMENTS

Applicants are required to submit a stormwater management and drainage plan as part of development review application and to provide the following submission items to demonstrate compliance with the applicable stormwater management standards:

- Urban Impaired Stream Standard: Calculations for the Compensation Fee or Mitigation Credit per the tables provided in Chapter 500 Rules and other associated Maine DEP regulations. (Note: The City of Portland has an approved Compensation Fee Utilization Plan (CFUP) and can therefore receive in-lieu-fee payments to meet the UIS Standard.)
- Basic Standard: An Erosion & Sediment Control management plan, notes, and details per the Chapter 500 Rules
- General Standard: Written narrative demonstrating compliance, site plans showing grading and drainage infrastructure, site plan showing water quality treatment area(s) with table showing compliance, BMP sizing calculations, construction details, and a Post-Construction Stormwater Inspection & Maintenance Plan per Maine DEP Chapter 500 Appendix B with reporting requirements per Chapter 32 of City of Portland Code of Ordinances, and a Stormwater Maintenance Agreement.
- Flooding Standard: Subcatchment plans with flow paths, full hydrology computations/model output of pre- and post-development conditions, summary of pre- and post-development flowrates, and a written request for waiver with rationale for waiver as noted in Section 5.II.F. (as applicable)

The following references provide guidance on LID techniques:

- *LID Guidance Manual for Maine Communities*, prepared for the Maine Coastal Program, dated September 21, 2007.
- *Low-Impact Development Design Strategies – An Integrated Design Approach,* prepared by Prince George's County, Maryland & Department of Environmental Resources, Programs and Planning Division, dated June 1999.

6. EROSION AND SEDIMENTATION CONTROL STANDARDSFOR SINGLE AND TWO-FAMILY HOMES

6.1. STANDARDS

6.1.1. Single and two family homes shall meet the requirements of Chapter 500, Appendix A, Appendix B 1a. and 1b, and Appendix C only, found under Section IV of the Technical Manual.

6.1.2. Erosion and sediment control measures shall follow the guidelines established by the Maine Department of Environmental Protection and contained in the publication “Maine Erosion and Sediment Control BMP’s”, which may be obtained on the MDEP website:

(http://mainegov-images.informe.org/dep/blwq/docstand/escbmps/) or may be viewed at the City of Portland Planning Division.

6.1.3. Sediment should be removed from runoff water before it leaves the site.

6.1.4. Temporary erosion control devices will be in place before commencing construction activities.

6.1.5. If any winter construction is planned, a specific winter construction erosion and sedimentation control plan will be implemented.

7. SOIL SURVEY STANDARDS

7.1. APPLICABILITY

Development proposals required to submit soil surveys include:

- Major site plans as defined in the site plan standards of the Land Use Code
- Subdivisions as defined in the subdivision standards of the Land Use Code except for those projects which do not involve construction of significant new infrastructure.
- Other projects where the review authority determines that unusual conditions specific to the site warrant a high intensity soil survey.

7.2. STANDARDS

Soil surveys are divided into four levels or classes, depending on the intensity desired. These are the minimum standards for each class of soil survey.

Class A (high intensity)

- Mapping units of 1/8 acre or less
- Scale is 1 inch equals 100 feet or larger
- Ground control – base line and test pits accurately located under the direction of a registered land surveyor or qualified professional engineer.
- Base map with 2 foot contour lines with ground survey, or aerial survey with ground control.

Class B (high intensity)

- Mapping units of 1 acre or less
- Scale of 1 inch equals 200 feet or larger.
- Ground control – test pits located by means of compass by chaining, pacing or taping from known survey points.
- Base map with 5 foot contour lines.

Class C (medium high intensity)

- Mapping units of 3 acres or less
- Scale of 1 inch equals 500 feet or larger.
- Ground control – as determined by the mapper.
- Base map – as determined by the mapper.

7.2.1. Use of the USDA National Cooperative Soil Survey and Classification:

The soil survey shall be designed using the National Cooperative Soil Survey as a guide and the soils classified at the series level. Soil map units will be phases of

soil series.

7.2.2. Map Legend and Map Unit Narratives:

The soil map legend shall include a symbol for each map unit and special symbol for areas too small to be mapped, and the name of each map unit.
The soil scientist shall provide a description for each map unit.

7.2.3. Map Unit Purity:

The soil(s) within an area enclosed by a soil boundary (map unit) will have a minimum of 75 percent of the soil(s) that provide the name of that map unit or similar soil(s). The total amount of dissimilar soils shall not exceed 25 percent of the map unit.

7.2.4. Accurate Soil Boundary Placement:

Soil boundaries must be observed throughout their length and their placement must correspond to changes in soils and/or land forms.

7.2.5. Map Preparation by a Maine Certified Soil Scientist:

All soil surveys submitted for the public record, with the exception of Soil Conservation Service soil surveys, shall be stamped and signed by a Maine Certified Soil Scientist licensed by the Maine Board of Certification for Geologists and Soil Scientists.

7.3. Reserved.

7.4. SUBMISSIONS

The following submissions will support the contention that the development will be built on suitable soils:

High Intensity Soil Survey:

A soil survey prepared by a Maine Certified Soil Scientist (CSS), completed at the appropriate mapping intensity. The soil survey must be mapped at a scale as required by the Maine Association of Professional Soil Scientists (MAPSS) Soil Survey Guidelines (available through the Department of Public Services or through the MAPSS website at http://www.mapss.org/publications.htm). The map must identify the soil mapping intensity under which the mapping was conducted.
The guidelines for each intensity level of soil mapping and the level at which various types of projects must be mapped are as follows:

- **Class A (High-Intensity) Soil Survey**:

  Specific land area, within any project, which is proposed to be used for

phosphorus control measures. Phosphorus control measures include wet ponds, infiltration facilities, and buffer strips.

For residential and commercial subdivisions where any lot is less than 2 acres and on site subsurface wastewater disposal is proposed.

- **Class B (High-Intensity) Soil Survey:**

  For residential and commercial subdivisions where any lot is less than 2 acres with more than 15 lots and 20 acres of area, no on site wastewater disposal is proposed, and new city streets are to be constructed.

  The land area of condominium developments which is to be disturbed during construction. Condominium developments include single or multi-family attached dwellings where greater than 3 acres of new non-vegetated surface is constructed and/or it results in the development of an area exceeding 20 acres.

  Shopping centers, or similar commercial and industrial developments, where large areas are to be utilized or disturbed such that greater than 3 acres of new non-vegetated surface is proposed for construction and/or results in the development of an area exceeding 20 acres.

- **Class C (Medium High-Intensity) Soil Survey:**

  Residential and commercial subdivisions where all lots are greater than 2 acres and on site subsurface wastewater disposal is proposed.

  Golf courses, ski areas and trails, and other multi-use recreational developments.

  Any project which the City has determined will require a hydrogeological investigation.

- **Class D (Medium Intensity) Soil Survey (published by Soil Conservation Service for Cumberland County)**

  All other developments.

  In the event that greater than 50 percent of a proposed development site is currently developed, an applicant may petition the Planning Authority to accept a lower class soil survey. The Planning Authority shall review the request, and their decision on the appropriate level of mapping shall be final.

  A Maine Certified Soil Scientist shall accurately map and mark in the field the boundaries of any hydric soils identified by the Soil Survey.

These standards are a minimum. The Planning Authority reserves the right to request the preparation of a high intensity soil map or require more intense hydric

soil boundary delineation, when special conditions warrant it. All soil maps, with the exception of U.S. Soil Conservation Service Soil surveys, shall be signed and stamped by a Maine Certified Soil Scientist. The soil survey shall meet the standards for the degree of mapping intensity as adopted by the Maine Association of Professional Soil Scientists, dated 4-4-89.

7.4.1. Geotechnical Investigation:

If proposed buildings, facilities or infrastructure require a geotechnical investigation for their design and construction, or a geotechnical investigation is determined to be necessary by the Planning Authority, the applicant shall submit a report of this investigation prepared and endorsed by a registered professional engineer and/or other licensed professionals, as appropriate, for review and approval. This report shall identify all major limitations to the development posed by existing soils and other surface and subsurface features of the site and describe the techniques to be used to overcome these limitations. Depending on the nature of the proposed development, the requirement for a soil survey map and report may be waived if the Planning Authority determines that the geotechnical report will provide sufficient information.

7.4.2. Soils Report:

A report, completed by a Certified Soil Scientist, identifying all major limitations to the proposed development by the soil characteristics, as well as the SCS Hydrologic Soil Group classification for each soil series. A soil report shall not be required for those projects where a Class D Soil Survey is determined to be sufficient.

7.4.3. Site Engineering Report:

A Site Engineering report prepared by a qualified professional such as a soils or geotechnical engineer that describes the techniques to be used to overcome the soil limitations identified in the soil survey. The application will not be considered complete until a Site Engineering Report is submitted if the Planning Authority determines one is required.

8. STANDARDS FOR DEVELOPMENT IN AND ADJACENT TO WETLANDS

8.1. APPLICABILITY

All projects which may impact wetlands as defined by the Shoreland Zoning Ordinance or are classified as a river, stream, or brook as defined by the Natural Resources Protection Act are subject to these standards. Some wetlands which may not be regulated by the City of Portland may be regulated under State and Federal law.

8.2. STANDARDS

All wetlands shall be delineated and mapped according to the U.S. Army Corps of Engineers Wetlands Delineation Manual (1987).

Maine State Jurisdictional Wetlands and wetlands as defined by the Shoreland Zoning Ordinance (hereafter referred to as wetlands) should be identified according to the Natural Resources Protection Act (Title 38 M.R.S.A. Section 480-B) and identified on a map.

Design the development to minimize wetland impacts by either avoiding direct wetland impacts or minimizing them when they are unavoidable. Activities in or adjacent wetlands should be carried out in accordance with the standards set forth in the Maine Wetlands Protection Rules (Chapter 310 Wetlands and Waterbodies Protection) or following the specific design criteria:

8.2.1. The development should be designed to avoid disturbance in wetlands and the developer must establish undisturbed buffer strips from the wetland boundary. For developments located adjacent to perennial streams, a minimum one hundred (100) foot buffer strip on either side of the stream should be maintained. For intermittent streams, the buffer strip may be reduced to twenty five (25) feet. The undisturbed buffer must be placed in deed restrictions. In cases where State and Local rules are in conflict, the most stringent rules will apply.

8.3. Reserved.

8.4. SUBMISSIONS

8.4.1. The following submissions will support the contention that the wetland impacts have been avoided:

- A topographic map with wetlands delineated according to the U.S. Army

Corps of Engineers Wetlands Delineation Manual (1987). State of Maine Jurisdictional Wetlands will be identified according to the Natural Resources Protection Act on the same map. The scale should be 1 inch equals 100 feet.

- A site plan that shows all development activity including lots, common areas, roads, driveways, and building windows in conjunction with wetlands.

If any wetlands filling or alteration is proposed:

- Areas of wetland fill or alteration must be clearly marked and individually identified on the site plan.

- A report that contains surface area amounts of wetland fill or alteration for the individually identified fill or alteration locations.

- A letter from the Department of Inland Fisheries and Wildlife indicating the wetlands on the site contain no significant or valuable wildlife habitat.

- A letter of non-jurisdiction, a copy of permits received from other regulatory agencies (i.e. Maine Department of Environmental Protection of the U.S. Army Corps. Of Engineers) or report from a qualified professional stating that the proposed work will not require a permit from state of local agencies must be submitted for all projects proposing work either in or adjacent to wetlands prior to issuance of a building permit. This includes wetlands not regulated by the City of Portland.

9. WATER SUPPLY STANDARDS

9.1. APPLICABILITY

All applications for approval of proposed developments shall include evidence that demonstrates that the developer has made adequate provisions for securing and maintaining a sufficient and healthful water supply.

9.2. STANDARDS

9.2.1. Documentation.

If water is to be supplied from an off-site source, provide a letter from the appropriate utility or water district stating that a sufficient and healthful water supply exists and may be utilized by the development.

For on-site water supply wells, provide evidence in the form of well inventory and water quality data on existing water supplies located within one thousand feet of any property boundary of the proposed development. The well inventory data must show a probability that proposed wells will produce a safe and adequate water supply. Positive findings by a Maine Certified Geologist must be supported by a report which summarizes and interprets hydrogeologic and groundwater data for the region, with emphasis on the project site. It should include information such as: number of wells established in the vicinity of the proposed project; identification and locations of these wells on a site map, such as a USGS topographic map; the type and depths of the wells; the types and depths of soil and bedrock encountered at the well sites; and water quality data from these wells (if applicable).

9.2.2. A common water supply will be required if there is a reasonable doubt that sufficient water quality or quantity will be available from individual wells. A common water supply must have adequate safe yield and storage to supply a minimum of seventy-five (75) gallons per day per person. For a single family home, the well must be able to supply a minimum of three hundred (300) gallons per day, per household.

9.2.3. The Maine Center for Disease Control (MeCDC), Division of Environmental Health's Drinking Water Program must review and approve of any public drinking water system (if such a system serves an average of at least twenty-five (25) individuals daily at least sixty (60) days out of the year, or has fifteen (15) service connections.)

9.2.4. If the water supply wells and subsurface wastewater disposal systems are on-site and any proposed lots are less than 2 acres in area, locations of the wells and subsurface disposal systems must be identified on the site plan.

9.2.5. A water supply report must be submitted, if any well services five (5) or more homes, or any development uses greater than 1500 gallons per day.

9.2.6. If there is a reasonable doubt that sufficient and healthful water supply can be provided by on site wells, the following are required:

- potability test of water from the development site.
- establishment of one or more test wells on the development site
- pump tests of the well(s)
- A report by a Maine Certified Geologist discussing the yield and potability of water obtained.
- A complete hydrogeological assessment of groundwater quality and quantity may also be required.

For developments with shallow to bedrock soils, wells must be cased 20 feet into the solid bedrock surface and the annual space cement/bentonite grouted.

9.3. Reserved

9.4. SUBMISSIONS

For developments to be serviced by individual wells, provide evidence, from the Certified Geologist knowledgeable about the project, which indicates a sufficient and healthful water supply is likely to be available as follows:

- Well inventory data indicating number of wells, depth, yield and approximate locations shown on a USGS topographic map. This data may be available upon request from the inventory data base at the Maine Geological Survey.

- Water quality data from an area well or wells showing potability.

- If a common well or wells are to service any portion of a development, submit a detailed water supply report prepared by a Maine Certified Geologist. The report must indicate that the water supply conforms to Maine State Drinking Water Regulations, Title 22 M.R.S.A. Section 601 and it must contain the following information:

  - Determination of the long term safe yield of each well including a prediction of operating levels.
  - Determination of the cone of influence (cone of depression) for the well or wells.
  - Water quality analysis results in accordance with requirements of the Maine State Drinking Water Regulations, Title 22 M.R.S.A. Section 601.

- Delineation of well head protection zones A, B, and C.
- Well head protection plan for each zone.
- Determination of any off-site wells which may be at risk due to groundwater withdrawal.
- Storage, treatment and distribution system designed, signed, stamped and dated by a Maine Registered Professional Engineer
- Evidence that adequate provisions will be made for the establishment of an entity to provide long-term maintenance and operation of the water supply system.

10. MUNICIPAL STREET LIGHTING STANDARDS

10.1. APPLICABILITY

Street lighting on city streets and public rights-of-way not subject to decorative street lighting shall follow the General Standards under 10.2 of this section.

In addition to the General Standards for lighting applicable throughout the city, the City of Portland has established special street lighting standards for decorative lighting in the following areas and according to the tables and figures in this section:

- Downtown (includes portions of Cumberland Avenue)
- Old Port
- Peninsula - Eastern Waterfront and Bayside
- Waterfront - Commercial/Thames Street
- Off-Peninsula/Forest Avenue
- Historic Landscape Districts (including Baxter Boulevard, the Eastern and Western Promenades, Lincoln Park, and Deering Oaks Park)
- Trails and pathways (including Eastern Promenade Trail, Fore River Trail, and Bayside Trail).

Decorative street lighting specifications include but are not limited to fixture type, pole and base type, pole height to top of fixture, pole spacing, and color. Please refer to Section 10.4 Standards for Decorative Lighting and Figure X-4 for the map of Portland's decorative lighting locations.

Developments subject to site plan review, with the exception of minor residential or low impact site development projects, as defined in Chapter 16 of this Technical Manual, that are on an existing or proposed street that is not currently illuminated with street lighting meeting City standards shall install the requisite type and number of street lights along all frontages.

Where lighting is being installed in the public way as part of a private development, developers are responsible for purchasing and installing all street lighting, including light poles, brackets, slip fitters, bases and all electrical wiring and conduit. The new street lighting shall be connected to an existing metered service, unless otherwise directed by the City. Once installed and operational, and upon acceptance by the City, street lighting located in the City right of way shall become the property of the City of Portland.

10.2. GENERAL STANDARDS

Location: For areas not designated with decorative lighting, street lighting may be placed on only one side of the street within the furnishing zone. However, when deemed necessary for traffic safety, the Reviewing Authority may require some street lights to be placed the opposite side of a street.

Specification: For areas not designated with decorative lighting, the City of Portland has adopted the following typical street light pole and fixture standards:

- Residential (Local/Minor) Street [see *Figure X-1*]

  a) The standard pole height is a minimum 14', not to exceed 15' and shall be black aluminum. Poles shall be mounted on reinforced concrete pole bases with at least 2" but no more than 4" reveal above grade, with 4 bolts per pole. Street light pole base design, mounting bolt pattern, bolt spacing, and bolt size shall be approved by the Department of Public Works.

  b) Light levels and pole spacing shall be in accordance with the table in section 10.2.1

  c) Streetlights shall be full cutoff, using LEDs at a 3000 Kelvin color temperature, and shall seek to match uniformity, lumen output, and color of existing streetlights along the roadway, where applicable.

- Commercial/Industrial (Arterial/Collector) Road [see *Figures X-2A to X-2G*]

  a) The standard pole height shall be either 20' or 30' according to the table in section 10.2.1 and shall be a grey.

  b) Poles selection and finish:
     - Within .5 mi. of shoreline shall use Beacon RSA-B-SHO-S AA-10 Cobra [Figure X-2F]
     - More than .5 mi. away from shoreline shall use Hubbell RTA Upsweep Style [Figure X-2G]

  c) Poles shall be mounted on reinforced concrete pole bases with at least 2" but no more than 4" reveal above grade, with 4 bolts per pole.

  d) Light levels, pole spacing shall be in accordance with the tables in 10.2.1.

  e) Streetlights shall be full cutoff, using cost-effective and innovative

technologies and shall seek to match uniformity, lumen output, and color of existing streetlights along the roadway, where applicable.

10.2.1 Lighting Design – Standard street lighting design shall conform to the following table:

STREET CLASSIFICATION	**COMMERCIAL/INDUSTRIAL**		**RESIDENTIAL**	
	Min. Avg. Foot Candles	Maximum Pole Spacing	Min. Avg. Foot Candles	Maximum Pole Spacing
Arterial	2.0	160’ (30’ pole)	1.0	130’ (30’ pole)
Collector	1.2	130’ (30’ pole)	0.6	60’ (14’ pole)
Local/Minor	0.9	130’ (30’ pole)	0.4	120’ (14’ pole)

STANDARD COBRAHEAD				
Fixture – Figures X-2A through X-2G				
Location	**Fixture Type**	**Fixture Height**	**Spacing + Layout**	**Color**
One-lane Roadways: Without parking with low traffic	COBRAHEAD A	20’	One side: 65’ – 70’ Alt. sides: 125’ – 135’	Grey (Manufacturer’s Specification)
One-lane Roadways: With on-street parking with low traffic	COBRAHEAD A	30’	One side: 70’ – 80’ Alt. sides: 120’ – 130’	
Two-lane Roadways: With on-street parking with medium traffic	COBRAHEAD B	20’	One side: 75’ – 80’ Alt. sides: 145’ – 155’	
Two-lane Roadways: With on-street parking with low traffic	COBRAHEAD B	30’	One side: 80’ – 90’ Alt. sides: 175’ – 185’	
Two-lane Roadways: With on-street parking with medium traffic	COBRAHEAD C	20’	One side: 90’ – 100’ Alt. sides: 180’ – 190’	
Two-lane Roadways: With on-street parking with medium traffic	COBRAHEAD C	30’	One side: 100’ – 110’ Alt. sides: 200’ – 210’	
Two or more lane Roadways: With on-street with high/medium traffic	COBRAHEAD D	20’	One side: 95’ – 105’ Alt. sides: 195’ – 210’	
Two or more lane Roadways: With on-street parking with high traffic	COBRAHEAD D	30’	One side: 115’ – 125’ Alt. sides: 245’ – 255’	
	COBRAHEAD E	20’	One side: 100’ – 110’ Alt. sides: 200’ – 215’	
	COBRAHEAD E	30’	One side: 115’ – 130’ Alt. sides: 240’ – 255’	

10.2.2. New Metered Services for Light Fixtures

- New light fixtures shall:
    a) Not to be tied to the existing power utility leased lighting system.
    b) Be provided with a NEMA 7-pin receptacle for future connection to the City of Portland lighting control system. Coordinate with the City of Portland for final connection and control testing.
    c) Be specified with a color temperature of 3000K.
- The developer is to provide a new metered electrical service in an APX outdoor rated enclosure (see section 10.3.1 for unit specification), preventing any new fixtures from being directly connected to the power utility.
- The developer will be required to:
    a) Provide an astronomical timeclock inside the electrical enclosure (see section 10.3.1 for unit specification) to control light fixtures or
    b) Provide a standard photocell for each fixture, to be used until lighting control module is installed.

10.3. ACCESSORIES & BOLLARDS

10.3.1. Cabinets – The city standard cabinet specifications are as follows:

CABINET				
Location	**Fixture Type**	**Fixture Height**	**Layout**	**Color**
Public Right-of-way	APX Enclosures, Inc. Cabinet APX NEMA 3R Pedestal Enclosure APXPE401615	Per Manufacturer's Specification	Mounted on the back side of sidewalk with door facing street, meter facing building street wall. If site constraints require box to be mounted within sidewalk furnishing zone, then door should face building/private property and meter should be mounted opposite side of travel direction.	Grey/Silver or Clear Coat (Manufacturer's Specification)

- Cabinet base can be stand-alone type other than above, provided it is not in a sidewalk or on the edge of a plowed pathway, street, or parking lot. Circuits may also be wired into existing traffic signal boxes or other light circuit boxes. This will be determined on a case-by-case basis.

- Additional specifications for multiuse box with external power for festivals and special events (not required – determined by Department of Public Works):

  Square D power panel QO816L100DF/S or QO112L125G with cover QO16US
  Circuits required:
  1= 125/250V 50 Amp NEMA 14-50 Receptacle
  1= 125/250V 30 Amp NEMA 14-30 Receptacle
  2= 125V 20A Standard Receptacle

10.3.2 Wiring & Electrical

- 2” inch conduit (minimum) underground in light pole bases and cabinet base.
- Each light fused individually at base Fuse holder type is a (Buchanan 65 kit Cat # 65U)
- Regular outlet on each pole just below the fixture to be fused at the bottom of the pole base with the same fuse kit as listed above.
- Any single photo cell control for all lights shall be in the cabinet, rated for the circuit. This may require an all-purpose contactor.
- Wire size and circuit size shall be calculated by the design engineer and inspected by the city inspector to make sure it is correct. This would be done on a case by case basis because not all circuits, lights and systems are the same.

10.3.3 Bollards

This section includes standards for typical lighted bollards. Non-lighted bollards appear in *Section 1. Transportation Systems and Street Design Standards.*

Location: Bollards may be used in areas such as underpasses and similar conditions where height is restricted for pedestrian lighting. Spacing and number to be determined by Department of Public Works. Locations must be approved by Department of Public Works and the Planning Authority. The City may approve additional bollard types for streetscape or special projects such as parks or as use for security bollards; any additional bollard selection must be of equivalent structural strength as approved bollards.

Specification:

- Bollards shall be mounted on reinforced concrete bases with at least 2” but no more than 4” reveal above grade, with 4 bolts per pole.

- The City of Portland has adopted the following typical lighted bollard standards:

LIGHTED BOLLARD				
Fixture – Figure X-3				
Location *(including but not limited to)*	**Fixture Type**	**Fixture Height**	**Spacing + Layout**	**Color**
Underpasses: Park Avenue, St. James Street, St. John Street, Forest Avenue, Preble Street, Franklin Street, Commercial Street, Harborview Park, Tukey's Bridge, Veranda Street	Holophane Freeport Series	45"	To be determined by Department of Public Works	Black (Manufacturer's Specification)
Waterfront Piers				

10.4. STANDARDS FOR DECORATIVE LIGHTING

Locations, Specifications, and Finish:

- Figure X-4 identifies the decorative street light locations. The following tables and Figures X-5 through X-12 illustrate the requirements for **fixture type, height, layout, and finish for each decorative light fixture**, according to street.
- All light poles shall be mounted on reinforced concrete pole bases with at least 2" but no more than 4" reveal above grade, with 4 bolts per pole.

DECORATIVE LIGHT – Downtown

Map - Figures X-5A, X-5D
Fixtures – Figures X-5B, X-5C, X-5E, X-5F
The Technical Manual supersedes the previously adopted City of Portland Downtown Sidewalk and Street Lighting Plan (1994); that plan may be used for reference or clarification of the standards in this manual.

Location	Fixture Type	Fixture Height	Spacing + Layout	Color
Oak Street, Casco Street, Brown Street, Chestnut Street, Shepley Street **Center Street:** Congress to Free St **Cross Street:** Free to Spring St **Monument Square and Monument Way:** Pedestrian ways	PEDESTRIAN 1 – Single or Double Arm [Figure X-5B]	12’ 6”	One side: 60’ – 80’ Alt. sides: 100’ – 175’ Single-arm fixture placed in furnishing zone with luminaire oriented over sidewalk. Double-arm fixture placed with bracket arms parallel to sidewalk. If sidewalk space is limited, Planning Authority may approve lights within private property or attached to building.	Dark Green – Tiger Drylac RAL 6012
	PEDESTRIAN 2 [Figure X-5C]	25’ 0”	One side: 90’ – 100’ Alt. sides: 175’ – 225’ Double-arm fixture placed with bracket arms parallel to sidewalk.	Dark Green – Tiger Drylac RAL 6012
Congress Street **Other locations on a case-by-case basis**	STREET – Single or Double Arm [Figure X-5E]	30’ 0”	One side: 90’ – 100’ Alt. sides: 175’ – 225’ Double-arm fixture used in median conditions with luminaire overhanging street.	Dark Green – Tiger Drylac RAL 6012
Congress Street: St. John to Franklin St	STREET/PED COMBO [Figure X-5F]	30’ 0”	One side: 90’ – 100’ Alt. sides: 175’ – 225’	Dark Green – Tiger Drylac RAL 6012
Cumberland Avenue: High to Franklin St				
Spring Street: High to Temple/Union St				
Free Street: Between High St and Temple St				
Forest Avenue: Congress to Cumberland Ave				
Center Street: Free to Spring St				
Temple Street: Congress to Spring/Middle St				
Myrtle, Chestnut, Elm and Preble Streets: Congress to Cumberland Ave	STREET/PED COMBO [Figure X-5F]	30’ 0”	One side: 90’ – 100'	Dark Green – Tiger Drylac RAL 6012
Federal Street: Congress to Temple St				

DECORATIVE LIGHT – Old Port				
Map - Figure X-6A ***Fixture – Figure X-6B***				
Location	**Fixture Type**	**Fixture Height**	**Spacing + Layout**	**Color**
Exchange Street: Congress to Fore St	STREET [Figure X-6B]	14’ 3”	Alt. sides: 60’- 80’	Black (Manufacturer’s Specification)
Fore Street: Center to Franklin Ave				
Streets between Spring/Middle to Commercial Street: Center Street, Cotton Street, Cross Street, Union Street, Dana Street, Patton Court, Moulton Street, Market Street, Silver Street, Pearl Street, Custom House Street, Portland Square, Milk Street, Wharf Street, Gold Street				
Federal Street W, Middle Street, Newbury Street W: Temple/Union to Franklin St				
Church Street				
Parks: Tommy’s, Post Office Park				

DECORATIVE LIGHT – Peninsula				
Map - Figures X-7A, X-7C ***Fixtures – Figures X-7B, X-7D, X-7E***				
Location	**Fixture Type**	**Fixture Height**	**Spacing + Layout**	**Color**
Wilmot Street, Chapel Street, Stone Street, and Cedar Street	MEDIUM STREET (Figure X-7B)	19’ 3”	One side: 80’ – 100’ Use Type 2 IES distribution. Fixture placed in furnishing zone overhang towards the street; where fixture conflicts with overhead utilities, may be placed on back of sidewalk with light overhanging sidewalk. Where street lighting is provided by existing cobrahead fixtures, decorative fixtures are not needed on that side of street. If a project includes placing utilities underground, street/pedestrian lighting provided by decorative fixtures.	Black (Manufacturer’s Specification)
Alder St, Hanover St, Parris St, Brattle St, Mechanic St				
Mountfort St, Hancock St, Hampshire St, Newbury St E, Federal St E				
Preble Street and Elm Street: Cumberland Ave to Marginal Way				
Pearl St, Chestnut St, Myrtle St: Cumberland Ave to Marginal Way				
Oxford Street W, Lancaster Street, Kennebec Street, Somerset Street				
Portland Street				
Anderson St: Everett to Plowman St				
Fox Street				
Washington Ave: Congress to I-295				
India Street				
Middle Street: Franklin to Hancock St				
Fore Street: Franklin to Waterville St				
Marginal Way	LARGE STREET (Figure X-7D)	24’ 3”	One side: 90’ – 110’ Alt. sides: 175’ – 225’	Black (Manufacturer’s Specification)
Forest Avenue: Cumberland Ave to Park/Portland St				
*** No streets shall use PEDESTRIAN scale light unless site conditions such as sidewalk width or overhead utilities prevent installation of MEDIUM STREET fixture (Figure X-7D)**	PEDESTRIAN (Figure X-7E)	14’ 6”	One side: 60’ – 80’ Alt. sides: 100’ – 175’ Fixture shall be oriented to overhang sidewalk. Fixture placed in furnishing zone unless space is limited. Placement on back of sidewalk or private property overhanging sidewalk may be accommodated where space is a constraint.	Black (Manufacturer’s Specification)

DECORATIVE LIGHT – Trails, Waterfront

Map - Figure X-8A
Fixture – Figure X-8B
Trails - This fixture appropriate for any city trail installation. Standard lighted bollard may also be used in appropriate circumstances.
Bayside Trail - This fixture should only be used on the Bayside Trail if replacing six or more of the existing fixtures.
Waterfront – Commercial/Thames Street, this fixture is suitable to supplement standard cobrahead lighting.

Location	Fixture Type	Fixture Height	Spacing + Layout	Color
Fore River Trail: Casco Bay Bridge to US-1; Harborview Park trail path	TRAIL – Single Arm	18′ 4″	One side: 90′ – 125′ Alt. sides: 175′ – 225′	Black (Manufacturer's Specification)
Commercial Street: Fore River Parkway to India St	TRAIL – Single Arm	18′ 4″	Supplemental pedestrian lighting as-needed. One side: 90′ – 125′ Alt. sides: 175′ – 225′	Black (Manufacturer's Specification)
Thames Street: India St to Eastern Promenade Trail	TRAIL – Single Arm	18′ 4″	One side: 90′ – 125′ Alt. sides: 175′ – 225′	Black (Manufacturer's Specification)
Eastern Promenade Trail	TRAIL – Single or Double Arm	18′ 4″	One side: 90′ – 125′ Alt. sides: 175′ – 225′ Single arm fixture oriented to overhang trail; Double arm fixture for medians or similar.	Black (Manufacturer's Specification)

DECORATIVE LIGHT – Off-Peninsula

Map - Figure X-9A
Fixture – Figure X-9B
In addition to the specific locations indicated below, this fixture is suitable for off-peninsula, commercial corridors to supplement standard cobrahead lighting.

Location	Fixture Type	Fixture Height	Spacing + Layout	Color
Forest Avenue: Marginal Way to Woodlawn Ave	PEDESTRIAN – Single or Double Arm	18′ 6″	One side: 60′-80′ Alt. sides: 100′ - 175′ Placement on back of sidewalk with single arm fixture oriented to overhang sidewalk; Where site constraints require placement in furnishing zone, use double arm fixture parallel to sidewalk.	Graphite (Manufacturer's Specification)

DECORATIVE LIGHT – Historic Landscape Street				
Map - Figure X-10A ***Fixture – Figure X-10B*** ***Fixture placement should comply with adopted master plans.***				
Location	**Fixture Type**	**Fixture Height**	**Spacing + Layout**	**Color**
Eastern Promenade (park side of street only): North St to Vesper St **Western Promenade (park side of street only):** Bramhall to Vaughan St **Baxter Boulevard (both sides of street):** Forest Ave to Bates St	STREET – with shield	21’ 0”	One side: 90’ – 100’ Alt sides: 175’ – 225’	Black (Manufacturer’s Specification)
Deering Oaks Park (Abutting Streets, park side only): Deering Ave, Park Ave, Forest Ave	STREET – without shield	21’ 0”	One side: 90’ – 100’ Park side of street only	Black (Manufacturer’s Specification)
Deering Oaks Park (within park): High Street, State Street	STREET – without shield	21’ 0”	One side: 90’ – 100’ Alt. sides: 175’ – 225’	Black (Manufacturer’s Specification)

DECORATIVE LIGHT – Historic Landscape Pedestrian				
Map - Figure X-11A ***Fixture - Figures X-11B*** ***Fixture placement should comply with adopted master plans.***				
Location	**Fixture Type**	**Fixture Height**	**Spacing + Layout**	**Color**
Eastern Promenade: Pedestrian paths	Pedestrian	14’ 6”	One side: 60’ – 80’	Black (Manufacturer’s Specification)
Western Promenade: Pedestrian paths	Pedestrian	14’ 6”	One side: 60’ – 80’	Black (Manufacturer’s Specification)
Deering Oaks Park (Interior): Pedestrian paths, High and State streets	Pedestrian	14’ 6”	Use existing light locations or refer to the Deering Oaks Master Plan (2003) for revised locations	Black (Manufacturer’s Specification)

DECORATIVE LIGHT – Deering Oaks Bridge				
Fixture –Figure X-12 ***Fixture placement should comply with adopted master plans.***				
Location	**Fixture Type**	**Fixture Height**	**Spacing + Layout**	**Color**
Deering Oaks Park (Bridge)	Bridge Light	6’ 0” (match existing)	Match existing	Match existing

10.5. CITY OF PORTLAND VERSUS CONSTRUCTION CONTRACTOR RESPONSIBILITIES

For projects where the construction contractor is required by the City to provide new street lighting, the new street lighting shall be connected to an existing metered service, unless otherwise directed by the City (see Section 10.2.2 for new metered services for lighting). The responsibilities of the construction contractor are as follows:

Construction Contractor Responsibilities:

a) The construction contractor shall furnish and install as part of the construction scope: Street lighting luminaires, street lighting poles, bracket arms, pole accessories, and decorative base enclosures all as stipulated by the City according to the City standards for the given project location.

b) Concrete foundation bases for new street lighting poles. Poles shall be mounted on reinforced concrete pole bases with at least 2" but no more than 4" reveal above grade, with 4 bolts per pole. The installation of the foundation bases shall be coordinated with sidewalk details and requirements as stipulated by the City of Portland Department of Public Works.

c) Underground conduit and wire between street lighting pole foundation bases. In addition, underground conduit and wire shall be provided to an electrical service panelboard and meter, as well as to an existing service connection.

d) Wiring to be installed within each street lighting pole and shall be extended at the pole top (or bracket arm), with connection to the street lighting luminaire(s).

e) Upon completion of the erection of the street lighting fixtures, including the installation of all lighting poles and conduit/wire, the construction contractor shall notify the City that the system is ready for operation. THE LUMINAIRES SHALL BE ENERGIZED PRIOR TO THE CONSTRUCTION CONTRACTOR'S REQUEST FOR A CITY CERTIFICATE OF OCCUPANCY.

f) It shall be the construction contractor's responsibility to pay all costs associated with the provision of required street lighting including costs associated with street lighting luminaires, street lighting poles, brackets, bases, conduit and wire, panelboards, and metering equipment.

City of Portland Responsibilities:

a) To approve the proposed point of connection for electrical service for new municipal street lighting where a new metered service is provided.

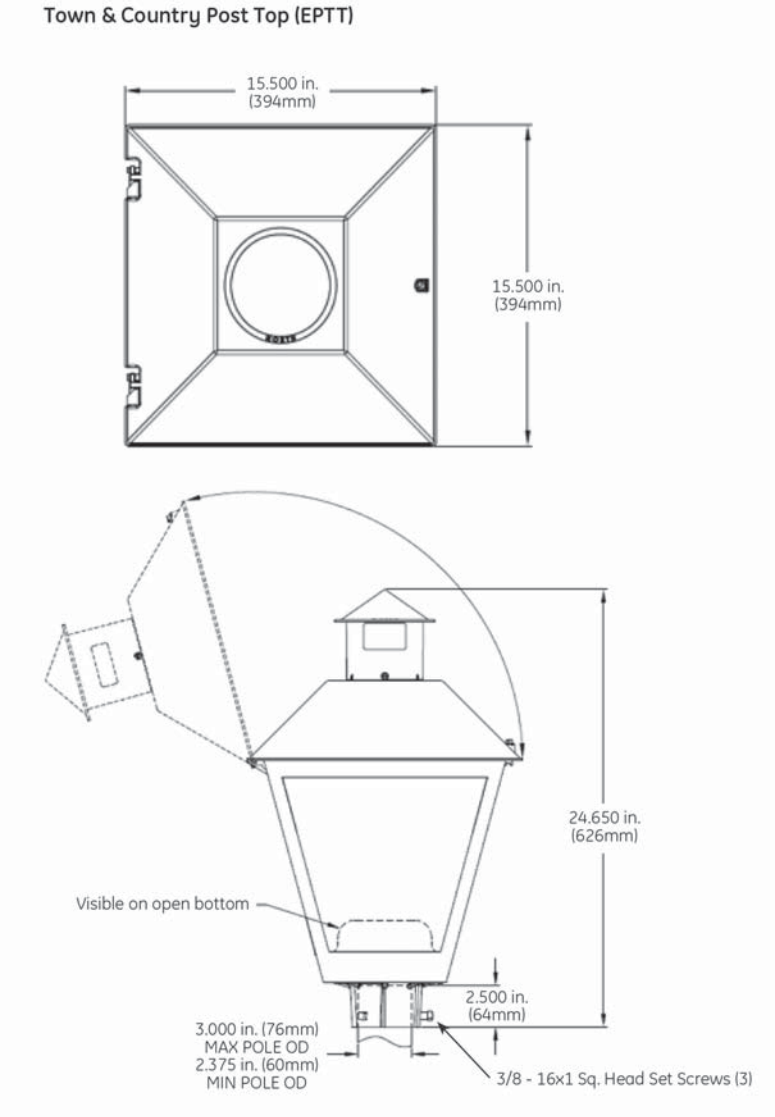
b) Connection of the construction contractor's secondary service conductors at an existing service point, where a new service is provided.

c) To review and approve the location of the street light fixtures within the public right-of-way.

10.6. Reserved.

10.7. SUBMISSION REQUIREMENTS

A lighting plan shall be provided which shall show the quantity and location of all existing and proposed street lights. This shall be incorporated into the site plan or presented on an individual lighting plan. Descriptive information including engineering detail drawings depicting the entire proposed fixture (luminaire, bracket arm, slip fitter) along with the proposed finish shall be included on the individual lighting plan.



LUMINAIRE

GE Evolve LED Post Top Town & Country (EPTT)
Model: EPTT-01-0-06-D-A-30-A-P-BLCKR-R

Die-case aluminum housing with acrylic refractor in white opal.

Pole-mounted, secondary surge protection
Voltage (120 through 277V)
Asymmetric HO, 56 watt
LED 3000K color temperature

LIGHTING POLE

Aluminum, smooth tapered pole with 5/32“ thickness (.156”).

EPA rating from 4.6 to 6.9 (using 110mph wind speed ratings from AAHTO).

Maximum weight capacity = 75-100 lbs.

Base bolt pattern: 10“ diagonal.

DIMENSIONS

Pole Height = 15’ max.
Pole Diameter = 6” base tapered to 3”

FINISH

Black (standard)

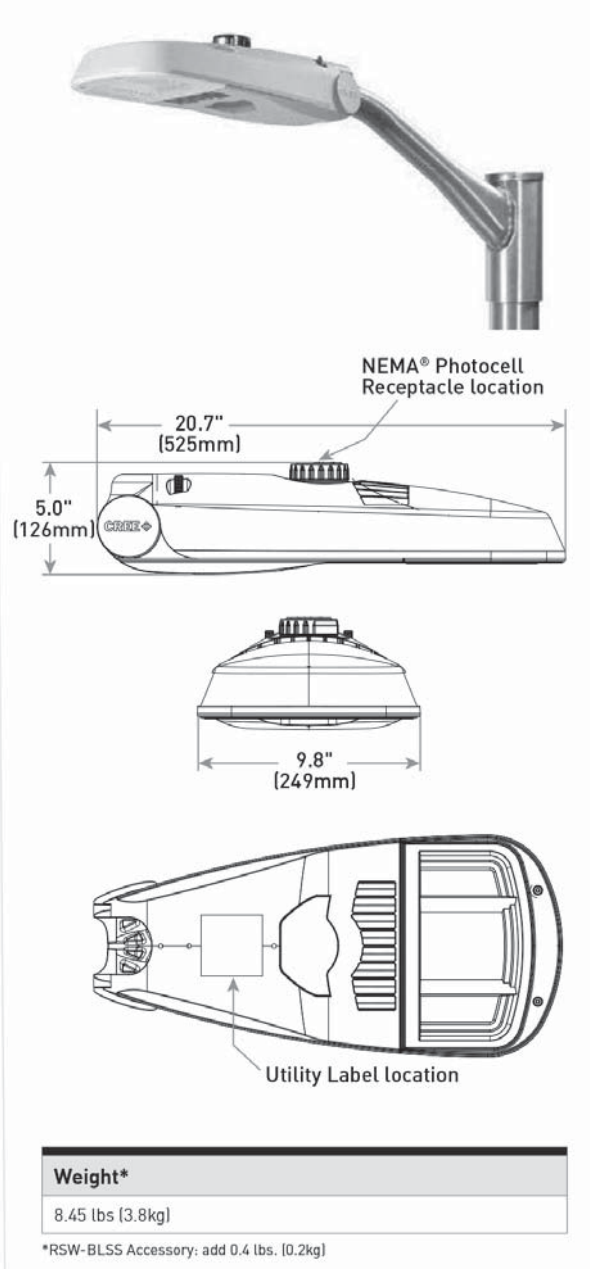
APPLICATION

Standard sidewalk lighting for residential streets not specified for decorative lighting.

Spacing: According to Section 10.2.1

Fixture placed in furnishing zone unless space is limited. Placement on back of sidewalk or private property near sidewalk may be accommodated where space is a constraint.

Date: **March, 2019**	**CITY OF PORTLAND, MAINE** TECHNICAL MANUAL	**MUNICIPAL STREET LIGHTING STANDARDS** SECTION 10	Figure: X-1
Revised Date:	**RESIDENTIAL**		



Weight*
8.45 lbs (3.8kg)

*RSW-BLSS Accessory: add 0.4 lbs. (0.2kg)

LUMINAIRE

Cree RSW series LED streetlight
Model: RSWS-A-HT-3ME-3L-30K7-UL-GY-N-X3

Small, horizontal tenon
Optics IES Type III Medium, 2,756 lumens
23 watts
Universal voltage (120-227V)
7-pin photocell receptacle
LED 3000K color temperature

LIGHTING POLE

Mount to existing pole or according to Section 10.2.1

DIMENSIONS

Pole Height = 20' or 30'

FINISH

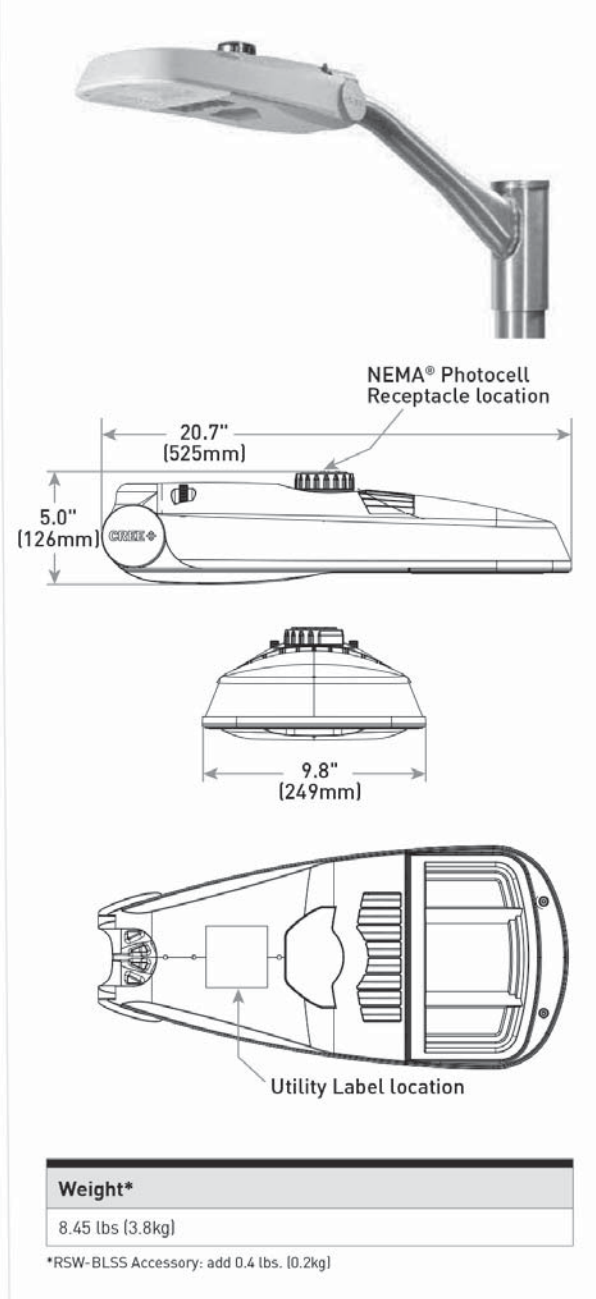
Grey: GY (standard)

APPLICATION

Standard street lighting for streets not specified for decorative lighting.

Fixture placed in furnishing zone unless space is limited. Placement on back of sidewalk or private property overhanging sidewalk may be accommodated where space is a constraint.

Date: **March, 2019**	**CITY OF PORTLAND, MAINE** TECHNICAL MANUAL	**MUNICIPAL STREET LIGHTING STANDARDS** SECTION 10	Figure: X-2A
Revised Date:	**COBRAHEAD A**		



Weight*
8.45 lbs (3.8kg)

*RSW-BLSS Accessory: add 0.4 lbs. (0.2kg)

LUMINAIRE

Cree RSW series LED streetlight
Model: RSWS-A-HT-3ME-5L-30K7-UL-GY-N-X1

Small, horizontal tenon
Optics IES Type III Medium, 3,617 lumens
30 watts
Universal voltage (120-277V)
7-pin photocell receptacle
LED 3000K color temperature

LIGHTING POLE

Mount to existing pole or according to Section 10.2.1

DIMENSIONS

Pole Height = 20’ or 30’

FINISH

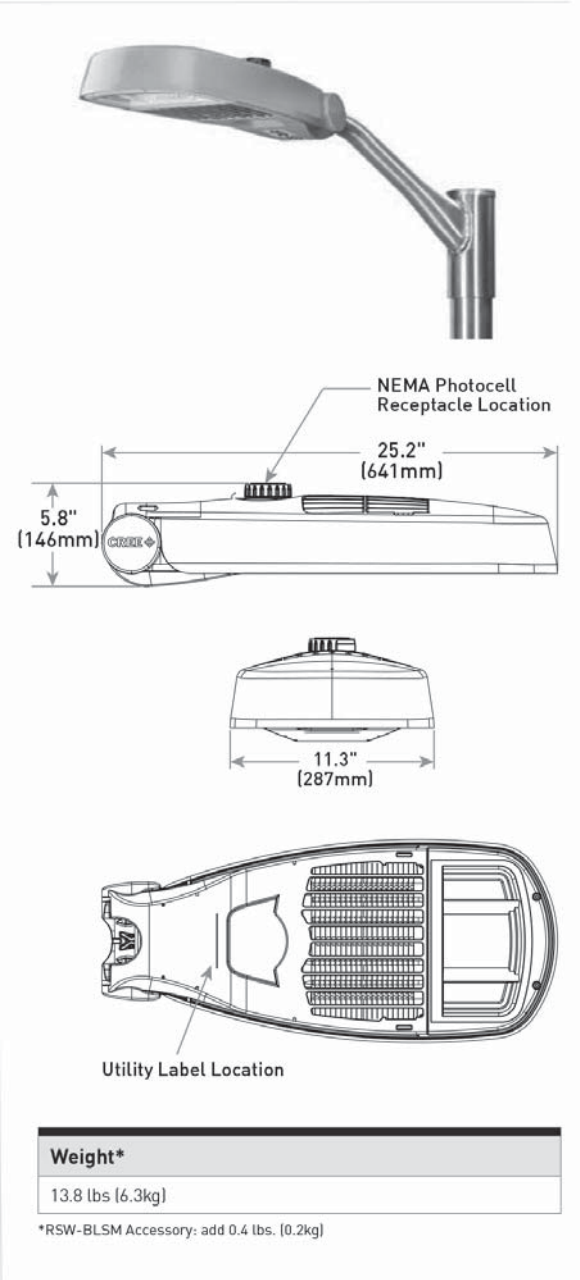
Grey: GY (standard)

APPLICATION

Standard street lighting for streets not specified for decorative lighting.

Fixture placed in furnishing zone unless space is limited. Placement on back of sidewalk or private property overhanging sidewalk may be accommodated where space is a constraint.

Date: **March, 2019**	**CITY OF PORTLAND, MAINE** TECHNICAL MANUAL	**MUNICIPAL STREET LIGHTING STANDARDS** SECTION 10	Figure: X-2B
Revised Date:	**COBRAHEAD B**		



Weight*
13.8 lbs (6.3kg)

*RSW-BLSM Accessory: add 0.4 lbs. (0.2kg)

LUMINAIRE
Cree RSW series LED streetlight
Model: RSWM-A-HT-3ME-9L-30K7-UL-GY-N-X1

Medium, horizontal tenon
Optics IES Type III Medium, 6,500 lumens
50 watts
Universal voltage (120-227V)
7-pin photocell receptacle
LED 3000K color temperature

LIGHTING POLE
Mount to existing pole or according to Section 10.2.1

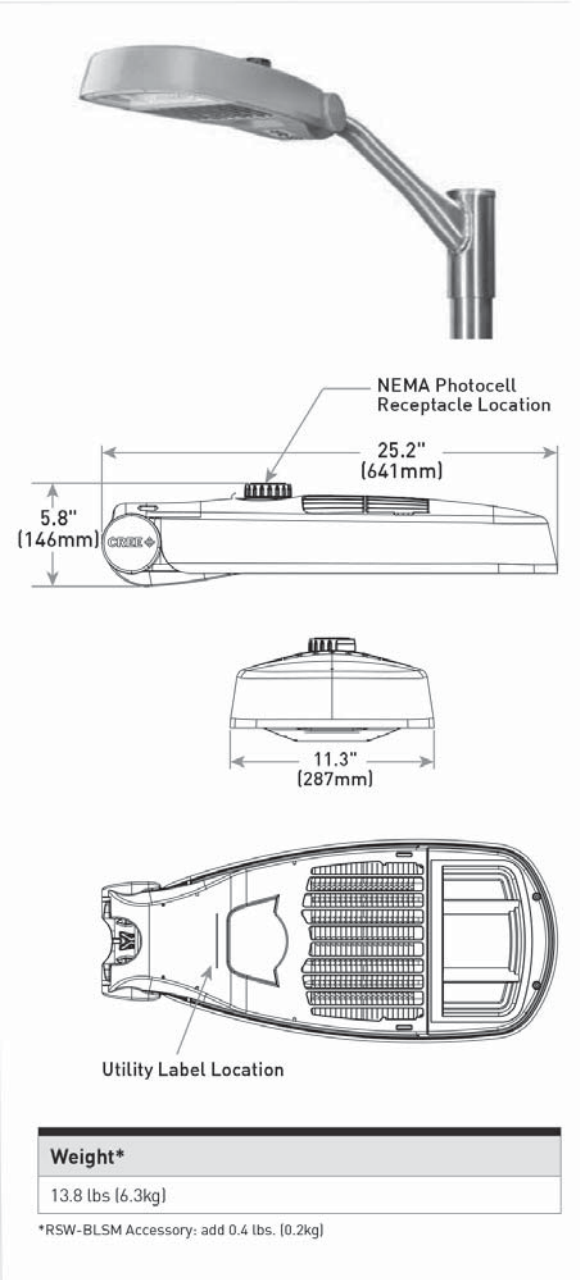
DIMENSIONS
Pole Height = 20' or 30'

FINISH
Grey: GY (standard)

APPLICATION
Standard street lighting for streets not specified for decorative lighting.

Fixture placed in furnishing zone unless space is limited. Placement on back of sidewalk or private property overhanging sidewalk may be accommodated where space is a constraint.

Date: **March, 2019**	**CITY OF PORTLAND, MAINE** TECHNICAL MANUAL	**MUNICIPAL STREET LIGHTING STANDARDS** SECTION 10	Figure: X-2C
Revised Date:	**COBRAHEAD C**		



Weight*
13.8 lbs (6.3kg)

*RSW-BLSM Accessory: add 0.4 lbs. (0.2kg)

LUMINAIRE
Cree RSW series LED streetlight
Model: RSWM-A-HT-3ME-9L-30K7-UL-GY-N-X6

Medium, horizontal tenon
Optics IES Type III Medium, 8,975 lumens
75 watts
Universal voltage (120-227V)
7-pin photocell receptacle
LED 3000K color temperature

LAMP
Vertical mounted, LED 3000K color temperature

LIGHTING POLE
Mount to existing pole or according to Section 10.2.1

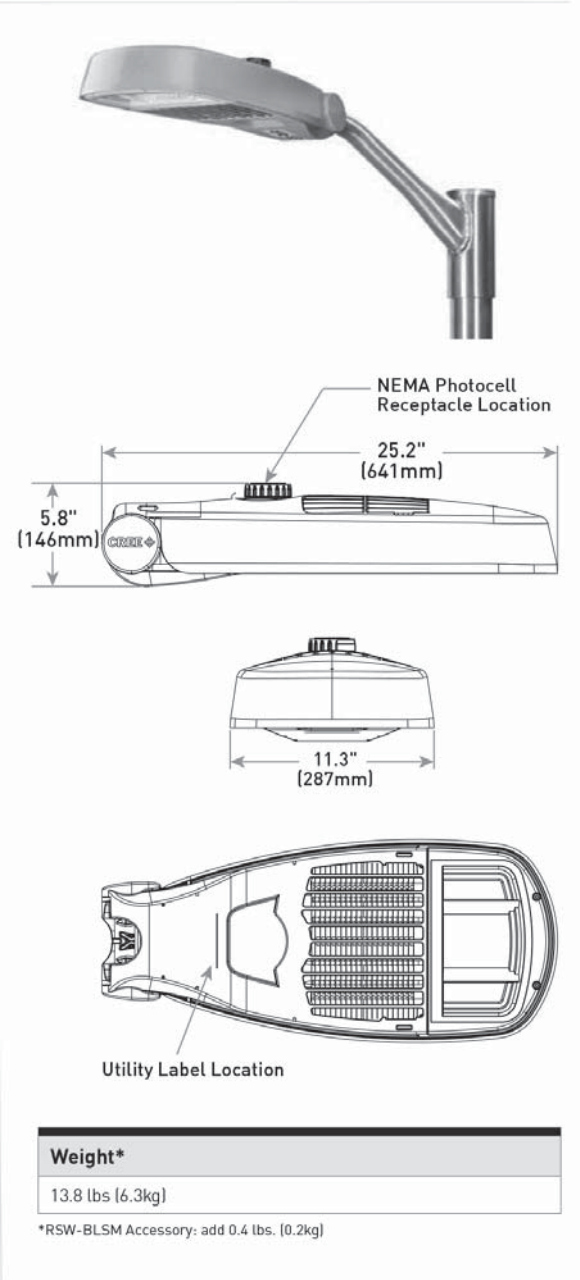
DIMENSIONS
Pole Height = 20' or 30'

FINISH
Grey: GY (standard)

APPLICATION
Standard street lighting for streets not specified for decorative lighting.

Fixture placed in furnishing zone unless space is limited. Placement on back of sidewalk or private property overhanging sidewalk may be accommodated where space is a constraint.

Date: **March, 2019**	**CITY OF PORTLAND, MAINE** TECHNICAL MANUAL	**MUNICIPAL STREET LIGHTING STANDARDS** SECTION 10	Figure: X-2D
Revised Date:	**COBRAHEAD D**		



Weight*
13.8 lbs (6.3kg)

*RSW-BLSM Accessory: add 0.4 lbs. (0.2kg)

LUMINAIRE

Cree RSW series LED streetlight
Model: RSWM-A-HT-3ME-9L-30K7-UL-GY-N

Medium horizontal tenon
Optics IES Type III Medium, 9,325 lumens
83 watts
Universal voltage (120-227V)
7-pin photocell receptacle
LED 3000K color temperature

LIGHTING POLE

Mount to existing pole or according to Section 10.2.1

DIMENSIONS

Pole Height = 20' or 30'

FINISH

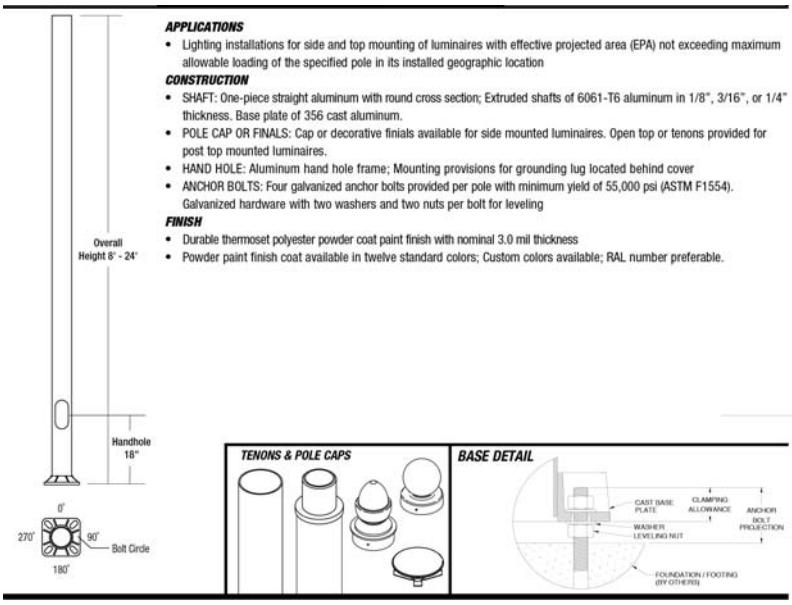
Grey: GY (standard)

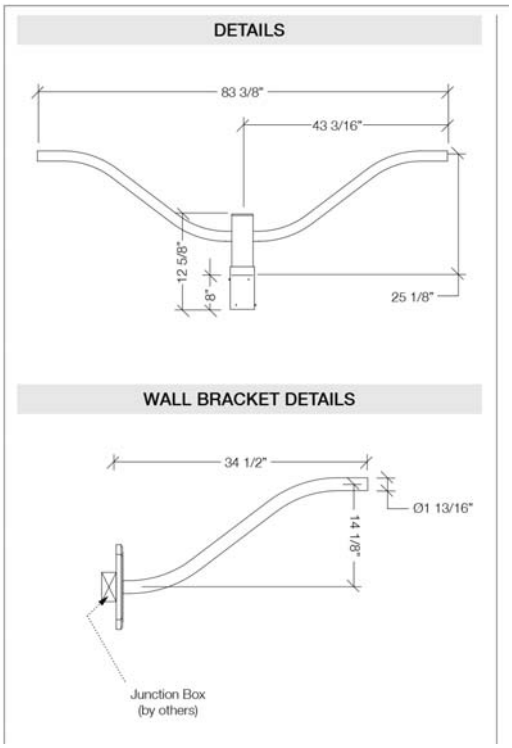
APPLICATION

Standard street lighting for streets not specified for decorative lighting.

Fixture placed in furnishing zone unless space is limited. Placement on back of sidewalk or private property overhanging sidewalk may be accommodated where space is a constraint.

Date: **March, 2019**	**CITY OF PORTLAND, MAINE** TECHNICAL MANUAL	**MUNICIPAL STREET LIGHTING STANDARDS** SECTION 10	Figure: X-2E
Revised Date:	**COBRAHEAD E**		





LIGHTING POLE (see Section 10.2)

Pole: Beacon RSA-B-SHO-S Series
Model:
RS-B-SHO-S-16-40-A/B/C-CAP-2L-B3-DBT-VM2

Aluminum, smooth tapered pole of 6061-T6 aluminum.

Arm: Beacon AA-10 Cobra
Model: AA-10-S-5-B-P-GYS

Smooth profile on arms with copper alloy A356. All extruded aluminum parts shall be alloy 6061-T6, 6063-T5 or equal.

Performance standards for locations near shoreline (AAMA 2604, ASTM D522, resists surface impacts of up to 160 inch-pounds).

Base bolt pattern: Four galvanized anchor bolts per pole with minimum yield of 55,000 psa (ASTM F1554). Galvanized hardward with two washers and two nuts per bolt for leveling.

DIMENSIONS

Pole Height = 20' or 30' (according to Section 10.2.1)

FINISH

Grey: GYS Grey Smooth (standard)

Thermoset polyester powder coat paint finish with nominal 3.0 mil thickness.

Corrosion-resistant polyester powder-coat electrostatically applied meeting AAMA 2604 performance specification.

APPLICATION

Standard street lighting for streets not specified for decorative lighting.

To be used within .5 mi. of shoreline and where existing poles are not available for mounting cobrahead fixture.

Spacing: According to Section 10.2.1

Follow established pattern and orientation - typically single arm overhanging towards street.

Fixture placed in furnishing zone unless space is limited. Placement on back of sidewalk or private property overhanging sidewalk may be accommodated where space is a constraint.

Date: **March, 2019**	**CITY OF PORTLAND, MAINE** TECHNICAL MANUAL	**MUNICIPAL STREET LIGHTING STANDARDS** SECTION 10	Figure: X-2F
Revised Date:	**COBRAHEAD POLE - WATERFRONT**		

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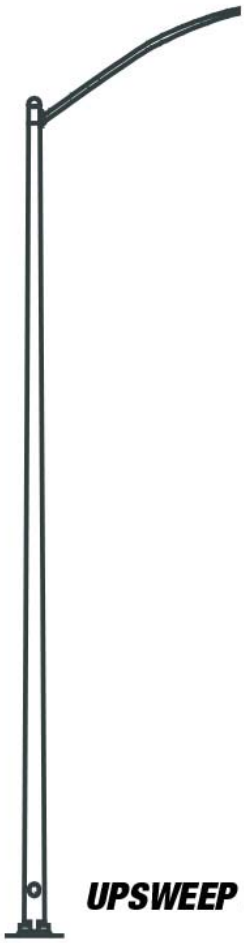
Street & Sidewalk Lighting
STANDARD - COBRAHEAD POLE



UPSWEEP STYLE

LIGHTING POLE (see Section 10.2)
Hubbell FTA Series - Upsweep Style
Model: RTA

Standard aluminum, smooth tapered pole.

DIMENSIONS
Pole Height = 20' or 30' (according to Section 10.2.1)

FINISH
Grey (standard)

APPLICATION
Standard street lighting for streets not specified for decorative lighting.

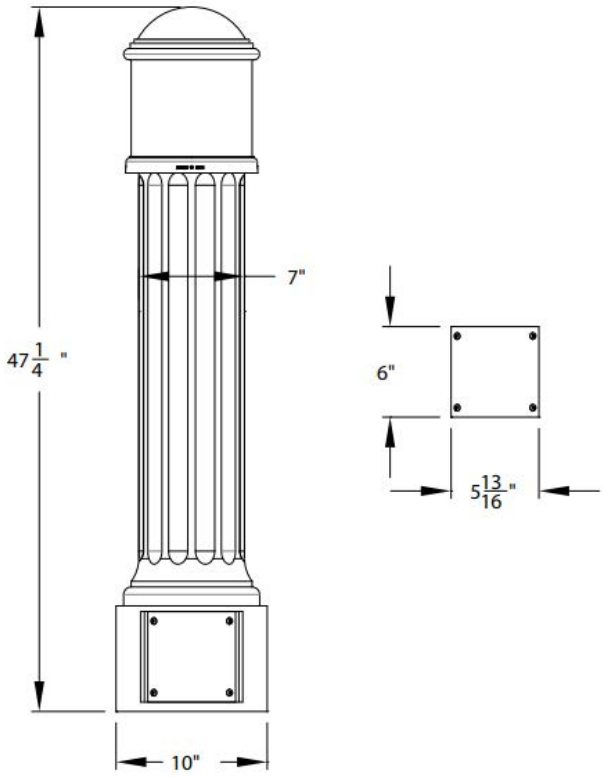
To be used further than .5 mi. from shoreline and where existing poles are not available for mounting cobrahead fixture.

Spacing: According to Section 10.2.1

Follow established pattern and orientation - typically single arm overhanging towards street.

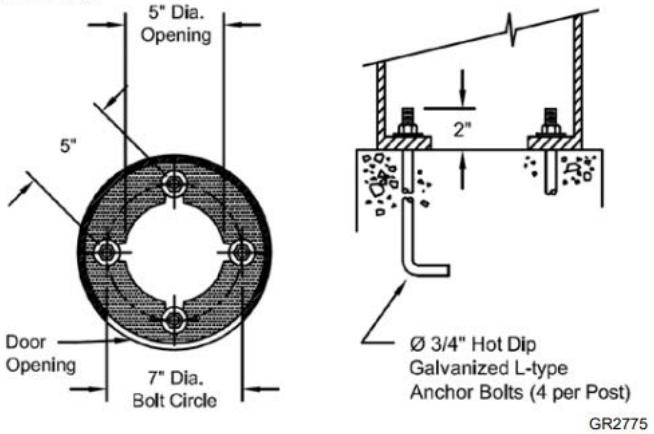
Fixture placed in furnishing zone unless space is limited. Placement on back of sidewalk or private property overhanging sidewalk may be accommodated where space is a constraint.

Date: **March, 2019**	**CITY OF PORTLAND, MAINE** TECHNICAL MANUAL	**MUNICIPAL STREET LIGHTING STANDARDS** SECTION 10	Figure: X-2G
Revised Date:	**COBRAHEAD POLE - NON-WATERFRONT**		



Maximum standard weight - 58 lbs.
Maximum weight with Direct Burial Base Option - 88 lbs.

HLBOLED:



LUMINAIRE

Hamilton LED Series Cast Aluminum Bollard
Model: HLBOLED CA P40 30K MVOLT GL5 ACS BK AO ABG

Mechanical Specifications

Be heavy grade A356.1 cast aluminum (aluminum with <1% copper)

Wet locations listed

One-piece casting with a removable top

All welders shall be certified per Section 5 of ANSI/ AWS D1.2-90

Access door opening for anchor bolts and wiring access is 3"x 5" x 4.5"

The finish shall utilize a polyester powder coat paint to ensure maximum durability rigorous multi-stage pre-treating and painting process yields a finish that achieves a scribe creepage rating of 8 (per ASTM D1654) after over 5000 hours exposure to salt fog chamber (operated per ASTM B117) on standard BLACK.

Optical Specifications

IP65 light engine

Type 5 distribution with prismatic borosilicate glass and a smooth clear acrylic outer lens

Control Options

Field adjustable output to adjust output to luminaire – AO

Electrical Specifications

The driver shall meet the following requirements:

Certified by UL or CSA for wet locations

A factory programmable electronic driver with 0-10V dimming

LEDs shall have a minimum of 70 CRI and available in 3000K CCT

The electrical system shall be designed to meet ANSI/ IEEE C62.41.2 and shall offer a 10kV/5kA surge protection, fail off.

FINISH

Black (standard)

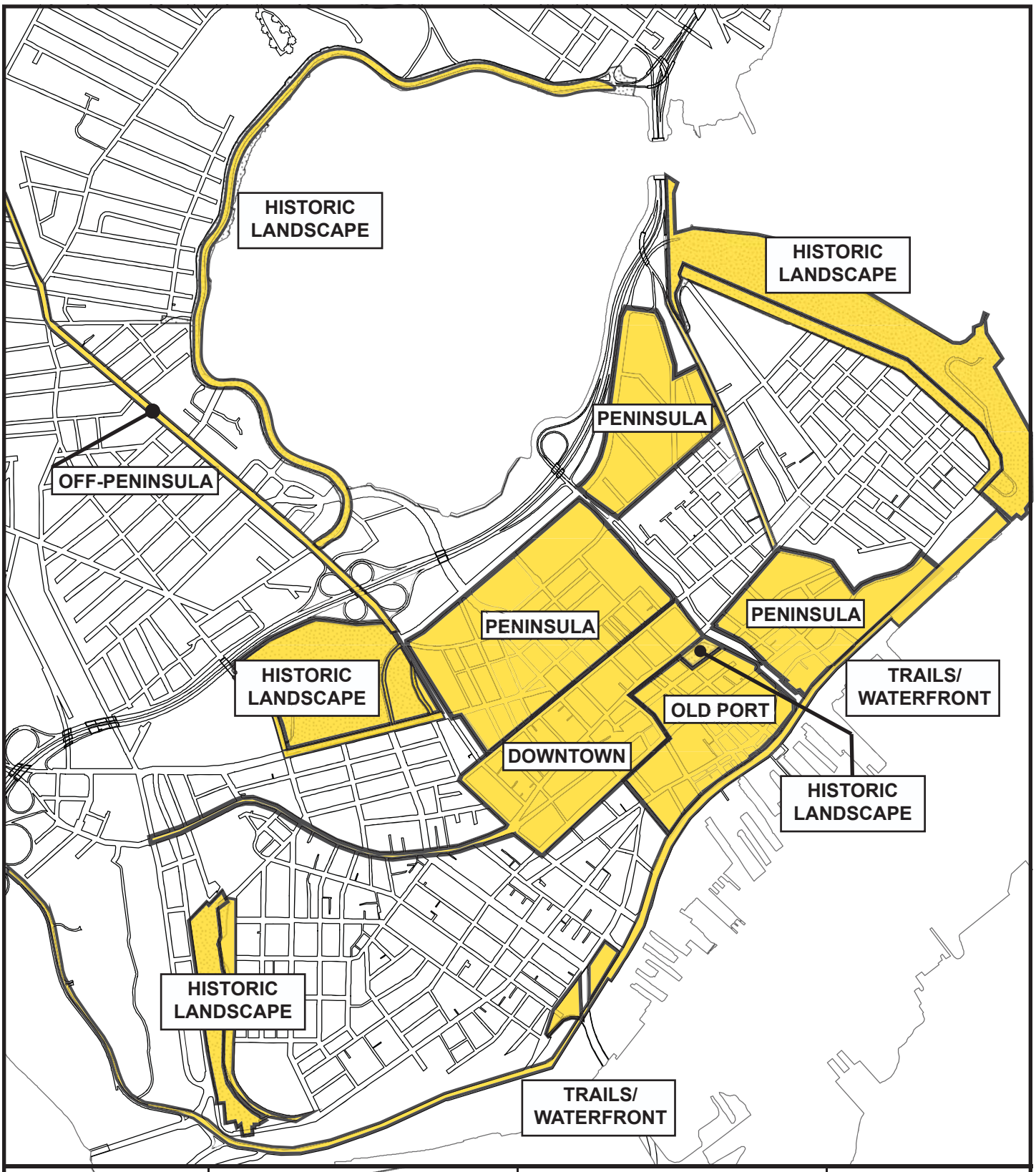
APPLICATION

Sidewalk lighting where height is limited - underpasses, parks, piers

Can be used as a security bollard.

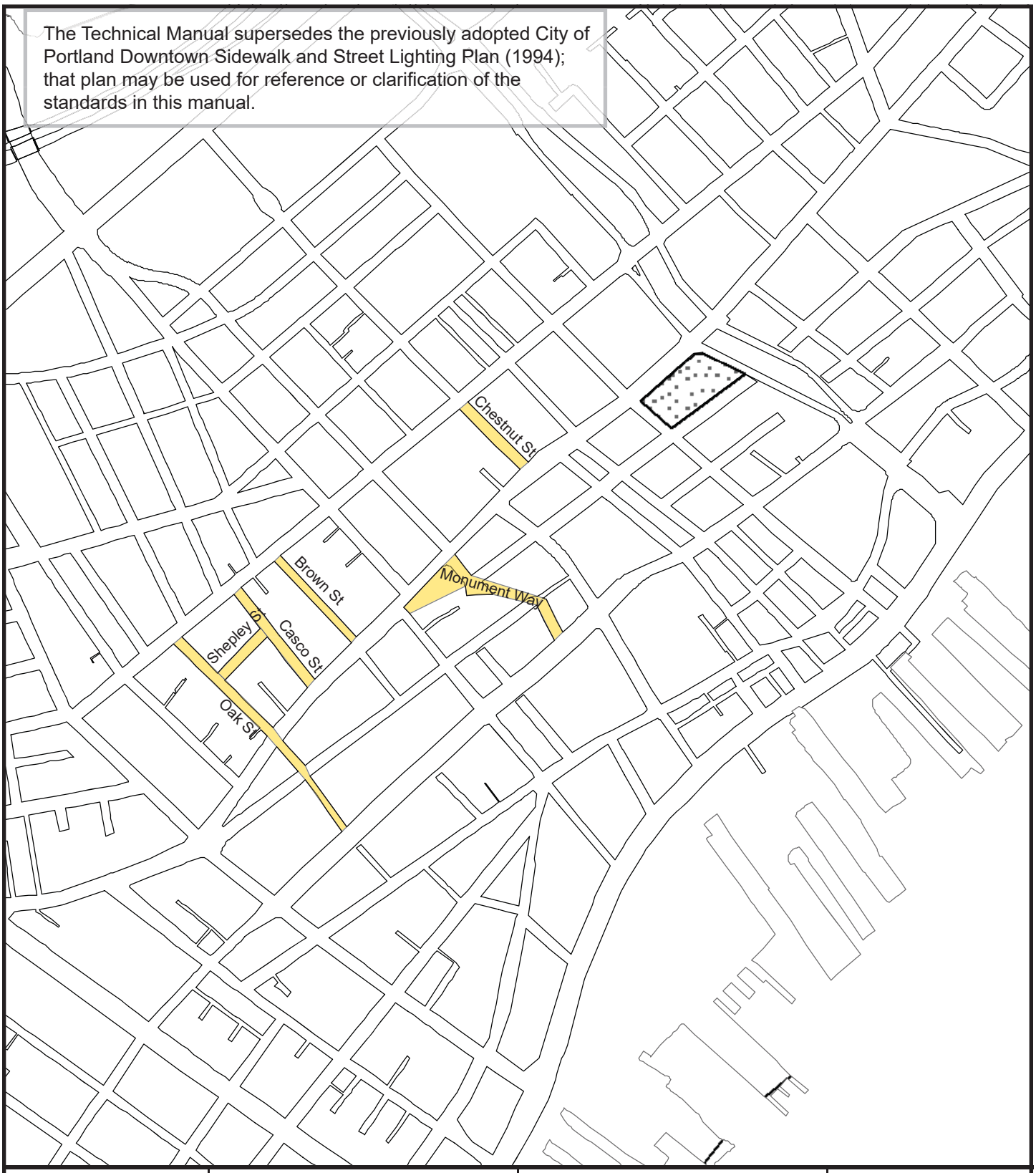
Spacing: To be determined by Department of Public Works per specific project

Date: **March 2019**	**CITY OF PORTLAND, MAINE** TECHNICAL MANUAL	**MUNICIPAL STREET LIGHTING STANDARDS** SECTION 10	Figure: X-3
Revised Date: 11/22/22	**LIGHTED BOLLARD**		



Date: **March, 2019**	**CITY OF PORTLAND, MAINE** TECHNICAL MANUAL	**MUNICIPAL STREET LIGHTING STANDARDS** SECTION 10	Figure: X-4
Revised Date:	**MAP: DECORATIVE LIGHTING AREAS**		

The Technical Manual supersedes the previously adopted City of Portland Downtown Sidewalk and Street Lighting Plan (1994); that plan may be used for reference or clarification of the standards in this manual.



Date: **March, 2019**	**CITY OF PORTLAND, MAINE** TECHNICAL MANUAL	**MUNICIPAL STREET LIGHTING STANDARDS** SECTION 10	Figure: X-5A
Revised Date:	**MAP: Decorative Light - DOWNTOWN PEDESTRIAN**		

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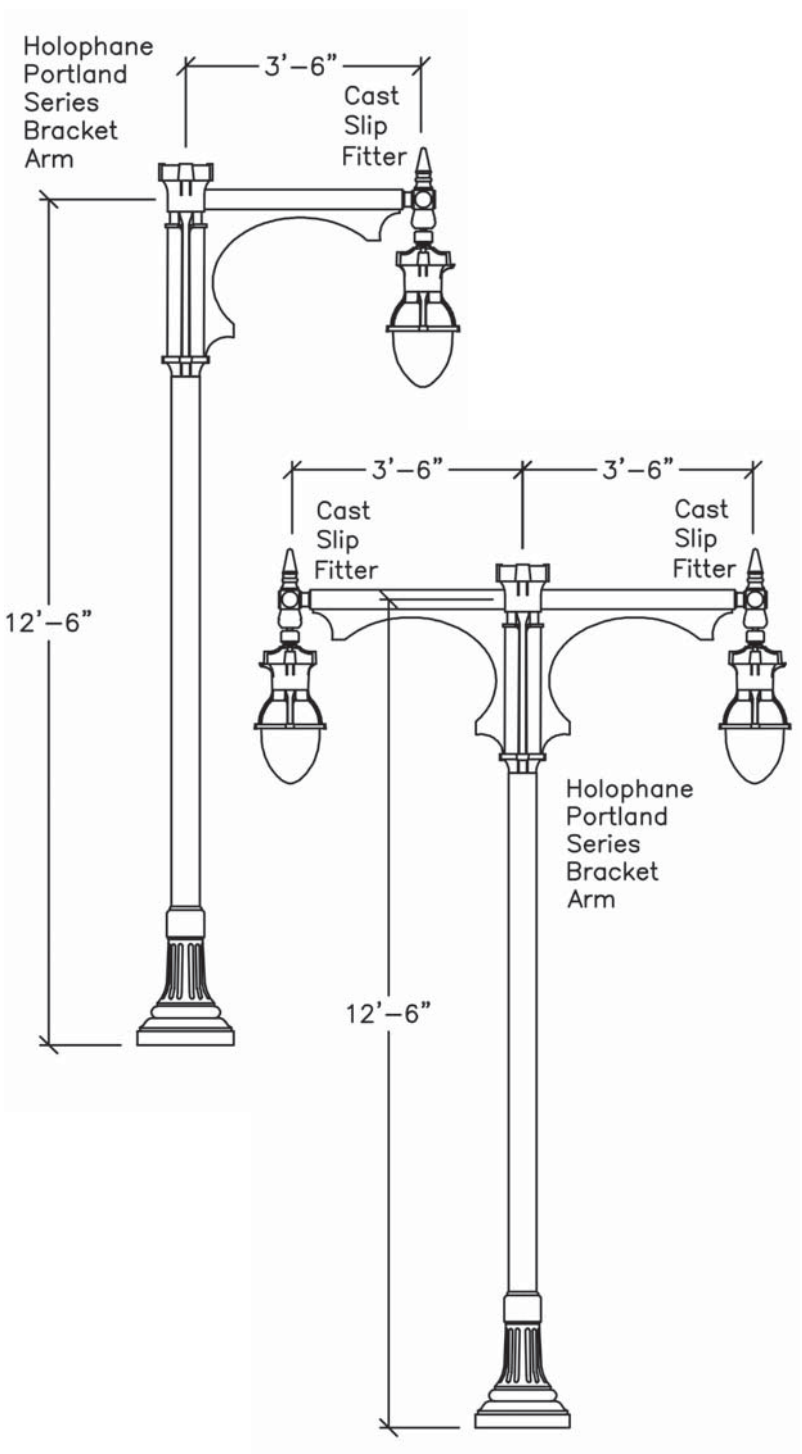
Street & Sidewalk Lighting
DECORATIVE LIGHT - DOWNTOWN



LUMINAIRE
Holophane Esplanade LED II
Model:
ESL2-P20S-30K-AS-CMC-TG3-S-P7-NL2X2-BHDF13-200CMC

Cast aluminum housing with stainless steel hardware. Dropped refractor shall be thermal resistant borosilicate glass. Internal reflector and prismatic diffuser shall provide an IES Type IV distribution pattern. Luminaire shall include an integral ballast with modular wiring connectors and multi-volatage taps. Provide an internal receptacle type photocell control. LED 3000K color temperature

BRACKET ARM
Holophane Portland Series (custom)
Model PD42CA-RAL6012

Portland Series steel crossarm with a post-top fitting for a 3-1/2" by 8" tenon.

SLIP FITTER
Holophane
Model :WLLF200SCA-RAL6012
2-3/8" O.D. with swivel cast fitter.

LIGHTING POLE AND BASE
Holophane North Yorkshire Cast Steel
Model NY-S-13-FTB-P13-ABG-RAL6012

Cast steel pole, smooth 5" diameter shaft with integrated base rated for a 90mph wind load with a 1.3 gust factor. Provide four hot-dipped galvanized steel L-type anchor bolts. Lighting pole shall be hot dip galvanized prior to powder coat paint.

DIMENSIONS
Overall Height = 12' 6"
Bracket Arm Length = 3' 6"
Base Diameter = 17"

FINISH
Dark Green: RAL-6012 (custom)

APPLICATION
Sidewalk lighting or pedestrian lighting areas

Spacing:
One side: 60' - 80'on center
Alternating sides: 100' - 175' on center

Single-arm fixture placed in furnishing zone with luminaire oriented over sidewalk. Double-arm fixture placed with bracket arms parallel to sidewalk. If sidewalk space is limited, Planning Authority may approve lights within private property or attached to building.

Date: **March, 2019**	**CITY OF PORTLAND, MAINE** TECHNICAL MANUAL	**MUNICIPAL STREET LIGHTING STANDARDS** SECTION 10	Figure: X-5B
Revised Date:	**DOWNTOWN PED 1**		

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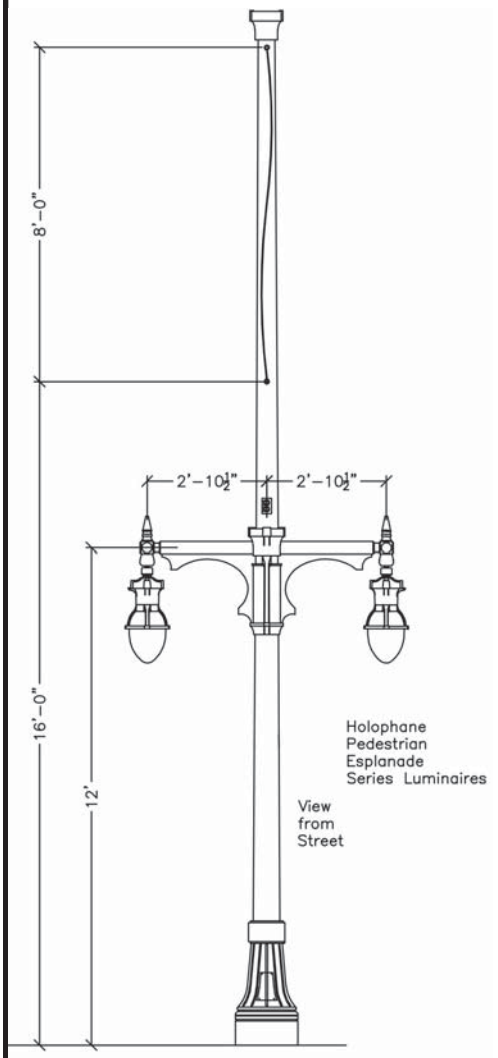
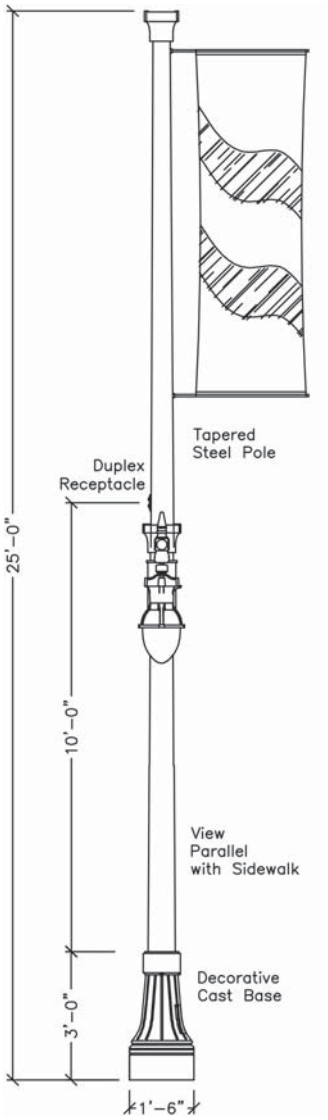
Street & Sidewalk Lighting
DECORATIVE LIGHT - DOWNTOWN





LUMINAIRE
Holophane Esplanade LED II
Model:
ESL2-P20S-30K-AS-CMC-TG3-S-P7-NL2X2-BHDF13-200CMC

Cast aluminum housing with stainless steel hardware. Dropped refractor shall be thermal resistant borosilicate glass. Internal reflector and prismatic diffuser shall provide an IES Type IV distribution pattern. Luminaire shall include an integral ballast with modular wiring connectors and multi-volatage taps. Provide an internal receptacle type photocell control. LED 3000K color temperature.

BRACKET ARM
Holophane Portland Series steel dual crossarm (custom)
Model: PD69-CA-RAL6012

SLIP FITTER
Holophane
Model: WLLF200S-CA-RAL6012
2-3/8" O.D. with swivel cast fitter

LIGHTING POLE
Holophane
Model: PM-18-CSB-CA-RAL6012

Tapered steel pole smooth shaft rated for a 90mph wind load with a 1.3 gust factor. Provide four hot-dipped galvanized steel L-type anchor bolts. Lighting pole shall be hot dip galvanized prior to powder coat paint.

DECORATIVE BASE
Holophane
Model: PM18CSB-CA-RAL6012
Decorative clamshell cast aluminum base. Hardware shall be stainless steel.

DIMENSIONS
Overall Height = 25' 0"
Bracket Arm Length = 2' 10 1/2"
Base Diameter = 18"

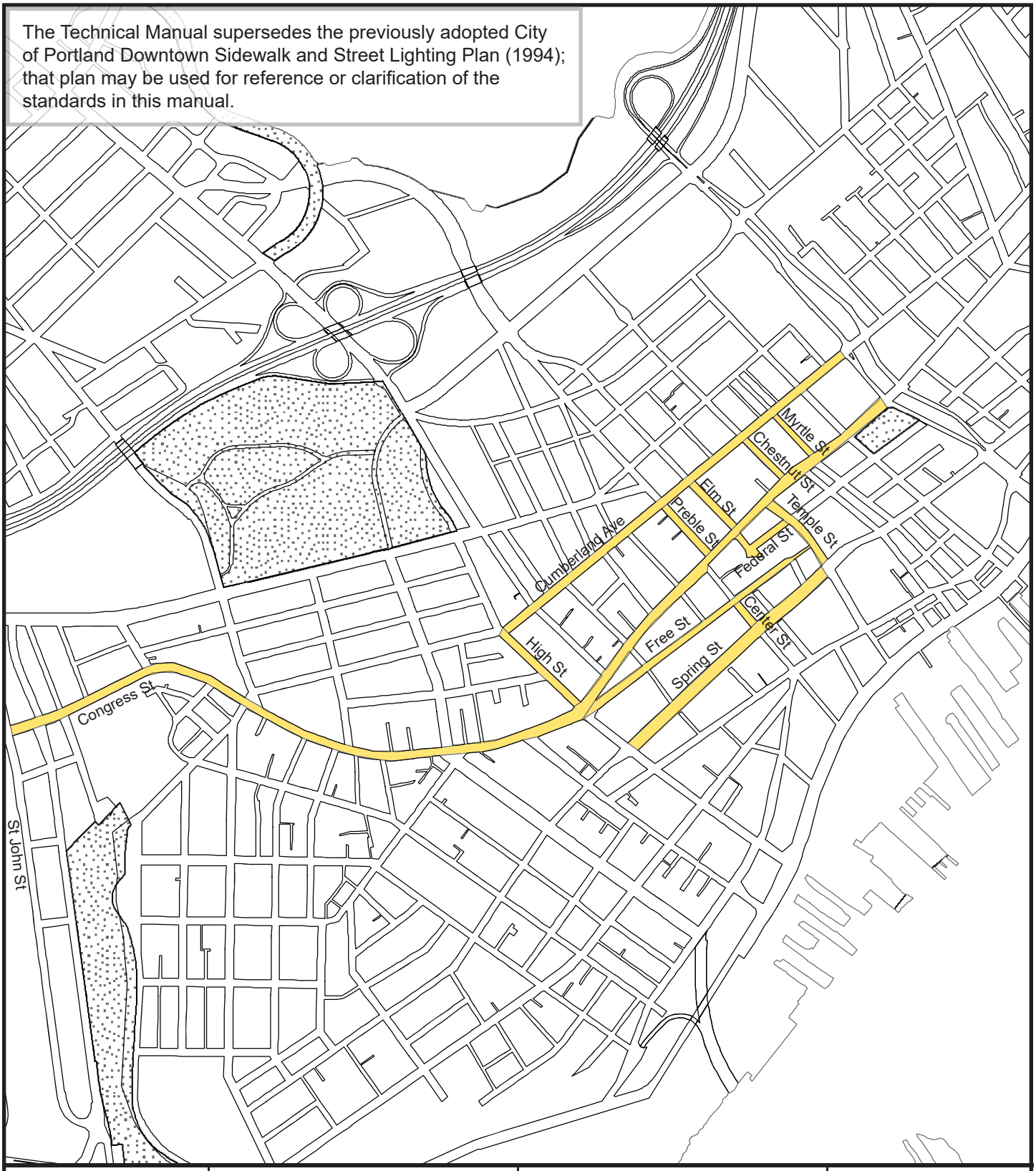
FINISH
Dark Green: RAL-6012 (custom)

APPLICATION
Sidewalk lighting or pedestrian lighting areas
Suggested layout:
One side: 90' - 100' on center
Alternating sides: 175' -225' on center

Double-arm fixture placed with bracket arms parallel to sidewalk. If sidewalk space is limited, Planning Authority may approve lights within private property or attached to building.

Date: **March, 2019**	**CITY OF PORTLAND, MAINE** TECHNICAL MANUAL	**MUNICIPAL STREET LIGHTING STANDARDS** SECTION 10	Figure: X-5C
Revised Date:	**DOWNTOWN PED 2**		

The Technical Manual supersedes the previously adopted City of Portland Downtown Sidewalk and Street Lighting Plan (1994); that plan may be used for reference or clarification of the standards in this manual.



Date: **March, 2019**	**CITY OF PORTLAND, MAINE** TECHNICAL MANUAL	**MUNICIPAL STREET LIGHTING STANDARDS** SECTION 10	Figure: X-5D
Revised Date:	**MAP: Decorative Light - DOWNTOWN STREET**		

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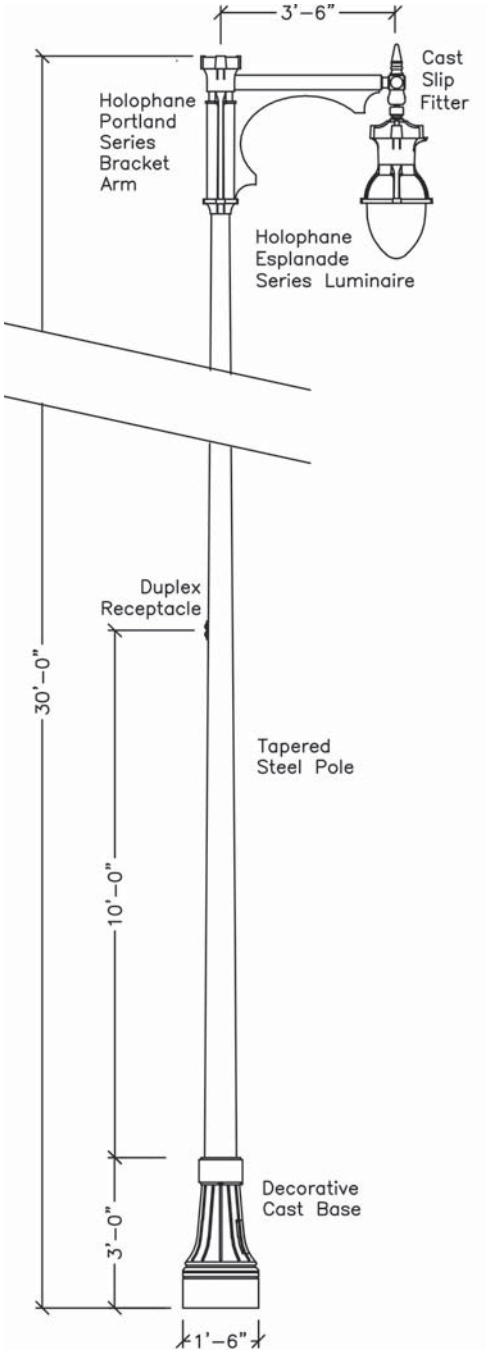
Street & Sidewalk Lighting
DECORATIVE LIGHT - DOWNTOWN



LUMINAIRE
Holophane Esplanade LED II
Model:
ESL2-P20S-30K-AS-CMC-TG3-S-P7-NL2X2-BHDF13-200CMC
Cast aluminum housing with stainless steel hardware. Dropped refractor shall be thermal resistant borosilicate glass. Internal reflector and prismatic diffuser shall provide an IES Type IV distribution pattern. Luminaire shall include an integral ballast with modular wiring connectors and multi-volatage taps. Provide an internal receptacle type photocell control. LED 3000K color temperature.

BRACKET ARM
Holophane Portland Series steel crossarm (custom)
Model: PD42-CA-RAL6012
Steel crossarm with a post-top fitting for a 3 1/2" by 8" tenon

SLIP FITTER
Holophane
Model: WLLF200S-CA-RAL6012
2-3/8" O.D. with swivel cast fitter.

LIGHTING POLE
Holophane
Model: PM-18-CSB-CA-RAL6012
Tapered steel pole smooth shaft rated for a 90mph wind load with a 1.3 gust factor. Provide four hot-dipped galvanized steel L-type anchor bolts. Lighting pole shall be hot dip galvanized prior to powder coat paint.

DECORATIVE BASE
Holophane
Model: PM18CSB-CA-RAL6012
Decorative clamshell cast aluminum base. Hardware shall be stainless steel.

DIMENSIONS
Overall Height = 30' 0"
Bracket Arm Length = 3' 6"
Base Diameter = 18"

FINISH
Dark Green: RAL-6012 (custom)

APPLICATION
Street lighting
Spacing:
One side: 90' - 100' on center
Alternating sides: 175' - 225' on center

Single-arm fixture placed in furnishing zone with luminaire oriented over sidewalk. Double-arm fixture placed with bracket arms parallel to sidewalk or in medians. If sidewalk space is limited, Planning Authority may approve lights within private property or attached to building.

Date: **March, 2019**	**CITY OF PORTLAND, MAINE** TECHNICAL MANUAL	**MUNICIPAL STREET LIGHTING STANDARDS** SECTION 10	Figure: X-5E
Revised Date:	**DOWNTOWN STREET**		

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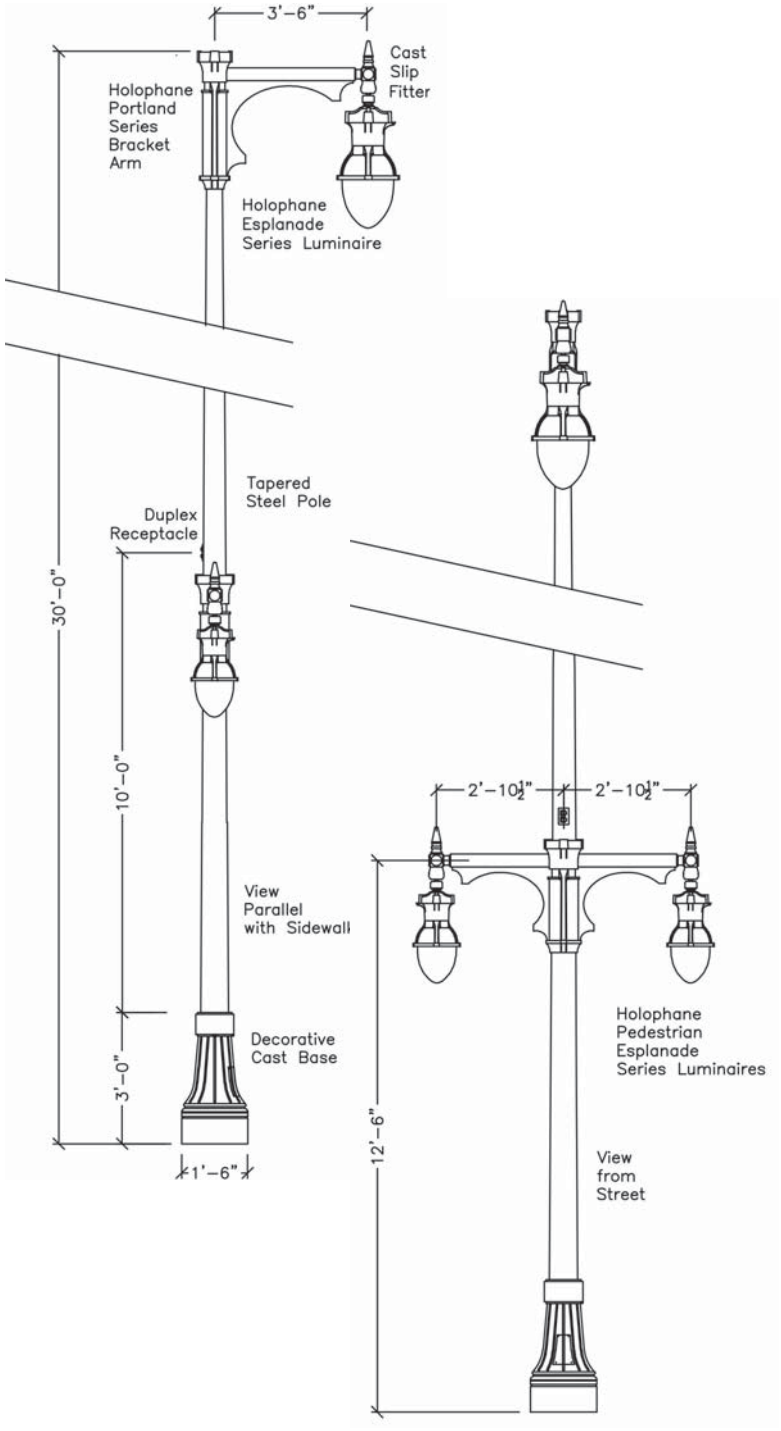
Street & Sidewalk Lighting
DECORATIVE LIGHT - DOWNTOWN



LUMINAIRE
Holophane Esplanade LED II
Model:
ESL2-P20S-30K-AS-CMC-TG3-S-P7-NL2X2-BHDF13-200CMC

Cast aluminum housing with stainless steel hardware. Dropped refractor shall be thermal resistant borosilicate glass. Internal reflector and prismatic diffuser shall provide an IES Type IV distribution pattern. Luminaire shall include an integral ballast with modular wiring connectors and multi-volatage taps. Provide an internal receptacle type photocell control. LED 3000K color temperature

BRACKET ARM
Holophane Portland Series steel (custom)
Top Bracket Arm: Steel crossarm with a post-top fitting for a 3 1/2" by 8" tenon
Model: PD42-CA-RAL6012
Lower Bracket Arm: Steel dual crossarm
Model: PD69-CA-RAL6012

SLIP FITTER
Holophane
Model: WLLF200S-CA-RAL6012
2-3/8" O.D. with swivel cast fitter.

LIGHTING POLE
Holophane
Model: PM-18-CSB-CA-RAL6012

Tapered steel pole smooth shaft rated for a 90mph wind load with a 1.3 gust factor. Provide four hot-dipped galvanized steel L-type anchor bolts. Lighting pole shall be hot dip galvanized prior to powder coat paint.

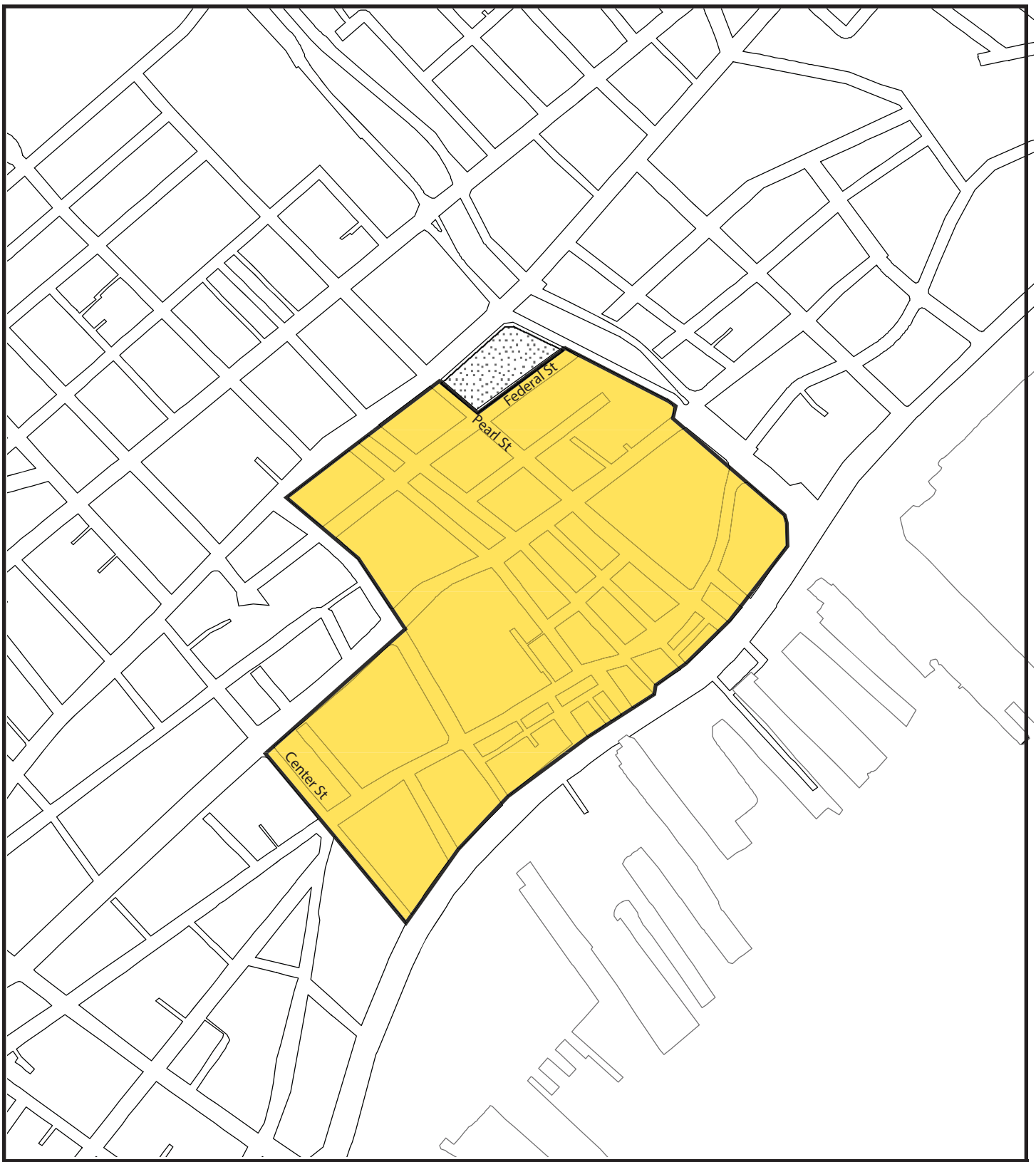
DECORATIVE BASE
Holophane
Model: PM18CSB-CA-RAL6012
Decorative clamshell cast aluminum base. Hardware shall be stainless steel.

DIMENSIONS
Overall Height = 30' 0"
Upper Bracket Arm Length = 3' 6"
Lower Bracket Arm Length = 2' 10 1/2"
Base Diameter = 18"

FINISH
Dark Green: RAL-6012 (custom)

APPLICATION
Street/pedestrian lighting combination.
Spacing:
One side: 90' - 100' on center
Alternating sides: 175' - 225' on center
Double-arm bracket arms parallel to sidewalk.

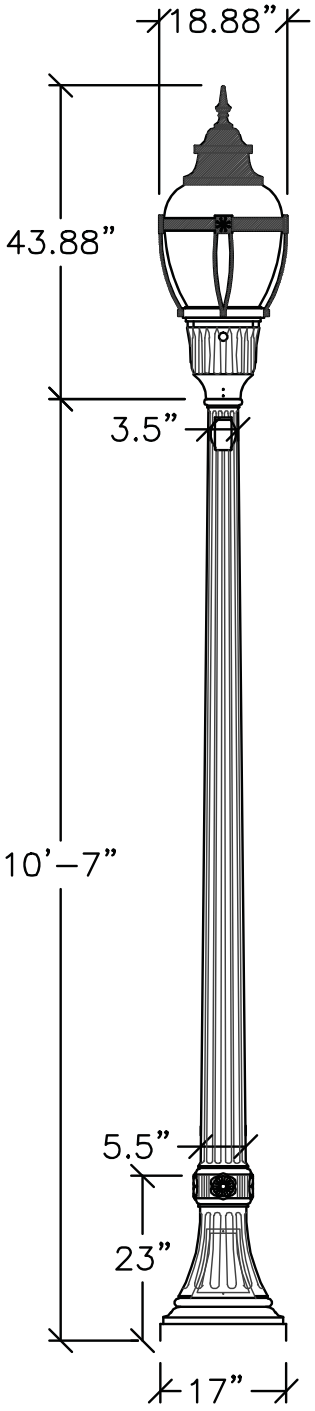
Date: **March, 2019**	**CITY OF PORTLAND, MAINE** TECHNICAL MANUAL	**MUNICIPAL STREET LIGHTING STANDARDS** SECTION 10	Figure: X-5F
Revised Date:	**DOWNTOWN COMBO**		



Date: **March, 2019**	**CITY OF PORTLAND, MAINE** TECHNICAL MANUAL	**MUNICIPAL STREET LIGHTING STANDARDS** SECTION 10	Figure: X-6A
Revised Date:	**MAP: Decorative Light - OLD PORT**		

PORTLAND | me

Street & Sidewalk Lighting
DECORATIVE LIGHT - OLD PORT



LUMINAIRE

Holophane Washington Postlite II LED - Acrylic

Model: WAUE2-P20-30K-AS-BK-3-BK-6-P7-F-PCLL

Cast aluminium housing with stainless steel hardware.

Thermal resistant acorn borosilicate glass refractor with IES Type asymmetric Type IV distribution.

Luminaire shall include decorative ribs, solid band, and spike finial, with internal twist-lock receptacle type photocell control. LED 3000K

LAMP

IES Type asymmetric Type IV distribution
LED 3000K color temperature

LIGHTING POLE

Holophane North Yorkshire - Aluminum pole and base

Model: NYA-11-FTJ-17-P07-ABG-BK-R126A

Tapered, fluted cast aluminum pole shaft rated for a 90mph wind load with a 1.3 gust factor.

Provide four hot-dipped galvanized steel L-type anchor bolts. Provide GFI rated duplex receptacle outlet.

Lighting pole shall be hot dipped galvanized prior powder coat paint.

DIMENSIONS

Overall Height = 14’ 3”
Pole Height = 10’ 7”
Taper = 5.5” to 3.5”
Base Diameter = 17”

FINISH

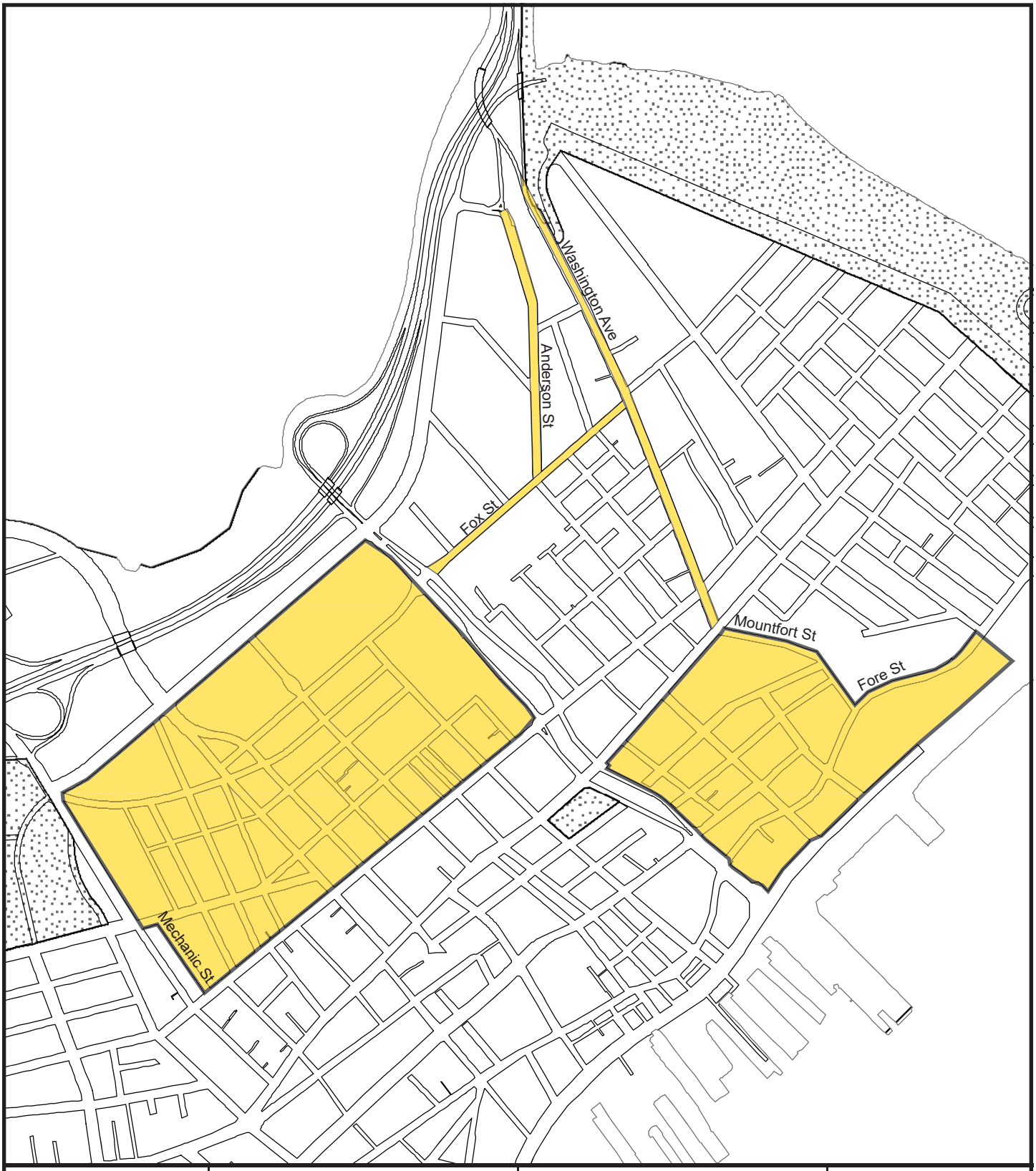
Black (standard)

APPLICATION

Street/Sidewalk lighting for two-way streets with parking on both sides.

Spacing: 60’ - 80’ on center (staggered pattern both sides of street)

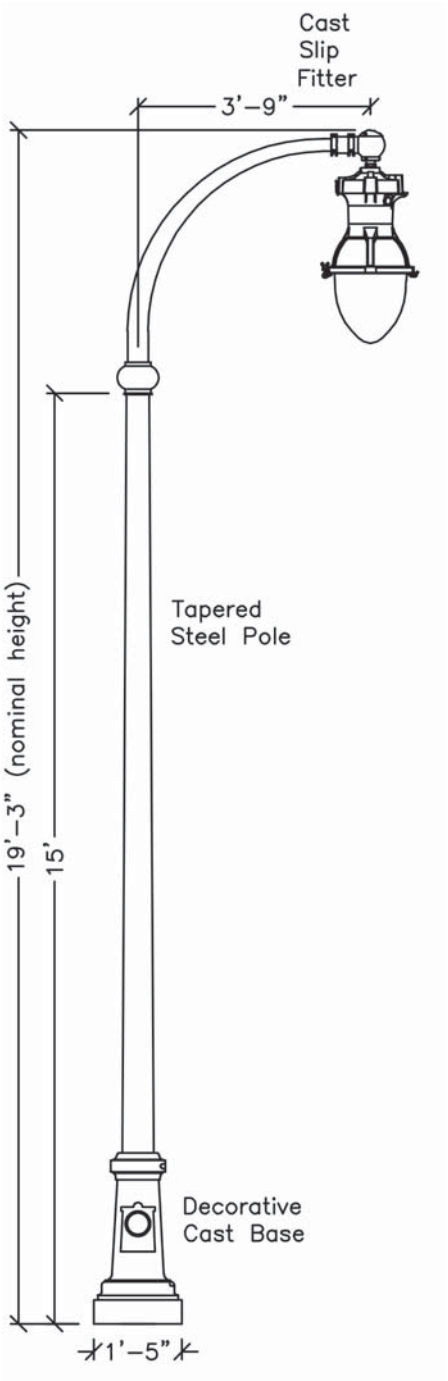
Date: **March, 2019**	**CITY OF PORTLAND, MAINE** TECHNICAL MANUAL	**MUNICIPAL STREET LIGHTING STANDARDS** SECTION 10	Figure: X-6B
Revised Date:	**OLD PORT**		



Date: **March, 2019**	**CITY OF PORTLAND, MAINE** TECHNICAL MANUAL	**MUNICIPAL STREET LIGHTING STANDARDS** SECTION 10	Figure: X-7A
Revised Date:	**MAP: Decorative Light - PENINSULA MEDIUM STREET**		

PORTLAND | me

Street & Sidewalk Lighting
DECORATIVE LIGHT - PENINSULA



LUMINAIRE
Holophane Esplanade LED II
Model:
ESL2-P20S-30K-AS-CMC-TG3-S-P7-NL2X2-BHDF13-200CMC
or Spring City Columbia Series
Model: ALMCLU-LE080/EVX/X2-30-CR3-GR14-LACLB-FED-CU
Pendant mount, cast aluminum housing with stainless steel hardware. Dropped refractor shall be thermal resistant borosilicate glass. Internal reflector and prismatic diffuser shall provide an IES Type IV distribution pattern. LED 3000K color temperature.

BRACKET ARM
Holophane OUC Roadway Arm
Model: OUC 6063-T6
or Spring City Columbia Arm
Model: AARCLA-1S-51-53-TN2.38/7.00-CU
Aluminum crossarm with a post-top fitting for a 3 1/2“ by 8” tenon. Single Arm 45” Oriented 180 degrees.

SLIP FITTER
Holophane Boston Harbor Series
Model: BHLF-200-SCA/AS
2 3/8” O.D. with swivel cast fitter.

LIGHTING POLE
Holophane
Model: CM17CSB-CA-RAL6012
or Spring City Cambridge Series
Model: SSHSM-G11-7.00-15.00-TN3.50/8.00-CU
Smooth, tapered steel pole smooth shaft rated for a 90mph wind load with a 1.3 gust factor. Provide four hot-dipped galvanized steel L-type anchor bolts. Lighting pole shall be hot dip galvanized prior to powdercoat paint.

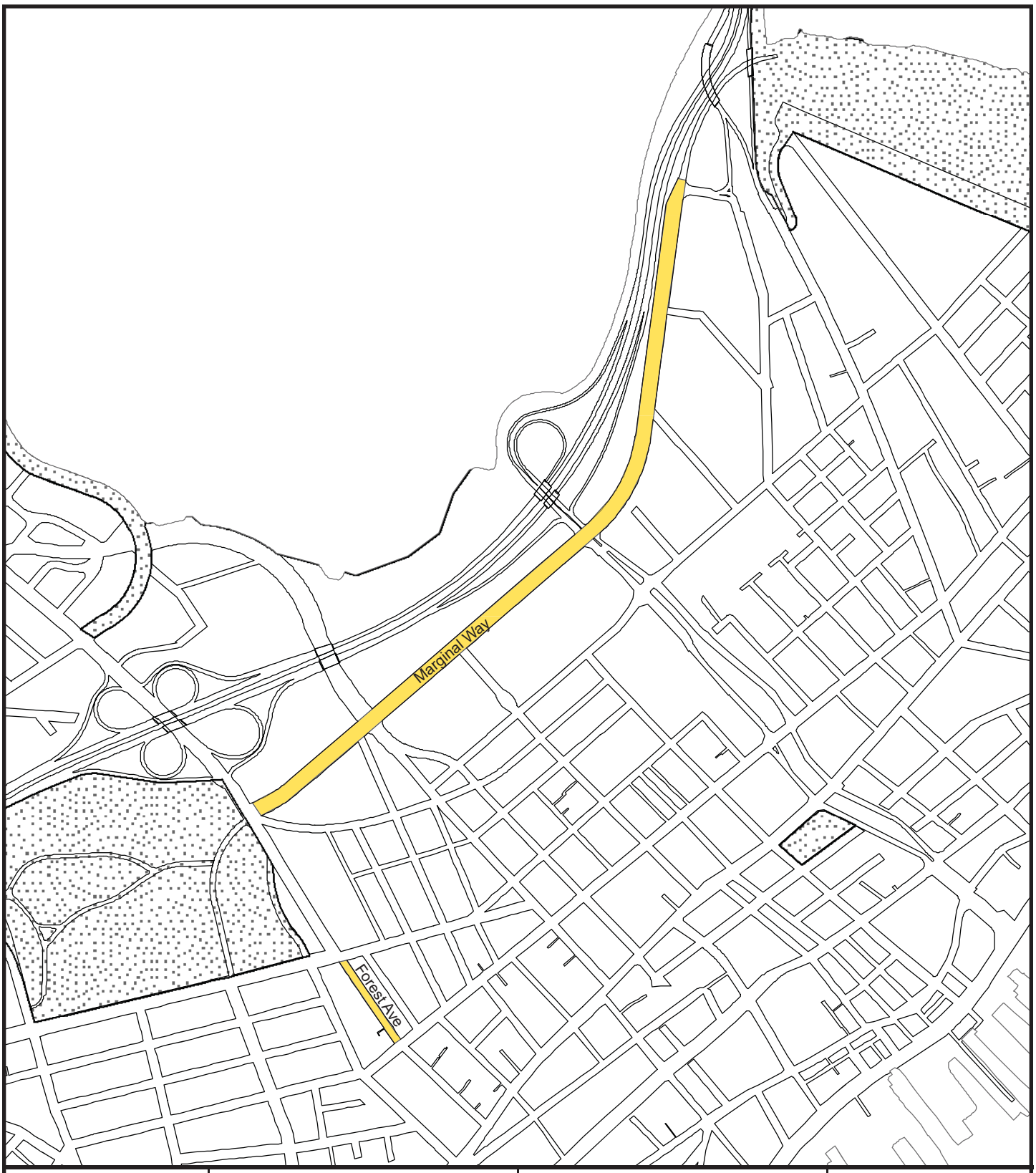
DECORATIVE BASE
Holophane Cambridge Series
Model: CM17CSB
or Spring City Cambridge Series
Model: DWBCMB-17-CU
Decorative clamshell cast aluminum base. Hardware shall be stainless steel.

DIMENSIONS
Overall Height = 19’ 3”
Pole Height = 15‘ 0”
Base Diameter = 17“ to 18”

FINISH
Black (standard)

APPLICATION
Stree/sidewalk lighting. Decorative fixture not needed on same side of street as existing cobrahead fixtures.
Spacing: 80’ - 100’ on center
Place in furnishing zone overhang towards street; where fixture conflicts with overhead utilities, may be placed on back of sidewalk.

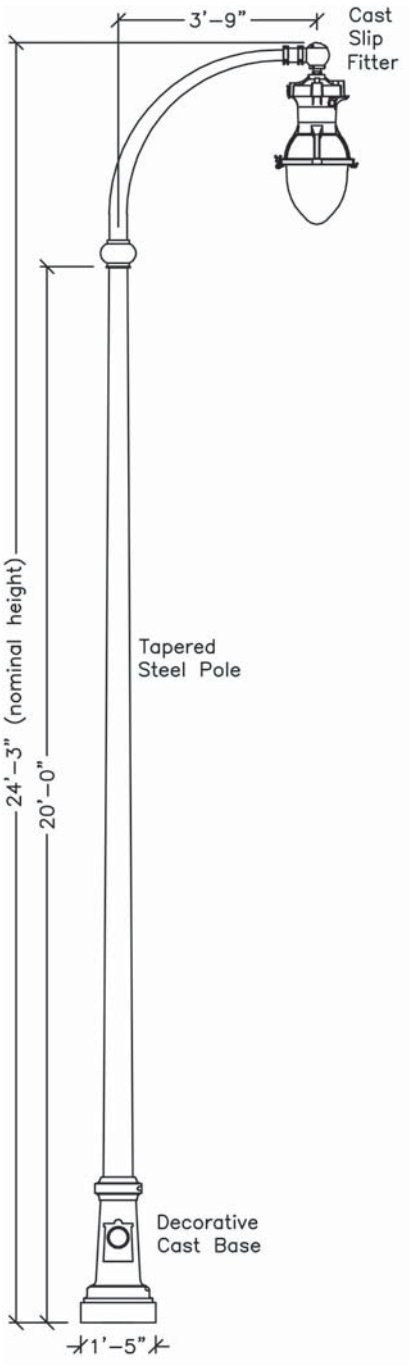
Date: **March, 2019**	**CITY OF PORTLAND, MAINE** TECHNICAL MANUAL	**MUNICIPAL STREET LIGHTING STANDARDS** SECTION 10	Figure: X-7B
Revised Date:	**PENINSULA MEDIUM STREET**		



Date: **March, 2019**	**CITY OF PORTLAND, MAINE** TECHNICAL MANUAL	**MUNICIPAL STREET LIGHTING STANDARDS** SECTION 10	Figure: X-7C
Revised Date:	**MAP: Decorative Light - PENINSULA LARGE STREET**		

PORTLAND | me

Street & Sidewalk Lighting
DECORATIVE LIGHT - PENINSULA



LUMINAIRE
Holophane Esplanade LED II
Model:
ESL2-P20S-30K-AS-CMC-TG3-S-P7-NL2X2-BHDF13-200CMC
or Spring City Columbia Series
Model: ALMCLU-LE080/EVX/X2-30-CR3-GR14-LACLB-FED-CU
Pendant mount, cast aluminum housing with stainless steel hardware. Dropped refractor shall be thermal resistant borosilicate glass. Internal reflector and prismatic diffuser shall provide an IES Type IV distribution pattern. LED 3000K color temperature.

BRACKET ARM
Holophane OUC Roadway Arm
Model: OUC 6063-T6
or Spring City Columbia Arm
Model: AARCLA-1S-51-53-TN2.38/7.00-CU
Aluminum crossarm with a post-top fitting for a 3 1/2“ by 8” tenon. Single Arm 45” Oriented 180 degrees.

SLIP FITTER
Holophane Boston Harbor Series
Model: BHLF-200-SCA/AS
2 3/8” O.D. with swivel cast fitter.

LIGHTING POLE
Holophane
Model: CM17CSB-CA-RAL6012
or Spring City Cambridge Series
Model: SSHSM-G11-7.00-15.00-TN3.50/8.00-CU
Smooth, tapered steel pole smooth shaft rated for a 90mph wind load with a 1.3 gust factor. Provide four hot-dipped galvanized steel L-type anchor bolts. Lighting pole shall be hot dip galvanized prior to powdercoat paint.

DECORATIVE BASE
Holophane Cambridge Series
Model: CM17CSB
or Spring City Cambridge Series
Model: DWBCMB-17-CU
Decorative clamshell cast aluminum base. Hardware shall be stainless steel.

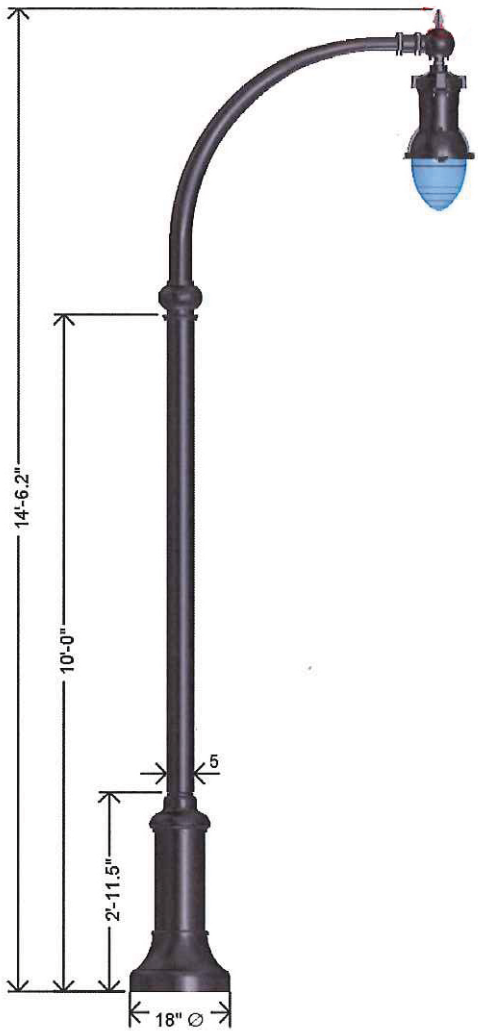
DIMENSIONS
Overall Height = 24’ 3”
Pole Height = 20‘ 0”
Bracket Arm = 3’ 9“
Base Diameter = 18”

FINISH
Black (standard)

APPLICATION
Street/Sidewalk light. Spacing: One side: 90’ - 110’ o.c.
Alt. sides: 175’ - 225’ on center
Place in furnishing zone overhang towards street; where fixture conflicts with overhead utilities, may be placed on back of sidewalk.

Date: **March, 2019**	**CITY OF PORTLAND, MAINE** TECHNICAL MANUAL	**MUNICIPAL STREET LIGHTING STANDARDS** SECTION 10	Figure: X-7D
Revised Date:	**PENINSULA LARGE STREET**		

*Waiver required: This fixture to be implemented in special circumstances only. See 10.4 STANDARDS FOR DECORATIVE LIGHTING.



Anchorage/Orientation Plan

LUMINAIRE
Holophane Esplanade LED II
Model: ESPL2-P20-30L-AS-S-B-4-SS-P7
IES Type IV Distribution

Pendant mount, quick lock stem mount
Auto-sensing 50/60 hz (120-225V), 38 watts
LED 3000K color temperature.

BRACKET ARM
Holophane OUC Roadway Arm
Model: OUC 45/1-CA-BK

Aluminum crossarm with a post-top fitting for a 3 1/2" by 8" tenon.
Single Arm 45" Oriented 180 degrees.

SLIP FITTER
Holophane Boston Harbor Decorative Arm Fitter
Model: WLLF200S-CA-RAL6012

2 3/8" O.D. with swivel cast fitter.

LIGHTING POLE AND BASE
Holophane Rockford Harbor Aluminum Pole
Model: RHA-10-S5J-18-P15-ABG-BK

Pole is aluminum, smooth 5" diameter, .25 wall
Assembly meets wind load of 90 mph.

DIMENSIONS
Overall Height = 14' 6"
Pole Height = 10'0"
Pole Diameter = 5"
Base Diameter = 18"
Arm = 45"

FINISH
Black (standard)

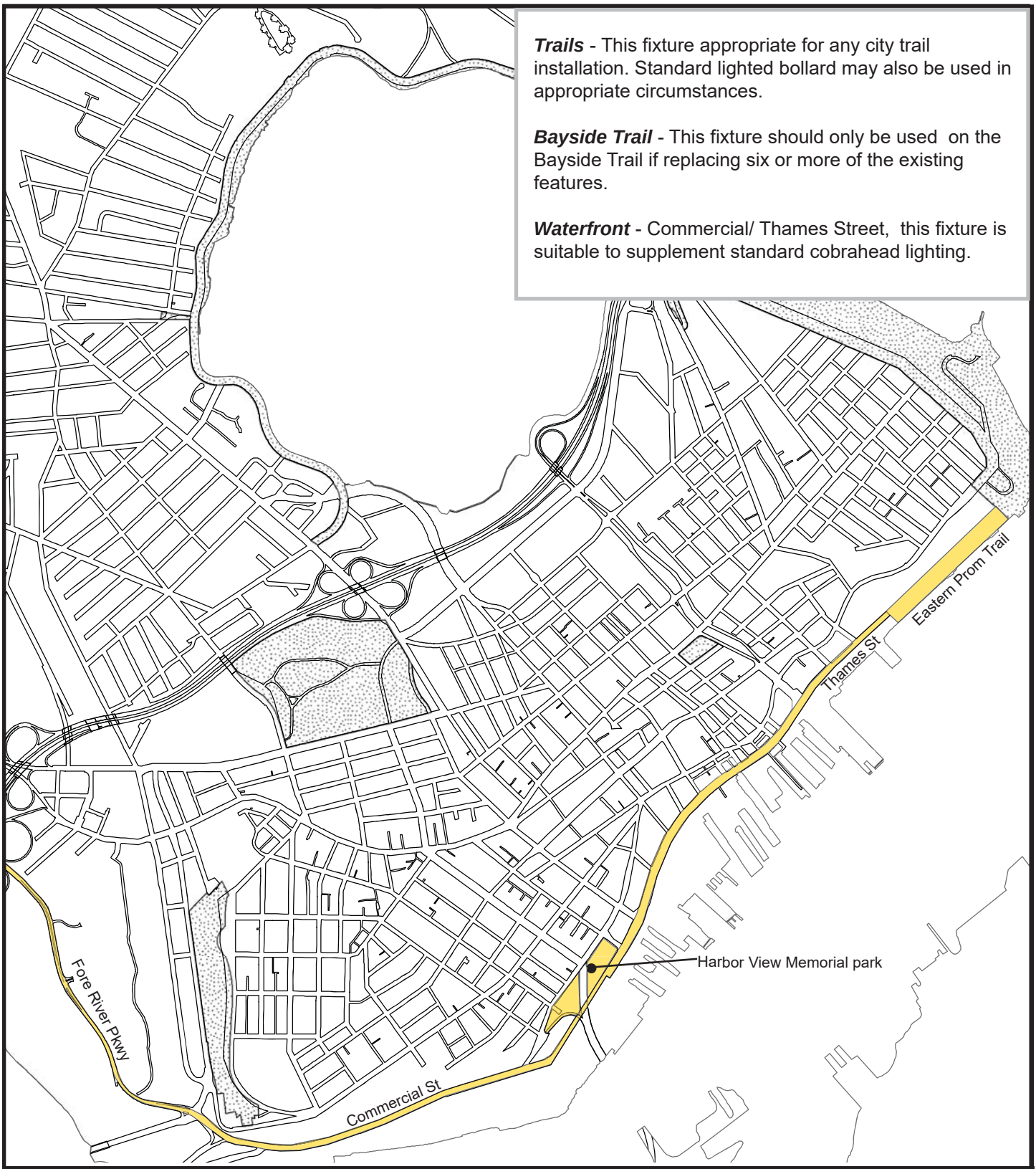
APPLICATION
Sidewalk lighting only when MEDIUM STREET fixture cannot be accommodated.

Spacing:
One side: 60' - 80' on center
Alternating sides: 100' - 175' on center

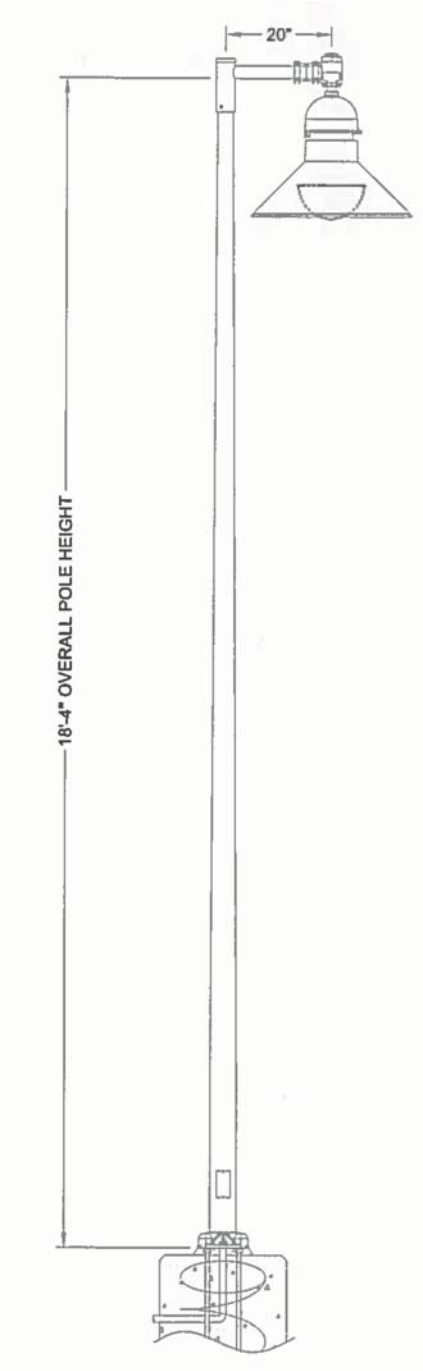
Fixture shall be oriented to overhang sidewalk.

Place in furnishing zone unless space is limited. Placement on back of sidewalk or private property overhanging sidewalk may be accommodated where space is a constraint.

Date: **March, 2019**	**CITY OF PORTLAND, MAINE** TECHNICAL MANUAL	**MUNICIPAL STREET LIGHTING STANDARDS** SECTION 10	Figure: X-7E
Revised Date:	**PENINSULA PED *waiver required**		



Date: **March, 2019**	**CITY OF PORTLAND, MAINE** TECHNICAL MANUAL	**MUNICIPAL STREET LIGHTING STANDARDS** SECTION 10	Figure: X-8A
Revised Date:	**MAP: Decorative Light - TRAILS/ WATERFRONT**		



LUMINAIRE
Holophane GlasWerks LED Hallbrook Series
Model: GELB-050-3K-AS-4-B-3-P7E-DM

Pendant mount
IES Type IV Distribution
Thermal resistant prismatic glass lens held in a formed aluminum door frame.
50 watts
Universal Voltage (120-277V)
Dimming driver with 7-pin photocontrol receptacle
LED 3000K color temperature

BRACKET ARM
Aluminum crossarm with a post-top fitting for a 2-3/8“ by 6” tenon.

SLIP FITTER
Holophane Glasswerks Slip Fitter
Model SG20/1-BK

2-3/8” O.D. with swivel cast fitter.

LIGHTING POLE
Holophane
Model: RTA1850E-PL-ND-BK-4

Aluminum pole shaft rated for a 90 mph wind load with a 1.3 gust factor.

Provide four hot-dipped galvanized steel L-type anchor bolts. Lighting pole shall be hot dipped galvanized prior to powder coat paint.

DIMENSIONS
Overall Height = 18’ 4”
Bracket Arm = 1’ 6“

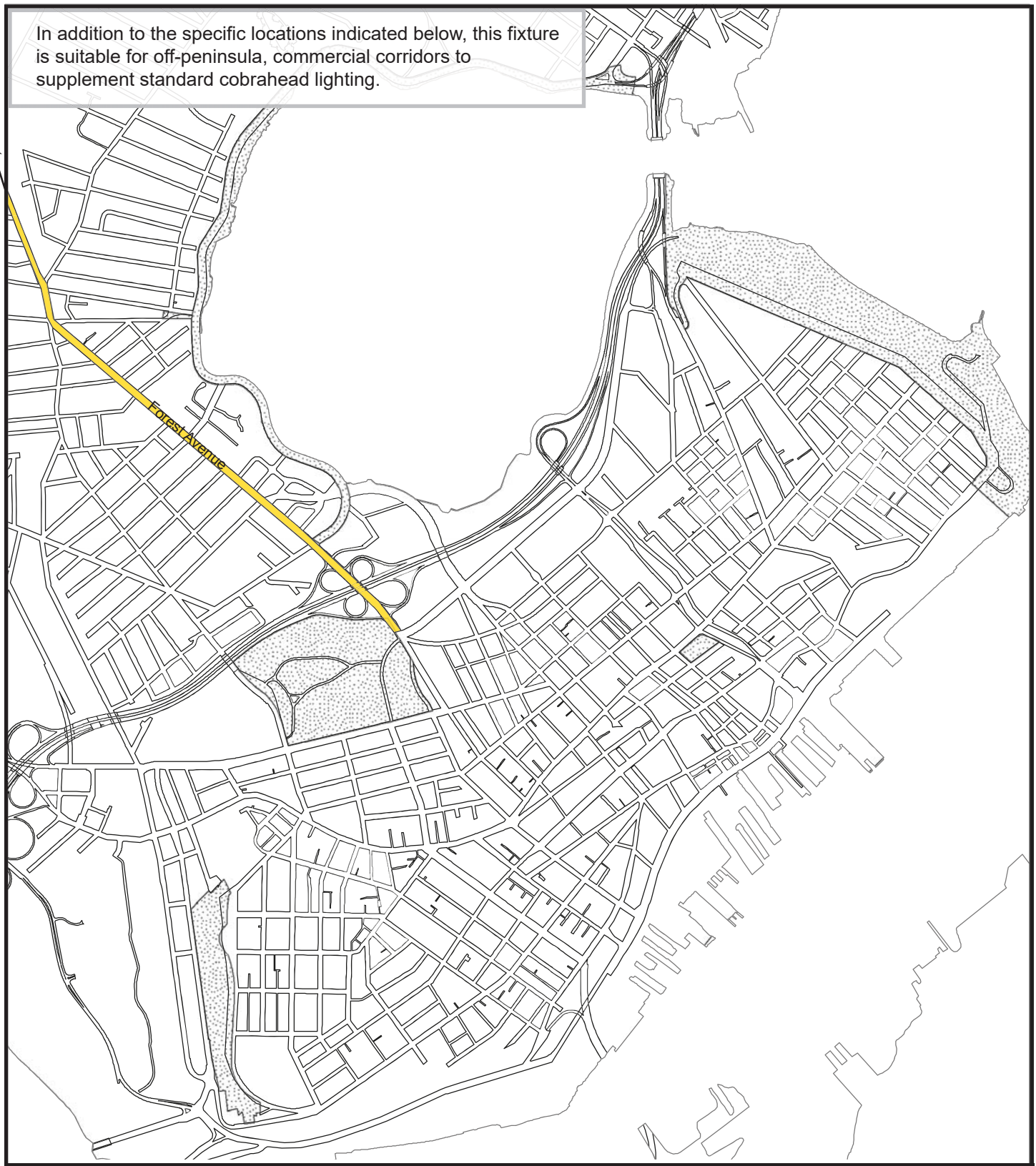
FINISH
Black (standard) - polyester powder coat

APPLICATION
Trails: Appropriate for any city trail installation.
Waterfront (Commercial/Thames St): Supplemental pedestrian lighting to standard cobrahead lighting.

Spacing:
One side: 90’ - 125’ on center
Alternating sides: 175’ - 225’ ft on center

Follow established pattern. Single arm oriented over trail or street; Double-arm used in medians or similar.

Date: **March, 2019**	**CITY OF PORTLAND, MAINE** TECHNICAL MANUAL	**MUNICIPAL STREET LIGHTING STANDARDS** SECTION 10	Figure: X-8B
Revised Date:	**TRAILS / WATERFRONT (COMMERCIAL/THAMES STREET)**		



Date: **March, 2019**	**CITY OF PORTLAND, MAINE** TECHNICAL MANUAL	**MUNICIPAL STREET LIGHTING STANDARDS** SECTION 10	Figure: X-9A
Revised Date:	**MAP: Decorative Light - OFF-PENINSULA**		

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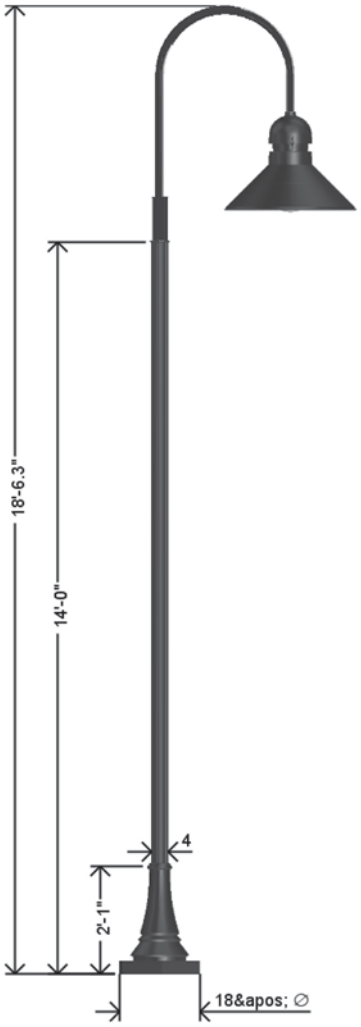
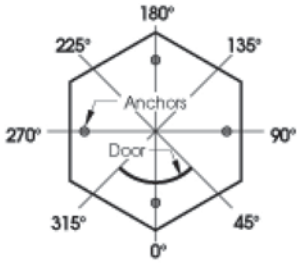
Street & Sidewalk Lighting
DECORATIVE LIGHT - OFF-PENINSULA



Anchorage/Orientation Plan



Hand Hole is at 0 deg.

LUMINAIRE

Holophane Hallbrook Ext GalsWerks LED Bowl Glass
Model: GELB-050-3K-AS-H-3
IES Type III Distribution
Pendant mouting (1.5 NPT). Dropped refractor shall be thermal resistant borosilicate glass held in a formed aluminum door frame. Asymmetric bowl glass.
Auto-sensing voltage (120-277V)
50 watt, LED 3000K color temperature

BRACKET ARM

Holophane Bishops Crook Arm
Model : 1-BC-90R-15F-XX (for single arm 90 degree)

Tenon mounted, using a 1 1/2" NPT fitting for luminaire mounting. Arm shall be 1 1/2" sch. 80 aluminum pipe (6061-T6 alloy). Mounting hub for the arm shall be 3" sch. 40 x 10" long aluminum pipe (6061-T6 alloy). All hardward shall be stainless steel. The arm shall be heat-treated to a T6 condition after fabriction.

LIGHTING POLE + BASE

Holophane Princeton Aluminum Pole, Smooth Base
Model: PSA-14-F4J-18-P09-ABG-GH

One-piece construction, aluminum pole (heavy wall cast aluminum ASTM 356), smooth shaft 4" dia. rated for a 90mph wind load with a 1.3 gust factor with integral 18" hexagonal smooth base. All hardware shall be tamper resistant stainless steel. Provide four hot-dipped galvanized steel L-type anchor bolts. Lighting pole shall be hot dip galvanized prior to powder coat paint.

DIMENSIONS

Overall Height = 18' 6"
Pole Height = 14' 0"
Pole Diameter = 4"
Base Diameter = 18"

FINISH

Graphite (Standard) - powder coat paint finish

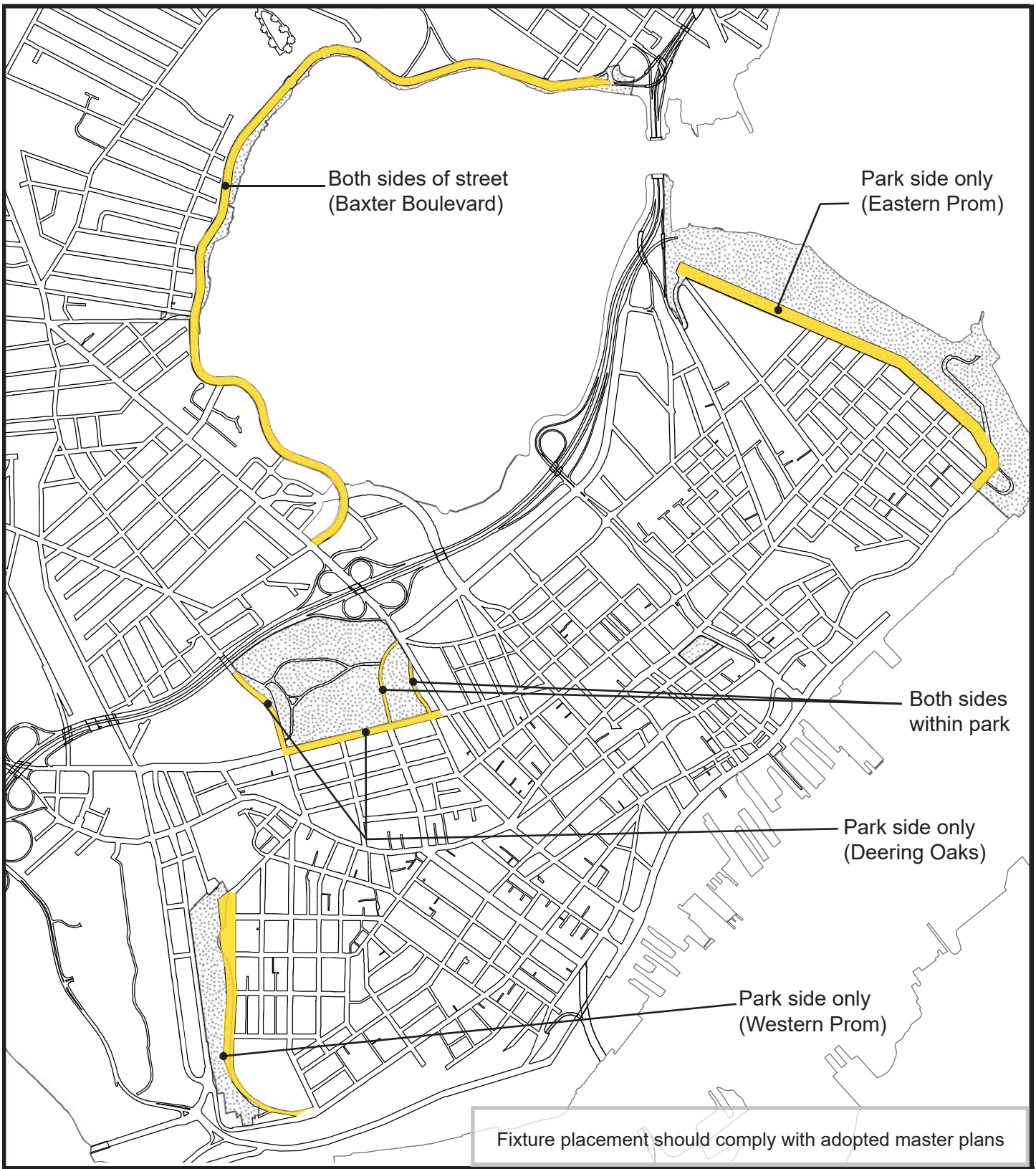
APPLICATION

Sidewalk lighting to supplement standard lighting off-peninsula.

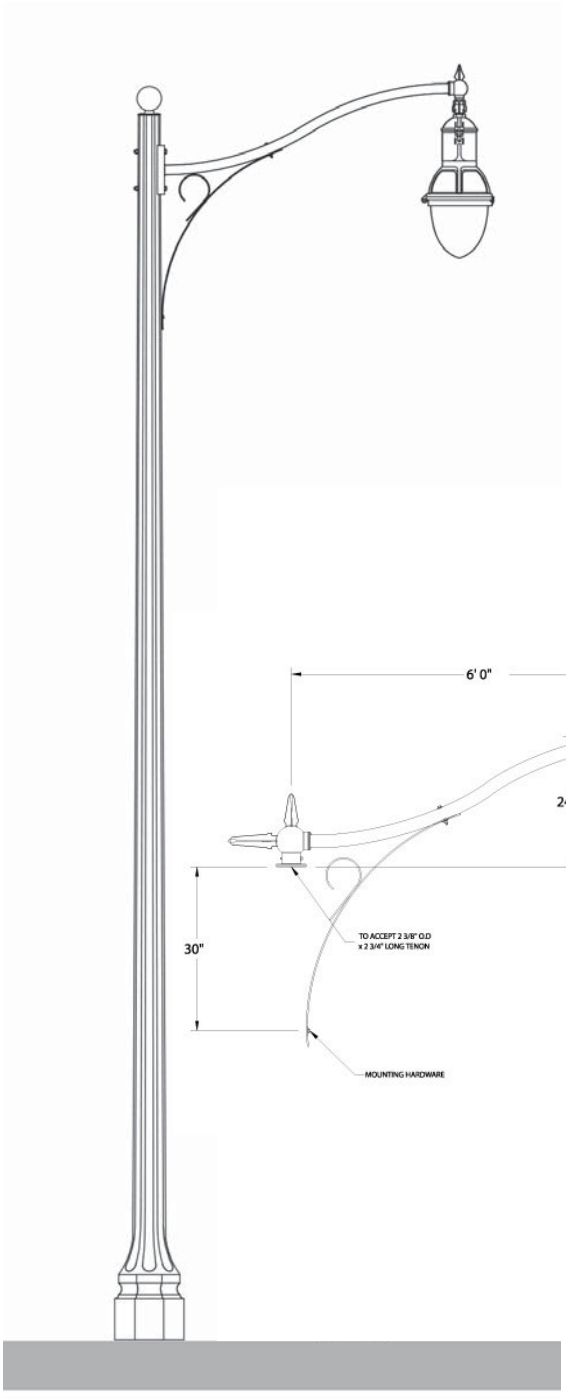
Spacing:
One side: 60' - 80' on center
Alternating sides: 100' - 175' on center

Fixture orientation should be consistent with established pattern. In some cases, a double-arm bracket parallel to the street may be appropriate.
Fixture placed in furnishing zone unless space is limited. Placement on back of sidewalk or private property overhanging sidewalk may be accommodated where space is a constraint.

Date: **March, 2019**	**CITY OF PORTLAND, MAINE** TECHNICAL MANUAL	**MUNICIPAL STREET LIGHTING STANDARDS** SECTION 10	Figure: X-9B
Revised Date:	**OFF-PENINSULA PED**		



Date: **March, 2019**	**CITY OF PORTLAND, MAINE** TECHNICAL MANUAL	**MUNICIPAL STREET LIGHTING STANDARDS** SECTION 10	Figure: X-10A
Revised Date:	**MAP: Decorative Light - HISTORIC LANDSCAPE STREET**		



LUMINAIRE

Holophane Espalanade LED II
Model:
ESL2-P20S-30K-AS-CMC-TG3-S-P7-NL2X2-BHDF13-200CMC
or Spring City Columbia Series
Model: LMCLU-LE080/EVX/X2-30-CR3-GR14-LACLB-FED-CU

With Shield: Deering Oaks Park
Without Shield: All other locations

LED Auto-sensing 39 watt
Voltage (120 - 277V)
IES Type V Distribution
LED 3000K color temperature

BRACKET ARM

King Luminaire/StressCrete: Scroll Arm with Decorative Scroll
Model: KA30-T

Single arm with finials and decorative scroll.
Slip fitter 2 3/8" O.D. to accommodate various leveling devices. At pole, to accept 2 3/8" O.D. x 2 3/4" Long tenon.

LIGHTING POLE

King Luminaire/StressCrete: The Talisman - Concrete
Model: KTH20

The American Series - The Talisman, 8-fluted concrete
Footing details, tenon size, options per specific project

DIMENSIONS

Overall Height = 21'0"
Pole Height = 20' 0"
Pole Base Flare = 18"
Bracket Arm Length = 6' 0"

FINISH

Luminaire: Black (standard)
Pole: Eclipse Black, acrylic coating (standard)

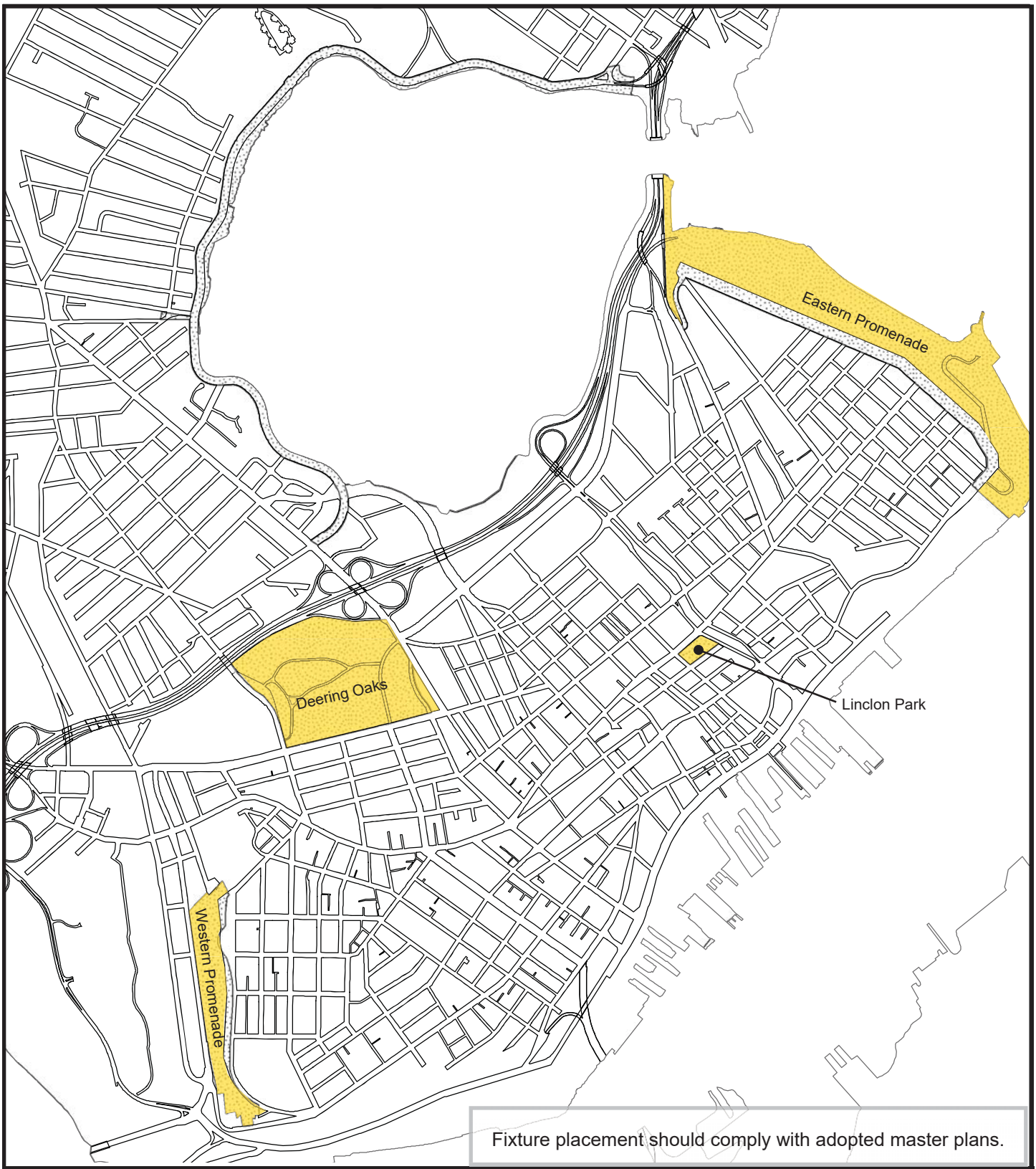
APPLICATION

Decorative street lighting for historic landscapes.

Spacing:
One side: 90' - 100' on center
Alt. sides: 175' - 225' on center

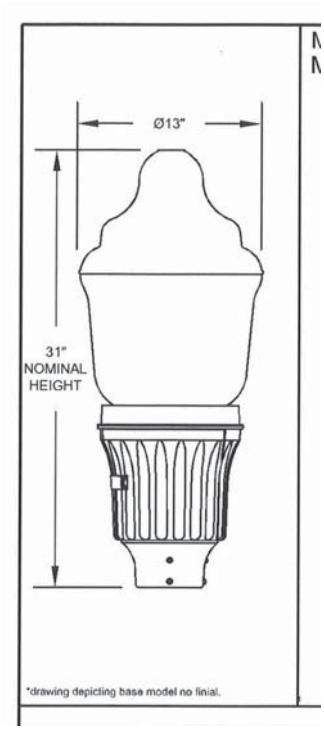
Fixture locations must comply with adopted Historic Master Plans.

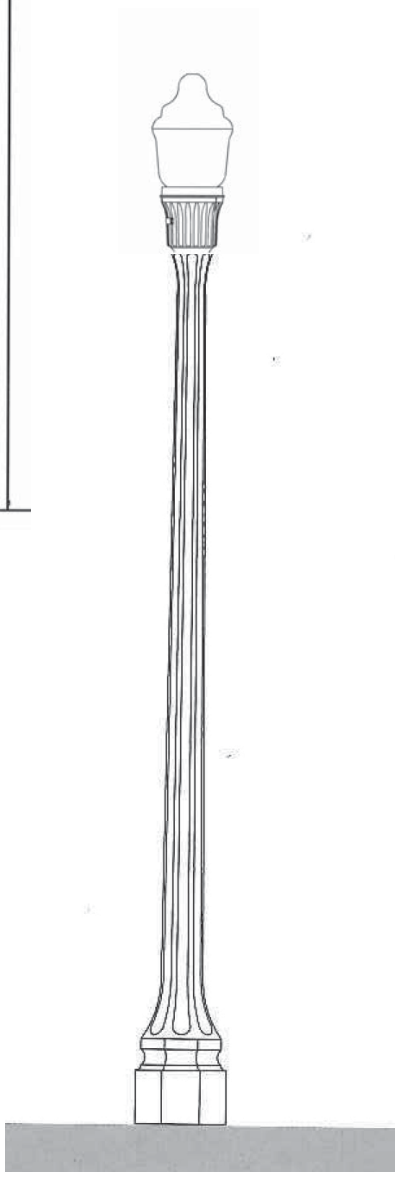
Date: **March, 2019**	**CITY OF PORTLAND, MAINE** TECHNICAL MANUAL	**MUNICIPAL STREET LIGHTING STANDARDS** SECTION 10	Figure: X-10B
Revised Date:	**HISTORIC LANDSCAPE STREET**		



Fixture placement should comply with adopted master plans.

Date: **March, 2019**	**CITY OF PORTLAND, MAINE** TECHNICAL MANUAL	**MUNICIPAL STREET LIGHTING STANDARDS** SECTION 10	Figure: X-11A
Revised Date:	**MAP: Decorative Light - HISTORIC LANDSCAPE PEDESTRIAN**		





LUMINAIRE

Holophane GranVille II LED
Model: GVD2-P20-30K-AS-M-BK-5-N-N-U

Prismatic Style: Glass Classic
Housing Size: Utility
No Trim or finial, Modern Housing
Slip fitter accommodates 2-7/8" to 3-1/8" dia. tenon

LED Auto-sensing 39 watt
Voltage (120 - 277V)
IES Type V Distribution
LED 3000K color temperature

LIGHTING POLE

King Luminaire/StressCrete: The Talisman - Concrete
Model: KT-12-E-11-DB-140 30/30-A

The American Series - The Talisman, 8-fluted concrete
Talisman Non-Flared Top 12'
Footing details, tenon size, options per specific project

DIMENSIONS

Overall Height = 14' 6"
Pole Height = 12' 0"

FINISH

Luminaire: Black (standard)
Pole: Eclipse Black, acrylic coating (standard)

APPLICATION

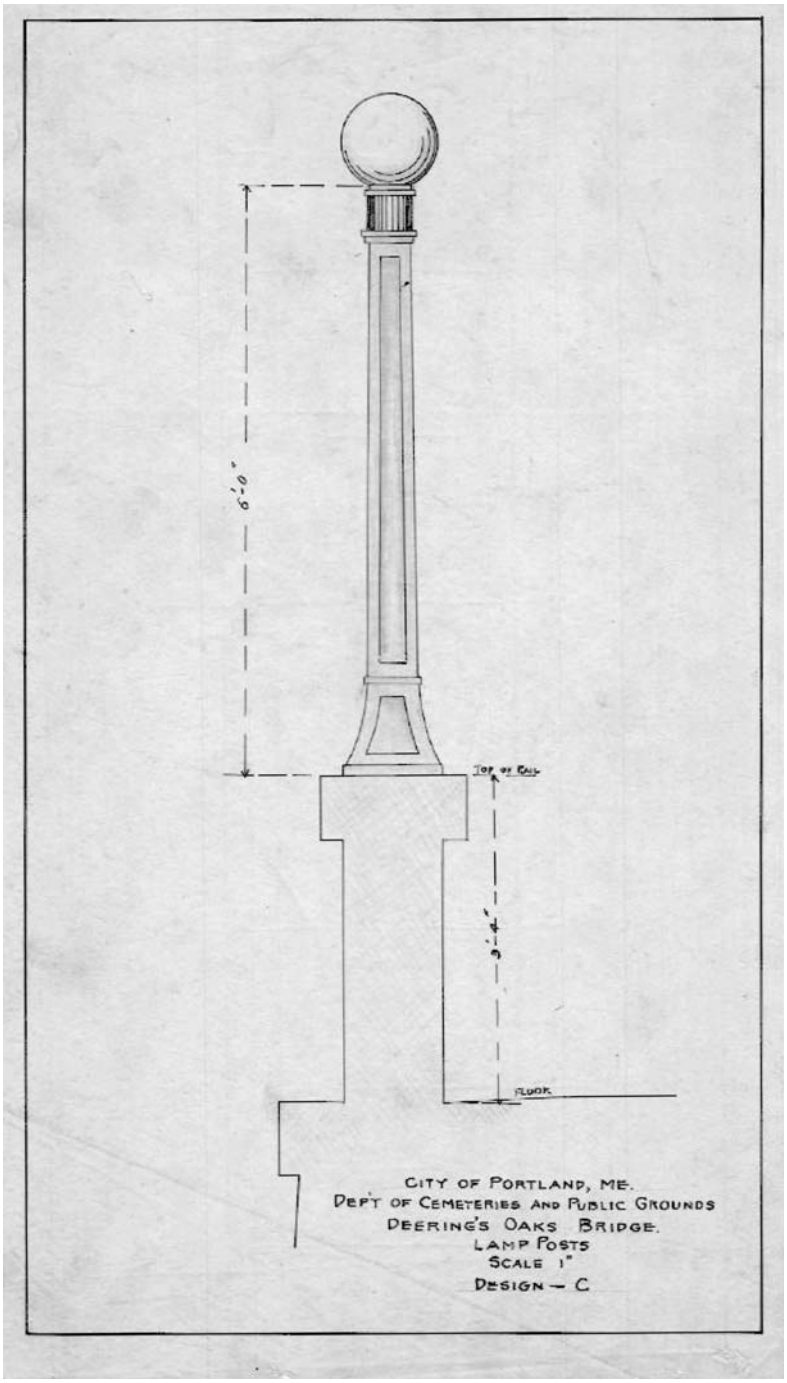
Decorative pedestrian lighting for historic landscapes.

Spacing: 60' - 80' on center

In some instances, the fixture will replace existing fixtures.

Fixture locations must comply with adopted Historic Master Plans.

Date: **March, 2019**	**CITY OF PORTLAND, MAINE** TECHNICAL MANUAL	**MUNICIPAL STREET LIGHTING STANDARDS** SECTION 10	Figure: X-11B
Revised Date:	**HISTORIC LANDSCAPE PED**		



LUMINAIRE
Match existing and according to historic resources.

LAMP
LED 3000K color temperature

LIGHTING POLE
Match existing and according to historic resources.

DIMENSIONS
Match existing and as shown in image.

FINISH
Black: Match existing and according to historic resources.

APPLICATION
Match existing location and installation.

Date: **March, 2019**	**CITY OF PORTLAND, MAINE** TECHNICAL MANUAL	**MUNICIPAL STREET LIGHTING STANDARDS** SECTION 10	Figure: X-12
Revised Date: **Month Year**	**DEERING OAKS BRIDGE**		

11. SHADOW STANDARDS

11.1. DEFINITIONS

For the purposes of this section, the following definitions shall apply:

- **Shadow:** A shadow is defined as the circumstance in which a built structure blocks the sun from the land.
- **Adverse Shadow Impact:** An adverse shadow impact occurs when the shadow cast by a proposed development falls on publicly accessible open space or other important natural features where such a shadow impact would adversely affects its use and/or the viability of existing landscaping and vegetation. For the purposes of this section, the above locations shall also be referred to as "significant public resources".
- **Shadow Analysis:** A shadow analysis refers to a document and its supporting graphics, which illustrate how the shadow cast by a proposed development, will impact adjacent properties and land uses.

11.2. APPLICABILITY

All Level II or Level III proposals **outside the B3, B5 B6 and B7 zones** that would result in new shadows long enough to reach significant public resources (except within an hour and a half of sunrise or sunset) are required to submit a preliminary shadow analysis to the Planning Authority for review. If a preliminary analysis indicates the potential for adverse shadow impact, applicants are then required to submit a shadow analysis, as outlined below. In many cases, it may be appropriate to use the services of an architect or other professional skilled in use of computer analysis to perform a shadow analysis; however, this is not a requirement. Anyone undertaking a shadow analysis must use the longitude, latitude and time information for Portland, Maine.

11.3. REQUIRED SUBMITTALS:

Preliminary Shadow Analysis*:* A preliminary shadow analysis shall be required for all Level II or Level III developments that include new structures or additions to structures greater than 45 ft tall, in order to determine if additional shadow analysis is required.

a) Shadow Length: The longest shadow that any structure will cast in Portland, Maine during the year (except within an hour of sunrise or sunset) is 4.26 times its height. To conduct a preliminary analysis, multiply this factor by the height of each proposed structure. If no significant public resources, as defined above, are located within that distance from the project site in any direction, no further analysis is required. If a resource is identified, the location of the site in relationship to the resource shall be evaluated to determine the potential for adverse shadow impact and the need for further analysis.

For example, if a development would result in a 48 ft tall building, its longest shadow would be approximately 192 feet. If there are no significant public resources within 192 feet of the project site, then no further shadow analysis is required.

b) Evaluate Site Location: Because of the path that the sun travels across the sky, no shadow can be cast in a triangular area to the south of any given project site. Therefore, if the resource in question is located within that triangular area, no further shadow analysis is required. In Portland, Maine that area lies between -122 degrees from true north and 122 degrees from true north. Thus, any significant public resource would have to be at an angle from true north greater than -122 degrees or 122 degrees in order to be shaded at any time by the proposed development.

c) Evaluate Significant Public Resource: Finally, the preliminary shadow analysis shall consider the sensitivity of the significant public resource(s) to shadow. Open spaces or natural features that require direct sunlight for a portion of the day to sustain existing vegetation or to maintain the viability of its current use (e.g. - sitting or sunning areas, public gathering spaces, turfed sports fields or children's play areas) require further analysis.

Some significant open space resources may not be sensitive to sunlight, such as paved areas or landscaped areas with all shade-tolerant species. For these types of conditions, no further shadow analysis is needed.

If the above steps are not able to determine that shadows from a proposed development would not reach a shadow-sensitive significant public resource during any time of the year, a full shadow analysis is required.

11.3.1. **SHADOW ANALYSIS:**

A shadow analysis shall define the extent and duration of additional shadow that a proposed development would cast on significant public resources in the project vicinity during the year, along with the effect that new shadowing would have on any sun-sensitive aspects of the resource(s). Applicants are encouraged to use professional resources and/or computer analysis to calculate and graphically display shadows; especially if proposed structures are irregularly shaped or if the project site is located in a densely developed area. A shadow analysis shall include the following times of year:

- March 21st or September 21st
- June 21st
- May 6th or August 6th
- December 21st

A shadow analysis should identify the types of significant public resources, types of vegetation and common use(s) of the site, along with discussion of the corresponding sunlight requirements for each. The uses and vegetation of open space areas establish its susceptibility to adverse shadow impact. Uses that rely on sunlight include sitting areas, gardens, and play areas. Vegetation that relies on

sunlight includes tree canopy, shade-intolerant flowering plants and turf. Shadow-sensitive landscapes and uses generally require a minimum of four to six hours of sunlight a day. If necessary, applicants are encouraged to use the professional services of a landscape architect or recreation planner to inventory and assess the sensitivity of various landscape features to shadow.

In presenting the results of a shadow analysis, the following information shall be included for each date:

- Duration of incremental shadow on affected features
- Times of shadow penetration
- Description of affected features (e.g.- landscaping, seating, active uses, historic resource)
- Time of sunrise and sunset for the date being analyzed.

In addition to a narrative description, the analysis shall include clear graphic representations of the following, as applicable:

- Relationship between the project site and significant public resources,
- Calculation of the angles from north for project shadows entering and existing the affected areas of the resource(s)
- A map showing pre-development condition shadows and the incremental shadows from the proposed structure(s) on all significant public resource(s) on each representative date.
- In the case of public open space resources, a site plan of the open space should be used to illustrate the placement of incremental shadows to allow for clear presentation of any impact to sensitive features. The length of time of the project's shadows should be indicated on each map.
- Photographs of the resource(s), focusing on elements sensitive to sunlight loss that may be impacted by new shadows from the development.
- Plan of the significant public resource, showing composite shadows and the location and duration of sunlight.
-

11.4. DETERMINING SIGNIFICANCE OF SHADOW IMPACT

A significant shadow impact occurs if the new shadow added by the development proposal reduces sunlight to a level where it would have an adverse impact on existing sunlight-sensitive uses. This includes but is not limited to the following scenarios:

- Substantial reduction in sunlight where a sensitive use is already subject to substandard sunlight.
- Reduction in sunlight to vegetation resulting in less available sunlight than the minimum necessary for its survival.
- Substantial reduction in the usability of an open space area.

11.5. Reserved.

11.6. ALTERNATIVES AND MITIGATION

Where an adverse shadow impact is identified, mitigation must be assessed. Types of mitigation that may be appropriate include but are not limited to relocating facilities within an open space to avoid sunlight loss, relocating or replanting vegetation, undertaking additional maintenance to reduce the likelihood of species loss, replacement facilities on another nearby site. Where affected open space is a City park, it is appropriate for the applicant to coordinate mitigation options with the Parks Division of the City of Portland Department of Public Services.

Alternatives that may reduce shadow impacts include but are not limited to

- Reorientation of the structure(s) bulk to avoid adverse shadow impacts on sensitive significant public resources.
- Reorientation of the site plan to include replacement facilities.
- Where possible, reorientation of the sun sensitive features of the resource itself.
- Incorporation of architectural design techniques and/or reflective façade materials to increase available light.

12. SITE LIGHTING STANDARDS

12.1. PURPOSE

The requirements set forth in this chapter are intended to promote and protect public health, safety and general welfare, and encourage the preservation of the natural nighttime outdoor environment. Specifically, the intent of this chapter is to limit light trespass, glare and light pollution to safeguard adequate safety, night vision, and comfort of the neighboring properties.

12.2. APPLICABILITY

The following types of development proposals are required to submit a lighting management plan for review and approval:

- All developments subject to site lighting standards of Section 14.6.4 of the Land Use Code.
- Other projects where the Reviewing Authority determines that special conditions warrant a lighting management plan.

12.3. GENERAL STANDARDS

Outdoor lighting standards listed below apply to all new developments.

1. Uniformity: As measured in foot candles at grade, maximum to minimum illumination levels shall not exceed a ratio of twenty (20) to one (1.)

2. Illumination Levels: Minimum, Maximum, and Average illumination levels for areas intended to be lighted, as measured at grade, shall be:

Minimum	0.2 foot candles (fc)
Maximum	5.0 foot candles (fc)
Average	1.25 foot candles (fc)

Average illuminance levels for exterior areas specified below, measured in foot candles (fc) at ground level unless noted, shall not exceed the following levels:

Uses	Average (Foot candle)	Uniformity Ratio (average-to-minimum)	Maximum (Foot candle)
Automated Teller Machine (ATM) Surrounding Area (10 ft perimeter)	10.0	3:1	20.0
Drive-through Canopy	10.0	3:1	20.0
Auto Service Station			
• **Approaches and Drives**	1.5	3:1	3.0
• **Service Areas**	2.0	3:1	4.0
• **Pump Island Areas**	10.0	3:1	20.0
Parking Lot			
• **Surface**	0.5	3:1	4.0
• **Structure**	0.8	3:1	2.0

3. Lumens: No fixture shall exceed 20,000 lumens (± 3%).

Types of Lighting	Maximum Lumens Allowed
Path lighting	1,500 lumens
Building Entrance	3,500 lumens
Residential/ Commercial Pole at 20'	15,000 Lumens
Industrial Pole at 30'	20,000 lumens
ATM Drive-Through Canopy	6,000 lumens
Auto Service Station	
• **Approaches and Drives**	4,000 lumens
• **Service Areas**	6,000 lumens
• **Pump Island Areas**	8,000 lumens per fuel pump

4. Light Trespass: The maximum illumination level at a property line shall not exceed 0.1-foot candle, as measured at grade, except where abutting industrial, or other non-sensitive uses. When a commercial or industrial use abuts a public right-of-way, or another commercial or industrial use, lighting must be designed so that the illumination at the property boundary line does not exceed 1.0 foot-candles.

   All residential uses and natural resource protection areas are to be considered sensitive to light trespass. In certain instances where a proposed

development is adjacent to a sensitive use, house-side shielding (see 12.3.5.1) may be necessary to comply with this standard.

5. Luminaire Types: All fixtures must be LED and shall not exceed 3000K Correlated Color Temperature (CCT). Screw in light fixtures must have LED lamps specified to be maximum of 3000K CCT.

6. Full Cut-off Fixtures and Shielding Required: All outdoor lighting fixtures, including pole mounted and wall mounted luminaires, shall be constructed Full "cut-off" or with full shielding, type where lenses, refractors or lamp sources do not extend below the surface of the fixture housing and no direct light shall be directed at or above the horizontal plane.

   Where the light source from an outdoor light fixture is visible beyond the property line, shielding shall be required to reduce glare so that the light source is not visible from within any residential dwelling unit.

   Light fixtures mounted under a canopy shall be recessed so that the lens cover is recessed into, or flush with, the underside (ceiling) of the canopy.

7. Pedestrian Walkway Lighting: Pedestrian walkway light fixtures can be a combination of freestanding pole, bollard, in-place step or building mounted fixtures. For building mounted fixtures, the proposed fixture type will be in scale with the building elevation on which it is to be installed and meet the fixture height provisions of 12.3.8. Pedestrian lighting (bollards) shall meet the technical manual standards for full cut-off or an exception may be considered under 12.2.11.

8. Fixture Height: Fixtures shall be mounted at the lowest height necessary to meet city standards and the height is measured from grade to the bottom of the lighting fixture.

Type of Lighting	Maximum Fixture Height
Residential (Pedestrian) Uses	20 feet
Commercial/ Office Uses	20 feet
Large Industrial Uses (50,000 sf or more- gross floor area)	30 feet
Building Mounted/ Entrances	below the roof eave and not to exceed 20 feet, whichever is lower
Bollard Fixtures	42 inches (3.5 feet)

9. Lighting Curfew: For surface and structured parking, lighting in vehicle parking areas containing twenty (20) or more parking spaces shall be reduced to 50% of permitted levels from one hour after the business closing

to one hour before business opening. If lighting levels are already below 50% of permitted levels, no curfew adjustment is required. Motion sensor activated lighting shall be permitted during closed hours to activate additional lighting above the 50% permitted, for the purposes of public safety.

10. Continued Maintenance: Lighting installations must be maintained in good repair to meet the provision of this ordinance on an on-going basis.

11. General Exceptions: Proposed uses that demonstrate a need to exceed the specific site lighting limits shown below for safe and reasonable exercise of the proposed use must provide a professionally produced lighting plan which adheres to the current Illuminating Engineering Society of North America (IESNA) recommendations for the proposed use. The Planning Authority may grant exceptions to the lighting standards with the finding that the light impacts do not create a public nuisance for abutting residential property. Unless otherwise specified below, exterior lighting shall conform to the recommendations put forth in Lighting for Exterior Environments RP-33-14, or its successor, published by the Illuminating Engineering Society of North America (IESNA). Lighting fixtures other than full cut-off fixtures may be allowed only if acceptable luminaires shall include internal and/or external glare control louvers and installed so as to minimize uplight and offsite light trespass.

12. Historic District, Architectural and Pedestrian Walkway Exception: Sites which are part of an historic district or require specific decorative lighting fixtures as means to achieve compatibility within an existing architectural context must meet the following standards:
    a. Lighting fixtures other than full cut-off fixtures may be allowed only if acceptable luminaires shall include internal and/or external glare control louvers and installed so as to minimize uplight and offsite light trespass.
    b. Low pressure sodium and metal halide lamps are prohibited.

12.4. Reserved.

12.5. ARCHITECTURAL AND SPECIALTY LIGHTING AND UPLIGHTING

1. Lighting shall be designed to minimize lighting of night ski and shall accentuate individual architectural or aesthetic elements, not the entire structure.

2. Lighting shall be directed downward unless the development is located in an area of the city where uplighting is permitted as described in Section 14.6.4

of the Land Use Code. Where permitted, upward aimed lighting (uplighting) shall not exceed 4,000 mean lumens per accent feature, shall be placed as close as possible to the base of the building or feature that is being illuminated, shall be fully shielded from view off-site, and shall use a narrow cone of light for the purpose of confining the light to the object.

3. Building façade lighting. The exterior of a building may be lighted provided the following standards are met:
    a. The lighting is done to accentuate an architectural or aesthetic element of the building, not the entire building.
    b. The light must only be directed onto the building façade and not spillover beyond the plane of the building.
    c. Upward aimed lighting must not exceed 4,000 mean lumens per accent feature, must be fully shielded, and mounted as flush to the wall as possible.
    d. Lighting exceeding 4,000 mean lumens per accent feature must be aimed downward, fully shielded, and mounted as flush to the wall as possible.
    e. Stripe Lighting: Stripe lighting along building structures as articulation may be approved as specialty architectural lighting, provided that it does not create nuisance.

4. Flag poles, statues and similar monuments. A flag pole bearing a state flag, a flag of the United States or a flag of a foreign nation may be illuminated, provided the following standards are met:
    a. The luminaires must be fully shielded.
    b. Upward aiming luminaires must be placed as close to the base as possible.
    c. The luminaires must not collectively exceed 20,000 mean lumens. Public statues, memorials or other similar monuments may also be lighted upon approval by the Historic Preservation authority, provided the above standards are met.

12.6. SUBMISSION REQUIREMENTS, PHOTOMETRIC PLANS

1. The Lighting Plan shall be depicted on a site plan, indicating the location of each current and proposed outdoor lighting fixture with projected hours of use. This plan will need to be stamped and certified by a licensed professional, such as an architect or engineer. The lighting plan must include a KEY to the proposed lighting that provides the following information:
    a. Type and number of luminaire equipment (fixtures), including the "cut off characteristics", indicating manufacturer and model number(s).
    b. Lamp source type (bulb type, i.e. LED), lumen output, and wattage.

c. Mounting height with distance noted to the nearest property line for each luminaire.
d. Types of timing devices used to control the hours set for illumination, as well as the proposed hours when each fixture will be operated.
e. Lighting manufacturer-supplied specifications ("cut sheets") that include photographs of the fixtures, indicating the certified "cut off characteristics" of the fixture.

2. A photometric plan shall be provided at 20 scale or larger which shall show the extent of the areas designed and intended for lighting, and within those specific areas show a photometric grid of maximum 10' point spacing, and within those areas provide foot candle calculations of maximum, average, minimum, maximum to minimum ratio, and average to minimum ratio. On the same or additional plan, a photometric plot shall extend to all lot lines and as necessary to reach illumination levels of 0 (zero) foot candles. Additionally, the applicant shall provide descriptive information, including manufacturers catalog excerpts, for all proposed light fixtures, lamps, and poles.

13. BOUNDARY SURVEY STANDARDS

13.1. MINOR RESIDENTIAL GENERAL STANDARDS

In addition to a standard boundary survey, all applications must also include a Site Plan prepared in accordance with Section 16 of the Technical Manual.

The following items and information shall be shown on boundary surveys for minor residential development site plans (as defined in Section 16 of the Technical Manual) to ensure compliance with City of Portland planning requirements, engineering technical and design standards, and accurate documents are on record for future planning, GIS mapping, and engineering needs:

1. Name and address of the property owner, the applicant and name of the proposed development, and with references to the Deed Book and Page at the Cumberland County Registry of Deeds.
2. North arrow
3. Scale of not less than one (1) inch to fifty (50) feet
4. A graphic scale (scale bar)
5. Plan Size: Where possible, it is preferred that plans not exceed a maximum size of 24” x 36”.
6. Site Boundaries: The full parcel boundaries must be shown on the survey.
7. Total land area of the site.
8. Flood Zone statement, where applicable, based on FEMA, FIRM Flood Insurance Rate Maps.
9. Existing streets, right-of-way, restrictions or easements on the site.
10. A revision block with a number and date indicating the revision status. The revision block shall be located in the title block or adjacent to it.
11. Property Corners: Location and descriptions of all property corners set or found, proposed to be set, and all granite survey monuments set. Where no property markers exist, the City of Portland requires that the property markers be installed and that a licensed surveyor set and confirm proposed building locations on site prior to the issuance of a building permit.
12. Boundary Survey plans, based on State of Maine Professional Licensing Boards’ legal requirements, shall bear the seal of a Professional Land Surveyor licensed to practice in the State of Maine.
13. City Vertical Datum: It shall be stated on all plans that the City of Portland established vertical datum of NGVD 1929 is used or manhole rim elevation data is used for all information shown on the plan.

14. All plans shall state the Official City of Portland Benchmark used as supplied by the Department of Public Services Engineering Division Archivist.
15. It may be required, especially in areas of old subdivision plans and areas not previously subdivided, that the survey show tie bearings and distances to the nearest street line corner, or to the nearest City of Portland survey monument. Survey tie line precision shall be an inverse line with the bearing to the nearest second and the distance to the nearest hundredth of a foot. This requirement is to aid in adding and verifying the property location on the City of Portland digital GIS basemap.
16. All current conveyances of lots, parcels, easements, and other forms of right, title, and/or interest shall be shown on both the survey plan (as submitted and as amended), with references to the Deed Book and Page at the Cumberland County Registry of Deeds.
17. Street Status: The Status of the street shall be shown; IE Accepted City Street, Continued Paper Street, Discontinued City Street, Vacated Paper Street, or new Proposed Street as per the project submission.

13.2. OTHER GENERAL STANDARDS

The following items shall be shown on boundary surveys for all other site plans to ensure compliance with City of Portland planning requirements, engineering technical and design standards, and accurate documents are on record for future planning, GIS mapping, and engineering needs:

1. Name and address of the property owner, the applicant and name of the proposed development, and with references to the Deed Book and Page at the Cumberland County Registry of Deeds.
2. North arrow
3. Scale of not less than one (1) inch to fifty (50) feet.
4. Graphic scale (scale bar).
5. Plan Size: Where possible, it is preferred that plans not exceed a maximum size of 24” x 36”.
6. Site Boundaries: The full parcel boundaries must be shown on the survey.
7. Total land area of the site
8. Zoning district boundaries, if applicable
9. Flood Zone statement, where applicable, based on FEMA, FIRM Flood Insurance Rate Maps

10. Required zoning setbacks for the site

11. Existing and proposed grading contours at intervals of not more than two (2) feet

12. Existing structures or other improvements on the site and the approximate location of structures or improvements on adjoining lots within fifty feet (50') of the site boundary

13. Existing streets, right-of-way, restrictions or easements on the site

14. The location and size of existing utilities servicing the site, including fire hydrants

15. Significant natural features on or directly adjacent to the site, including wetlands, ponds, watercourses, floodplains, significant wildlife habitats and fisheries or other important natural features as listed in Section 14.6.2 of the Land Use Code

16. Location of existing street trees and the general location of on-site trees and vegetation

17. Vicinity Map showing the relationship of the project to the surrounding area at a scale no greater than one inch equals 2,000 feet

18. A revision block with a number and date indicating the revision status. The revision block shall be located in the title block or adjacent to it

19. Rim elevations of all catch basin and manhole structures

20. Invert elevations of all pipes entering and/or exiting catch basins and manhole structures

21. The length, material, diameter, and slope of all storm sewer and sanitary sewer piping

22. The location, with dimensions from existing structures, at the main line pipe and at the street property line, of all sanitary sewer and storm drain laterals. The Public Services Department Engineering Archives may have this information available for existing infrastructure

23. Location, size, type of material, and invert elevations of culverts

24. Location of water lines and valves, gas lines and valves, buried electrical lines, buried communication cables, buried TV cables, telephone and electric manholes, utility hand-hold access boxes, transformer pads, utility and light poles

25. All curbing and sidewalks, stating type of material.

26. Property Corners: Location and descriptions of all property corners set or found, proposed to be set, and all granite survey monuments set. Where no property markers exist, the City of Portland requires that the property markers be installed and that a licensed surveyor set and confirm proposed building locations on site prior to the issuance of a building permit.

27. Boundary Survey plans, based on State of Maine Professional Licensing Boards' legal requirements, shall bear the seal of a Professional Land Surveyor licensed to practice in the State of Maine.

28. City Vertical Datum: It shall be stated on all plans that the City of Portland established vertical datum of NGVD 1929 is used or manhole rim elevation data is used for all information shown on the plan.

29. All plans shall state the Official City of Portland Benchmark used as supplied by the Public Services Engineering Division Archivist.

30. Distances, bearings, and angles shall be shown on the survey or subdivision plans, shall tie the property into the nearest accepted street line and be tied into established City of Portland survey monuments or record survey data at the Public Services Engineering Archives. Ties shall be considered as an inverse line with a bearing and distance to the nearest second and hundredth of a foot.

31. All current conveyances of lots, parcels, easements, and other forms of right, title, and/or interest shall be shown on both the survey plan (as submitted and as amended), with references to the Deed Book and Page at the Cumberland County Registry of Deeds.

32. Street Status. The Status of the street shall be shown; IE Accepted City Street, Continued Paper Street, Discontinued City Street, Vacated Paper Street, or new Proposed Street as per the project submission.

13.3. ADDITIONAL BOUNDARY SURVEY STANDARDS FOR MINOR AND MAJOR SITE PLANS

On minor and major site plans (excluding minor residential and low-impact site development as defined in Section 16 of the Technical Manual), the following items shall be addressed:

1. Prior to starting field surveys and design on a project it is strongly advised to contact the City Engineer's office, Public Services Department, Engineering Division at (207) 874-8846 for information on existing

infrastructure, additional requirements, or future projects that may affect the proposed project.

2. Proposed Survey Monument Locations, if required. Granite survey monuments shall be set on one side of the street as directed by the Public Services Engineering Division on the 3 foot offset Lines, as offset towards the street. Notes describing monuments found by the Project Surveyor shall include information describing the size, condition, and depth below grade to the top of any buried monuments found.

3. All proposed (if required by Planning) and existing survey monuments shall be shown in bold line type on all utility and site plans.

4. Projects shall be tied into the Maine State Plane Coordinate System (2-zone projection), West Zone using the NAD1983 Datum and the U.S. Survey Foot as the unit of measure. The survey methods, traverse or GPS observations/methods, geodetic control used, and coordinates of new monuments set shall be stated on the survey and subdivision plans.

5. When State Plane Coordinates are required, the State Plane Coordinates (to the nearest hundredth of a foot) of two survey property corners shall be displayed for any two property corners in the project which are the farthest distance apart. Please contact the Public Services Engineering Division for assistance in providing Survey Control Points or GPS Base Station Support.

6. Bearing Basis. When State Plane Coordinates are required, magnetic bearings may be shown on plans submitted, with a note stating that the project was submitted digitally to the City of Portland on State Plane Coordinates, but that the bearings on the plans are magnetic due to survey and boundary retracement considerations. The plan shall show the magnetic declination if magnetic bearings are shown.

7. All easements and conveyances proposed as part of the project shall be recorded, upon project approval, at the Cumberland County Registry of Deeds. Easement ownership and responsibility must be stated on the survey plans. Revised plans may be requested if deeds are executed during the progression of the project for easements or other conveyances.

13.4. WAIVER OF BOUNDARY SURVEY REQUIREMENTS

13.4.1. Minor and major site plans (excluding minor residential development as defined in Section 16 of the Technical Manual) – The reviewing authority may permit the submission of a partial survey depicting only the to-be- developed portion of the improved lot of record if the development:

1. Is proposed on an already improved lot of record; and
2. Comprises less than one (1) acre of said improved lot of record,

13.4.2. Minor residential development – If the proposed house is to be located on a lot within an existing subdivision, approved no earlier than 1968, the final subdivision recording plat may be used, provided that the applicant sufficiently documents all existing encumbrances, and can show that no new encumbrances have occu**rr**ed since recording of the final plat.

14. STANDARDS FOR LOCAL SITE LOCATION OF DEVELOPMENT REVIEW

14.1. Intention

These standards are intended to provide a flexible and practical means by which the City of Portland may exercise its police powers to control the location of those developments substantially affecting the local environment in order to ensure that such developments will be located in a manner which will have minimal adverse impact on the natural environment within the development sites and of their surroundings and to otherwise protect the health, safety and general welfare of the people.

14.2. APPLICABILITY

The Planning Board shall review:

(a) subdivisions;
(b) structures;
(c) developments generating passenger car equivalents of between 100-200 per peak hour for compliance with the following standards; and
(d) metallic mineral mining or advanced exploration activity.

For purposes of this section the following definitions shall be applied by the City of Portland Planning Board:

14.2.1. **Subdivisions.** The subdivision of land into 5 or more lots, other than lots for single-family, detached, residential housing, common areas or open space, to be offered for sale or lease to the general public during any 5-year period, if the aggregate land area includes more than 20 acres; or the division of a parcel of land into 15 or more lots for single-family, detached, residential housing, common areas or open space, to be offered for sale or lease to the general public within any 5-year period, if the aggregate land area includes more than 30 acres. The aggregate land area includes lots to be offered together with the roads, common areas, easement areas and all portions of the parcel of land in which rights or interests, whether express or implied, are to be offered. This definition of "subdivision" is subject to the following exceptions:

A. Lots of 40 or more acres but not more than 500 acres may not be counted as lots except where:

(1) The proposed subdivision is located wholly or partly within the shoreland zone;

B. Lots of more than 500 acres in size may not be counted as lots;

C. Five years after a subdivider establishes a single-family residence for

that subdivider's own use on a parcel and actually uses all or part of the parcel for that purpose during that period, a lot containing that residence may not be counted as a lot;

D. Unless intended to circumvent this article, the following transactions may not be considered lots offered for sale or lease to the general public:

(1) Sale or lease of lots to an abutting owner or to a spouse, child, parent, grandparent or sibling of the developer if those lots are not further divided or transferred to a person not so related to the developer within a 5-year period, except as provided in this subsection;

(2) Personal, nonprofit transactions, such as the transfer of lots by gift, if those lots are not further divided or transferred within a 5-year period or the transfer of lots by devise or inheritance; or

(3) Grant of a bona fide security interest in the whole lot or subsequent transfer of the whole lot by the original holder of the bona fide security interest or that person's successor in interest;

E. In those subdivisions that would otherwise not require site location approval, unless intended to circumvent this article, the following transactions may not, except as provided, be considered lots offered for sale or lease to the general public:

(1) Sale or lease of common lots created with a conservation easement as defined in Title 33, section 476, provided that the Department of Environmental Protection is made a party;

(2) The exception described in paragraph E does not apply, and the subdivision requires site location approval, whenever the use of a lot described in paragraph E changes or the lot is offered for sale or lease to the general public without the limitations set forth in paragraph E; and

F. The transfer of contiguous land by a permit holder to the owner of a lot within a permitted subdivision is exempt from review hereunder, provided that the land was not owned by the permit holder at the time the Department of Environmental Protection, the MDOT or the City approved the subdivision. Further division of the transferred land must be reviewed under these standards.

For the purposes of this section, a parcel of land is defined as all contiguous land in the same ownership provided that lands located on opposite sides of a public or private road are considered each a separate parcel of land unless that

road was established by the owner of land on both sides of the road subsequent to January 1, 1970. A lot to be offered for sale or lease to the general public is counted, for purposes of determining jurisdiction, from the time a municipal subdivision plan showing that lot is recorded or the lot is sold or leased, whichever occurs first, until 5 years after that recording, sale or lease.

14.2.2. **Structure**. A "structure" means any building, parking lot, road, paved area, wharf or area to be stripped or graded and not to be revegetated that cause a total project to occupy a ground area in excess of 3 acres. Stripped or graded areas that are not revegetated within a calendar year are included in calculating the 3-acre threshold; and

14.2.3. **Passenger car equivalents at peak hour**. "Passenger car equivalents at peak hour" means the number of passenger cars, or, in the case of non-passenger vehicles, the number of passenger cars that would be displaced by non-passenger vehicles, that pass through an intersection or on a roadway under prevailing roadway and traffic conditions at that hour of the day during which the traffic volume generated by the development is higher than the volume during any other hour of the day. A one tractor-trailer combination is the equivalent of 2 passenger cars.

14.3. STANDARDS

The following standards shall be applied in evaluating subdivisions or site plans as defined above, except where Portland elsewhere has adopted more restrictive standards, the more restrictive standards shall control:

1. Financial and technical capacity. The developer has the financial capacity and technical ability to develop the project in a manner consistent with state environmental standards and with the provisions of Portland's Code of Ordinances . The Planning Board may issue a permit that conditions any site alterations upon a developer providing the Planning Board with evidence that the developer has been granted a line of credit or a loan by a financial institution authorized to do business in this State or with evidence of any other form of financial assurance the Planning Board determines to be adequate. The Planning Board shall also assess any such application in accordance with the standards set forth in Chapter 373 of the Maine Department of Environmental Protection Site Law Regulations, as may be amended from time to time.

2. Traffic movement. For any development that generates 100 or more passenger car equivalents at peak hour, the developer has made adequate provision for traffic movement of all types into and out of the development area. Before issuing a permit, the Planning Board shall determine that any traffic increase attributable to the proposed development will not result in unreasonable congestion or unsafe conditions on a road in the vicinity of the proposed development. The Department of Transportation or the City of Portland Traffic

Engineer shall provide the Planning Board with an analysis of traffic movement of all types into and out of the development area and with a statement of recommended findings on traffic issues. In making its determination under this subsection, the Planning Board shall consider the analysis and recommendations provided by the City's Traffic Engineer or the Department of Transportation. Traffic movement determinations are subject to the following:

A. A proposed development that involves fewer than 100 passenger car equivalents at peak hour is not subject to traffic review.

B. If any project qualifies for review hereunder solely because it generates 100 or more passenger car equivalents at peak hour then the review hereunder shall be limited only to issues relevant to the traffic movement standards in this section. Otherwise, all other standards of review shall be applied.

In all instances the appropriate representative of the municipality or municipalities where the project is located, shall discuss with the applicant the scope of impact evaluation required for the proposed development. The applicant shall provide notice to abutting municipalities.

C. If a development is located in an area designated as a growth area in a local growth management plan that has been found by the State to be consistent with the growth management program in Title 30-A, chapter 187, the Planning Board shall require improvements to the level of traffic service only if the level of service adjacent to or in the vicinity of the development is or would be level of service E or F, as determined by the City's Traffic Engineer in accordance with the "Highway Capacity Manual" (3rd ed. 1994). In these cases, improvements are limited only to those necessary to mitigate for the foreseeable impacts of the development.

D. The Planning Board shall also assess any such application in accordance with the standards set forth in Chapter 374 of the Maine Department of Environmental Protection Site Law Regulations, as may be amended from time to time.

(3) No adverse effect on the natural environment. The developer has made adequate provision for fitting the development harmoniously into the existing natural environment and that the development will not adversely affect existing uses, scenic character, air quality, water quality or other natural resources in the municipality or in neighboring municipalities. In making a determination under this subsection, the Planning Board shall apply the standards set forth in Chapter 375 of the Maine Department of Environmental Protection Site Law Regulations, as may be amended from time to time.

(4) Soil types. The proposed development will be built on soil types that are

suitable to the nature of the undertaking. In making a determination under this subsection, the Planning Board shall apply the standards set forth in Chapter 376 of the Maine Department of Environmental Protection Site Law Regulations, as may be amended from time to time.

(5) Ground water. The proposed development will not pose an unreasonable risk that a discharge to a significant ground water aquifer will occur. In making a determination under this subsection, the Planning Board shall apply the standards set forth in Chapter 500 and 502 of the Maine Department of Environmental Stormwater Management and Direct Watersheds of Waterbodies Most at Risk from New Development Rules as may be amended from time to time.

(6) Infrastructure. The developer has made adequate provision of utilities, including water supplies, sewerage facilities, solid waste disposal and roadways required for the development and the development will not have an unreasonable adverse effect on the existing or proposed utilities and roadways in the municipality or area served by those services.

(7) Flooding. The activity will not unreasonably cause or increase the flooding of the alteration area or adjacent properties nor create an unreasonable flood hazard to any structure. In making a determination under this subsection, the Planning Board shall apply the standards set forth in Chapter 500 and 502 of the Maine Department of Environmental Stormwater Management and Direct Watersheds of Waterbodies Most at Risk from New Development Rules as may be amended from time to time.

(8) Storm water management and erosion and sedimentation control. The proposed development meets the standards for storm water management in 38 MRSA §420-D as amended from time to time (See Exhibit 1) and the standard for erosion and sedimentation control in 38 MRSA §420-C as amended from time to time. In making a determination under this subsection, the Planning Board shall apply the standards set forth in Chapter 500 and 502 of the Maine Department of Environmental Stormwater Management and Direct Watersheds of Waterbodies Most at Risk from New Development Rules, as may be amended from time to time.

15. SOLAR ENERGY GENERATION TECHNICAL STANDARDS

15.1 APPLICABILITY

15.1.1 All solar energy generation systems are subject to the standards set out in the Article 6 of the Land Use Code, whether permitted or conditional.

15.1.2 Roof mounted and accessory ground mounted solar energy systems as per Article 6 of the Land Use Code not subject to site plan review must comply with technical, safety and maintenance standards as per Building and Fire Code requirements and as determined by the Permitting and Inspections Department when a building permit is submitted. These solar energy systems must obtain a building permit but are not subject to the detailed Technical Standards in 15.2 below.

15.1.3 It should be noted that roof mounted systems potentially present a safety issue for the Fire Department in the event of a fire, and it is recommended that any roof mounted solar energy system be discussed with the Fire Department prior to design.

15.1.4 The technical standards in 15.2 below apply to any minor or major solar energy generation system that requires site plan approval (through the Planning Division) in accordance with Article 14, Site Plan, of the Land Use Code. These solar energy systems also require a Building Permit and other permits as required by Permitting and Inspections Department. The Permitting and Inspections Department may have additional submittal requirements for solar energy systems.

15.1.5 The following technical standards are referenced in Article 6 of the Land Use Codeand aim to complement this ordinance and the existing codes and site plan review standards. Together the aim is to ensure safe, effective and efficient installation of solar energy systems compatible with surrounding uses. Within this aim the overall intent is to encourage the installation of solar energy systems.

15.2 TECHNICAL STANDARDS

15.2.1 Site Layout: Wherever possible solar energy systems should be located on the side or rear (i.e. least visible) part of the site. This also applies to associated features such as lighting and infrastructure. Applicants shall take all

reasonable efforts to place utility connections underground, unless making use of existing lines, or as otherwise required by the utility. The proposed placement of new poles for electrical connections shall be included in the site plan and construction management plan.

15.2.2 Site Plan Review Standards: Proposals should address the specific requirements for solar energy systems found in Article 6, as well as the site plan review standards, listed in Article 14**.** It is recognized that some of the Site Plan standardsmay not be relevant, as determined by the Planning Division/Planning Board during the review. It is likely that the review of any solar energy system would focus on how the proposals avoid or minimize impacts on the following:

- Existing vegetation and other natural resources - location on brownfield sites and on areas that are already impervious are encouraged;
- Wetlands and areas subject to flooding - DEP approval may be required;
- Wildlife and wildlife habitats - information may be requested on resources, impacts and potential mitigation eg through specified maintenance regimes;
- Septic systems, leach fields (unless explicitly allowed by the relevant regulator);
- Existing topography - ensure adequate temporary and permanent erosion and sedimentation control;
- Water quality of the stormwater runoff;
- Airport flight paths (FAA approval may be required);
- Other specific or local site characteristics as referenced in ordinance standards.

15.2.3 Security: The siting and design of the solar energy installation shall ensure that unauthorized access is prevented, and shall be in conformance with all applicable electrical code requirements. Knox boxes at gates (or similar arrangements as approved during the review) shall be provided for emergency access. [DC1]

15.2.4 Screening: The ordinance specifies screening from nearby residential/institutional uses and public ways. The proposals should take advantage of existing topography and vegetation where possible to integrate the development (including fencing, infrastructure and connections to the grid) into the landscape, and introduce vegetated buffer areas. Fencing shall be wildlife friendly and as unobtrusive as possible, utilizing measures such as locating the fencing along topographical contours and screening with planting. The selection of new planting would be in accordance with the *Technical Standards* in Section 4 *Site Landscaping.*

15.2.5 Construction Impacts: Proposals should include information regarding the methods of construction and a Construction Management Plan may be

requested. Clearing of existing trees and vegetation shall be restricted to the minimum amount needed for construction access and to avoid shading of the solar development. Construction work should be performed in such a way that erosion and sedimentation is minimized, and measures should be taken to permanently stabilize disturbed areas of the site as soon as possible.

15.2.6 Lighting, signage and materials: Where lighting is necessary it should be at the lowest level to meet functional needs, activated by motion sensors, fully shielded and of cut off design to meet the *Site Lighting* standards in Section 12 of the *Technical Standards*. Similarly, signage should meet functional needs of safety/security and emergency contacts and not include advertising. Materials would ideally be of neutral colors and manufactured with a low "carbon footprint".

15.2.7 Stormwater Management: A new solar development will be required to comply with the *Technical Standards* in Section 5 *Portland Stormwater Management Standards* and Maine DEP Chapter 500 Stormwater Management.

15.3 SAFETY STANDARDS

15.3.1 Building Permit: All solar energy systems require a building permit prior to installation, whatever level of site plan review. All shall be installed by a qualified solar installer.

15.3.2 Certification: Solar energy systems shall be designed, erected and installed in accordance with all applicable codes, regulations and standards, with equipment approved under a certification program certified by the US Department of energy or similar. Experimental, homebuilt and prototype models would not be permitted.

15.3.3 Hazardous Materials: The city is concerned about the creation of hazardous waste in the future and requires a statement from the applicant regarding the content of toxic materials (eg cadmium) in the proposed system. Where the panels contain potentially toxic materials, the Operations and Maintenance Plan (for medium and large ground mounted or dual use systems - see below) shall address future disposal.

15.4 MAINTENANCE STANDARDS

15.4.1 Maintenance: Maintenance includes, but is not limited to: cleaning, mowing, painting, structural repairs, integrity of security measures, maintenance of site access adequate for emergency and maintenance services,

planned maintenance of fencing, stormwater systems and vegetation/ground cover, plans for cleaning panels and any specific mowing or other regimes to support the wildlife habitat value of the site.

15.4.2 Operations and Maintenance Plan: All minor and major solar energy systems, as defined in Article 6 of the Land Use Code are required to provide an *Operations and Maintenance Plan* that is prepared and stamped by a licensed Professional Engineer or other licensed Professional as appropriate. The *Plan* will vary depending on the site, the method of connecting to the grid, and the number and type of panels- but is expected to address the maintenance items listed in 15.4.1 and any operational time tables as relevant, and include the following:

- Clarification of the responsible party;
- Any maintenance items that are particularly important from a public safety perspective;
- An estimate of the life of the project
- What options/actions are anticipated when it has reached the end of its estimated useful life; and
- How the disposal of any toxic materials will be handled when the system is dismantled.

16. APPLICATION SUBMISSION REQUIREMENTS

16.1 SITE PLAN

The applicant shall submit for review a packet of materials and submissions in a form and content as specified by the Department of Planning and Urban Development to demonstrate compliance of the development with the site plan standards listed in Article 14 of the Land Use Code. Such submissions shall contain, at a minimum, the following elements:

A. General Submission Requirements For all Applications

1. Application form;
2. Applicable fees;
3. Project description;
4. Evidence of right, title and interest;
5. Evidence of state and/or federal approvals, if applicable;
6. Written assessment of project compliance with applicable zoning requirements;
7. Written assessment of project compliance with site plan standards;
8. Summary of existing and/or proposed easements, covenants, public or private rights-of-way, or other burdens on the site;
9. Written requests for waivers from the city's site plan or technical standards, if applicable;
10. Evidence of financial and technical capacity;
11. Boundary survey stamped by a professional surveyor licensed to practice in the State of Maine, drawn to scale and tied into the State Plane Coordinates, NAD 1983, Maine West Zone, as specified in Section 13 of the Technical Manual. A boundary survey of the site, may be waived by the Planning Authority for a review of Master Development Plan, where an existing conditions plan is available. The Boundary Survey requirement shall be met for each phase of development.

B. Written Materials for Site Plan Applications

1. Construction Management Plan, including a traffic control plan;

2. A traffic study and other applicable transportation plans in accordance with Section 17 of the Technical Manual, where applicable;

3. A narrative describing any significant natural features, wildlife and fisheries habitats or archaeological sites subject to the provisions of Section 14.6.2 of the land use code that are located on or near the project site and a description of the methods that will be used to protect such areas or sites during and post construction;

4. A narrative describing site layout, on and off-site watershed hydrology, new and existing buildings and facilities, total impervious area, disturbed area and developed area created by the project;

5. Stormwater runoff calculations as described in Section 5 of the Technical Manual;

6. A narrative describing the development's consistency with applicable City Master Plans;

7. Evidence of Utility Capacity to Serve;

8. Estimated types and quantities of solid waste to be generated by the development. For new commercial and industrial development, a description of the estimated amount and type of recyclable material to be generated;

9. A code summary referencing NFPA 1 and all Fire Department technical standards;

10. Where applicable, an assessment of the development's consistency with any applicable design standards contained in Section 14.6.4 of the land use code and/or in the City of Portland Design Manual;

11. Manufacturer's verification that all proposed HVAC and manufacturing equipment meets applicable state and federal emissions requirements.

C. Plans Required for Site Plan Applications – Plan based upon a standard stamped boundary survey meeting City of Portland standards, stamped by a professional engineer licensed to practice in the State of Maine, and including the following information:

1. Existing and proposed structures, as applicable, and distance from property

lines;

2. Approximate location of structures on parcels abutting the site;

3. All streets and intersections adjacent to the site and any proposed geometric modifications to those streets or intersections;

4. Location, dimensions and materials of all existing and proposed driveways, vehicle and pedestrian access ways, and bicycle access ways, with corresponding curb lines;

5. Engineered construction specifications and cross-sectional drawings for all proposed driveways, paved areas, sidewalks;

6. Location and dimensions of all proposed loading areas including turning templates for applicable design delivery vehicles;

7. Existing and proposed public transit infrastructure with applicable dimensions and engineering specifications;

8. Location of existing and proposed vehicle and bicycle parking spaces with applicable dimensional and engineering information;

9. Location of all snow storage areas and/or a snow removal plan;

10. Proposed buffers and preservation measures for significant natural features, where applicable, as defined in Section 14.6.2 of the land use code;

11. Location and proposed alteration to any watercourse;

12. A delineation of wetlands boundaries prepared by a qualified professional as detailed in Section 8 of the Technical Manual;

13. Proposed buffers and preservation measures for wetlands;

14. Existing soil conditions and location of test pits and test borings;

15. Existing vegetation to be preserved, proposed site landscaping, screening and proposed street trees, as applicable;

16. A stormwater management and drainage plan, in accordance with Section 5 of the Technical Manual;

17. Grading plan;

18. Ground water protection measures;

19. Existing and proposed sewer mains and connections;

20. Location of all existing and proposed fire hydrants and a life safety plan in accordance with Section 3 of the Technical Manual;

21. Location, sizing, and directional flows of all existing and proposed utilities within the project site and on all abutting streets;

22. Location and dimensions of off-premises public or publicly accessible infrastructure immediately adjacent to the site;

23. Location and size of all on-site solid waste receptacles, including on-site storage containers for recyclable materials for any commercial or industrial property;

24. Plans showing the location, ground floor area, floor plans and grade elevations for all buildings;

25. A shadow analysis as described in Section 11 of the Technical Manual, if applicable;

26. A note on the plan identifying the Historic Preservation designation and a copy of the Application for Certificate of Appropriateness, if applicable, as specified in Section Article IX, the Historic Preservation Ordinance;

27. Location and dimensions of all existing and proposed HVAC and mechanical equipment and all proposed screening, where applicable;

28. An exterior lighting plan in accordance with Section 12 of the Technical Manual;

29. A master signage plan showing the location, dimensions, height, setback, materials, and illumination of all existing and proposed signs;

30. Location, dimensions and ownership of easements, public or private rights of way, both existing and proposed.

D. Exceptions for Minor Site Plan Applications
On account of the scope and anticipated level of impact for certain types of Minor Site Plan applications, a complete submission package as detailed under

Section 16.1(B) and 16.1(C) is not required for the following types of development, which are defined for the purposes of application fee assignment and submittal requirements:

1. Minor Residential Development:
    a. Development of a single-family or a two-family building, regardless of its size, excluding building additions, decks, or accessory structures; or

    b. The addition of one or two dwelling units to a multifamily structure.

2. Low-Impact Site Development
    a. Alteration of a watercourse or wetland as defined in Article 3 of the Land Use Code;

    b. Alteration of a site where disturbance of land area is less than one (1) acre and consisting of either one or more of the following activities; stripping, grading, grubbing, filling or excavation. The Planning Authority shall exempt from review the loam and seeding of lawns and the cumulative placement of less than fifteen (15) cubic yards of fill on any lot provided such loaming or placement does not alter a drainage course, swale, wetland or redirect water onto adjoining property and does not violate any other provision of the Portland City Code or state or federal law. “Disturbed area” does not include routine maintenance, but does include re-development and new impervious areas;

    c. The construction of any temporary or permanent parking area, paving of existing unpaved surface parking areas between 1,000 and 7,500 square feet or 5-25 spaces, or creation of other impervious surface areas between 1,000 and 7,500 square feet;

    d. The rehabilitation or reconstruction, but not new construction, of piers, docks, wharves, bridges, retaining walls, and other structures located within the shoreland zone;

    e. A site alteration in which vehicle access is proposed from more than one (1) street.

3. Plan Requirements for Minor Residential and Low-Impact Site Development, to be provided in addition to the general submission requirements for all site plan applications, listed under Section 16.1(A). Site plans shall be based upon the boundary survey and show the following information:

a. Existing and proposed structures, as applicable, and distance from property lines;

b. Existing and proposed paved areas, if applicable;

c. Proposed ground floor area and finish floor or sill elevation;

d. For minor residential only, exterior building elevation drawings (all sides);

e. Location of proposed utilities;

f. Identification and proposed protection measures for any significant natural features, as defined in Section 14.6.2 of the land use code;

g. Identification and proposed protection for alterations of watercourses, if applicable;

h. Identification and, if applicable, proposed impacts and protection measures for wetlands;

i. For minor residential projects only, soil type;

j. Existing and proposed grades and contours;

k. Location, dimensions and ownership of easements, public or private rights of way, both existing and proposed;

l. Proposed stormwater management control;

m. Soil erosion control plan;

n. Existing vegetation to be preserved, proposed site landscaping, screening, and proposed street trees, if applicable;

o. Existing and proposed curb and sidewalk;

p. Location, area, and limits of the proposed site disturbance or alteration;

q. Proposed pier, dock, wharf, pier, or slope stabilization in the Shoreland Zone, if applicable.

E. Master Development Plan. A Master Development Plan is an optional submittal as part as part of the site plan review process. If the applicant elects to submit a Master Development Plan for review, it shall include the following information in addition to general submission requirements listed above:

1. A neighborhood context map, at a scale not less than one (1) inch equals one hundred (100) feet, providing a graphic description of the neighborhood in which the tract lies, including roads, utilities and other public facilities, major existing buildings and structures. There shall also be a statement and/or plan as to the general impact of the proposed Master Development Plan upon the area, indicating how the Master Development Plan relates to surrounding properties and what measures will be taken to create appropriate transitions and access from the subject property to abutting public properties (i.e. parks, waterfront, etc.) or other neighboring tracts (if applicable).

2. A conceptual site plan drawn to a scale of not less than one (1) inch equaling fifty (50) feet, or series of drawings at the same scale, and any necessary supporting information, showing:

   a. The approximate boundary lines of existing and proposed lots within and immediately adjacent to the Master Development Plan, with approximate areas and dimensions. With respect to residential areas, the proposed density, lot configuration, circulation and a typical plot plan shall be included in the application.

   b. An analysis of the natural features of the site, including existing and/or adjacent natural waterways, wetlands, floodplains, topography, soil conditions and other natural features requested or required by the Planning Authority.

   c. An analysis of the designated view corridors, historic resources, and archeological resource associated with the site.

   d. Existing/proposed buildings and other significant structures, building groupings, exterior building elevations and entrances, parking areas, and other significant physical features of the site.

   e. The context and design approach, including context drawings, perspective renderings, photographic montages, or computer-generated graphics depicting the proposed development within the surrounding building and environmental context, and building elevations. These drawings shall include the following:

i. Illustrations of all sides of the structures;

ii. Views of major entries or prominent building features;

iii. Illustration of building articulation and elements;

iv. Building finish composition; and

v. Views of the pedestrian and streetscape experience.

The submission shall include a digital three-dimensional model tied to a specific location that is submitted as a KML, KMZ, DXF, or DWG file on a CD or DVD or such format as approved by the Planning Authority. It is the applicant's responsibility that the model is complete and represents the proposed development accurately using best practice modeling techniques and layering standards.

f. Major circulation patterns surrounding and serving the site, the existing and proposed lines of streets (including the street width), ways, easements and any public areas within or next to the site.

g. Major landscaping elements, features, open space, and plans for preservation of natural features.

h. An analysis of the public safety services needed to support the master plan.

i. An analysis of the anticipated impacts on the public-school system to support the Master Development Plan.

j. A generalized drainage plan for the site, indicating drainage ways, flow, points of outfall, and indicating impacts of development on affected drainage basins. The plan shall include contour information at not less than two-foot (2') contour intervals and document anticipated quantities of run-off characteristics. General statements concerning storm water management techniques shall also be submitted with the application.

k. The plan shall clearly show Master Development Plan boundaries, north arrow, date, scale, legend, the title "Master Development Plan Concept Site Plan" followed by the formal project name, and the name(s) of applicant(s), engineer(s), designer(s) and/or agent(s).

l. A traffic analysis and recommendations prepared by a registered professional engineer qualified to conduct such studies, including

current traffic counts for streets surrounding the project, analysis of the existing capacity of those streets, projections of the amount of traffic that will be generated by the proposed development, and the ability of the street system to absorb the increased traffic without decreasing the level of service below an acceptable level – said level to be determined by the Planning Authority in concert with the Department of Public Works. In cases where the Master Development Plan is subject to a Traffic Movement Permit (TMP) for all phases, the TMP submissions and review shall supersede these requirements.

m. A utilities analysis and recommendations prepared by a registered professional engineer qualified to conduct such studies. Said analysis shall contain an inventory of existing utilities including, but not limited to, storm sewers and drains, sanitary sewers, electrical lines, fire alarm boxes and lines, gas lines/mains, water mains, lighting, curb and gutter, etc. Said inventory shall illustrate utility locations, sizes, diameters, carrying capacity and present load on the system. The engineer's report shall state if the current system is capable of adequately serving the proposed development. If the current utility system is found to be inadequate for the proposed development, the report shall confirm the deficiencies and make recommendation(s) as to the infrastructure improvements necessary to properly service the proposed development and maintain the existing service. The report shall also present a formal plan for infrastructure improvements, documenting timing, funding mechanisms and coordination with the City; and

n. Any other supportive information the applicant feels may be beneficial in the evaluation of the request.

o. The Planning Authority or Planning Board may reduce the level of information required at the Master Development Plan review stage, provided more detailed supportive documentation is provided at final major site plan review of the Master Development Plan or phases thereof.

16. 2. SUBDIVISION

The applicant shall submit for review a packet of materials and submissions in a form and content as specified by the Department of Planning and Urban Development to demonstrate compliance of the development with the subdivision standards listed in Article 15 of the Land Use Code. Such submissions shall contain, at a minimum, the following elements:

A. Subdivision Plat. The following information shall be shown on the subdivision plat unless otherwise indicated:

1. Date, north point, title and graphic scale. Scale shall not be more than 60 feet to the inch unless lots are more than an acre, but in no event more than 100 feet to the inch;

2. Based on a recent survey by the subdivider, existing contours at two feet intervals or as otherwise required by the Public Works Authority. Existing structures which are to remain will shall be delineated;

3. Names of proposed streets, width of rights of way, and typical cross section reservation, and depth of construction materials;

4. Locations, widths and purposes of other rights of way or easements to be recorded;

5. All appropriate street curve information, including point of curvature, point of tangency, tangent distance, radii and interior angle, in standard engineering format;

6. Location of those utilities existing on or adjacent to the tract to be subdivided, including size and elevation of buried or underground utilities (may be shown on separate plan);

7. Tract boundary lines and property lines of lots, with accurate dimensions and either bearings or deflection angles. All lots shall be numbered;

8. Names of adjacent property owners with parcels over 25,000 square feet or names of adjacent subdivision;

9. Designation of flood hazard areas, as defined by the National Flood Insurance Program and shown on the city flood hazard boundary map, as well as any other areas in the subdivision subject to inundation by storm water or storm sewer overflow;

10. All potential wetlands within the proposed subdivision, regardless of the size of those wetlands;

11. Any river, stream or brook within or abutting the proposed subdivision. For purposes of this section, "river, stream or brook" has the same meaning as in 38 M.R.S. § 480 B, Subsection 9.

12. Existing historic sites and structures which either appear on the National

Register or are nominated to the National Register by the state historic preservation officer;

13. Proposed private and public utility system including water, gas, telephone, fire hydrants, and any other services which shall supply the area (may be shown on separate plan);

14. Sanitary sewer and storm drain plans and profiles showing size, kind and slope of pipe, proposed manhole rim and invert elevations and catch basin locations and drains (may be shown on separate plan);

15. Lighting plan showing the location, design, height and spacing from each other of the support poles, in accordance with standards and specifications established by the Public Works Authority (may be shown on separate plan);

16. Tree plan showing groups of existing, sizeable trees which the subdivider intends to preserve (may be shown on separate plan);

17. A detailed plan of the entire subdivision and the immediate vicinity showing all existing and proposed drainage both on- and off-site including drainage swales, ditches, etc., with directional flow arrows and approximate slope grades, and showing proposed finished "spot elevations" around the perimeter of the subdivision. Proposed drainage shall be shown as it may affect or restrict development on individual lots and with reference to improvements for which a performance guarantee is required under this article. Where deemed feasible by the Public Works Authority, proposed finished contours at intervals of two feet shall be provided on the drainage plan upon request (may be shown on separate plan);

18. Location and designation of any zoning district boundaries affecting the subdivision;

19. All future phases and sections of the subdivision proposed by the subdivider (may be shown on separate plan);

20. Proposed parks and school sites, or other public open space that the developer proposes to convey to the city;

21. Names, addresses and stamp or certification, if applicable, of registered professional engineer, subdivider, and owner:

22. At the option of the subdivider, any other information that may be necessary for the full and proper consideration of the subdivision shall be submitted in writing;

23. Streets and right of way monuments and property line markers;

24. Vicinity sketch (may be shown on separate plan);

25. Total site data, including total area of the subdivision, total area in streets, total area in recreation or open space and number of house lots;

26. Profiles of each street or way in the subdivision shall be shown on the subdivision plat. They shall be drawn to a longitudinal scale of 40 feet to one foot and a vertical scale of four feet to one inch. Such profiles shall include separate profiles of each side line and center line of the street or way. Any buildings abutting on the street shall be shown in standard engineering format as requested by the Public Works Authority.

B. Supplemental Submission Items. The following submission items shall be provided if required by the Planning Board and insofar as feasible:

1. When private sewage systems are used, the results and supporting data of a soil test of each lot in the subdivision conducted by a soil evaluator licensed in the state;

2. When the adequacy of the subdivision's load bearing capacity is in question, the results and supporting data of test borings conducted by a professional engineer registered in the state;

3. When conditions warrant, a program which shall be implemented by the subdivider to control dust, erosion and sedimentation and/or vehicular traffic during construction;

4. Evidence of the applicant's financial capability to carry out all phases of the proposed development;

5. Evidence of technical capacity to undertake the development;

6. Evidence of state and federal approvals, licenses or permits required by law, or the status of applications therefor;

7. Price range of houses that will be built in the subdivision;

8. Traffic impact analysis;

9. High intensity soil survey, if required by the Planning Authority;

10. Types and estimated quantities of solid waste to be generated by the development;

11. Construction plan outlining the anticipated sequence of construction of the major features of the project including without limitation roads, retention basins, sewer lines, seeding and other erosion and sedimentation control measures, and pollution abatement measures and also setting forth the approximate dates for commencement and completion of the project;

12. A narrative and a plan showing all proposed buffer strips, their dimensions, and maintenance plans and responsibilities;

13. A description of any wetlands, wildlife and fisheries habitats, archaeological sites or unusual natural areas located on or near the project site and a description of the methods that will be used to protect such area; and

14. Where submission drawings are available in electronic form, the applicant shall submit any available electronic CADD.DXF files with final plans.

C. Recording Plat. The Recording plat shall be an original ink drawing on linen or mylar, or as necessary to be acceptable to the Registry of Deeds, and shall be tied to an accepted street or to a proposed street under construction and bonded to insure construction. The plat shall show the following:

1. Title, date, graphic scale, north arrow, name, signature and registration number or seal of a registered land surveyor licensed in the state, name and address of developer and owner;

2. Tract boundary lines and property lines of lots, with accurate dimensions and either bearings or deflection angles. All lots shall be numbered;

3. All appropriate street curve information, including point of tangency, tangent distance, radii and interior angles, in standard engineering form;

4. Street names, width of street rights of way and typical cross section showing only surface dimensions of roadway pavement, esplanade and sidewalk reservation;

5. Street and right of way monuments and property markers. Iron pipes shall be designated by a small circle at the point of installation;

6. Locations, dimensions and purposes of any easement or right of way;

7. Purpose for which sites, other than residential lots, are dedicated or

reserved; it being understood that any reservations of areas shall be subject to the proper zoning thereof;

8. Reference to recorded subdivision plats of adjoining platted land by book and page number;

9. Space for the signatures of the Planning Board and date of approval;

10. Where required by 30 A M.R.S. § 4406, the fact that initial approval or subsequent amendment of a subdivision is based in part upon the granting of a variance from any of the applicable subdivision approval standards.

17. TRANSPORTATION STUDIES & PLANS

17.1. TRANSPORTATION STUDIES

17.1.1. Definitions: For the purposes of this section, **passenger car equivalents (PCE)** shall be defined as the number of passenger cars or, in the case of non-passenger vehicles, the number of passenger cars that would be displaced by non-passenger vehicles. One tractor trailer combination is the equivalent of two passenger cars.

17.1.2. Applicability: Developments that generate 100 PCE or more during a peak hour period, thus requiring a Traffic Movement Permit (TMP), shall meet the requirements of TMP regulations of State Law, in addition to all applicable transportation site plan standards of the City Code. The calculation of the PCE trip level for determination of TMP thresholds shall be made prior to trip reductions for other modes or shared trips.

For more information concerning state TMP requirements, please refer to https://www.maine.gov/mdot/traffic/docs/229c305.pdf or contact the Maine Department of Transportation (MaineDOT). The City of Portland is the delegated reviewing authority for TMP applications.

Developments generating at least 25 PCE and less than 100 PCE during a peak hour period may be required to complete a transportation study. The determination shall be made by the City Traffic Engineer, based upon the proximity of the development site to identified issues related to safety, congestion, and/or multi-modal accessibility.

17.1.3. Preparation: Transportation studies shall be prepared, stamped, and signed by a Professional Engineer licensed in the State of Maine.

17.1.4. Scope of study: The City Traffic Engineer, in consultation with the applicant's engineer, shall determine the scope of the transportation study. The scope of the study may include, but is not limited to, the following elements:

- A description of the development proposal.
- A description of the existing multi-modal transportation conditions and context.
- Estimated trip generation by the development and design hour volume for site driveway(s) and study intersections by mode. Trip generation will be based upon current Institute of Transportation Engineers data, or approved alternate methodology, by mode.
- Trip distribution.
- Multi-modal level of service analysis pre-and post-development at study area intersections and roadway segments.

- Capacity analysis at study area intersections, including level of service (LOS), delay, volume-to-capacity ratios, and queue analysis.
- Crash analysis within the study area, or expanded study area if deemed appropriate.
- Key findings regarding multi-modal traffic and safety issues in the existing condition or as a result of project-generated trips.
- Analysis of impacts to pedestrians, bicyclists, and transit service and users.
- Summary of findings and recommendations for transportation improvements and other impact mitigation measures.

17.1.5. Mitigation: Mitigation of development project impacts may be required under MaineDOT TMP regulations and/or by the City of Portland through a transportation study. In some cases, where safety or capacity improvements to vehicle operations are not feasible due to constraints, mitigation may consist of in-kind multi-modal improvements to pedestrian, bicycle, and/or transit facilities and service. Where required, mitigation measures shall be included in the applicant's transportation study, and shall be approved by the Department of Public Works prior to site plan approval.

17.2. PARKING STUDY

Parking studies shall be produced by a licensed transportation engineer.

Where a parking study is required, data shall be determined by values contained in the current version of the Institute of Transportation Engineers (ITE) publication titled Parking Generation, or through local, regional or other pertinent national data. If local or regional data is to be used, the scope and methodology of the parking study shall be coordinated with the City Traffic Engineer.

Parking studies for mixed-use developments shall reference best practices for shared parking, both in terms of calculations and studies, such as the Urban Land Institute's Shared Parking.

Where a parking study is required, the scope of study shall be determined in coordination with the City Traffic Engineer. The requirements for the study shall be based on standard transportation engineering practices.

17.3. TRANSPORTATION DEMAND MANAGEMENT (TDM)

All TDM Plans shall:

17.3.1. Include a transportation narrative:

Every TDM plan shall describe how the project fits within the multi-modal

transportation system serving the district in which the development or site is located. The narrative should address the specifics of the land uses, occupants, visitors, and location of the development and how it is anticipated to relate to its transportation context.

The narrative for the transportation context should address applicable existing conditions and TDM challenges and opportunities for the site related to vehicular access and circulation, the quality of the bicycling and pedestrian environment and facilities, transit service levels and the transit-supportive environment, and current levels of parking and parking policies. For existing developed sites, the current state of any TDM-related efforts should be described.

17.3.2. Identify a TDM Coordinator to administer the TDM plan:

Every TDM Plan shall identify a TDM coordinator or coordinators and establish the roles and responsibilities of the coordinator. The plan should demonstrate how the administration of the TDM plan and role of the TDM coordinator will reflect the scale of the site/development, proposed uses, parking and vehicle trip reduction targets, as well as the ownership and property management framework.

17.3.3. Document baseline TDM data:

The TDM plan shall identify baseline travel demand and supply data for the development or site in tabular format, against which future performance can be measured. Baseline data shall include:

- Future trip generation estimates (where applicable),
- Proposed parking supply and future demand estimates (where applicable), and
- Estimated modal split, recognizing modal split as the uniform metric to be used in TDM reporting in subsequent years.

Baseline data shall correspond to the transportation analysis required for the project, and shall represent best estimates of transportation demand and modal split at time of occupancy, given the transportation context.

1.13.4. Set TDM targets:

The TDM plan shall establish short-term (3-5 year) and long-term modal split targets, based on documented baseline transportation demand data, the combination of land uses, location, transportation context, and other data for the site. Modal split targets shall relate directly to the transportation infrastructure

provided, TDM strategies to be employed, and site context, and shall consider city-wide TDM goals as represented in plans such as *One Climate Future*. The metrics for TDM modal split targets shall be measurable, and shall include goals for reductions in single-occupancy vehicle trips and increases in non-single-occupancy trips, broken down by mode. The targets shall be described in both absolute values and percentage terms. The targets will be reviewed and updated based upon the annual TDM reporting.

17.3.5. Set customized modal split strategies:

Every TDM plan shall include a set of strategies designed to achieve the TDM target~~s~~. The strategies should be customized to reflect the specific mix of uses, the population that will access the site, the scale of development, the location, the modal split targets, and the transportation opportunities available to the site. The strategies should also reflect a broad mix of TDM approaches, including approaches that:

- Provide TDM infrastructure and operations to the site (e.g. on-site lockers and shower facilities, transit capital or operation funding, programming that supports TDM, such as guaranteed ride home or ride-matching programs)

- Incentivize TDM options (e.g. through parking cash-out, preferential carpool parking, subsidized transit passes, subsidized bicycle maintenance, or bikeshare memberships), and

- Educate users of the site about TDM options (e.g. through site-level information-sharing mechanisms, provision of transit maps and schedules, etc.).

For additional information on TDM strategies, see https://www.portlandmaine.gov/721/TDM-Parking.

17.3.6. Establish a monitoring and reporting plan:

All TDM plans must include provisions for monitoring program effectiveness over time to establish whether progress toward TDM targets is being met.

Responsibility: TDM Coordinators and/or plan administrators are responsible for monitoring the efficacy of the TDM plan and making adjustments to the plan as needed to achieve modal split targets.

Methods: The methods of monitoring shall be outlined in the TDM plan. Monitoring methods will typically involve use of an annual survey combined

with other data collection, such as parking utilization counts where needed.

Reporting: The results of TDM plan monitoring shall be reported to the City of Portland on an annual basis using reporting tools provided by the city.

17.4. CONSTRUCTION PERMITTING AND TRAFFIC CONTROL PLANS

17.4.1. Construction activity in the public right-of-way is controlled by Chapter 25 Article VII of the City Code of Ordinances. Required licenses and permits, restrictions on activity, and fees & charges are all outlined in that Chapter. Rules and Regulations for Excavation Activity are available through the Street Opening Clerk at the Department of Public Works.

17.4.2. Sewer and stormwater system connections are controlled by Chapters 24 and 32 of the City Code of Ordinance. Required permits for new connections and/or abandonment of existing connections are available through the Street Opening Clerk at the Department of Public Works. Rules and Regulations for these utility systems are available through the City Engineer's office of the Department of Public Works. See also Section II of the Technical Manual for lateral abandonment requirements associated with demolition permits.

17.4.3. Traffic Control Plans: Construction activity that impacts the existing public street system must be controlled to protect the safety of the construction workers and all modes of the traveling public. Projects that will occur along accepted city streets are required to submit a satisfactory 'maintenance of traffic' (MOT) plan prior to any site plan, subdivision, or street opening permit approval.

Maintenance of Traffic (MOT) plans shall provide for the safe passage of the public by all modes of transportation through or along the construction work zone. On a case-by-case basis applicants may be allowed to close a street and/or detour a mode of traffic when absolutely necessary for safety. These closures are to be limited to the shortest duration possible with durations specifically noted in the TCP documentation. MOT plans shall employ the appropriate techniques and devices as called for in the latest edition of the Manual on Uniform Traffic Control Devices (MUTCD). In addition:

- Construction speed signing may be used as needed to slow traffic
- Traffic Control signs shall not be placed where they are an obstruction to bicycles or pedestrians. ADA-compliant access shall be maintained at all times and documented within Traffic Control Plans.
- In some situations, flaggers may be required to allow for safe pedestrian and bicycle movement

Additional information for temporary traffic control plans is provided in Chapter

6 of the MUTCD. (https://mutcd.fhwa.dot.gov/htm/2009/part6/part6_toc.htm

17.4.4. All existing modes of travel in the work zone area shall be accommodated if impacted by the activity. The safe passage of pedestrians, bicyclists, transit providers, and motorists are of equal importance when planning out the work zone; no pre-existing travel mode may be eliminated without the express approval of the Department of Public Works.

- Traffic control for bicycle and pedestrian facilities or routes through work zones shall be maintained until the bicycle and pedestrian facilities or routes are ready for safe operation. Traffic control will not be removed to allow auto travel at the expense of bicycles and pedestrians.

- Where pedestrian traffic is significant, and/or where a detour would present a significant delay and/or safety issue to pedestrians, a temporary walkway in the shoulder/parking lane/outside travel lane may be required where possible. Any temporary walkway shall be ADA-accessible, including temporary ADA ramps leading to/from the walkway where needed, and solid, detectable barriers along the edges of the walkway. Temporary walkways shall be kept clear of snow, ice and debris by the contractor at all times. Temporary walkways shall have a minimum clear width of five (5) feet.

- Pedestrian detours shall be considered as a last resort where no other practical option is available. Where pedestrian detours are allowed, pedestrians shall be directed to cross at existing crosswalk locations where practical. Temporary crosswalks and curb ramps may be required to shorten the overall detour. Any temporary crosswalk shall be ADA-compliant and shall be located where sight distance is adequate. All temporary crosswalks shall be approved by the Department of Public Works.

- Where construction requires the closure of a bicycle lane or shared use pathway alongside a high-volume and/or high-speed roadway, bicycle traffic shall be managed by the contractor in coordination with the Department of Public Works. Treatments may include a barrier-protected bicycle lane or shared use path, or bicycle detours as a last resort.

- Barrier systems utilized to separate the construction activity from the public street and/or sidewalk shall not inhibit sight distances, particularly for visibility of pedestrians and bicyclists.

For reference, see also “How to Plan, Document, and Implement Pedestrian Mobility in and around Work Zones”

(https://portlandmaine.gov/DocumentCenter/View/30884/Work-Zone-ADA)

17.4.5. Use of public parking spaces or the blockage of any portion of sidewalk for the purpose of construction activity shall require an occupancy permit and appropriate fee as assessed by the Department of Public Works.

ACORN ENGINEERING, INC.

Planning and Urban Development Department
Matt Grooms, AICP
Development Review Services Manager
City of Portland, Maine
389 Congress Street, 4th Floor
Portland, ME 04101

April 9, 2024

Subject: Phased Oxford Street Redevelopment
Joint Major Site Plan Application

Matt:

On behalf of Reveler Development and Avesta Housing Development Corporation d/b/a Avesta Oxford Street LP, Acorn Engineering is pleased to submit the accompanying package of submission materials for a Joint Major Site Plan Application. The Application proposes the phased redevelopment of 123 new residential units across several underutilized parcels within downtown Portland. As Co-Applicants, Reveler and Avesta intend to construct this project in three phases consisting of:

- Phase 1: 197 Oxford Street: 48 Affordable and "Housing Fist" Residential Units (Avesta)
- Phase 2: 50 Cedar Street: 24 Market Rate Residential Units (Reveler)
- Phase 3: 158 Lancaster Street: 51 Market Rate Residential Units (Reveler)

Located entirely within the R-6 Zoning District, the project area consists of 1.58 acres of contiguous property owned by Reveler. The project proposes to redevelop approximately 0.96 acres as part of this application. Given 48 of the 123 units will be restricted as affordable, the project intends to utilize the density bonuses described in the City of Portland Land Use Code, section 18.2. The project also intends to comply with the off-site provisions within the Inclusionary Zoning Implementation Guidelines for Developers of Rental Housing. Please refer to Section D. of the application for more information on density and affordability bonuses.

We are excited to submit this application which proposes much-needed housing in lieu of existing parking lots and vacant, uninhabitable buildings. The joint application provides a variety of housing options, while taking a unified approach to the overall project design and planning. Taking ques from the adjacent Bayside Master Development Plan approved in 2023, the proposal aims to enhance the streetscape through public improvements including a water main replacement in Lancaster Street, the planting of a multitude of street trees, and other enhancements such as bike racks and decorative lighting. All three phases will provide on-site stormwater detention while rebuilding their respective frontages, totaling over 900 linear feet of reconstructed sidewalk.

As permitted under Section 18.2.2 of the Land Use Code, in addition to the reduction in fees for affordable housing projects, we are requesting the review is performed in an expedited manner at both the Staff and Planning Board levels.

The Co-Applicants and the design team look forward to your review of this project. If you have any questions regarding these materials or the completeness of the application materials, please do not hesitate to contact me.

Sincerely,

Sam Lebel

Sam Lebel, P.E.
Project Manager
Acorn Engineering, Inc.

The following documents and drawings will be uploaded onto the City's electronic submission site per the procedure outlined in the application:

Documents:

- Section A: Cover Letter
- Section B: Major Site Plan Application & Checklist
- Section C: Right, Title, Interest
- Section D: Zoning Assessment
- Section E: Easements
- Section F: Waiver Table
- Section F: Waiver Table
- Section G: Financial Capacity
- Section H: Technical Capacity
- Section I: Conformity with Land Use Ordinance
- Section J: Stormwater Management Report
- Section K: Erosion & Sedimentation Control Report
- Section L: Public Safety & Fire Prevention Letter
- Section M: Wastewater Capacity Letter
- Section N: Lighting
- Section O: Architectural Design Narrative
- Section P: Utility Cover
- Section Q: Construction Management Plan
- Section R: Solid Waste
- Section S: Parking Analysis
- Section T: Traffic Analysis
- Section U: Pre-App Neighborhood Meeting Documentation

Drawings:

- Civil Site Plan Set
- Architectural Plan Sets

CITY OF PORTLAND
Planning & Urban Development Department

MAJOR SITE PLAN
GENERAL DOCUMENT AND DRAWINGS CHECKLIST

Please submit each document as a separate PDF file.
Please confirm by electronically checking the boxes in the left-hand column.

**** PLEASE FILL OUT AND UPLOAD THE ZONING ASSESSMENT TABLE AND WAIVER TABLE SEPARATELY AS NOTED BELOW ****

At the time of application submission, please contact the Department of Public Works regarding E-911 addressing for your project.

GENERAL APPLICATION DOCUMENTS		
Yes	NA	**Project Description** ● Cover letter with detailed project description
Yes	NA	**Completed Checklist** (this document)
Yes	NA	**Evidence of Right, Title, and Interest** ● Deeds, leases, or purchase and sales agreements
Yes	NA	**Evidence of State or Federal Approvals** ● Permits or letters of non-jurisdiction, if applicable
Yes	NA	**Zoning Assessment** (see Zoning Assessment Table) Summary of compliance with use and dimensional standards of the land use code
Yes	NA	**Site Plan Standards Assessment** (see Section 14.6 of the land use code) ● Summary of project compliance with site plan standards of the land use code
Yes	NA	**Summary of Existing and/or Proposed Easements or Covenants, applicable.** ● Evidence of existing easements and any proposed easements, covenants, public or private rights-of-way
Yes	NA	**Waiver Requests** (see Waiver Table) ● Written request for waiver describing request and compliance with applicable waiver standards
Yes	NA	**Financial Capability** ● Letter or evidence from a financial institution or third party verifying financial capacity to undertake project
Yes	NA	**Technical Capability** ● Evidence of technical capability of applicant and consultants – resumes and/or examples of past projects

MAJOR SITE PLAN
STANDARDS AND SUBMISSION CHECKLIST

Provide assessment of compliance with standards and include supplemental documentation, as applicable.
Please submit each document as a separate PDF file.

TRANSPORTATION	
Yes **NA**	**Impact on Surrounding Street Systems (14-14.6.1(A))** ● Describe incremental volume of traffic impacts and mitigation measures. If needed
Yes **NA**	**Access and Circulation (14-14.6.1(B))** Identify and describe the following: ● Site access and internal circulation, including ADA access ● Drive-up features, if applicable ● Loading and servicing needs, routes, and geometry, providing turning templates for delivery vehicles, if applicable ● Sidewalks and condition along street frontages and internal walkways ● Engineered details for ADA ramps and public sidewalks, meeting sidewalk material policy and construction requirements (Technical Manual, Section 1)
Yes **NA**	**Public Transit (14-14.6.1(C)), if applicable** Identify and describe the following: ● Existing available transit service and proposed transit improvements, including design details, such as easement, pad base, and shelter
Yes **NA**	**Off-Street Parking (14-14.6.1(D)), if applicable** Identify and describe the following: ● Proposed vehicular and bicycle parking supply (including ADA-compliant parking) in relation to applicable parking requirements in Article 19 of the land use code ● Curb cut separation and parking layout (Technical Manual, Section 1) ● Construction details for bicycle racks ● Management plan for snow storage and removal
Yes **NA**	**Transportation Demand Management (TDM) (14-14.6.1(E)), if applicable** ● Provide TDM plan drafted in accordance with Technical Manual Section 1 requirements

ENVIRONMENTAL	
Yes NA	**Preservation of Significant Natural Features (14-14.6.2(A)), if applicable** Identify and describe the following: ● High and moderate value waterfowl and wading habitat ● Aquifers (for Casco Bay Islands) ● Waterbodies (including wetlands, watercourses, significant vernal pools and floodplains) ● Proposed preservation areas and protection measures ● Documentation from environmental compliance consultants and determinations from applicable state and federal agencies
Yes NA	**Landscape Preservation (14-14.6.2(B))** Identify and describe the following: ● Measures to preserve trees, including within required zoning setbacks (Technical Manual, Section 4) ● Measures to protect existing vegetation during construction
Yes NA	**Site Landscaping and Buffers (14-14.6.2(C))** Identify and describe the following: ● Overall landscaping approach and consistency with standards ● The use of screening and buffering of service areas and between non-residential and residential uses ● Existing Heritage or Feature Trees on site and measures to preserve ● Compliance with street tree requirements
Yes NA	**Water Quality, Stormwater Management, and Erosion Control (14-14.6.2(D))** Identify and describe the following: ● Erosion and sedimentation control plan and measures ● Evidence of compliance with Urban Impaired Stream Standards pursuant to DEP Chapter 500 stormwater law, as applicable ● Subsurface sanitary sewage disposal and groundwater protection measures

PUBLIC INFRASTRUCTURE AND COMMUNITY SAFETY	
Yes NA	**Consistency with City Master Plans (14-14.6.3(A))** ● Describe proposed easements, rights and improvements to connect or continue off-premises public infrastructure, as applicable
Yes NA	**Public Safety and Fire Prevention (14-14.6.3(B))** Identify and describe the following: ● Compliance with Crime Prevention through Environmental Design (CPTED) requirements (Technical Manual, Section 3) ● Emergency vehicle access ● Consistency with public safety standards (Technical Manual, Section 3)
Yes NA	**Availability and Adequacy of Public Utilities (14-14.6.3(C)) (Technical Manual, Sections 2 & 9)** Identify and describe the following: ● Electrical services, including providing underground services ● Existing and proposed connections for public utilities and required public utility upgrades ● Sewer line connections
SITE DESIGN	
Yes NA	**Massing, Ventilations and Wind Impact (14-14.6.4(A))** Identify and describe the following: ● Wind and ventilation impacts on adjoining structures and/or adjacent public spaces, including wind study, if applicable ● Bulk, location, or height impacts on adjoining structures
Yes NA	**Shadows (14-14.6.4(B)), if applicable** ● Provide shadow analysis of impacts on publicly accessible open space (Technical Manual, Section 11)
Yes NA	**Snow and Ice Loading (14-14.6.4(C))** ● Describe building design measures to prevent snow and ice from loading or falling onto adjacent properties or public ways
Yes NA	**View Corridors (14-14.6.4(D)), if applicable** ● Describe any protection of designated view corridors (Portland Design Manual, Appendix. 1)
Yes NA	**Historic Resources (14-14.6.4(E)), if applicable** Identify and describe the following: ● The site's status as a designated landmark, within a historic district or historic landscape district, or within 100 feet of any designated landmark, historic district, or historic landscape district ● Compliance with standards for preservation and documentation of archaeological resources

Yes NA	**Exterior Lighting (14-14.6.4(F))** ● Describe how the proposed site lighting will adhere to photometrics requirements as it relates to light trespass and full cutoff fixture design, pursuant to Technical Manual Section 12
Yes NA	**Noise and Vibration (14-14.6.4(G))** ● Provide data on noise levels for HVAC and other mechanical equipment, such as design specifications, to demonstrate consistency with state and federal noise emissions requirements as well as City code
Yes NA	**Signage and Wayfinding (14-14.6.4(H)), if applicable** ● Provide signage plan showing the location, dimensions, height and setback of all existing and proposed signs ● Provide drawings of all commercial and directional signage on site
Yes NA	**Zone-Related Design Standards (14-14.6.4(I))** ● Address any applicable design review standards by zone, including compliance with Design Manual

MAJOR SITE PLAN
DRAWINGS CHECKLIST

Please upload the following DRAWINGS with the listed details into e-Plan as separate pdfs.

All drawings must be submitted in a 24 x 36 sheet size.

BOUNDARY SURVEY (stamped by a Maine Licensed Surveyor and drawn as per Technical Manual Sec. 13)

SITE PLAN(s) (stamped by a Maine Licensed Professional Engineer) including:

All sheets – Include a title block with project title and the following information:

- Project street address
- Name and address of property owner & applicant
- Licensed design professional, incl firm that produced plans
- North arrow
- Date of preparation and revision history block
- Tax parcel (chart, block, and lot) number

Existing Conditions Plan with the following:

- Existing structures, with distance from primary building façade(s) to the property line
- Approximate location of structures on abutting properties
- All streets and intersections adjacent to the site
- Existing driveways, pedestrian ways, and bicycle infrastructure, including dimensions and materials
- Existing public transit infrastructure
- Existing vehicle & bicycle parking areas
- Existing utilities on site and within adjacent rights-of-way
- Existing grades (two-foot contours preferred)
- Location of water courses, wetlands, and vegetation, or other significant natural features
- Existing soil conditions and location of test pits and borings
- Zoning boundary lines, including overlays
- Location of all existing easements and rights-of-way

Proposed Site Plan with the following:

- Proposed structures, including distance from primary building façade(s) to property lines
- Ground floor area, and finished floor elevations for all buildings
- Any proposed geometric modifications to streets and intersections adjacent to site
- Location, dimensions and materials of all proposed driveways, vehicle, bicycle, & pedestrian access ways with corresponding curb lines
- Engineered specifications/ cross-sections for proposed driveways, sidewalks & paved areas
- Location and dimensions of proposed loading areas, including turning templates
- Proposed transit infrastructure with dimensions/ engineering specifications
- Location of vehicle and bicycle parking with dimensions and engineering specifications
- Location of all snow storage areas
- Exterior lighting (please see Technical Manual Sec. 12 for photometrics requirements)

- Location of fire hydrants
- Location of solid waste management receptacles
- Location of all proposed HVAC and mechanical equipment, including proposed screening, where applicable
- Location of proposed easements and rights-of-way, including dimensions
- Please utilize color-coding and/or hatches and shading to delineate changes between the pre and post development condition as needed

UTILITY PLAN including:

- Proposed electrical infrastructure
- Location, sizing and directional flows of all proposed sewer and stormwater infrastructure
- Location and dimensions of off-premises public or publicly accessible infrastructure adjacent to site
- Electric utility infrastructure

GRADING AND DRAINAGE PLAN including:

- Proposed grades
- Proposed stormwater management measures meeting Technical Manual (Section 5) standards
- Any proposed alteration of a watercourse or wetlands
- Any groundwater protection measures
- Proposed buffers and preservation measures for wetlands or significant natural features

LANDSCAPE PLAN including:

- Existing vegetation to be preserved and preservation measures
- Proposed landscaping, screening, and street trees, including caliper widths for trees
- Planting schedule, including street trees

ARCHITECTURAL PLANS AND RENDERINGS including:

- Exterior building elevations, color renderings, illustrations of all sides
- Axonometric and street-level views for structures greater than three stories in height
- Provide context drawings, if applicable (Design Manual, page 1)
- Floor plans

CONSTRUCTION MANAGEMENT PLAN including:

- Specifics on traffic control, sidewalk sheds, and pedestrian rerouting
- Include a drawing and written narrative

OTHER

- Details and cross-sections, as necessary

C. Right, Title, Interest

The Co-Applicants of this phased application are Reveler Development and Avesta Housing Development Corporation d/b/a Avesta Oxford Street LP.

Reveler Development manages all entities who own the parcels under this application. Avesta has an option agreement with Reveler to purchase the 197 – 203 Oxford Street lot (Phase I).

Please see the attached Deeds and Option Agreement for the three phases of development.

- Phase 1: 197 Oxford Street (39779/239), and 31 Cedar Street (39779/241) are both owned by 197 OXFORD STREET LLC.
- Phase 2: 50 Cedar Street (39779/246), and 89 Elm Street (39779/236) are both owned by 89 ELM STREET LLC.
- Phase 3: 158 Lancaster Street (39779/223), which is owned by WBP COMMERCIAL LLC.
- Option Agreement between Reveler and Avesta

PHASE 1 - 197 OXFORD STREET DEED

Doc#: 51979 Bk:39779 Ps: 239

MAINE REAL ESTATE TAX PAID

DLN:_____

QUITCLAIM DEED WITH COVENANT

Maine Statutory Short Form

KNOW ALL PERSONS BY THESE PRESENTS THAT **BAYSIDE III, LLC,** a Maine limited liability with a principal place of business in Portland, County of Cumberland, State of Maine, for consideration paid, grants to **197 OXFORD STREET LLC**, a Maine limited liability company with an address of 82 Hanover Street, Portland, Maine 04101, with **QUITCLAIM COVENANT**, the land, together with any buildings and improvements thereon, in Portland, County of Cumberland, and State of Maine more particularly described in **Exhibit A** attached hereto and made a part hereof.

IN WITNESS WHEREOF, the said Bayside III, LLC has caused this instrument to be executed by Thomas A. Toye, III, its Sole Member thereunto duly authorized as of this 12th day of October, 2022.

WITNESS:

BAYSIDE III, LLC

By _____
Thomas A. Toye, III
Its: Sole Member

STATE OF MAINE
COUNTY OF CUMBERLAND

October 12, 2022

Then personally appeared the above named Thomas A. Toye, III, Sole Member as aforesaid, and acknowledged the foregoing instrument to be his free act and deed in his said capacity and the free act and deed of said Bayside III, LLC.

_____
Attorney at Law/Notary Public

_____
Printed Name

Jason G. Howe, Esq.
Bar No. 0004860

Doc#: 51979 Bk:39779 Pg: 240

EXHIBIT A
(Legal Description, Parcel 1)

A CERTAIN PARCEL OF LAND, TOGETHER WITH THE IMPROVEMENTS THEREON, SITUATED ON THE NORTHWESTERLY SIDE OF OXFORD STREET IN THE CITY OF PORTLAND, COUNTY OF CUMBERLAND, STATE OF MAINE, AND SHOWN AS PARCEL 1 ON ALTA/ACSM LAND TITLE SURVEY ON CEDAR STREET, CHESTNUT STREET, ELM STREET AND OXFORD STREET, PORTLAND, MAINE FOR BAYSIDE III, LLC BY OWEN HASKELL, INC., DATED JANUARY 24, 2000 AND RECORDED IN THE CUMBERLAND COUNTY REGISTRY Of DEEDS IN PLAN BOOK 200, PAGE 42 (THE "PLAN'), BOUNDED AND DESCRIBED AS FOLLOWS:

THENCE S 48° 37' 47" W ALONG THE SIDELINE OF OXFORD STREET 167.19 FEET;

THENCE N 43° 29' 51" W 67.00 FEET;

THENCE N 48° 37' 47" E 35.54 FEET;

THENCE N 00° 14' 40" E 2.72 FEET;

THENCE N 52° 33' 00" E 18.73 FEET;

THENCE N 41° 16' 13" W 3.10 FEET;

THENCE N 49° 06' 44" E 109.65 FEET TO THE SOUTHWESTERLY SIDELINE OF CHESTNUT STREET;

THENCE S 44° 38' 26" E 70.00 FEET TO THE POINT OF BEGINNING.

MEANING AND INTENDING TO CONVEY AND HEREBY CONVEYING A PORTION OF THE PREMISES CONVEYED TO BAYSIDE III, LLC BY QUITCLAIM DEED FROM OCTOBER CORPORATION, DATED JANUARY 26, 2000 AND RECORDED IN THE CUMBERLAND COUNTY REGISTRY OF DEEDS IN BOOK 15298, PAGE 193.

Received
Recorded Register of Deeds
Oct 13,2022 02:32:29P
Cumberland County
Jessica M. Spaulding

PHASE 1 - 197 OXFORD STREET
DEED

Doc#: 51980 Bk:39779 Pg: 241

DLN:_____

QUITCLAIM DEED WITH COVENANT

Maine Statutory Short Form

KNOW ALL PERSONS BY THESE PRESENTS THAT **BAYSIDE IV, LLC**, a Maine limited liability with a principal place of business in Portland, County of Cumberland, State of Maine, for consideration paid, grants to **197 OXFORD STREET LLC**, a Maine limited liability company with an address of 82 Hanover Street, Portland, Maine 04101, with **QUITCLAIM COVENANT**, the land, together with any buildings and improvements thereon, in Portland, County of Cumberland, and State of Maine more particularly described in **Exhibit A** attached hereto and made a part hereof.

MAINE REAL ESTATE TAX PAID

IN WITNESS WHEREOF, the said Bayside IV, LLC has caused this instrument to be executed by Thomas A. Toye, III, its Sole Member thereunto duly authorized as of this 12th day of October, 2022.

WITNESS:

BAYSIDE IV, LLC

By_____
Thomas A. Toye, III
Its: Sole Member

STATE OF MAINE
COUNTY OF CUMBERLAND

October 12, 2022

Then personally appeared the above named Thomas A. Toye, III, Sole Member as aforesaid, and acknowledged the foregoing instrument to be his free act and deed in his said capacity and the free act and deed of said Bayside IV, LLC.

_____
Attorney at Law/Notary Public

_____
Printed Name

Jason G. Howe, Esq.
Bar No. 0004860

PHASE 1 - 197 OXFORD STREET DEED

Doc#: 51980 Bk:39779 Pg: 242

EXHIBIT A
(Legal Description, Parcel 4)

A CERTAIN PARCEL OF LAND, TOGETHER WITH THE IMPROVEMENTS THEREON, SITUATED ON THE NORTHWESTERLY SIDE OF OXFORD STREET, AND THE NORTHEASTERLY SIDE OF CEDAR STREET IN THE CITY OF PORTLAND, COUNTY OF CUMBERLAND STATE OF MAINE AND SHOWN AS PARCEL 4 ON ALTA/ACSM LAND TITLE SURVEY ON CEDAR STREET, LANCASTER STREET EAST, CHESTNUT STREET AND OXFORD STREET, PORTLAND, MAINE FOR BAYSIDE IV, LLC BY OWEN HASKELL. INC., DATED JANUARY 24, 2000 AND RECORDED IN THE CUMBERLAND COUNTY REGISTRY OF DEEDS IN PLAN BOOK 200, PAGE 43 (THE PLAN), BOUNDED AND DESCRIBED AS FOLLOWS:

BEGINNING AT THE INTERSECTION OF THE NORTHWESTERLY SIDELINE OF OXFORD STREET AND THE NORTHEASTERLY SIDELINE OF CEDAR STREET;

THENCE N 43° 29' 51" W ALONG THE SIDELINE OF CEDAR STREET 64.50 FEET;
THENCE N 48° 37' 47" E 57.00 FEET;
THENCE S 43° 29' 51" E 64.50 FEET TO THE NORTHWESTERLY SIDELINE OF OXFORD STREET;
THENCE S 48° 37' 47" W ALONG SAID SIDELINE 57.00 FEET TO THE POINT OF BEGINNING.

MEANING AND INTENDING TO CONVEY AND HEREBY CONVEYING THE LAND DESCRIBED AS PARCEL 4 IN DEED FROM OCTOBER CORPORATION TO BAYSIDE IV, LLC DATED JANUARY 26, 2000 AND RECORDED IN THE CUMBERLAND COUNTY REGISTRY OF DEEDS IN BOOK 15298, PAGE 242.

PHASE 1 - 197 OXFORD STREET DEED

Doc#: 51980 Bk:39779 Pg: 243

EXHIBIT A
(Legal Description, Parcel 3)

A CERTAIN PARCEL OF LAND, TOGETHER WITH THE IMPROVEMENTS THEREON. SITUATED ON THE SOUTHWESTERLY SIDE OF CHESTNUT STREET AND THE SOUTHEASTERLY SIDE OF HALL'S COURT, SO CALLED, IN THE CITY OF PORTLAND, COUNTY OF CUMBERLAND, STATE OF MAINE AND SHOWN AS PARCEL 3 ON ALTA/ACSM LAND TITLE SURVEY ON CEDAR STREET, LANCASTER STREET EAST, CHESTNUT STREET AND OXFORD STREET, PORTLAND, MAINE FOR BAYSIDE IV, LLC BY OWEN HASKELL, INC., DATED JANUARY 24, 2000 AND RECORDED IN THE CUMBERLAND COUNTY REGISTRY OF DEEDS IN PLAN BOOK 200, PAGE 43 (THE PLAN), BOUNDED AND DESCRIBED AS FOLLOWS:

BEGINNING AT THE INTERSECTION OF THE SOUTHWESTERLY SIDELINE OF CHESTNUT STREET AND THE SOUTHEASTERLY SIDELINE OF HALL'S COURT;

THENCE S 44° 38' 26" E ALONG THE SIDELINE OF CHESTNUT STREET 78.04 FEET;
THENCE S 49° 06' 44" W 108.67 FEET;
THENCE S 43° 14' 05" E 39.95 FEET;
THENCE S 41°16' 13" E 3.10 FEET;
THENCE S 52° 33' 00" W 18.73 FEET;
THENCE S 00°14' 40" W 2.72 FEET;
THENCE S 48° 37' 47" W 35.54 FEET;
THENCE N 43° 29' 51" W 33.00 FEET;
THENCE S 48° 37' 47" W 57.00 FEET TO THE NORTHEASTERLY SIDELINE OF CEDAR STREET;
THENCE N 43° 29' 51" W ALONG SAID SIDELINE 23.00 FEET;
THENCE N 48°37' 47" E 113.42 FEET;
THENCE N 43° 14' 05' W 58.51 FEET TO THE SOUTHEASTERLY SIDELINE OF HALL'S COURT;
THENCE ALONG SAID SIDELINE THE FOLLOWING COURSES AND DISTANCES:
N 33° 50' 09" E 19.40 FEET;
N 42° 14' 19" E 19.88 FEET;
N 49° 19' 48" E 68.00 FEET TO THE POINT OF BEGINNING.

MEANING AND INTENDING TO CONVEY AND HEREBY CONVEYING THE LAND DESCRIBED AS PARCEL 3 IN DEED FROM OCTOBER CORPORATION TO BAYSIDE IV, LLC DATED JANUARY 26, 2000 AND RECORDED IN THE CUMBERLAND COUNTY REGISTRY OF DEEDS IN BOOK 15298, PAGE 242.

Received
Recorded Register of Deeds
Oct 13,2022 02:33:19P
Cumberland County
Jessica M. Spaulding

PHASE 2 - 50 CEDAR STREET
DEED

Doc#: 51982 Bk:39779 Pg: 246

DLN:_____

QUITCLAIM DEED WITH COVENANT

Maine Statutory Short Form

MAINE REAL ESTATE TAX PAID

KNOW ALL PERSONS BY THESE PRESENTS THAT **BAYSIDE IV, LLC,** a Maine limited liability with a principal place of business in Portland, County of Cumberland, State of Maine, for consideration paid, grants to **89 ELM STREET LLC**, a Maine limited liability company with an address of 82 Hanover Street, Portland, Maine 04101, with **QUITCLAIM COVENANT**, the land, together with any buildings and improvements thereon, in Portland, County of Cumberland, and State of Maine more particularly described in **Exhibit A** attached hereto and made a part hereof.

IN WITNESS WHEREOF, the said Bayside IV, LLC has caused this instrument to be executed by Thomas A. Toye, III, its Sole Member thereunto duly authorized as of this 12th day of October, 2022.

WITNESS:

BAYSIDE IV, LLC

By _____
Thomas A. Toye, III
Its: Sole Member

STATE OF MAINE
COUNTY OF CUMBERLAND

October 12, 2022

Then personally appeared the above named Thomas A. Toye, III, Sole Member as aforesaid, and acknowledged the foregoing instrument to be his free act and deed in his said capacity and the free act and deed of said Bayside IV, LLC.

_____
Attorney at Law/Notary Public

_____
Printed Name

Jason G. Howe, Esq.
Bar No. 0004860

PHASE 2 - 50 CEDAR STREET DEED

Doc#: 51982 Bk:39779 Pg: 247

EXHIBIT A
(Legal Description, Parcel 5- 50 Cedar Street)

A CERTAIN LOT OR PARCEL OF LAND WITH ALL THE BUILDINGS THEREON, SITUATED ON THE SOUTHWESTERLY SIDE OF CEDAR STREET, IN THE CITY OF PORTLAND, COUNTY OF CUMBERLAND AND STATE OF MAINE, BOUNDED AND DESCRIBED AS FOLLOWS:

BEGINNING AT A STAKE ON THE LINE OF SAID STREET DISTANT TWO HUNDRED FORTY-FOUR AND FOUR TENTHS (244.4) FEET NORTHWESTERLY FROM OXFORD STREET AT THE NORTHERLY CORNER OF LAND SOLD BY THE ADMINISTRATOR OF WILLIAM WEBB'S ESTATE TO JOSIAH M. HASKELL AND RUNNING THENCE NORTHWESTERLY BY SAID CEDAR STREET FORTY (40) FEET TO A STAKE;

THENCE SOUTHWESTERLY ON A LINE PARALLEL WITH THE NORTHWESTERLY SIDE OF SAID HASKELL'S LAND ONE HUNDRED SEVENTEEN (117) FEET, MORE OR LESS, TO THE SOUTHWESTERLY SIDELINE OF LAND OF WHICH THE SAID WEBB DIED SEIZED;

THENCE SOUTHEASTERLY BY SAID SOUTHWESTERLY SIDELINE OF SAID WEBB'S LAND TO MOST WESTERLY CORNER OF SAID HASKELL'S LOT;

THENCE NORTHEASTERLY BY SAID HASKELL'S LAND ONE HUNDRED SEVENTEEN (117) FEET, MORE OR LESS, TO THE POINT OF BEGINNING.

BEING THE SAME PREMISES CONVEYED BY DEED DATED NOVEMBER 16, 2018 FROM 50 CEDAR STREET, LLC, TO BAYSIDE IV, LLC, AND RECORDED IN THE CUMBERLAND COUNTY REGISTRY OF DEEDS IN BOOK 35293, PAGE 77, AND BY DEED RECORDED IN SAID REGISTRY AT BOOK 35293, PAGE 78.

Received
Recorded Register of Deeds
Oct 13,2022 02:35:36P
Cumberland County
Jessica M. Spaulding

PHASE 2 - 50 CEDAR STREET DEED

Doc#: 51978 Bk:39779 Ps: 236

MAINE REAL ESTATE TAX PAID

DLN:_____

QUITCLAIM DEED WITH COVENANT

Maine Statutory Short Form

KNOW ALL PERSONS BY THESE PRESENTS THAT **BAYSIDE II, LLC,** a Maine limited liability with a principal place of business in Portland, County of Cumberland, State of Maine, for consideration paid, grants to **89 ELM STREET LLC**, a Maine limited liability company with an address of 82 Hanover Street, Portland, Maine 04101, with **QUITCLAIM COVENANT**, the land, together with any buildings and improvements thereon, in Portland, County of Cumberland, and State of Maine more particularly described in **Exhibit A** attached hereto and made a part hereof.

IN WITNESS WHEREOF, the said Bayside II, LLC has caused this instrument to be executed by Thomas A. Toye, III, its Sole Member thereunto duly authorized as of this 12th day of October, 2022.

WITNESS:

BAYSIDE II, LLC

By _____
Thomas A. Toye, III
Its: Sole Member

STATE OF MAINE
COUNTY OF CUMBERLAND October 12, 2022

Then personally appeared the above named Thomas A. Toye, III, Sole Member as aforesaid, and acknowledged the foregoing instrument to be his free act and deed in his said capacity and the free act and deed of said Bayside II, LLC.

_____
Attorney at Law/Notary Public

_____
Printed Name

Jason G. Howe, Esq.
Bar No. 0004860

Doc#: 51978 Bk:39779 Pg: 237

EXHIBIT A
(Legal Description, Parcel 2)

A CERTAIN LOT OR PARCEL OF LAND, WITH THE IMPROVEMENTS THEREON SITUATED ON THE NORTHEASTERLY SIDELINE OF ELM STREET, THE SOUTHEASTERLY SIDELINE OF LANCASTER STREET EAST AND THE SOUTHWESTERLY SIDELINE OF CEDAR STREET AND IN THE CITY OF PORTLAND, COUNTY OF CUMBERLAND AND STATE OF MAINE AS SHOWN ON A PLAN TITLED "LAND DIVISION PLAN BAYSIDE II, LLC" MADE FOR RECORD OWNER BAYSIDE II, LLC BY OWEN HASKELL, INC. DATED SEPTEMBER 14, 2022, BOUNDED AND DESCRIBED AS FOLLOWS:

BEGINNING AT THE POINT OF INTERSECTION OF THE SOUTHEASTERLY SIDELINE OF LANCASTER STREET EAST AND THE NORTHEASTERLY SIDELINE OF ELM STREET;

THENCE, N 49° 39' 27" E ALONG SAID SIDELINE OF LANCASTER STREET EAST 210.57 FEET TO THE SOUTHWESTERLY SIDELINE OF CEDAR STREET;

THENCE, S 43° 29' 51" E ALONG SAID SIDELINE OF CEDAR STREET 40.00 FEET TO THE NORTHEASTERLY CORNER OF LAND NOW OR FORMERLY OF BAYSIDE IV, LLC AS DESCRIBED IN DEED BOOK 35293, PAGE 78;

THENCE, THE FOLLOWING COURSES AND DISTANCES ALONG SAID BAYSIDE IV, LLC LAND:

S 49° 39' 26" W A DISTANCE OF 117.00 FEET;

S 42° 13' 00" E A DISTANCE OF 39.96 FEET;

N 49° 39' 26" E A DISTANCE OF 117.89 FEET TO THE SOUTHWESTERLY SIDELINE OF SAID CEDAR STREET;

THENCE, S 43° 29' 51" E ALONG THE SIDELINE OF CEDAR STREET 39.34 FEET TO THE NORTHERLY CORNER OF LAND NOW OR FORMERLY OF AMELIA A. LABRECK AS DESCRIBED IN DEED BOOK 37970, PAGE 11;

THENCE, BY THE FOLLOWING COURSES AND DISTANCES ALONG SAID LABRECK LAND:

S 48° 42' 12" W A DISTANCE OF 118.73 FEET;
S 42° 13' 00" E A DISTANCE OF 40.00 FEET;

Doc#: 51978 Bk:39779 Pg: 238

N 48° 41' 30" E A DISTANCE OF 119.62 FEET TO THE SIDELINE OF SAID CEDAR STREET;

THENCE, S 43° 29' 51" E ALONG THE SIDELINE OF CEDAR STREET 80.62 FEET TO THE NORTHERLY CORNER OF LAND NOW OR FORMERLY OF DAVID B. NOWLIN AS DESCRIBED IN DEED BOOK 25148, PAGE 336;

THENCE, S 48° 41' 30" W ALONG SAID NOWLIN LAND 63.30 FEET;

THENCE, THE FOLLOWING COURSES AND DISTANCES THROUGH THE LAND OF THE GRANTOR:

S 49°53'31" W A DISTANCE OF 55.81 FEET;

N 43°54'25" W A DISTANCE OF 31.26 FEET;

S 46°08'15" W A DISTANCE OF 90.10 FEET TO THE NORTHEASTERLY SIDELINE OF SAID ELM STREET;

THENCE, N 43°45'13" W ALONG THE SIDELINE OF ELM STREET 215.15 FEET TO THE POINT OF BEGINNING, CONTAINING 38,462 S.F. OR 0.88 ACRES, MORE OR LESS.

BEARINGS ARE REFERENCED TO CITY GRID.

MEANING AND INTENDING TO CONVEY AND HEREBY CONVEYING A PORTION OF THE LAND DESCRIBED AS PARCEL 2 CONVEYED TO BAYSIDE II, LLC BY QUITCLAIM DEED OF OCTOBER CORPORATION, DATED JANUARY 26, 2000 AND RECORDED IN SAID REGISTRY OF DEEDS IN BOOK 15298, PAGE 144.

Received
Recorded Register of Deeds
Oct 13,2022 02:30:55P
Cumberland County
Jessica M. Spaulding

PHASE 3 - 158 LANCASTER STREET DEED

Doc#: 51973 Bk:39779 Pg: 223

DLN:_____

QUITCLAIM DEED WITH COVENANT

Maine Statutory Short Form

MAINE REAL ESTATE TAX PAID

KNOW ALL PERSONS BY THESE PRESENTS THAT **BAYSIDE II, LLC,** a Maine limited liability with a principal place of business in Portland, County of Cumberland, State of Maine, for consideration paid, grants to **WBP COMMERCIAL LLC**, a Maine limited liability company with an address of 82 Hanover Street, Portland, Maine 04101, with **QUITCLAIM COVENANT**, the land, together with any buildings and improvements thereon, in Portland, County of Cumberland, and State of Maine more particularly described in **Exhibit A** attached hereto and made a part hereof.

IN WITNESS WHEREOF, the said Bayside II, LLC has caused this instrument to be executed by Thomas A. Toye, III, its Sole Member thereunto duly authorized as of this 12th day of October, 2022.

WITNESS:

BAYSIDE II, LLC

By _____
Thomas A. Toye, III
Its: Sole Member

STATE OF MAINE
COUNTY OF CUMBERLAND

October 12, 2022

Then personally appeared the above named Thomas A. Toye, III, Sole Member as aforesaid, and acknowledged the foregoing instrument to be his free act and deed in his said capacity and the free act and deed of said Bayside II, LLC.

_____
Attorney at Law/Notary Public

_____
Printed Name

Jason G. Howe, Esq.
Bar No. 0004860

Doc#: 51973 Bk:39779 Pg: 224

EXHIBIT A
(Legal Description, Parcel 1)

A CERTAIN LOT OR PARCEL OF LAND, WITH THE IMPROVEMENTS THEREON, SITUATED IN THE BLOCK BOUNDED BY ELM, KENNEBEC, CHESTNUT AND LANCASTER STREETS, IN THE CITY OF PORTLAND, COUNTY OF CUMBERLAND AND STATE OF MAINE AND SHOWN AS PARCEL 1 ON ALTA/ACSM LAND TITLE SURVEY ON KENNEBEC STREET, LANCASTER STREET EAST, ELM STREET, CEDAR STREET AND OXFORD STREET, PORTLAND, MAINE MADE FOR BAYSIDE II, LLC BY OWEN HASKELL, INC., DATED JANUARY 24, 2000 AND RECORDED IN THE CUMBERLAND COUNTY REGISTRY OF DEEDS IN PLAN BOOK 200, PAGE 41 (THE PLAN), BEING BOUNDED AND DESCRIBED AS FOLLOWS:

BEGINNING AT THE INTERSECTION MARKING THE NORTHWESTERLY SIDE OF LANCASTER STREET AND THE NORTHEASTERLY SIDE OF ELM STREET;

THENCE, BY THE NORTHEASTERLY SIDE OF ELM STREET N 43° 46' 33" W, A DISTANCE OF 158.86' TO AN ANGLE IN SAID STREET;

THENCE, N 40° 53' 33" W, A DISTANCE OF 31.49' TO THE SOUTHEASTERLY SIDE OF KENNEBEC STREET, MARKING A NON-TANGENT POINT ON A CURVE, IN SAID STREET;

THENCE, NORTHEASTERLY BY THE SOUTHEASTERLY SIDE OF SAID KENNEBEC STREET AND BY A CURVE TO THE LEFT WHOSE RADIUS IS 695.00', AN ARC DISTANCE OF 210.01', TO A POINT OF TANGENCY;

THENCE CONTINUING BY SAID KENNEBEC STREET N 48° 56' 54' E, A DISTANCE OF 251.30', TO THE SOUTHWESTERLY SIDE OF SAID CHESTNUT STREET;

THENCE BY THE SOUTHWESTERLY SIDE OF SAID CHESTNUT STREET S 44° 38' 26" E, A DISTANCE OF 164.71' TO THE NORTHWESTERLY SIDE OF SAID LANCASTER STREET;

THENCE BY THE NORTHWESTERLY SIDE OF SAID LANCASTER STREET S 49° 39' 27" W, A DISTANCE OF 461.02', TO THE POINT OF BEGINNING.

THE PROPERTY IS SUBJECT TO A NOTICE OF ABANDONED UNDERGROUND OIL STORAGE FACIUTY OR TANK NOTICE, DATED APRIL 6, 2011 AND RECORDED IN SAID REGISTRY OF DEEDS IN BOOK 28629, PAGE 238.

MEANING AND INTENDING TO CONVEY AND HEREBY CONVEYING THE SAME LAND DESCRIBED AS PARCEL 1 CONVEYED TO BAYSIDE II, LLC BY QUITCLAIM

Doc#: 51973 Bk:39779 Pg: 225

DEED OF OCTOBER CORPORATION, DATED JANUARY 26, 2000 AND RECORDED IN SAID REGISTRY OF DEEDS IN BOOK 15298, PAGE 144.

Doc#: 51973 Bk:39779 Pg: 226

EXHIBIT A
(Legal Description, Parcel 3)

A CERTAIN PARCEL OF LAND, WITH THE OF IMPROVEMENTS THEREON SITUATED ON THE SOUTHEASTERLY SIDE OF LANCASTER STREET, IN THE CITY OF PORTLAND, COUNTY OF CUMBERLAND, STATE OF MAINE AND SHOWN AS PARCEL 3 ON ALTA/ACSM LAND TITLE SURVEY ON KENNEBEC STREET, LANCASTER STREET EAST, ELM STREET, CEDAR STREET AND OXFORD STREET, PORTLAND, MAINE MADE FOR BAYSIDE II, LLC BY OWEN HASKELL, INC., DATED JANUARY 24, 2000 AND RECORDED IN THE CUMBERLAND COUNTY REGISTRY OF DEEDS IN PLAN BOOK 200, PAGE 41 (THE PLAN), BEING BOUNDED AND DESCRIBED AS FOLLOWS:

BEGINNING AT THE INTERSECTION OF THE SOUTHEASTERLY SIDELINE OF LANCASTER STREET AND THE SOUTHWESTERLY SIDELINE OF CHESTNUT STREET;

THENCE S 44° 38' 26" E ALONG THE SIDELINE OF CHESTNUT STREET 88.08 FEET;
THENCE S 49° 39' 27" W 107.40;
THENCE N 45° 57' 49" W 3.67 FEET;
THENCE S 31° 29' 21" W 4.67 FEET;
THENCE N 43° 29' 51" W 23.77 FEET;
THENCE S 49° 39' 27" W 35.69 FEET;
THENCE N 43° 29' 51" W 28.00 FEET;
THENCE S 49° 39' 27" W 72.00 FEET TO THE NORTHEASTERLY SIDELINE OF CEDAR STREET;
THENCE N 43° 29' 51" W ALONG SAID SIDELINE 34.00 FEET TO THE SOUTHEASTERLY SIDELINE OF LANCASTER STREET;
THENCE N 49° 39' 27" E ALONG SAID SIDELINE 218.00 FEET TO THE POINT OF BEGINNING.

MEANING AND INTENDING TO CONVEY AND HEREBY CONVEYING THE SAME LAND DESCRIBED AS PARCEL 3 CONVEYED TO BAYSIDE II, LLC BY QUITCLAIM DEED OF OCTOBER CORPORATION, DATED JANUARY 26, 2000 AND RECORDED IN SAID REGISTRY OF DEEDS IN BOOK 15298, PAGE 144.

Received
Recorded Register of Deeds
Oct 13,2022 02:22:36P
Cumberland County
Jessica M. Spaulding

OPTION AGREEMENT

THIS OPTION AGREEMENT (the "Agreement") made and entered into as of the 26th day of July, 2023 (the "Effective Date"), by and between **197 OXFORD STREET LLC**, a Maine limited liability company with a place of business in Portland, Maine and mailing address of c/o Port Property Management, Inc., 82 Hanover Street, Suite 5, Portland, Maine 04101 ("Grantor"), and **AVESTA HOUSING DEVELOPMENT CORPORATION**, a Maine nonprofit corporation with a place of business in Portland, Maine and mailing address of 307 Cumberland Avenue, Portland, Maine 04101 (the "Grantee").

WITNESSETH:

In consideration of Ten Thousand Dollars ($10,000.00) (the "Initial Option Consideration"), the receipt of which is hereby acknowledged by Grantor, Grantor and Grantee hereby agree as follows:

1. Grant of Option. Grantor hereby grants to Grantee, its successors and assigns, the exclusive and irrevocable option (the "Option") to acquire the following five certain lots or parcels of land, with the buildings and improvements thereon (except with respect to those lots noted as vacant land and as otherwise described in Sections 4(e)(ii) and 4(h)), located in Portland, Maine and described as follows: (a) 0 Chestnut Street (vacant land), 203 Oxford Street, 193 Oxford Street (vacant land), 197 Oxford Street, all as more particularly described in a deed to Grantor recorded in the Cumberland County Registry of Deeds in Book 39779, Page 239, and (b) 31 Cedar Street, as more particularly described in the first Exhibit A (labeled as Parcel 4) in a deed to Grantor recorded in said Registry in Book 39799, Page 241, including a total of approximately 15,419 square feet of land, together with all appurtenant rights and easements (collectively the "Property"). The Property is shown on the plan attached hereto as Exhibit A.

2. Expiration; Extension. The initial term of this Option shall expire on July 26th, 2024, at midnight, Maine time unless exercised by that date and time in accordance with the terms and conditions of this Agreement. Grantee shall have the right to extend said initial term of this Option for one additional period of one (1) year by providing written notice to Grantor, prior to the expiration date of said initial term, with an additional payment of $10,000.00 (the "Additional Option Consideration", and together with the Initial Option Consideration, the "Option Consideration").

The Option Consideration shall be non-refundable, except as follows: (i) if during the first one hundred twenty (120) days of the initial term of this Option (the "Initial 120-day Period") Grantee sends written notice to Grantor of Grantee's dissatisfaction, in Grantee's sole discretion, with either the title to the Property or the environmental condition of the Property, or any part thereof, Grantor shall refund promptly the Option Consideration to Grantee and this Agreement shall thereupon terminate and all rights and obligations of the parties shall cease. Grantee shall not be obliged to terminate this Agreement due to there being mortgages or other liens on the title to the Property, such matters being the obligation of Grantor to remove prior to closing; and (ii) as otherwise set forth specifically in this Agreement.

3. Notice of Exercise; Failure to Exercise. This Option may be exercised only by Grantee giving written notice of election to exercise to Grantor by Fed Ex, or similar overnight express mail, prepaid, to Grantor at the address set forth at the beginning of this Agreement, or to such other address as Grantor may designate to Grantee in writing. Said notice shall be deemed to have been duly given when delivered to a Fed Ex (or similar overnight delivery service) courier or office at the time indicated on the proof of delivery. In the event that Grantee fails to exercise the Option granted in this Agreement within the time specified in Section 2 above, the Initial Option Consideration, and the Additional Option Consideration, if paid, shall be retained by Grantor, and thereafter neither Grantor nor Grantee shall have any further rights or claims against the other.

4. Exercise. In the event that Grantee exercises the Option granted in this Agreement to purchase the Property as provided herein, the following provisions shall be applicable:

(a) Purchase Price. Subject to any adjustments and prorations hereinafter described, the total purchase price (the "Purchase Price") for the Property shall be the sum of X, payable at closing by wire transfer. The Initial Option Consideration, and the Additional Option Consideration, if paid, shall in all instances be credited against the Purchase Price at closing.

(b) Title to the Property; Covenant Against Further Encumbrances. Grantor shall convey the Property to Grantee at the closing in fee simple with good and marketable title, free and clear of liens and encumbrances, other than those that are acceptable to Grantee. In the event that Grantee determines upon examining title to the Property that there have arisen since the title research conducted by Grantee during the Initial 120-day Period, Grantor shall be given a reasonable period of time after notice from Grantee, not to exceed forty-five (45) days, in which to remedy any such title defects. In the event that said defects cannot be corrected or remedied within said time period, then the Initial Option Consideration and the Additional Option Consideration, if applicable, shall be returned to Grantee and this Agreement shall terminate. Grantee may, however, elect to close notwithstanding such defects as may exist. Grantor and Grantee understand and agree that any mortgages and liens on the Property shall not be considered title defects provided that the same shall be discharged at or prior to the closing at Grantor's expense. Grantor agrees that it will not further encumber or permit to be encumbered the Property by any liens, mortgages, attachments, covenants, restrictions or easements after the Effective Date.

(c) Closing. The closing under this Agreement shall take place not later than sixty (60) days after this Option is exercised (the "Closing Date") at 10:00 AM, local time, at Grantee's counsel's office, or at such other time and place as Grantor and Grantee shall mutually agree upon in writing. At the closing, Grantor shall execute a Quitclaim Deed with Covenant to the Property (the "Deed"), underground storage tank certification, a title insurance affidavit regarding mechanic's liens and persons in possession and such other affidavits, documents and instruments as Grantee shall reasonably request and that are customary in commercial real estate transactions in Maine, provided, however, under no circumstances shall Grantor be obligated to

execute and deliver a so-called "no survey" affidavit. If requested, Grantor agrees that the Deed shall also include a conveyance of the Property using a new survey description resulting from Grantor's boundary survey but such conveyance shall not include any covenants.

(d) Risk of Loss. At all times during the term of this Agreement, all risk of loss to the Property prior to the closing shall be on Grantor.

(e) Adjustments.

(i) Real property taxes shall be prorated as of the Closing Date based on the latest available tax bill. Grantee shall pay the cost to record the deed and any financing documents executed by Grantee. The parties shall share equally the Maine transfer tax according to law. Grantor shall be responsible for all costs associated with the Property through the Closing Date, and Grantee shall be responsible for all such costs after the Closing Date.

(ii) The parties agree to the provisions set forth in the Joint Site Plan Application Agreement dated on or about the date hereof by and between Grantor and Grantee (the "JSPAA") and agree that it is deemed to be a part of this Agreement.

(f) Default; Remedies. In the event that Grantee exercises its option but fails to close hereunder for a reason other than the default of Grantor, Grantor's sole remedy shall be to retain the Option Consideration as full and complete liquidated damages in lieu of any other legal or equitable remedy, whereupon this Agreement will terminate and neither party will be under any further obligation hereunder. In the event Grantor defaults under this Agreement, Grantee shall have available all remedies at law and in equity, including, without limitation, the right of specific performance or, in the alternative, the right to seek a complete refund of the Option Consideration.

(g) Possession. Grantor shall deliver the Property to Grantee at closing free and clear of all leases, tenancies and occupancies by any person.

(h) Removal of Gardens. Grantor shall remove all gardens from the Property, including without limitation, all box gardens, wood, plants, weeds, soil and any related materials and equipment.

(i) Conditions Precedent. Grantee's obligation to purchase the Property is subject to Grantee's full and complete satisfaction with all of the following:

(i) Grantee's receipt of a satisfactory appraisal which supports the Purchase Price in its sole discretion.

(ii) Grantee's receipt of binding written commitments from institutional lenders and/or investors which commit to finance Grantee's acquisition of the Property. Grantee agrees to exercise diligent efforts to secure such financing. Grantee shall have until the Closing Date to obtain such financing, and Grantee's obligation to purchase the

Property shall be contingent on Grantee's obtaining such financing on terms and in amounts satisfactory to Grantee in Grantee's sole discretion.

(iii) Other than with respect to the removal of the gardens and buildings, if applicable, there shall have been no material adverse change in the condition of the Property, occurring after the conclusion of Grantee's inspections under Section 5 below, and the Property shall be substantially in the same condition at the Closing Date as it was at the time of the inspections, reasonable wear and tear excepted. By the Closing Date, Grantee shall have removed all gardens and buildings, if applicable, from the Property in accordance with this Agreement.

(iv) Title to the Property shall be good and marketable, and the same shall be conveyed to the Grantee free and clear of all liens, claims and encumbrances except as provided in Section 4(b) above.

(v) Grantee shall have received all necessary federal, state and municipal permits and approvals (including all zoning approvals) required in connection with Grantee's intended use of the Property.

(vi) Grantee shall have received approval for the transactions described in this Agreement from its governing authorities.

(vii) By the end of the Inspection Period, Grantee shall be satisfied with all its due diligence inquiries and tests of the Property as set forth in Section 5 below.

Prior to the expiration of the Inspection Period, if any of the conditions described above are not satisfied, Grantor may terminate this Agreement in writing, whereupon the Initial Option Consideration shall promptly be returned to Grantee by the Grantor, and neither party shall have any further obligation hereunder. After the expiration of the Inspection Period, if the conditions described in subsections (i), (ii), (v), (vi) and (vii) are not satisfied by the Closing Date, Grantee shall have the option of terminating this Agreement in writing, whereupon the Option Consideration shall be retained by the Grantor, and neither party shall have any further obligation hereunder, and if the conditions described in subsections (iii) and (iv) are not satisfied by the Closing Date, Grantee shall have the option of terminating this Agreement in writing, whereupon the Option Consideration shall promptly be refunded to Grantee by the Grantor, and neither party shall have any further obligation hereunder.

i. Brokers. The parties represent to each other that neither has had any dealings with any real estate broker in connection with this transaction. The parties shall indemnify, defend and hold harmless one another from and against any breach of the foregoing representation.

5. Inspection. For a period of one hundred eighty days (180) from the Effective Date (the "Inspection Period"), at all times upon reasonable prior notice, Grantee and any prospective lender or investor of Grantee's shall have the right to enter the Property and perform, at Grantee's expense, any and all inspections (including without limitation environmental site

assessments), tests, surveys or other due diligence inquiries with respect to the Property as Grantee deems necessary or appropriate. Grantee agrees to return the Property as nearly as possible to its original condition after any of such tests and inspections and, prior to completing such inspections, Grantee shall provide Grantor with evidence of insurance for any parties, including Grantee's contractors, who are conducting said inspections on the Property, which insurance must be acceptable to Grantor, in its reasonable discretion. In the event Grantee is not satisfied for any reason by the results of such due diligence inspections, Grantee shall have the option of terminating this Agreement by written notice to Grantor, prior to the expiration of the Inspection Period. Without limiting the generality of the foregoing and notwithstanding anything to the contrary elsewhere in this Agreement, this Agreement and Grantee's purchase of the Property are subject to a determination by Maine State Housing Authority as to the desirability of the Property for Grantee's intended use as a result of the completion of the environmental review process required by the United States Department of Housing and Urban Development, and if such determination is unsatisfactory, Grantee may terminate this Agreement at any time, including after the end of the Inspection Period, whereupon the Option Consideration shall promptly be refunded to Grantee.

6. Recording of Option. Grantor and Grantee agree that this Option shall not be recorded. Grantor agrees upon request of Grantee to execute and tender for recording a memorandum summarizing the terms of this Agreement (except the Purchase Price).

7. Notices. Except as provided in Section 3 above, all notices, demands and other communications hereunder shall be in writing and shall be deemed to have been duly given on the date of service if served personally on the party to whom notice is to be given, or on the first business day after mailing if mailed to the party to whom notice is to be given by first class mail, postage prepaid, registered or certified, return receipt requested, addressed to the recipient at the addresses set forth at the beginning of this Agreement. Either party may change its address for purposes of this Section by giving the other party notice of the new address in the manner described herein.

8. Assignment. Grantee may not assign this Agreement without the express written consent of Grantor, which may be withheld in Grantor's sole discretion. Except as otherwise set forth herein any purported or attempted assignment or delegation, without obtaining Grantor's prior written consent shall be void and of no effect and shall constitute a default pursuant to the terms herein. Notwithstanding anything to the contrary contained elsewhere in this Agreement, Grantee named herein shall have the one-time right to assign this Agreement prior to the Closing Date to a Controlled Affiliate (hereinafter defined) without the consent of Grantor. "Controlled Affiliate" shall mean any entity which is Controlled by Grantee as of the date of the assignment and the Closing Date. "Control" or "Controlled by" means the power and authority to direct the business and affairs of the assignee by reason of the ownership of a majority of the beneficial interests in such assignee, by contract or otherwise. Any such assignment shall be conditioned upon Grantee delivering to Grantor an executed copy of the assignment and assumption agreement wherein the assignee assumes all of the obligations of the Grantee named herein and proof reasonably satisfactory to Grantor that the assignee constitutes a Controlled Affiliate. This Agreement is solely for the benefit of Grantor and Grantee; there are no third party beneficiaries hereof. Any assignment of this Agreement in violation of the foregoing provisions shall be null

and void. Notwithstanding any permitted assignment or transfer of Grantee's rights and obligations under this Agreement, Grantee shall in all cases remain liable for all of Grantee's obligations under this Agreement. Grantee's breach of this Section shall be a material default under this Agreement, which shall entitle Grantor to all rights and remedies available to it pursuant to this Agreement.

9. Miscellaneous. Time is of the essence hereof. This Agreement and the JSPAA constitute the entire agreement between Grantor and Grantee; there are no agreements or understandings between the parties except as set forth herein and in the JSPAA, and all prior agreements and understandings are superseded by this Agreement and the JSPAA. This Agreement will inure to the benefit of and bind the respective successors and assigns of Grantor and Grantee. As used in this Agreement, the singular number shall include the plural, the plural the singular, and the use of one gender shall be deemed applicable to all genders. This Agreement may be executed in two or more counterparts, each of which shall be deemed an original and all of which together shall constitute one and the same agreement. This Agreement shall be governed by and construed in accordance with the laws of Maine. If any provision of this Agreement is determined to be invalid or unenforceable, it shall not affect the validity or enforcement of the remaining provisions hereof.

IN WITNESS WHEREOF, Grantor and Grantee have executed this Option Agreement as of the date first above written.

WITNESS:

Kimberly A. Gilpatrick

197 OXFORD STREET LLC, Grantor
By: Tom Watson & Co., LLC, its Manager

By:
Name: John Laliberte
Its: Vice President

AVESTA HOUSING DEVELOPMENT CORPORATION, Grantee

By:
Name: Rebecca Hatfield
Its: President

Portland, Maine Yes. Life's good here.

Planning & Urban Development Department

197 Oxford St (Phase I)

ZONING ANALYSIS Relevant Zone(s) R6 - Residential

All Projects:

	Required	Proposed
Lot Size	2,000 SF	15,224
Area Per Dwelling Unit	290 SF*	317*
Minimum Street Frontage	20 FT	359 FT
Front Yard Minimum	5 FT	8 FT
Front Yard Maximum	N/A	
Rear Yard	10 FT	10.2 FT
Yard Right	NONE	9.2 FT
Yard Left	NONE	5.9 FT
Side Street Setback	NONE	SEE ABOVE
Step Back	15 FT	15 FT (Rear)
Maximum Lot Coverage	60%	60%
Minimum Lot Coverage	N/A	
Maximum Height	55 FT	54.93 FT
Open Space	20%	20%
Maximum Impervious Area	80%	80%
Pavement Setback	N/A	
Floor Area Ratio	N/A	
Off Street Parking Spaces	TBD	5
Loading Bays	N/A	
Other 1		
Other 2		
Other 3		

*See Density Bonus Table and Attachment

Planned Residential Unit Developments (PRUD) Requirements

Not Applicable

	Required	Proposed
Minimum Lot Size		
Minimum Lot Area per Dwelling		
Maximum # Units per Building		
Maximum Building Length		
Maximum Accessory Building Length		
Minimum Setbacks		
Minimum Building Separation		
Minimum Open Space		

Affordable Housing Density Bonuses (if applicable)

	Bonus Increase or Decrease	Maximum Allowable With Bonus	Proposed
Density	2.5x	52 UNITS	48 UNITS
Height	NA		
Setback Reduction	NA		
Recreation Space	NA		
Maximum Accessory Building Length	NA		
Minimum Setbacks	NA		
Minimum Building Separation	NA		
Minimum Open Space	NA		
Explanatory Text 1 (optional):			
Explanatory Text 2 (optional):			
Explanatory Text 3 (optional):			

Portland, Maine Yes. Life's good here.

Planning & Urban Development Department

50 Cedar St
(Phase II)

ZONING ANALYSIS Relevant Zone(s) R6 - Residential

All Projects:

	Required	Proposed
Lot Size	2,000 SF	23,250 SF
Area Per Dwelling Unit	725 SF/UNIT	1,092/UNIT
Minimum Street Frontage	20 FT	197 FT
Front Yard Minimum	5 FT	5.51 FT
Front Yard Maximum	N/A	
Rear Yard	10 FT	21.46 FT
Yard Right (North)	None	> 5'
Yard Left (South)	5'	12.54'
Side Street Setback	NONE	5'
Step Back	NONE	N/A
Maximum Lot Coverage	60%	21%
Minimum Lot Coverage	N/A	
Maximum Height	55 FT	< 35 FT
Open Space	20%	21%
Maximum Impervious Area	80%	80%
Pavement Setback	N/A	
Floor Area Ratio	N/A	
Off Street Parking Spaces	38	Provided Off Si
Loading Bays	N/A	
Other 1		
Other 2		
Other 3		

Planned Residential Unit Developments (PRUD) Requirements

Not Applicable

	Required	Proposed
Minimum Lot Size		
Minimum Lot Area per Dwelling		
Maximum # Units per Building		
Maximum Building Length		
Maximum Accessory Building Length		
Minimum Setbacks		
Minimum Building Separation		
Minimum Open Space		

Affordable Housing Density Bonuses (if applicable)

	Bonus Increase or Decrease	Maximum Allowable With Bonus	Proposed
Density	NA		
Height			
Setback Reduction			
Recreation Space			
Maximum Accessory Building Length			
Minimum Setbacks			
Minimum Building Separation			
Minimum Open Space			
Explanatory Text 1 (optional):			
Explanatory Text 2 (optional):			
Explanatory Text 3 (optional):			

Portland, Maine Yes. Life's good here.

Planning & Urban Development Department

158 Lancaster St (Phase 3)

ZONING ANALYSIS Relevant Zone(s) R6 - Residential

All Projects:

	Required	Proposed
Lot Size	2,000 SF	17,748.60 SF
Area Per Dwelling Unit	725 SF/UNIT	740 SF/UNIT
Minimum Street Frontage	20 FT	369 FT
Front Yard Minimum	5 FT	5.25 FT
Front Yard Maximum	N/A	
Rear Yard	10 FT	13.13 FT
Yard Right (West)	5'	> 5'
Yard Left (East)	NONE	9.14'
Side Street Setback	NONE	> 5'
Step Back	15'	> 15' (rear)
Maximum Lot Coverage	60%	29%
Minimum Lot Coverage	N/A	
Maximum Height	55 FT	34.79 FT
Open Space	20%	35%
Maximum Impervious Area	80%	65%
Pavement Setback	N/A	
Floor Area Ratio	N/A	
Off Street Parking Spaces	37	13 ONSITE *
Loading Bays	N/A	
Other 1		
Other 2		
Other 3		

*REMAINING PARKING PROVIDED OFFSITE

Planned Residential Unit Developments (PRUD) Requirements

Not Applicable

	Required	Proposed
Minimum Lot Size		
Minimum Lot Area per Dwelling		
Maximum # Units per Building		
Maximum Building Length		
Maximum Accessory Building Length		
Minimum Setbacks		
Minimum Building Separation		
Minimum Open Space		

Affordable Housing Density Bonuses (if applicable)

	Bonus Increase or Decrease	Maximum Allowable With Bonus	Proposed
Density	NA		
Height	NA		
Setback Reduction	NA		
Recreation Space	NA		
Maximum Accessory Building Length	NA		
Minimum Setbacks	NA		
Minimum Building Separation	NA		
Minimum Open Space	NA		
Explanatory Text 1 (optional):			
Explanatory Text 2 (optional):			
Explanatory Text 3 (optional):			

Density Overview – Phased Joint Site Plan

The following breakdown of land area and density bonus utilization is as follows:

Phase I Land Area = 15,224 SF

Base Density: 15,224 / 725 = 21

Affordable Bonus: 2.5 x 21 = 52.5 allowable units. 48 affordable units proposed.

Phase 2 Land Area = 23,250 SF

Base Density: 23,250 / 725 = 32 allowable units. 24 market rate units proposed

Phase 3 Land Area = 17,749 SF

Base Density: 17,749 / 725 = 24.5 allowable units. 24 market rate units proposed.

Overall: 48 IZ / 96 total units = 50% IZ.

E. Easements

Existing Easements:

Existing easement information as provided on the plan titled "Topographic Survey" prepared and identified by Owen Haskell for Bush-Watson on February 17, 2023 and most recently revised on March 29, 2023.

- CMP/NET&T easement associated with Book/Page 4811/70 in the Cumberland County of Deeds.

This easement is anticipated to be extinguished as part of the previously approved 89 Elm project and/or the proposed Phase 2 50 Cedar project as part of this Application.

Proposed Easements:

- **Phase 1 – 197 Oxford Street:**
  - There are no proposed easements at the time of filing this Application.
- **Phase 2 – 50 Cedar Street:**
  - The project, under common ownership with the abutting and previously approved 89 Elm development, will provide a reciprocal access, utility, and maintenance easement within the shared drive aisle and solid waste enclosure area.
- **Phase 3 – 158 Lancaster Street:**
  - There are no proposed easements at the time of filing this Application.

F. Waivers: Phase 1 - 197 Oxford Street

Standard to be Waived: Cite Ordinance or Technical Manual Standard	**Cite Standard Language:** Cite specific language of applicable Ordinance or Technical Manual Standard	**Waiver Being Sought:** Describe waiver being sought. Ex. – We are requesting a two-way parking lot drive aisle width of 20' feet.	**Justification for Waiver:** Address specific waiver criteria, if applicable, and document reasons for the waiver request.
Figure I-27	The drive aisle width is 24 feet	Requesting waiver to decrease the width to 21.20'.	Typical of previous residential projects on tight sites, 21.20' is a functional width especially for low-volume, familiar users.
LUC 14.6.2.B.3	All development subject to zoning setbacks shall preserve a minimum of 30% of existing trees 10 inches DBH or greater within the required setback area.	Several 10" trees existing along the rear property line and near the Chestnut/Oxford intersection. Their removal will be required to facilitate the building and reconstruction of the failing retaining wall along the rear property line.	The project is not feasible without removal of these trees. The trees in the rear do not appear to be in good health, and the apple trees near the intersection are small and not of high value.

Standard to be Waived: Cite Ordinance or Technical Manual Standard	Cite Standard Language: Cite specific language of applicable Ordinance or Technical Manual Standard	Waiver Being Sought: Describe waiver being sought. Ex. – We are requesting a two-way parking lot drive aisle width of 20' feet.	Justification for Waiver: Address specific waiver criteria, if applicable, and document reasons for the waiver request.
.... Technical Manual Section 1.14	"New structured and surface parking lots of five or more spaces shall include energized electrical outlets or installed chargers capable of providing Level 2 EV charging or higher to 20% of parking spaces (rounded down to the nearest whole number). An additional 50% of spaces must be made EV-ready,"	An EV Charger is not proposed to be installed at the time of construction due to fire risk under habitable building space; however, the project team is proposing to install conduit and pull wire to allow for the ability to energize and install a charger in the future should the battery technology improve and become safer with respect to fire hazards.	As electric vehicles become more common, knowledge continues to increase about how they react under fire conditions. The concern is if an EV is parked in a parking structure or parking beneath the building overhang even if there is a sprinkler system in place would this being inviting a potential severe fire event where there seems to be no current ability to extinguish an EV fire quickly. One contributing factor is a process called "thermal runway" which occurs when the heat within a battery is greater than the heat that can dissipate to the ambient surroundings. Batteries can overheat while recharging or occur if a cell fails while the vehicle is being operated, including being parked. This type of failure produces oxygen and gases that are toxic with the potential to be flammable. Vehicle batteries are essentially bundles of these cells inside of a plastic container, the failing of one can trigger the same in neighboring cells. This will lead to an intense fire or if modern plastic is involved, perhaps an explosion. The Applicant is not interested in installing EV chargers given the lack of parking and the life safety concerns noted above.
....	....	..	

F. Waivers: Phase 2 - 50 Cedar Street

Standard to be Waived: Cite Ordinance or Technical Manual Standard	**Cite Standard Language:** Cite specific language of applicable Ordinance or Technical Manual Standard	**Waiver Being Sought:** Describe waiver being sought. Ex. – We are requesting a two-way parking lot drive aisle width of 20' feet.	**Justification for Waiver:** Address specific waiver criteria, if applicable, and document reasons for the waiver request.
··· Figure I-27	The drive aisle width is 24 feet	Requesting waiver to decrease the width to 22.83'	Typical of previous residential projects on tight sites, a dimension as low as 22' is a functional width especially for low-volume, familiar users.
....	....	....	....

F. Waivers: Phase 3 - 158 Lancaster Street

Standard to be Waived: Cite Ordinance or Technical Manual Standard	**Cite Standard Language:** Cite specific language of applicable Ordinance or Technical Manual Standard	**Waiver Being Sought:** Describe waiver being sought. Ex. – We are requesting a two-way parking lot drive aisle width of 20' feet.	**Justification for Waiver:** Address specific waiver criteria, if applicable, and document reasons for the waiver request.
¨ Figure I-27	¨ The drive aisle width is 24 feet	Requesting waiver to decrease the width to 22'.	Typical of previous residential projects on tight sites, 22' is a functional width especially for low-volume, familiar users.
....	....	....	....

G. Financial Capacity

Please find attached the status of good standing from the Secretary of State and letters from the Co-Applicants' banks.

March 28, 2024

City of Portland
389 Congress Street
Portland, ME 04101

RE: 197 Oxford Street

To Whom It May Concern:

On behalf of Bangor Savings Bank, I am pleased to provide this letter in support of Avesta Housing for the development of a 48-unit, affordable housing project to be located at 197 Oxford Street in Portland, Maine. Bangor Savings Bank has worked with Avesta Housing on multiple projects of a similar nature. Based on our prior experience working with the organization, we believe that the applicant has the ability to finance the proposed project costs. In addition, they possess the management skill and development expertise to successfully complete the proposed project.

While this letter of support is not a commitment to lend, Bangor Savings Bank would welcome the opportunity to be a resource for project financing. Please feel free to call me at 541-2707 with any questions.

Sincerely,

Shawn McKenna
Vice President
Commercial Banking

BAR HARBOR
BANK & TRUST

April 2, 2024

Planning Board
City of Portland
389 Congress Street
Portland, ME 04101

RE: Reveler LLC - 75 unit phased development in the Bayside area of Portland, Maine

To Whom It May Concern:

I am pleased to provide this financial capacity letter in support of Reveler LLC, manager of 197 Oxford Street LLC, WBP Commercial LLC, and 89 Elm LLC. Based on my longstanding relationship with Reveler, it is my opinion that the development group has the financial resources, technical expertise and management capability to complete the above referenced project.

If you should need further information or clarification please contact me at (207) 771-1217.

Sincerely,

Joe Delano
Senior Vice President



Corporate Name Search

Information Summary

Subscriber activity report

This record contains information from the CEC database and is accurate as of: Wed Mar 27 2024 13:45:00. Please print or save for your records.

Legal Name	Charter Number	Filing Type	Status
AVESTA OXFORD STREET LP	202400012LP	LIMITED PARTNERSHIP	GOOD STANDING

Filing Date	Expiration Date	Jurisdiction
02/12/2024	N/A	MAINE

Other Names **(A=Assumed ; F=Former)**

NONE

Principal Home Office Address

Physical	Mailing

Clerk/Registered Agent

Physical	Mailing
REBECCA HATFIELD 307 CUMBERLAND AVE PORTLAND, ME 04101	REBECCA HATFIELD 307 CUMBERLAND AVE PORTLAND, ME 04101



Corporate Name Search

Information Summary

Subscriber activity report

This record contains information from the CEC database and is accurate as of: Wed Mar 27 2024 13:49:35. Please print or save for your records.

Legal Name	Charter Number	Filing Type	Status
REVELER LLC	20062993DC	LIMITED LIABILITY COMPANY	GOOD STANDING

Filing Date	Expiration Date	Jurisdiction
04/11/2006	N/A	MAINE

Other Names	(A=Assumed ; F=Former)
REVELER DEVELOPMENT	A
TOM WATSON & CO., LLC	F

Principal Home Office Address

Physical	Mailing

Clerk/Registered Agent

Physical	Mailing
WILLIAM H LEETE ONE CANAL PLAZA PORTLAND, ME 04101	WILLIAM H LEETE PERKINS THOMPSON, P.A. P.O. BOX 426 PORTLAND, ME 04112-0426

H. Technical Capacity

Reveler Development, Previously Tom Watson & Co., has completed several development projects within the City including 82 and 52 Hanover St and 132 Marginal Way – The Linden.

Avesta Housing is Northern New England's largest affordable housing developer, having completed dozens of affordable projects across Maine and New Hampshire. Most recently, developments include Porter Station (200 Valley Street), Village Commons in Scarborough, and the West End Apartments in South Portland.

Acorn Engineering, Inc. has successfully permitted and provided civil/site engineering for a multitude of constructed major site plans across the City including Munjoy Heights, 89 Anderson Street, the Hiawatha, 52 Hanover, and Porter Station.

CWS Architecture + Interior Design has extensive experience in residential development in Portland and has been the Architect of Record on many residential projects, some of which include Wessex Woods, 58 Boyd Street, Huston Commons, and 409 Cumberland.

Ryan Senatore Architecture also has extensive experience in residential development, including leading projects at Munjoy Heights, 89 Anderson, the Hiawatha, Porter Station, and Hammond House.

Overall, the design team brings decades of experience and demonstrated success in designing, managing, permitting, and overseeing the construction of high-quality residential properties.

I. Conformity with Land Use Ordinance

OVERVIEW

The proposed joint major site plan application proposed a total of 123 dwelling units to be distributed over the development of three parcels, depicted as phases 1-3 below.

- Phase 1: 197 Oxford Street: 48 Affordable and "Housing Fist" Residential Units (Avesta)
- Phase 2: 50 Cedar Street Redevelopment: 24 Market Rate Residential Units (Reveler)
- Phase 3: 158 Lancaster Street: 24 Market Rate Residential Units (Reveler)

Each project phase has been designed to conform to the applicable City standards where possible, as well as improve upon existing non-conformities.

The following narrative demonstrates the proposed projects compliance with the site plan standards of the City of Portland's Land Use Ordinance, outlined in Chapter 14, Section 6 (14.6.1-4). In addition, the site has been designed to comply with the City's Technical and Design Manual, as referenced in the land use code.

14.6.1 Transportation Standards

A. Impact on Surrounding Street Systems:

a. The project is not anticipated to create any significant hazard to safety on the surrounding street network nor any adjacent properties. The sites are bordered by Chestnut Street, Lancaster Street, Cedar Street and Oxford Street. Please see Section T of this application for the Traffic Analysis Narrative.

b. According to the City of Portland Federal Street Classification map, the site is located along Cedar Street, Oxford Street, Chestnut, and Lancaster Street which are all considered local roads. The development does not intend to substantially increase congestion on the surrounding streets.

B. Access and Circulation:

1) In general

a. The development will provide safe access and internal circulation for both pedestrians, vehicles and emergency vehicles as seen on the Site Plan and in accordance with the Technical Manual.

b. Continuous internal walkways are proposed and will connect to the existing sidewalks along Cedar Street, Chestnut Street and Lancaster Street. Each phase of the project will provide a newly constructed sidewalk along the property frontage, as shown on each respective Site Plan; C-11 (Ph-1), C-12 (Ph-

2), and C-13 (Ph-3).

c. Points of access and egress have been located to avoid conflicts with turning movements and traffic flows. Site access has been modeled utilizing AutoCAD 2020 Vehicle Tracking software to confirm vehicular circulation for each site and the proposed use.

d. Not applicable

2) Loading and Servicing:

Regular service trucks are not anticipated to occur as part of any of the proposed developments, given all buildings are to be solely residential. As all 3 of the proposed redevelopment sites are located along corner lots, it can be expected that delivery services will predominantly utilize the public street frontages, as is customary for these types of services.

3) Curbs and Sidewalks:

a. Each of the development sites propose to replace the existing curbing and sidewalks along all frontages, and are to be installed in accordance with the City's Technical Manual. Please refer to the overall site plan which includes all offsite improvements associated with each phase of the project.

b. There are existing sidewalks along all abutting Streets. Any curbing or sidewalk disturbed during construction is to be repaired and rebuilt as necessary in conformance with City standards.

c. Not applicable

d. Not applicable

C. Public Transit Access:

1) The proposed redevelopment sites are located along Oxford Street, Cedar Street, Lancaster Street and Chestnut Street, all classified as local urban roadways. Currently the Greater Portland METRO Local Route 8 service runs through Lancaster Street, with a bus stop along the Lancaster and Chestnut Street intersection. Additionally, the METRO Pulse Station on Elm Street is close to all 3 sites. Given the proximity to the existing transit system, the development does not propose any new transit shelters.

2) Not applicable.

3) Not applicable.

D. Parking:

1) Vehicular Parking:

    a. The parking is anticipated to be provided by a mix of on-site parking, as well as availability in the Cumberland Ave parking garage within a quarter mile of the project. Please See Section S, of this application for the Overall parking analysis.

    b. A TDM is not proposed for this project.

    c. Not applicable

    d. All phases propose a drive aisle less than 24', which has been requested as a waiver in Section F.

2) Location and Required Number of Bicycle Parking Spaces:

    a. A minimum of 39 bicycle spaces are required for the proposed 96 residential units, following the ratio (2 bike spaces/ 5 units) provided in Table 19-A of the Land Use Code. Please refer to each Phases Site Plan, Landscape plan, and Architectural Floor Plans for more information on proposed bike storage locations. Signage is to be provided in accordance with the Technical Manual.

    b. Not applicable.

3) Snow Storage:

    a. Please refer to each phases site plan for the proposed locations designated for snow storage. The Owner will be responsible for managing snow at their discretion and/or coordinating snow removal from the site when necessary.

    b. Snow storage areas will not encroach on parking, walkways, or stormwater management systems.

4) Electric Vehicle (EV) charging

    a. Section 1 of the Technical Manual states; "New structured and surface parking lots of five or more spaces shall include energized electrical outlets or installed chargers capable of providing Level 2 EV charging or higher to 20% of parking spaces. An additional 50% of spaces must be made EV-ready.". Please see Section S of this application for the Parking Analysis which outlines the existing, proposed, and improved parking areas on each site.

    Phase I is requesting a waiver from the EV requirement for their 5 parking spaces due to covered parking which poses a fire risk. They have committed to providing conduit and pull wire for future adaptability should the technology improve such that there is a lower fire risk to the residences above the covered parking.

    Phase II only has 4 parking spaces and does not trigger this requirement.

Phase III is replacing the existing parking spaces and is not creating a new structured or surface parking lot.

E. Transportation Demand Management (TDM):

1) A Transportation Demand Management (TDM) plan was not prepared for this application. Please see the Parking and Traffic Analysis narrative for more information.

2) Not applicable.

14.6.2 Environmental Quality Standards

A. Preservation of Significant Natural Features:

1. The site does not consist of any significant natural features. There are no known endangered species or plants existing on the site.

2. Not applicable

3. Not applicable

B. Landscape Preservation:

1) The sites have been designed to limit disturbance to existing vegetation where feasible, particularly along the larger parcel, Phase 3. Please see the attached plans with references to existing vegetation to remain and be protected on the 158 Lancaster Street lot where the opportunity exists.

2) Please refer to the Landscaping plan, details, as well as the erosion control report for more information regarding proposed implementation measures to preserve the existing vegetation that is to remain from construction impacts. These construction-level details will progress and the project progresses.

3) Phase 1: A waiver has been requested due to number of 10" trees along the rear property line causing a failing retaining wall onto the neighbor's property.

Phase 2: No trees are being removed.

Phase 3: 8 trees at 10" DBH or larger exist on site. The project proposes to maintain 3 of them which meets the standard (37.5%)

4) See above and Section F.

5) Where the replacement of trees onsite is not feasible, the applicant intends to contribute the proportionate cost of the replacement trees to the City of Portland Tree Fund.

C. Site Landscaping and Buffers

1) Within the R6 zone, one shade tree or plantings is required per every 30 linear feet along all the property frontages, per the City of Portland Technical Manual standards. Please refer to the Landscaping plans for more information on the proposed quantity, spacing, and species.

2) Buffers

a. Solid waste storage is provided within the proposed buildings in Phase 1. The Phase 2 solid waste is shared with 89 Elm and will be screened by a cedar enclosure. The phase 3 solid waste will be adjacent to the parking lot and screened be a cedar enclosure.

b. Not applicable

c. Buffers are proposed within each project site where possible.

3) Parking Landscaping

a. The project features minimal surface parking; however, shade trees have been provided adjacent to the parking where feasible.

b. Not applicable.

c. Not applicable.

4) Street Trees

a. The proposed redevelopment project proposes street trees along the property frontages in the greatest number feasible. Please refer to the landscape plans for more information on placement and quantity.

b. Where the replacement of trees onsite is not feasible, the applicant intends to contribute the proportionate cost of the replacement trees to the City of Portland Tree Fund. It should also be noted that structural soil measures or granite planters are proposed for certain street trees to help improve their growing mediums.

D. Water Quality, Stormwater Management and Erosion Control:

1. All developments have been designed to minimize the total impervious area while

meeting the project goals, in combination with providing Stormwater Management best practices measures to reduce stormwater runoff generated from the site and minimize the overall contribution into the City's system. Please see each site's Grading and Drainage plan in combination with the Section J of this application, the Stormwater Management Report.

a. The site drainage will not be directed to flow or create ponding onto adjacent lots. The runoff created from the site will be collected, attenuated, and released at a rate that does not exceed the existing condition.

b. The site was designed to reduce the volume and rate of runoff generated from the sites.

c. A site-specific Stormwater Management Plan has been developed for the project to show compliance with Section 5 of the Technical Manual, including the basic standards of MEDEP Chapter 500. Please refer to sections J and K, the Erosion & Sedimentation Control and Stormwater Management Plans, respectively, for more information.

d. In coordination with DPW, the project anticipates detaining the larger of 1" times each Site's impervious area, or the proposed net new sewer flows created by the project.

2. Each Redevelopment site has been designed to comply with the Stormwater Management standards within the city technical manual.

3. The development is not anticipated to pose a contamination risk to groundwater during or after construction. The development proposes adequate and sanitary disposal of sewage in accordance with Section 2 of the Technical Manual. The project will be serviced by a public wastewater system.

14.6.3 Public Infrastructure and Community Safety Standards

A. Consistency with City Master Plans:

1. The project has been designed to be consistent with the City's Master plans, Zoning Ordinance, Design Manual, and off-site infrastructure.

2. Please refer to each respective phased site plan which includes the necessary improvements to all connections to off premise public infrastructure.

B. Public Safety and Fire Prevention:

1. Public Safety Design

a. The site has been designed to enhance the security of the public and private areas on site to reduce the potential for crime.

b. Each site has been designed to provide appropriate controlled access points for the future building tenants.

c. All areas will promote natural surveillance and access control.

2. Emergency and fire vehicle access is provided on three (3) sides of each building within the public frontage. In addition, the site has potential ambulance access through the access drive aisles provided from Chestnut Street (PH-1), Cedar Street (PH-2), and Lancaster Street (PH-3).

C . Public Utilities

1. Requests for Ability to Serve letters have been sent to the respective companies. Coordination is ongoing and responses are forthcoming.

2. The electrical services to each building will be provided underground.

3. The new sewer and stormwater infrastructure will meet the provisions of the Technical Manual. Please see the Stormwater Management Report in Section J of this application. Further coordination with DPW is anticipated to confirm the proposed infrastructure and connections.

4. The project will be served by connection to the public sewer system within Chestnut Street and Cedar Street, furthermore, intercepted by the Lancaster Street Combined Sewer. The proposed stormwater management systems have been designed to meet the City standards as well as the applicable standards outlined in Chapter 500.

5. Given each of the residential developments proposes 20 or more units within the building, trash collection and disposal will be coordinated by the property/landowner of each site with a private hauler. Please see the respective site plans for the proposed location of trash storage.

16.4.4 Site Design Standards

A. Massing, Ventilation and Wind Impact:

a. Please refer to Section O, Architectural Design Narrative for more information on the building massing and ventilation systems. The project will not result in health or safety problems, devaluation to neighboring properties, or direct exhaust towards neighbors.

B. Shadows:

The project vicinity does not include any existing publicly accessible open space.

Therefore, according to the technical manual, a shadow study is not required, although a shadow study was provided for the 197 Oxford building at the request of the neighbors at the pre-application neighborhood meeting.

C. Snow and Ice Loading:

The structure will not distribute snow and ice onto adjacent properties. All of the building roofs are to be designed to collect rainfall runoff onto the roof and route to the proposed stormwater infrastructure systems as proposed by phase.

D. View Corridors:

Not applicable.

E. Historic Resources:

a. The development is not located in a historic district, historic landscape district or City designated landmark.

b. The development is not located adjacent to designated landmarks, historic district, or historic landscape district.

c. It is our understanding that there are no known archaeological resources that exist on the site.

F. Exterior Lighting:

a. Site Lighting.

   i. Exterior lighting will be designed to meet the requirements set forth in the Technical Manual and not to negatively impact the abutting properties.

   ii. Lighting has been designed to not adversely impact the abutting residential properties. Shielding shall be implemented when necessary. Please refer to the Photometric Plans for more information.

b. Architectural and Specialty Lighting.

   i. No architectural and Specialty lighting is proposed, at this time.

   ii. No up-lighting is proposed, at this time.

c. Street lighting has been proposed in accordance with the City Technical Manual and is to include the required peninsula decorative lighting when along Lancaster Street. The remaining site lighting will be accomplished

through wall pack units along the proposed building entryways, in combination with existing street lighting along the abutting streets.

G. Noise and Vibration:

a. All proposed heating, ventilation and air conditioning equipment, and emergency generators are to meet the applicable state and federal emissions requirements as defined by the Architect and their mechanical engineer.

H. Signage and Wayfinding:

1. All street and wayfinding signage shall meet the requirements of the Manual on Uniform Traffic Devices (MUTCD) and Division 22 of the City Code.

    a) The project is not located in a historic district or subject to Article IX.

    b) Signage will complement the subject building and its immediate context.

    c) Signage will not adversely affect visibility at intersections.

    d) Signage will be facing downward to avoid glare and light spillover to towards the sky.

    e) Signs will not be located along rooftops.

b. All street and wayfinding signage shall meet the requirements of the Manual on Uniform Traffic Devices (MUTCD) and Division 22 of the City Code. Signage will not adversely affect visibility at intersection on or off the site.

I. Design Standards.

a. The Architect has designed the project to meet the standards set forth in the R6 Residential zoning standards, as well as the City of Portland Design Manual. Please refer to the Architectural Plans and narratives for each building.

ACORN ENGINEERING, INC.

J. STORMWATER MANAGEMENT REPORT

Phased Oxford Street Redevelopment

Prepared For:

Avesta Housing & Reveler Development
Joint Site Plan Application

Prepared By:

Acorn Engineering, Inc.
PO Box 3372
Portland, Maine 04104



April 2024
Rev. September 2024

INTRODUCTION

Acorn Engineering, Inc. has been retained by Avesta Housing and Reveler Development, to provide civil engineering services for the Phased Oxford Street Redevelopment, Joint Major Site Plan Application. The contiguous parcels encapsulating the re-development project include 197 Oxford Street, 50 Cedar Street, 158 Lancaster Street, and 78 Chestnut Street in Portland, Maine. The joint application referenced the lots above as Phase 1, Phase 2, and Phase 3, respectively. Please note there are no modifications proposed at 78 Chestnut Street, at this time.

The overall site area consists of 1.58 acres of contiguous land, of which 0.96 acres are to be redeveloped as part of this proposed project. The development project proposes 3 residential buildings throughout Phases 1, 2, and 3, to provide 96 Residential Units to the Bayside area. Please see *Table 1* below which provides an overview of the existing parcels area and proposed redeveloped area.

This stormwater analysis was prepared to demonstrate the effects of the proposed development on both the quantity and quality of stormwater runoff. The purpose of this report is to demonstrate the project's compliance with the City of Portland Stormwater Management Standards. The following narrative provides an outline of each of the project phase's compliance with the applicable standards set forth within the City of Portland City Code and Technical Manual as outlined below, in addition to the applicable requirements set forth by Maine DEP within Chapter 500.

- City of Portland Land Use Ordinance Article 14.6.2.D.
- City of Portland Technical Manual:
  - Section 5 – Portland Stormwater Management Standards and Maine DEP Chapter 500 Stormwater Management.
  - Section 2 – Portland Sanitary Sewer and Storm Drain Design Standards
- City of Portland Code of Ordinances:
  - Chapter 32 – Post-Construction Stormwater Management
  - Chapter 24 – Sewers

TABLE 1: OVERVIEW OF PROPOSED RE-DEVELOPED AREA BY PROJECT PHASE:

	PARCEL AREA (AC):	RE DEVELOPED AREA (AC):
197 OXFORD STREET:	0.35	0.35
50 CEDAR STREET:	0.53	0.22
158 LANCASTER STREET:	0.41	0.39
78 CHESTNUT STREET:	0.29	0
TOTAL AREA:	**1.58**	**0.96**

EXISTING CONDITIONS

The project parcels are bordered by Lancaster Street, Cedar Street, Oxford Street, and Chestnut Street, and are all located within the Residential R-6 Zoning District and the Bayside Height Overlay Zoning District.

It is our understanding that there are no natural resources on site and that the development is not within an urban impaired stream watershed and appears that no formal stormwater treatment or detention presently resides onsite, unless otherwise noted as on Phase 2. Existing topography and onsite soils information was obtained from the Topographic Survey plan prepared by Owen Haskell Inc., dated February 17th, 2023.

- **Phase 1 – 197 Oxford Street:**

Phase 1, the 197 Oxford Street parcel consists of approximately 0.35 acres of land and is currently occupied by 2 existing, now vacant buildings to be demolished and transformed into a 5-story building with 48 affordable residential units, to be owned and managed by Avesta Housing. The project will reside at Map, Book Lot: 26-B-018, whose lot line will be adjusted to encompass the entire development area of 0.35-acres. Currently the parcels are addressed as 31 Cedar Street and 197 Oxford Street, 26-B-012 & 26-B-018, which will be merged into one parcel whose area will remain outside the building footprint.

The site is currently occupied by 2 existing, now vacant buildings (total footprint of approximately 5,553 square feet). Please note it is our understanding that demolition of the existing retrofitted storage container structures which have since been removed since receiving our survey (footprint of approximately 517 square-feet.) In addition, the site is occupied with nearly 4,118 square feet of impervious cover over the lot, consisting of disconnected impervious patio area along the Cedar Street side. and a community garden located on the Chestnut Street side. The remainder of the site consists of a mix of mulched and grassed area within the existing community garden. The site topography consists of slopes ranging up to 17% within the garden area. Elevations across the site range from 27' at the Chestnut Street Corner of the site, to elevation 42' across the parcel at the Cedar and Oxford Street intersection. The Cedar Street, Oxford Street, and Chestnut Street sidewalks consist of slopes ranging up to 9% along the property frontage.

- **Phase 2 – 50 Cedar Street:**

Phase 2, the 50 Cedar Street parcel consists of approximately 0.53 acres of land occupied by surface parking lots to be transformed into a 3-story building with 24 market rate residential units, to be owned and managed by Reveler Development. The project will reside at Map, Book Lot: 33-H-009, whose lot line was recently adjusted due to a separate project application, previously approved, and under common ownership.

As part of the recently approved application at the adjoining property at (33-H-006-001), stormwater runoff and site improvements on the 50 Cedar Street parcel were incorporated within the proposed stormwater system on the 89 Elm Street parcel. As part of this application, we have outlined the drainage area boundaries for the 50 Cedar Street parcel

and included the HydroCAD stormwater model approved with storing runoff from 50 Cedar Street. As the 89 Elm Street application is not yet under construction, should the 50 Cedar Street redevelopment project be constructed prior to 89 Elm Street, modifications for stormwater runoff generated from the 50 Cedar Street site intend to be sufficient for the runoff drainage area leading to the subsurface storage system, as demonstrated in this report and highlighted in the Attached HydroCAD Report and pre and post re-development maps for Phase 2 - 50 Cedar Street Re-Development Project. In other words, each project is able to stand on its own as a complying site/project whether or not both buildings are constructed or not.

Currently the site consists of 16,480 sf surface parking lots. The site topography consists of slopes ranging up to approximately 9% within the drive aisle proposed for 89 Elm Street, with slopes ranging up to 50% within the existing grassed area. Elevations on site range from 17.80' at the Lancaster and Cedar Street intersection to elevation 40' across the parcel where the uphill parking lot ties into Cedar Street. Currently the Cedar Street and Lancaster Street sidewalks consist of slopes ranging up to 12.5% along the property frontage.

- **Phase 3 – 158 Lancaster Street:**

Phase 3, the 158 Lancaster Street parcel consists of approximately 0.41- acres of land occupied by an existing surface parking lot and community garden. The project proposes to redevelop the site to provide a 3-Story Building with 24 dwelling units, to be owned and managed by Reveler. The project will reside at Map, Book Lot: 26-A-001.

Currently the site consists of a 12,620 sf surface parking lot with a community garden on the Southeast side of the property. The site topography consists of slopes ranging up to approximately 8% within the existing parking area and up to 50% along the property line and within the garden area. Elevations across the site range from 11.50' at the Lancaster and Chestnut Street intersection to elevation 22' near the rear property line along Halls Court. Currently the Cedar Street, Lancaster Street, and Chestnut Street sidewalks consist of slopes ranging up to 20% along the property frontage.

The overall redevelopment project will result in a reduction of non-roof impervious area by 9,836 square-feet, as provided in *Table 2* below.

TABLE 2 – REDUCTION OF PRE AND POST RE-DEVELOPMENT NON-ROOF IMPERVIOUS AREA

	NON-ROOF IMPERVIOUS AREA:		
PHASE:	**EXISTING (SF):**	**PROPOSED (SF):**	**REDUCTION:**
Phase 1 - 197 Oxford Street:	4,117.96	3,248.90	-869.06
Phase 2 - 50 Cedar Street:	16,479.74	13,702.09	-2,777.65
Phase 3 - 158 Lancaster Street:	12,620.11	6,430.15	-6,189.96
Totals:	**33,217.81**	**21,637.11**	**-9,836.67**

Given the existing building use and impervious cover, the existing sanitary sewer and surface stormwater runoff flows were included as part of this analysis to provide a better comparison of how the proposed development will impact the City's Combined Sewer System. See below for more information on the existing and proposed site drainage conditions for each phase of the development.

PROPOSED DEVELOPMENT

The proposed development intends to transform the existing parcels to provide 3 residential buildings and 96 residential units to the Bayside community.

- Phase 1 proposes a 5-story building with 48 affordable dwelling units.
- Phase 2 proposes a 3-story building with 24 market rate units.
- Phase 3 proposes a 5-story building with 24 market rate units.

The site proposes modifications to redirect stormwater runoff generated from the site to be contained and detained within the parcels by utilizing subsurface stormwater storage systems onsite. Each project phase will feature interconnecting sidewalks and pavement for a driveway accessed from the adjacent streets.

Table 3 below provides a comparison of the existing and proposed impervious area. Collectively the overall project will produce a total of 41,874 square-feet of impervious cover over the three development sites. As demonstrated in the table above, 21,637 square-feet of non-roof impervious area is anticipated post redevelopment of all 3 phases. Please note that none of the individual project phases will generate more than 5,000 square feet of new redeveloped non-roof impervious area, as seen below.

Table 3 – Total Impervious Area by Phase

PHASE:	EXISTING IMPERVIOUS AREA (SF):	TOTAL PROPOSED IMPERVIOUS AREA (SF):
Phase 1 - 197 Oxford Street:	9,982	11,970
Phase 2 - 50 Cedar Street:	16,480	18,553
Phase 3 - 158 Lancaster Street:	12,620	11,351
Totals (sf):	**39,082**	**41,874**

Overall, the project sites are currently draining Northwest, towards the Combined Sewer System within Lancaster Street. It is our understanding that there is an existing 18" Combined Sewer within Chestnut Street and Cedar Street, along with a 48" double brick Combined Sewer within Lancaster Street.

As part of the recently approved West Bayside Master Development Plan (MDP), Phase 1A – 89 Elm Street, it was proposed to extend the City's MS4 System from Preble Street to the frontage of 89 Elm Street, the adjoining property of 50 Cedar Street. As the proposed

extension is still under discussion and review with DPW and PWD, the 50 Cedar Street re-development site intends to tie into the proposed MS4 extension at the upstream end, as described further in this report and depicted on the plans.

All developments intend to be served by the Portland Water District, CMP, Spectrum, Consolidated Communications, and municipal sewer and storm systems. Utility mains and services are under coordination with each respective utility company. The project team will coordinate the project details further with the Department of Public Works team, to ensure proposed connections and verify the existing systems capacity, as necessary.

As the site is not located within an urban impaired stream, nor will it create one or more acre of impervious area, the project is exempt from the treatment requirements as outlined in Chapter 500.

Please note that each project phase will provide stormwater management systems and infrastructure on each site to account for the stormwater runoff generated by site. None of the sites will create more than 5,000 SF of non-roof redeveloped area; however, Phase 1 and Phase 2 will create more than 1,000 SF of new impervious area, and therefore those two phases have included stormwater treatment in tandem with the detention systems.

GENERAL STANDARDS – WATER QUALITY

The following narrative intends to meet the applicable Basic, General, and Flooding standards in Section 5 of the City of Portland Technical Manual. Please refer to the erosion and sedimentation control report for the site's compliance with the Basic Standards outlined in Chapter 500.

Treatment on both sites (Ph-1 & Ph-2) are proposed for the equivalent water quality volume to treat approximately a quarter and half of the roof area on both of the proposed buildings, respectively, which would exceed treatment of 95% of the new impervious area on site.

The following section outlines the phased projects compliance with Section 5 of the City's Technical Manual for Redevelopment Projects.

Treatment of stormwater is accomplished by utilizing Subsurface Storm filter Vault systems on Phases 1 and 2. *Table 4* below provides an overview of the redevelopment project required treatment area in addition to the proposed treatment measures on site. Given Phase 3 results in a reduction in impervious area, no treatment is required, or proposed onsite.

TABLE 4 - WATER QUALITY TREATMENT AREA

	REQUIRED TREATMENT AREA*	PROPOSED TREATMENT AREA
PHASE 1 – 197 OXFORD STREET	1,889 SF	2,438 SF
PHASE 2 – 50 CEDAR STREET	1,969 SF	2,419 SF

TOTAL:	**3,858 SF**	**4,857 SF**
***Required Treatment Area based on 95% of new impervious area**		

All treatment BMP's proposed for the development sites intend to utilize Stormfilter cartridges as a filter and have been designed to meet the requirements of the General Standards (Section 4.B) of the Chapter 500 by CONTECH Engineered Solutions LLC, Approved by the Maine DEP March 13th, 2015, last revised February 24th, 2023.

The StormFilter system proposed will provide further storage and release of a water quality volume through R-Tank subsurface chamber system. The StormFilters are proposed to provide treatment generated from the roof area. As it is not anticipated that oils and grease will be entering the StormFilter Cartridges the CONTECH provides various options of filter media for the targeted pollutant removal. Please refer to the Post Development Watershed Map for Phases 1 and 2 in Attachment B and the Civil Grading and Drainage Plans for more information on the proposed area to be treated.

In accordance with Contech's Stormfilter guidelines, each stormfilter vault system has been designed to treat the required Water Quality Volume and bypass the larger storm flows.

Treatment Area

Based on the approval letter by the MDEP when utilizing 18" cartridges it is recommended to use 34 cartridges per acre of impervious being treated. The project proposes to treat 0.11 acres of impervious surface within the Storm Filter Cartridges. See *Table 5* below:

Table 5 – StormFilter Cartridge Sizing

	1-Year Peak Flow (cfs)	Area to be treated (acres):	Required Cartridges	Provided Cartridges
Phase 1 - Storm Filter Cartridges:	0.06	0.056	2	2
Phase 2 – Storm Filter Cartridges:	0.06	0.056	2	2
Overall		0.11	4	4
*StormFilter Vault sized with 18" Cartridges				

Per the MDEP StormFilter approval letter the system was sized to treat 90% of the average annual runoff volume.

As represented in *Table 6*, the site is in accordance with Chapter 500, General Standard rules and the MDEP approval letter for StormFilter treatment.

FLOODING STANDARDS – WATER QUANTITY

The proposed development anticipates connecting into the City's combined sewer system within Chestnut Street, further combining into the Lancaster Street Combined Sewer. The stormwater flows for a 24 hour - 1" rainfall storm over the entire redeveloped area, were computed to analyze each of the proposed on-site storage systems.

As part of the stormwater analysis, the existing sewer flows generated from the current building were analyzed. The analysis included a review of the existing water meter data (assumed to be equivalent to sewer discharge) for the existing buildings on 197 Oxford Street compared to the proposed sewer flows.

Table 6 below provides a comparison of the new sewer flows that the proposed development will add to the system as well as the runoff volume based on 1" of rainfall over the impervious area.

Detention on site is accomplished utilizing R-Tank subsurface chambers. The subsurface chamber systems have been sized to provide a storage volume for 1" of rainfall over the impervious area draining to the system. Table 6 below provides an overview of the stormwater detention provided on each site. The system was sized to meet the City's request and to drain between 24 to 48 hours.

Table 6: Required Detention Volume

	Phase 1 - 197 Oxford Street:	**Phase 2 – 50 Cedar Street:**	**Phase 3 – 158 Lancaster Street:**
1" of rainfall over the redeveloped impervious area:	998 CF	643 CF	913 CF
Projected 24 hour daily sanitary flows:	770 CF (Net New: 340 CF)	385 CF	385 CF
R-Tank Storage Provided onsite:	**1,015 CF**	**660 CF**	**1,015 CF**

R-Tank Subsurface Stormwater Detention Systems

Each development site proposes a subsurface stormwater detention system utilizing the R-Tank System by Ferguson Waterworks, formerly manufactured by ACF Environmental.

The proposed subsurface storage systems will be utilizing double stacked R-tanks modules with various layouts to achieve the required/ proposed storage volume. Each of the systems' storage volume was measured by the available area within the R-Tank System and stone area from the bottom of the stone on the system to the invert of the overflow pipes out. Each system has been designed with a series of overflow pipes set below the top of the tanks, and underdrains set within the stone below the tanks to ensure the system can store the required volume and drain out between 24 to 48 hours after a storm.

The overflow pipes from the R-Tanks were set at the top of the system to ensure maximum storage is provided within the system prior to entering the overflow pipes. Each of the systems will utilize a series of wye connections and header pipes to relay the systems overflow from the R-Tank into a header pipe, to facilitate a single overflow pipe out of the R-Tank system, into the downstream stormwater infrastructure and furthermore into the City's Combined Sewer.

Each of the 4" underdrains from the R-Tank systems are intended to have a cap placed on the outfall pipe within the downstream F-Basin, with an orifice drilled into the cap eccentrically. The PVC cap can be easily inspected, removed, or replaced, if necessary, as accessed from a manhole.

The City has requested the outflow for a 1" storm event be equal to 0.1 CFS per acre of watershed area draining to the detention systems. To meet this request, the proposed orifice sizes on each system range from a 1" to 1.5" diameter. It should be noted that the R tank system is utilizing a 1" orifice for, which is typically the lowest diameter orifice that's considered best practice. Diameters lower than this size are less resilient to clogging from debris and therefore may inadvertently short circuit the system.

Please refer to the Grading and Drainage plans for Phases 1-3 and Civil Drainage Details Sheet 2 for more information on the R-Tank system proposed on each site.

Pre and Post Development Subcatchments:

Time of Concentration (Tc)

The times of concentration for subcatchments in both the pre and post conditions were calculated by entering the flow path with the associated ground cover and slopes. HydroCAD then calculated the Tc's and incorporated the total Tc for each subcatchment into the model. When the calculated Tc was less than six minutes (0.1 hours), a direct entry of six minutes was used as advised by the TR-55 model.

Curve Number (CN)

Within the pre-development model, the vegetated areas were generally considered fair or poor grass conditions due to the interrupted growth and lack of maintenance or robust plantings.

The post development landscaped areas were given a good rating for new landscaped or loam/seeded areas and fair rating for the vegetated areas to remain. Refer to the attached pre and post development maps provides a visual representation of the land covers from the pre and post conditions.

Pre and Post Development Calculations:

Each of the proposed project phases were modeled using HydroCAD to verify that the post-development conditions do not exceed the pre-development conditions. A 24-hour SCS Type III storm distribution for the 2, 10, and 25-year storm events were used. The corresponding rainfall amounts for these storms are 3.10", 4.60", and 5.80" respectively. Due to the numerous variables, and inherent inaccuracies with the modeling program used to calculate stormwater runoff it is custom at Acorn Engineering, Inc. to round to the nearest whole number. However, due to the small size of the project sites, the stormwater runoff was rounded to the nearest tenth of a cubic feet per second (cfs).

- **Phase 1 - 197 Oxford Street:**

The pre and post redevelopment surface runoff conditions maintained the same three general points of interest: Cedar Street, Oxford Street, and Chestnut Street. As the proposed development intends to tie into the Chestnut Street Combined sewer, the overall drainage point analyzed for the project was considered to be the Lancaster Street Combined Sewer which intercepts the Combined sewers within Cedar and Chestnut Street.

Table 7 below provides the pre and post development flows modeled in HydroCAD from Phase 1 of the proposed redevelopment project.

Table 7 – 197 OXFORD STREET:
Comparison of Peak Flows for 197 Oxford Street at POI #99

Drainage Area	2-Year Storm Event (cfs)		10-Year Storm Event (cfs)		25-Year Storm Event (cfs)	
	Pre	Post	Pre	Post	Pre	Post
POI #99*	0.7	0.5	1.2	1.2	1.6	1.6

*POI #99 is represented in the Post Development HydroCAD and is located at the Chestnut St. and Lancaster St. intersection and is the primary drainage point for the development for both pre and post conditions.

- **Phase 2 – 50 Cedar Street:**

Given the parcel layout on 50 Cedar Street the catchments areas analyzed for the pre and post redevelopment conditions were divided into two catchments with various subcatchments within them.

Table 8 below provides the pre and post development flows modeled in HydroCAD from Phase 2 of the proposed redevelopment project.

Table 8 – 50 CEDAR STREET:
Comparison of Peak Flows for 197 Oxford Street at POI #99

Drainage Area	2-Year Storm Event (cfs)		10-Year Storm Event (cfs)		25-Year Storm Event (cfs)	
	Pre	Post	Pre	Post	Pre	Post
POI #99*	0.9	0.4	1.4	1.4	1.9	1.8

*POI #99 is represents Lancaster Street within the Post Development HydroCAD.

- **Phase 3 – 158 Lancaster Street:**

The pre and post site conditions will maintain the same overall drainage point being the Lancaster Street Combined Sewer. Currently the 158 Lancaster Street site is occupied by a surface parking lot with surface runoff sheeting towards Lancaster and Chestnut Street. Post development conditions proposed a subsurface R-Tank detention system on site which intends to collect and store flow generated from Subcatchment 1. The remainder of the site area is proposed to be captured through various F-Basins and field inlets. This area will then be combined with the discharge from the R-Tanks and further routed to the existing sewer manhole on the Chestnut Street combined sewer.

Table 9 below provides the pre and post development flows modeled in HydroCAD from Phase 3 of the proposed redevelopment project.

Table 9 – 158 LANCASTER STREET:
Comparison of Peak Flows for 197 Oxford Street at POI #99

Drainage Area	2-Year Storm Event (cfs)		10-Year Storm Event (cfs)		25-Year Storm Event (cfs)	
	Pre	Post	Pre	Post	Pre	Post
POI #99*	0.8	0.4	1.4	1.1	1.9	1.5

*POI #99 is represented in the Post Development HydroCAD and is located at the Chestnut St. and Lancaster St. intersection and is the primary drainage point for the development for both pre and post conditions.

As shown in Tables 7-9, the project proposes to maintain or reduce the peak flows from each Phased Site. A post-development watershed map developed for this project can be viewed in Attachment B, and a copy of the HydroCAD calculations is included within Attachment C of this report.

SOILS

Onsite soil information has been derived from the following resources:

- Soil Conservation Service Medium Intensity Soil Survey for York County

The site consists of soils within hydrological groups A, which have been inputted into HydroCAD accordingly. In accordance with Maine Best Management Practices (BMP). The USDA soil report has been submitted as part of this submission.

CONCLUSION

This narrative was prepared to demonstrate how the proposed development was designed to meet the City of Portland Stormwater requirements.

The site was designed with the intent to minimize the total area of impervious surface on the site and overall reducing both the volume and rate of runoff leaving the site. This was accomplished by providing an R-Tank subsurface stormwater storage system on each site to collect and detain stormwater runoff draining to each system to meet the water quantity standards. As demonstrated in this report, Stormwater quality is achieved through the use of subsurface Storm Filter cartridges on Phases 1 and 2 to treat approximately 25% and 50% of the proposed roof area, respectively.

Overall, the development will be reducing the flow rate leaving the parcel and into the City's combined sewer system from the pre to post development conditions. This is achieved through the use of subsurface storage systems to detain runoff onsite prior to discharging into the public system.

Please find the following attachments for more information on the stormwater analysis in addition to the proposed construction and maintenance plan for the development.

STORMWATER REPORT ATTACHMENTS:

- Attachment A.1: Pre-Development Watershed Map – Phase 1: 197 Oxford Street
- Attachment A.2: Pre-Development Watershed Map – Phase 2: 50 Cedar Street
- Attachment A.3: Pre-Development Watershed Map – Phase 3: 158 Lancaster Street

- Attachment B.1: Post-Development Watershed Map – Phase 1: 197 Oxford Street
- Attachment B.2: Post-Development Watershed Map – Phase 2: 50 Cedar Street
- Attachment B.3: Post-Development Watershed Map – Phase 3: 158 Lancaster Street

- Attachment C:.1 HydroCAD Calculations – Phase 1: 197 Oxford Street
- Attachment C:.2 HydroCAD Calculations – Phase 2: 50 Cedar Street
- Attachment C.3: HydroCAD Calculations – Phase 3: 158 Lancaster Street

- Attachment D: Soil Survey

SECTION J

STORMWATER MANAGMENT REPORT

Attachment A: Pre Development Watershed Map

PHASE 1 - 197 OXFORD STREET



ISSUED FOR	BY	DATE
JOINT MAJOR SITE PLAN APPLICATION	SJL	4/11/24

DRAWING NAME: PHASE 1 – PRE-DEVELOPMENT WATERSHED MAP

PROJECT NAME: PHASE 1 – PHASED OXFORD STREET REDEVELOPMENT

CLIENT: AVESTA HOUSING
307 CUMBERLAND AVE, PORTLAND, ME 04101

ACORN ENGINEERING, INC.

THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM ACORN ENGINEERING, INC. ANY ALTERATIONS, AUTHORIZED OR OTHERWISE, SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO ACORN ENGINEERING, INC.

ACORN ENGINEERING, INC.
PO BOX 3372, PORTLAND MAINE 04104
(207) 775-2655

FILE:	1212.1_AE_CIVIL
JN:	1212.1
SCALE:	AS NOTED
DESIGNED BY:	SJL
DRAWN BY:	DNM
CHECKED BY:	SJL

STATE OF MAINE
SAMUEL J. LEBEL
16506
LICENSED
PROFESSIONAL ENGINEER
4/11/24

DRAWING NO.
PRE

SECTION J

STORMWATER MANAGMENT REPORT

Attachment A: Pre Development Watershed Map

PHASE 2 - 50 CEDAR STREET



SUBCATCHMENT LEGEND:

- 1 — SUBCATCHMENT NUMBER
- SUBCATCHMENT EXTENTS
- POI #1 — POINT OF INTEREST (POI)
- 1 — POND
- FLOW PATH ARROWS

LEGEND:

- EXISTING IMPERVIOUS AREAS:
- EXISTING GREEN/ LANDSCAPED SPACE:

GENERAL NOTES:

1. REFER TO STORMWATER REPORT FOR MORE INFORMATION

PERMIT LEVEL
NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY	DATE
JOINT MAJOR SITE PLAN APPLICATION	SJL	4/10/24

DRAWING NAME: PHASE 2– PRE DEVELOPMENT WATERSHED MAP

PROJECT NAME: PHASE 2 –PHASED OXFORD STREET REDEVELOPMENT

CLIENT: REVELER DEVELOPMENT
188 STATE STREET, 3RD FLOOR, PORTLAND, ME 04101

ACORN ENGINEERING, INC.
ACORN ENGINEERING, INC.
PO BOX 3372, PORTLAND MAINE 04104
(207) 775-2655

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FILE:	1212.2_AE_CIVIL
JN:	1212
SCALE:	AS NOTED
DESIGNED BY:	SJL
DRAWN BY:	DNM
CHECKED BY:	SJL

DRAWING NO.
PRE

SECTION J

STORMWATER MANAGMENT REPORT

Attachment A: Pre Development Watershed Map

PHASE 3 - 158 LANCASTER STREET

LANCASTER ST.
TWO-WAY

CEDAR ST.
ONE-WAY

CHESTNUT ST.
TWO-WAY

HALL COURT

FEEDER LINE

FEEDER LINE

POI #99: LANCASTER STREET
COMBINED SEWER

POI #1: CHESTNUT STREET
COMBINED SEWER

S1

TM 26-A-12
N/F JAMES W. HALL
SARAH MICHNIEWICZ
23909/341

TM 26-A-8
N/F ALBERT
BRESETTE
7951/275

SUBCATCHMENT LEGEND:

1 — SUBCATCHMENT NUMBER

SUBCATCHMENT EXTENTS

POI #1 — POINT OF INTEREST (POI)

1 — POND

FLOW PATH ARROWS

LEGEND:

EXISTING IMPERVIOUS AREAS:

EXISTING GREEN/ LANDSCAPED SPACE:

GENERAL NOTES:

1. REFER TO STORMWATER REPORT FOR MORE INFORMATION

10 0 10 20

SCALE: 1"=10'

PERMIT LEVEL
NOT ISSUED FOR
CONSTRUCTION

ISSUED FOR	BY	DATE
JOINT SITE PLAN APPLICATION	SJL	4/10/24

DRAWING NAME: PHASE 3: PRE DEVELOPMENT WATERSHED MAP

PROJECT NAME: PHASE 3 – PHASED OXFORD STREET REDEVELOPMENT

CLIENT: REVELER DEVELOPMENT
188 STATE STREET, 3RD FLOOR, PORTLAND, ME 04101

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JN:	1212
SCALE:	AS NOTED
DESIGNED BY:	SJL
DRAWN BY:	DNM
CHECKED BY:	SJL

DRAWING NO.
PRE

SECTION J

STORMWATER MANAGMENT REPORT

Attachment B: Post Development Watershed Map

PHASE 1 - 197 OXFORD STREET

SUBCATCHMENT LEGEND:

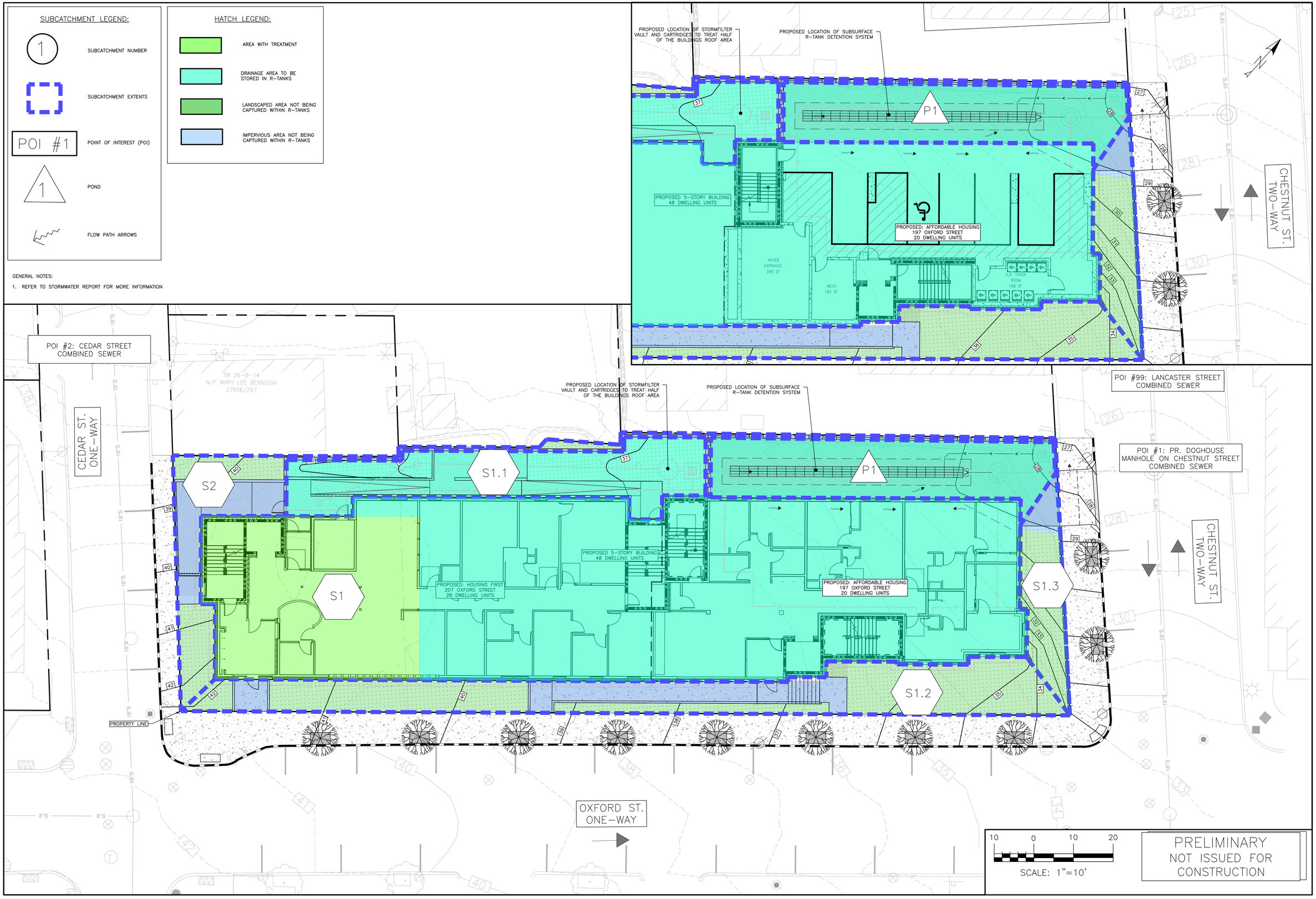
- 1 — SUBCATCHMENT NUMBER
- SUBCATCHMENT EXTENTS
- POI #1 — POINT OF INTEREST (POI)
- 1 — POND
- FLOW PATH ARROWS

HATCH LEGEND:

- AREA WITH TREATMENT
- DRAINAGE AREA TO BE STORED IN R-TANKS
- LANDSCAPED AREA NOT BEING CAPTURED WITHIN R-TANKS
- IMPERVIOUS AREA NOT BEING CAPTURED WITHIN R-TANKS

GENERAL NOTES:

1. REFER TO STORMWATER REPORT FOR MORE INFORMATION



ISSUED FOR	BY	DATE
JOINT MAJOR SITE PLAN APPLICATION	SJL	4/11/24

DRAWING NAME: **POST RE-DEVELOPMENT WATERSHED MAP**

PROJECT NAME: **PHASE 1 – PHASED OXFORD STREET REDEVELOPMENT**

CLIENT: AVESTA HOUSING
307 CUMBERLAND AVE, PORTLAND, ME 04101

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JN:	1212.1
SCALE:	AS NOTED
DESIGNED BY:	SJL
DRAWN BY:	DNM
CHECKED BY:	SJL

STATE OF MAINE
SAMUEL J. LEBEL
16506
LICENSED PROFESSIONAL ENGINEER

DRAWING NO.
POST

SECTION J

STORMWATER MANAGMENT REPORT

Attachment B: Post Development Watershed Map

PHASE 2 - 50 CEDAR STREET

LANCASTER STREET
TWO-WAY

POI #99: LANCASTER STREET
COMBINED SEWER

ELM STREET
ONE-WAY

CEDAR STREET
ONE-WAY

S2.3

S1.3

PROPOSED BUILDING:
50 CEDAR STREET
24-UNITS
(4,837 SF)

S1

PR. R-TANK SUBSURFACE
STORMWATER DETENTION SYSTEM

P1

PR. SUBSURFACE STORMFILTER
MANHOLE TO TREAT 50% OF
THE PR. BUILDINGS ROOF AREA

S1.1

S2.1

S2.2

AREA NOT ACCOUNTED FOR
IN 50 CEDAR STREET
ANALYSIS, GIVEN AREA WAS
ACCOUNTED FOR WITHIN THE
89 ELM STREET R-TANK

OHE / T / C

TM 26-B-7
N/F FRANK E. DIDONATO
DONNA E. COX
24885/320

197 OXFORD STREET LLC
39779/241
3,674 S.F. ±
0.08 ACRES ±

197 OXFORD STREET LLC
39779/239
11,550 S.F. ±
0.265 ACRES ±

TEMP. BUILDINGS
GABEZO
2-1/2 STORY WOOD FRAME
PORCH w/OVERHANG
CONC. STEPS
1 STORY BRICK
PORCH
CONC
GM
THRESH=38.80
PLANTERS
CHAIN LINK FENCE
GUARDRAIL

SUBCATCHMENT LEGEND:

1 — SUBCATCHMENT NUMBER

SUBCATCHMENT EXTENTS

POI #1 — POINT OF INTEREST (POI)

1 — POND

FLOW PATH ARROWS

HATCH LEGEND:

AREA WITH TREATMENT

DRAINAGE AREA TO BE STORED IN R-TANKS

LANDSCAPED AREA NOT BEING CAPTURED WITHIN R-TANKS

IMPERVIOUS AREA NOT BEING CAPTURED WITHIN R-TANKS

GENERAL NOTES:

1. REFER TO STORMWATER REPORT FOR MORE INFORMATION

20 0 20 40

SCALE: 1" = 20'

PERMIT LEVEL
NOT ISSUED FOR
CONSTRUCTION

ISSUED FOR	BY	DATE
JOINT MAJOR SITE PLAN APPLICATION	SJL	4/10/24

DRAWING NAME: PHASE 2 – POST DEVELOPMENT WATERSHED MAP

PROJECT NAME: PHASE 2 –PHASED OXFORD STREET REDEVELOPMENT

CLIENT: REVELER DEVELOPMENT
188 STATE STREET, 3RD FLOOR, PORTLAND, ME 04101

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FILE:	1212.2_AE_CIVIL
JN:	1212
SCALE:	AS NOTED
DESIGNED BY:	SJL
DRAWN BY:	DNM
CHECKED BY:	SJL

STATE OF MAINE
SAMUEL J. LEBEL
16506
LICENSED PROFESSIONAL ENGINEER

DRAWING NO.
POST

SECTION J

STORMWATER MANAGMENT REPORT

Attachment B: Post Development Watershed Map

PHASE 3 - 158 LANCASTER STREET

GENERAL NOTES:

1. ALL WORK WITHIN THE CITY STREET RIGHT OF WAY SHALL MEET CITY OF PORTLAND TECHNICAL MANUAL STANDARDS.
2. DESIGN OF TEMPORARY SOIL RESTRAINT MEASURES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR IF NECESSARY FOR CONSTRUCTION.
3. CONTRACTOR SHALL ENSURE THAT UNDERDRAINS ARE CONSTRUCTED WITH POSITIVE OUTLET TO PROPOSED CONNECTIONS.
4. CATCH BASIN INLET PROTECTION TO BE INSTALLED WITHIN ANY STRUCTURES DOWNGRADIENT OF ACTIVE CONSTRUCTION.
5. SEDIMENTATION BARRIERS ARE TO BE INSTALLED DOWNGRADIENT OF ALL ACTIVE CONSTRUCTION WORK PER DETAIL. BARRIERS TO NOT EXTEND PAST PROPERTY LINES; BARRIERS SHOWN OFFSET FROM PROPERTY LINES ON PLANS FOR VISUAL PURPOSES ONLY.
6. CONTRACTOR SHALL VERIFY BOTTOM AND TOP OF CURB ELEVATIONS ALONG BUILDING FRONTAGES PRIOR TO CONSTRUCTION OF THE FOUNDATIONS. CONTACT ENGINEER PRIOR TO CONSTRUCTION IF DISCREPANCIES ARE FOUND.

BUILDING HEIGHT CALCULATION:

AVERAGE GRADE:
(13.25'+14.41'+11.69'+17.00'+22.00'+16.50')/6 = 15.81'

ROOF HEIGHT: 67.10'

BUILDING HEIGHT: 51.29'

LANCASTER ST.
TWO-WAY

POI #99: LANCASTER STREET
COMBINED SEWER

POI #1: PR. DOGHOUSE
MANHOLE ON CHESTNUT STREET
COMBINED SEWER

EX. SMH RIM: 11.20'
INV. IN: 5.02' (18")
INV. IN: 5.82' (8")
INV. IN: 5.62' (6")
INV. OUT: 4.92' (18")

APPROX. LOCATION OF EX. 18" COMBINED SEWER, SLOPE OF SEWER VARIES ALONG CHESTNUT STREET. SLOPE FROM EX. MH TO PR. DOGHOUSE MH = 1.25% BASED ON DPW "CHESTNUT STREET SEWER" PLAN, SHEET 467, DATED 2/1959

APPROX. LOCATION OF PROPOSED 6' DOGHOUSE MANHOLE TO ACCEPT SANITARY AND STORM FLOWS FROM 158 LANCASTER STREET. PR. 6" PVC SEWER LATERAL TO MATCH SPRINGLINE OF EXISTING 18" SEWER MAIN WITH INSERTA-TEE. STORM DRAIN INVERT TO BE SET 18" HIGHER THAN SEWER INVERT. CONTRACTOR TO TEST PIT AND CONFIRM INVERT OF EX. SEWER AND CONFIRM WITH CIVIL ENGINEER PRIOR TO CONSTRUCTION.
RIM: 12.00'
12" INV. IN: 7.62' (STORM DRAIN)
18" APPROX. INV. OF EX. MAIN: 5.37'
6" INV. IN: 6.25' (SEWER)

PR. R-TANK SUBSURFACE
STORMWATER DETENTION SYSTEM

PROPOSED BUILDING
158 LANCASTER STREET
BUILDING FOOTPRINT: 4,920 SF

S1.1 S1 S1.2 S2 P1

CEDAR ST.
ONE-WAY

CHESTNUT ST.
TWO-WAY

HALL COURT

10.00'

SUBCATCHMENT LEGEND:

1 — SUBCATCHMENT NUMBER

SUBCATCHMENT EXTENTS

POI #1 — POINT OF INTEREST (POI)

1 — POND

FLOW PATH ARROWS

LEGEND:

PROPOSED AREA TO BE STORED IN R-TANK SUBSURFACE DETENTION SYSTEM:

PROPOSED GREEN/LANDSCAPED SPACE TO BE STORED IN R-TANKS:

PROPOSED IMPERVIOUS AREAS:

PROPOSED GREEN/ LANDSCAPED SPACE:

GENERAL NOTES:

1. REFER TO STORMWATER REPORT FOR MORE INFORMATION

10 0 10 20
SCALE: 1"=10'

PERMIT LEVEL
NOT ISSUED FOR
CONSTRUCTION

ISSUED FOR	BY	DATE
JOINT SITE PLAN APPLICATION	SJL	4/10/24
COMMENT RESPONSE	SJL	9/30/24

DRAWING NAME: PHASE 3: POST DEVELOPMENT WATERSHED MAP

PROJECT NAME: PHASE 3 – PHASED OXFORD STREET REDEVELOPMENT

CLIENT: REVELER DEVELOPMENT
188 STATE STREET, 3RD FLOOR, PORTLAND, ME 04101

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1212_AE_CIVIL
JN: 1212
SCALE: AS NOTED
DESIGNED BY: SJL
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SECTION J

STORMWATER MANAGMENT REPORT

Attachment C: HydroCAD Calculations

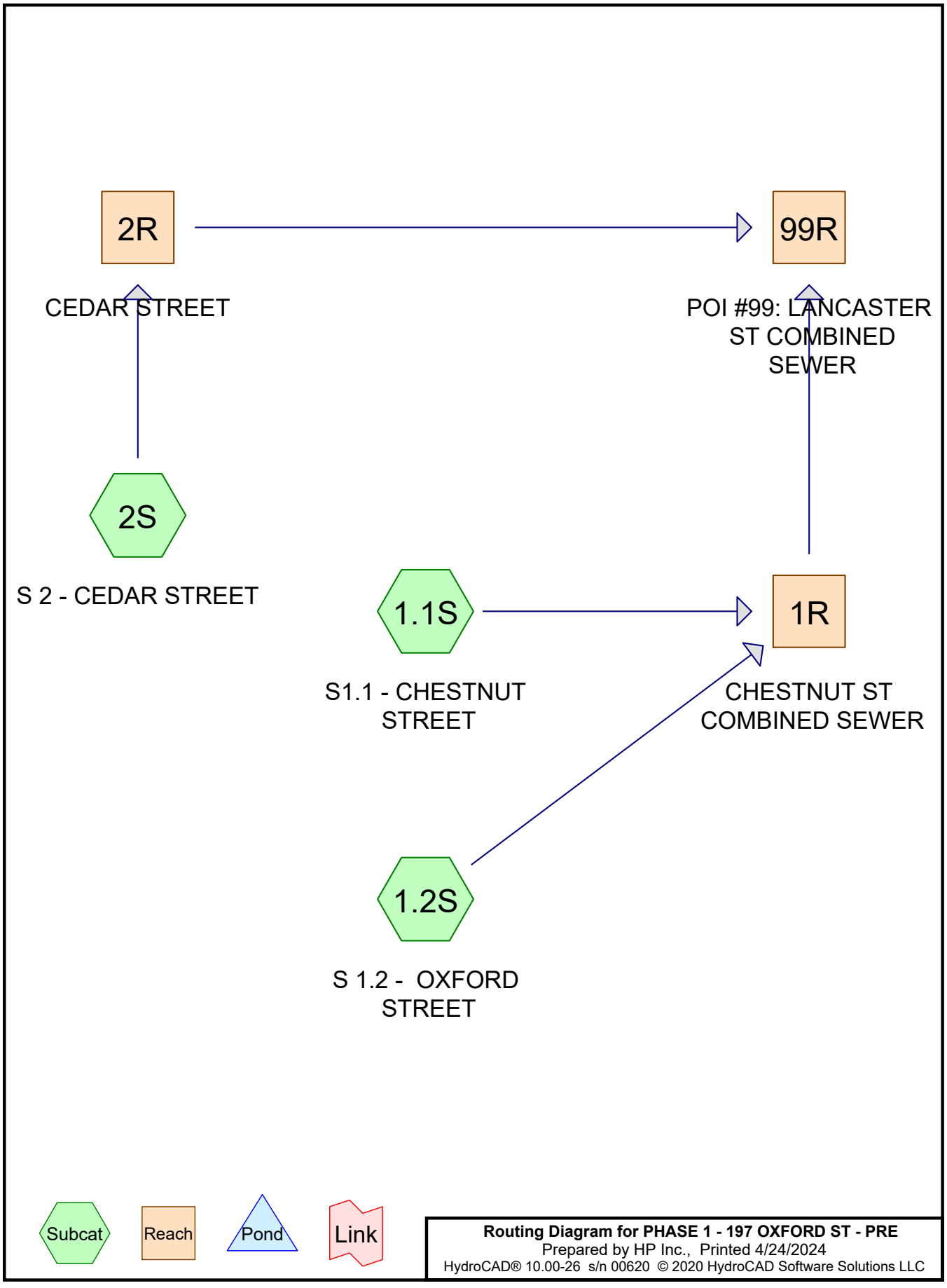
PHASE 1 - 197 OXFORD STREET

SECTION J

STORMWATER MANAGMENT REPORT

Attachment C: Pre Development HydroCAD

PHASE 1 - 197 OXFORD STREET



Routing Diagram for PHASE 1 - 197 OXFORD ST - PRE
Prepared by HP Inc., Printed 4/24/2024
HydroCAD® 10.00-26 s/n 00620 © 2020 HydroCAD Software Solutions LLC

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.121	68	<50% Grass cover, Poor, HSG A (1.1S, 2S)
0.016	48	Brush, Poor, HSG A (1.1S)
0.059	96	Gravel surface, HSG A (1.2S, 2S)
0.135	98	Roof (1.1S, 1.2S, 2S)
0.020	98	Unconnected pavement, HSG A (1.1S, 1.2S, 2S)
0.350	**85**	**TOTAL AREA**

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.216	HSG A	1.1S, 1.2S, 2S
0.000	HSG B	
0.000	HSG C	
0.000	HSG D	
0.135	Other	1.1S, 1.2S, 2S
0.350		**TOTAL AREA**

Ground Covers (all nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.121	0.000	0.000	0.000	0.000	0.121	<50% Grass cover, Poor	1.1S, 2S
0.016	0.000	0.000	0.000	0.000	0.016	Brush, Poor	1.1S
0.059	0.000	0.000	0.000	0.000	0.059	Gravel surface	1.2S, 2S
0.000	0.000	0.000	0.000	0.135	0.135	Roof	1.1S, 1.2S, 2S
0.020	0.000	0.000	0.000	0.000	0.020	Unconnected pavement	1.1S, 1.2S, 2S
0.216	**0.000**	**0.000**	**0.000**	**0.135**	**0.350**	**TOTAL AREA**	

Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1.1S: S1.1 - CHESTNUT Runoff Area=7,971 sf 36.57% Impervious Runoff Depth=1.14"
Tc=6.0 min CN=77 Runoff=0.24 cfs 0.017 af

Subcatchment 1.2S: S 1.2 - OXFORD Runoff Area=5,013 sf 69.14% Impervious Runoff Depth=2.76"
Tc=6.0 min CN=97 Runoff=0.34 cfs 0.026 af

Subcatchment 2S: S 2 - CEDAR STREET Runoff Area=2,269 sf 15.16% Impervious Runoff Depth=1.67"
Tc=6.0 min CN=85 Runoff=0.10 cfs 0.007 af

Reach 1R: CHESTNUT ST COMBINED SEWER Inflow=0.58 cfs 0.044 af
Outflow=0.58 cfs 0.044 af

Reach 2R: CEDAR STREET Inflow=0.10 cfs 0.007 af
Outflow=0.10 cfs 0.007 af

Reach 99R: POI #99: LANCASTER ST COMBINED SEWER Inflow=0.68 cfs 0.051 af
Outflow=0.68 cfs 0.051 af

Total Runoff Area = 0.350 ac Runoff Volume = 0.051 af Average Runoff Depth = 1.75"
55.91% Pervious = 0.196 ac 44.09% Impervious = 0.154 ac

Summary for Subcatchment 1.1S: S1.1 - CHESTNUT STREET

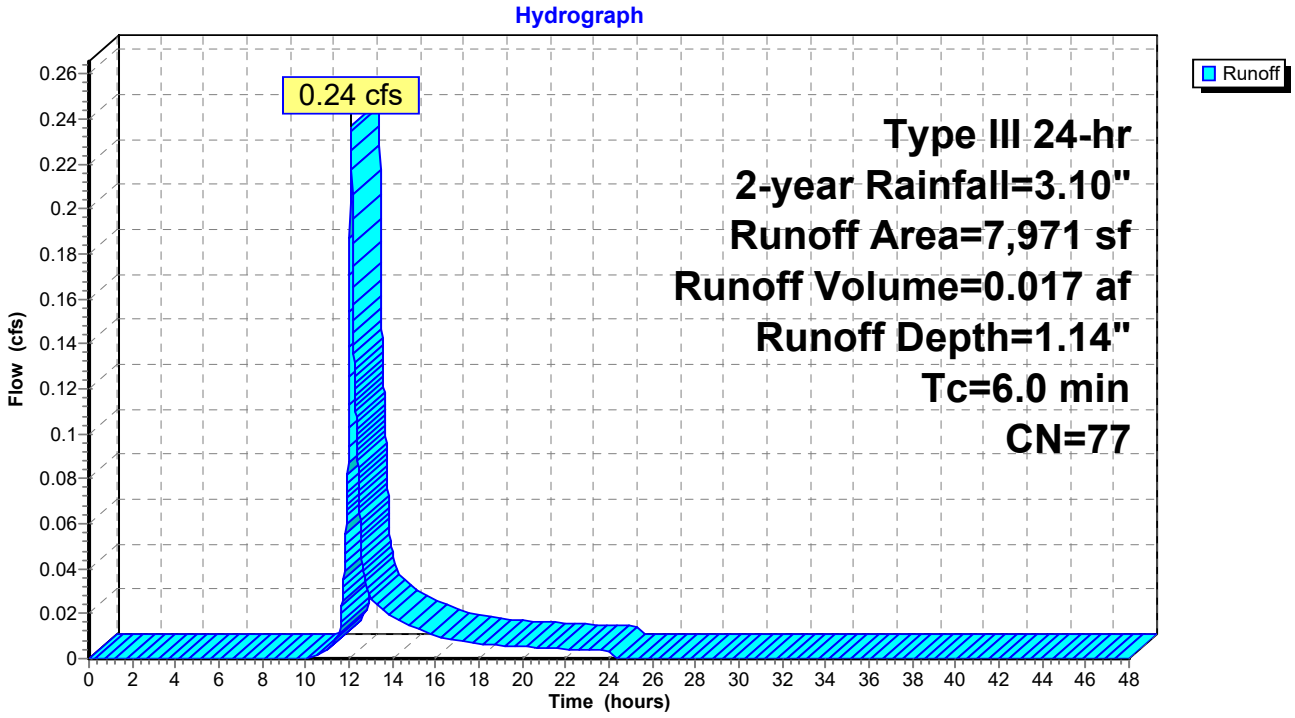
Runoff = 0.24 cfs @ 12.09 hrs, Volume= 0.017 af, Depth= 1.14"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-year Rainfall=3.10"

	Area (sf)	CN	Description
*	2,308	98	Roof
	607	98	Unconnected pavement, HSG A
	1,344	68	<50% Grass cover, Poor, HSG A
	690	48	Brush, Poor, HSG A
	3,022	68	<50% Grass cover, Poor, HSG A
	7,971	77	Weighted Average
	5,056		63.43% Pervious Area
	2,915		36.57% Impervious Area
	607		20.82% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 1.1S: S1.1 - CHESTNUT STREET



Summary for Subcatchment 1.2S: S 1.2 - OXFORD STREET

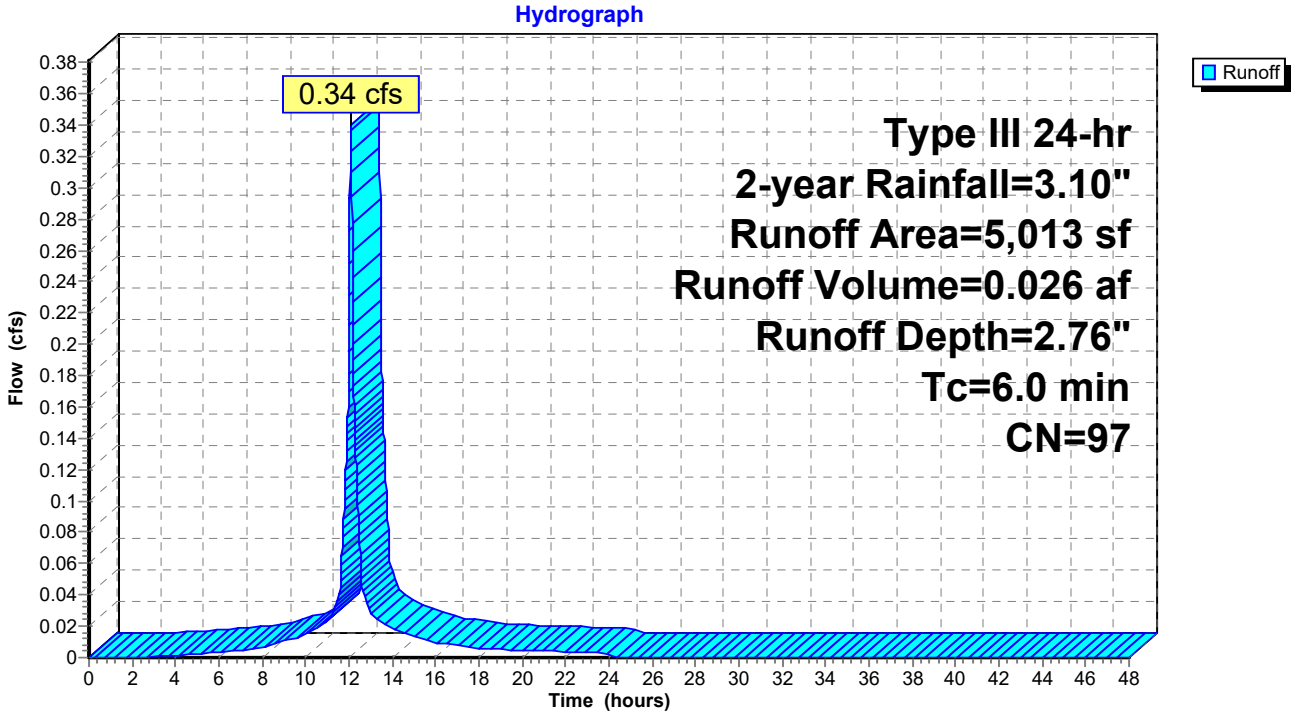
Runoff = 0.34 cfs @ 12.08 hrs, Volume= 0.026 af, Depth= 2.76"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-year Rainfall=3.10"

	Area (sf)	CN	Description
*	3,244	98	Roof
	222	98	Unconnected pavement, HSG A
	1,547	96	Gravel surface, HSG A
	5,013	97	Weighted Average
	1,547		30.86% Pervious Area
	3,466		69.14% Impervious Area
	222		6.41% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 1.2S: S 1.2 - OXFORD STREET



Summary for Subcatchment 2S: S 2 - CEDAR STREET

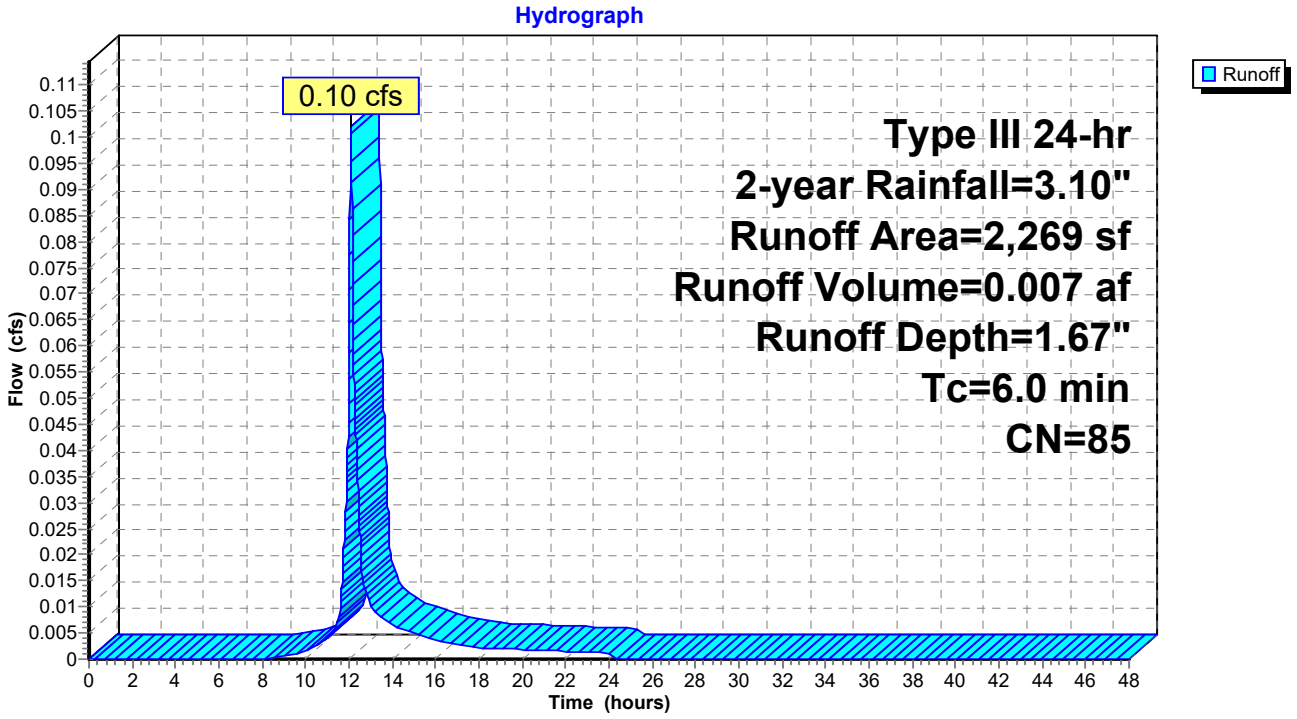
Runoff = 0.10 cfs @ 12.09 hrs, Volume= 0.007 af, Depth= 1.67"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-year Rainfall=3.10"

	Area (sf)	CN	Description
*	311	98	Roof
	33	98	Unconnected pavement, HSG A
	904	68	<50% Grass cover, Poor, HSG A
	1,021	96	Gravel surface, HSG A
	2,269	85	Weighted Average
	1,925		84.84% Pervious Area
	344		15.16% Impervious Area
	33		9.59% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 2S: S 2 - CEDAR STREET

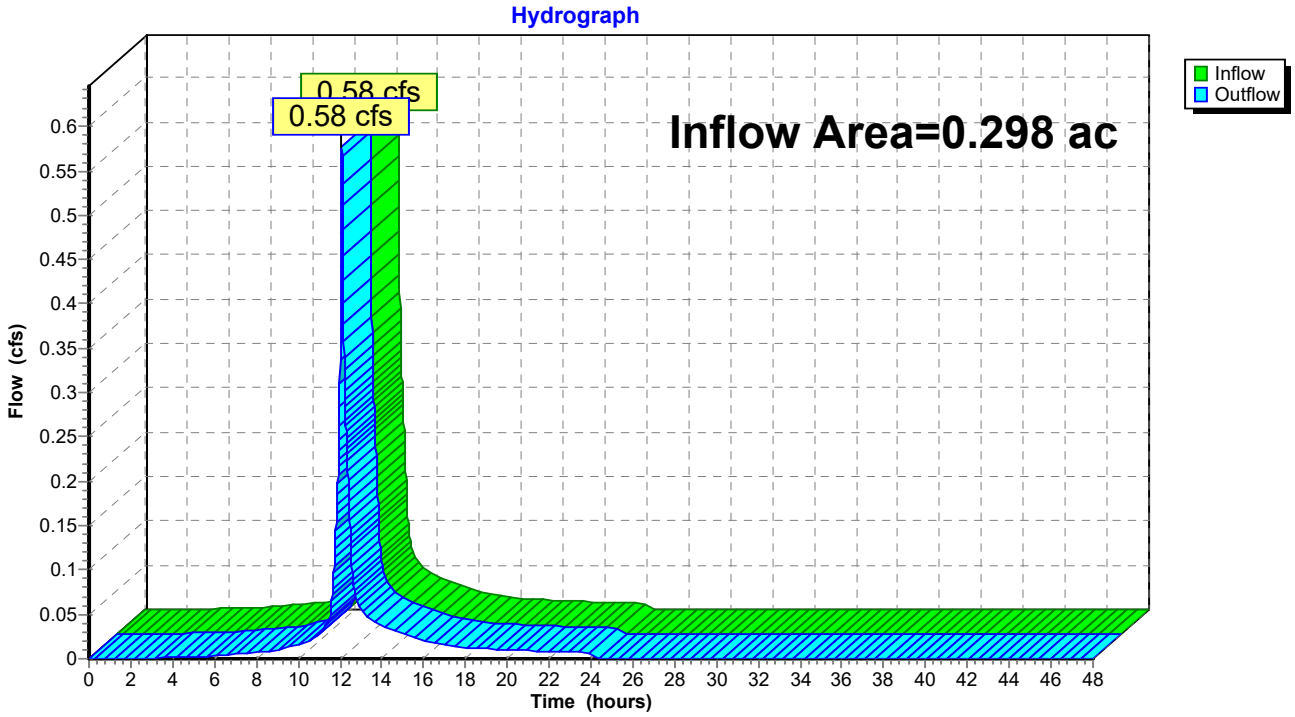


Summary for Reach 1R: CHESTNUT ST COMBINED SEWER

Inflow Area = 0.298 ac, 49.15% Impervious, Inflow Depth = 1.77" for 2-year event
Inflow = 0.58 cfs @ 12.09 hrs, Volume= 0.044 af
Outflow = 0.58 cfs @ 12.09 hrs, Volume= 0.044 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Reach 1R: CHESTNUT ST COMBINED SEWER

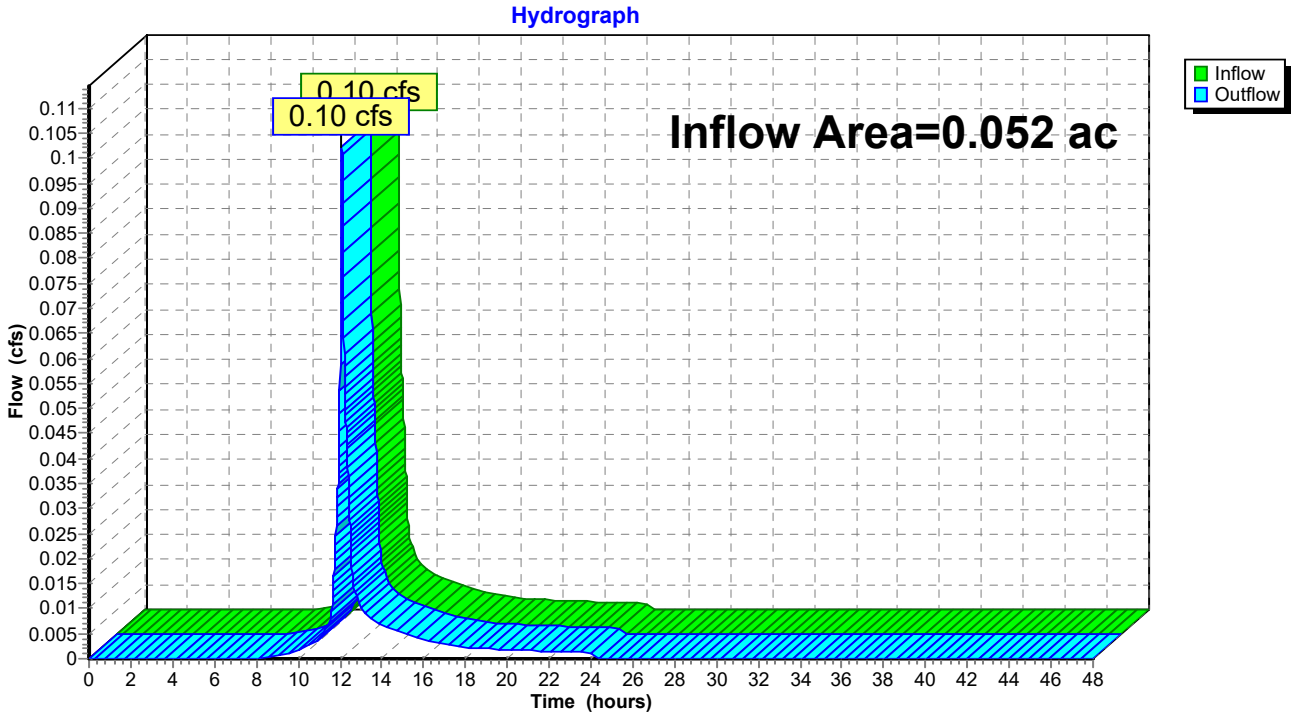


Summary for Reach 2R: CEDAR STREET

Inflow Area = 0.052 ac, 15.16% Impervious, Inflow Depth = 1.67" for 2-year event
Inflow = 0.10 cfs @ 12.09 hrs, Volume= 0.007 af
Outflow = 0.10 cfs @ 12.09 hrs, Volume= 0.007 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Reach 2R: CEDAR STREET

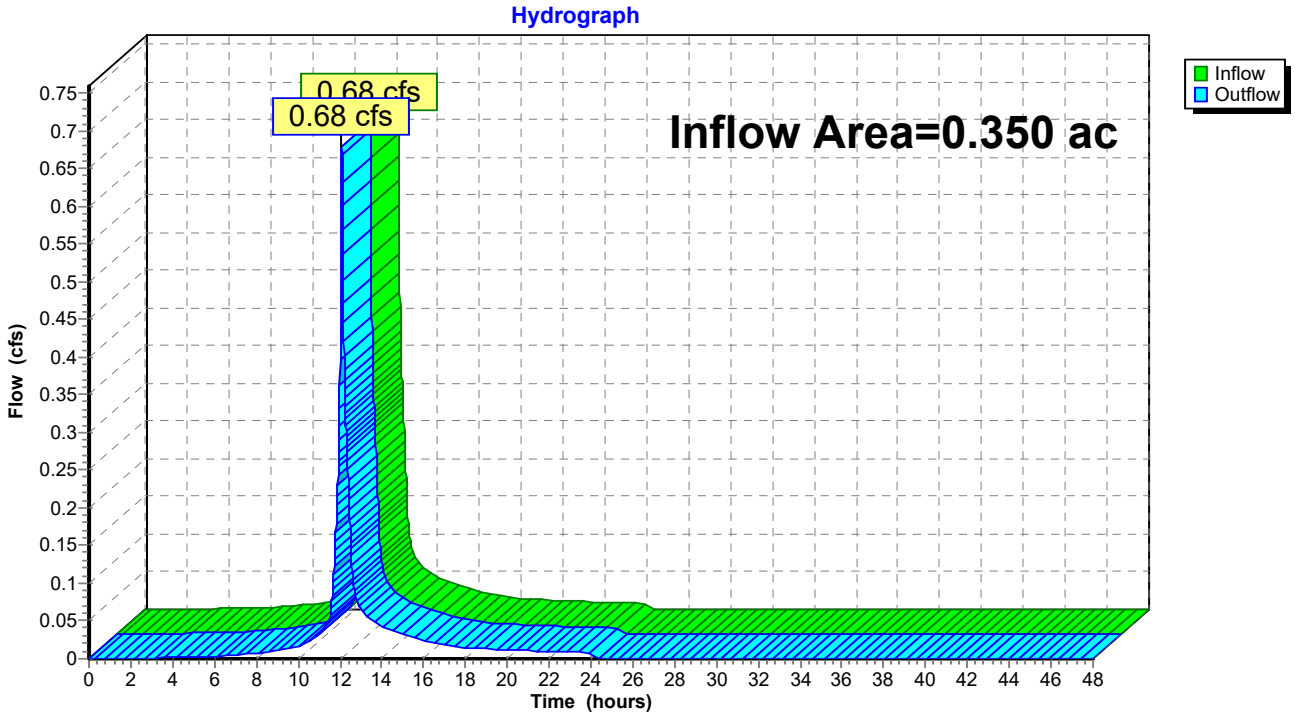


Summary for Reach 99R: POI #99: LANCASTER ST COMBINED SEWER

Inflow Area = 0.350 ac, 44.09% Impervious, Inflow Depth = 1.75" for 2-year event
Inflow = 0.68 cfs @ 12.09 hrs, Volume= 0.051 af
Outflow = 0.68 cfs @ 12.09 hrs, Volume= 0.051 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Reach 99R: POI #99: LANCASTER ST COMBINED SEWER



Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1.1S: S1.1 - CHESTNUT Runoff Area=7,971 sf 36.57% Impervious Runoff Depth=2.29"
Tc=6.0 min CN=77 Runoff=0.49 cfs 0.035 af

Subcatchment 1.2S: S 1.2 - OXFORD Runoff Area=5,013 sf 69.14% Impervious Runoff Depth=4.25"
Tc=6.0 min CN=97 Runoff=0.51 cfs 0.041 af

Subcatchment 2S: S 2 - CEDAR STREET Runoff Area=2,269 sf 15.16% Impervious Runoff Depth=3.00"
Tc=6.0 min CN=85 Runoff=0.18 cfs 0.013 af

Reach 1R: CHESTNUT ST COMBINED SEWER Inflow=1.00 cfs 0.076 af
Outflow=1.00 cfs 0.076 af

Reach 2R: CEDAR STREET Inflow=0.18 cfs 0.013 af
Outflow=0.18 cfs 0.013 af

Reach 99R: POI #99: LANCASTER ST COMBINED SEWER Inflow=1.19 cfs 0.089 af
Outflow=1.19 cfs 0.089 af

Total Runoff Area = 0.350 ac Runoff Volume = 0.089 af Average Runoff Depth = 3.04"
55.91% Pervious = 0.196 ac 44.09% Impervious = 0.154 ac

Summary for Subcatchment 1.1S: S1.1 - CHESTNUT STREET

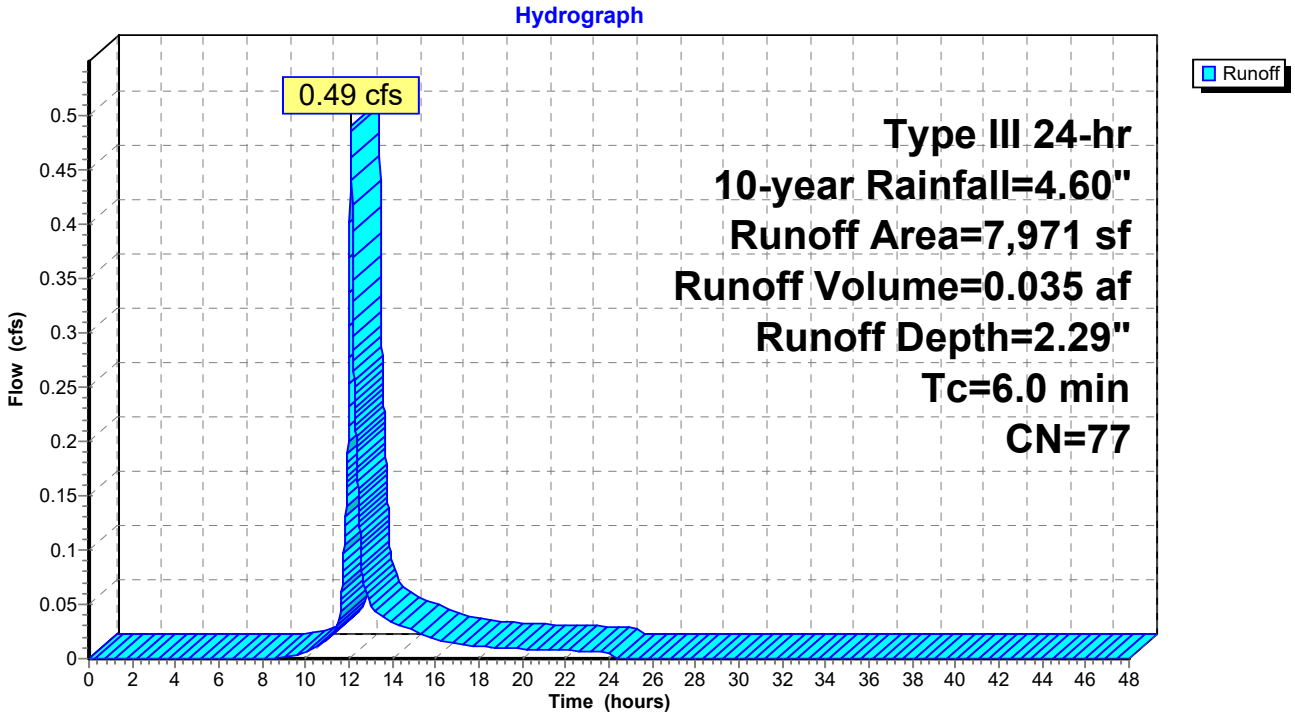
Runoff = 0.49 cfs @ 12.09 hrs, Volume= 0.035 af, Depth= 2.29"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-year Rainfall=4.60"

	Area (sf)	CN	Description
*	2,308	98	Roof
	607	98	Unconnected pavement, HSG A
	1,344	68	<50% Grass cover, Poor, HSG A
	690	48	Brush, Poor, HSG A
	3,022	68	<50% Grass cover, Poor, HSG A
	7,971	77	Weighted Average
	5,056		63.43% Pervious Area
	2,915		36.57% Impervious Area
	607		20.82% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 1.1S: S1.1 - CHESTNUT STREET



Summary for Subcatchment 1.2S: S 1.2 - OXFORD STREET

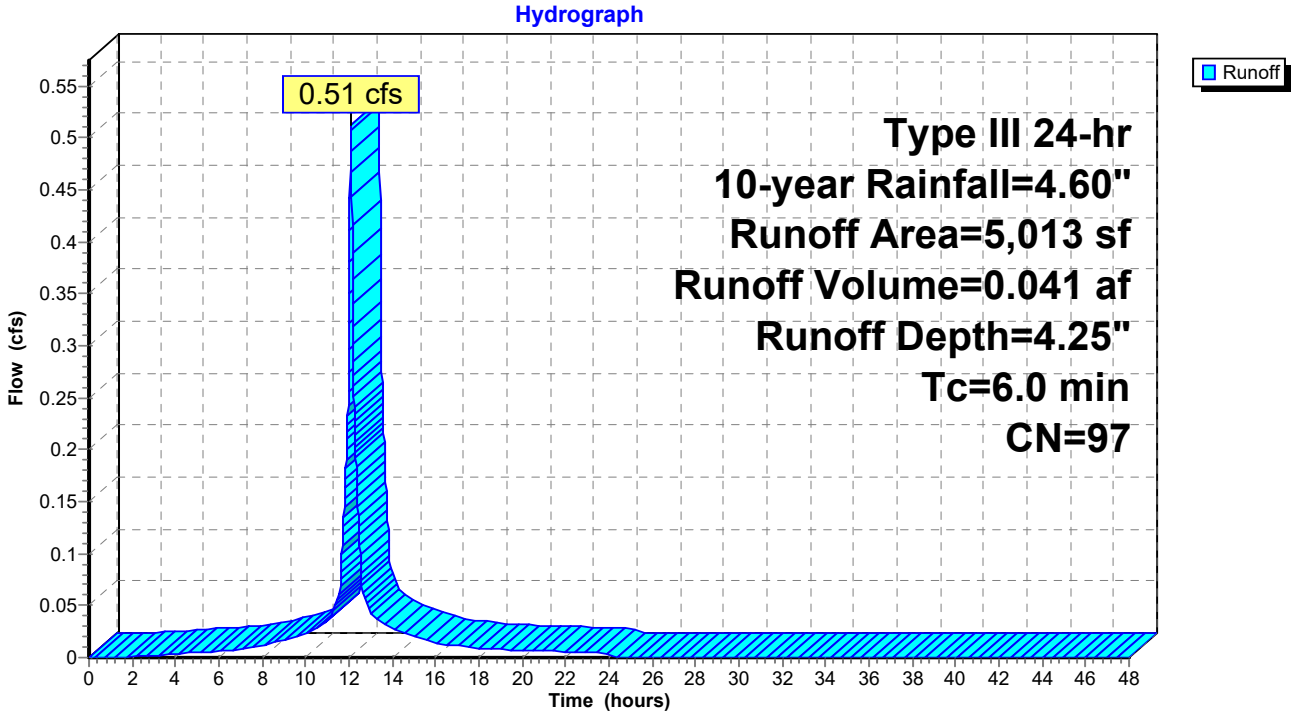
Runoff = 0.51 cfs @ 12.08 hrs, Volume= 0.041 af, Depth= 4.25"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-year Rainfall=4.60"

	Area (sf)	CN	Description
*	3,244	98	Roof
	222	98	Unconnected pavement, HSG A
	1,547	96	Gravel surface, HSG A
	5,013	97	Weighted Average
	1,547		30.86% Pervious Area
	3,466		69.14% Impervious Area
	222		6.41% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 1.2S: S 1.2 - OXFORD STREET



Summary for Subcatchment 2S: S 2 - CEDAR STREET

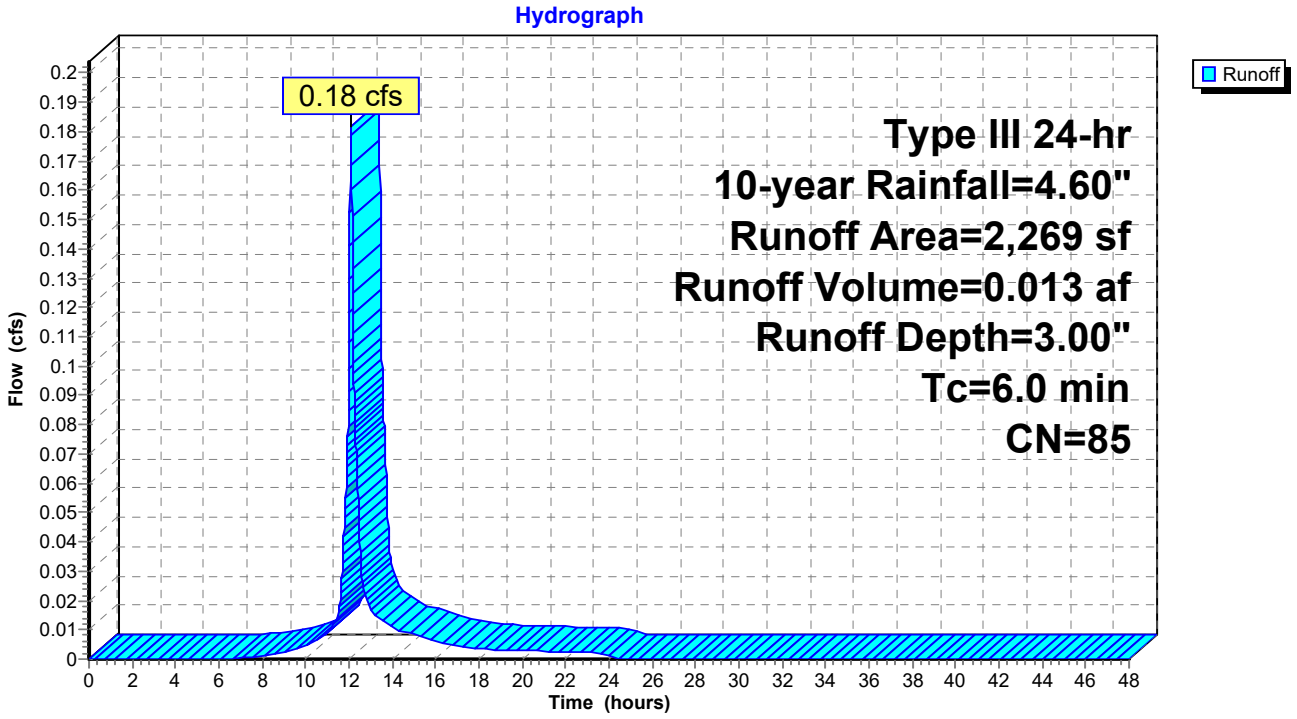
Runoff = 0.18 cfs @ 12.09 hrs, Volume= 0.013 af, Depth= 3.00"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-year Rainfall=4.60"

	Area (sf)	CN	Description
*	311	98	Roof
	33	98	Unconnected pavement, HSG A
	904	68	<50% Grass cover, Poor, HSG A
	1,021	96	Gravel surface, HSG A
	2,269	85	Weighted Average
	1,925		84.84% Pervious Area
	344		15.16% Impervious Area
	33		9.59% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 2S: S 2 - CEDAR STREET

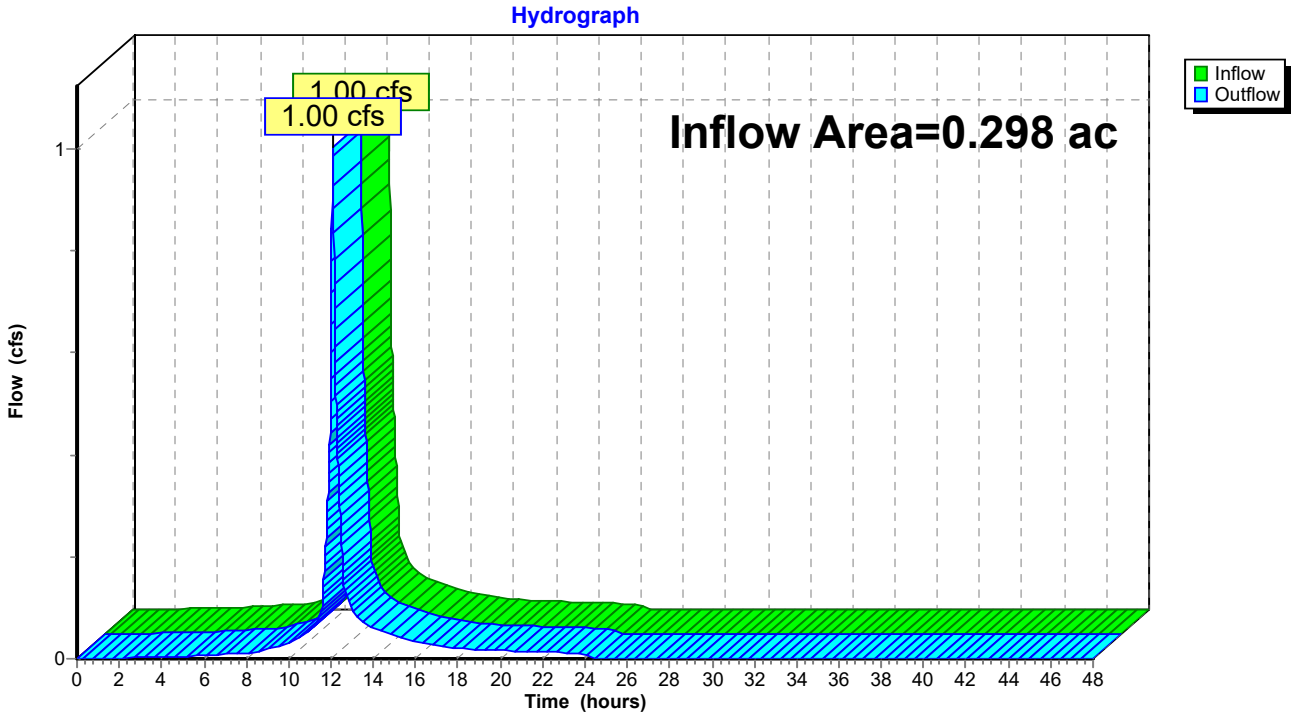


Summary for Reach 1R: CHESTNUT ST COMBINED SEWER

Inflow Area = 0.298 ac, 49.15% Impervious, Inflow Depth = 3.05" for 10-year event
Inflow = 1.00 cfs @ 12.09 hrs, Volume= 0.076 af
Outflow = 1.00 cfs @ 12.09 hrs, Volume= 0.076 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Reach 1R: CHESTNUT ST COMBINED SEWER

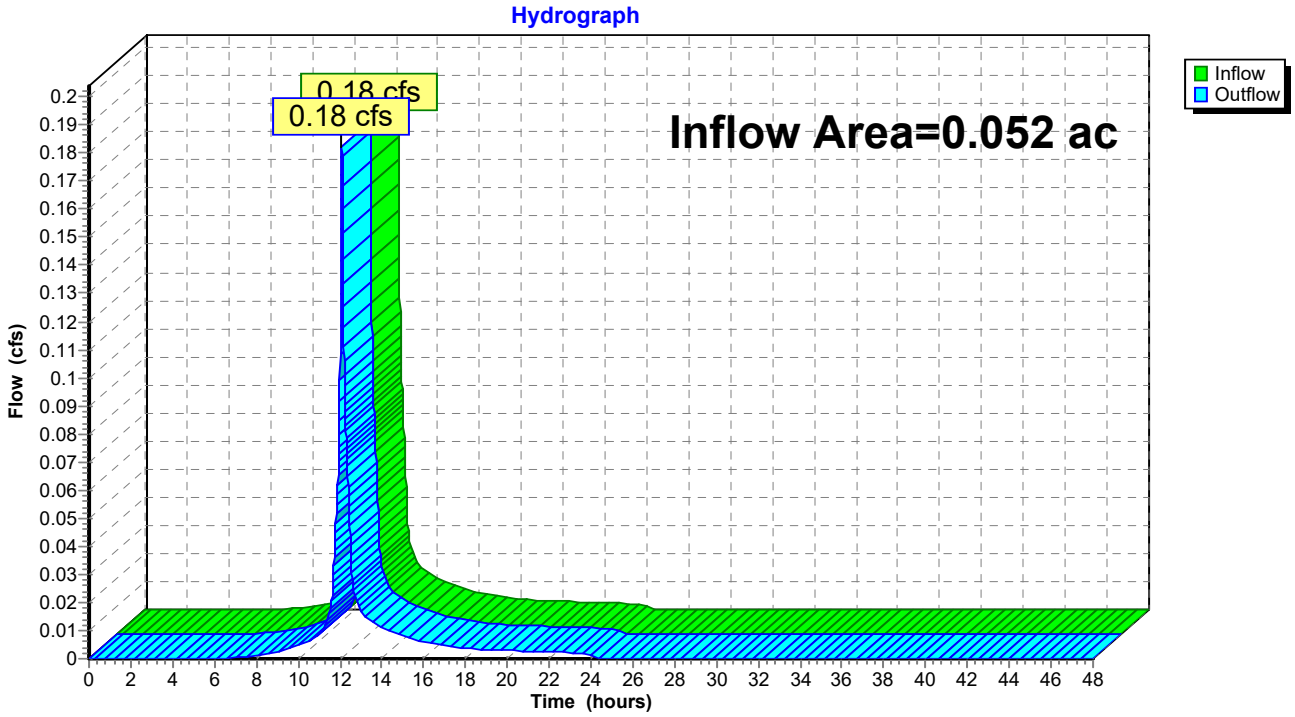


Summary for Reach 2R: CEDAR STREET

Inflow Area = 0.052 ac, 15.16% Impervious, Inflow Depth = 3.00" for 10-year event
Inflow = 0.18 cfs @ 12.09 hrs, Volume= 0.013 af
Outflow = 0.18 cfs @ 12.09 hrs, Volume= 0.013 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Reach 2R: CEDAR STREET

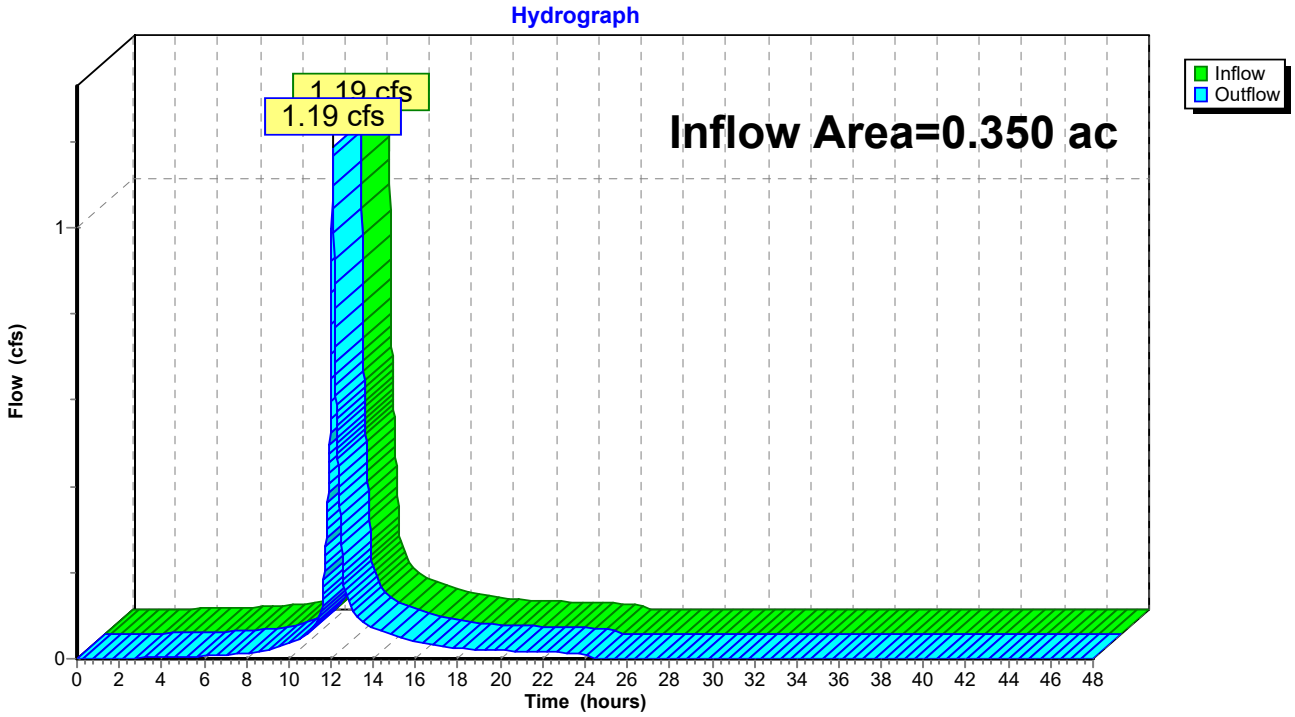


Summary for Reach 99R: POI #99: LANCASTER ST COMBINED SEWER

Inflow Area = 0.350 ac, 44.09% Impervious, Inflow Depth = 3.04" for 10-year event
Inflow = 1.19 cfs @ 12.09 hrs, Volume= 0.089 af
Outflow = 1.19 cfs @ 12.09 hrs, Volume= 0.089 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Reach 99R: POI #99: LANCASTER ST COMBINED SEWER



Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1.1S: S1.1 - CHESTNUT Runoff Area=7,971 sf 36.57% Impervious Runoff Depth=3.31"
Tc=6.0 min CN=77 Runoff=0.71 cfs 0.050 af

Subcatchment 1.2S: S 1.2 - OXFORD Runoff Area=5,013 sf 69.14% Impervious Runoff Depth=5.44"
Tc=6.0 min CN=97 Runoff=0.65 cfs 0.052 af

Subcatchment 2S: S 2 - CEDAR STREET Runoff Area=2,269 sf 15.16% Impervious Runoff Depth=4.11"
Tc=6.0 min CN=85 Runoff=0.25 cfs 0.018 af

Reach 1R: CHESTNUT ST COMBINED SEWER Inflow=1.36 cfs 0.103 af
Outflow=1.36 cfs 0.103 af

Reach 2R: CEDAR STREET Inflow=0.25 cfs 0.018 af
Outflow=0.25 cfs 0.018 af

Reach 99R: POI #99: LANCASTER ST COMBINED SEWER Inflow=1.61 cfs 0.120 af
Outflow=1.61 cfs 0.120 af

Total Runoff Area = 0.350 ac Runoff Volume = 0.120 af Average Runoff Depth = 4.13"
55.91% Pervious = 0.196 ac 44.09% Impervious = 0.154 ac

Summary for Subcatchment 1.1S: S1.1 - CHESTNUT STREET

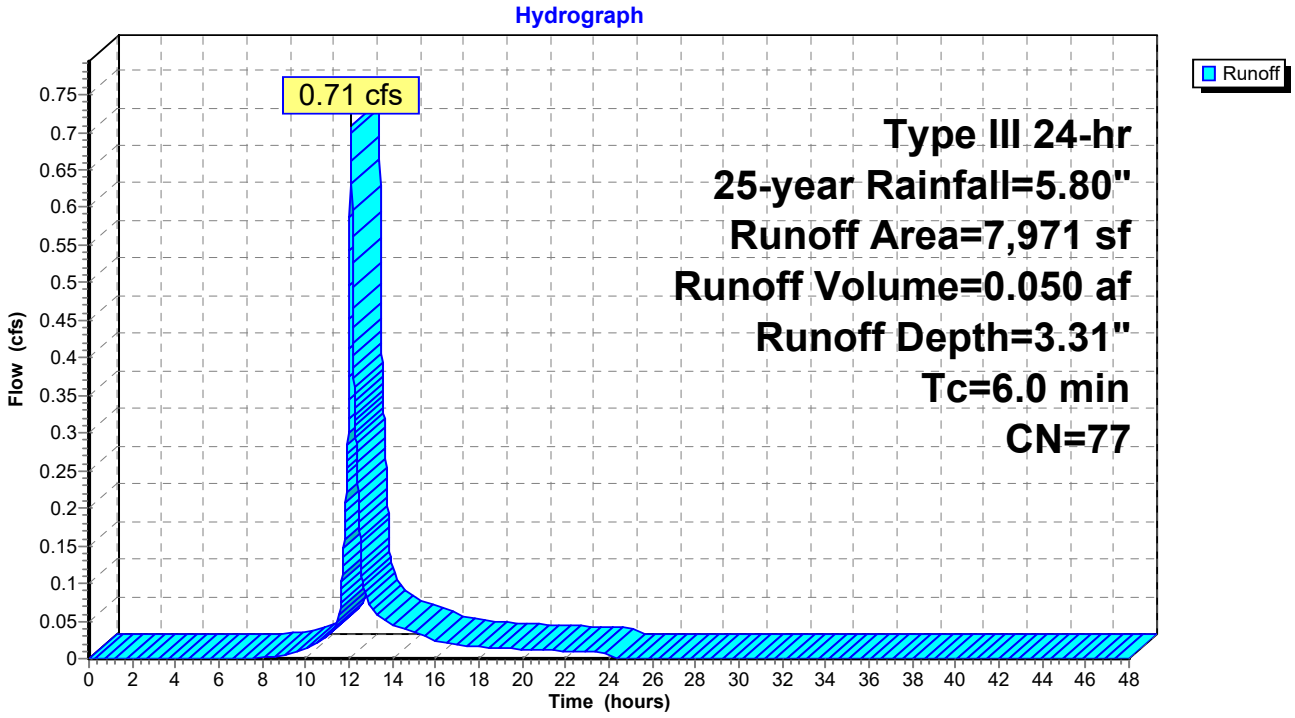
Runoff = 0.71 cfs @ 12.09 hrs, Volume= 0.050 af, Depth= 3.31"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-year Rainfall=5.80"

	Area (sf)	CN	Description
*	2,308	98	Roof
	607	98	Unconnected pavement, HSG A
	1,344	68	<50% Grass cover, Poor, HSG A
	690	48	Brush, Poor, HSG A
	3,022	68	<50% Grass cover, Poor, HSG A
	7,971	77	Weighted Average
	5,056		63.43% Pervious Area
	2,915		36.57% Impervious Area
	607		20.82% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 1.1S: S1.1 - CHESTNUT STREET



Summary for Subcatchment 1.2S: S 1.2 - OXFORD STREET

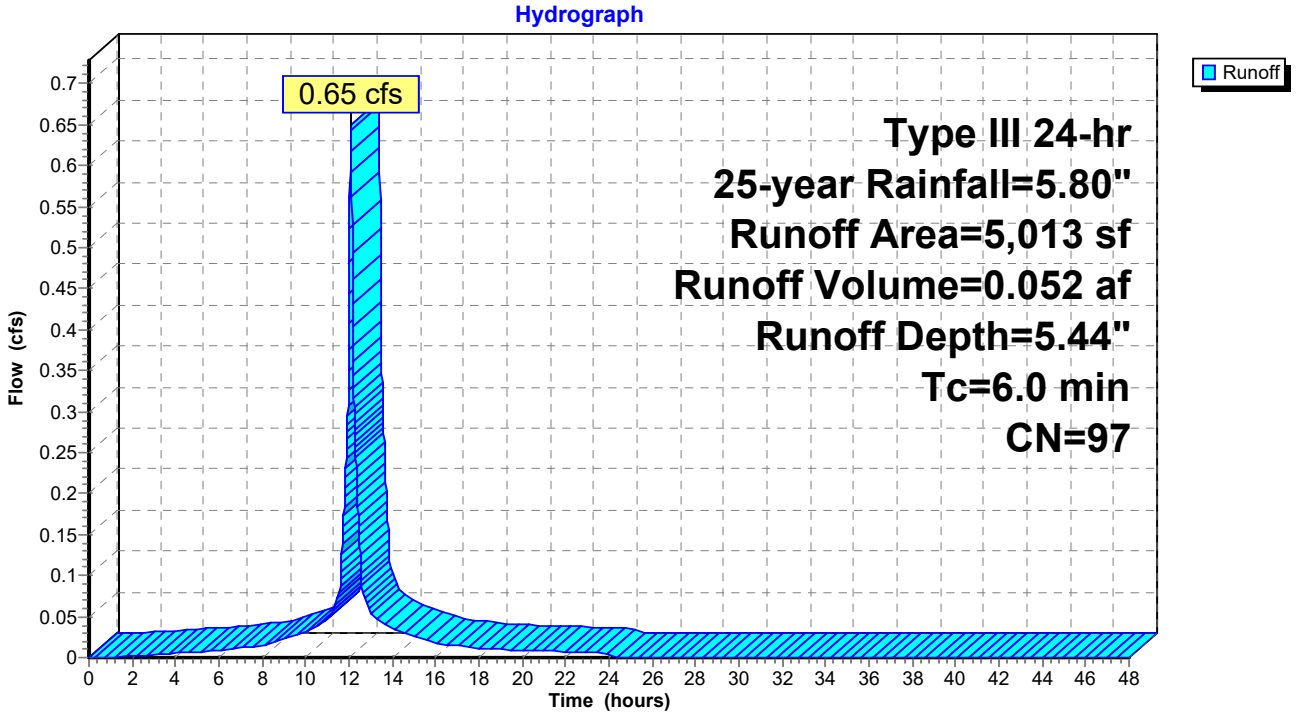
Runoff = 0.65 cfs @ 12.08 hrs, Volume= 0.052 af, Depth= 5.44"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-year Rainfall=5.80"

	Area (sf)	CN	Description
*	3,244	98	Roof
	222	98	Unconnected pavement, HSG A
	1,547	96	Gravel surface, HSG A
	5,013	97	Weighted Average
	1,547		30.86% Pervious Area
	3,466		69.14% Impervious Area
	222		6.41% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 1.2S: S 1.2 - OXFORD STREET



Summary for Subcatchment 2S: S 2 - CEDAR STREET

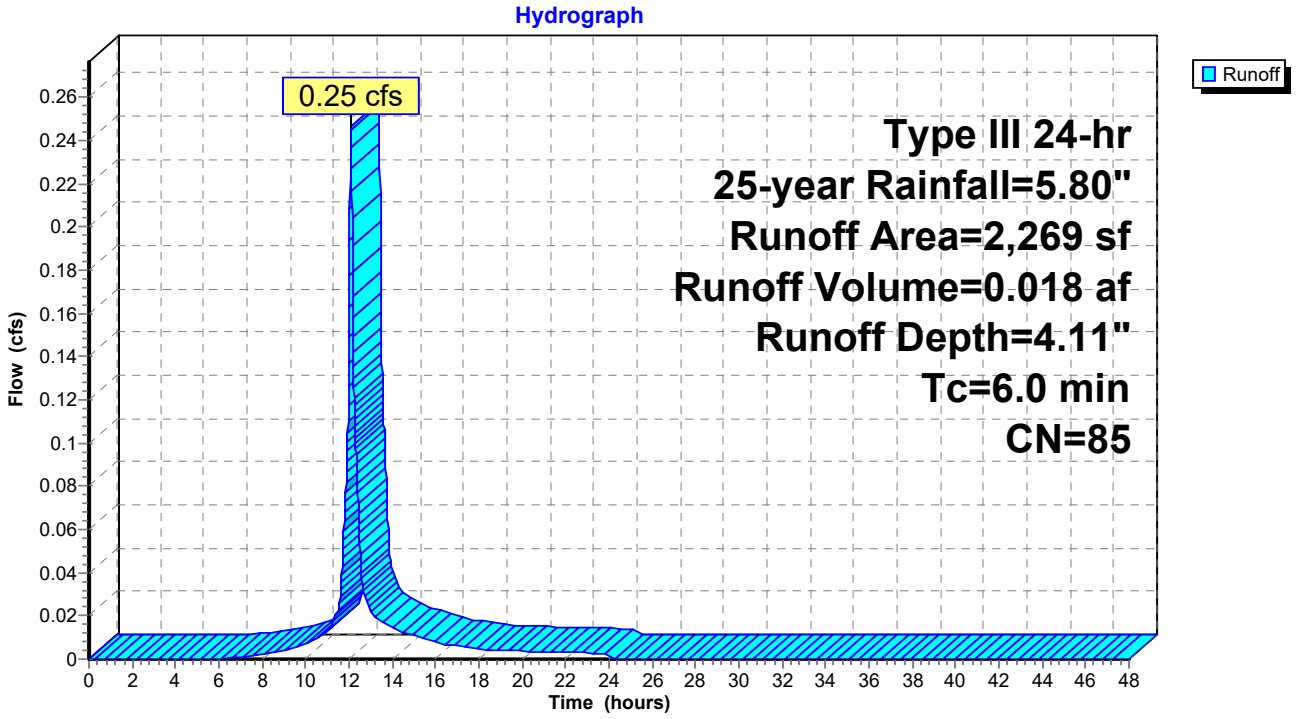
Runoff = 0.25 cfs @ 12.09 hrs, Volume= 0.018 af, Depth= 4.11"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-year Rainfall=5.80"

	Area (sf)	CN	Description
*	311	98	Roof
	33	98	Unconnected pavement, HSG A
	904	68	<50% Grass cover, Poor, HSG A
	1,021	96	Gravel surface, HSG A
	2,269	85	Weighted Average
	1,925		84.84% Pervious Area
	344		15.16% Impervious Area
	33		9.59% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 2S: S 2 - CEDAR STREET

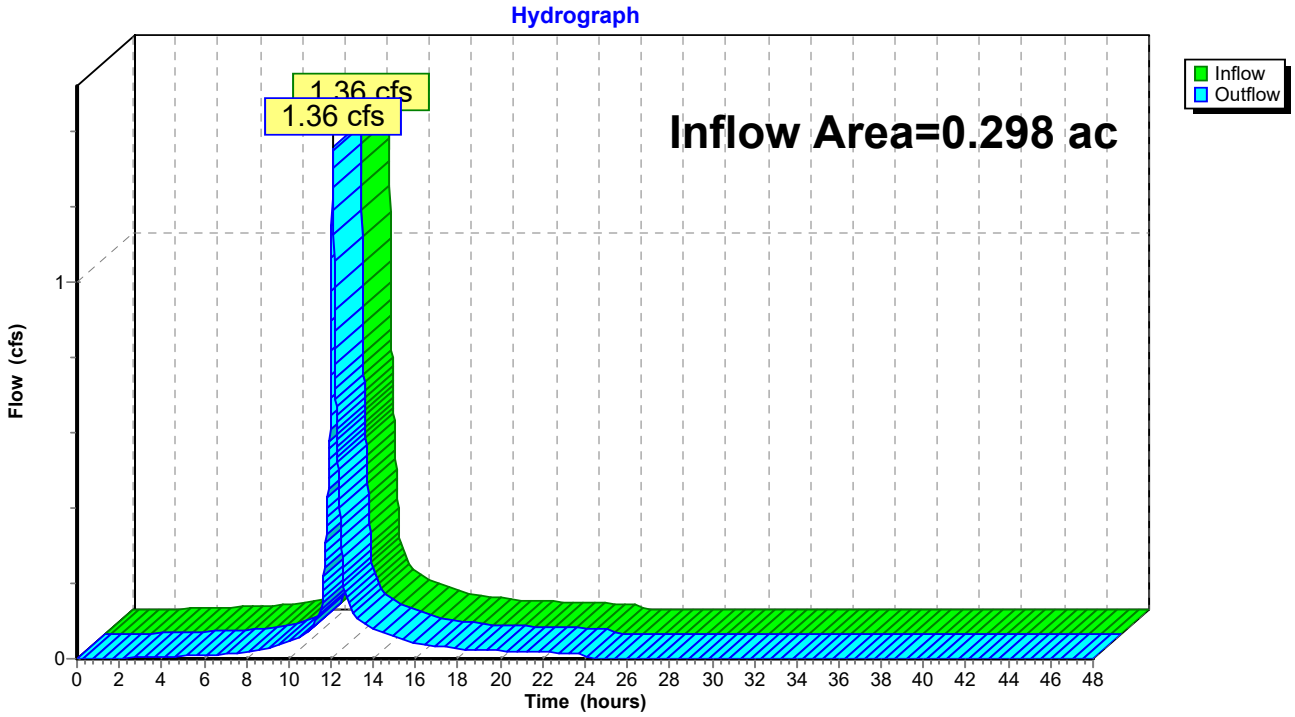


Summary for Reach 1R: CHESTNUT ST COMBINED SEWER

Inflow Area = 0.298 ac, 49.15% Impervious, Inflow Depth = 4.13" for 25-year event
Inflow = 1.36 cfs @ 12.09 hrs, Volume= 0.103 af
Outflow = 1.36 cfs @ 12.09 hrs, Volume= 0.103 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Reach 1R: CHESTNUT ST COMBINED SEWER

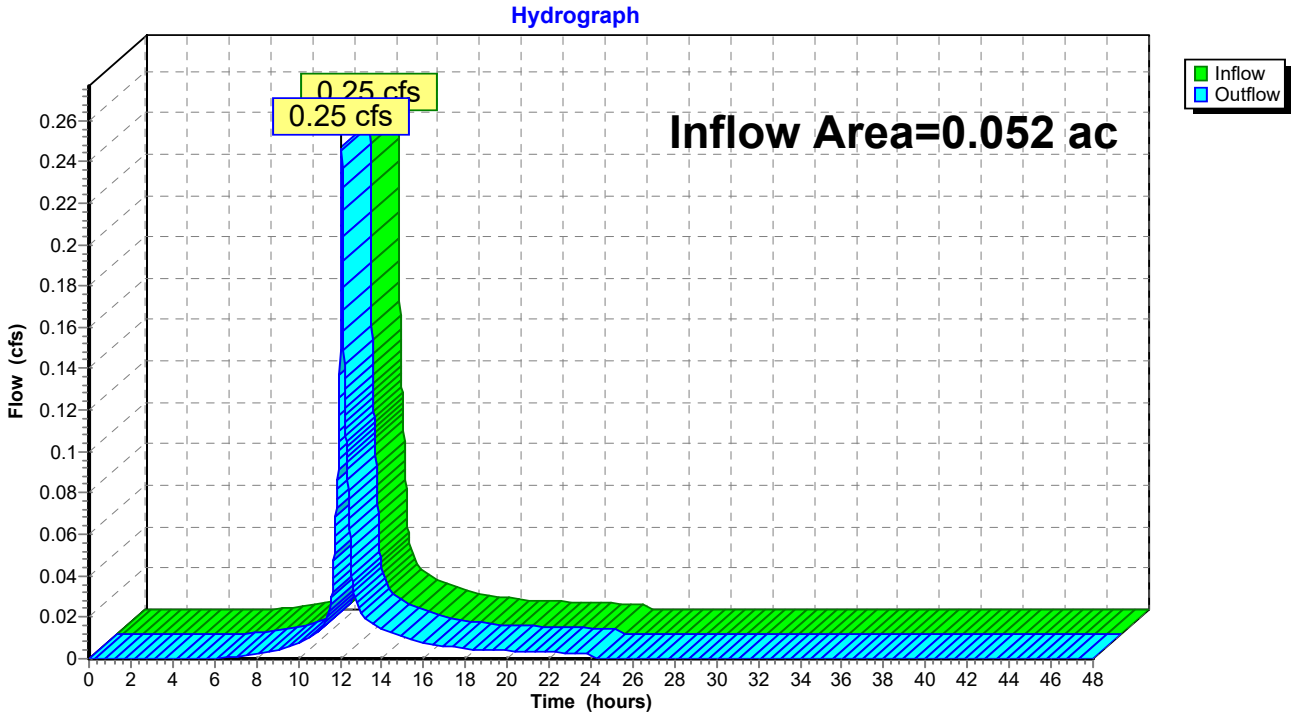


Summary for Reach 2R: CEDAR STREET

Inflow Area = 0.052 ac, 15.16% Impervious, Inflow Depth = 4.11" for 25-year event
Inflow = 0.25 cfs @ 12.09 hrs, Volume= 0.018 af
Outflow = 0.25 cfs @ 12.09 hrs, Volume= 0.018 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Reach 2R: CEDAR STREET

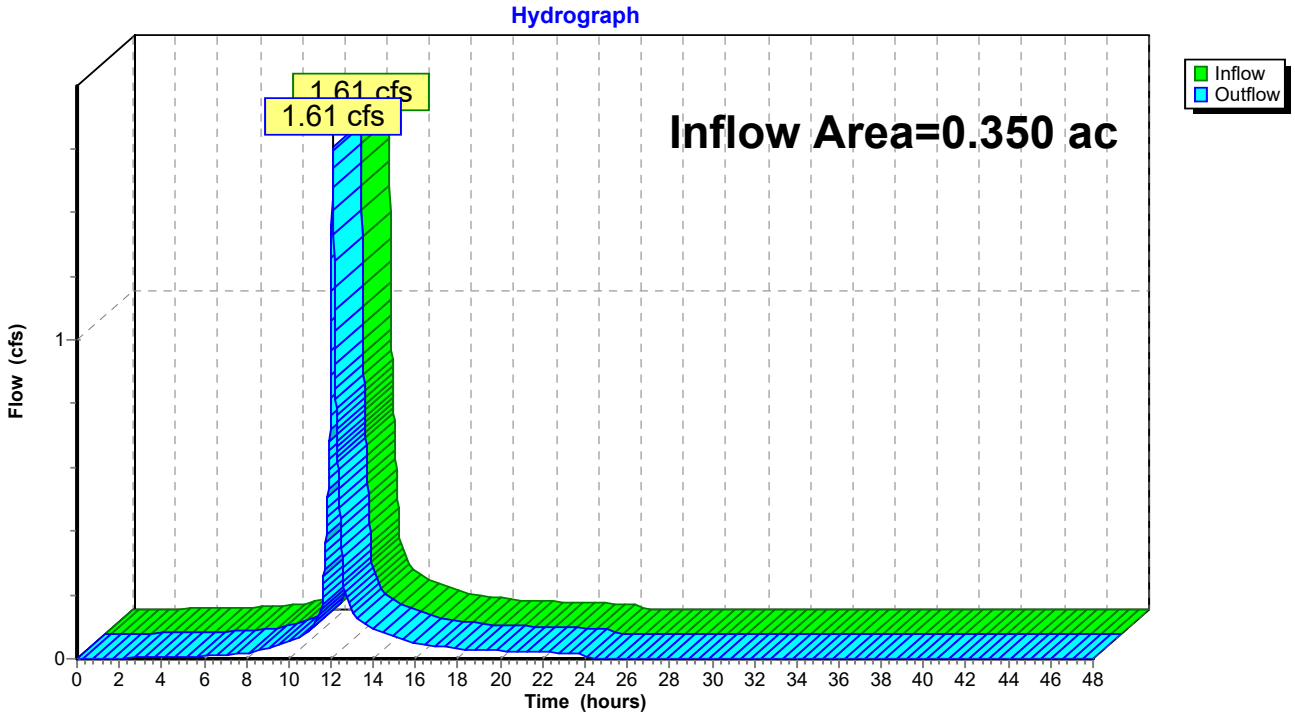


Summary for Reach 99R: POI #99: LANCASTER ST COMBINED SEWER

Inflow Area = 0.350 ac, 44.09% Impervious, Inflow Depth = 4.13" for 25-year event
Inflow = 1.61 cfs @ 12.09 hrs, Volume= 0.120 af
Outflow = 1.61 cfs @ 12.09 hrs, Volume= 0.120 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Reach 99R: POI #99: LANCASTER ST COMBINED SEWER

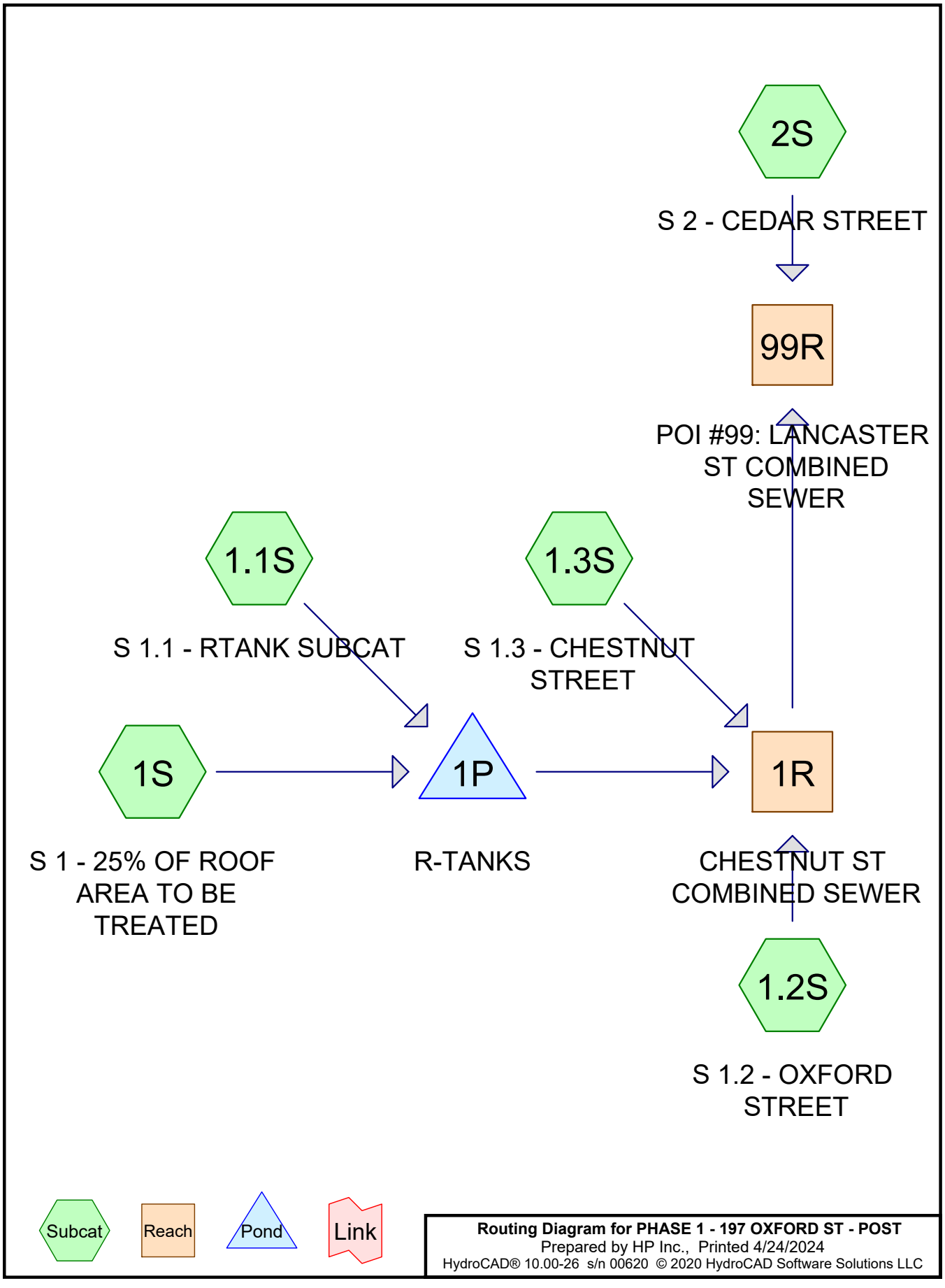


SECTION J

STORMWATER MANAGMENT REPORT

Attachment C: Post Development HydroCAD

PHASE 1 - 197 OXFORD STREET



Routing Diagram for PHASE 1 - 197 OXFORD ST - POST
Prepared by HP Inc., Printed 4/24/2024
HydroCAD® 10.00-26 s/n 00620 © 2020 HydroCAD Software Solutions LLC

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.059	39	>75% Grass cover, Good, HSG A (1.1S, 1.2S, 2S)
0.068	98	Paved parking, HSG A (1.1S, 1.2S, 1.3S)
0.155	98	REMAINING ROOF AREA (1.1S)
0.052	98	Roofs, HSG A (1S)
0.015	98	Unconnected pavement, HSG A (1.3S, 2S)
0.349	**88**	**TOTAL AREA**

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.194	HSG A	1.1S, 1.2S, 1.3S, 1S, 2S
0.000	HSG B	
0.000	HSG C	
0.000	HSG D	
0.155	Other	1.1S
0.349		**TOTAL AREA**

Ground Covers (all nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.059	0.000	0.000	0.000	0.000	0.059	>75% Grass cover, Good	1.1S, 1.2S, 2S
0.068	0.000	0.000	0.000	0.000	0.068	Paved parking	1.1S, 1.2S, 1.3S
0.000	0.000	0.000	0.000	0.155	0.155	REMAINING ROOF AREA	1.1S
0.052	0.000	0.000	0.000	0.000	0.052	Roofs	1S
0.015	0.000	0.000	0.000	0.000	0.015	Unconnected pavement	1.3S, 2S
0.194	**0.000**	**0.000**	**0.000**	**0.155**	**0.349**	**TOTAL AREA**	

Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1.1S: S 1.1 - RTANK SUBCAT Runoff Area=9,399 sf 93.32% Impervious Runoff Depth=2.45"
Tc=6.0 min CN=94 Runoff=0.59 cfs 0.044 af

Subcatchment 1.2S: S 1.2 - OXFORD Runoff Area=2,048 sf 27.15% Impervious Runoff Depth=0.22"
Tc=6.0 min CN=55 Runoff=0.00 cfs 0.001 af

Subcatchment 1.3S: S 1.3 - CHESTNUT Runoff Area=589 sf 100.00% Impervious Runoff Depth=2.87"
Tc=6.0 min CN=98 Runoff=0.04 cfs 0.003 af

Subcatchment 1S: S 1 - 25% OF ROOF Runoff Area=2,253 sf 100.00% Impervious Runoff Depth=2.87"
Tc=6.0 min CN=98 Runoff=0.16 cfs 0.012 af

Subcatchment 2S: S 2 - CEDAR STREET Runoff Area=920 sf 49.24% Impervious Runoff Depth=0.68"
Tc=6.0 min CN=68 Runoff=0.01 cfs 0.001 af

Reach 1R: CHESTNUT ST COMBINED SEWER Inflow=0.49 cfs 0.060 af
Outflow=0.49 cfs 0.060 af

Reach 99R: POI #99: LANCASTER ST COMBINED SEWER Inflow=0.50 cfs 0.061 af
Outflow=0.50 cfs 0.061 af

Pond 1P: R-TANKS Peak Elev=26.08' Storage=856 cf Inflow=0.75 cfs 0.056 af
Outflow=0.46 cfs 0.055 af

Total Runoff Area = 0.349 ac Runoff Volume = 0.062 af Average Runoff Depth = 2.12"
17.01% Pervious = 0.059 ac 82.99% Impervious = 0.290 ac

Summary for Subcatchment 1.1S: S 1.1 - RTANK SUBCAT

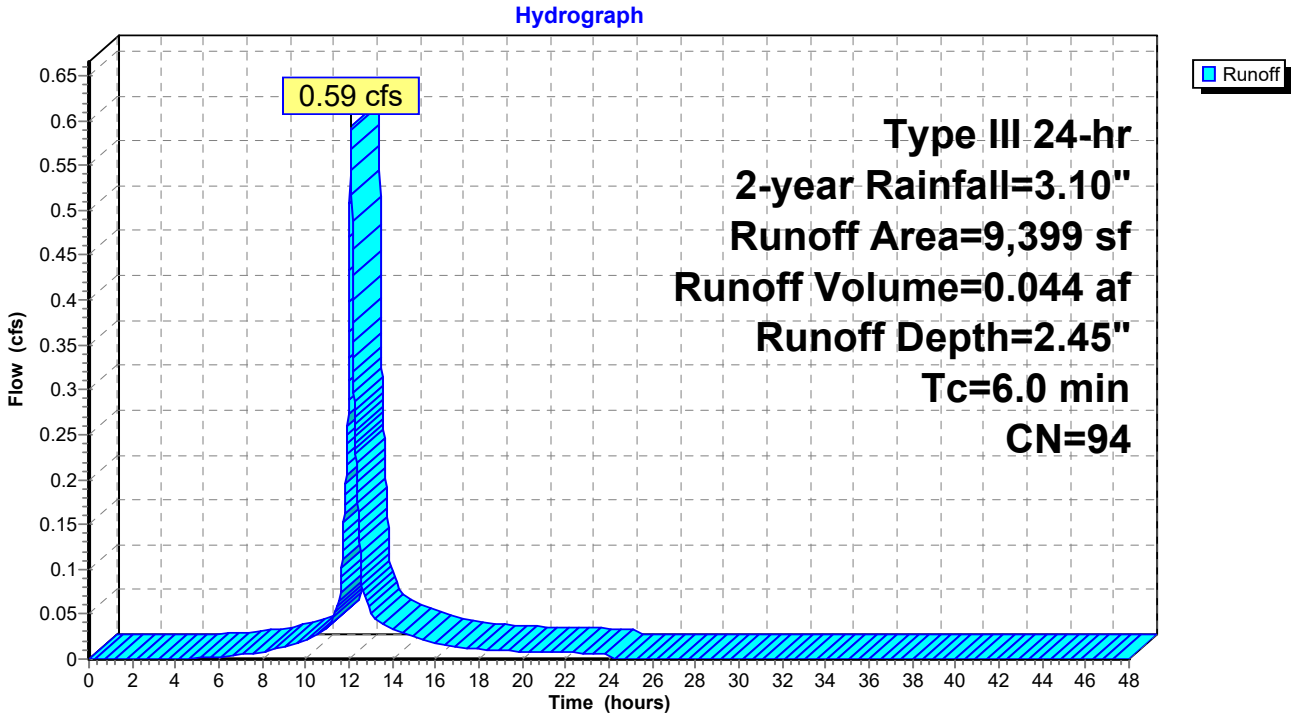
Runoff = 0.59 cfs @ 12.08 hrs, Volume= 0.044 af, Depth= 2.45"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-year Rainfall=3.10"

	Area (sf)	CN	Description
	2,011	98	Paved parking, HSG A
	628	39	>75% Grass cover, Good, HSG A
*	6,760	98	REMAINING ROOF AREA
	9,399	94	Weighted Average
	628	39	6.68% Pervious Area
	8,771	98	93.32% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 1.1S: S 1.1 - RTANK SUBCAT



Summary for Subcatchment 1.2S: S 1.2 - OXFORD STREET

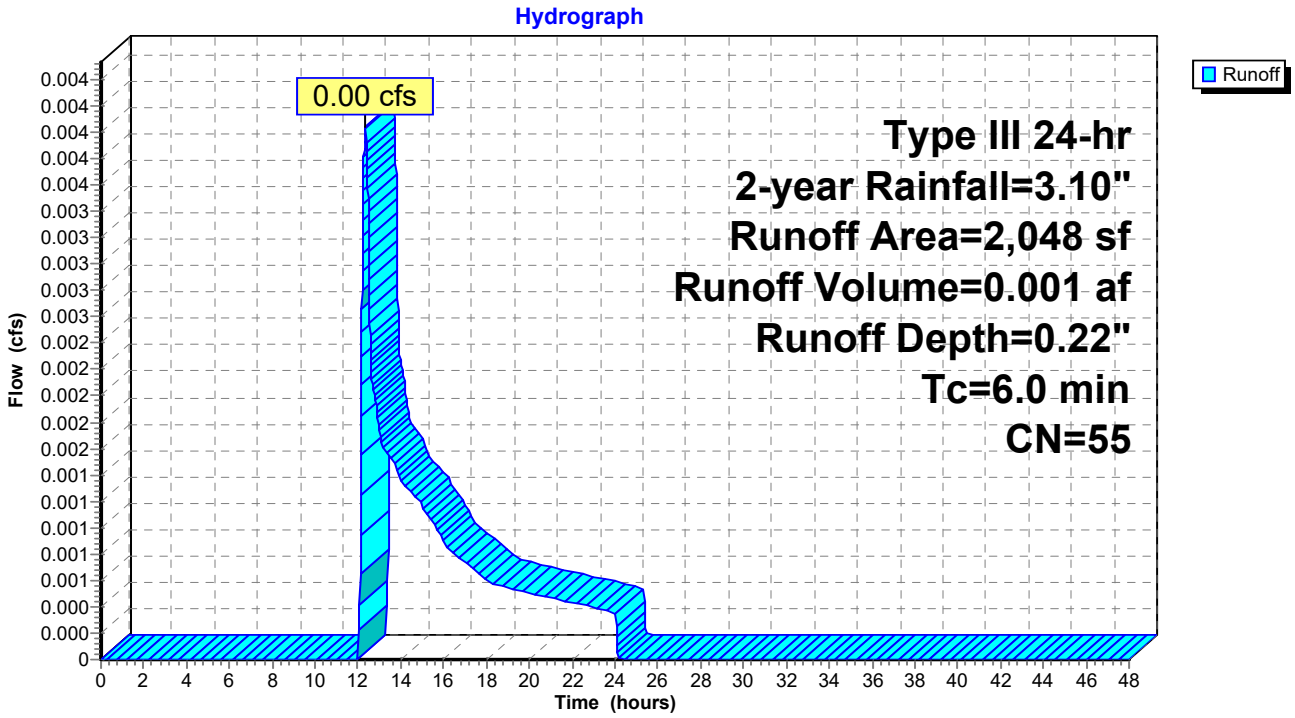
Runoff = 0.00 cfs @ 12.35 hrs, Volume= 0.001 af, Depth= 0.22"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-year Rainfall=3.10"

Area (sf)	CN	Description
556	98	Paved parking, HSG A
1,492	39	>75% Grass cover, Good, HSG A
2,048	55	Weighted Average
1,492	39	72.85% Pervious Area
556	98	27.15% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 1.2S: S 1.2 - OXFORD STREET



Summary for Subcatchment 1.3S: S 1.3 - CHESTNUT STREET

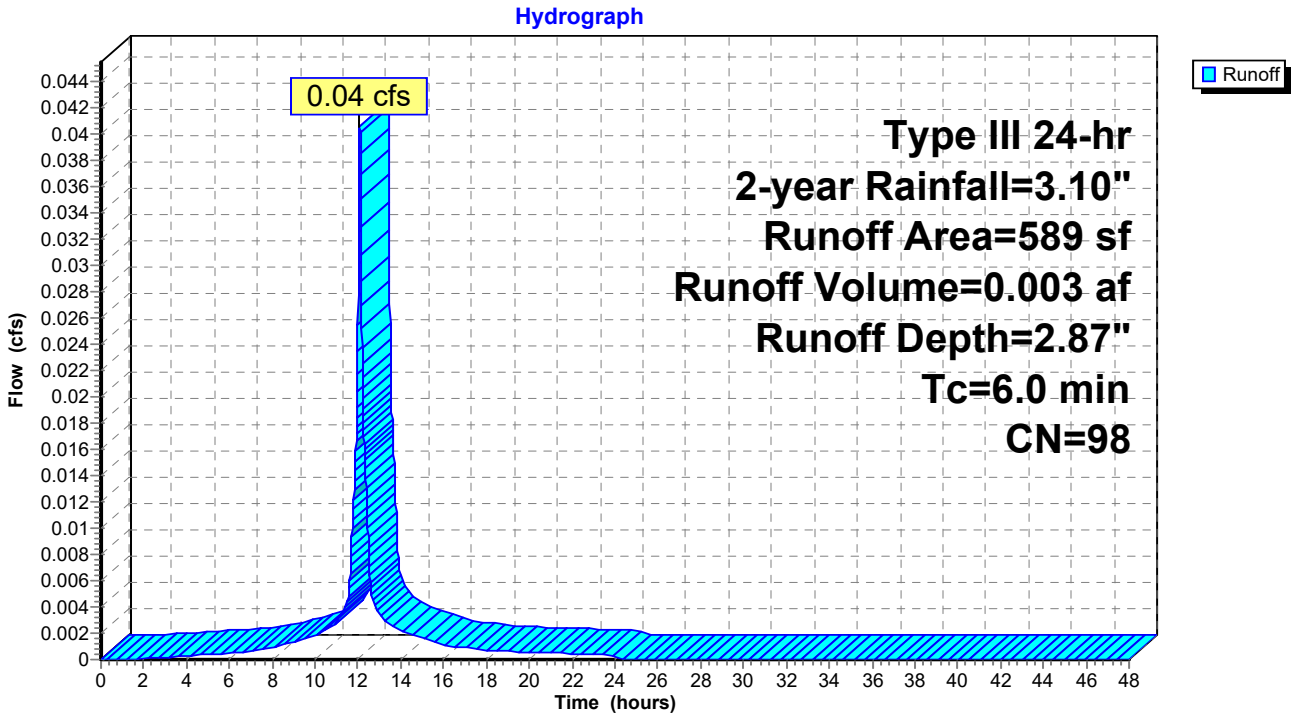
Runoff = 0.04 cfs @ 12.08 hrs, Volume= 0.003 af, Depth= 2.87"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-year Rainfall=3.10"

Area (sf)	CN	Description
190	98	Unconnected pavement, HSG A
399	98	Paved parking, HSG A
589	98	Weighted Average
589	98	100.00% Impervious Area
190		32.26% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 1.3S: S 1.3 - CHESTNUT STREET



Summary for Subcatchment 1S: S 1 - 25% OF ROOF AREA TO BE TREATED

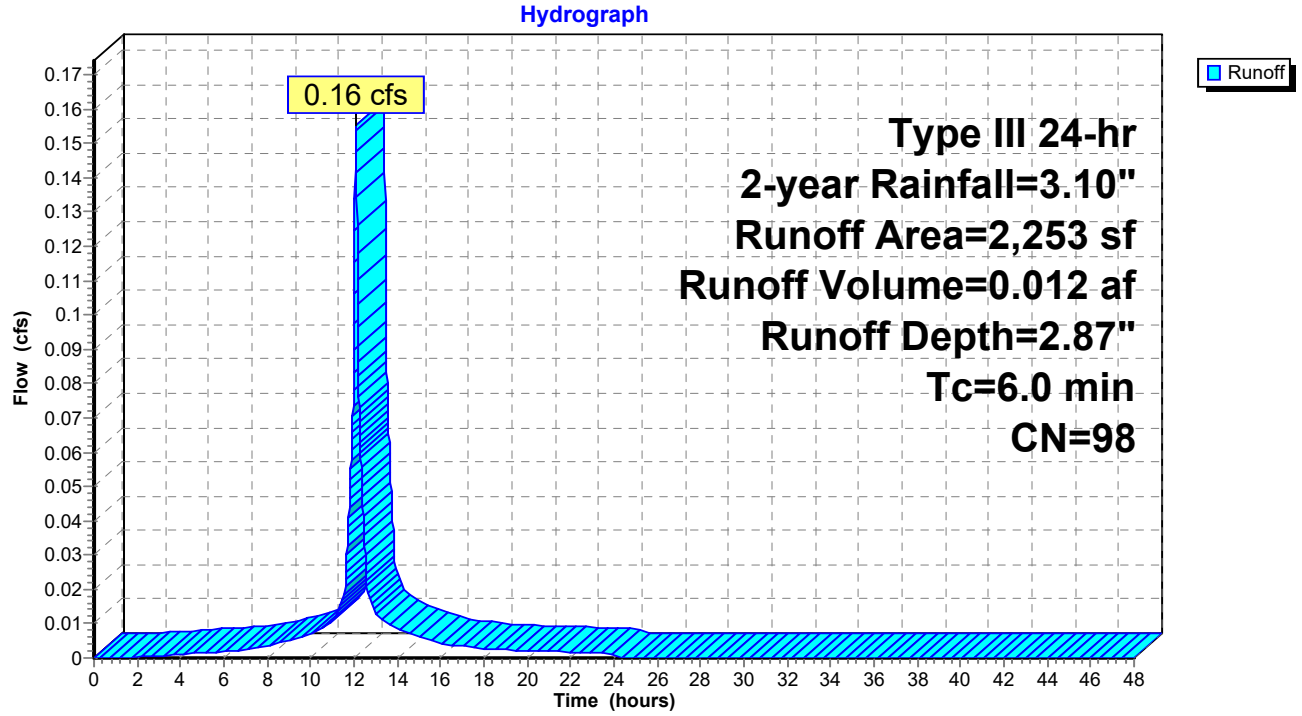
Runoff = 0.16 cfs @ 12.08 hrs, Volume= 0.012 af, Depth= 2.87"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-year Rainfall=3.10"

Area (sf)	CN	Description
2,253	98	Roofs, HSG A
2,253	98	100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 1S: S 1 - 25% OF ROOF AREA TO BE TREATED



Summary for Subcatchment 2S: S 2 - CEDAR STREET

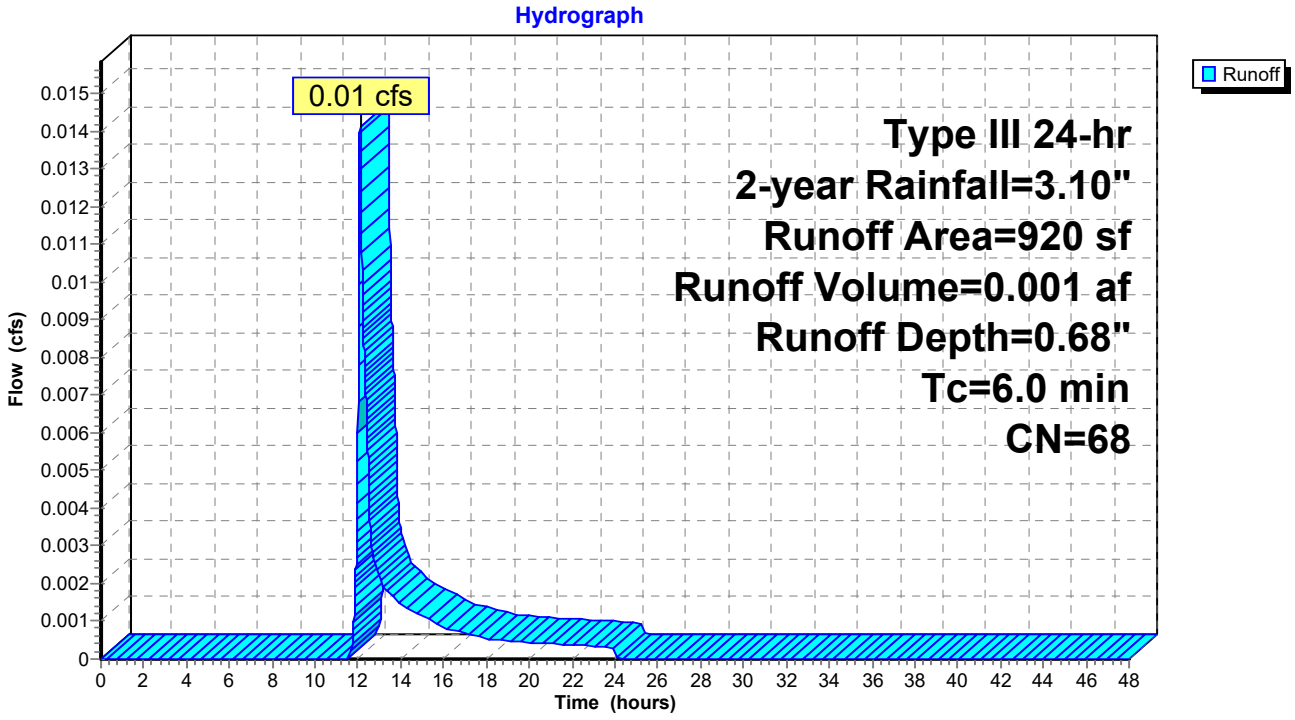
Runoff = 0.01 cfs @ 12.10 hrs, Volume= 0.001 af, Depth= 0.68"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-year Rainfall=3.10"

Area (sf)	CN	Description
467	39	>75% Grass cover, Good, HSG A
453	98	Unconnected pavement, HSG A
920	68	Weighted Average
467	39	50.76% Pervious Area
453	98	49.24% Impervious Area
453		100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 2S: S 2 - CEDAR STREET

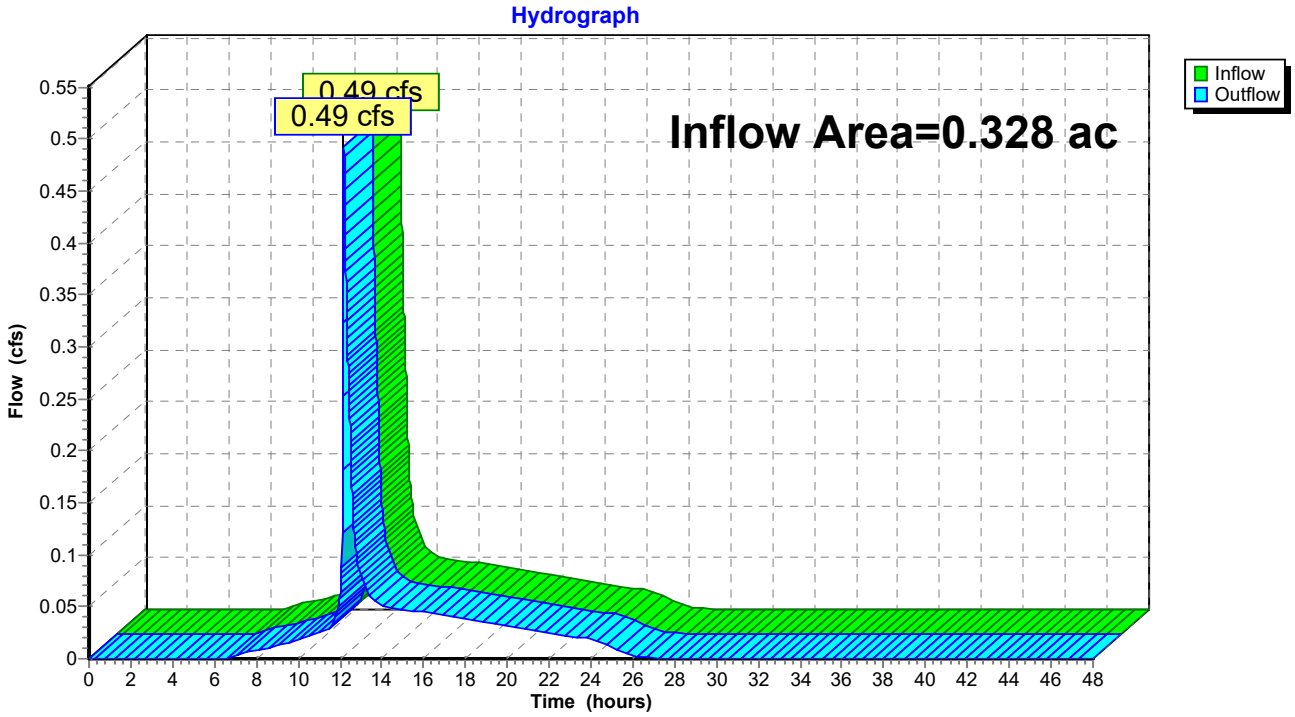


Summary for Reach 1R: CHESTNUT ST COMBINED SEWER

Inflow Area = 0.328 ac, 85.16% Impervious, Inflow Depth = 2.18" for 2-year event
Inflow = 0.49 cfs @ 12.18 hrs, Volume= 0.060 af
Outflow = 0.49 cfs @ 12.18 hrs, Volume= 0.060 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Reach 1R: CHESTNUT ST COMBINED SEWER

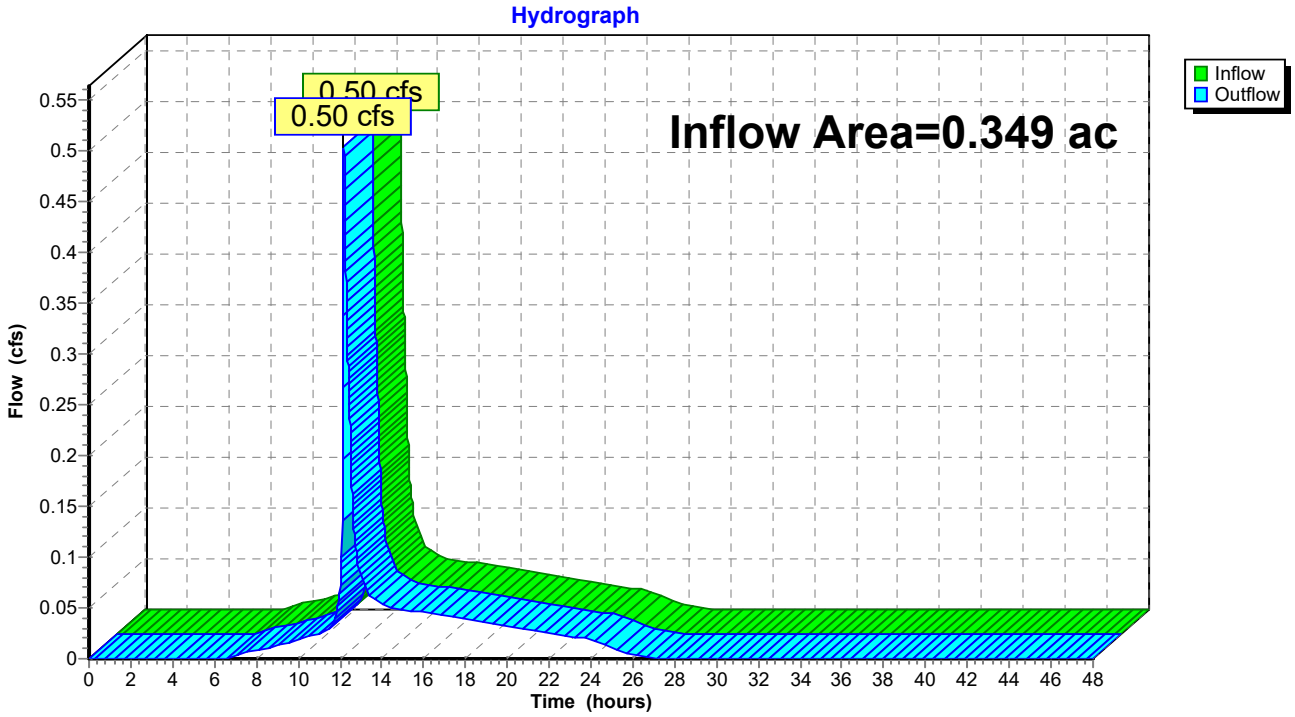


Summary for Reach 99R: POI #99: LANCASTER ST COMBINED SEWER

Inflow Area = 0.349 ac, 82.99% Impervious, Inflow Depth = 2.09" for 2-year event
Inflow = 0.50 cfs @ 12.18 hrs, Volume= 0.061 af
Outflow = 0.50 cfs @ 12.18 hrs, Volume= 0.061 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Reach 99R: POI #99: LANCASTER ST COMBINED SEWER



Summary for Pond 1P: R-TANKS

Inflow Area = 0.267 ac, 94.61% Impervious, Inflow Depth = 2.53" for 2-year event
Inflow = 0.75 cfs @ 12.08 hrs, Volume= 0.056 af
Outflow = 0.46 cfs @ 12.18 hrs, Volume= 0.055 af, Atten= 38%, Lag= 5.9 min
Primary = 0.46 cfs @ 12.18 hrs, Volume= 0.055 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 26.08' @ 12.18 hrs Surf.Area= 415 sf Storage= 856 cf
Flood Elev= 29.00' Surf.Area= 415 sf Storage= 1,001 cf

Plug-Flow detention time= 165.6 min calculated for 0.055 af (98% of inflow)
Center-of-Mass det. time= 155.9 min (937.2 - 781.3)

Volume	Invert	Avail.Storage	Storage Description
#1B	22.38'	583 cf	**6.62'W x 62.65'L x 4.57'H Field B** 1,897 cf Overall - 440 cf Embedded = 1,457 cf x 40.0% Voids
#2B	23.13'	413 cf	**ACF R-Tank HD 2** x 50 Inside #1 Inside= 15.7"W x 33.9"H => 3.52 sf x 2.35'L = 8.3 cf Outside= 15.7"W x 33.9"H => 3.70 sf x 2.35'L = 8.7 cf 50 Chambers in 2 Rows
#3	22.75'	5 cf	**4.0" Round Pipe Storage** Inside #1 L= 63.0' S= 0.0100 '/'
		1,001 cf	Total Available Storage

Storage Group B created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	22.31'	**10.0" Round 10" Main Outlet** L= 40.0' CMP, mitered to conform to fill, Ke= 0.700 Inlet / Outlet Invert= 22.31' / 21.51' S= 0.0200 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.55 sf
#2	Device 1	22.61'	**1.0" Vert. 1" UNDERDRAIN ORIFICE** C= 0.600
#3	Device 1	25.63'	**10.0" Round Culvert** L= 2.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 25.63' / 25.62' S= 0.0050 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.55 sf
#4	Device 3	25.63'	**4.0" Vert. 4" Overflows (4) X 4.00** C= 0.600

Primary OutFlow Max=0.46 cfs @ 12.18 hrs HW=26.08' (Free Discharge)
- **1=10" Main Outlet** (Passes 0.46 cfs of 4.24 cfs potential flow)
  - **2=1" UNDERDRAIN ORIFICE** (Orifice Controls 0.05 cfs @ 8.91 fps)
  - **3=Culvert** (Barrel Controls 0.41 cfs @ 2.01 fps)
    - **4=4" Overflows (4)** (Passes 0.41 cfs of 0.89 cfs potential flow)

Pond 1P: R-TANKS - Chamber Wizard Field B

Chamber Model = ACF R-Tank HD 2 (ACF Environmental R-Tank HD)
Inside= 15.7"W x 33.9"H => 3.52 sf x 2.35'L = 8.3 cf
Outside= 15.7"W x 33.9"H => 3.70 sf x 2.35'L = 8.7 cf

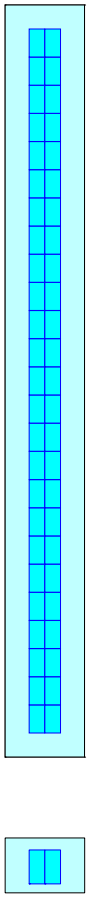
25 Chambers/Row x 2.35' Long = 58.65' Row Length +24.0" End Stone x 2 = 62.65' Base Length
2 Rows x 15.7" Wide + 24.0" Side Stone x 2 = 6.62' Base Width
9.0" Base + 33.9" Chamber Height + 12.0" Cover = 4.57' Field Height

50 Chambers x 8.3 cf = 412.6 cf Chamber Storage
50 Chambers x 8.7 cf = 434.3 cf Displacement

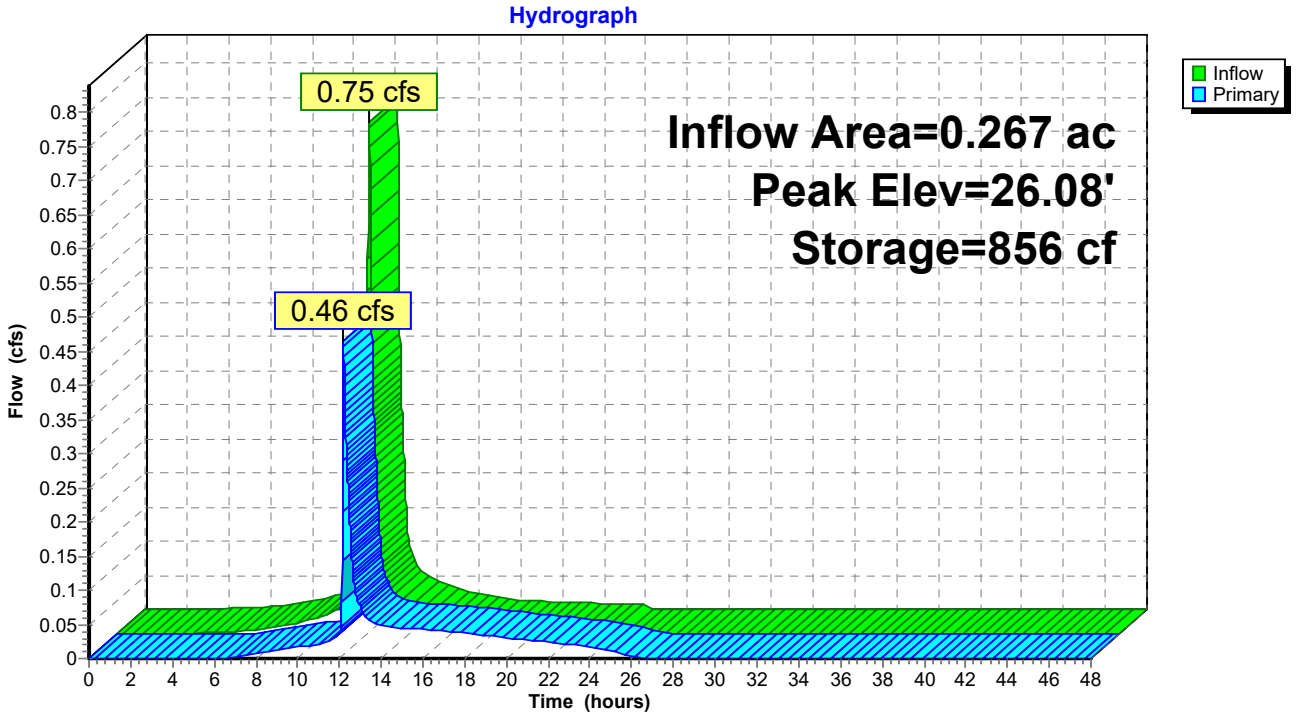
1,897.2 cf Field - 434.3 cf Chambers = 1,462.9 cf Stone x 40.0% Voids = 585.2 cf Stone Storage

Chamber Storage + Stone Storage = 997.7 cf = 0.023 af
Overall Storage Efficiency = 52.6%
Overall System Size = 62.65' x 6.62' x 4.57'

50 Chambers
70.3 cy Field
54.2 cy Stone



Pond 1P: R-TANKS



Stage-Area-Storage for Pond 1P: R-TANKS

Elevation (feet)	Storage (cubic-feet)
22.38	0
22.48	17
22.58	33
22.68	50
22.78	66
22.88	83
22.98	100
23.08	117
23.18	138
23.28	164
23.38	190
23.48	215
23.58	240
23.68	266
23.78	291
23.88	316
23.98	341
24.08	366
24.18	391
24.28	416
24.38	441
24.48	466
24.58	491
24.68	516
24.78	541
24.88	566
24.98	592
25.08	617
25.18	642
25.28	667
25.38	692
25.48	717
25.58	742
25.68	767
25.78	792
25.88	817
25.98	840
26.08	856
26.18	873
26.28	890
26.38	906
26.48	923
26.58	939
26.68	956
26.78	973
26.88	**989**
26.98	**1,001**
27.08	1,001
27.18	1,001
27.28	1,001
27.38	1,001
27.48	1,001
27.58	1,001
27.68	1,001
27.78	1,001
27.88	1,001
27.98	1,001
28.08	1,001
28.18	1,001
28.28	1,001
28.38	1,001
28.48	1,001
28.58	1,001
28.68	1,001
28.78	1,001
28.88	1,001
28.98	1,001

Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1.1S: S 1.1 - RTANK SUBCAT Runoff Area=9,399 sf 93.32% Impervious Runoff Depth=3.91"
Tc=6.0 min CN=94 Runoff=0.93 cfs 0.070 af

Subcatchment 1.2S: S 1.2 - OXFORD Runoff Area=2,048 sf 27.15% Impervious Runoff Depth=0.79"
Tc=6.0 min CN=55 Runoff=0.03 cfs 0.003 af

Subcatchment 1.3S: S 1.3 - CHESTNUT Runoff Area=589 sf 100.00% Impervious Runoff Depth=4.36"
Tc=6.0 min CN=98 Runoff=0.06 cfs 0.005 af

Subcatchment 1S: S 1 - 25% OF ROOF Runoff Area=2,253 sf 100.00% Impervious Runoff Depth=4.36"
Tc=6.0 min CN=98 Runoff=0.23 cfs 0.019 af

Subcatchment 2S: S 2 - CEDAR STREET Runoff Area=920 sf 49.24% Impervious Runoff Depth=1.60"
Tc=6.0 min CN=68 Runoff=0.04 cfs 0.003 af

Reach 1R: CHESTNUT ST COMBINED SEWER Inflow=1.21 cfs 0.096 af
Outflow=1.21 cfs 0.096 af

Reach 99R: POI #99: LANCASTER ST COMBINED SEWER Inflow=1.25 cfs 0.099 af
Outflow=1.25 cfs 0.099 af

Pond 1P: R-TANKS Peak Elev=26.41' Storage=911 cf Inflow=1.16 cfs 0.089 af
Outflow=1.12 cfs 0.088 af

Total Runoff Area = 0.349 ac Runoff Volume = 0.100 af Average Runoff Depth = 3.44"
17.01% Pervious = 0.059 ac 82.99% Impervious = 0.290 ac

Summary for Subcatchment 1.1S: S 1.1 - RTANK SUBCAT

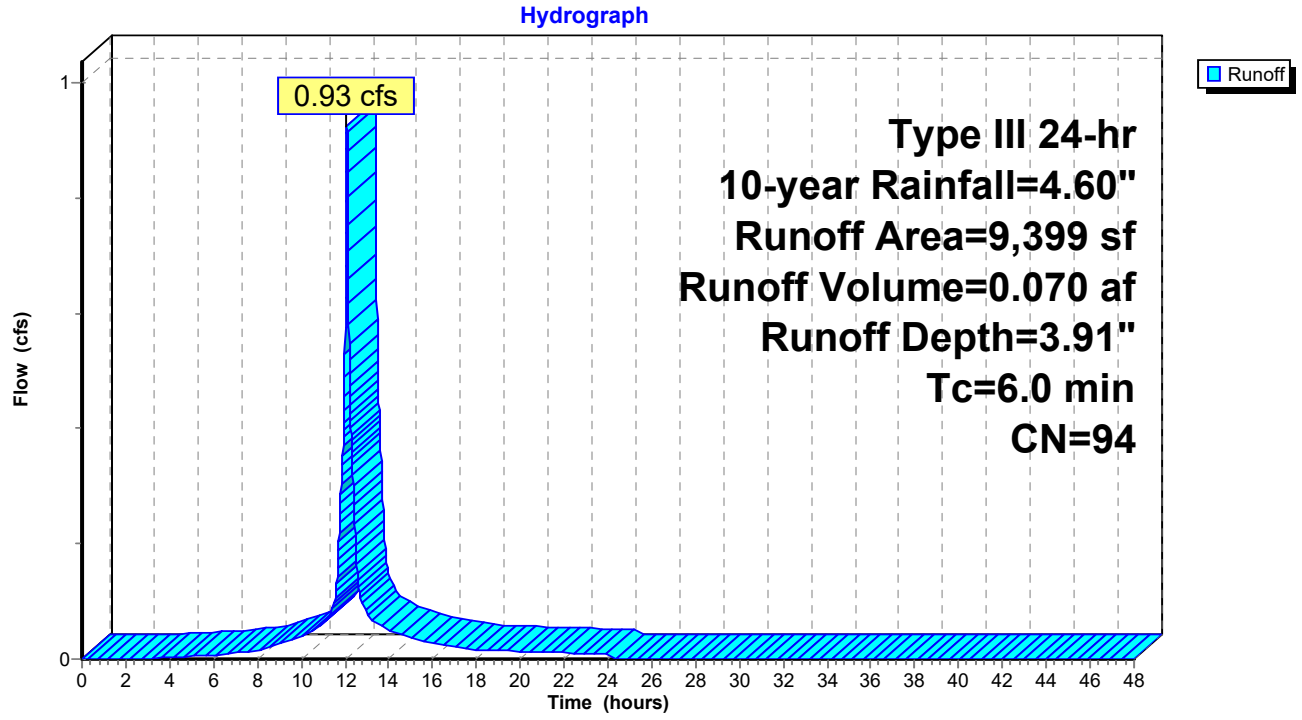
Runoff = 0.93 cfs @ 12.08 hrs, Volume= 0.070 af, Depth= 3.91"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-year Rainfall=4.60"

	Area (sf)	CN	Description
	2,011	98	Paved parking, HSG A
	628	39	>75% Grass cover, Good, HSG A
*	6,760	98	REMAINING ROOF AREA
	9,399	94	Weighted Average
	628	39	6.68% Pervious Area
	8,771	98	93.32% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 1.1S: S 1.1 - RTANK SUBCAT



Summary for Subcatchment 1.2S: S 1.2 - OXFORD STREET

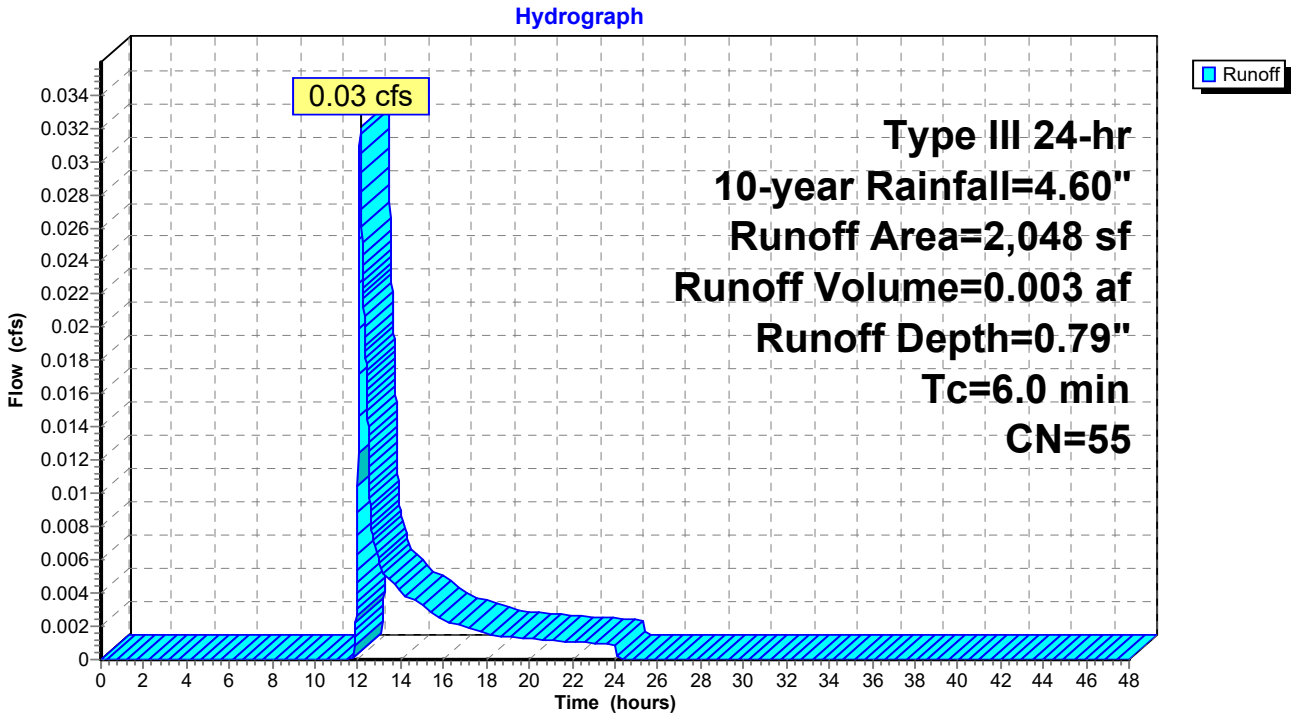
Runoff = 0.03 cfs @ 12.11 hrs, Volume= 0.003 af, Depth= 0.79"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-year Rainfall=4.60"

Area (sf)	CN	Description
556	98	Paved parking, HSG A
1,492	39	>75% Grass cover, Good, HSG A
2,048	55	Weighted Average
1,492	39	72.85% Pervious Area
556	98	27.15% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 1.2S: S 1.2 - OXFORD STREET



Summary for Subcatchment 1.3S: S 1.3 - CHESTNUT STREET

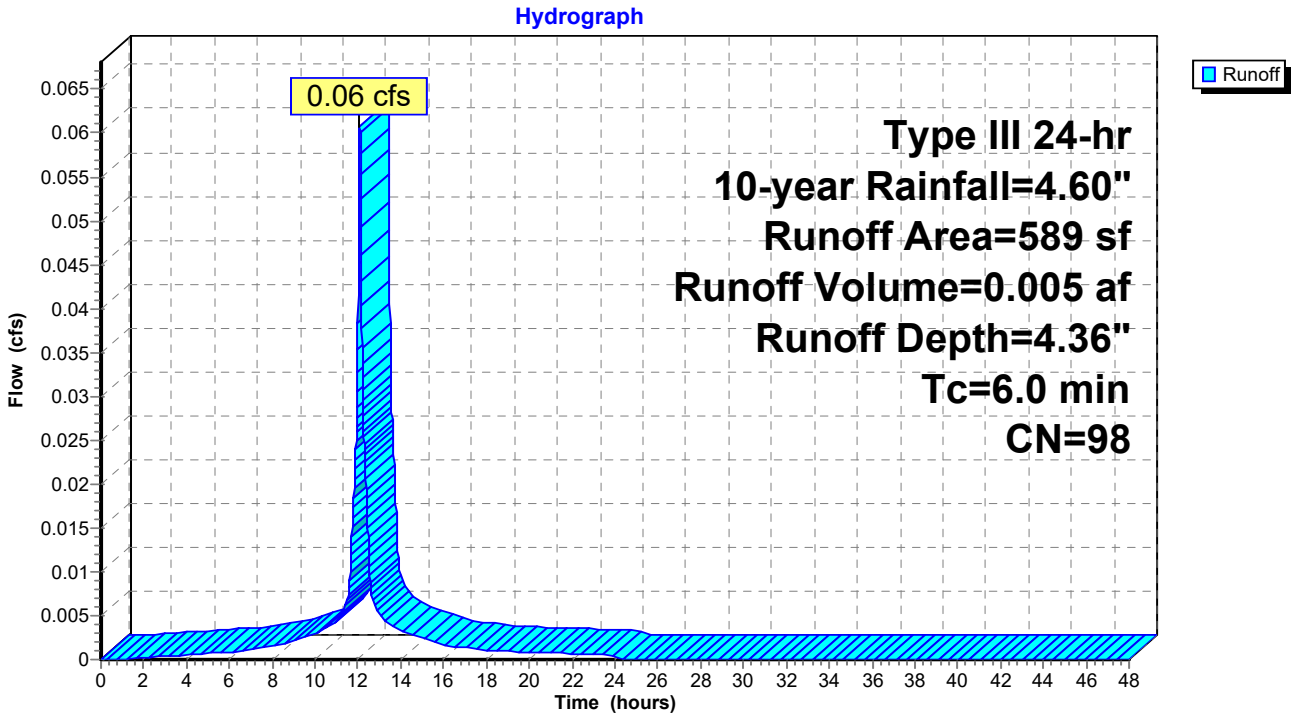
Runoff = 0.06 cfs @ 12.08 hrs, Volume= 0.005 af, Depth= 4.36"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-year Rainfall=4.60"

Area (sf)	CN	Description
190	98	Unconnected pavement, HSG A
399	98	Paved parking, HSG A
589	98	Weighted Average
589	98	100.00% Impervious Area
190		32.26% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 1.3S: S 1.3 - CHESTNUT STREET



Summary for Subcatchment 1S: S 1 - 25% OF ROOF AREA TO BE TREATED

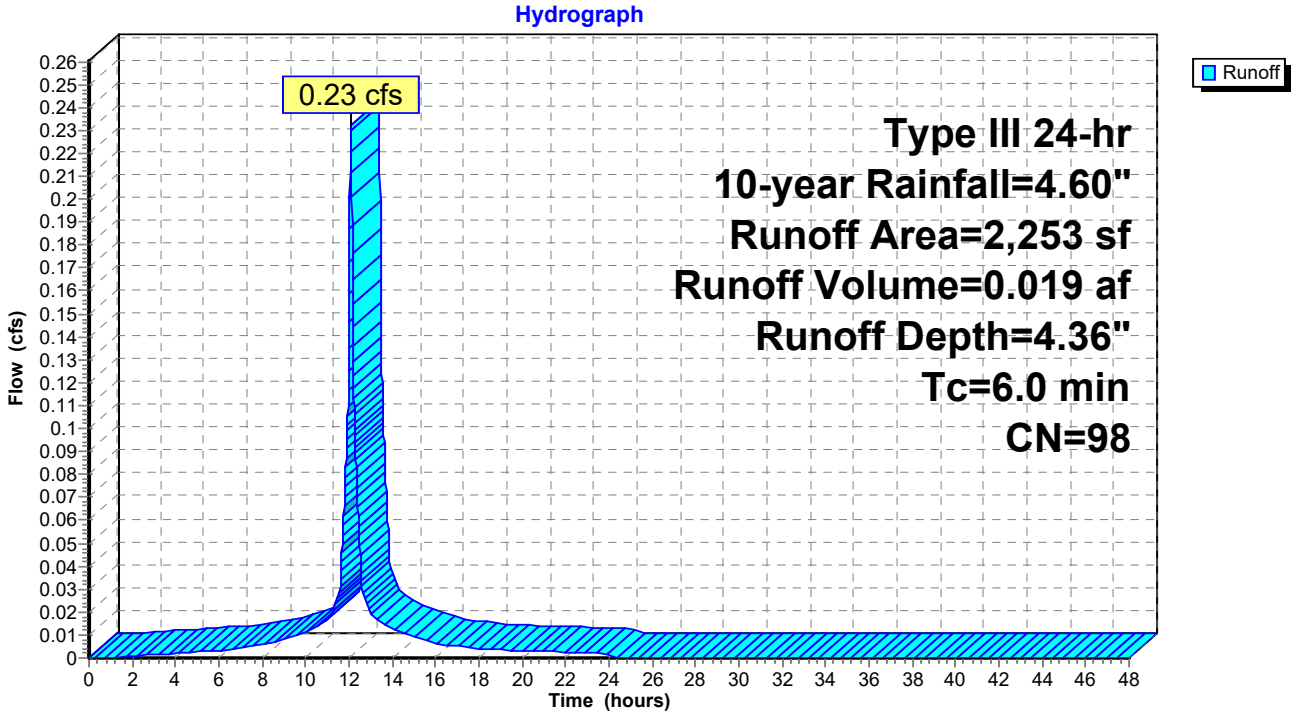
Runoff = 0.23 cfs @ 12.08 hrs, Volume= 0.019 af, Depth= 4.36"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-year Rainfall=4.60"

Area (sf)	CN	Description
2,253	98	Roofs, HSG A
2,253	98	100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 1S: S 1 - 25% OF ROOF AREA TO BE TREATED



Summary for Subcatchment 2S: S 2 - CEDAR STREET

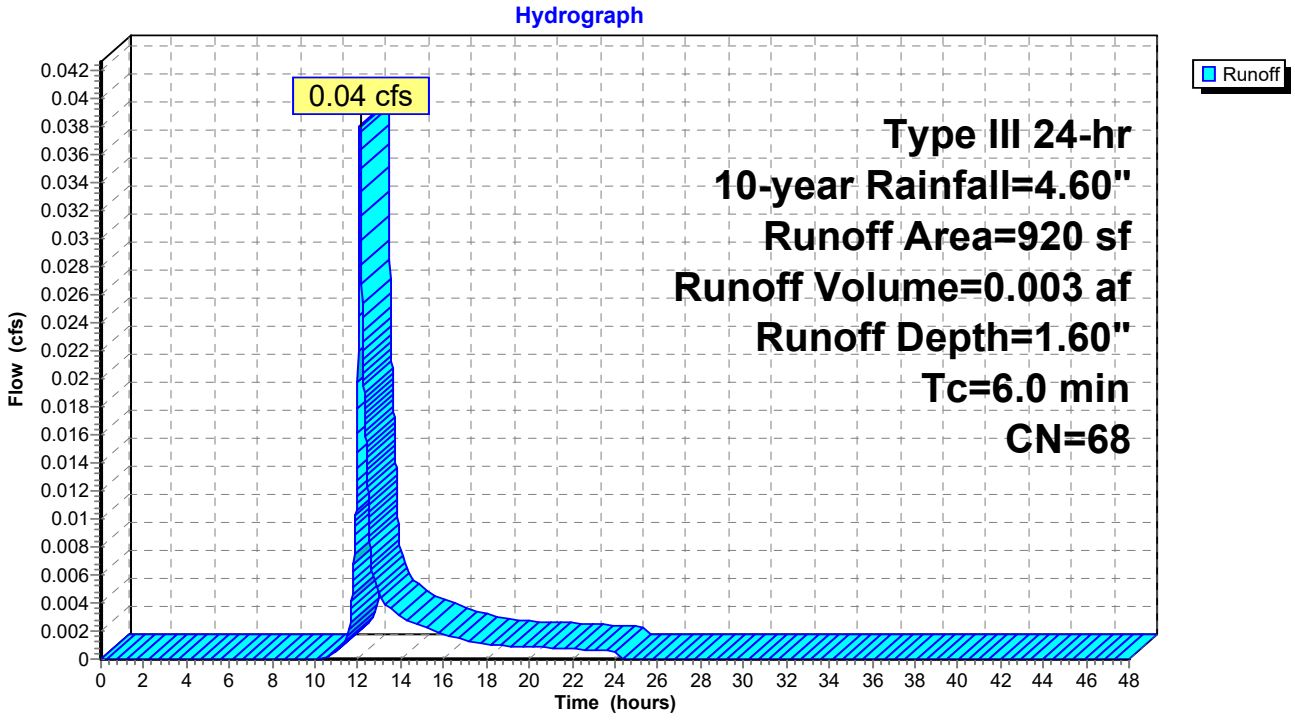
Runoff = 0.04 cfs @ 12.09 hrs, Volume= 0.003 af, Depth= 1.60"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-year Rainfall=4.60"

Area (sf)	CN	Description
467	39	>75% Grass cover, Good, HSG A
453	98	Unconnected pavement, HSG A
920	68	Weighted Average
467	39	50.76% Pervious Area
453	98	49.24% Impervious Area
453		100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 2S: S 2 - CEDAR STREET

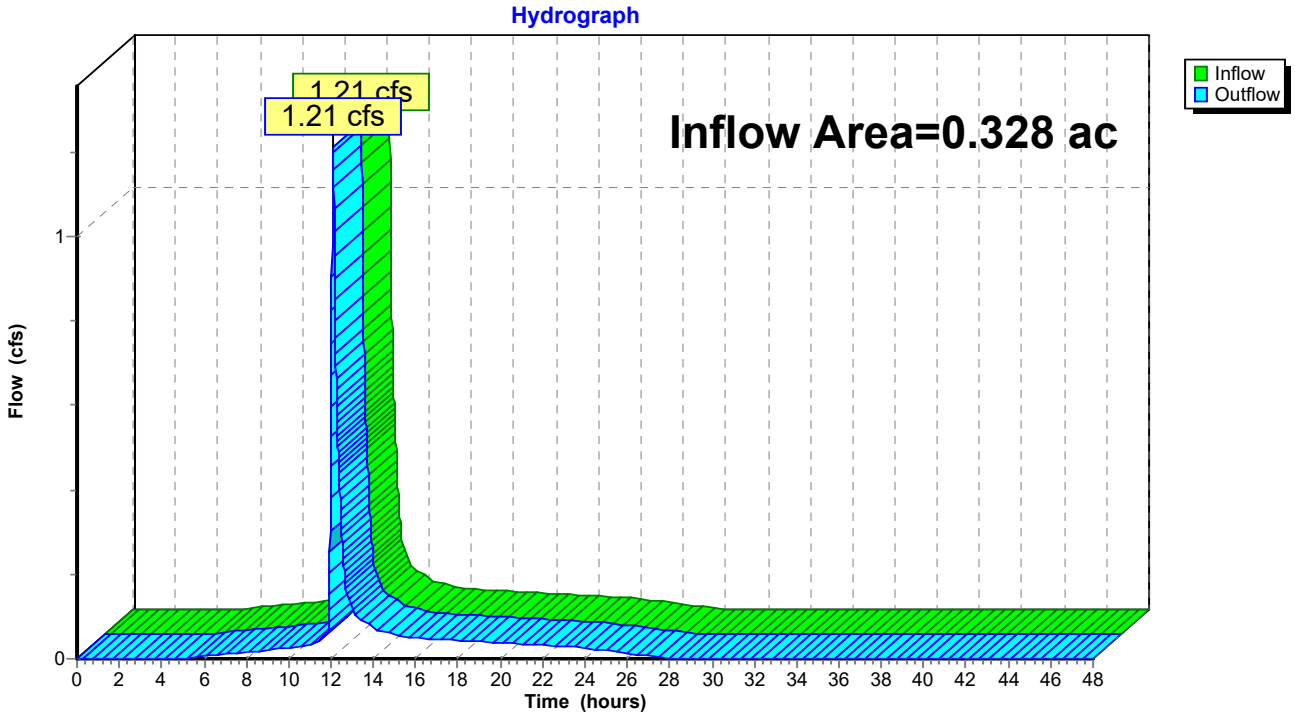


Summary for Reach 1R: CHESTNUT ST COMBINED SEWER

Inflow Area = 0.328 ac, 85.16% Impervious, Inflow Depth = 3.52" for 10-year event
Inflow = 1.21 cfs @ 12.10 hrs, Volume= 0.096 af
Outflow = 1.21 cfs @ 12.10 hrs, Volume= 0.096 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Reach 1R: CHESTNUT ST COMBINED SEWER

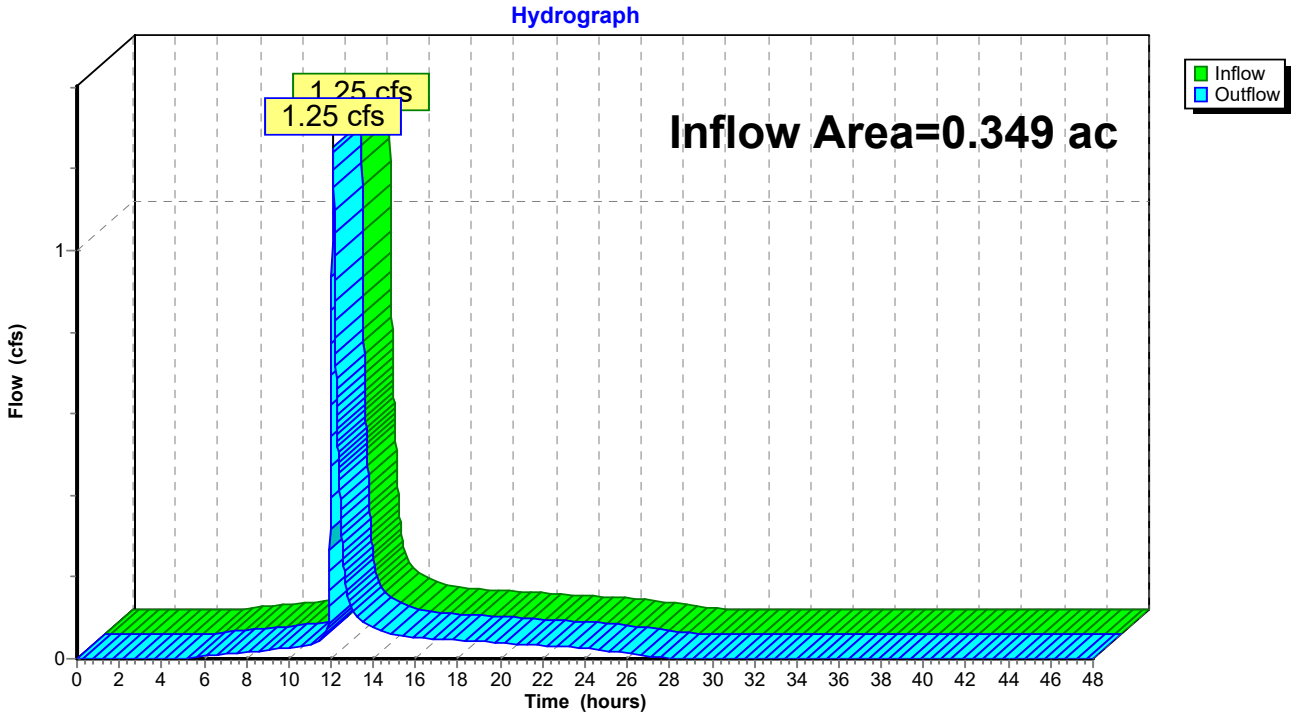


Summary for Reach 99R: POI #99: LANCASTER ST COMBINED SEWER

Inflow Area = 0.349 ac, 82.99% Impervious, Inflow Depth = 3.41" for 10-year event
Inflow = 1.25 cfs @ 12.10 hrs, Volume= 0.099 af
Outflow = 1.25 cfs @ 12.10 hrs, Volume= 0.099 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Reach 99R: POI #99: LANCASTER ST COMBINED SEWER



Summary for Pond 1P: R-TANKS

Inflow Area = 0.267 ac, 94.61% Impervious, Inflow Depth = 4.00" for 10-year event
Inflow = 1.16 cfs @ 12.08 hrs, Volume= 0.089 af
Outflow = 1.12 cfs @ 12.10 hrs, Volume= 0.088 af, Atten= 3%, Lag= 1.2 min
Primary = 1.12 cfs @ 12.10 hrs, Volume= 0.088 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 26.41' @ 12.10 hrs Surf.Area= 415 sf Storage= 911 cf
Flood Elev= 29.00' Surf.Area= 415 sf Storage= 1,001 cf

Plug-Flow detention time= 132.5 min calculated for 0.088 af (99% of inflow)
Center-of-Mass det. time= 126.1 min (896.4 - 770.3)

Volume	Invert	Avail.Storage	Storage Description
#1B	22.38'	583 cf	**6.62'W x 62.65'L x 4.57'H Field B** 1,897 cf Overall - 440 cf Embedded = 1,457 cf x 40.0% Voids
#2B	23.13'	413 cf	**ACF R-Tank HD 2** x 50 Inside #1 Inside= 15.7"W x 33.9"H => 3.52 sf x 2.35'L = 8.3 cf Outside= 15.7"W x 33.9"H => 3.70 sf x 2.35'L = 8.7 cf 50 Chambers in 2 Rows
#3	22.75'	5 cf	**4.0" Round Pipe Storage** Inside #1 L= 63.0' S= 0.0100 '/'
		1,001 cf	Total Available Storage

Storage Group B created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	22.31'	**10.0" Round 10" Main Outlet** L= 40.0' CMP, mitered to conform to fill, Ke= 0.700 Inlet / Outlet Invert= 22.31' / 21.51' S= 0.0200 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.55 sf
#2	Device 1	22.61'	**1.0" Vert. 1" UNDERDRAIN ORIFICE** C= 0.600
#3	Device 1	25.63'	**10.0" Round Culvert** L= 2.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 25.63' / 25.62' S= 0.0050 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.55 sf
#4	Device 3	25.63'	**4.0" Vert. 4" Overflows (4) X 4.00** C= 0.600

Primary OutFlow Max=1.12 cfs @ 12.10 hrs HW=26.41' (Free Discharge)
└**1=10" Main Outlet** (Passes 1.12 cfs of 4.45 cfs potential flow)
  └**2=1" UNDERDRAIN ORIFICE** (Orifice Controls 0.05 cfs @ 9.34 fps)
  └**3=Culvert** (Barrel Controls 1.07 cfs @ 2.61 fps)
    └**4=4" Overflows (4)** (Passes 1.07 cfs of 1.32 cfs potential flow)

Pond 1P: R-TANKS - Chamber Wizard Field B

Chamber Model = ACF R-Tank HD 2 (ACF Environmental R-Tank HD)
Inside= 15.7"W x 33.9"H => 3.52 sf x 2.35'L = 8.3 cf
Outside= 15.7"W x 33.9"H => 3.70 sf x 2.35'L = 8.7 cf

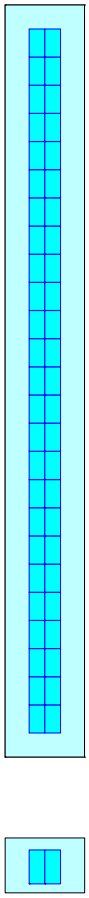
25 Chambers/Row x 2.35' Long = 58.65' Row Length +24.0" End Stone x 2 = 62.65' Base Length
2 Rows x 15.7" Wide + 24.0" Side Stone x 2 = 6.62' Base Width
9.0" Base + 33.9" Chamber Height + 12.0" Cover = 4.57' Field Height

50 Chambers x 8.3 cf = 412.6 cf Chamber Storage
50 Chambers x 8.7 cf = 434.3 cf Displacement

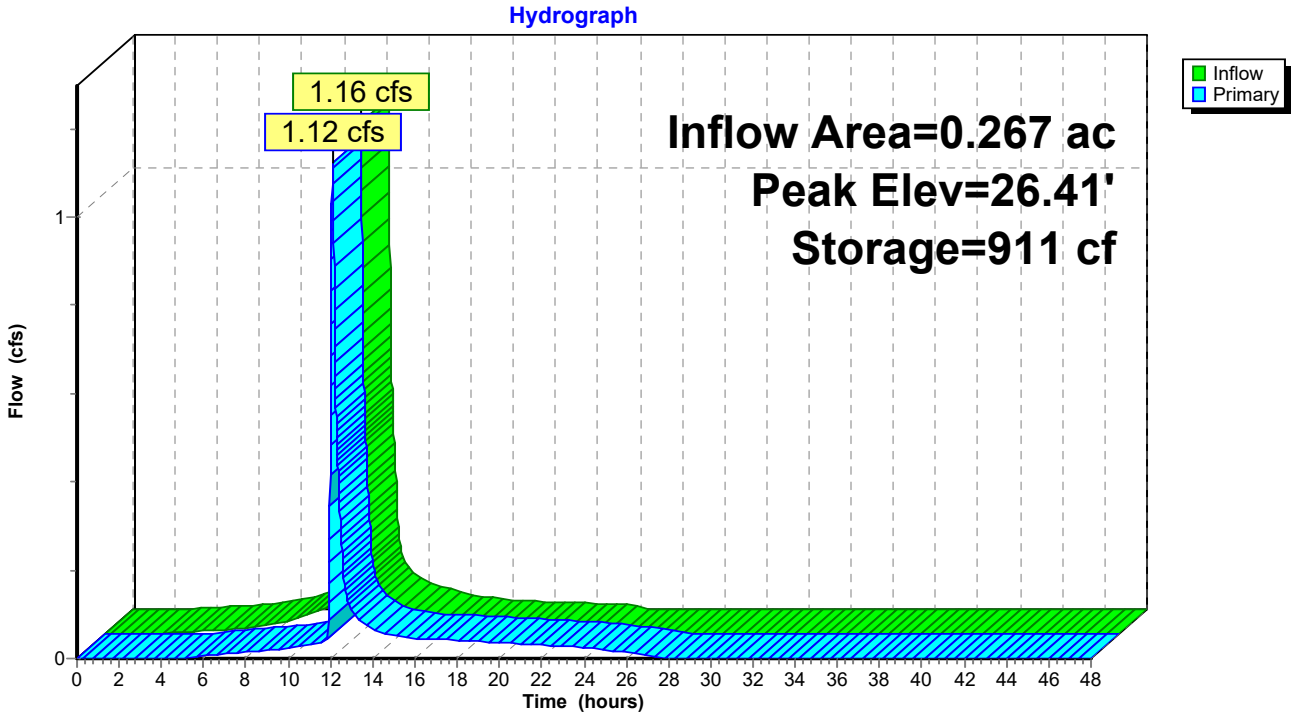
1,897.2 cf Field - 434.3 cf Chambers = 1,462.9 cf Stone x 40.0% Voids = 585.2 cf Stone Storage

Chamber Storage + Stone Storage = 997.7 cf = 0.023 af
Overall Storage Efficiency = 52.6%
Overall System Size = 62.65' x 6.62' x 4.57'

50 Chambers
70.3 cy Field
54.2 cy Stone



Pond 1P: R-TANKS



Stage-Area-Storage for Pond 1P: R-TANKS

Elevation (feet)	Storage (cubic-feet)
22.38	0
22.48	17
22.58	33
22.68	50
22.78	66
22.88	83
22.98	100
23.08	117
23.18	138
23.28	164
23.38	190
23.48	215
23.58	240
23.68	266
23.78	291
23.88	316
23.98	341
24.08	366
24.18	391
24.28	416
24.38	441
24.48	466
24.58	491
24.68	516
24.78	541
24.88	566
24.98	592
25.08	617
25.18	642
25.28	667
25.38	692
25.48	717
25.58	742
25.68	767
25.78	792
25.88	817
25.98	840
26.08	856
26.18	873
26.28	890
26.38	906
26.48	923
26.58	939
26.68	956
26.78	973
26.88	**989**
26.98	**1,001**
27.08	1,001
27.18	1,001
27.28	1,001
27.38	1,001
27.48	1,001
27.58	1,001
27.68	1,001
27.78	1,001
27.88	1,001
27.98	1,001
28.08	1,001
28.18	1,001
28.28	1,001
28.38	1,001
28.48	1,001
28.58	1,001
28.68	1,001
28.78	1,001
28.88	1,001
28.98	1,001

Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1.1S: S 1.1 - RTANK SUBCAT Runoff Area=9,399 sf 93.32% Impervious Runoff Depth=5.10"
Tc=6.0 min CN=94 Runoff=1.19 cfs 0.092 af

Subcatchment 1.2S: S 1.2 - OXFORD Runoff Area=2,048 sf 27.15% Impervious Runoff Depth=1.40"
Tc=6.0 min CN=55 Runoff=0.07 cfs 0.006 af

Subcatchment 1.3S: S 1.3 - CHESTNUT Runoff Area=589 sf 100.00% Impervious Runoff Depth=5.56"
Tc=6.0 min CN=98 Runoff=0.08 cfs 0.006 af

Subcatchment 1S: S 1 - 25% OF ROOF Runoff Area=2,253 sf 100.00% Impervious Runoff Depth=5.56"
Tc=6.0 min CN=98 Runoff=0.29 cfs 0.024 af

Subcatchment 2S: S 2 - CEDAR STREET Runoff Area=920 sf 49.24% Impervious Runoff Depth=2.47"
Tc=6.0 min CN=68 Runoff=0.06 cfs 0.004 af

Reach 1R: CHESTNUT ST COMBINED SEWER Inflow=1.58 cfs 0.127 af
Outflow=1.58 cfs 0.127 af

Reach 99R: POI #99: LANCASTER ST COMBINED SEWER Inflow=1.64 cfs 0.131 af
Outflow=1.64 cfs 0.131 af

Pond 1P: R-TANKS Peak Elev=26.56' Storage=936 cf Inflow=1.48 cfs 0.116 af
Outflow=1.43 cfs 0.115 af

Total Runoff Area = 0.349 ac Runoff Volume = 0.132 af Average Runoff Depth = 4.53"
17.01% Pervious = 0.059 ac 82.99% Impervious = 0.290 ac

Summary for Subcatchment 1.1S: S 1.1 - RTANK SUBCAT

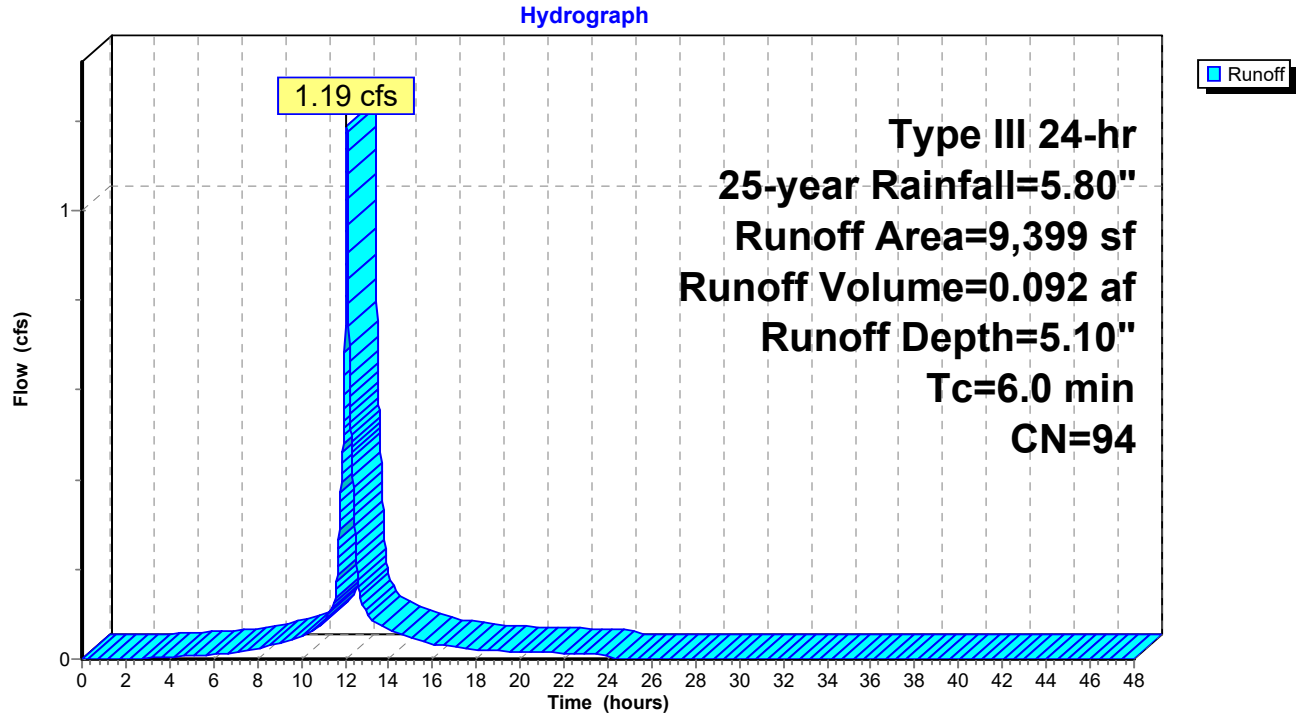
Runoff = 1.19 cfs @ 12.08 hrs, Volume= 0.092 af, Depth= 5.10"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-year Rainfall=5.80"

	Area (sf)	CN	Description
	2,011	98	Paved parking, HSG A
	628	39	>75% Grass cover, Good, HSG A
*	6,760	98	REMAINING ROOF AREA
	9,399	94	Weighted Average
	628	39	6.68% Pervious Area
	8,771	98	93.32% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 1.1S: S 1.1 - RTANK SUBCAT



Summary for Subcatchment 1.2S: S 1.2 - OXFORD STREET

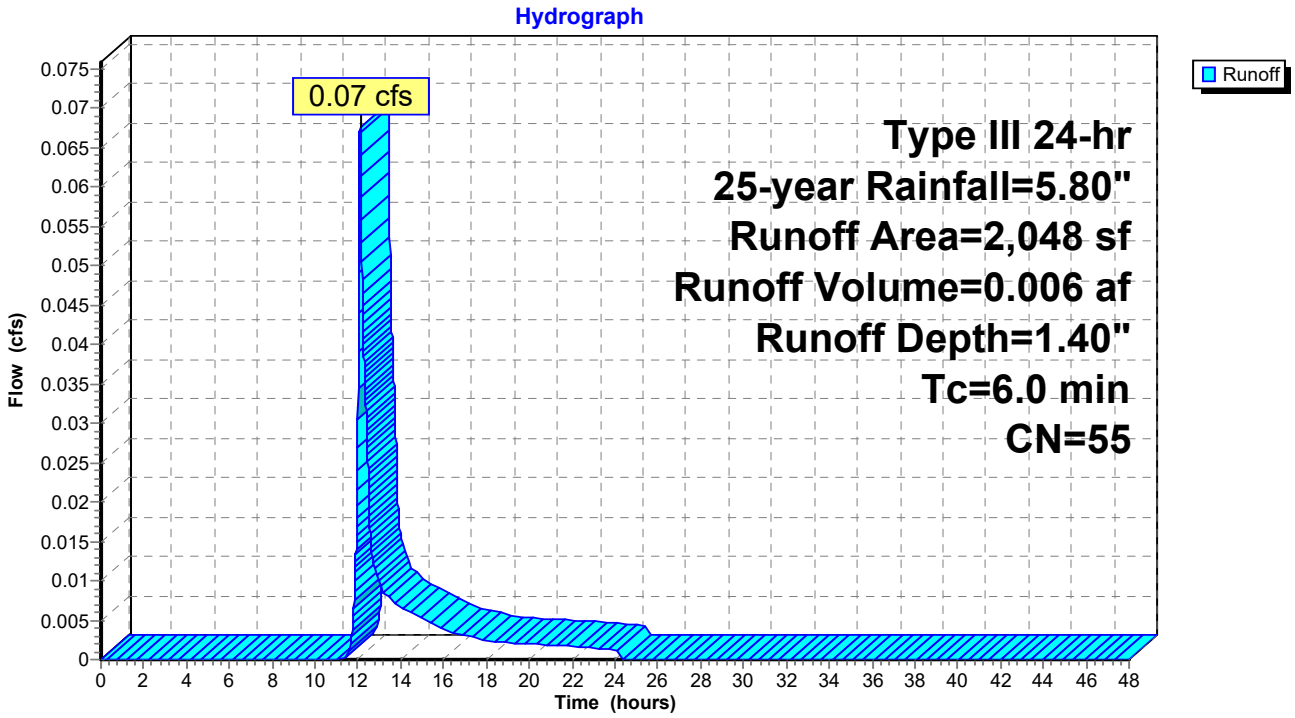
Runoff = 0.07 cfs @ 12.10 hrs, Volume= 0.006 af, Depth= 1.40"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-year Rainfall=5.80"

Area (sf)	CN	Description
556	98	Paved parking, HSG A
1,492	39	>75% Grass cover, Good, HSG A
2,048	55	Weighted Average
1,492	39	72.85% Pervious Area
556	98	27.15% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 1.2S: S 1.2 - OXFORD STREET



Summary for Subcatchment 1.3S: S 1.3 - CHESTNUT STREET

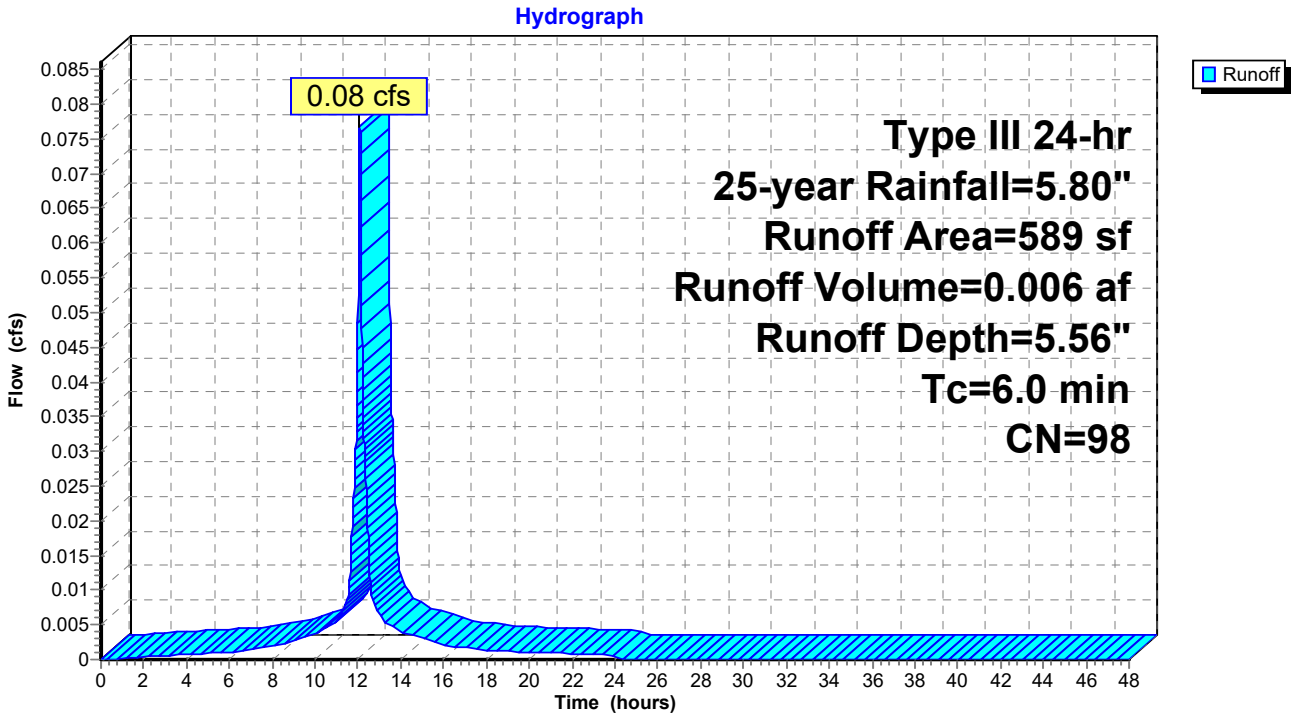
Runoff = 0.08 cfs @ 12.08 hrs, Volume= 0.006 af, Depth= 5.56"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-year Rainfall=5.80"

Area (sf)	CN	Description
190	98	Unconnected pavement, HSG A
399	98	Paved parking, HSG A
589	98	Weighted Average
589	98	100.00% Impervious Area
190		32.26% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 1.3S: S 1.3 - CHESTNUT STREET



Summary for Subcatchment 1S: S 1 - 25% OF ROOF AREA TO BE TREATED

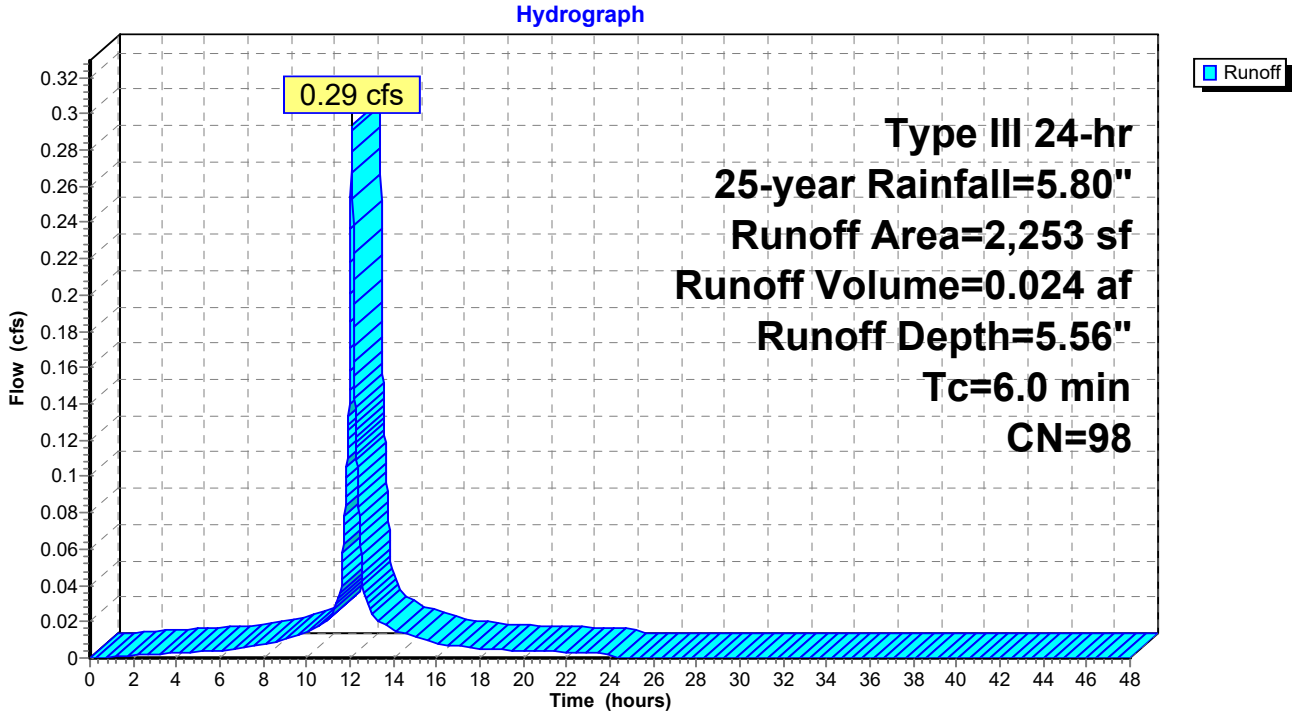
Runoff = 0.29 cfs @ 12.08 hrs, Volume= 0.024 af, Depth= 5.56"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-year Rainfall=5.80"

Area (sf)	CN	Description
2,253	98	Roofs, HSG A
2,253	98	100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 1S: S 1 - 25% OF ROOF AREA TO BE TREATED



Summary for Subcatchment 2S: S 2 - CEDAR STREET

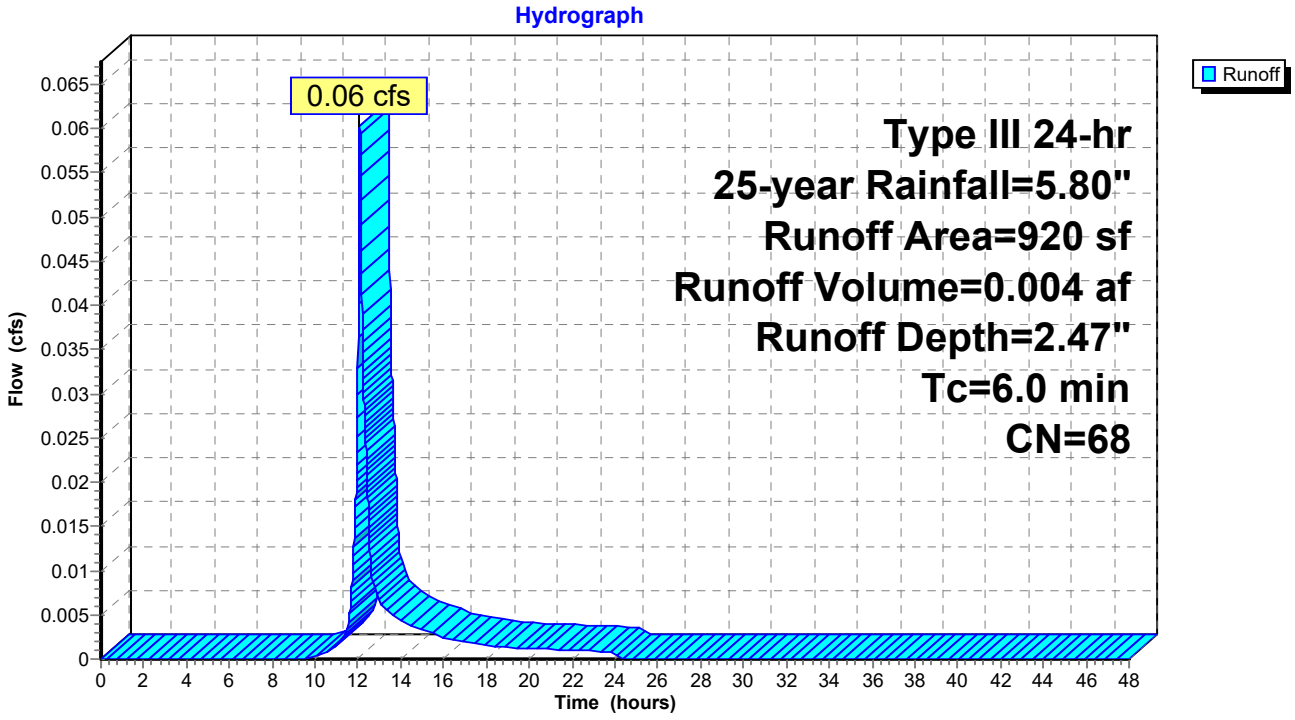
Runoff = 0.06 cfs @ 12.09 hrs, Volume= 0.004 af, Depth= 2.47"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-year Rainfall=5.80"

Area (sf)	CN	Description
467	39	>75% Grass cover, Good, HSG A
453	98	Unconnected pavement, HSG A
920	68	Weighted Average
467	39	50.76% Pervious Area
453	98	49.24% Impervious Area
453		100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 2S: S 2 - CEDAR STREET

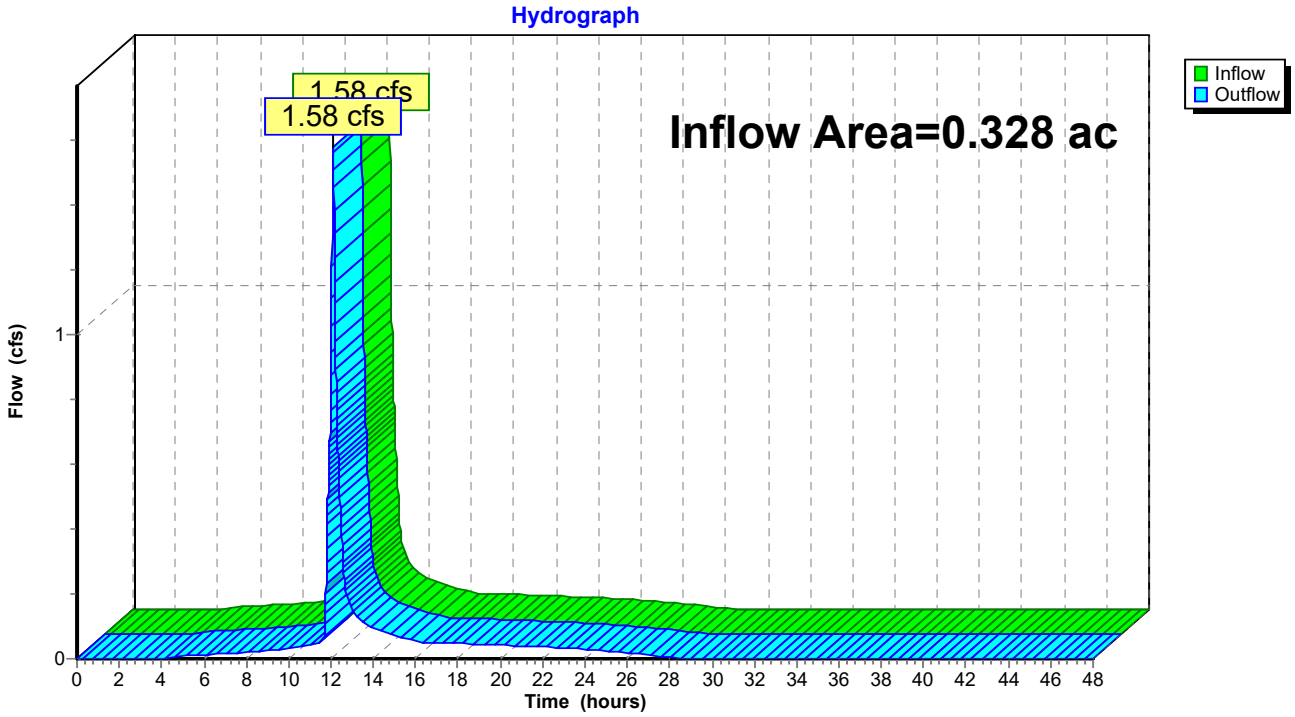


Summary for Reach 1R: CHESTNUT ST COMBINED SEWER

Inflow Area = 0.328 ac, 85.16% Impervious, Inflow Depth = 4.63" for 25-year event
Inflow = 1.58 cfs @ 12.10 hrs, Volume= 0.127 af
Outflow = 1.58 cfs @ 12.10 hrs, Volume= 0.127 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Reach 1R: CHESTNUT ST COMBINED SEWER

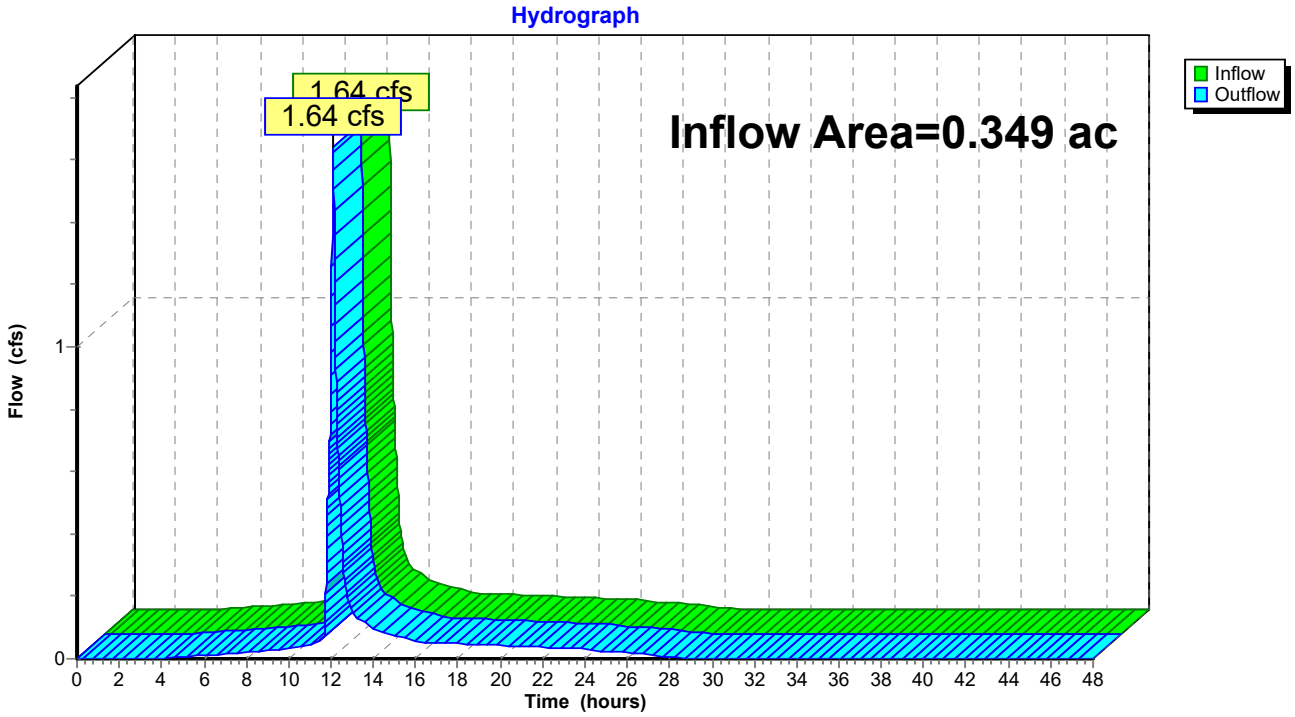


Summary for Reach 99R: POI #99: LANCASTER ST COMBINED SEWER

Inflow Area = 0.349 ac, 82.99% Impervious, Inflow Depth = 4.50" for 25-year event
Inflow = 1.64 cfs @ 12.10 hrs, Volume= 0.131 af
Outflow = 1.64 cfs @ 12.10 hrs, Volume= 0.131 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Reach 99R: POI #99: LANCASTER ST COMBINED SEWER



Summary for Pond 1P: R-TANKS

Inflow Area = 0.267 ac, 94.61% Impervious, Inflow Depth = 5.19" for 25-year event
Inflow = 1.48 cfs @ 12.08 hrs, Volume= 0.116 af
Outflow = 1.43 cfs @ 12.10 hrs, Volume= 0.115 af, Atten= 3%, Lag= 1.2 min
Primary = 1.43 cfs @ 12.10 hrs, Volume= 0.115 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 26.56' @ 12.10 hrs Surf.Area= 415 sf Storage= 936 cf
Flood Elev= 29.00' Surf.Area= 415 sf Storage= 1,001 cf

Plug-Flow detention time= 117.4 min calculated for 0.115 af (99% of inflow)
Center-of-Mass det. time= 112.3 min (876.8 - 764.5)

Volume	Invert	Avail.Storage	Storage Description
#1B	22.38'	583 cf	**6.62'W x 62.65'L x 4.57'H Field B** 1,897 cf Overall - 440 cf Embedded = 1,457 cf x 40.0% Voids
#2B	23.13'	413 cf	**ACF R-Tank HD 2** x 50 Inside #1 Inside= 15.7"W x 33.9"H => 3.52 sf x 2.35'L = 8.3 cf Outside= 15.7"W x 33.9"H => 3.70 sf x 2.35'L = 8.7 cf 50 Chambers in 2 Rows
#3	22.75'	5 cf	**4.0" Round Pipe Storage** Inside #1 L= 63.0' S= 0.0100 '/'
		1,001 cf	Total Available Storage

Storage Group B created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	22.31'	**10.0" Round 10" Main Outlet** L= 40.0' CMP, mitered to conform to fill, Ke= 0.700 Inlet / Outlet Invert= 22.31' / 21.51' S= 0.0200 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.55 sf
#2	Device 1	22.61'	**1.0" Vert. 1" UNDERDRAIN ORIFICE** C= 0.600
#3	Device 1	25.63'	**10.0" Round Culvert** L= 2.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 25.63' / 25.62' S= 0.0050 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.55 sf
#4	Device 3	25.63'	**4.0" Vert. 4" Overflows (4) X 4.00** C= 0.600

Primary OutFlow Max=1.43 cfs @ 12.10 hrs HW=26.56' (Free Discharge)
- **1=10" Main Outlet** (Passes 1.43 cfs of 4.54 cfs potential flow)
  - **2=1" UNDERDRAIN ORIFICE** (Orifice Controls 0.05 cfs @ 9.52 fps)
  - **3=Culvert** (Barrel Controls 1.38 cfs @ 2.84 fps)
    - **4=4" Overflows (4)** (Passes 1.38 cfs of 1.47 cfs potential flow)

Pond 1P: R-TANKS - Chamber Wizard Field B

Chamber Model = ACF R-Tank HD 2 (ACF Environmental R-Tank HD)
Inside= 15.7"W x 33.9"H => 3.52 sf x 2.35'L = 8.3 cf
Outside= 15.7"W x 33.9"H => 3.70 sf x 2.35'L = 8.7 cf

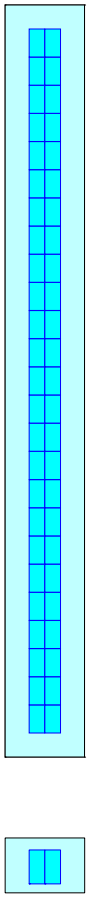
25 Chambers/Row x 2.35' Long = 58.65' Row Length +24.0" End Stone x 2 = 62.65' Base Length
2 Rows x 15.7" Wide + 24.0" Side Stone x 2 = 6.62' Base Width
9.0" Base + 33.9" Chamber Height + 12.0" Cover = 4.57' Field Height

50 Chambers x 8.3 cf = 412.6 cf Chamber Storage
50 Chambers x 8.7 cf = 434.3 cf Displacement

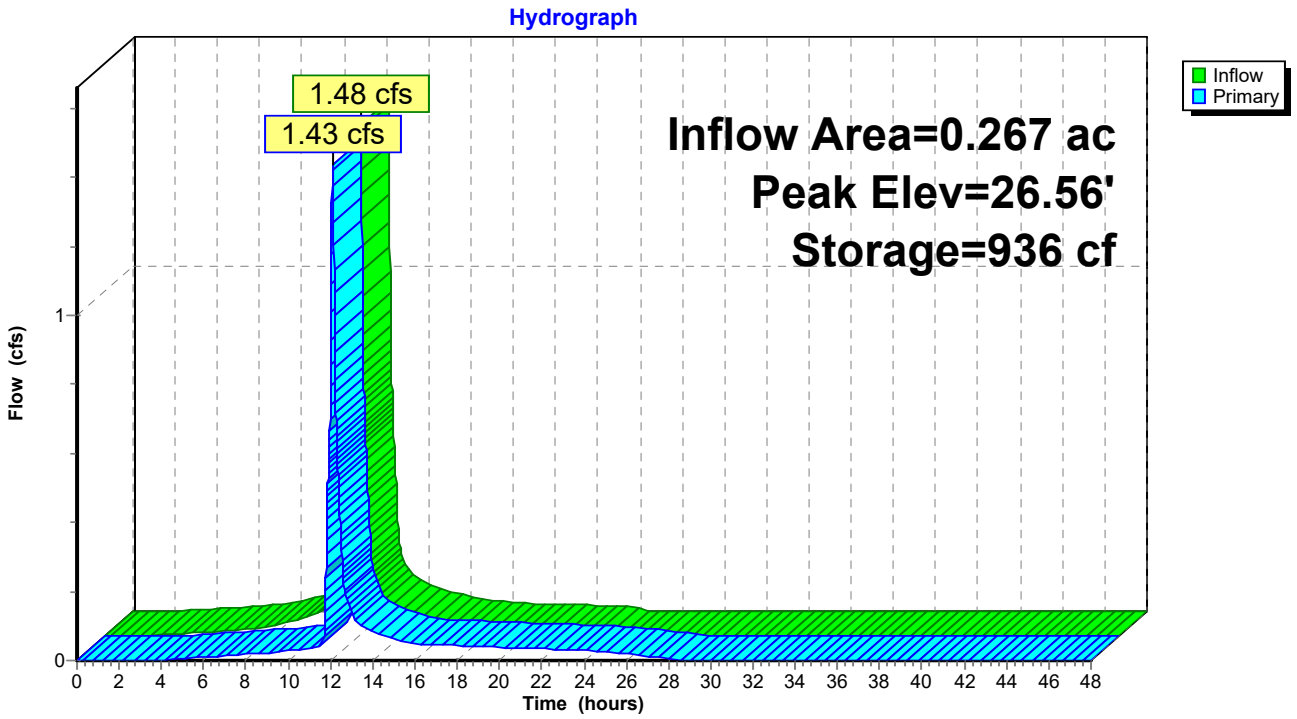
1,897.2 cf Field - 434.3 cf Chambers = 1,462.9 cf Stone x 40.0% Voids = 585.2 cf Stone Storage

Chamber Storage + Stone Storage = 997.7 cf = 0.023 af
Overall Storage Efficiency = 52.6%
Overall System Size = 62.65' x 6.62' x 4.57'

50 Chambers
70.3 cy Field
54.2 cy Stone



Pond 1P: R-TANKS



Stage-Area-Storage for Pond 1P: R-TANKS

Elevation (feet)	Storage (cubic-feet)
22.38	0
22.48	17
22.58	33
22.68	50
22.78	66
22.88	83
22.98	100
23.08	117
23.18	138
23.28	164
23.38	190
23.48	215
23.58	240
23.68	266
23.78	291
23.88	316
23.98	341
24.08	366
24.18	391
24.28	416
24.38	441
24.48	466
24.58	491
24.68	516
24.78	541
24.88	566
24.98	592
25.08	617
25.18	642
25.28	667
25.38	692
25.48	717
25.58	742
25.68	767
25.78	792
25.88	817
25.98	840
26.08	856
26.18	873
26.28	890
26.38	906
26.48	923
26.58	939
26.68	956
26.78	973
26.88	**989**
26.98	**1,001**
27.08	1,001
27.18	1,001
27.28	1,001
27.38	1,001
27.48	1,001
27.58	1,001
27.68	1,001
27.78	1,001
27.88	1,001
27.98	1,001
28.08	1,001
28.18	1,001
28.28	1,001
28.38	1,001
28.48	1,001
28.58	1,001
28.68	1,001
28.78	1,001
28.88	1,001
28.98	1,001

SECTION J

STORMWATER MANAGMENT REPORT

Attachment C: HydroCAD Calculations

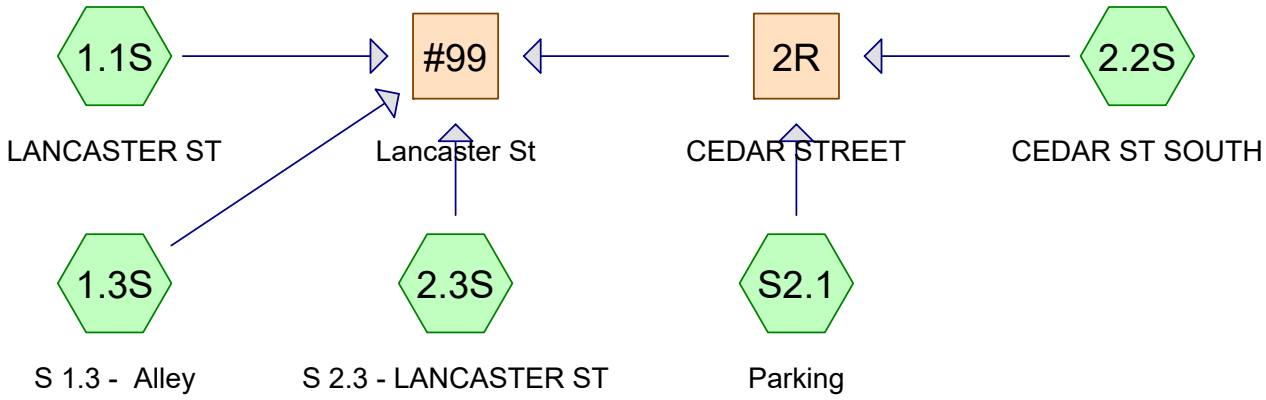
PHASE 2 - 50 CEDAR STREET

SECTION J

STORMWATER MANAGMENT REPORT

Attachment C: Pre Development HydroCAD

PHASE 2 - 50 CEDAR STREET



Subcat Reach Pond Link

Routing Diagram for PHASE 2 - 50 CEDAR ST - PRE
Prepared by HP Inc., Printed 4/25/2024
HydroCAD® 10.00-26 s/n 00620 © 2020 HydroCAD Software Solutions LLC

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.120	68	<50% Grass cover, Poor, HSG A (1.3S, 2.2S, 2.3S)
0.046	98	Parking (S2.1)
0.215	98	Paved parking, HSG A (1.1S, 1.3S, 2.2S, 2.3S)
0.381	**89**	**TOTAL AREA**

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.335	HSG A	1.1S, 1.3S, 2.2S, 2.3S
0.000	HSG B	
0.000	HSG C	
0.000	HSG D	
0.046	Other	S2.1
0.381		**TOTAL AREA**

Ground Covers (all nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.120	0.000	0.000	0.000	0.000	0.120	<50% Grass cover, Poor	1.3S, 2.2S, 2.3S
0.000	0.000	0.000	0.000	0.046	0.046	Parking	S2.1
0.215	0.000	0.000	0.000	0.000	0.215	Paved parking	1.1S, 1.3S, 2.2S, 2.3S
0.335	**0.000**	**0.000**	**0.000**	**0.046**	**0.381**	**TOTAL AREA**	

Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1.1S: LANCASTER ST Runoff Area=1,862 sf 100.00% Impervious Runoff Depth=2.87"
Tc=6.0 min CN=98 Runoff=0.13 cfs 0.010 af

Subcatchment 1.3S: S 1.3 - Alley Runoff Area=1,251 sf 84.89% Impervious Runoff Depth=2.35"
Tc=6.0 min CN=93 Runoff=0.08 cfs 0.006 af

Subcatchment 2.2S: CEDAR ST SOUTH Runoff Area=6,494 sf 74.28% Impervious Runoff Depth=2.08"
Tc=6.0 min CN=90 Runoff=0.36 cfs 0.026 af

Subcatchment 2.3S: S 2.3 - LANCASTER ST Runoff Area=4,993 sf 32.53% Impervious Runoff Depth=1.20"
Tc=6.0 min CN=78 Runoff=0.16 cfs 0.011 af

Subcatchment S2.1: Parking Runoff Area=2,008 sf 100.00% Impervious Runoff Depth=2.87"
Tc=6.0 min CN=98 Runoff=0.14 cfs 0.011 af

Reach #99: Lancaster St Inflow=0.86 cfs 0.064 af
Outflow=0.86 cfs 0.064 af

Reach 2R: CEDAR STREET Inflow=0.50 cfs 0.037 af
Outflow=0.50 cfs 0.037 af

Total Runoff Area = 0.381 ac Runoff Volume = 0.064 af Average Runoff Depth = 2.02"
31.48% Pervious = 0.120 ac 68.52% Impervious = 0.261 ac

Summary for Subcatchment 1.1S: LANCASTER ST

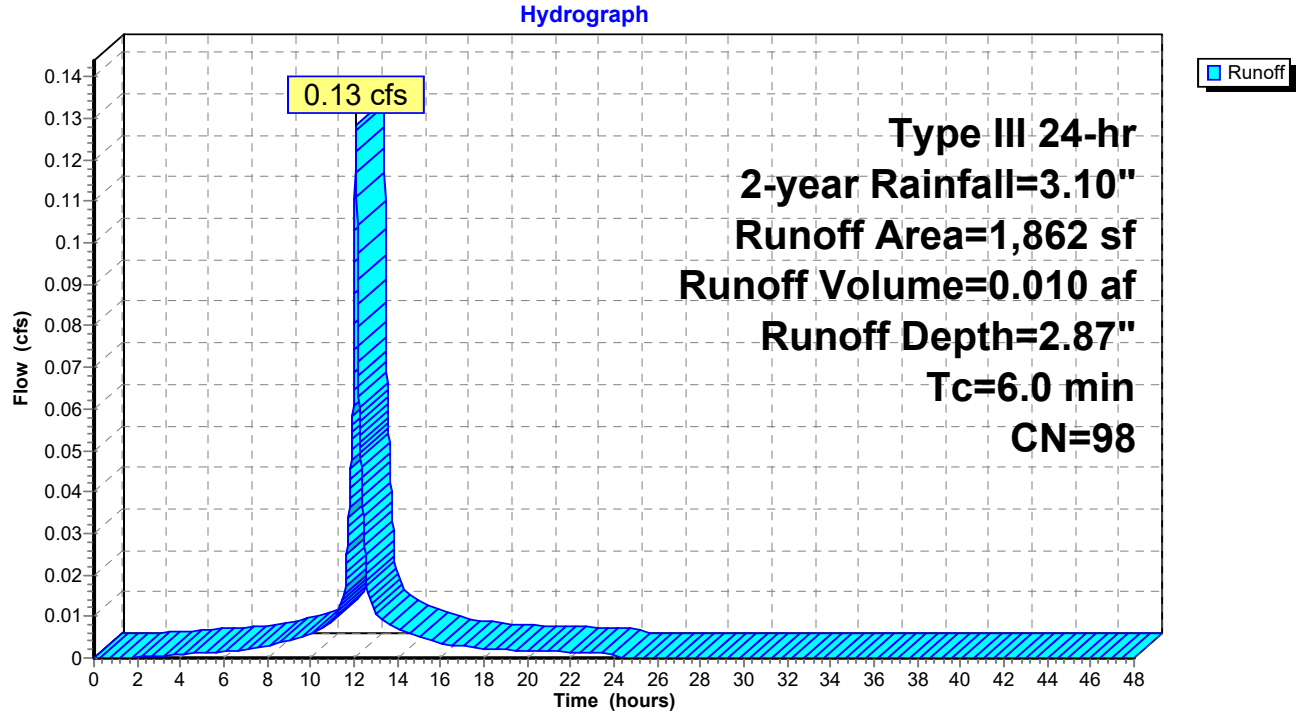
Runoff = 0.13 cfs @ 12.08 hrs, Volume= 0.010 af, Depth= 2.87"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-year Rainfall=3.10"

Area (sf)	CN	Description
1,862	98	Paved parking, HSG A
1,862	98	100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 1.1S: LANCASTER ST



Summary for Subcatchment 1.3S: S 1.3 - Alley

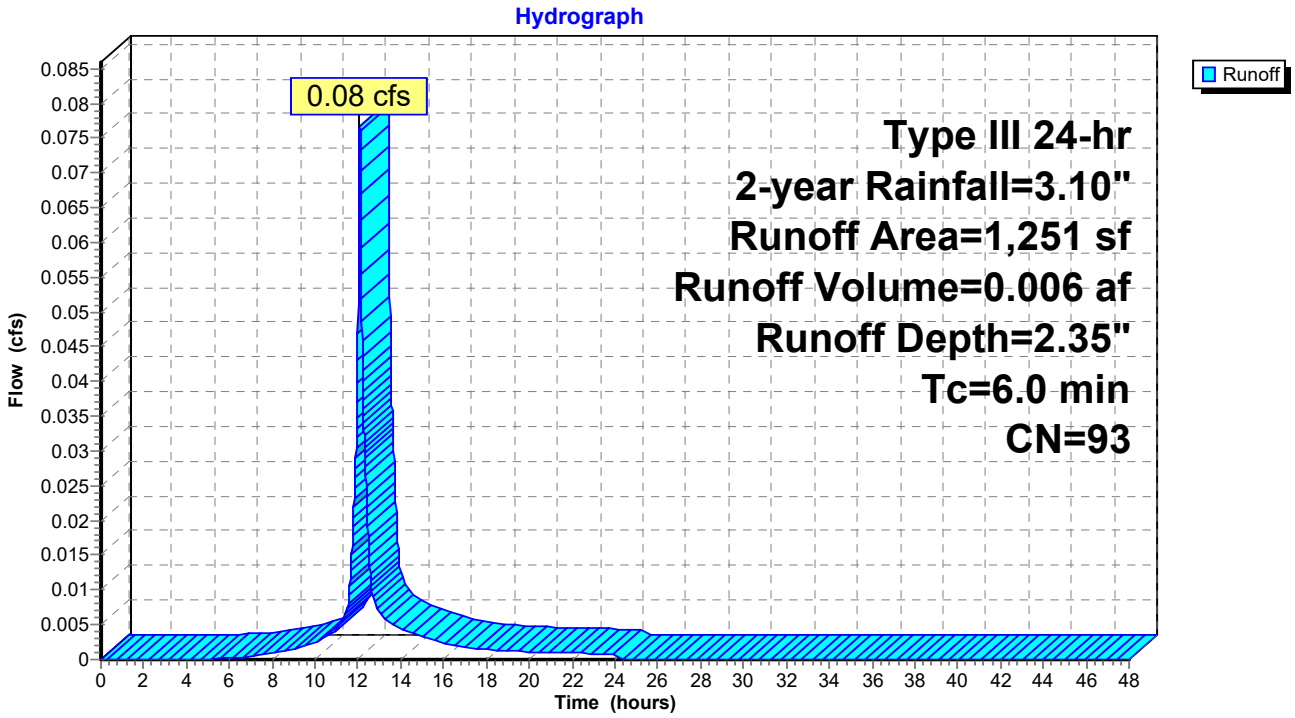
Runoff = 0.08 cfs @ 12.09 hrs, Volume= 0.006 af, Depth= 2.35"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-year Rainfall=3.10"

Area (sf)	CN	Description
189	68	<50% Grass cover, Poor, HSG A
1,062	98	Paved parking, HSG A
1,251	93	Weighted Average
189	68	15.11% Pervious Area
1,062	98	84.89% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 1.3S: S 1.3 - Alley



Summary for Subcatchment 2.2S: CEDAR ST SOUTH

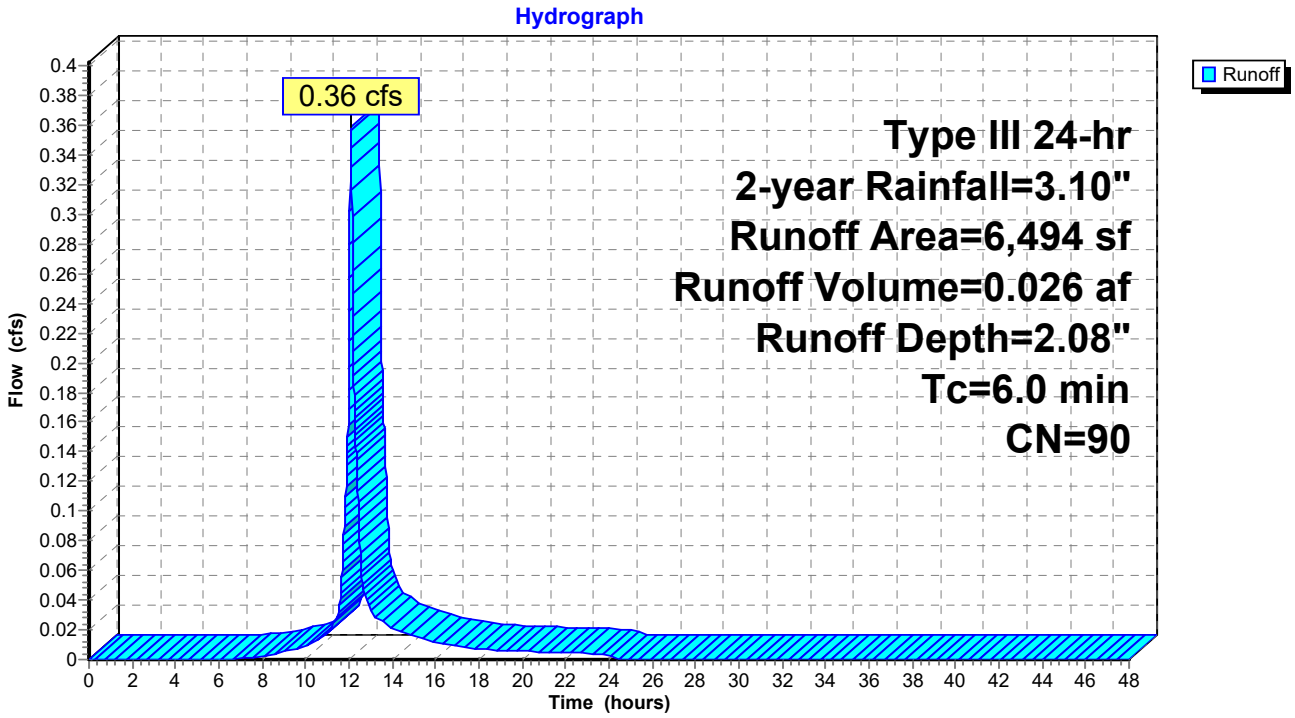
Runoff = 0.36 cfs @ 12.09 hrs, Volume= 0.026 af, Depth= 2.08"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-year Rainfall=3.10"

Area (sf)	CN	Description
1,670	68	<50% Grass cover, Poor, HSG A
4,824	98	Paved parking, HSG A
6,494	90	Weighted Average
1,670	68	25.72% Pervious Area
4,824	98	74.28% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 2.2S: CEDAR ST SOUTH



Summary for Subcatchment 2.3S: S 2.3 - LANCASTER ST

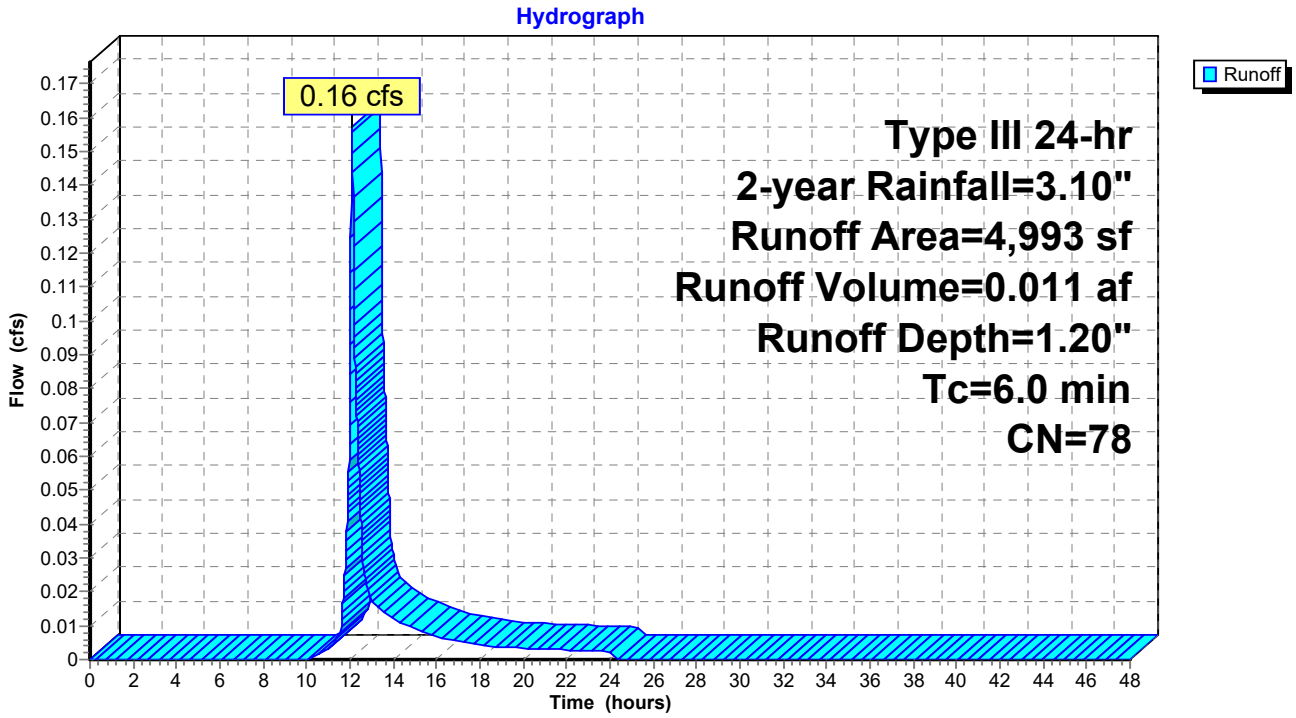
Runoff = 0.16 cfs @ 12.09 hrs, Volume= 0.011 af, Depth= 1.20"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-year Rainfall=3.10"

Area (sf)	CN	Description
3,369	68	<50% Grass cover, Poor, HSG A
1,624	98	Paved parking, HSG A
4,993	78	Weighted Average
3,369	68	67.47% Pervious Area
1,624	98	32.53% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 2.3S: S 2.3 - LANCASTER ST



Summary for Subcatchment S2.1: Parking

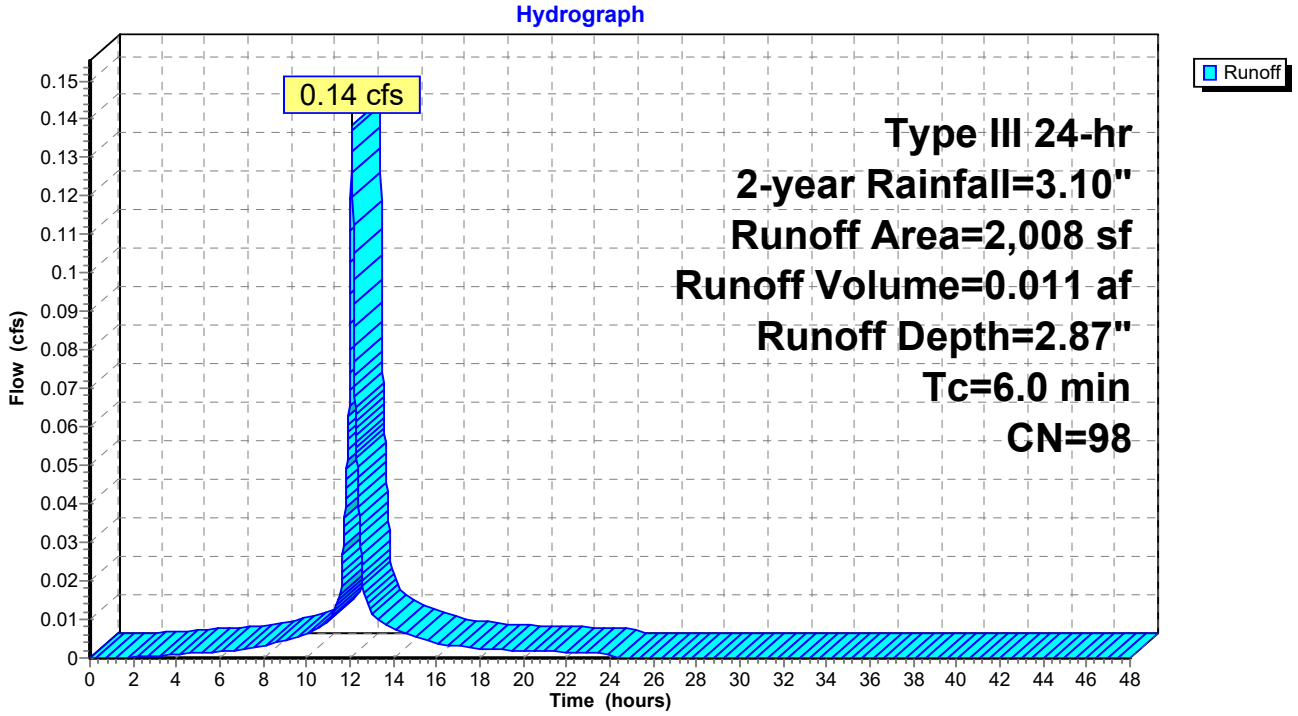
Runoff = 0.14 cfs @ 12.08 hrs, Volume= 0.011 af, Depth= 2.87"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-year Rainfall=3.10"

	Area (sf)	CN	Description
*	2,008	98	Parking
	2,008	98	100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Direct**

Subcatchment S2.1: Parking

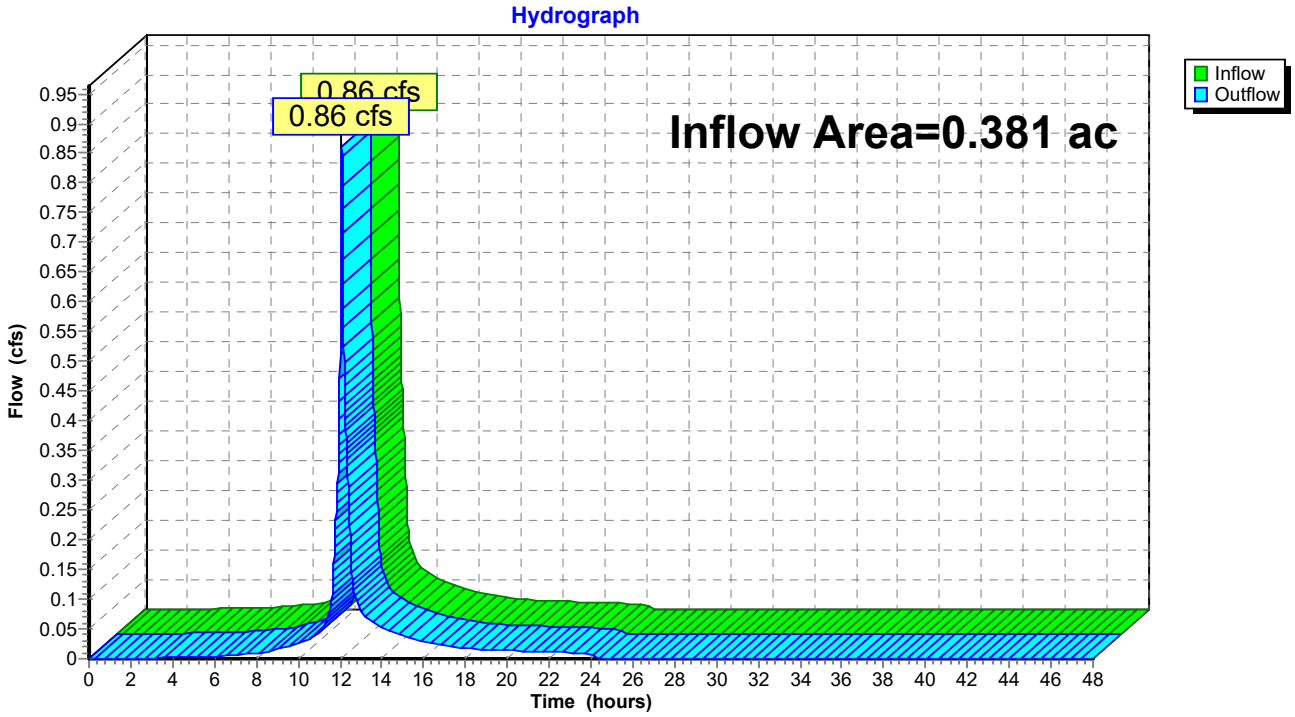


Summary for Reach #99: Lancaster St

Inflow Area = 0.381 ac, 68.52% Impervious, Inflow Depth = 2.02" for 2-year event
Inflow = 0.86 cfs @ 12.09 hrs, Volume= 0.064 af
Outflow = 0.86 cfs @ 12.09 hrs, Volume= 0.064 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Reach #99: Lancaster St

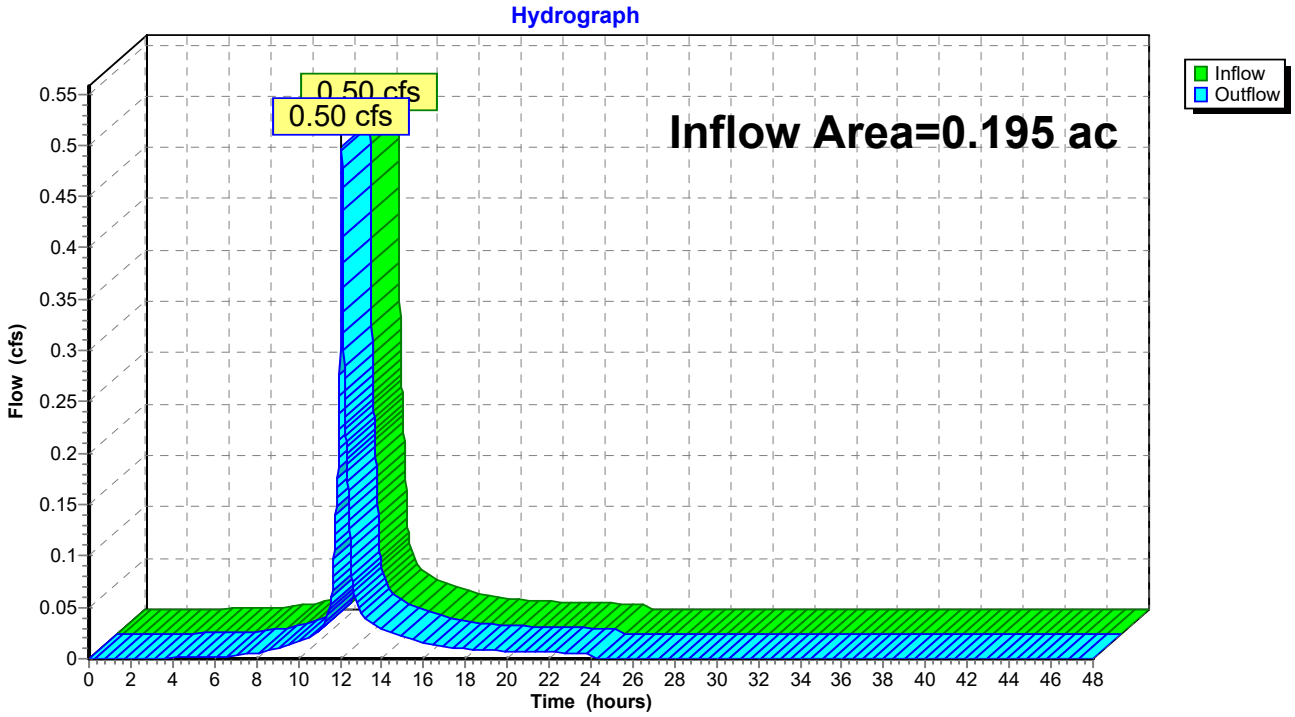


Summary for Reach 2R: CEDAR STREET

Inflow Area = 0.195 ac, 80.36% Impervious, Inflow Depth = 2.26" for 2-year event
Inflow = 0.50 cfs @ 12.09 hrs, Volume= 0.037 af
Outflow = 0.50 cfs @ 12.09 hrs, Volume= 0.037 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Reach 2R: CEDAR STREET



Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1.1S: LANCASTER ST Runoff Area=1,862 sf 100.00% Impervious Runoff Depth=4.36"
Tc=6.0 min CN=98 Runoff=0.19 cfs 0.016 af

Subcatchment 1.3S: S 1.3 - Alley Runoff Area=1,251 sf 84.89% Impervious Runoff Depth=3.81"
Tc=6.0 min CN=93 Runoff=0.12 cfs 0.009 af

Subcatchment 2.2S: CEDAR ST SOUTH Runoff Area=6,494 sf 74.28% Impervious Runoff Depth=3.49"
Tc=6.0 min CN=90 Runoff=0.59 cfs 0.043 af

Subcatchment 2.3S: S 2.3 - LANCASTER ST Runoff Area=4,993 sf 32.53% Impervious Runoff Depth=2.38"
Tc=6.0 min CN=78 Runoff=0.32 cfs 0.023 af

Subcatchment S2.1: Parking Runoff Area=2,008 sf 100.00% Impervious Runoff Depth=4.36"
Tc=6.0 min CN=98 Runoff=0.21 cfs 0.017 af

Reach #99: Lancaster St Inflow=1.43 cfs 0.107 af
Outflow=1.43 cfs 0.107 af

Reach 2R: CEDAR STREET Inflow=0.80 cfs 0.060 af
Outflow=0.80 cfs 0.060 af

Total Runoff Area = 0.381 ac Runoff Volume = 0.107 af Average Runoff Depth = 3.38"
31.48% Pervious = 0.120 ac 68.52% Impervious = 0.261 ac

Summary for Subcatchment 1.1S: LANCASTER ST

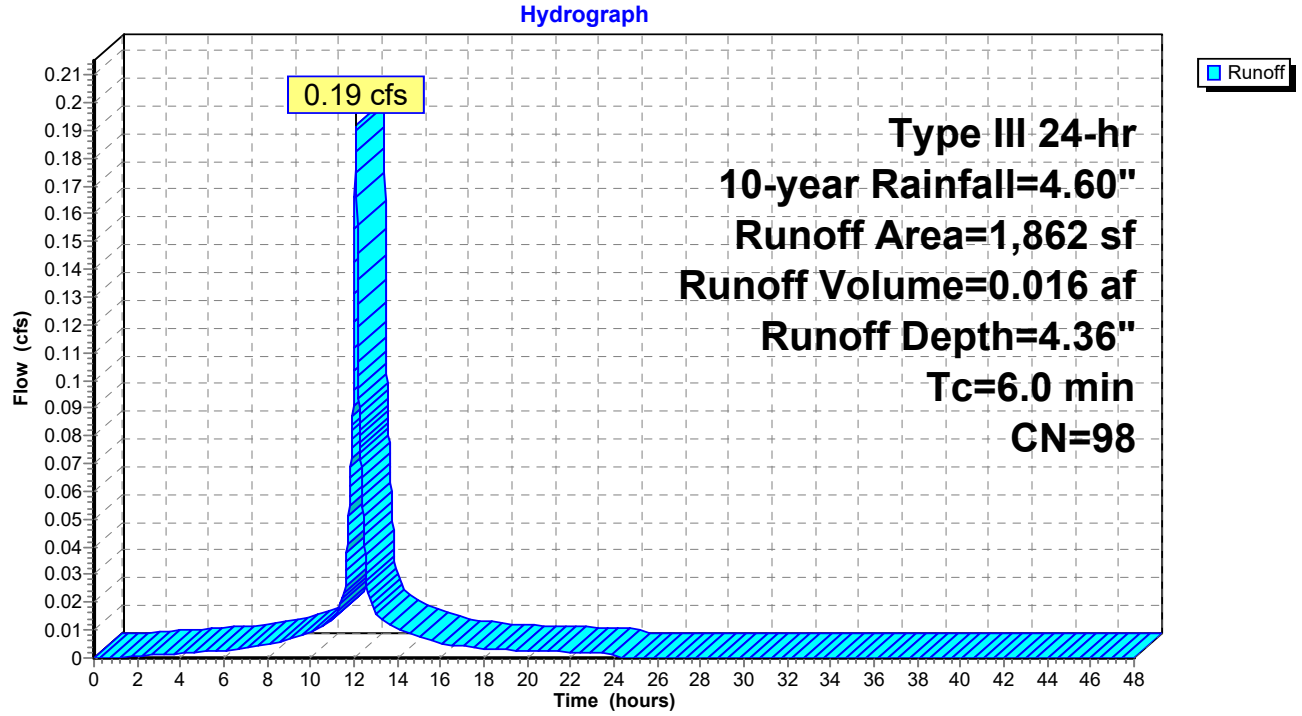
Runoff = 0.19 cfs @ 12.08 hrs, Volume= 0.016 af, Depth= 4.36"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-year Rainfall=4.60"

Area (sf)	CN	Description
1,862	98	Paved parking, HSG A
1,862	98	100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 1.1S: LANCASTER ST



Summary for Subcatchment 1.3S: S 1.3 - Alley

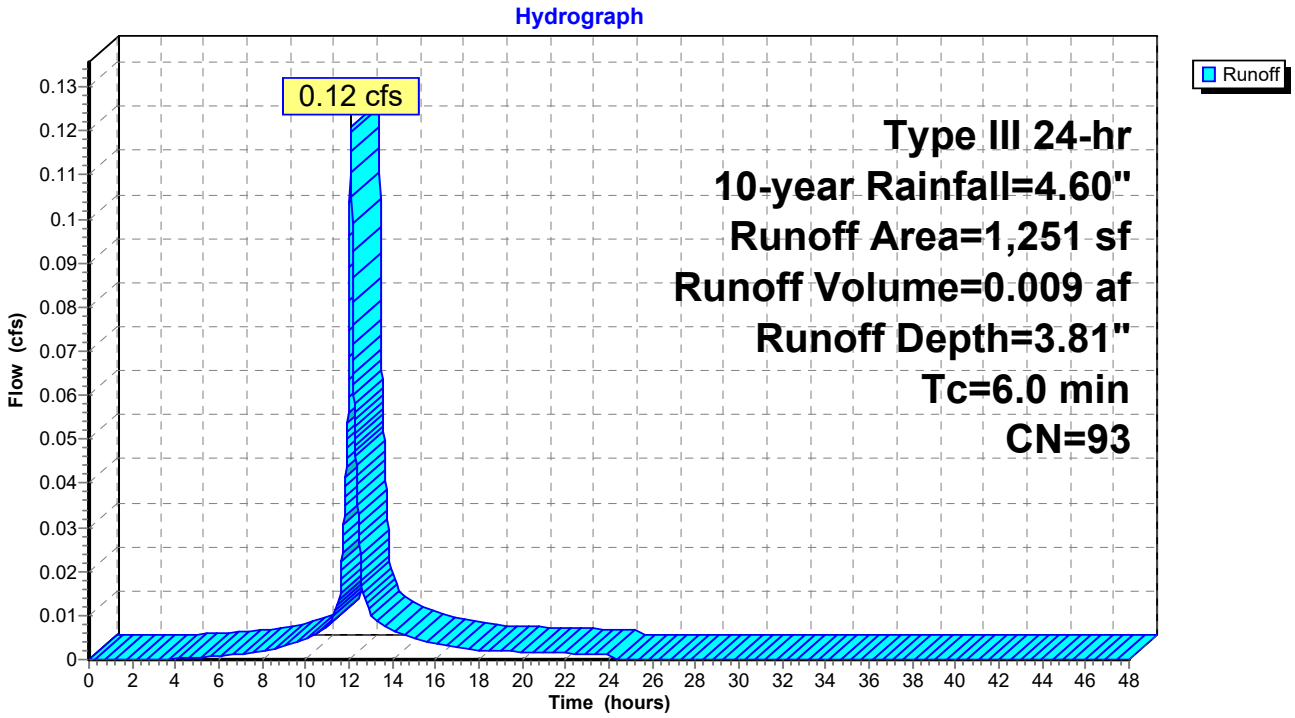
Runoff = 0.12 cfs @ 12.08 hrs, Volume= 0.009 af, Depth= 3.81"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-year Rainfall=4.60"

Area (sf)	CN	Description
189	68	<50% Grass cover, Poor, HSG A
1,062	98	Paved parking, HSG A
1,251	93	Weighted Average
189	68	15.11% Pervious Area
1,062	98	84.89% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 1.3S: S 1.3 - Alley



Summary for Subcatchment 2.2S: CEDAR ST SOUTH

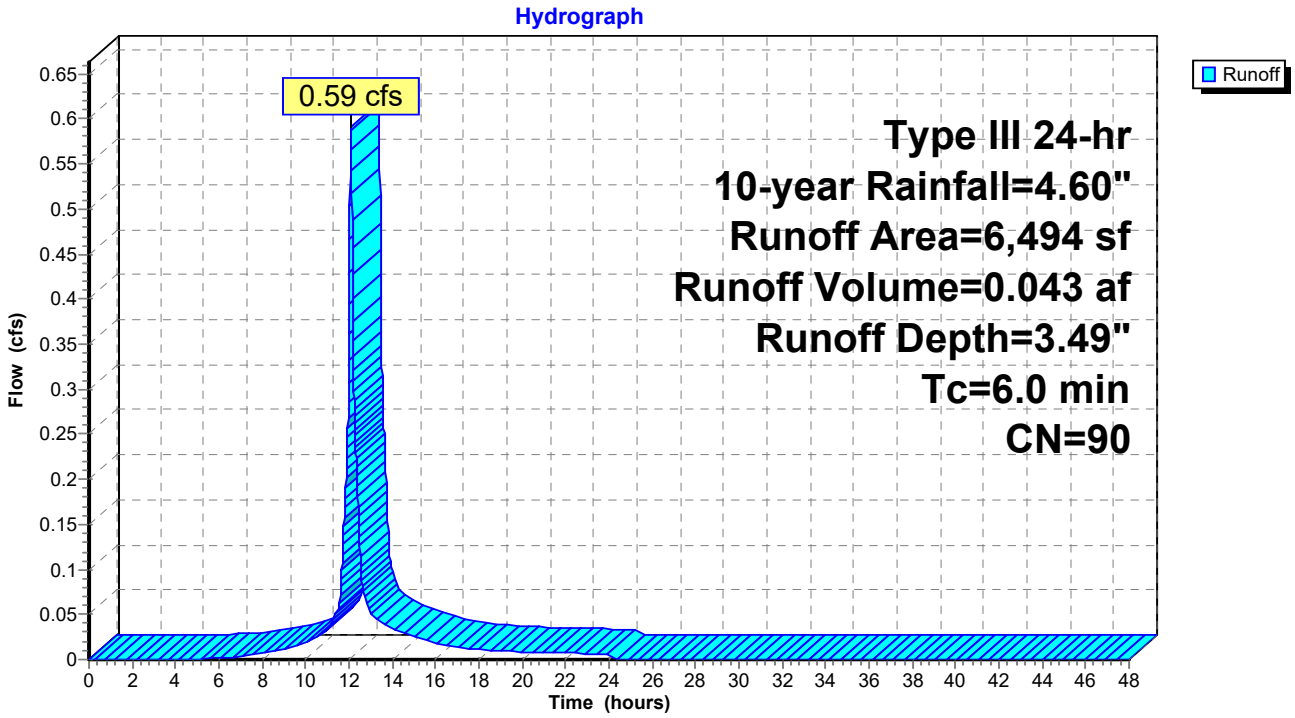
Runoff = 0.59 cfs @ 12.09 hrs, Volume= 0.043 af, Depth= 3.49"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-year Rainfall=4.60"

Area (sf)	CN	Description
1,670	68	<50% Grass cover, Poor, HSG A
4,824	98	Paved parking, HSG A
6,494	90	Weighted Average
1,670	68	25.72% Pervious Area
4,824	98	74.28% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 2.2S: CEDAR ST SOUTH



Summary for Subcatchment 2.3S: S 2.3 - LANCASTER ST

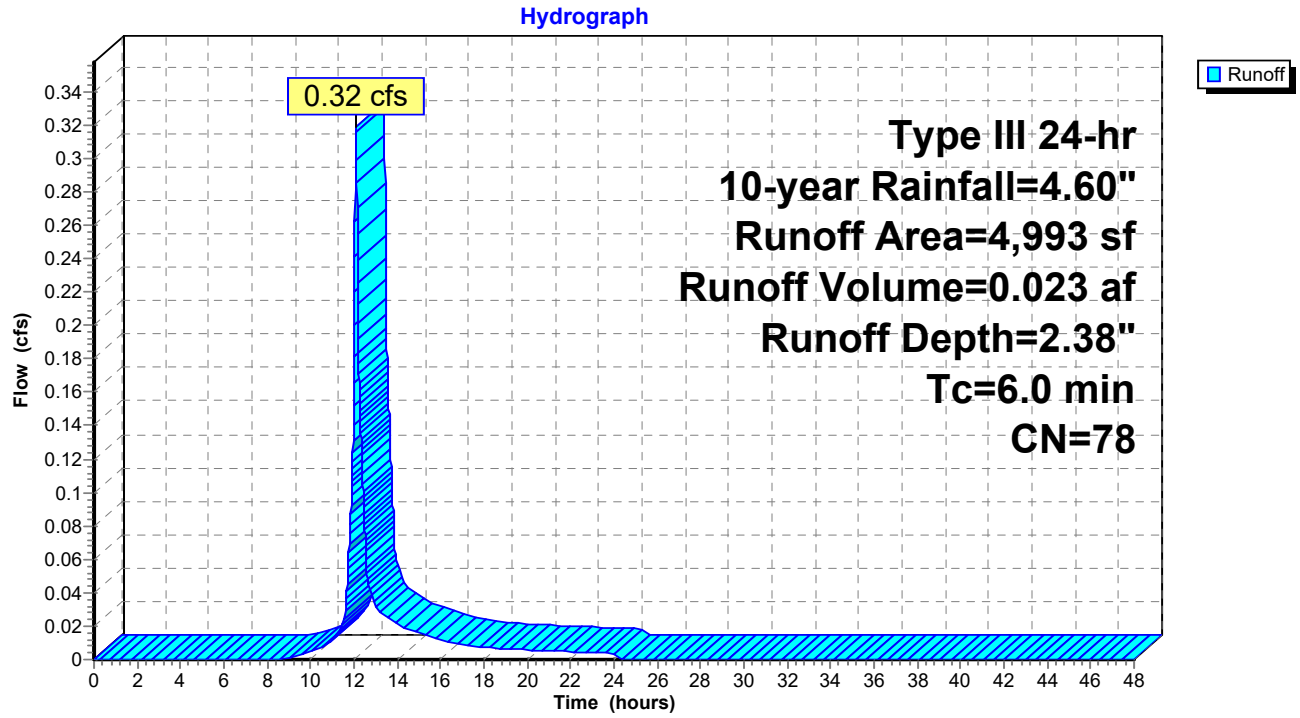
Runoff = 0.32 cfs @ 12.09 hrs, Volume= 0.023 af, Depth= 2.38"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-year Rainfall=4.60"

Area (sf)	CN	Description
3,369	68	<50% Grass cover, Poor, HSG A
1,624	98	Paved parking, HSG A
4,993	78	Weighted Average
3,369	68	67.47% Pervious Area
1,624	98	32.53% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 2.3S: S 2.3 - LANCASTER ST



Summary for Subcatchment S2.1: Parking

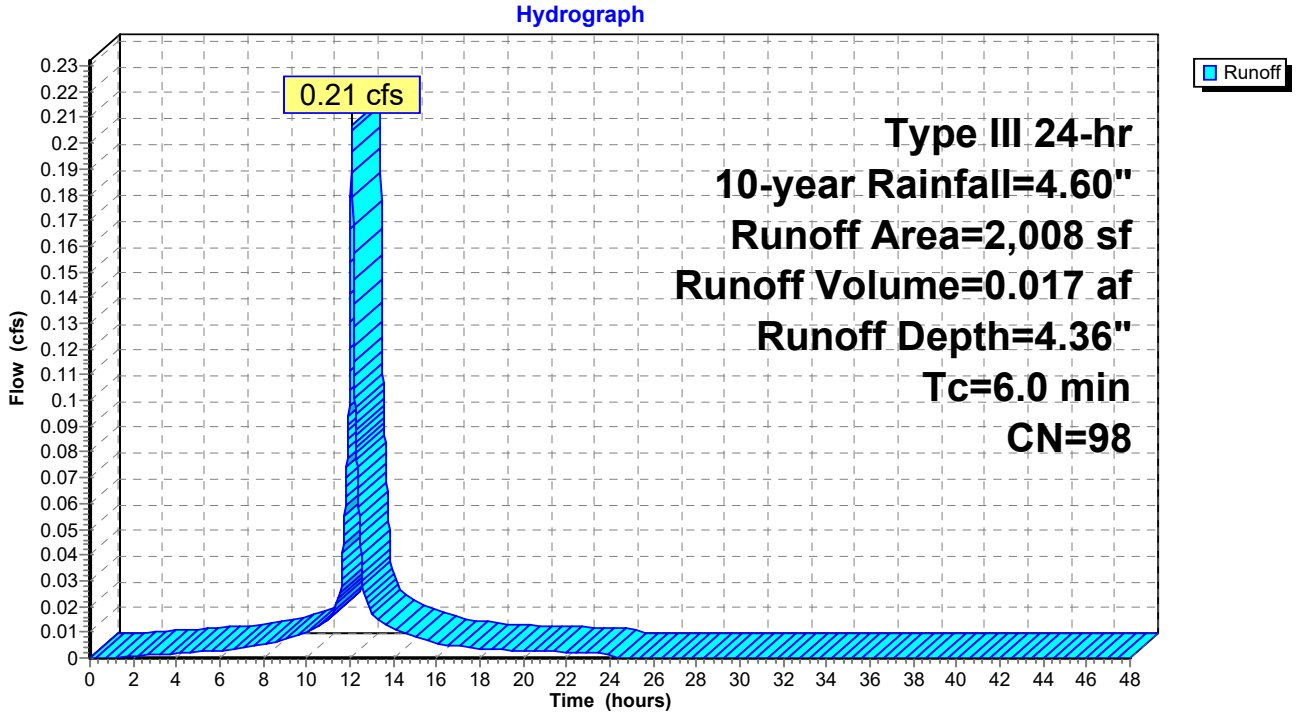
Runoff = 0.21 cfs @ 12.08 hrs, Volume= 0.017 af, Depth= 4.36"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-year Rainfall=4.60"

	Area (sf)	CN	Description
*	2,008	98	Parking
	2,008	98	100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Direct**

Subcatchment S2.1: Parking

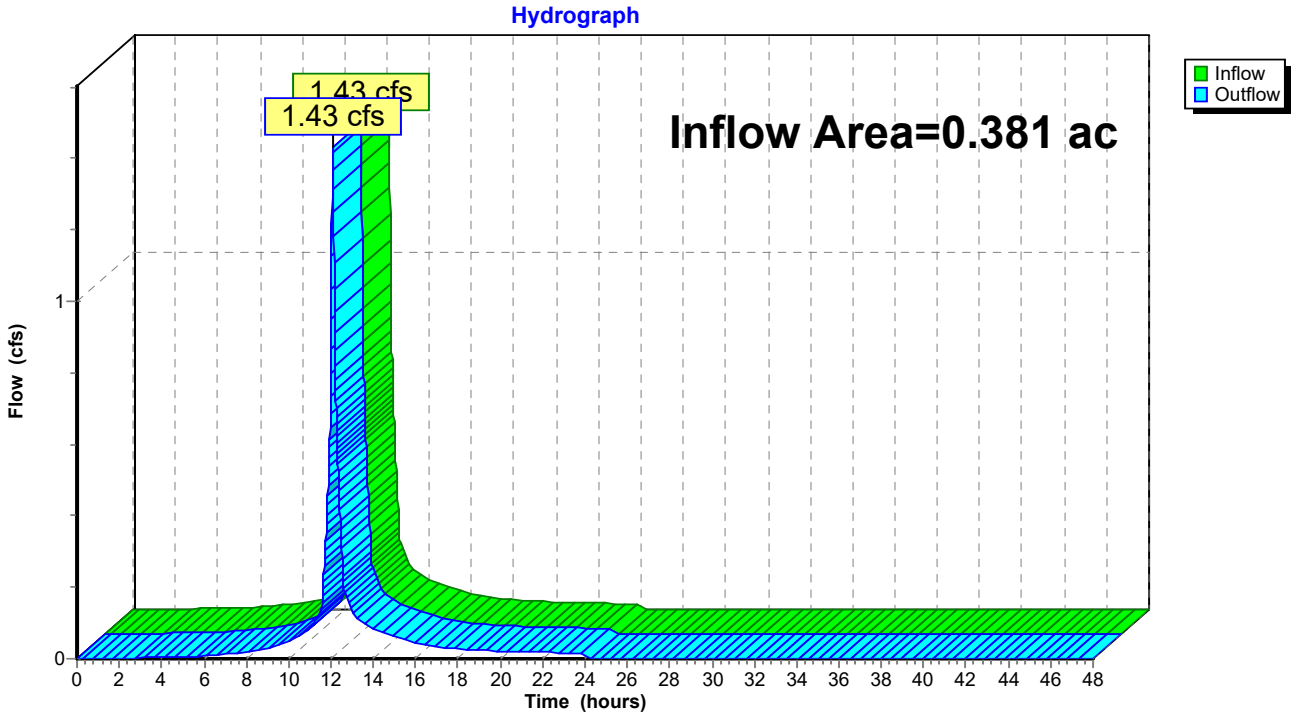


Summary for Reach #99: Lancaster St

Inflow Area = 0.381 ac, 68.52% Impervious, Inflow Depth = 3.38" for 10-year event
Inflow = 1.43 cfs @ 12.09 hrs, Volume= 0.107 af
Outflow = 1.43 cfs @ 12.09 hrs, Volume= 0.107 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Reach #99: Lancaster St

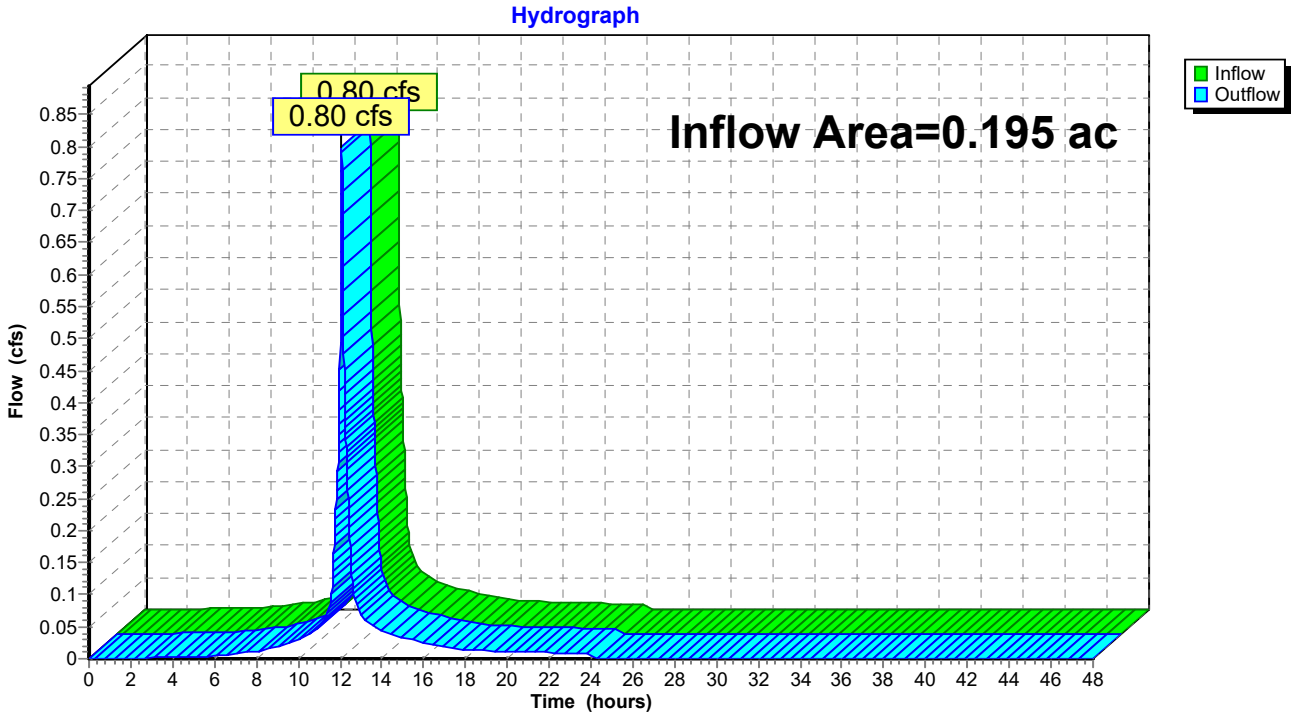


Summary for Reach 2R: CEDAR STREET

Inflow Area = 0.195 ac, 80.36% Impervious, Inflow Depth = 3.70" for 10-year event
Inflow = 0.80 cfs @ 12.08 hrs, Volume= 0.060 af
Outflow = 0.80 cfs @ 12.08 hrs, Volume= 0.060 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Reach 2R: CEDAR STREET



Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1.1S: LANCASTER ST Runoff Area=1,862 sf 100.00% Impervious Runoff Depth=5.56"
Tc=6.0 min CN=98 Runoff=0.24 cfs 0.020 af

Subcatchment 1.3S: S 1.3 - Alley Runoff Area=1,251 sf 84.89% Impervious Runoff Depth=4.99"
Tc=6.0 min CN=93 Runoff=0.16 cfs 0.012 af

Subcatchment 2.2S: CEDAR ST SOUTH Runoff Area=6,494 sf 74.28% Impervious Runoff Depth=4.65"
Tc=6.0 min CN=90 Runoff=0.78 cfs 0.058 af

Subcatchment 2.3S: S 2.3 - LANCASTER ST Runoff Area=4,993 sf 32.53% Impervious Runoff Depth=3.40"
Tc=6.0 min CN=78 Runoff=0.46 cfs 0.033 af

Subcatchment S2.1: Parking Runoff Area=2,008 sf 100.00% Impervious Runoff Depth=5.56"
Tc=6.0 min CN=98 Runoff=0.26 cfs 0.021 af

Reach #99: Lancaster St Inflow=1.89 cfs 0.143 af
Outflow=1.89 cfs 0.143 af

Reach 2R: CEDAR STREET Inflow=1.04 cfs 0.079 af
Outflow=1.04 cfs 0.079 af

Total Runoff Area = 0.381 ac Runoff Volume = 0.143 af Average Runoff Depth = 4.51"
31.48% Pervious = 0.120 ac 68.52% Impervious = 0.261 ac

Summary for Subcatchment 1.1S: LANCASTER ST

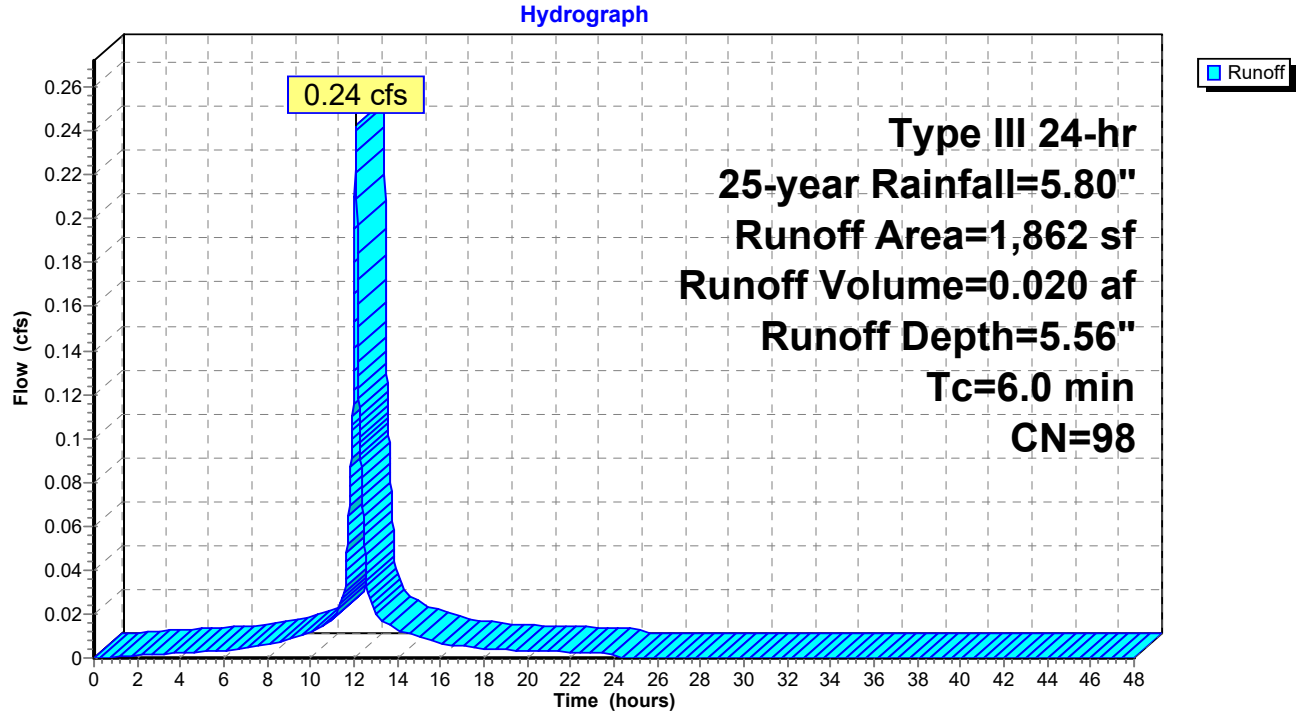
Runoff = 0.24 cfs @ 12.08 hrs, Volume= 0.020 af, Depth= 5.56"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-year Rainfall=5.80"

Area (sf)	CN	Description
1,862	98	Paved parking, HSG A
1,862	98	100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 1.1S: LANCASTER ST



Summary for Subcatchment 1.3S: S 1.3 - Alley

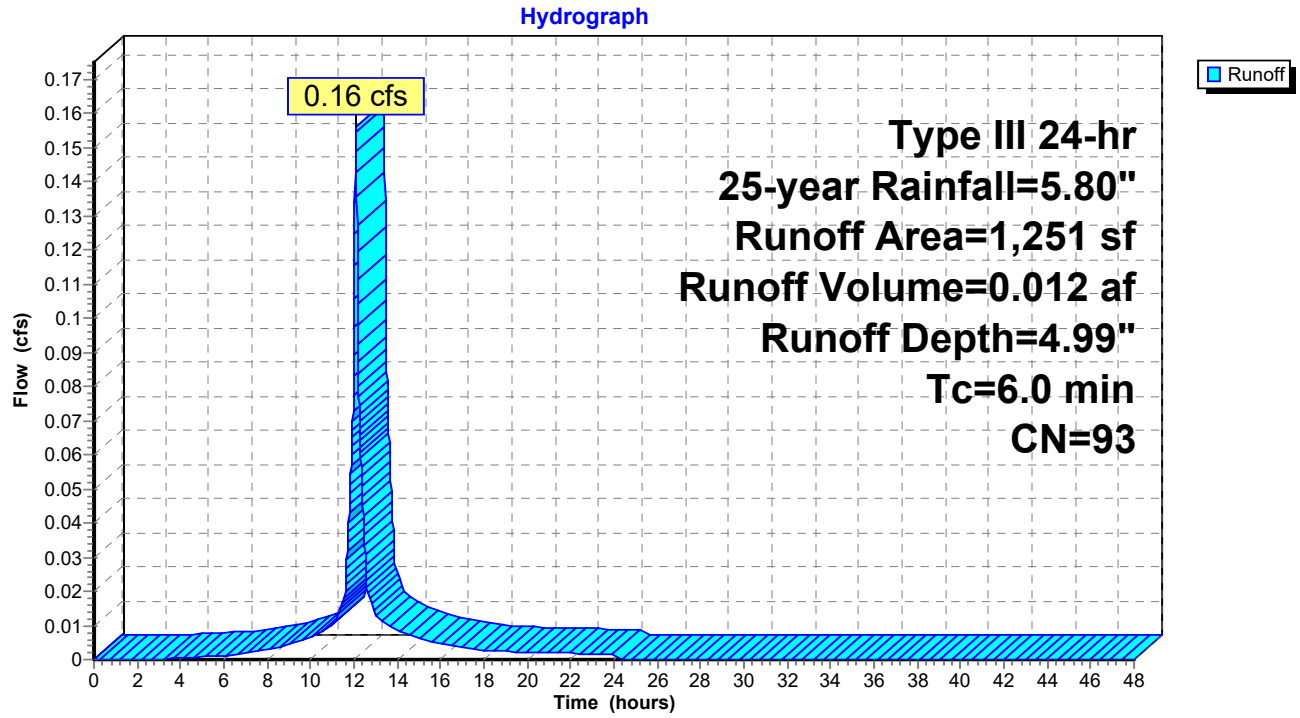
Runoff = 0.16 cfs @ 12.08 hrs, Volume= 0.012 af, Depth= 4.99"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-year Rainfall=5.80"

Area (sf)	CN	Description
189	68	<50% Grass cover, Poor, HSG A
1,062	98	Paved parking, HSG A
1,251	93	Weighted Average
189	68	15.11% Pervious Area
1,062	98	84.89% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 1.3S: S 1.3 - Alley



Summary for Subcatchment 2.2S: CEDAR ST SOUTH

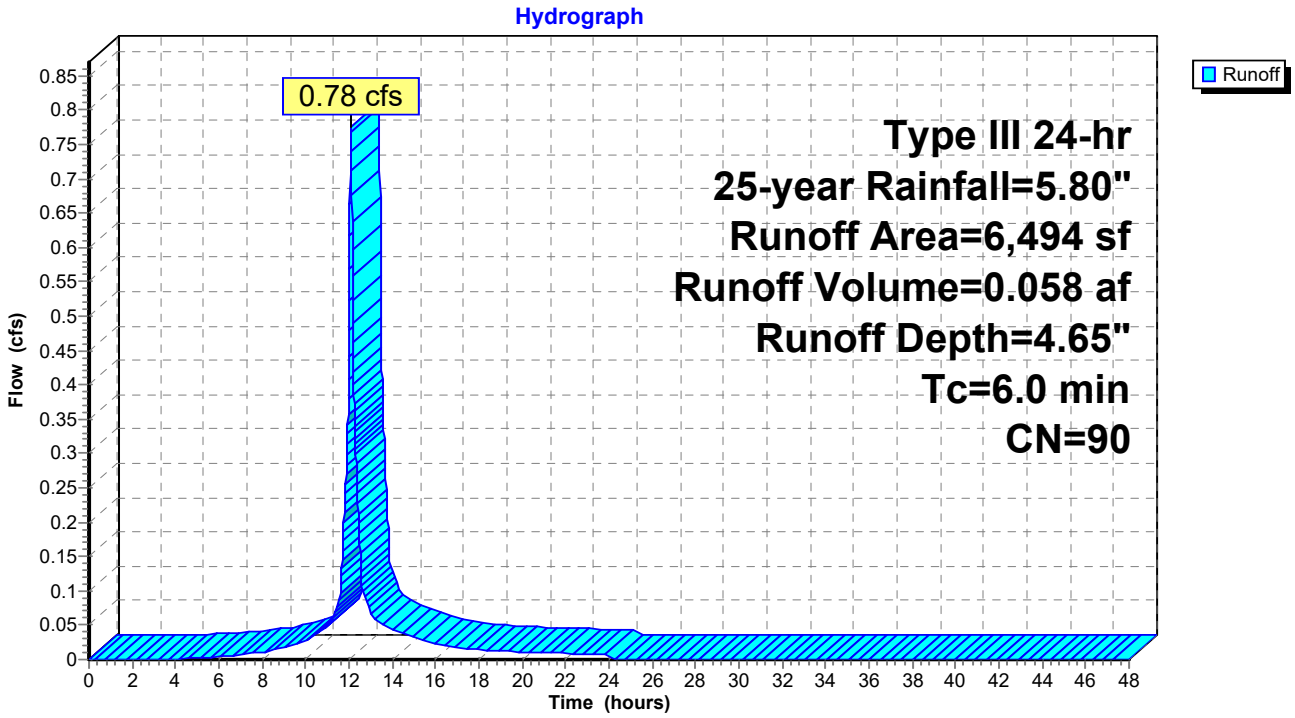
Runoff = 0.78 cfs @ 12.08 hrs, Volume= 0.058 af, Depth= 4.65"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-year Rainfall=5.80"

Area (sf)	CN	Description
1,670	68	<50% Grass cover, Poor, HSG A
4,824	98	Paved parking, HSG A
6,494	90	Weighted Average
1,670	68	25.72% Pervious Area
4,824	98	74.28% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 2.2S: CEDAR ST SOUTH



Summary for Subcatchment 2.3S: S 2.3 - LANCASTER ST

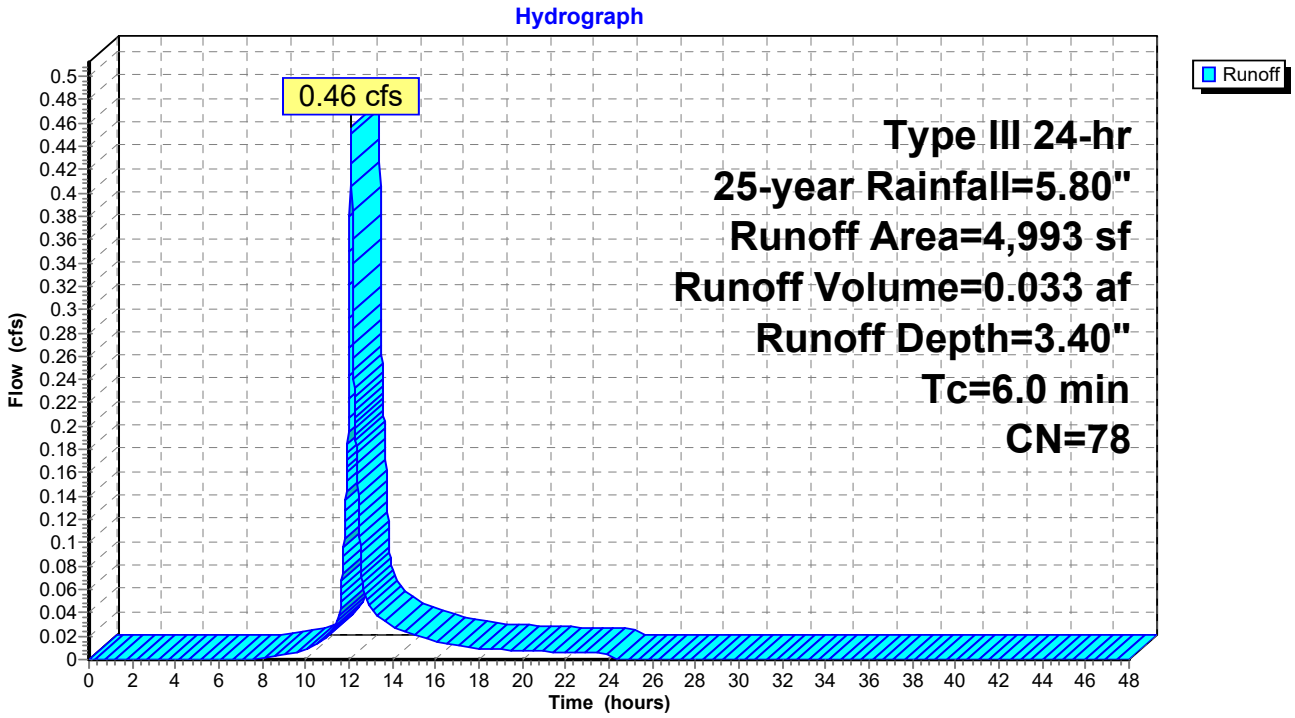
Runoff = 0.46 cfs @ 12.09 hrs, Volume= 0.033 af, Depth= 3.40"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-year Rainfall=5.80"

Area (sf)	CN	Description
3,369	68	<50% Grass cover, Poor, HSG A
1,624	98	Paved parking, HSG A
4,993	78	Weighted Average
3,369	68	67.47% Pervious Area
1,624	98	32.53% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 2.3S: S 2.3 - LANCASTER ST



Summary for Subcatchment S2.1: Parking

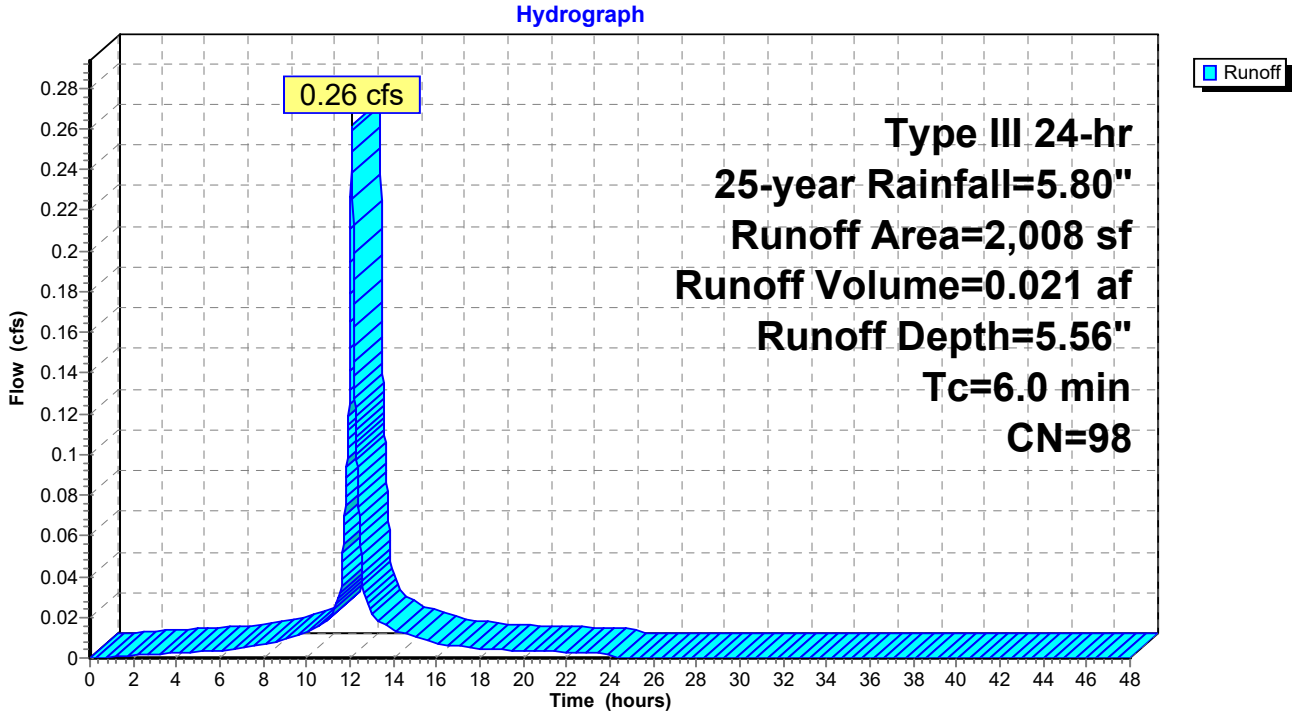
Runoff = 0.26 cfs @ 12.08 hrs, Volume= 0.021 af, Depth= 5.56"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-year Rainfall=5.80"

	Area (sf)	CN	Description
*	2,008	98	Parking
	2,008	98	100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Direct**

Subcatchment S2.1: Parking

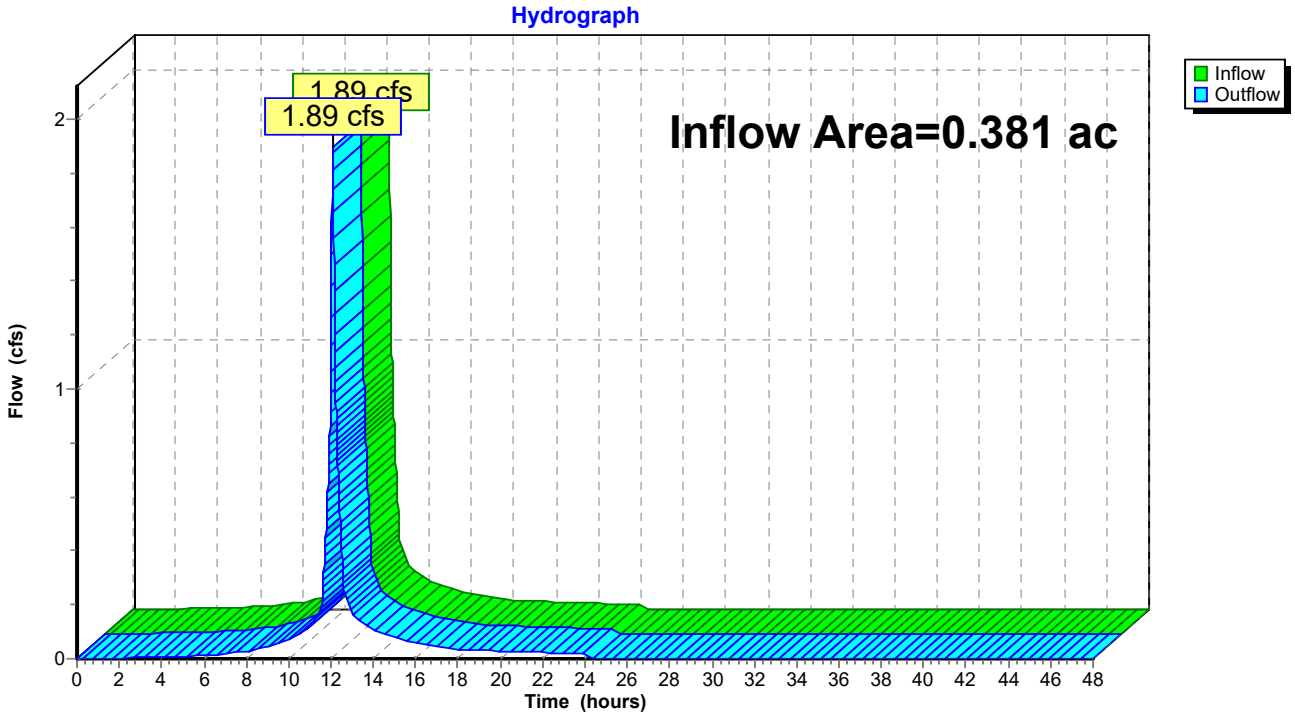


Summary for Reach #99: Lancaster St

Inflow Area = 0.381 ac, 68.52% Impervious, Inflow Depth = 4.51" for 25-year event
Inflow = 1.89 cfs @ 12.09 hrs, Volume= 0.143 af
Outflow = 1.89 cfs @ 12.09 hrs, Volume= 0.143 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Reach #99: Lancaster St

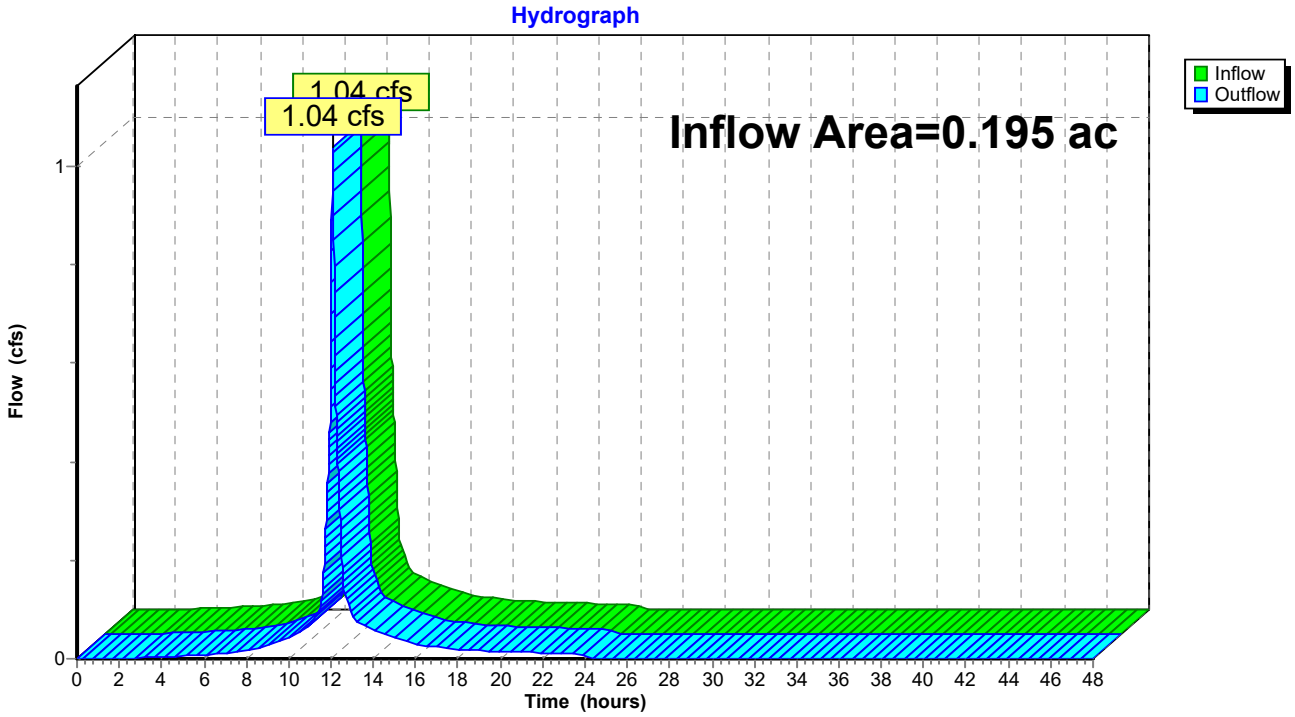


Summary for Reach 2R: CEDAR STREET

Inflow Area = 0.195 ac, 80.36% Impervious, Inflow Depth = 4.87" for 25-year event
Inflow = 1.04 cfs @ 12.08 hrs, Volume= 0.079 af
Outflow = 1.04 cfs @ 12.08 hrs, Volume= 0.079 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Reach 2R: CEDAR STREET

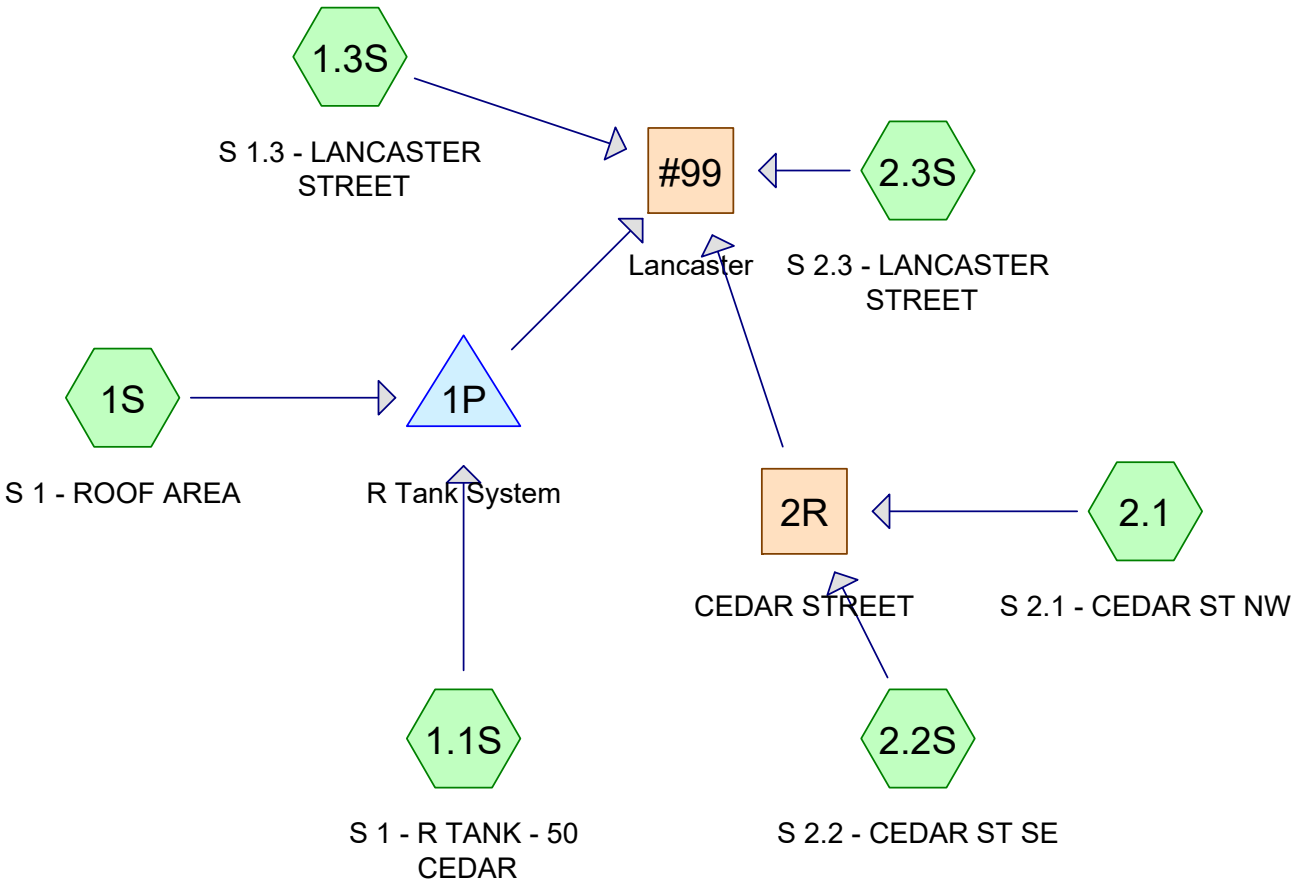


SECTION J

STORMWATER MANAGMENT REPORT

Attachment C: Post Development HydroCAD

PHASE 2 - 50 CEDAR STREET



Subcat Reach Pond Link

Routing Diagram for PHASE 2 - 50 CEDAR ST - POST
Prepared by HP Inc., Printed 4/25/2024
HydroCAD® 10.00-26 s/n 00620 © 2020 HydroCAD Software Solutions LLC

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.068	39	>75% Grass cover, Good, HSG A (1.3S, 2.1, 2.2S, 2.3S)
0.202	98	Paved parking, HSG A (1.1S, 1.3S, 2.1, 2.2S, 2.3S)
0.111	98	Roof and Pave (1S)

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.269	HSG A	1.1S, 1.3S, 2.1, 2.2S, 2.3S
0.000	HSG B	
0.000	HSG C	
0.000	HSG D	
0.111	Other	1S

Ground Covers (all nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.068	0.000	0.000	0.000	0.000	0.068	>75% Grass cover, Good	1.3S, 2.1, 2.2S, 2.3S
0.202	0.000	0.000	0.000	0.000	0.202	Paved parking	1.1S, 1.3S, 2.1, 2.2S, 2.3S
0.000	0.000	0.000	0.000	0.111	0.111	Roof and Pave	1S

Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1.1S: S 1 - R TANK - 50 Runoff Area=1,944 sf 100.00% Impervious Runoff Depth=2.87"
Tc=6.0 min CN=98 Runoff=0.13 cfs 0.011 af

Subcatchment 1.3S: S 1.3 - LANCASTER Runoff Area=1,733 sf 72.01% Impervious Runoff Depth=1.39"
Tc=6.0 min CN=81 Runoff=0.06 cfs 0.005 af

Subcatchment 1S: S 1 - ROOF AREA Runoff Area=4,851 sf 100.00% Impervious Runoff Depth=2.87"
Tc=6.0 min CN=98 Runoff=0.33 cfs 0.027 af

Subcatchment 2.1: S 2.1 - CEDAR ST NW Runoff Area=1,397 sf 43.31% Impervious Runoff Depth=0.55"
Tc=6.0 min CN=65 Runoff=0.02 cfs 0.001 af

Subcatchment 2.2S: S 2.2 - CEDAR ST SE Runoff Area=6,321 sf 76.29% Impervious Runoff Depth=1.60"
Tc=6.0 min CN=84 Runoff=0.27 cfs 0.019 af

Subcatchment 2.3S: S 2.3 - LANCASTER Runoff Area=328 sf 48.48% Impervious Runoff Depth=0.68"
Tc=6.0 min CN=68 Runoff=0.01 cfs 0.000 af

Reach #99: Lancaster Inflow=0.40 cfs 0.062 af
Outflow=0.40 cfs 0.062 af

Reach 2R: CEDAR STREET Inflow=0.29 cfs 0.021 af
Outflow=0.29 cfs 0.021 af

Pond 1P: R Tank System Peak Elev=25.21' Storage=546 cf Inflow=0.47 cfs 0.037 af
Outflow=0.21 cfs 0.036 af

Summary for Subcatchment 1.1S: S 1 - R TANK - 50 CEDAR

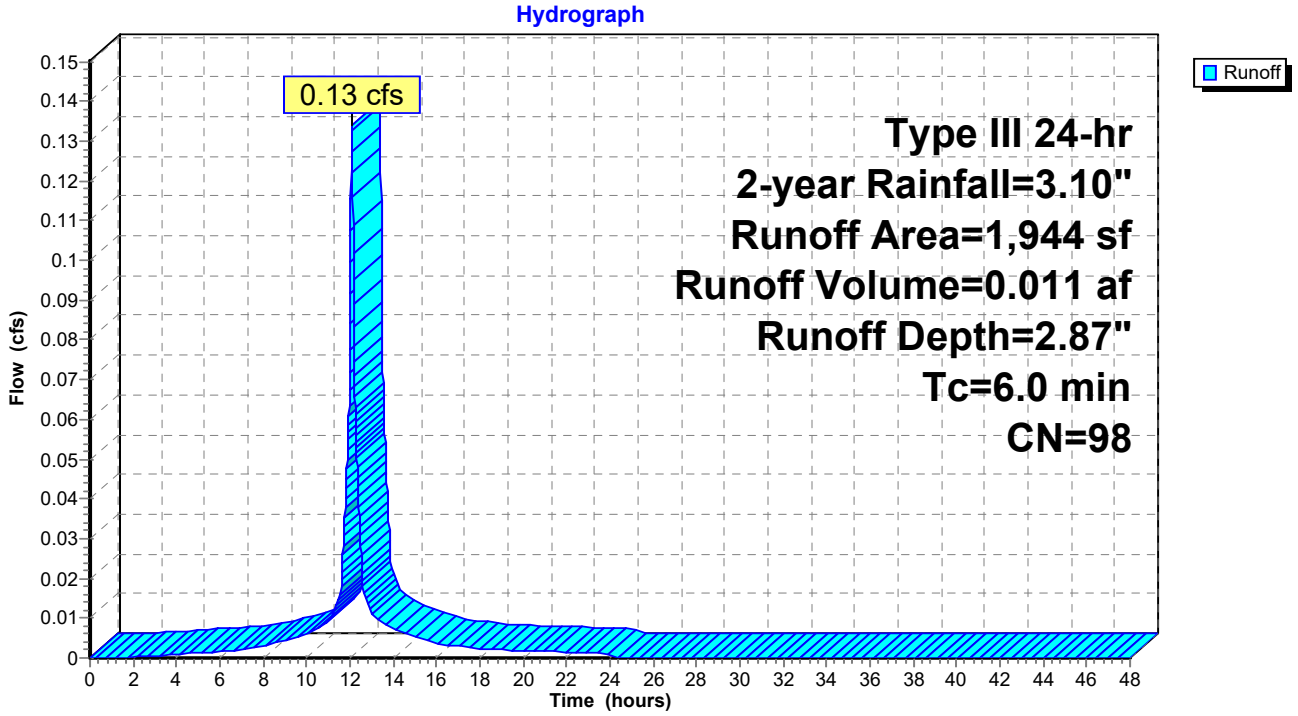
Runoff = 0.13 cfs @ 12.08 hrs, Volume= 0.011 af, Depth= 2.87"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-year Rainfall=3.10"

Area (sf)	CN	Description
1,944	98	Paved parking, HSG A
1,944		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 1.1S: S 1 - R TANK - 50 CEDAR



Summary for Subcatchment 1.3S: S 1.3 - LANCASTER STREET

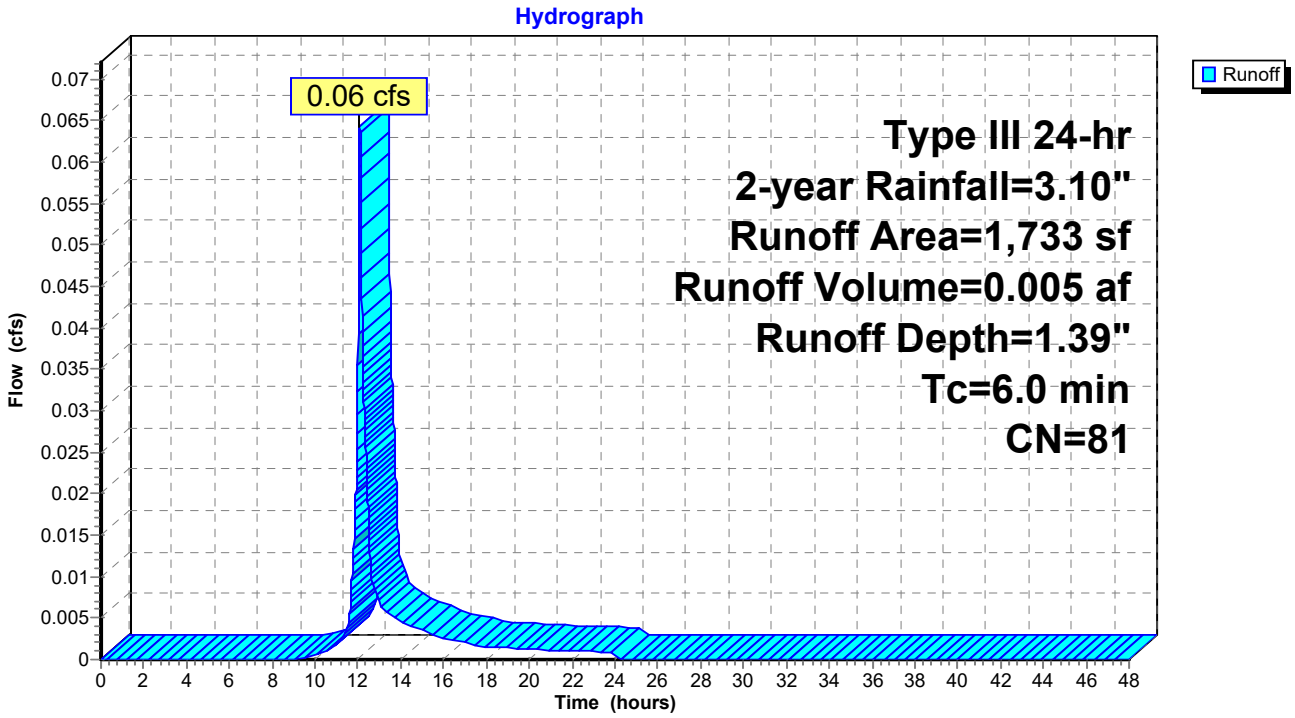
Runoff = 0.06 cfs @ 12.09 hrs, Volume= 0.005 af, Depth= 1.39"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-year Rainfall=3.10"

Area (sf)	CN	Description
485	39	>75% Grass cover, Good, HSG A
1,248	98	Paved parking, HSG A
1,733	81	Weighted Average
485		27.99% Pervious Area
1,248		72.01% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 1.3S: S 1.3 - LANCASTER STREET



Summary for Subcatchment 1S: S 1 - ROOF AREA

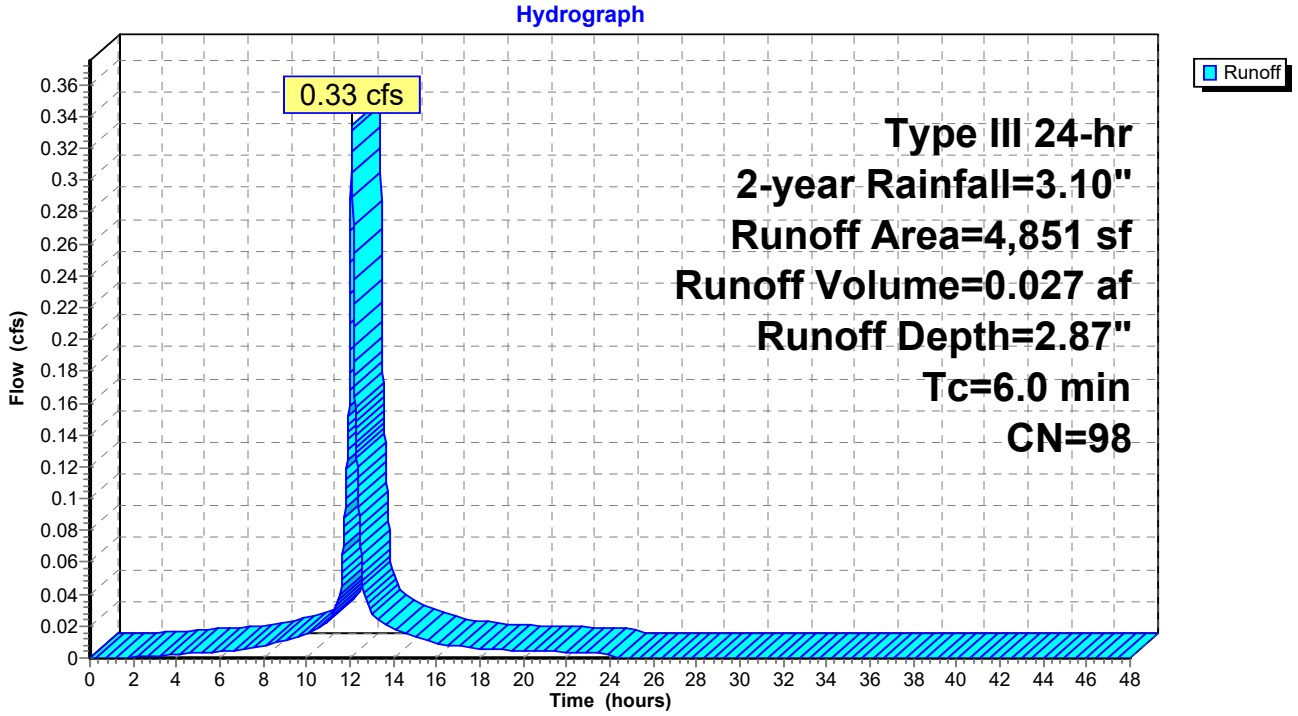
Runoff = 0.33 cfs @ 12.08 hrs, Volume= 0.027 af, Depth= 2.87"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-year Rainfall=3.10"

	Area (sf)	CN	Description
*	4,851	98	Roof and Pave
	4,851		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 1S: S 1 - ROOF AREA



Summary for Subcatchment 2.1: S 2.1 - CEDAR ST NW

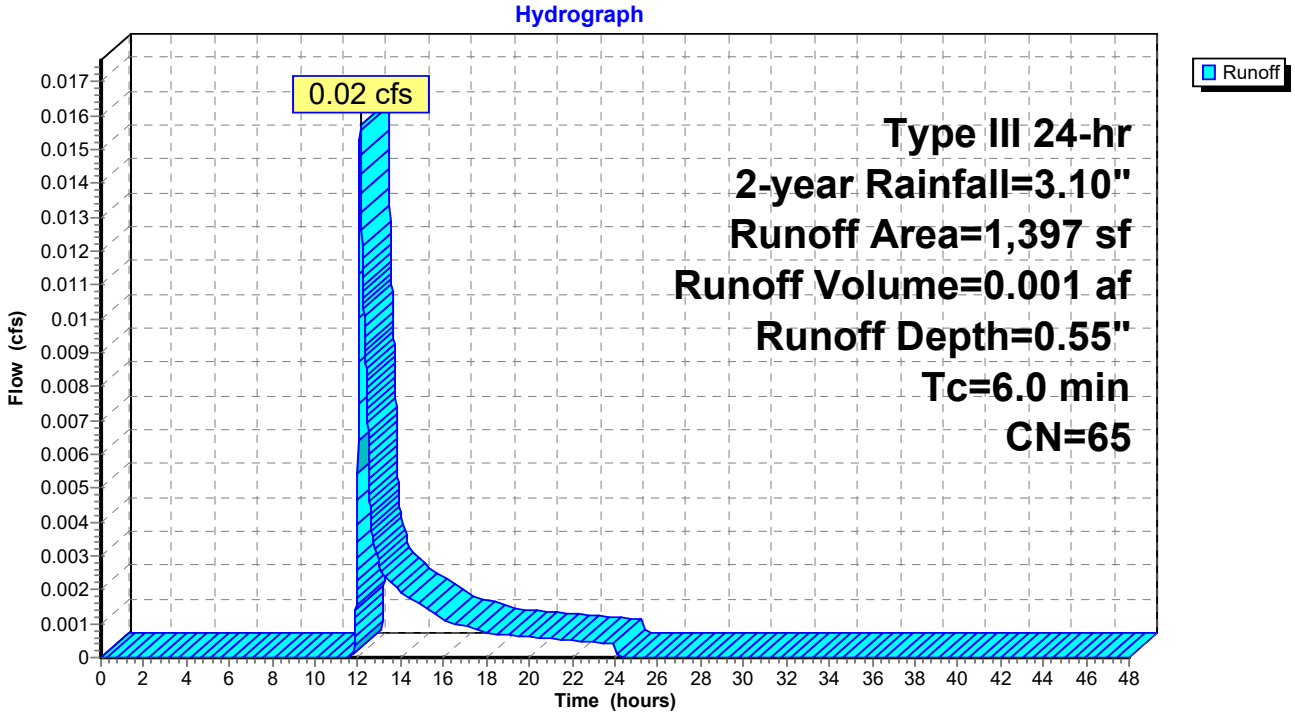
Runoff = 0.02 cfs @ 12.11 hrs, Volume= 0.001 af, Depth= 0.55"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-year Rainfall=3.10"

Area (sf)	CN	Description
792	39	>75% Grass cover, Good, HSG A
605	98	Paved parking, HSG A
1,397	65	Weighted Average
792		56.69% Pervious Area
605		43.31% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 2.1: S 2.1 - CEDAR ST NW



Summary for Subcatchment 2.2S: S 2.2 - CEDAR ST SE

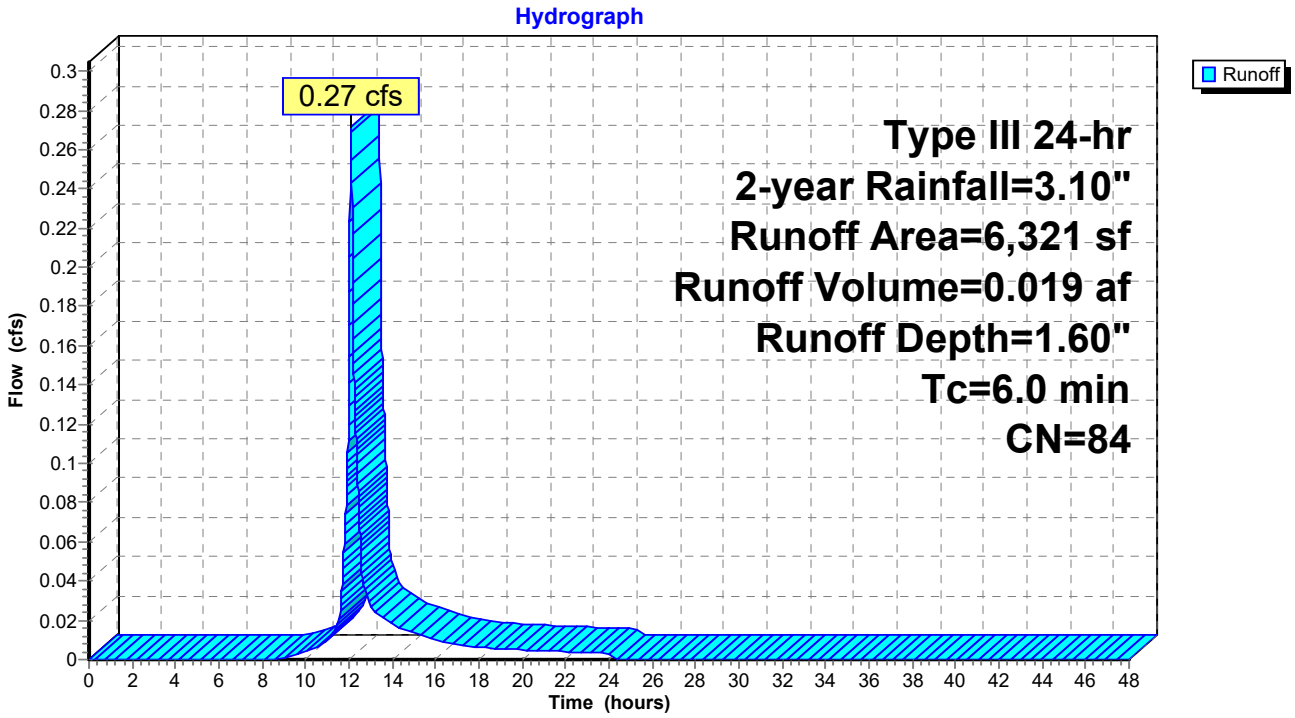
Runoff = 0.27 cfs @ 12.09 hrs, Volume= 0.019 af, Depth= 1.60"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-year Rainfall=3.10"

Area (sf)	CN	Description
1,499	39	>75% Grass cover, Good, HSG A
4,822	98	Paved parking, HSG A
6,321	84	Weighted Average
1,499		23.71% Pervious Area
4,822		76.29% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 2.2S: S 2.2 - CEDAR ST SE



Summary for Subcatchment 2.3S: S 2.3 - LANCASTER STREET

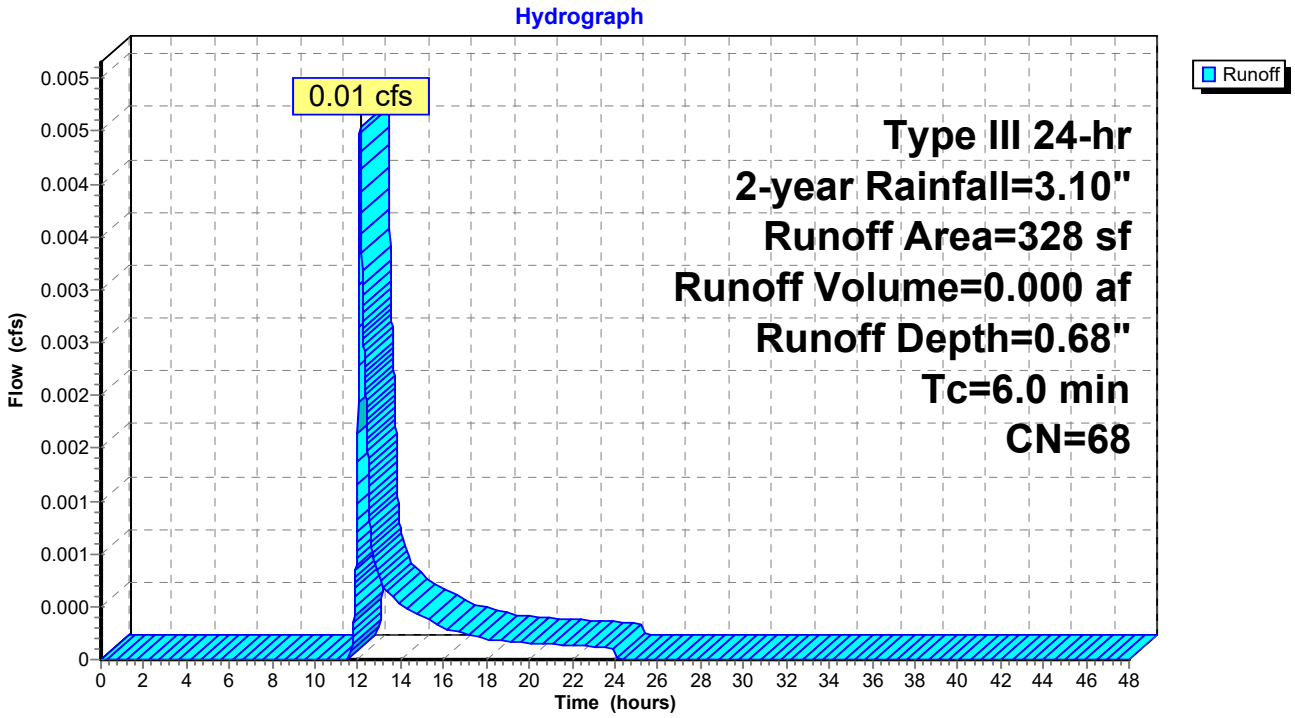
Runoff = 0.01 cfs @ 12.10 hrs, Volume= 0.000 af, Depth= 0.68"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-year Rainfall=3.10"

Area (sf)	CN	Description
169	39	>75% Grass cover, Good, HSG A
159	98	Paved parking, HSG A
328	68	Weighted Average
169		51.52% Pervious Area
159		48.48% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 2.3S: S 2.3 - LANCASTER STREET

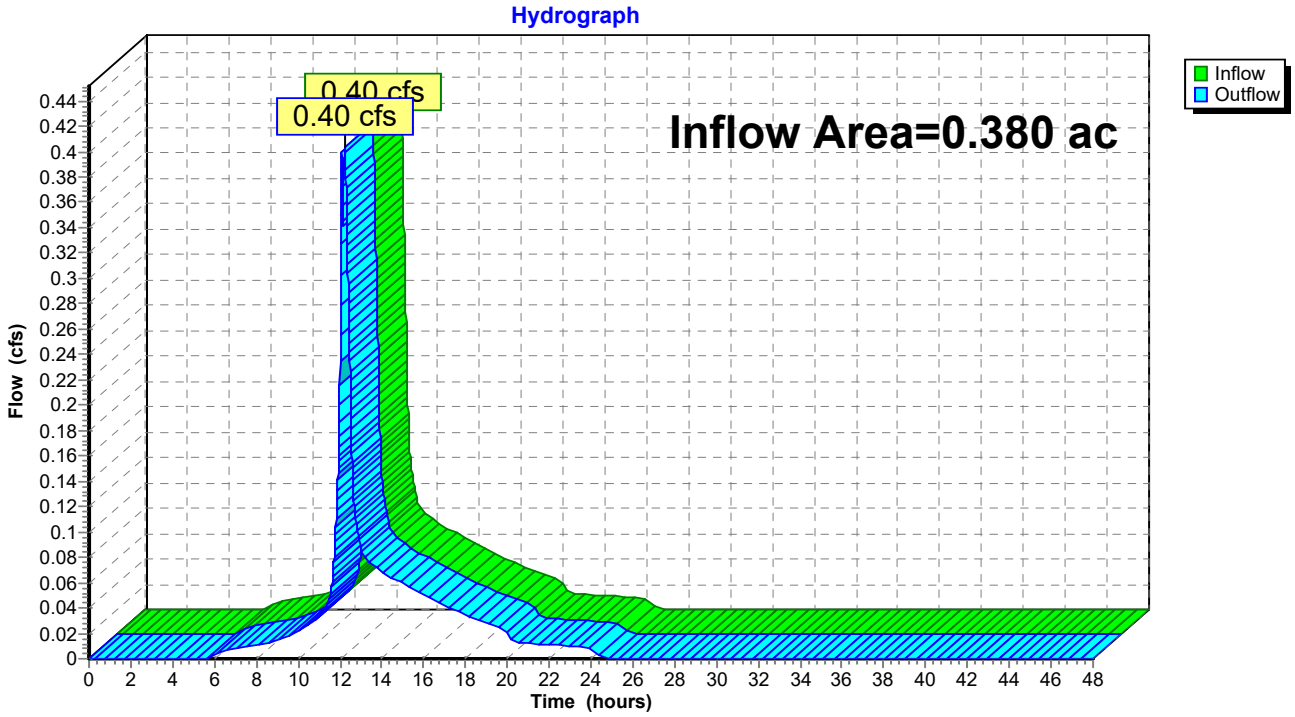


Summary for Reach #99: Lancaster

Inflow Area = 0.380 ac, 82.23% Impervious, Inflow Depth = 1.96" for 2-year event
Inflow = 0.40 cfs @ 12.22 hrs, Volume= 0.062 af
Outflow = 0.40 cfs @ 12.22 hrs, Volume= 0.062 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Reach #99: Lancaster

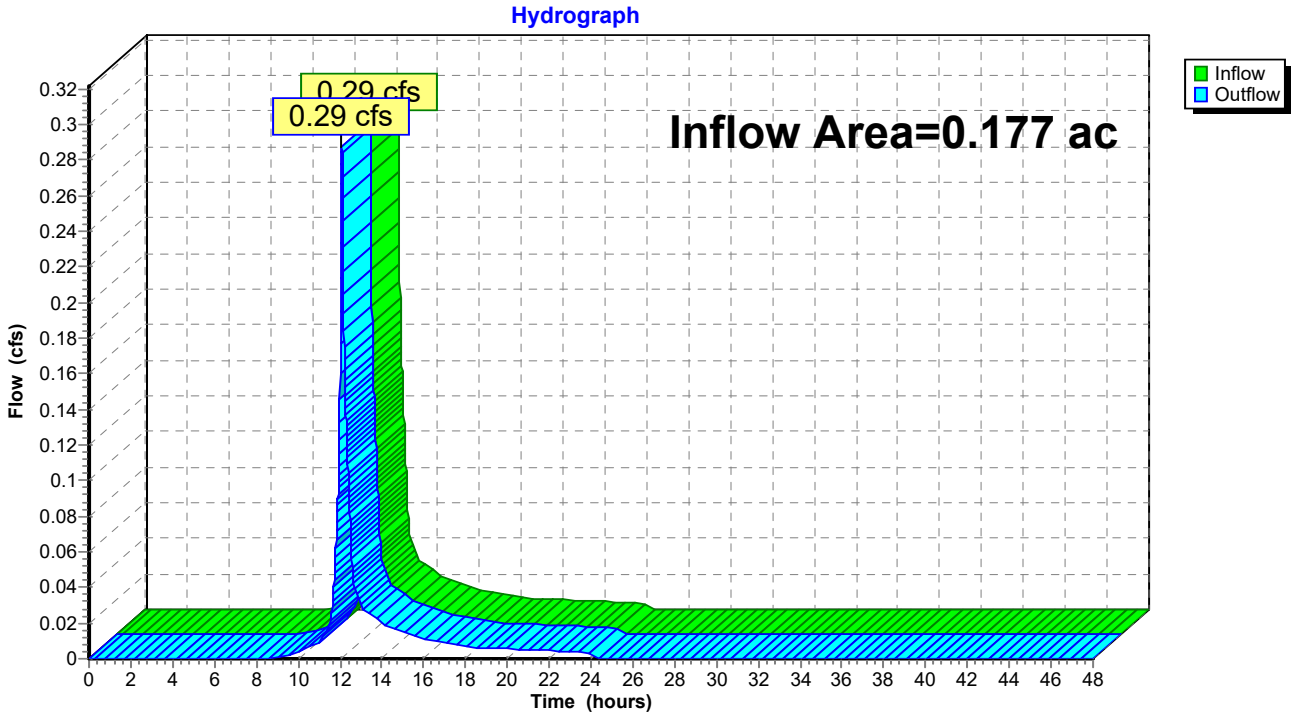


Summary for Reach 2R: CEDAR STREET

Inflow Area = 0.177 ac, 70.32% Impervious, Inflow Depth = 1.41" for 2-year event
Inflow = 0.29 cfs @ 12.09 hrs, Volume= 0.021 af
Outflow = 0.29 cfs @ 12.09 hrs, Volume= 0.021 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Reach 2R: CEDAR STREET



Summary for Pond 1P: R Tank System

Inflow Area = 0.156 ac,100.00% Impervious, Inflow Depth = 2.87" for 2-year event
Inflow = 0.47 cfs @ 12.08 hrs, Volume= 0.037 af
Outflow = 0.21 cfs @ 12.25 hrs, Volume= 0.036 af, Atten= 55%, Lag= 10.2 min
Primary = 0.21 cfs @ 12.25 hrs, Volume= 0.036 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 25.21' @ 12.25 hrs Surf.Area= 254 sf Storage= 546 cf
Flood Elev= 26.75' Surf.Area= 254 sf Storage= 656 cf

Plug-Flow detention time= 114.0 min calculated for 0.036 af (97% of inflow)
Center-of-Mass det. time= 97.9 min (855.0 - 757.1)

Volume	Invert	Avail.Storage	Storage Description
#1B	21.68'	325 cf	**9.25'W x 27.46'L x 4.57'H Field B** 1,161 cf Overall - 347 cf Embedded = 814 cf x 40.0% Voids
#2B	22.43'	330 cf	**ACF R-Tank HD 2** x 40 Inside #1 Inside= 15.7"W x 33.9"H => 3.52 sf x 2.35'L = 8.3 cf Outside= 15.7"W x 33.9"H => 3.70 sf x 2.35'L = 8.7 cf 40 Chambers in 4 Rows
		656 cf	Total Available Storage

Storage Group B created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	21.74'	**10.0" Round 10" Culvert** L= 9.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 21.74' / 21.70' S= 0.0044 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.55 sf
#2	Device 1	21.84'	**1.0" Vert. 1" Orifice** C= 0.600
#3	Device 2	22.09'	**4.0" Round 4" UNDERDRAIN** L= 50.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 22.09' / 21.84' S= 0.0050 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.09 sf
#4	Device 1	24.92'	**8.0" Round 8" COMBINED OVERFLOW PIPE** L= 3.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 24.92' / 24.90' S= 0.0067 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.35 sf
#5	Device 4	24.92'	**4.0" Round 3 - 4" OVERFLOW PIPES X 3.00** L= 2.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 24.92' / 24.91' S= 0.0050 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.09 sf

Primary OutFlow Max=0.21 cfs @ 12.25 hrs HW=25.20' (Free Discharge)
- **1=10" Culvert** (Passes 0.21 cfs of 3.62 cfs potential flow)
  - **2=1" Orifice** (Orifice Controls 0.05 cfs @ 8.78 fps)
    - **3=4" UNDERDRAIN** (Passes 0.05 cfs of 0.50 cfs potential flow)
  - **4=8" COMBINED OVERFLOW PIPE** (Barrel Controls 0.16 cfs @ 1.69 fps)
    - **5=3 - 4" OVERFLOW PIPES** (Passes 0.16 cfs of 0.28 cfs potential flow)

Pond 1P: R Tank System - Chamber Wizard Field B

Chamber Model = ACF R-Tank HD 2 (ACF Environmental R-Tank HD)
Inside= 15.7"W x 33.9"H => 3.52 sf x 2.35'L = 8.3 cf
Outside= 15.7"W x 33.9"H => 3.70 sf x 2.35'L = 8.7 cf

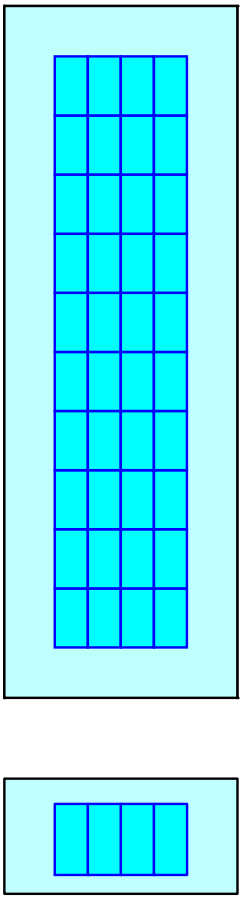
10 Chambers/Row x 2.35' Long = 23.46' Row Length +24.0" End Stone x 2 = 27.46' Base Length
4 Rows x 15.7" Wide + 24.0" Side Stone x 2 = 9.25' Base Width
9.0" Base + 33.9" Chamber Height + 12.0" Cover = 4.57' Field Height

40 Chambers x 8.3 cf = 330.1 cf Chamber Storage
40 Chambers x 8.7 cf = 347.4 cf Displacement

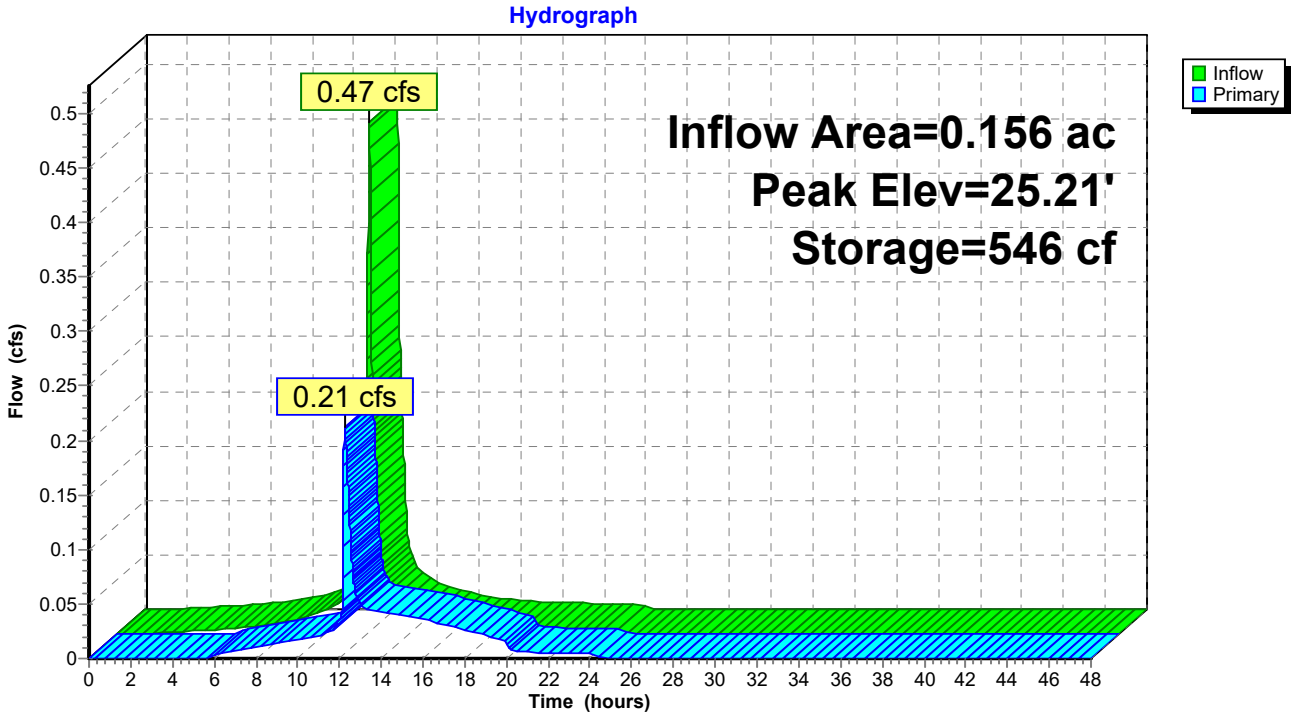
1,161.0 cf Field - 347.4 cf Chambers = 813.6 cf Stone x 40.0% Voids = 325.4 cf Stone Storage

Chamber Storage + Stone Storage = 655.5 cf = 0.015 af
Overall Storage Efficiency = 56.5%
Overall System Size = 27.46' x 9.25' x 4.57'

40 Chambers
43.0 cy Field
30.1 cy Stone



Pond 1P: R Tank System



Stage-Area-Storage for Pond 1P: R Tank System

Elevation (feet)	Storage (cubic-feet)
21.68	0
21.78	10
21.88	20
21.98	30
22.08	41
22.18	51
22.28	61
22.38	71
22.48	85
22.58	102
22.68	119
22.78	135
22.88	152
22.98	169
23.08	186
23.18	203
23.28	220
23.38	237
23.48	254
23.58	271
23.68	288
23.78	305
23.88	322
23.98	339
24.08	356
24.18	372
24.28	389
24.38	406
24.48	423
24.58	440
24.68	457
24.78	474
24.88	491
24.98	508
25.08	525
25.18	542
25.28	557
25.38	567
25.48	577
25.58	587
25.68	597
25.78	608
25.88	618
25.98	628
26.08	638
26.18	**648**
26.28	**656**
26.38	656
26.48	656
26.58	656
26.68	656

Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1.1S: S 1 - R TANK - 50 Runoff Area=1,944 sf 100.00% Impervious Runoff Depth=4.36"
Tc=6.0 min CN=98 Runoff=0.20 cfs 0.016 af

Subcatchment 1.3S: S 1.3 - LANCASTER Runoff Area=1,733 sf 72.01% Impervious Runoff Depth=2.63"
Tc=6.0 min CN=81 Runoff=0.12 cfs 0.009 af

Subcatchment 1S: S 1 - ROOF AREA Runoff Area=4,851 sf 100.00% Impervious Runoff Depth=4.36"
Tc=6.0 min CN=98 Runoff=0.50 cfs 0.040 af

Subcatchment 2.1: S 2.1 - CEDAR ST NW Runoff Area=1,397 sf 43.31% Impervious Runoff Depth=1.39"
Tc=6.0 min CN=65 Runoff=0.05 cfs 0.004 af

Subcatchment 2.2S: S 2.2 - CEDAR ST SE Runoff Area=6,321 sf 76.29% Impervious Runoff Depth=2.91"
Tc=6.0 min CN=84 Runoff=0.49 cfs 0.035 af

Subcatchment 2.3S: S 2.3 - LANCASTER Runoff Area=328 sf 48.48% Impervious Runoff Depth=1.60"
Tc=6.0 min CN=68 Runoff=0.01 cfs 0.001 af

Reach #99: Lancaster Inflow=1.35 cfs 0.104 af
Outflow=1.35 cfs 0.104 af

Reach 2R: CEDAR STREET Inflow=0.54 cfs 0.039 af
Outflow=0.54 cfs 0.039 af

Pond 1P: R Tank System Peak Elev=25.54' Storage=584 cf Inflow=0.70 cfs 0.057 af
Outflow=0.68 cfs 0.056 af

Summary for Subcatchment 1.1S: S 1 - R TANK - 50 CEDAR

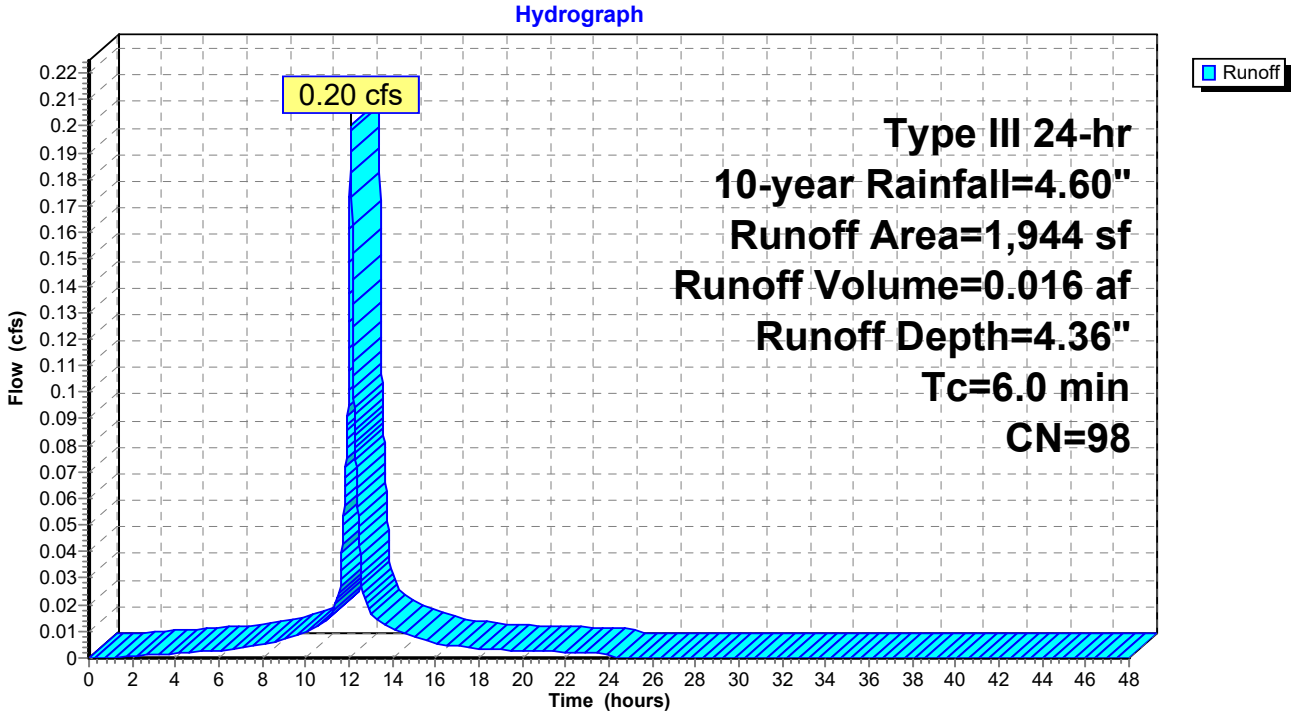
Runoff = 0.20 cfs @ 12.08 hrs, Volume= 0.016 af, Depth= 4.36"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-year Rainfall=4.60"

Area (sf)	CN	Description
1,944	98	Paved parking, HSG A
1,944		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 1.1S: S 1 - R TANK - 50 CEDAR



Summary for Subcatchment 1.3S: S 1.3 - LANCASTER STREET

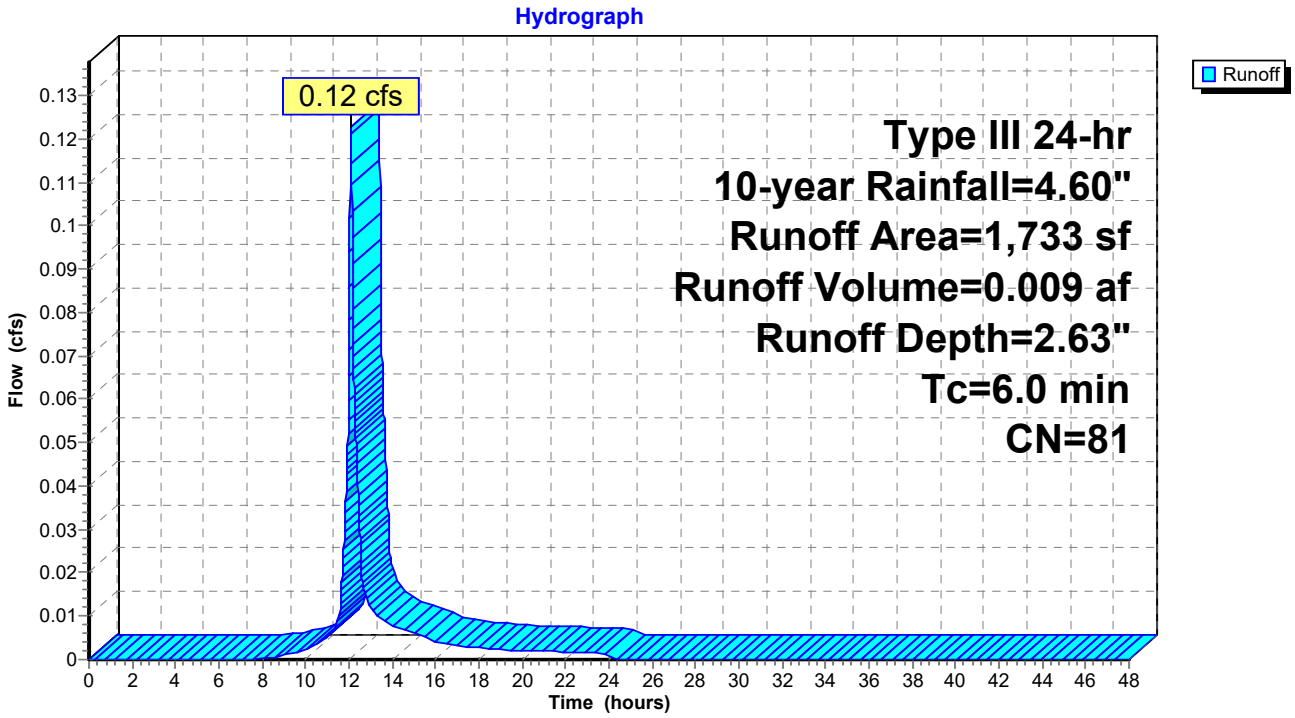
Runoff = 0.12 cfs @ 12.09 hrs, Volume= 0.009 af, Depth= 2.63"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-year Rainfall=4.60"

Area (sf)	CN	Description
485	39	>75% Grass cover, Good, HSG A
1,248	98	Paved parking, HSG A
1,733	81	Weighted Average
485		27.99% Pervious Area
1,248		72.01% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 1.3S: S 1.3 - LANCASTER STREET



Summary for Subcatchment 1S: S 1 - ROOF AREA

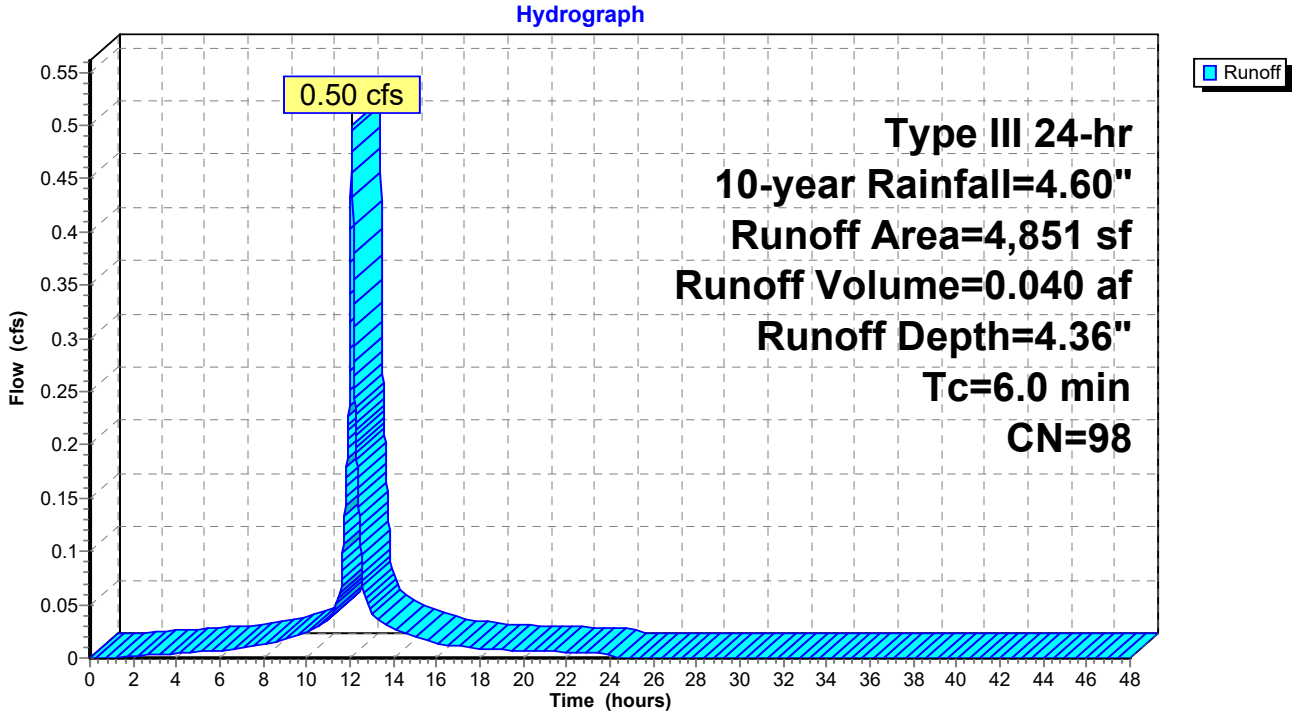
Runoff = 0.50 cfs @ 12.08 hrs, Volume= 0.040 af, Depth= 4.36"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-year Rainfall=4.60"

	Area (sf)	CN	Description
*	4,851	98	Roof and Pave
	4,851		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 1S: S 1 - ROOF AREA



Summary for Subcatchment 2.1: S 2.1 - CEDAR ST NW

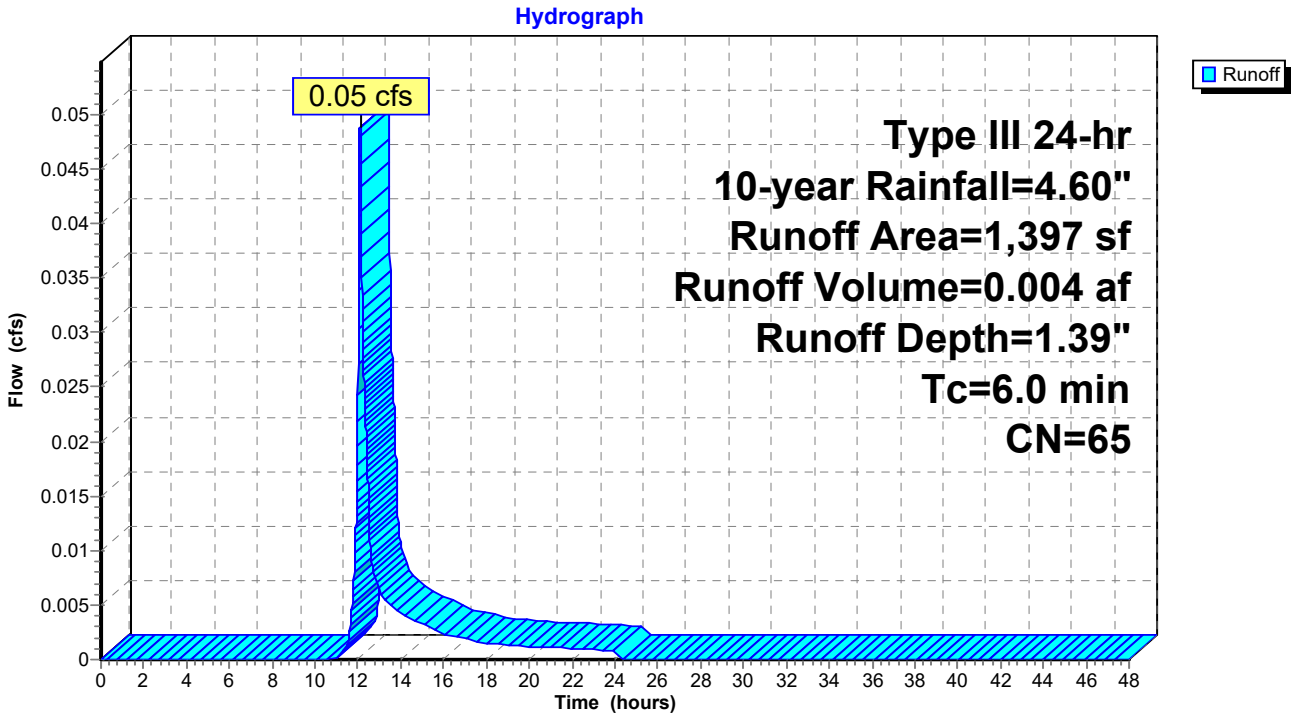
Runoff = 0.05 cfs @ 12.10 hrs, Volume= 0.004 af, Depth= 1.39"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-year Rainfall=4.60"

Area (sf)	CN	Description
792	39	>75% Grass cover, Good, HSG A
605	98	Paved parking, HSG A
1,397	65	Weighted Average
792		56.69% Pervious Area
605		43.31% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 2.1: S 2.1 - CEDAR ST NW



Summary for Subcatchment 2.2S: S 2.2 - CEDAR ST SE

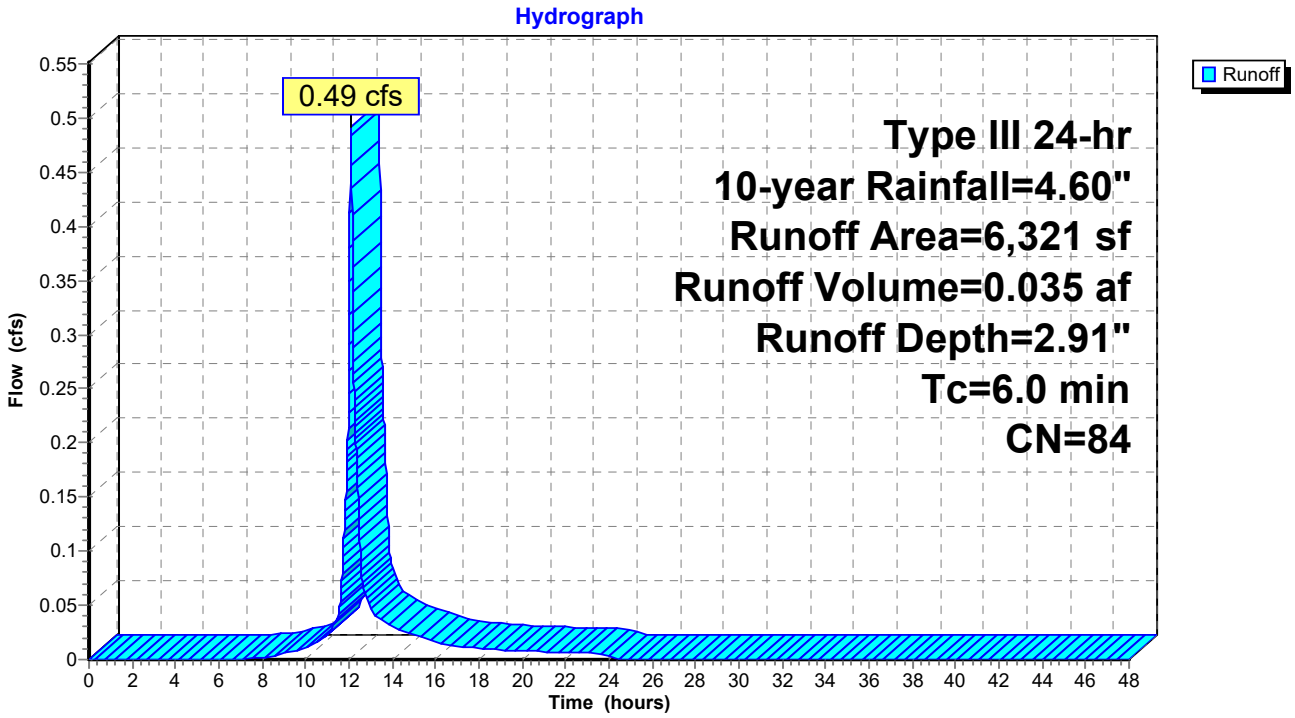
Runoff = 0.49 cfs @ 12.09 hrs, Volume= 0.035 af, Depth= 2.91"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-year Rainfall=4.60"

Area (sf)	CN	Description
1,499	39	>75% Grass cover, Good, HSG A
4,822	98	Paved parking, HSG A
6,321	84	Weighted Average
1,499		23.71% Pervious Area
4,822		76.29% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 2.2S: S 2.2 - CEDAR ST SE



Summary for Subcatchment 2.3S: S 2.3 - LANCASTER STREET

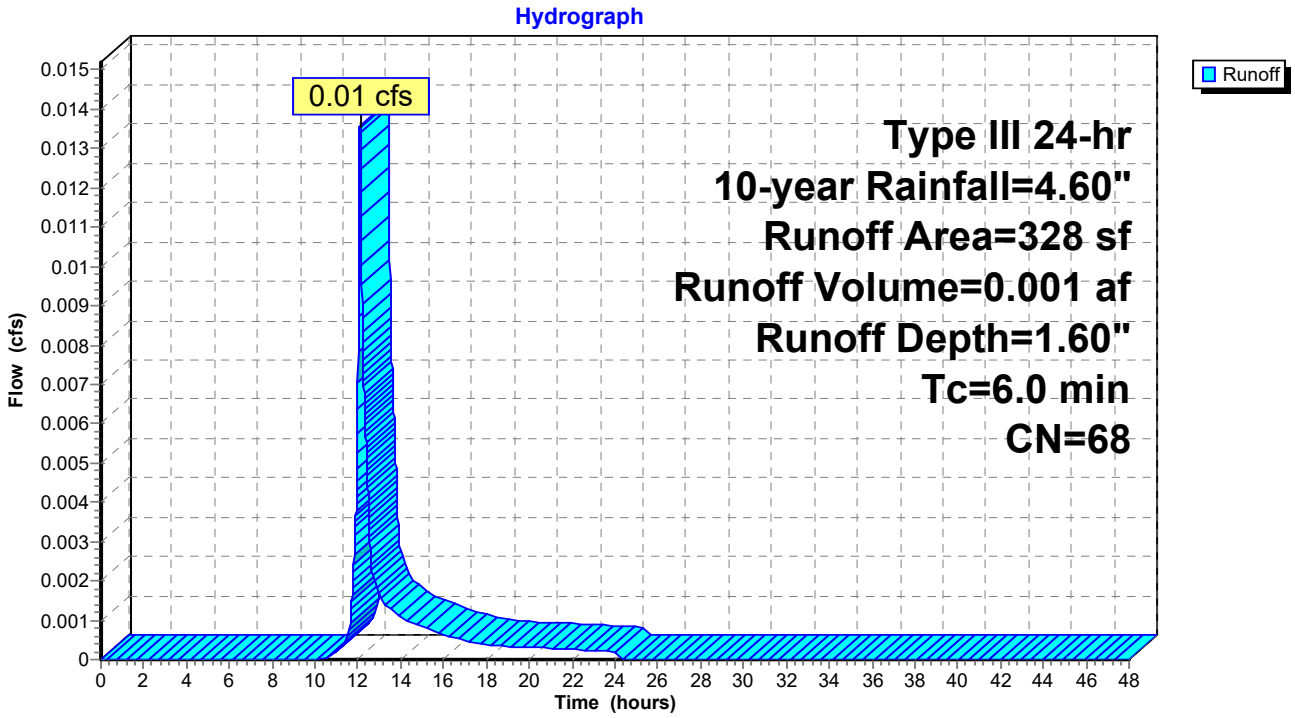
Runoff = 0.01 cfs @ 12.09 hrs, Volume= 0.001 af, Depth= 1.60"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-year Rainfall=4.60"

Area (sf)	CN	Description
169	39	>75% Grass cover, Good, HSG A
159	98	Paved parking, HSG A
328	68	Weighted Average
169		51.52% Pervious Area
159		48.48% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 2.3S: S 2.3 - LANCASTER STREET

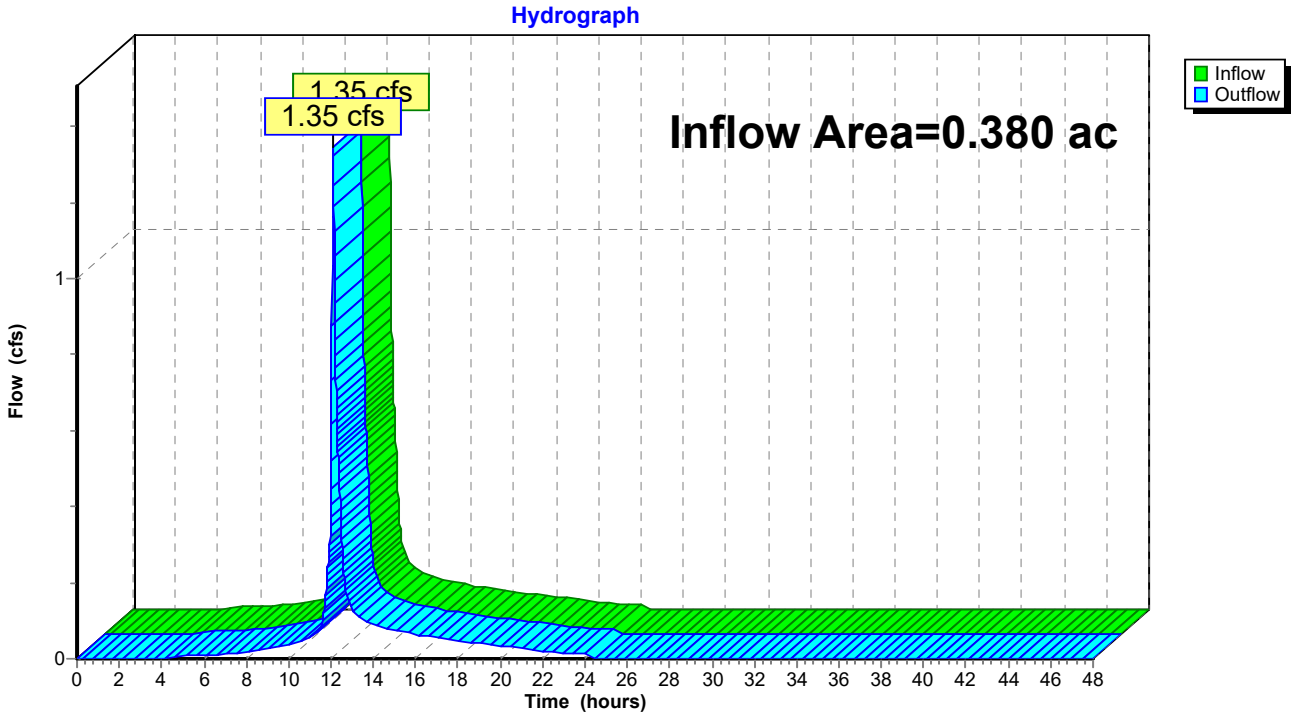


Summary for Reach #99: Lancaster

Inflow Area = 0.380 ac, 82.23% Impervious, Inflow Depth = 3.29" for 10-year event
Inflow = 1.35 cfs @ 12.10 hrs, Volume= 0.104 af
Outflow = 1.35 cfs @ 12.10 hrs, Volume= 0.104 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Reach #99: Lancaster

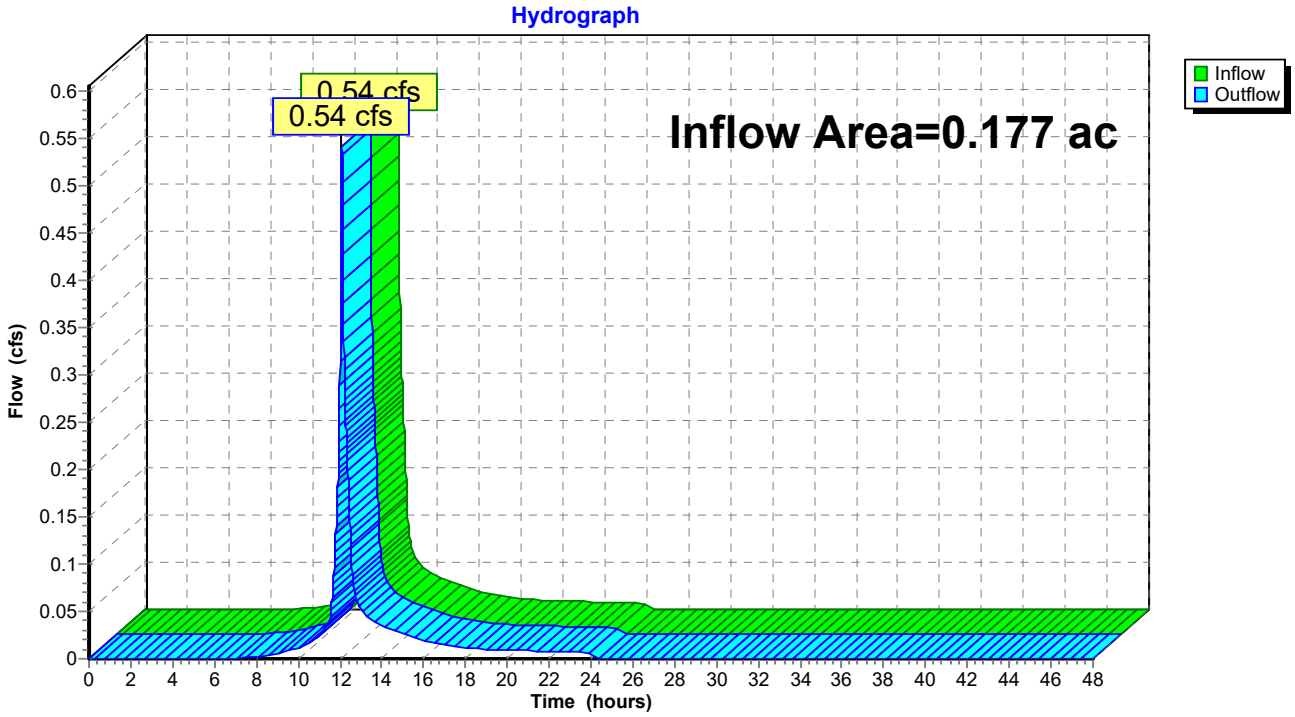


Summary for Reach 2R: CEDAR STREET

Inflow Area = 0.177 ac, 70.32% Impervious, Inflow Depth = 2.63" for 10-year event
Inflow = 0.54 cfs @ 12.09 hrs, Volume= 0.039 af
Outflow = 0.54 cfs @ 12.09 hrs, Volume= 0.039 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Reach 2R: CEDAR STREET



Summary for Pond 1P: R Tank System

Inflow Area = 0.156 ac,100.00% Impervious, Inflow Depth = 4.36" for 10-year event
Inflow = 0.70 cfs @ 12.08 hrs, Volume= 0.057 af
Outflow = 0.68 cfs @ 12.10 hrs, Volume= 0.056 af, Atten= 3%, Lag= 1.3 min
Primary = 0.68 cfs @ 12.10 hrs, Volume= 0.056 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 25.54' @ 12.10 hrs Surf.Area= 254 sf Storage= 584 cf
Flood Elev= 26.75' Surf.Area= 254 sf Storage= 656 cf

Plug-Flow detention time= 95.2 min calculated for 0.056 af (98% of inflow)
Center-of-Mass det. time= 84.1 min (833.5 - 749.4)

Volume	Invert	Avail.Storage	Storage Description
#1B	21.68'	325 cf	**9.25'W x 27.46'L x 4.57'H Field B** 1,161 cf Overall - 347 cf Embedded = 814 cf x 40.0% Voids
#2B	22.43'	330 cf	**ACF R-Tank HD 2** x 40 Inside #1 Inside= 15.7"W x 33.9"H => 3.52 sf x 2.35'L = 8.3 cf Outside= 15.7"W x 33.9"H => 3.70 sf x 2.35'L = 8.7 cf 40 Chambers in 4 Rows
		656 cf	Total Available Storage

Storage Group B created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	21.74'	**10.0" Round 10" Culvert** L= 9.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 21.74' / 21.70' S= 0.0044 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.55 sf
#2	Device 1	21.84'	**1.0" Vert. 1" Orifice** C= 0.600
#3	Device 2	22.09'	**4.0" Round 4" UNDERDRAIN** L= 50.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 22.09' / 21.84' S= 0.0050 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.09 sf
#4	Device 1	24.92'	**8.0" Round 8" COMBINED OVERFLOW PIPE** L= 3.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 24.92' / 24.90' S= 0.0067 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.35 sf
#5	Device 4	24.92'	**4.0" Round 3 - 4" OVERFLOW PIPES X 3.00** L= 2.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 24.92' / 24.91' S= 0.0050 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.09 sf

Primary OutFlow Max=0.68 cfs @ 12.10 hrs HW=25.54' (Free Discharge)
- **1=10" Culvert** (Passes 0.68 cfs of 3.82 cfs potential flow)
  - **2=1" Orifice** (Orifice Controls 0.05 cfs @ 9.21 fps)
    - **3=4" UNDERDRAIN** (Passes 0.05 cfs of 0.53 cfs potential flow)
  - **4=8" COMBINED OVERFLOW PIPE** (Barrel Controls 0.63 cfs @ 2.39 fps)
    - **5=3 - 4" OVERFLOW PIPES** (Passes 0.63 cfs of 0.67 cfs potential flow)

Pond 1P: R Tank System - Chamber Wizard Field B

Chamber Model = ACF R-Tank HD 2 (ACF Environmental R-Tank HD)
Inside= 15.7"W x 33.9"H => 3.52 sf x 2.35'L = 8.3 cf
Outside= 15.7"W x 33.9"H => 3.70 sf x 2.35'L = 8.7 cf

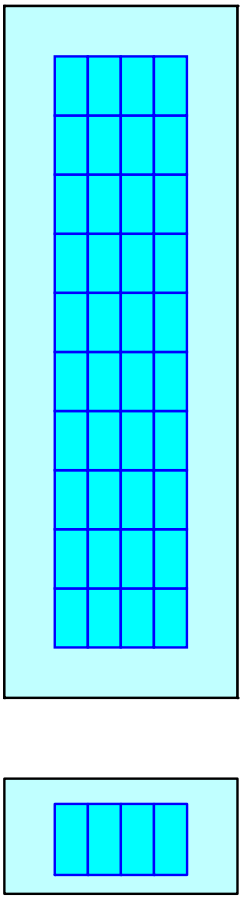
10 Chambers/Row x 2.35' Long = 23.46' Row Length +24.0" End Stone x 2 = 27.46' Base Length
4 Rows x 15.7" Wide + 24.0" Side Stone x 2 = 9.25' Base Width
9.0" Base + 33.9" Chamber Height + 12.0" Cover = 4.57' Field Height

40 Chambers x 8.3 cf = 330.1 cf Chamber Storage
40 Chambers x 8.7 cf = 347.4 cf Displacement

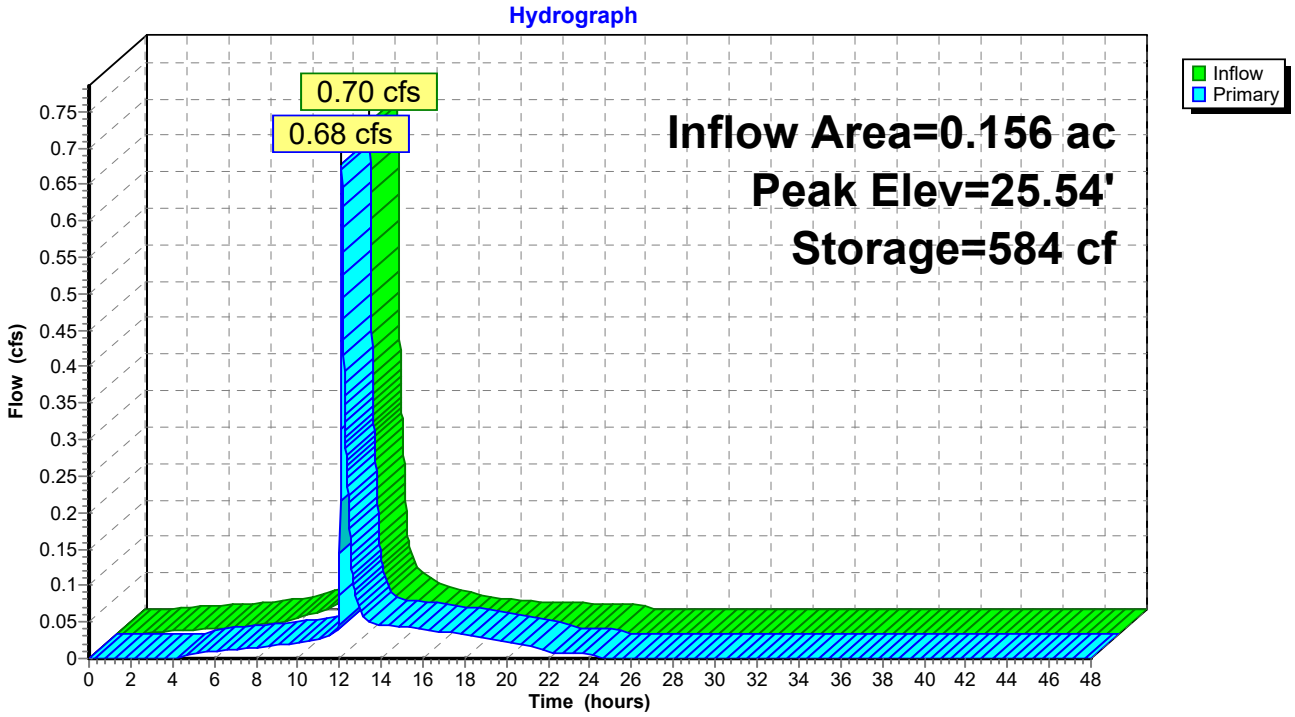
1,161.0 cf Field - 347.4 cf Chambers = 813.6 cf Stone x 40.0% Voids = 325.4 cf Stone Storage

Chamber Storage + Stone Storage = 655.5 cf = 0.015 af
Overall Storage Efficiency = 56.5%
Overall System Size = 27.46' x 9.25' x 4.57'

40 Chambers
43.0 cy Field
30.1 cy Stone



Pond 1P: R Tank System



Stage-Area-Storage for Pond 1P: R Tank System

Elevation (feet)	Storage (cubic-feet)
21.68	0
21.78	10
21.88	20
21.98	30
22.08	41
22.18	51
22.28	61
22.38	71
22.48	85
22.58	102
22.68	119
22.78	135
22.88	152
22.98	169
23.08	186
23.18	203
23.28	220
23.38	237
23.48	254
23.58	271
23.68	288
23.78	305
23.88	322
23.98	339
24.08	356
24.18	372
24.28	389
24.38	406
24.48	423
24.58	440
24.68	457
24.78	474
24.88	491
24.98	508
25.08	525
25.18	542
25.28	557
25.38	567
25.48	577
25.58	587
25.68	597
25.78	608
25.88	618
25.98	628
26.08	638
26.18	**648**
26.28	**656**
26.38	656
26.48	656
26.58	656
26.68	656

Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1.1S: S 1 - R TANK - 50 Runoff Area=1,944 sf 100.00% Impervious Runoff Depth=5.56"
Tc=6.0 min CN=98 Runoff=0.25 cfs 0.021 af

Subcatchment 1.3S: S 1.3 - LANCASTER Runoff Area=1,733 sf 72.01% Impervious Runoff Depth=3.70"
Tc=6.0 min CN=81 Runoff=0.17 cfs 0.012 af

Subcatchment 1S: S 1 - ROOF AREA Runoff Area=4,851 sf 100.00% Impervious Runoff Depth=5.56"
Tc=6.0 min CN=98 Runoff=0.63 cfs 0.052 af

Subcatchment 2.1: S 2.1 - CEDAR ST NW Runoff Area=1,397 sf 43.31% Impervious Runoff Depth=2.21"
Tc=6.0 min CN=65 Runoff=0.08 cfs 0.006 af

Subcatchment 2.2S: S 2.2 - CEDAR ST SE Runoff Area=6,321 sf 76.29% Impervious Runoff Depth=4.01"
Tc=6.0 min CN=84 Runoff=0.67 cfs 0.048 af

Subcatchment 2.3S: S 2.3 - LANCASTER Runoff Area=328 sf 48.48% Impervious Runoff Depth=2.47"
Tc=6.0 min CN=68 Runoff=0.02 cfs 0.002 af

Reach #99: Lancaster Inflow=1.77 cfs 0.140 af
Outflow=1.77 cfs 0.140 af

Reach 2R: CEDAR STREET Inflow=0.75 cfs 0.054 af
Outflow=0.75 cfs 0.054 af

Pond 1P: R Tank System Peak Elev=25.71' Storage=601 cf Inflow=0.89 cfs 0.072 af
Outflow=0.84 cfs 0.071 af

Summary for Subcatchment 1.1S: S 1 - R TANK - 50 CEDAR

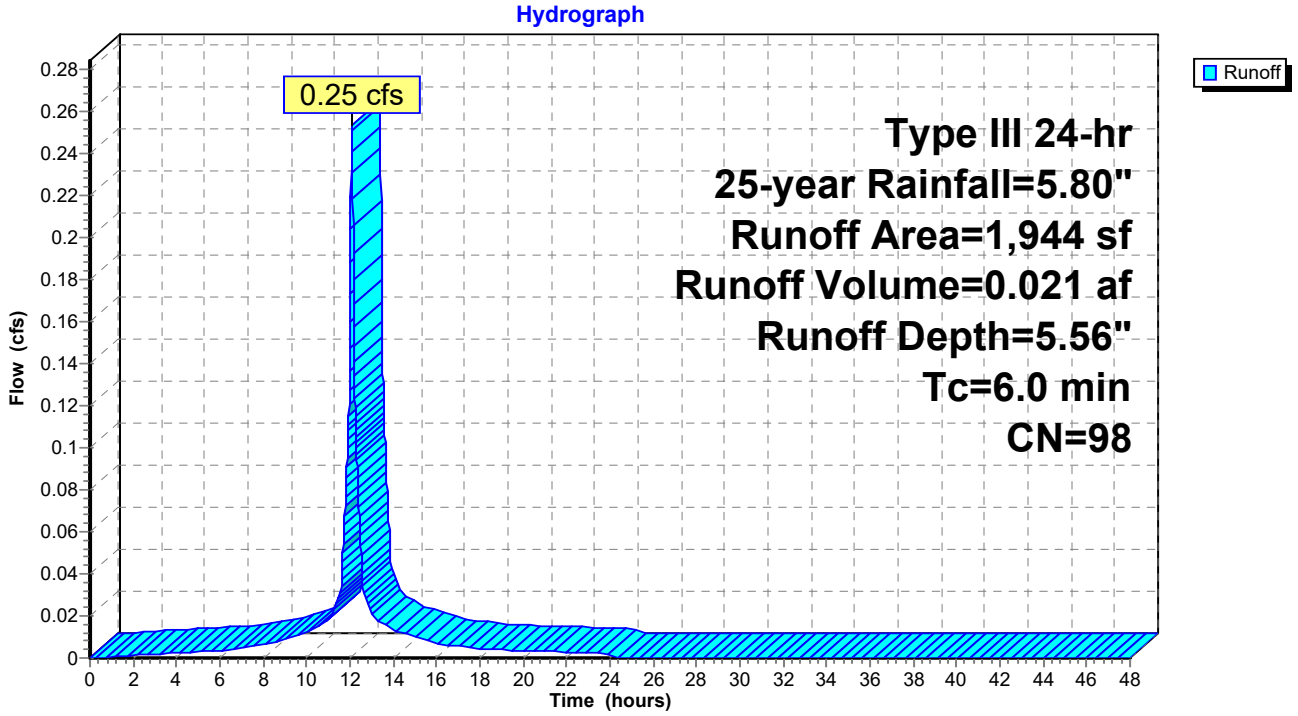
Runoff = 0.25 cfs @ 12.08 hrs, Volume= 0.021 af, Depth= 5.56"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-year Rainfall=5.80"

Area (sf)	CN	Description
1,944	98	Paved parking, HSG A
1,944		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 1.1S: S 1 - R TANK - 50 CEDAR



Summary for Subcatchment 1.3S: S 1.3 - LANCASTER STREET

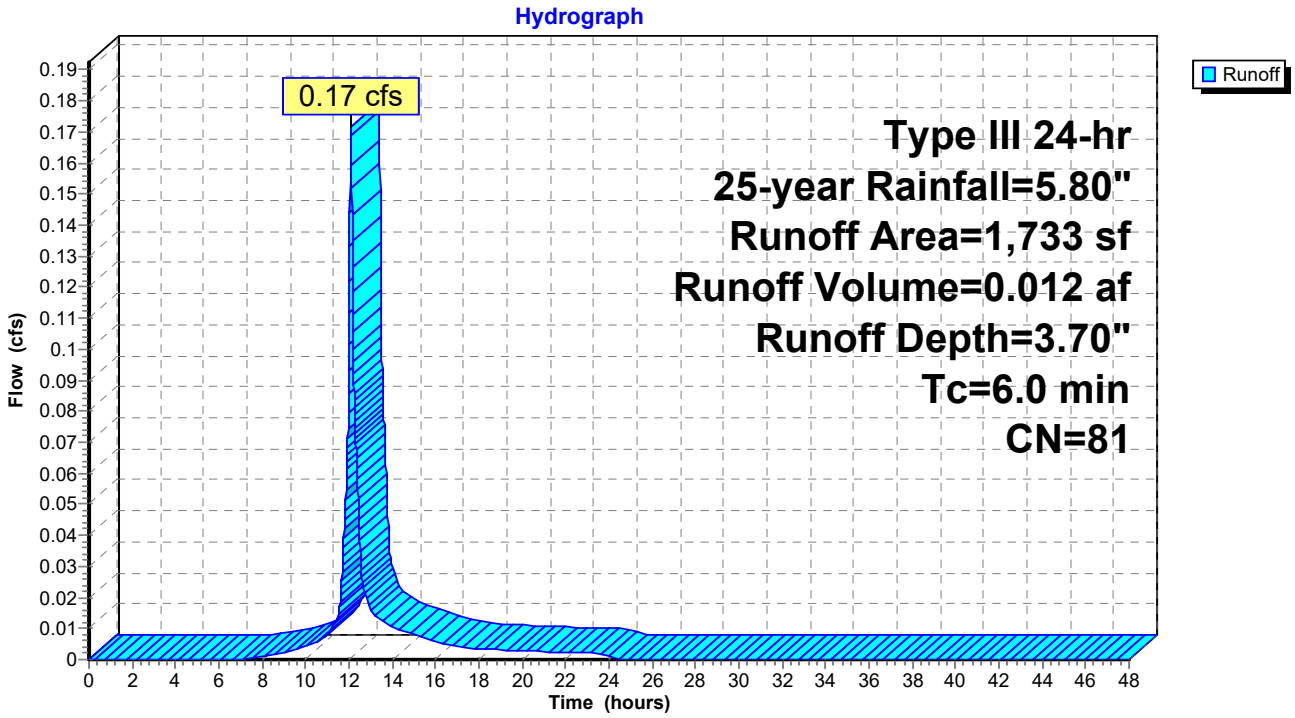
Runoff = 0.17 cfs @ 12.09 hrs, Volume= 0.012 af, Depth= 3.70"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-year Rainfall=5.80"

Area (sf)	CN	Description
485	39	>75% Grass cover, Good, HSG A
1,248	98	Paved parking, HSG A
1,733	81	Weighted Average
485		27.99% Pervious Area
1,248		72.01% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 1.3S: S 1.3 - LANCASTER STREET



Summary for Subcatchment 1S: S 1 - ROOF AREA

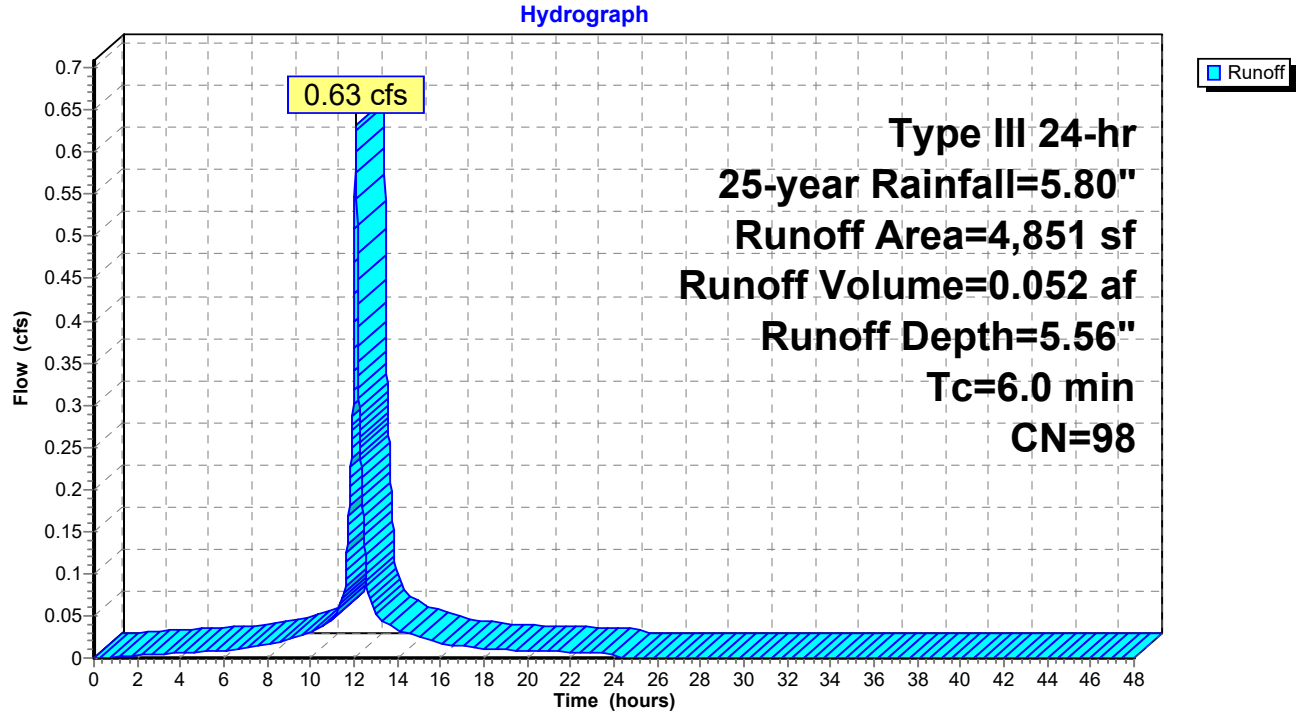
Runoff = 0.63 cfs @ 12.08 hrs, Volume= 0.052 af, Depth= 5.56"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-year Rainfall=5.80"

	Area (sf)	CN	Description
*	4,851	98	Roof and Pave
	4,851		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 1S: S 1 - ROOF AREA



Summary for Subcatchment 2.1: S 2.1 - CEDAR ST NW

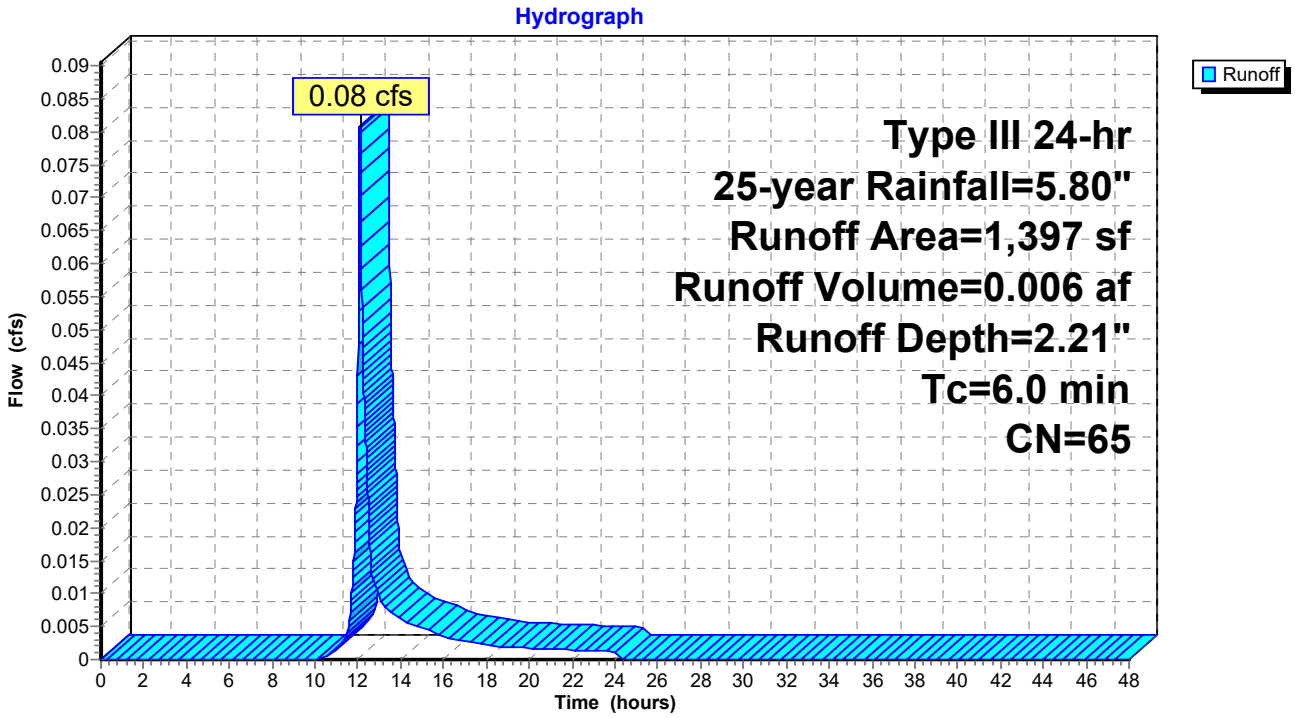
Runoff = 0.08 cfs @ 12.09 hrs, Volume= 0.006 af, Depth= 2.21"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-year Rainfall=5.80"

Area (sf)	CN	Description
792	39	>75% Grass cover, Good, HSG A
605	98	Paved parking, HSG A
1,397	65	Weighted Average
792		56.69% Pervious Area
605		43.31% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 2.1: S 2.1 - CEDAR ST NW



Summary for Subcatchment 2.2S: S 2.2 - CEDAR ST SE

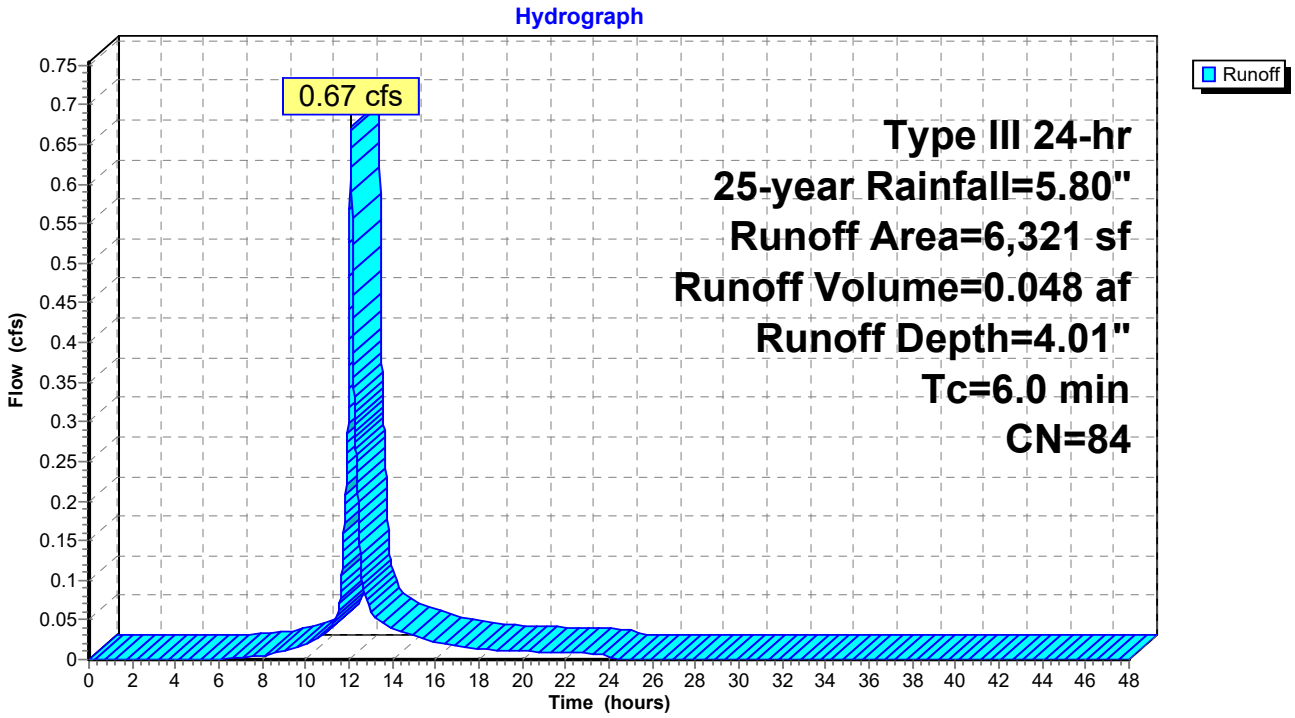
Runoff = 0.67 cfs @ 12.09 hrs, Volume= 0.048 af, Depth= 4.01"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-year Rainfall=5.80"

Area (sf)	CN	Description
1,499	39	>75% Grass cover, Good, HSG A
4,822	98	Paved parking, HSG A
6,321	84	Weighted Average
1,499		23.71% Pervious Area
4,822		76.29% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 2.2S: S 2.2 - CEDAR ST SE



Summary for Subcatchment 2.3S: S 2.3 - LANCASTER STREET

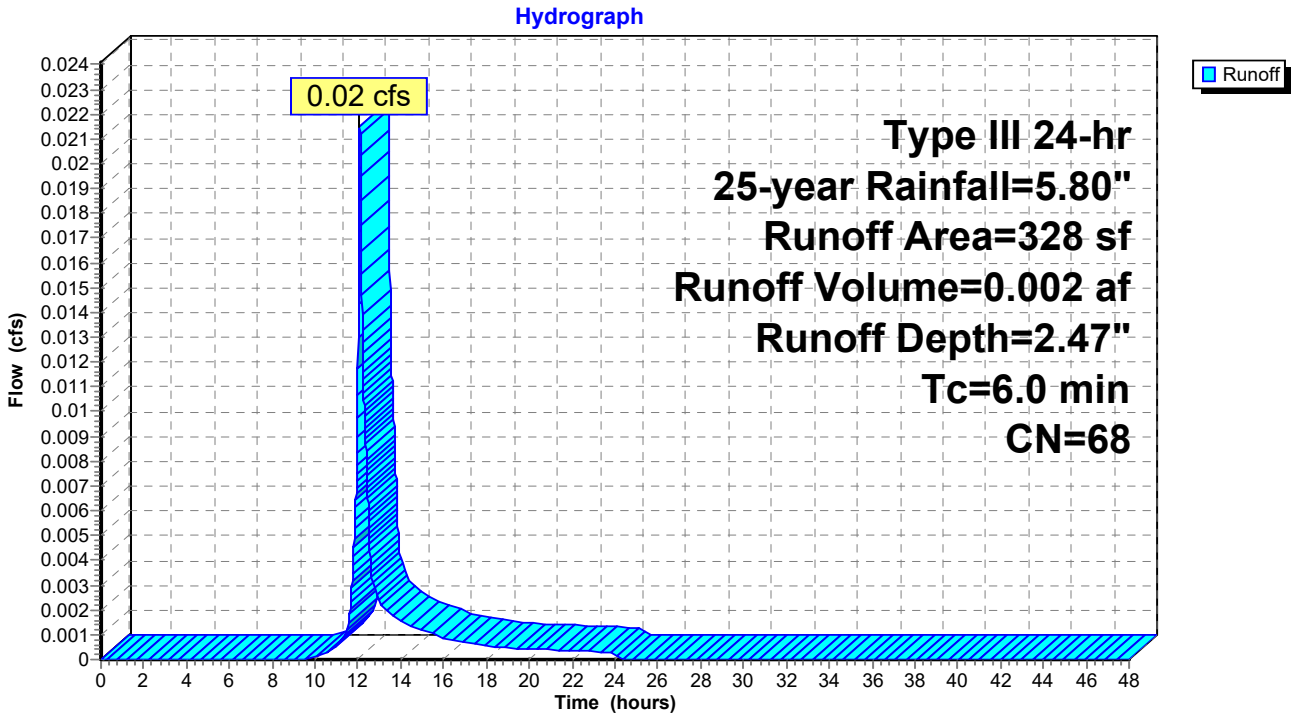
Runoff = 0.02 cfs @ 12.09 hrs, Volume= 0.002 af, Depth= 2.47"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-year Rainfall=5.80"

Area (sf)	CN	Description
169	39	>75% Grass cover, Good, HSG A
159	98	Paved parking, HSG A
328	68	Weighted Average
169		51.52% Pervious Area
159		48.48% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 2.3S: S 2.3 - LANCASTER STREET

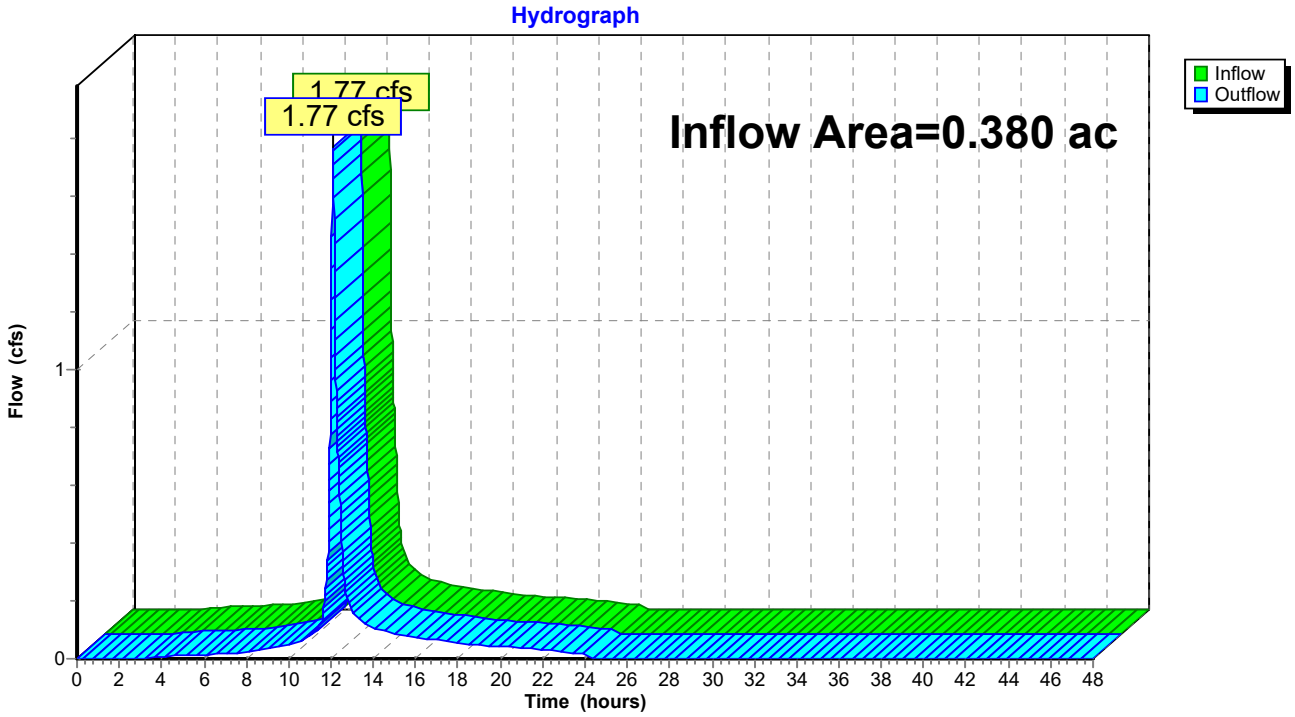


Summary for Reach #99: Lancaster

Inflow Area = 0.380 ac, 82.23% Impervious, Inflow Depth = 4.40" for 25-year event
Inflow = 1.77 cfs @ 12.09 hrs, Volume= 0.140 af
Outflow = 1.77 cfs @ 12.09 hrs, Volume= 0.140 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Reach #99: Lancaster

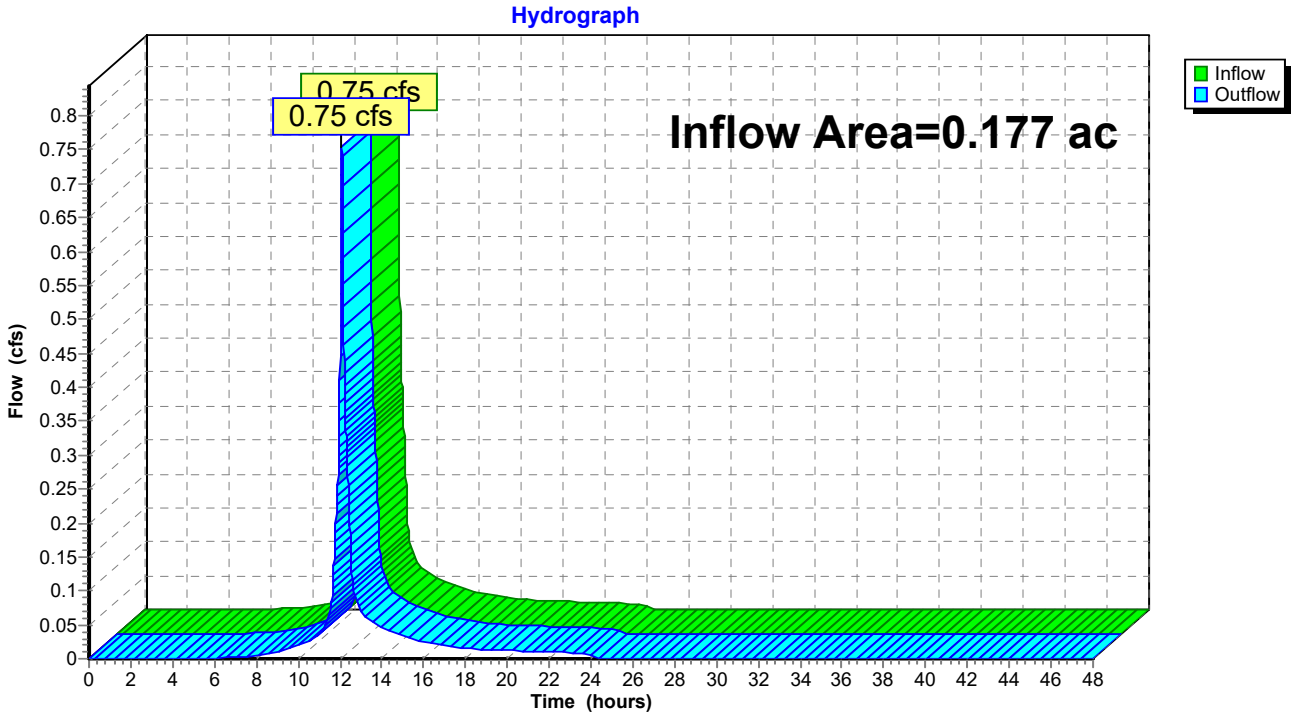


Summary for Reach 2R: CEDAR STREET

Inflow Area = 0.177 ac, 70.32% Impervious, Inflow Depth = 3.68" for 25-year event
Inflow = 0.75 cfs @ 12.09 hrs, Volume= 0.054 af
Outflow = 0.75 cfs @ 12.09 hrs, Volume= 0.054 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Reach 2R: CEDAR STREET



Summary for Pond 1P: R Tank System

Inflow Area = 0.156 ac,100.00% Impervious, Inflow Depth = 5.56" for 25-year event
Inflow = 0.89 cfs @ 12.08 hrs, Volume= 0.072 af
Outflow = 0.84 cfs @ 12.11 hrs, Volume= 0.071 af, Atten= 5%, Lag= 1.6 min
Primary = 0.84 cfs @ 12.11 hrs, Volume= 0.071 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 25.71' @ 12.11 hrs Surf.Area= 254 sf Storage= 601 cf
Flood Elev= 26.75' Surf.Area= 254 sf Storage= 656 cf

Plug-Flow detention time= 86.8 min calculated for 0.071 af (99% of inflow)
Center-of-Mass det. time= 77.9 min (823.6 - 745.7)

Volume	Invert	Avail.Storage	Storage Description
#1B	21.68'	325 cf	**9.25'W x 27.46'L x 4.57'H Field B** 1,161 cf Overall - 347 cf Embedded = 814 cf x 40.0% Voids
#2B	22.43'	330 cf	**ACF R-Tank HD 2** x 40 Inside #1 Inside= 15.7"W x 33.9"H => 3.52 sf x 2.35'L = 8.3 cf Outside= 15.7"W x 33.9"H => 3.70 sf x 2.35'L = 8.7 cf 40 Chambers in 4 Rows
		656 cf	Total Available Storage

Storage Group B created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	21.74'	**10.0" Round 10" Culvert** L= 9.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 21.74' / 21.70' S= 0.0044 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.55 sf
#2	Device 1	21.84'	**1.0" Vert. 1" Orifice** C= 0.600
#3	Device 2	22.09'	**4.0" Round 4" UNDERDRAIN** L= 50.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 22.09' / 21.84' S= 0.0050 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.09 sf
#4	Device 1	24.92'	**8.0" Round 8" COMBINED OVERFLOW PIPE** L= 3.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 24.92' / 24.90' S= 0.0067 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.35 sf
#5	Device 4	24.92'	**4.0" Round 3 - 4" OVERFLOW PIPES X 3.00** L= 2.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 24.92' / 24.91' S= 0.0050 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.09 sf

Primary OutFlow Max=0.84 cfs @ 12.11 hrs HW=25.71' (Free Discharge)
- **1=10" Culvert** (Passes 0.84 cfs of 3.91 cfs potential flow)
  - **2=1" Orifice** (Orifice Controls 0.05 cfs @ 9.42 fps)
    - **3=4" UNDERDRAIN** (Passes 0.05 cfs of 0.54 cfs potential flow)
  - **4=8" COMBINED OVERFLOW PIPE** (Passes 0.79 cfs of 0.88 cfs potential flow)
    - **5=3 - 4" OVERFLOW PIPES** (Inlet Controls 0.79 cfs @ 3.01 fps)

Pond 1P: R Tank System - Chamber Wizard Field B

Chamber Model = ACF R-Tank HD 2 (ACF Environmental R-Tank HD)
Inside= 15.7"W x 33.9"H => 3.52 sf x 2.35'L = 8.3 cf
Outside= 15.7"W x 33.9"H => 3.70 sf x 2.35'L = 8.7 cf

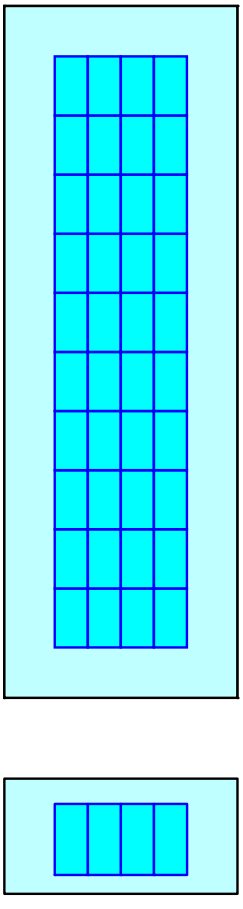
10 Chambers/Row x 2.35' Long = 23.46' Row Length +24.0" End Stone x 2 = 27.46' Base Length
4 Rows x 15.7" Wide + 24.0" Side Stone x 2 = 9.25' Base Width
9.0" Base + 33.9" Chamber Height + 12.0" Cover = 4.57' Field Height

40 Chambers x 8.3 cf = 330.1 cf Chamber Storage
40 Chambers x 8.7 cf = 347.4 cf Displacement

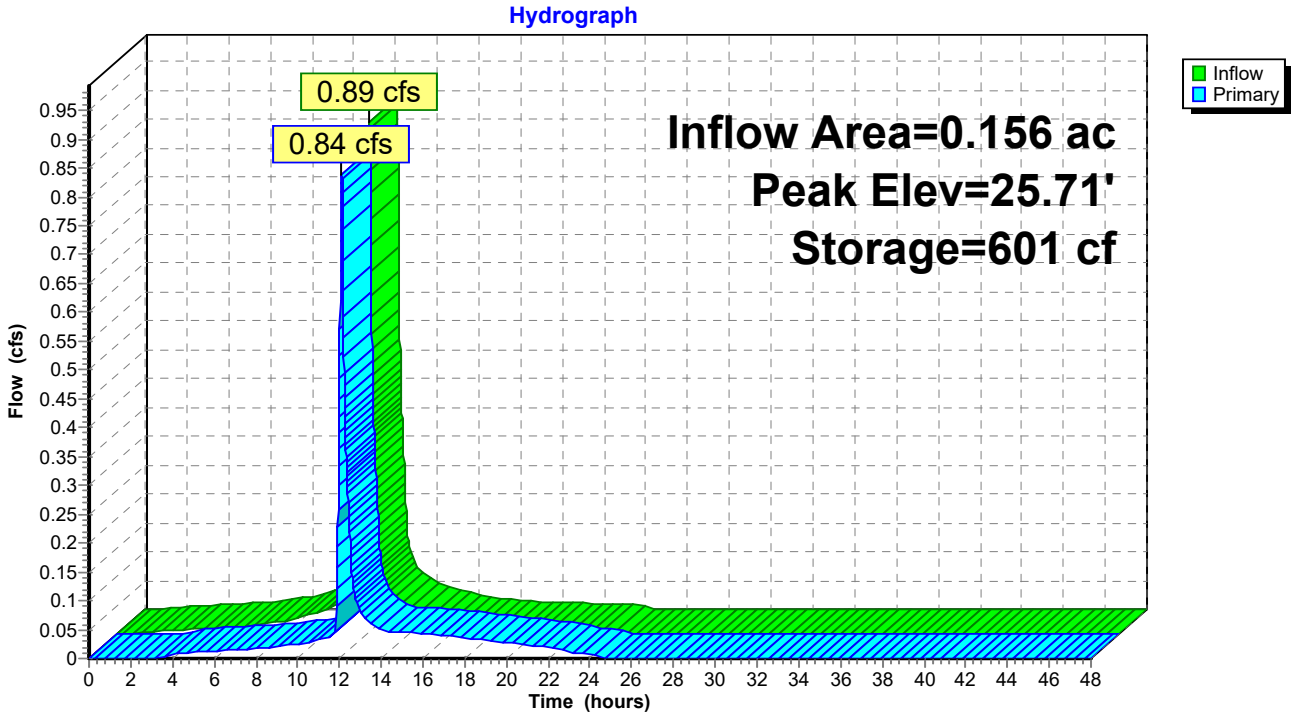
1,161.0 cf Field - 347.4 cf Chambers = 813.6 cf Stone x 40.0% Voids = 325.4 cf Stone Storage

Chamber Storage + Stone Storage = 655.5 cf = 0.015 af
Overall Storage Efficiency = 56.5%
Overall System Size = 27.46' x 9.25' x 4.57'

40 Chambers
43.0 cy Field
30.1 cy Stone



Pond 1P: R Tank System



Stage-Area-Storage for Pond 1P: R Tank System

Elevation (feet)	Storage (cubic-feet)
21.68	0
21.78	10
21.88	20
21.98	30
22.08	41
22.18	51
22.28	61
22.38	71
22.48	85
22.58	102
22.68	119
22.78	135
22.88	152
22.98	169
23.08	186
23.18	203
23.28	220
23.38	237
23.48	254
23.58	271
23.68	288
23.78	305
23.88	322
23.98	339
24.08	356
24.18	372
24.28	389
24.38	406
24.48	423
24.58	440
24.68	457
24.78	474
24.88	491
24.98	508
25.08	525
25.18	542
25.28	557
25.38	567
25.48	577
25.58	587
25.68	597
25.78	608
25.88	618
25.98	628
26.08	638
26.18	**648**
26.28	**656**
26.38	656
26.48	656
26.58	656
26.68	656

SECTION J

STORMWATER MANAGMENT REPORT

Attachment C: HydroCAD Calculations

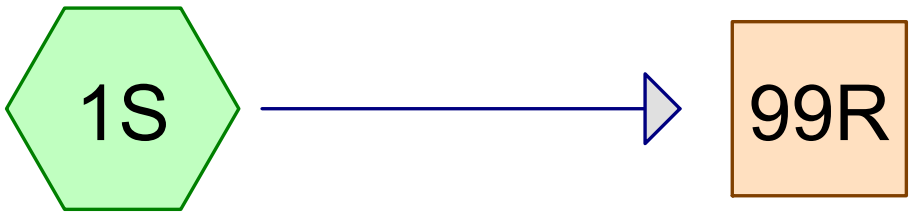
PHASE 3 - 158 LANCASTER STREET

SECTION J

STORMWATER MANAGMENT REPORT

Attachment C: Pre Development HydroCAD

PHASE 3 - 158 LANCASTER STREET



S 1 - TOTAL RUNOFF AREA

POI #99: LANCASTER ST COMBINED SEWER

Subcat Reach Pond Link

Routing Diagram for PHASE 3 - 158 LANCASTER ST - PRE
Prepared by HP Inc., Printed 4/25/2024
HydroCAD® 10.00-26 s/n 00620 © 2020 HydroCAD Software Solutions LLC

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.117	49	50-75% Grass cover, Fair, HSG A (1S)
0.290	98	Paved parking, HSG A (1S)
0.407	**84**	**TOTAL AREA**

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.407	HSG A	1S
0.000	HSG B	
0.000	HSG C	
0.000	HSG D	
0.000	Other	
0.407		**TOTAL AREA**

Ground Covers (all nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.117	0.000	0.000	0.000	0.000	0.117	50-75% Grass cover, Fair	1S
0.290	0.000	0.000	0.000	0.000	0.290	Paved parking	1S
0.407	**0.000**	**0.000**	**0.000**	**0.000**	**0.407**	**TOTAL AREA**	

Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: S 1 - TOTAL RUNOFF Runoff Area=17,735 sf 71.16% Impervious Runoff Depth=1.60"
Tc=6.0 min CN=84 Runoff=0.76 cfs 0.054 af

Reach 99R: POI #99: LANCASTER ST COMBINED SEWER Inflow=0.76 cfs 0.054 af
Outflow=0.76 cfs 0.054 af

Total Runoff Area = 0.407 ac Runoff Volume = 0.054 af Average Runoff Depth = 1.60"
28.84% Pervious = 0.117 ac 71.16% Impervious = 0.290 ac

Summary for Subcatchment 1S: S 1 - TOTAL RUNOFF AREA

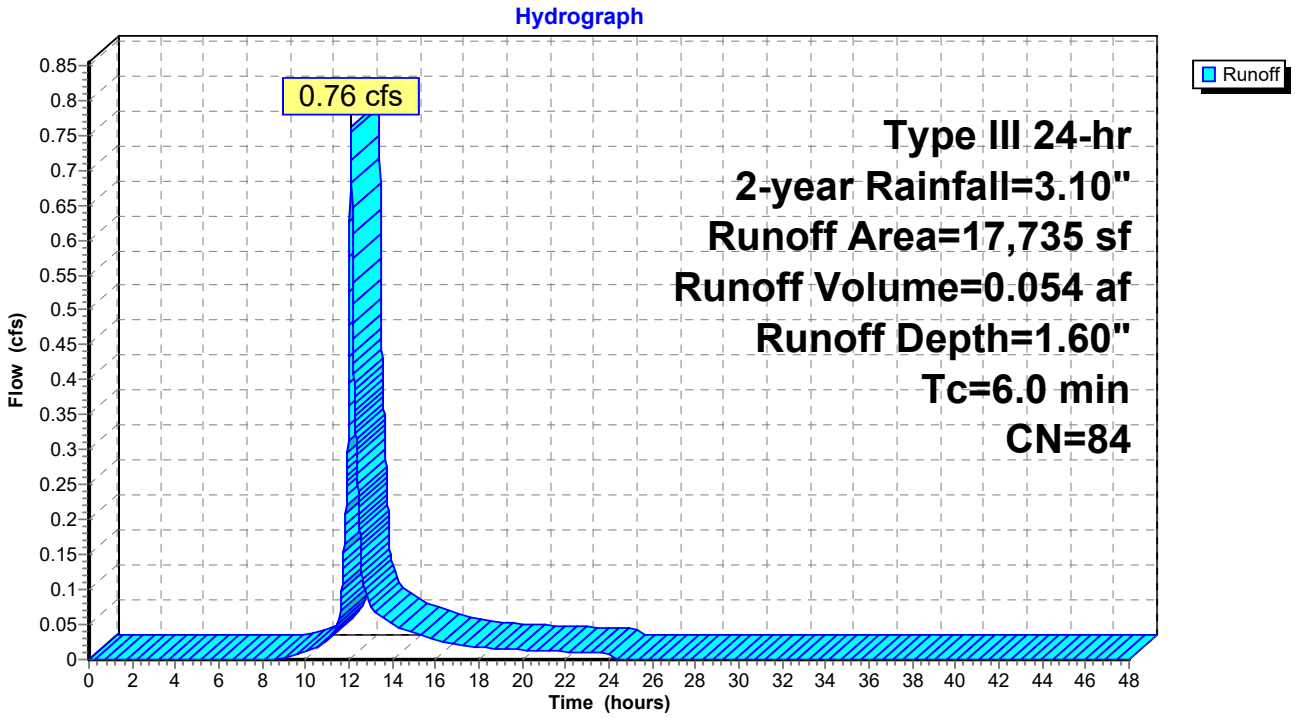
Runoff = 0.76 cfs @ 12.09 hrs, Volume= 0.054 af, Depth= 1.60"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-year Rainfall=3.10"

Area (sf)	CN	Description
12,620	98	Paved parking, HSG A
5,115	49	50-75% Grass cover, Fair, HSG A
17,735	84	Weighted Average
5,115	49	28.84% Pervious Area
12,620	98	71.16% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 1S: S 1 - TOTAL RUNOFF AREA

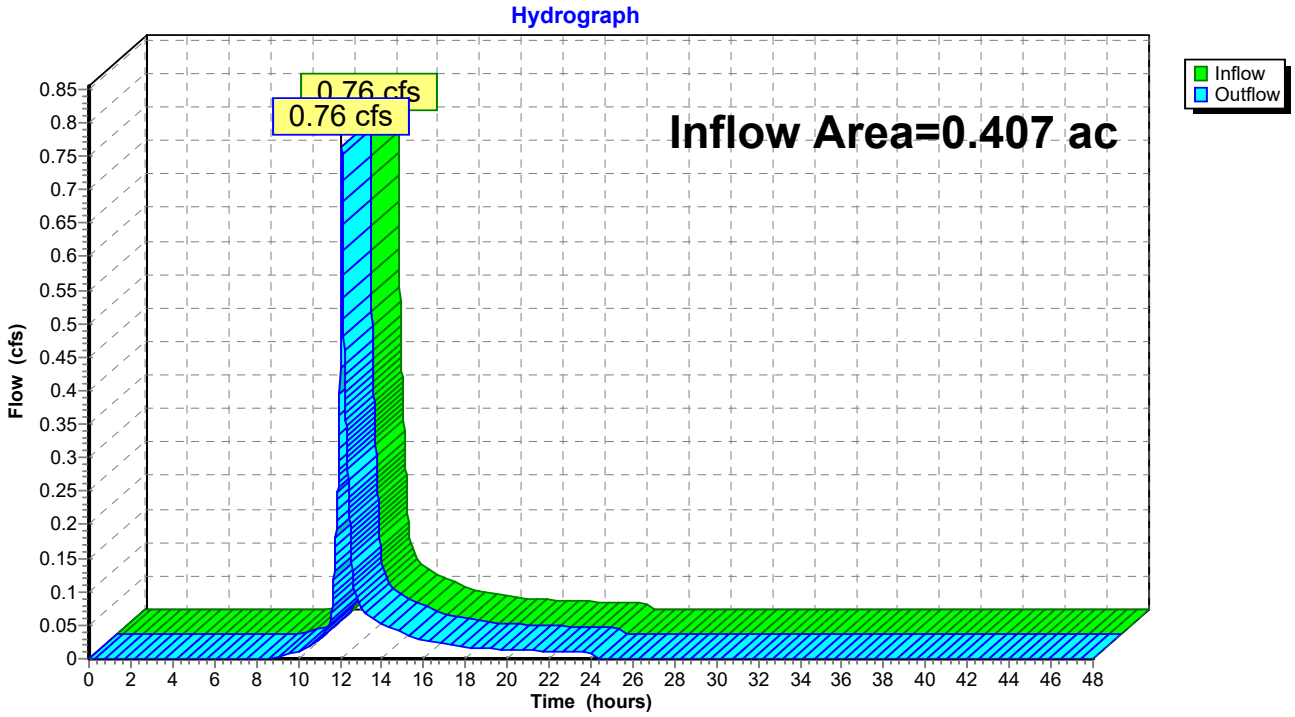


Summary for Reach 99R: POI #99: LANCASTER ST COMBINED SEWER

Inflow Area = 0.407 ac, 71.16% Impervious, Inflow Depth = 1.60" for 2-year event
Inflow = 0.76 cfs @ 12.09 hrs, Volume= 0.054 af
Outflow = 0.76 cfs @ 12.09 hrs, Volume= 0.054 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Reach 99R: POI #99: LANCASTER ST COMBINED SEWER



Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: S 1 - TOTAL RUNOFF Runoff Area=17,735 sf 71.16% Impervious Runoff Depth=2.91"
Tc=6.0 min CN=84 Runoff=1.38 cfs 0.099 af

Reach 99R: POI #99: LANCASTER ST COMBINED SEWER Inflow=1.38 cfs 0.099 af
Outflow=1.38 cfs 0.099 af

Total Runoff Area = 0.407 ac Runoff Volume = 0.099 af Average Runoff Depth = 2.91"
28.84% Pervious = 0.117 ac 71.16% Impervious = 0.290 ac

Summary for Subcatchment 1S: S 1 - TOTAL RUNOFF AREA

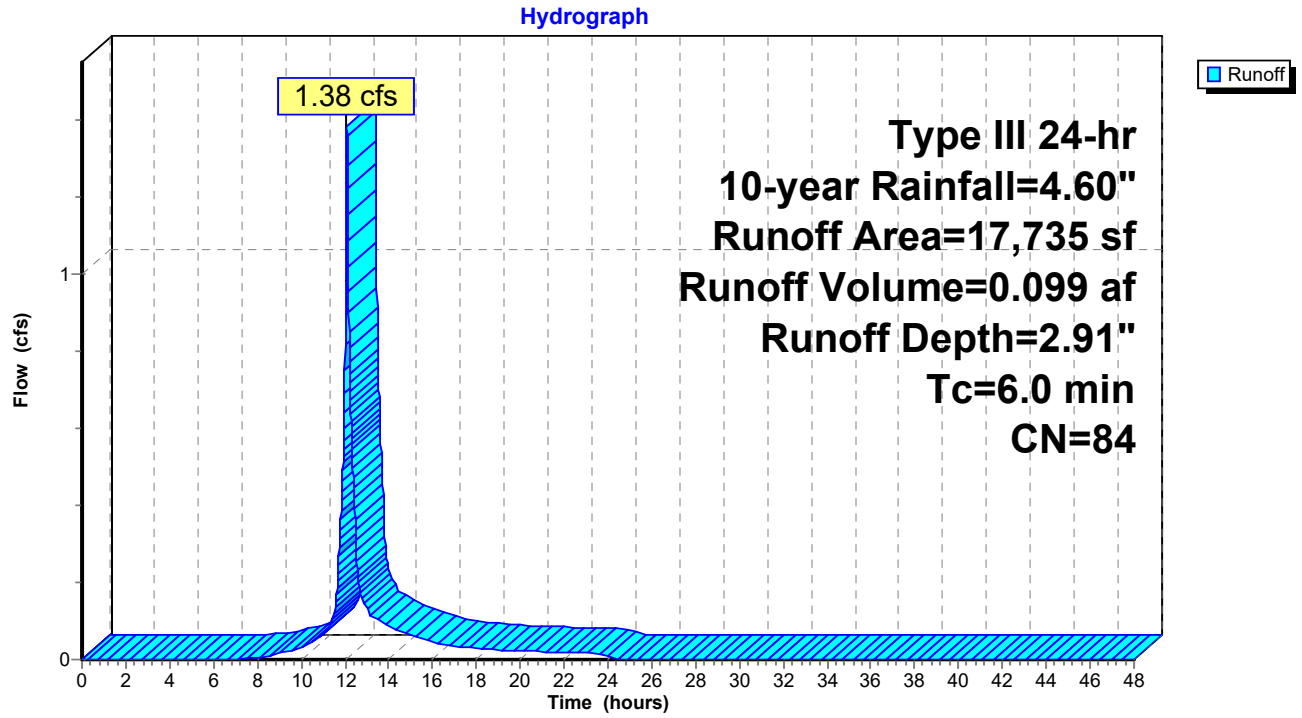
Runoff = 1.38 cfs @ 12.09 hrs, Volume= 0.099 af, Depth= 2.91"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-year Rainfall=4.60"

Area (sf)	CN	Description
12,620	98	Paved parking, HSG A
5,115	49	50-75% Grass cover, Fair, HSG A
17,735	84	Weighted Average
5,115	49	28.84% Pervious Area
12,620	98	71.16% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 1S: S 1 - TOTAL RUNOFF AREA

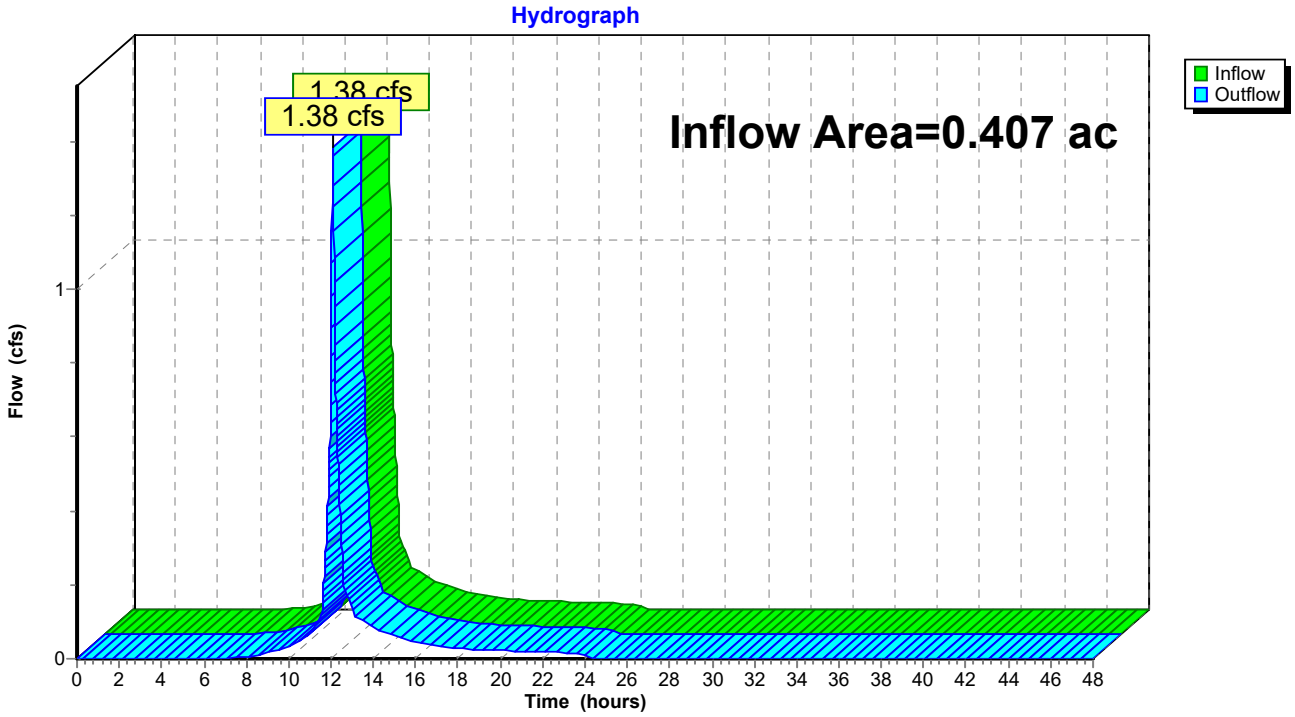


Summary for Reach 99R: POI #99: LANCASTER ST COMBINED SEWER

Inflow Area = 0.407 ac, 71.16% Impervious, Inflow Depth = 2.91" for 10-year event
Inflow = 1.38 cfs @ 12.09 hrs, Volume= 0.099 af
Outflow = 1.38 cfs @ 12.09 hrs, Volume= 0.099 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Reach 99R: POI #99: LANCASTER ST COMBINED SEWER



Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: S 1 - TOTAL RUNOFF Runoff Area=17,735 sf 71.16% Impervious Runoff Depth=4.01"
Tc=6.0 min CN=84 Runoff=1.89 cfs 0.136 af

Reach 99R: POI #99: LANCASTER ST COMBINED SEWER Inflow=1.89 cfs 0.136 af
Outflow=1.89 cfs 0.136 af

Total Runoff Area = 0.407 ac Runoff Volume = 0.136 af Average Runoff Depth = 4.01"
28.84% Pervious = 0.117 ac 71.16% Impervious = 0.290 ac

Summary for Subcatchment 1S: S 1 - TOTAL RUNOFF AREA

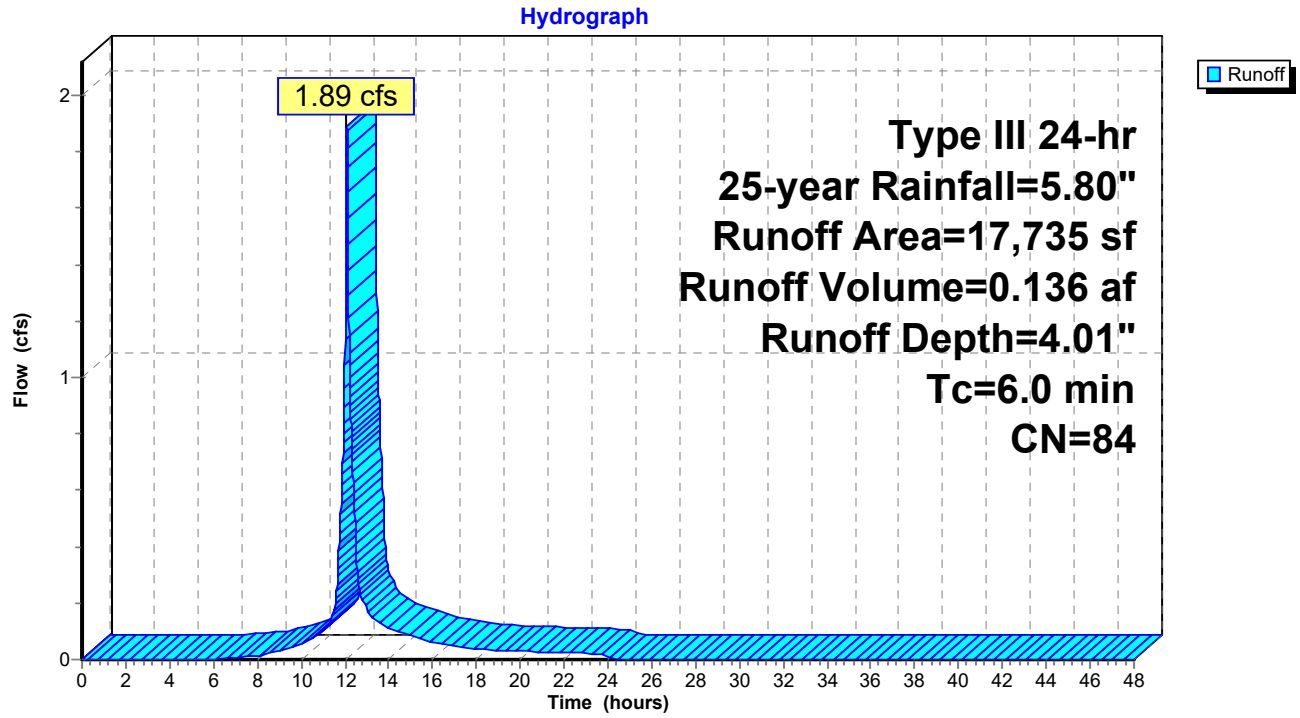
Runoff = 1.89 cfs @ 12.09 hrs, Volume= 0.136 af, Depth= 4.01"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-year Rainfall=5.80"

Area (sf)	CN	Description
12,620	98	Paved parking, HSG A
5,115	49	50-75% Grass cover, Fair, HSG A
17,735	84	Weighted Average
5,115	49	28.84% Pervious Area
12,620	98	71.16% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 1S: S 1 - TOTAL RUNOFF AREA

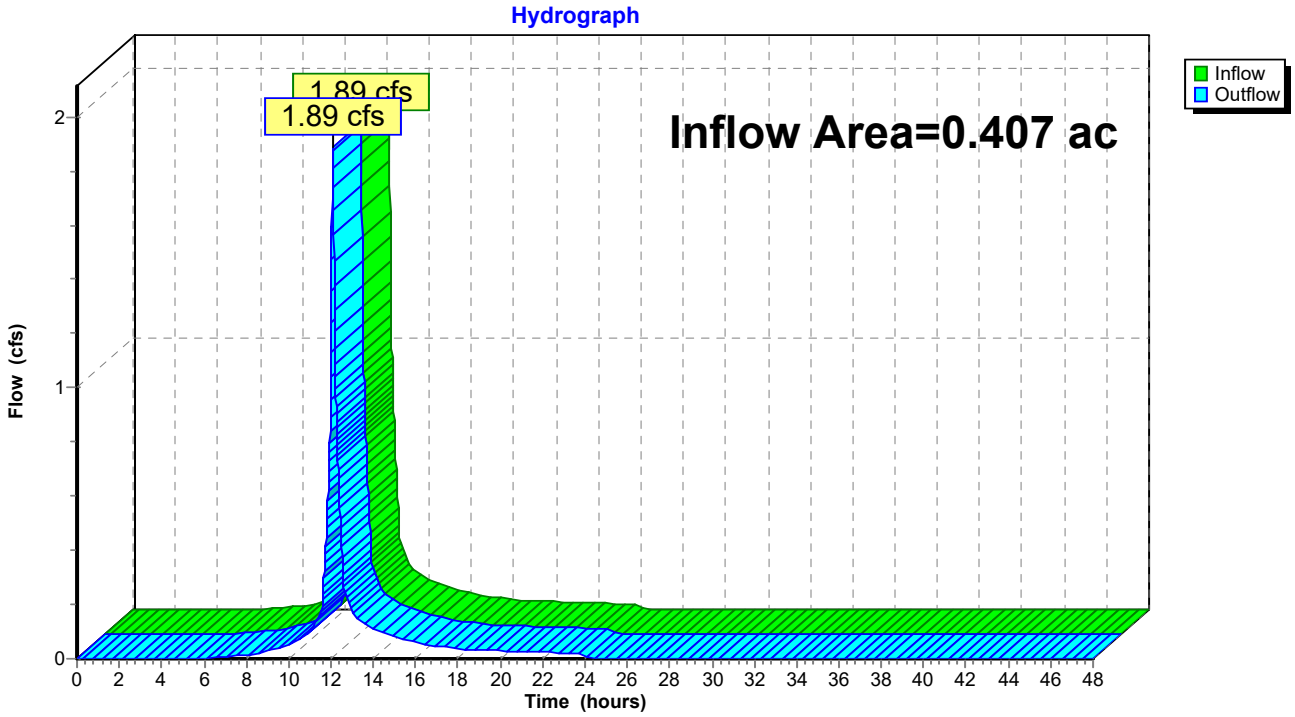


Summary for Reach 99R: POI #99: LANCASTER ST COMBINED SEWER

Inflow Area = 0.407 ac, 71.16% Impervious, Inflow Depth = 4.01" for 25-year event
Inflow = 1.89 cfs @ 12.09 hrs, Volume= 0.136 af
Outflow = 1.89 cfs @ 12.09 hrs, Volume= 0.136 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Reach 99R: POI #99: LANCASTER ST COMBINED SEWER

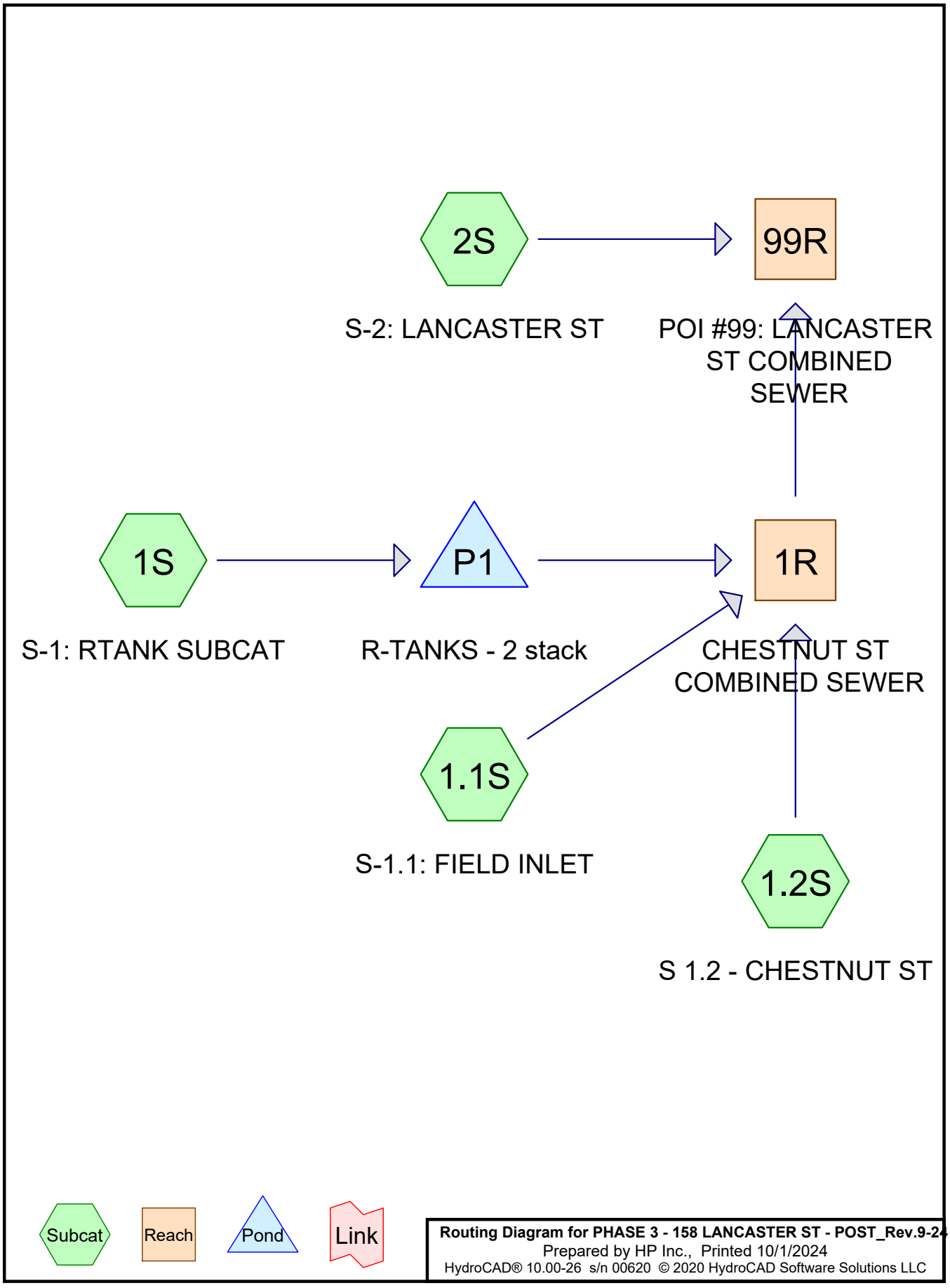


SECTION J

STORMWATER MANAGMENT REPORT

Attachment C: Post Development HydroCAD

PHASE 3 - 158 LANCASTER STREET


2S
99R
S-2: LANCASTER ST
POI #99: LANCASTER ST COMBINED SEWER
1S
P1
1R
S-1: RTANK SUBCAT
R-TANKS - 2 stack
CHESTNUT ST COMBINED SEWER
1.1S
S-1.1: FIELD INLET
1.2S
S 1.2 - CHESTNUT ST
Subcat
Reach
Pond
Link
Routing Diagram for PHASE 3 - 158 LANCASTER ST - POST_Rev.9-24
Prepared by HP Inc., Printed 10/1/2024
HydroCAD® 10.00-26 s/n 00620 © 2020 HydroCAD Software Solutions LLC

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.140	39	>75% Grass cover, Good, HSG A (1.1S, 1.2S, 1S)
0.129	98	Paved parking, HSG A (1S)
0.113	98	ROOF AREA (1S)
0.024	98	Unconnected pavement, HSG A (1.1S, 1.2S, 2S)
0.407	**78**	**TOTAL AREA**

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.294	HSG A	1.1S, 1.2S, 1S, 2S
0.000	HSG B	
0.000	HSG C	
0.000	HSG D	
0.113	Other	1S
0.407		**TOTAL AREA**

Ground Covers (all nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.140	0.000	0.000	0.000	0.000	0.140	>75% Grass cover, Good	1.1S, 1.2S, 1S
0.129	0.000	0.000	0.000	0.000	0.129	Paved parking	1S
0.000	0.000	0.000	0.000	0.113	0.113	ROOF AREA	1S
0.024	0.000	0.000	0.000	0.000	0.024	Unconnected pavement	1.1S, 1.2S, 2S
0.294	**0.000**	**0.000**	**0.000**	**0.113**	**0.407**	**TOTAL AREA**	

Pipe Listing (all nodes)

Line#	Node Number	In-Invert (feet)	Out-Invert (feet)	Length (feet)	Slope (ft/ft)	n	Diam/Width (inches)	Height (inches)	Inside-Fill (inches)
1	P1	8.74	8.03	143.0	0.0050	0.010	10.0	0.0	0.0
2	P1	11.67	11.61	9.0	0.0067	0.010	10.0	0.0	0.0

Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1.1S: S-1.1: FIELD INLET Runoff Area=3,502 sf 0.71% Impervious Runoff Depth=0.00"
Tc=6.0 min CN=39 Runoff=0.00 cfs 0.000 af

Subcatchment 1.2S: S 1.2 - CHESTNUT ST Runoff Area=2,793 sf 29.86% Impervious Runoff Depth=0.07"
Tc=6.0 min UI Adjusted CN=48 Runoff=0.00 cfs 0.000 af

Subcatchment 1S: S-1: RTANK SUBCAT Runoff Area=11,214 sf 93.90% Impervious Runoff Depth=2.45"
Tc=6.0 min CN=94 Runoff=0.71 cfs 0.052 af

Subcatchment 2S: S-2: LANCASTER ST Runoff Area=199 sf 100.00% Impervious Runoff Depth=2.87"
Tc=6.0 min CN=98 Runoff=0.01 cfs 0.001 af

Reach 1R: CHESTNUT ST COMBINED SEWER Inflow=0.35 cfs 0.052 af
Outflow=0.35 cfs 0.052 af

Reach 99R: POI #99: LANCASTER ST COMBINED SEWER Inflow=0.36 cfs 0.053 af
Outflow=0.36 cfs 0.053 af

Pond P1: R-TANKS - 2 stack Peak Elev=12.02' Storage=869 cf Inflow=0.71 cfs 0.052 af
Outflow=0.35 cfs 0.051 af

Total Runoff Area = 0.407 ac Runoff Volume = 0.054 af Average Runoff Depth = 1.59"
34.56% Pervious = 0.140 ac 65.44% Impervious = 0.266 ac

Summary for Subcatchment 1.1S: S-1.1: FIELD INLET

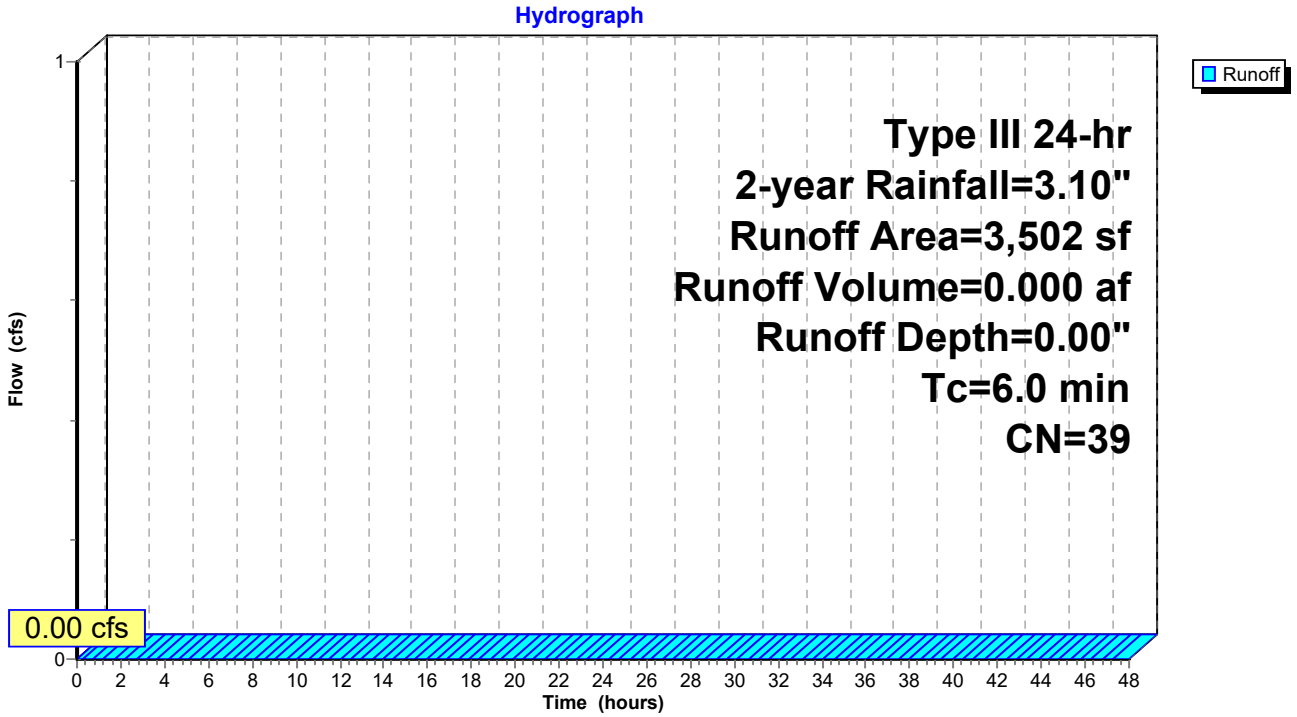
Runoff = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Depth= 0.00"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-year Rainfall=3.10"

Area (sf)	CN	Description
25	98	Unconnected pavement, HSG A
3,477	39	>75% Grass cover, Good, HSG A
3,502	39	Weighted Average
3,477	39	99.29% Pervious Area
25	98	0.71% Impervious Area
25		100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 1.1S: S-1.1: FIELD INLET



Summary for Subcatchment 1.2S: S 1.2 - CHESTNUT ST

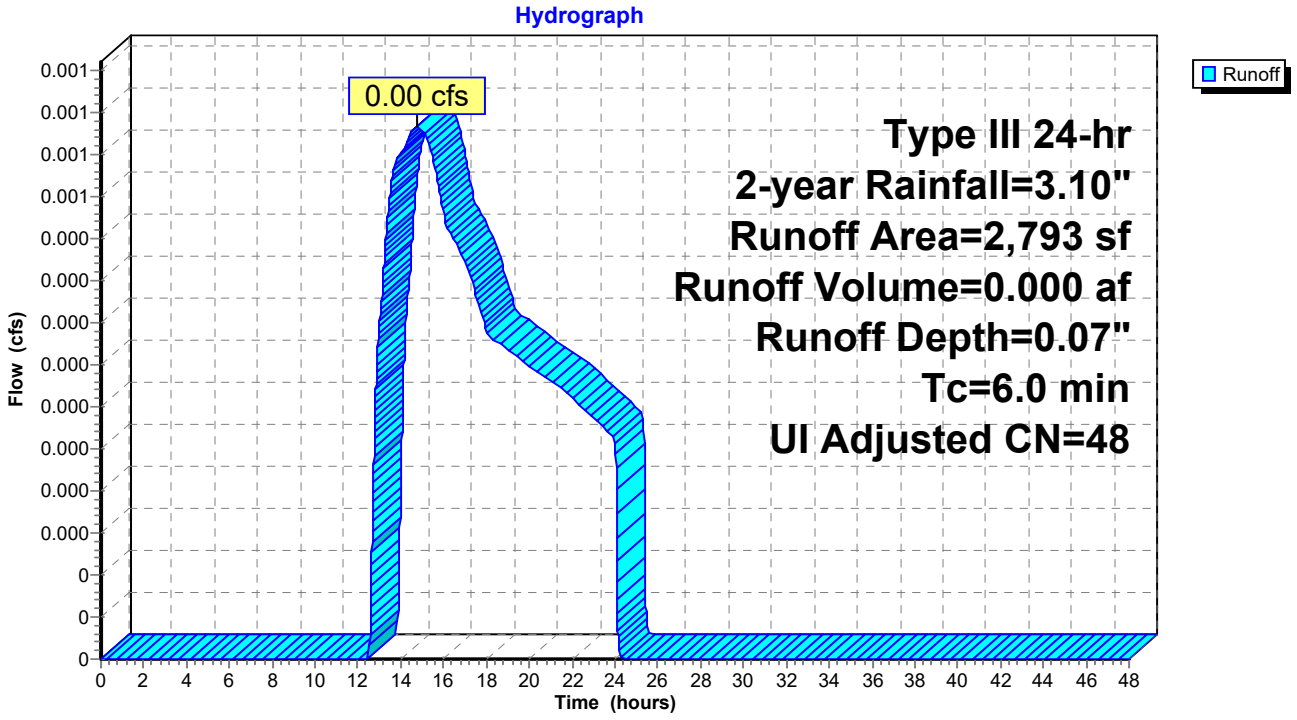
Runoff = 0.00 cfs @ 14.74 hrs, Volume= 0.000 af, Depth= 0.07"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-year Rainfall=3.10"

Area (sf)	CN	Adj	Description
834	98		Unconnected pavement, HSG A
1,959	39		>75% Grass cover, Good, HSG A
2,793	57	48	Weighted Average, UI Adjusted
1,959	39	39	70.14% Pervious Area
834	98	98	29.86% Impervious Area
834			100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 1.2S: S 1.2 - CHESTNUT ST



Summary for Subcatchment 1S: S-1: RTANK SUBCAT

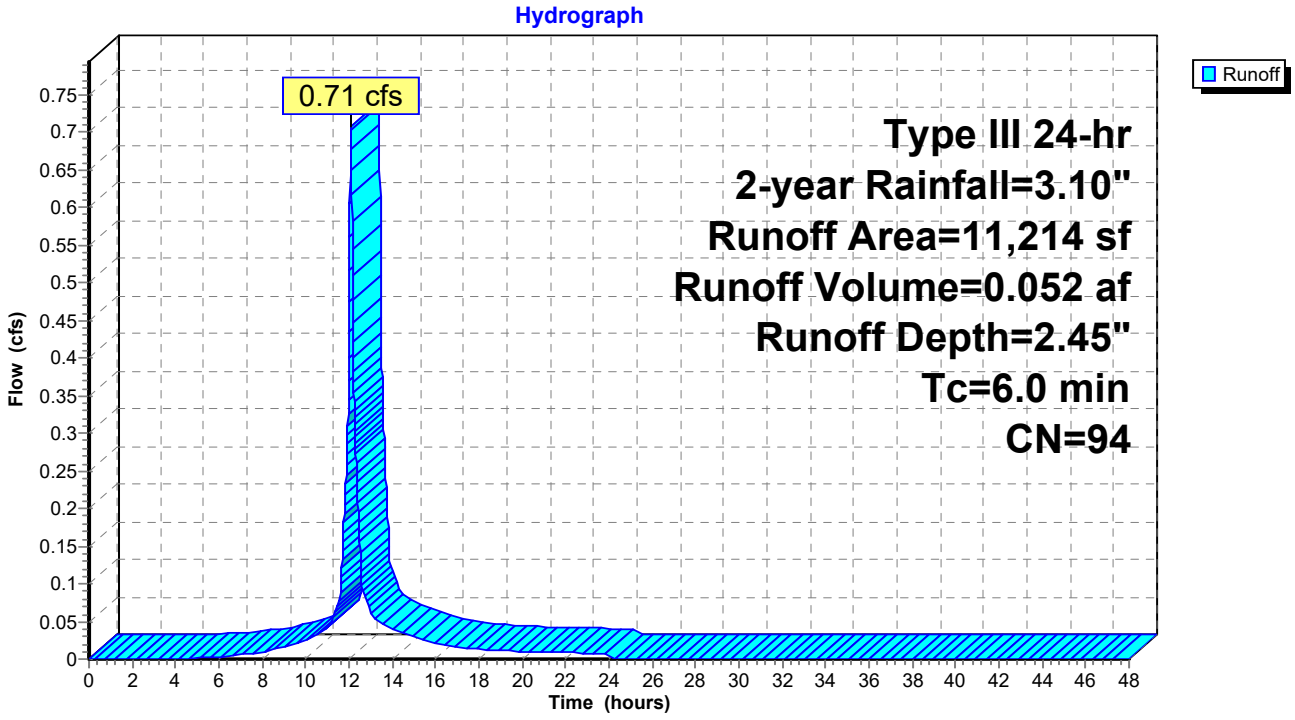
Runoff = 0.71 cfs @ 12.08 hrs, Volume= 0.052 af, Depth= 2.45"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-year Rainfall=3.10"

	Area (sf)	CN	Description
	5,609	98	Paved parking, HSG A
	684	39	>75% Grass cover, Good, HSG A
*	4,921	98	ROOF AREA
	11,214	94	Weighted Average
	684	39	6.10% Pervious Area
	10,530	98	93.90% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 1S: S-1: RTANK SUBCAT



Summary for Subcatchment 2S: S-2: LANCASTER ST

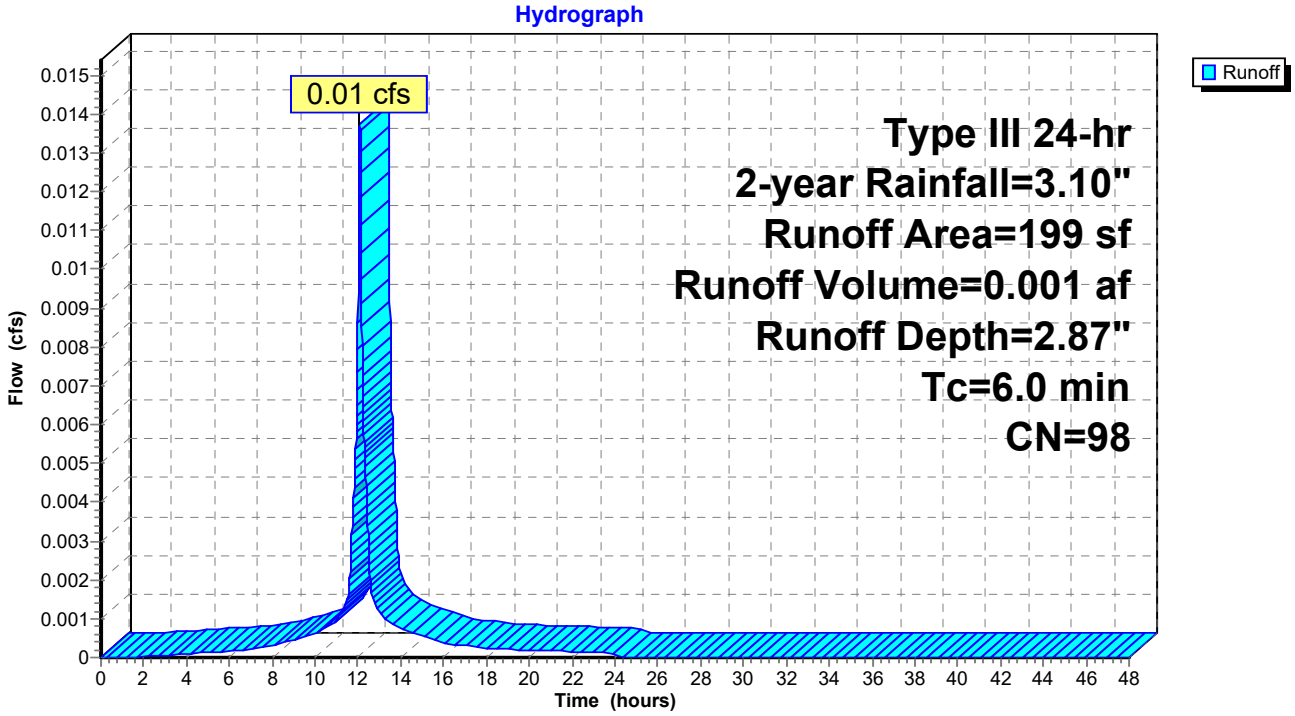
Runoff = 0.01 cfs @ 12.08 hrs, Volume= 0.001 af, Depth= 2.87"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-year Rainfall=3.10"

Area (sf)	CN	Description
199	98	Unconnected pavement, HSG A
199	98	100.00% Impervious Area
199		100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 2S: S-2: LANCASTER ST

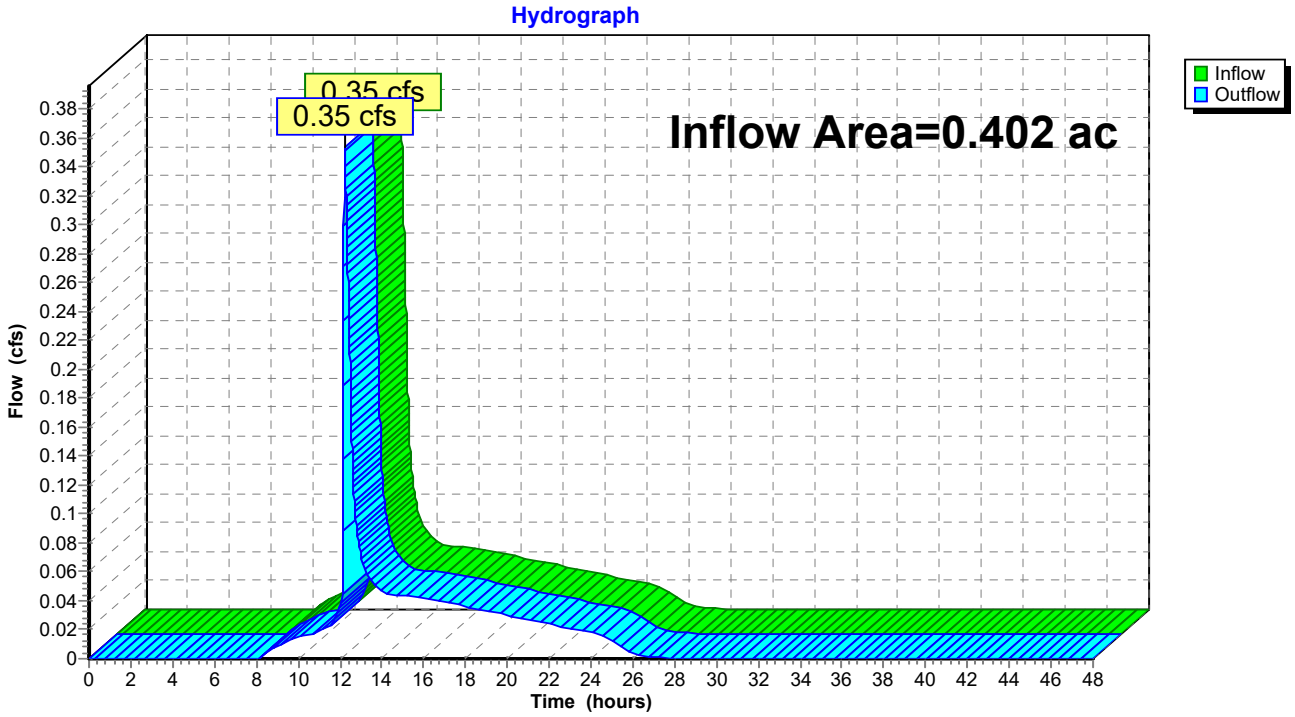


Summary for Reach 1R: CHESTNUT ST COMBINED SEWER

Inflow Area = 0.402 ac, 65.05% Impervious, Inflow Depth = 1.54" for 2-year event
Inflow = 0.35 cfs @ 12.23 hrs, Volume= 0.052 af
Outflow = 0.35 cfs @ 12.23 hrs, Volume= 0.052 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Reach 1R: CHESTNUT ST COMBINED SEWER

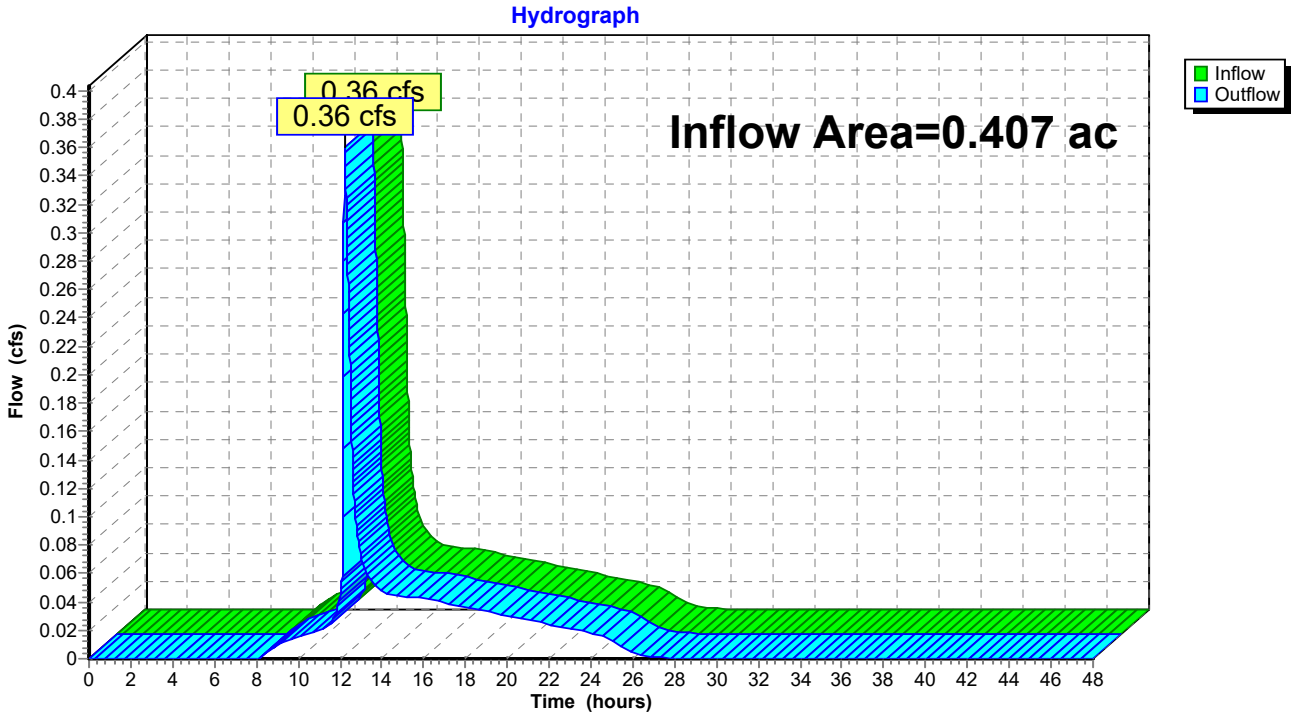


Summary for Reach 99R: POI #99: LANCASTER ST COMBINED SEWER

Inflow Area = 0.407 ac, 65.44% Impervious, Inflow Depth = 1.55" for 2-year event
Inflow = 0.36 cfs @ 12.23 hrs, Volume= 0.053 af
Outflow = 0.36 cfs @ 12.23 hrs, Volume= 0.053 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Reach 99R: POI #99: LANCASTER ST COMBINED SEWER



Summary for Pond P1: R-TANKS - 2 stack

Inflow Area = 0.257 ac, 93.90% Impervious, Inflow Depth = 2.45" for 2-year event
Inflow = 0.71 cfs @ 12.08 hrs, Volume= 0.052 af
Outflow = 0.35 cfs @ 12.23 hrs, Volume= 0.051 af, Atten= 50%, Lag= 8.8 min
Primary = 0.35 cfs @ 12.23 hrs, Volume= 0.051 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 12.02' @ 12.23 hrs Surf.Area= 364 sf Storage= 869 cf
Flood Elev= 13.50' Surf.Area= 364 sf Storage= 1,012 cf

Plug-Flow detention time= 185.6 min calculated for 0.051 af (97% of inflow)
Center-of-Mass det. time= 169.9 min (958.1 - 788.2)

Volume	Invert	Avail.Storage	Storage Description
#1B	8.43'	414 cf	**14.50'W x 25.11'L x 4.57'H Field B** 1,664 cf Overall - 629 cf Embedded = 1,035 cf x 40.0% Voids
#2B	9.18'	594 cf	**ACF R-Tank HD 2** x 72 Inside #1 Inside= 15.7"W x 33.9"H => 3.52 sf x 2.35'L = 8.3 cf Outside= 15.7"W x 33.9"H => 3.70 sf x 2.35'L = 8.7 cf 72 Chambers in 8 Rows
#3	8.84'	4 cf	**4.0" Round Pipe Storage** Inside #1 L= 45.0' S= 0.0100 '/'
		1,012 cf	Total Available Storage

Storage Group B created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	8.74'	**10.0" Round 10" Main Outlet** L= 143.0' CMP, mitered to conform to fill, Ke= 0.700 Inlet / Outlet Invert= 8.74' / 8.03' S= 0.0050 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.55 sf
#2	Device 1	8.84'	**1.0" Vert. 1" UNDERDRAIN ORIFICE** C= 0.600
#3	Device 1	11.67'	**10.0" Round 10" OVERFLOW HEADER PIPE** L= 9.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 11.67' / 11.61' S= 0.0067 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.55 sf
#4	Device 3	11.67'	**4.0" Vert. 4" Overflows (4) X 4.00** C= 0.600

Primary OutFlow Max=0.35 cfs @ 12.23 hrs HW=12.02' (Free Discharge)
- **1=10" Main Outlet** (Passes 0.35 cfs of 3.45 cfs potential flow)
  - **2=1" UNDERDRAIN ORIFICE** (Orifice Controls 0.05 cfs @ 8.53 fps)
  - **3=10" OVERFLOW HEADER PIPE** (Barrel Controls 0.31 cfs @ 2.07 fps)
    - **4=4" Overflows (4)** (Passes 0.31 cfs of 0.72 cfs potential flow)

Pond P1: R-TANKS - 2 stack - Chamber Wizard Field B

Chamber Model = ACF R-Tank HD 2 (ACF Environmental R-Tank HD)
Inside= 15.7"W x 33.9"H => 3.52 sf x 2.35'L = 8.3 cf
Outside= 15.7"W x 33.9"H => 3.70 sf x 2.35'L = 8.7 cf

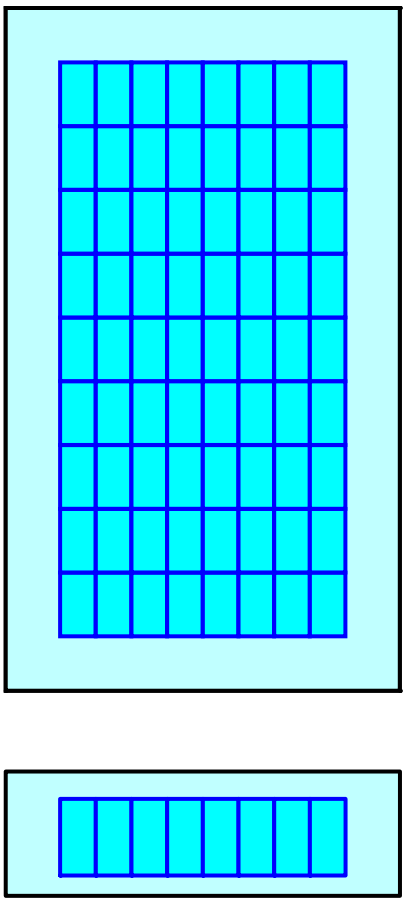
9 Chambers/Row x 2.35' Long = 21.11' Row Length +24.0" End Stone x 2 = 25.11' Base Length
8 Rows x 15.7" Wide + 24.0" Side Stone x 2 = 14.50' Base Width
9.0" Base + 33.9" Chamber Height + 12.0" Cover = 4.57' Field Height

72 Chambers x 8.3 cf = 594.1 cf Chamber Storage
72 Chambers x 8.7 cf = 625.4 cf Displacement

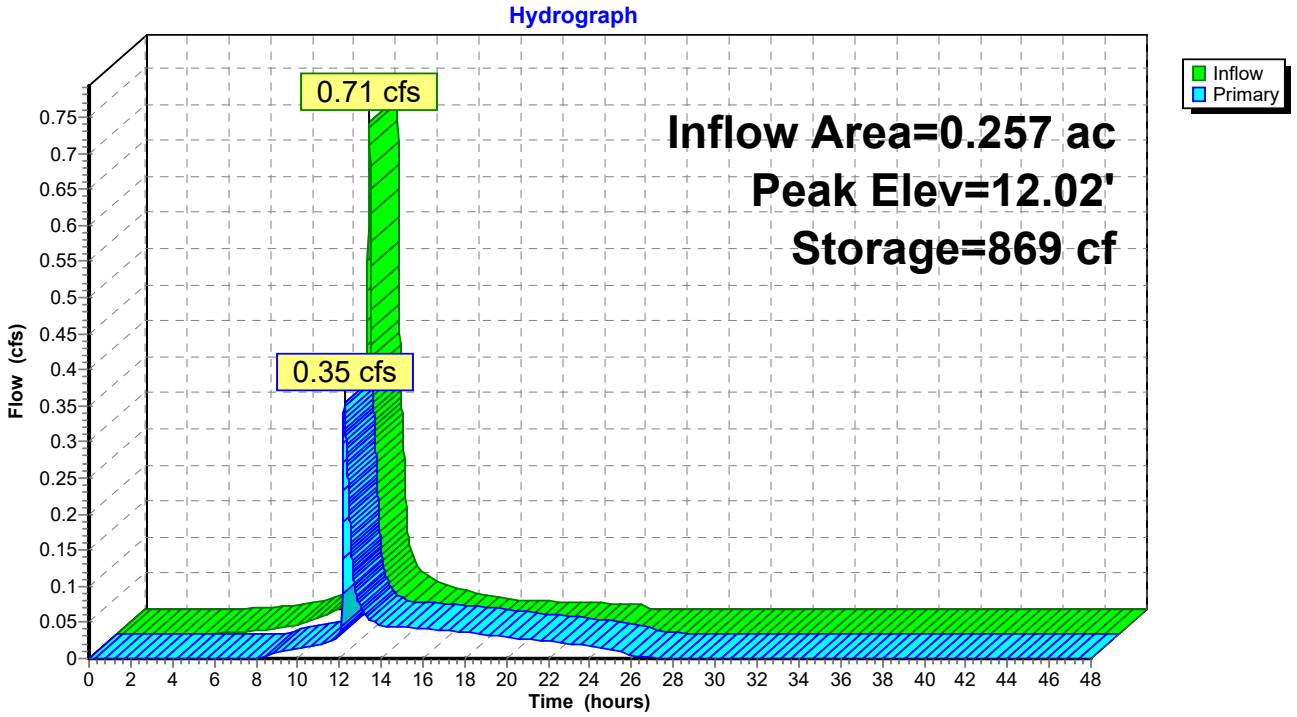
1,664.5 cf Field - 625.4 cf Chambers = 1,039.1 cf Stone x 40.0% Voids = 415.6 cf Stone Storage

Chamber Storage + Stone Storage = 1,009.8 cf = 0.023 af
Overall Storage Efficiency = 60.7%
Overall System Size = 25.11' x 14.50' x 4.57'

72 Chambers
61.6 cy Field
38.5 cy Stone



Pond P1: R-TANKS - 2 stack



Stage-Area-Storage for Pond P1: R-TANKS - 2 stack

Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)
8.43	0	9.49	194	10.55	478
8.45	3	9.51	200	10.57	483
8.47	6	9.53	205	10.59	489
8.49	9	9.55	211	10.61	494
8.51	12	9.57	216	10.63	500
8.53	15	9.59	221	10.65	505
8.55	17	9.61	227	10.67	510
8.57	20	9.63	232	10.69	516
8.59	23	9.65	237	10.71	521
8.61	26	9.67	243	10.73	526
8.63	29	9.69	248	10.75	532
8.65	32	9.71	253	10.77	537
8.67	35	9.73	259	10.79	542
8.69	38	9.75	264	10.81	548
8.71	41	9.77	269	10.83	553
8.73	44	9.79	275	10.85	558
8.75	47	9.81	280	10.87	564
8.77	50	9.83	285	10.89	569
8.79	52	9.85	291	10.91	574
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9.47	189	10.53	473	11.59	756

Stage-Area-Storage for Pond P1: R-TANKS - 2 stack (continued)

Elevation (feet)	Storage (cubic-feet)
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11.95	853
11.97	858
11.99	863
12.01	868
12.03	871
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12.23	900
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12.27	906
12.29	908
12.31	911
12.33	914
12.35	917
12.37	920
12.39	923
12.41	926
12.43	929
12.45	932
12.47	935
12.49	938
12.51	941
12.53	943
12.55	946
12.57	949
12.59	952
12.61	955
12.63	958
12.65	961
12.67	964
12.69	967
12.71	970
12.73	973
12.75	975
12.77	978
12.79	981
12.81	984
12.83	987
12.85	990
12.87	993
12.89	996
12.91	999
12.93	1,002
12.95	1,005
12.97	1,008
12.99	1,010
13.01	**1,012**
13.03	1,012
13.05	1,012
13.07	1,012
13.09	1,012
13.11	1,012
13.13	1,012
13.15	1,012
13.17	1,012
13.19	1,012
13.21	1,012
13.23	1,012
13.25	1,012
13.27	1,012
13.29	1,012
13.31	1,012
13.33	1,012
13.35	1,012
13.37	1,012
13.39	1,012
13.41	1,012
13.43	1,012
13.45	1,012
13.47	1,012
13.49	1,012

Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1.1S: S-1.1: FIELD INLET Runoff Area=3,502 sf 0.71% Impervious Runoff Depth=0.13"
Tc=6.0 min CN=39 Runoff=0.00 cfs 0.001 af

Subcatchment 1.2S: S 1.2 - CHESTNUT ST Runoff Area=2,793 sf 29.86% Impervious Runoff Depth=0.45"
Tc=6.0 min UI Adjusted CN=48 Runoff=0.01 cfs 0.002 af

Subcatchment 1S: S-1: RTANK SUBCAT Runoff Area=11,214 sf 93.90% Impervious Runoff Depth=3.91"
Tc=6.0 min CN=94 Runoff=1.10 cfs 0.084 af

Subcatchment 2S: S-2: LANCASTER ST Runoff Area=199 sf 100.00% Impervious Runoff Depth=4.36"
Tc=6.0 min CN=98 Runoff=0.02 cfs 0.002 af

Reach 1R: CHESTNUT ST COMBINED SEWER Inflow=1.09 cfs 0.086 af
Outflow=1.09 cfs 0.086 af

Reach 99R: POI #99: LANCASTER ST COMBINED SEWER Inflow=1.11 cfs 0.087 af
Outflow=1.11 cfs 0.087 af

Pond P1: R-TANKS - 2 stack Peak Elev=12.39' Storage=924 cf Inflow=1.10 cfs 0.084 af
Outflow=1.08 cfs 0.083 af

Total Runoff Area = 0.407 ac Runoff Volume = 0.089 af Average Runoff Depth = 2.62"
34.56% Pervious = 0.140 ac 65.44% Impervious = 0.266 ac

Summary for Subcatchment 1.1S: S-1.1: FIELD INLET

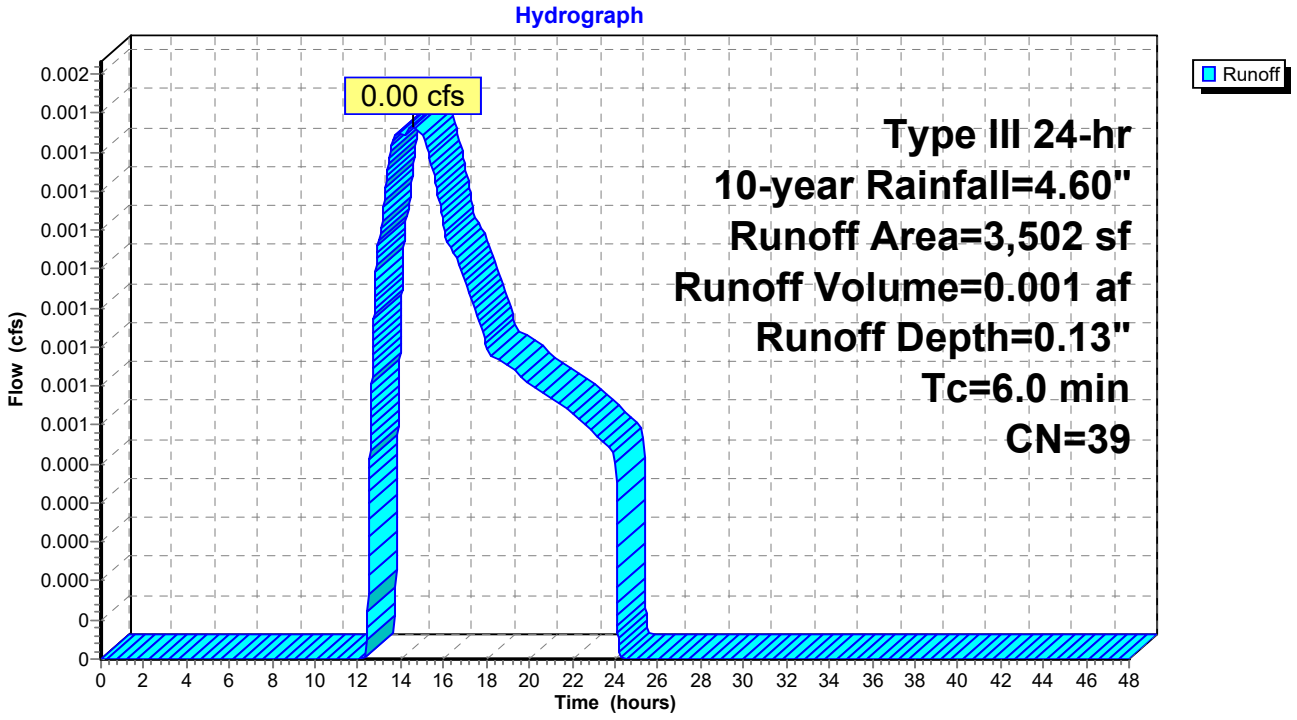
Runoff = 0.00 cfs @ 14.58 hrs, Volume= 0.001 af, Depth= 0.13"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-year Rainfall=4.60"

Area (sf)	CN	Description
25	98	Unconnected pavement, HSG A
3,477	39	>75% Grass cover, Good, HSG A
3,502	39	Weighted Average
3,477	39	99.29% Pervious Area
25	98	0.71% Impervious Area
25		100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 1.1S: S-1.1: FIELD INLET



Summary for Subcatchment 1.2S: S 1.2 - CHESTNUT ST

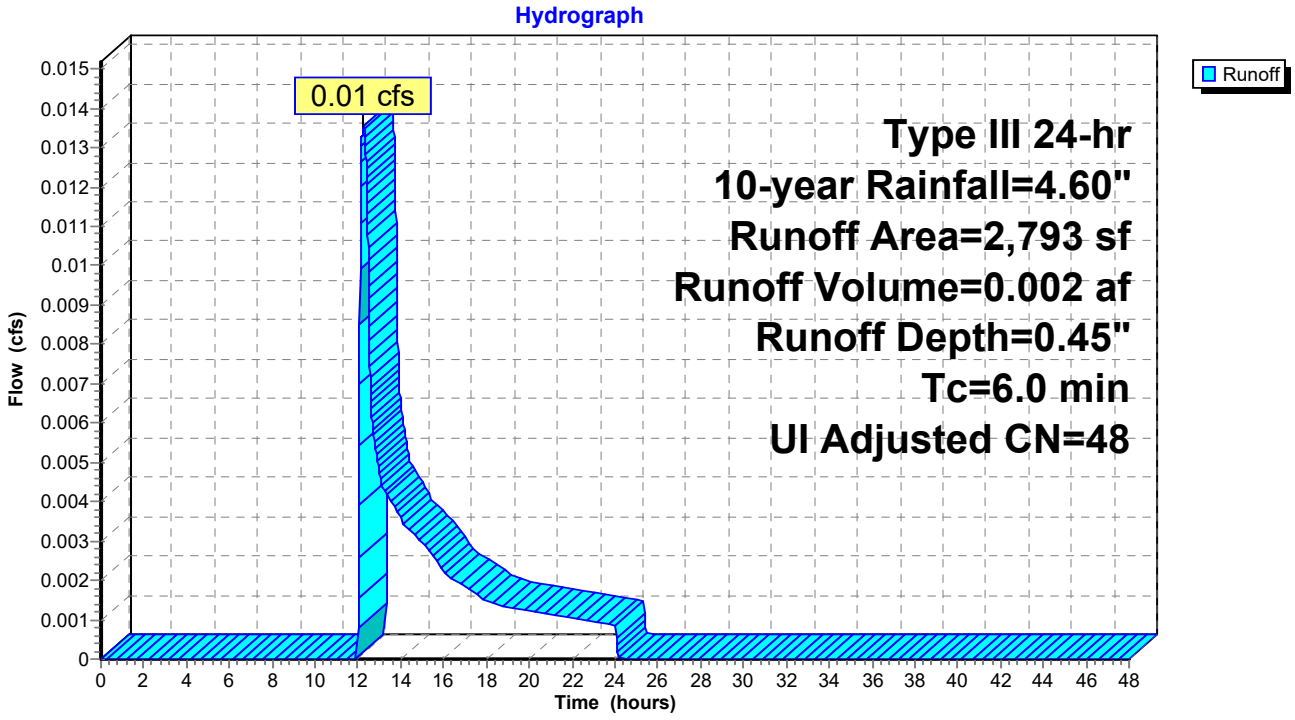
Runoff = 0.01 cfs @ 12.28 hrs, Volume= 0.002 af, Depth= 0.45"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-year Rainfall=4.60"

Area (sf)	CN	Adj	Description
834	98		Unconnected pavement, HSG A
1,959	39		>75% Grass cover, Good, HSG A
2,793	57	48	Weighted Average, UI Adjusted
1,959	39	39	70.14% Pervious Area
834	98	98	29.86% Impervious Area
834			100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 1.2S: S 1.2 - CHESTNUT ST



Summary for Subcatchment 1S: S-1: RTANK SUBCAT

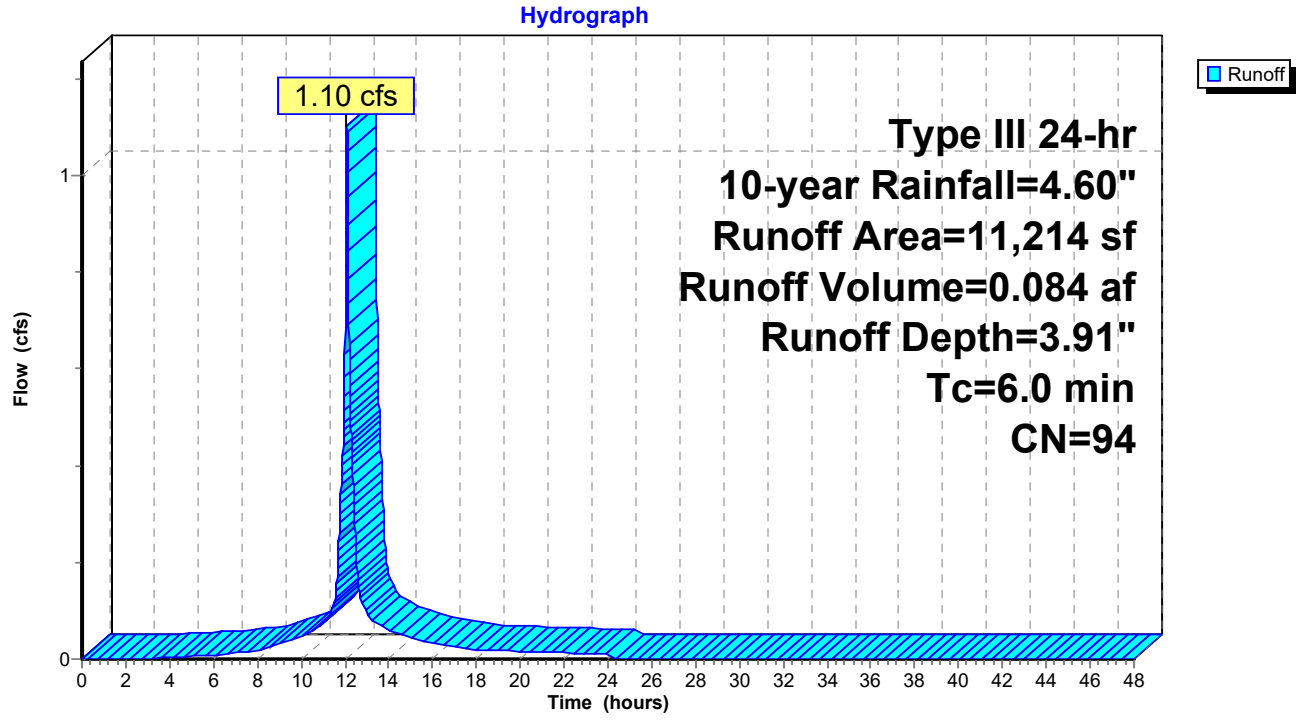
Runoff = 1.10 cfs @ 12.08 hrs, Volume= 0.084 af, Depth= 3.91"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-year Rainfall=4.60"

	Area (sf)	CN	Description
	5,609	98	Paved parking, HSG A
	684	39	>75% Grass cover, Good, HSG A
*	4,921	98	ROOF AREA
	11,214	94	Weighted Average
	684	39	6.10% Pervious Area
	10,530	98	93.90% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 1S: S-1: RTANK SUBCAT



Summary for Subcatchment 2S: S-2: LANCASTER ST

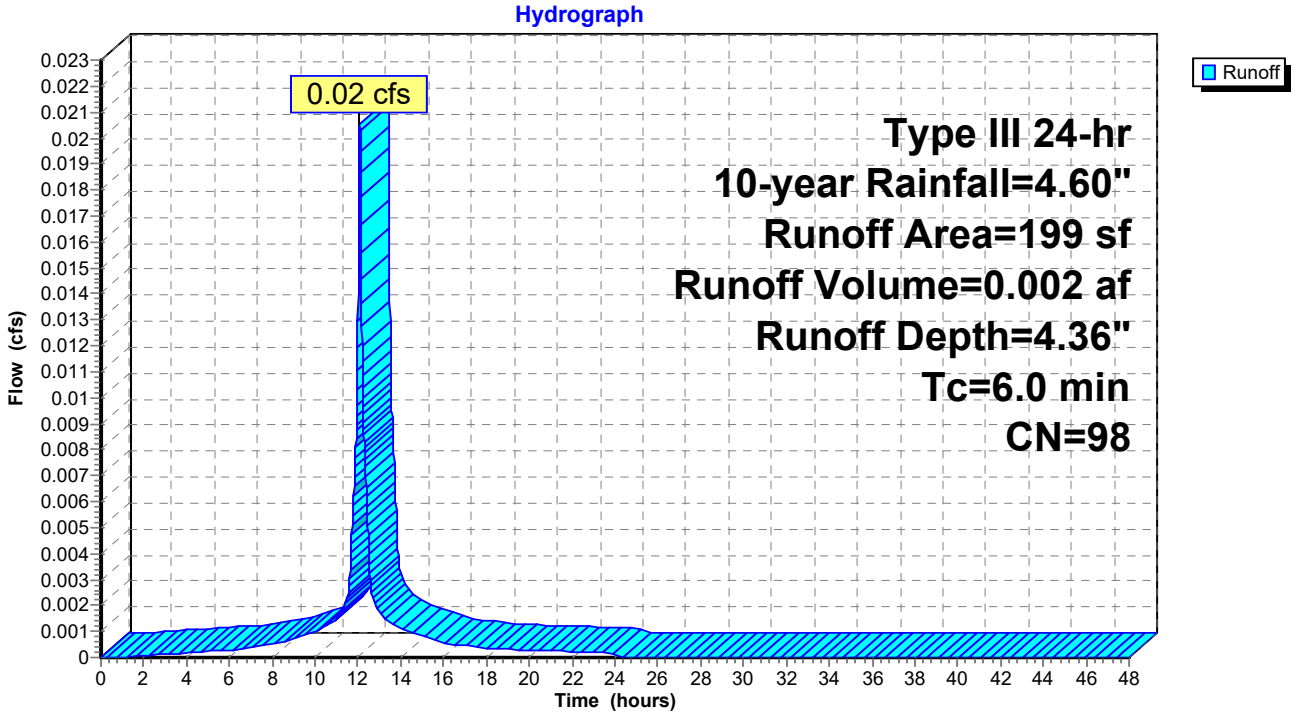
Runoff = 0.02 cfs @ 12.08 hrs, Volume= 0.002 af, Depth= 4.36"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-year Rainfall=4.60"

Area (sf)	CN	Description
199	98	Unconnected pavement, HSG A
199	98	100.00% Impervious Area
199		100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 2S: S-2: LANCASTER ST

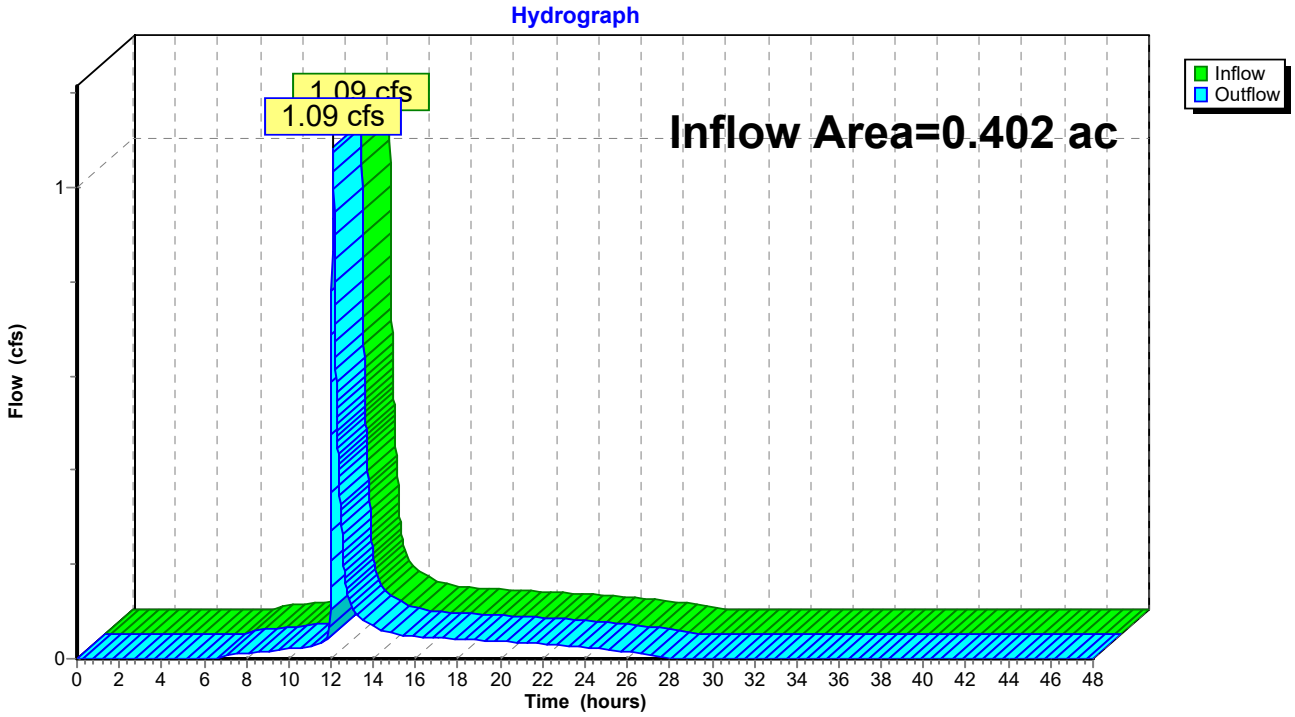


Summary for Reach 1R: CHESTNUT ST COMBINED SEWER

Inflow Area = 0.402 ac, 65.05% Impervious, Inflow Depth = 2.56" for 10-year event
Inflow = 1.09 cfs @ 12.10 hrs, Volume= 0.086 af
Outflow = 1.09 cfs @ 12.10 hrs, Volume= 0.086 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Reach 1R: CHESTNUT ST COMBINED SEWER

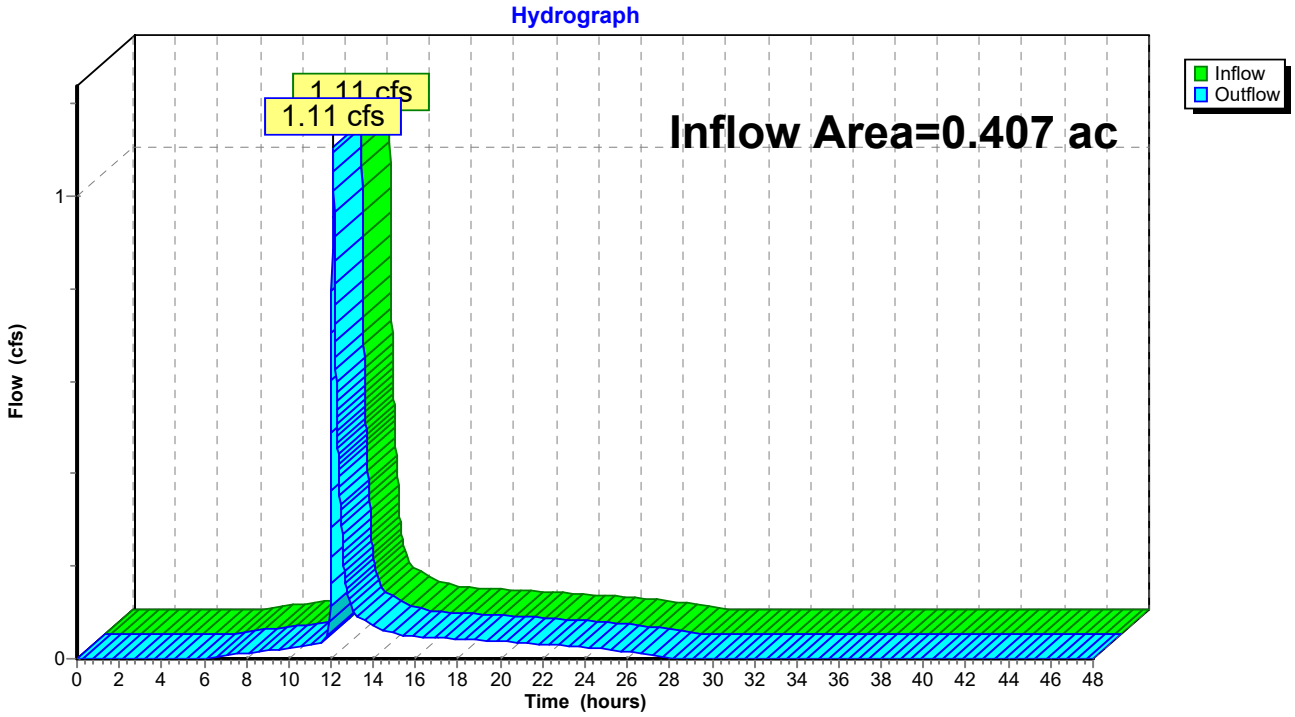


Summary for Reach 99R: POI #99: LANCASTER ST COMBINED SEWER

Inflow Area = 0.407 ac, 65.44% Impervious, Inflow Depth = 2.58" for 10-year event
Inflow = 1.11 cfs @ 12.10 hrs, Volume= 0.087 af
Outflow = 1.11 cfs @ 12.10 hrs, Volume= 0.087 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Reach 99R: POI #99: LANCASTER ST COMBINED SEWER



Summary for Pond P1: R-TANKS - 2 stack

Inflow Area = 0.257 ac, 93.90% Impervious, Inflow Depth = 3.91" for 10-year event
Inflow = 1.10 cfs @ 12.08 hrs, Volume= 0.084 af
Outflow = 1.08 cfs @ 12.10 hrs, Volume= 0.083 af, Atten= 3%, Lag= 1.1 min
Primary = 1.08 cfs @ 12.10 hrs, Volume= 0.083 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 12.39' @ 12.10 hrs Surf.Area= 364 sf Storage= 924 cf
Flood Elev= 13.50' Surf.Area= 364 sf Storage= 1,012 cf

Plug-Flow detention time= 145.7 min calculated for 0.083 af (98% of inflow)
Center-of-Mass det. time= 135.4 min (911.3 - 775.9)

Volume	Invert	Avail.Storage	Storage Description
#1B	8.43'	414 cf	**14.50'W x 25.11'L x 4.57'H Field B** 1,664 cf Overall - 629 cf Embedded = 1,035 cf x 40.0% Voids
#2B	9.18'	594 cf	**ACF R-Tank HD 2** x 72 Inside #1 Inside= 15.7"W x 33.9"H => 3.52 sf x 2.35'L = 8.3 cf Outside= 15.7"W x 33.9"H => 3.70 sf x 2.35'L = 8.7 cf 72 Chambers in 8 Rows
#3	8.84'	4 cf	**4.0" Round Pipe Storage** Inside #1 L= 45.0' S= 0.0100 '/'
		1,012 cf	Total Available Storage

Storage Group B created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	8.74'	**10.0" Round 10" Main Outlet** L= 143.0' CMP, mitered to conform to fill, Ke= 0.700 Inlet / Outlet Invert= 8.74' / 8.03' S= 0.0050 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.55 sf
#2	Device 1	8.84'	**1.0" Vert. 1" UNDERDRAIN ORIFICE** C= 0.600
#3	Device 1	11.67'	**10.0" Round 10" OVERFLOW HEADER PIPE** L= 9.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 11.67' / 11.61' S= 0.0067 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.55 sf
#4	Device 3	11.67'	**4.0" Vert. 4" Overflows (4) X 4.00** C= 0.600

Primary OutFlow Max=1.07 cfs @ 12.10 hrs HW=12.39' (Free Discharge)
- **1=10" Main Outlet** (Passes 1.07 cfs of 3.65 cfs potential flow)
  - **2=1" UNDERDRAIN ORIFICE** (Orifice Controls 0.05 cfs @ 9.02 fps)
  - **3=10" OVERFLOW HEADER PIPE** (Barrel Controls 1.03 cfs @ 2.73 fps)
    - **4=4" Overflows (4)** (Passes 1.03 cfs of 1.25 cfs potential flow)

Pond P1: R-TANKS - 2 stack - Chamber Wizard Field B

Chamber Model = ACF R-Tank HD 2 (ACF Environmental R-Tank HD)
Inside= 15.7"W x 33.9"H => 3.52 sf x 2.35'L = 8.3 cf
Outside= 15.7"W x 33.9"H => 3.70 sf x 2.35'L = 8.7 cf

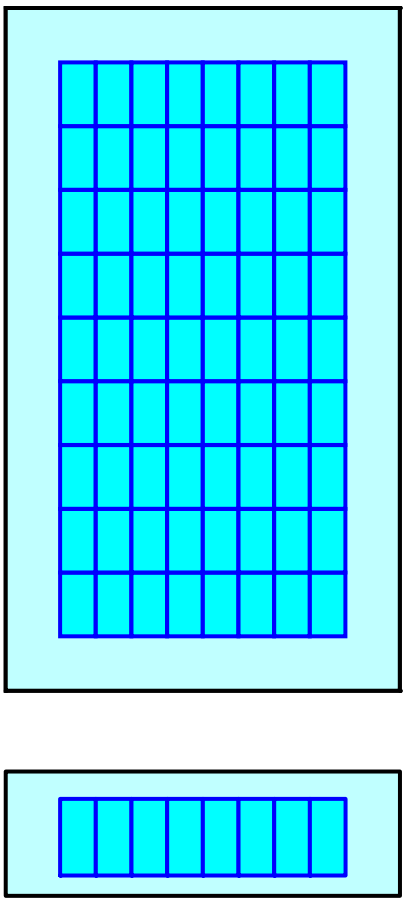
9 Chambers/Row x 2.35' Long = 21.11' Row Length +24.0" End Stone x 2 = 25.11' Base Length
8 Rows x 15.7" Wide + 24.0" Side Stone x 2 = 14.50' Base Width
9.0" Base + 33.9" Chamber Height + 12.0" Cover = 4.57' Field Height

72 Chambers x 8.3 cf = 594.1 cf Chamber Storage
72 Chambers x 8.7 cf = 625.4 cf Displacement

1,664.5 cf Field - 625.4 cf Chambers = 1,039.1 cf Stone x 40.0% Voids = 415.6 cf Stone Storage

Chamber Storage + Stone Storage = 1,009.8 cf = 0.023 af
Overall Storage Efficiency = 60.7%
Overall System Size = 25.11' x 14.50' x 4.57'

72 Chambers
61.6 cy Field
38.5 cy Stone



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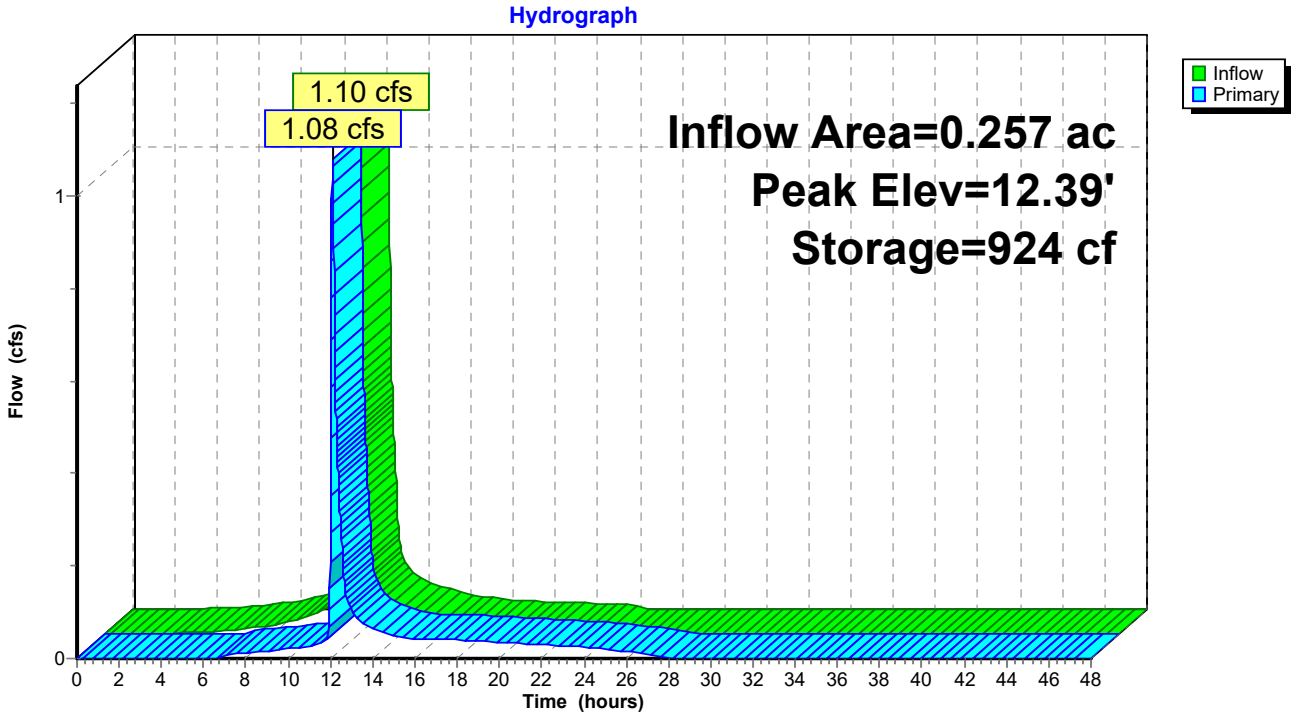

Stage-Area-Storage for Pond P1: R-TANKS - 2 stack

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Stage-Area-Storage for Pond P1: R-TANKS - 2 stack (continued)

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11.97	858
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12.35	917
12.37	920
12.39	923
12.41	926
12.43	929
12.45	932
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12.53	943
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12.59	952
12.61	955
12.63	958
12.65	961
12.67	964
12.69	967
12.71	970
12.73	973
12.75	975
12.77	978
12.79	981
12.81	984
12.83	987
12.85	990
12.87	993
12.89	996
12.91	999
12.93	1,002
12.95	1,005
12.97	1,008
12.99	1,010
13.01	**1,012**
13.03	1,012
13.05	1,012
13.07	1,012
13.09	1,012
13.11	1,012
13.13	1,012
13.15	1,012
13.17	1,012
13.19	1,012
13.21	1,012
13.23	1,012
13.25	1,012
13.27	1,012
13.29	1,012
13.31	1,012
13.33	1,012
13.35	1,012
13.37	1,012
13.39	1,012
13.41	1,012
13.43	1,012
13.45	1,012
13.47	1,012
13.49	1,012

Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1.1S: S-1.1: FIELD INLET Runoff Area=3,502 sf 0.71% Impervious Runoff Depth=0.39"
Tc=6.0 min CN=39 Runoff=0.01 cfs 0.003 af

Subcatchment 1.2S: S 1.2 - CHESTNUT ST Runoff Area=2,793 sf 29.86% Impervious Runoff Depth=0.91"
Tc=6.0 min UI Adjusted CN=48 Runoff=0.05 cfs 0.005 af

Subcatchment 1S: S-1: RTANK SUBCAT Runoff Area=11,214 sf 93.90% Impervious Runoff Depth=5.10"
Tc=6.0 min CN=94 Runoff=1.42 cfs 0.109 af

Subcatchment 2S: S-2: LANCASTER ST Runoff Area=199 sf 100.00% Impervious Runoff Depth=5.56"
Tc=6.0 min CN=98 Runoff=0.03 cfs 0.002 af

Reach 1R: CHESTNUT ST COMBINED SEWER Inflow=1.43 cfs 0.115 af
Outflow=1.43 cfs 0.115 af

Reach 99R: POI #99: LANCASTER ST COMBINED SEWER Inflow=1.46 cfs 0.118 af
Outflow=1.46 cfs 0.118 af

Pond P1: R-TANKS - 2 stack Peak Elev=12.53' Storage=944 cf Inflow=1.42 cfs 0.109 af
Outflow=1.38 cfs 0.108 af

Total Runoff Area = 0.407 ac Runoff Volume = 0.119 af Average Runoff Depth = 3.51"
34.56% Pervious = 0.140 ac 65.44% Impervious = 0.266 ac

Summary for Subcatchment 1.1S: S-1.1: FIELD INLET

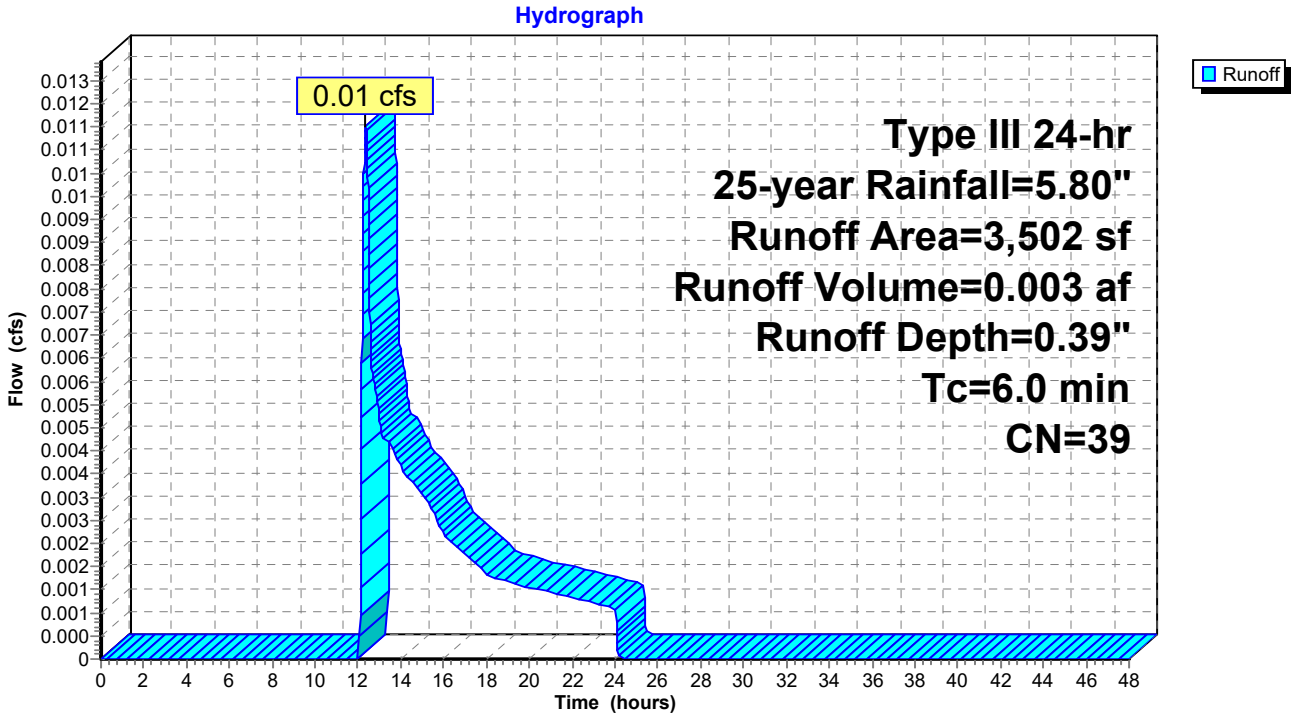
Runoff = 0.01 cfs @ 12.37 hrs, Volume= 0.003 af, Depth= 0.39"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-year Rainfall=5.80"

Area (sf)	CN	Description
25	98	Unconnected pavement, HSG A
3,477	39	>75% Grass cover, Good, HSG A
3,502	39	Weighted Average
3,477	39	99.29% Pervious Area
25	98	0.71% Impervious Area
25		100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 1.1S: S-1.1: FIELD INLET



Summary for Subcatchment 1.2S: S 1.2 - CHESTNUT ST

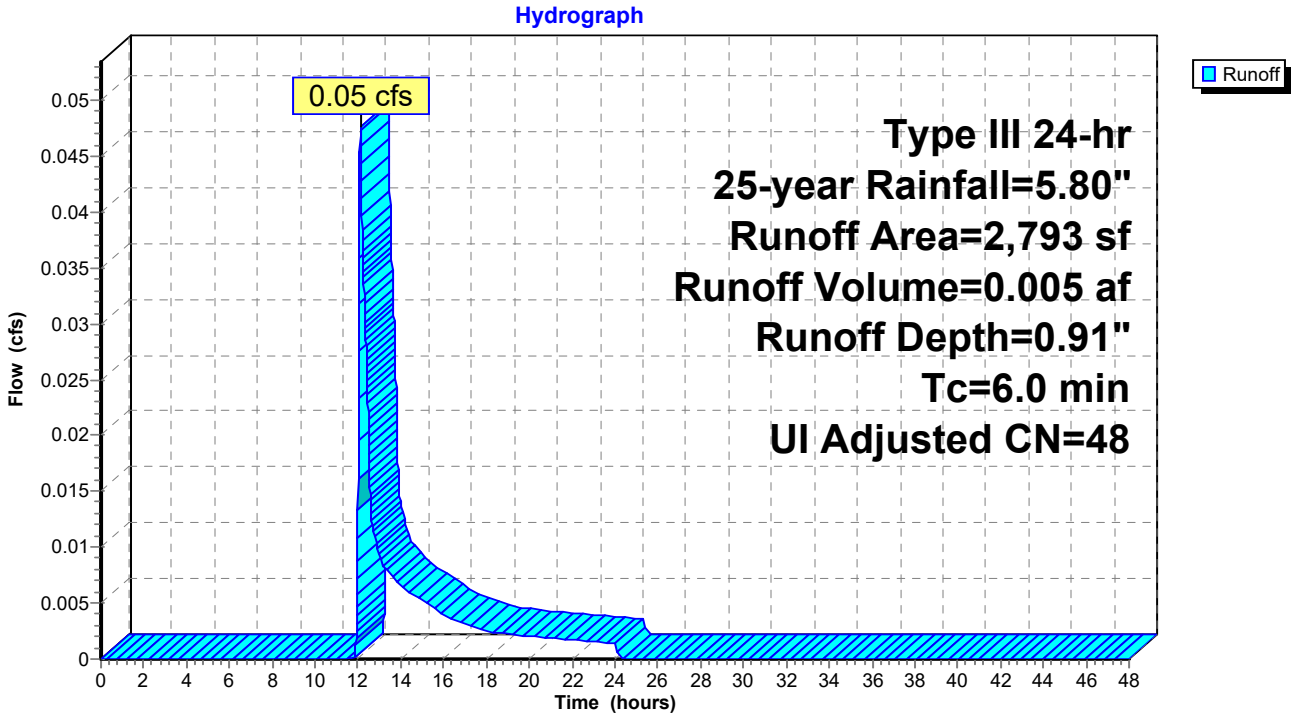
Runoff = 0.05 cfs @ 12.12 hrs, Volume= 0.005 af, Depth= 0.91"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-year Rainfall=5.80"

Area (sf)	CN	Adj	Description
834	98		Unconnected pavement, HSG A
1,959	39		>75% Grass cover, Good, HSG A
2,793	57	48	Weighted Average, UI Adjusted
1,959	39	39	70.14% Pervious Area
834	98	98	29.86% Impervious Area
834			100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 1.2S: S 1.2 - CHESTNUT ST



Summary for Subcatchment 1S: S-1: RTANK SUBCAT

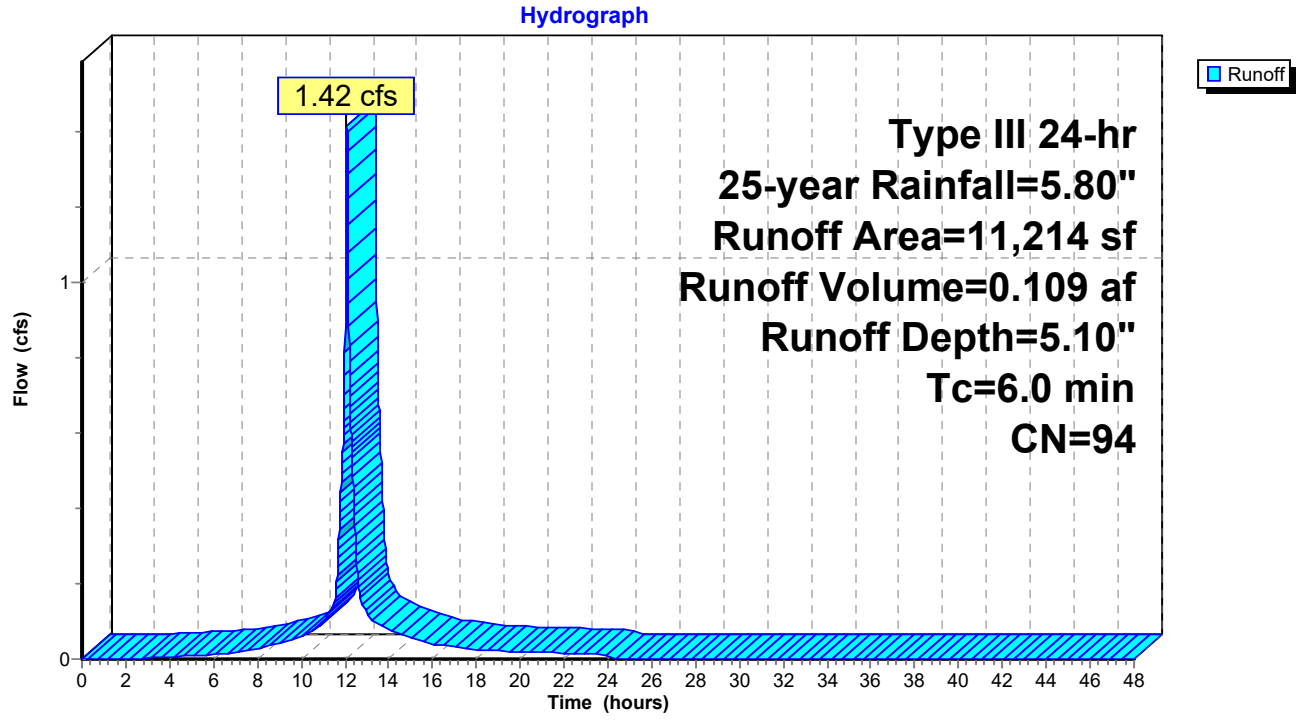
Runoff = 1.42 cfs @ 12.08 hrs, Volume= 0.109 af, Depth= 5.10"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-year Rainfall=5.80"

	Area (sf)	CN	Description
	5,609	98	Paved parking, HSG A
	684	39	>75% Grass cover, Good, HSG A
*	4,921	98	ROOF AREA
	11,214	94	Weighted Average
	684	39	6.10% Pervious Area
	10,530	98	93.90% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 1S: S-1: RTANK SUBCAT



Summary for Subcatchment 2S: S-2: LANCASTER ST

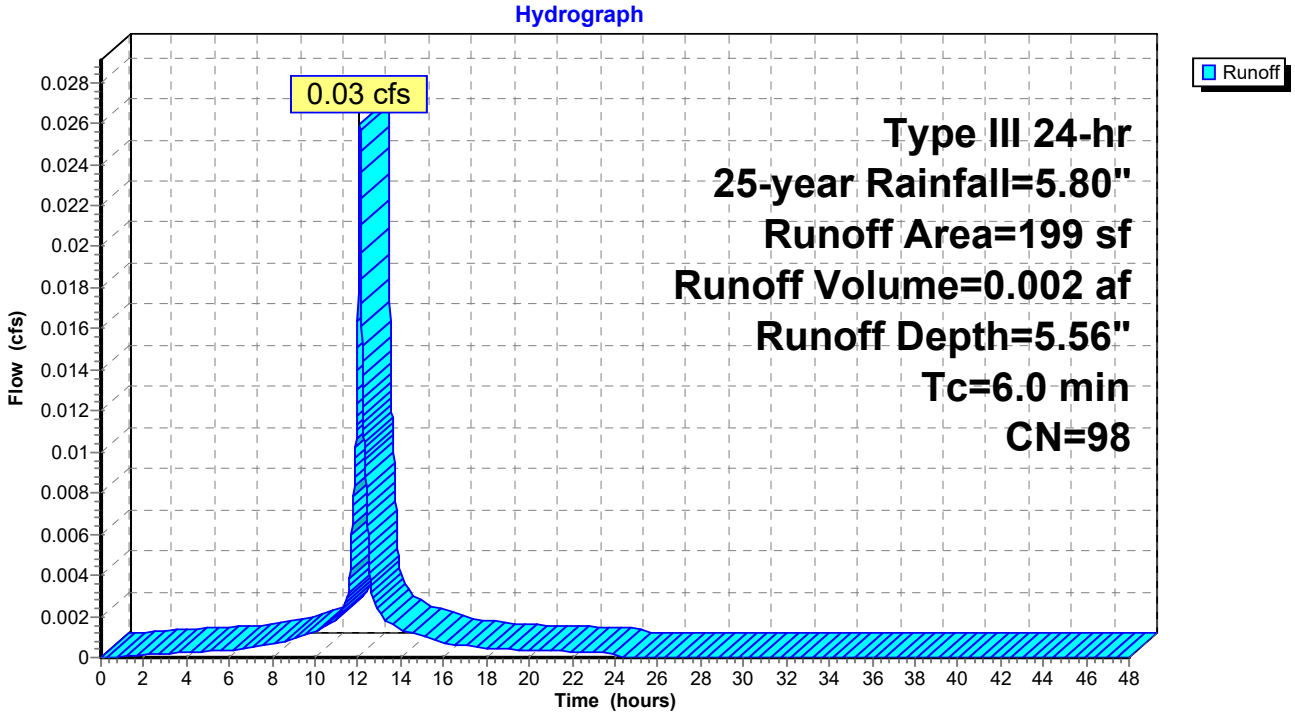
Runoff = 0.03 cfs @ 12.08 hrs, Volume= 0.002 af, Depth= 5.56"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-year Rainfall=5.80"

Area (sf)	CN	Description
199	98	Unconnected pavement, HSG A
199	98	100.00% Impervious Area
199		100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 2S: S-2: LANCASTER ST

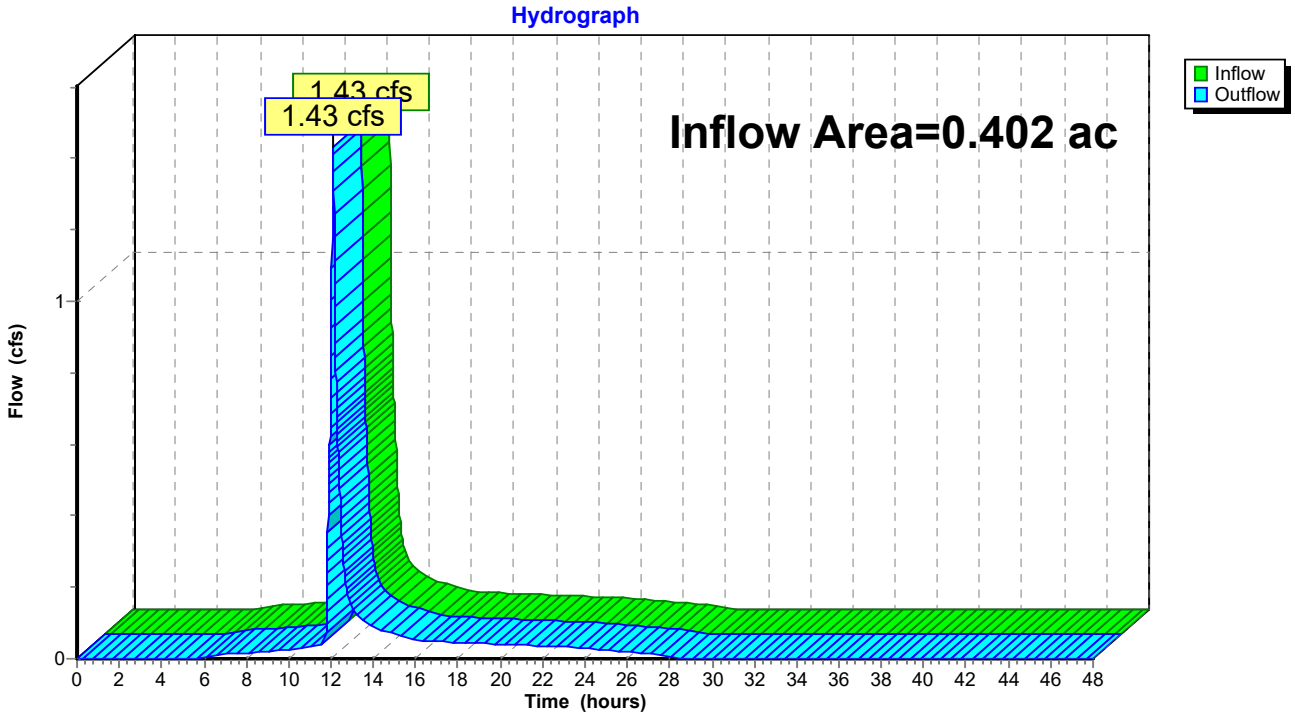


Summary for Reach 1R: CHESTNUT ST COMBINED SEWER

Inflow Area = 0.402 ac, 65.05% Impervious, Inflow Depth = 3.45" for 25-year event
Inflow = 1.43 cfs @ 12.10 hrs, Volume= 0.115 af
Outflow = 1.43 cfs @ 12.10 hrs, Volume= 0.115 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Reach 1R: CHESTNUT ST COMBINED SEWER

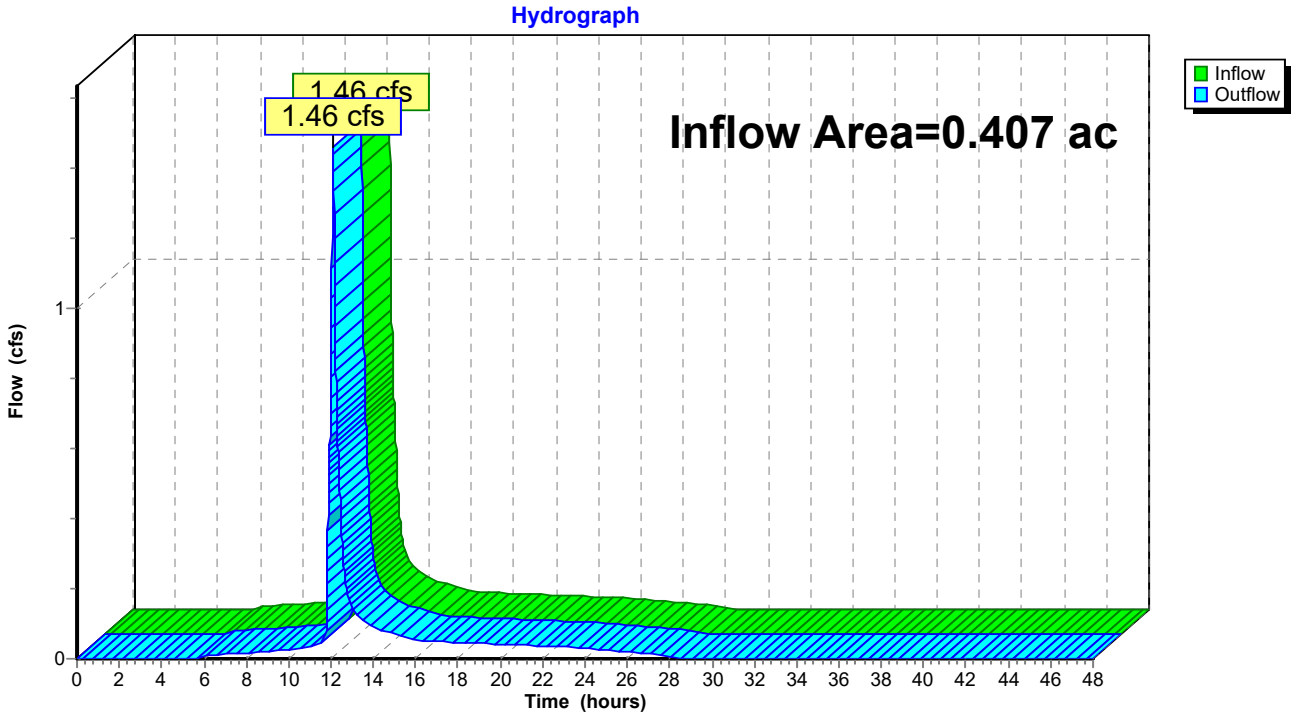


Summary for Reach 99R: POI #99: LANCASTER ST COMBINED SEWER

Inflow Area = 0.407 ac, 65.44% Impervious, Inflow Depth = 3.47" for 25-year event
Inflow = 1.46 cfs @ 12.10 hrs, Volume= 0.118 af
Outflow = 1.46 cfs @ 12.10 hrs, Volume= 0.118 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Reach 99R: POI #99: LANCASTER ST COMBINED SEWER



Summary for Pond P1: R-TANKS - 2 stack

Inflow Area = 0.257 ac, 93.90% Impervious, Inflow Depth = 5.10" for 25-year event
Inflow = 1.42 cfs @ 12.08 hrs, Volume= 0.109 af
Outflow = 1.38 cfs @ 12.10 hrs, Volume= 0.108 af, Atten= 2%, Lag= 1.1 min
Primary = 1.38 cfs @ 12.10 hrs, Volume= 0.108 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 12.53' @ 12.10 hrs Surf.Area= 364 sf Storage= 944 cf
Flood Elev= 13.50' Surf.Area= 364 sf Storage= 1,012 cf

Plug-Flow detention time= 127.6 min calculated for 0.108 af (99% of inflow)
Center-of-Mass det. time= 119.6 min (889.0 - 769.4)

Volume	Invert	Avail.Storage	Storage Description
#1B	8.43'	414 cf	**14.50'W x 25.11'L x 4.57'H Field B** 1,664 cf Overall - 629 cf Embedded = 1,035 cf x 40.0% Voids
#2B	9.18'	594 cf	**ACF R-Tank HD 2** x 72 Inside #1 Inside= 15.7"W x 33.9"H => 3.52 sf x 2.35'L = 8.3 cf Outside= 15.7"W x 33.9"H => 3.70 sf x 2.35'L = 8.7 cf 72 Chambers in 8 Rows
#3	8.84'	4 cf	**4.0" Round Pipe Storage** Inside #1 L= 45.0' S= 0.0100 '/'
		1,012 cf	Total Available Storage

Storage Group B created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	8.74'	**10.0" Round 10" Main Outlet** L= 143.0' CMP, mitered to conform to fill, Ke= 0.700 Inlet / Outlet Invert= 8.74' / 8.03' S= 0.0050 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.55 sf
#2	Device 1	8.84'	**1.0" Vert. 1" UNDERDRAIN ORIFICE** C= 0.600
#3	Device 1	11.67'	**10.0" Round 10" OVERFLOW HEADER PIPE** L= 9.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 11.67' / 11.61' S= 0.0067 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.55 sf
#4	Device 3	11.67'	**4.0" Vert. 4" Overflows (4) X 4.00** C= 0.600

Primary OutFlow Max=1.38 cfs @ 12.10 hrs HW=12.53' (Free Discharge)
- **1=10" Main Outlet** (Passes 1.38 cfs of 3.72 cfs potential flow)
  - **2=1" UNDERDRAIN ORIFICE** (Orifice Controls 0.05 cfs @ 9.20 fps)
  - **3=10" OVERFLOW HEADER PIPE** (Barrel Controls 1.33 cfs @ 2.93 fps)
    - **4=4" Overflows (4)** (Passes 1.33 cfs of 1.40 cfs potential flow)

Pond P1: R-TANKS - 2 stack - Chamber Wizard Field B

Chamber Model = ACF R-Tank HD 2 (ACF Environmental R-Tank HD)
Inside= 15.7"W x 33.9"H => 3.52 sf x 2.35'L = 8.3 cf
Outside= 15.7"W x 33.9"H => 3.70 sf x 2.35'L = 8.7 cf

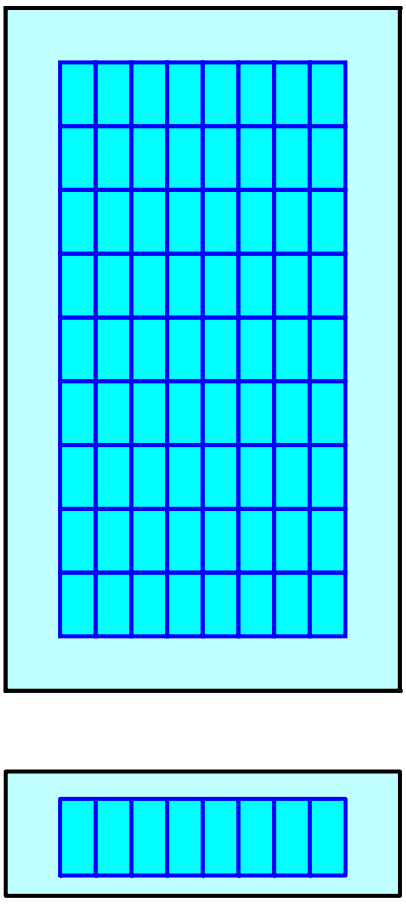
9 Chambers/Row x 2.35' Long = 21.11' Row Length +24.0" End Stone x 2 = 25.11' Base Length
8 Rows x 15.7" Wide + 24.0" Side Stone x 2 = 14.50' Base Width
9.0" Base + 33.9" Chamber Height + 12.0" Cover = 4.57' Field Height

72 Chambers x 8.3 cf = 594.1 cf Chamber Storage
72 Chambers x 8.7 cf = 625.4 cf Displacement

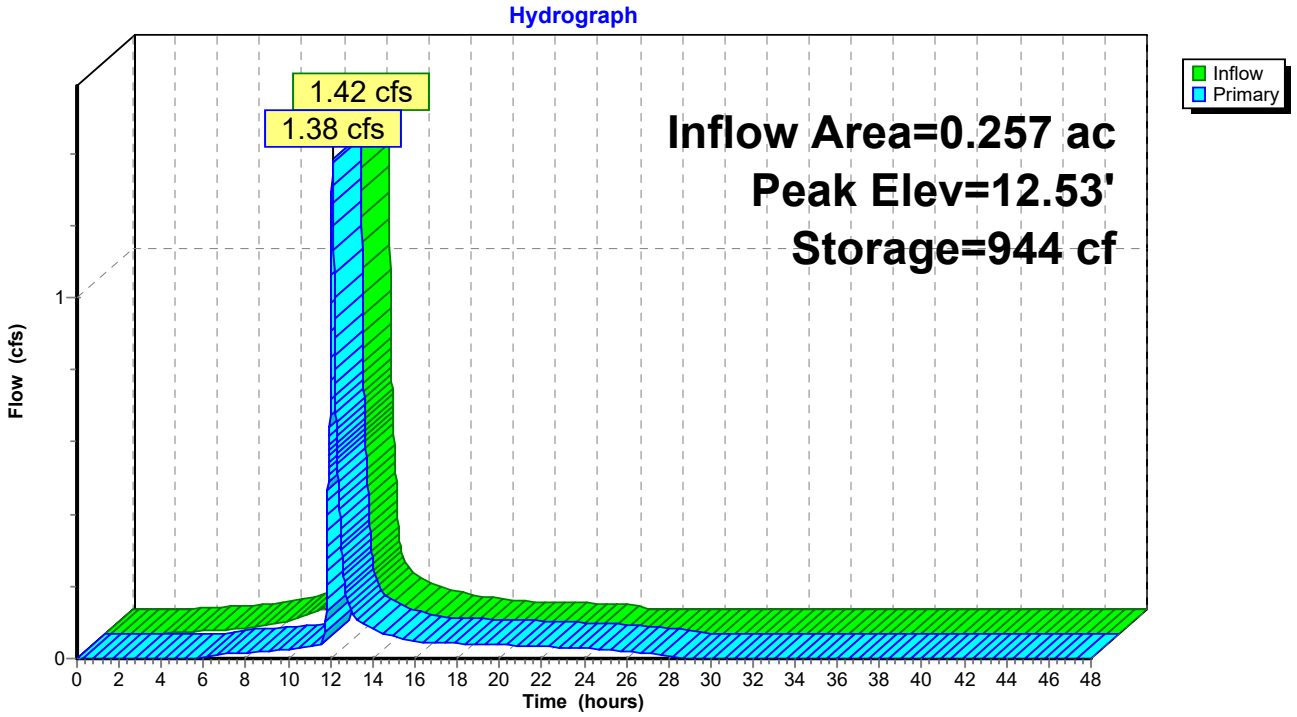
1,664.5 cf Field - 625.4 cf Chambers = 1,039.1 cf Stone x 40.0% Voids = 415.6 cf Stone Storage

Chamber Storage + Stone Storage = 1,009.8 cf = 0.023 af
Overall Storage Efficiency = 60.7%
Overall System Size = 25.11' x 14.50' x 4.57'

72 Chambers
61.6 cy Field
38.5 cy Stone



Pond P1: R-TANKS - 2 stack



Stage-Area-Storage for Pond P1: R-TANKS - 2 stack

Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)
8.43	0	9.49	194	10.55	478
8.45	3	9.51	200	10.57	483
8.47	6	9.53	205	10.59	489
8.49	9	9.55	211	10.61	494
8.51	12	9.57	216	10.63	500
8.53	15	9.59	221	10.65	505
8.55	17	9.61	227	10.67	510
8.57	20	9.63	232	10.69	516
8.59	23	9.65	237	10.71	521
8.61	26	9.67	243	10.73	526
8.63	29	9.69	248	10.75	532
8.65	32	9.71	253	10.77	537
8.67	35	9.73	259	10.79	542
8.69	38	9.75	264	10.81	548
8.71	41	9.77	269	10.83	553
8.73	44	9.79	275	10.85	558
8.75	47	9.81	280	10.87	564
8.77	50	9.83	285	10.89	569
8.79	52	9.85	291	10.91	574
8.81	55	9.87	296	10.93	580
8.83	58	9.89	302	10.95	585
8.85	61	9.91	307	10.97	590
8.87	64	9.93	312	10.99	596
8.89	67	9.95	318	11.01	601
8.91	70	9.97	323	11.03	607
8.93	73	9.99	328	11.05	612
8.95	76	10.01	334	11.07	617
8.97	79	10.03	339	11.09	623
8.99	82	10.05	344	11.11	628
9.01	85	10.07	350	11.13	633
9.03	88	10.09	355	11.15	639
9.05	91	10.11	360	11.17	644
9.07	94	10.13	366	11.19	649
9.09	97	10.15	371	11.21	655
9.11	100	10.17	376	11.23	660
9.13	103	10.19	382	11.25	665
9.15	106	10.21	387	11.27	671
9.17	109	10.23	393	11.29	676
9.19	113	10.25	398	11.31	681
9.21	118	10.27	403	11.33	687
9.23	124	10.29	409	11.35	692
9.25	129	10.31	414	11.37	698
9.27	135	10.33	419	11.39	703
9.29	140	10.35	425	11.41	708
9.31	146	10.37	430	11.43	714
9.33	151	10.39	435	11.45	719
9.35	156	10.41	441	11.47	724
9.37	162	10.43	446	11.49	730
9.39	167	10.45	451	11.51	735
9.41	173	10.47	457	11.53	740
9.43	178	10.49	462	11.55	746
9.45	184	10.51	467	11.57	751
9.47	189	10.53	473	11.59	756

Stage-Area-Storage for Pond P1: R-TANKS - 2 stack (continued)

Elevation (feet)	Storage (cubic-feet)
11.61	762
11.63	767
11.65	772
11.67	778
11.69	783
11.71	788
11.73	794
11.75	799
11.77	805
11.79	810
11.81	815
11.83	821
11.85	826
11.87	831
11.89	837
11.91	842
11.93	847
11.95	853
11.97	858
11.99	863
12.01	868
12.03	871
12.05	874
12.07	876
12.09	879
12.11	882
12.13	885
12.15	888
12.17	891
12.19	894
12.21	897
12.23	900
12.25	903
12.27	906
12.29	908
12.31	911
12.33	914
12.35	917
12.37	920
12.39	923
12.41	926
12.43	929
12.45	932
12.47	935
12.49	938
12.51	941
12.53	943
12.55	946
12.57	949
12.59	952
12.61	955
12.63	958
12.65	961
12.67	964
12.69	967
12.71	970
12.73	973
12.75	975
12.77	978
12.79	981
12.81	984
12.83	987
12.85	990
12.87	993
12.89	996
12.91	999
12.93	1,002
12.95	1,005
12.97	1,008
12.99	1,010
13.01	**1,012**
13.03	1,012
13.05	1,012
13.07	1,012
13.09	1,012
13.11	1,012
13.13	1,012
13.15	1,012
13.17	1,012
13.19	1,012
13.21	1,012
13.23	1,012
13.25	1,012
13.27	1,012
13.29	1,012
13.31	1,012
13.33	1,012
13.35	1,012
13.37	1,012
13.39	1,012
13.41	1,012
13.43	1,012
13.45	1,012
13.47	1,012
13.49	1,012

SECTION J

STORMWATER MANAGMENT REPORT

Attachment D: USDA Soil Survey

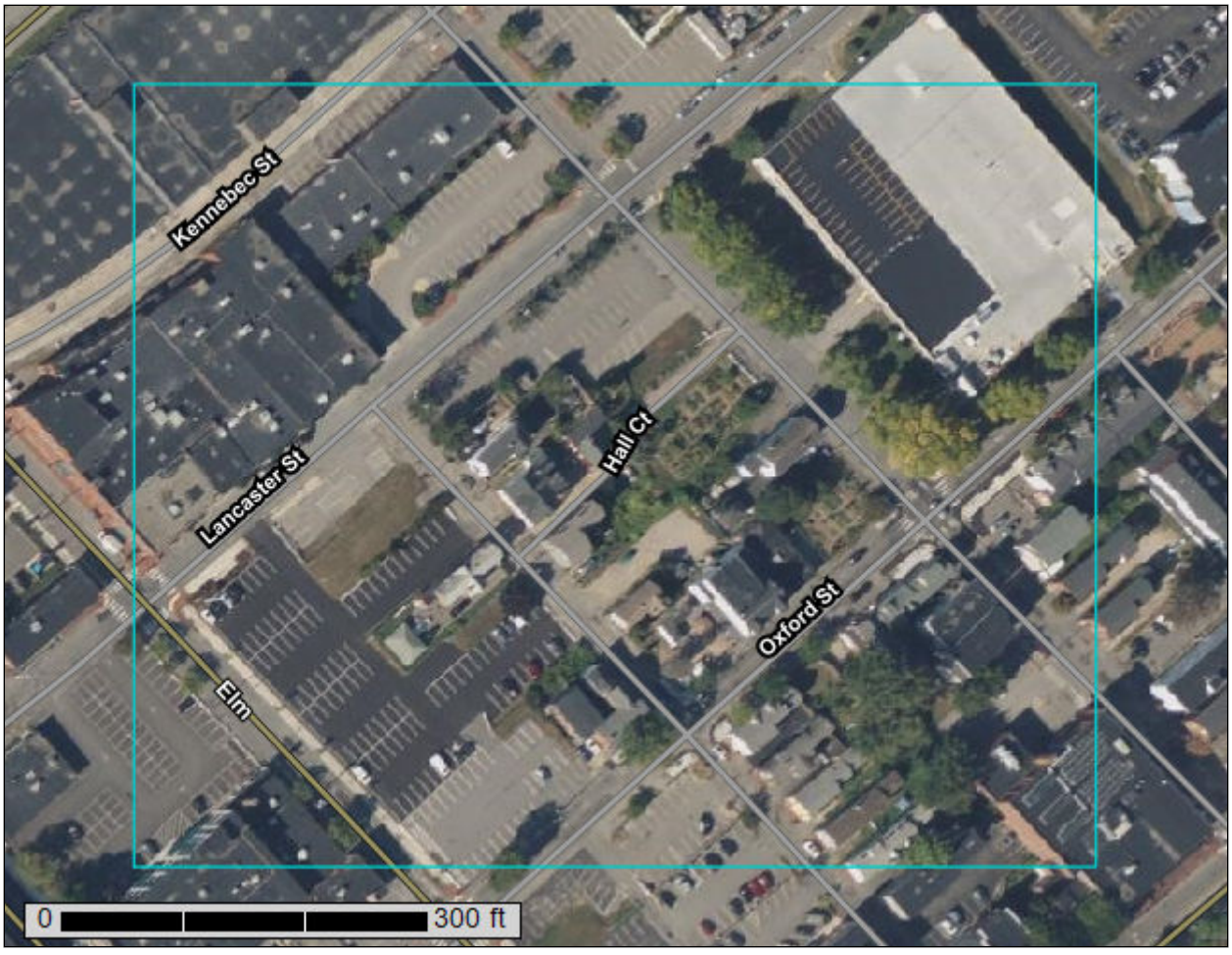
United States Department of Agriculture

NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Cumberland County and Part of Oxford County, Maine



February 22, 2024

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.



Map Scale: 1:1,650 if printed on A landscape (11" x 8.5") sheet.

N

Meters
0 20 40 80 120

Feet
0 50 100 200 300

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 19N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Cumberland County and Part of Oxford County, Maine
Survey Area Data: Version 20, Sep 5, 2023

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jun 19, 2020—Sep 20, 2020

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background

MAP LEGEND

MAP INFORMATION

imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
Au	Au Gres loamy sand	4.6	39.2%
HIB	Hinckley loamy sand, 3 to 8 percent slopes	7.1	60.8%
Totals for Area of Interest		**11.6**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however,

onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Cumberland County and Part of Oxford County, Maine

Au—Au Gres loamy sand

Map Unit Setting

National map unit symbol: blgr
Elevation: 200 to 1,800 feet
Mean annual precipitation: 34 to 50 inches
Mean annual air temperature: 41 to 45 degrees F
Frost-free period: 90 to 130 days
Farmland classification: Not prime farmland

Map Unit Composition

Au gres and similar soils: 85 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Au Gres

Setting

Landform: Outwash plains
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Sandy glaciofluvial deposits derived from granite and gneiss

Typical profile

H1 - 0 to 10 inches: loamy sand
H2 - 10 to 32 inches: loamy sand
H3 - 32 to 65 inches: sand

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Capacity of the most limiting layer to transmit water (Ksat): High (2.00 to 6.00 in/hr)
Depth to water table: About 0 to 18 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 3.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: A/D
Hydric soil rating: Yes

HIB—Hinckley loamy sand, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: 2svm8
Elevation: 0 to 1,430 feet
Mean annual precipitation: 36 to 53 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Hinckley and similar soils: 85 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Hinckley

Setting

Landform: Outwash deltas, outwash terraces, kames, kame terraces, moraines, eskers, outwash plains
Landform position (two-dimensional): Summit, shoulder, backslope, footslope
Landform position (three-dimensional): Nose slope, side slope, base slope, crest, riser, tread
Down-slope shape: Concave, convex, linear
Across-slope shape: Convex, linear, concave
Parent material: Sandy and gravelly glaciofluvial deposits derived from gneiss and/or granite and/or schist

Typical profile

Oe - 0 to 1 inches: moderately decomposed plant material
A - 1 to 8 inches: loamy sand
Bw1 - 8 to 11 inches: gravelly loamy sand
Bw2 - 11 to 16 inches: gravelly loamy sand
BC - 16 to 19 inches: very gravelly loamy sand
C - 19 to 65 inches: very gravelly sand

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Excessively drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to very high (1.42 to 99.90 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water supply, 0 to 60 inches: Very low (about 3.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3s

Hydrologic Soil Group: A
Ecological site: F144AY022MA - Dry Outwash
Hydric soil rating: No

Soil Information for All Uses

Soil Properties and Qualities

The Soil Properties and Qualities section includes various soil properties and qualities displayed as thematic maps with a summary table for the soil map units in the selected area of interest. A single value or rating for each map unit is generated by aggregating the interpretive ratings of individual map unit components. This aggregation process is defined for each property or quality.

Soil Qualities and Features

Soil qualities are behavior and performance attributes that are not directly measured, but are inferred from observations of dynamic conditions and from soil properties. Example soil qualities include natural drainage, and frost action. Soil features are attributes that are not directly part of the soil. Example soil features include slope and depth to restrictive layer. These features can greatly impact the use and management of the soil.

Hydrologic Soil Group

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

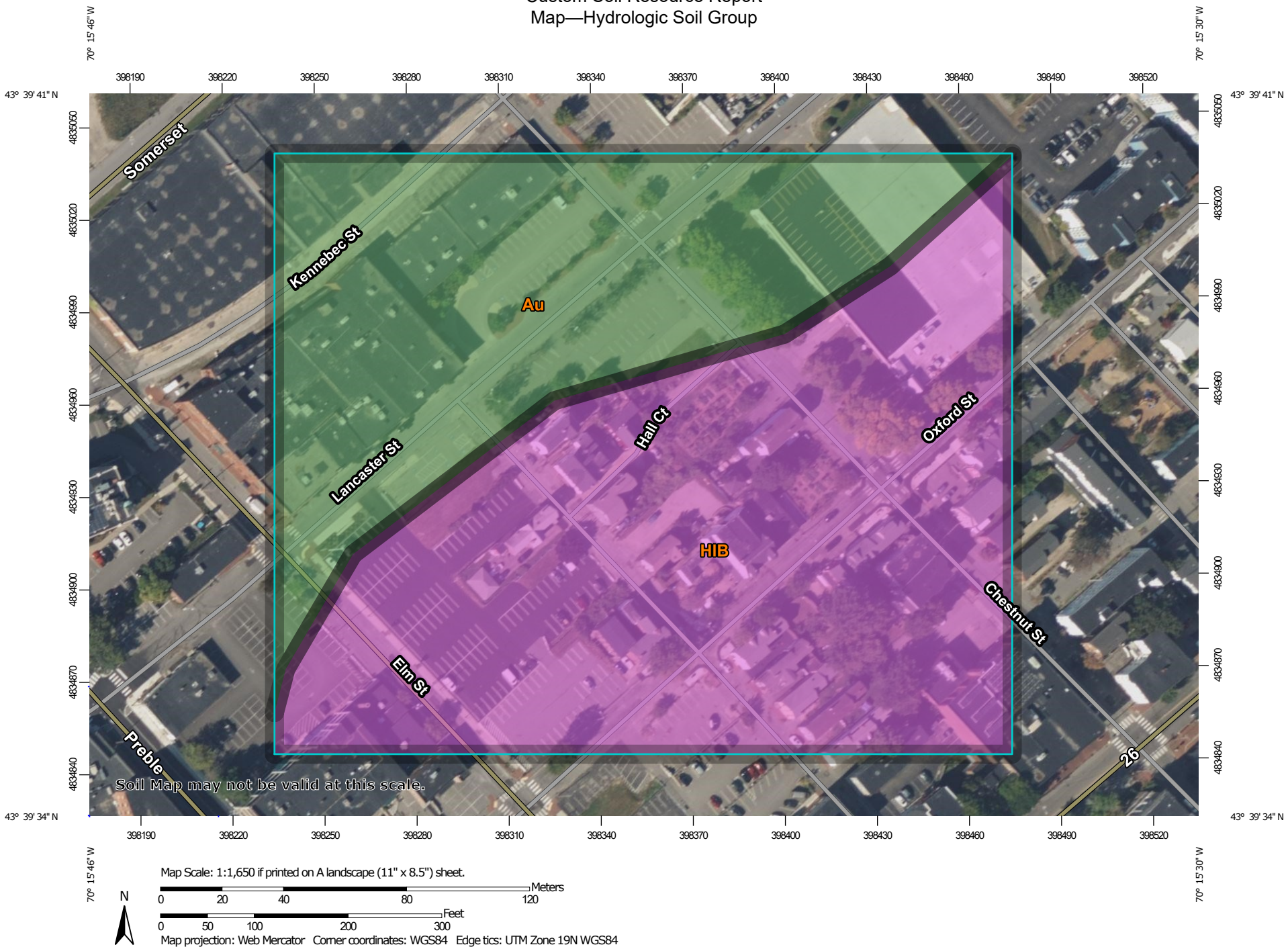
Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.



Map Scale: 1:1,650 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 20 40 80 120

Feet: 0 50 100 200 300

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 19N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils

Soil Rating Polygons
- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Soil Rating Lines
- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Soil Rating Points
- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Cumberland County and Part of Oxford County, Maine
Survey Area Data: Version 20, Sep 5, 2023

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jun 19, 2020—Sep 20, 2020

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background

MAP LEGEND

MAP INFORMATION

imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Table—Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
Au	Au Gres loamy sand	A/D	4.6	39.2%
HlB	Hinckley loamy sand, 3 to 8 percent slopes	A	7.1	60.8%
Totals for Area of Interest			**11.6**	**100.0%**

Rating Options—Hydrologic Soil Group

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

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ACORN ENGINEERING, INC.

K. EROSION & SEDIMENTATION CONTROL REPORT

Prepared For:

Avesta Housing & Reveler Development
Joint Site Plan Application

Prepared By:

Acorn Engineering, Inc.
500 Washington Ave.
Portland, Maine 04103



April 2024

INTRODUCTION

Acorn Engineering, Inc. has been retained by Avesta Housing and Reveler Development to provide civil engineering services for the proposed redevelopment of a phased tract of land located within the R-6 Zoning District in Portland, Maine. The existing parking lots and vacant buildings will be redeveloped into 3 multifamily buildings.

The following Erosion and Sedimentation Control Report was developed in accordance with the City of Portland Technical Manual – Section 5 – Portland Stormwater Management Standards and the Maine DEP Chapter 500 Stormwater Management Appendix A and B (1), Amended August 12, 2015. This narrative also meets the standards required in the Maine DEP's Erosion & Sediment Control BMP's Manual, revised in 2016.

1.0 EXISTING CONDITIONS

The proposed project site is located at 197 Oxford Street, 50 Cedar, and 158 Lancaster Street. A Boundary & Topographic Survey has been prepared by Owen Haskell, Inc.

The property is in the R-6 Residential Zone. Abutting Uses are all residential in nature with some commercial to the west across Lancaster Street.

The sites are currently vacant or used for parking. All sites feature notable slopes with water draining to the west towards Back Cove. The average slope is approximately 6%.

1.1 Existing Soils

Onsite soil information includes the following:

- Soil Conservation Service Medium Intensity Soil Survey for Cumberland County
- United States Department of Agriculture Web Soil Survey

No onsite wastewater is proposed; the applicant does not intend to perform a more intense hydric soil boundary delineation because the waiver requirements set forth in the City of Portland Technical Manual – Section 7 – Soil Survey, Rev. 6/17/11 are met.

The soil type is listed as Hinckley loamy sand. Hydraulically, this soil type is excessively drained with negligible surface runoff. The erodibility is considered moderate. The contractor will be expected to install erosion and sedimentation controls as shown on sheet C-03, Construction Management & Erosion Control Plan within the civil set plans.

1.2 Existing Erosion Problems

There are no signs of erosion.

1.3 Critical Areas

There are no critical areas that require special attention during construction.

1.4 Protected Natural Resource

The client is not aware of the presence of any existing significant natural features located on the site as listed in Section 14-526 (b) 1. of the Land Use Code. The project is not located within a watershed classified as an Urban Impaired Stream by the Maine DEP.

1.5 Previous Construction Activity (5 years)

Acorn Engineering, Inc. is not aware of any construction related activities within the project limits within the past 5 years.

1.6 Timber Harvesting

Acorn Engineering, Inc. is not aware of any timber harvesting within the past five years.

2.0 EROSION CONTROL MEASURES AND SITE STABILIZATION

As part of the site development, the following temporary and permanent erosion and sedimentation control devices shall be implemented. Devices shall be installed as described in this report or within the plan set. See the Maine Erosion and Sediment Control Handbook for Construction: Best Management Practices for further reference.

2.1 Temporary Erosion Control Measures

The following temporary erosion and sedimentation control measures are planned for the project's construction period:

2.1.1 Crushed stone stabilized construction entrances shall be placed at all access points to the project site where there are disturbed areas. The following specifications shall be followed at a minimum:

- Stone size shall be 2-3 inches, or reclaimed or recycled concrete equivalent.
- The thickness of the entrance stone layer shall be no less than 6 inches.
- The entrance shall not be less than 20 feet wide, however not less than the full width of points where ingress or egress occurs. The length shall not be less than 50 feet in length.

- Geotextile fabric (woven or non-woven) shall be placed over the entire entrance area.
- The entrance/exit shall be maintained to the extent that it will prevent the tracking of sediment onto public road ways.

2.1.2 Siltation fence or erosion control berm shall be installed down gradient of any disturbed areas to trap runoff borne sediments until permanent stabilization is achieved. The silt fence or erosion control berm shall be installed per the details provided in the plan set and inspected before and immediately after each rainfall and at least daily during prolonged rainfall. Repairs shall be made if there are any signs of erosion or sedimentation below the fence line or berm. If there are signs of undercutting at the center or the edges, or impounding of large volumes of water behind the fence or berm, the barrier shall be replaced with a stone check dam.

2.1.3 Hay mulch including hydro seeding is intended to provide cover for denuded or seeded areas until revegetation is established. Mulch placed between April 15th and November 1st on slopes of less than 15 percent shall be covered by fabric netting and anchored with staples in accordance with the manufacturer's recommendation. Mulch placed between November 1st and April 15th on slopes equal to or steeper than 8 percent and equal to or flatter than 2:1 shall use mats or fabric netting and anchored with staples in accordance with the manufacturer's recommendation.

2.1.4 At any time of the year, all slopes greater than 3:1 shall be stabilized with Double Net Erosion Control Blanket Bionet SC150BN by North American Green or Approved Equal, or Erosion Control Mix Slope Protection as detailed within the plans.

2.1.5 Adjacent streets shall be swept to control mud and dust from the construction site as necessary. Add additional stone to the stabilized construction entrance to minimize the tracking of material off the site and onto the surrounding roadways.

2.1.6 During demolition, clearing and grubbing operations, stone check dams shall be installed at any areas of concentrated flow. The maximum height of the check dam shall not exceed 2 feet. The center of the check dam shall be 6 inches below the outer edges of the dam. The contractor shall mulch the side slopes and install stone check dams for all newly excavated ditch lines within 24 hours of their creation.

2.1.7 Silt fence stake spacing shall not exceed 6 feet unless the fence is supported with 14-gauge wire in which case the maximum spacing shall not exceed 10 feet. The silt fence shall be "toed" into the ground.

2.1.8 Storm drain inlet protection shall be provided to storm drains using any of the following: hay bale drop inlet structures, silt fence drop inlet sediment filter,

gravel and wire mesh drop inlet sediment filter, or curb inlet sediment filter. Barriers shall be inspected after every rainfall event and repaired as necessary. Sediments shall be removed when accumulation has reached ½ the design height.

2.1.9 Dust control shall be accomplished using any of the following: water, calcium chloride, stone, or an approved MDEP product. Dust control shall be applied as needed to accomplish dust control.

2.1.10 Temporary loam, seed, and mulching shall be used in areas where no other erosion control measure is used. Application rates for seeding are provided at the end of this report.

2.1.11 Stockpiles shall be stabilized within 7 days of formation unless a scheduled rain event occurs prior to the 7-day window, in which case the stockpile shall be stabilized prior to the rain event. Methods of stabilization shall be mulch, erosion control mix, or erosion control blankets/mats. Silt fence or a wood waste compost filter berm shall be placed downhill of any soil stockpile location.

2.1.12 For disturbance between November 1 and April 15, please refer to winter stabilization plan in this report and the Maine Erosion and Sediment Control BMP manual for further information.

2.1.13 It is of the utmost importance that stormwater runoff and potential sediment from the construction site be diverted around the proposed underdrains until the trench is backfilled.

2.2 Permanent Erosion Control Measures

The following permanent erosion control measures are intended for post disturbance areas of the project.

2.2.1 All disturbed areas during construction, not subject to other proposed conditions, shall receive a minimum 4" of loam, limed, and mulched. Erosion control blankets or mats shall be placed over the mulch in areas noted in paragraph 4.1 of this report.

2.2.2 All stormwater devices shall be installed, and tributary areas stabilized prior receiving stormwater.

2.2.3 Refer to the Maine Erosion and Sediment Control BMP manual for additional information.

3.0 EROSION AND SEDIMENTATION CONTROL PLAN

3.1 The Construction Management & Erosion Control Plan is included within the plan set.

4.0 DETAILS AND SPECIFICATIONS

4.1 Erosion & Sedimentation Control Details and Specifications are included in the plan set.

5.0 STABILIZATION PLAN FOR WINTER CONSTRUCTION

Winter Construction consists of earthwork disturbance between the dates of November 1 and April 15. If a construction site is not stabilized with pavement, a road gravel base, 75% mature vegetation cover or riprap by November 15, then the site shall be protected with over-winter stabilization. Any area not stabilized with pavement, vegetation, mulching, erosion control mix, erosion control mats, riprap, or gravel base on a road shall be considered open.

The contractor shall limit the work area to areas that work will occur in during the subsequent 15 days and so that it can be mulched one day prior to a snow event. The contractor shall stabilize work areas prior to opening additional work areas to minimize areas without erosion control measures.

The following measures shall be implemented during winter construction periods:

5.1 Sediment Barriers

During frozen conditions, sediment barriers may consist of erosion control mix berms or any other recognized sediment barriers as frozen soil prevents the proper installation of hay bales or silt fences.

5.2 Mulching

All areas shall be considered to be denuded until seeded and mulched. Hay and straw mulch shall be applied at a rate of 150 lb. per 1,000 square feet or 3 tons/acre (twice the normal accepted rate of 75-lbs./1,000 s.f. or 1.5 tons/acre) and shall be properly anchored. Erosion control mix must be applied with a minimum 4-inch thickness. Mulch shall not be spread on top of snow. The snow shall be removed down to a one-inch depth or less prior to application. After each day of final grading, the area shall be properly stabilized with anchored hay or straw or erosion control matting. An area shall be considered to have been stabilized when exposed surfaces have been either mulched or adequately anchored so that ground surface is not visible through the mulch. Between the dates of November 1 and April 15, all mulch shall be anchored by either mulch netting, tracking or wood cellulose fiber. The cover will be considered sufficient when the ground surface is not visible through the mulch. After November 1st, mulch and anchoring of all exposed soil shall occur at the end of each final grading workday.

5.3 Soil Stockpiling

Stockpiles of soil or subsoil shall be mulched for over winter protection with hay or straw at twice the normal rate or with a four-inch layer of erosion control mix. This shall be done within 24 hours of stocking and re-established prior to any rainfall or snowfall.

5.4 Seeding

Between the dates of October 15th and April 1st, loam or seed shall not be required. During periods of above freezing temperatures finished areas shall be fine graded and either protected with mulch or temporarily seeded and mulched until the final treatment can be applied. If the date is after November 1st and if the exposed area has not been loamed, final grading with a uniform surface, then the area may be dormant seeded at a rate of 3 times higher than specified for permanent seed and then mulched.

Dormant seeding may be placed prior to the placement of mulch or erosion control blankets. If dormant seeding is used for the site, all disturbed areas shall receive 4" of loam and seed at an application rate of 5 lbs./1,000 s.f. All areas seeded during the winter shall be inspected in the spring for adequate catch. All areas insufficiently vegetated (less than 75% catch) shall be revegetated by replacing loam, seed and mulch. If dormant seeding is not used for the site, all disturbed areas shall be revegetated in the spring.

5.5 Over winter stabilization of disturbed soils

By September 15th, all disturbed soils on areas having a slope less than 15% shall be seeded and mulched. If the disturbed areas are not stabilized by this date, then one of the following actions shall be taken to stabilize the soil for late fall and winter:

- Stabilize the soil with temporary vegetation – By October 1st, seed the disturbed soil with winter rye at a seeding rate of 3lbs per 1,000 s.f., lightly mulch the seeded soil with hay or straw at 75 lbs per 1,000 s.f., and anchor the mulch with plastic netting. Monitor growth of the rye over the next 30 days. If the rye fails to grow at least three inches or fails to cover at least 75% of the disturbed soil before November 1st, then mulch the area for over-winter protection.

- Stabilize the soil with sod – Stabilize the disturbed soil with properly installed sod by October 1st. Proper installation includes pinning the sod onto the soil with wire pins, rolling the sod to guarantee contact between the sod and underlying soil, and watering the sod to promote root growth into the disturbed soil.

- Stabilize the soil with mulch – By November 15th, mulch the disturbed soil by spreading hay or straw at a rate of at least 150 lbs per 1,000 s.f. on the area so that no soil is visible through the mulch. Immediately after applying the mulch,

anchor the mulch with plastic netting to prevent wind from moving the mulch off the disturbed soil.

5.6 Over winter stabilization of disturbed slopes

All stone-covered slopes shall be constructed and stabilized by November 15th. All slopes to be vegetated shall be seeded and mulched by September 1st. A slope is considered a grade greater than 15%. If a slope to be vegetated is not stabilized by September 1st, then one of the following action shall be taken to stabilize the slope for late fall and winter:

- Stabilize the soil with temporary vegetation and erosion control mats – By October 1st the disturbed slope shall be seeded with winter rye at a seeding rate of 3 lbs per 1,000 s.f. and then install erosion control mats or anchored mulch over the seeding. If the rye fails to grow at least three inches or fails to cover at least 75% of the slope by November 1st, then the contractor shall cover the slope with a layer of erosion control mix or with stone riprap.

- Stabilize the soil with sod – The disturbed slope shall be stabilized with properly installed sod by October 1st. Proper installation includes the contractor pinning the sod onto the slope with wire pins, rolling the sod to guarantee contact between the sod and underlying soil, and watering the sod to promote root growth into the disturbed soil. The contractor shall not use late-season sod installation to stabilize slopes having a grade greater than 3H:1V or having groundwater seeps on the slope face.

- Stabilize the soil with erosion control mix – Erosion control mix shall be properly installed by November 15th. The contractor shall not use erosion control mix to stabilize slopes having grades greater than 2H:1V or having groundwater seeps on the slope face.

- Stabilize the soil with stone riprap – Place a layer of stone riprap on the slope by November 15th. A registered professional engineer shall be hired to determine the stone size needed for stability on the slope and to design a filter layer for underneath the riprap.

6.0 INSPECTION AND MAINTENANCE

A person with knowledge of erosion and stormwater control, including the standards and conditions in the permit, shall conduct periodic visual inspections of installed erosion control measures. The frequency of inspection shall occur at least once every two weeks, as well as after a "storm event". A "storm event" shall consist 0.5 inches of rain within a 24-hour period. The following Erosion and Sediment Control - Best Management Practices (BMP's) shall inspected in the manner as described.

6.1 Sediment Barriers

Hay bale barriers, silt fences and filter berms shall be inspected and repaired for the following if there are any signs of erosion or sedimentation below them. If there are signs of undercutting at the center or the edges of the barrier, or impounding of large volumes of water behind them, sediment barriers shall be replaced with a temporary check dam. Should the fabric on a silt fence or filter barrier decompose or become ineffective prior to the end of the expected usable life and the barrier is still necessary, the fabric shall be replaced promptly. Sediment deposits should be removed when deposits reach approximately one-half the height of the barrier. Filter berms should be reshaped as needed. Any sediment deposits remaining in place after the silt fence or filter barrier is no longer required should be dressed to conform to the existing grade, prepared and seeded.

6.2 Stabilized Stone Construction Entrances

The exit shall be maintained in a condition that will prevent tracking of sediment onto public rights-of-way. When the control pad becomes ineffective, the stone shall be removed along with the collected soil material and redistributed on site in a stable manner. The entrance should then be reconstructed. The contractor shall sweep or wash pavement at exits, which have experienced mud-tracking on to the pavement or traveled way. When washing is required, it shall be done on an area stabilized with aggregate, which drains into an approved sediment trapping device. All sediment shall be prevented from entering storm drains, ditches, or waterways.

6.3 Mulched Areas

All mulches must be inspected periodically, in particular after rainstorms, to check for rill erosion. If less than 90% of the soil surface is covered by mulch, additional mulch shall be immediately applied. Nets must be inspected after rain events for dislocation or failure. If washouts or breakage occur, re-install the nets as necessary after repairing damage to the slope. Where mulch is used in conjunction with ornamental plantings, inspect periodically throughout the year to determine if mulch is maintaining coverage of the soil surface. Repair as needed.

6.4 Dust Control

When temporary dust control measures are used, repetitive treatment shall be applied as needed to accomplish control.

6.5 Stormwater Appurtenances

All underdrains, storm drains, and catch basins need to be operating effectively and free of debris.

6.6 Erosion and Sedimentation Control Inspections:

Acorn Engineering has personnel qualified to conduct Erosion and Sedimentation Control Inspections. For further information, contact:

Contact: Will Savage, PE
Telephone: (207) 775-2655

Qualifications:

- Maine Professional Engineering License #11419
- Maine DEP - Certified in Maintenance & Inspection of Stormwater BMP's Cert #14
- Certified Erosion, Sediment and Storm Water Inspector (CESSWI) Cert #0293
- Certified Professional in Erosion and Sediment Control (CPESC) Cert. #4620

The Contractor has sole responsibility for complying with the Erosion and Sedimentation Report/Plan, including control of fugitive dust. The Contractor shall be responsible for any monetary penalties resulting from failure to comply with these standards.

7.0 IMPLEMENTATION SCHEDULE

The following implementation sequence is intended to maximize the effectiveness of the above described erosion control measures. Contractors should avoid overexposing disturbed areas and limit the amount of stabilization area.

1. Install a stabilized construction entrance in all locations where construction traffic will enter and exit the site.
2. Install perimeter silt fence or erosion control berm.
3. Install all other erosion control devices as necessary throughout the remainder of this schedule.
4. Commence installation of drainage infrastructure.
5. Prioritize the downhill side to contain runoff within the site while providing an engineered outlet to the municipal storm drain system within Chestnut or Lancaster Street.
6. Commence installation of utilities.
7. Continue earthwork and grading to subgrade as necessary for construction.
8. Complete installation of drainage infrastructure, as well as other utility work.
9. Complete remaining earthwork operations.
10. Install sub-base and base gravels in paved areas.
11. Install paving, curbing and brickwork.
12. Loam, lime, fertilize, seed and mulch disturbed areas and complete all landscaping.
13. Once the site is stabilized and mulching of landscape areas is complete, remove all temporary erosion control measures.
14. Touch up areas without a vigorous catch of grass with loam and seed.
15. Complete site signage and striping.
16. Execute proper maintenance of all temporary and permanent erosion control measures throughout the project.

The above implementation sequence should be generally followed by the site contractor. However, the contractor may construct several items simultaneously. The contractor shall submit to the owner a schedule of the completion of the work. If the contractor is to commence the construction of more than one item above, they shall limit the amount of exposed areas to those areas in which work is expected to be undertaken during the following 30 days.

The contractor shall re-vegetate disturbed areas as rapidly as possible. All areas shall be permanently stabilized within 7 days of final grading or before a storm event. The contractor shall incorporate planned inlets and drainage systems as early as possible into the construction phase.

8.0 CONCLUSION

The above erosion control narrative is intended to minimize the development impact by implementing temporary and permanent erosion control measures. The contractor shall also refer to the Maine Erosion and Sediment Control BMP manual for additional information.

9.0 ATTACHMENTS

- Temporary Seeding Plan

TEMPORARY SEEDING PLAN

Site Preparation

The seeded areas shall be feasibly graded out to provide the use of equipment for seedbed preparation, seeding, mulch application, and mulch anchoring. If necessary, the site may require additional temporary erosion control measures outlined in the Erosion Control report.

Seedbed Preparation

Fertilizer shall be applied to the site at a rate of 13.8 pounds per 1,000 square feet. The composition of the fertilizer shall be 10-10-10 (N-P2O5-K2O) or equivalent.

Limestone shall be applied to the site at a rate of 138 pounds per 1,000 square feet.

Seeding

The composition and amount of temporary seed applied to a site shall be determined by the following table:

Seed	Pounds / 1,000 S.F.	Recommended Seeding Dates
Winter Rye	2.57	Aug-15 to Oct-1
Oats	1.84	Apr-1 to Jul-1 Aug-15 to Sep-15
Annual Ryegrass	0.92	Apr-1 to Jul-1
Sudangrass	0.92	May-15 to Aug-15
Perennial	0.92	Aug-15 to Sep-15

Mulching

Mulch shall be applied at a rate of 70 lbs – 90 lbs per 1,000 square feet. The mulch shall be installed at a minimum depth of 4 inches. The seeded area shall be mulched immediately after seed is applied. Mulching during the winter season shall be double the normal amount.

Conclusion

Please refer to the Maine Erosion and Sediment Control BMP manual for additional information pertaining to temporary seeding and mulching.

A C O R N
ENGINEERING, INC.

Chief Keith Gautreau
City of Portland Fire Department
380 Congress St.
Portland, ME 04101

April 11, 2024

Subject: 197 & 207 Oxford Street Redevelopment – Phase I Fire Department Checklist

On behalf of Avesta and Reveler, the design team is pleased to respond to the Portland Fire Department Site Review Checklist.

1. Name, address, telephone number of applicant

   Avesta Housing
   307 Cumberland Avenue
   Portland, Maine 04101
   (207)-553-7777

2. Name, address, telephone number of architect

   CWS Architecture + Interior Design
   264 US Route One, Suite 100-2A
   Scarborough, Maine 04074
   (207) 774-4441

3. Proposed uses of any structures:

   The first floor of the Housing First side is Mixed Use B Business and A-2 Assembly Occupancy dedicated to professional services needed for the Housing First population. The first floor of the Affordable Housing side is Mixed Use R-2 Residential and B Occupancy services for the Affordable Housing tenants. Floors two thru five are R-2 residential on both sides of the building. Fire separation between floors, dwellings, and occupancy types will be designed per IBC requirements.

4. Square footage of all structures, including decks [total and per story]

Proposed Building		
Basement	1,469	sf
1st Floor	8,991	sf
Floors 2-4	8,623	sf
5th Floor	7,418	sf
Total	**43,748**	**sf**

5. Elevation of all structures

   The proposed building height, based upon IBC's average grade plane method, is 54.9' which is consistent with the Bayside Height Overlay allowance.

6. Proposed fire protection of all structures

   Sprinkler systems are proposed for each side of the building, each served by a 6" fire service. Each side will have a dedicated sprinkler room. Fire flows and requirements for system storage or booster pumping are subject to the fire professional design which will be performed prior to the request for a building permit. FDC's are anticipated to be provided along the Oxford Street frontage.

7. Hydrant locations

   Hydrants in the vicinity of Phase 1 includes a hydrant on the corner of Oxford and Cedar, directly in front of the proposed building, and a hydrant on the corner of Oxford and Chestnut Street, opposite of the site area. Hydrant flow data from the Portland Water District once received may be made available to the Fire Department upon request.

8. Water main size and location

   For Phase 1, each portion of the building will have a separate water connection due to the split management of the building and demising wall without internal connection. Each side will have a 6" fire service extended from the 12" Oxford Street water main to serve separate fire sprinkler systems.

9. Access to all structures [min. 2 sides]

   Phase 1 will have access on 3 sides: Cedar, Oxford, and Chestnut Streets.

10. Code summaries will be provided by the Architects upon request.

NFPA 1 – Chapter 18 Fire Department Access and Water Supply

18.2 Fire Department Access:

Per NFPA 1 – Chapter 18.2.3.2.2.1, all first story floors shall be located not more than 450 feet from a Fire Department access road. This requirement is satisfied.

City of Portland Technical Manual – Section 3 Public Safety

3.4.1 Every dead-end roadway more than one hundred fifty (150') feet in length shall provide a turnaround at the closed end. Turnarounds shall be designed to facilitate future street connectivity and shall always be designed to the right (refer to Figure I-5).

Response: Not applicable

3.4.2 Where possible, developments shall provide access for Fire Department vehicles to at least two sides of all structures. Access may be from streets, access roads, emergency access lanes, or parking areas.

Response: The building is accessible from 3 sides.

3.4.3 Building setbacks, where required by zoning, shall be adequate to allow for emergency vehicle access and related emergency response activities and shall be evaluated based on the following factors:

- *Building Height.*
- *Building Occupancy.*
- *Construction Type.*
- *Impediments to the Structures.*
- *Safety Features Provided.*

Response: The proposed development layout has contemplated emergency access conditions and provides for safe and efficient access.

3.4.4. Fire Dept. access roads shall extend to within 50' of an exterior door providing access to the interior of the structure.

Response: All buildings will be provided with exterior doors that will be within 50' of a Fire Department access route.

3.4.5. Site access shall provide a minimum of nine (9) feet clearance height to accommodate ambulance access.

Response: Not applicable given the ample street frontage and lack of non-building site space.

3.4.6. Elevators shall be sized to accommodate an 80 x 24-inch stretcher.

Response: The proposed elevators will meet this requirement.

3.4.7. All structures are required to display the assigned street number. Numbers shall be clearly visible from the public right of way.

Response: The applicant is currently working with the City's Public Works Division to assign street addresses and numbering to meet City Standards.

Thank you for your review. Please let me know if you have any additional questions or comments.

Sincerely,

Sam Lebel

Sam Lebel, P.E.
Project Manager
Acorn Engineering, Inc.

A C O R N
ENGINEERING, INC.

Chief Keith Gautreau
City of Portland Fire Department
380 Congress St.
Portland, ME 04101

April 24, 2024

Subject: Phase 2 – 50 Cedar Street Re-Development Fire Department Checklist

On behalf of Avesta and Reveler, the design team is pleased to report the Portland Fire Department Site Review Checklist.

1. Name, address, telephone number of applicant

   Reveler Development
   188 State Street, 3rd Floor
   Portland, Maine 04101
   (207) 939-5432

1. Name, address, telephone number of architect

   Ryan Senatore Architecture
   500 Congress Street, Suite 2
   Portland, ME 04101
   (207) 650-6414

2. Proposed uses of any structures [NFPA and IBC classification]

   NFPA: Apartments IBC: R2

3. Square footage of all structures, including decks [total and per story]

Proposed Building		
Ground	4,796	sf
2nd Floor	4,796	sf
3rd Floor	4,796	sf
Total	**14,388**	**sf**

4. Elevation of all structures

   The proposed building height, based upon IBC's average grade plane method, is approximately 32'.

5. Proposed fire protection of all structures

   A sprinkler system is proposed for the building, served by a 6" fire service. Each building will have a sprinkler room on the ground floor that will be easily accessible by the fire department. Fire flows and requirements for system storage or booster pumping are subject to the fire professional design which will be performed prior to the request for a building permit.

6. Hydrant locations

   For Phase 2 there is a hydrant on the corner of Lancaster and Chestnut, opposite of the site. Hydrant flow data from the Portland Water District once received may be made available to the Fire Department upon request.

7. Water main size and location

   A new 12" water main will be installed in Lancaster Street as part of this project, directly along its frontage.

8. Access to all structures [min. 2 sides]

   Phase 1 will have fire access on two sides, Oxford and Chestnut Street. Phase 2 will have access on three sides, Chestnut Street, Lancaster Street, and the 12.5-foot gravel paved Hall Court. Phase 3 will have access on two sides, Cedar Street and Lancaster Way.

9. Code summaries will be provided by the Architects upon request.

NFPA 1 – Chapter 18 Fire Department Access and Water Supply

18.2 Fire Department Access:

The site locations are in a densely developed area and are surrounded by four public streets. The following pavement street widths are currently available:

- Lancaster Street: 35.93' wide and 19.93' wide between parking stalls and edge of pavement.
- Cedar Street: 20.7 feet wide and 11.7 feet wide between parking stall and edge of pavement.
- Oxford Street: 31.6 feet and 23.6 feet wide between parking stall and edge of pavement.

- Chestnut Street: 34.08 feet and 16.02 feet wide between parking stall and edge of pavement.

Per NFPA 1 – Chapter 18.2.3.2.2.1, all first story floors shall be located not more than 450 feet from a Fire Department access road.

City of Portland Technical Manual – Section 3 Public Safety

3.4.1 Every dead-end roadway more than one hundred fifty (150') feet in length shall provide a turnaround at the closed end. Turnarounds shall be designed to facilitate future street connectivity and shall always be designed to the right (refer to Figure I-5).

Response: Not applicable

3.4.2 Where possible, developments shall provide access for Fire Department vehicles to at least two sides of all structures. Access may be from streets, access roads, emergency access lanes, or parking areas.

Response: All buildings are accessible from at least 2 sides.

3.4.3 Building setbacks, where required by zoning, shall be adequate to allow for emergency vehicle access and related emergency response activities and shall be evaluated based on the following factors:

- *Building Height.*
- *Building Occupancy.*
- *Construction Type.*
- *Impediments to the Structures.*
- *Safety Features Provided.*

Response: The proposed development layout has contemplated emergency access conditions and provides for safe and efficient access.

3.4.4. Fire Dept. access roads shall extend to within 50' of an exterior door providing access to the interior of the structure.

Response: All buildings will be provided with exterior doors that will be within 50' of a Fire Department access route.

3.4.5. Site access shall provide a minimum of nine (9) feet clearance height to accommodate ambulance access.

Response: The proposed site maintains the required clearance height of nine feet in all cases.

3.4.6. Elevators shall be sized to accommodate an 80 x 24-inch stretcher.

Response: The proposed elevators will meet this requirement.

3.4.7. All structures are required to display the assigned street number. Numbers shall be clearly visible from the public right of way.

Response: The applicant is currently working with the City's Public Works Division to assign street addresses and numbering to meet City Standards.

Thank you for your review. Please let me know if you have any additional questions or comments.

Sincerely,

Sam Lebel

Sam Lebel, P.E.
Project Manager
Acorn Engineering, Inc.

ACORN ENGINEERING, INC.

Chief Keith Gautreau
City of Portland Fire Department
380 Congress St.
Portland, ME 04101

October 2, 2024

Subject: Phase 3 –158 Lancaster Street Re-Development Fire Department Checklist

On behalf of Avesta and Reveler, the design team is pleased to report the Portland Fire Department Site Review Checklist.

1. Name, address, telephone number of applicant

   Reveler Development
   188 State Street, 3rd Floor
   Portland, Maine 04101
   (207) 939-5432

1. Name, address, telephone number of architect

   Ryan Senatore Architecture
   500 Congress Street, Suite 2
   Portland, ME 04101
   (207) 650-6414

2. Proposed uses of any structures [NFPA and IBC classification]

   NFPA: Apartments IBC: R2

3. Square footage of all structures, including decks [total and per story]

Proposed Building		
Ground	4,796	sf
2nd Floor	4,796	sf
3rd Floor	4,796	sf
Total	**14,388**	**sf**

4. Elevation of all structures

The proposed building height, based upon IBC's average grade plane method, is approximately 34.79'.

5. Proposed fire protection of all structures

   A sprinkler system is proposed for the building, served by a 6" fire service. Each building will have a sprinkler room on the ground floor that will be easily accessible by the fire department. Fire flows and requirements for system storage or booster pumping are subject to the fire professional design which will be performed prior to the request for a building permit.

6. Hydrant locations

   For Phase 3, there is a hydrant on the corner of Lancaster and Chestnut. Hydrant flow data from the Portland Water District once received may be made available to the Fire Department upon request.

7. Water main size and location

   A new 12" water main will be installed in Lancaster Street as part of this project, directly along its frontage.

8. Access to all structures [min. 2 sides]

   Access is provided directly from Lancaster and Chestnut Streets.

9. Code summaries will be provided by the Architects upon request.

NFPA 1 – Chapter 18 Fire Department Access and Water Supply

18.2 Fire Department Access:

The site locations are in a densely developed area and are surrounded by four public streets. The following pavement street widths are currently available:

- Lancaster Street: 35.93' wide and 19.93' wide between parking stalls and edge of pavement.
- Cedar Street: 20.7 feet wide and 11.7 feet wide between parking stall and edge of pavement.
- Oxford Street: 31.6 feet and 23.6 feet wide between parking stall and edge of pavement.
- Chestnut Street: 34.08 feet and 16.02 feet wide between parking stall and edge of pavement.

Per NFPA 1 – Chapter 18.2.3.2.2.1, all first story floors shall be located not more than 450 feet from a Fire Department access road.

City of Portland Technical Manual – Section 3 Public Safety

3.4.1 Every dead-end roadway more than one hundred fifty (150') feet in length shall provide a turnaround at the closed end. Turnarounds shall be designed to facilitate future street connectivity and shall always be designed to the right (refer to Figure I-5).

Response: Not applicable

3.4.2 Where possible, developments shall provide access for Fire Department vehicles to at least two sides of all structures. Access may be from streets, access roads, emergency access lanes, or parking areas.

Response: All buildings are accessible from at least 2 sides.

3.4.3 Building setbacks, where required by zoning, shall be adequate to allow for emergency vehicle access and related emergency response activities and shall be evaluated based on the following factors:

- *Building Height.*
- *Building Occupancy.*
- *Construction Type.*
- *Impediments to the Structures.*
- *Safety Features Provided.*

Response: The proposed development layout has contemplated emergency access conditions and provides for safe and efficient access.

3.4.4. Fire Dept. access roads shall extend to within 50' of an exterior door providing access to the interior of the structure.

Response: All buildings will be provided with exterior doors that will be within 50' of a Fire Department access route.

3.4.5. Site access shall provide a minimum of nine (9) feet clearance height to accommodate ambulance access.

Response: The proposed site maintains the required clearance height of nine feet in all cases.

3.4.6. Elevators shall be sized to accommodate an 80 x 24-inch stretcher.

Response: The proposed elevators will meet this requirement.

3.4.7. All structures are required to display the assigned street number. Numbers shall be clearly visible from the public right of way.

Response: The applicant is currently working with the City's Public Works Division to assign street addresses and numbering to meet City Standards.

Thank you for your review. Please let me know if you have any additional questions or comments.

Sincerely,

Sam Lebel

Sam Lebel, P.E.
Project Manager
Acorn Engineering, Inc.

M. Wastewater Capacity

The following tables have been prepared to estimate the existing and proposed flows for each phase.

Table 1: Phase 1 – 207 & 197 Oxford Street - Estimate of Design Flows			
Classification of Water Demand	**Uses and Use Count**	**Gallons per Day per Use**	**Total Gallons per Day**
Existing			
197 Oxford Street & 31 Cedar Street PWD recorded flow data:	-	-	3,215
Proposed			
Studios:	31	120	3,720
One-Bedroom:	17	120	2,040
		Total Existing	**3,215**
		Total Proposed	**5,760**
		Net Change	**2,545**
*Values based on STATE OF MAINE: SUBSURFACE WASTEWATER DISPOSAL RULES, most recent edition			

Table 2: Phase 2 – 50 Cedar Street - Estimate of Design Flows			
Classification of Water Demand	**Uses and Use Count**	**Gallons per Day per Use**	**Total Gallons per Day**
Existing			
Vacant lot	-	-	0
Proposed			
Studios:	8	120	960
One-Bedroom:	16	120	1,920
		Total Existing	**0**
		Total Proposed	**2,880**
		Net Change	**2,880**
*Values based on STATE OF MAINE: SUBSURFACE WASTEWATER DISPOSAL RULES, most recent edition			

Table 3: Phase 3 – 158 Lancaster Street - Estimate of Design Flows			
Classification of Water Demand	**Uses and Use Count**	**Gallons per Day per Use**	**Total Gallons per Day**
Existing			
Vacant lot	-	-	0
Proposed			
Studios:	8	120	960
One-Bedroom:	16	120	1,920
		Total Existing	**0**
		Total Proposed	**2,880**
		Net Change	**2,880**
*Values based on STATE OF MAINE: SUBSURFACE WASTEWATER DISPOSAL RULES, most recent edition			

As requested by DPW, it's anticipated that each phase will offset the new sewer flows by providing on-site stormwater detention. Please refer to the Stormwater Management Report for more information.

CITY OF PORTLAND WASTEWATER CAPACITY APPLICATION

Portland Dept. of Public Works -
Water Resources
212 Canco Road
Portland, Maine 04103

Date: April, 2024

Bradley Roland, P.E.
Water Resources Division
Department of Public Works
212 Canco Road
Portland, ME 04103

1. Please, Submit Utility, Site, and Locus Plans.

Site Address: 197 Oxford Street Portland, ME 04101

Chart Block Lot Number: 026-B-012 & B-018

Proposed Use: Residential Building
Previous Use: Vacant Office & Apartment Buildings
Existing Sanitary Flows: 3.215 GPD
Existing Process Flows: GPD
Description and location of City sewer that is to receive the proposed building sewer lateral.

18" Combined Sewer within Chestnut Street

Site Category

Commercial *(see part 4 below)*	
Industrial *(complete part 5 below)*	
Governmental	
Residential	X
Other *(specify)*	

Clearly, indicate the proposed connections, on the submitted plans.

2. Please, Submit Contact Information.

City Planner's Name: Matt Grooms Phone:
Owner/Developer Name: Avesta Housing Development
Owner/Developer Address: 307 Cumberland Ave, Portland, ME 04101
Phone: 207-553-7777 Fax: E-mail: celliott@avestahousing.org
Engineering Consultant Name: Sam Lebel, Acorn Engineering
Engineering Consultant Address: 500 Washington Ave, Suite 202, Portland, ME 04103 (P.O. Box: 3372)
Phone: 207-775-2655 Fax: E-mail: slebel@acorn-engineering.com

Note: Consultants and Developers should allow +/- 15 days, for capacity status, prior to Planning Board Review.

3. Please, Submit Domestic Wastewater Design Flow Calculations.

Estimated Domestic Wastewater Flow Generated: 5,760 GPD
Peaking Factor/ Peak Times: Diurnal Residential Flow Pattern
Specify the source of design guidelines: *(i.e.* *"Handbook of Subsurface Wastewater Disposal in Maine,"* "*Plumbers and Pipe Fitters Calculation Manual,"* *Portland Water District Records,* *Other (specify)*
State of Maine, Subsurface Wastewater Disposal Rules

Note: Please submit calculations showing the derivation of your design flows, either on the following page, in the space provided, or attached, as a separate sheet.

4. Please, Submit External Grease Interceptor Calculations.

Total Drainage Fixture Unit (DFU) Values: NA

Size of External Grease Interceptor: NA

Retention Time: NA

Peaking Factor/ Peak Times: NA

Note: In determining your restaurant process water flows, and the size of your external grease interceptor, please use The Uniform Plumbing Code. Note: In determining the retention time, sixty (60) minutes is the minimum retention time. Note: Please submit detailed calculations showing the derivation of your restaurant process water design flows, and please submit detailed calculations showing the derivation of the size of your external grease interceptor, either in the space provided below, or attached, as a separate sheet.

5. Please, Submit Industrial Process Wastewater Flow Calculations

Estimated Industrial Process Wastewater Flows Generated: NA GPD

Do you currently hold Federal or State discharge permits? Yes ____ No ____

Is the process wastewater termed categorical under CFR 40? Yes ____ No ____

OSHA Standard Industrial Code (SIC): *(http://www.osha.gov/oshstats/sicser.html)*

Peaking Factor/Peak Process Times: _____

Note: On the submitted plans, please show where the building's domestic sanitary sewer laterals, as well as the building's industrial-commercial process wastewater sewer laterals exits the facility. Also, show where these building sewer laterals enter the city's sewer. Finally, show the location of the wet wells, control manholes, or other access points; and, the locations of filters, strainers, or grease traps.

Note: Please submit detailed calculations showing the derivation of your design flows, either in the space provided, or attached, as a separate sheet.

CITY OF PORTLAND WASTEWATER CAPACITY APPLICATION

Portland Dept. of Public Works -
Water Resources
212 Canco Road
Portland, Maine 04103

Date: April, 2024

Bradley Roland, P.E.
Water Resources Division
Department of Public Works
212 Canco Road
Portland, ME 04103

1. Please, Submit Utility, Site, and Locus Plans.

Site Address: 50 Cedar Street Portland, ME 04101

Chart Block Lot Number: 033 - H009

Proposed Use: Residential Building
Previous Use: Surface Parking Lot
Existing Sanitary Flows: 0 GPD
Existing Process Flows: GPD
Description and location of City sewer that is to receive the proposed building sewer lateral.

18" Combined Sewer within Cedar Street

Site Category:

Commercial *(see part 4 below)*	
Industrial *(complete part 5 below)*	
Governmental	
Residential	X
Other *(specify)*	

Clearly, indicate the proposed connections, on the submitted plans.

2. Please, Submit Contact Information.

City Planner's Name: Matt Grooms Phone:
Owner/Developer Name: Reveler Development
Owner/Developer Address: 188 State Street, 3rd floor, Portland, ME 04101
Phone: 207-939-5432 Fax: E-mail: mbarton@reveler.com
Engineering Consultant Name: Sam Lebel, Acorn Engineering
Engineering Consultant Address: 500 Washington Ave, Suite 202, Portland, ME 04103 (P.O. Box: 3372)
Phone: 207-775-2655 Fax: E-mail: slebel@acorn-engineering.com

Note: Consultants and Developers should allow +/- 15 days, for capacity status, prior to Planning Board Review.

3. Please, Submit Domestic Wastewater Design Flow Calculations.

Estimated Domestic Wastewater Flow Generated: 2,880 GPD
Peaking Factor/ Peak Times: Diurnal Residential Flow Pattern
Specify the source of design guidelines: *(i.e.* "*Handbook of Subsurface Wastewater Disposal in Maine,*" "*Plumbers and Pipe Fitters Calculation Manual,*" *Portland Water District Records, Other (specify)*
State of Maine, Subsurface Wastewater Disposal Rules

Note: Please submit calculations showing the derivation of your design flows, either on the following page, in the space provided, or attached, as a separate sheet.

4. Please, Submit External Grease Interceptor Calculations.

Total Drainage Fixture Unit (DFU) Values: NA

Size of External Grease Interceptor: NA

Retention Time: NA

Peaking Factor/ Peak Times: NA

Note: In determining your restaurant process water flows, and the size of your external grease interceptor, please use The Uniform Plumbing Code. Note: In determining the retention time, sixty (60) minutes is the minimum retention time. Note: Please submit detailed calculations showing the derivation of your restaurant process water design flows, and please submit detailed calculations showing the derivation of the size of your external grease interceptor, either in the space provided below, or attached, as a separate sheet.

5. Please, Submit Industrial Process Wastewater Flow Calculations

Estimated Industrial Process Wastewater Flows Generated: NA GPD

Do you currently hold Federal or State discharge permits? Yes ____ No ____

Is the process wastewater termed categorical under CFR 40? Yes ____ No ____

OSHA Standard Industrial Code (SIC): *(http://www.osha.gov/oshstats/sicser.html)*

Peaking Factor/Peak Process Times: _____

Note: On the submitted plans, please show where the building's domestic sanitary sewer laterals, as well as the building's industrial-commercial process wastewater sewer laterals exits the facility. Also, show where these building sewer laterals enter the city's sewer. Finally, show the location of the wet wells, control manholes, or other access points; and, the locations of filters, strainers, or grease traps.

Note: Please submit detailed calculations showing the derivation of your design flows, either in the space provided, or attached, as a separate sheet.

CITY OF PORTLAND WASTEWATER CAPACITY APPLICATION

Portland Dept. of Public Works -
Water Resources
212 Canco Road
Portland, Maine 04103

Date: April, 2024 (Rev. Sept 2024)

Bradley Roland, P.E.
Water Resources Division
Department of Public Works
212 Canco Road
Portland, ME 04103

1. Please, Submit Utility, Site, and Locus Plans.

Site Address: _____

Chart Block Lot Number: 026 - A-001

Proposed Use: Residential Building
Previous Use: Surface Parking Lot
Existing Sanitary Flow 158 Lancaster Street Portland, ME 04101
Existing Process Flows: 0 GPD
Description and location of City sewer that is to receive the proposed building sewer lateral.

18" Combined Sewer within Chestnut Street

Site Category:

	Commercial *(see part 4 below)*
	Industrial *(complete part 5 below)*
	Governmental
X	Residential
	Other *(specify)*

Clearly, indicate the proposed connections, on the submitted plans.

2. Please, Submit Contact Information.

City Planner's Name: Eric Freeman Phone: _____
Owner/Developer Name: Reveler Development
Owner/Developer Address: 188 State Street, 3rd floor, Portland, ME 04101
Phone: 207-939-5432 Fax: _____ E-mail: mbarton@reveler.com
Engineering Consultant Name: Sam Lebel, Acorn Engineering
Engineering Consultant Address: 500 Washington Ave, Suite 202, Portland, ME 04103 (P.O. Box: 3372)
Phone: 207-775-2655 Fax: _____ E-mail: slebel@acorn-engineering.com

Note: Consultants and Developers should allow +/- 15 days, for capacity status, prior to Planning Board Review.

3. Please, Submit Domestic Wastewater Design Flow Calculations.

Estimated Domestic Wastewater Flow Generated: 2,880 GPD
Peaking Factor/ Peak Times: Diurnal Residential Flow Pattern
Specify the source of design guidelines: *(i.e.__"Handbook of Subsurface Wastewater Disposal in Maine,"*
"*Plumbers and Pipe Fitters Calculation Manual,"* __ *Portland Water District Records,* __ *Other (specify)*
State of Maine, Subsurface Wastewater Disposal Rules

Note: Please submit calculations showing the derivation of your design flows, either on the following page, in the space provided, or attached, as a separate sheet.

4. Please, Submit External Grease Interceptor Calculations.

Total Drainage Fixture Unit (DFU) Values: NA

Size of External Grease Interceptor: NA

Retention Time: NA

Peaking Factor/ Peak Times: NA

Note: In determining your restaurant process water flows, and the size of your external grease interceptor, please use The Uniform Plumbing Code. Note: In determining the retention time, sixty (60) minutes is the minimum retention time. Note: Please submit detailed calculations showing the derivation of your restaurant process water design flows, and please submit detailed calculations showing the derivation of the size of your external grease interceptor, either in the space provided below, or attached, as a separate sheet.

5. Please, Submit Industrial Process Wastewater Flow Calculations

Estimated Industrial Process Wastewater Flows Generated: NA GPD

Do you currently hold Federal or State discharge permits? Yes ____ No ____

Is the process wastewater termed categorical under CFR 40? Yes ____ No ____

OSHA Standard Industrial Code (SIC): *(http://www.osha.gov/oshstats/sicser.html)*

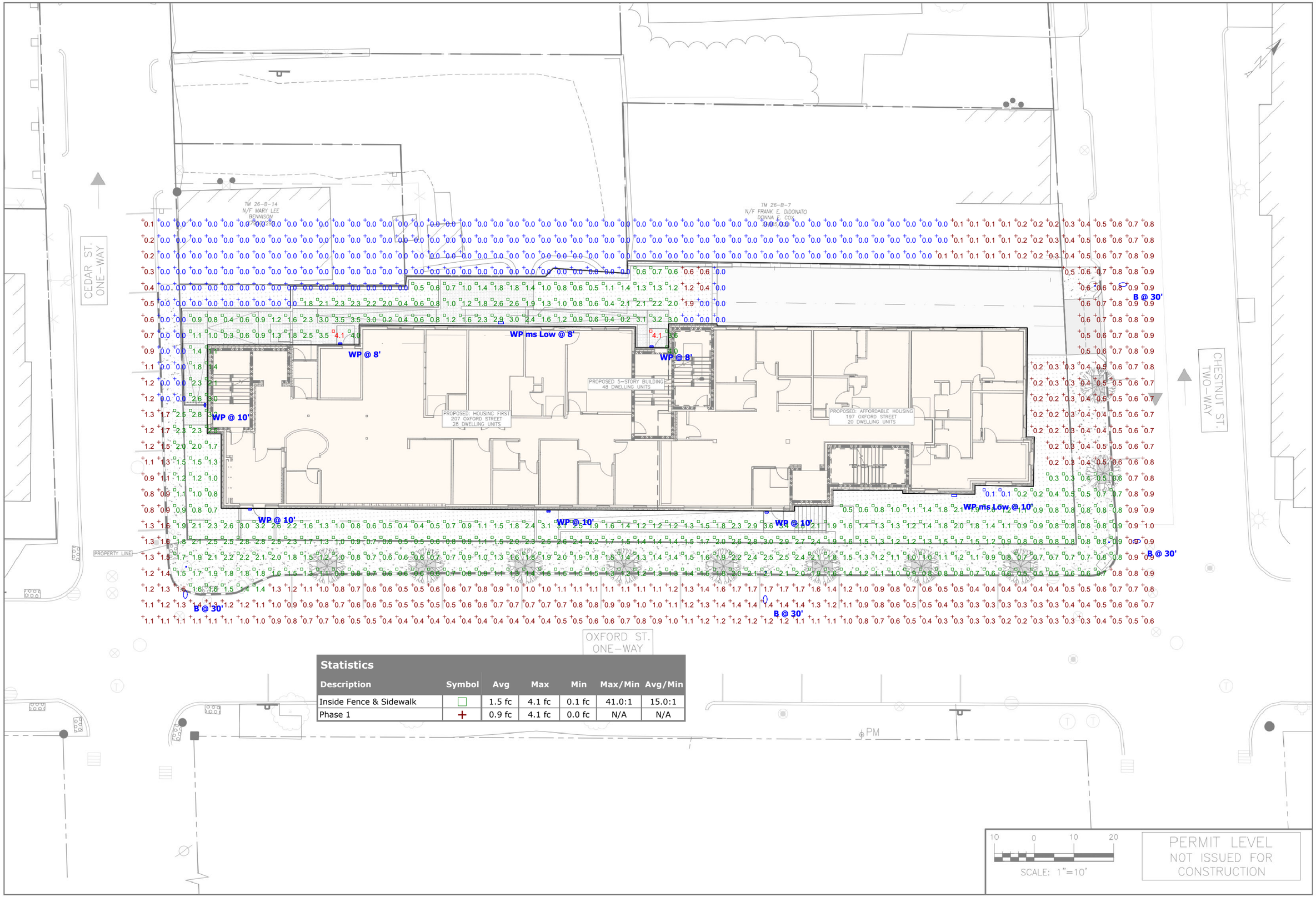
Peaking Factor/Peak Process Times: _____

Note: On the submitted plans, please show where the building's domestic sanitary sewer laterals, as well as the building's industrial-commercial process wastewater sewer laterals exits the facility. Also, show where these building sewer laterals enter the city's sewer. Finally, show the location of the wet wells, control manholes, or other access points; and, the locations of filters, strainers, or grease traps.

Note: Please submit detailed calculations showing the derivation of your design flows, either in the space provided, or attached, as a separate sheet.

N. Lighting

Please find the attached photometric plan for Phase 1, 197 Oxford Street. The remaining photometric plans and associated cut sheets of the overall projects proposed site lighting will be uploaded to the City's EPlan system when they become available.



Statistics

Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
Inside Fence & Sidewalk	□	1.5 fc	4.1 fc	0.1 fc	41.0:1	15.0:1
Phase 1	+	0.9 fc	4.1 fc	0.0 fc	N/A	N/A

ISSUED FOR	BY	DATE
JOINT MAJOR SITE PLAN APPLICATION	SJL	4/10/24

DRAWING NAME: PHASE 1 – SITE PLAN

PROJECT NAME: PHASE 1 – PHASED OXFORD STREET REDEVELOPMENT

CLIENT: AVESTA HOUSING
307 CUMBERLAND AVE, PORTLAND, ME 04101

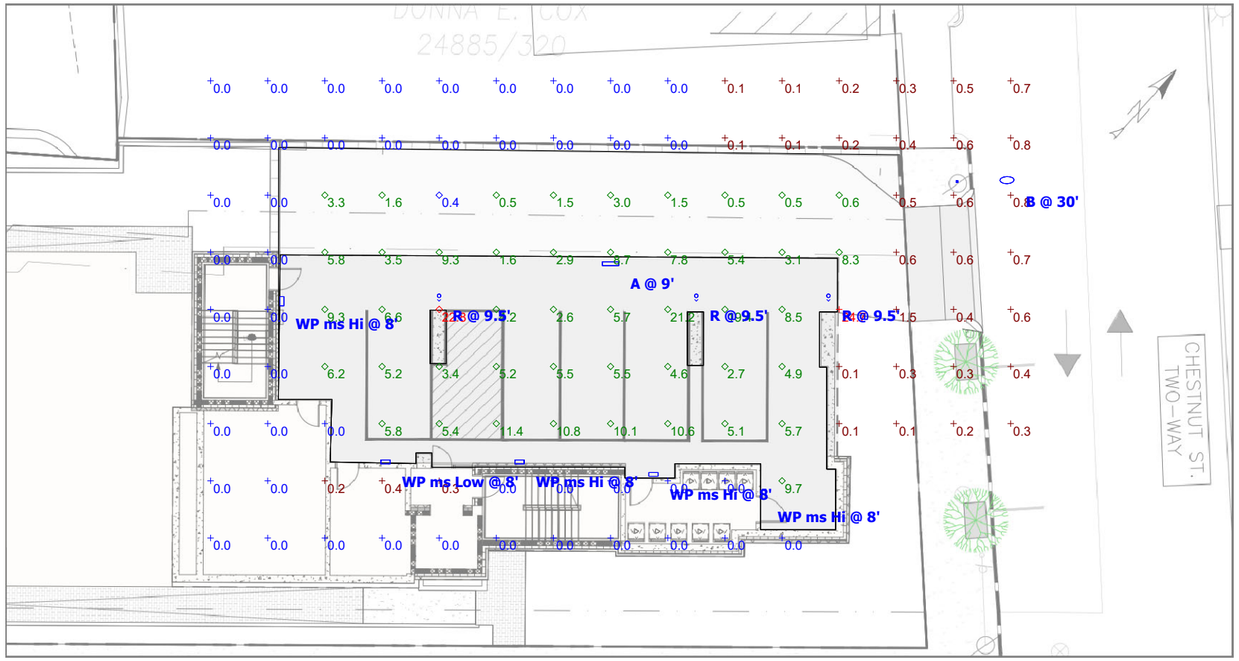
ACORN ENGINEERING, INC.

THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM ACORN ENGINEERING, INC. ANY ALTERATIONS, AUTHORIZED OR OTHERWISE, SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO ACORN ENGINEERING, INC.

ACORN ENGINEERING, INC.
PO BOX 3372, PORTLAND MAINE 04104
(207) 775-2655

FILE: 1212.1_AE_CIVIL-4-4-24
JN: 1212.1
SCALE: AS NOTED
DESIGNED BY: SJL
DRAWN BY: DNM
CHECKED BY: SJL

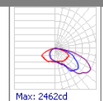
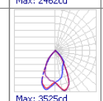
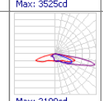
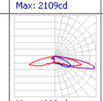
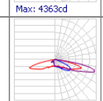
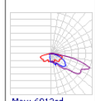
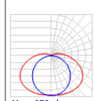
DRAWING NO.
C-11



Statistics

Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
Covered Parking & Drive Aisle	◇	6.1 fc	22.8 fc	0.4 fc	57.0:1	15.3:1

Schedule

Symbol	Label	Image	Manufacturer	Catalog	Description	Number Lamps	Lamp Output	LLF	Input Power	Polar Plot	Notes
	B		Cree Lighting	RSWS-B-HT-3ME-5L-30K7-UL-xx-N CONFIGURED FROM RSWS-B-HT-3ME-7L-40K7-UL-GY-N	CONFIGURED FROM RSW Small Luminaire, Type III Medium Distribution, 7L Lumen Package, 4000K, 70CRI	1	5000	0.9	42		
	R		Lithonia Lighting	LDN6 30/40 LW6WR	6IN LDN WALLWASH, 3000K, 4000LM, WHITE, CRI80	1	3461	0.9	1.1542		
	WP		Holophane	HLWPC2 P10 30K XX T3M	Wallpack Full Cutoff LED, LED Performance Package P10, 3000 series CCT, Voltage, Type III Medium	1	2800	0.9	28		
	WP ms Hi		Holophane	HLWPC2 P20 30K XX T2M	Wallpack Full Cutoff LED, LED Performance Package P10, 3000 series CCT, Voltage, Type II Medium	1	5272	0.9	47		1 MASL and MASH sensors are not allowed with P10 lumen package option selected.
	WP ms Low		Holophane	HLWPC2 P20 30K XX T2M	Wallpack Full Cutoff LED, LED Performance Package P10, 3000 series CCT, Voltage, Type II Medium	1	5272	0.27	14		2 MASL and MASH options reduce luminaire light output to roughly 30% (not full OFF) when no motion is detected. When motion is detected, light output temporarily increases to 100%.
	X-7D		Holophane	ESL3 P20S 30K XXXXX TG2	Esplanade style housings Standard housing, 3000 series CCT Auto-sensing voltage, Type IV, Medium, (Standard) or Type III, Short, (Uplight)	1	11106	0.9	72.77		
	A		Holophane	EMS L24 4000LM LPAFL PGD 80CRI 30K	EMS LED 24", 4,000 lumens, acrylic, low profile frosted lens, parking garage distribtuion, 80 CRI, 3000 K	1	3679	0.9	25.95		

Catalog Number	HLWPC2 P10 30K T3M MVOLT BZSDP AO
Notes	Type WP

HLWPC2

Wallpack® Full Cutoff LED





Mechanical

- Heavy grade A360 cast aluminum (aluminum with <1% copper)
- Exterior parts are protected by a zinc-infused Super Durable TGIC thermoset powder coat finish that provides superior resistance to corrosion and weathering
- Mounts to a standard junction box
- Wet location listed
- IP65 rated housing, down light only
- ¾" painted threaded entry(¾" - 14 NPT) on each side and on top, accepts ¾" and ½" conduit
- ¾" threaded plugs are painted on each side
- Vibration tested to 1.5G per ANSI C136.31.

Electrical

- Certified by UL or CSA
- Rated for -40°C (-40°F) minimum ambient
- A programmable electronic driver with 0-10V control leads
- Available in: 120-277V 50/60 Hz and 347-480V 50/60 Hz,
- Standard: 3000K, 4000K and 5000K CCT (>70 CRI)
- Optional >80 CRI (3000K, 4000K and 5000K CCT)
- Internally mounted emergency battery backup for operation in an ambient temperature ranging from -20°C (-4°F) to 30°C (86°F), available with P10 thru P40 performance packages, non CEC compliant
- All surge protection meets ANSI/IEEE C62.41.2 10kV/10kA
- Standard surge protection is 20kV/10kA per ANSI C136.2
- Optional surge protection is 10kV/5kA per ANSI C136.2

Optical

- Light engine housing is IP66 rated
- Acrylic optical system
- Type V: E (entry), M (medium), R (rectangle) & W (wide)
- Asymmetric

Controls

- Field adjustable output (AO)
- Button style photocontrol (PE)
- Motion sensor & ambient photocontrol combination for mounting low (8-15') (MASL) and high (15-30') (MASH) mounting heights

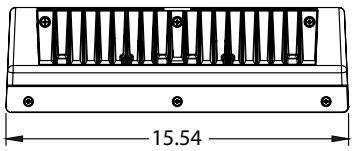
Certification and Standards

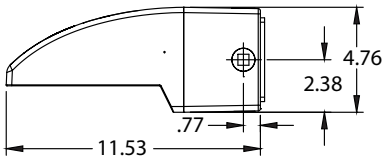
- Luminaire is CSA listed, US and Canada
- Suitable for operation in an ambient temperature up to 40°C/104°F per UL or CSA certification
- Design lights Consortium® (DLC) qualified product. Not all versions of this product may be DLC qualified. Please check the DLC Qualified Products List at www.designlights.org/QPL to confirm which versions are qualified.
- LM-79 compliant
- The projected LED Lumen Maintenance shall be based only on IES LM-80-08 and TM-21

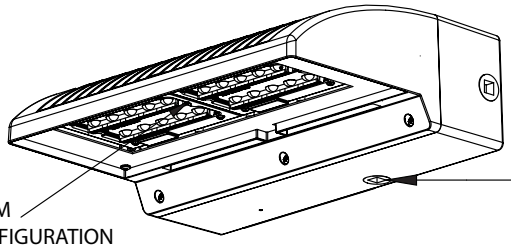
Warranty

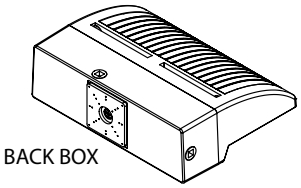
5-year limited warranty. This is the only warranty provided and no other statements in this specification sheet create any warranty of any kind. All other express and implied warranties are disclaimed. Complete warranty terms located at: www.acuitybrands.com/support/warranty/terms-and-conditions.

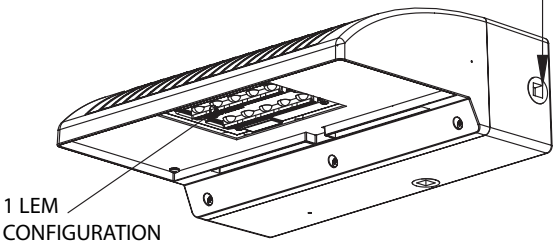
Note: Actual performance may differ as a result of end-user environment and application.
All values are design or typical values, measured under laboratory conditions at 25 °C.
Specifications subject to change without notice.











Note: Maximum weight 22 lbs.

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HLWPC2

Wallpack® Full Cutoff LED

ORDERING INFORMATION

Example: HLWPC2 P20 40K AS T3M BZSDP

Series	Lumen Package	Color Temperature	Voltage	Optics	Color	CRI
HLWPC2 Wallpack Full Cutoff LED	1 LEM Package P10 3,100 lm P20 5,600 lm 2 LEM Package P30 7,800 lm P40 9,900 lm P50 11,700 lm (Nominal Lumens, 4000K)	AMB True Amber 30K 3,000 K CCT 40K 4,000 K CCT 50K 5,000 K CCT	120 120 volts 208 208 volts 240 240 volts 277 277 volts 347 347 volts 480 480 volts HVOLT 347/480 volts MVOLT 120-277 volts	T2S Type 2 Short T2M Type 2 Medium T3S Type 3 Short T3M Type 3 Medium T4M Type 4 Medium TFTM Forward Throw Medium ASYDF Asymmetric Diffuse SYMDF Symmetric Diffuse	BKSDP Black BZSDP Bronze GYSDP Grey WHSDP White	Blank 70 CRI (STD) 80CRI 80 CRI

Options:

Adjustable/Programmable Options

A0 Field Adjustable Output

Circuit Options

2CI 2 Independent Circuits

Control - Motion Sensor Options

MASL[1,2] Motion / Ambient Sensor, 8-15' Mounting Height Ambient Sensor Enabled at 5 FC

MASH[1,2] Motion / Ambient Sensor, 15-30' Mounting Height Ambient Sensor Enabled at 5 FC

Control - Photocontrol Options

PE Button Style Photocontrol

P3 N.E.M.A. Twistlock Receptacle Mount -3 PIN

P7 N.E.M.A. Twistlock Receptacle Mount -7 PIN

PCLL DTL Long Life Twistlock Photocontrol for Solid State

PSC Shorting Cap

Fuse Option

SF Single Fuse

DF Double Fuse

Safety Option

EM Integral Emergency Battery

TP Tamper Resistant Hardware

Surge Protection Option - 20kV/10kA is Standard

10KV 10kV/5kA Surge Protection, in place of 20kV/10kA

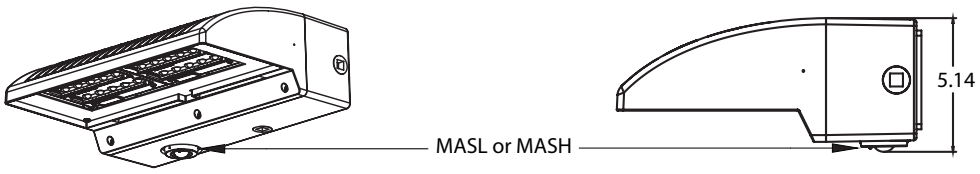
Notes

1 MASL and MASH sensors are not allowed with P10 lumen package option selected.

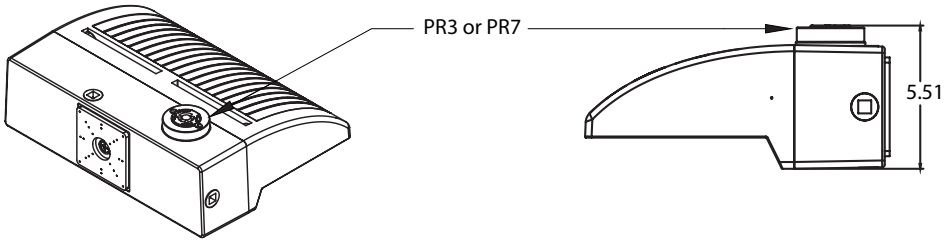
2 MASL and MASH options reduce luminaire light output to roughly 30% (not full OFF) when no motion is detected. When motion is detected, light output temporarily increases to 100%.

Options Location

Motion/Ambient Sensor mount options for Low (8-15') (MASL) and Height (15-30') (MASH) applications

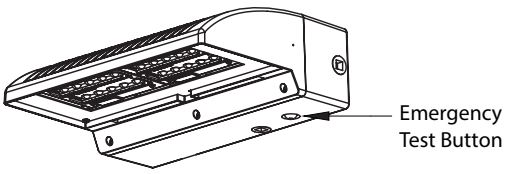


N.E.M.A. Twistlock Receptacle P3 and P7 Options, P7 Shown

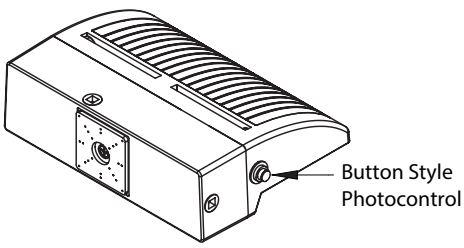


Internal Emergency Battery Test Button - EM Option

Test Button - EM Option



Button Style Photocontrol - PE Option



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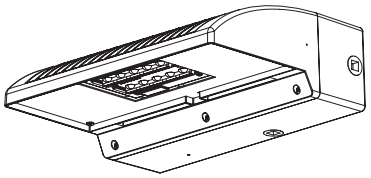
Driver & LEM Configuration Based on Circuit Options

Number of LEMs & Drivers / Circuit		Sinlge Circuit (std.)		Two Circuit (2CI option)	
		LEMs	Drivers	LEMs	Drivers
Lumen Maintenance Factor	P10	1	1	-	-
	P20	1	1	2	2
	P30	2	1	2	2
	P40	2	1	2	2
	P50	2	1	-	-

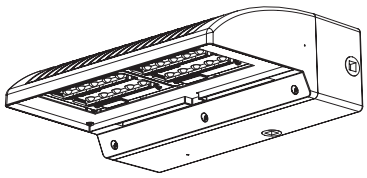
1 LEM Luminaire



SPD Based on Circuit Options

Number of LEMs & Drivers / Circuit		Sinlge Circuit (std.)				Two Circuit (2CI option)			
		LEMs	Drivers	No. of SPDs	SPD	LEMs	Drivers	No. of SPDs	SPD
Lumen Maintenance Factor	P10	1	1	1	20kV/10kA	-	-	-	-
	P20	1	1	1	20kV/10kA	2	2	2	10kV/5kA
	P30	2	1	1	20kV/10kA	2	2	2	10kV/5kA
	P40	2	1	1	20kV/10kA	2	2	2	10kV/5kA
	P50	2	1	1	20kV/10kA	-	-	-	-

2 LEM Luminaire



Projected LED Lumen Maintenance

Data references the extrapolated performance projections for the platform noted in a 25°C ambient, based on 6,000 hours of LED testing (tested per IESNA LM-80-08 and projected per IESNA TM-21-11).

To calculate LLF, use the lumen maintenance factor that corresponds to the desired number of operating hours below. For other lumen maintenance values, contact factory.

The italicized data is extrapolated beyond the TM-21 standard.

E = (LM) x (CU) x (LAT) x (LLD)
LM and CU are obtained from published photometry.

Operating Hours (Standard)		0	25,000	30,000	36,000	45,000	50,000	60,000	75,000	100,000
Lumen Maintenance Factor	P10	1	0.98	0.97	0.96	0.96	0.95	0.95	0.94	0.92
	P20	1	0.97	0.95	0.94	0.93	0.92	0.90	0.88	0.85
	P30	1	0.98	0.97	0.96	0.96	0.95	0.95	0.94	0.92
	P40	1	0.97	0.95	0.94	0.93	0.92	0.90	0.88	0.85

Operating Hours (2CI Option)		0	25,000	30,000	36,000	45,000	50,000	60,000	75,000	100,000
Lumen Maintenance Factor	P10	1	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
	P20	1	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
	P30	1	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
	P40	1	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97

Lumen Ambient Temperature (LAT) Multipliers

Use these factors to determine relative lumen output for average ambient temperatures from 0-40°C (32-104°F).

Single Circuit Application

Ambient		P10	P20	P30	P40	P50
0°C	32°F	1.02	1.03	1.03	1.04	1.05
10°C	50°F	1.01	1.02	1.02	1.03	1.03
20°C	68°F	1.01	1.01	1.01	1.01	1.01
25°C	77°F	1.00	1.00	1.00	1.00	1.00
30°C	86°F	0.99	0.99	0.99	0.99	0.99
40°C	104°F	0.98	0.97	0.98	0.97	0.97

Optional Two Independent Circuit (2CI) Application

Ambient		P20	P30	P40
0°C	32°F	1.02	1.02	1.02
10°C	50°F	1.01	1.01	1.02
20°C	68°F	1.00	1.01	1.01
25°C	77°F	1.00	1.00	1.00
30°C	86°F	0.99	0.99	0.99
40°C	104°F	0.98	0.98	0.98

Electrical Load

Single Circuit Application

LEDs	Drive Current (mA)	System Watts/ Circuit	Current (A)					
			120	208	240	277	247	480
P10	700	28	0.23	0.13	0.12	0.10	0.08	0.06
P20	1400	47	0.41	0.24	0.20	0.18	0.14	0.10
P30	1050	71	0.63	0.37	0.32	0.29	0.22	0.18
P40	1420	95	0.78	0.45	0.40	0.35	0.27	0.20
P50	1720	115	0.95	0.55	0.48	0.42	0.33	0.24

Optional Two Independent Circuit (2CI) Application

LEDs	Drive Current (mA)	System Watts/ Circuit	Current (A)					
			120	208	240	277	247	480
P10	-	-	-	-	-	-	-	-
P20	700	22	0.10	0.06	0.05	0.04	-	-
P30	1000	32	0.14	0.08	0.07	0.06	-	-
P40	1250	47	0.18	0.10	0.09	0.08	-	-
P50	-	-	-	-	-	-	-	-

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Operating Characteristics

LED Package	Distribution	System Watts	30K (3000K, 70 CRI)					40K (4000K, 70 CRI)					50K (5000K, 70 CRI)				
			Lumens	LPW	B	U	G	Lumens	LPW	B	U	G	Lumens	LPW	B	U	G
P10	T2S	28	2,904	104	1	0	1	3,128	112	1	0	1	3,168	113	1	0	1
	T2M	28	2,887	103	1	0	1	3,110	111	1	0	1	3,149	112	1	0	1
	T3S	28	2,964	106	1	0	1	3,194	114	1	0	1	3,234	116	1	0	1
	T3M	28	2,801	100	1	0	1	3,017	108	1	0	1	3,055	109	1	0	1
	T4M	28	2,858	102	1	0	1	3,079	110	1	0	1	3,118	111	1	0	1
	TFTM	28	2,979	106	1	0	1	3,209	115	1	0	1	3,250	116	1	0	1
	SYMDF	28	2,771	99	1	0	1	2,986	107	1	0	1	3,023	108	1	0	1
	ASYDF	28	2,756	98	1	0	1	2,969	106	1	0	1	3,007	107	1	0	1
P20	T2S	47	5,303	113	1	0	1	5,713	122	1	0	1	5,785	123	1	0	1
	T2M	47	5,272	112	1	0	2	5,680	121	1	0	2	5,751	122	1	0	2
	T3S	47	5,414	115	1	0	2	5,832	124	1	0	2	5,906	126	1	0	2
	T3M	47	5,115	109	1	0	2	5,510	117	1	0	2	5,580	119	1	0	2
	T4M	47	5,220	111	1	0	2	5,623	120	1	0	2	5,694	121	1	0	2
	TFTM	47	5,440	116	1	0	2	5,861	125	1	0	2	5,935	126	1	0	2
	SYMDF	47	5,062	108	2	0	2	5,453	116	2	0	2	5,522	117	2	0	2
	ASYDF	47	5,033	107	1	0	1	5,422	115	2	0	1	5,491	117	2	0	1
P30	T2S	71	7,319	103	2	0	2	7,884	111	2	0	2	7,984	112	2	0	2
	T2M	71	7,276	102	2	0	2	7,838	110	2	0	2	7,937	112	2	0	2
	T3S	71	7,472	105	1	0	2	8,049	113	2	0	2	8,151	115	2	0	2
	T3M	71	7,059	99	2	0	2	7,604	107	2	0	2	7,700	108	2	0	2
	T4M	71	7,203	101	2	0	2	7,760	109	2	0	2	7,858	111	2	0	2
	TFTM	71	7,508	106	1	0	2	8,088	114	2	0	2	8,190	115	2	0	2
	SYMDF	71	6,985	98	2	0	2	7,525	106	3	0	3	7,620	107	3	0	3
	ASYDF	71	6,946	98	2	0	2	7,483	105	2	0	2	7,578	107	2	0	2
P40	T2S	95	9,320	98	2	0	2	10,041	106	2	0	2	10,168	107	2	0	2
	T2M	95	9,266	98	2	0	2	9,982	105	2	0	3	10,108	106	2	0	3
	T3S	95	9,515	100	2	0	2	10,251	108	2	0	2	10,381	109	2	0	2
	T3M	95	8,989	95	2	0	2	9,684	102	2	0	2	9,807	103	2	0	2
	T4M	95	9,174	97	2	0	2	9,883	104	2	0	3	10,008	105	2	0	3
	TFTM	95	9,561	101	2	0	2	10,300	108	2	0	2	10,431	110	2	0	2
	SYMDF	95	8,896	94	3	0	3	9,583	101	3	0	3	9,705	102	3	0	3
	ASYDF	95	8,846	93	2	0	2	9,530	100	2	0	2	9,650	102	2	0	2
P50	T2S	115	10,972	95	2	0	2	11,820	103	2	0	2	11,969	104	2	0	2
	T2M	115	10,908	95	2	0	3	11,751	102	2	0	3	11,900	103	2	0	3
	T3S	115	11,202	97	2	0	2	12,067	105	2	0	2	12,220	106	2	0	2
	T3M	115	10,582	92	2	0	2	11,400	99	2	0	3	11,544	100	2	0	3
	T4M	115	10,799	94	2	0	3	11,634	101	2	0	3	11,781	102	2	0	3
	TFTM	115	11,256	98	2	0	2	12,126	105	2	0	2	12,279	107	2	0	2
	SYMDF	115	10,472	91	3	0	3	11,282	98	3	0	3	11,424	99	3	0	3
	ASYDF	115	10,414	91	2	0	2	11,219	98	3	0	2	11,361	99	3	0	2

Use the following to scale 70CRI to 80CRI.

CCT	Multiplier
3000K	0.909
4000K	0.886
5000K	0.865

All IES files available on product web page

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Operating Characteristics (continued)

LED Package	Distribution	System Watts	30K + 2CI Option (3000K, 70 CRI)					40K + 2CI Option (4000K, 70 CRI)					50K + 2CI Option (5000K, 70 CRI)				
			Lumens	LPW	B	U	G	Lumens	LPW	B	U	G	Lumens	LPW	B	U	G
P20	T2S	49	5,015	102	1	0	1	5,402	110	1	0	1	5,471	112	1	0	1
	T2M	49	4,985	102	1	0	2	5,371	110	1	0	2	5,439	111	1	0	2
	T3S	49	5,120	104	1	0	1	5,515	113	1	0	2	5,585	114	1	0	2
	T3M	49	4,837	99	1	0	2	5,210	106	1	0	2	5,276	108	1	0	2
	T4M	49	4,936	101	1	0	2	5,317	109	1	0	2	5,385	110	1	0	2
	TFTM	49	5,144	105	1	0	2	5,542	113	1	0	2	5,612	115	1	0	2
	SYMDF	49	4,786	98	2	0	2	5,156	105	2	0	2	5,222	107	2	0	2
	ASYDF	49	4,760	97	1	0	1	5,127	105	1	0	1	5,192	106	1	0	1
P30	T2S	70	6,769	97	1	0	1	7,293	104	2	0	2	7,385	106	2	0	2
	T2M	70	6,730	96	2	0	2	7,250	104	2	0	2	7,342	105	2	0	2
	T3S	70	6,911	99	1	0	2	7,445	106	1	0	2	7,539	108	1	0	2
	T3M	70	6,529	93	2	0	2	7,033	100	2	0	2	7,123	102	2	0	2
	T4M	70	6,663	95	2	0	2	7,178	103	2	0	2	7,269	104	2	0	2
	TFTM	70	6,945	99	1	0	2	7,481	107	1	0	2	7,576	108	2	0	2
	SYMDF	70	6,461	92	2	0	2	6,960	99	2	0	2	7,049	101	2	0	2
	ASYDF	70	6,425	92	2	0	2	6,922	99	2	0	2	7,009	100	2	0	2
P40	T2S	89	8,370	94	2	0	2	9,017	101	2	0	2	9,131	103	2	0	2
	T2M	89	8,321	93	2	0	2	8,964	101	2	0	2	9,078	102	2	0	2
	T3S	89	8,545	96	2	0	2	9,205	103	2	0	2	9,322	105	2	0	2
	T3M	89	8,073	91	2	0	2	8,696	98	2	0	2	8,807	99	2	0	2
	T4M	89	8,238	93	2	0	2	8,875	100	2	0	2	8,987	101	2	0	2
	TFTM	89	8,586	96	2	0	2	9,250	104	2	0	2	9,367	105	2	0	2
	SYMDF	89	7,989	90	3	0	3	8,606	97	3	0	3	8,715	98	3	0	3
	ASYDF	89	7,944	89	2	0	2	8,558	96	2	0	2	8,666	97	2	0	2

Use the following to scale 70CRI to 80CRI.

CCT	Multiplier
3000K	0.909
4000K	0.886
5000K	0.865

All IES files available on product web page

LED Package	Distribution	System Watts	AMB (Wavelength)					LED Package	Distribution	System Watts	AMB (Wavelength)				
			Lumens	LPW	B	U	G				Lumens	LPW	B	U	G
P10	T2S	28	1,061	38	0	0	1	P30	T2S	28	1,975	71	0	0	1
	T2M	28	1,054	38	0	0	1		T2M	28	1,964	70	0	0	1
	T3S	28	1,083	39	0	0	1		T3S	28	2,016	72	0	0	1
	T3M	28	1,023	37	0	0	1		T3M	28	1,905	68	0	0	1
	T4M	28	1,044	37	0	0	1		T4M	28	1,944	69	0	0	1
	TFTM	28	1,088	39	0	0	1		TFTM	28	2,026	72	0	0	1
	SYMDF	28	1,012	36	1	0	1		SYMDF	28	1,885	67	1	0	1
	ASYDF	28	1,007	36	0	0	1		ASYDF	28	1,875	67	0	0	1

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Options Matrix

Parameters		LED AMB	Options (Start with SF, DF, 2CI or EM if being used)													
			PE	P3	P7	PSC	PCLL	MASH	MASL	SF	DF	TP	10kV	AO	2CI	EM
LED Performance Package	P10	Y	Y	Y	Y	Y	Y	N	N	Y	Y	Y	Y	Y	N	Y
	P20	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
	P30	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
	P40	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
	P50	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y
Voltage	AS	Y	N	Y	Y	Y	Y	Y	Y	N	N	Y	Y	Y	Y	Y
	AH	Y	N	Y	Y	Y	N	N	N	N	N	Y	Y	Y	N	N
	12	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y
	20	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y
	24	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y
	27	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y
	34	Y	Y	Y	Y	Y	Y	N	N	Y	N	Y	Y	Y	N	N
	48	Y	N	Y	Y	Y	Y	N	N	N	Y	Y	Y	Y	N	N
Options	PE	Y		N	N	N	N	N	N	Y	Y	Y	Y	Y	N	Y
	P3	Y	N		N	M	Y	N	N	Y	Y	Y	Y	N	N	N
	P7	Y	N	N		M	Y	N	N	Y	Y	Y	Y	N	N	N
	PSC	Y	N	M	M		N	N	N	Y	Y	Y	Y	N	N	N
	PCLL	Y	N	Y	Y	N		N	N	Y	Y	Y	Y	N	N	N
	MASH	Y	N	N	N	N	N		N	Y	Y	Y	Y	N	N	N
	MASL	Y	N	N	N	N	N	N		Y	Y	Y	Y	N	N	N
	SF	Y	Y	Y	Y	Y	Y	Y	Y		N	Y	Y	Y	Y	Y
	DF	Y	Y	Y	Y	Y	Y	Y	Y	N		Y	Y	Y	Y	Y
	TP	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y		Y	Y	Y	Y
	10kV	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y		Y	M	M
	AO	Y	Y	N	N	N	N	N	N	Y	Y	Y	Y		N	N
	2CI	P30	N	N	N	N	N	N	N	Y	Y	Y	M	N		N
	EM	Y	Y	N	N	N	N	N	N	Y	Y	Y	M	N	N	

Notes
I = Included with option
M = Must have: one of these must be installed for the luminaire to operate
N = Combination Not available
P30 = Valid Option Combination, not available with P10 Performance Packabe
Y = Valid Option Combination

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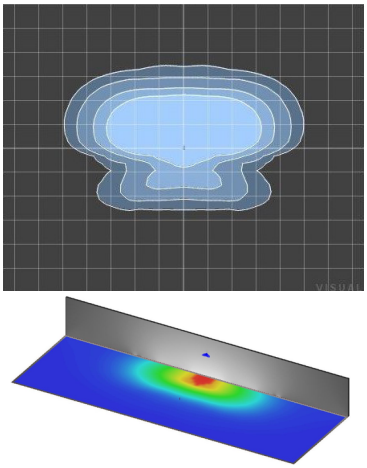
Photometric Diagrams

To see complete photometric reports or download .ies files for this product, visit the Holophane's Wallpack FCO LED homepage. Isofootcandle plots for the HLWPC2 P30 40K. Distance are in units of mounting height (12"). Grid is 10'x10'.

0.1 fc	1 fc	0.2 fc	0.5 fc

HLWPC2 P30 40K XX T2S



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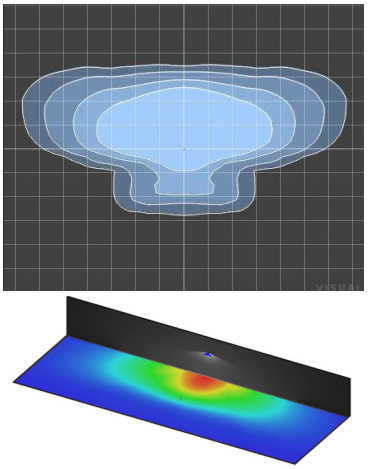

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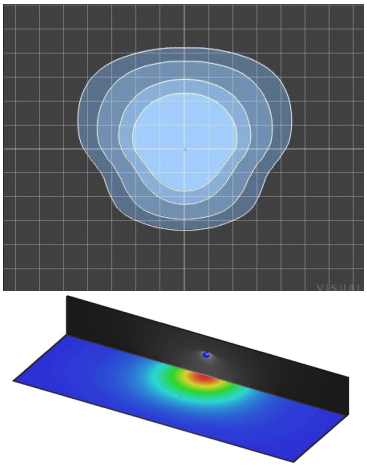

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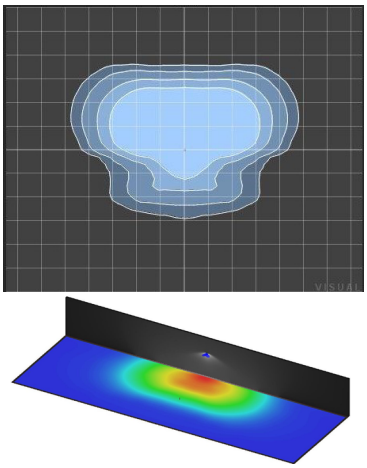

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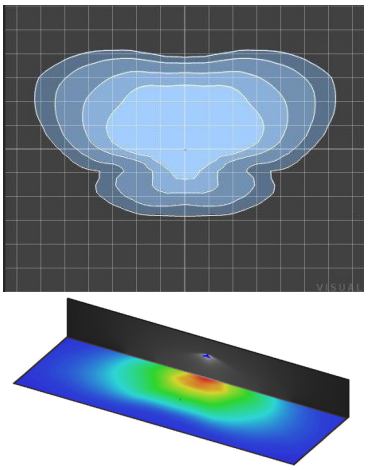

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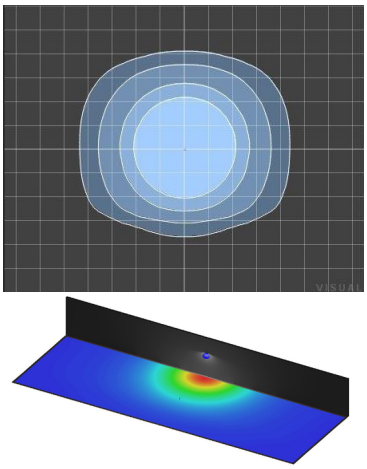

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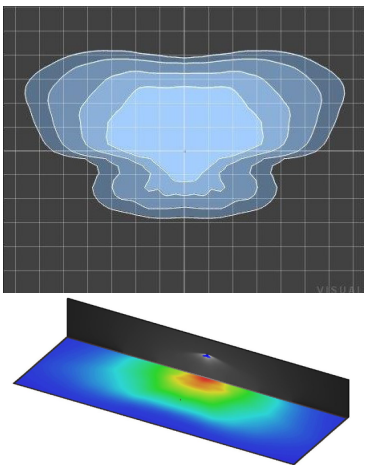
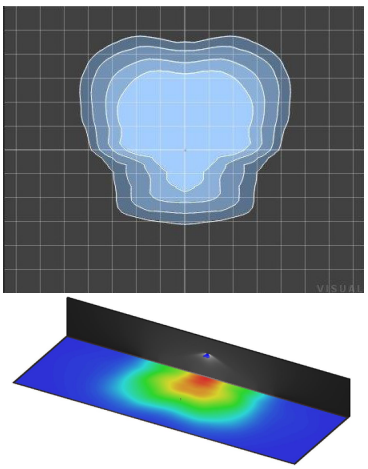


HLWPC2 P30 40K XX TFTM



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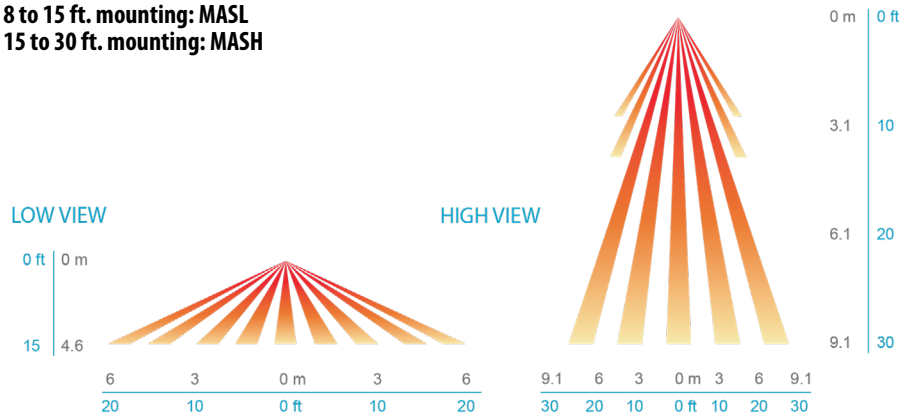
Coverage Pattern

8 to 15 ft. mounting: MASL
15 to 30 ft. mounting: MASH



Control Options

Button Style Photocontrol

PE



N.E.M.A. Receptacle

P3



P7



Motion & Ambient Combined Sensor

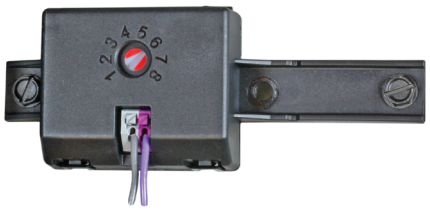
MASL/MASH



MASL and MASH options reduce luminaire light output to roughly 30% (not full OFF) when no motion is detected. When motion is detected, light output increases to 100%.

Field Adjustable Output Module

The Field Adjustable Output (AO) module is an onboard device that adjusts the light output and input voltage to meet specific requirements, allowing a single fixture configuration to be flexibly applied in many different applications. The AO option is available on the HLWPC2 series.



P10 - AS and AH		
AO Position	% Lumens	% Wattage
8	100%	100%
7	94%	95%
6	83%	82%
5	71%	69%
4	59%	57%
3	46%	45%
2	34%	33%
1	21%	21%

P20 - AS and AH		
AO Position	% Lumens	% Wattage
8	100%	100%
7	95%	94%
6	84%	80%
5	73%	67%
4	61%	54%
3	48%	42%
2	35%	30%
1	21%	18%

P30 - AS and AH		
AO Position	% Lumens	% Wattage
8	100%	100%
7	95%	94%
6	84%	80%
5	73%	67%
4	61%	54%
3	48%	42%
2	35%	30%
1	21%	18%

P40 - AS and AH		
AO Position	% Lumens	% Wattage
8	100%	100%
7	95%	95%
6	85%	82%
5	74%	68%
4	62%	55%
3	49%	43%
2	36%	30%
1	21%	17%

P50 - AS and AH		
AO Position	% Lumens	% Wattage
8	100%	100%
7	96%	95%
6	86%	81%
5	75%	68%
4	64%	55%
3	51%	42%
2	37%	29%
1	22%	17%

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Catalog Number	HLWPC2 P10 30K T3M MVOLT BZSDP AO
Notes	Type WP

HLWPC2

Wallpack® Full Cutoff LED





Mechanical

- Heavy grade A360 cast aluminum (aluminum with <1% copper)
- Exterior parts are protected by a zinc-infused Super Durable TGIC thermoset powder coat finish that provides superior resistance to corrosion and weathering
- Mounts to a standard junction box
- Wet location listed
- IP65 rated housing, down light only
- ¾" painted threaded entry(¾" - 14 NPT) on each side and on top, accepts ¾" and ½" conduit
- ¾" threaded plugs are painted on each side
- Vibration tested to 1.5G per ANSI C136.31.

Electrical

- Certified by UL or CSA
- Rated for -40°C (-40°F) minimum ambient
- A programmable electronic driver with 0-10V control leads
- Available in: 120-277V 50/60 Hz and 347-480V 50/60 Hz,
- Standard: 3000K, 4000K and 5000K CCT (>70 CRI)
- Optional >80 CRI (3000K, 4000K and 5000K CCT)
- Internally mounted emergency battery backup for operation in an ambient temperature ranging from -20°C (-4°F) to 30°C (86°F), available with P10 thru P40 performance packages, non CEC compliant
- All surge protection meets ANSI/IEEE C62.41.2 10kV/10kA
- Standard surge protection is 20kV/10kA per ANSI C136.2
- Optional surge protection is 10kV/5kA per ANSI C136.2

Optical

- Light engine housing is IP66 rated
- Acrylic optical system
- Type V: E (entry), M (medium), R (rectangle) & W (wide)
- Asymmetric

Controls

- Field adjustable output (AO)
- Button style photocontrol (PE)
- Motion sensor & ambient photocontrol combination for mounting low (8-15') (MASL) and high (15-30') (MASH) mounting heights

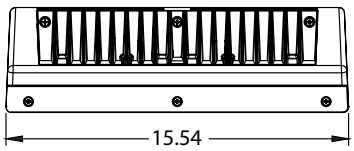
Certification and Standards

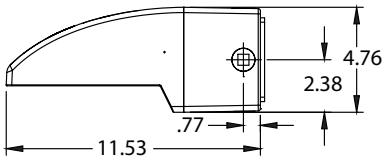
- Luminaire is CSA listed, US and Canada
- Suitable for operation in an ambient temperature up to 40°C/104°F per UL or CSA certification
- Design lights Consortium® (DLC) qualified product. Not all versions of this product may be DLC qualified. Please check the DLC Qualified Products List at www.designlights.org/QPL to confirm which versions are qualified.
- LM-79 compliant
- The projected LED Lumen Maintenance shall be based only on IES LM-80-08 and TM-21

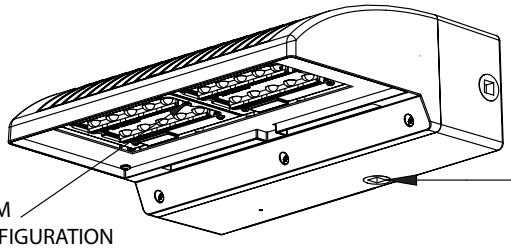
Warranty

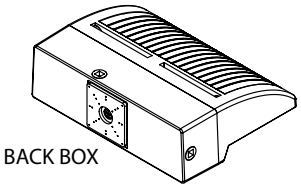
5-year limited warranty. This is the only warranty provided and no other statements in this specification sheet create any warranty of any kind. All other express and implied warranties are disclaimed. Complete warranty terms located at: www.acuitybrands.com/support/warranty/terms-and-conditions.

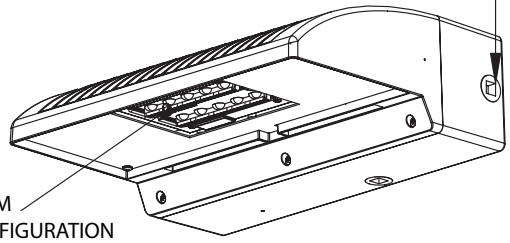
Note: Actual performance may differ as a result of end-user environment and application.
All values are design or typical values, measured under laboratory conditions at 25 °C.
Specifications subject to change without notice.











Note: Maximum weight 22 lbs.

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HLWPC2

Wallpack® Full Cutoff LED

ORDERING INFORMATION

Example: HLWPC2 P20 40K AS T3M BZSDP

Series	Lumen Package	Color Temperature	Voltage	Optics	Color	CRI
HLWPC2 Wallpack Full Cutoff LED	1 LEM Package P10 3,100 lm P20 5,600 lm 2 LEM Package P30 7,800 lm P40 9,900 lm P50 11,700 lm (Nominal Lumens, 4000K)	AMB True Amber 30K 3,000 K CCT 40K 4,000 K CCT 50K 5,000 K CCT	120 120 volts 208 208 volts 240 240 volts 277 277 volts 347 347 volts 480 480 volts HVOLT 347/480 volts MVOLT 120-277 volts	T2S Type 2 Short T2M Type 2 Medium T3S Type 3 Short T3M Type 3 Medium T4M Type 4 Medium TFTM Forward Throw Medium ASYDF Asymmetric Diffuse SYMDF Symmetric Diffuse	BKSDP Black BZSDP Bronze GYSDP Grey WHSDP White	Blank 70 CRI (STD) 80CRI 80 CRI

Options:

Adjustable/Programmable Options

A0 Field Adjustable Output

Circuit Options

2CI 2 Independent Circuits

Control - Motion Sensor Options

MASL[1,2] Motion / Ambient Sensor, 8-15' Mounting Height Ambient Sensor Enabled at 5 FC

MASH[1,2] Motion / Ambient Sensor, 15-30' Mounting Height Ambient Sensor Enabled at 5 FC

Control - Photocontrol Options

PE Button Style Photocontrol

P3 N.E.M.A. Twistlock Receptacle Mount -3 PIN

P7 N.E.M.A. Twistlock Receptacle Mount -7 PIN

PCLL DTL Long Life Twistlock Photocontrol for Solid State

PSC Shorting Cap

Fuse Option

SF Single Fuse

DF Double Fuse

Safety Option

EM Integral Emergency Battery

TP Tamper Resistant Hardware

Surge Protection Option - 20kV/10kA is Standard

10KV 10kV/5kA Surge Protection, in place of 20kV/10kA

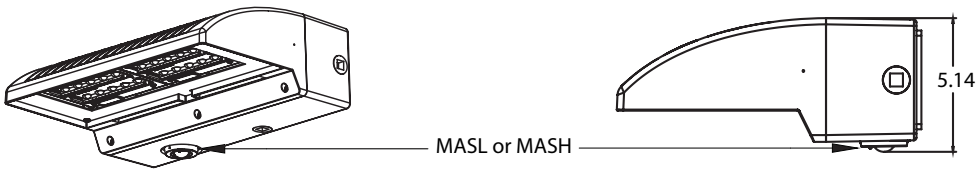
Notes

1 MASL and MASH sensors are not allowed with P10 lumen package option selected.

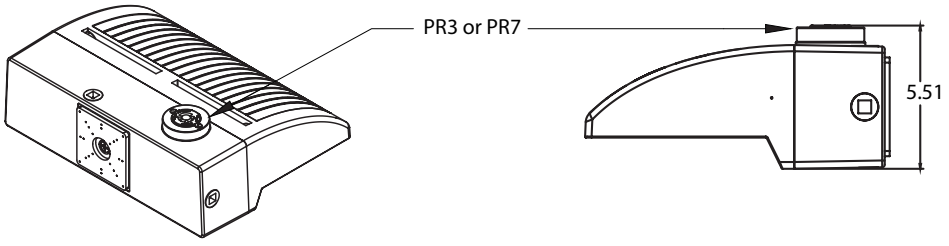
2 MASL and MASH options reduce luminaire light output to roughly 30% (not full OFF) when no motion is detected. When motion is detected, light output temporarily increases to 100%.

Options Location

Motion/Ambient Sensor mount options for Low (8-15') (MASL) and Height (15-30') (MASH) applications

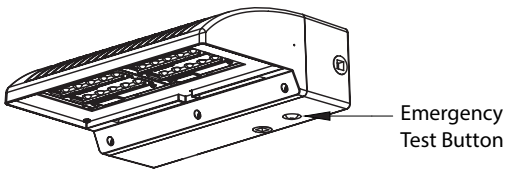


N.E.M.A. Twistlock Receptacle P3 and P7 Options, P7 Shown

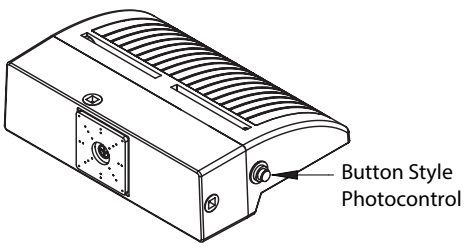


Internal Emergency Battery Test Button - EM Option

Test Button - EM Option



Button Style Photocontrol - PE Option



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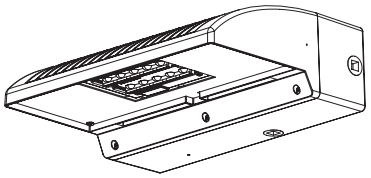
Driver & LEM Configuration Based on Circuit Options

Number of LEMs & Drivers / Circuit		Sinlge Circuit (std.)		Two Circuit (2CI option)	
		LEMs	Drivers	LEMs	Drivers
Lumen Maintenance Factor	P10	1	1	-	-
	P20	1	1	2	2
	P30	2	1	2	2
	P40	2	1	2	2
	P50	2	1	-	-

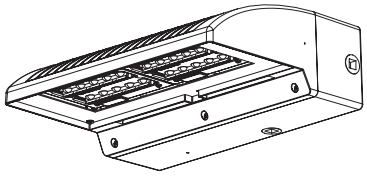
1 LEM Luminaire



SPD Based on Circuit Options

Number of LEMs & Drivers / Circuit		Sinlge Circuit (std.)				Two Circuit (2CI option)			
		LEMs	Drivers	No. of SPDs	SPD	LEMs	Drivers	No. of SPDs	SPD
Lumen Maintenance Factor	P10	1	1	1	20kV/10kA	-	-	-	-
	P20	1	1	1	20kV/10kA	2	2	2	10kV/5kA
	P30	2	1	1	20kV/10kA	2	2	2	10kV/5kA
	P40	2	1	1	20kV/10kA	2	2	2	10kV/5kA
	P50	2	1	1	20kV/10kA	-	-	-	-

2 LEM Luminaire



Projected LED Lumen Maintenance

Data references the extrapolated performance projections for the platform noted in a 25°C ambient, based on 6,000 hours of LED testing (tested per IESNA LM-80-08 and projected per IESNA TM-21-11).

To calculate LLF, use the lumen maintenance factor that corresponds to the desired number of operating hours below. For other lumen maintenance values, contact factory.

The italicized data is extrapolated beyond the TM-21 standard.

E = (LM) x (CU) x (LAT) x (LLD)
LM and CU are obtained from published photometry.

Operating Hours (Standard)		0	25,000	30,000	36,000	45,000	50,000	60,000	75,000	100,000
Lumen Maintenance Factor	P10	1	0.98	0.97	0.96	0.96	0.95	0.95	0.94	0.92
	P20	1	0.97	0.95	0.94	0.93	0.92	0.90	0.88	0.85
	P30	1	0.98	0.97	0.96	0.96	0.95	0.95	0.94	0.92
	P40	1	0.97	0.95	0.94	0.93	0.92	0.90	0.88	0.85

Operating Hours (2CI Option)		0	25,000	30,000	36,000	45,000	50,000	60,000	75,000	100,000
Lumen Maintenance Factor	P10	1	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
	P20	1	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
	P30	1	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
	P40	1	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97

Lumen Ambient Temperature (LAT) Multipliers

Use these factors to determine relative lumen output for average ambient temperatures from 0-40°C (32-104°F).

Single Circuit Application

Ambient		P10	P20	P30	P40	P50
0°C	32°F	1.02	1.03	1.03	1.04	1.05
10°C	50°F	1.01	1.02	1.02	1.03	1.03
20°C	68°F	1.01	1.01	1.01	1.01	1.01
25°C	77°F	1.00	1.00	1.00	1.00	1.00
30°C	86°F	0.99	0.99	0.99	0.99	0.99
40°C	104°F	0.98	0.97	0.98	0.97	0.97

Optional Two Independent Circuit (2CI) Application

Ambient		P20	P30	P40
0°C	32°F	1.02	1.02	1.02
10°C	50°F	1.01	1.01	1.02
20°C	68°F	1.00	1.01	1.01
25°C	77°F	1.00	1.00	1.00
30°C	86°F	0.99	0.99	0.99
40°C	104°F	0.98	0.98	0.98

Electrical Load

Single Circuit Application

LEDs	Drive Current (mA)	System Watts/ Circuit	Current (A)					
			120	208	240	277	247	480
P10	700	28	0.23	0.13	0.12	0.10	0.08	0.06
P20	1400	47	0.41	0.24	0.20	0.18	0.14	0.10
P30	1050	71	0.63	0.37	0.32	0.29	0.22	0.18
P40	1420	95	0.78	0.45	0.40	0.35	0.27	0.20
P50	1720	115	0.95	0.55	0.48	0.42	0.33	0.24

Optional Two Independent Circuit (2CI) Application

LEDs	Drive Current (mA)	System Watts/ Circuit	Current (A)					
			120	208	240	277	247	480
P10	-	-	-	-	-	-	-	-
P20	700	22	0.10	0.06	0.05	0.04	-	-
P30	1000	32	0.14	0.08	0.07	0.06	-	-
P40	1250	47	0.18	0.10	0.09	0.08	-	-
P50	-	-	-	-	-	-	-	-

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Operating Characteristics

LED Package	Distribution	System Watts	30K (3000K, 70 CRI)					40K (4000K, 70 CRI)					50K (5000K, 70 CRI)				
			Lumens	LPW	B	U	G	Lumens	LPW	B	U	G	Lumens	LPW	B	U	G
P10	T2S	28	2,904	104	1	0	1	3,128	112	1	0	1	3,168	113	1	0	1
	T2M	28	2,887	103	1	0	1	3,110	111	1	0	1	3,149	112	1	0	1
	T3S	28	2,964	106	1	0	1	3,194	114	1	0	1	3,234	116	1	0	1
	T3M	28	2,801	100	1	0	1	3,017	108	1	0	1	3,055	109	1	0	1
	T4M	28	2,858	102	1	0	1	3,079	110	1	0	1	3,118	111	1	0	1
	TFTM	28	2,979	106	1	0	1	3,209	115	1	0	1	3,250	116	1	0	1
	SYMDF	28	2,771	99	1	0	1	2,986	107	1	0	1	3,023	108	1	0	1
	ASYDF	28	2,756	98	1	0	1	2,969	106	1	0	1	3,007	107	1	0	1
P20	T2S	47	5,303	113	1	0	1	5,713	122	1	0	1	5,785	123	1	0	1
	T2M	47	5,272	112	1	0	2	5,680	121	1	0	2	5,751	122	1	0	2
	T3S	47	5,414	115	1	0	2	5,832	124	1	0	2	5,906	126	1	0	2
	T3M	47	5,115	109	1	0	2	5,510	117	1	0	2	5,580	119	1	0	2
	T4M	47	5,220	111	1	0	2	5,623	120	1	0	2	5,694	121	1	0	2
	TFTM	47	5,440	116	1	0	2	5,861	125	1	0	2	5,935	126	1	0	2
	SYMDF	47	5,062	108	2	0	2	5,453	116	2	0	2	5,522	117	2	0	2
	ASYDF	47	5,033	107	1	0	1	5,422	115	2	0	1	5,491	117	2	0	1
P30	T2S	71	7,319	103	2	0	2	7,884	111	2	0	2	7,984	112	2	0	2
	T2M	71	7,276	102	2	0	2	7,838	110	2	0	2	7,937	112	2	0	2
	T3S	71	7,472	105	1	0	2	8,049	113	2	0	2	8,151	115	2	0	2
	T3M	71	7,059	99	2	0	2	7,604	107	2	0	2	7,700	108	2	0	2
	T4M	71	7,203	101	2	0	2	7,760	109	2	0	2	7,858	111	2	0	2
	TFTM	71	7,508	106	1	0	2	8,088	114	2	0	2	8,190	115	2	0	2
	SYMDF	71	6,985	98	2	0	2	7,525	106	3	0	3	7,620	107	3	0	3
	ASYDF	71	6,946	98	2	0	2	7,483	105	2	0	2	7,578	107	2	0	2
P40	T2S	95	9,320	98	2	0	2	10,041	106	2	0	2	10,168	107	2	0	2
	T2M	95	9,266	98	2	0	2	9,982	105	2	0	3	10,108	106	2	0	3
	T3S	95	9,515	100	2	0	2	10,251	108	2	0	2	10,381	109	2	0	2
	T3M	95	8,989	95	2	0	2	9,684	102	2	0	2	9,807	103	2	0	2
	T4M	95	9,174	97	2	0	2	9,883	104	2	0	3	10,008	105	2	0	3
	TFTM	95	9,561	101	2	0	2	10,300	108	2	0	2	10,431	110	2	0	2
	SYMDF	95	8,896	94	3	0	3	9,583	101	3	0	3	9,705	102	3	0	3
	ASYDF	95	8,846	93	2	0	2	9,530	100	2	0	2	9,650	102	2	0	2
P50	T2S	115	10,972	95	2	0	2	11,820	103	2	0	2	11,969	104	2	0	2
	T2M	115	10,908	95	2	0	3	11,751	102	2	0	3	11,900	103	2	0	3
	T3S	115	11,202	97	2	0	2	12,067	105	2	0	2	12,220	106	2	0	2
	T3M	115	10,582	92	2	0	2	11,400	99	2	0	3	11,544	100	2	0	3
	T4M	115	10,799	94	2	0	3	11,634	101	2	0	3	11,781	102	2	0	3
	TFTM	115	11,256	98	2	0	2	12,126	105	2	0	2	12,279	107	2	0	2
	SYMDF	115	10,472	91	3	0	3	11,282	98	3	0	3	11,424	99	3	0	3
	ASYDF	115	10,414	91	2	0	2	11,219	98	3	0	2	11,361	99	3	0	2

Use the following to scale 70CRI to 80CRI.

CCT	Multiplier
3000K	0.909
4000K	0.886
5000K	0.865

All IES files available on product web page

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Operating Characteristics (continued)

LED Package	Distribution	System Watts	30K + 2CI Option (3000K, 70 CRI)					40K + 2CI Option (4000K, 70 CRI)					50K + 2CI Option (5000K, 70 CRI)				
			Lumens	LPW	B	U	G	Lumens	LPW	B	U	G	Lumens	LPW	B	U	G
P20	T2S	49	5,015	102	1	0	1	5,402	110	1	0	1	5,471	112	1	0	1
	T2M	49	4,985	102	1	0	2	5,371	110	1	0	2	5,439	111	1	0	2
	T3S	49	5,120	104	1	0	1	5,515	113	1	0	2	5,585	114	1	0	2
	T3M	49	4,837	99	1	0	2	5,210	106	1	0	2	5,276	108	1	0	2
	T4M	49	4,936	101	1	0	2	5,317	109	1	0	2	5,385	110	1	0	2
	TFTM	49	5,144	105	1	0	2	5,542	113	1	0	2	5,612	115	1	0	2
	SYMDF	49	4,786	98	2	0	2	5,156	105	2	0	2	5,222	107	2	0	2
	ASYDF	49	4,760	97	1	0	1	5,127	105	1	0	1	5,192	106	1	0	1
P30	T2S	70	6,769	97	1	0	1	7,293	104	2	0	2	7,385	106	2	0	2
	T2M	70	6,730	96	2	0	2	7,250	104	2	0	2	7,342	105	2	0	2
	T3S	70	6,911	99	1	0	2	7,445	106	1	0	2	7,539	108	1	0	2
	T3M	70	6,529	93	2	0	2	7,033	100	2	0	2	7,123	102	2	0	2
	T4M	70	6,663	95	2	0	2	7,178	103	2	0	2	7,269	104	2	0	2
	TFTM	70	6,945	99	1	0	2	7,481	107	1	0	2	7,576	108	2	0	2
	SYMDF	70	6,461	92	2	0	2	6,960	99	2	0	2	7,049	101	2	0	2
	ASYDF	70	6,425	92	2	0	2	6,922	99	2	0	2	7,009	100	2	0	2
P40	T2S	89	8,370	94	2	0	2	9,017	101	2	0	2	9,131	103	2	0	2
	T2M	89	8,321	93	2	0	2	8,964	101	2	0	2	9,078	102	2	0	2
	T3S	89	8,545	96	2	0	2	9,205	103	2	0	2	9,322	105	2	0	2
	T3M	89	8,073	91	2	0	2	8,696	98	2	0	2	8,807	99	2	0	2
	T4M	89	8,238	93	2	0	2	8,875	100	2	0	2	8,987	101	2	0	2
	TFTM	89	8,586	96	2	0	2	9,250	104	2	0	2	9,367	105	2	0	2
	SYMDF	89	7,989	90	3	0	3	8,606	97	3	0	3	8,715	98	3	0	3
	ASYDF	89	7,944	89	2	0	2	8,558	96	2	0	2	8,666	97	2	0	2

Use the following to scale 70CRI to 80CRI.

CCT	Multiplier
3000K	0.909
4000K	0.886
5000K	0.865

All IES files available on product web page

LED Package	Distribution	System Watts	AMB (Wavelength)					LED Package	Distribution	System Watts	AMB (Wavelength)				
			Lumens	LPW	B	U	G				Lumens	LPW	B	U	G
P10	T2S	28	1,061	38	0	0	1	P30	T2S	28	1,975	71	0	0	1
	T2M	28	1,054	38	0	0	1		T2M	28	1,964	70	0	0	1
	T3S	28	1,083	39	0	0	1		T3S	28	2,016	72	0	0	1
	T3M	28	1,023	37	0	0	1		T3M	28	1,905	68	0	0	1
	T4M	28	1,044	37	0	0	1		T4M	28	1,944	69	0	0	1
	TFTM	28	1,088	39	0	0	1		TFTM	28	2,026	72	0	0	1
	SYMDF	28	1,012	36	1	0	1		SYMDF	28	1,885	67	1	0	1
	ASYDF	28	1,007	36	0	0	1		ASYDF	28	1,875	67	0	0	1

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Options Matrix

Parameters		LED AMB	Options (Start with SF, DF, 2CI or EM if being used)													
			PE	P3	P7	PSC	PCLL	MASH	MASL	SF	DF	TP	10kV	AO	2CI	EM
LED Performance Package	P10	Y	Y	Y	Y	Y	Y	N	N	Y	Y	Y	Y	Y	N	Y
	P20	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
	P30	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
	P40	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
	P50	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y
Voltage	AS	Y	N	Y	Y	Y	Y	Y	Y	N	N	Y	Y	Y	Y	Y
	AH	Y	N	Y	Y	Y	N	N	N	N	N	Y	Y	Y	N	N
	12	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y
	20	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y
	24	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y
	27	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y
	34	Y	Y	Y	Y	Y	Y	N	N	Y	N	Y	Y	Y	N	N
	48	Y	N	Y	Y	Y	Y	N	N	N	Y	Y	Y	Y	N	N
Options	PE	Y		N	N	N	N	N	N	Y	Y	Y	Y	Y	N	Y
	P3	Y	N		N	M	Y	N	N	Y	Y	Y	Y	N	N	N
	P7	Y	N	N		M	Y	N	N	Y	Y	Y	Y	N	N	N
	PSC	Y	N	M	M		N	N	N	Y	Y	Y	Y	N	N	N
	PCLL	Y	N	Y	Y	N		N	N	Y	Y	Y	Y	N	N	N
	MASH	Y	N	N	N	N	N		N	Y	Y	Y	Y	N	N	N
	MASL	Y	N	N	N	N	N	N		Y	Y	Y	Y	N	N	N
	SF	Y	Y	Y	Y	Y	Y	Y	Y		N	Y	Y	Y	Y	Y
	DF	Y	Y	Y	Y	Y	Y	Y	Y	N		Y	Y	Y	Y	Y
	TP	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y		Y	Y	Y	Y
	10kV	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y		Y	M	M
	AO	Y	Y	N	N	N	N	N	N	Y	Y	Y	Y		N	N
	2CI	P30	N	N	N	N	N	N	N	Y	Y	Y	M	N		N
	EM	Y	Y	N	N	N	N	N	N	Y	Y	Y	M	N	N	

Notes
I = Included with option
M = Must have: one of these must be installed for the luminaire to operate
N = Combination Not available
P30 = Valid Option Combination, not available with P10 Performance Packabe
Y = Valid Option Combination

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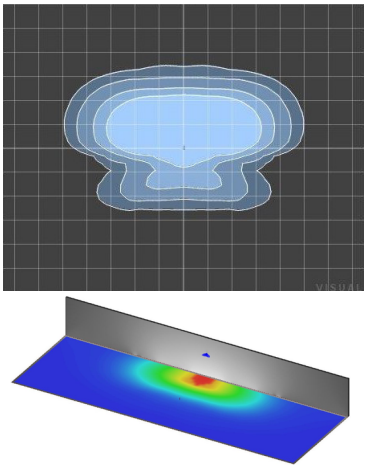
Photometric Diagrams

To see complete photometric reports or download .ies files for this product, visit the Holophane's Wallpack FCO LED homepage. Isofootcandle plots for the HLWPC2 P30 40K. Distance are in units of mounting height (12"). Grid is 10'x10'.

0.1 fc	1 fc	0.2 fc	0.5 fc

HLWPC2 P30 40K XX T2S



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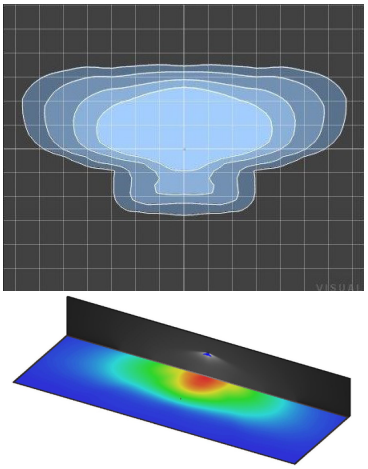

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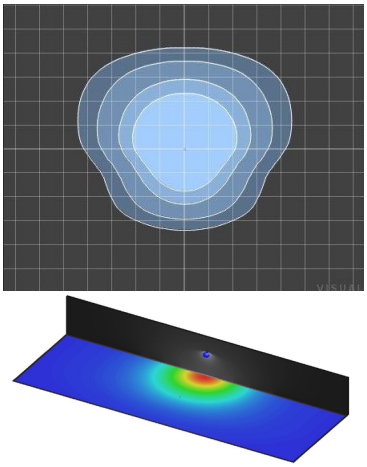

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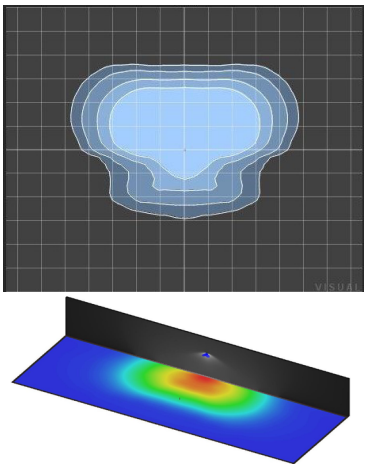

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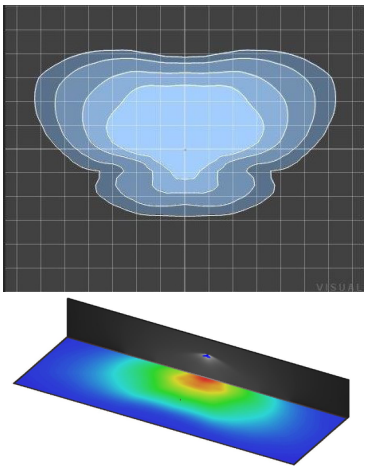
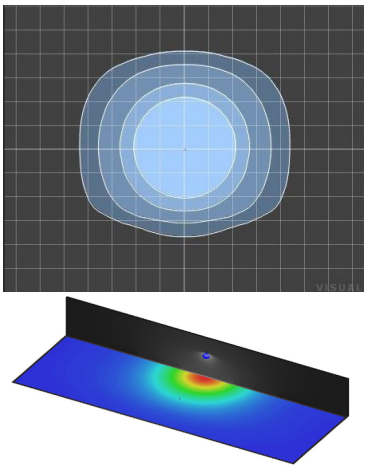
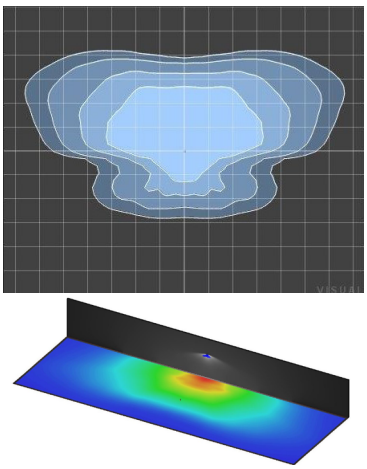


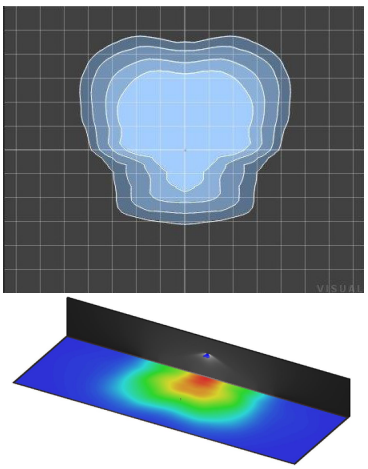
HLWPC2 P30 40K XX SYMDF



HLWPC2 P30 40K XX T4M



HLWPC2 P30 40K XX TFTM



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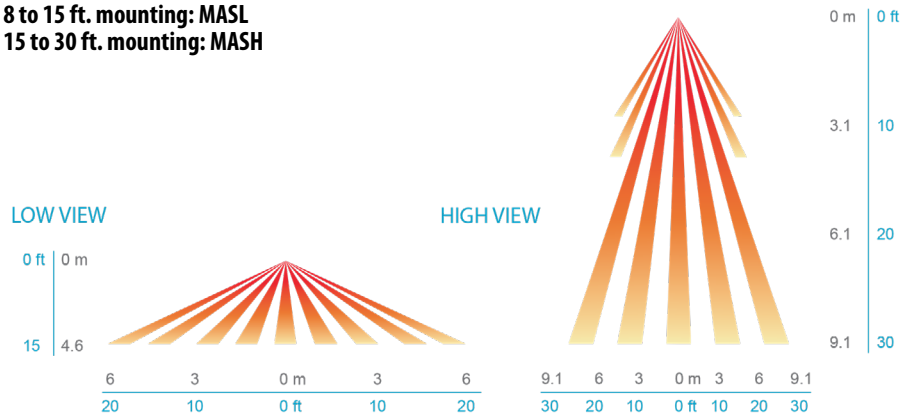
Coverage Pattern

8 to 15 ft. mounting: MASL
15 to 30 ft. mounting: MASH



Control Options

Button Style Photocontrol

PE



N.E.M.A. Receptacle

P3



P7



Motion & Ambient Combined Sensor

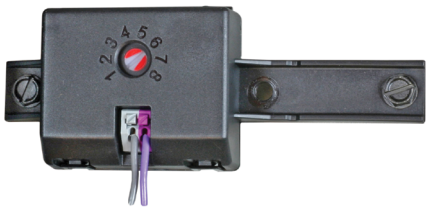
MASL/MASH



MASL and MASH options reduce luminaire light output to roughly 30% (not full OFF) when no motion is detected. When motion is detected, light output increases to 100%.

Field Adjustable Output Module

The Field Adjustable Output (AO) module is an onboard device that adjusts the light output and input voltage to meet specific requirements, allowing a single fixture configuration to be flexibly applied in many different applications. The AO option is available on the HLWPC2 series.



P10 - AS and AH		
AO Position	% Lumens	% Wattage
8	100%	100%
7	94%	95%
6	83%	82%
5	71%	69%
4	59%	57%
3	46%	45%
2	34%	33%
1	21%	21%

P20 - AS and AH		
AO Position	% Lumens	% Wattage
8	100%	100%
7	95%	94%
6	84%	80%
5	73%	67%
4	61%	54%
3	48%	42%
2	35%	30%
1	21%	18%

P30 - AS and AH		
AO Position	% Lumens	% Wattage
8	100%	100%
7	95%	94%
6	84%	80%
5	73%	67%
4	61%	54%
3	48%	42%
2	35%	30%
1	21%	18%

P40 - AS and AH		
AO Position	% Lumens	% Wattage
8	100%	100%
7	95%	95%
6	85%	82%
5	74%	68%
4	62%	55%
3	49%	43%
2	36%	30%
1	21%	17%

P50 - AS and AH		
AO Position	% Lumens	% Wattage
8	100%	100%
7	96%	95%
6	86%	81%
5	75%	68%
4	64%	55%
3	51%	42%
2	37%	29%
1	22%	17%

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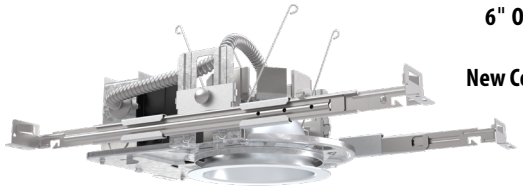
LITHONIA LIGHTING®

Catalog Number	LDN6 30/20 LW6BR
Notes	
Type	R

LDN6 STATIC WHITE

6" Open and Wallwash LED
Non-IC
New Construction Downlight





Open Trim



Wallwash Trim

FEATURES & SPECIFICATIONS

INTENDED USE — Typical applications include corridors, lobbies, conference rooms and private offices.

CONSTRUCTION — Galvanized steel mounting/plaster frame; galvanized steel junction box with bottom-hinged access covers and spring latches. Reflectors are retained by torsion springs.

Vertically adjustable mounting brackets with commercial bar hangers provide 3-3/4" total adjustment.

Two combination ½"-3/4" and four ½" knockouts for straight-through conduit runs. Capacity: 8 (4 in, 4 out). No. 12 AWG conductors, rated for 90°C.

Accommodates 12"-24" joist spacing.

Passive cooling thermal management for 25°C standard; high ambient (40°C) option available. Light engine and drivers are accessible from above or below ceiling.

Max ceiling thickness 1-1/2".

OPTICS — LEDs are binned to a 3-step MacAdam Ellipse; 80 CRI minimum. 90 CRI optional.

LED light source concealed with diffusing optical lens.

General illumination lighting with 1.0 S/MH and 55° cutoff to source and source image.

Self-flanged anodized reflectors in specular, semi-specular, or matte diffuse finishes. Also available in white and black painted reflectors.

A+ CAPABLE LUMINAIRE — This item is an A+ capable luminaire, which has been designed and tested to provide consistent color appearance and out-of-the-box control compatibility with simple commissioning when used with Acuity Brands controls products. All configurations of this luminaire are calibrated and tested to meet the Acuity Brands' specifications for chromatic consistency – including color rendering, color fidelity and color temperature tolerance around standard CIE chromaticity coordinates. To learn more about A+ standards, specifications, and testing visit www.acuitybrands.com/aplus.

UGR — UGR is zero for fixtures aimed at nadir with a cut-off equal to or less than 60deg, per CIE 117-1996 Discomfort Glare in Interior Lighting.

ELECTRICAL — Multi-volt (120-277V, 50/60Hz) 0-10V dimming drivers mounted to junction box, 10% or 1% minimum dimming level available.

0-10V dimming fixture requires two (2) additional low-voltage wires to be pulled.

LUMEN MAINTENANCE — 70% lumen maintenance at 60,000 hours. L70/60,000 hours

LISTINGS — Certified to US and Canadian safety standards. Wet location standard (covered ceiling). IP55 rated. ENERGY STAR® certified product. Drivers are RoHS compliant

BUY AMERICAN ACT — Product with the BAA option is assembled in the USA and meets the Buy America(n) government procurement requirements under FAR, DFARS and DOT regulations. Please refer to www.acuitybrands.com/buy-american for additional information.

WARRANTY — 5-year limited warranty. This is the only warranty provided and no other statements in this specification sheet create any warranty of any kind. All other express and implied warranties are disclaimed. Complete warranty terms located at: www.acuitybrands.com/support/warranty/terms-and-conditions

Note: Actual performance may differ as a result of end-user environment and application.
All values are design or typical values, measured under laboratory conditions at 25 °C.
Specifications subject to change without notice.

PERFORMANCE DATA

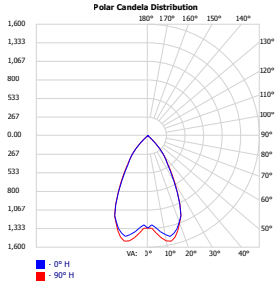
LDN6 3500K AR LSS 80CRI			
Nominal Lumens	**Lumens**	**Wattage**	**Lm/W**
500	527.9	5.8	90.5
750	758.1	8.9	85.1
1000	950.1	10.4	91.0
1500	1514	17.5	86.4
2000	2006	22.5	89.1
2500	2504	28.3	88.6
3000	3021	34.8	86.9
4000	4008	44.3	90.6
5000	4975	57.7	86.3

Notes

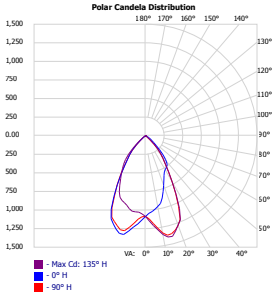
- Tested in accordance with IESNA LM-79-08.
- Tested to current IES and NEMA standards under stabilized laboratory conditions.
- CRI: 80 typical.

battery pack

DISTRIBUTIONS



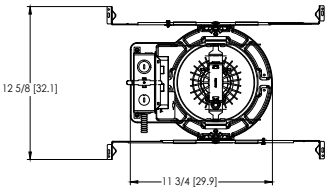
Open

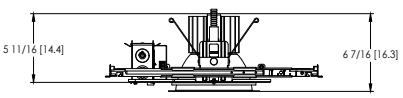


Wallwash

DIMENSIONS

LDN6 500-3000 Lumens





Aperture: Ø 6-1/4" [15.9]
Ceiling Cutout: Ø 7-1/8" [18.1] Self-flanged
Overlap Trim: Ø 7-1/2" [19.1]

See page 4 for other fixture dimensions

LDN6

Design Select options indicated by this color background.

ORDERING INFORMATION Lead times will vary depending on options selected. Consult with your sales representative.

Example: LDN6 35/15 LO6 AR LSS MVOLT EZ10

LDN6							
Series	**Color temperature**	**Lumens ‡**	**Trim Style**	**Trim Color**	**Trim Finish**	**Flange Color ‡**	**Voltage**
LDN6 6" round	27/ 2700K	05 500 lumens	LO6 Downlight	AR Clear	LSS Semi-specular	TRW White painted flange	MVOLT Multi-volt
	30/ 3000K	07 750 lumens	LW6 Wallwash	WR ‡ White	LD Matte diffuse	TRBL Black painted flange	120 120V
	35/ 3500K	10 1000 lumens		BR ‡ Black	LS Specular	FCPC Custom painted flange only	277 277V
	40/ 4000K	15 1500 lumens		TCPC ‡ Custom painted trim		FRALTBD RAL painted flange only	347 ‡ 347V
	50/ 5000K	20 2000 lumens		TRALTBD ‡ RAL painted trim			
		25 2500 lumens					
		30 3000 lumens					
		40 4000 lumens					
		50 5000 lumens					

Driver	**Emergency ‡**	**Control Input ‡**	**Options**
GZ10 0-10V driver dims to 10%	(blank) No Emergency Needed	(blank) No Control Input Needed	HAO ‡ High ambient option (40°C)
GZ1 0-10V driver dims to 1%	EL Battery pack (10W constant power), non-T20 compliant, integral test switch	JOT Wireless room control with "Just One Touch" pairing	CP ‡ Chicago Plenum
D10 Minimum dimming 10% driver for use with JOT	ELR Battery pack (10W constant power), non-T20 compliant, remote test switch	NPP16D nLight® network power/relay pack with 0-10V dimming for non-eldoLED drivers (GZ10, GZ1).	RRL__ RELOC®-ready luminaire connectors enable a simple and consistent factory installed option across all ABL luminaire brands. Refer to RRL for complete nomenclature. Available only in RRLA, RRLB, RRLAE, and RRLC12S.
D1 Minimum dimming 1% driver for use with JOT	ELSD Self-diagnostic battery pack (10W constant power), non-T20 compliant, integral test switch	NPP16DER nLight® network power/relay pack with 0-10V dimming for non-eldoLED drivers (GZ10, GZ1). ER controls fixtures on emergency circuit.	BAA Buy America(n) Act Compliant
EZ1 0-10V eldoLED driver with smooth and flicker-free deep dimming performance down to 1%	ELRSD Self-diagnostic battery pack (10W constant power), non-T20 compliant, remote test switch	NPS80EZ nLight® dimming pack controls 0-10V eldoLED drivers (EZ1).	90CRI High CRI (90+)
EDAB eldoLED DALI SOLDRIVE dim to dark	E10WCP Battery pack (10W constant power), T20 compliant, integral test switch	NPS80EZER nLight® dimming pack controls 0-10V eldoLED drivers (EZ1). ER controls fixtures on emergency circuit.	SF ‡ Single fuse
	E10WCPR Battery pack (10W constant power), T20 compliant, remote test switch	N80 nLight™ Lumen Compensation	
	E10WRSTAR Emergency battery pack, 10W with remote test switch and Iota STAR technology	NLTAIR2 nLight® Air enabled	
		NLTAIRER2 nLight® AIR Dimming Pack Wireless Controls. Controls fixtures on emergency circuit, not available with battery pack options	
		NLTAIREM2 nLight® AIR Dimming Pack Wireless Controls. UL924 Emergency Operation, via power interrupt detection. Available with battery pack options.	

‡ Option Value Ordering Restrictions

Option value	Restriction
Lumens	Overall height varies based on lumen package; refer to dimensional chart.
WR, BR	Not available with finishes.
347	Not available with emergency options.
SF	Must specify voltage 120V or 277V.
TRW, TRBL	Available with clear (AR) reflector only.
EL, ELR, ELSD, ELRSD, E10WCP, E10WCPR	12.5" of plenum depth or top access required for battery pack maintenance.
NPP16D, NPP16DER, NPS80EZ, NPS80EZER	Specify voltage. ER for use with generator supply EM power. Will require an emergency hot feed and normal hot feed. See UL 924 Sequence of Operation table.
N80	Fixture begins at 80% light level. Must be specified with NPS80EZ or NPS80EZ ER. Only available with EZ1 drivers.
NLTAIR, NLTAIR2, NLTAIRER2, NLTAIREM2	Not available with CP, NPS80EZ, NPS80EZER, NPP16D, NPP16DER or N80 options. not recommended for metal ceiling installations.
HAO	Fixture height is 6.5" for all lumen packages with HAO.
CP	Must specify voltage for 3000lm and above. 5000lm with marked spacing 24 L x 24 W x 14 H. Not available with emergency battery pack option.
JOT	Must specify D10 or D1 driver. Not available with nLight options. Not available with CP. Not recommended for metal ceiling installation. Not for use with emergency backup power systems other than battery packs.
Reloc® Options	Refer to RRL specification sheet on acuitybrands.com for further details.
RRLAE	Commercial fixtures should disconnect the TSPL before unplugging the RRL so it does not go into discharge mode.
RRLC12S	RRLC12S option is to be used with the OnePass OCU, OCS, OD, OFC and OD for 0-24V integrated single-circuit or 0-10V low voltage controls applications. Not available with integral dimming sensors.
TRALTBD, FRALTBD	RALTBD for pricing only. Replace with applicable RAL number and finish when ready to order. See the RAL BROCHURE for available color options.
TCPC, FCPC	CPC options for pricing only. Custom color chip needs to be sent in to your Customer Resolution specialist before order can be processed. Click HERE for more details
E10WRSTAR	Not available with wet location, EC1, EC6, QDS, CP, 347V, NPS80EZ ER, NLTAIRER2, NLTAIREM2, ALO3 & ALO4 w/DALI, OR 2000-4500 lumens w/JOT. Top access installation or 17.5" plenum clearance required for roomside installation. Not available with integral test switch

Accessories: *Order as separate catalog number.*

EAC ISSM 375	Compact interruptible emergency AC power system
EAC ISSM 125	Compact interruptible emergency AC power system
GRA68 JZ	Oversized trim ring with 8" outside diameter
SCA6	Sloped Ceiling Adapter. Degree of slope must be specified (5D, 10D, 15D, 20D, 25D, 30D). Ex: SCA6 10D

design select

Items marked by a shaded background qualify for the Design Select program and ship in 15 days or less. To learn more about Design Select, visit www.acuitybrands.com/designselect. *See ordering tree for details

(Maximum order quantity for design select lead times is 112.)

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Emergency Battery Pack Options - Field Installable

Battery Model Number	Wattage	Runtime (Minutes)	Lumen Output* @ 120 Lumens/Watt	Other
ILB CP07 2H A	7W	120	840	Storm Shelter / 2 Hour Runtime
ILB CP10 A	10W	90	1200	
ILBLP CP10 HE SD A+	10W	90	1200	Title 20, Self Diagnostic
ILBLP CP15 HE SD A+	15W	90	1800	Title 20, Self Diagnostic
ILB CP20 HE A	20W	90	2400	Title 20
ILB CP20 HE SD A	20W	90	2400	Title 20, Self Diagnostic
ILBHI CP10 HE SD A+	10W	90	1200	347-480V AC Input, Title 20, Self Diagnostic
ILBHI CP15 HE SD A+	15W	90	1800	347-480V AC Input, Title 20, Self Diagnostic

All the above are UL Listed products that are certified for field install external/remote to the fixture.
*Minimum delivered lumen output to assist in product selection for increased fixture mounting height.
The CP10 delivered emergency illumination outperforms legacy 1400 lumen fluorescent emergency ballast.
Please contact us at techsupport@iotaengineering.com for any Emergency Battery related questions.

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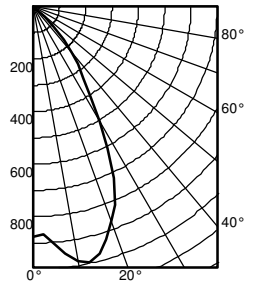
PHOTOMETRY

Distribution Curve | **Distribution Data** | **Output Data** | **Illuminance Data at 30" Above Floor for a Single Luminaire**

LDN6 35/10 LO6AR, input watts: 10.44, delivered lumens: 987.10, LM/W = 94.54, spacing criterion at 0= 1.02, test no. ISF 30716P262.



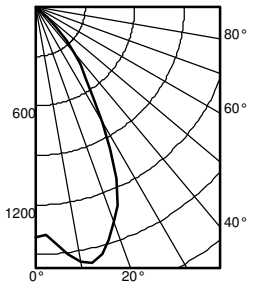
	Ave	Lumens
0	876	
5	905	89
15	971	269
25	720	322
35	330	214
45	110	87
55	1	4
65	1	1
75	0	0
85	0	0
90	0	

Zone	Lumens	% Lamp
0° - 30°	680.7	69.0
0° - 40°	895.0	90.7
0° - 60°	986.0	99.9
0° - 90°	987.0	100.0
90° - 120°	0.0	0.0
90° - 130°	0.0	0.0
90° - 150°	0.0	0.0
90° - 180°	0.0	0.0
0° - 180°	987.0	*100.0

*Efficiency

Mounting Height	Inital FC Center Beam	50% beam - 54.5° Diameter	50% beam - 54.5° FC	10% beam - 82.2° Diameter	10% beam - 82.2° FC
8.0	29.0	5.7	14.5	9.6	2.9
10.0	15.6	7.7	7.8	13.1	1.6
12.0	9.7	9.8	4.9	16.6	1.0
14.0	6.6	11.8	3.3	20.1	0.7
16.0	4.8	13.9	2.4	23.6	0.5

LDN6 35/15 LO6AR, input watts: 17.52, delivered lumens: 1572.9, LM/W = 89.77, spacing criterion at 0= 1.02, test no. ISF 30716P265.



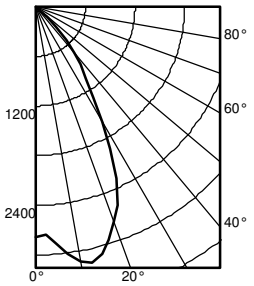
	Ave	Lumens
0	1396	
5	1442	142
15	1547	429
25	1147	514
35	526	342
45	176	139
55	2	6
65	1	1
75	1	1
85	0	0
90	0	

Zone	Lumens	% Lamp
0° - 30°	1084.6	69.0
0° - 40°	1426.2	90.7
0° - 60°	1571.3	99.9
0° - 90°	1572.9	100.0
90° - 120°	0.0	0.0
90° - 130°	0.0	0.0
90° - 150°	0.0	0.0
90° - 180°	0.0	0.0
0° - 180°	1572.9	*100.0

*Efficiency

Mounting Height	Inital FC Center Beam	50% beam - 54.5° Diameter	50% beam - 54.5° FC	10% beam - 82.2° Diameter	10% beam - 82.2° FC
8.0	46.2	5.7	23.1	9.6	4.6
10.0	24.8	7.7	12.4	13.1	2.5
12.0	15.5	9.8	7.7	16.6	1.5
14.0	10.6	11.8	5.3	20.1	1.1
16.0	7.7	13.9	3.8	23.6	0.8

LDN6 35/30 LO6AR, input watts: 34.75, delivered lumens: 3138.5, LM/W = 90.31, spacing criterion at 0= 1.02, test no. ISF 30716P274.



	Ave	Lumens
0	2786	
5	2877	284
15	3087	855
25	2289	1025
35	1049	682
45	350	277
55	5	12
65	2	2
75	1	1
85	0	0
90	0	

Zone	Lumens	% Lamp
0° - 30°	2164.3	69.0
0° - 40°	2845.9	90.7
0° - 60°	3135.3	99.9
0° - 90°	3138.5	100.0
90° - 120°	0.0	0.0
90° - 130°	0.0	0.0
90° - 150°	0.0	0.0
90° - 180°	0.0	0.0
0° - 180°	3138.5	*100.0

*Efficiency

Mounting Height	Inital FC Center Beam	50% beam - 54.5° Diameter	50% beam - 54.5° FC	10% beam - 82.2° Diameter	10% beam - 82.2° FC
8.0	92.1	5.7	46.1	9.6	9.2
10.0	49.5	7.7	24.8	13.1	5.0
12.0	30.9	9.8	15.4	16.6	3.1
14.0	21.1	11.8	10.5	20.1	2.1
16.0	15.3	13.9	7.6	23.6	1.5

HOW TO ESTIMATE DELIVERED LUMENS IN EMERGENCY MODE

Use the formula below to estimate the delivered lumens in emergency mode

Delivered Lumens = 1.25 x P x LPW

P = Ouput power of emergency driver. P = 10W for PS1055CP

LPW = Lumen per watt rating of the luminaire. This information is available on the ABL luminaire spec sheet.

The LPW rating is also available at Designlight Consortium.

LUMEN OUTPUT MULTIPLIERS - FINISH	Clear (AR)	White (WR)	Black (BR)
Specular (LS)	1.0	N/A	N/A
Semi-specular (LSS)	0.950	N/A	N/A
Matte diffuse (LD)	0.85	N/A	N/A
Painted	N/A	0.87	0.73

LUMEN OUTPUT MULTIPLIERS - CRI	
80	1.0
90	0.874

LUMEN OUTPUT MULTIPLIERS - CCT	2700K	3000K	3500K	4000K	5000K
80CRI	0.950	0.966	1.000	1.025	1.101

Notes

- Tested in accordance with IESNA LM-79-08.
- Tested to current IES and NEMA standards under stabilized laboratory conditions.
- CRI: 80 typical.

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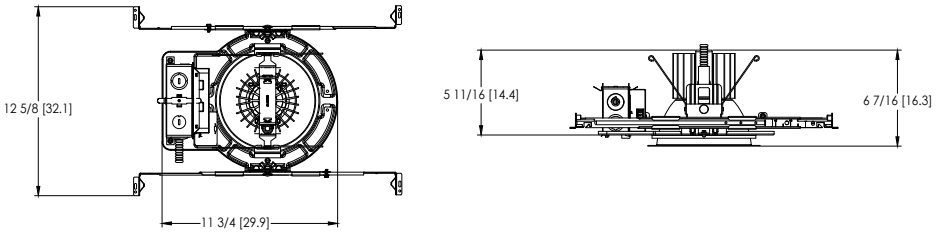
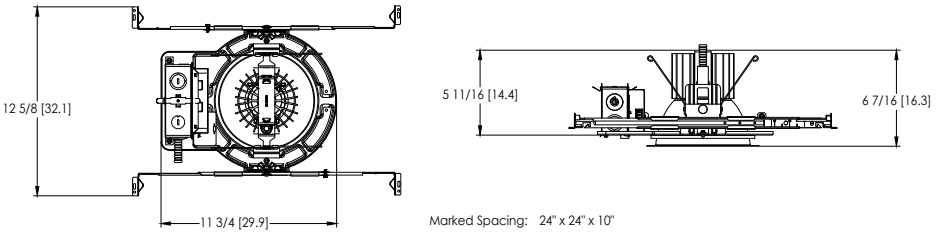
* All dimensions are inches (centimeters) unless otherwise noted.

LDN6 500-3000 Lumens



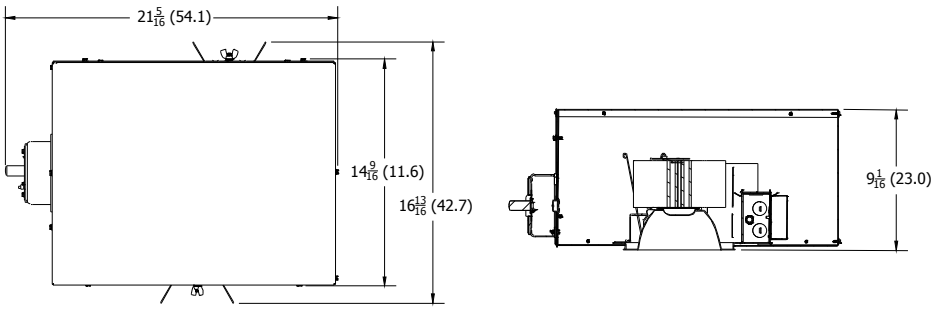
Aperture: Ø 6-1/4" [15.9]
Ceiling Cutout: Ø 7-1/8" [18.1] Self-flanged
Overlap Trim: Ø 7-1/2" [19.1]

LDN6 4000-5000 Lumens



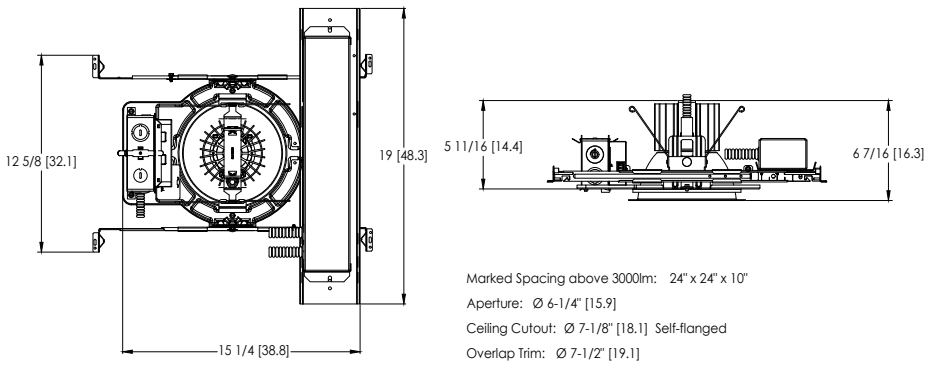
Marked Spacing: 24" x 24" x 10"
Aperture: Ø 6-1/4" [15.9]
Ceiling Cutout: Ø 7-1/8" [18.1] Self-flanged
Overlap Trim: Ø 7-1/2" [19.1]

LDN6 CP



Aperture: 6-1/4 (15.9)
Ceiling Opening: 7-1/8 (18.1)
Overlap Trim: 7-1/2 (19.1)

LDN6 EL



Marked Spacing above 3000lm: 24" x 24" x 10"
Aperture: Ø 6-1/4" [15.9]
Ceiling Cutout: Ø 7-1/8" [18.1] Self-flanged
Overlap Trim: Ø 7-1/2" [19.1]

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ADDITIONAL DATA

JOT
JUST ONE TOUCH

The Sensor Switch JOT enabled solution offers a wireless, app-free approach to single room lighting control. JOT enabled products use Bluetooth® Low Energy (BLE) technology to enable wireless dimming and switching.

Diagram



LDN6 Series



Sensor Switch
WSXA JOT

1. **Power:** Install JOT enabled fixtures and controls as instructed.
2. **Pair:** Insert the pairing tool into the pinhole on the wall switch; press and hold any button for 6 seconds.
3. **Play:** Once paired, each fixture will individually dim down to 10% brightness. All products will be fully functional.

COMPATIBLE 0-10V WALL-MOUNT DIMMERS		
MANUFACTURER	PART NO.	POWER BOOSTER AVAILABLE
Lutron®	Diva® DVTV	
	Diva® DVSCTV	
	Nova T® NTFTV	
	Nova® NFTV	
Leviton®	AWSMT-7DW	CN100
	AWSMG-7DW	PE300
	AMRMG-7DW	
	Leviton Centura Fluorescent Control System	
	IllumaTech® IP7 Series	
Synergy®	ISD BC	RDMFC
	SLD LPCS	
	Digital Equinox (DEQ BC)	
Douglas Lighting Controls	WPC-5721	
Entertainment Technology	Tap Glide TG600FAM120 (120V)	
	Tap Glide Heatsink TGH1500FAM120 (120V)	
	Oasis 0A2000FAMU	
Honeywell	EL7315A1019	EL7305A1010 (optional)
	EL7315A1009	
HUNT Dimming	Preset slide: PS-010-IV and PS-010-WH	
	Preset slide: PS-010-3W-IV and PS-010-3W-WH	
	Preset slide, controls FD-010: PS-IFC-010-IV and PS-IFC-010-WH-120/277V	
	Preset slide, controls FD-010: PS-IFC-010-3W-IV and PS-IFC-010-3W-WH-120/277V	
	Remote mounted unit: FD-010	
Lehigh Electronic Products	Solitaire	PBX
PDM Electrical Products	WPC-5721	
Starfield Controls	TR61 with DALI interface port	RT03 DALInet Router
WattStopper®	LS-4 used with LCD-101 and LCD-103	

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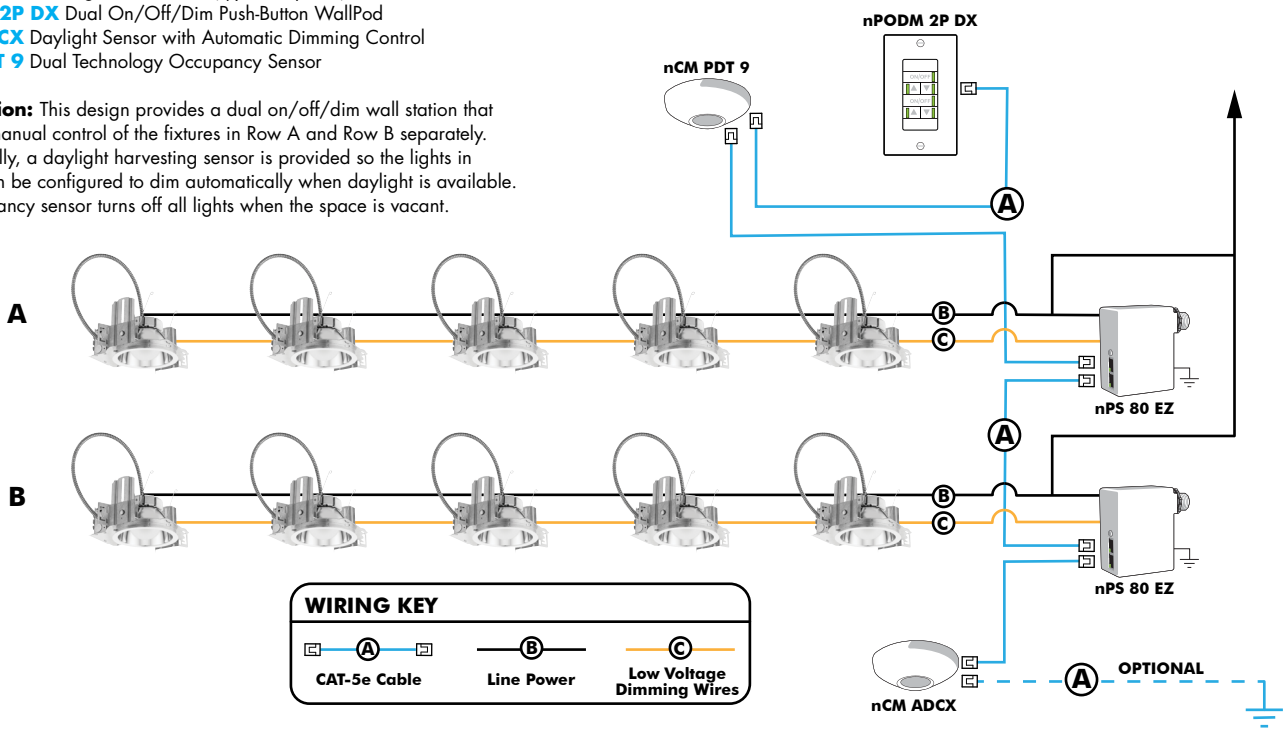
EXAMPLE
Group Fixture Control*
*Appiication diagram applies for fixtures with eldoLED drivers only.

nPS 80 EZ Dimming/Control Pack (qty: 2 required)
nPODM 2P DX Dual On/Off/Dim Push-Button WallPod
nCM ADCX Daylight Sensor with Automatic Dimming Control
nCM PDT 9 Dual Technology Occupancy Sensor

Description: This design provides a dual on/off/dim wall station that enables manual control of the fixtures in Row A and Row B separately. Additionally, a daylight harvesting sensor is provided so the lights in Row B can be configured to dim automatically when daylight is available. An occupancy sensor turns off all lights when the space is vacant.



Choose Wall Controls

nLight offers multiple styles of wall controls - each with varying features and user experience.



Push-Button Wallpod
Traditional tactile buttons and LED user feedback



Graphic Wallpod
Full color touch screen provides a sophisticated look and feel

nLight® Wired Controls Accessories:			
Order as separate catalog number. Visit www.acuitybrands.com/products/controls/nlight for complete listing of nLight controls.			
WallPod Stations	**Model number**	**Occupancy sensors**	**Model Number**
On/Off	nPODM (Color)	Small motion 360°, ceiling (PIR/dual Tech)	nCM 9 / nCM PDT 9
On/Off & Raise/Lower	nPOD DX (Color)	Large motion 360°, ceiling (PIR/dual tech)	nCM 10 / nCM PDT 10
Graphic Touchscreen	nPOD GFX (Color)	Wide View (PIR/dual tech)	nWV 16 / nWV PDT 16
Photocell controls	**Model Number**	Wall Switch w/ Raise/Lower (PIR/dual tech)	nWSX LV DX / nWSX PDT LV DX
Dimming	nCM ADCX	**Cat-5 cables (plenum rated)**	**Model Number**
		10', CAT5 10FT	CAT5 10FT J1
		15, CAT5 15FT	CAT5 15FT J1

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nLight® AIR Control Accessories:
Order as separate catalog number. Visit www.acuitybrands.com/products/controls/nlightair.

Wall switches	Model number
On/Off single pole	rPODB [color]
On/Off two pole	rPODB 2P [color]
On/Off & raise/lower single pole	rPODB DX [color]
On/Off & raise/lower two pole	rPODB 2P DX [color]
On/Off & raise/lower single pole	rPODBZ DX WH[1]

Notes
1 Can only be ordered with the RES7Z zone control sensor version.

UL924 Sequence of Operation

The below information applies to all nLight AIR devices with an EM option.

- EM devices will remain at their high-end trim and ignore wireless lighting control commands, unless a normal-power-sensed (NPS) broadcast is received at least every 8 seconds.
- Using the CL**AIR**ITY+ mobile app, EM devices must be associated with a group that includes a normal power sensing device to receive NPS broadcasts.
- Only non-emergency rPP20, rLSXR, rSBOR, rSDGR, and nLight AIR luminaires with version 3.4 or later firmware can provide normal power sensing for EM devices. See specification sheets for control devices and luminaires for more information on options that support normal power sensing.

nLight AIR

nLight AIR is the ideal solution for retrofit or new construction spaces where adding communication is cost prohibitive. The integrated nLight AIR rPP20 Power Pack is part of each Lithonia LDN Luminaire. These individually addressable controls offer the ultimate in flexibility during initial setup and for space repurposing.



Simple as 1,2,3

1. Install the nLight® AIR fixtures with embedded smart sensor
2. Install the wireless battery-powered wall switch
3. With CL**AIR**ITY app, pair the fixtures with the wall switch and if desired, customize the sensor settings for the desired outcome



nLight AIR rPODB 2P DX

Mobile Device

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O. Architectural Design Narrative

Please see the attached design narratives for each Phase of the project, completed by CWS and RSA architecture firms.

CWS
ARCHITECTURE +
INTERIOR DESIGN

December 18, 2024

City of Portland
Planning & Urban Development Department

Design Narrative for Avesta Oxford St. (Phase I)

The proposed design is for new construction of a 43,280 sq ft, 48-unit apartment building on Oxford Street between Cedar and Chestnut. There is an existing 2 ½ story building and a 1 story building currently located on the site that are to be demolished. The new building is five story with basement level parking. The building will have two internally independent programs that are designed to meet the needs of two different residential populations: a 23,429 sq ft, 28-unit Housing First side and a 19,852 sq ft, 20-unit Affordable Housing side. All Housing First Units are 0-bedroom and the Affordable Housing side has a mix of 0-bedroom units and 1-bedroom units. The two areas of the building are designed to function independently of each other, including building entrances, egress, vertical circulation, and HVAC/mechanical/electrical systems.

The building will be Type IIIB Construction, fully sprinklered. Floors two, three, four and five are Type VB Construction, fully sprinklered. The first floor of the Housing First side is dedicated to social services needed for the Housing First population. The first floor of the Affordable Housing side is a combination of apartments and amenities for the Affordable Housing tenants. Floors two through five are residential on both sides of the building. Fire separation between floors, dwellings, and occupancy types are designed per IBC requirements.

CWS is taking a very intentional approach to the design of this building, intending to be responsive to the existing neighborhood fabric and how it is evolving. The proposed design is something that will be appropriate for this high density, downtown neighborhood. The building will span the entire length of Oxford Street between Chestnut and Cedar, which has been historically underutilized in this growing neighborhood.

The neighborhood is comprised of a range of architecture types, with varying materials and scales. The range of buildings include 6-story multifamily housing, several story mixed use buildings, and single-family homes. The site is also in close proximity to the downtown core as well as City Hall. A response to this evolving place, the rectangular form of the proposed building reflects the urban density of a neighborhood of this type, and the Oxford Street façade as well as the design around Cedar and Chestnut respond to practical challenges of the site, such as the grade change. The architectural detailing emphasizes sustainability for reduced environmental impact and improved resident comfort.

We have selected a preliminary palette of materials that will maintain their beauty and timeless appearance for the life of the building while also providing an opportunity to express the building's program. The levels at grade that serve more public functions are primarily clad with self-finishing materials, consisting of long expanses of storefront and ground-face CMU veneer. The construction on upper floors that are primarily used for housing units are clad with a cementitious lap siding and accented with corrugated metal panels. These materials work to further articulate the fenestration and bring the building into the scale and context of the surrounding character of the neighborhood, as requested during the initial design review. Vertical circulation elements are clad with cementitious panel siding, sized to compliment the scale of these elements while giving the opportunity to incorporate variation in color and texture to the facade.

The building's dimensions are in compliance with the guidelines for both R-6 zoning and the Bayside Height Overlay Map. The roof deck is 55'-0" above the average grade of the site. Floor to floor height is 10'-0" with the exception of the basement parking level at 12'-0". Extra design consideration has been implemented regarding security, noise and pollutant suppression of the Housing First outdoor space, and shadow studies have been generated that represent the new building's impact on its neighbors and their gardens. This building will be designed to Passive House standards.

In addition to some of the aesthetic façade revisions mentioned above, and in preparation for the second round design workshop, CWS made numerous revisions to the proposed design in response to comments we received from the April Design Workshop. The variations in parapet height have been eliminated in order to address the planning board's request to establish a stronger roof-datum line that continues to Chestnut Street. The windows sizes in question have been refined. The 'minimal fenestration' that was brought into question on the side elevations of the building are windows located within the stairwells at the landings, and are 3'-4" X 3'-4", which compliments the regulating lines established with the reveal siding panels. The dimension of these windows, located at landings within the small footprint of the stairwell will actually make for a very bright space, full of natural daylight. Each unit features a configuration of paired 3'-4" X 4'-8" (total 6'-8" X 4'-8" opening) windows in the living room

spaces and 3'-4" X 3'-4" windows in the more private sleeping spaces, with additional windows incorporated in corner units.

The first floor entrances have been reworked to establish a positive street presence and wayfinding for pedestrians. The Housing First vestibule has been revised to incorporate more glazing and visibility, and is now projecting from the building to meet the front yard setback line. The Affordable Housing entrance has also been revised to better engage pedestrian experience. Relocating the entrance to the furthermost corner of Oxford and Chestnut is not feasible due to the grade change on the site, and would make the basement level parking an impossibility. However, we have articulated the entry with a canopy and we have brought the entry as close as we possibly could to the front yard setback while staying in compliance with accessibility of the egress elements as well as the city's requirements regarding projection in required setback areas that would otherwise force us to eliminate the stairs.

CWS has also provided renderings with this revised submission that include existing context at both Oxford and Cedar and Oxford and Chestnut and represent the developments we've made to the proposed exterior material palette. Please note the updated transformer location shown in the rendering at Oxford and Chestnut. This was brought into question at the first meeting, and staff expressed the desire to move it away from the corner. It has been relocated near the lower landing of the Affordable Housing stair.

The Planning and Urban Development Department provided another round of comments in preparation for the JSPA Planning Board Design Workshop that took place on November 12, 2024, and CWS has further revised the Phase I design. In response to the request for greater articulation associated with the residential units, particularly in the form of a more pronounced cornice above the horizontal siding, we have provided a more pronounced, 8"X8" cornice above all of the lap siding-clad portions of the building. We think the overhang and the added shadow line have improved the look of the elevations and work to provide better definition between the lap siding and panel siding portions of the building.

In regard to the planning board's request to minimize blank facades at grade level, the design team has added tall-layered landscaping at said locations, and will continue to develop the planting design to reduce their presence at street level.

The mechanical room projection on Oxford street was added in response to the comments we received after the first design workshop, and has since become integral to the design of the mechanical systems. The second round design workshop request to recess the mechanical room wall would render the space unusable as it is designed. The room houses an ERV and if we were to recess the wall, the minimum required distance between air supply and return would no longer be available.

The second round request to extend the NE corner of the building out to the OHE setback is also not feasible due to the zoning requirements of the property. The corner in question has been extended as far as possible toward the corner of Oxford and Chestnut per the City's request, but additional extension would infringe on the lot coverage maximum requirement of the site.

The staff request to move the Affordable Housing vestibule/ entry in order to reduce the ramp length has been addressed. We have moved the vestibule to the opposite side of the Affordable Housing common area and the change has resulted in re-design of the Affordable Housing common areas that has proven advantageous to the design as a whole. The entry relocation on Oxford Street has resulted in a shorter ramp and fewer stair treads. And the new common area layout has relocated the community room to the rear of the building, which allows for a larger, better-defined space, and has relocated the office and mail room adjacent to the entry vestibule. The office relocation provides for better visibility and interaction with visitors and tenants, and the mail room relocation provides better functionality while re-introducing the opportunity to implement passive heating strategies at the storefront. These revisions have also allowed for a larger, better functioning Affordable Housing mechanical room.

In addition to the colored-renderings provided in response to the first round design workshop, CWS has included additional 3D renderings with this submission that illustrate the proposed sidewalk condition from the abutting property at 72 Chestnut, per staff request. We have also included a bird's eye rendering from the rear of the building at Cedar street to better illustrate the proposed Housing First rear yard community space and to show the proposed fencing that staff has requested we specify. The proposed fencing is to be either ground-face CMU to match the foundation walls or cast-in-place concrete. The proposed walls are 8'-0" tall, and there will also be planting provided in front of them at rear yard in order to provide the greatest acoustical suppression possible.



Bhen Reed, AIA, NCARB
Architect, CWS Architecture + Interior Design
breed@cwsarch.com

October 1, 2024

Eric Freeman
Planner
City of Portland Maine
389 Congress Street
Portland, Maine 04101

Re: 158 Lancaster Street Apartments - Design Narrative

Dear Eric,

The proposed building to be located at 158 Lancaster Street consists of 24 Market Rate residential apartment units.

The neighborhood is comprised of a diverse palate of Architectural forms, and time periods of design and construction. The surrounding streets contain residential structures with sloped roofs, large commercial buildings with flat roofs, brick exterior walls, lap siding, concrete exterior walls, and metal panel siding.

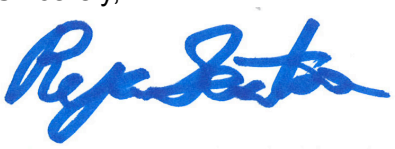
We designed the building using color, massing and texture to scale the building as reflected on the attached elevations. The facades utilize punched openings in pairs and singles with horizontal lap and shiplap siding that references the local residential vernacular Architecture. The facades are broken by projecting bays that work their way along the streets.

The siding materials proposed are factory finished fibercement corrugated siding, in various formats, lap siding, shiplap siding and panel siding. These products were chosen for their crisp appearance and long term durability. The windows proposed are dark in color to compliment the siding colors and also further reinforce the crisp simplicity of the design. The roofing proposed is an EPDM roof membrane.

We did review the stoops on Lancaster Street and would like to keep them as designed, we found many examples of this orientation throughout the City of Portland thus we feel there is precedent for this proposed design.

We look forward to discussing the projects at the upcoming Planning Board workshop.

Sincerely,



Ryan Senatore, AIA LEED AP

Principal

207-747-5159

senatorearchitecture.com

ryan@senatorearchitecture.com

500 Congress Street, Suite 2
Portland, Maine 04101

P. Utilities:

Coordination with respective utility companies is ongoing and Ability to serve requests have been sent. Formal response letters are forthcoming and will be uploaded upon receipt. The proposed re-development project proposes the following utility service to support each phase:

Water:

Phase 1: 197 Oxford Street; Based on the City archive plans, there is an existing 12" water main within Oxford Street, 6" water main within Chestnut Street, and a 4" within Cedar Street. Given the demising wall within the building, we anticipate having a separate domestic and fire service for each side of the building.

It is proposed to connect into the existing 12" water main within Oxford Street with four services to feed the proposed building. The connections include two separate 2" domestic services and two separate 6" fire service lines, which will run to the proposed mechanical/sprinkler rooms on each side of the building (i.e. for both the Housing first and the Affordable Housing portion.)

- Phase 2 and 3: Consistent with the adjacent MDP project, the water main in Lancaster Street will be upgraded to a 12" ductile iron main. Both phases will tap 2" and 6" domestic and sprinkler lines off this main, respectively.

Sewer:

Phase 1: 197 Oxford Street; An existing 18" combined sewer exists in Chestnut Street. It is proposed to connect a new 6" PVC lateral into the Chestnut Street main discharging the domestic sewer, the covered parking oil water separator, and the elevator sumps. A backflow preventer is proposed at the property line, typical of all three phases.

- Phase 2: 50 Cedar Street; It is proposed to tap the sewer lateral into the existing 18" sewer main in Cedar Street.

Phase 3: 158 Lancaster Street: It is proposed to tie into the existing sewer main within Chestnut Street.

Stormwater:

Phase 1: 197 Oxford Street; The project proposes over 1,000 SF of new impervious. Treatment will be accomplished using Storm-filter cartridges which will discharge into a proposed R-Tank subsurface detention system. The detention system is sized to store an inch across the entire roof area as well as some ancillary impervious ground surfaces, which is a larger volume than the new sewer flows created by the project.

The stormwater will outlet into the combined 18" sewer within Chestnut.

- Phase 2: 50 Cedar Street; The project proposes over 1,000 SF of new impervious. Treatment will be accomplished using Storm-filter cartridges which will discharge into a proposed R-Tank subsurface detention system. The detention system is sized to store an inch of rainfall across the site's impervious area, which exceeds the new sewer flows. The outfall will tie into the previously engineered and approved 89 Elm drainage system which ultimately drains to the upstream end of the MS4 extension that's been designed as part of the MDP (89 Elm being Phase I).

  Phase 3: 158 Lancaster Street: The project will not create more than 1,000 SF of new impervious area and therefore no treatment is proposed. The site will detain the new sewer flows because its volume exceeds an inch across the site's impervious area. The outlet is not high enough to outlet to the MS4 extension in Lancaster Street and therefore will outlet into the 18" combined sewer in Chestnut Street.

Electric/Communications:

- Phase 1: 197 Oxford Street; proposes a new riser pole along Chestnut Street to facilitate routing underground secondary and communications lines to the proposed building. Secondaries are proposed to be routed to a 7'x7' pad mount transformer within the property, to be located along Chestnut Street.

- Phase 2: 50 Cedar Street; proposes a pole mounted transformer along Lancaster Street to facilitate power to the building. Depending on the final service loads, CMP may require an alternative proposal, which will be addressed at that time.

  Phase 3: 158 Lancaster Street; proposes new riser pole along Chestnut Street to facilitate routing underground secondary and communications lines to the proposed building. Secondaries are proposed to be routed to a 9'x9' pad mount transformer within the property, to be located along Chestnut Street. It is possible a pole-mounted transformer may be sufficient to serve these residences.

Gas:

Phase 1: 197 Oxford Street; It is our understanding that a 2" gas main exists within Cedar and Chestnut. It is proposed to connect a new gas line to the 2" gas main from each street, which will service each portion of the co-managed building.

- Phase 2: 50 Cedar Street; proposed to tap a gas service off the Cedar Street gas main due to lack of gas main in Lancaster Street.

  Phase 3: 158 Lancaster Street: proposed to tap a gas service off the Chestnut Street gas main.

Q. Construction Management Plan

Project Address:

Phase I – 197 Oxford Street, Portland Maine, 04101
Phase 2 – 50 Cedar Street, Portland Maine, 04101
Phase 3 – 158 Lancaster Street, Portland Maine, 04101

Project Description:

The project proposes to redevelop the current parcels into multifamily residential buildings.

Project Team Summary:

Owner:	Avesta Housing and Reveler Development
General Contractor:	TBD
Civil & Environmental Engineer:	Acorn Engineering, Inc.
Architect:	CWS Architecture + Interior Design (Phase 1) Ryan Senatore Architecture (Phase 2 and 3)

The Owner/GC and all subcontractors will work with the City of Portland and adjacent landowners to minimize any project impacts.

The GC will remain responsible for enforcement of all compliance with 1) all contract plans and specifications in their scope of work and 2) all site working conditions and safety requirements, day and night, for both persons and property, in each case for the duration of their work. These include OSHA, NIOSH, U.S. EPA, local ordinance and any other applicable governmental regulations. Both the Owner/GC and any subcontractors will remain responsible for safeguarding the general public.

The GC shall review all permits and conditions associated with the project. Refer to the Civil/Site Plan Set, Sheet C-03 Construction Management Plan for visual representation of the general, high-level measures to be taken during the phased construction. The specific construction managers, in coordination with their subcontractors, who are hired later in the process will develop more detailed details and commitments to construction management including traffic control, site logistics, laydown areas, etc.

The following outline has been developed in accordance with the City of Portland Construction Management Plan General Template and shall be referenced by the GC during construction.

A. Construction Management Principles

The control of noise, vibrations, ground movement, truck traffic, and other construction related factors will be of utmost importance. Care shall be taken to minimize these effects in the best interest of neighbors and the general public. GC to ensure that work hours conform to the City of Portland's Ordinance.

B. Development Review of Construction Management Plan

Logistics and safety program shall be submitted at or prior to the preconstruction meeting by the GC with all pertinent information required by the Maine Department of Transportation's Traffic Control Plan Standard Specification 652.3.3.

C. Performance Guarantees, Inspection Fees, Preconstruction Meeting, and Permits

Guarantees and fees will be paid at the time of the respective application. Sections 14-11 will be complied with all necessary permits will be obtained prior to work.

1. Street Opening and Street Occupancy Permits:

   Required permits regarding street opening and occupancy will be obtained from the Department of Public Works. The requests shall conform to the approved Construction Management Plan.

2. Blasting:

   Although not anticipated, if blasting occurs, it shall conform to Article VIII. In Chapter 14 of the City Code and Section 3.7 in the City's Technical Manual.

3. Building Code:

   Employ the best practices, as applicable, of Chapter 33 Safeguards During Construction, from the 2009 International Building Code. In addition to the best practices set forth in the Inclusionary Zoning Guidelines for Developers of rental housing.

D. Construction Administration and Communication

The Contractor will work closely with adjacent abutters, businesses, and all parties informed, as far in advance as possible, of scheduled work, particularly work anticipated to cause significant noise, vibrations, or dust. Communication in order to comply with all agreements, ordinances, and special permits will be of the utmost importance. Contractor and Subcontractor contact information shall be posted somewhere along the project's street frontage. Additional signage necessary for communication shall be provided but will be temporary and removed upon completion of the project.

E. Construction Schedule

The GC shall submit a construction timeline at or prior to the preconstruction meeting. Construction may occur during the daytime hours as defined in Section 17-18. Construction Activities for Building permit and City Code Section 25-129, Noise, dust and debris. Between September 1 and May 31, the following year, no person shall engage in construction activities generating noise exceeding 50 decibels, between

the hours of 7 pm and 7 am of the following day within 500 feet of any buildings. From June 1 to August 31, construction activity may continue until 8 pm. No construction activity shall begin before 8 am on a Saturday, Sunday, or legal holiday. Extended hours or night work may be requested for special circumstances and street utility work if needed. These requests will be subject to approval by the Public Works Authority. Deliveries will be scheduled between 7 am and 5 pm.

The estimated timeframe of the proposed project is outlined below:

Project Start Date:	Spring 2026 (Phase 1)
Project End Date:	Fall 2029 (Phase 3)

A more detailed work schedule shall be provided by the GC at or before the pre-construction meeting with the City.

F. Security

1. The Construction Management Plan, Sheet C-03, depicts all proposed fencing and other barriers, with the intent of separating pedestrian and vehicle circulation from the construction site. Construction entrances per detail shall be installed.

2. Structures undergoing construction, alteration, or demolition operations, including those in underground locations, shall comply with NFPA 1 Chapter 16. *Safeguarding Construction, Alteration, and Demolition Operations.*

3. Fire Safety Program: Prior to construction, an overall construction and demolition fire safety program shall be developed. Essential items to be emphasized include the following:
    - Good Housekeeping
    - On-site security
    - Installation of new fire protection systems as construction progresses
    - Preservation of existing systems during demolition
    - Organization and training of an on-site fire brigade
    - Development of a pre-fire plan with the local fire department
    - Rapid communication
    - Consideration of special hazards resulting from previous occupancies
    - Protection of existing structures and equipment from exposure fires resulting from construction, alteration, and demolition operations.

4. Blasting, if required, shall conform with all measures of Article VIII. Regulation of Explosives in the Land Use Code and Section 3.7 Standards for Blasting and Regulation of Explosives in Portland's Technical Manual.

5. Temporary security lighting shall be shown on the Construction Management Plan, and all fixtures shall be full cutoffs.

G. Construction Permitting and Traffic Control Plans

1. Construction Activity in Public Streets

   Construction activity in the public right-of-way shall be compliant with Chapter 25 Article VII of the City Code. At no time will it be permissible for construction activity including delivery vehicle to close or block streets or affect public safety access without prior notice and approval of the Department of Public Works.

2. Sewer and Stormwater

   Sewer and stormwater system connections are controlled by Chapters 24 and 32 of the City code of Ordinance. Required permits for new connections and/or abandonment of existing connections are available through the Street Opening Clerk at the Department of Public Works. Rules and Regulations for these utility systems are available through the City Engineer's office of the Department of Public Works and in Section II of the Technical Manual.

3. Traffic Control Plans

   Construction activity that impacts the existing public street system must be controlled to protect the safety of the construction workers and all modes of the traveling public. The contractor shall submit a satisfactory "Maintenance of Traffic" (MOT) plan prior to any street opening permit approval. This document shall contain all pertinent information from the Maine Department of Transportation's Traffic Control Plan Standard Specification 652.3.3.

   The MOT will address the work required for utility connections in Lancaster, Chestnut, Cedar, and Oxford Street. Traffic will be channelized utilizing drums and cones. Proper signage will be installed prior to the through work zone. Alternating traffic will be controlled with flaggers. Trenches will be patched with pavement daily.

   The MOT plan shall provide for the safe passage of the public through or along the construction work zone. It may be permissible to close a portion of the street during utility connections and/or detour a mode of traffic when absolutely necessary for safety. All requests shall be subject to City approval. MOT plans shall employ the appropriate techniques and devices as called for in the latest edition of the Manual on Uniform Traffic Control Devices (MUTCD). In addition:

   - Construction speed signing may be used as needed to slow traffic.
   - Traffic Control signs shall not be placed where they would create any obstructions to bicycles or pedestrians.
   - Flaggers will be utilized when necessary.

   All existing modes of travel in the work zone area shall be accommodated if impacted by the activity. The safe passage of pedestrians, bicyclists, transit providers, and motorists are of equal importance when planning and laying out

the work zone; no pre-existing travel mode may be eliminated without the express approval of the Department of Public Works. The MOT should also address on-street parking impacts, including deliveries and parking for adjoining businesses and property owners, analysis of roadway capacity or diversion capacity if street closure or change to roadway capacity is required, and coordination with other on-going or future construction or utility projects in the vicinity.

- Traffic control bicycle and pedestrian facilities or routes through work zones shall be maintained until the bicycle and pedestrian facilities or routes are ready for safe operation. Traffic control will not be removed to allow auto travel at the expense of bicycle and pedestrians.
- Barrier systems utilized to separate the construction activity from the public street and /or sidewalk shall not inhibit sight distances, particularly for visibility of pedestrians and bicyclists.
- ADA compliance in all capacities shall be maintained.

Use of public parking spaces or the blockage of any portion of sidewalk for the purpose of construction activity shall require an occupancy permit and appropriate fee as assessed by the Department of Public Works.

H. Site Management and Controls

1. Regular trash and debris shall be managed appropriately, and its removal shall comply with all local, state, and federal regulations.

2. Street cleaning and sweeping shall be followed as outlined in the erosion and sedimentation control notes and report. Damage to the street shall be avoided and shall be the responsibility of the contractor.

3. Dust shall be controlled and shall comply with Section 25-129 and the erosion and sedimentation control notes, plan, and details.

4. Noise shall be controlled and shall comply with Section 17-18 and Section 25-129.

5. Rodent Control shall be provided, if applicable, by a professional exterminator and shall be consistent with Chapter 22 of the City Code.

6. Snow and Ice Removal shall be provided. Pursuant to Section 25-173, the Contractor shall ensure a safe means of travel within the work zone by the following steps:

    a. Snow/ice removal or commence automatically from 1" or greater of snow or ice
    b. Remove snow as needed within the work zone, including parking spaces. Driveways and site lines shall not be blocked by piles of snow.
    c. Clear all walks and ramps within the work zone
    d. Sand or salt as needed
    e. Clear all basin or drainage to help snow melt
    f. The above steps shall be carried out Sunday-Saturday including holidays.

I. Erosion & Sedimentation Control

1. The Contractor shall install all erosion and sedimentation controls as depicted on the approved Construction Management Plan, C-03, and the approved erosion and sedimentation control report, prior to the pre-construction meeting for inspection by the City. The Contractor shall regularly inspect the control measures, no less than weekly and after storm events (0.5" or more in 24 hours). Additionally, temporary or permanent stormwater management systems shall be inspected and maintained to ensure working order. The Contractor shall document all inspection activities and corrective actions and be prepared to provide these documents for inspection by the City, Maine Department of Environmental Protection (MDEP) or the U.S. Environmental Protection Agency (EPA) upon request.

2. Due to the existing, sparse landscaping on site, no protection during construction will be necessary.

3. Stored materials shall be identified and avoid being located under/near trees.

J. Construction Staging Area

1. The Contractor shall submit a plan with locations depicted for the location of material staging areas, the location of on-site temporary construction trailers, the location of on-site truck delivery holding areas, the location of on-site truck washing stations, masonry mixing stations, the general location of the construction security fence and the general location of temporary construction dumpsters. This plan shall be submitted at or prior to the pre-construction meeting. Any open storage areas shall be shown on the plan.

2. Delivery Truck Holding Areas On-Site: The majority of materials delivered to the site will be scheduled such that they are able to be off-loaded immediately. On days when the construction activities require multiple truck deliveries, these deliveries will be carefully scheduled so that there is always adequate on-site area for the holding of trucks until they can be unloaded. Once at the site all vehicles will be brought within the fence line and will make every attempt to avoid queuing on public streets. If, for any reason, on-site holding of trucks is not feasible, an off-site location must be designated and shown on the submitted plan referenced above in J.1.

3. All deliveries for materials shall comply with the City's noise requirements.

K. Parking During Construction

1. Adequate parking for construction workers shall be provided on site or arrangements for off-street parking at an off-site location shall be provided.

2. Truck Routes and Volumes: The following quantities are estimated as part of the redevelopment:

- Gravel & Stone – 2,500 CY. Earthwork subcontractor(s) pit to project site.
- Hot Mix Asphalt – 300 Tons. Paving subcontractor pit to project site.

L. Dewatering Plans

1. A basic dewatering plan for any construction work is required and shall be submitted by the Contractor. The plan must cover construction sites where groundwater is not expected but the impact of rainwater may require dewatering. The plan must include operating procedures, equipment to be used, including filters, erosion and sediment control measures, or other methods of removing sediment from approved discharges.

2. For construction work that will require frequent dewatering of groundwater from site, a dewatering plan must be prepared by the Contractor and approved by the Department of Public Works. Groundwater and/or soil testing may be required to determine course of action if treatment is necessary. Approval for all discharges to City infrastructure is required. The proposed plan must address the following:

    - Project duration, discharge location, storage equipment on-site, dewatering schematic, and emergency contact.
    - General requirements include trained staff on-site for all approved discharges and required site log for documentation of all discharges.
    - Storage and/or treatment process should include proper settling time and maintain proper use of filtering medium as required.
    - Contingency/maintenance plan for all dewatering equipment devices and filtration mediums.

    Any water that is removed from an excavation must be pumped from a perforated device buried in crush stone prior discharge and/or prior to storage and treatment. There will be no discharge allowed during precipitation events.

M. Special Measures as Necessary

No special measures are necessary for the proposed reconstruction.

R. Solid Waste Disposal

The property management company and Owner will be responsible for locating the solid waste and recyclable material to the spaces allocated for solid waste storage. Ultimately, a private hauler will be contracted for removal of each phase. The solid waste containers will be fully enclosed and screened from the public view as shown in each Phase's site plan and/or ground floor plan.

Phase I:

Each portion of the building will have a dedicated trash room adjacent to the street to provide easy access to the waste hauler. The Housing First room will be accessed off Cedar Street through a sidewalk. The Affordable Housing room will be accessed off Chestnut Street through a paved access aisle in the basement. Mobile (rolling) totes will be utilized for all solid waste.

Phase 2:

The project will share the solid waste enclosure with the adjacent 89 Elm development. Access to the dumpsters is provided directly off Lancaster Street, or through the sidewalk at the back of the site that leads to an elevated trash chute.

Phase 3:

The project proposes a solid waste enclosure with the parking lot on 158 Lancaster Street. Access to the dumpsters is provided through the parking lot alongside the building.

Please refer to the project plans for more information.

S. Parking Analysis

Per the City of Portland Land Use Code, one parking space is required for every unit minus the first four units, per phase. This requirement is intended to be met through a combination of on-site parking, as well as off-site parking within the Cumberland Avenue parking garage which is owned by the Co-Applicant, Reveler Development, and has a capacity of 595 vehicles.

Phase 1: 5 on-site spaces provided (48 proposed units)

Due to the limited space on site, 5 parking spaces are being provided on site for Staff. If tenants wish to pursue dedicated off-site parking, there is ample capacity within the Cumberland Avenue parking garage (3 minute walk). Vehicle usage within this development is intended to be low as Avesta's current utilization rate for 1-bedroom on-peninsula apartments is about 14%. The Housing First portion of the building is expected to have a utilization rate even lower than that figure.

Phase 2: 3 spaces provided (24 units) & Phase 3: 13 spaces provided (24 units)

16 off-street parking spaces on Phases 2 and 3 are being provided due to the extra available space on site as an option for residents who choose to be closer to their building, including residents who may have a disability under Phase 3 (Phase 2 is limited due to topographical challenges and building program). All parking spaces will be unbundled from the base rent, and residents will have the opportunity to reserve a parking space on the subject parcel, or within the garage on Cumberland Ave depending on their individual preference for covered parking without snowplow requirements vs a shorter walking distance to their vehicle. In most cases, it will likely depend on the end user's frequency of vehicle usage. Ample capacity exists at the Cumberland Avenue parking garage (5 minute walk) should tenants wish to secure off-site parking. Reveler Development owns this garage and included supply calculations as part of the previously approved Master Development Plan in 2023. A portion of this information is also reiterated below.

It should be noted that approximately 43 leased parking spaces on the 50 Cedar and 158 Lancaster Street lot, are currently for commercial uses. The termination of these leases/agreements as the residential redevelopments occur will be coordinated by the managing entity, Reveler, and if necessary, relocated elsewhere under one of the many parcels under their site control in the immediate vicinity, including the Cumberland Avenue parking garage which has a capacity of 595 vehicles.

Cumberland Ave. Parking Garage Commitments & Availability:

- **Existing Commitments** – As of September 2023, 157 structured parking spaces have term commitments in place during portions of the proposed development period. There are no existing approvals associated within the parking garage other than the MDP which also has no formal ties or required commitments.

- **Future Commitments** – Depending on start timing, ownership has the ability to reduce parking commitments to 0 during years 6-7 of the anticipated MDP development period (2030 timeframe).
    - **Future Commitments** – Depending on project start timing, parking commitments are expected to come online per project phase. Ownership has strategically planned and allocated parking spaces per phase of the West Bayside MDP, as previously shared during the approval process.

As part of the TMP prepared for the West Bayside Master Development Plan, 169 parking spaces were allocated to the parking garage as part of Phases 1A, 1B, and 2. Should these phases of the MDP and this JSPA be completed concurrently, the net parking availability in the garage upon the completion of the JSPA and MDP phases listed above would result in approximately 269 available parking spaces in the garage available for future residents of the JSPA and later phases of the MDP. This number is conservative in that assumes the existing 157 leases are still in effect at the time of MDP Phase 1A, 1B, 2 and the JSPA occupancy.

Closure:

A combination of surface and structured parking is more than adequate to service existing and future needs associated with the proposed developments while honoring existing commitments in place. Additional parking is not required to be created given the parking garage's ample capacity. It should also be noted that the new zoning ordinance, in effect 12/4/2024, does not require parking.

ACORN ENGINEERING, INC.

T. Traffic Analysis

The redevelopment project is proposed to be phased. Phase 1 is located along Oxford Street and between Cedar and Chestnut Street. The phase intends to redevelop the existing property located at 197 Oxford Street into 48 Affordable and "Housing Fist" Residential Units. Phase 2 is located at 50 Cedar Street will redevelop the parking lot into 24 market rate residential units (24 bedrooms). Phase 3 intends to redevelop the existing parking lot located at 158 Lancaster Street to provide a total of 24 market rate units. The streets encompassing the phases consist of all local streets being Lancaster, Cedar, Chestnut, and Oxford Streets. Cedar Street and Oxford Street feature one-way traffic patterns, while the remaining streets are two-way traffic. The existing curb cut along Oxford Street is proposed to be closed and replaced with a rebuilt sidewalk in Phase 1. Two of the three existing curb cuts under Phase 2 will be closed (one on Cedar Street and one on Lancaster Street. One curb cut that exists under Phase 3 will remain and be rebuilt to facilitate existing surface parking, a portion of which will remain. The other curb cut along the Phase 3 frontage (on Chestnut Street) will be closed.

Land Use Codes

Given the existing and proposed developments encompass different land uses, the traffic generated from the development has been broken up into various categories. To determine the increase in traffic resulting from the project, the Institute of Transportation Engineers Trip Generation Manual, 11th Edition was utilized.

The Trip Generation Manual does not contain a specific LUC for the Shelter use at 197 Oxford Street and therefore, the office LUC was used in its place for existing trips, based on the square footage recorded in the Portland Accessor Database for Office only. All existing non-office space was not attributed to any existing trips. The existing structures containing office space were modeled using the General Office Building (LUC 710) and the Single-Family Detached use at 50 Cedar (previously existing within 10 years).

- LUC 710 - A general office building houses multiple tenants; it is a location where affairs of businesses, commercial or industrial organizations, or professional persons or firms are conducted. An office building or buildings may contain a mixture of tenants including professional services, insurance companies, investment brokers, and tenant services, such as a bank or savings and loan institution, a restaurant, or cafeteria and service retail facilities. A general office building with a gross floor area of 5,000 square feet or less is classified as a small office building (Land Use 712). Corporate headquarters building (Land Use 714), single tenant office building (Land Use 715), office park (Land Use 750), research and development center (Land Use 760), and business park (Land Use 770) are additional related uses.
- LUC 223 – All multi-family housing that is rented at below market rate.

The land uses utilized in the calculation of the proposed phases consist of Affordable Housing (Income Limits LUC 223) and Mid-rise Multifamily Housing LUC 223. LUC 223 is a new land use that was introduced in ITE 11.

- LUC 221 - Mid-rise multifamily housing includes apartments, townhouses, and condominiums located within the same building with at least three other dwelling units and that have between three and 10 levels (floors). Multifamily housing (low-rise) (Land Use 220), multifamily housing (high-rise) (Land Use 222), off-campus student apartment (Land Use 225), and mid-rise residential with 1st-floor commercial (Land Use 231) are related land uses.
- LUC 223 – All multi-family housing that is rented at below market rate.

Trip Generation

The trip generation for the proposed project has been estimated using the Institute of Transportation Engineers (ITE) "Trip Generation" 11th Edition publication. Consistent with Maine DOT standards, the existing trip generation for the project was estimated by applying a trip credit accounting for the site conditions in a 10-year window (2014-2024). Utilizing the City's tax maps, google earth history, and information from the owner, it was assumed for Phase 1 that the former sites consists of two buildings with 201 Oxford Street building consisting of a shelter for around 7,000 SF of floor area. 197 Oxford Street also consisted of a shelter with 2,000 SF of floor area. For the purposes of this calculation, 2,714 SF of office space was used for trip generation as a conservative approach, based upon the Assessor's information (page 6). It was assumed the other uses comprising the floor area created negligible trips. If additional credit is to be obtained, a more in depth analysis would need to occur. For phase 2, it is assumed that the former site consists of one single family house with approximately 4,500 sf. Lastly, phase 3, it is assumed that the former site consists of an existing parking lot with no buildings. See the Appendix further in this report for visual representation of the existing buildings. The number of trips were estimated based on the floor areas and residential units provided above.

Proposed development:

- Phase 1: 197 Oxford Street: 48 Affordable and "Housing First" Residential Units
- Phase 2: 50 Cedar Street: 24 Market Rate Residential Units
- Phase 3: 158 Lancaster Street: 24 Market Rate Residential Units

The proposed development use is in tandem with the trip generation rate to project based on the peak hour passenger car equivalent. LUC 223 does not include weekend trip generation data, thus the peak hour PM rate was assumed here. This approach is consistent with previous affordable housing projects.

Rates for the office weekend were estimated due to the 11th edition manual not containing Saturday or Sunday Peak Hour rates for all LUCs. This was modeled based on the existing buildings being utilized shelters that are used 7 days a week.

Land-Use #210: Single Family Detached Housing –
[Setting/Location: General Urban/Suburban]

Weekday AM Peak Hour (Street)	= 0.70 trips/unit
Weekday PM Peak Hour (Street)	= 0.94 trips/unit
Weekday AM Peak Hour (Generator)	= 0.75 trips/unit
Weekday PM Peak Hour (Generator)	= 0.99 trips/unit
Saturday Peak Hour (Generator)	= 0.92 trips/unit
Sunday Peak Hour (Generator)	= 0.83 trips/unit

Land-Use #221: Multifamily Housing – Midrise (Dwelling unit)
[Setting/Location: Dense Multi Use Urban]

Weekday AM Peak Hour (Street)	= 0.28 trips/unit
Weekday PM Peak Hour (Street)	= 0.26 trips/unit
Weekday AM Peak Hour (Generator)	= 0.23 trips/unit
Weekday PM Peak Hour (Generator)	= 0.24 trips/unit
Saturday Peak Hour (Generator)	= 0.25 trips/unit
Sunday Peak Hour (Generator)	= 0.25 trips/unit

Land-Use #223: Affordable Housing – Income Limits (per Bedroom)
[Setting/Location: Dense Multi Use Urban]

Weekday AM Peak Hour (Street)	= 0.25 trips/BR
Weekday PM Peak Hour (Street)	= 0.18 trips/BR
Weekday AM Peak Hour (Generator)	= 0.25 trips/BR
Weekday PM Peak Hour (Generator)	= 0.19 trips/BR
Saturday Peak Hour (Generator)*	= 0.25 trips/BR
Sunday Peak Hour (Generator)*	= 0.25 trips/BR

*Weekend rates not provided in manual thus are estimated

Land-Use #710: General Office Building (per 1000 Sq. Ft.)
[Setting/Location: Dense Multi Use Urban]

Weekday AM Peak Hour (Street)	= 0.84 trips/1000 SQ. FT.
Weekday PM Peak Hour (Street)	= 0.87 trips/1000 SQ. FT.
Weekday AM Peak Hour (Generator)	= 0.84 trips/1000 SQ. FT.

Weekday PM Peak Hour (Generator) = 0.87 trips/1000 SQ. FT.

Saturday Peak Hour (Generator) = 0.50 trips/1000 SQ. FT.

Sunday Peak Hour (Generator)* = 0.50 trips/1000 SQ. FT.

*Sunday rate not provided in manual thus is estimated

Table 1, below, provides a summary of the trip generation for the existing development of two office buildings.

Table 1 – Peak Hour Trip Generation - Existing				
LUC: #710 General Office Building/ LUC #221 Multi-family Housing Mid-Rise (per 1000 SF/Unit/Bedroom)	**Phase 1 197 Oxford Street**	**Phase 2 50 Cedar Street (single family)**	**Phase 3 158 Lancaster Street**	**Peak Hour Trip Generation**
AM Peak Hour (Street)	2 trips	1 trip	0 trips	3 trips
PM Peak Hour (Street)	2 trips	1 trip	0 trips	3 trips
AM Peak Hour (Generator)	2 trips	1 trip	0 trips	3 trips
PM Peak Hour (Generator)	2 trips	1 trip	0 trips	3 trips
Saturday Peak Hour (Generator)*	1 trip	1 trip	0 trips	2 trips
Sunday Peak Hour (Generator)*	1 trip	1 trip	0 trips	2 trips

*Weekend rates were not provided in manual thus are estimated for Phase I, given the facility is not a typical M-F office use.

Table 2, below, provides a summary of the trip generation for the proposed development in phases with a total of 75 market rate units and 48 affordable 1-BR units (48 Bedrooms).

Table 2 – Peak Hour Trip Generation – Proposed				
	Phase 1 Affordable Housing Units (48 Bedrooms) LUC 223	**Phase 2 Market Rate Units (24 Bedrooms) LUC 221**	**Phase 3 Market Rate Units (24 Bedrooms) LUC 221**	**Total Peak Hour Trip Generation**
AM Peak Hour (Street)	12 trips	7 trips	7 trips	26 trips
PM Peak Hour (Street)	9 trips	7 trips	6 trips	22 trips
AM Peak Hour (Generator)	12 trips	6 trips	6 trips	24 trips
PM Peak Hour (Generator)	10 trips	6 trips	6 trips	22 trips
Saturday Peak Hour (Generator)*	12 trips	6 trips	6 trips	24 trips
Sunday Peak Hour (Generator)*	12 trips	6 trips	6 trips	24 trips

*Weekend rates were not provided in manual thus are estimated

Table 3, below, provides a summary of the previous and new trip generation for the proposed development.

Table 3 – Peak Hour Trip Generation – Proposed			
	Existing Peak Hour Trip Generation	**Proposed Peak Hour Trip Generation**	**Net Increase Peak Hour Trip Generation**
AM Peak Hour (Street)	3 trips	26 trips	24 trips
PM Peak Hour (Street)	3 trips	22 trips	20 trips
AM Peak Hour (Generator)	3 trips	24 trips	21 trips
PM Peak Hour (Generator)	3 trips	22 trips	19 trips
Saturday Peak Hour (Generator)*	2 trips	24 trips	26 trips
Sunday Peak Hour (Generator)*	2 trips	24 trips	26 trips

*Weekend rates were not provided in manual, thus are estimated for office use and multifamily affordable.

Analysis

From this analysis, the total trips generated by the project when accounting for the former site credit is 26 trips in the peak hour. It should also be noted that this analysis does not factor in the reduced parking supply on site which will encourage residents to use multi-modal transportation and therefore likely reduce the vehicle trip generation to and from the site. Multimodal options include the various public bus options, bicycling, car-sharing/pooling, or utilizing the newly constructed sidewalks as a pedestrian to access goods and services that are in the vicinity of the site.

Crash Data

The street network in the project vicinity was analyzed for crashes. Lancaster, Cedar, Oxford, and Chestnut Streets have all been classified as local streets by Maine DOT. The following tables represent the crash data on these roads over the past three years.

Along Cedar Street	
Crash Date	**Type of Crash**
1/3/2021	Property Damage
1/6/2022	Pedestrians (Injury)
1/15/2022	Property Damage
4/3/2022	Property Damage
8/17/2022	Property Damage
9/25/2022	Property Damage
2/7/2023	Property Damage
11/28/2023	Property Damage
1/9/2024	Property Damage
1/19/2024	Property Damage

Crash data was obtained from MaineDOT for the most recent available three-year period (2021-2023). There have been 10 crashes near the three project phases. Only one crash along Oxford Street did result in injuries.

Based on the relative minor nature of reported crashes and existing intersection conditions, the net trip generation provided, and proposed traffic calming improvements, it is not anticipated for this project to have a negative impact on the surrounding street network.

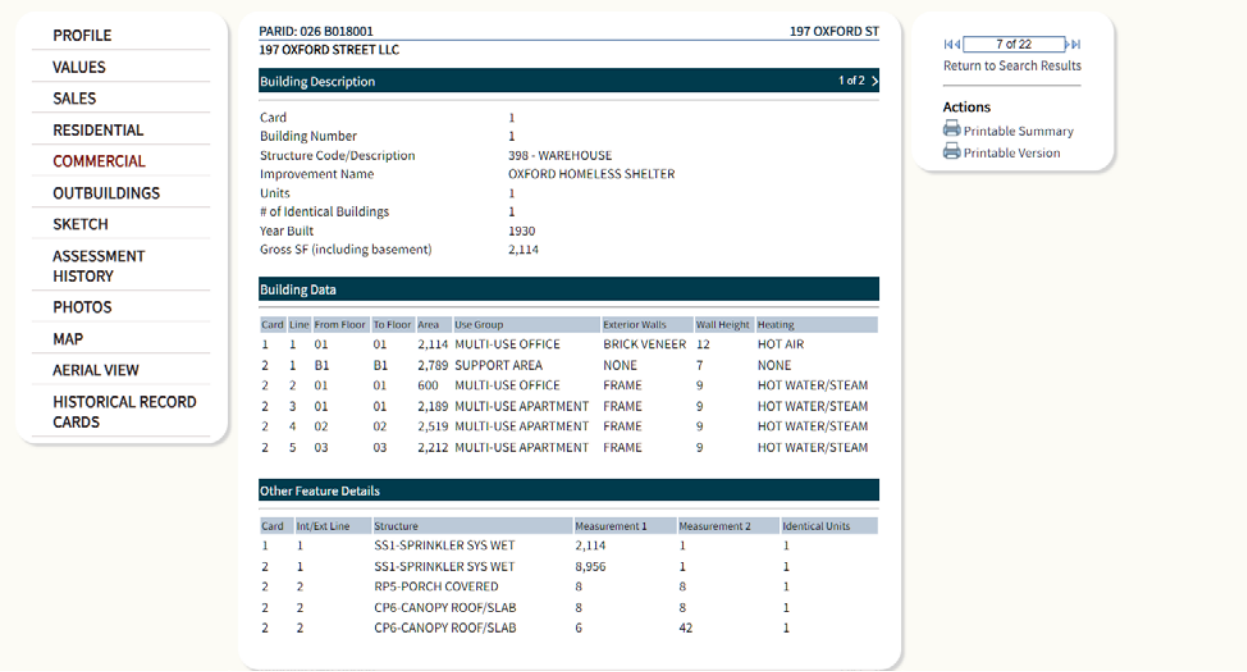
Conclusion

Overall, the project does not anticipate negatively influencing the surrounding street system. Given the site's ideal location with direct access to goods and services, the encouragement of multimodal transportation such as bicycles and buses, and the overall existing context of Portland's downtown street grid, this infill project is expected to be seamlessly incorporated into the neighborhood.

Existing Building Overview Appendix:

Existing Buildings			
Building Number	Number of Stories	Type of Building	Size of Building (SF)
201 Oxford Street	3rd Floor, 2nd Floor, 1st Floor, Basement	Office Building – Low Rise	600 SF
197 Oxford Street	1st Floor	Office Building – Low Rise	2,114 SF
50 Cedar Street	3rd Floor, 2nd Floor, 1st Floor, Basement	Residential – Mid Rise	4,500 SF

Portland Assessor for 197 Oxford Street LLC (201 Oxford Street included)



PROFILE
VALUES
SALES
RESIDENTIAL
COMMERCIAL
OUTBUILDINGS
SKETCH
ASSESSMENT HISTORY
PHOTOS
MAP
AERIAL VIEW
HISTORICAL RECORD CARDS

PARID: 026 B018001 — 197 OXFORD ST
197 OXFORD STREET LLC

Building Description — 1 of 2

Card	1
Building Number	1
Structure Code/Description	398 - WAREHOUSE
Improvement Name	OXFORD HOMELESS SHELTER
Units	1
# of Identical Buildings	1
Year Built	1930
Gross SF (including basement)	2,114

Building Data

Card	Line	From Floor	To Floor	Area	Use Group	Exterior Walls	Wall Height	Heating
1	1	01	01	2,114	MULTI-USE OFFICE	BRICK VENEER	12	HOT AIR
2	1	B1	B1	2,789	SUPPORT AREA	NONE	7	NONE
2	2	01	01	600	MULTI-USE OFFICE	FRAME	9	HOT WATER/STEAM
2	3	01	01	2,189	MULTI-USE APARTMENT	FRAME	9	HOT WATER/STEAM
2	4	02	02	2,519	MULTI-USE APARTMENT	FRAME	9	HOT WATER/STEAM
2	5	03	03	2,212	MULTI-USE APARTMENT	FRAME	9	HOT WATER/STEAM

Other Feature Details

Card	Int/Ext Line	Structure	Measurement 1	Measurement 2	Identical Units
1	1	SS1-SPRINKLER SYS WET	2,114	1	1
2	1	SS1-SPRINKLER SYS WET	8,956	1	1
2	2	RP5-PORCH COVERED	8	8	1
2	2	CP6-CANOPY ROOF/SLAB	8	8	1
2	2	CP6-CANOPY ROOF/SLAB	6	42	1

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Return to Search Results
Actions
Printable Summary
Printable Version



201 Oxford Street



197 Oxford Street



50 Cedar Street

ATTACHED:

Institute of Transportation Engineers (ITE) 11th Edition Excerpts from applicable Land Use Codes (LUC).

Land Use: 210
Single-Family Detached Housing

Description

A single-family detached housing site includes any single-family detached home on an individual lot. A typical site surveyed is a suburban subdivision.

Specialized Land Use

Data have been submitted for several single-family detached housing developments with homes that are commonly referred to as patio homes. A patio home is a detached housing unit that is located on a small lot with little (or no) front or back yard. In some subdivisions, communal maintenance of outside grounds is provided for the patio homes. The three patio home sites total 299 dwelling units with overall weighted average trip generation rates of 5.35 vehicle trips per dwelling unit for weekday, 0.26 for the AM adjacent street peak hour, and 0.47 for the PM adjacent street peak hour. These patio home rates based on a small sample of sites are lower than those for single-family detached housing (Land Use 210), lower than those for single-family attached housing (Land Use 251), and higher than those for senior adult housing -- single-family (Land Use 251). Further analysis of this housing type will be conducted in a future edition of *Trip Generation Manual*.

Additional Data

The technical appendices provide supporting information on time-of-day distributions for this land use. The appendices can be accessed through either the ITETripGen web app or the trip generation resource page on the ITE website (https://www.ite.org/technical-resources/topics/trip-and-parking-generation/).

For 30 of the study sites, data on the number of residents and number of household vehicles are available. The overall averages for the 30 sites are 3.6 residents per dwelling unit and 1.5 vehicles per dwelling unit.

The sites were surveyed in the 1980s, the 1990s, the 2000s, and the 2010s in Arizona, California, Connecticut, Delaware, Illinois, Indiana, Kentucky, Maryland, Massachusetts, Minnesota, Montana, New Jersey, North Carolina, Ohio, Ontario (CAN), Oregon, Pennsylvania, South Carolina, South Dakota, Tennessee, Vermont, Virginia, and West Virginia.

Source Numbers

100, 105, 114, 126, 157, 167, 177, 197, 207, 211, 217, 267, 275, 293, 300, 319, 320, 356, 357, 367, 384, 387, 407, 435, 522, 550, 552, 579, 598, 601, 603, 614, 637, 711, 716, 720, 728, 735, 868, 869, 903, 925, 936, 1005, 1007, 1008, 1010, 1033, 1066, 1077,1078, 1079

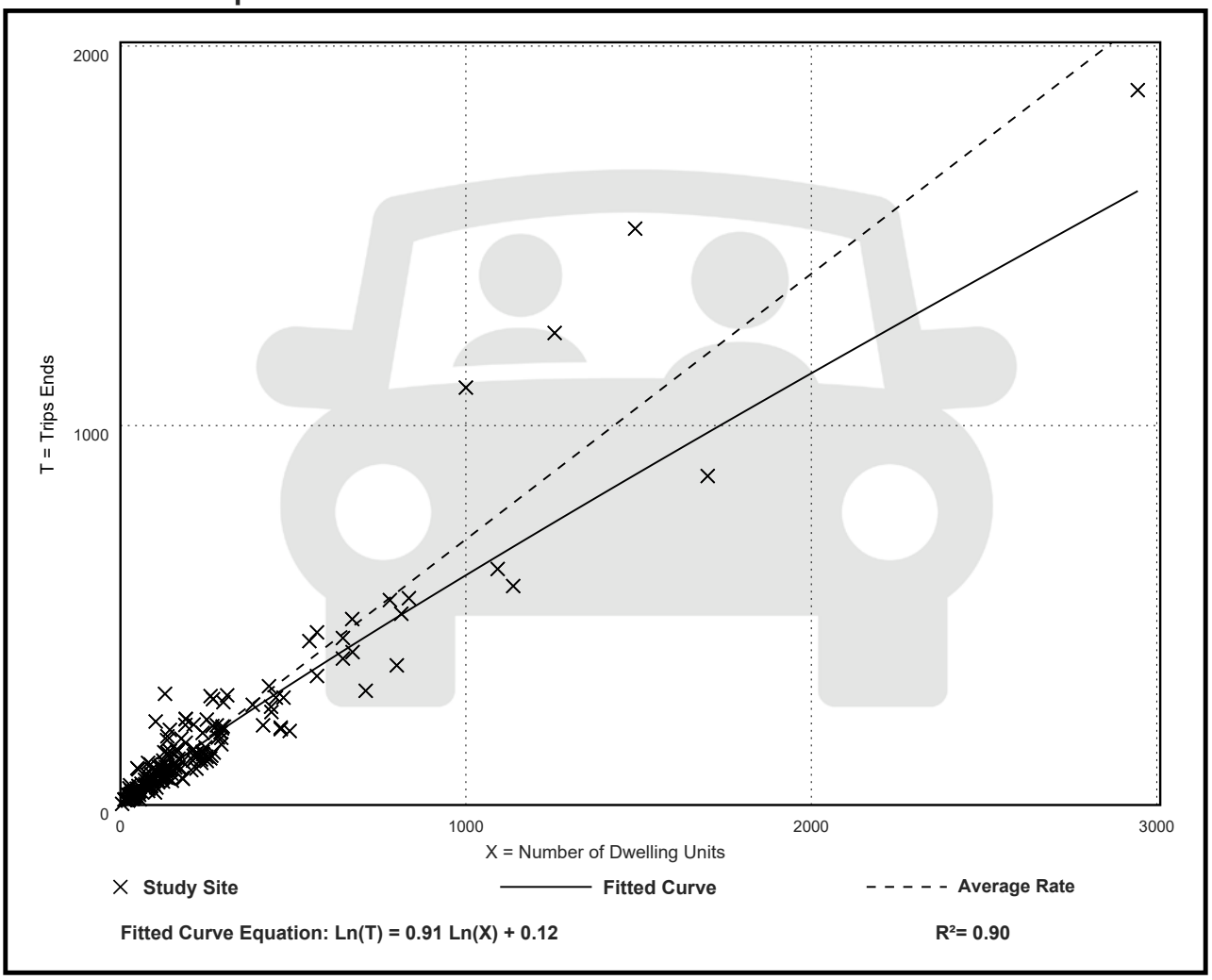
Single-Family Detached Housing
(210)

Vehicle Trip Ends vs: Dwelling Units
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: General Urban/Suburban
Number of Studies: 192
Avg. Num. of Dwelling Units: 226
Directional Distribution: 26% entering, 74% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.70	0.27 - 2.27	0.24

Data Plot and Equation



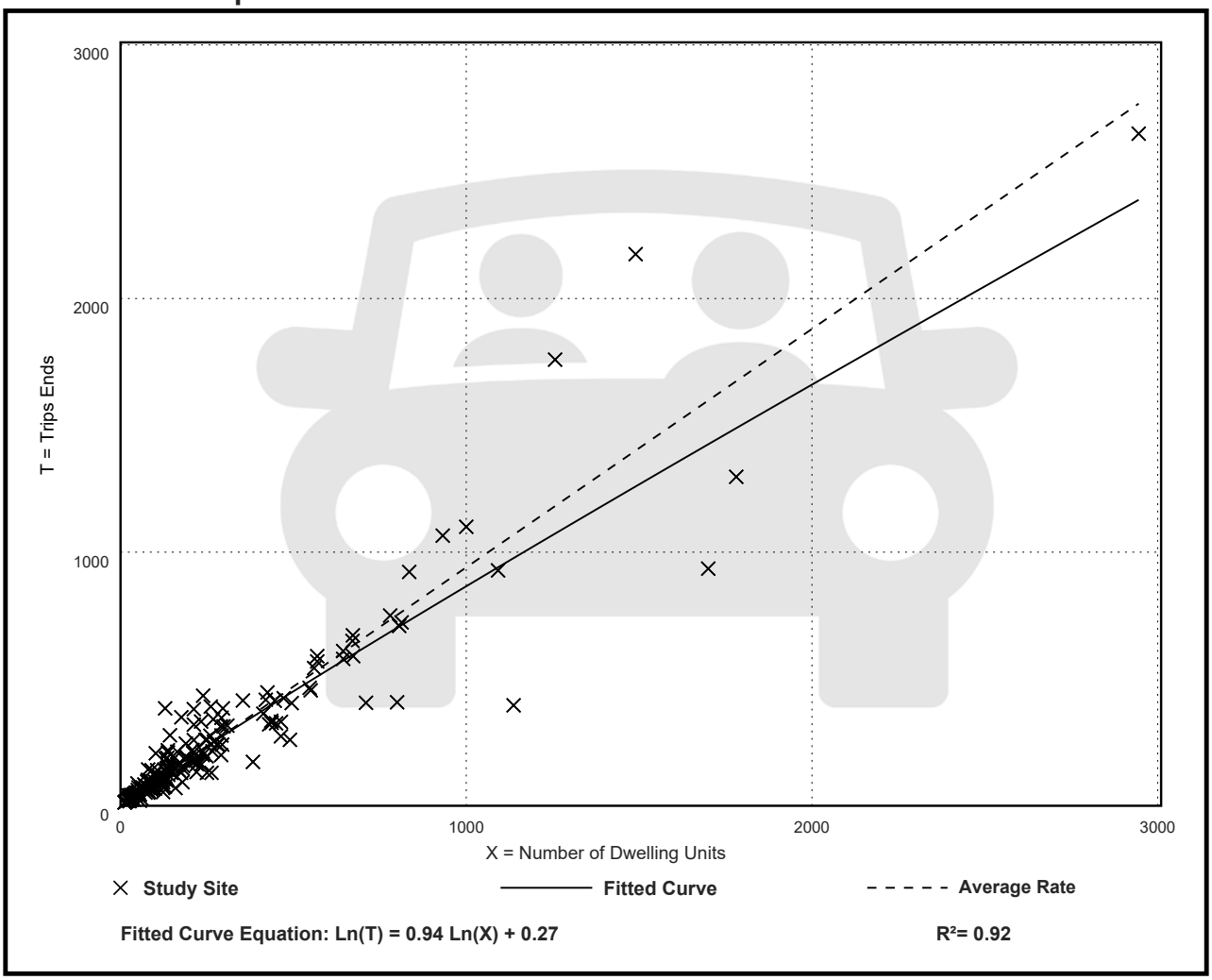
Single-Family Detached Housing
(210)

Vehicle Trip Ends vs: Dwelling Units
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: General Urban/Suburban
Number of Studies: 208
Avg. Num. of Dwelling Units: 248
Directional Distribution: 63% entering, 37% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.94	0.35 - 2.98	0.31

Data Plot and Equation



Single-Family Detached Housing
(210)

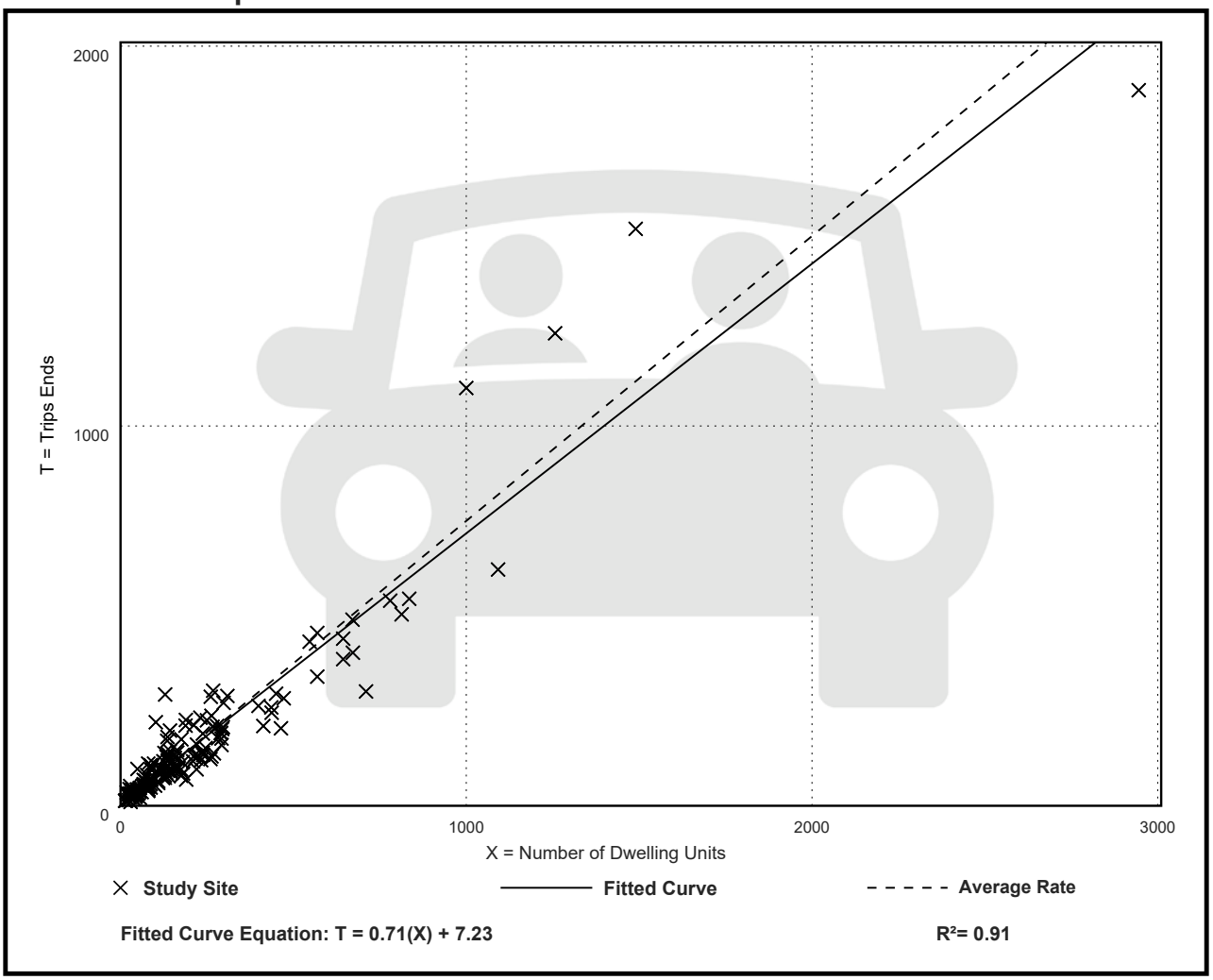
Vehicle Trip Ends vs: Dwelling Units
On a: Weekday,
AM Peak Hour of Generator

Setting/Location: General Urban/Suburban
Number of Studies: 169
Avg. Num. of Dwelling Units: 217
Directional Distribution: 26% entering, 74% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.75	0.34 - 2.27	0.25

Data Plot and Equation



Single-Family Detached Housing
(210)

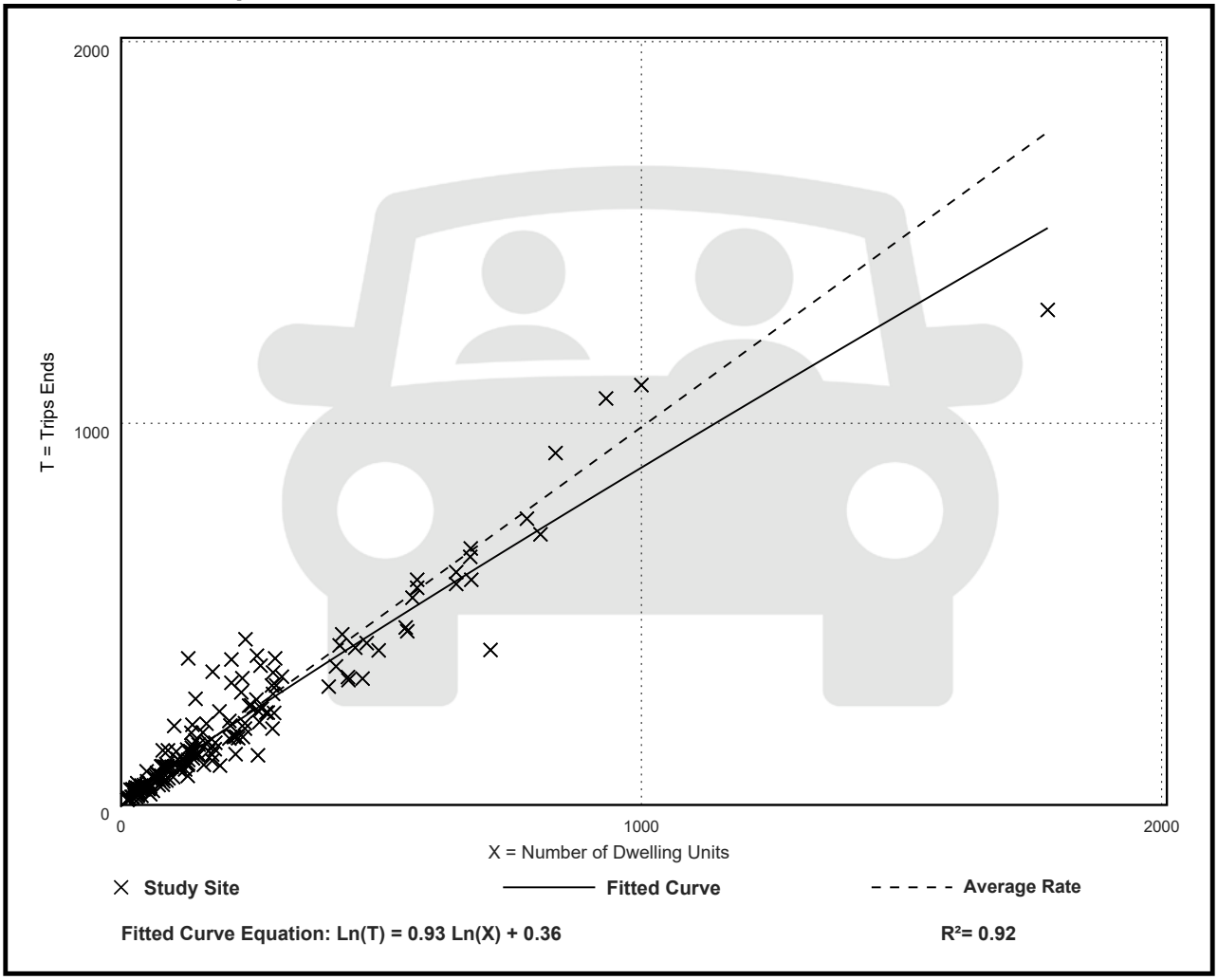
Vehicle Trip Ends vs: Dwelling Units
On a: Weekday,
PM Peak Hour of Generator

Setting/Location: General Urban/Suburban
Number of Studies: 178
Avg. Num. of Dwelling Units: 203
Directional Distribution: 64% entering, 36% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.99	0.49 - 2.98	0.28

Data Plot and Equation



Single-Family Detached Housing
(210)

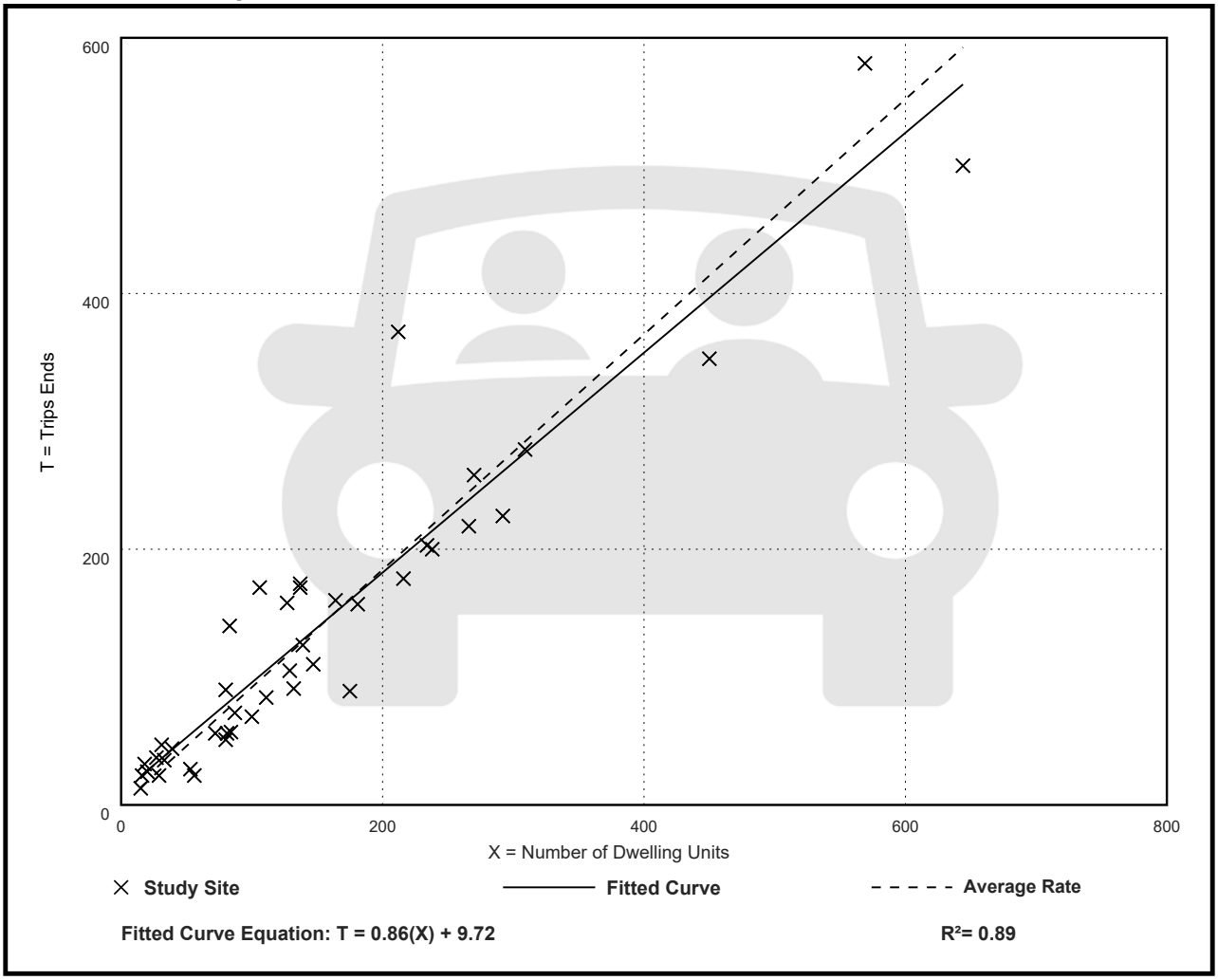
Vehicle Trip Ends vs: Dwelling Units
On a: Saturday, Peak Hour of Generator

Setting/Location: General Urban/Suburban
Number of Studies: 42
Avg. Num. of Dwelling Units: 152
Directional Distribution: 54% entering, 46% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.92	0.41 - 1.78	0.27

Data Plot and Equation



Single-Family Detached Housing
(210)

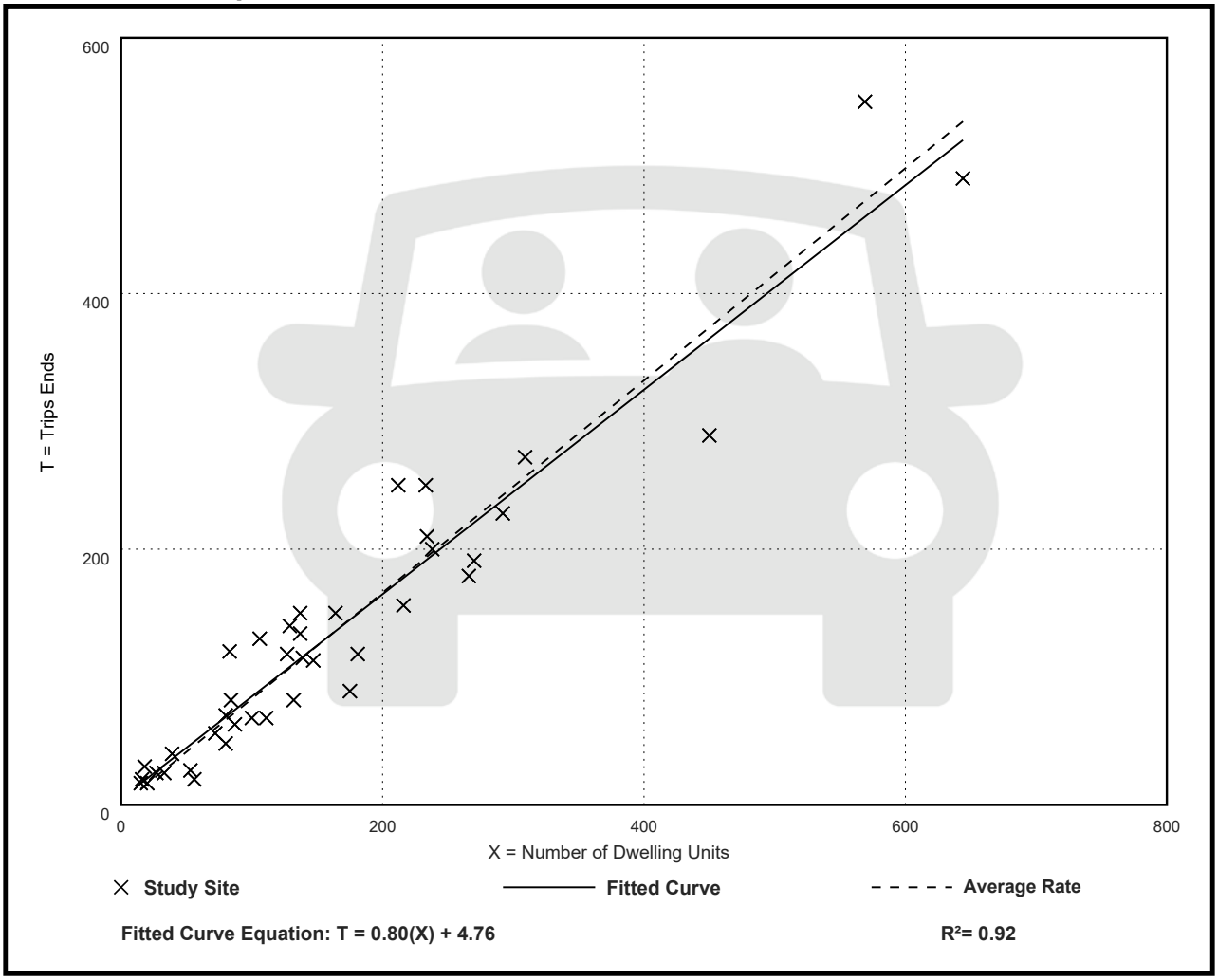
Vehicle Trip Ends vs: Dwelling Units
On a: Sunday, Peak Hour of Generator

Setting/Location: General Urban/Suburban
Number of Studies: 40
Avg. Num. of Dwelling Units: 162
Directional Distribution: 53% entering, 47% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.83	0.36 - 1.67	0.19

Data Plot and Equation



Land Use: 221
Multifamily Housing (Mid-Rise)

Description

Mid-rise multifamily housing includes apartments and condominiums located in a building that has between four and 10 floors of living space. Access to individual dwelling units is through an outside building entrance, a lobby, elevator, and a set of hallways.

Multifamily housing (low-rise) (Land Use 220), multifamily housing (high-rise) (Land Use 222), off-campus student apartment (mid-rise) (Land Use 226), and mid-rise residential with ground-floor commercial (Land Use 231) are related land uses.

Land Use Subcategory

Data are presented for two subcategories for this land use: (1) not close to rail transit and (2) close to rail transit. A site is considered close to rail transit if the walking distance between the residential site entrance and the closest rail transit station entrance is ½ mile or less.

Additional Data

For the six sites for which both the number of residents and the number of occupied dwelling units were available, there were an average of 2.5 residents per occupied dwelling unit.

For the five sites for which the numbers of both total dwelling units and occupied dwelling units were available, an average of 96 percent of the total dwelling units were occupied.

The technical appendices provide supporting information on time-of-day distributions for this land use. The appendices can be accessed through either the ITETripGen web app or the trip generation resource page on the ITE website (https://www.ite.org/technical-resources/topics/trip-and-parking-generation/).

It is expected that the number of bedrooms and number of residents are likely correlated to the trips generated by a residential site. To assist in future analysis, trip generation studies of all multifamily housing should attempt to obtain information on occupancy rate and on the mix of residential unit sizes (i.e., number of units by number of bedrooms at the site complex).

The sites were surveyed in the 1990s, the 2000s, the 2010s, and the 2020s in Alberta (CAN), California, District of Columbia, Florida, Georgia, Illinois, Maryland, Massachusetts, Minnesota, Montana, New Jersey, New York, Ontario (CAN), Oregon, Utah, and Virginia.

Source Numbers

168, 188, 204, 305, 306, 321, 818, 857, 862, 866, 901, 904, 910, 949, 951, 959, 963, 964, 966, 967, 969, 970, 1004, 1014, 1022, 1023, 1025, 1031, 1032, 1035, 1047, 1056, 1057, 1058, 1071, 1076

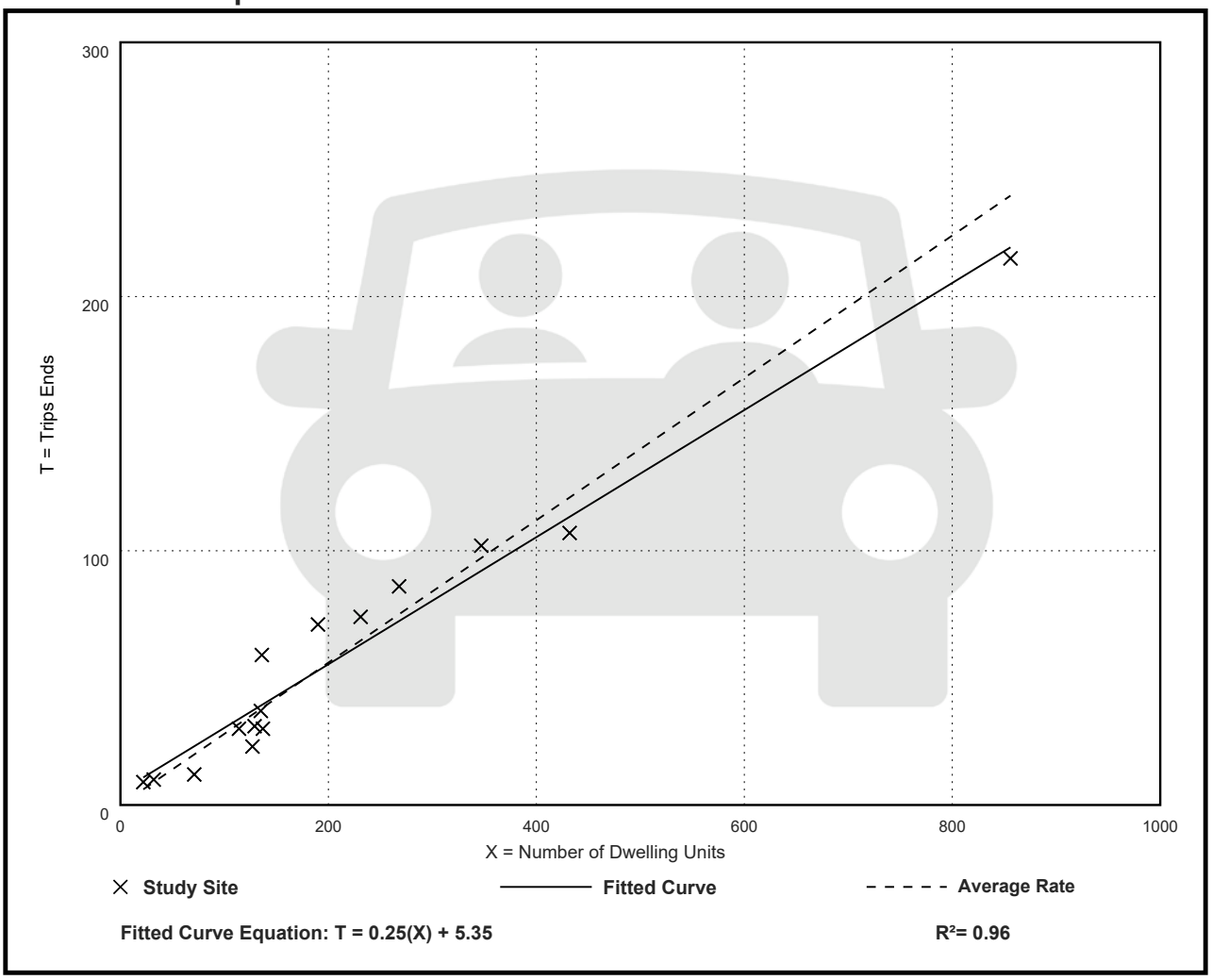
Multifamily Housing (Mid-Rise)
Not Close to Rail Transit (221)

Vehicle Trip Ends vs: Dwelling Units
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: Dense Multi-Use Urban
Number of Studies: 15
Avg. Num. of Dwelling Units: 215
Directional Distribution: 15% entering, 85% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.28	0.17 - 0.43	0.06

Data Plot and Equation



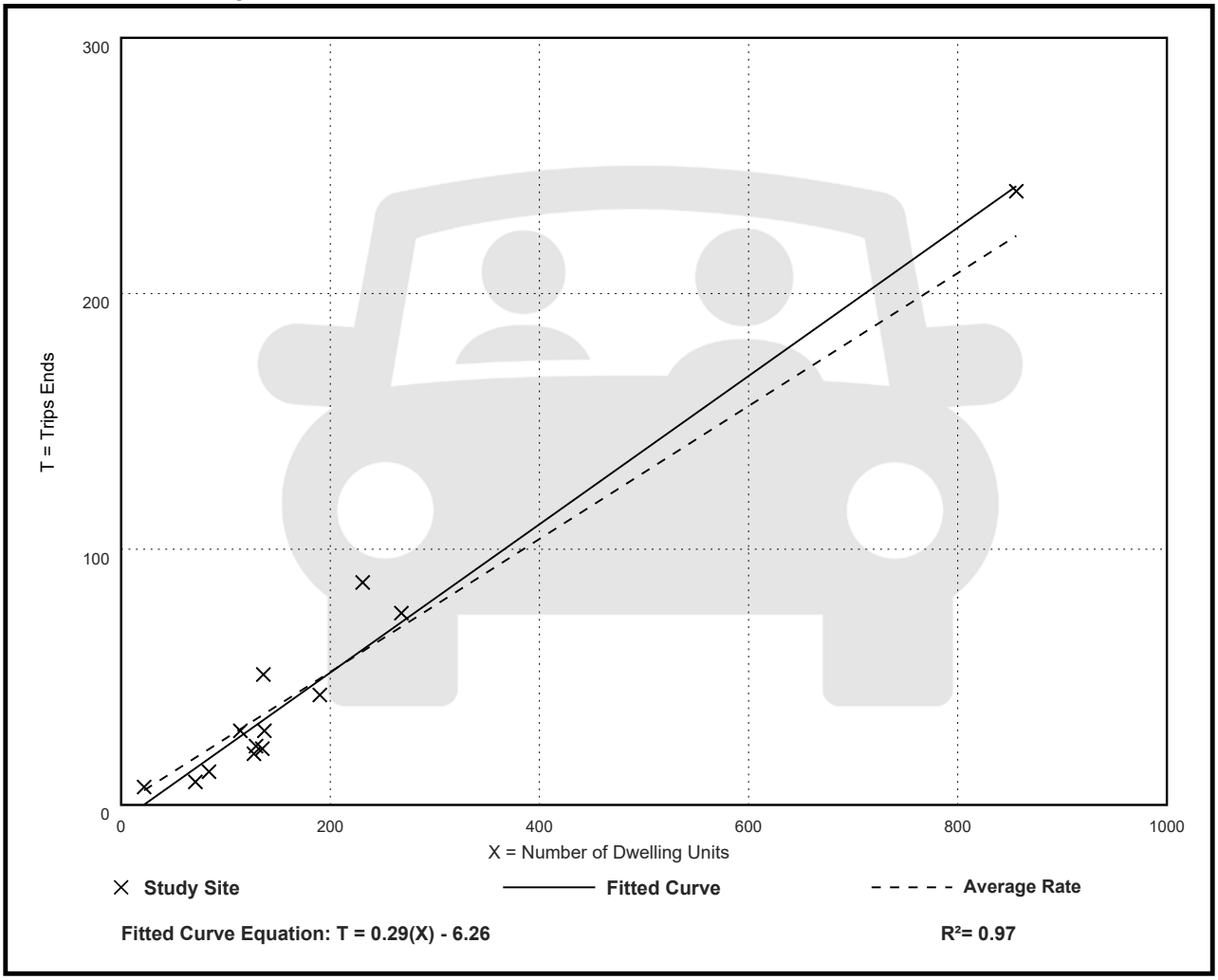
Multifamily Housing (Mid-Rise)
Not Close to Rail Transit (221)

Vehicle Trip Ends vs: Dwelling Units
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: Dense Multi-Use Urban
Number of Studies: 13
Avg. Num. of Dwelling Units: 192
Directional Distribution: 73% entering, 27% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.26	0.13 - 0.38	0.07

Data Plot and Equation



Multifamily Housing (Mid-Rise)
Not Close to Rail Transit (221)

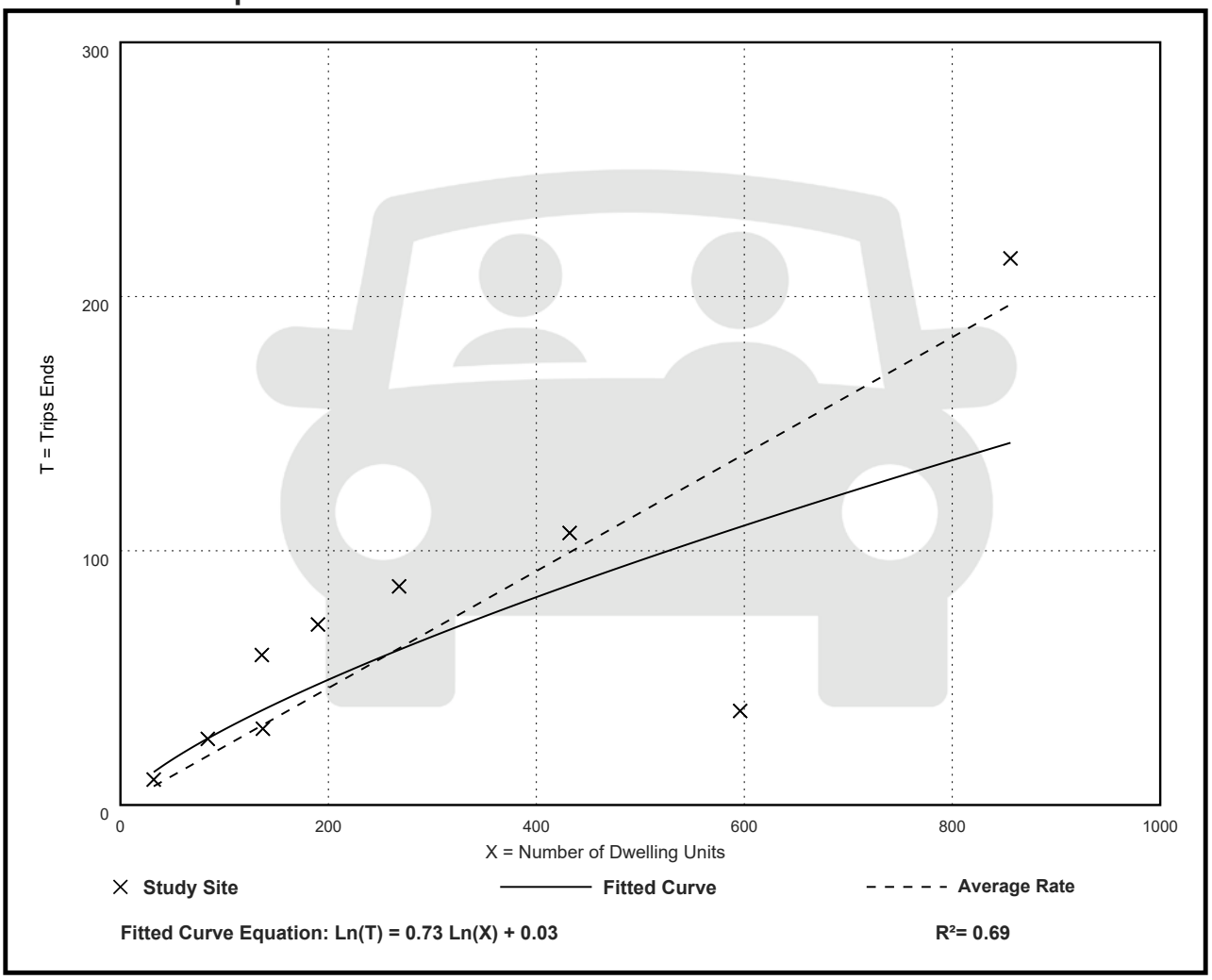
Vehicle Trip Ends vs: Dwelling Units
On a: Weekday,
AM Peak Hour of Generator

Setting/Location: Dense Multi-Use Urban
Number of Studies: 9
Avg. Num. of Dwelling Units: 303
Directional Distribution: 17% entering, 83% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.23	0.06 - 0.43	0.11

Data Plot and Equation



Fitted Curve Equation: Ln(T) = 0.73 Ln(X) + 0.03

R^2= 0.69

Multifamily Housing (Mid-Rise)
Not Close to Rail Transit (221)

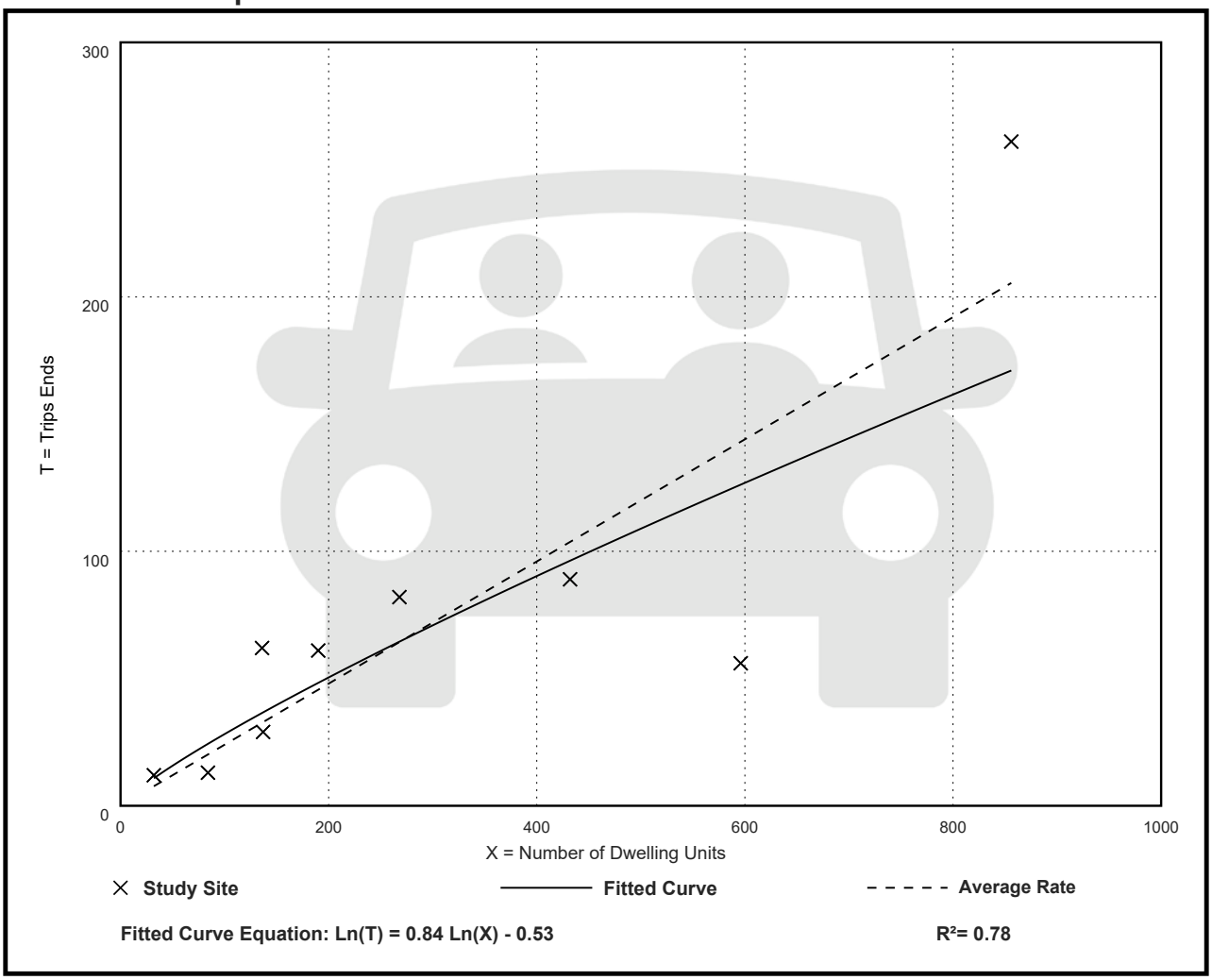
Vehicle Trip Ends vs: Dwelling Units
On a: Weekday,
PM Peak Hour of Generator

Setting/Location: Dense Multi-Use Urban
Number of Studies: 9
Avg. Num. of Dwelling Units: 303
Directional Distribution: 63% entering, 37% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.24	0.09 - 0.46	0.11

Data Plot and Equation



Fitted Curve Equation: Ln(T) = 0.84 Ln(X) - 0.53

R^2= 0.78

Land Use: 223
Affordable Housing

Description

Affordable housing includes all multifamily housing that is rented at below market rate to households that include at least one employed member. Eligibility to live in affordable housing can be a function of limited household income and resident age. Multifamily housing (low-rise) (Land Use 220), multifamily housing (mid-rise) (Land Use 221), and multifamily housing (high-rise) (Land Use 222) are related land uses.

Land Use Subcategory

Data are presented for three subcategories for this land use: (1) sites with income limitations for its tenants (denoted as income limits in the data plots), (2) sites with both minimum age thresholds and income limitations for its tenants (denoted as senior in the data plots), and (3) sites designed for and occupied by residents with special needs, such as persons with physical and mental impairments, single mothers, recovering addicts and others living in a group setting.

Additional Data

For most study sites contained in this land use, all dwelling units in the development are classified as affordable units. For residential study sites that provide a mix of market value and affordable units, the study sites with at least 75 percent of the dwelling units designated as affordable are also included in this land use database.

It is expected that the number of bedrooms and number of residents are likely correlated to the trips generated by a residential site. To assist in future analysis, trip generation studies of all multifamily housing should attempt to obtain information on occupancy rate and on the mix of residential unit sizes (i.e., number of units by number of bedrooms at the site complex).

The sites were surveyed in the 1980s and 2010s in California, Ontario (CAN), and New Jersey.

Source Numbers

237, 918, 1003, 1004, 1046, 1057

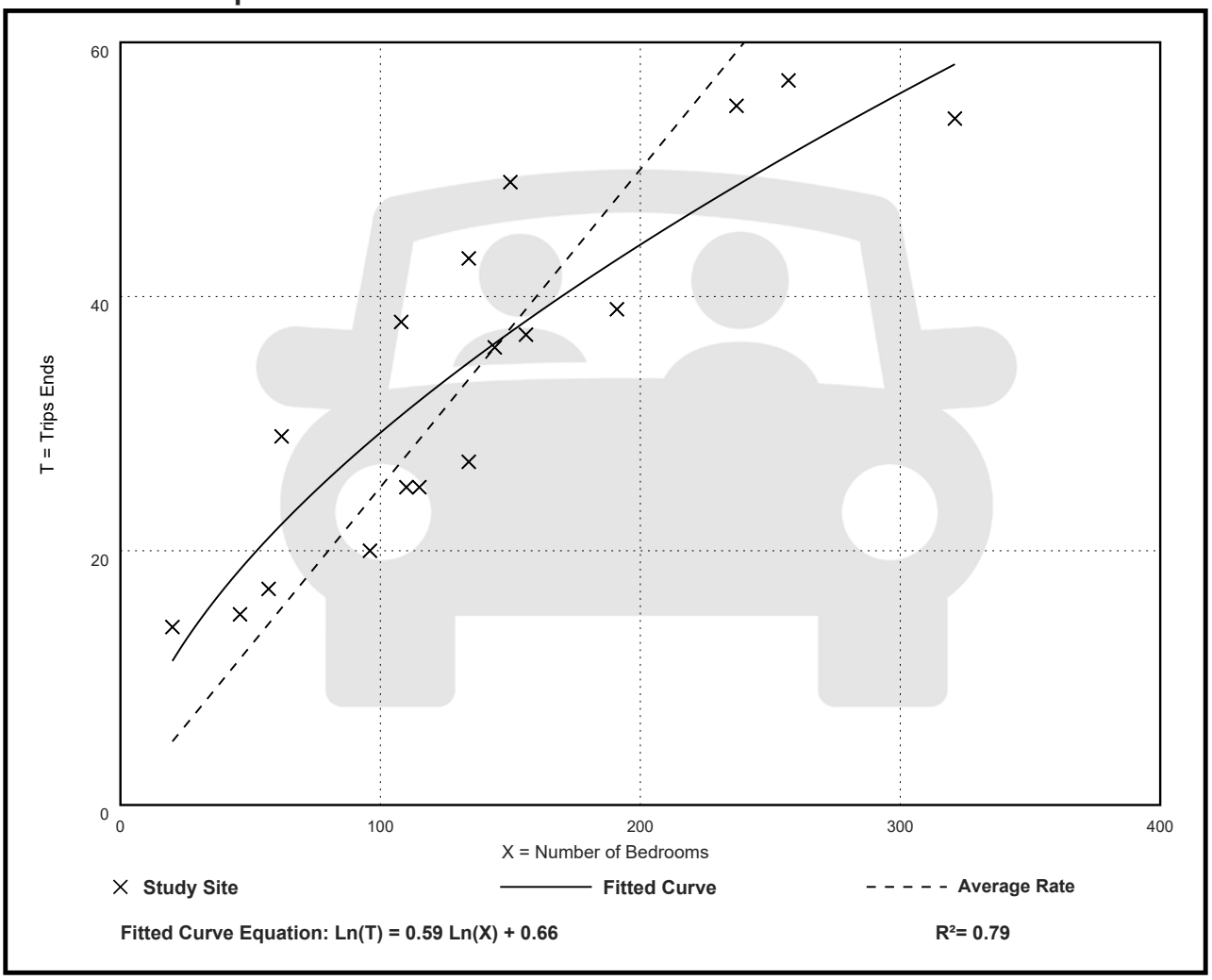
Affordable Housing - Income Limits
(223)

Vehicle Trip Ends vs: Bedrooms
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: Dense Multi-Use Urban
Number of Studies: 17
Avg. Num. of Bedrooms: 138
Directional Distribution: 33% entering, 67% exiting

Vehicle Trip Generation per Bedroom

Average Rate	Range of Rates	Standard Deviation
0.25	0.17 - 0.70	0.08

Data Plot and Equation



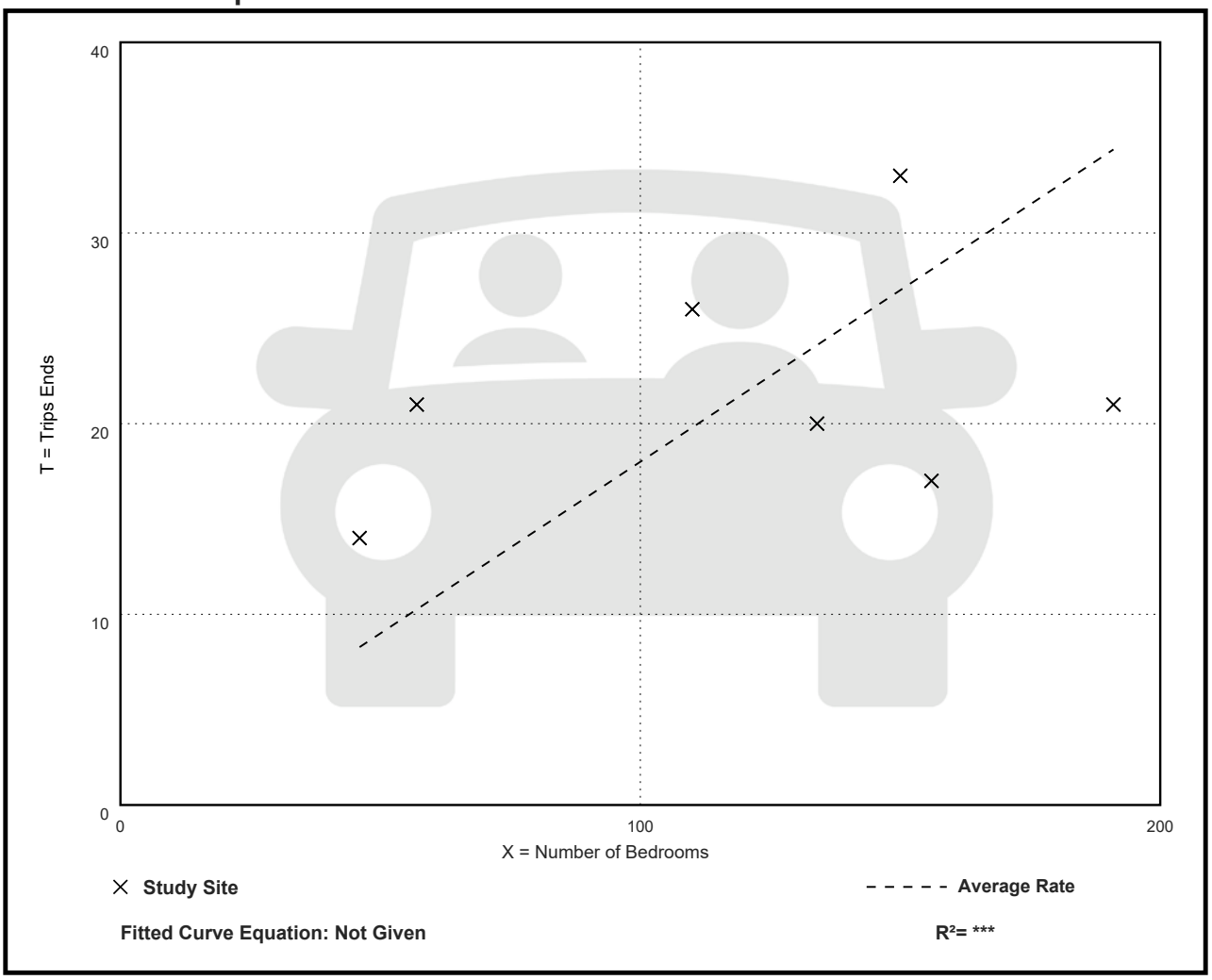
Affordable Housing - Income Limits (223)

Vehicle Trip Ends vs: Bedrooms
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: Dense Multi-Use Urban
Number of Studies: 7
Avg. Num. of Bedrooms: 121
Directional Distribution: 59% entering, 41% exiting

Vehicle Trip Generation per Bedroom

Average Rate	Range of Rates	Standard Deviation
0.18	0.11 - 0.37	0.08

Data Plot and Equation



Affordable Housing - Income Limits
(223)

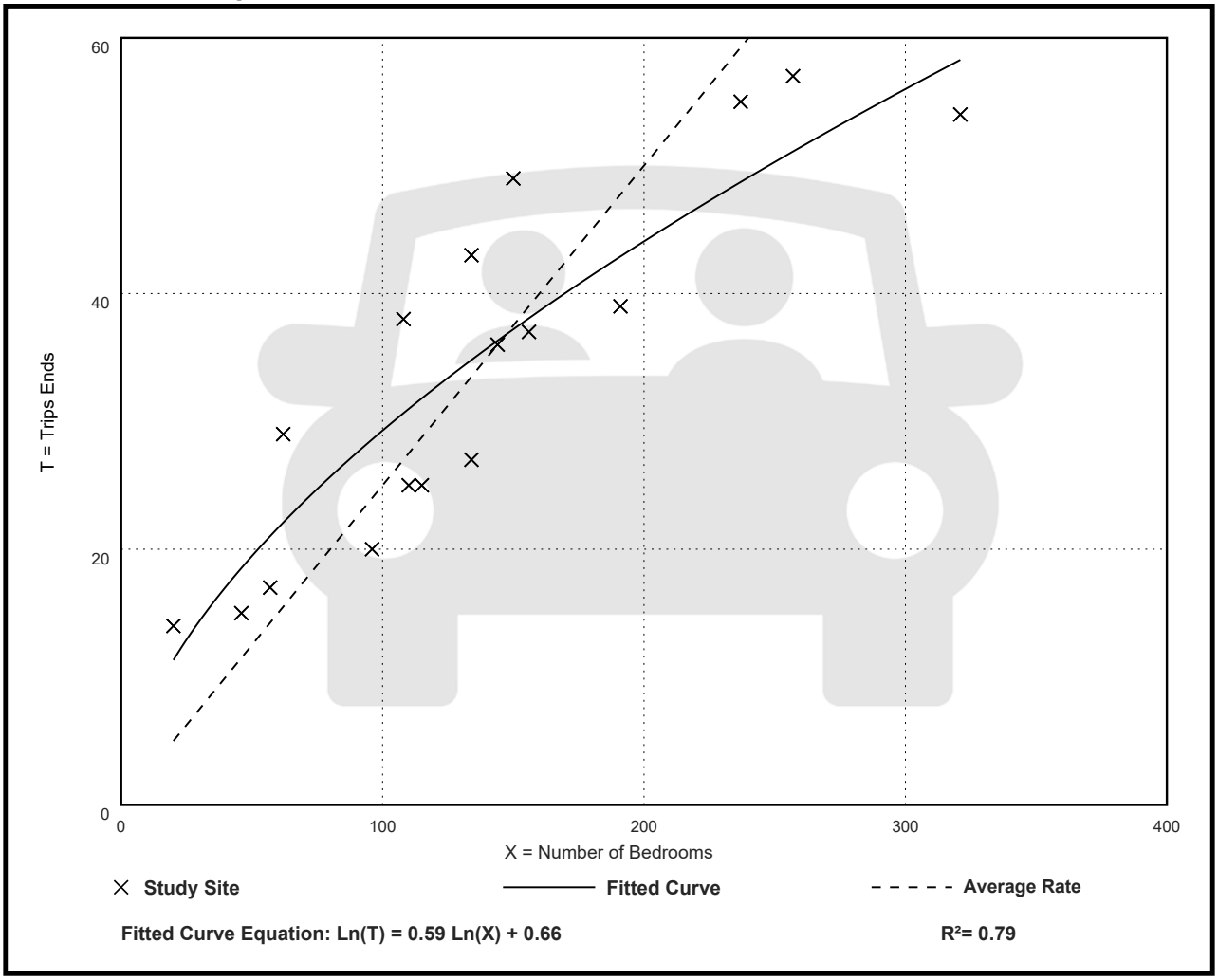
Vehicle Trip Ends vs: Bedrooms
On a: Weekday,
AM Peak Hour of Generator

Setting/Location: Dense Multi-Use Urban
Number of Studies: 17
Avg. Num. of Bedrooms: 138
Directional Distribution: 33% entering, 67% exiting

Vehicle Trip Generation per Bedroom

Average Rate	Range of Rates	Standard Deviation
0.25	0.17 - 0.70	0.08

Data Plot and Equation



Affordable Housing - Income Limits
(223)

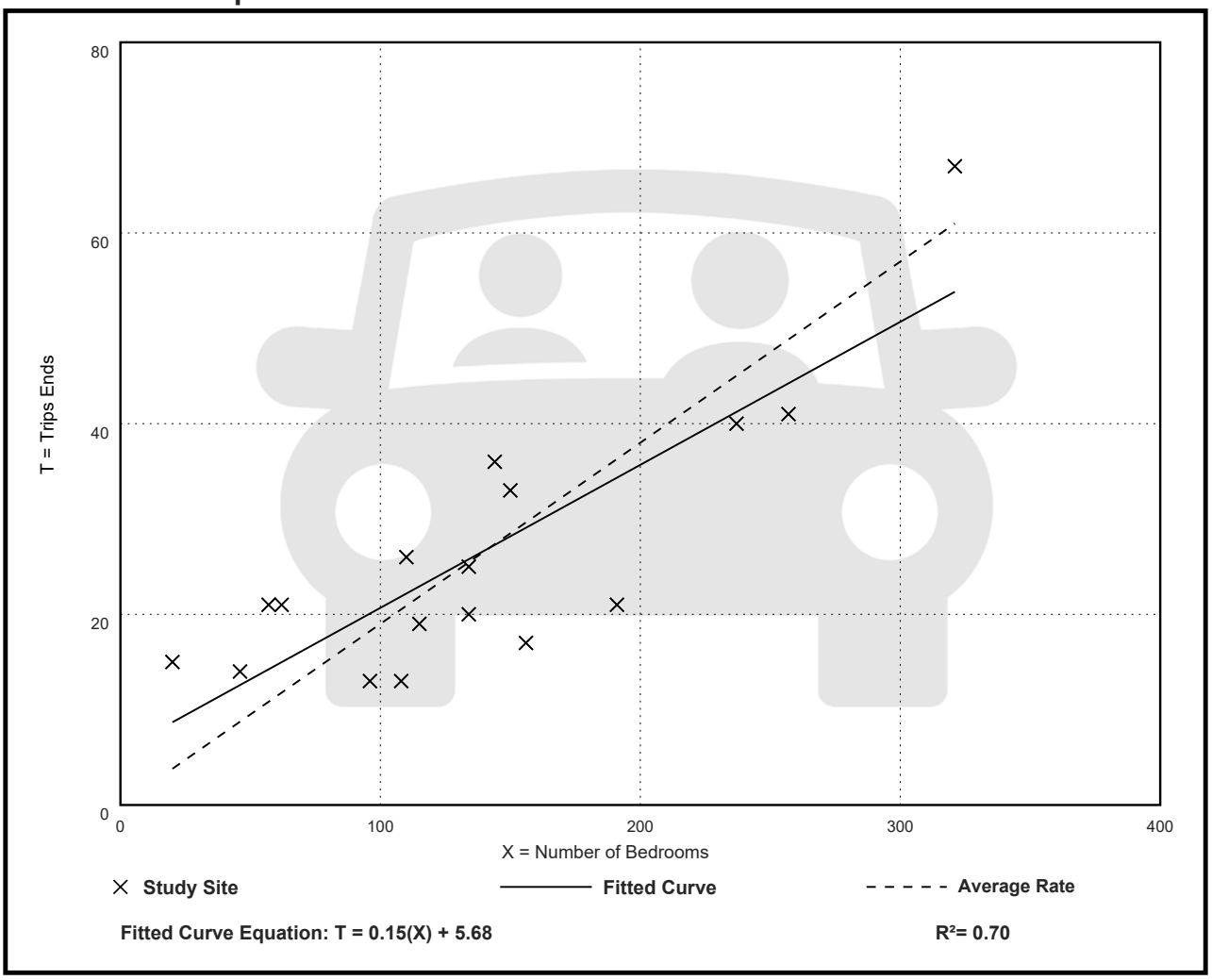
Vehicle Trip Ends vs: Bedrooms
On a: Weekday,
PM Peak Hour of Generator

Setting/Location: Dense Multi-Use Urban
Number of Studies: 17
Avg. Num. of Bedrooms: 138
Directional Distribution: 57% entering, 43% exiting

Vehicle Trip Generation per Bedroom

Average Rate	Range of Rates	Standard Deviation
0.19	0.11 - 0.75	0.08

Data Plot and Equation



Land Use: 710
General Office Building

Description

A general office building is a location where affairs of businesses, commercial or industrial organizations, or professional persons or firms are conducted. An office building houses multiple tenants that can include, as examples, professional services, insurance companies, investment brokers, a banking institution, a restaurant, or other service retailers. A general office building with a gross floor area of 10,000 square feet or less is classified as a small office building (Land Use 712). Corporate headquarters building (Land Use 714), single tenant office building (Land Use 715), medical-dental office building (Land Use 720), office park (Land Use 750), research and development center (Land Use 760), and business park (Land Use 770) are additional related uses.

Additional Data

If two or more general office buildings are in close physical proximity (within a close walk) and function as a unit (perhaps with a shared parking facility and common or complementary tenants), the total gross floor area or employment of the paired office buildings can be used for calculating the site trip generation. If the individual buildings are isolated or not functionally related to one another, trip generation should be calculated for each building separately.

For study sites with reported gross floor area and employees, an average employee density of 3.3 employees per 1,000 square feet GFA (or roughly 300 square feet per employee) has been consistent through the 1980s, 1990s, and 2000s. No sites counted in the 2010s reported both GFA and employees.

The average building occupancy varies considerably within the studies for which occupancy data were provided. The reported occupied gross floor area was 88 percent for general urban/suburban sites and 96 percent for the center city core and dense multi-use urban sites.

The technical appendices provide supporting information on time-of-day distributions for this land use. The appendices can be accessed through either the ITETripGen web app or the trip generation resource page on the ITE website (https://www.ite.org/technical-resources/topics/trip-and-parking-generation/).

The average numbers of person trips per vehicle trip at the eight center city core sites at which both person trip and vehicle trip data were collected are as follows:

- 2.8 during Weekday, Peak Hour of Adjacent Street Traffic, one hour between 7 and 9 a.m.
- 2.9 during Weekday, AM Peak Hour of Generator
- 2.9 during Weekday, Peak Hour of Adjacent Street Traffic, one hour between 4 and 6 p.m.

- 3.0 during Weekday, PM Peak Hour of Generator

The average numbers of person trips per vehicle trip at the 18 dense multi-use urban sites at which both person trip and vehicle trip data were collected are as follows:

- 1.5 during Weekday, Peak Hour of Adjacent Street Traffic, one hour between 7 and 9 a.m.
- 1.5 during Weekday, AM Peak Hour of Generator
- 1.5 during Weekday, Peak Hour of Adjacent Street Traffic, one hour between 4 and 6 p.m.
- 1.5 during Weekday, PM Peak Hour of Generator

The average numbers of person trips per vehicle trip at the 23 general urban/suburban sites at which both person trip and vehicle trip data were collected are as follows:

- 1.3 during Weekday, Peak Hour of Adjacent Street Traffic, one hour between 7 and 9 a.m.
- 1.3 during Weekday, AM Peak Hour of Generator
- 1.3 during Weekday, Peak Hour of Adjacent Street Traffic, one hour between 4 and 6 p.m.
- 1.4 during Weekday, PM Peak Hour of Generator

The sites were surveyed in the 1980s, the 1990s, the 2000s, the 2010s, and the 2020s in Alberta (CAN), California, Colorado, Connecticut, Georgia, Illinois, Indiana, Kansas, Kentucky, Maine, Maryland, Michigan, Minnesota, Missouri, Montana, New Hampshire, New Jersey, New York, Ontario (CAN)Pennsylvania, Texas, Utah, Virginia, and Washington.

Source Numbers

161, 175, 183, 184, 185, 207, 212, 217, 247, 253, 257, 260, 262, 273, 279, 297, 298, 300, 301, 302, 303, 304, 321, 322, 323, 324, 327, 404, 407, 408, 419, 423, 562, 734, 850, 859, 862, 867, 869, 883, 884, 890, 891, 904, 940, 944, 946, 964, 965, 972, 1009, 1030, 1058, 1061

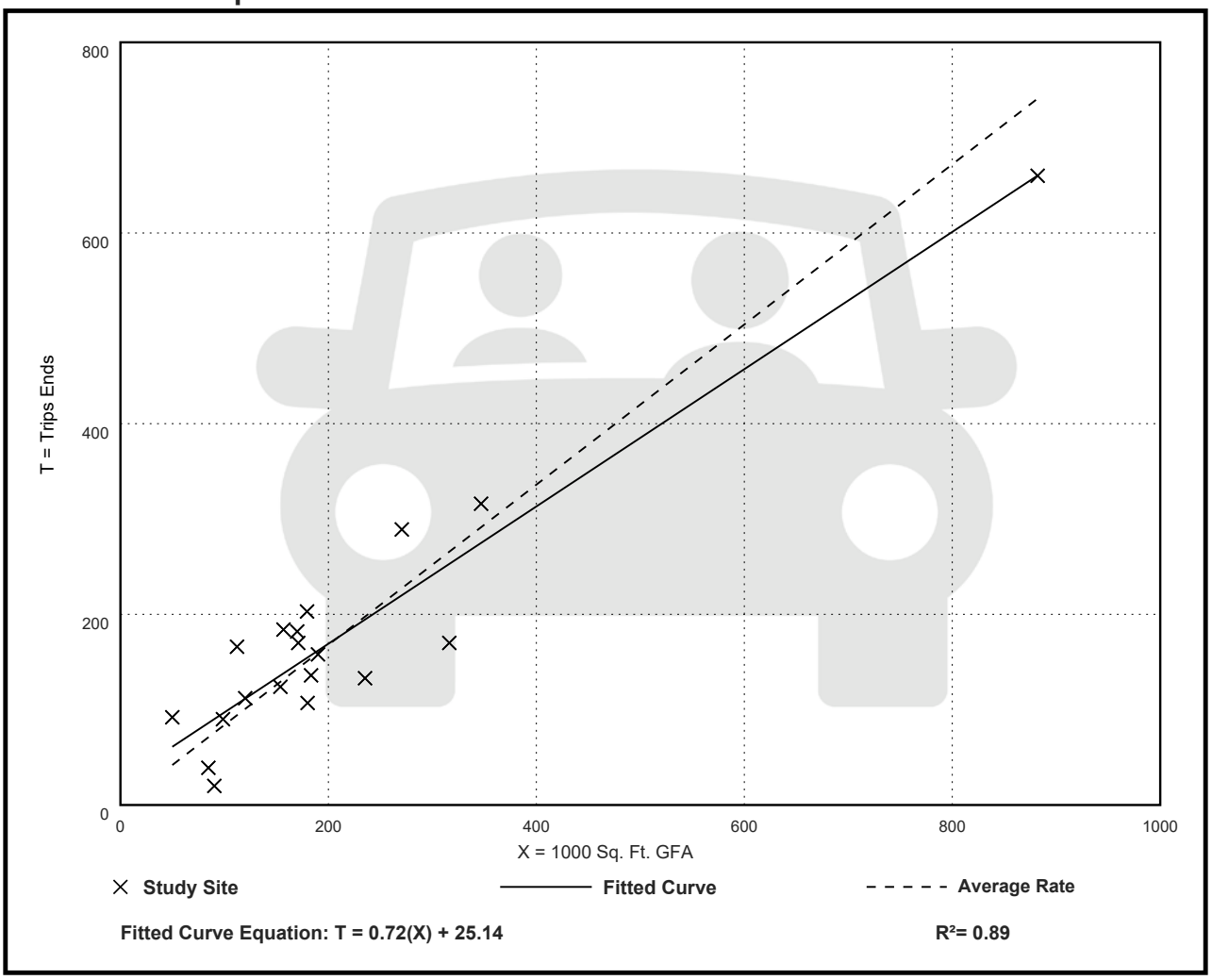
General Office Building
(710)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: Dense Multi-Use Urban
Number of Studies: 19
Avg. 1000 Sq. Ft. GFA: 210
Directional Distribution: 87% entering, 13% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
0.84	0.22 - 1.84	0.27

Data Plot and Equation



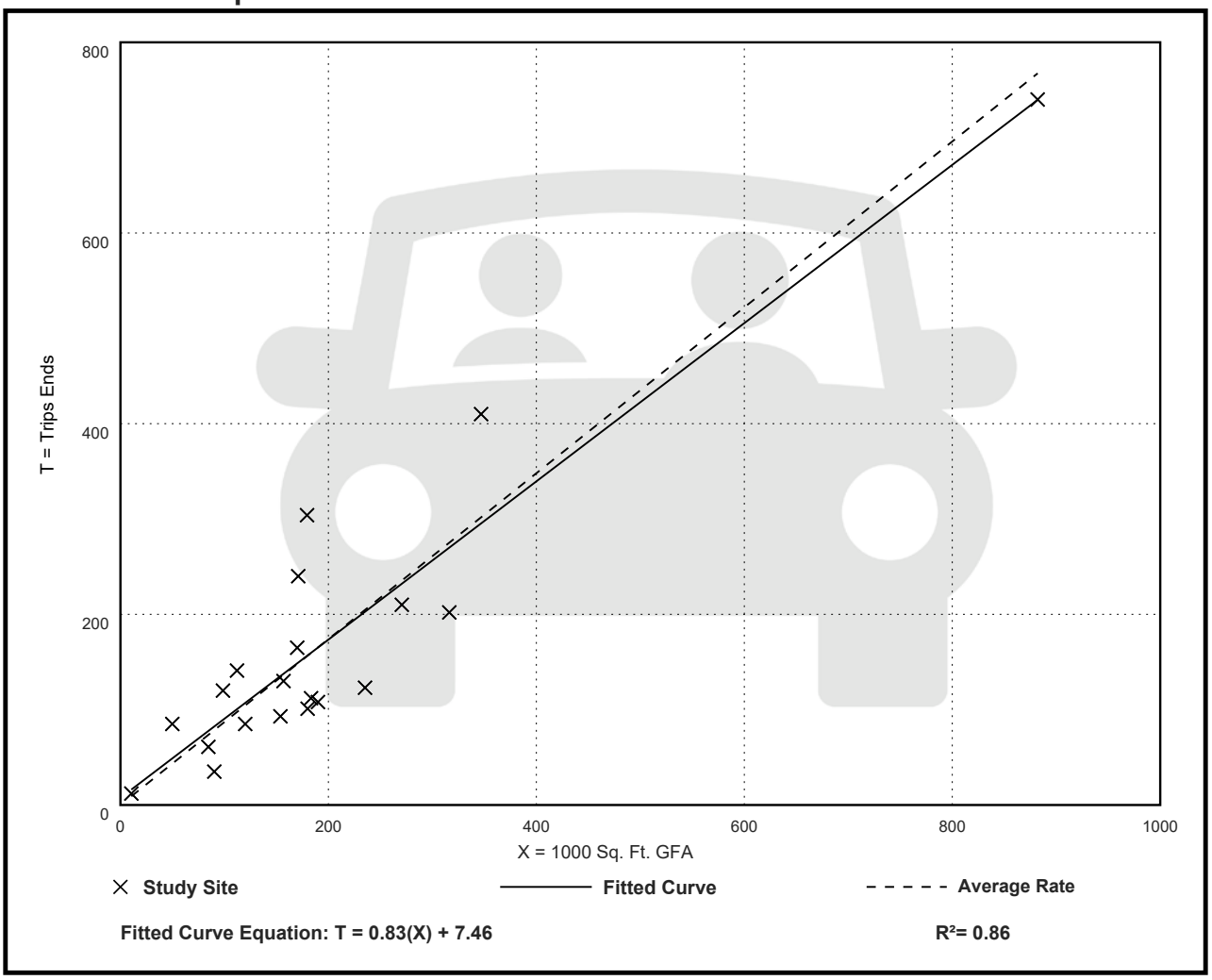
General Office Building
(710)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: Dense Multi-Use Urban
Number of Studies: 20
Avg. 1000 Sq. Ft. GFA: 200
Directional Distribution: 16% entering, 84% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
0.87	0.39 - 1.70	0.33

Data Plot and Equation



ACORN ENGINEERING, INC.

Planning Division
City of Portland, Maine
389 Congress Street, 4th Floor
Portland, ME 04101

April 11th, 2024

Subject: Phased Oxford Street Redevelopment Neighborhood Meeting

I, Sam Lebel, hereby certify that a neighborhood meeting was held on March 6th, 2024, at 409 Cumberland Ave, Portland, ME 04101, at 5:30 pm.

I also certify that on February 23rd, 2024, invitations were mailed to the following:

1. All addresses on the mailing list provided by the Planning Division, which includes property owners within 500 feet of the proposed development.
2. Residents on the "interested parties" list.

Sincerely,

Sam Lebel

Sam Lebel, P.E.
Project Manager
Acorn Engineering, Inc.

The following documents are included with this certification letter:

1. Copy of the invitation letter sent out prior to the neighborhood meeting.
2. Documentation of Public Notice signage posted for the neighborhood meeting and Intent to file Site Plan Review.
3. Meeting sign-in sheet.
4. Copy of the mailing list.

ACORN ENGINEERING, INC.

Dear Neighbor: February 23, 2024

On behalf of Avesta Housing and Reveler, we are pleased to invite you to a neighborhood meeting to discuss the proposed Major Site Plan Application anticipated to be submitted on April 8th, 2024. The proposal features a joint application between Avesta and Reveler and will seek to redevelop several parcels at 197 Oxford, 50 Cedar, and 158 Lancaster Streets into residential buildings. This meeting will be focused on the plans for 197 Oxford Street which proposes a 5-story building with 52 affordable units co-managed by Avesta and Preble Street.

This meeting is required because the project intends to utilize the affordable housing density bonus in Section 18.2.4 of the City Code. At a minimum, a second neighborhood meeting will be held later this year prior to any Planning Board meetings, which you will also receive an invitation to. Please refer to the meeting information below:

Meeting Location: 1st Floor Community Room, 409 Cumberland Ave, Portland, ME 04101
Meeting Date/Time: Wednesday, March 6, 2024, at 5:30pm

Sincerely,

Sam Lebel

Sam Lebel, P.E.
Project Manager
Acorn Engineering, Inc.

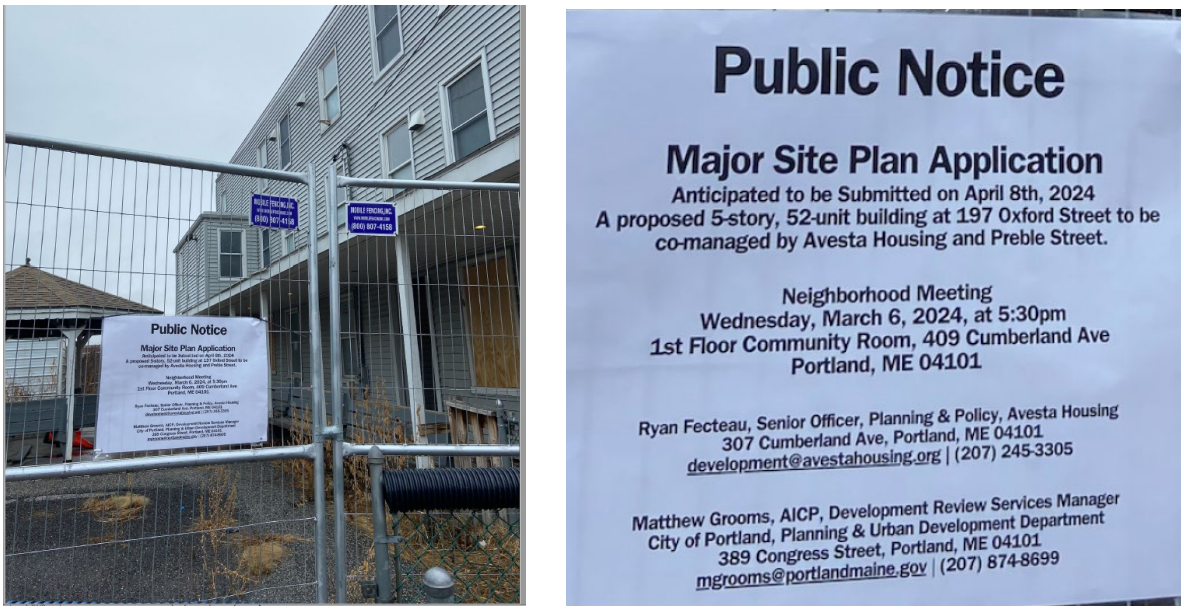
ACORN ENGINEERING, INC.

Planning Division
City of Portland, Maine
Attn: Zach Powell
315 Cumberland Avenue
Portland, ME 04101

April 11th, 2024

Subject: Phased Oxford Street Redevelopment – Notice of Public Meeting & Intent to File Site Plan Application Certification

I, Danielle McGowan, hereby certify that signage was posted for the notice of neighborhood meeting and the intent to file for the Joint Major Site Plan Application. Signs were posted on February 23rd, 2024, prior to filing for the Major Site Plan Application for the proposed project. Photo documentation of sign in-situ:



Public Notice signage posted for Intent to file Site Plan Review

Please note, it is the applicant's responsibility and intention to remove the notice of public meeting sign within three days following the date of the meeting.

Sincerely,

Danielle McGowan, E.I.
Project Engineer
Acorn Engineering, Inc.

Sign-in Sheet

Participants:

Name	Email
Brittney Dunham	bdunham@preblestreet.org
Andrew Bove	above@preblestreet.org
Sarah Michniewicz	SarahMichniewicz@mac.com
John Dolewa	John.Dolewa@gmail.com
Lenora Dolewa	jdolewa@maine.rr.com
Jed Nitzky	jednitzky@gmail.com
George Arsenault	on file
Christine Arsenault	carsenault3@gmail.com
Heather Latham	
Ryan Fecteau	rfecteau@avestahousing.org
Deborah Fell	dffell@yahoo.com
Andrew Rocenstein	andrew718@mac.com
C.neal.milneil@gmail.com	Christian Milneil

Sign-in Sheet **Participants:**

Name	Email
Dwoan McCloskey	dmccloskey@maine.rr.com
Jim Hall	Jim@ModernU1.com
John Laliberte	jlaliberte@reveler.com

COMPANY	FIRST NAME	LAST NAME	ADDRESS	CITY	STATE	ZIP
114 PREBLE BLOCK LLC			26 SHAW AVE	ROCKLAND	ME	04841
125 KENNEBEC STREET CONDO			125 KENNEBEC ST	PORTLAND	ME	04101
141 PLEASANT STREET LLC			307 MAIN ST	HANOVER	MA	02339
149 LANCASTER STREET LLC			82 HANOVER ST	PORTLAND	ME	04101
150 PEARL STREET LLC			225 CUMBERLAND AVE	PORTLAND	ME	04101
197 OXFORD STREET LLC			82 HANOVER ST	PORTLAND	ME	04101
198 OXFORD STREET PORTLAND LLC			62 PORTLAND RD STE 25A	KENNEBUNK	ME	04043
200 OXFORD STREET PORTLAND LLC			62 PORTLAND RD STE 25A	KENNEBUNK	ME	04043
21 CEDAR STREET PORTLAND LLC			62 PORTLAND RD STE 25A	KENNEBUNK	ME	04043
25 CEDAR STREET PORTLAND LLC			62 PORTLAND RD STE 25A	KENNEBUNK	ME	04043
38-40 ALDER LLC			2120 COLORADO AVE STE 160	SANTA MONICA	CA	90404
41 CHESTNUT LLC			PO BOX 805	BRUNSWICK	ME	04011
54 CHESTNUT STREET LLC			450 BAXTER BLVD	PORTLAND	ME	04103
55 CHESTNUT STREET LLC			450 BAXTER BLVD	PORTLAND	ME	04103
56-58 CHESTNUT STREET LLC			450 BAXTER BLVD	PORTLAND	ME	04103
57 CHESTNUT STREET LLC			450 BAXTER BLVD	PORTLAND	ME	04103
60 ELM STREET LLC			82 HANOVER ST	PORTLAND	ME	04101
73 ELM STREET LLC			82 HANOVER ST	PORTLAND	ME	04101
75 CHESTNUT STREET OWNER LLC			35 VILLAGE RD STE 702	MIDDLETON	MA	01949
89 ELM STREET LLC			82 HANOVER ST	PORTLAND	ME	04101
	PETER	AMES	69 ROCK RIDGE RUN	CUMBERLAND	ME	04021
AMWELL GROUP LLC			5 ROLLINS FARM RD	STRATHAM	NH	03885
	EVAN	ANDERSON	21 CHESTNUT ST # 2W	PORTLAND	ME	04101
	DAVID	ANGEL	85 GOUNOD RD	WESTERLY	RI	02891
ASHBY TEAM LLC			415 CONGRESS ST STE 204	PORTLAND	ME	04101
AVESTA HOUSING DEVELOPMENT CORPORATION			307 CUMBERLAND AVE	PORTLAND	ME	04101
AVESTA PEARL STREET ONE LP			307 CUMBERLAND AVE	PORTLAND	ME	04101
AVESTA UNITY VILLAGE LP			307 CUMBERLAND AVE	PORTLAND	ME	04101
	PIERRE	AVIGNON	723 ISLAND AVE	LONG ISLAND	ME	04050
	ABDUL	AZIMI	98 SAWYER ST	SOUTH PORTLAND	ME	04106
	JANET	BAER	411 WALNUT ST # 15658	GREEN COVE SPRINGS	FL	32043
	DONALD	BAILEY	21 CHESTNUT ST # 406	PORTLAND	ME	04101
	NICHOLAS	BARNES	31 BOGASTOW BROOK RD	SHERBORN	MA	01770
	PRUDENCE	BARRY	21 CHESTNUT ST # 6W	PORTLAND	ME	04101
BAYSIDE CONDO			164 PEARL ST	PORTLAND	ME	04101
	MARY	BENNISON	33 CEDAR ST	PORTLAND	ME	04101
	THOMAS	BLACK	8910 HIGHWAY 17 SOUTH	LOUISVILLE	GA	30434
	THOMAS	BLACK	973 FOREST AVE # 2	PORTLAND	ME	04103
	TANIA	BOWEN	164 PEARL ST # B	PORTLAND	ME	04101
BOYS & GIRLS CLUBS OF SOUTHERN MAINE			PO BOX 7830	PORTLAND	ME	04112
	ALBERT	BRESETTE	3 MECHANIC ST	WINDHAM	ME	04062
	REBECCA	BROOKS	80 ACADEMY DR	WOLFEBORO	NH	03894
	PETER	BUSQUE	21 CHESTNUT ST # 08W	PORTLAND	ME	04101
C58ALDER LLC			3375 EAST MAULE AVE	LAS VEGAS	NV	89120
	CLAUDIA	CASAVECCHIA	1011 CLINTON ST # 4	PHILADELPHIA	PA	19107
CASTANEA PRIME LLC			PO BOX 24	FRIENDSHIP	ME	04547
CHESTNUT STREET GARAGE LLC			120 EXCHANGE ST	PORTLAND	ME	04101
CHESTNUT STREET LOFTS			21 CHESTNUT ST	PORTLAND	ME	04101
CHESTNUT STREET LOFTS LLC			58 HANNAFORD COVE RD	CAPE ELIZABETH	ME	04107
CHESTNUT STREET PARKING CONDO			134 LANCASTER ST	PORTLAND	ME	04101
	LOUIS	CHRISTEN	239 CUMBERLAND AVE	PORTLAND	ME	04101
	JENEPHER	CLIFFE	75 CHESTNUT ST # 701	PORTLAND	ME	04101
	KELLEY	COLLACCHI	125 MORNING ST E 2	PORTLAND	ME	04101
	STEPHANIE	COTSIRILOS	21 CHESTNUT ST # 8N	PORTLAND	ME	04101
	TERESA	CURTIN	21 CHESTNUT ST # 5W	PORTLAND	ME	04101
DAYMARK CONDO			75 CHESTNUT ST	PORTLAND	ME	04101
	EMILY	DEGRAY	172 BOYCE ST	AUBURN	MA	01501
	KATHLEEN	DENOIA	4 CEDARWOOD DR	FALMOUTH	ME	04105
	FRANK	DIDONATO	72 CHESTNUT ST	PORTLAND	ME	04101
	CRAIG	DIGIOVANNI	75 CHESTNUT ST # 402	PORTLAND	ME	04101
	DENNIS	DIXON	295 SUMMER ST	MANCHESTER	MA	01944
	MARK	DOLAN	740 ORANGE BELT LOOP	WINTER GARDEN	FL	34787
	JOHN	DOLEWA	75 CHESTNUT ST # 410	PORTLAND	ME	04101
DOWTOWN LODGING LLC			PO BOX 10250	PORTLAND	ME	04104
EAST END CORP			PO BOX 10291	PORTLAND	ME	04101
	AVNER	EISENBERG	29 CITY POINT RD	PEAKS ISLAND	ME	04108
FEDEQ DV005 LLC			PO BOX 191887	MIAMI	FL	33119
FEDERAL STREET PHOENIX LLC			PO BOX 15372	PORTLAND	ME	04112
	DANIEL	FITZPATRICK	PO BOX 143	WESTBROOK	ME	04098
	ROSEMARY	FLACH	21 CHESTNUT ST # 503	PORTLAND	ME	04101
	LORINDA	FRAZER	123 HOPE RD	LINCOLNVILLE	ME	04849
	GIOVANNI	FRISONE	22 LANCESTER RD	CROMWELL	CT	06416
	JULIA	GAULKE	60 BOLTON ST	PORTLAND	ME	04102
	MICHAEL	GUIGLI	21 CHESTNUT ST # 701	PORTLAND	ME	04101
HAIR ETC LLC			705 WEBBS MILLS RD	RAYMOND	ME	04071
HAL LLC			65 HANOVER ST	PORTLAND	ME	04101
	JAMES	HALL	47 CEDAR ST	PORTLAND	ME	04101
	LARRY	HAMM	1800 JONATHAN WAY # 115	RESTON	VA	20190
	ALICIA	HARDING	21 CHESTNUT ST	PORTLAND	ME	04101
HELM PROPERTY GROUP LLC			4420 GIBBONS ST # D	VANCOUVER	WA	98661
	MARCO	HERNANDEZ	43 ALDER ST	PORTLAND	ME	04101
	MARY	HERSTAM	75 CHESTNUT ST # 201	PORTLAND	ME	04101
	ADAM	HILL	PO BOX 4242	PORTLAND	ME	04101
	JANNA	HOBBS	33 BACK SHORE RD	CHEBEAGUE ISLAND	ME	04017
HOLLYDAY MULTI LLC ETAL JTS			PO BOX 1610	COCKEYSVILLE	MD	21030
HOWLES CORPORATION			PO BOX 938	PORTLAND	ME	04104
	CURTIS	HUSSEY	156 OXFORD ST	PORTLAND	ME	04101
	ROBERT	HYDE	39 CEDAR ST	PORTLAND	ME	04101
J2 MAINE LLC			55 CARROLL AVE	NEWPORT	RI	02840
	CARA	JORDAN	9 MITCHELLWOOD DR	FALMOUTH	ME	04105
	LAUREN	JOY	250 BEACON ST # 12	BOSTON	MA	02116
	CHARLES	KAUFMANN	21 CHESTNUT ST # 4S	PORTLAND	ME	04101
	MARILYN	KELLY	21 CHESTNUT ST # 702	PORTLAND	ME	04101
	JOAN	KHEDER	75 CHESTNUT ST # 403	PORTLAND	ME	04101
KINGSLEY ENTERPRISES			225 CUMBERLAND AVE	PORTLAND	ME	04101
	AMELIA	LABRECK	87 MUNJOY ST	PORTLAND	ME	04101
	ANN	LEES	31 WHITE RD	GEORGETOWN	ME	04548
	ALAN	LERMAN	3 VAN CARLL CIR	SCARBOROUGH	ME	04074
	CONOR	MAHON	21 CHESTNUT ST # 5SE	PORTLAND	ME	04101
	NATHANIEL	MALONE	75 CHESTNUT ST # 202	PORTLAND	ME	04101
	SCOTT	MCMULLIN	75 CHESTNUT ST # 206	PORTLAND	ME	04101
	THOMAS	MICHAUD	50 MYRTLE ST	PORTLAND	ME	04101
	MARGARET	MINISTER	75 CHESTNUT ST # 708	PORTLAND	ME	04101
MOJO PROPERTIES LLC			536 WASHINGTON AVE	PORTLAND	ME	04103
	VICTOR	MORREL	21 CHESTNUT ST # 202	PORTLAND	ME	04101
	JEAN	MURPHY	PO BOX 10045	PORTLAND	ME	04104
	CHRISTINE	NICKERSON	60 HARVARD AVE # 2	BROOKLINE	MA	02446
	DAVID	NOWLIN	360 PLEASANT HILL RD	SCARBOROUGH	ME	04074

	DANTON	NYGAARD	21 CHESTNUT ST # 401	PORTLAND	ME	04101
OUELLETTE INVESTMENTS LLC			195 LANE AVE	PORTLAND	ME	04103
PD2 LLC			6 PHANTOM FARM RD	CAPE ELIZABETH	ME	04107
PEARL MANOR LLC			225 CUMBERLAND AVE	PORTLAND	ME	04101
	MEREDITH	PERKINS	213 SILVER MOSS DR	VERO BEACH	FL	32963
PERRY E IRON & METAL CO			115 LANCASTER ST	PORTLAND	ME	04101
	HIKA	PETROVIC	75 CHESTNUT ST # 204	PORTLAND	ME	04101
	HOLLY	PICOTTE	75 CHESTNUT ST # 310	PORTLAND	ME	04101
	SARAH	PLUCK	53 OLD NECK RD	SCARBOROUGH	ME	04074
PORTLAND ARCITECTURAL SALVAGE INC			125 KENNEBEC ST	PORTLAND	ME	04101
PORTLAND BOYS CLUB ASSOC			277 CUMBERLAND AVE	PORTLAND	ME	04101
PREBLE STREET RESOURCE CENTER INC			331 CUMBERLAND AVE	PORTLAND	ME	04101
PYC LLC			PO BOX 17916	PORTLAND	ME	04112
	JORDAN	RICHARDSON	19 PORT VIEW LN	KENNEBUNK	ME	04043
	SETH	ROBERTSON	75 CHESTNUT ST # 505	PORTLAND	ME	04101
	LAURA	ROWLEY	20 WINN WAY	SCARBOROUGH	ME	04074
SALVATION ARMY THE			88 PREBLE ST	PORTLAND	ME	04101
SALVATION ARMY THE			440 WEST NYACK RD	NYACK	NY	10960
	WILLIAM	SAVAGE	18 THOMPSON INN RD	SOUTH BRISTOL	ME	04568
	JESSE	SAWYER	21 CHESTNUT ST # 302	PORTLAND	ME	04101
SCHLOTTERBECK BLOCK LLC			82 HANOVER ST STE 5	PORTLAND	ME	04101
	JAMES	SCHWELLENBACH	21 CHESTNUT ST # 602	PORTLAND	ME	04101
	AURELIA	SCOTT	21 CHESTNUT ST # 6N	PORTLAND	ME	04101
	STEPHEN	SEARS	95 AMBROSE COVE	BELGRADE	ME	04917
	THOMAS	SEPULVERES	43 MYRTLE ST	PORTLAND	ME	04101
	THOMAS	SEPULVERES	51 MYRTLE ST	PORTLAND	ME	04101
	DOUGLAS	SMITH	21 CHESTNUT ST # 2N	PORTLAND	ME	04101
	JAMES	SMITH	75 CHESTNUT ST # 507	PORTLAND	ME	04101
STATE OF MAINE			16 STATE HOUSE STATION	AUGUSTA	ME	04330
	PAUL	SUITTER	75 CHESTNUT ST # 306	PORTLAND	ME	04101
	PATRICIA	TAYLOR	6 E GLENDALE AVE	ALEXANDRIA	VA	22301
	PATRICK	THERRIAULT	75 CHESTNUT ST # 303	PORTLAND	ME	04101
	GARRETT	TILTON	21 CHESTNUT ST # 3N	PORTLAND	ME	04101
	JEFFREY	TITCOMB	PO BOX 835	FRYEBURG	ME	04037
	TAMSEN	TOWLE	75 CHESTNUT ST # 305	PORTLAND	ME	04101
	ANNIES	TRASK	50 ALDER ST	PORTLAND	ME	04101
	JOHN	VANHOEWYK	21 CHESTNUT ST # 301	PORTLAND	ME	04101
	JULIA	WAECHTER	75 CHESTNUT ST # 301	PORTLAND	ME	04101
WARDS CAPITAL LLC			973 FOREST AVE STE 2	PORTLAND	ME	04103
WBP COMMERCIAL LLC			100 MIDDLE ST	PORTLAND	ME	04101
WBP COMMERCIAL LLC			82 HANOVER ST	PORTLAND	ME	04101
WBP GARAGE LLC			82 HANOVER ST STE 5	PORTLAND	ME	04101
	THOMAS	WELSH	75 CHESTNUT ST # 502	PORTLAND	ME	04101
	JAN	WILLIAMS	21 CHESTNUT ST # 8S	PORTLAND	ME	04101
	SARA	YINDRA	21 CHESTNUT ST # 5N	PORTLAND	ME	04101
YOUTH AND FAMILY OUTREACH			331 CUMBERLAND AVE	PORTLAND	ME	04101

ACORN ENGINEERING, INC.

Planning Division
City of Portland, Maine
389 Congress Street, 4th Floor
Portland, ME 04101

May 17th, 2024

Subject: 197 Oxford Street Neighborhood Meeting

I, Sam Lebel, hereby certify that a neighborhood meeting was held on May 16th, 2024, at 409 Cumberland Avenue, Portland, ME 04101, at 5:30 pm.

I also certify that on May 3rd, 2024, invitations were mailed to the following:

1. All addresses on the mailing list provided by the Planning Division, which includes property owners within 500 feet of the proposed development.
2. Residents on the "interested parties" list.

Sincerely,

Sam Lebel

Sam Lebel, P.E.
Project Manager
Acorn Engineering, Inc.

Included with this certification are:

1. Copy of the invitation letter sent prior to the neighborhood meeting
2. Meeting Sign-in sheet
3. Meeting minutes
4. Neighborhood Meeting #2 Presentation

ACORN ENGINEERING, INC.

Dear Neighbor: May 6, 2024

On behalf of Avesta Housing and Reveler Development, we are pleased to invite you to a neighborhood meeting to discuss the proposed Major Site Plan Application that was recently submitted to the Planning Board. The project is split into three phases with a total of 123 new apartments. The first phase proposes 28 Housing First and 20 affordable units at 197 Oxford Street, managed by Avesta and Preble Street. The second and third phases propose 24 and 51 market rate units at 50 Cedar and 158 Lancaster Street, respectively, both managed by Reveler.

Meeting Location: 1st Floor Community Room, 409 Cumberland Ave, Portland, ME 04101
Meeting Date/Time: Thursday, May 16, 2024, at 5:30pm

A sign-in sheet will be circulated, and a record of the meeting will be taken. Both the sign-in sheet and record will be submitted to the Planning Board. If you have any questions, please call (207) 775-2655.

Sincerely,

Sam Lebel

Sam Lebel, P.E.
Acorn Engineering, Inc.

Note: Under the City of Portland land use code, an applicant for a major site plan, master development plan, subdivision of over five lots, or zoning map amendment is required to hold a neighborhood meeting within 30 days of an application being deemed complete and no less than seven calendar days before a public hearing. Should you wish to offer additional comments on this proposed development, you may forward them by e-mail to planning@portlandmaine.gov or by mail to the Planning and Urban Development Department, Planning Division, 4th Floor, 389 Congress Street Portland, ME 04101.

Sign-in Sheet

Presenters:

Name	Email
Applicant Team	
Michael Barton	mbarton@reveler.com
Ryan Fecteau	RFecteau@avestahousing.org
Sam Lebel	slebel@acorn-engineering.com
Brad Kaden	bkaden@acorn-engineering.com
George Lavigne	glavigne@cwsarch.com
Bhen Reed	Breed@cwsarch.com
Jessica James	Jessica@longfellocomms.com
Reid Tozier	reid@senatorearchitecture.com
Andrew Bove	above@preblestreet.org

Sign-in Sheet **Presenters:**

Name	Email
Deborah Van Hoeuyk	dvhoeuyk@umich.edu
WELSH	hbwelsh@ige.org
ANNE PRINGLE	ANNE.PRINGLE.ME@GMAIL.COM
George Rheault	george.rheault@gmail.com
THOMAS BLACKBURN	TBlackburn1948@GMAIL.com
Duncan McCluskey	smccluskey@maine.rr.com
Christina Arsenault	carsenault3@gmail.com
Alicia Harding	aliciadharding@gmail.com Please note the "d"
Avery Yale Kamila	avery.kamila@gmail.com
John Dolewa	John.Dolewa@gmail.com
Lenora Dolewa	JDolewa@maine.rr.com
Andrew Bove (PrebleStreet)	above@preblestreet.org
Jim Hall	MTJIMHALL@GMAIL.COM
Sarah Michniewicz	SarahMichniewicz@Mac.com
Ned Payne	NedPayne@gmail.com

Sign-in Sheet **Participants:**

Name	Email
Laura Underkuffler	lu27@cornell.edu
Deborah Fell	dffell@yahoo.com

197 Oxford Street Neighborhood Meeting

Neighborhood Meeting Minutes
May 16, 2024 / 5:30 pm
409 Cumberland Avenue, Portland Maine

Project Team Attendees:

Michael Barton (MB): Applicant/Presenter (Reveler)

Ryan Fecteau (RF): Applicant/Presenter (Avesta)

Andrew Bove (AB): Vice President of Social Work (Preble Street)

George Lavigne (GL): Architect (CWS)

Bhen Reed (BR): Architect/Presenter (CWS)

Jessica James (JJ): Client Team (Longfellow Communications)

Reid Tozier (RT): Architect/Presenter (Ryan Senatore Architecture)

Sam Lebel (SL): Civil Engineer /Presenter (Acorn Engineering)

Brad Kaden (BK): Civil Engineer/Note Taker (Acorn Engineering)

The meeting started at approximately 5:35 pm.

Presentation:

MB & RF:
- Team Introduction
- Overview of Meeting
- Project Introduction

SL:
- Project Timeline
- Existing and Proposed Conditions – Overall
- Proposed Site Plan Overview – Phase I

BR:
- Reviewed the floor layouts and renderings of the building
- Provided voluntary shadow analysis per request at 1st neighborhood meeting

SL:
- Proposed Site Plan Overview – Phase 2

RT:

- Reviewed the floor layouts and renderings of the Phase 2 Building

SL:

- Proposed Site Plan Overview – Phase 3

RT:

- Reviewed the floor layouts and renderings of the Phase 3 Building

Comments, Questions & Answers:

Please note that the following questions and answers were not recorded verbatim and aim to represent and summarize the actual questions, answers, and discussion that took place at the meeting that were pertinent to the project application.

Neighbor: What is the city involvement with this project regarding funding? Are there limitations on the amount of low income units?

RF: We will likely seek additional funding support from the City in order to cover gaps in our financing.

MB: Phase 2 and 3 will be privately funded.

Question (Q): What is the timing of this project and the timing of the MDP?

RF: Avesta will submit an application to Maine housing in September. If we receive funding through Maine Housing then Phase 1 can begin construction mid 2025. If we don't receive funding this year, then everything would push a year.

MB: Phase 2 and 3 will be trailing phase 1 and would most likely commence in the spring of 2026. The 89 Elm project (MDP Phase 1.A) is to begin construction in early 2025.

Q: Where will people park?

MB: There is the Public Market parking garage located nearby which we own. Tenants can utilize this if they wish, along with on street parking around the sites.

RF: Vehicle usage among Housing First units is about 1%. Roughly 14% of people own vehicles in the studios and 1 bedroom apartments for Avesta's conventional affordable housing units on the peninsula.

Q: Does the presented timeline reflect the requested expedited approval mentioned in the application?

SL: Yes, our timeline presented earlier is consistent with the request for an expedited review for affordable housing projects as allowed in the Ordinance. The

review is not meant to be sacrificed in quality, but to prioritize affordable projects.

Q: How are the unit numbers calculated for market rate and affordable?

SL: The LD 2003 amendment allows up to a density bonus of 2.5 if over 50% of the units are affordable. Phase 1 as a standalone project meets that criteria. Then in the aggregate, the affordability is over 30% for the entire project which equates to a 1.3X density bonus for the project as a whole.

Q: Bedrooms are only 1 bedroom or studios. Is there a possibly to do 2 or 3 bedrooms for families?

RF: Avesta has done projects that have 2 and 3-bedrooms, but with this site we have too many constraints regarding the size of the building. We tried to maximize the number of units based on our bonuses.

MB: Market rate units need to be aligned with the affordable units in order to comply with the IZ regulations.

Q: How will this affect the children that are going to the elementary school near by? How does children come into the planning process when discussing these projects?

RF: Tenants will have a lease agreement. Avesta has 3 Housing First sites that have proven to be successful.

Q: How are the services for housing first different than Preble Street's emergency shelters?

AB: There is a good staff to client ratio so staff is able to support the people in an individual experience more often. It is a relatively slow pace environment in Preble Street's existing housing-first programs. Many of the challenges that exist in a congregate setting like an emergency shelter are not present in housing-first given that individuals have their own apartments.

Comment (C): There are hundreds of emergency calls a year into similar housing types such as the Florence House. There should be a balance for the need for housing first and what the neighborhood needs. Not all the calls are for the same exact type of housing as Housing First, but it shows the high level of need.

Q: Are there structured social services for housing first facilities?

AB: This facility will have full time social work staff 24/7. Mental health clinicians and medical providers are not located onsite or employed by Preble Street but are regularly connecting with clients in other housing-first programs and will be an important part of this project.

C: It's going to be challenging for Housing First to deal with the outside forces in the public areas.

C: Homelessness is at an all time high. Many are located along Preble street. It needs to be your job to manage what happens outside the building.

Q: Several retaining walls exist along the property line in phase 3. How will they be incorporated into the site?

> **MB/SL: We are proposing a few different approaches depending on the wall/property line in question including reconstruction and grading/landscaping. Some of the conclusions are still in early stages depending on a geotechnical evaluation.**

C: We recommend that the choke cherry tree behind the retaining wall remain.

> **SL: That tree will be close to retaining wall reconstruction so may be difficult to preserve, but would be happy to walk the property edge to discuss the various edge conditions.**

Q: What are your thoughts on the small 4'x4' "gore" portion of the lot that no owner has title over? We would prefer to not have that space left impervious.

- **SL: We can look into that condition more closely for permission to integrate it into the landscaping.**

Q: Congresswoman Pingree was presented the Housing First concept in March 2023. Does she know the project is at this site? Doesn't she have an obligation to weigh in to putting this new building at the former shelter site?

> **RF: The project meets the goals of the Housing First funding initiative. The project is not a done deal and has to go through the planning board process.**

Q: For a tenant, what are the screen processes for the housing first people? What would not be allowed for housing first?

> **RF: We have previously shared the draft lease agreement and can provide more details about the process to you after tonight. Overall, we do perform a background check for each person.**
>
> **AB: Being on the sex offender registry would disqualify someone from renting a unit.**

Q: What is the status of the existing bathrooms? Will be they be relocated or replaced?

> **MB: We can get back in touch with you regarding their relocation.**

Q: Will our comments make any difference in the project?

> **RF/MB: We do take the feedback seriously and consider your comments. We also look to balance these comments with feedback from Staff and the Planning Board.**

Q: Has there been consideration for water flooding around the site for phase 3 where the site is low-lying?

SL: We are planning to elevate the building on site over a foot from the sidewalk elevation to provide resiliency against flooding, in alignment with the ReCode language.

Q: Can you provide more renderings for phase 3 as it progresses?

MB: We are still in the early stages, but can create updated renderings for the site and share them as they become available.

Q: Are the proposed green spaces going to actually be grass and tree areas?

MB: We do have a high ratio of impervious to landscape area in Phase 2, but overall are considering as much green space area as we can especially in Phase 3.

Q: Are you open to changing the colors of the building?

MB: Yes, we would be willing to explore options with you and find a happy medium.

Q: Is there a reason you are not connecting into the sewer along Lancaster instead of Cedar Street?

SL: We initially intended to discharge the sewer lateral into the Lancaster sewer main, but in reviewing DPW's comments from the MDP process, we were reminded that they prefer to limit the amount of taps into the Lancaster main due to its age, material, and condition.

Q: Can we revisit the sidewalk and street trees along Cedar?

MB/SL: Overview of 3 street trees on private property along the Phase 2 Cedar frontage to provide adequate sidewalk width and shade tree canopy. On the Phase 3 side, minimal street frontage, but proposing to maintain the two existing street trees and replace some of the sloped pavement that exists today with more green space.

Q: What is the plan for the retaining wall behind the Phase 1 site?

BR: The intention is to layer a freestanding block wall along the property line with vegetative screening to provide buffering and noise reduction from the patio space behind the building.

Q: What is the timeline of the woonerf plans in the MDP?

MB: This would occur under Phase 1.B. of the MDP. Once Phase 1.A moves forward, we would advance Phase 1.B and the woonerf design.

Q: Will the transportation aspect of the MDP be included with this project? We don't agree with the statement that the project will have a minimal effect on the neighborhood and street network.

MB: We plan to discuss the transportation aspect of this project and its relation to the MDP further with the City in the coming weeks.

The meeting concluded at approximately 7:30 pm.

The abovementioned material was as interpreted and recorded from handwritten notes. Please note and relay any discrepancies or disputed information in the recorded minutes to the below address so that they can be reviewed, revised, and resubmitted, as necessary.

Recorded by,



Brad Kaden, EI
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Eric Freeman
City Planner - City of Portland Maine
389 Congress Street
Portland, ME 04101
September 30, 2024

Subject:
Joint Site Plan Application Open Space Narrative
197 Oxford Street, 50 Cedar Street, and 158 Lancaster Street

Dear Eric,

This joint site plan application for 197 Oxford Street, 50 Cedar Street, and 158 Lancaster Street reflects a coordinated effort to enhance not only the individual lots but also the surrounding neighborhood. The proposed developments aim to improve urban green space, sidewalk accessibility, and community connections, with a focus on creating open spaces that benefit both residents and the wider public.

Throughout the planning process, the design team engaged in productive public outreach to ensure the project aligns with community needs. On June 26th, 2024, the design team met with abutters on site, conducting a walking tour of each lot to gather direct feedback and insights from the neighboring community. This meeting provided valuable perspectives that informed the design, which we hoped would foster a collaborative approach to the open space and site improvements.

In addition to this on-site engagement, multiple meetings were held with City staff and community members to refine the plans for each property, addressing both functional and aesthetic considerations. The project also includes enhancements to the Cedar Street sidewalk, promoting pedestrian access and safety. Furthermore, the plans recognize and support the existing community garden on Cedar Street and Hall Court, ensuring that the proposed developments complement this valuable green space and contribute to the neighborhood's ecological health.

The collaborative effort between the design team, abutters, and City staff has resulted in a thoughtful site plan that not only improves the individual lots but also enhances the overall character and connectivity of the neighborhood.

197 Oxford Street

Open space: 20%

The open space plan for 197 Oxford Street includes a landscaped courtyard on the northern side of the building that will serve as a shared green space for both residents and visitors. The design emphasizes passive use with seating areas, decorative plantings, and hardscaped surfaces. Native and drought-resistant plants will be used to ensure low-maintenance landscaping and promote local biodiversity. Pathways will be integrated to provide ease of access while also creating a sense of flow throughout the space. The Oxford Street streetscape will be treated with native and drought-resistant plants to ensure low-maintenance landscaping while adding a strong foundation planting - elevating the user experience and reducing heat island effect. Grade changes along Oxford Street and building entrances are being addressed by a ramping condition that allow universal access to the building's main entrances. The Oxford, Chestnut, and Cedar Street streetscapes adjacent the proposed building will be planted with a

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total of 18 street trees - aligning with the City of Portland standards and creating vibrant and robust improvements.

50 Cedar Street

Open space: 21.8%

The proposed development on this tight urban lot has been designed to maximize open space and enhance the visual appeal through strategic plantings and landscaping, with special attention given to the building's prominent location at the corner of Cedar and Lancaster Streets. Due to the proximity of the structure to the street corner, our open space strategy focuses on creating a welcoming, green edge that not only softens the building's urban footprint but also enhances the pedestrian experience and contributes to the overall streetscape.

The overall goal is to use these visual and plant-based improvements to maximize the perceived open space on a lot with tight spatial constraints. By thoughtfully placing greenery at key points, enhancing building facades, and improving the surrounding sidewalk and corner transitions, the design aims to create an attractive and functional urban open space that not only benefits building residents but also enhances the visual and social fabric of the Cedar and Lancaster Street corner.

158 Lancaster Street

Open space: 41.9%

The proposed open space plan for this small urban lot, located next to a community garden, maximizes its green potential by creating a wildflower meadow designed to support and enhance the garden's productivity while adding a unique amenity for residents. The meadow will feature a diverse mix of native wildflowers and grasses, providing crucial habitat for pollinators such as bees and butterflies, directly benefiting the adjacent farm plot through increased pollination and ecological health.

Additionally, the lot's perimeter along Halls Court, Chestnut Street and Lancaster Street will be flanked by flowering street trees. These trees will provide shade, improve air quality, and add a natural buffer between the building, parking area, and the sidewalk. Together, the wildflower meadow and street trees create a cohesive, ecologically rich open space that enhances the community garden while contributing to a greener, more sustainable urban environment.

We look forward to presenting the updates at the next public hearing.
Thank you for your attention to this matter.

Sincerely,



Braden Drypolcher, Principal
Dry Landscape Architecture

ACORN ENGINEERING, INC.

City of Portland Planning Department
Eric Freeman – Planner
389 Congress Street, 4th Floor
Portland, Maine 04101

September 30, 2024

Subject: Comment Response Letter
197 Oxford Street Phased Redevelopment – Joint Major Site Plan Application

On behalf of Reveler Development and Avesta Housing Development Corporation d/b/a Avesta Oxford Street LP, Acorn Engineering is pleased to respond to the following comments from the City of Portland Planning Department review of the 197 Oxford Street Phased Redevelopment Project, Joint Major Site Plan Application (PL-002885-2024).

The following material provided below outlines the comments that were "Not Met", according to the City Staff findings. City Staff Comments were received on May 28th, 2024, followed by a Planning Board meeting on June 25, 2024.

As referenced in this document, the project design team held the following meetings to discuss and receive clarification on the comments received.

- Density and Zoning conversation with the City; held on June 3rd, 2024.
- Google Meets Discussion with City Staff, DPW, and the transportation team; held on June 11th, 2024.
- Neighborhood Site Walk; held on June 26th, 2024.
- Meeting with the City to Discuss the overall density and design; held on June 28th, 2024.
- Meeting with the City to discuss the design changes and steps moving forward, held on August 20th, 2024.

Additionally, in the absence of a formal written comment from Staff, it should be noted that based upon a review of Hall Court's status and the requirement for each parcel to stand on its own meeting space and bulk requirements, the Phase 3 portion of the project has been reduced from 51 units to 24 units. The project now contains a total of 96 units, 48 of which will be affordable and constructed as Phase 1. Please consider this letter to supersede the original cover letter.

Site Plan Worksheet - City Comments:

Site Plan Review Standards (Sec. 14.6)

- **Transportation Standards (Sec. 14.6.1)**

Impact on Surrounding Street Systems Comment:

Overview:

Phase 1 is bordered by Oxford, Chestnut and Cedar Streets
Phase 2 is located at the southwest corner of Cedar and Lancaster Streets
Phase 3 is located at the southwest corner of Chestnut and Lancaster streets
All three phases share frontages along Cedar Street and Hall Court, A private Row.
The applicant proposes to install a curb extension at the intersection of Oxford and Boyd Streets. The curb extension would extend approximately feet along 20 Boyd Street, removing one on-street parking space.

Updates Requested:

- *Comment: The applicant shall provide all back up calculations for their trip generation methodology.*

Response: Please refer to the revised Section T. Traffic Analysis for this information.

Access & Circulation Comment:

Updates Requested:

- *Comment: The applicant shall update the plans to label or provide spot grades and slopes for the proposed sidewalks, accessible ramps and driveways at grade breaks. Callout tip downs.*

Response: Please refer to the revised Civil Plan set which includes more detailed callouts for the proposed spot grades and grade breaks. The level of detail will continue to progress for the final submission later this year, and ultimately construction.

- *Comment: Show Street Centerlines, callout & dimension limits of ROW*
- *Comment: Reconstructed Sidewalk ramps should be constructed such that they are facing the direction of pedestrian travel*
- *Comment: When a detail is referenced ie. "per detail" provide a sheet# for said detail*

Response: Please refer to the revised Civil Plan set which includes more detailed callouts for the proposed site grading, the street centerlines and dimensions of the ROW, and provides sheet #'s for each of the referenced details.

- *Comment: The City's Technical Manual has been recently updated and approved. The applicant shall update all proposed details (Site, Sewer, Stormwater, Landscape, ... details) to meet the requirements of the recently approved technical manual update.*

Response: **All details included with the Civil package are proposed to meet the requirements outlined in the City of Portland Technical Manual.**

- *Comment: Existing conditions and proposed Improvements in the ROW shall be dimensioned on the plan view sheets. For example ROW, street, lanes sidewalk, esplanade driveways (and other improvements) widths as well as when a width changes.*

Response: **Please refer to the revised Civil Plan set which includes more detailed dimensions on the existing conditions and proposed improvements within the City Right of Way.**

- *Phase 1*
    - *Comment: The Bayside Transportation Master Plan contains a recommendation to convert Oxford Street to a two-way street. The proposed curb lines, as shown on the plan, would make such a conversion difficult without eliminating parking on one side of the street. Applicant shall construct a six-foot wide sidewalk along their frontage, thus affecting a slight widening of the roadway.*

Response: **After further discussion with Planning and DPW, it was agreed upon that maintenance of the existing ~8.5' wide sidewalk was appropriate. Some of the reasoning includes:**

- **The 8.5' wide sidewalk facilitates strong tree growth while maintaining 5' clearance at the tree wells for ADA accessibility**
- **Moving the curbline out towards the subject parcel would require the utility poles, overhead electrical and telecommunications lines to be relocated incurring additional costs and disruption.**
- **It allows the building to maintain its required separation from electrical conductors per Maine State Statute. The subject parcels is limited in depth and the building can not move further towards to the rear lot line to accommodate a decreased sidewalk and pole relocation.**
- **There is adequate width within Oxford Street to allow for 2-way traffic and maintain on-street parking on both sides of the street, either with limited use in the winter, or an adjustment to curbline on the opposite side of the street where the sidewalk is in substandard condition and does not currently meet the sidewalk policy. A more formal study is forthcoming as outlined in the 89 Elm Street/Traffic Movement Permit condition of approvals, prior to the occupancy of Phase 1B of the MDP (196 Lancaster Street which has not yet been submitted to the Planning Board).**

- *Comment: C-11 - Street Signage shall be replaced as all other streetscape features are being replaced.*

Response: **All street signage to be removed is intended to be replaced, as noted on the plans.**

- *Comment: C-11 - Dimension sidewalk width from edge of ROW to back of curb on Chestnut St and Cedar St.*

Response: **Please refer to the revised Site Plan for more information on the proposed sidewalk widths.**

- *Comment: C-31 - Show drainage direction arrows.*
- *Comment: C-31 - Provide additional spot grades around the building to better indicate positive drainage away from the building.*

Response: **Please refer to the revised Grading and Drainage Plan for more information on the proposed grades and corresponding directional drainage arrows.**

- *Phase 2*
  - *Comment: The Phase 2 site plan shall include a driveway width dimension at the property line.*

Response: **Please refer to the revised Site Plan which now includes the driveway width dimension at the property line.**

- *Comment: C-12 - Dimension sidewalk width from ROW to Curb on Cedar St & Lancaster St, Minimum 6' Sidewalk must be provided.*

Response: **The existing sidewalk widths that do not meet the 6' standard occur along the Phase 2 Lancaster frontage as well as the entirety of Cedar Street**

The existing Cedar Street sidewalks are approximately 5 – 5.5' wide. As part of this redevelopment project, the Cedar Street sidewalks are proposed to be replaced as part of each project phase. Please refer to the overall site plan which depicts the extent of the improvements associated with each phase. The improvements propose to increase the sidewalk along the North side of Cedar Street by 1', to provide a 6' sidewalk on the North side of the street which also allows 3' wide tree grates to be installed with a 4' clear passing zone (a portion of which is provided by the grate), meeting ADA requirements. Note that we are seeking guidance from DPW on curb treatments along Cedar Street, specifically at existing curb cuts. The width of the sidewalk will not allow for the preferred design where the back 5' of width stays elevated and the remaining sidewalk width is used as a ramp to bridge the elevation between the gutterline and the elevated sidewalk. Given the existing homes, we also do not want to provide 15' long tipdown/ramps at each curb cut which may undermine or expose existing foundations. It would appear the most appropriate design solution is one that mimics the recent Chestnut Street work where a partial tipdown is provided to transition from a 7" reveal to a 4"-5" reveal at the bugs. The bugs are then used as a transition area with pavement to provide the 4" "bridge" between gutterline and elevated sidewalk. If this approach is acceptable to DPW, please confirm and we will advance the engineering of the Cedar Street off-site sidewalk improvements for the final submission.

Along the Phase 2 Lancaster frontage, the proposed sidewalk width is 4' which would occur for 40 linear feet before the width tapers into a larger sidewalk. This condition is based upon continuity of the Lancaster St curb line that was designed as part of the MDP and subsequent 89 Elm Street Site Plan. 89 Elm Street contemplates a public access easement to effectively provide a wider pedestrian width on private property; however, 50 Cedar (Phase 2 of the JSPA) does not have an opportunity to offer that easement due

to site constraints and the building typology. Please provide guidance if the preference is to maintain this 4' sidewalk width for this 40 linear feet, or decrease the 36' curb to curb width in Lancaster Street which would require the curbline to taper to the northeast of the 89 Elm service driveway, and potentially affect the two on-street parking spaces in front of the Phase 2 parcel.

- *Comment: C-12 - Show the limits of curb that is being removed and relocated along Lancaster.*

<u>Response:</u> Please refer to the revised Construction Management Plan which now includes the limits of curbs that are to be removed as part of this redevelopment project.

- *Comment: C-12 - Need Clarity on what the curb cuts are encompassing.*

<u>Response:</u> Please refer to the revised Construction Management Plan and Site Plan, which provides more information on the curb cuts affected on the parcel.

- *Comment: C-12 - Call out all paving that is being removed and replaced.*

<u>Response:</u> Please refer to the revised Construction Management Plan and Site Plan which identifies the pavement that is to be removed and replaced.

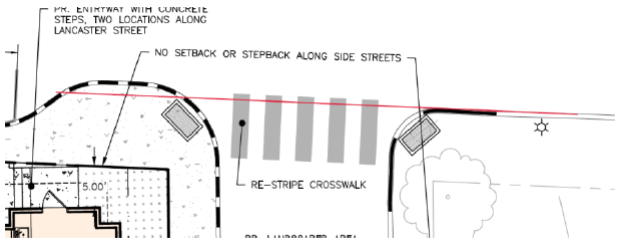
- *Comment: C-12 - Parallel on street parking spaces must be 20' in length.*

<u>Response:</u> All on street parking spaces have been revised to reflect the traditional 20' long on street parallel parking stall.

- *Comment: C-12 - Show how this site plan ties into site plan from 89 Elm St. site plan.*

<u>Response:</u> Please refer to the Phase 2 Civil Plans for more information on how 50 Cedar Street is proposed to tie into the 89 Elm Street Site Plan.

- *Comment: C-12 - Curb extension must align with existing curb line from opposite side of Chestnut St.at the location shown below*



Response: **Please refer to the revised Site Plan which includes this modification to the existing and proposed curbline.**

- *Phase 3*
    - *Comment: C-13 - Keep Light poles out of accessible ramps*

Response: **All proposed light poles are to be located out of the accessible ramps. Please refer to the revised Civil Plans and the Phase 3 Photometric Plan for more information.**

    - *Comment: C-13 - Tree wells must be shown on Site plan, with sidewalk widths dimensioned. Provide 6' Sidewalk clear width must be maintained at all locations.*

Response: **Please refer to the revised Site Plan which includes the proposed locations of the tree wells within the sidewalk and the associated sidewalk dimensions.**

    - *Comment: C-33 - Provide additional spot grades around building to better indicate positive drainage away from the building*

Response: **Please refer to the revised Grading and Drainage Plan which provides more detail on the proposed grades and overall site drainage.**

    - *Comment: C-33 - Show sawcut limits for utilities in ROW*

Response: **Please refer to the revised Construction Management Plan and Site Plan which identifies the pavement that is to be removed and replaced.**

Parking Comment:
Updates Requested:

- *Comment: The parking analysis notes that off-street parking needs will be accommodated in the Cumberland Avenue garage on an as needed basis.*
- *Comment: The applicant shall provide a narrative regarding the need for the small surface level parking lots for phases 2 and 3*

Response: **The off-street parking spaces on Phases 2 and 3 are being provided due to the extra available space on site as an option for residents who choose to be closer to their building, including residents who may have a disability. All parking spaces will be unbundled from the base rent, and residents will have the opportunity to reserve a parking space on the subject parcel, or within the garage on Cumberland Ave depending on their individual preference for covered parking without snowplow requirements vs a shorter walking distance to their vehicle. In most cases, it will likely depend on the end user's frequency of vehicle usage.**

- *Phase 1*
    - *Comment: The Phase 1 site plan shall include the parking aisle width.*

Response: **Please refer to the revised Site Plan which includes the parking aisle width.**

- *Comment: Provide more clarification regarding proposed parking along Oxford street frontage. DPW suggests all parking except the space closest to the entrance near the corner of Cedar and Oxford be either one-hour or two-hour parking from 9-5. The space closest to the corner should be an accessible space as it is closest to the entrance and to the curb ramps.*

Response: Please refer to the revised Site Plan which provides the locations and proposed signage intended to be replaced and reset.

Water Quality, Stormwater Management and Erosion Control Comment:

Updates Requested:

- *The project is required to comply with MaineDEP Chapter and City 500 of Portland Technical Manual Section 5 standards for stormwater management.*
  - *Basic Standards - The project is required to provide for erosion and sedimentation control per the Basic Standard. Erosion control measures are shown on the Construction Management Plans that have been provided for each of the three phases.*
    - *Comment: It is recommended that consistency in line types and designations of erosion control measures be used. For example, a different line type is used for silt fence on Phase 3 compared to the other two drawings.*

Response: Please refer to the revised Construction Management Plans which provides a consistent line type style throughout the three phases.

    - *Comment: Catch basins requiring inlet protection should be specifically designated on the plans. Current notation is inconsistent across the different phases.*

Response: Please refer to the revised Civil Plan Set for more information on the locations downgradient of the development which propose catch basin inlet protection.

  - *General/Redevelopment Standards - The Applicant has divided the project into three phases, and has evaluated the requirements for stormwater treatment for each. Within Phases 1 and 2, greater than 1,000 SF of new impervious surface has been created and treatment has been provided. In Phase 3, the amount of impervious surface has been reduced. None of the phases will result in the redevelopment of greater than 5,000 SF of non-roof redeveloped impervious area - redeveloped areas are primarily roof, and there are areas that are not considered to be "redeveloped" as they are not being regraded. Subsurface stormfilter systems have been provided for Phases 1 and 2.*
  - *Flooding Standards - For each modeled phase, the project will reduce flows from the pre-development to the post development condition in all modeled storm, meeting the Flooding Standard.*
- *I have the following comments on the proposed stormwater system:*
    - *Comment: The Phase 1 roof drainage should be clarified - the plan notes that the stormfilter vault will collect and treat 25% of the roof, while the inset notes that this percentage is 50%.*

Response: **The proposed Stormfilter vault on Phase 1 is intended to treat runoff from 25% of the roof area. Please refer to the revised Grading and Drainage plan for more information.**

- *Comment: The proposed stormfilter structure provided on the Phase 2 Grading plan does not include any structure rim or invert information.*

Response: **Please refer to the revised Grading and Drainage plan which now includes more information on the proposed rim and invert information for the stormfilter vault.**

- *Comment: For Phase 3, a solid cover is provided on the structure at the northern corner of the site. Based on the site grades, it appears this will allow for stormwater flow across the sidewalk onto the ramp area, and then into the catch basin on Chestnut Street. I'd suggest that a grated cover be considered for this structure to reduce flow across the ramp*

Response: **This structure is now proposed with a grate.**

- *Comment: The Applicant should also evaluate the layout of the existing catch basin at the corner of Lancaster and Chestnut Streets in Phase 3 to ensure that it can be installed within the proposed ramped area of the sidewalk.*

Response: **The existing catch basin at the Lancaster and Chestnut Street corner is to remain, but be retrofitted with a cascade grate in lieu of a headstone.**

- *Comment: I would recommend, for the R-Tank table of values provided with the detail, noting that finished grades are per the grading plans. The finished grades listed, in particular for Phase 1 and Phase 2, are low compared to the grading plans. I believe this will just result in a greater amount of fill over the system, which shouldn't be a design issue, but could cause confusion with review for construction.*

Response: **Please refer to the revised R-Tank Detail on sheet C-45 which includes the proposed grades associated with each phase. These details will continue to be refined as the project approaches approval and ultimately construction.**

- *Comment: The overflow/header pipe layout should be consistently called out on all three R-tank systems. Phase 1 identifies the 4" overflow pipes to the 10" header pipe. A similar level of detail is needed for Phases 2 and 3.*

Response: **Please refer to the revised Civil Plan Set for more information on the proposed stormwater systems design.**

- *Comment: The Applicant has noted that they are coordinating with utilities and confirmation of ability to serve will be provided.*

Response: **Confirmation letters from each respective utility company will be uploaded to**

the City's EPlan, when available.

- *Comment: The Applicant should clarify when the installation of the water main in Lancaster Street will be taking place - notes on different plans vary, so it is unclear. If this work is to be completed as part of this project, the full extent of the impact with repaving of the trench in Lancaster Street should be shown.*

Response: As discussed in the meeting with City staff, the Lancaster Street water main replacement and MS4 Extension, as proposed in part of the West Bayside Master Development Plan (MDP) in April 2023, is intended to be constructed as part of the 89 Elm Street Redevelopment project, Phase 1A of the MDP which will be commencing construction in the coming months. The water main extension has been broken into two phases. The first phase will occur during the 89 Elm construction. The second phase of the water main extension will occur between Cedar and Chestnut Street during the 158 Lancaster redevelopment (Phase 3 of the JSPA). Due to topographical and invert constraints, the MS4 can not be extended beyond its current upstream terminus and therefore the entire project will occur as one phase during the 89 Elm Street redevelopment. The abovementioned sequencing has been coordinated with Planning and DPW staff.

- *Comment: The plans should be consistent in how pavement repair for utility installation is represented. This has only been shown on the Phase 2 utility plan.*

Response: Please refer to the revised utility plans which represents the pavement repairs anticipated to facilitate the construction of the proposed utilities by project phase.

Site Landscaping and Buffers Comment:

Updates Requested:
Phase 2:

- *Comment: The applicant should provide a narrative for the three off-street parking spaces. Staff would be supportive of removing these spaces in favor of the creation of private open space for residents.*

Response: The off-street parking spaces on Phases 2 and 3 are being provided due to the extra available space on site as an option for residents who choose to be closer to their building, including residents who may have a disability. All parking spaces will be unbundled from the base rent, and residents will have the opportunity to reserve a parking space on the subject parcel, or within the garage on Cumberland Ave depending on their individual preference for covered parking without snowplow requirements vs a shorter walking distance to their vehicle. In most cases, it will likely depend on the end user's frequency of vehicle usage.

- *Comment: The applicant should demonstrate how the open space is being 20% determined.*

Response: Please refer to the individual Site Plans as well as Document W. Open Space

Narrative which provides the open space and associated calculations. The open space is derived from any ground cover that is proposed as vegetation. Hardscaping that may function towards open space use was not counted towards the 20% minimum requirement.

Public Utilities Comment:

Updates Requested:

- *Phases 1and 3:*
  - *Comment: Water resources had previously directed the west bayside master plan development group to extend the City's separated storm drain system up Chestnut Street from the intersection of Somerset Street and Chestnut Street to provide drainage for the eastern end of the overall redevelopment program. It appears the design and implementation of that storm drain extension should happen as part of 197 Oxford Street Phase# 1 project. Subsequent phases of development (Phase# 3 of this site plan review, and other west bayside MDP projects) should then utilize this extended storm drain for their respective storm drain connections. Water resources is asking the developer to design the storm drain, including a plan and profile, and submit it to water resources review and approval as part of this site plan process.*

Response: After discussion with the City and DPW, it has been agreed upon the potential MS4 extension within Chestnut Street is not necessary for Phase 1 of the Oxford Street Redevelopment project. The design for the MS4 extension within Lancaster Street as proposed as part of the West Bayside Master Development Plan, approved in 2023, has been generally approved by PWD and DPW, with some minor edits to be made prior to construction. The MS4 in Lancaster Street will be constructed during the redevelopment of 89 Elm Street which is slated for construction in Fall 2024.

- *It appears the applicant has satisfied DPW's stormwater detention volume and flow control requirements for project phases #1 and #3.*
- *Phase 2*
  - *Comment: As part of the 89 Elm Street site plan approval PL-002403-2023 (West Bayside MDP Phase#1) the applicant committed to extending the City's separated storm drain in Lancaster Street from Preble Street to the project site. A condition of approval was added to that project which requires the final design of the Lancaster stormwater system to be submitted as part of a subsequent MDP site plan application for 196 Lancaster Street. This proposed project (197 Oxford Street Ph #2) is proposing to outlet it's stormwater into the proposed adjacent stormwater system for the 89 Elm Street project. Water resources supports this connection and ultimate discharge into the proposed Lancaster Street Storm Drain (see easement notes below), but the design of this Lancaster Street storm drain extension will need to be finalized and approved by water resources as part of this site plan review process before we sign off on the connection.*

Response: The Lancaster Street MS4 will be constructed prior to the Phase 2 of the Phased Joint Site Plan Application.

Comment: An easement agreement should be set up and recorded between these two properties for the

proposed shared stormwater system. The applicant should comment on proposed phasing and coordination of utility work between the two projects.

Response: We are in agreement. Reveler owns both parcels and plans to develop a mutual easement agreement for access, maintenance, and utilities.

Design Review:

Comment: Phase 3 – Staff recommends the building placement move to align with Chestnut Street to respond to the existing structures located directly at or within close proximity to the street. Furthermore, the Applicant is requested to find an alternative location for the transformer proposed at Chestnut Street.

Response: The building placement is driven by Maine State Statute and CMP requirements. This results in a minimum 16' setback from the existing overhead electrical wires. Therefore, the building can not move closer to Chestnut Street. The padmount transformer is located as such due to CMP requirement for crane access. Given the reduction in unit count from 51 to 24, it's possible that a pole-mounted transformer may be sufficient to energize this building. Both options are being shown on the utility plan. The transformer type will be dictated by the final electrical loading.

Comment: Staff requests that the Applicant provide a written narrative to identify the proposed open space for the proposed three-phased site plan, with a description to provide access for people with limited mobility. Staff will need to evaluate shared open space, communal open space per property and/or private open for residential units to meet this design standard. Open space functions may include, but not limited to buffers and screening, yard space, play areas, and planting around the perimeter of the proposed building, in addition to communal or private open space within the building footprint (such as roof-level terraces or balconies incorporated within the building façade).

Response: We have provided this document per request as Document V. which demonstrates each phase meets the 20% requirement. We are not aware of any additional R-6 requirements within the ordinance requiring communal open space.

Comment: Phase 1 – Staff recommends a building location closer to the street along Oxford Street and Chestnut Street to reduce the lawn areas proposed along the front property adjacent to the public sidewalk and relocate the transformer at the corner that Staff finds is not contextually appropriate. Staff recommends greater activation along the street with pedestrian amenities such as seating, building entry articulations and planting areas for screening around the building.

Response: The location of the building in relation to Oxford Street is once again drive by State and Utility regulations on setbacks from aerial electrical conductors. We have removed a large portion of lawn area and replaced it with landscaping. Additionally, the building redesign has accommodated space to allow the padmount transformer to be relocated away from the intersection per request. Lastly, greater articulation and screening has been improved where feasible.

Comment: Phase 2 – Staff recommends the Applicant replace the lawn areas along the property frontages for shrub planting material as a more contextually appropriate landscape buffer adjacent to the public sidewalk. In addition, the Applicant is requested to consider additional open space for

communal use, either within the building footprint or as a shared driveway (also known as paseo or woonerf) at the paved areas leading into the parking area at the rear of the property.

Response: Where appropriate, lawn areas have been replaced with more interesting plantings. The current site and building program is not able to accommodate communal open space due to site constraints and the lack of owner interest in encouraging gathering areas within travel areas, particularly given its immediate adjacency to a neighboring residence.

Comment: Staff finds the Phase 1 – 197 Oxford Street development parking is located in a garage and requests additional information for the proposed retaining wall at the rear of the property to evaluate proper screening for vehicles from the adjacent property at 72 Chestnut Street.

Response: A safety/privacy fence will be provided on top of the retaining wall that will provide fall protection and a visual barrier between the parking area and property line. Please refer to the plan set for more information.

Comment: Staff finds the Phase 3 – 158 Lancaster Street development parking is not appropriately arranged and landscaped to properly screen vehicles from Lancaster Street. Staff recommends:

- *a reduction in surface parking area;*
- *moving the building closer to Chestnut Street;*
- *expanding the building along Lancaster Street; and*
- *adding a garage door to allow for parking at the rear of the property or within the building footprint as structured parking.*

Response:

- **The applicant does not wish to reduce the surface parking area. These parking spaces will provide value to the future residents within the 48 units that span between Phase 2 and 3, particularly for those with a disability, or who prefer to be closer to their apartment than the parking garage can provide.**
- **As previously described, the building can not move closer to Chestnut Street**
- **The limitation of 24 units does not result in a building massing large enough to provide the opportunity to span a greater length along Lancaster Street.**
- **A garage door or structured parking does not logically work with the current program and building design. A larger structure may have been able to support this recommendation, but the current design now resembles the Phase 2 building with a stepped townhouse style design and is not conducive to a garage door or structured parking.**

For responses specific to the architectural design review, please refer to the revised architectural drawings and design narratives which address these comments in tandem with several meetings with City Staff. Note that:

- The Phase 1 building has been significantly redesigned in response to Staff and Board feedback.
- The Phase 2 building has not undergone any changes.
- The Phase 3 building has been significantly redesigned, based upon feedback from Staff that the 158 Lancaster parcel can not obtain additional density from contributing parcels within

the JSPA. Therefore, the unit count has been reduced from 51 units to 24 units. The proposed building is now similar to the Phase 2 building design.

Please refer to the attachment outline below for the supplemental materials provided as part of this resubmission. Thank you for your review – we look forward to being placed on the next available Planning Board agenda for a second workshop.

Please let us know if you have any additional questions or comments.

Sincerely,

Sam Lebel, P.E.
Project Manager
Acorn Engineering, Inc.

Danielle McGowan, E.I.
Project Engineer
Acorn Engineering, Inc.

New Documents:

- **Section W. Open Space Narrative**
- **Section X. Turning Templates**
- **Section Y. Comment Response Letter**

Revised Documents:

- **Section D.3 Zoning Analysis – Phase 3**
- **Section D.4 Density Overview**
- **Section F. Waivers**
- **Section I. Conformity with Land Use Ordinance**
- **Section J. Stormwater Management Report**
- **Section L.3 Fire Department Letter – Phase 3**
- **Section M. Wastewater Capacity Letter**
- **Section M.3 Wastewater Capacity Form – Phase 3**
- **Section O. Architectural Design Narratives**
- **Section R. Solid Waste**
- **Section S. Parking Analysis**
- **Section T. Traffic Analysis**

New or Revised Drawings:

- **Civil Plan Set**
- **Landscape Plan Set**
- **Architectural Plan Sets**

ACORN ENGINEERING, INC.

City of Portland Planning Department
Eric Freeman – Planner
389 Congress Street, 4th Floor
Portland, Maine 04101

December 23rd, 2024

Subject: Comment Response Letter 2
197 Oxford Street Phased Redevelopment – Joint Major Site Plan Application

On behalf of Reveler Development and Avesta Housing Development Corporation d/b/a Avesta Oxford Street LP, Acorn Engineering is pleased to respond to the latest round of comments from the City of Portland Planning Department review of the 197 Oxford Street Phased Redevelopment Project, Joint Major Site Plan Application (PL-002885-2024).

The following comments are in response to the following comments:

- Design Review Comments provided by the city, dated 10/23/24
- Site Plan Worksheet comments dated 11/4/24

To facilitate the review, comments are provided below in italics followed by the project team's response.

Acorn Engineering Inc. (Sam Lebel & Danielle McGowan) – Civil Engineers
CWS Architecture (Bhen Reed & George Lavigne) – Phase 1 Architects
RSA Architecture (Ryan Senatore & Reid Tozier) – Phase 2 & 3 Architects
Dry Landscape Architecture (Braden Drypolcher) – Phase 2 & 3 Landscape Architect

Design Review Comments:

- ***Comment 1****: The exterior design of the proposed structure… shall be designed to complement and enhance the nearest residential neighborhood.*

Staff Comment: The built context of the surrounding area contains a variety of building types, architectural styles, and a mix of uses that vary in height and proximity to the street typically found throughout Portland's Bayside neighborhood. The north side of Chestnut Street includes a larger 7-story multi-family building with flat roof. The south side includes an existing 2.5-story residential building with open gable roof style. Cedar Street includes a mix of smaller-

scale residential structures with a mix of roof types including, box gable, intersecting/overlaid hip, and open gable. Buildings tend to have a masonry base, predominantly brick, with clapboard siding. Along Oxford Street includes a mix of building typologies including Unity Village, a community of 33 townhouse style, 3-story apartment buildings, with pitched roofs, brick base and clapboard siding with balconies on the second floor. Adjacent R-7, B-3 & B-7 zoning districts are within close proximity to the proposed project. The existing buildings within the surrounding context are located close to the street with direct access to building entries from public sidewalks.

The proposed phased site plan varies in architectural style and generally deviates from the surrounding residential neighborhood due to the larger lot size and large building footprint to accommodate the proposed high density of residential units. The proposed buildings include flat roofs to maximize structure height. Flat roofs are common for multi-family buildings in the neighborhood and throughout the city.

Phase 1 - 197 Oxford Street: The applicant has resubmitted plans with revisions to the building design that further articulate the facade at the ground level facing the street with a consistent storefront window pattern and canopies that identify the primary entries that Staff finds appropriate to the surrounding context. In addition, the revised building design includes paneling above the storefront windows to distinguish a more cohesive composition with the ground level communal interior spaces from the residential units at the upper floors.

The applicant has resubmitted plans that further articulate the upper stories facing the street with material and trim detailing that express the window arrangement as bay projections that Staff finds appropriate to provide facade variation. Staff recommends greater articulation associated with the residential units, in particular a more pronounced cornice above the horizontal siding.

In addition, Staff has concerns about the large expanses of blank facade at the ground level that face the street. The applicant is requested to provide further justification for the revised building design, in particular the vestibule wall facing Cedar Street, Mechanical Room wall projection facing Oxford Street, and the Basement level wall that wraps the corner of Oxford and Chestnut Street.

Staff recommends the applicant include greater articulation to minimize these blank facades or an alternative (e.g., vine system screening, tall-layered landscaping or artwork) that reduce the visual presence along the ground level.

Response: We have provided a more pronounced, 8"X8" cornice above all of the lap siding-clad portions of the building. We think the overhang and the added shadow line have improved the look of the elevations and work to provide better definition between the lap siding and panel siding portions of the building.

The mechanical room projection on Oxford Street was added in response to the comments we received after the first design workshop, and has since become integral to the design of the mechanical systems. The design team has explored recessing said wall in an effort to satisfy the second-round request, but recessing the wall instead of projecting it would render the space unusable as it is designed. The room houses an ERV and if we were to recess the wall, the

minimum required distance between air supply and return would no longer be available.

The design team has included tall-layered landscaping at said locations, including incorporation of Cotinus coggyggria (Smoke Tree) in front of each facade, with a combination of Schizachyrium scoparium (Little Bluestem), Comptonia peregrina (Sweet Fern) and turf grass planted between the Continus and the sidewalk. The proposed installation size of the Continus has been increased to 10 gallons, and this shrub/tree grows to 10-15 feet in height.

Phase 2 - 50 Cedar Street: Staff finds the building design provides massing variation and mitigates the existing grade along Cedar Street appropriately with the location of multiple entries that are recessed and articulated with an overhead canopy. The proposed design does not provide direct resident access from the parking lot through the rear of the building, which requires residents using mobility devices to walk a longer distance without a pedestrian facility to access the building from the designated ADA-accessible space. Staff recommends that the applicant identify an ADA-accessible entry at the rear of the building that consolidates and/or provides an alternative location for either the utility or bike room for residents to access an interior corridor from the parking lot to the building.

Response: There cannot be an entrance at the rear of the building, as this would eliminate the space that is to be used for the utility and bike rooms that are located in that area. This project is designed as 2 separate buildings with a 2 hour fire wall separating them, and as such, we have provide an internal, ADA accessible bike room located in each of the buildings with ADA access provided at the main entries off the public sidewalk. Additionally, the parking is decoupled from the rents.

Phase 3 - 158 Lancaster Street: The applicant has resubmitted plans for a building design Staff finds the building design provides massing variation and mitigates the existing grade along Chestnut Street appropriately with the location of multiple entries that are recessed and articulated with an overhead canopy. The proposed design does not provide direct resident access from the parking lot through the rear of the building, which requires residents using mobility devices to walk a longer distance without a pedestrian facility to access the building from the designated ADA-accessible space. Staff recommends that the applicant identify an ADA-accessible entry at the rear of the building that consolidates and/or provides an alternative location for either the utility or bike room for residents to access an interior corridor from the parking lot to the building.

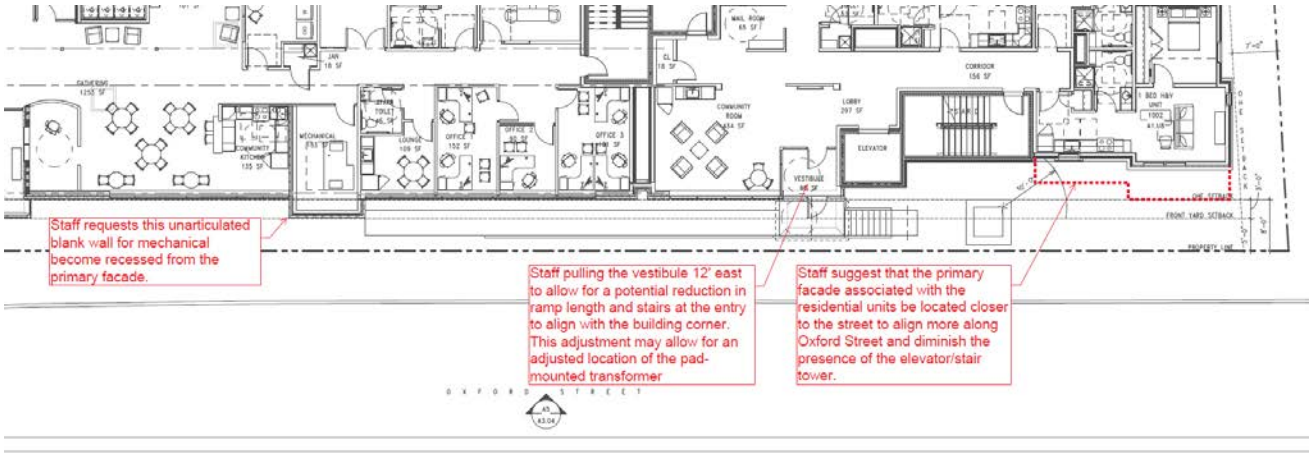
Response: There cannot be an entrance at the rear of the building, as this would eliminate the space that is to be used for the utility and bike rooms that are located in that area. This project is designed as 2 separate buildings with a 2 hour fire wall separating them, and as such, we have provide an internal, ADA accessible bike room located in each of the buildings with ADA access provided at the main entries off the public sidewalk. Additionally, the parking is decoupled from the rents.

- ***Comment 2:*** *The proposed development shall respect the existing relationship of*

buildings to public streets.

Staff comment: The prevailing surrounding context includes buildings within close proximity to the street, to allow direct access to building entries directly from the public sidewalk. The arrangement of smaller properties and existing structures at different finished floor elevations allows for individual structures to mitigate changes in grade along sloped public streets.

Phase 1 - 197 Oxford Street: The applicant has resubmitted plans to adjust the building location, with Staff continuing to recommend a stronger proximity at the corner of Oxford and Chestnut Streets. Staff encourages the residential units fronting Oxford Street be located closer to the street and to explore an alternative transformer location at the Basement parking level. Staff has provided a markup for the applicant's consideration in an effort to create a more cohesive building design that projects the facades associated with the residential units to diminish or setback the fiber cement paneled facades where the elevator and stairwells are located.



Response: This request is not entirely feasible due to the lot coverage zoning requirements of the property. The corner in question has been extended as far as possible toward the corner of Oxford and Chestnut per the City's request, but additional extension would infringe on the lot coverage maximum requirement of the site and would require substantial wholesale redesign of the project.
This request has been addressed and incorporated into the design as practicable. We have moved the vestibule to the opposite side of the Affordable Housing common area, resulting in a shorter ramp and fewer stair treads, and an updated Affordable Housing common area floorplan that has proven advantageous to the layout function as a whole.

Phase 2 - 50 Cedar Street: Staff finds the proposed building placement promotes street activation along Lancaster Street and Cedar Street that is appropriate to the surrounding neighborhood context. Staff continues to recommend a reorientation the proposed entry stoops and railings along the Lancaster Street building frontage to include recessed entries and stairs that are perpendicular to the street. Staff requests that the applicant explore a finish

floor elevation to reduces the amount of ramp and stair transition from the public sidewalk. As envisioned in the adjacent approved 196 Lancaster Street MOP, Lancaster Street is proposed as a neighborhood main street with Staff recommendation to create a more conducive street-level entry along Lancaster Street that contributes to the future streetscape design.

Response: Please refer to the architectural plans and respond, in addition to the Phase 2 Landscape plan for more information. Based on feedback from the neighborhood during the two Workshop Public Comment periods, the Neighborhood Meeting, and the Neighborhood Site Walk, the building was designed to incorporate a private residential entry way. There are currently no ramps proposed off the sidewalk at 50 Cedar.

Response: The building FFE should not be lowered along Cedar street, as this would lower the window sill elevations (which are currently 36" above grade), to about 15", which is too low for privacy concerns. We also believe there are precedents in the surrounding neighborhood for stoops with stairs that are parallel to the adjacent sidewalk. (See Section AA).

This building also should not be lowered because of the retaining wall in the back, if we lowered then these windows in unit 108 would be completely below the retaining wall.

Phase 3 - 158 Lancaster Street: The applicant has resubmitted plans for a 24-residential unit building that is oriented towards the corner of Lancaster and Chestnut Street, Staff recommends a building orientation with primary frontage along Lancaster Street to reinforce the surrounding neighboring building proximity to the street. Staff suggest an orientation of the building with greater frontage along Lancaster Street, to allow for primary entries that are at-grade, recessed and with direct access to the public sidewalk. Staff finds the residential unit stoops more contextual along Chestnut Street and promotes direct access with stairs to make up grade change along the street. Furthermore, the Applicant is requested to identify the pole-mounted transformer on the plans as an alternative to the pad mounted transformer, as suggested in their response letter based on the reduction of units.

Response: Please refer to the architectural plans and response, in addition to the Phase 3 Utility Plan for more information. Based on feedback from the neighborhood during the two Workshop Public Comment periods, the Neighborhood Meeting, and the Neighborhood Site Walk, the building was designed to incorporate a private residential entry way

Additionally, the primary Option (A) has been clarified to install a bank of pole-mounted transformers. The transformer pad may not be necessary and has been relegated to Option B, but until the final electrical building loads are known, and CMP can evaluate its grid against the loads, the exact type of transformer will not be known.

Response: The building FFE should not be lowered as this would lower the window sill elevations creating privacy and flooding concerns. We also believe there are precedents in the surrounding neighborhood for stoops with stairs that are parallel to the adjacent sidewalk. (See Section AA).

This building also should not be lowered because of the retaining wall in the back. The further the building drops, the higher the wall and darker the units the will become which is less ideal for the neighborhood and future residents.

- ***Comment 3:*** *Open space on the site for all ... multiple-family development shall be integrated into the development site.*

Staff comment: The applicant has resubmitted plans and an open space narrative that begin to respond to the accessibility and the function of open space throughout the phased site plans. In general, Staff finds the open space is partially met by the perimeter plantings proposed at each building phase. However, in regards to the total amount of units proposed, Staff finds that access to private and shared open space is limited and only successfully captured within the balcony units of Phase 2 and Phase 3 and the pollinator garden of Phase 3. Staff recommends that the applicant provide an accessible route and entry from the rear parking area with direct access for residents of Phase 2 and Phase 3.

Response: The project has addressed open space components through enhancing the existing streetscape through perimeter plantings proposed at each building. The design has opted to enhance the visual aspect of the surrounding areas while listening to the needs of the existing neighbors regarding open space and how it functions.

Due to technical constraints and building program requirements with the building type and size that's able to fit on this tight lot, an accessible route from the parking area to the building is not feasible. The parking will be decoupled from the rent. It's anticipated that should a tenant with a disability be housed in this building, an alternative parking location may be sought after that results in less topographic challenges.

Phase 1 - 197 Oxford Street: The Applicant has indicated new street trees along Oxford Street, Chestnut Street & Cedar Street under the City's Technical Manual, Section 4 standards, along with walkways, courtyards and planting areas at the rear of the property. Staff does not support the proposed seeded lawn areas due to maintenance and viability concerns and lack of contextuality with the surrounding neighborhood.

Response: The landscaping design includes a significant amount of plantings and has already increased the amount of plantings/mulched garden beds in response to the previous round of comments. Based upon feedback from the neighborhood as well as the precedent across the street at the Daymark condos which features lawn areas around the entire property, the design team has maintained a small strip of lawn between the sidewalk and plantings. This will help formalize the edge and keep a reasonably sized mulched bed while also being responsive to neighborhood input.

Phase 2 - 50 Cedar Street: The Applicant has indicated new street trees along Lancaster Street and Cedar Street under the City's Technical Manual, Section 4 standards, along with minimal perimeter building planting areas. The applicant has resubmitted plans that remove the lawn areas adjacent to the public sidewalk for shrub plantings that Staff finds appropriate based on the surrounding context. Staff suggests open space programming at the corner of Lancaster and Cedar Street that contributes to the street activation along Lancaster Street. Open space can function for the residents may include but not limited to communal outdoor gathering spaces, seating, planting and lawn areas. The applicant may consider the addition of balconies to provide private open space for residents.

Response: The updated landscape plans have added bike racks to address staff comments on activation. Potential mobile planters could be added if DPW is in agreement, however more robust, permanent plantings were not selected due to utility conflicts and snowplow concerns.

Phase 3 - 158 Lancaster Street: The Applicant has indicated new street trees along Lancaster Street and Chestnut Street under the City's Technical Manual, Section 4 standards, along with landscape buffering around the perimeter of the property and lawn area for communal gathering at the rear of the property. The applicant has resubmitted plans that remove the lawn areas adjacent to the public sidewalk for shrub plantings that Staff finds appropriate based on the surrounding context. Staff suggests open space programming at the rear of the property given the proposed twenty- four residential units. Open space can function for the residents may include, but is not limited to, communal outdoor gathering spaces, seating, planting, and lawn areas.

Response: The submitted plans show wildflower plantings and tree plantings that help reinforce the visual aesthetic of the parcel and enhance ecological function of the site and surrounding areas, providing a connection and consistency with the community gardens across Hall Court. This area is meant to be a low-impact passive area and not utilized as a hardscape or patio with impervious area.

- ***Comment 4**: The design of proposed dwellings shall provide ample windows to enhance opportunities for sunlight and air in each dwelling in principal living areas and shall also provide sufficient storage areas.*

Staff comment: Staff finds the proposed phased site plan buildings provide ample windows and sufficient storage within each residential unit to meet this design standard. The applicant has resubmitted plans with a revised fenestration pattern at the ground level and upper floors that Staff finds appropriate to the surrounding context.

- ***Comment 5**: The scale and surface area of parking and driveways and paved areas are arranged and landscaped to properly screen vehicles from adjacent properties and streets.*

Staff comment: Phase 1 - 197 Oxford Street: The applicant has resubmitted plans to propose a

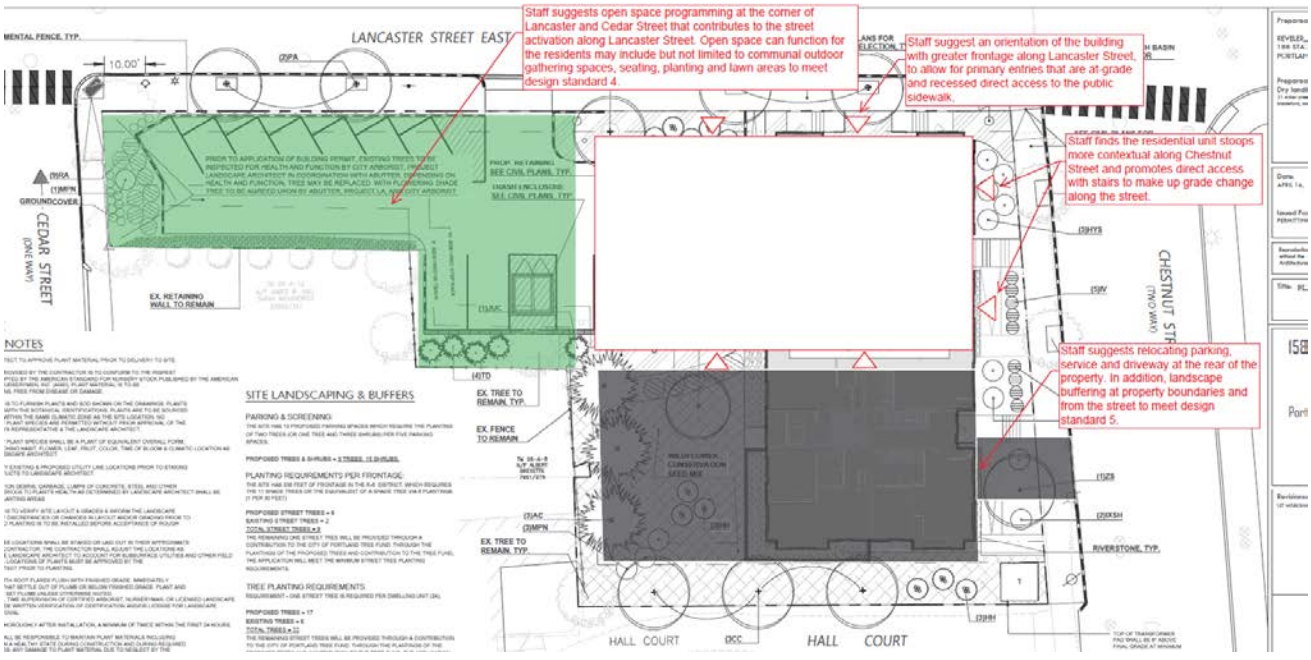
six-foot six-inch height retaining wall with a four-foot tall mounted fence. Staff requests the applicant illustrate this proposed condition from the abutting property at 72 Chestnut Street with rendered views from the public sidewalk. In addition, the applicant is requested to provide specifications for the fencing for each building phase.

Response: CWS has included additional 3D renderings with this submission that illustrate the proposed sidewalk condition from the abutting property at 72 Chestnut. We have also included a bird's eye rendering from the rear of the building at Cedar street to better illustrate the proposed Housing First rear yard community space and to show the proposed fencing that staff has requested we specify. The proposed fencing is to be either ground-face CMU to match the foundation walls or cast-in-place concrete. The proposed walls are 8'-0" tall, and there will also be planting provided in front of them at rear yard in order to provide the greatest acoustical suppression possible.

Phase 2 - 50 Cedar Street: The applicant has included landscape buffering and fencing around to sufficiently screen abutting properties. Staff request that applicant provide specifications for the fencing for each building phase.

Response: The updated plans have specified fencing for the 3 phases.

Phase 3 - 158 Lancaster Street: Staff suggests relocating parking, service and driveway at the rear of the property and provide landscape buffering at property boundaries and from the street. If the applicant intends to provide fencing to sufficiently screen abutting properties, Staff request that applicant provide specifications for the fencing for each building phase.



Response: As discussed in a meeting with Staff, given the grade change

throughout the lot in addition to the proposed building design, rotating the building to include parking on the uphill size of 158 Lancaster Street would result in the building impeding onto the neighboring property's existing landscape which is proposed to remain. Additionally, the building layout lends itself to being perpendicular to the slope (lengthwise) as opposed to running parallel with the slope.

The existing parking area at 158 Lancaster Street is better suited to reduce the heat island effect because it is situated at a lower elevation on the site and benefits from existing tree cover that provides natural shading. This strategic location minimizes the exposure of paved surfaces to direct sunlight, effectively reducing heat absorption and re-radiation.

Relocating the parking, as proposed, would increase the site's heat island effect due to the new area's solar orientation, which lacks sufficient shading opportunities. Additionally, this change would disrupt the continuity of the proposed wildflower planting, which plays a vital role in ecological function, supporting pollinators, improving biodiversity, and providing connectivity to the adjacent community gardens. The wildflower area enhances the site's environmental value and fosters a sense of community while aligning with sustainable landscape practices. We recommend maintaining the existing parking location to preserve these ecological and community benefits while mitigating heat-related impacts.

Site Plan Worksheet - City Comments:

Site Plan Review Standards (Sec. 14.6)

Transportation Standards (Sec. 14.6.1)

- ***Comment 1:*** *Impact on Surrounding Street Systems:*

Overview:

Phase 1 is bordered by Oxford, Chestnut and Cedar Streets

Phase 2 is located at the southwest corner of Cedar and Lancaster Streets

Phase 3 is located at the southwest corner of Chestnut and Lancaster streets. All three phases share frontages along Cedar Street and Hall Court, A private Row.

The applicant proposes to install a curb extension at the intersection of Oxford and Boyd Streets. The curb extension would extend approximately feet along 20 Boyd Street, removing one on-street parking space.

Updates Requested:

- *The applicant shall provide all back up calculations for their trip generation methodology.*

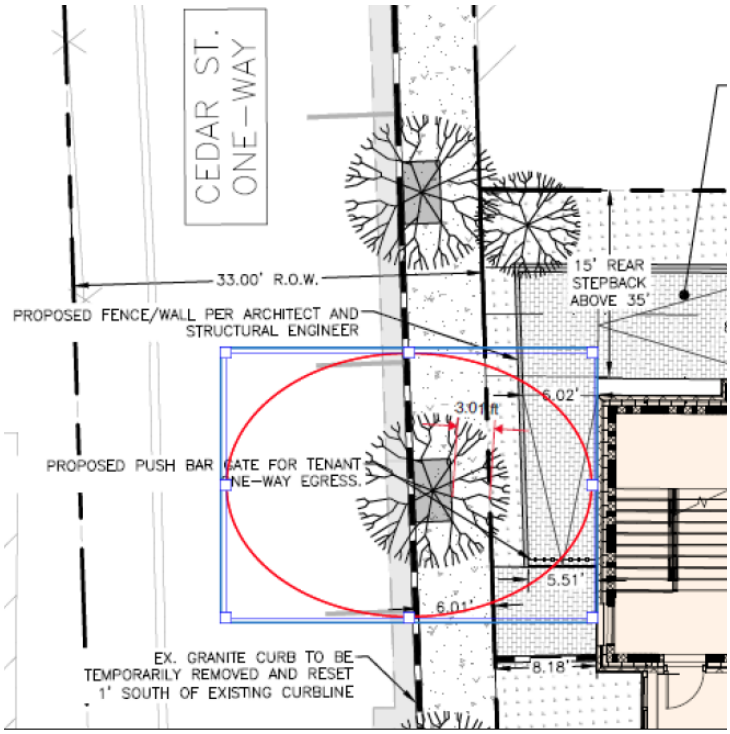
Response: The trip generation calculations were previously provided within the Traffic Analysis prepared for the project. Please refer to Section T, of the application for the Traffic Analysis completed for the project which highlights the ITE excerpts for trip generation.

- ***Comment 2:*** *Access and Circulation:*

Overview:
The applicant proposed to reconstruct sidewalks along the frontages of all three phases using concrete pavers and granite curbing. Additionally, the applicant proposed to reconstruct sidewalk along both sides of Cedar Street using concrete pavers. Sidewalks will be rebuilt to city standards and will be constructed in phases.
Internal walkways are proposed for each phase and will connect to the existing sidewalks along Cedar Street, Chestnut Street, and Lancaster Street.

Updates Requested:

- *Provide site plan dimensions for proposed work along Cedar Street.*
- *Minimum of 4' Clearance between tree wells and edge of sidewalk. Along Cedar Street only 3' is being provided. Look at shifting the curb line on both sides of Cedar 1' to maintain 20' road width while also allowing for appropriate clearance for street trees and sidewalk clearance. The tree grate does not satisfy the 4' accessible walking path requirement.*



Response: Please refer to the Overall Site Plan for the continuity of the sidewalk improvements proposed as part of each phase, in addition to the individual phase site plans for the clearance and width of the proposed sidewalks throughout the development. The curb cut along Cedar Street has been revised to provide adequate clearance around the proposed tree wells by offsetting the curbline another foot. We are requesting that DPW and PDF confirm that the resulting 19' curb to curb width is acceptable given the on-street parking this is allowable on one side of the street.

- ***Comment 3**: Parking:*

Overview:
Each phase of this application involves a limited amount of dedicated off-street parking.

Phase 1: Includes five basement level-parking spaces accessed via a new curb cut on Chestnut Street. These spaces would be utilized by Housing First Staff. No additional on-site parking is provided for the residents of Phase 1, if tenants wish to pursue dedicated off-site parking, there is capacity within the Cumberland Avenue parking garage, which is owned by Co-Applicant, Reveler Development.

Phase II: Includes three off-street parking spaces accessed from Cedar Street.

Phase III: Includes 13 angled off-street parking spaces accessed via an existing curb cut on Lancaster Street.

The applicant intends to provide off-site parking for all 48 market-rate units in the nearby Cumberland Avenue Garage on an as-requested basis.
Reveler Development owns this garage and included supply calculations as part of the previously approved Master Development Plan in 2023

Updated Requested:

- *The applicant shall provide information demonstrating adequate parking supply will be provided in the garage.*

Response: Please refer to parking analysis for more information on the parking supply available in the Cumberland Ave Parking Garage as previously provided under the MDP process. In conclusion, there is ample capacity in the parking garage.

- *Phase 1 Site plan shall include the parking aisle width*

Response: Please refer to the Phase 1 Site Plan and the waiver worksheet in Section F, for more information.

- *Turning templates shall be provided for the second and third phase. For the third phase, turning templates should be provided for the westernmost angled space.*

Response: Please refer to the revised Turning Templates document.

Environmental Quality Standards (Sec. 14.6.2)

- ***Comment 1:*** *Site Landscaping and Buffers:*

Overview:
Phase I: Several mature trees are located along the rear of the property line. The applicant has requested a waiver of Article 14.6.2 related to tree preservation.

Phase II: No trees or significant landscaping features are being removed

Phase III: Eight trees of 10" DBH or greater exist on site. The project will maintain three of those trees which meets landscape preservation standards.

Within the R6 zone, one shade tree or plantings are required per every 30 linear feet along all the property frontages, per the City of Portland Technical Manual standards. Where the replacement of trees onsite is not feasible, the applicant intends to contribute the proportionate cost of the replacement trees to the City of Portland Tree Fund. In total, the applicant will plant 23 new trees between the three phases of this application.

Updated Requested:
- *Phase I: The applicant should demonstrate how the 20% open space is being determined.*
- *Phase II:*
  - *The applicant should provide a narrative for the three off-street parking spaces. Staff would be supportive of removing these spaces in favor of the creation of private open space for residents.*
  - *The Applicant should demonstrate how the 20% open space is being determined.*

Response: The proposal for the three parking spaces are outlined within the Parking Analysis. Please refer to the overall open space plan and each individual

site plan for more information on how open space is being accomplished for each phase. Consistent with previous applications, green space is only counted if the ground surface is open to the sky and is planted with vegetation. We have shaded these areas green on the Overall Site Plan and are further described in the Site and Landscape plans for each phase.

- ***Comment 2:*** *Water Quality, Stormwater Management and Erosion Control:*

Overview:
Phase I: Treatment will be accomplished using Storm-filter cartridges, which will discharge into a proposed R-Tank subsurface detention system. The detention system is sized to store an inch across the entire roof area as well as some ancillary impervious ground surfaces, which is larger volume than the new sewer flows created by the project. The stormwater will outlet into the combined 18-inch sewer within Chestnut Street.

Phase II: Treatment will be accomplished using Storm-filter cartridges, which will discharge into a proposed R-Tank subsurface detention system. The detention system is sized to store an inch across the site's imperivous area, which exceeds the new sewer flows. The outfall will tie into the previously engineered and approved 89 Elm drainage system which ultimately drains to the upstream end of the MS4 extension that has been designed as part of the Bayside MDP.

Phase III: The project will not create more than 1,000 SF of new impervious area and therefore no treatment is proposed. The site will detain the new sewer flows because its volume exceeds an inch across the site's impervious area.

The stormwater detention will be provided by an R-tank system and treatment will be via a Stormfilter BMP.

Updated Requested:

- *The Applicant is still waiting for confirmation of utility ability to serve. It is also noted that most utility service locations are noted as approximate pending coordination with various utilities.*

Response: Ability to serve letters will be finalized and coordinated with each respective utility company when the applicable material to determine and provide a final design is available from the architectural and MEP teams. Acorn has had discussions with each utility company to confirm the overall capacity to serve. Further design detail will be incorporated once received. From there, formal Ability to serve letters can be issued. This

approach is the most efficient and respectful use of everyone's time such that there is little to no "re-work".

Public Infrastructure and Community Safety Standards (Sec. 14.6.3)

- ***Comment 1:*** *Public Utilities:*

Overview:

All three phases will be served via underground electrical conduits. New Utility providers have been contacted for their ability to serve the proposed project. The applicant has requested ability to serve letter from Central Maine Power and Portland Water District.

All three phased will be served by connection to the public sewer system within Chestnut Street and Cedar Street, furthermore, intercepted by the Lancaster Street Combined Sewer. The proposed stormwater management systems have been designed to meet the City standards as well as the applicable standards outlined in Chapter 500.

Updates Requested:

- *Phase I: It appears that the catch basin at the corner of Chestnut Street can be installed with a new headstone since it is outside the 7' tip down zone. Please revise the note on sheet C-31 to reflect this.*

  Response: We have revised the plan to reset the headstone and begin the tipdown immediately after the headstone.

- *Phase II: Notes clarifying and describing the proposed easement with 89 Elm Street should be added to the site plan of Utility plan so it can be easily referenced in the future.*

  Response: Please refer to the revised Phase 2 Site and Utility plans which reference the easements associated with 89 Elm Street.

- *Phase III: It appears there is enough room to install a 7' tip without having to remove the existing City CB headstone at the corner of Lancaster Street and Chestnut Street.*

  Response: This condition requires a longer tipdown than 7' to minimize the ramp slope (due to the steepness of the adjacent street grade). Therefore, the headstone is proposed to removed and catch basin structure retrofitted with a flat grate.

Site Design Standards (Sec. 14.6.4)

- ***Comment 1:*** *Massing, Ventilation, and Wind Impact:*

All three phases meet relevant zoning and dimensional standards and are similar in scale to surrounding buildings.

Updates Requested:

- *Phase I:*
  - *The applicant shall provide average grade calculations and methodologies for Phase 1.*
  - *The applicant shall provide calculations used to determine lot coverage and landscaped open space for Phase 1.*

Response: Please refer to the Overall Site Plan, Phase 1 Site and Grading plan for more information on the proposed open space and average grade calculations. Consistent with previous applications, green space is only counted if the ground surface is open to the sky and is planted with vegetation. We have shaded these areas green on the Overall Site Plan and are further described in the Site and Landscape plans for each phase.

- *Phase II: The Applicant shall provide screening for rooftop utilities.*
- *Phase III: The Applicant shall provide screening for the rooftop utilities.*

Response: Please refer to the Architectural plans and narrative for Phases 2 & 3 for more information on screening the rooftop utilities. Presently, HVAC equipment is not planned for the roof. Should this equipment become necessary to be installed on the roof in the future, it will be screened.

Please refer to the attachment outline below for the supplemental materials provided as part of this resubmission. Thank you for your review – as discussed with Planning Staff, we look forward to being placed on the January 14 Planning Board agenda for a public hearing.

Please let us know if you have any additional questions or comments.

Sincerely,

Sam Lebel, P.E.
Project Manager
Acorn Engineering, Inc.

Danielle McGowan, E.I.
Project Engineer
Acorn Engineering, Inc.

New or Revised Documents:

- **Section F. Waivers**
- **Section O. Architectural Design Narratives**
- **Section S. Parking Analysis**
- **Section Z. Comment Response Letter 2**
- **Section AA. Precedent Images**

New or Revised Drawings:

- **Civil Plan Set**
- **Landscape Plan Set**
- **Architectural Plan Sets**

Carter Frank <cfrank@portlandmaine.gov>

PL-002885-2024 Erroneous Inclusion of 197 Oxford Street in Reveler MDP

1 message

Laura S. Underkuffler <lu27@cornell.edu> Wed, Jan 8, 2025 at 11:14 AM
Reply-To: lu27@cornell.edu
To: "planningboard@portlandmaine.gov" <planningboard@portlandmaine.gov>
Cc: Kevin Kraft <kkraft@portlandmaine.gov>, "efreeman@portlandmaine.gov" <efreeman@portlandmaine.gov>, "planning@portlandmaine.gov" <planning@portlandmaine.gov>

Dear Planning Board Members,

From the beginning of the consideration of PL-002885-2024 -- the latest Reveler MDP now before the Planning Board, which includes the proposed development of "197 Oxford Street" (to be owned, constructed, and operated by completely different by a third party, Avesta) as an add-on to Reveler's MDP — it has struck everyone that there was something wrong with this picture.

Previously it was established that Reveler cannot use affordable housing units to be owned, constructed, and operated by third party (Avesta) to meet Reveler's affordable housing (IZ) units required. The fact that Reveler has no ownership, control, or involvement in the 197 Oxford Street buildings, however, creates another, equally fundamental problem for the purported "co-applicant" application. Because the 197 Oxford Street land is not owned by Reveler, it cannot — under the Code — be a part of Reveler's "site," as defined by the Code, which is the subject of Reveler's MDP — and therefore cannot be a part of Reveler's MDP application.

Avesta's proposed 197 Oxford Street development must independently — on its own — meet all Code requirements. As explained below, it fails those requirements in multiple dimensions.

I. **The "Oxford Avesta" buildings, described as "197 Oxford Street," are only legitimate parts of the Reveler's MDP – and can only rely on the existence of other MDP land to meet Land Use Code requirements – if Reveler retains ownership of those buildings.**

The entire premise of the 197 Oxford Street buildings* is that they can rely upon and be "lumped in" with other Reveler MDP land in order to meet lot coverage, landscaped open space, area per dwelling unit, impervious surface maximums, and other code requirements. However, this assumes that the 197 Oxford Street buildings are a legitimate part of the Reveler's proposed MDP under the Code. That is not true if the 197 Oxford Street buildings and the land that they occupy are under different ownership and control.

(*Note: Upon closer inspection, the proposed development of "197 Oxford Street" is actually – under the Code – two attached but separate and independent buildings, separated by a party wall. See Code Article 3, Definitions, p. 3-2 ("Attached buildings" are "two or more independent buildings that share at least one common party wall but have full building separation and independent principal entries," are "not free-standing," and "may or may not have common ownership.") The Affordable Housing and Housing First buildings are attached but independent buildings that share a party wall. They have no internal connection, separate entrances, and different uses. The Affordable Housing building is simply affordable apartments; the Housing First building is a self-contained institution with different residential admissions requirements, offices for professional service providers, places of assembly, and so on.)

The bizarre posture of this MDP application – with the 197 Oxford Street buildings to be owned, constructed, and operated completely by a third party, Avesta, as an add-on to Reveler's multi-parcel MDP – has been noted repeatedly throughout this process. Previously it was established that Reveler cannot use affordable housing units to be owned, constructed, and operated by a third party (Avesta, with public money) to meet its affordable housing (IZ) requirements under the Code. A developer must either build the affordable (IZ) units required, or pay an in-lieu-of fee of $150,000 per market rate unit (as updated) to the City's Housing Trust Fund. As stated in the Staff Report of November 5:

"The Definitions and Regulations for Developers of IZ Units defines developer as 'the owner of the project.' Owner is defined as 'all legal and equitable owners (including, but not limited to, any person, persons, firm, partnership, association, joint venture, corporation, or any public or private entity or entities or the owner's agent) of a building or project during the term of the permit and any heir, successor, or assign of any person holding an ownership interest in the project or building,' To satisfy the IZ off-site requirements at 197 Oxford Street, Reveler will need to demonstrate how their proposed partnership with Avesta complies with the definition of owner. ... Reveler [must be] able to demonstrate that the project is consistent with the definitions of 'owner' and 'developer' [to] satisfy[] the off-site IZ provisions ... ."

So far, no ownership by Reveler of the 197 Oxford Street buildings has emerged. When asked at the last workshop how Reveler would meet the ownership requirements, the answer was "we will come up with something."

The fact that Reveler has no ownership, control, or involvement in the 197 Oxford Street buildings creates another problem for the purported "co-applicant" application. Under the Code, for land to be part of a minor or major site plan application it must be part of the "site" as defined in the Code. A site is defined as "[a]ll contiguous land under the same ownership or control, whether proposed for development or not ... ." Code Definitions, Article 3, p. 3-11. Because the 197 Oxford Street land is not under the ownership or control of Reveler, it cannot – under that definition – be included in Reveler's MDP application.

The reason why that disqualification matters is this. A major site plan application, as used by Reveler in this case, allows a developer to redefine the "area" that the "site" includes, which affects calculations of all Code area coverage and other requirements. See Code Section 14.3.2A, p. 14-1 ("An applicant may elect to submit a master development plan application ... consisting of multiple buildings and site improvements on sites of one acre or more of total land which is designed as a cohesive and integrated whole.") An MDP allows a "conceptual consolidation" of the various lots and building projects, and permits the developer to apply square footage of land that is part of other lots or parcels to lots or parcels that are otherwise inadequate to meet Code requirements. In the words of the Code, the "master development plan approval, including an application of waivers, establishes the general parameters for the development, including the general development program, massing, open space plan, and infrastructure plan." Code Section 14.3.2B, p. 14-1. This conceptual consolidation of land, and the "conceptual transfer of land" from one parcel or project to another, can be used to allow more building on what would otherwise be Code-inadequate lots.

There is, however – as noted above – a fundamental legal prerequisite for this. The designated land that is the subject of the site plan application or master development plan proposal must be "contiguous ...[and] under the same ownership or control." Code Definitions, Article 3, p. 3-11. If it is not, it cannot be included in the MDP, and its Code violations cannot be satisfied by "other" MDP land.

In this case, the 197 Oxford Street land and buildings are not owned by Reveler, and therefore cannot be presented as a part of Reveler's MDP. When it comes to all applicable Code requirements, the 197 Oxford Street developments must independently meet all of the Code's requirements.

2. **Evaluation of the Affordable Housing and Housing First buildings under the Code: Lot coverage, landscaped open space, minimum lot area per dwelling unit, and impervious surface requirements.**

Because the numbers previously submitted by Reveler do not accurately reflect what the Code's calculations require – i.e., only the square footage and so on of Avesta's developments and land– it is difficult, at this point, to determine which Code requirements the 197 Oxford Street lot and buildings fail to meet. However, some violations are obvious from drawings and other data submitted.

Lot Coverage. "Lot Coverage" is defined in the Code as "the area of the lot covered by the building footprint area and the footprint of accessory detached structures." Code, Dimensional Standards, p. 7-1. For this calculation, the square feet of owned lot area and the footprint of buildings and other structures must be known. Under the Code, the area that the combined buildings cover cannot exceed 60% of the designated lot.

As noted in the Staff Report of November 5 (p. 9), lot coverage data for the Affordable Housing and Housing First buildings is missing, as is the size of the lot which Avesta will actually own. However, it is highly unlikely, in view of the drawings submitted, that 40% of the lot will remain uncovered after the buildings and other structures are built. As proposed, the Affordable Housing building occupies approximately half of the old shelter lot, and the Housing First building occupies the other half. The Affordable Housing building footprint appears to cover nearly 90% of its half of the old shelter lot, and the Housing First building footprint covers nearly 100% of its half. It is impossible to see how the maximum Lot Coverage of 60% will be met in this case.

Landscaped Open Space. The Landscaped Open Space requirement is defined under the Code as "[t]he proportion of lot area covered by landscaped open space, calculated by dividing the total landscaped open space area by the lot area. For the purposes of this measurement, landscaped open space shall not include rooftop gardens or structural or engineered surfaces." Code Dimensional Standards, p. 7-1. The Code requires that 20% of the building's land be landscaped open space, as so defined.

Looking at the drawings submitted to date, it is impossible to see how this requirement will be met. The Affordable Housing building lot has minimal open space that is not an engineered surface; it does not appear to equal 20% of that half-lot. The Housing First building lot has practically none. It is extraordinarily difficult to see how this requirement will be met.

Area Per Dwelling Unit. As the Staff Report of November 5 states, 290 square feet of land is required per dwelling unit (assuming that the 2.5 density bonus as set forth in Code Table 18-C, p. 18-7 is applied (see Note below)**). In the existing application before the Board, it is asserted that this is met, with a figure of 317 sq. ft. per building unit for the Affordable Housing and Housing First buildings combined. However, there is no indication as to how this number was derived. How was it calculated? What land was included in the "total square feet" figure that was used? Was this limited to the land that Avesta will own, and that its site plan for 197 Oxford Street will encompass? If the calculations include Reveler MDP land that is not a part of the land that Avesta will own, then the 317 sq ft of area per dwelling unit is incorrect.

(**Note: The Code is unclear as to whether the density bonus scheme set forth in Code Sections 18.2.3 and 18.2.4 applies to any building that is a Workforce or Low Income project, which has no connection to the idea of development incentives for a market-rate building developer (the primary focus of Code Sections 18.2.3 and 18.2.4). It is also unclear, under the Code, whether a Housing First building is a development that creates "affordable housing" within Code Sections 18.2.3 and 18.2.4. It is certainly income-limited; however, it is also quite different from simple affordable housing to which anyone who falls within stated income guidelines is eligible. Until these questions are clarified, it is assumed that the answer to both questions is in the affirmative.)

Maximum Impervious Surface Permitted. Under the Code and Technical Manual, impervious surface cannot exceed 80% of the area of the lot involved. The Housing First half-lot is almost entirely impervious surface, and the Affordable Housing half-lot is more than 80% the same. It is therefore highly unlikely that this requirement is met by the 179 Oxford Street project.

3. **Evaluation of the Affordable Housing and Housing First Buildings under the Code: Required Site Landscaping, Buffers, and Prevention of Detrimental Impacts on Neighboring Structures**

The Affordable Housing half-lot and building appear to create few problems under these Code requirements. There is at least some site landscaping for this building; there appear to be adequate buffers for neighboring houses and structures; and there are no obviously detrimental impacts that are anticipated from that proposed development.

The Housing First building is an entirely different matter.

To begin, one must understand what the proposed Housing First building is. It is supposed to be following the model of prior Housing First institutions constructed by Avesta/Preble Street: Huston Commons, 72 Bishop Street, zone B2c; Logan Place, 52 Frederick Street, zone C31; and Florence House, 190 Valley Street, zone C48. However, the proposed 197 Oxford Street Housing First building is radically different from all of those.

The Housing First facility that is proposed will create an institutional setting for 28 chronically homeless individuals who are struggling with addiction, including addiction to Schedule 1 drugs. Applicant Statement at Neighborhood Meeting, 5/16/24. The plan is that Preble Street will simply transfer 28 people from its Elena's Way Shelter who are suffering from that condition to the 197 Oxford Street building. On-site support services will be provided 24/7, such as social work services and mental health services. The facility will include the provision of food, common gathering rooms, a shared group kitchen, and four professional offices. All will occupy the entire first floor of the building. Preble Street – in accordance with its policies – will not interfere with the residents' continued drug use or provide on-site treatment. Drug use will not be monitored within the facility or without it. It is expected that residents will use drugs in the facility, and it is Preble Street's position that it would be inappropriate and a violation of privacy for staff to question drug use in residential units. Applicant Statement at Neighborhood Meeting, 5/16/24.
The facility will be shoe-horned into half of the old Shelter lot, in an existing residential neighborhood. An 8-foot high concrete or CMU(cinder block) wall will separate the back of the building and building service area from the small house at 33 Cedar Street (the MaryLee Bennison house). At one point, this wall will be 24 inches from the front porch and front door of the Bennison house (see submitted Drawing A1.10). A small concrete back patio, approximately 9 x 18 ft in size, will be built in the back for the 28 residents. A concrete or CMU (cinder block) wall will be constructed around the patio's perimeter. This will be for "security, noise, and pollutant suppression" (presumably from smoking). Letter from CWS Architecture to Planning Board, 8/17/24. There will be no other outside space or grounds for the 28 residents of the facility. Indeed, Avesta and Preble Street have stressed that the building will be built out to the sidewalks, occupying (by design) the entire lot.

The exterior of the building is deliberately designed to be as bleak as possible – no shrubs or other greenery, no lawns or green patches, no place for a human to sit or stand – in an effort to deter loitering, drug use, and drug dealing around the facility. Statement of Applicant at Neighborhood Meeting, 5/16/24. "High level security" has been implemented to physically separate the Housing First and Affordable Housing buildings and to "prevent penetration [by Housing First residents] into the other side." Statement of Applicant at City Workshop, 6/24/24. It is stressed that there will be no internal way or means for Housing First residents to enter the attached Affordable Housing building; that the entrances for the Housing First

building and the Affordable Housing buildings will be at opposite ends of the block on Oxford Street; and that Housing First residents will not be permitted in the green space or landscaped areas adjacent to the Affordable Housing building. (The Affordable Housing building has landscaping, green space for sitting, bushes "to soften the look of the building," and other amenities – all features that the Housing First building deliberately lacks.) Housing First residents will also not be welcome in or permitted to occupy outdoor areas created by Reveler around its buildings that are a part of the proposed Reveler MDP. The goal and expectation, as expressed by Avesta and Preble Street, is that Housing First residents "will stay in their rooms." Applicant Statement at Neighborhood Meeting, 5/16/24. Beyond these security measures, Avesta and Preble Street have flatly stated that the conditions outside of the Housing First building and its environment are things for which they believe that they have "no responsibility." Applicant Statement at Neighborhood Meeting, 5/16/24.

Code section 14-6 sets forth the Site Plan Review Standards which are applicable to all site plans submitted for approval. In this case, this is the 197 Oxford Street site plan, standing alone.

Shade Trees and Plantings. The site plan standards begin with the requirement that "all development subject to the required zoning setbacks shall include a minimum of one shade tree or six plantings per 30 linear feet of all frontages as measured along the property line." Code section 14-6.2C(1), p. 14-10. The building's frontage along Cedar street fails this requirement; there are no trees, shrubs, or other plantings whatever pictured along that boundary.

Screening. Code section 14-6C(2)(a) states that "all loading and servicing areas, trash and recycling areas, storage areas, and foot- and ground-mounted utility structures ... shall be screened from view from public sidewalks, streets, and adjacent properties by dense evergreen landscaping fencing, and architectural screening products, masonry walls, building walls, or a combination thereof." Here, a cement or CMU wall separates the side and the back of the Housing First building, and its loading and service areas, from Cedar Street and the MaryLee Bennison house (33 Cedar Street). A stark, unadorned cement or cinder block wall is not the equivalent of "dense evergreen landscaping fencing" or "architectural screening products." It is, at best, a screening device appropriate to industrial or commercial buildings. This wall is patently inadequate. There are no evergreens, bushes, architectural efforts – nothing that reflects any attempt to hide this wall or improve its stark appearance.

Buffers. Code section 14-6C(2)(b) states that "[f]or nonresidential development abutting a residential zone, an evergreen, densely landscaped buffer of not less than 10' wide and 6' tall is required along the side abutting the residential zone. Where site constraints prevent such a buffer from being established, the width of the landscaped buffer may be reduced but shall include architectural fencing of not less than six feet tall and a mix of evergreen and deciduous trees spaced no farther than 20 feet apart abutting the residential zone." Although the upper floors of the Housing First building are residential, the first floor of the building is not. There is, however, no buffer separating the Housing First building along Oxford Street, Cedar Street, or along the boundary with the Bennison house. The cinder block wall proposed to be built 24 inches from that house not a landscaped buffer, architectural fencing, or a mixture of evergreen and deciduous trees.

If – instead – the Housing First building is classified as "residential" only, Code section 14-6C(2)(c) states that "[a]ll residential development shall provide and/or preserve evergreen vegetated buffers where necessary to buffer the development from detrimental impacts on existing surrounding development." There are no such evergreen vegetated buffers anywhere along the buildings or boundaries of the Housing First facility.

Detrimental Impact on Surrounding Structures. Code section 14.6.4A(2) states that "[t]he bulk, location, or height of proposed buildings and structures shall minimize, to the extent feasible, any substantial

diminution in the value or utility to neighboring properties ... .” It is impossible to argue that the cramming of this building into this completely inadequate lot – with its back wall 24 inches from the neighboring structure – will not adversely affect that home. The building of an 8-foot cement or cinder block wall (again, with no external greenery or screening at all) to “contain” noise and smoking by 28 residents in the only outdoor area provided is a completely inadequate attempt to “minimize” the problem. Nor does the prison-like architecture, lack of landscaping, and the lack of bushes, trees, or other buffers attempt to minimize the negative impact on surrounding structures that this building creates.

Code section 14.6.4I states that “[r]esidential developments, as listed below, shall integrate with and respect the character of surrounding residential development in terms of architectural form, landscaping and open space, facade materials, roof pitches, massing and height.” Under section 14.6.4I (v), this explicitly includes “residential development of the following types: .. special needs independent dwelling units, lodging homes, bed and breakfasts, and emergency shelters.” This proposed Housing First building – explicitly covered, as a “special needs independent dwelling unit” building – is subject to this requirement. With its lack of adequate land, its stark institutional building form, its deliberate design with elimination of landscaping, greenery or open space of any kind, and its stark massing, this building does not, in any conceivable conception, demonstrate integration with or respect for the character of the surrounding residential development.

Avesta is proud of its other Housing First buildings. The pictures of those on its website stress the open grounds -- grassy lawns, trees, flowers, and other plantings, wetlands with natural flora, surrounding trees and woods, an extensive fenced-in courtyard, and other beautiful outdoor areas. They illustrate the attractive architectural detail of the buildings, with fountains and other calming and peaceful scenes. These photos of the other Housing First projects from Avesta’s website (avestahousing.org/affordable-housing/real-estate-development/housing-first/) are attached as the first file, above, to this submission. (For comparison, the drawing for the proposed Housing First building at 197 Oxford Street follows.) All of those Housing First buildings are deliberately designed and executed to create a feeling of beauty and peacefulness, and all are located far from the toxic drug use and dealing area that surrounds Preble Street’s Elena’s Way homeless shelter on Portland Street (which is only 1 ½ block from the now proposed Housing First location). Why Avesta wants to risk its achievements and its brand by trying to cram this Housing First building onto a completely inadequate piece of land – and in the middle of the most toxic area of the City – defies comprehension.

Respectfully, Laura Underkuffler and David Nowlin

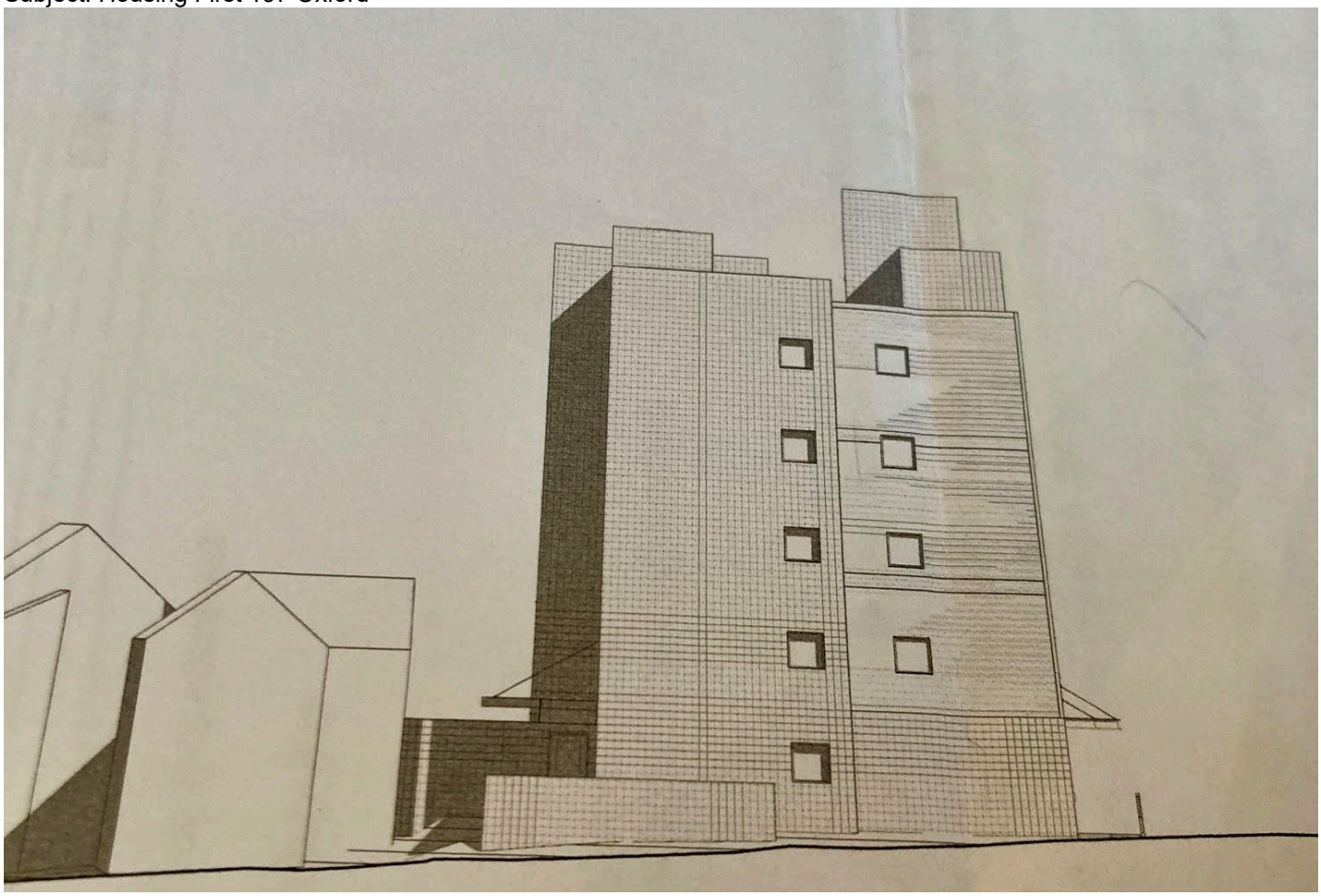
Laura S. Underkuffler
Owner of 215 Oxford Street
J. DuPratt White Professor of Law
Cornell University

David Nowlin
Owner of 215 Oxford Street
Registered Architect - State of Maine

---------- Forwarded message ----------
From: David Nowlin <archc3@gmail.com>
To: Laura <lu27@cornell.edu>
Cc:
Bcc:
Date: Wed, 8 Jan 2025 15:21:12 +0000
Subject: Housing First

---------- Forwarded message ----------
From: David Nowlin <archc3@gmail.com>
To: Laura <lu27@cornell.edu>
Cc:
Bcc:
Date: Wed, 8 Jan 2025 15:21:12 +0000
Subject: Housing First

---------- Forwarded message ----------
From: David Nowlin <archc3@gmail.com>
To: "Laura S. Underkuffler" <lu27@cornell.edu>
Cc:
Bcc:
Date: Wed, 8 Jan 2025 15:22:19 +0000
Subject: Housing First 197 Oxford



10 attachments



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Housing First.eml
4011K

Housing First 197 Oxford.eml
699K

Carter Frank <cfrank@portlandmaine.gov>

PL-002885-2024; 197 Oxford Street

1 message

dgroff@maine.rr.com <dgroff@maine.rr.com> Mon, Jan 13, 2025 at 8:00 AM
Reply-To: dgroff@maine.rr.com
To: "planningboard@portlandmaine.gov" <planningboard@portlandmaine.gov>

I am writing in support the proposed project located at 197 Oxford Street because this proposal aims to house some of our most vulnerable citizens. Additionally, this proposal will help to fill the gap in the city's overall housing stock.

Thank you very much,

Deborah Groff
55 Harris Ave
Portland, Maine 04103

Carter Frank <cfrank@portlandmaine.gov>

Public Comment. PL-002885-2024

1 message

Anne Pringle <anne.pringle.me@gmail.com> Mon, Jan 13, 2025 at 9:31 AM
Reply-To: anne.pringle.me@gmail.com
To: Planning Board <planningboard@portlandmaine.gov>
Cc: "Kraft, Kevin" <kkraft@portlandmaine.gov>

At the prior Planning Board workshop. a Planning Board member asked about comments made at the required neighborhood meeting. I commented at that meeting, but my comments were not reflected in the comment summary submitted to the Board by Avesta. On May 30, I submitted a detailed letter to the then-CEO of Avesta (pasted below), stating that the proposed "housing first"program element should be withdrawn for the reasons stated. I received no response, as requested. After several follow-up efforts on my part, I received an automated email that comments by all "stakeholders are appreciated". Clearly, Avesta is stonewalling legitimate public concerns.

The Planning Board's role is more than just a review body. As the recent ReCode effort highlights, it also reviews and recommends important policies to the City Council. Because of concerns about demonstrated impacts, I believe the Board was involved in bringing forward a moratorium on shelter development and licensing standards in 2021, passed by the Council in late 2021. Unfortunately, these standards were rescinded by the succeeding Council in a reconsideration motion. Today, the behaviors experienced on a daily basis outside of Elena's Way, and predicted outside the proposed Avesta housing first site, are the direct result of the failure to license, and hold accountable, facilities serving this vulnerable population. Leading the charge to defeat reasonable licensing standards was Preble Street, the proposed operator of the Oxford Street facility.

Please put your "planning hats on" and do not approve a housing first facility on Oxford Street, further compounding the impact on the already overburdened Bayside neighborhood.

Anne Pringle
Portland

ANNE B. PRINGLE

44 Neal Street Portland, ME 04102-3527
oldmayor@maine.rr.com

May 30, 2024

Rebecca Hatfield

President and CEO
Avesta
307 Cumberland Avenue
Portland, ME. 04101

Re: Proposed Housing First
197 Oxford Street

Dear Ms. Hatfield:

I spoke at the May 16 required neighborhood meeting regarding the proposed "housing first" facility at 197 Oxford Street. As you were not there to hear my comments and the passionate comments of others, I am writing to bring those comments to your attention – and to the Avesta Board of Trustees.

I have lived in the West End for 53 years. During that time, I have seen many changes in my neighborhood and in the city of Portland.

For example, about forty years ago, there was a soup kitchen around the corner from me at the Williston West Church on Thomas Street. Serving dinner to homeless adults, a very small population at the time, the impacts were much more benign: smoking on the front steps of residents, urinating in front yards, littering, etc.

These impacts were nothing like what is happening in Bayside on a daily basis: active drug dealing, open-air drug use (witnessed myself), stabbings, shots fired, machetes and guns being brandished, threatening behaviors, etc. Please watch this video taken by an owner of a building adjacent to Elena's Way: https://youtu.be/7R_9VgocYqQ And please review the citizen reports posted on SeeClickFix during the first three weeks of May (attached).

In this context, establishing a housing first facility at 197 Oxford Street is the worst possible location. The behaviors I cite outside of Elena's Way are absolutely certain to occur outside 197 Oxford Street. Preble Street expects those who leave Elena's Way, after being supposedly stabilized, will move into the housing first facility – and their "friends" and drug dealers are sure to follow.

Based on current circumstances and Preble Street's demonstrated inability to control their clients' public behaviors (at Florence House and the Recuperative Care Center, as well as Elena's Way), I strongly urge Avesta to drop the housing first proposal altogether.

Based on my experience with Preble Street, no program modifications or promises will produce anything less than what is already being seen, which is horrific. Bayside does not deserve and should not continue to bear these totally unacceptable impacts. If Avesta continues to pursue this project, the organization will be held complicit in a serious and dangerous public health and safety situation. And your low-income tenants on the right side of the new building will also suffer the consequences of what is seen outside Elena's Way.

Preble Street's PR touts its "housing first successes", as did Ryan Fecteau the meeting. Have you even seen outcome reports, or just relied on their assertions of successful outcomes? I was given a personal tour of Logan Place by Mark Swann before it opened 19 years ago. The project was intended for the "hardest-to-house homeless", with multiple problems. Individuals could move in with no preconditions. The goal was that the new apartments and supportive new environment, would persuade individuals into treatment and recovery. And they would (after 18-24 months of support) be able to move into subsidized rentals, freeing housing first units for new homeless tenants. I have been told by a retired Avesta employee that this never happens, that the facilities are "mini-institutions", and that units open up only if someone dies. The Portland Housing Authority and CHOM both integrate formerly unhoused individuals with their other low-income tenants and provide proactive supportive services. This seems like a much better approach to me, yet Preble Stret persists with its model, supported by Avesta as its landlord.

I was on the York Cumberland Housing Development Corp. Board (Avesta's predecessor) years ago and am well-familiar with Avesta's mission and history. I am convinced that the proposed housing first project at 197 Oxford

Street will be a major mistakeand will tarnish Avesta's reputation in ways you do not fully appreciate.

As a former City Councilor and Mayor, I have followed the homeless issue closely for many years. I understand the needs and the challenges. Successful initiatives should be explored and replicated. But outcomes for clients and impacts on neighborhoods must be measured. There is no way that a Preble Street-operated housing first facility at 197 Oxford Street will a be a "win" for anyone…

Again, I urge you to abandon the housing first element of the proposal for 197 Oxford Street

Thank you for careful consideration of the points I have made. I would be happy to discuss these observations with you directly.

I look forward to your prompt response. **Because of the urgency of this matter, I ask that you provide the full Board with a copy of this letter.**

Sincerely,

Anne B. Pringle

cc: Ryan Fecteau
Avesta Board of Directors

Attachment

Carter Frank <cfrank@portlandmaine.gov>

PL-002885-2024. Proposed Housing First Facility

1 message

Anne Pringle <anne.pringle.me@gmail.com> Mon, Jan 13, 2025 at 10:40 AM
Reply-To: anne.pringle.me@gmail.com
To: Planning Board <planningboard@portlandmaine.gov>

See this article, pasted below. "Housing First" is not the "silver bullet" it is touted to be. Please table time to read this!

Anne Pringle
Portland

I lived in a homeless encampment for a week. I saw how Housing First doesn't work.
Aurora, Colorado, is taking action to invest in people and establish the infrastructure needed to have a lasting impact. I hope it can serve as a model for cities nationwide.

Mike Coffman
Opinion contributor
USA Today 7.21/24

More than 650,000 Americans experienced homelessness on any given night last year – a 12% increase since 2022. Chronic homelessness is also worsening, with over 143,000 people homeless for at least a year in 2023, an all-time high.

I've been the mayor of Aurora, Colorado, for five years. In my first term in 2020, I lived among people experiencing homelessness in Aurora and Denver for a week – not as Mayor Coffman, but just as Mike. I wanted to understand why Colorado's homeless community was growing and how my city could best help.

The leading policy approach to homelessness, and the one that attracts the lion's share of government funding, is "Housing First." Essentially, it prioritizes placing individuals into permanent housing as quickly as possible without addressing other issues like untreated mental illness or drug addiction.

No one can doubt the sincerity of Housing First advocates. But its proponents have been seduced by an illusory "silver bullet."

After spending time in encampments, it became clear that solving homelessness won't have a one-size-fits-all solution. Many individuals were battling addiction and had little chance of holding down a job. Others dealt with mental health challenges.

That's why a broader approach is necessary. Federal and state governments should expand support for other programs that respect individual responsibility and focus on moving people forward – especially addiction recovery, mental health and job training – rather than leaving them to repeat destructive cycles that hold them back.

Housing First isn't working. Homelessness still climbs.

In its worst iteration, Housing First is a no-strings-attached approach. Beneficiaries receive housing and don't need to attend job training programs or agree to a sober lifestyle. It's a well-intentioned approach, but it simply isn't working.

Since 2019, California has spent $24 billion on homelessness programs, even mandating all state-funded programs to adopt the Housing First model. Homeless resource centers aren't allowed to make housing conditional on participation in addiction recovery or job training programs. Yet chronic homelessness in the state keeps climbing.
In Utah, Housing First has been the de facto approach since 2005. Yet from 2017 to 2022, the number of chronically homeless skyrocketed 328%.

Homelessness is destroying US cities. Supreme Court must let them get it under control.
Despite these failures, Housing First remains the priority for federal and state funding. This year, the Department of Housing and Urban Development released $3.16 billion for projects that house or serve people experiencing homelessness. The Department encouraged "approaches that first connect people to housing" over those "requiring people experiencing homelessness to first complete a treatment program or achieve sobriety."

This preferential treatment stunts programs that address underlying causes of homelessness. One study showed that more than 60% of chronically homeless individuals reported drug or alcohol abuse.

Yet there is hope. As a Coloradan, I don't have to look very far to find successful models with tangible results.

What works better at curbing homelessness than Housing First
Step Denver provides free housing, addiction recovery programs and peer recovery support for hundreds of men each year. The program includes career counseling, 12-step meetings and life skills classes. After leaving, 84% find a full-time job and 80% report sustained sobriety.

Likewise, Ready to Work, a program run by Boulder-based nonprofit Bridge House, takes a "three-legged stool" approach by providing employment, housing and additional support like career mentoring and medical care to homeless individuals in Boulder and Aurora. Nearly three-quarters of Ready to Work's trainees successfully move on to permanent housing after about a year in the program.

He was rejected and homeless at 15. Now he leads the LGBTQ group that gave him acceptance.
In Colorado Springs, residents at Springs Rescue Mission receive a mentor, a case manager, skills classes and individualized treatment plans if needed.

Colorado Springs' approach has resulted in a decrease in unsheltered homelessness over the past several years, in contrast with neighboring Denver, where this population is growing.

It's not just Colorado. Nationwide, centers that address the root causes of homelessness are transforming lives.

The Chapman Partnership in Miami creates an individualized Housing Stability Plan for each client who seeks housing, providing workforce development programs, social services and long-term housing opportunities. It has achieved an 80% outplacement rate.

In Phoenix, the nonprofit St. Joseph the Worker provides transitional housing and financial literacy resources for clients who work full-time but are at risk of homelessness. Since the program began, about 250 clients have moved on to permanent independent housing.

Aurora is following suit and launching a Navigation Campus as early as next year. The center will provide mental health services, recovery programs, health care and workforce development. Emergency shelter will be available to anyone who needs it, but long-term private housing will be reserved for clients who seek employment and engage with a case manager.

Aurora is taking action to invest in people and establish the infrastructure needed to have a lasting impact. I hope it can serve as a model for cities nationwide.

Mike Coffman is the mayor of Aurora, Colorado.

TO: City of Portland Planning Board
FROM: Robert Sylvain
SUBJECT: 189 Oxford Street
DATE: January 13, 2025

Dear People,

Firstly let me say that I support housing first in concept and practice. Avesta has succeeded with similar projects in other locations. However 189 Oxford Street is a singularly bad location for this type of project because the wounds left from tearing off the band-aid of the defunct Oxford Street shelter have not yet healed. It would be irresponsible and ineffective to put vulnerable, marginalized people up in the very environment that has put them at risk all these years. I live over a mile from the proposed site and I would rather see a housing first project built on the empty lot next to my house on Falmouth Street than on Oxford Street— for the sake of the Bayside neighborhood, the City of Portland, and for the sake of humanity in general.

In my view Avesta is being misused by their co-applicant. Reveler has a penchant for playing fast and loose with the rules surrounding master development plans as evidenced by the sneaky use of low-income housing credits at 89 Elm St. to ostensibly allow them to build separate market rate buildings in the same MDP. They are apparently trying the same strategy with this phased site plan, which serves neither the prospective clients nor the surrounding community. If Reveler doesn't retain ownership of the 189 Oxford Street site in this case, they must not be allowed to use it as part of the larger plan.

Thank you for your time and consideration.

Robert Sylvain
167 Falmouth Street
Portland, ME 04102

Dear Members of the Planning Board,

As a Bayside resident, I appreciate the time and thought you have invested in seeking a just and workable plan for the neighborhood's future. I think we all share a common goal in creating a healthy living environment in which individuals, families and businesses can thrive.

With that in mind, I must express my surprise at the enduring consideration of the Reveler, Avesta and Preble Street plan to force a Housing First facility into the Bayside neighborhood. They have persisted with this plan despite its flagrant code violations, questionable legality, pleas from neighborhood residents against the project and the obvious inappropriateness of the location. Their determination is amazing to witness. It makes me wonder, why all the tenacity?

The cynical choice to place Housing First in a neighborhood that is already known for drug and human trafficking, crime, and homelessness is both shameful and irresponsible. The area is considered unsafe, uninviting and a blight to Portland. The people they are purporting to serve will be immersed in the adverse environment surrounding Elena's Way, Dyers, and Portland and Preble Streets. How is this a good idea or use of funds ? How does this help stabilize the Bayside neighborhood?

I urge you to reject this plan and Reveler, Avesta and Preble Street to reevaluate their objectives. Surely their considerable efforts in this matter can be better directed to providing a solution that is more favorable to their clients, neighborhood residents and the greater Portland community.

I thank you for your time and consideration of my letter,

Deborah Fell

Carter Frank <cfrank@portlandmaine.gov>

197 Oxford

1 message

Amelia Labreck <labreckestates@gmail.com> Mon, Jan 13, 2025 at 11:59 AM
Reply-To: labreckestates@gmail.com
To: planningboard@portlandmaine.gov

Good evening Planning Board Members.

This phased site plan needs more work. Please consider -

There are several code violations regarding the 197 Oxford St. site plan including:

* There are no required grren buffers on Cedar St.

* The height and bulk will negatively impact value of existing homes

* There is no architectural integration with surrounding homes

Another issue:

The modified site plan at 50 Cedar is not workable for the continued maintenance and access to our home if the drive aisle were to be removed. For us, maintaining access to our home on all sides for maintenance and repairs is imperative and a serious issue. The new plan to remove the drive aisle on the Lancaster St. side, and that right of way has been long established and used since the building of our home, giving us the right to continue to do so. In addition, some fences surrounding our property have been there for decades and our land has expanded in some areas through means of adverse posession, as legal right in Maine. We are in the process of acquiring legal documentation.

Thank you,

Amelia Labreck

Carter Frank <cfrank@portlandmaine.gov>

PL-002885-2024 Failure of 197 Oxford Street Project to Meet Code

1 message

Laura S. Underkuffler <lu27@cornell.edu> Mon, Jan 13, 2025 at 12:04 PM
Reply-To: lu27@cornell.edu
To: "planningboard@portlandmaine.gov" <planningboard@portlandmaine.gov>

To the Planning Board:

1.The staff report, and the proposed order of approval, fail to address the central legal deficiency in this case: that because Reveler states that it will not own the 197 Oxford Street land and buildings, and Avesta has presented itself as the sole owner of that project, the 197 Oxford Street project 1) cannot be a part of the Reveler MDP proposal and 2) cannot be used by Reveler to satisfy its IZ requirements under the Portland Land Use Code.

In prior submissions, objectors set forth why all of the land and developments included in an MDP must be under the same ownership or control, and all IZ units claimed by a developer to meet its IZ obligations must be owned by it. See emails to Planning Board dated January 8, 2024 ("The Erroneous Inclusion of 197 Oxford Street in Reveler's MDP"); June 13, 2024 ("The Legal Structure of Reveler's Affordable Units Plan is Impermissible"); and November 11, 2024 ("Reveler has provided no answer to the question of how the proposed 197 Oxford Street building – to be owned, built, and thereafter maintained by Avesta – can be used to meet Reveler's obligation to build and maintain 25% units of affordable housing under the City's IZ rules").
The ownership issue is simple. If Reveler retains ownership of the 197 Oxford Street project, there is no problem with the inclusion of that project in Reveler's MDP or its use of that project to meet its IZ requirements.

If – on the other hand – the 197 Oxford Street project is owned, developed, and built solely by Avesta, as now represented, that project must be evaluated as a separate MDP proposed by Avesta, and it must meet all Code requirements on its own. Other MDP land owned by Reveler and a part of Reveler's MDP cannot be used to "rectify" the many severe inadequacies of the 197 Oxford Street land and project. These include lot coverage, landscaped open space, area per dwelling unit, maximum impervious surface, screening, buffers, and no detrimental impact on surrounding property. In addition, the affordable housing units that are a part of the 197 Oxford Street project – as neither owned, built, nor controlled by Reveler – cannot be used by Reveler to meet its 25% IZ requirements.

Although previously acknowledged by planning staff and Planning Board members, no mention of the ownership issue now appears in the staff report submitted for this public hearing or in the proposed order – issued before the public hearing has been held – approving the project.

2. This process has taken a disturbing turn.

Previously, planning staff and board members were attempting to evaluate the 197 Oxford Street project under the Code's explicit requirements. For example, in November, the staff report made the following demands:

Staff: "The Applicant should demonstrate how the 20% open space is being determined in Phase 1 of the project."

Staff: “The Applicant [for Phase I] shall provide calculations used to determine lot coverage and landscaped open space ... .”

Both of these questions have been stonewalled by the Applicant:

Re: Open Space - Answer: “Please refer to the overall open space plan and each individual site plan for more information on how open space is being accomplished for each phase.” Those documents show areas that are colored green (“open space”); they do not give any square footage numbers of open space as a percentage of total square footage.

Re: lot coverage and landscaped open space: “Please refer to the Overall Site Plan [and] Phase I Site and Grading Plan for more information on the proposed open space and average grade calculations.”

No actual square footage numbers and no calculations are stated in either answer. See Applicant’s Submittal - Acorn Engineering Letter, dated December 23, 2024.)

In the staff’s now assessment of whether the project meets Code requirements, the requirements – and the ownership problem – and a host of other deficiencies – are simply ignored.

It is as if a decision has been made to simply exempt this project from all hard Code requirements.

In another R6 case in Portland, Murray v. City of Portland, 301 A.3d 777 (Me. 2003), the Maine Supreme Judicial Court reversed a planning board decision that failed to include written findings of fact and specific reasons for the decisions on the issues which questioned compliance. Factual matters regarding compliance cannot be “implied” from general statements or submissions of the Applicant. See id. at 780. “[S]pecific findings [are required] related to the challenges ... raised.” Id. This case seems to be taking a turn which completely ignores those requirements.

Respectfully,

Laura Underkuffler
Owner of 215 Oxford Street
J. DuPratt White Professor of Law
Cornell University

CITY OF PORTLAND, MAINE

PLANNING BOARD

Brandon Mazer, Chair
Justin Barker, Vice Chair
Marpheen Chann
Sean Murphy
David Silk
Austin Smith
Maggie Stanley

January 14, 2025

Sam Lebel
16 Middle Street
Portland, Me
04101

Project Name:	Phased Site Plan	**Project ID:**	PL-002885-2024
Address:	197 Oxford Street	**CBL:**	026 B018

Applicant: Revler Development, Avesta Housing
Planner: Eric Freeman

Dear Sam Lebel,

On January 14, 2025, the Planning Board approved a major site plan application for a Phased Site Plan application for the construction of 96 housing units at 197 Oxford Street, 50 Cedar Street and 158 Lancaster Street located within the R-6 Residential Zone. The decision is based upon the application, documents and plans as submitted. The decision is based upon the application, documents, and plans as submitted. The Planning Board reviewed the proposal for conformance with the standards of the Site Plan Ordinance, Chapter 14, Article 14, Section 14.6 and the *City of Portland Design Manual Section (i) Multiple-Family Standards*. Based on the information provided to the Board in the application, plans, and reports, through testimony and other information submitted by the applicant, as well as the findings, conclusions and recommendations contained in the Planning Board Report for the public hearing held on January 14, 2025, which is attached hereto and incorporated herein by reference, the Planning Board found the application met all relevant standards and voted (X-X) to approve the application with the following waivers and conditions as presented below.

A. WAIVERS

The Planning Board voted X-X to waive the following *City of Portland Technical Manual* and *City Code* standards:

1. Drive Aisle Width

The Planning Board finds based upon the Planning Staff's review that extraordinary conditions exist or undue hardship may result from strict compliance with Technical Manual Section 1.10.3. which states that the minimum two-way drive aisle width must be 24 feet, that substantial justice and the public interest are secured with the proposed variation in this standard, and that variation is consistent with the intent of the ordinance. The Planning Board waives Technical Manual Section 1.10.3 to allow two-way drive aisle widths of 21 and 22 feet.

2. Landscape Preservation
The Planning Board finds based upon the City Staff's Review, that extraordinary conditions exist or undue hardship may result from strict compliance with Section 14.6.2.B.3 of the City of Portland's Land Use Code, which states that all development subject to zoning setbacks shall preserve a minimum of 30% of existing trees of 10 inches DBH or greater within the setback area. That substantial justice and the public interest are secured with the proposed variation in this standard, and that variation is consistent with the intent of the ordinance. The Planning Board waives Land Use Code Section 14.6.2.B.3 to allow the applicant to remove trees within the rear setback of 197 Oxford Street.

3. Electric Vehicle Charging
The Planning Board finds based upon City Staff Review, that extraordinary conditions exist or undue hardship may result from strict compliance with Technical Manual Section 1.14. which states that new structured and surface parking lots of five or more spaces shall include energized electrical outlets or installed chargers capable of providing Level 2 EV charging our higher to 20% of parking spaces, that substantial justice and the public interest are secured with the proposed variation in this standard, and that variation is consistent with the intent of the ordinance. The Planning Board waives Technical Manual Section 1.14 to remove the requirement to install EV charging infrastructure in the Phase I covered parking area.

B. CONDITIONAL USE
On the basis of the application, plans, reports and other information submitted by the applicant; findings and recommendations contained in the Planning Board Report for the public hearing on January 14, 2025 for application # CU-002904-2024 at 197 Oxford Street relevant to the site plan regulations; and the testimony presented at the Planning Board hearing, the Planning Board finds that the plan is in conformance with the site plan standards of the land use code, subject to the following conditions of approval:

PRIOR TO ISSUANCE OF A BUILDING PERMIT

1. The Applicant shall submit a draft affordable housing agreement as part of the deed for 197 Oxford Street, outlining the proposed inclusionary zoning implementation for the second and third phases of the Site Plan Application, to be reviewed and approved by Corporation Counsel, Department of Housing & Community Development, and the Department of Planning and Urban Development. The agreement, shall include an exhibit with floor plans for all three phases of the development, detailing the correlation between the workforce

units and the market rate units; specifically related to the number of workforce units required, the size of the proposed workforce units, amenities, and fit and finish, as required in the City of Portland Inclusionary Zoning Implementation Guidelines for Rental Housing

2. The Affordable Housing Agreement (AHA) shall be filed as covenant to the 197 Oxford Street property's deed with the Cumberland County Registry of Deeds. This shall also be filed as covenant to the deeds of 50 Cedar Street and 158 Lancaster Street.

3. In the event that the applicant elects to provide a fee in-lieu of providing a portion or all of the required workforce units, the applicant shall pay into the City's Jill C. Duson Housing Trust Fund in accordance with Ch. 14, Sec. 18.2.3.C.6.

C. SITE PLAN REVIEW

On the basis of the application, plans, reports, and other information submitted by the applicant, findings and recommendations contained in the Planning Board Report for the public hearing on January 14, 2025 for application #PL-002885-2024 relevant to the Site Plan regulations; and the testimony presented at the Planning Board hearing, the Planning Board finds that the plan is in conformance with the Site Plan standards of the land use code, subject to the following conditions of approval.

PRIOR TO APPLYING FOR A BUILDING PERMIT

1. The applicant shall provide ability to serve letters from the Portland Water District and Central Maine Power for all three phases.

2. The applicant shall provide Wastewater Capacity authorizations for all three phases.

3. The applicant shall revise the Phase III Site Plan to provide a 20-foot primary driveway entrance.

4. The applicant shall submit a complete Transportation Demand Management plan to be reviewed and approved by the Planning Authority.

PRIOR TO ISSUANCE OF A CERTIFICATE OF OCCUPANCY

1. The applicant shall contribute $24,800 to the City's Tree Fund, in lieu of planting 62 of the required street trees.

Standard Procedures

Note: The following standard procedures and requirements apply to all approved site plans:

1. Site Plan Expiration The site plan approval will be deemed to have expired unless work has commenced within one (1) year of the approval or within a time period up to three (3) years from the approval date as agreed upon in writing by the City and the applicant. Requests to extend approvals must be received before the one (1) year expiration date.

2. Separate Building Permits Are Required This approval does not constitute approval of building plans, which must be reviewed and approved by the City of Portland's Permitting and Inspections Department.

3. Performance Guarantee and Inspection Fees A performance guarantee covering the site improvements and an inspection fee payment of 2.0% of the guarantee amount and three (3) final sets of plans must be submitted to and approved by the Planning and Urban Development Department and Public Works Department prior to the release of a building permit, street opening permit or certificate of occupancy for site plans.

4. Construction Management Plans The applicant, contractor and subcontractors are required to conform to the approved Construction Management Plan, and all conditions contained within the project's approval, for the entire duration of the project. Any amendments to the approved Construction Management Plan shall be reviewed and approved by the Department of Public Works prior to the execution. The Planning Authority and the Department of Public Works have the right to seek revisions to an approved Construction Management Plan. The applicant shall coordinate the project's construction schedule with the timing of nearby construction activities to avoid cumulative impacts on a neighborhood and prevent unsafe vehicle and pedestrian movements. Accordingly, nearby construction activities could involve a delay in the commencement of construction.

5. Preconstruction Meeting Prior to the release of a building permit and scheduling of a preconstruction meeting, a hard copy set of approved plans shall be submitted to the Development Review Coordinator. A pre-construction meeting shall be held at the project site with the contractor, Development Review Coordinator, Public Works representative, and owner to review the construction schedule and critical aspects of the site work. At that time, the Development Review Coordinator will confirm that the contractor is working from the approved site plan and the approved Construction Management Plan. The site/building contractor shall provide one (1) copy of a detailed construction schedule to the attending City representative. It shall be the contractor's responsibility to arrange a mutually agreeable time for the pre-construction meeting.

6. Department of Public Works Permits If work or obstructions will occur within the public right-of-way, such as utilities, curb, sidewalk, driveway construction, site deliveries and equipment siting, a Street Opening and/or Occupancy Permits are required for your site. Please contact the Department of Public Works Permit Clerk at (207) 874-8300, ext. 8828. (Only excavators licensed by the City of Portland are eligible.)

7. Develop Site According to Plan The site shall be developed and maintained as depicted on the site plan and in the written submission of the applicant. Any modifications of an approved site plan or alteration of a parcel, or of any approved exterior elevations, which were the subject of site plan approval after May 20, 1974, shall require the prior approval of an amended site plan by the Planning Board or Planning Authority pursuant to the terms of Chapter 14, Land Use, of the Portland City Code.

8. Stormwater Management The owner/operator of an approved stormwater management system, and all assigns shall comply with the conditions of Chapter 32, Stormwater including Article III,

Post Construction Stormwater Management, which specifies the annual inspections and reporting requirements.

A maintenance agreement for the stormwater drainage system, as attached, or in substantially the same form, shall be submitted for review by Corporation Counsel. Once approved, the document shall be signed and recorded at the Cumberland County Registry of Deeds prior to the issuance of a building permit. Final copies shall be submitted to both the Department of Planning and Urban Development and the Department of Public Works.

9. Third Party Inspections For all sites with one acre or greater of disturbance, the applicant shall retain the services of a third-party inspector for the duration of construction until final site stabilization is in place. The inspection is required in order to ensure that all construction and stabilization activities comply with the approved drawings and specifications; that field decisions regarding erosion control implementation, stormwater system installation, and natural resource protection are based on sound engineering and environmental considerations; and that any changes to the development's erosion control plan, stormwater management plan, or final stabilization plan is communicated to the City of Portland for additional review and approval.

   The inspector will submit weekly written reports to the Stormwater Coordinator(s) in the Water Resources Division of Public Works. Reports must include: project ID, project address, the date(s) and time(s) of inspection(s), site photographs of areas under construction, and the date(s) and approximate duration(s) of any rainfall events. The report will identify and describe any erosion problems or discharge of pollutants and what actions will be taken to address these issues and repair any damage to other properties or natural resources, actions to eliminate the erosion source, and actions to prevent future sediment discharges from the area.

10. Defect Guarantee A defect guarantee, consisting of 10% of the performance guarantee, must be posted before the performance guarantee will be released.

11. As-Built Final Plans Final sets of as-built plans shall be submitted digitally to the Planning and Urban Development Department, on a CD or DVD, in AutoCAD format (.dwg), release AutoCAD 2005 or greater. Please provide one hard copy of the mylar.

12. Mylar Copies Mylar copies of the as-built drawings for the public streets and other public infrastructure in the subdivision must be submitted to Public Works prior to the issuance of a certificate of occupancy.

13. Impact Fees New development or changes of use that result in net new residential dwelling units, non- residential building square footage, or water meters, are subject to the City of Portland's impact fee ordinance (Chapter 14, Article XVII). Impact fees are calculated at the time of building permit and must be paid prior to the certificate of occupancy. For more information, visit https://www.portlandmaine.gov/2409/Impact-Fees

The Development Review Coordinator must be notified five (5) working days prior to the date required for final site inspection. The Development Review Coordinator can be reached at the Planning and Urban Development Department at drc@portlandmaine.gov or (207)874-8901. All site plan requirements must

be completed and approved by the Development Review Coordinator prior to issuance of a Certificate of Occupancy. Please schedule any property closing with these requirements in mind.

If there are any questions, please contact Zach Powell by phone at 207-756-8083 or email at zpowell@portlandmaine.gov.

Sincerely,

Brandon Mazer, Planning Board Chair

Attachments:
1. Planning Board Report
2. Portland City Code: Chapter 32
3. Sample Stormwater Maintenance Agreement
4. Performance Guarantee Packet

PHASED OXFORD STREET REDEVELOPMENT

AVESTA HOUSING & REVELER DEVELOPMENT
PORTLAND, MAINE

LEGEND

EXISTING

REFER TO THE EXISTING CONDITIONS PLAN FOR ADDITIONAL INFORMATION

PROPOSED

	UNDERDRAIN
	GREEN SPACE
	UTILITY PAVEMENT CUTS
	STRIPING
	SEDIMENTATION BARRIER
	EDGE OF EX. PAVEMENT
	CURB
	SIGN
	LAMP OR LIGHT POLE
	UTILITY POLE
	GUY WIRE
	WATER VALVE
	FIRE HYDRANT
	SEWER MANHOLE
	CATCH BASIN
	DRAIN MANHOLE
UE UE	UNDERGROUND ELECTRIC LINE
W W	UNDERGROUND WATER LINE
64	MINOR CONTOURS (1 FT)
65	MAJOR CONTOURS (5 FT)
G G	GAS LINE
SD SD	STORM DRAIN LINE
S S	SEWER LINE
	EXISTING/PROPOSED BUILDING
OHE/T/C	OVERHEAD ELECTRICAL/TELEPHONE/CABLE
	PROPERTY LINE
	SETBACKS

UTILITIES

SEWER

DEPARTMENT OF PUBLIC WORKS (DPW)
250 CANCO ROAD
PORTLAND, MAINE 04101
CONTACT: BRAD ROLAND, P.E.
(207) 874–8834

WATER

PORTLAND WATER DISTRICT
225 DOUGLASS STREET
PO BOX 3553
PORTLAND, MAINE 04104
ATTN: MEANS DIVISION
(207) 774–5961

ELECTRIC

CENTRAL MAINE POWER COMPANY (CMP)
162 CANCO ROAD
PORTLAND, MAINE 04103
CONTACT: JAMIE COUGH
(207) 828–2882

TELEPHONE

CONSOLIDATED COMMUNICATIONS
(FORMERLY FAIRPOINT)
45 FOREST AVENUE
PORTLAND, MAINE 04101
CONTACT: PAT MORRISON
(207) 745–9363

CABLE

CHARTER COMMUNICATIONS
444 PERRY ROAD
BANGOR, MAINE, 04401
CONTACT: STEVEN HOLMES
(207) 631–1618

FIRST LIGHT FIBER
14 RESILIENT CIRCLE
BRUNSWICK, MAINE, 04011
CONTACT: JONATHAN ROVILLARD
(207) 631–1618

NATURAL GAS

UNITIL SERVICE CORP
1075 FOREST AVENUE
PORTLAND, ME 04103
CONTACT: SCOTT CARPENTER
(207) 541–2543

PROJECT TEAM

DEVELOPER (PHASE 1)

AVESTA HOUSING
307 CUMBERLAND AVE
PORTLAND, ME 04101
CONTACT: CATHERINE ELLIOT
(207) 553–7777

DEVELOPER (PHASE 2 & 3)

REVELER DEVELOPMENT
188 STATE STREET, 3RD FLOOR
PORTLAND, ME 04101
CONTACT: MIKE BARTON
(207) 939–5432

ARCHITECT

RYAN SENATORE ARCHITECTURE
PORTLAND, MAINE
CONTACT: RYAN SENATORE, R.A.
(207) 650–6414

SURVEYOR

OWEN HASKEL, INC.
FALMOUTH, MAINE
CONTACT: RANDY R. LOUBIER, P.L.S.
(207) 774–0424

CIVIL ENGINEER

ACORN ENGINEERING, INC.
PORTLAND, MAINE
CONTACT: SAM LEBEL, P.E.
(207) 775–2655

LANDSCAPE ARCHITECT (PHASE 1)

ACORN ENGINEERING, INC.
PORTLAND, MAINE
CONTACT: ALEX DEL VECCHIO
(207) 775–2655

LANDSCAPE ARCHITECT (PHASE 2 & 3)

DRY LANDSCAPE ARCHITECT
PORTLAND, ME
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ABBREVIATIONS

PARTIAL LIST OF ABBREVIATIONS AND THEIR CORRESPONDING MEANING. PLEASE CONTACT THE ENGINEER FOR ANY CLARIFICATION

APPROX.	APPROXIMATE
BC	BOTTOM OF CURB
BMP	BEST MANAGEMENT PRACTICE
BOT.	BOTTOM
CAD	COMPUTER AIDED DESIGN
CB	CATCH BASIN
CF	CUBIC FOOT
CIP	CAST IN PLACE
CL	CENTERLINE
CM	CONSTRUCTION MANAGER
CMP	CENTRAL MAINE POWER
CONC.	CONCRETE
CPP	CORRUGATED PLASTIC PIPE
CY	CUBIC YARD
DI	DUCTILE IRON PIPE
DIA.	DIAMETER
DIM.	DIMENSION
EA.	EACH
ELEC.	ELECTRICAL
ELEV.	ELEVATION
EQUIV.	EQUIVALENT
EST.	ESTIMATE
EX.	EXISTING
FFE	FINISH FLOOR ELEVATION
FT.	FEET
HDPE	HIGH DENSITY POLY ETHYLENE
ID	INNER DIAMETER
IN.	INCH
INV.	INVERT
L	LENGTH
MAX.	MAXIMUM
MDEP	MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION
MDOT	MAINE DEPARTMENT OF TRANSPORTATION
M.E.P	MECHANICAL, ELECTRICAL, PLUMBING DESIGNER
MFG.	MANUFACTURED
MH	MANHOLE
MIN.	MINIMUM
O.C.	ON CENTER
OD	OUTSIDE DIAMETER
OHE/T/C	OVERHEAD ELECTRIC/TELEPHONE/CABLE
PC	PRECAST
PE	PROFESSIONAL ENGINEER
PL	PROPERTY LINE
PLS	PROFESSIONAL LAND SURVEYOR
PROP.	PROPOSED
PSI	POUNDS PER SQUARE INCH
PVC	POLYVINYL CHLORIDE
PWD	PORTLAND WATER DISTRICT
R	RADIUS
RD	ROOF DRAIN
RET.	RETAINING
ROW	RIGHT OF WAY
S	SLOPE
SD	STORM DRAIN
SDR	STANDARD DIMENSION RATIO
SF	SQUARE FEET
SMH	SEWER MANHOLE
SPEC.	SPECIFICATION
TC	TOP OF CURB
TW	TOP OF WALL
TYP.	TYPICAL
UD	UNDERDRAIN
UGE	UNDERGROUND ELECTRIC
VIF	VERIFY IN FIELD

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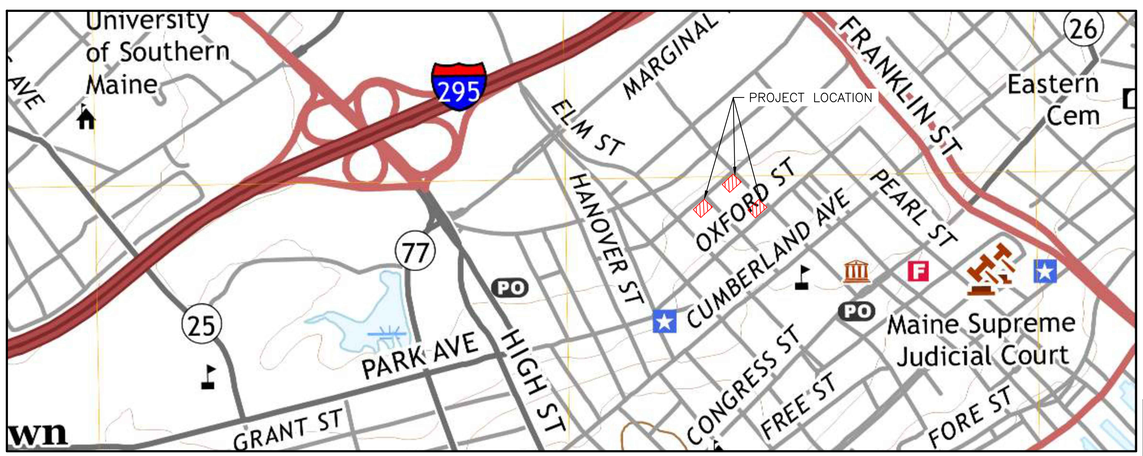

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ISSUED FOR	BY	DATE
JOINT MAJOR SITE PLAN APPLICATION	SJL	4/10/24
COMMENT RESPONSE	SJL	9/30/24

COVER SHEET & LEGEND
PHASED OXFORD STREET REDEVELOPMENT
AVESTA HOUSING & REVELER DEVELOPMENT
307 CUMBERLAND AVE, PORTLAND, ME 04101
188 STATE STREET, 3RD FLOOR, PORTLAND, ME 04101

DRAWING NAME:
PROJECT NAME:
CLIENT:

ACORN ENGINEERING, INC.
THESE PLANS SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM ACORN ENGINEERING, INC. AND ANY UNAUTHORIZED USE OF THESE PLANS SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO ACORN ENGINEERING, INC.

ACORN ENGINEERING, INC
PO BOX 3422, PORTLAND, MAINE 04104
(207) 775–2655

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DRAWN BY:	DNM
CHECKED BY:	SJL

STATE OF MAINE
Sam Lebel
SAMUEL J. LEBEL
No. 16505
LICENSED PROFESSIONAL ENGINEER
9/30/24

DRAWING NO.
C-01

GENERAL NOTES:

1. THE CONTRACTOR SHALL CALL THE APPROPRIATE UTILITY COMPANIES AND DIG SAFE AT LEAST 72 HOURS PRIOR TO ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION FOR UTILITIES. OTHERWISE IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE LOCATION OF UNDERGROUND UTILITIES AND LOCATE ANY POTENTIAL CONFLICTS WITH THE APPROVED PLANS PRIOR TO CONSTRUCTION.

2. THE CONTRACTOR IS RESPONSIBLE FOR MAINTENANCE OF ALL EROSION CONTROL MEASURES SHOWN ON THE PLAN. IF DEEMED NECESSARY BY THE OWNER OR OWNER'S REPRESENTATIVE (IF APPLICABLE), ADDITIONAL EROSION CONTROL MEASURES SHALL BE INSTALLED AT NO ADDITIONAL COST TO THE OWNER.

3. THE CONTRACTOR SHALL PREPARE THEIR OWN MATERIAL SCHEDULE BASED ON THE PLANS AND FIELD VERIFICATION BY THE CONTRACTOR. ALL MATERIAL SCHEDULES SHOWN WITHIN THE PLAN SET ARE FOR GENERAL INFORMATION ONLY.

4. ALL CONSTRUCTION METHODS, TESTING AND MATERIALS SHALL CONFORM TO THE MAINE DEPARTMENT OF TRANSPORTATION SPECIFICATIONS, THE CITY OF PORTLAND AND SERVICING UTILITY REQUIREMENTS, IF ANY. IN CASES WHERE THESE CONFLICT THE MOST STRINGENT SPECIFICATION SHALL APPLY AT NO ADDITIONAL COST TO THE OWNER.

5. THE SITE CONTRACTOR SHALL MAINTAIN A SET OF PAPER AND CAD DRAWINGS WHICH SHALL RECORD THE ACTUAL LOCATION, DIMENSIONS, ELEVATIONS, MATERIALS OF THEIR WORK, INDICATING THEREON ALL VARIATIONS FROM THE CONTRACT DRAWINGS. THE CONTRACTOR SHALL PROVIDE THE OWNER WITH ONE COMPLETE SET OF REPRODUCIBLE RECORD DRAWINGS, IN .DWG FORMAT AND PAPER, STAMPED ''AS–BUILT''. IF AUTOCAD CAPABILITY IS NOT AVAILABLE, EXCLUDE FROM BID IN WRITING.

6. THE CONTRACTOR WILL REMAIN SOLELY AND COMPLETELY RESPONSIBLE FOR ENFORCEMENT OF AND COMPLIANCE WITH 1) ALL CONTRACT PLANS AND SPECIFICATIONS, 2) APPLICABLE INTERNATIONAL BUILDING CODE REQUIREMENTS, AND 3) ALL SITE WORKING CONDITIONS AND SAFETY REQUIREMENTS, DAY AND NIGHT, FOR BOTH PERSONS AND PROPERTY, IN EACH CASE BOTH BY THE CONTRACTOR AND ITS SUBCONTRACTORS. THESE INCLUDE ALL OSHA, NIOSH, U.S. EPA AND ANY OTHER APPLICABLE GOVERNMENTAL REGULATIONS.

7. EXISTING CONDITIONS, BOUNDARY SURVEY, AND TOPOGRAPHY FROM THE PLAN TITLED **TOPOGRAPHIC SURVEY, BAYSIDE PARCELS** BY **OWEN HASKEL, INC. DATED 2/17/23, LAST REVISED 3/22/24.**

8. SUBSURFACE DATA WILL BE OBTAINED BY THE PROJECT GEOTECHNICAL ENGINEER AND SHALL BE INCLUDED IN THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL ALSO REVIEW THE REPORT PRIOR TO SUBMITTING A BID.

9. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING ACCESS TO THE SITE AT ALL TIMES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TEMPORARY MARKINGS, SIGNAGE AND INCIDENTALS TO MAINTAIN A SAFE VEHICLE AND PEDESTRIAN ACCESS THOUGH THE LIFE OF THE PROJECT. THE CONTRACTOR SHALL NOTIFY THE PORTLAND PUBLIC SAFETY DIVISION ROUTINELY REGARDING TEMPORARY IMPACTS OR CHANGES TO SITE ACCESS CONDITIONS.

10. **CONSTRUCTION MANAGEMENT PLAN AND SITE LOGISTICS NARRATIVE WILL BE PROVIDED BY THE CONTRACTOR AND** SHALL BE REFERRED TO FOR ANTICIPATED PROJECT SCHEDULE AND CLOSURES. TRAFFIC CONTROL SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

11. CONTRACTOR TO DETERMINE SOIL CLASSIFICATION INDEPENDENTLY FOR TRENCH, SHORING, AND OTHER SIMILAR CONSTRUCTION MEANS AND METHODS APPLICATIONS.

12. NO HOLES, TRENCHES, OR STRUCTURES SHALL BE LEFT OPEN OR UNATTENDED OVERNIGHT IN ANY AREA ACCESSIBLE TO THE PUBLIC OR WITHIN THE PUBLIC RIGHT–OF–WAY.

13. THE CONTRACTOR SHALL CONDUCT A PRE–CONSTRUCTION SURVEY OF INTERIOR SUBGRADE AND ABOVE GRADE ACCESSIBLE WALLS, CEILINGS, FLOORS, ROOF AND VISIBLE EXTERIOR AS VIEWED FROM THE GRADE LEVEL. THIS SHALL BE COMPLETED AT A MINIMUM ADJACENT STRUCTURES. PROVIDE A COPY OF THE SURVEY TO THE OWNER. DOCUMENT WITH PICTURES AT A MINIMUM.

14. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PRESERVATION OF ALL TREES AND SHRUBS ON THE PROJECT WHICH ARE NOT TO BE REMOVED.

15. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING ANY TRENCH PAVEMENT THAT HAS EXPERIENCED EXCESSIVE SETTLEMENT, CRACKING, OR OPENING OF JOINTS. REPAIRS MAY INCLUDE OVERLAY. REMOVAL OF WORK MAY BE NECESSARY AFTER THE FINAL ACCEPTANCE OF WORK OR PRIOR TO THE END OF THE WARRANTY PERIOD. THIS WORK SHALL BE DONE AT THE CONTRACTOR'S EXPENSE.

CIVIL SITE NOTES:

1. THE CONTRACTOR SHALL SUBMIT IN WRITING ANY REQUESTS TO ACORN TO MODIFY THE CONTRACT DOCUMENTS.

2. ALL SHOP, ERECTION, AND CONSTRUCTION DRAWINGS SHALL BE CHECKED AND STAMPED BY THE CONTRACTOR PRIOR TO SUBMISSION FOR ACORN'S REVIEW. ANY UNCHECKED OR NON–STAMPED SUBMITTALS WILL BE RETURNED WITHOUT REVIEW.

3. CONTRACTOR SHALL THOROUGHLY INSPECT AND SURVEY EXISTING STRUCTURES AND SITE TO VERIFY CONDITIONS THAT AFFECT THE WORK SHOWN ON THE DRAWINGS. CONTRACTOR TO NOTIFY ACORN OF ANY DISCREPANCIES PRIOR TO PROCEEDING.

4. DETAILS SHOWN APPLY TO ALL SIMILAR CONDITIONS UNLESS OTHERWISE INDICATED.

5. ALTHOUGH ALL DUE DILIGENCE HAS BEEN APPLIED TO MAKE THE DRAWINGS AS COMPLETE AS POSSIBLE, NOT ALL DETAILS ARE ILLUSTRATED, NOR IS EVERY EXCEPTION CONDITION ADDRESSED WITHIN THE CONTRACT DOCUMENTS.

6. ALL PROPRIETARY CONNECTIONS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

7. THE CONTRACTOR IS RESPONSIBLE FOR THE COORDINATION OF ALL WORK, INCLUDING DIMENSION AND LAYOUT VERIFICATION, MATERIALS COORDINATION, SHOP DRAWING REVIEW, AND THE WORK OF ANY SUBCONTRACTORS.

8. UNLESS OTHERWISE SPECIFICALLY INDICATED, THE DRAWINGS DO NOT DESCRIBE OR DIRECT MEANS OR METHODS OF CONSTRUCTION.

9. THE CONTRACTOR, IN THE PROPER SEQUENCE, SHALL PERFORM OR SUPERVISE ALL WORK NECESSARY TO ACHIEVE THE FINAL COMPLETED STRUCTURE, AND TO PROTECT THE STRUCTURE, WORKMEN, AND OTHERS DURING THE CONSTRUCTION. SUCH WORK SHALL INCLUDE, BUT NOT BE LIMITED TO, BRACING, SHORING FOR CONSTRUCTION EQUIPMENT, SHORING FOR EXCAVATION, FORMWORK, SCAFFOLDING, SAFETY DEVICES AND PROGRAMS OF ALL KINDS, SUPPORT AND BRACING FOR CRANES AND OTHER ERECTION EQUIPMENT.

10. DO NOT BACKFILL AGAINST RETAINING WALLS UNTIL SUPPORTING SLABS AND FLOOR FRAMING ARE IN PLACE AND SECURELY ANCHORED, UNLESS ADEQUATE BRACING IS PROVIDED. PRIOR TO BACKFILLING, CONCRETE SHALL BE CURED PER STRUCTURAL ENGINEER'S SPECIFICATIONS.

11. TEMPORARY BRACING SHALL REMAIN IN PLACE UNTIL ALL FLOORS, WALLS, ROOFS AND OTHER SUPPORTING ELEMENTS ARE IN PLACE, IF APPLICABLE.

12. ALL PAVEMENT JOINTS SHALL BE SAWCUT AND APPLIED WITH TACK COAT PRIOR TO PAVING TO PROVIDE A DURABLE AND UNIFORM JOINT.

13. ACORN BEARS NO RESPONSIBILITY FOR THE ABOVE ITEMS, AND SITE OBSERVATION VISITS DO NOT IN ANY WAY INCLUDE INSPECTION OF THEM.

14. EXCAVATIONS ACCOMPLISHED AS PART OF THIS PROJECT SHALL BE CONSTRUCTED IN ACCORDANCE WITH SUBPART P OF 29 CRF PART 1926.650–.652 (CONSTRUCTION STANDARD FOR EXCAVATIONS).

15. ALL TRENCH PAVEMENT REPAIR SHALL BE COMPLETED WITH THE USE OF A STREET PAVER WITH A SCREED WIDTH CAPABLE OF SPANNING THE FULL WIDTH OF THE TRENCH UNLESS OTHERWISE AUTHORIZED BY THE ENGINEER.

SPECIAL INSPECTION NOTES

1. ALL SITE SOILS–RELATED WORK AND FOOTING EXCAVATIONS PRIOR TO PLACING FORMS SHALL BE REVIEWED BY THE PROJECT GEOTECHNICAL ENGINEER.

2. ALL SITE DRAINAGE–RELATED WORK SHALL BE REVIEWED BY ACORN.

3. NORMAL REVIEWS BY LOCAL BUILDING DEPARTMENT. NOTIFY 48 HOURS PRIOR TO REQUIRED REVIEW.

4. REQUIRED SPECIAL INSPECTIONS PER I.B.C. SECTION 1705.6 BY AN APPROVED SPECIAL INSPECTOR RETAINED BY OWNER. CONTRACTOR TO COORDINATE SPECIAL INSPECTIONS.

5. SPECIAL INSPECTOR SHALL BE A QUALIFIED PERSON WHO SHALL DEMONSTRATE COMPETENCE, TO THE SATISFACTION OF THE BUILDING OFFICIAL, FOR INSPECTION OF THE PARTICULAR TYPE OF CONSTRUCTION OR OPERATION REQUIRING SPECIAL INSPECTION.

5.1. DUTIES AND RESPONSIBILITIES OF THE SPECIAL INSPECTOR SHALL BE TO OBSERVE AND/OR TEST THE WORK ASSIGNED AND OUTLINE ABOVE FOR CONFORMANCE WITH THE CONTRACT DOCUMENTS, ALL DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION.

5.2. THE SPECIAL INSPECTOR SHALL FURNISH REGULAR REPORTS TO THE BUILDING OFFICIAL, THE ARCHITECT AND ENGINEER OF RECORD, AND OTHER DESIGNATED PERSONS. PROGRESS REPORTS FOR CONTINUOUS INSPECTION SHALL BE FURNISHED WEEKLY. INDIVIDUAL REPORTS OF PERIODIC INSPECTIONS SHALL BE FURNISHED WITHIN ONE WEEK OF INSPECTION DATES. THE REPORTS SHALL NOTE UNCORRECTED DEFICIENCIES, AND NET CHANGES TO THE APPROVED CONSTRUCTION DOCUMENTS AUTHORIZED BY THE ENGINEER OF RECORD.

5.3. THE SPECIAL INSPECTOR SHALL SUBMIT A FINAL SIGNED REPORT WITHIN TEN DAYS OF THE FINAL INSPECTION STATING WHETHER THE WORK REQUIRING A SPECIAL INSPECTION WAS, TO THE BEST OF THE INSPECTOR'S KNOWLEDGE AND BELIEF, IN CONFORMANCE WITH THE APPROVED CONSTRUCTION DOCUMENTS AND THE APPLICABLE WORKMANSHIP PROVISIONS OF THE INTERNATIONAL BUILDING CODE. WORK NOT IN COMPLIANCE SHALL BE NOTED IN THE REPORT.

5.4. SPECIAL INSPECTOR SHALL BE EMPLOYED BY OWNER AND COORDINATED BY THE CONTRACTOR.

LAYOUT NOTES:

1. MONUMENTS DELINEATING PROPERTY LINES OR RIGHT OF WAYS SHALL NOT BE DISTURBED DURING CONSTRUCTION OPERATIONS. IN THE CASE A MONUMENT IS DISTURBED, AT THE CONTRACTOR'S EXPENSE, THE MONUMENT SHALL BE RESET TO ITS ORIGINAL LOCATION AND ELEVATION BY A LICENSED PROFESSIONAL LAND SURVEYOR.

2. ALL DIMENSIONS ON THE FOLLOWING SHEETS TAKE PRECEDENT OVER SCALED DIMENSIONS. EACH DRAWING WITH A BAR SCALE MEANS THAT THE DRAWING/DETAIL HAS BEEN SCALED AS ACCURATELY AS POSSIBLE, AND THE BAR SCALE IS FOR GENERAL REFERENCE ONLY. IF NO BAR SCALE IS PRESENT, THEN THERE IS NO SCALE TO THAT DRAWING/DETAIL. AT NO TIME SHOULD DRAWINGS BE SCALED FROM. ANY DISCREPANCIES BETWEEN DRAWINGS, DETAILS, SPECIFICATIONS AND THE FIELD CONDITION SHALL BE IMMEDIATELY REPORTED TO ACORN FOR FURTHER DIRECTIONS BEFORE ANY ADDITIONAL WORK PROCEEDS.

3. SIGNAGE, STRIPING, AND PAVEMENT MARKINGS SHALL BE IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).

4. ALL TRAFFIC CONTROL SIGNS INDICATED ON THE SITE LAYOUT PLAN ARE TO MEET ALL REQUIREMENTS & CONDITIONS OF THE CITY OF PORTLAND, MAINE DEPARTMENT OF TRANSPORTATION AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION.

5. THE CONTRACTOR SHALL OBTAIN THE SERVICES OF A LICENSED PROFESSIONAL LAND SURVEYOR TO PROVIDE A MINIMUM OF TWO TEMPORARY BENCHMARKS WITHIN THE SITE AND TO LOCATE PROPOSED STRUCTURE CORNERS.

6. CONTRACTOR TO ENSURE THAT ACCESS, INCLUDING BUT NOT LIMITED TO WALKWAYS, DRIVEWAYS, AND MAILBOXES ADJACENT TO THE PROJECT REMAIN FUNCTIONAL AND AVAILABLE FOR USE AT ALL TIMES.

PERMITTING NOTES

1. THIS PROJECT IS SUBJECT TO THE TERMS AND CONDITIONS OF MAJOR SITE PLAN PERMIT FROM THE CITY OF PORTLAND.

2. THE CONTRACTOR SHALL REVIEW THE ABOVE REFERENCED PERMITS PRIOR TO SUBMITTING A BID FOR THIS PROJECT, AND INCLUDE COSTS AS NECESSARY TO COMPLY WITH THE CONDITIONS OF THESE PERMITS.

3. ALL WORK WITHIN THE PUBLIC RIGHT–OF–WAY REQUIRES A STREET OPENING PERMIT FROM THE **CITY OF PORTLAND**. ADDITIONALLY, COORDINATE WITH THE DEPARTMENT OF PUBLIC WORKS.

GRADING AND DRAINAGE NOTES:

1. TOPSOIL STRIPPED FROM THE SITE THAT IS SUITABLE FOR REUSE AS LOAM (MEETS THE REQUIREMENTS WITHIN SECTION 615 OF THE MDOT STANDARD SPECIFICATIONS, MOST RECENT VERSION AND IS FREE OF TRACEABLE AMOUNTS OF CONTAMINANTS) SHALL BE STOCKPILED WITHIN THE PROPOSED LIMIT OF WORK AREA. THE CONTRACTOR SHALL NOT ASSUME THAT ANY STRIPPED TOPSOIL WILL BE ACCEPTABLE FOR REUSE WITH THEIR ESTIMATE.

2. THE CONTRACTOR SHALL ANTICIPATE THAT GROUNDWATER WILL BE ENCOUNTERED DURING CONSTRUCTION AND SHALL INCLUDE SUFFICIENT COSTS WITHIN THEIR BID TO PROVIDE DEWATERING AS NECESSARY; NO SEPARATE PAYMENT SHALL BE MADE TO THE CONTRACTOR FOR DEWATERING. DEWATERING SHALL INCLUDE TREATMENT OF SILT THROUGH THE USE OF A DIRTBAG BY ACF ENVIRONMENTAL OR APPROVED EQUIVALENT. FLOWS FROM DEWATERING ACTIVITIES SHALL NOT BE DISCHARGED INTO SANITARY SEWERS. **SEE BORING LOGS FOR ADDITIONAL INFORMATION.**

3. THE OWNER SHALL BE RESPONSIBLE FOR OBTAINING ANY EASEMENT OR TEMPORARY CONSTRUCTION RIGHTS AS NECESSARY BY PRIVATE ADJACENT LAND OWNERS. THE CONTRACTOR SHALL NOT DISTURB ANY SOIL BEYOND THE PROPERTY LINE WITHOUT NOTIFYING AND OBTAINING SUCH EASEMENT OR TEMPORARY CONSTRUCTION RIGHT FROM THE ADJACENT LAND OWNERS. PRIOR TO THE CONTRACTOR PRICING THE WORK, THEY SHALL PROVIDE ACORN WITH PROOF OF SUCH EASEMENT OR TEMPORARY RIGHTS. SHOULD EASEMENTS OR TEMPORARY RIGHTS NOT BE AVAILABLE, THE CONTRACTOR SHALL INCLUDE COST FOR BRACING AND SHORING AS NECESSARY.

4. THE MINIMUM SLOPE SHALL MEET OR EXCEED 1.0% IN ALL CASES WHERE NOT NOTED ON THE GRADING PLAN. SLOPES IDENTIFIED ON THE GRADING PLAN TAKE PRECEDENT. ALL SLOPES SHALL BE AWAY FROM BUILDINGS AND TOP OF PAVEMENT SHALL BE AT OR BELOW EXISTING FINISH FLOOR ELEVATIONS.

5. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST **GEOTECHNICAL REPORT PREPARED BY THE PROJECT GEOTECHNICAL ENGINEER.**

6. CONTRACTOR TO REVIEW EXISTING SOIL CONDITIONS, TEST PITS, AND BORINGS. THERE WILL BE NO ADDITIONAL PAYMENT FOR UNSUITABLE SOILS.

7. ALL STORM DRAIN PIPE SHALL BE SMOOTH BORE INTERIOR PROVIDING A MANNINGS ROUGHNESS COEFFICIENT OF N=0.012 OR LESS.

8. ADJUST ALL MANHOLES, CATCH BASINS, CURB BOXES, ETC. WITHIN LIMITS OF WORK TO FINISH GRADE.

9. NATIVE SOILS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO LIMIT THE DISTURBANCE TO SUBGRADE SOILS. SHOULD THE SUBGRADE BECOME YIELDING OR DIFFICULT TO WORK, CONTACT ACORN. THE DISTURBED AREAS SHALL BE EXCAVATED AND BACKFILLED WITH COMPACTED SELECT FILL OR CRUSHED STONE AT NO ADDITIONAL EXPENSE TO THE OWNER.

10. ALL SUBGRADE PREPARATION IS SUBJECT TO THE RECOMMENDATIONS OF THE PROJECT **GEOTECHNICAL** ENGINEER, IF APPLICABLE.

EROSION CONTROL NOTES:

1. DISTURBED AREAS ARE DEFINED AS THOSE SURFACES WHERE EXISTING VEGETATION OR STRUCTURES HAVE BEEN REMOVED, EXPOSING NATIVE SOIL TO THE ELEMENTS.

2. ALL ROUTINE WORK ACTIVITIES SHALL BE CONDUCTED IN SUCH A WAY TO LIMIT THE AMOUNT OF DISTURBED AREA AT ONE TIME TO THE EXTENT PRACTICABLE.

3. PRIOR TO THE START OF ANY CLEARING/LAND DISTURBING ACTIVITIES, THE CONTRACTOR SHALL INSTALL APPLICABLE EROSION CONTROL DEVICES SUCH AS PERIMETER SILT FENCE, AND OTHER APPLICABLE MEASURES. IN THE EVENT THE CONTRACTOR IS NOT SURE A EROSION CONTROL MEASURE SHOULD BE IMPLEMENTED, THE CONTRACTOR SHALL CONTACT THE ENGINEER OF RECORD TO CONFIRM IMPLEMENTATION OF ANY EROSION CONTROL DEVICES.

4. ALL GROUND AREAS GRADED FOR CONSTRUCTION SHALL BE GRADED, LOAMED, SEEDED AND MULCH SHALL BE APPLIED AS SOON AS POSSIBLE WITHIN 7 DAYS FOLLOWING THE COMPLETION OF ANY SOIL DISTURBANCE, AND PRIOR TO ANY STORM EVENT.

5. EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE INSTALLED TO THE SATISFACTION OF THE CITY. THE CONTRACTOR SHALL REFERENCE THE APPROVED EROSION AND SEDIMENTATION CONTROL REPORT FOR TEMPORARY AND PERMANENT EROSION AND SEDIMENTATION CONTROL DEVICES IN ADDITION TO THE PLAN SET. THE CONTRACTOR SHALL ALSO REFER TO THE MAINE D.E.P.'S PERMIT CONDITIONS, FINDINGS OF FACT AND ORDER (IF ANY), AND THE CURRENT MAINE EROSION AND SEDIMENT CONTROL BMP MANUAL FOR ADDITIONAL INFORMATION.

6. PRIOR TO PAVING, THE CONTRACTOR SHALL REMOVE ALL SEDIMENT FROM STORM DRAINS, CATCH BASINS, AND APPURTENANCES.

7. REFER TO THE EROSION CONTROL DETAILS & NOTES FOR ADDITIONAL INFORMATION.

UTILITY NOTES:

1. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND ELEVATION OF THE EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED UPON RECORDS OF VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THIS INFORMATION IS NOT TO BE RELIED UPON AS BEING EXACT OR COMPLETE. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO TEST PIT TO DETERMINE THE EXACT LOCATION AND ELEVATION OF UTILITIES TO COORDINATE WITH THE PROPOSED CONNECTIONS OR CROSSING. ANY DISCREPANCIES SHALL BE IMMEDIATELY REPORTED TO ACORN FOR FURTHER DIRECTIONS BEFORE ANY ADDITIONAL WORK PROCEEDS.

2. **CONTRACTOR TO BYPASS EXISTING SEWER FLOW CONTROL AT CONNECTION TO EXISTING SYSTEM AT NO ADDITIONAL COST.**

3. CONTRACTOR SHALL, AT NO ADDITIONAL COST TO THE OWNER, CONDUCT EXPLORATORY EXCAVATIONS AT LOCATIONS WHERE PROPOSED EXCAVATION WILL INTERSECT WITH EXISTING UTILITIES, PRIOR TO THE ORDERING OF STRUCTURES.

4. ALL NEW SANITARY MANHOLES SHALL BE VACUUM TESTED AND SHOWN TO PASS PRIOR TO BACKFILLING. TESTING SHALL BE COMPLETED IN ACCORDANCE WITH TECHNICAL REPORT #16 (TR–16): GUIDES FOR THE DESIGN OF WASTEWATER TREATMENT WORKS, PREPARED BY THE NEW ENGLAND INTERSTATE WATER POLLUTION CONTROL COMMISSION.

5. SEWER MANHOLES SHALL BE 4' ID UNLESS OTHERWISE STATED ON THE PLANS.

6. CONTRACTOR TO PROVIDE 5.5' OF COVER FROM TOP OF PIPE TO FINISH GRADE FOR WATER MAINS.

7. THRUST BLOCKS SHALL BE USED FOR THRUST RESTRAINT ON WATER MAINS. DETAIL AND LIMITS FOR THRUST BLOCKS ARE SHOWN WITHIN THE PLAN SET.

8. WATER INFRASTRUCTURE SHALL BE TESTED IN ACCORDANCE WITH THE PORTLAND WATER DISTRICT DOCUMENT ''WATER AND SEWER CONSTRUCTION SPECIFICATIONS AND PROCEDURE'', MOST RECENT REVISION.

9. ALL REQUIRED FITTINGS FOR THE WATER MAIN ARE NOT SHOWN ON DRAWINGS. CONTRACTOR SHALL FURNISH AND INSTALL ALL NECESSARY FITTINGS REQUIRED TO CONSTRUCT THE WATER MAIN IN ACCORDANCE WITH **CITY OF PORTLAND**, STATE OF MAINE, AND AMERICAN WATER WORKS ASSOCIATION STANDARDS AND REGULATIONS.

10. CONTRACTOR SHALL COORDINATE WORK REGARDING ANY WATER MAIN CONNECTION AND WATER MAIN SHUTDOWN WITH THE PORTLAND WATER DISTRICT AT LEAST SEVEN (7) DAYS PRIOR TO CONSTRUCTION.

11. ALL WATER PIPE INSTALLATION SHALL CONFORM WITH THE **PORTLAND WATER DISTRICT** SPECIFICATIONS AND PROCEDURES, MOST RECENT EDITION.

12. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.

13. SEWER, GAS, TELEPHONE, ELECTRICITY, CABLE, WATER AND ANY OTHER UTILITY CONNECTIONS SHALL BE REVIEWED BY PLUMBING, ELECTRICAL, AND MECHANICAL DESIGNER FOR CONSISTENCY WITH THEIR PLANS PRIOR TO CONSTRUCTION.

14. COORDINATE EXIT POINT FOR SECONDARY UTILITY SERVICES WITH THE ARCHITECT/ELECTRICAL ENGINEER. SECONDARY LINE LOCATIONS NOT PROVIDED BY ACORN WITHIN THE UTILITY PLAN.

15. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN ALL THE NECESSARY PERMITS FOR THE INSTALLATION OF THE UTILITIES AND STORMDRAINS WITHIN THE PUBLIC RIGHT OF WAY. THE CONTRACTOR SHALL SUBMIT A MAINTENANCE OF TRAFFIC PLAN TO THE CITY IN ACCORDANCE WITH **THE CITY OF PORTLAND TECHNICAL MANUAL** PRIOR TO ANY WORK.

16. THE CONTRACTOR SHALL PROVIDE AND INSTALL ALL BOXES, FITTINGS, CONNECTORS, COVER PLATES AND OTHER MISCELLANEOUS ITEMS NOT NECESSARILY DETAILED ON THE DRAWINGS TO RENDER INSTALLATION OF UTILITIES COMPLETE AND OPERATIONAL AT NO EXTRA EXPENSE TO THE OWNER.

17. ALL UTILITY PIPES SHALL SLOPE UNIFORMLY BETWEEN ELEVATIONS INDICATED ON THE DRAWINGS. NO CRESTS OR SAGS IN THE PIPING WILL BE PERMITTED. ALL HORIZONTAL AND VERTICAL BENDS IN PRESSURIZED PIPE LINES SHALL BE SUITABLY RESTRAINED WITH THRUST BLOCKS OR RETAINER GLANDS. RETAINER GLANDS ALLOWED FOR DUCTILE IRON PIPE ONLY. PROVIDE ALL BENDS, HORIZONTAL AND VERTICAL, AS REQUIRED TO MEET THE GRADES AND ALIGNMENTS INDICATED ON THE DRAWINGS.

18. ALL WASTEWATER PIPING, EXCLUDING BUILDING DRAINS, AND ALL PRESSURIZED PIPING, TO INCLUDE WATER MAINS, INSTALLED BENEATH STRUCTURES SHALL BE ENCASED IN CONCRETE.

19. WHERE NEW PIPING IS TO BE CONNECTED TO EXISTING PIPING, THE CONTRACTOR SHALL FURNISH AND INSTALL ALL ADAPTERS, FITTINGS AND ADDITIONAL PIPE AS REQUIRED TO ENSURE A COMPLETE AND PROPERLY FUNCTIONING CONNECTION. CONTRACTOR TO VERIFY LOCATION, ELEVATION, ORIENTATION AND MATERIAL OF CONSTRUCTION. ADAPTERS AND FITTINGS ARE INCIDENTAL TO THE PIPE INSTALLATION.

20. WHENEVER POSSIBLE, WATER LINES SHOULD BE INSTALLED OVER WASTEWATER LINES. A MINIMUM SEPARATION OF 18 INCHES BETWEEN THE BOTTOM OF THE WATER LINE AND THE TOP OF THE WASTEWATER LINE SHALL BE MAINTAINED WHERE POSSIBLE. WHERE A WATER LINE CROSSES UNDER THE WASTEWATER LINE, A FULL LENGTH OF WASTEWATER PIPE SHALL BE CENTERED ABOVE THE WATER LINE SO THAT BOTH JOINTS WILL BE AS FAR FROM THE WATER LINE AS POSSIBLE,

21. THE CONTRACTOR SHALL BE ANTICIPATE THAT THE NATIVE SILT AND CLAY SOILS WILL NOT BE SUITABLE FOR PIPE TRENCH BACKFILL IN PAVED AREAS.

22. GROUNDWATER SHALL BE CONTROLLED TO A LEVEL OF AT LEAST ONE FOOT BELOW SUBGRADE OF THE PIPE OR STRUCTURE. THE CONTRACTOR SHALL MAINTAIN THE LOWERED GROUNDWATER LEVEL UNTIL CONSTRUCTION HAS BEEN COMPLETED TO SUCH AN EXTENT THAT THE STRUCTURES OR PIPES WILL NOT BE FLOATED OR OTHERWISE DAMAGED.

23. EXCAVATION TO SUBRADE IN NATIVE SILT AND CLAY SHALL BE COMPLETED WITH A SMOOTH EDGE BUCKET TO MINIMIZE SUBGRADE DISTURBANCE.

24. ALL ADJUSTMENTS TO FINISHED GRADE ARE TO BE COMPLETED BY THE CONTRACTOR. THE CONTRACTOR SHALL CONFIRM STRUCTURES THAT REQUIRE ADJUSTMENT WITH THE ENGINEER OR OWNERS REPRESENTATIVE PRIOR TO ADJUSTING FRAMES.

DEMOLITION NOTES:

1. THE FOLLOWING ITEMS ARE TYPICAL OF MATERIAL WHICH MAY BE ON SITE:
   - ROCK AND CONCRETE FOUNDATIONS
   - CONCRETE SLABS
   - BITUMINOUS ASPHALT PAVEMENT
   - CONCRETE PADS AND BLOCKS
   - FENCE POST AND FENCING
   - UNDERGROUND UTILITY LINES
   - ABOVE AND OR BELOW FUEL OIL AND PROPANE GAS TANKS
   - STORM DRAIN PIPES AND APPURTENANCE STRUCTURES
   - OTHER TRASH & MISCELLANEOUS SOLID WASTES

2. THE CONTRACTOR IS ADVISED TO VISIT THE SITE TO CONFIRM DEMOLITION ITEMS SINCE THE LIST IS NOT INCLUSIVE OF THE SITE CONDITIONS WHICH MAY BE ENCOUNTERED

3. ALL DISPOSAL OF DEMOLITION DEBRIS OR WASTE SHALL BE IN ACCORDANCE WITH ALL LOCAL, STATE, & FEDERAL REGULATIONS. CONTRACTORS SHALL PROVIDE OWNER WITH APPROPRIATE "BILLS OF LADING" DEMONSTRATING PROPER DISPOSAL OF ALL MATERIALS.

4. **THE CLIENT HAS NOT REQUESTED NOR HAS ACORN COMPLETED A PHASE I – ENVIRONMENTAL SITE ASSESSMENT FOR THE PROPERTY.**

PERMIT LEVEL
NOT ISSUED FOR
CONSTRUCTION

ISSUED FOR	BY	DATE
JOINT MAJOR SITE PLAN APPLICATION	SJL	4/10/24
COMMENT RESPONSE	SJL	5/30/24

DRAWING NAME: **GENERAL NOTES**

PROJECT NAME: **PHASED OXFORD STREET REDEVELOPMENT**

CLIENT: AVESTA HOUSING & REVELER DEVELOPMENT
307 CUMBERLAND AVE, PORTLAND, ME 04101
188 STATE STREET, 3RD FLOOR, PORTLAND, ME 04101

ACORN ENGINEERING, INC.

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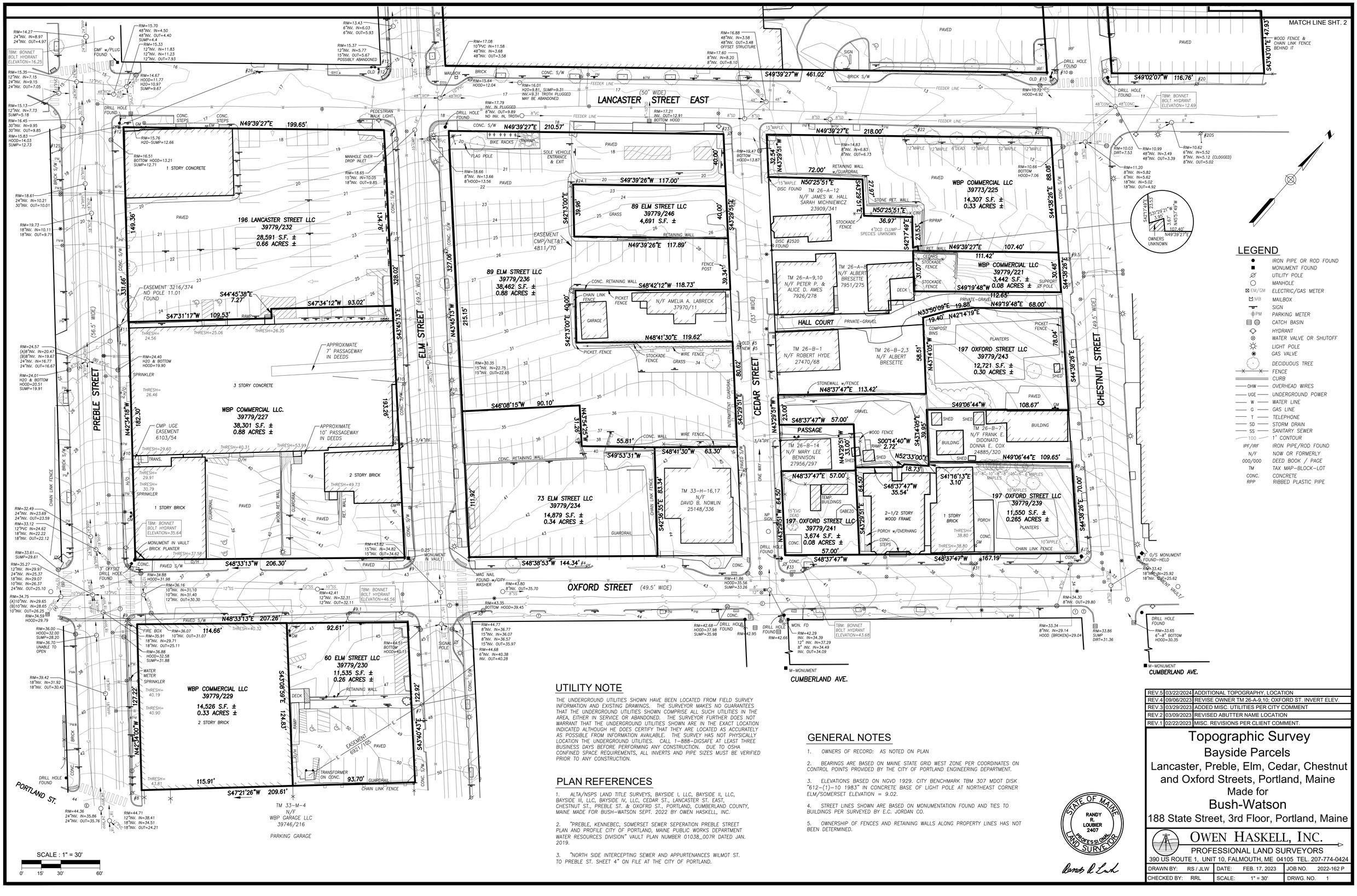
ALL CAD DATA SHALL BE ADDITIVE ONLY. ACORN SHALL NOT BE RESPONSIBLE FOR ANY ALTERATIONS TO THE CAD DATA FROM THE ORIGINAL DRAWINGS PREPARED BY ACORN ENGINEERING, INC. OR OTHERWISE. SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO ACORN ENGINEERING, INC.

ACORN ENGINEERING, INC.
FREEPORT, MAINE 04104
PO BOX 3435
(207) 775–2655

FILE:	1212_AE_CIVIL
JN:	1212.1
SCALE:	AS NOTED
DESIGNED BY:	SJL
DRAWN BY:	DNM
CHECKED BY:	SJL

STATE OF MAINE
SAMUEL J. LEBEL
No. 16505
LICENSED PROFESSIONAL ENGINEER
5/30/24

DRAWING NO.
C-02



LEGEND

- IRON PIPE OR ROD FOUND
- MONUMENT FOUND
- UTILITY POLE
- MANHOLE
- EM/GM ELECTRIC/GAS METER
- MB MAILBOX
- SIGN
- PM PARKING METER
- CATCH BASIN
- HYDRANT
- WATER VALVE OR SHUTOFF
- LIGHT POLE
- GAS VALVE
- DECIDUOUS TREE
- FENCE
- CURB
- OHW OVERHEAD WIRES
- UGE UNDERGROUND POWER
- W WATER LINE
- G GAS LINE
- T TELEPHONE
- SD STORM DRAIN
- SS SANITARY SEWER
- 100 1' CONTOUR
- IPF/IRF IRON PIPE/ROD FOUND
- N/F NOW OR FORMERLY
- 000/000 DEED BOOK / PAGE
- TM TAX MAP–BLOCK–LOT
- CONC. CONCRETE
- RPP RIBBED PLASTIC PIPE

UTILITY NOTE

THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING DRAWINGS. THE SURVEYOR MAKES NO GUARANTEES THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH HE DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. THE SURVEY HAS NOT PHYSICALLY LOCATION THE UNDERGROUND UTILITIES. CALL 1–888–DIGSAFE AT LEAST THREE BUSINESS DAYS BEFORE PERFORMING ANY CONSTRUCTION. DUE TO OSHA CONFINED SPACE REQUIREMENTS, ALL INVERTS AND PIPE SIZES MUST BE VERIFIED PRIOR TO ANY CONSTRUCTION.

PLAN REFERENCES

1. *ALTA/NSPS LAND TITLE SURVEYS, BAYSIDE I, LLC, BAYSIDE II, LLC, BAYSIDE III, LLC, BAYSIDE IV, LLC, CEDAR ST., LANCASTER ST. EAST, CHESTNUT ST., PREBLE ST. & OXOFRD ST., PORTLAND, CUMBERLAND COUNTY, MAINE MADE FOR BUSH–WATSON SEPT. 2022 BY OWEN HASKELL, INC.*
2. *"PREBLE, KENNEBEC, SOMERSET SEWER SEPERATION PREBLE STREET PLAN AND PROFILE CITY OF PORTLAND, MAINE PUBLIC WORKS DEPARTMENT WATER RESOURCES DIVISION" VAULT PLAN NUMBER 01038_007R DATED JAN. 2019.*
3. *"NORTH SIDE INTERCEPTING SEWER AND APPURTENANCES WILMOT ST. TO PREBLE ST. SHEET 4" ON FILE AT THE CITY OF PORTLAND.*

GENERAL NOTES

1. *OWNERS OF RECORD: AS NOTED ON PLAN*
2. *BEARINGS ARE BASED ON MAINE STATE GRID WEST ZONE PER COORDINATES ON CONTROL POINTS PROVIDED BY THE CITY OF PORTLAND ENGINEERING DEPARTMENT.*
3. *ELEVATIONS BASED ON NGVD 1929. CITY BENCHMARK TBM 307 MDOT DISK "612–(1)–10 1983" IN CONCRETE BASE OF LIGHT POLE AT NORTHEAST CORNER ELM/SOMERSET ELEVATION = 9.02.*
4. *STREET LINES SHOWN ARE BASED ON MONUMENTATION FOUND AND TIES TO BUILDINGS PER SURVEYED BY E.C. JORDAN CO.*
5. *OWNERSHIP OF FENCES AND RETAINING WALLS ALONG PROPERTY LINES HAS NOT BEEN DETERMINED.*

STATE OF MAINE
RANDY R. LOUBIER
2407
PROFESSIONAL LAND SURVEYOR

REV.5	03/22/2024	ADDITIONAL TOPOGRAPHY, LOCATION
REV.4	09/06/2023	REVISE OWNER TM 26-A-9,10; OXFORD ST. INVERT ELEV.
REV.3	03/29/2023	ADDED MISC. UTILITIES PER CITY COMMENT
REV.2	03/09/2023	REVISED ABUTTER NAME LOCATION
REV.1	02/22/2023	MISC. REVISIONS PER CLIENT COMMENT.

Topographic Survey
Bayside Parcels
Lancaster, Preble, Elm, Cedar, Chestnut and Oxford Streets, Portland, Maine
Made for
Bush-Watson
188 State Street, 3rd Floor, Portland, Maine

OWEN HASKELL, INC.
PROFESSIONAL LAND SURVEYORS
390 US ROUTE 1, UNIT 10, FALMOUTH, ME 04105 TEL. 207-774-0424

DRAWN BY:	RS / JLW	DATE: FEB. 17, 2023	JOB NO. 2022-162 P
CHECKED BY:	RRL	SCALE: 1" = 30'	DRWG. NO. 1

LEGEND:

- PROPERTY LINE
- EROSION CONTROL BARRIER
- CONSTRUCTION FENCE
- EX. BUILDING TO BE REMOVED
- EX. PAVEMENT TO BE REMOVED
- EX. SIDEWALK TO BE REMOVED/REPLACED
- TRENCHING EXTENT

GENERAL NOTES:

1. EXISTING ASPHALT TO BE REMOVED SHALL BE STRIPPED AND PROPERLY DISPOSED OF OFFSITE.
2. ALL DISPOSAL OF DEMOLITION DEBRIS OR WASTE SHALL BE IN ACCORDANCE WITH ALL LOCAL, STATE, & FEDERAL REGULATIONS. CONTRACTOR SHALL PROVIDE OWNER WITH APPROPRIATE "BILLS OF LADING" TO DEMONSTRATE PROPER DISPOSAL OF ALL MATERIALS.
3. SITE DEMOLITION SHALL NOT OCCUR UNTIL PROPER ABATEMENT PROCEDURES HAVE OCCURRED. ABATEMENT, IF NECESSARY, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
4. THE CONTRACTOR SHALL CALL THE APPROPRIATE UTILITY COMPANIES AND DIG SAFE AT LEAST 72 HOURS PRIOR TO EXCAVATION TO REQUEST EXACT FIELD LOCATION FOR UTILITIES. OTHERWISE IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE LOCATION OF UNDERGROUND UTILITIES AND LOCATE POTENTIAL CONFLICT WITH THE APPROVED PLANS PRIOR TO CONSTRUCTION.
5. ALL CONSTRUCTION SIGNAGE IS TEMPORARY AND WILL BE REMOVED AT PROJECT COMPLETION. FINAL SIGNAGE WORDING AND PLACEMENT LOCATION TO BE ACCEPTED BY THE CITY.
6. SEDIMENT BARRIERS TO BE PLACED DIRECTLY ON THE FRONT AND SIDE PROPERTY LINES, DOWN GRADIENT OF THE PROPOSED PROJECT WORK PER DETAIL; FENCES ARE OFFSET OF THE PROPERTY LINES AS SHOWN ON THE PLAN FOR CLARITY PURPOSES AND DO NOT NECESSARILY DEPICT THE PHYSICAL LOCATION.
7. CONTRACTOR SHALL PLACE CATCH BASIN INLET PROTECTION ON CATCH BASINS AND FIELD INLETS DOWN-GRADIENT OF ALL NON-STABILIZED SURFACES, PER DETAIL.
8. DEMOLITION PLAN IS NOT INCLUSIVE OF ALL EXISTING ITEMS TO BE REMOVED AS PART OF SITE CONSTRUCTION INCLUDING BUT NOT LIMITED TO LANDSCAPING, UTILITIES, WORK WITHIN THE ROW, ETC. ALL DEMOLITION WORK SHALL BE IN ACCORDANCE WITH THE CITY OF PORTLAND REGULATIONS.
9. CONTRACTOR TO BE RESPONSIBLE FOR PROVIDING OFF-SITE PARKING TO EMPLOYEES; ON-SITE PARKING WILL NOT BE PROVIDED OR GUARANTEED. CONTRACTOR TO BE RESPONSIBLE FOR OBTAINING THE APPROPRIATE PERMITS FROM THE CITY FOR CLOSING ANY ON-STREET PARKING SPACES DURING THE CONSTRUCTION PERIOD.
10. CONTRACTOR SHALL BE RESPONSIBLE FOR SNOW REMOVAL ALONG CONSTRUCTION FENCE AND GATE.
11. CONTRACTOR TO SUBMIT A DEWATERING PLAN FOR REVIEW AND APPROVAL TO THE DEPARTMENT OF PUBLIC WORKS PRIOR TO THE PRE-CONSTRUCTION MEETING, DURING THE BUILDING PERMIT APPLICATION PROCESS, OR PRIOR TO ADVANCED SITE WORK. CONTACT THE DEPARTMENT OF PUBLIC WORKS FOR ADDITIONAL INFORMATION AND CURRENT REGULATIONS.
12. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PERFORM THE FOLLOWING:
    - 12.1. REQUEST AND REVIEW RELEVANT DOCUMENTS THAT SUMMARIZE FINDINGS FROM INITIAL ENVIRONMENTAL DUE DILIGENCE ACTIVITIES COMPLETED AT THE SITE PERFORMED BY TRC COMPANIES INC.
    - 12.2. DETERMINE WHAT, IF ANY, RECOGNIZED ENVIRONMENTAL CONDITIONS (RECs) IDENTIFIED SUBSEQUENT TO ENVIRONMENTAL DUE DILIGENCE ACTIVITIES MAY AFFECT THE CONTRACTOR'S WORK.
    - 12.3. DETERMINE IF THE SITE IS/HAS BEEN IDENTIFIED AS A STATE &/OR FEDERAL HAZARDOUS SUBSTANCE SITE, OR SIMILARLY REGULATED SITE. IF SO, IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COMMUNICATE AND COORDINATE WITH AN ENVIRONMENTAL PROFESSIONAL (EP) TO UNDERSTAND WHAT CONTAMINANTS &/OR HAZARDS HAVE BEEN IDENTIFIED FOR THE SITE AND HOW THEIR RESPECTIVE IMPACTS MAY AFFECT THE CONTRACTOR'S WORK. THE EP SHALL BE EMPLOYED BY THE CLIENT. SHOULD THE CLIENT REQUIRE ACORN'S EP SERVICES IT SHALL BE REQUESTED IN WRITING.
    - 12.4. COMMUNICATE AND COORDINATE WITH AN EP TO REQUEST, REVIEW AND ADHERE TO RELEVANT DOCUMENTS PREPARED FOR THE SITE DESCRIBING BEST MANAGEMENT PRACTICES FOR IMPACTED OR POTENTIALLY IMPACTED MEDIA THAT MAY BE ENCOUNTERED AS PART OF THE CONTRACTOR'S WORK INCLUDING BUT NOT LIMITED TO THE SOIL MANAGEMENT PLAN & EMMP.
    - 12.5. ENSURE THE APPROPRIATE STATE &/OR FEDERAL REGULATORY AGENCY(IES) HAVE BEEN NOTIFIED OF THE CONTRACTOR'S PLANNED WORK ACTIVITIES.

78 CHESTNUT STREET

CEDAR ST. ONE-WAY

TM 26-B-14
N/F MARY LEE BENNISON
27956/297

TM 26-B-7
N/F FRANK E. DIDONATO
DONNA E. COX
24885/320

CHESTNUT ST. TWO-WAY

OXFORD ST. ONE-WAY

CONTRACTOR TO ENSURE EX. BUILDINGS ON ABUTTING PROPERTIES REMAIN PROTECTED AND UNDISTURBED DURING CONSTRUCTION. TYP. OF ALL EX. STRUCTURES ABUTTING THE PROPERTY.

BASED ON PWD RECORDS, THERE IS AN EX. SANITARY SEWER LINE THAT RUNS THROUGH THE REAR YARD OF THIS PROPERTY SERVICING THE EX. BUILDING TO BE DEMOLISHED. CONTRACTOR TO FIELD VERIFY EX. UTILITY AND COORDINATE ABANDONMENT AND PLUGGING IN COORDINATION WITH DPW.

EXISTING RETAINING WALL TO BE REMOVED AND REBUILT. CONTRACTOR AND OWNER TO COORDINATE WITH ABUTTER ON RETAINING WALL REPLACEMENT. SEE SHEET C-11 AND C-31 FOR PROPOSED SITE MODIFICATIONS.

APPROX. LOCATION OF EX. SEWER LATERALS

EX. FENCE AND SHRUBS TO BE REMOVED. SEE C-11 FOR PR. SITE IMPROVEMENTS

APPROX. EXTENT OF SIDEWALK AND CURBING TO BE TEMPORARILY REMOVED AND REPLACED, SEE SHEET C-11 FOR MORE INFORMATION.

APPROX. LOCATION OF EXISTING SEWER AND UNDERGROUND UTILITY LINES TO BE REMOVED AS PART OF DEMOLITION OF EX. BUILDINGS.

REMOVE LANDSCAPING WITHIN SUBJECT PARCEL AND COORDINATE WITH OWNER ON REMAINING PERMANENT LANDSCAPE ELEMENTS AT 78 CHESTNUT STREET

ALL EX. TREES ONSITE TO BE REMOVED.

EXISTING GRANITE CURB TO BE REMOVED AND REBUILT. SEE SITE PLAN FOR MORE INFORMATION ON PROPOSED CURB CUT.

EX. 4" CAST IRON WATER MAIN (1886)

PROPERTY LINE.

EXISTING BUILDINGS TO BE DEMOLISHED

COORDINATE WITH OWNER ON DEMOLITION OF EX. SHEDS.

INSTALL STABILIZED CONSTRUCTION ENTRANCE (PER DETAIL) DURING INITAL EARTHWORK. MAINTAIN UNTIL SITE STABILIZED AND REFRESH STONE AS NECESSARY.

TEMP. CONSTRUCTION FENCE WITH GATED ACCESS. FENCE TO BE PLACED ALONG PROPERTY LINE WHERE FEASIBLE. FENCE PLACEMENT IS OFFSET FROM PROPERTY LINE FOR VISUAL PURPOSES.

TEMPORARY EROSION CONTROL BARRIER, PER DETAIL ON SHEET C-46, ALONG PROPERTY LINE AND DOWN GRADIENT OF ANY SOIL DISTURBANCE, TYP. DURING CONSTRUCTION. FILTER SOCK TO BE UTILIZED AT CONSTRUCTION ENTRANCES.

SIDEWALK ABUTTING PROPERTY TO REMAIN OPEN TO THE GREATEST EXTENT POSSIBLE. SHOULD SIDEWALK CLOSURE BE NECESSARY TO CONSTRUCT PORTIONS OF THE BUILDING, CONTRACTOR TO COORDINATE WITH DPW ON TIMING, SIGNAGE, AND PEDESTRIAN DETOUR AND PROVIDE TRAFFIC AND PEDESTRIAN CONTROL PLAN TO DPW PRIOR TO ISSUANCE OF BUILDING PERMIT.

EX. CONCRETE PAD TO BE REMOVED.

EX. CONCRETE PAD TO BE REMOVED.

EX. STOP SIGN, "NO RIGHT TURN", "NO PARKING ANYTIME", AND "NO PARKING 2ND & 4TH WEDNESDAY" SIGN TO REMAIN OR BE RESET IN PLACE AFTER NEW SIDEWALK IS INSTALLED. TYP., OF ALL EX. SIGNS

EX. UTILITY POLE TO REMAIN

EX. 2" PLASTIC GAS MAIN (2020)

EX. BUILDING STEPS WITHIN ROW TO BE REMOVED.

EX. STREET TREE TO BE REMOVED AS PART OF CONSTRUCTION

EX. FIRE HYDRANT TO REMAIN

RETIRE EX. GAS SERVICE TO BUILDING IN COORDINATION WITH UNITIL.

EX. UT POLE #31 TO REMAIN

EX. OVERHEAD SINGLE PHASE LINE TO REMAIN.

EX. STOP SIGN & ONE WAY SIGN TO REMAIN

INSTALL CATCH BASIN INLET PROTECTION PER DETAIL, TYP. OF ALL STRUCTURES DOWN GRADIENT OF CONSTRUCTION.

APPROX. LOCATION OF EX. WATER SERVICE TO BE LOCATED, SHUT CORPORATION, REMOVE SERVICE BOX AND ROD, AND CUT SERVICE AT MAIN IN COORDINATION WITH PWD. TYP. OF APPROX. 3 EX. WATER SERVICES.

EX. ON-STREET SIGNAGE TO BE TEMPORARILY REMOVED AND REPLACED AS PART OF CONSTRUCTION AND IN COORDINATION WITH DPW. SEE C-10 FOR PROPOSED RELOCATED SIGNAGE LOCATIONS. TYP. OF ALL EX. SIGNAGE

EX. "1HR PARKING 9AM-5PM & PHS ZONE", SIGN TO REMAIN.

26.65'

31.78'

EX. 12" CAST IRON WATER MAIN (1886)

EX. 2" PLASTIC GAS MAIN (2020)

10 0 10 20

SCALE: 1"=10'

PERMIT LEVEL
NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY DATE
JOINT MAJOR SITE PLAN APPLICATION	SJL 4/11/24
COMMENT RESPONSE	SJL 7/30/24
COMMENT RESPONSE 2	SJL 12/23/24

DRAWING NAME: PHASE 1 – CONSTRUCTION MANAGEMENT PLAN

PROJECT NAME: PHASE 1 – PHASED OXFORD STREET REDEVELOPMENT

CLIENT: AVESTA HOUSING
307 CUMBERLAND AVE, PORTLAND, ME 04101

ACORN ENGINEERING, INC.
ACORN ENGINEERING, INC.
PO BOX 3372, PORTLAND MAINE 04104
(207) 775-2655

THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM ACORN ENGINEERING, INC. ANY ALTERATIONS AUTHORIZED WITHOUT LIABILITY TO ACORN ENGINEERING, INC. SOLE RISK AND

FILE:	1212.1_AE_CIVIL_PH1 BASE
JN:	1212.1
SCALE:	AS NOTED
DESIGNED BY:	SJL
DRAWN BY:	DNM
CHECKED BY:	SJL

STATE OF MAINE
SAMUEL J. LEBEL
No. 16505
REGISTERED PROFESSIONAL ENGINEER
12/23/24

DRAWING NO.
C-03

LEGEND:

- PROPERTY LINE
- EROSION CONTROL BARRIER
- CONSTRUCTION FENCE
- EX. PAVEMENT TO BE REMOVED
- EX. SIDEWALK TO BE REMOVED/REPLACED
- TRENCHING EXTENT

LANCASTER STREET
TWO–WAY

ELM STREET
ONE–WAY

CEDAR STREET

HALL COURT

EX. 48" COMBINED SEWER MAIN

EX. 12" WATER MAIN TO BE REPLACED AS PART OF THE LANCASTER STREET WATER MAIN REPLACEMENT PROJECT PHASE 1B. SEE GENERAL NOTE 13 FOR MORE INFORMATION.

EX. 15" PVC SDR 35 MS4 STORMDRAIN. EXTENDED AS PART OF THE LANCASTER STREET MS4 EXTENSION. SEE GENERAL NOTE 13 FOR MORE INFORMATION.

EX. CURB CUT TO BE REMOVED. SEE C–12 & C–32 FOR PR. SITE IMPROVEMENTS.

POTENTIAL LOCATION OF STABILIZED CONSTRUCTION ENTRANCE (PER DETAIL) DURING INITAL EARTHWORK. MAINTAIN UNTIL SITE STABILIZED AND REFRESH STONE AS NECESSARY. TYP. OF 2 LOCATIONS.

EX. CURB CUT TO BE REMOVED. SEE C–11 FOR PR. SITE IMPROVEMENTS.

EX. HYDRANT REPLACED AS PART OF THE LANCASTER STREET WATER MAIN REPLACEMENT PROJECT. SEE GENERAL NOTE 13 FOR MORE INFORMATION.

SIDEWALK ABUTTING PROPERTY TO REMAIN OPEN TO THE GREATEST EXTENT POSSIBLE. SHOULD SIDEWALK CLOSURE BE NECESSARY TO CONSTRUCTION OF POTIONS OF THE BUILDING, CONTRACTOR TO COORDINATE WITH DPW ON TIMING, SIGNAGE, AND PEDESTRIAN DETOUR AND PROVIDE TRAFFIC AND PEDESTRIAN CONTROL PLAN TO DPW PRIOR TO ISSUANCE OF BUILDING PERMIT.

EX. PULL BOX AND UNDERGROUND TELECOM LINES TO REMAIN AND BE PROTECTED DURING CONSTRUCTION.

EX. PAVEMENT, PARKING, AND SIGNAGE TO BE REMOVED.

EX. DRIVE AISLE TO REMAIN. PROTECT EX. CONCRETE AND PAVEMENT TO THE GREATEST EXTENT FEASIBLE DURING CONSTRUCTION. CONTRACTOR TO COORDINATE WITH 89 ELM STREET OWNER TO ENSURE TEMPORARY DRIVEWAY CLOSURES WILL NOTE IMPEDE ON TRASH REMOVAL

TEMP. CONSTRUCTION FENCE WITH GATED ACCESS. FENCE TO BE PLACED ALONG PROPERTY LINE WHERE FEASIBLE. FENCE PLACEMENT IN PLANS ARE OFFSET FOR VISUAL PURPOSES.

TEMPORARY EROSION CONTROL BARRIER ALONG PROPERTY LINE AND DOWN GRADIENT OF ANY SOIL DISTURBANCE, TYP. DURING CONSTRUCTION. FILTER SOCK TO BE UTILIZED AT CONSTRUCTION ENTRANCES.

EX. DUMPSTERS TO REMAIN AND BE PROTECTED DURING CONSTRUCTION

STATUS OF EX. UTILITY POLE TO BE COORDINATED FURTHER WITH CMP AND RESPECTIVE UTILITY COMPANIES.

EX. RETAINING WALLS TO REMAIN AND BE PROTECTED DURING CONSTRUCTION. SEE C–12 FOR MORE INFORMATION

EX. 4" CAST WATER MAIN (1886)

EX. CURB CUT TO BE REMOVED. SEE C–12 FOR PR. SITE IMPROVEMENTS.

PROPERTY LINE, TYP.

EX. TRANSFORMER TO REMAIN AND BE PROTECTED DURING CONSTRUCTION. EX. UTILITIES AS PART OF THE WEST BAYSIDE MASTER DEVELOPMENT PLAN, PHASE 1A – 89 ELM STREET REDEVELOPMENT, UNDER CONSTRUCTION AS OF DECEMBER 2024.

EX. 2" PLASTIC GAS MAIN (2020)

EX. CURB TO BE REMOVED. SEE SITE PLAN C–12 FOR MORE INFORMATION.

EX. 38Y MANHOLE AND UNDERGROUND CONDUITS TO REMAIN AND BE PROTECTED DURING CONSTRUCTION.

EX. PAVEMENT TO BE REMOVED, SEE SHEET C–12 FOR THE PR. SITE IMPROVEMENTS.

89 ELM STREET LLC
39779/236

TM 26–A–12
N/F JAMES W. HALL
SARAH MICHNIEWICZ
23909/341

TM 26–A–8
N/F ALBERT
BRESETTE
7951/275

TM 26–A–9,10
N/F PETER P. & ALICE
D. AMES
7926/278

N/F AMELIA A. LABRECK
37970/11

GENERAL NOTES:

1. EXISTING ASPHALT TO BE REMOVED SHALL BE STRIPPED AND PROPERLY DISPOSED OF OFFSITE.
2. ALL DISPOSAL OF DEMOLITION DEBRIS OR WASTE SHALL BE IN ACCORDANCE WITH ALL LOCAL, STATE, & FEDERAL REGULATIONS. CONTRACTOR SHALL PROVIDE OWNER WITH APPROPRIATE "BILLS OF LADING" TO DEMONSTRATE PROPER DISPOSAL OF ALL MATERIALS.
3. SITE DEMOLITION SHALL NOT OCCUR UNTIL PROPER ABATEMENT PROCEDURES HAVE OCCURRED. ABATEMENT, IF NECESSARY, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
4. THE CONTRACTOR SHALL CALL THE APPROPRIATE UTILITY COMPANIES AND DIG SAFE AT LEAST 72 HOURS PRIOR TO EXCAVATION TO REQUEST EXACT FIELD LOCATION FOR UTILITIES. OTHERWISE IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE LOCATION OF UNDERGROUND UTILITIES AND LOCATE POTENTIAL CONFLICT WITH THE APPROVED PLANS PRIOR TO CONSTRUCTION.
5. ALL CONSTRUCTION SIGNAGE IS TEMPORARY AND WILL BE REMOVED AT PROJECT COMPLETION. FINAL SIGNAGE WORDING AND PLACEMENT LOCATION TO BE ACCEPTED BY THE CITY.
6. SEDIMENT BARRIERS TO BE PLACED DIRECTLY ON THE FRONT AND SIDE PROPERTY LINES, DOWN GRADIENT OF THE PROPOSED PROJECT WORK PER DETAIL; FENCES ARE OFFSET OF THE PROPERTY LINES AS SHOWN ON THE PLAN FOR CLARITY PURPOSES AND DO NOT NECESSARILY DEPICT THE PHYSICAL LOCATION.
7. CONTRACTOR SHALL PLACE CATCH BASIN INLET PROTECTION ON CATCH BASINS AND FIELD INLETS DOWN–GRADIENT OF ALL NON–STABILIZED SURFACES, PER DETAIL.
8. DEMOLITION PLAN IS NOT INCLUSIVE OF ALL EXISTING ITEMS TO BE REMOVED AS PART OF SITE CONSTRUCTION INCLUDING BUT NOT LIMITED TO LANDSCAPING, UTILITIES, WORK WITHIN THE ROW, ETC. ALL DEMOLITION WORK SHALL BE IN ACCORDANCE WITH THE CITY OF PORTLAND REGULATIONS.
9. CONTRACTOR TO BE RESPONSIBLE FOR PROVIDING OFF–SITE PARKING TO EMPLOYEES; ON–SITE PARKING WILL NOT BE PROVIDED OR GUARANTEED. CONTRACTOR TO BE RESPONSIBLE FOR OBTAINING THE APPROPRIATE PERMITS FROM THE CITY FOR CLOSING ANY ON–STREET PARKING SPACES DURING THE CONSTRUCTION PERIOD.
10. CONTRACTOR SHALL BE RESPONSIBLE FOR SNOW REMOVAL ALONG CONSTRUCTION FENCE AND GATE.
11. CONTRACTOR TO SUBMIT A DEWATERING PLAN FOR REVIEW AND APPROVAL TO THE DEPARTMENT OF PUBLIC WORKS PRIOR TO THE PRE–CONSTRUCTION MEETING, DURING THE BUILDING PERMIT APPLICATION PROCESS, OR PRIOR TO ADVANCED SITE WORK. CONTACT THE DEPARTMENT OF PUBLIC WORKS FOR ADDITIONAL INFORMATION AND CURRENT REGULATIONS.
12. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PERFORM THE FOLLOWING:
    - 12.1. REQUEST AND REVIEW RELEVANT DOCUMENTS THAT SUMMARIZE FINDINGS FROM INITIAL ENVIRONMENTAL DUE DILIGENCE ACTIVITIES COMPLETED AT THE SITE PERFORMED BY TRC COMPANIES.
    - 12.2. DETERMINE WHAT, IF ANY, RECOGNIZED ENVIRONMENTAL CONDITIONS (RECs) IDENTIFIED SUBSEQUENT TO ENVIRONMENTAL DUE DILIGENCE ACTIVITIES MAY AFFECT THE CONTRACTOR'S WORK.
    - 12.3. DETERMINE IF THE SITE IS/HAS BEEN IDENTIFIED AS A STATE &/OR FEDERAL HAZARDOUS SUBSTANCE SITE, OR SIMILARLY REGULATED SITE. IF SO, IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COMMUNICATE AND COORDINATE WITH AN ENVIRONMENTAL PROFESSIONAL (EP) TO UNDERSTAND WHAT CONTAMINANTS &/OR HAZARDS HAVE BEEN IDENTIFIED FOR THE SITE AND HOW THEIR RESPECTIVE IMPACTS MAY AFFECT THE CONTRACTOR'S WORK. THE EP SHALL BE EMPLOYED BY THE CLIENT. SHOULD THE CLIENT REQUIRE ACORN'S EP SERVICES IT SHALL BE REQUESTED IN WRITING.
    - 12.4. COMMUNICATE AND COORDINATE WITH AN EP TO REQUEST, REVIEW AND ADHERE TO RELEVANT DOCUMENTS PREPARED FOR THE SITE DESCRIBING BEST MANAGEMENT PRACTICES FOR IMPACTED OR POTENTIALLY IMPACTED MEDIA THAT MAY BE ENCOUNTERED AS PART OF THE CONTRACTOR'S WORK INCLUDING BUT NOT LIMITED TO THE SOIL MANAGEMENT PLAN & EMMP.
    - 12.5. ENSURE THE APPROPRIATE STATE &/OR FEDERAL REGULATORY AGENCY(IES) HAVE BEEN NOTIFIED OF THE CONTRACTOR'S PLANNED WORK ACTIVITIES.
13. CONTRACTOR TO COORDINATE WITH DPW, PWD, AND ACORN ENGINEERING INC. REGARDING THE THE LANCASTER STREET WATER MAIN REPLACEMENT PROJECT AND MS4 EXTENSION PROJECT, PROPOSED AS PART OF THE WEST BAYSIDE MASTER DEVELOPMENT PLAN. CONTRACTOR TO REFERENCE THE 89 ELM STREET CIVIL PLAN SET AND AS–BUILT PLANS FROM PWD AND DPW FOR THE LANCASTER STREET PLAN AND PROFILE, SHEET C–21, FOR IMPROVEMENTS ASSOCIATED WITH THE 89 ELM STREET REDEVELOPMENT PROJECT. 89 ELM STREET CIVIL PLANS AND PROFILE PREPARED FOR 89 ELM STREET APARTMENTS LLC, DESIGNED BY ACORN ENGINEERING INC., ISSUED FOR CONSTRUCTION IN DECEMBER 2024.

10 0 10 20
SCALE: 1" = 10'

PERMIT LEVEL
NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY	DATE
JOINT MAJOR SITE PLAN APPLICATION	SJL	4/10/24
COMMENT RESPONSE	SJL	6/25/24
COMMENT RESPONSE 2	SJL	12/23/24

DRAWING NAME: PHASE 2 – CONSTRUCTION MANAGEMENT PLAN

PROJECT NAME: PHASE 2 –PHASED OXFORD STREET REDEVELOPMENT

CLIENT: REVELER DEVELOPMENT
188 STATE STREET, 3RD FLOOR, PORTLAND, ME 04101

ACORN ENGINEERING, INC.
THESE PLANS SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM ACORN ENGINEERING, INC. AND SHALL BE RETURNED UPON REQUEST. ANY MODIFICATION OR REUSE OF THESE PLANS BY THE USER'S OR BY OTHERS, WITHOUT WRITTEN AUTHORIZATION FROM ACORN ENGINEERING, INC., SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO ACORN ENGINEERING, INC.

ACORN ENGINEERING, INC.
70 COMMERCIAL STREET, SUITE 104
PO BOX 3422, PORTLAND, MAINE 04104
(207) 775–2655

FILE: 1212.2_AE_CIVIL
JN: 1212
SCALE: AS NOTED
DESIGNED BY: SJL
DRAWN BY: DNM
CHECKED BY: SJL

STATE OF MAINE
SAMUEL J. LEBEL
No. 16505
LICENSED PROFESSIONAL ENGINEER
12/23/24

DRAWING NO.
C-04

LEGEND:

- PROPERTY LINE
- EROSION CONTROL BARRIER
- CONSTRUCTION FENCE — X —
- EX. PAVEMENT TO BE REMOVED
- EX. SIDEWALK TO BE REMOVED/REPLACED
- TRENCHING EXTENT

LANCASTER ST.
TWO–WAY

CEDAR ST.
ONE–WAY

CHESTNUT ST.
TWO–WAY

HALL COURT

EX. LIGHT/UTILITY POLES ALONG LANCASTER STREET TO BE REMOVED AS PART OF THE 158 LANCASTER STREET REDEVELOPMENT PROJECT, IN COORDINATION WITH CMP.

PRIOR TO APPLICATION OF BUILDING PERMIT, EXISTING 12" DBH BARTLETT PEAR TREE IS TO BE INSPECTED FOR HEALTH AND FUNCTION BY CITY ARBORIST AND PROJECT LANDSCAPE ARCHITECT, IN COORDINATION WITH ABUTTER AT TM 26–A–12. DEPENDING ON HEALTH AND FUNCTION, TREE MAY BE REPLACED WITH FLOWERING SHADE TREE TO BE AGREED UPON BY ABUTTER, PROJECT LA, AND CITY ARBORIST.

EX. CATCHBASIN TO BE MODIFIED, SEE C–33 FOR MORE INFORMATION.

PRIOR TO APPLICATION OF BUILDING PERMIT, EXISTING 15" DBH BARTLETT PEAR TREE IS TO BE INSPECTED FOR HEALTH AND FUNCTION BY CITY ARBORIST AND PROJECT LANDSCAPE ARCHITECT, IN COORDINATION WITH ABUTTER AT TM 26–A–12. DEPENDING ON HEALTH AND FUNCTION, TREE MAY BE REPLACED WITH FLOWERING SHADE TREE TO BE AGREED UPON BY ABUTTER, PROJECT LA, AND CITY ARBORIST.

REMOVE EX. PARKING METERS, TYP.

REMOVE EX. PAVEMENT, PROTECT EX. SIDEWALK

REMOVE EX. PAVEMENT. PARKING LOT TO BE RECONSTRUCTED PER C–13 AND C–33

PROTECT EX. GUARD RAIL AND LANDSCAPED AREA, UNLESS OTHERWISE EVALUATED BY GEOTECHNICAL ENGINEER

REMOVE EX. SITE SIGNAGE, TYP.

REMOVE EX. TREES, 6 TOTAL

CONSTRUCTION ENTRANCE PER DETAIL, TYP.

INSTALL INLET PROTECTION ON ALL CATCH BASINS WITHIN THE PROJECT VICINITY

INSTALL SILT FENCE OR EROSION CONTROL BERM AT DOWN GRADIENT AREAS OF THE PARCEL

PROTECT EXISTING STREET TREES ON CHESTNUT STREET, TYP. OF 2

REMOVE PARKING AREA

RETAINING WALL TO BE DEMOLISHED AND REBUILT

EX. FENCE TO REMAIN IN COORDINATION WITH ABUTTER

TREE TO BE PROTECTED TO THE GREATEST EXTENT FEASIBLE

REMOVE PARKING AREA

EX. CURB CUT TO BE REMOVED AND REPLACED WITH CURBING PER C–13.

EX. FENCE TO BE REMOVED

REMOVE SUPPORT EX. POLE IN COORDINATION WITH CMP

EX. 15" DBH TREE TO REMAIN IF UNDAMAGED BY CONSTRUCTION

TM 26–A–12
N/F JAMES W. HALL
SARAH MICHNIEWICZ
23909/341

TM 26–A–8
N/F ALBERT
BRESETTE
7951/275

TM 26–A–9,10
N/F PETER P. & ALICE D. AMES
7926/278

GENERAL NOTES:

1. EXISTING ASPHALT TO BE REMOVED SHALL BE STRIPPED AND PROPERLY DISPOSED OF OFFSITE.
2. ALL DISPOSAL OF DEMOLITION DEBRIS OR WASTE SHALL BE IN ACCORDANCE WITH ALL LOCAL, STATE, & FEDERAL REGULATIONS. CONTRACTOR SHALL PROVIDE OWNER WITH APPROPRIATE "BILLS OF LADING" TO DEMONSTRATE PROPER DISPOSAL OF ALL MATERIALS.
3. SITE DEMOLITION SHALL NOT OCCUR UNTIL PROPER ABATEMENT PROCEDURES HAVE OCCURRED. ABATEMENT, IF NECESSARY, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
4. THE CONTRACTOR SHALL CALL THE APPROPRIATE UTILITY COMPANIES AND DIG SAFE AT LEAST 72 HOURS PRIOR TO EXCAVATION TO REQUEST EXACT FIELD LOCATION FOR UTILITIES. OTHERWISE IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE LOCATION OF UNDERGROUND UTILITIES AND LOCATE POTENTIAL CONFLICT WITH THE APPROVED PLANS PRIOR TO CONSTRUCTION.
5. ALL CONSTRUCTION SIGNAGE IS TEMPORARY AND WILL BE REMOVED AT PROJECT COMPLETION. FINAL SIGNAGE WORDING AND PLACEMENT LOCATION TO BE ACCEPTED BY THE CITY.
6. SEDIMENT BARRIERS TO BE PLACED DIRECTLY ON THE FRONT AND SIDE PROPERTY LINES, DOWN GRADIENT OF THE PROPOSED PROJECT WORK PER DETAIL; FENCES ARE OFFSET OF THE PROPERTY LINES AS SHOWN ON THE PLAN FOR CLARITY PURPOSES AND DO NOT NECESSARILY DEPICT THE PHYSICAL LOCATION.
7. CONTRACTOR SHALL PLACE CATCH BASIN INLET PROTECTION ON CATCH BASINS AND FIELD INLETS DOWN–GRADIENT OF ALL NON–STABILIZED SURFACES, PER DETAIL.
8. DEMOLITION PLAN IS NOT INCLUSIVE OF ALL EXISTING ITEMS TO BE REMOVED AS PART OF SITE CONSTRUCTION INCLUDING BUT NOT LIMITED TO LANDSCAPING, UTILITIES, WORK WITHIN THE ROW, ETC. ALL DEMOLITION WORK SHALL BE IN ACCORDANCE WITH THE CITY OF PORTLAND REGULATIONS.
9. CONTRACTOR TO BE RESPONSIBLE FOR PROVIDING OFF–SITE PARKING TO EMPLOYEES; ON–SITE PARKING WILL NOT BE PROVIDED OR GUARANTEED. CONTRACTOR TO BE RESPONSIBLE FOR OBTAINING THE APPROPRIATE PERMITS FROM THE CITY FOR CLOSING ANY ON–STREET PARKING SPACES DURING THE CONSTRUCTION PERIOD.
10. CONTRACTOR SHALL BE RESPONSIBLE FOR SNOW REMOVAL ALONG CONSTRUCTION FENCE AND GATE.
11. CONTRACTOR TO SUBMIT A DEWATERING PLAN FOR REVIEW AND APPROVAL TO THE DEPARTMENT OF PUBLIC WORKS PRIOR TO THE PRE–CONSTRUCTION MEETING, DURING THE BUILDING PERMIT APPLICATION PROCESS, OR PRIOR TO ADVANCED SITE WORK. CONTACT THE DEPARTMENT OF PUBLIC WORKS FOR ADDITIONAL INFORMATION AND CURRENT REGULATIONS.
12. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PERFORM THE FOLLOWING:
    - 12.1. REQUEST AND REVIEW RELEVANT DOCUMENTS THAT SUMMARIZE FINDINGS FROM INITIAL ENVIRONMENTAL DUE DILIGENCE ACTIVITIES COMPLETED AT THE SITE PERFORMED BY TRC COMPANIES.
    - 12.2. DETERMINE WHAT, IF ANY, RECOGNIZED ENVIRONMENTAL CONDITIONS (RECs) IDENTIFIED SUBSEQUENT TO ENVIRONMENTAL DUE DILIGENCE ACTIVITIES MAY AFFECT THE CONTRACTOR'S WORK.
    - 12.3. DETERMINE IF THE SITE IS/HAS BEEN IDENTIFIED AS A STATE &/OR FEDERAL HAZARDOUS SUBSTANCE SITE, OR SIMILARLY REGULATED SITE. IF SO, IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COMMUNICATE AND COORDINATE WITH AN ENVIRONMENTAL PROFESSIONAL (EP) TO UNDERSTAND WHAT CONTAMINANTS &/OR HAZARDS HAVE BEEN IDENTIFIED FOR THE SITE AND HOW THEIR RESPECTIVE IMPACTS MAY AFFECT THE CONTRACTOR'S WORK. THE EP SHALL BE EMPLOYED BY THE CLIENT. SHOULD THE CLIENT REQUIRE ACORN'S EP SERVICES IT SHALL BE REQUESTED IN WRITING.
    - 12.4. COMMUNICATE AND COORDINATE WITH AN EP TO REQUEST, REVIEW AND ADHERE TO RELEVANT DOCUMENTS PREPARED FOR THE SITE DESCRIBING BEST MANAGEMENT PRACTICES FOR IMPACTED OR POTENTIALLY IMPACTED MEDIA THAT MAY BE ENCOUNTERED AS PART OF THE CONTRACTOR'S WORK INCLUDING BUT NOT LIMITED TO THE SOIL MANAGEMENT PLAN & EMMP.
    - 12.5. ENSURE THE APPROPRIATE STATE &/OR FEDERAL REGULATORY AGENCY(IES) HAVE BEEN NOTIFIED OF THE CONTRACTOR'S PLANNED WORK ACTIVITIES.

10 0 10 20
SCALE: 1"=10'

PERMIT LEVEL
NOT ISSUED FOR
CONSTRUCTION

ISSUED FOR	BY DATE
JOINT SITE PLAN APPLICATION	SJL 4/10/24
COMMENT RESPONSE	SJL 9/30/24
COMMENT RESPONSE 2	SJL 12/23/24

DRAWING NAME: PHASE 3 – CONSTRUCTION MANAGEMENT PLAN

PROJECT NAME: PHASE 3 – PHASED OXFORD STREET REDEVELOPMENT

CLIENT: REVELER DEVELOPMENT
188 STATE STREET, 3RD FLOOR, PORTLAND, ME 04101

ACORN ENGINEERING, INC.
ENGINEERING, INC.
ACORN ENGINEERING, INC.
PO BOX 3372, PORTLAND, MAINE 04104
(207) 775–2655

THIS PLAN SHALL NOT BE ALTERED WITHOUT WRITTEN PERMISSION FROM ACORN ENGINEERING, INC. ANY ALTERATIONS, AUTHORIZED OR UNAUTHORIZED, TO ACORN ENGINEERING, INC. SHALL BE AT SOLE RISK AND WITHOUT LIABILITY TO ACORN ENGINEERING, INC.

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SCALE: AS NOTED
DESIGNED BY: SJL
DRAWN BY: DNM
CHECKED BY: SJL

CITY OF PORTLAND
SAMUEL J. LEBEL
No. 16505
LICENSED PROFESSIONAL ENGINEER
9/30/24

DRAWING NO.
C-05

LEGEND:

- PROPERTY LINE
- SETBACK
- PH 1 – ROW LIMIT OF WORK LINE
- PH 2 – ROW LIMIT OF WORK LINE
- PH 3 – ROW LIMIT OF WORK LINE
- RECENTLY RECONSTRUCTED SIDEWALK TO REMAIN AS IS
- FLUSH GRANITE CURB
- VERTICAL GRANITE CURB
- PROPERTY MARKER (TO BE SET)
- PROPERTY MARKER (FOUND)
- PR. PAVEMENT
- PR. BUILDING
- PR. CONCRETE
- PR. BRICK
- PR. STREET TREE
- EX. STREET TREE

DENSITY OVERVIEW:

TOTAL LAND AREA BETWEEN PARCELS = 1.58 ACRES (68,943.66 SF)
TOTAL PROPOSED UNITS = 96

PHASE 1 LAND AREA = 0.32 ACRES
DENSITY PER D.U. = 317 SF/UNIT*
TOTAL PROPOSED UNITS = 48 WORKFORCE HOUSING UNITS
*2.5X DENSITY BONUS PER TABLE 18-C FOR >50% WORK FORCE UNITS.

PHASE 2 LAND AREA = 0.53 ACRES
DENSITY PER D.U. = 969 SF/UNIT
TOTAL PROPOSED UNITS = 24 MARKET RATE UNITS

PHASE 3 LAND AREA = 0.41 ACRES
DENSITY PER D.U. = 740 SF/UNIT
TOTAL PROPOSED UNITS = 24 MARKET RATE UNITS

LANCASTER ST.
TWO–WAY

89 ELM STREET

PHASE 2:
50 CEDAR STREET
LOT AREA= 0.53 ACRES
PR. UNITS: 24 (MR)

PHASE 3:
158 LANCASTER STREET
LOT AREA= 0.41 ACRES
PR. UNITS: 24 (MR)

ELM ST
ONE–WAY

CEDAR ST.
ONE–WAY

HALL COURT

CHESTNUT ST.
TWO–WAY

78 CHESTNUT STREET
LOT AREA=0.29 ACRES

PROPOSED STREET TREE AS PART OF PHASE 3 CONSTRUCTION.

PROPOSED SIDEWALK UPGRADE ALONG CEDAR STREET, APPROX. 158 LF OF EXISTING SIDEWALK AND RESET CURB FROM HALL COURT TO LANCASTER STREET. SIDEWALK RECONSTRUCTION AS PART OF PHASE 3.

PROPOSED TIPDOWN CURBING AND RAMP. SEE DRIVEWAY APRON DETAIL FOR THE SOUTH SIDE OF CEDAR STREET OFFSITE IMPROVEMENTS PROVIDED ON SHEET C–40.

PAVEMENT TRANSITION

EXISTING TREE TO REMAIN

PROPOSED SIDEWALK UPGRADE ALONG CEDAR STREET; APPROX. 315 LF OF EXISTING SIDEWALK AND RESET CURB. SIDEWALK RECONSTRUCTION AS PART OF PHASE 2.

PROPOSED STREET TREE AS PART OF PHASE 2 CONSTRUCTION.

PROPOSED STREET TREE AND FLUSH GRATE AS PART OF PHASE 1 CONSTRUCTION.

PROPOSED GRANITE BUG AND 2' BITUMINOUS PAVEMENT STRIP. SEE DRIVEWAY APRON DETAIL FOR THE NORTH SIDE OF CEDAR STREET OFFSITE IMPROVEMENTS PROVIDED ON SHEET C–40.

RECENTLY RECONSTRUCTED SIDEWALK AND STREET TREE TO REMAIN

RECENT IMPROVEMENTS ON 78 CHESTNUT STREET ABUTTING 33 CEDAR STREET (TM 26–B–14) TO REMAIN

PROPOSED SIDEWALK UPGRADE ALONG CEDAR STREET, APPROX. 180 LF OF EXISTING SIDEWALK AND RESET CURB FROM OXFORD STREET TO HALL COURT. SIDEWALK RECONSTRUCTION AS PART OF PHASE 1.

PHASE 1:
207 & 197 OXFORD STREET
LOT AREA= 0.35 ACRES
PR. UNITS: 48 (IZ)

PROPOSED SIDEWALK UPGRADE ALONG CEDAR STREET TO MATCH INTO EX. CONCRETE SIDEWALK, AS PART OF PHASE 2 OFFSITE IMPROVEMENTS.

RECENTLY RECONSTRUCTED SIDEWALK TO REMAIN

OXFORD ST.
ONE–WAY

OPEN SPACE OVERVIEW:

	PHASE 1:		PHASE 2		PHASE 3	
TOTAL LOT AREA:	15,223.68 SF		23,250 SF		17,748.60 SF	
	SF	%	SF	%	SF	%
TOTAL OPEN SPACE:	3,049 SF	20 %	4,790 SF	21 %	6,114 SF	34 %
PROPOSED LOT COVERAGE:	9,103 SF	60 %	4,931 SF	21 %	5,167 SF	29 %
TOTAL IMPERVIOUS AREA:	12,175 SF	80 %	18,410 SF	79 %	11,634 SF	66 %

20 0 20 40
SCALE: 1"=20'

PERMIT LEVEL
NOT ISSUED FOR CONSTRUCTION

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ISSUED FOR	BY	DATE
JOINT MAJOR SITE PLAN APPLICATION	SJL	4/10/24
COMMENT RESPONSE	SJL	7/30/24
COMMENT RESPONSE 2	SJL	12/23/24

DRAWING NAME: OVERALL SITE PLAN

PROJECT NAME: PHASED OXFORD STREET REDEVELOPMENT

CLIENT: AVESTA HOUSING & REVELER DEVELOPMENT
307 CUMBERLAND AVE, PORTLAND, ME 04101
188 STATE STREET, 3RD FLOOR, PORTLAND, ME 04101

ACORN ENGINEERING, INC.
PO BOX 3372, PORTLAND MAINE 04104
(207) 775–2655

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SCALE: AS NOTED
DESIGNED BY: SJL
DRAWN BY: DNM
CHECKED BY: SJL

STATE OF MAINE
SAMUEL J. LEBEL
No. 16505
LICENSED PROFESSIONAL ENGINEER
12/23/24

DRAWING NO.
C-10

SPACE AND BULK STANDARDS

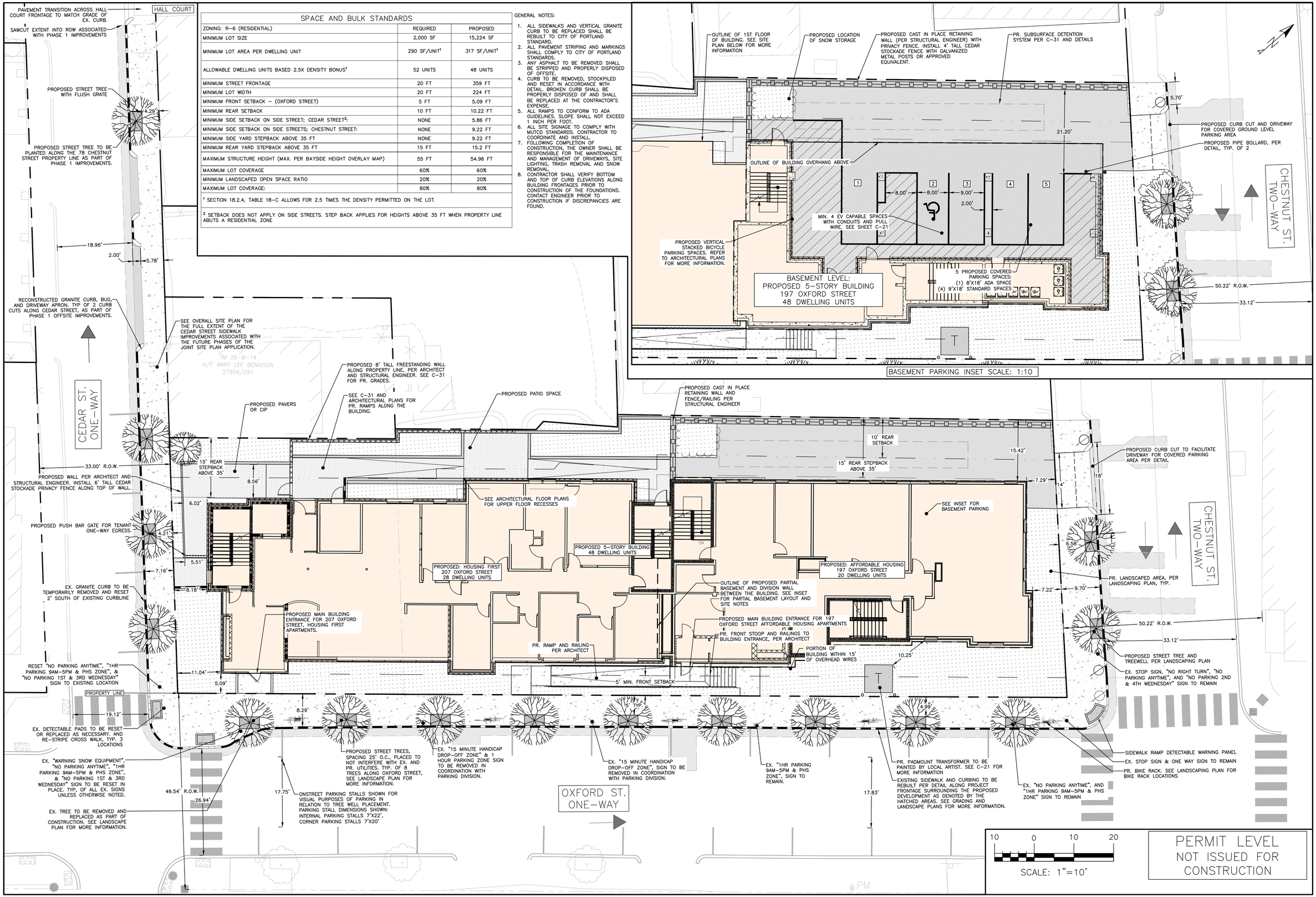
ZONING: R–6 (RESIDENTIAL)	REQUIRED	PROPOSED
MINIMUM LOT SIZE	2,000 SF	15,224 SF
MINIMUM LOT AREA PER DWELLING UNIT	290 SF/UNIT[1]	317 SF/UNIT[1]
ALLOWABLE DWELLING UNITS BASED 2.5X DENSITY BONUS[1]	52 UNITS	48 UNITS
MINIMUM STREET FRONTAGE	20 FT	359 FT
MINIMUM LOT WIDTH	20 FT	224 FT
MINIMUM FRONT SETBACK – (OXFORD STREET)	5 FT	5.09 FT
MINIMUM REAR SETBACK	10 FT	10.22 FT
MINIMUM SIDE SETBACK ON SIDE STREET; CEDAR STREET[2]:	NONE	5.86 FT
MINIMUM SIDE SETBACK ON SIDE STREETS; CHESTNUT STREET:	NONE	9.22 FT
MINIMUM SIDE YARD STEPBACK ABOVE 35 FT	NONE	9.22 FT
MINIMUM REAR YARD STEPBACK ABOVE 35 FT	15 FT	15.2 FT
MAXIMUM STRUCTURE HEIGHT (MAX. PER BAYSIDE HEIGHT OVERLAY MAP)	55 FT	54.96 FT
MAXIMUM LOT COVERAGE	60%	60%
MINIMUM LANDSCAPED OPEN SPACE RATIO	20%	20%
MAXIMUM LOT COVERAGE:	80%	80%

[1] SECTION 18.2.4, TABLE 18–C ALLOWS FOR 2.5 TIMES THE DENSITY PERMITTED ON THE LOT.

[2] SETBACK DOES NOT APPLY ON SIDE STREETS. STEP BACK APPLIES FOR HEIGHTS ABOVE 35 FT WHEN PROPERTY LINE ABUTS A RESIDENTIAL ZONE

GENERAL NOTES:

1. ALL SIDEWALKS AND VERTICAL GRANITE CURB TO BE REPLACED SHALL BE REBUILT TO CITY OF PORTLAND STANDARD.
2. ALL PAVEMENT STRIPING AND MARKINGS SHALL COMPLY TO CITY OF PORTLAND STANDARDS.
3. ANY ASPHALT TO BE REMOVED SHALL BE STRIPPED AND PROPERLY DISPOSED OF OFFSITE.
4. CURB TO BE REMOVED, STOCKPILED AND RESET IN ACCORDANCE WITH DETAIL. BROKEN CURB SHALL BE PROPERLY DISPOSED OF AND SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.
5. ALL RAMPS TO CONFORM TO ADA GUIDELINES. SLOPE SHALL NOT EXCEED 1 INCH PER FOOT.
6. ALL SITE SIGNAGE TO COMPLY WITH MUTCD STANDARDS. CONTRACTOR TO COORDINATE AND INSTALL.
7. FOLLOWING COMPLETION OF CONSTRUCTION, THE OWNER SHALL BE RESPONSIBLE FOR THE MAINTENANCE AND MANAGEMENT OF DRIVEWAYS, SITE LIGHTING, TRASH REMOVAL AND SNOW REMOVAL.
8. CONTRACTOR SHALL VERIFY BOTTOM AND TOP OF CURB ELEVATIONS ALONG BUILDING FRONTAGES PRIOR TO CONSTRUCTION OF THE FOUNDATIONS. CONTACT ENGINEER PRIOR TO CONSTRUCTION IF DISCREPANCIES ARE FOUND.



BASEMENT PARKING INSET SCALE: 1:10

10 0 10 20

SCALE: 1"=10'

PERMIT LEVEL
NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY DATE
JOINT MAJOR SITE PLAN APPLICATION	SJL 4/11/24
COMMENT RESPONSE	SJL 9/30/24
COMMENT RESPONSE 2	SJL 12/23/24

DRAWING NAME: PHASE 1 – SITE PLAN

PROJECT NAME: PHASE 1 – PHASED OXFORD STREET REDEVELOPMENT

CLIENT: AVESTA HOUSING
307 CUMBERLAND AVE, PORTLAND, ME 04101

ACORN ENGINEERING, INC.
ACORN ENGINEERING, INC.
PO BOX 3372, PORTLAND MAINE 04104
(207) 775–2855

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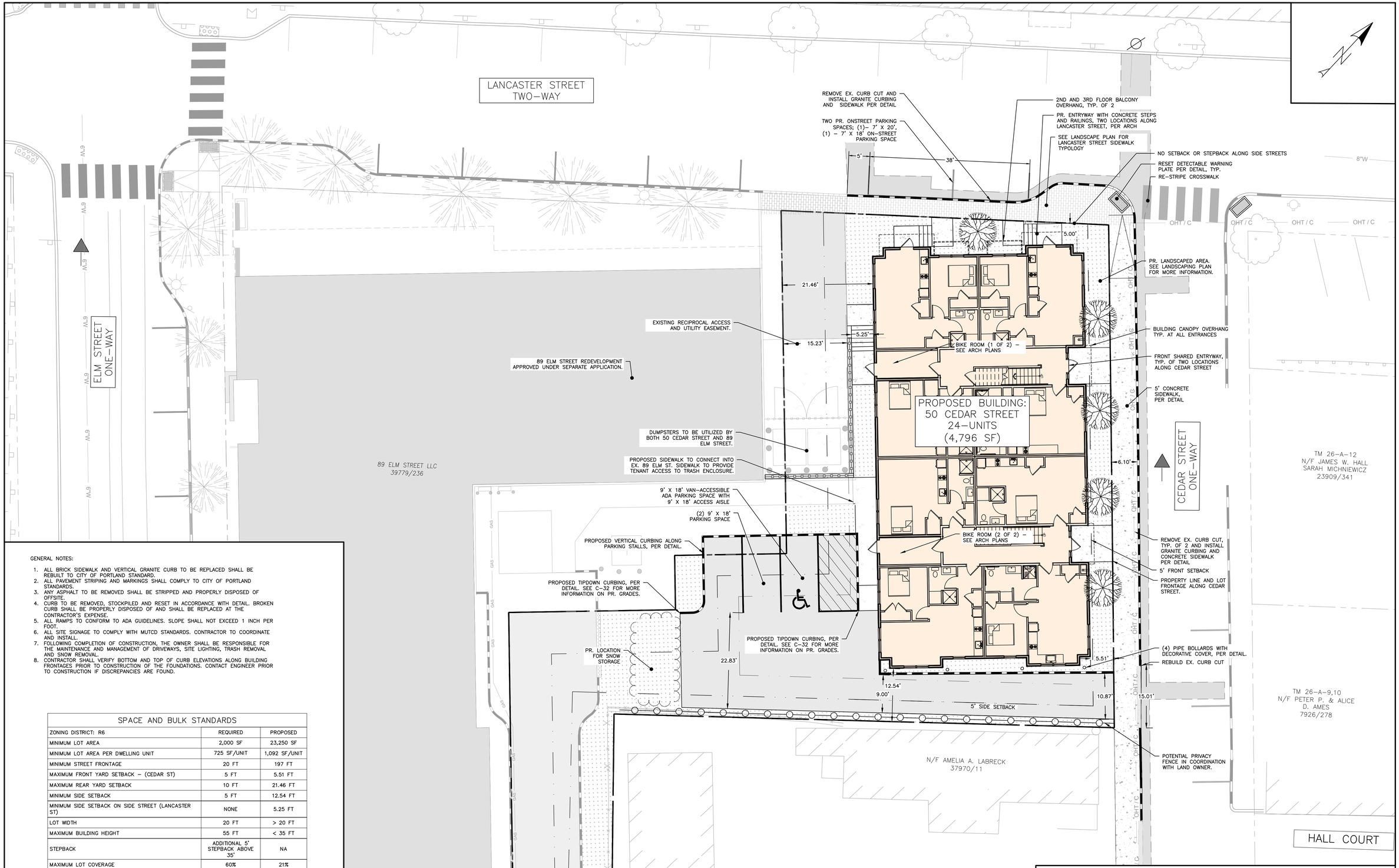
JN: 1212.1
SCALE: AS NOTED
DESIGNED BY: SJL
DRAWN BY: DNM
CHECKED BY: SJL

STATE OF MAINE
SAMUEL J. LEBEL
No. 16505
LICENSED PROFESSIONAL ENGINEER
12/23/24

DRAWING NO.
C-11



GENERAL NOTES:

1. ALL BRICK SIDEWALK AND VERTICAL GRANITE CURB TO BE REPLACED SHALL BE REBUILT TO CITY OF PORTLAND STANDARD.
2. ALL PAVEMENT STRIPING AND MARKINGS SHALL COMPLY TO CITY OF PORTLAND STANDARDS.
3. ANY ASPHALT TO BE REMOVED SHALL BE STRIPPED AND PROPERLY DISPOSED OF OFFSITE.
4. CURB TO BE REMOVED, STOCKPILED AND RESET IN ACCORDANCE WITH DETAIL. BROKEN CURB SHALL BE PROPERLY DISPOSED OF AND SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.
5. ALL RAMPS TO CONFORM TO ADA GUIDELINES. SLOPE SHALL NOT EXCEED 1 INCH PER FOOT.
6. ALL SITE SIGNAGE TO COMPLY WITH MUTCD STANDARDS. CONTRACTOR TO COORDINATE AND INSTALL.
7. FOLLOWING COMPLETION OF CONSTRUCTION, THE OWNER SHALL BE RESPONSIBLE FOR THE MAINTENANCE AND MANAGEMENT OF DRIVEWAYS, SITE LIGHTING, TRASH REMOVAL AND SNOW REMOVAL.
8. CONTRACTOR SHALL VERIFY BOTTOM AND TOP OF CURB ELEVATIONS ALONG BUILDING FRONTAGES PRIOR TO CONSTRUCTION OF THE FOUNDATIONS. CONTACT ENGINEER PRIOR TO CONSTRUCTION IF DISCREPANCIES ARE FOUND.

SPACE AND BULK STANDARDS		
ZONING DISTRICT: R6	REQUIRED	PROPOSED
MINIMUM LOT AREA	2,000 SF	23,250 SF
MINIMUM LOT AREA PER DWELLING UNIT	725 SF/UNIT	1,092 SF/UNIT
MINIMUM STREET FRONTAGE	20 FT	197 FT
MAXIMUM FRONT YARD SETBACK – (CEDAR ST)	5 FT	5.51 FT
MAXIMUM REAR YARD SETBACK	10 FT	21.46 FT
MINIMUM SIDE SETBACK	5 FT	12.54 FT
MINIMUM SIDE SETBACK ON SIDE STREET (LANCASTER ST)	NONE	5.25 FT
LOT WIDTH	20 FT	> 20 FT
MAXIMUM BUILDING HEIGHT	55 FT	< 35 FT
STEPBACK	ADDITIONAL 5' STEPBACK ABOVE 35'	NA
MAXIMUM LOT COVERAGE	60%	21%
MINIMUM LANDSCAPED OPEN SPACE RATIO	20%	20%

10 0 10 20

SCALE: 1" = 10'

PERMIT LEVEL
NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY DATE
JOINT MAJOR SITE PLAN APPLICATION	SJL 4/10/24
COMMENT RESPONSE	SJL 9/30/24
COMMENT RESPONSE 2	SJL 12/23/24

PHASE 2 – SITE PLAN

DRAWING NAME:

PHASE 2 –PHASED OXFORD STREET REDEVELOPMENT

PROJECT NAME:

REVELER DEVELOPMENT
188 STATE STREET, 3RD FLOOR, PORTLAND, ME 04101

CLIENT:

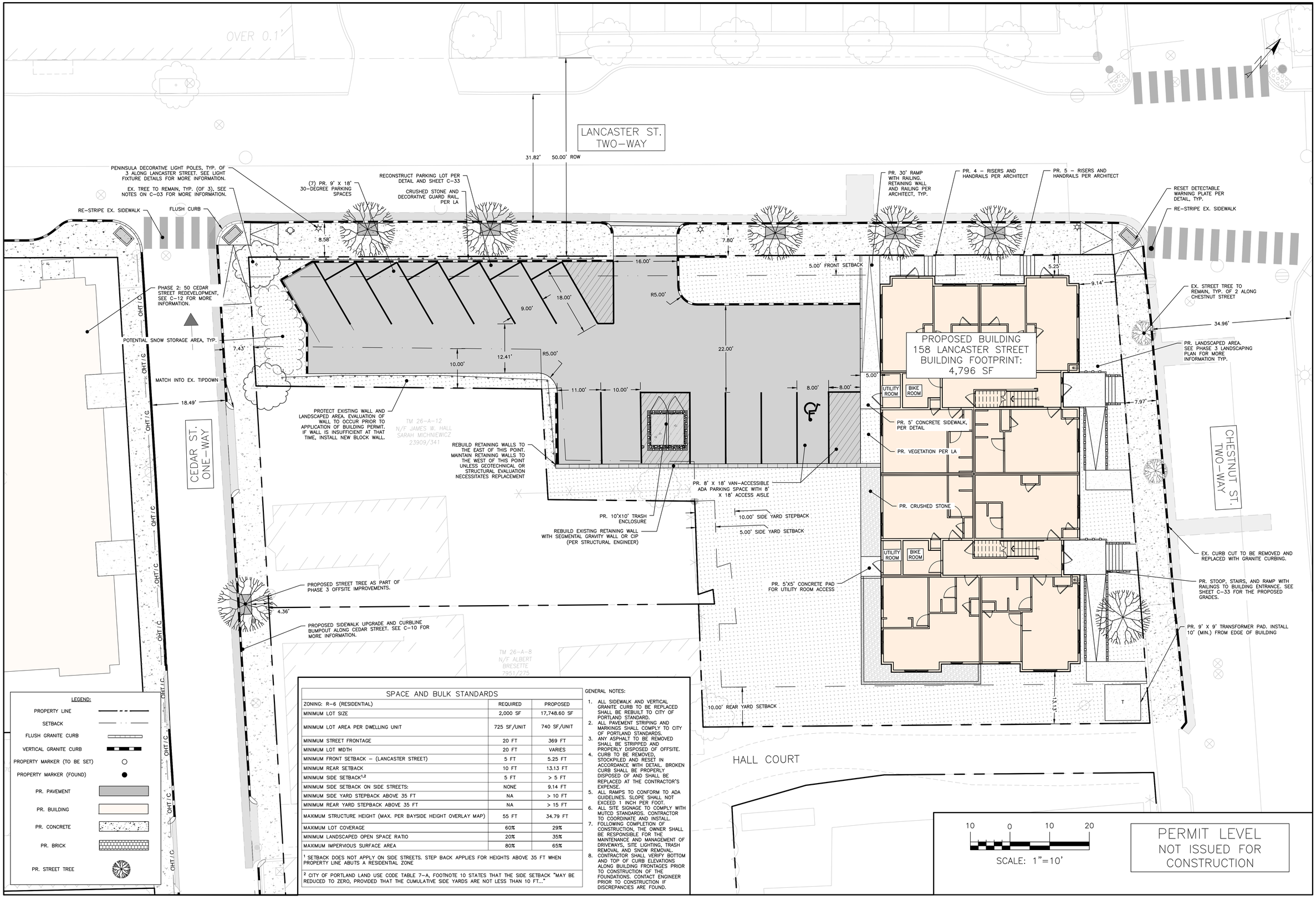
ACORN ENGINEERING, INC.
THESE PLANS SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM ACORN ENGINEERING, INC. AND ANY UNAUTHORIZED MODIFICATIONS OR OTHERWISE, SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO ACORN ENGINEERING, INC.

ACORN ENGINEERING, INC.
70 MILK STREET, #7, PORTLAND, MAINE 04104
PO BOX 3422, PORTLAND, MAINE 04104
(207) 775-2655

FILE: 1212.2_AE_CIVIL
JN: 1212
SCALE: AS NOTED
DESIGNED BY: SJL
DRAWN BY: DNM
CHECKED BY: SJL

STATE OF MAINE
SAMUEL J. LEBEL
No. 16505
LICENSED
PROFESSIONAL ENGINEER
12/23/24

DRAWING NO.
C-12



LEGEND:

- PROPERTY LINE
- SETBACK
- FLUSH GRANITE CURB
- VERTICAL GRANITE CURB
- PROPERTY MARKER (TO BE SET)
- PROPERTY MARKER (FOUND)
- PR. PAVEMENT
- PR. BUILDING
- PR. CONCRETE
- PR. BRICK
- PR. STREET TREE

SPACE AND BULK STANDARDS

ZONING: R-6 (RESIDENTIAL)	REQUIRED	PROPOSED
MINIMUM LOT SIZE	2,000 SF	17,748.60 SF
MINIMUM LOT AREA PER DWELLING UNIT	725 SF/UNIT	740 SF/UNIT
MINIMUM STREET FRONTAGE	20 FT	369 FT
MINIMUM LOT WIDTH	20 FT	VARIES
MINIMUM FRONT SETBACK - (LANCASTER STREET)	5 FT	5.25 FT
MINIMUM REAR SETBACK	10 FT	13.13 FT
MINIMUM SIDE SETBACK[1,2]	5 FT	> 5 FT
MINIMUM SIDE SETBACK ON SIDE STREETS:	NONE	9.14 FT
MINIMUM SIDE YARD STEPBACK ABOVE 35 FT	NA	> 10 FT
MINIMUM REAR YARD STEPBACK ABOVE 35 FT	NA	> 15 FT
MAXIMUM STRUCTURE HEIGHT (MAX. PER BAYSIDE HEIGHT OVERLAY MAP)	55 FT	34.79 FT
MAXIMUM LOT COVERAGE	60%	29%
MINIMUM LANDSCAPED OPEN SPACE RATIO	20%	35%
MAXIMUM IMPERVIOUS SURFACE AREA	80%	65%

[1] SETBACK DOES NOT APPLY ON SIDE STREETS. STEP BACK APPLIES FOR HEIGHTS ABOVE 35 FT WHEN PROPERTY LINE ABUTS A RESIDENTIAL ZONE

[2] CITY OF PORTLAND LAND USE CODE TABLE 7-A, FOOTNOTE 10 STATES THAT THE SIDE SETBACK "MAY BE REDUCED TO ZERO, PROVIDED THAT THE CUMULATIVE SIDE YARDS ARE NOT LESS THAN 10 FT..."

GENERAL NOTES:

1. ALL SIDEWALK AND VERTICAL GRANITE CURB TO BE REPLACED SHALL BE REBUILT TO CITY OF PORTLAND STANDARD.
2. ALL PAVEMENT STRIPING AND MARKINGS SHALL COMPLY TO CITY OF PORTLAND STANDARDS.
3. ANY ASPHALT TO BE REMOVED SHALL BE STRIPPED AND PROPERLY DISPOSED OF OFFSITE.
4. CURB TO BE REMOVED, STOCKPILED AND RESET IN ACCORDANCE WITH DETAIL. BROKEN CURB SHALL BE PROPERLY DISPOSED OF AND SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.
5. ALL RAMPS TO CONFORM TO ADA GUIDELINES. SLOPE SHALL NOT EXCEED 1 INCH PER FOOT.
6. ALL SITE SIGNAGE TO COMPLY WITH MUTCD STANDARDS. CONTRACTOR TO COORDINATE AND INSTALL.
7. FOLLOWING COMPLETION OF CONSTRUCTION, THE OWNER SHALL BE RESPONSIBLE FOR THE MAINTENANCE AND MANAGEMENT OF DRIVEWAYS, SITE LIGHTING, TRASH REMOVAL AND SNOW REMOVAL.
8. CONTRACTOR SHALL VERIFY BOTTOM AND TOP OF CURB ELEVATIONS ALONG BUILDING FRONTAGES PRIOR TO CONSTRUCTION OF THE FOUNDATIONS. CONTACT ENGINEER PRIOR TO CONSTRUCTION IF DISCREPANCIES ARE FOUND.

10 0 10 20

SCALE: 1"=10'

PERMIT LEVEL
NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY	DATE
JOINT SITE PLAN APPLICATION	SJL	4/10/24
COMMENT RESPONSE	SJL	9/30/24
COMMENT RESPONSE 2	SJL	12/23/24

DRAWING NAME: PHASE 3 - SITE PLAN

PROJECT NAME: PHASE 3 - PHASED OXFORD STREET REDEVELOPMENT

CLIENT: REVELER DEVELOPMENT
188 STATE STREET, 3RD FLOOR, PORTLAND, ME 04101

ACORN ENGINEERING, INC.

THIS PLAN SHALL NOT BE MODIFIED WITHOUT THE WRITTEN PERMISSION FROM ACORN ENGINEERING, INC. ANY ALTERATIONS, MODIFICATIONS OR REUSE SHALL BE AUTHORIZED WITHOUT LIABILITY TO ACORN ENGINEERING, INC.

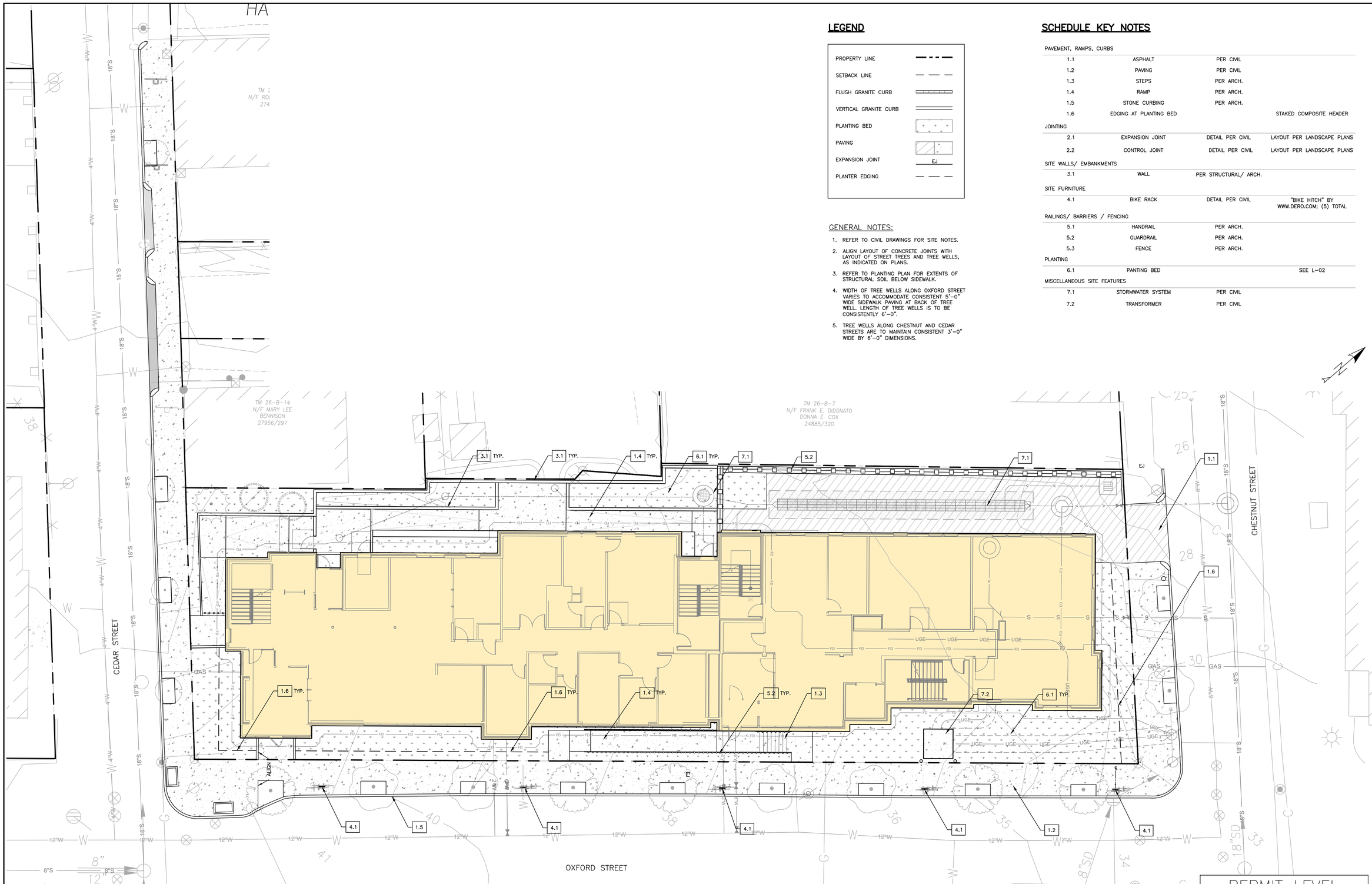
ACORN ENGINEERING, INC.
PO BOX 3372, PORTLAND MAINE 04104
(207) 775-2655

1212_AE_CIVIL

JN:	1212
SCALE:	AS NOTED
DESIGNED BY:	SJL
DRAWN BY:	DNM
CHECKED BY:	SJL

STATE OF MAINE
SAMUEL J. LEBEL
No. 16505
REGISTERED PROFESSIONAL ENGINEER
9/30/24

DRAWING NO.
C-13



LEGEND

- PROPERTY LINE
- SETBACK LINE
- FLUSH GRANITE CURB
- VERTICAL GRANITE CURB
- PLANTING BED
- PAVING
- EXPANSION JOINT (EJ)
- PLANTER EDGING

GENERAL NOTES:

1. REFER TO CIVIL DRAWINGS FOR SITE NOTES.
2. ALIGN LAYOUT OF CONCRETE JOINTS WITH LAYOUT OF STREET TREES AND TREE WELLS, AS INDICATED ON PLANS.
3. REFER TO PLANTING PLAN FOR EXTENTS OF STRUCTURAL SOIL BELOW SIDEWALK.
4. WIDTH OF TREE WELLS ALONG OXFORD STREET VARIES TO ACCOMMODATE CONSISTENT 5'-0" WIDE SIDEWALK PAVING AT BACK OF TREE WELL. LENGTH OF TREE WELLS IS TO BE CONSISTENTLY 6'-0".
5. TREE WELLS ALONG CHESTNUT AND CEDAR STREETS ARE TO MAINTAIN CONSISTENT 3'-0" WIDE BY 6'-0" DIMENSIONS.

SCHEDULE KEY NOTES

PAVEMENT, RAMPS, CURBS			
1.1	ASPHALT	PER CIVIL	
1.2	PAVING	PER CIVIL	
1.3	STEPS	PER ARCH.	
1.4	RAMP	PER ARCH.	
1.5	STONE CURBING	PER ARCH.	
1.6	EDGING AT PLANTING BED		STAKED COMPOSITE HEADER
JOINTING			
2.1	EXPANSION JOINT	DETAIL PER CIVIL	LAYOUT PER LANDSCAPE PLANS
2.2	CONTROL JOINT	DETAIL PER CIVIL	LAYOUT PER LANDSCAPE PLANS
SITE WALLS/ EMBANKMENTS			
3.1	WALL	PER STRUCTURAL/ ARCH.	
SITE FURNITURE			
4.1	BIKE RACK	DETAIL PER CIVIL	"BIKE HITCH" BY WWW.DERO.COM; (5) TOTAL
RAILINGS/ BARRIERS / FENCING			
5.1	HANDRAIL	PER ARCH.	
5.2	GUARDRAIL	PER ARCH.	
5.3	FENCE	PER ARCH.	
PLANTING			
6.1	PANTING BED		SEE L-02
MISCELLANEOUS SITE FEATURES			
7.1	STORMWATER SYSTEM	PER CIVIL	
7.2	TRANSFORMER	PER CIVIL	

1 PHASE 1 – HARDSCAPE AND MATERIALS PLAN

PERMIT LEVEL
NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY	DATE
JOINT MAJOR SITE PLAN APPLICATION	SJL	4/10/24
COMMENT RESPONSE	SJL	5/30/24
COMMENT RESPONSE 2	SJL	7/23/24

DRAWING NAME: PHASE 1 – HARDSCAPE AND MATERIALS PLAN
PROJECT NAME: PHASE 1 – PHASED OXFORD STREET REDEVELOPMENT
CLIENT: AVESTA HOUSING
307 CUMBERLAND AVE, PORTLAND, ME 04101

LANDSCAPE ARCHITECTURE

THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM ACORN ENGINEERING, INC. ANY ALTERATIONS MADE TO THESE PLANS WITHOUT ACORN ENGINEERING, INC.'S WRITTEN PERMISSION WILL BE DONE WITHOUT LIABILITY TO ACORN ENGINEERING, INC.

ACORN ENGINEERING, INC.
PO BOX 3372, PORTLAND MAINE 04104
(207) 775-2605

FILE:	1212.1_AE_LA
JN:	1212.1
SCALE:	AS NOTED
DESIGNED BY:	ALDV
DRAWN BY:	ALDV
CHECKED BY:	SJL

LICENSED LANDSCAPE ARCHITECT
ALEXIS LOPEZ DELVECCHIO
LAR5303
12/23/2024
STATE OF MAINE

DRAWING NO.
L-01

PLANTING SCHEDULE

TREES

SYMBOL	SCIENTIFIC NAME	COMMON NAME	SPACING	SIZE	QTY	NOTES
	AMELANCHIER LAEVIS	SERVICEBERRY	PER PLAN	2" CAL.	5	STANDARD TRUNK; NATIVE
	CERCIS CANADENSIS 'FOREST PANSY'	EASTERN REDBUD	PER PLAN	2" CAL.	4	NATIVE
	OSTRYA VIRGINIA	AMERICAN HOPHORNBEAM	PER PLAN	2.5" CAL.	6	NATIVE
	PICEA GLAUCA	WHITE SPRUCE	PER PLAN	5–6" HT.	1	NATIVE
	THUJA PLICATA	ARBORVITAE	PER PLAN	5–6" HT.	2	NATIVE

HERBACEOUS PERENNIALS/ SHRUBS

SYMBOL						
AN	AJUGA REPTANS 'CHOCOLATE CHIP'	CHOCOLATE CHIP BUNGLEWEED	12" O.C.	1 GAL.	43	–
As	AZALEA 'NORTHERN HI–LIGHTS"	NORTHERN HI–LIGHTS AZALEA	42" O.C.	5 GAL.	4	–
dcg	DENNSTAEDTIA PUNCTILOBULA	HAY SCENTED FERN	18" O.C.	1 QUART OR 1 GAL.	61	NATIVE
cp	DESCHAMPSIA CESPITOSA 'GOLDTAU'	TUFTED HAIR GRASS	30" O.C.	1 QUART OR 1 GAL.	38	NATIVE
cot	COMPTONIA PEREGRINA	SWEET FERN	42" O.C.	5 GAL.	6	NATIVE
FG	COTINUS COGGYGRIA	SMOKE TREE	5' O.C.	5 GAL.	18	–
	FOTHERGILLA GARDENII	DWARF FOTHERGILLA	36" O.C.	5 GAL.	32	–
Po	POLYGONATUM ODORATUM 'VARIEGATUM'	SOLOMON'S SEAL	18" O.C.	1 GAL.	68	–
RAE	RHODODENDRON 'ALBUM ELEGANS'	ELEGANT CATAWBA	4' O.C.	5 GAL.	2	–
Rpjm	RHODODENDRON 'P.J.M'	PJM RHODODENDRON	4.5' O.C.	5 GAL.	2	–
RhusGL	RHUS AROMATICA 'GRO–LOW'	GROW LOW SUMAC	4' O.C.	5 GAL.	24	NATIVE
Rhus	RHUS GLABRA	SMOOTH SUMAC	5' O.C.	10 GAL.	3	NATIVE
Rs	RUDBECKIA FULGIDA 'GOLDSTRUM'	BLACK EYED SUSAN	2" O.C.	1 GAL.	31	NATIVE
Sb	SCHIZACHYRIUM SCOPARIUM	LITTLE BLUESTEM	18" O.C.	1 GAL.	92	NATIVE
	WALDSTEINIA TERNATA	BARREN STRAWBERRY	8" O.C.	4" POT	257	–

SEEDING

SYMBOL	SEED MIX	SPECIES	PERCENTAGE	AREA	RATE
	GRASS MIX	SEE SEEDING NOTES	–	750 SF	7 LBS /100 SF; 300 LBS/ACRE

PLANTING NOTES:

1. NO PLANTING IS TO BE INSTALLED UNTIL GRADING AND CONSTRUCTION HAS BEEN COMPLETED IN THE IMMEDIATE AREA.
2. SUBSTITUTIONS TO THE PLANTING SCHEDULE ARE TO BE REVIEWED FOR APPROVAL BY THE LANDSCAPE ARCHITECT.
3. CONTRACTOR IS TO VERIFY UTILITIES ON PROPERTY AND TO PROTECT DURING EXCAVATION FOR PLANTS.
4. PLANT QUANTITIES LISTED IN THE PLANTING SCHEDULE ARE PROVIDED TO THE CONTRACTOR AS A CONVENIENCE; CONTRACTORS ARE TO VERIFY ALL PLANT QUANTITIES ON THE PLANS. IN THE EVENT OF A DISCREPANCY BETWEEN THE SCHEDULE AND THE DRAWING, THE DRAWING SHALL TAKE PRECEDENCE.
5. PLANTING MATERIAL SHALL COMPLY WITH THE LATEST EDITION OF THE AMERICAN STANDARD FOR NURSERY STOCK, AMERICAN ASSOCIATION OF NURSERYMAN.
6. THE CONTRACTOR SHALL SUBMIT NURSERY PHOTOGRAPHS OF ALL SHRUBS AND HERBACEOUS MATERIAL TO THE LANDSCAPE ARCHITECT FOR APPROVAL PRIOR TO ACCEPTANCE.
7. THE CONTRACTOR SHALL SUBMIT NURSERY PHOTOGRAPHS OF ALL TREES TO THE LANDSCAPE ARCHITECT FOR REVIEW. THE LANDSCAPE ARCHITECT IS SUBSEQUENTLY TO TAG ALL STREET TREES IN THE NURSERY PRIOR TO ACCEPTANCE.
8. ALL PLANT MATERIAL DELIVERED TO THE SITE, INCLUDING TREES, SHRUBS, AND HERBACEOUS PERENNIALS, SHALL BE LOCATED IN A TEMPORARY "NURSERY" IN A SHADED AREA PROTECTED FROM WIND AND WATERED REGULARLY, ACCORDING TO THE SEASON AND PLANTS' REQUIREMENTS.
9. ALL TREE LOCATIONS ARE TO BE STAKED IN THE FIELD FOR REVIEW AND APPROVAL BY THE LANDSCAPE ARCHITECT PRIOR TO PLANTING. FINAL LOCATIONS FOR ALL TREES ARE TO BE DETERMINED IN THE FIELD BY THE LANDSCAPE ARCHITECT.
10. ALL SHRUBS AND HERBS ARE TO BE LAID OUT IN THE FIELD, ACCORDING TO THE LAYOUT PROVIDED IN THE PLANS, FOR APPROVAL BY THE LANDSCAPE ARCHITECT PRIOR TO PLANTING.
14. TOPSOIL SHALL BE FREE FROM SUBSOIL, STONES LARGER THAN 1" OR ANY UNDESIRABLE MATERIAL, CONTAIN 5% ORGANIC MATTER AND HAVE A PH SUITABLE TO THE LOCAL GROWING CONDITIONS.
15. INSTALL ALL TREES, SHRUBS, AND HERBS PER PLANTING DETAILS.
16. ALL DISTURBED AREAS, INCLUDING THOSE NOT INDICATED ON THE PLANS, DUE TO CONSTRUCTION ACTIVITY OR THE STORAGE OF MATERIALS OR EQUIPMENT ARE TO BE REPAIRED. APPLY TOPSOIL AS NEEDED, TO MEET ADJACENT GRADES AND RE–SEED TO MATCH EXISTING OR PROPOSED LANDSCAPE. IF SITE CONDITIONS ARE UNCLEAR, CONTACT THE LANDSCAPE ARCHITECT TO VERIFY THE APPROPRIATE RE–SEEDING SPECIFICATION.
17. ALL PLANTING BEDS ARE TO RECEIVE 3" OF SHREDDED HARDWOOD MULCH.
18. CONTRACTOR IS TO MAINTAIN A ONE YEAR WARRANTY ON ALL PLANTINGS FOLLOWING INSTALLATION.
19. CONTRACTOR IS TO BE RESPONSIBLE FOR THE WATERING AND MAINTENANCE OF ALL PLANT MATERIAL AND LANDSCAPING IMPROVEMENTS UNTIL THE START OF THE WARRANTY PERIOD.
20. THE PROPERTY OWNER IS RESPONSIBLE FOR THE CONTINUED CARE AND MAINTENANCE OF THE LANDSCAPED AREA. PLANTINGS THAT SHOW SIGNS OF CONSTRUCTION DAMAGE WITHIN A ONE YEAR PERIOD FOLLOWING CONSTRUCTION SHALL BE REPLACED PRIOR TO ANY DEFECT GUARANTEE AT NO ADDITIONAL COST TO THE OWNER.

REQUIRED STREET TREES

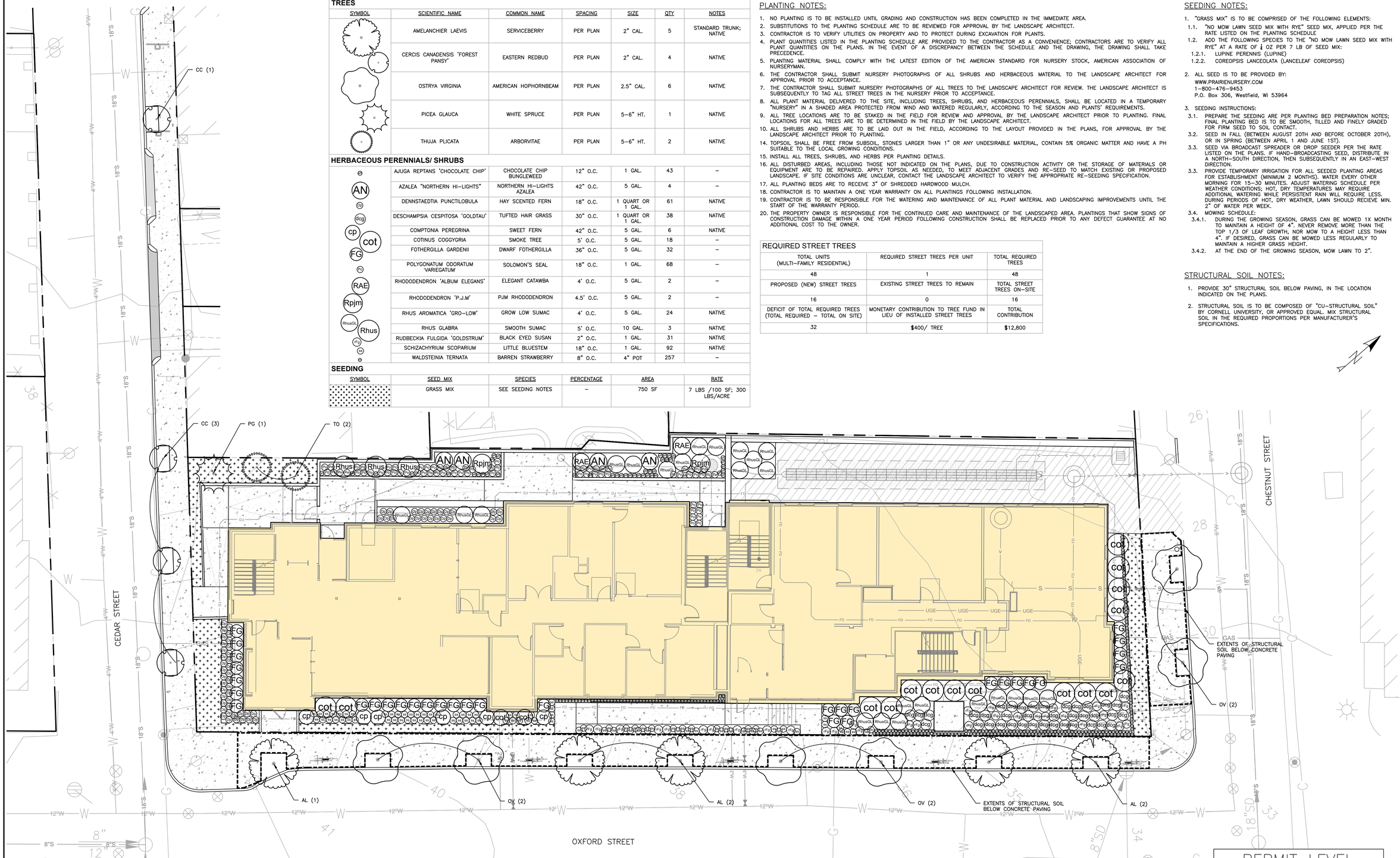
TOTAL UNITS (MULTI–FAMILY RESIDENTIAL)	REQUIRED STREET TREES PER UNIT	TOTAL REQUIRED TREES
48	1	48
PROPOSED (NEW) STREET TREES	EXISTING STREET TREES TO REMAIN	TOTAL STREET TREES ON–SITE
16	0	16
DEFICIT OF TOTAL REQUIRED TREES (TOTAL REQUIRED – TOTAL ON SITE)	MONETARY CONTRIBUTION TO TREE FUND IN LIEU OF INSTALLED STREET TREES	TOTAL CONTRIBUTION
32	$400/ TREE	$12,800

SEEDING NOTES:

1. "GRASS MIX" IS TO BE COMPRISED OF THE FOLLOWING ELEMENTS:
   - 1.1. "NO MOW LAWN SEED MIX WITH RYE" SEED MIX, APPLIED PER THE RATE LISTED ON THE PLANTING SCHEDULE
   - 1.2. ADD THE FOLLOWING SPECIES TO THE "NO MOW LAWN SEED MIX WITH RYE" AT A RATE OF ½ OZ PER 7 LB OF SEED MIX:
     - 1.2.1. LUPINE PERENNIS (LUPINE)
     - 1.2.2. COREOPSIS LANCEOLATA (LANCELEAF COREOPSIS)
2. ALL SEED IS TO BE PROVIDED BY:
   WWW.PRAIRIENURSERY.COM
   1–800–476–9453
   P.O. Box 306, Westfield, WI 53964
3. SEEDING INSTRUCTIONS:
   - 3.1. PREPARE THE SEEDING ARE PER PLANTING BED PREPARATION NOTES; FINAL PLANTING BED IS TO BE SMOOTH, TILLED AND FINELY GRADED FOR FIRM SEED TO SOIL CONTACT.
   - 3.2. SEED IN FALL (BETWEEN AUGUST 20TH AND BEFORE OCTOBER 20TH), OR IN SPRING (BETWEEN APRIL 1 AND JUNE 1ST).
   - 3.3. SEED VIA BROADCAST SPREADER OR DROP SEEDER PER THE RATE LISTED ON THE PLANS. IF HAND–BROADCASTING SEED, DISTRIBUTE IN A NORTH–SOUTH DIRECTION, THEN SUBSEQUENTLY IN AN EAST–WEST DIRECTION.
   - 3.3. PROVIDE TEMPORARY IRRIGATION FOR ALL SEEDED PLANTING AREAS FOR ESTABLISHMENT (MINIMUM 2 MONTHS). WATER EVERY OTHER MORNING FOR 15–30 MINUTES. ADJUST WATERING SCHEDULE PER WEATHER CONDITIONS; HOT, DRY TEMPERATURES MAY REQUIRE ADDITIONAL WATERING WHILE PERSISTENT RAIN WILL REQUIRE LESS. DURING PERIODS OF HOT, DRY WEATHER, LAWN SHOULD RECIEVE MIN. 2" OF WATER PER WEEK.
   - 3.4. MOWING SCHEDULE:
     - 3.4.1. DURING THE GROWING SEASON, GRASS CAN BE MOWED 1X MONTH TO MAINTAIN A HEIGHT OF 4". NEVER REMOVE MORE THAN THE TOP 1/3 OF LEAF GROWTH, NOR MOW TO A HEIGHT LESS THAN 4". IF DESIRED, GRASS CAN BE MOWED LESS REGULARLY TO MAINTAIN A HIGHER GRASS HEIGHT.
     - 3.4.2. AT THE END OF THE GROWING SEASON, MOW LAWN TO 2".

STRUCTURAL SOIL NOTES:

1. PROVIDE 30" STRUCTURAL SOIL BELOW PAVING, IN THE LOCATION INDICATED ON THE PLANS.
2. STRUCTURAL SOIL IS TO BE COMPOSED OF "CU–STRUCTURAL SOIL" BY CORNELL UNIVERSITY, OR APPROVED EQUAL. MIX STRUCTURAL SOIL IN THE REQUIRED PROPORTIONS PER MANUFACTURER'S SPECIFICATIONS.



1 PHASE 1 – PLANTING PLAN

PERMIT LEVEL
NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY DATE
JOINT MAJOR SITE PLAN APPLICATION	SJL 6/10/22
COMMENT RESPONSE	SJL 9/30/22
COMMENT RESPONSE 2	SJL 12/23/22

PHASE 1 – PLANTING PLAN

PROJECT NAME: PHASE 1 – PHASED OXFORD STREET REDEVELOPMENT

CLIENT: AVESTA HOUSING
307 CUMBERLAND AVE, PORTLAND, ME 04101

DRAWING NAME:

LANDSCAPE ARCHITECTURE

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ACORN ENGINEERING, INC.
PO BOX 3372, PORTLAND MAINE 04104
(207) 775–2605

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DESIGNED BY:	ALDV
DRAWN BY:	ALDV
CHECKED BY:	SJL

LICENSED LANDSCAPE ARCHITECT
ALEXIS LOPEZ DELVECCHIO
LAR5303
12/23/2024
STATE OF MAINE

DRAWING NO.
L-02

PLANTING NOTES

1. LANDSCAPE ARCHITECT TO APPROVE PLANT MATERIAL PRIOR TO DELIVERY TO SITE.
2. PLANT MATERIAL PROVIDED BY THE CONTRACTOR IS TO CONFORM TO THE HIGHEST STANDARD AS ADOPTED BY THE AMERICAN STANDARD FOR NURSERY STOCK PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN, INC. (ANSI). PLANT MATERIAL IS TO BE HEALTHY SPECIMENS, FREE FROM DISEASE OR DAMAGE.
3. THE CONTRACTOR IS TO FURNISH PLANTS AND SOD SHOWN ON THE DRAWINGS. PLANTS ARE TO CONFORM WITH THE BOTANICAL IDENTIFICATIONS. PLANTS ARE TO BE SOURCED FROM A NURSERY WITHIN THE SAME CLIMATIC ZONE AS THE SITE LOCATION. NO SUBSTITUTIONS OF PLANT SPECIES ARE PERMITTED WITHOUT PRIOR APPROVAL OF THE OWNER OR OWNER'S REPRESENTATIVE & THE LANDSCAPE ARCHITECT.
4. SUBSTITUTIONS OF PLANT SPECIES SHALL BE A PLANT OF EQUIVALENT OVERALL FORM, HEIGHT AND BRANCHING HABIT, FLOWER, LEAF, FRUIT, COLOR, TIME OF BLOOM & CLIMATIC LOCATION AS APPROVED BY LANDSCAPE ARCHITECT.
5. LOCATE AND VERIFY EXISTING & PROPOSED UTILITY LINE LOCATIONS PRIOR TO STAKING AND REPORT CONFLICTS TO LANDSCAPE ARCHITECT.
6. PLANTING DEMOLITION DEBRIS, GARBAGE, LUMPS OF CONCRETE, STEEL AND OTHER MATERIALS DELETERIOUS TO PLANT'S HEALTH AS DETERMINED BY LANDSCAPE ARCHITECT SHALL BE REMOVED FROM PLANTING AREAS.
7. THE CONTRACTOR IS TO VERIFY SITE LAYOUT & GRADES & INFORM THE LANDSCAPE ARCHITECT OF ANY DISCREPANCIES OR CHANGES IN LAYOUT AND/OR GRADING PRIOR TO CONSTRUCTION. NO PLANTING IS TO BE INSTALLED BEFORE ACCEPTANCE OF ROUGH GRADING.
8. ALL PROPOSED TREE LOCATIONS SHALL BE STAKED OR LAID OUT IN THEIR APPROXIMATE LOCATION BY THE CONTRACTOR. THE CONTRACTOR SHALL ADJUST THE LOCATIONS AS REQUESTED BY THE LANDSCAPE ARCHITECT TO ACCOUNT FOR SUBSURFACE UTILITIES AND OTHER FIELD CONDITIONS. FINAL LOCATIONS OF PLANTS MUST BE APPROVED BY THE LANDSCAPE ARCHITECT PRIOR TO PLANTING.
9. INSTALL PLANTS WITH ROOT FLARES FLUSH WITH FINISHED GRADE. IMMEDIATELY REPLANT PLANTS THAT SETTLE OUT OF PLUMB OR BELOW FINISHED GRADE. PLANT AND STAKES ARE TO BE SET PLUMB UNLESS OTHERWISE NOTED. PLANT UNDER FULL TIME SUPERVISION OF CERTIFIED ARBORIST, NURSERYMAN, OR LICENSED LANDSCAPE ARCHITECT. PROVIDE WRITTEN VERIFICATION OF CERTIFICATION AND/OR LICENSE FOR LANDSCAPE ARCHITECT'S APPROVAL.
10. WATER PLANTS THOROUGHLY AFTER INSTALLATION, A MINIMUM OF TWICE WITHIN THE FIRST 24 HOURS.
11. CONTRACTOR SHALL BE RESPONSIBLE TO MAINTAIN PLANT MATERIALS INCLUDING SOD/SEED AREAS IN A HEALTHY STATE DURING CONSTRUCTION AND DURING REQUIRED WARRANTY PERIODS. ANY DAMAGE TO PLANT MATERIAL DUE TO NEGLECT BY THE CONTRACTOR SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE.
12. REPAIR DAMAGE DUE TO LANDSCAPE INSTALLATION OPERATIONS INSIDE AND OUTSIDE OF LIMIT OF WORK.
13. SOAK ALL PERENNIALS FOR 24 HOURS PRIOR TO INSTALLATION.
14. A LIST OF PLANTS INCLUDING BOTANICAL NAMES, SIZES, AND SPACING ARE SHOWN ON THE DRAWINGS. QUANTITIES ARE PROVIDED FOR CONTRACTOR'S CONVENIENCE AND ARE TO BE VERIFIED. IN THE EVENT THAT QUANTITIES OR OMISSIONS OCCUR THE PLAN DRAWINGS ARE TO BE FOLLOWED.
15. IRRIGATION: A TEMPORARY UNDERGROUND DRIP AND SPRINKLER IRRIGATION SYSTEM IS TO BE PROVIDED FOR ALL PLANT MATERIAL AND SOD OR SEEDED AREAS.
16. DISTURBED SITE AREAS ARE TO BE DRESSED WITH 6" MIN. OF AMENDED TOPSOIL FOR LAWNS AND 12" MIN. FOR PLANT BEDS. TOPSOIL FOR SEEDED AND/OR SEEDED AREAS IS TO BE TWO PARTS SHARP SAND, ONE PART LOAM AND ONE PART ORGANIC COMPOST.
17. PLANT BEDS ARE TO BE MULCHED TO A DEPTH OF 2" MIN. WITH NATURAL BARK MULCH WITH BARK SIZES NO LARGER THAN 3". PERENNIAL PLANT BEDS ARE TO BE MULCHED WITH BARK SIZES NO MORE THAN 1". TREES IN LAWN AREAS ARE TO HAVE MULCH RINGS OF 5' DIA.
18. TREES ADJACENT TO PEDESTRIAN ROUTES AND WITHIN PARKING ISLANDS ARE TO BE LIMBED TO 6' ABOVE GRADE.
19. ALL TREE SPECIES SHALL BE WATERED AT LEAST 2-4 TIMES EACH WEEK WITH 10-15 GALLONS ADMINISTERED TO EACH TREE DEPENDING ON THE WEATHER AND CURRENT MOISTURE LEVEL. WATERING WILL CONSIST OF 10-15 GALLONS ADMINISTERED TO EACH TREE EVERY TIME THEY ARE WATERED.

PLANTING SCHEDULE

CODE	BOTANICAL NAME	COMMON NAME	QTY.	SIZE	SPACING	NOTES
	DECIDUOUS TREES - 50 Cedar Street					
MI	*Malus "Ivory Spear"*	Ivory Spear Crabapple	1	1.75-2" cal	as shown	
LS	*Liquidambar styraciflua 'Slender Silhouette'*	Slender Silk Sweet Gum	6	2.75-3" cal	as shown	Seedless variety only
QP	*Quercus paulustris*	Pin Oak	2	2.5-3" cal	as shown	
	DECIDUOUS SHRUBS					
CODE	BOTANICAL NAME	COMMON NAME	QTY.	SIZE	SPACING	NOTES
HH	*Hypericum 'Hidcote'*	St. John's Wort	5	24"-36" ht.	36" O.C.	
IV	*Itea virginica*	Little Henry Sweetspire	18	24"-36" ht.	36" O.C.	
LB	*Lindera Benzion*	Spice Bush	1	24"-36" ht.	36" O.C.	
	EVERGREEN SHRUBS					
CODE	BOTANICAL NAME	COMMON NAME	QTY.	SIZE	SPACING	NOTES
IXSH	*Ilex glabra 'Shamrock'*	Shamrock Inkberry	10	30"-36" ht.	60" O.C.	
	PERENNIAL					
CODE	BOTANICAL NAME	COMMON NAME	QTY.	SIZE	SPACING	NOTES
AMH	*Amsonia hubrichtii*	Thread-leafed Bluestar	tbd	tbd	36" O.C.	
ABB	*Astilbe 'Bressingham Beauty'*	Bressingham Beauty Astilbe	tbd	tbd	18" O.C.	
COM	*Coreopsis 'Moonbeam'*	Moonbeam Coreopsis	tbd	tbd	18" O.C.	
GRC	*Geranium x 'Rozanne'*	Rozanne Cranesbill	tbd	tbd	24" O.C.	
HAH	*Hemeocallis 'Heavenly Angel Ice'*	Heavenly Angel Ice Daylilly	tbd	tbd	24" O.C.	
HEC	*Heuchera 'Caramel'*	Caramel Coral Bells	tbd	tbd	18" O.C.	
RFA	*Rudbeckia fulgida 'American Gold Rush'*	Gold Rush Black-Eyed Susan	tbd	tbd	24" O.C.	
SMM	*Salvia 'May Night'*	May Night Salvia	tbd	tbd	24" O.C.	
	GRASSES, VINES & GROUND COVERS					
CODE	BOTANICAL NAME	COMMON NAME	QTY.	SIZE	SPACING	NOTES
AG	*Allium gladiator*	Ornamental Onion	tbd	Bulb	12" O.C.	
AU	*Arctostophylos uva-ursi*	Bearberry	tbd	1' ht.	36" OC	
PVS	*Panicum virgatum 'Shenandoah'*	Shenandoah Switchgrass	tbd	#2	24" O.C.	
SS	*Schizachryum scoparium*	Little Bluestem	tbd	#2	18" O.C.	
	DECIDUOUS TREES - Cedar Street Sidewalk Improvements Sheet L2					
CODE	BOTANICAL NAME	COMMON NAME	QTY.	SIZE	SPACING	NOTES
ZS	*Zelkova Serrata*	City Sprite Zelkova	3	2.75-3" cal	as shown	

SITE SOIL NOTES

1. CONTRACTOR SHALL COORDINATE WITH OWNER'S REPRESENTATIVE FOR LOCATION OF STOCKPILE AREAS FOR STRIPPED TOPSOIL AND PLANTING SOIL PRODUCTS. CONTRACTOR SHALL ENSURE AREA IS PROTECTED AND CONTAMINATION OR DISTURBANCE OF STORED PRODUCTS IS NOT ALLOWED.
2. CONTRACTOR SHALL ENSURE SUBGRADE IS SCARIFIED PRIOR TO INSTALLING PLANTING SOIL AND BLEND WITH INITIAL LIFT OR PLACEMENT OF PROPOSED PLANTING SOIL.
3. COORDINATE PLACEMENT OF PLANTING SOIL WITH OTHER WORK, ESPECIALLY UTILITIES. PLACEMENT SHOULD OCCUR AFTER INSTALLATION OF ALL HARDSCAPE IMPROVEMENTS, IRRIGATION SYSTEM, UTILITIES, ETC. AND BEFORE INSTALLATION OF PLANTS.
4. SILVA CELL SOIL FOR STREET TREE PLANTING SHALL BE HIGH QUALITY LOAM-BASED PLANTING SOIL FOR FILLING THE SILVA CELLS.

SITE LANDSCAPING & BUFFERS

PARKING & SCREENING:

THE SITE HAS 3 PROPOSED PARKING SPACES WHICH REQUIRE THE PLANTING OF TWO TREES (OR ONE TREE AND THREE SHRUBS) PER FIVE PARKING SPACES.

PROPOSED TREES & SHRUBS = 2 TREES, 6 SHRUBS.

PLANTING REQUIREMENTS PER FRONTAGE:

THE SITE HAS 270 FEET OF FRONTAGE IN THE R-6 DISTRICT, WHICH REQUIRES 9 SHADE TREES OR THE EQUIVALENT OF A SHADE TREE VIA 6 PLANTINGS (1 PER 30 FEET)

PROPOSED STREET TREES = 8
EXISTING TREES=1
TOTAL STREET TREES = 9

TREE PLANTING REQUIREMENTS:

REQUIREMENT - ONE STREET TREE IS REQUIRED PER DWELLING UNIT (24),

PROPOSED TREES (SITE) = 10

PROPOSED TREES IN
COORDINATION WITH 89 ELM
STREET DEVELOPMENT = 16
(SEE SHEET L2)

PROPOSED TREES CEDAR SIDEWALK IMPROVEMENTS = 2*

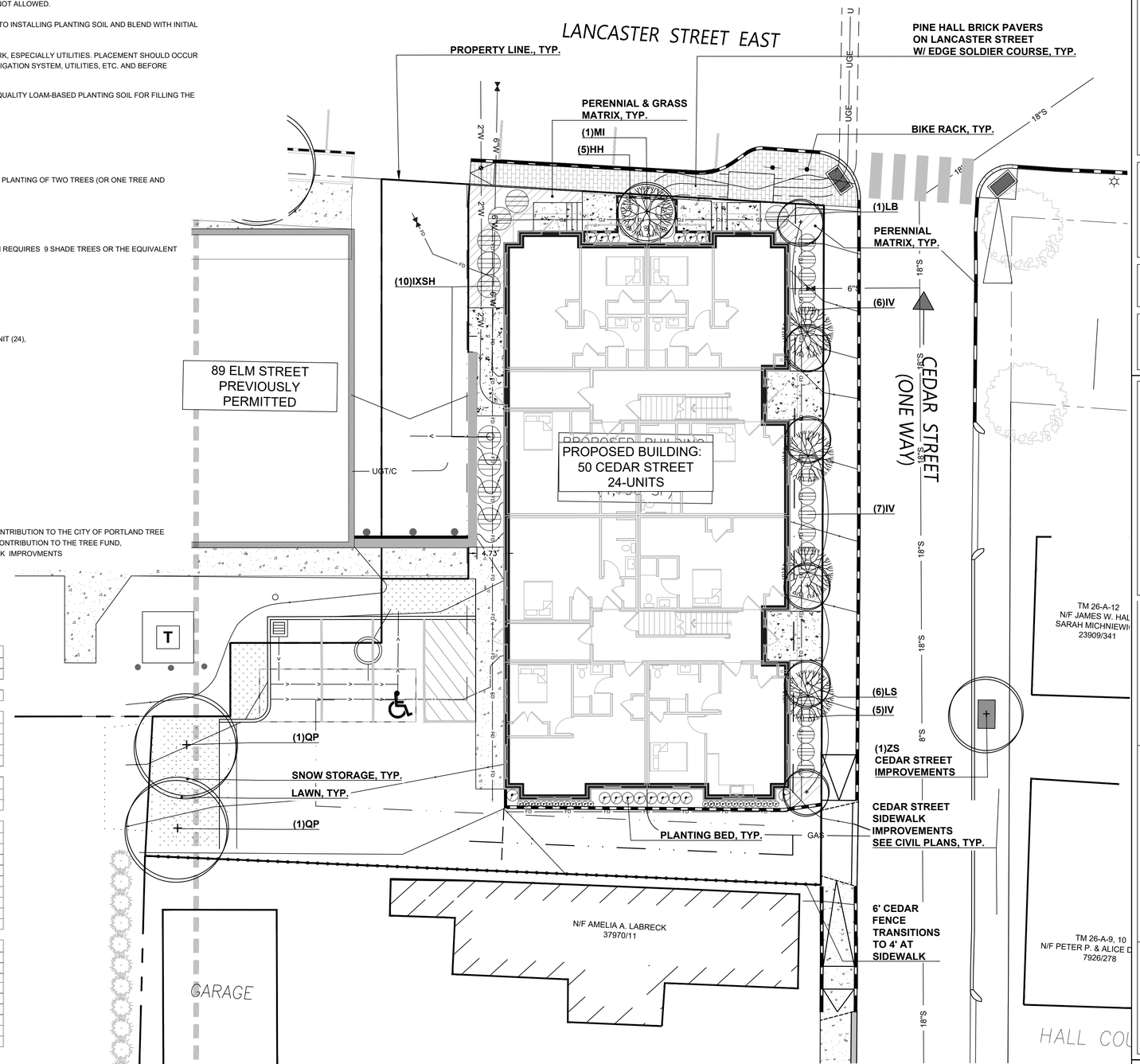
EXISTING TREES = 1

TOTAL PROPOSED TREES = 29*

TOTAL REQUIRED - 24

THE REMAINING STREET TREES WILL BE PROVIDED THROUGH A CONTRIBUTION TO THE CITY OF PORTLAND TREE FUND. THROUGH THE PLANTINGS OF THE PROPOSED TREES AND CONTRIBUTION TO THE TREE FUND,

* PROPOSED TOTAL INCLUDES CEDAR STREET SIDEWALK IMPROVMENTS



PLANTING LEGEND

EXISTING TREE
PROPOSED SHRUB
PERENNIAL MATRIX
PROPOSED DECIDUOUS TREE
PROPOSED PERENNIAL BEDS

NOTE: This drawing is PRELIMINARY REVIEW ONLY. It is NOT intended for use as a construction document.

Prepared For:

REVELER, LLC
188 STATE STREET, 3RD FLOOR
PORTLAND, ME 04101

Prepared By:

Dry landscape architecture, l.l.c
31 miller ave.
biddeford, me 04005

Date:
APRIL 17, 2023

Issued For:
PERMITTING DOCUMENTS

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Title:
PLANTING PLAN

50 Cedar Street

PHASE 2
Portland ME 04103

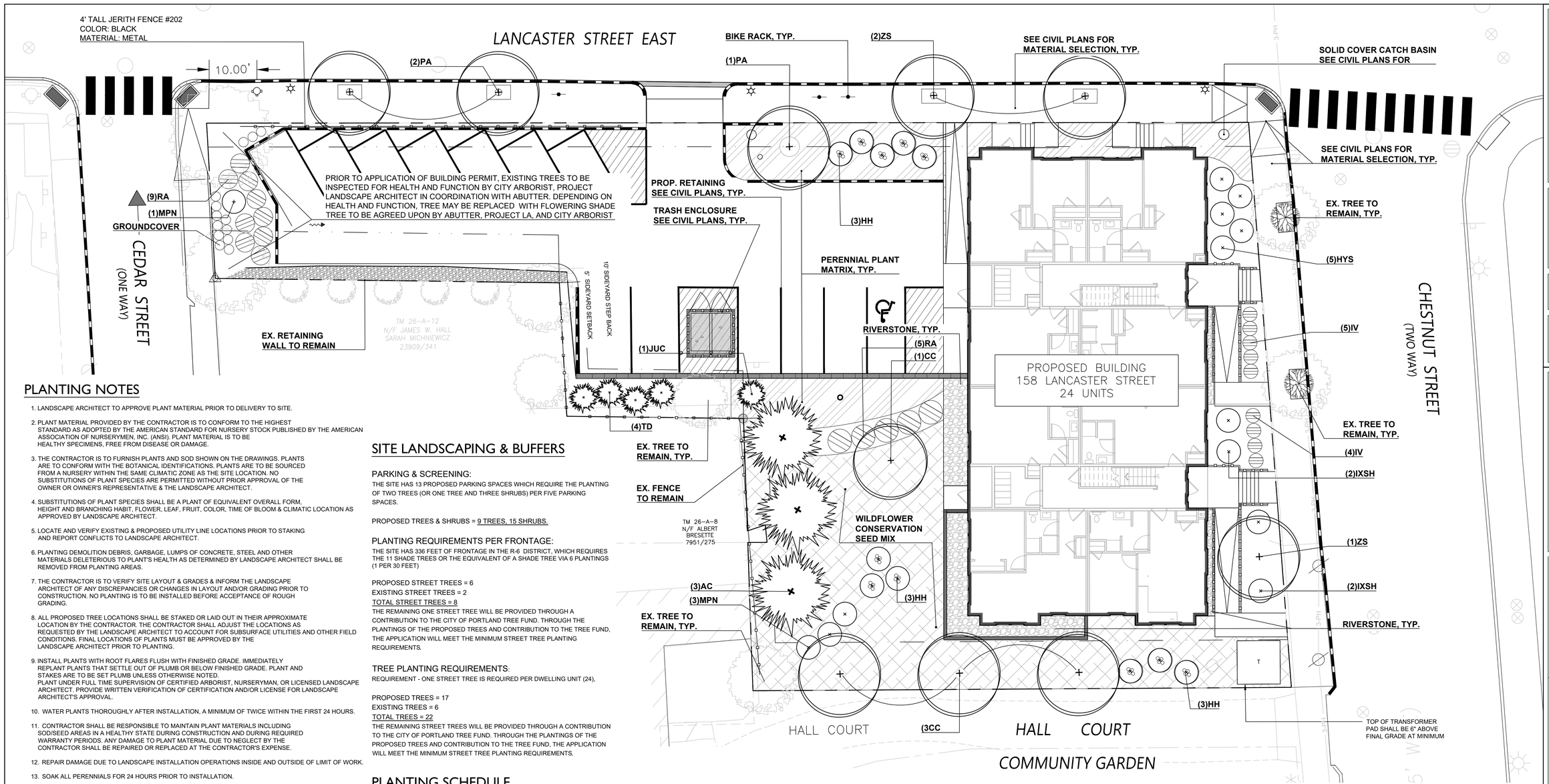
Revisions:
1ST WORKSHOP COMMENTS REV.1 - 09.30.2024
2ND WORKSHOP COMMENTS REV.2 - 12.23.2024

North:

Sheet No.:
L1

Scale: 1" = 20'-0"
0 10 20 40

C:\Users\DRY L\OneDrive\Documents\Onedrive\DRY LA\Projects\50 Cedar-158 Lancaster\CAD\50 Cedar Street-sketch Plan Submission REV 2 12.23.2024.dwg dry l 12/23/2024



PLANTING NOTES

1. LANDSCAPE ARCHITECT TO APPROVE PLANT MATERIAL PRIOR TO DELIVERY TO SITE.
2. PLANT MATERIAL PROVIDED BY THE CONTRACTOR IS TO CONFORM TO THE HIGHEST STANDARD AS ADOPTED BY THE AMERICAN STANDARD FOR NURSERY STOCK PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN, INC. (ANSI). PLANT MATERIAL IS TO BE HEALTHY SPECIMENS, FREE FROM DISEASE OR DAMAGE.
3. THE CONTRACTOR IS TO FURNISH PLANTS AND SOD SHOWN ON THE DRAWINGS. PLANTS ARE TO CONFORM WITH THE BOTANICAL IDENTIFICATIONS. PLANTS ARE TO BE SOURCED FROM A NURSERY WITHIN THE SAME CLIMATIC ZONE AS THE SITE LOCATION. NO SUBSTITUTIONS OF PLANT SPECIES ARE PERMITTED WITHOUT PRIOR APPROVAL OF THE OWNER OR OWNER'S REPRESENTATIVE & THE LANDSCAPE ARCHITECT.
4. SUBSTITUTIONS OF PLANT SPECIES SHALL BE A PLANT OF EQUIVALENT OVERALL FORM, HEIGHT AND BRANCHING HABIT, FLOWER, LEAF, FRUIT, COLOR, TIME OF BLOOM & CLIMATIC LOCATION AS APPROVED BY LANDSCAPE ARCHITECT.
5. LOCATE AND VERIFY EXISTING & PROPOSED UTILITY LINE LOCATIONS PRIOR TO STAKING AND REPORT CONFLICTS TO LANDSCAPE ARCHITECT.
6. PLANTING DEMOLITION DEBRIS, GARBAGE, LUMPS OF CONCRETE, STEEL AND OTHER MATERIALS DELETERIOUS TO PLANT'S HEALTH AS DETERMINED BY LANDSCAPE ARCHITECT SHALL BE REMOVED FROM PLANTING AREAS.
7. THE CONTRACTOR IS TO VERIFY SITE LAYOUT & GRADES & INFORM THE LANDSCAPE ARCHITECT OF ANY DISCREPANCIES OR CHANGES IN LAYOUT AND/OR GRADING PRIOR TO CONSTRUCTION. NO PLANTING IS TO BE INSTALLED BEFORE ACCEPTANCE OF ROUGH GRADING.
8. ALL PROPOSED TREE LOCATIONS SHALL BE STAKED OR LAID OUT IN THEIR APPROXIMATE LOCATION BY THE CONTRACTOR. THE CONTRACTOR SHALL ADJUST THE LOCATIONS AS REQUESTED BY THE LANDSCAPE ARCHITECT TO ACCOUNT FOR SUBSURFACE UTILITIES AND OTHER FIELD CONDITIONS. FINAL LOCATIONS OF PLANTS MUST BE APPROVED BY THE LANDSCAPE ARCHITECT PRIOR TO PLANTING.
9. INSTALL PLANTS WITH ROOT FLARES FLUSH WITH FINISHED GRADE. IMMEDIATELY REPLANT PLANTS THAT SETTLE OUT OF PLUMB OR BELOW FINISHED GRADE. PLANT AND STAKES ARE TO BE SET PLUMB UNLESS OTHERWISE NOTED. PLANT UNDER FULL TIME SUPERVISION OF CERTIFIED ARBORIST, NURSERYMAN, OR LICENSED LANDSCAPE ARCHITECT. PROVIDE WRITTEN VERIFICATION OF CERTIFICATION AND/OR LICENSE FOR LANDSCAPE ARCHITECT'S APPROVAL.
10. WATER PLANTS THOROUGHLY AFTER INSTALLATION, A MINIMUM OF TWICE WITHIN THE FIRST 24 HOURS.
11. CONTRACTOR SHALL BE RESPONSIBLE TO MAINTAIN PLANT MATERIALS INCLUDING SOD/SEED AREAS IN A HEALTHY STATE DURING CONSTRUCTION AND DURING REQUIRED WARRANTY PERIODS. ANY DAMAGE TO PLANT MATERIAL DUE TO NEGLECT BY THE CONTRACTOR SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE.
12. REPAIR DAMAGE DUE TO LANDSCAPE INSTALLATION OPERATIONS INSIDE AND OUTSIDE OF LIMIT OF WORK.
13. SOAK ALL PERENNIALS FOR 24 HOURS PRIOR TO INSTALLATION.
14. A LIST OF PLANTS INCLUDING BOTANICAL NAMES, SIZES, AND SPACING ARE SHOWN ON THE DRAWINGS. QUANTITIES ARE PROVIDED FOR CONTRACTOR'S CONVENIENCE AND ARE TO BE VERIFIED. IN THE EVENT THAT QUANTITIES OR OMISSIONS OCCUR THE PLAN DRAWINGS ARE TO BE FOLLOWED.
15. IRRIGATION: A TEMPORARY UNDERGROUND DRIP AND SPRINKLER IRRIGATION SYSTEM IS TO BE PROVIDED FOR ALL PLANT MATERIAL AND SOD OR SEEDED AREAS.
16. DISTURBED SITE AREAS ARE TO BE DRESSED WITH 6" MIN. OF AMENDED TOPSOIL FOR LAWNS AND 12" MIN. FOR PLANT BEDS. TOPSOIL FOR SEEDED AND/OR SEEDED AREAS IS TO BE TWO PARTS SHARP SAND, ONE PART LOAM AND ONE PART ORGANIC COMPOST.
17. PLANT BEDS ARE TO BE MULCHED TO A DEPTH OF 2" MIN. WITH NATURAL BARK MULCH WITH BARK SIZES NO LARGER THAN 3". PERENNIAL PLANT BEDS ARE TO BE MULCHED WITH BARK SIZES NO MORE THAN 1". TREES IN LAWN AREAS ARE TO HAVE MULCH RINGS OF 5' DIA.
18. TREES ADJACENT TO PEDESTRIAN ROUTES AND WITHIN PARKING ISLANDS ARE TO BE LIMBED TO 6' ABOVE GRADE.
19. ALL TREE SPECIES SHALL BE WATERED AT LEAST 2-4 TIMES EACH WEEK WITH 10-15 GALLONS ADMINISTERED TO EACH TREE DEPENDING ON THE WEATHER AND CURRENT MOISTURE LEVEL. WATERING WILL CONSIST OF 10-15 GALLONS ADMINISTERED TO EACH TREE EVERY TIME THEY ARE WATERED.

SITE SOIL NOTES

1. CONTRACTOR SHALL COORDINATE WITH OWNER'S REPRESENTATIVE FOR LOCATION OF STOCKPILE AREAS FOR STRIPPED TOPSOIL AND PLANTING SOIL PRODUCTS. CONTRACTOR SHALL ENSURE AREA IS PROTECTED AND CONTAMINATION OR DISTURBANCE OF STORED PRODUCTS IS NOT ALLOWED.
2. CONTRACTOR SHALL ENSURE SUBGRADE IS SCARIFIED PRIOR TO INSTALLING PLANTING SOIL AND BLEND WITH INITIAL LIFT OR PLACEMENT OF PROPOSED PLANTING SOIL.
3. COORDINATE PLACEMENT OF PLANTING SOIL WITH OTHER WORK, ESPECIALLY UTILITIES. PLACEMENT SHOULD OCCUR AFTER INSTALLATION OF ALL HARDSCAPE IMPROVEMENTS, IRRIGATION SYSTEM, UTILITIES, ETC. AND BEFORE INSTALLATION OF PLANTS.
4. SILVA CELL SOIL FOR STREET TREE PLANTING SHALL BE HIGH QUALITY LOAM-BASED PLANTING SOIL FOR FILLING THE SILVA CELLS.

SITE LANDSCAPING & BUFFERS

PARKING & SCREENING:

THE SITE HAS 13 PROPOSED PARKING SPACES WHICH REQUIRE THE PLANTING OF TWO TREES (OR ONE TREE AND THREE SHRUBS) PER FIVE PARKING SPACES.

PROPOSED TREES & SHRUBS = 9 TREES, 15 SHRUBS.

PLANTING REQUIREMENTS PER FRONTAGE:

THE SITE HAS 336 FEET OF FRONTAGE IN THE R-6 DISTRICT, WHICH REQUIRES THE 11 SHADE TREES OR THE EQUIVALENT OF A SHADE TREE VIA 6 PLANTINGS (1 PER 30 FEET)

PROPOSED STREET TREES = 6
EXISTING STREET TREES = 2
TOTAL STREET TREES = 8
THE REMAINING ONE STREET TREE WILL BE PROVIDED THROUGH A CONTRIBUTION TO THE CITY OF PORTLAND TREE FUND. THROUGH THE PLANTINGS OF THE PROPOSED TREES AND CONTRIBUTION TO THE TREE FUND, THE APPLICATION WILL MEET THE MINIMUM STREET TREE PLANTING REQUIREMENTS.

TREE PLANTING REQUIREMENTS:

REQUIREMENT - ONE STREET TREE IS REQUIRED PER DWELLING UNIT (24),

PROPOSED TREES = 17
EXISTING TREES = 6
TOTAL TREES = 22
THE REMAINING STREET TREES WILL BE PROVIDED THROUGH A CONTRIBUTION TO THE CITY OF PORTLAND TREE FUND. THROUGH THE PLANTINGS OF THE PROPOSED TREES AND CONTRIBUTION TO THE TREE FUND, THE APPLICATION WILL MEET THE MINIMUM STREET TREE PLANTING REQUIREMENTS.

PLANTING SCHEDULE

DECIDUOUS TREES

CODE	BOTANICAL NAME	COMMON NAME	QTY.	SIZE	SPACING
CC	*Cercis canadensis*	Eatern Redbud	4	2.5-3" cal	as shown
PA	*Prunus 'accolade'*	Accolade Cherry	3	2.5-3" cal	as shown
ZS	*Zelkova Serrata*	City Sprite Zelkova	3	2.5-3" cal	as shown

EVERGREEN TREES

CODE	BOTANICAL NAME	COMMON NAME	QTY.	SIZE	SPACING
AC	*Abies concolor*	White Fir	3	8-10'	as shown
TD	*Thuja occidentalis "Degroots Spire"*	Degroot's Spire Arborvitae	4	#7 CONT.	as shown

DECIDUOUS SHRUBS

CODE	BOTANICAL NAME	COMMON NAME	QTY.	SIZE	SPACING
HH	*Hypericum 'Hidcote'*	St. John's Wort	11	24"-36" ht.	48" O.C.
HYS	*Hydrangea quercifolia 'Snow Queen'*	Snow Queen Oakleaf Hydrangea	5	24"-36" ht.	60" O.C.
IV	*Itea virginica*	Little Henry Sweetspire	7	24"-36" ht.	36" O.C.
MPN	*Myrica pensylvanica*	Northern Bayberry	4	24"-30" ht.	60" O.C.
RA	*Rhus aromatica*	Lo-gro Sumac	14	24"-30" ht.	48" O.C.

EVERGREEN SHRUBS

CODE	BOTANICAL NAME	COMMON NAME	QTY.	SIZE	SPACING
IXSH	*Ilex glabra 'Shamrock'*	Shamrock Inkberry	4	30"-36" ht.	48" O.C.
JUC	*Juniperus conferta 'Emerald Sea*	Emerald Sea Shore Juniper	1	18"-24" ht.	48" O.C.

PERENNIAL MATRIX

CODE	BOTANICAL NAME	COMMON NAME	QTY.	SIZE	SPACING
AMH	*Amsonia hubrichtii*	Thread-leafed Bluestar	tbd	tbd	36" O.C.
ABB	*Astilbe 'Bressingham Beauty'*	Bressingham Beauty Astilbe	tbd	tbd	18" O.C.
COM	*Coreopsis 'Moonbeam'*	Moonbeam Coreopsis	tbd	tbd	18" O.C.
GRC	*Geranium x 'Rozanne'*	Rozanne Cranesbill	tbd	tbd	24" O.C.
HAH	*Hemeocallis 'Heavenly Angel Ice'*	Heavenly Angel Ice Daylilly	tbd	tbd	24" O.C.
HEC	*Heuchera 'Caramel'*	Caramel Coral Bells	tbd	tbd	18" O.C.
RFA	*Rudbeckia fulgida 'American Gold Rush'*	Gold Rush Black-Eyed Susan	tbd	tbd	24" O.C.
SMM	*Salvia 'May Night'*	May Night Salvia	tbd	tbd	24" O.C.
PVS	*Panicum virgatum 'Shenandoah'*	Shenandoah Switchgrass	tbd	tbd	24" O.C.
SS	*Schizachryum scoparium*	Little Bluestem	tbd	tbd	18" O.C.

PLANTING LEGEND

EXISTING TREE
PROPOSED DECIDUOUS TREE
PROPOSED SHRUB
PROPOSED EVERGREEN TREE
PERENNIAL MATRIX
WILDFLOWER SEED MIX

NOTE: This drawing is PRELIMINARY REVIEW ONLY. It is NOT intended for use as a construction document.

Prepared For:
REVELER, LLC
188 STATE STREET, 3RD FLOOR
PORTLAND, ME 04101

Prepared By:
Dry landscape architecture, l.l.c
31 miller ave.
biddeford, me 04005

Date:
APRIL 16, 2024

Issued For:
PERMITTING DOCUMENTS

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Title: PLANTING PLAN

158 Lancaster Street
PHASE 3
Portland ME 04103

Revisions:
1ST WORKSHOP COMMENTS REV.1 - 09.30.2024
2ND WORKSHOP COMMENTS REV.2 - 12.23.2024

North:

Sheet No.: L3

Scale: 1" = 10'-0"
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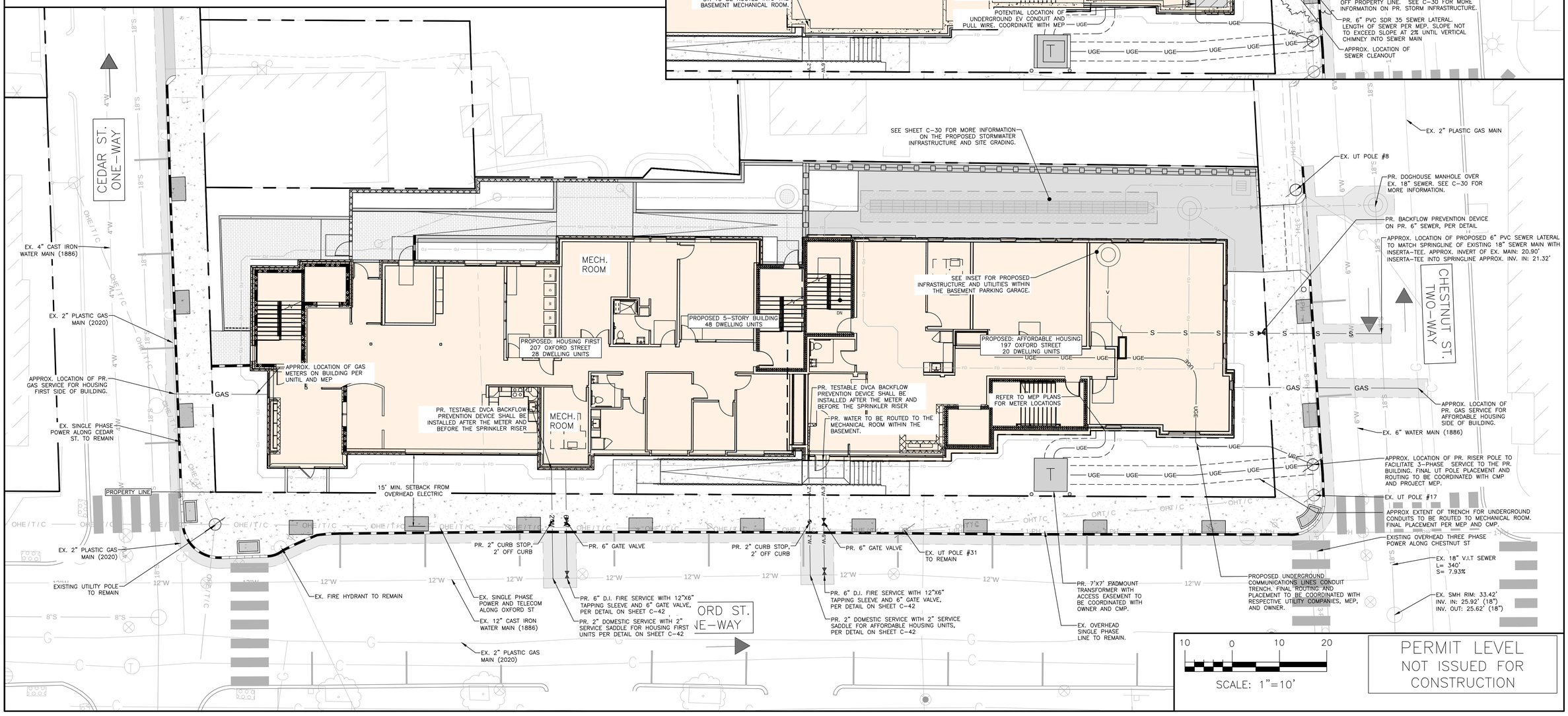
GENERAL NOTES:

1. LOCATION OF PROPOSED CONNECTIONS ARE APPROXIMATE. CONTRACTOR TO CONTACT ENGINEER IF FIELD INFORMATION VARIES FROM INFORMATION ON PLANS.
2. CONTRACTOR IS TO BE CAUTIONED THAT CERTAIN LOCATIONS AND/OR ELEVATIONS OF EXISTING UTILITIES HAVE BEEN PROVIDED THROUGH UTILITY COORDINATION OR OTHER OBSERVATIONS. INFORMATION IS NOT TO BE RELIED UPON AS EXACT OR COMPLETE. CONTRACTOR TO FIELD VERIFY AND COORDINATE WITH UTILITY COMPANY AND DIG SAFE NO LESS THAN 72 HOURS PRIOR TO ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF ALL UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS INDICATED IN THE CONTRACT DOCUMENTS. CONTRACTOR TO NOTIFY ENGINEER OF ANY DIFFERENTIATIONS FROM EXISTING CONDITIONS, INCLUDING UTILITY INFORMATION, PRIOR TO ANY CHANGES.
3. FOR ALL UTILITIES, ACORN ENGINEERING DESIGN LIMITS END AT EXTERIOR WALL OF BUILDING. METERING OF UTILITIES TO BE COMPLETED BY M.E.P. UNLESS SPECIFIED OTHERWISE.
4. CONTRACTOR TO COORDINATE WITH ARCHITECT ON FINAL UTILITY CONNECTIONS WITHIN THE BUILDING.
5. SEWER UTILITIES: CONTRACTOR TO COORDINATE WITH ARCHITECT FOR FINAL SERVICE CONNECTION. SEWER UTILITIES TO BE CONSTRUCTED IN ACCORDANCE WITH CITY OF PORTLAND TECHNICAL STANDARDS. VALVE FOR BACKFLOW PREVENTION SHALL BE INSTALLED WITHIN THE THE PROPERTY LINES FOR EACH CITY SEWER CONNECTION. CONTACT ENGINEER IF INVERT FIELD CONDITIONS VARY FROM DESIGN.
6. WATER UTILITIES: FINAL PIPE SIZING PROVIDED BY M.E.P. ENGINEER AND FIRE PROTECTION DESIGNER. INTERNAL METERING, BACKFLOW PREVENTION, AND PRESSURE REDUCERS TO BE COMPLETED BY M.E.P. ENGINEER. DOMESTIC WATER PIPE SIZES WILL DETERMINE THE FINAL WATER METERING OPTIONS. METER MAY BE SMALLER THAN PROPOSED WATER MAIN. WATER METERING, PRESSURE REDUCER AND BACKFLOW PREVENTION TO BE IN ACCORDANCE WITH THE PORTLAND WATER DISTRICT STANDARDS. CONTRACTOR TO FOLLOW METERING GUIDELINES OF THE PORTLAND WATER DISTRICT AND CITY OF PORTLAND.
7. GAS UTILITIES: PROJECT GAS LOAD, GAS UTILITY DESIGN, AND FINAL GAS SERVICE LOCATION AND METERS TO BE DEFINED BY M.E.P. AND IN ACCORDANCE WITH UNITIL.
8. ELECTRIC UTILITIES: ELECTRIC DESIGN TO BE FINALIZED BY M.E.P. ENGINEER. ELECTRICAL LOAD TO BE DETERMINED BY M.E.P. ENGINEER. METER LOCATION AND TRANSFORMER SIZE, IF NECESSARY DEFINED BY M.E.P. M.E.P. TO FINALIZE SERVICE CONNECTION TO BUILDING. ALL ELECTRIC CONSTRUCTION SHALL CONFORM TO CMP GUIDEBOOK OF STANDARD REQUIREMENTS, MOST RECENT EDITION. DESIGN SUBJECT TO FINAL APPROVAL FROM CMP.
9. CABLE AND TELEPHONE PULLBOXES AND PEDESTAL LOCATIONS TO BE DETERMINED BY CHARTER COMMUNICATIONS AND FAIRPOINT PRIOR TO CONSTRUCTION. CONTRACTOR TO COORDINATE INSTALLATION OF UNDERGROUND UTILITIES WITH ALL UTILITY COMPANIES INVOLVED.



ISSUED FOR	BY DATE
JOINT MAJOR SITE PLAN APPLICATION	SJL 4/11/24
COMMENT RESPONSE	SJL 9/30/24
COMMENT RESPONSE 2	SJL 12/23/24

DRAWING NAME: PHASE 1 – UTILITY PLAN

PROJECT NAME: PHASE 1 – PHASED OXFORD STREET REDEVELOPMENT

CLIENT: AVESTA HOUSING
307 CUMBERLAND AVE, PORTLAND, ME 04101

ACORN ENGINEERING, INC.

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(207) 775-2655

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SCALE: AS NOTED
DESIGNED BY: SJL
DRAWN BY: DNM
CHECKED BY: SJL

STATE OF MAINE
SAMUEL J. LEBEL
No. 16505
PROFESSIONAL ENGINEER
LICENSED
12/23/24

DRAWING NO.
C-21

LANCASTER STREET
TWO–WAY

ELM STREET
ONE–WAY

CEDAR STREET
ONE–WAY

HALL COURT

PR. 6" D.I. FIRE SERVICE WITH 12"X6" SWIVEL TEE AND 6" GATE VALVE

2" TYPE K COPPER DOMESTIC LINE WITH 2" SERVICE SADDLE. PR. 2" AND 6" WATER SERVICE LINE TO TAP INTO THE LANCASTER STREET WATER MAIN. LANCASTER STREET WATER MAIN IS CURRENTLY AN 8" CAST (1887) WATER MAIN THAT IS PROPOSED TO BE REPLACED WITH A 12" DUCTILE IRON WATER MAIN AS PERMITTED UNDER THE BAYSIDE MDP WATER MAIN REPLACEMENT PROJECT, WHICH IS CURRENTLY UNDER REVIEW WITH PWD.

PR. 2" CURB STOP, 2' FROM CURB

PR. BACKFLOW PREVENTER ON FOUNDATION DRAIN

EXISTING RECIPROCAL ACCESS AND UTILITY EASEMENT, RECORDED IN CCRD BOOK: 224, PAGE: 424.

EXTEND 12" WATER MAIN ALL THE WAY TO CHESTNUT STREET

UNDERGROUND SECONDARIES TO BE ROUTED TO THE BUILDINGS UTILITY ROOM. REFER TO MEP PLANS FOR METER LOCATIONS. FINAL ROUTING AND PLACEMENT TO BE COORDINATED WITH RESPECTIVE UTILITY COMPANIES, MEP, AND OWNER.

POTENTIAL 38Y MANHOLE AND/OR PULL BOXES, PER DETAIL FOR 3–PHASE POWER TO BUILDING. FINAL MANHOLE PLACEMENT PER CMP.

PR. 6" PVC SEWER TO RUN UNDER SLAB TO THE BUILDINGS MECHANICAL ROOM PER MEP

PR. TESTABLE DVCA BACKFLOW PREVENTION DEVICE SHALL BE INSTALLED AFTER THE METER AND BEFORE THE SPRINKLER RISER

UTILITY/SPRINKLER ROOM

PROPOSED BUILDING:
50 CEDAR STREET
24–UNITS
(4,796 SF)

UTILITY ROOM

APPROX. LOCATION OF SUBSURFACE STORAGE SYSTEM FOR 50 CEDAR STREET. SEE GRADING PLAN FOR MORE INFORMATION.

POTENTIAL 38Y MANHOLE AND/OR PULL BOXES TO CONVEY UNDERGROUND PRIMARY CONDUITS FOR 89 ELM STREET. FINAL ROUTING AND PLACEMENT TO BE COORDIANTED WITH RESPECTIVE UTILITY COMPANIES, MEP, AND OWNER.

APPROX. LOCATION OF GAS METERS ON BUILDING PER UNITIL AND MEP

PR. RISER POLE WITH POLE MOUNTED TRANSFORMER, TO ROUTE SECONDARY LINES UNDERGROUND TO THE PROPOSED BUILDING AT 50 CEDAR STREET. FINAL LOCATION OF RISER POLE TO BE COORDINATED WITH CMP

PR. EXTENT OF TRENCHING FOR UNDERGROUND ELECTRIC.

PR. EXTENT CONCRETE ENCASED DUCT BANK FOR UNDERGROUND SECONDARY CONDUITS

APPROX. ELEVATION AT CROWN OF EX. 48" SEWER: 7.58'

APPROX. EX. INV. INTO 48" SEWER: 4.95'

EX. SMH RIM: 16.88'
48" INV. IN: 3.58'
48" INV. OUT: 3.48'

EX. HYDRANT RELOCATED FROM THE OPPOSITE SIDE OF CEDAR STREET. SEE SHEET C–23 FOR MORE INFORMATION ON THE RELOCATED HYDRANT LOTION AND PROPOSED IMPROVEMENTS.

EX. MH RIM: 17.60'
8" INV. IN: 8.20'
8" INV. OUT: 8.10'

APPROX. LOCATION OF BEND IN EX. SEWER. APPROX. INV. AT BEND: 13.47'

EX. CB RIM: 19.47'
HOOD: 13.87'

APPROX. LOCATION OF PROPOSED 6" PVC SEWER LATERAL TO MATCH SPRINGLINE OF EXISTING SEWER MAIN WITH INSERTA–TEE. APPROX. INVERT OF EX. MAIN: 14.39'
WYE INTO SPRINGLINE, APPROX. INV. IN: 14.89'
CONTRACTOR TO TEST PIT TO CONFIRM INVERT.
TYP. OF ALL UTILITY CONNECTIONS

6" PVC GRAVITY SEWER LATERAL. L=23', SLOPE MIN: 0.01, MAX: 0.04

PR. BACKFLOW PREVENTER AT PL ON 6" PVC SEWER.

APPROX. LOCATION OF UTILITY TRENCHING AND PAVEMENT REPAIRS

APPROX. LOCATION OF PR. GAS SERVICE FOR BUILDING. FINAL SERVICE LOCATION, METERS, AND GAS VALVE PER MEP AND UNITIL.

89 ELM STREET LLC
39779/236

TM 26–A–12
N/F JAMES W. HALL
SARAH MICHNIEWICZ
23909/341

TM 26–A–9,10
N/F PETER P. & ALICE
D. AMES
7926/278

N/F AMELIA A. LABRECK
37970/11

GENERAL NOTES:

1. LOCATION OF PROPOSED CONNECTIONS ARE APPROXIMATE. CONTRACTOR TO CONTACT ENGINEER IF FIELD INFORMATION VARIES FROM INFORMATION ON PLANS.
2. CONTRACTOR IS TO BE CAUTIONED THAT CERTAIN LOCATIONS AND/OR ELEVATIONS OF EXISTING UTILITIES HAVE BEEN PROVIDED THROUGH UTILITY COORDINATION OR OTHER OBSERVATIONS. INFORMATION IS NOT TO BE RELIED UPON AS EXACT OR COMPLETE. CONTRACTOR TO FIELD VERIFY AND COORDINATE WITH UTILITY COMPANY AND DIG SAFE NO LESS THAN 72 HOURS PRIOR TO ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF ALL UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS INDICATED IN THE CONTRACT DOCUMENTS. CONTRACTOR TO NOTIFY ENGINEER OF ANY DIFFERENTIATIONS FROM EXISTING CONDITIONS, INCLUDING UTILITY INFORMATION, PRIOR TO ANY CHANGES.
3. FOR ALL UTILITIES, ACORN ENGINEERING DESIGN LIMITS END AT EXTERIOR WALL OF BUILDING. METERING OF UTILITIES TO BE COMPLETED BY M.E.P. UNLESS SPECIFIED OTHERWISE.
4. CONTRACTOR TO COORDINATE WITH ARCHITECT ON FINAL UTILITY CONNECTIONS WITHIN THE BUILDING.
5. SEWER UTILITIES: CONTRACTOR TO COORDINATE WITH ARCHITECT FOR FINAL SERVICE CONNECTION. SEWER UTILITIES TO BE CONSTRUCTED IN ACCORDANCE WITH CITY OF PORTLAND TECHNICAL STANDARDS. VALVE FOR BACKFLOW PREVENTION SHALL BE INSTALLED WITHIN THE THE PROPERTY LINES FOR EACH CITY SEWER CONNECTION. CONTACT ENGINEER IF INVERT FIELD CONDITIONS VARY FROM DESIGN.
6. WATER UTILITIES: FINAL PIPE SIZING PROVIDED BY M.E.P. ENGINEER AND FIRE PROTECTION DESIGNER. INTERNAL METERING, BACKFLOW PREVENTION, AND PRESSURE REDUCERS TO BE COMPLETED BY M.E.P. ENGINEER. DOMESTIC WATER PIPE SIZES WILL DETERMINE THE FINAL WATER METERING OPTIONS. METER MAY BE SMALLER THAN PROPOSED WATER MAIN. WATER METERING, PRESSURE REDUCER AND BACKFLOW PREVENTION TO BE IN ACCORDANCE WITH THE PORTLAND WATER DISTRICT STANDARDS. CONTRACTOR TO FOLLOW METERING GUIDELINES OF THE PORTLAND WATER DISTRICT AND CITY OF PORTLAND.
7. GAS UTILITIES: PROJECT GAS LOAD, GAS UTILITY DESIGN, AND FINAL GAS SERVICE LOCATION AND METERS TO BE DEFINED BY M.E.P. AND IN ACCORDANCE WITH UNITIL.
8. ELECTRIC UTILITIES: ELECTRIC DESIGN TO BE FINALIZED BY M.E.P. ENGINEER. ELECTRICAL LOAD TO BE DETERMINED BY M.E.P. ENGINEER. METER LOCATION AND TRANSFORMER SIZE, IF NECESSARY DEFINED BY M.E.P. M.E.P. TO FINALIZE SERVICE CONNECTION TO BUILDING. ALL ELECTRIC CONSTRUCTION SHALL CONFORM TO CMP GUIDEBOOK OF STANDARD REQUIREMENTS, MOST RECENT EDITION. DESIGN SUBJECT TO FINAL APPROVAL FROM CMP.
9. CABLE AND TELEPHONE PULLBOXES AND PEDESTAL LOCATIONS TO BE DETERMINED BY CHARTER COMMUNICATIONS AND FAIRPOINT PRIOR TO CONSTRUCTION. CONTRACTOR TO COORDINATE INSTALLATION OF UNDERGROUND UTILITIES WITH ALL UTILITY COMPANIES INVOLVED.

10 0 10 20
SCALE: 1" = 10'

PERMIT LEVEL
NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY DATE
JOINT MAJOR SITE PLAN APPLICATION	SJL 4/10/24
COMMENT RESPONSE	SJL 6/20/24
COMMENT RESPONSE 2	SJL 12/23/24

DRAWING NAME: PHASE 2 – UTILITY PLAN

PROJECT NAME: PHASE 2 –PHASED OXFORD STREET REDEVELOPMENT

CLIENT: REVELER DEVELOPMENT
188 STATE STREET, 3RD FLOOR, PORTLAND, ME 04101

THESE PLANS SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM ACORN ENGINEERING, INC. AND THE ORIGINAL PLANS SHALL BE RETURNED OR DESTROYED UPON REQUEST. ANY USE OR MODIFICATION OF THESE PLANS BY OTHERS SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO ACORN ENGINEERING, INC.

ACORN ENGINEERING, INC.
70 FORT ROAD, SOUTH PORTLAND, MAINE 04106
PO BOX 3422 PORTLAND, MAINE 04104
(207) 775–2655

FILE: 1212.2_AE_CIVIL
JN: 1212
SCALE: AS NOTED
DESIGNED BY: SJL
DRAWN BY: DNM
CHECKED BY: SJL

STATE OF MAINE
SAMUEL J. LEBEL
No. 16505
REGISTERED PROFESSIONAL ENGINEER
12/23/24

DRAWING NO.
C-22

LANCASTER ST.
TWO–WAY

12" WATER MAIN EXTENSION TO CHESTNUT STREET AS PERMITTED UNDER THE BAYSIDE MDP WATER MAIN REPLACEMENT PROJECT WHICH IS CURRENTLY UNDER REVIEW WITH PWD.

PR. 2" DOMESTIC SERVICE WITH 2" SERVICE SADDLE

PR. 6" D.I. FIRE SERVICE WITH 12"X6" TAPPING SLEEVE AND 6" GATE VALVE

PR. LOCATION OF RELOCATED FIRE HYDRANT.

10.00'

PR. 2" CURB STOP

MAINTAIN 15' SEPARATION FROM EX OVERHEAD UTILITIES TO PR. BUILDING

EX. 3–PHASE POWER LINES ALONG CHESTNUT STREET TO REMAIN

EX. MH RIM: 11.20'
8" INV. IN: 5.82'
6" INV. IN: 5.62'
18" INV. IN: 5.02'
18" INV. OUT: 4.92'

PR. BACKFLOW PREVENTION DEVICE ON PR. 6" SEWER, PER DETAIL ON SHEET C–42

APPROX. LOCATION OF PROPOSED 6" PVC SEWER LATERAL TO MATCH SPRINGLINE OF EXISTING 18" SEWER MAIN WITH INSERTA–TEE. APPROX. INV. OF EX. MAIN: 5.27' INSERTA TEE INTO SPRINGLINE APPROX. INV. IN: 6.15'

PR. SUBSURFACE STORMWATER DETENTION SYSTEM. SEE C–33, THE PH3 GRADING AND DRAINAGE PLAN FOR MORE INFORMATION.

INSTALL THRUST BLOCKS AT PR. WATER MAIN BEND, TYP.

PR. TESTABLE DVCA BACKFLOW PREVENTION DEVICE SHALL BE INSTALLED AFTER THE METER AND BEFORE THE SPRINKLER RISER

UTILITY ROOM

FINAL LOCATION OF GAS METERS ON BUILDING PER UNITIL AND MEP

CEDAR ST.
ONE–WAY

CHESTNUT ST.
TWO–WAY

APPROX. LOCATION OF PR. GAS SERVICE FOR BUILDING. FINAL SERVICE LOCATION, METERS, AND GAS VALVE PER MEP AND UNITIL

APPROX. LOCATION OF EX. 6" WATER MAIN

APPROX. LOCATION OF EX. 18" SEWER MAIN

APPROX. LOCATION OF EX. 2" GAS MAIN

APPROX. LOCATION OF EX. UNDERGROUND UTILITY DUCT BANK

EX. POLE #9.5 TO REMAIN

PR. BEEHIVE FIELD INLET. SEE SHEET C–33 FOR MORE INFORMATION.

PR. APPROX. EXTENT OF DUCT BANK FOR UNDERGROUND CONDUITS TO BE ROUTED TO THE TRANSFORMER, FINAL LAYOUT PER MEP AND CMP

OPTION A: PR. RISER POLE TO REPLACE EXISTING UTILITY POLE. POTENTIAL BANK OF POLE MOUNTED TRANSFORMERS. FINAL UTILITY LAYOUT PER CMP, MEP, AND OWNER.

PROPOSED STREET TREE AS PART OF PHASE 3 OFFSITE IMPROVEMENTS.

PROPOSED SIDEWALK UPGRADE AND CURBLINE BUMPOUT ALONG CEDAR STREET. SEE C–10 FOR MORE INFORMATION.

PR. UNDERGROUND ELECTRIC AND TELECOMMUNICATIONS LINES CONDUIT TRENCH, FINAL ROUTING AND PLACEMENT TO BE COORDINATED WITH RESPECTIVE UTILITY COMPANIES, MEP, AND OWNER

EX. UTILITY SUPPORT POLE TO BE REMOVED AND RELOCATED AS NECESSARY IN COORDINATION WITH CMP

OPTION B: POTENTIAL 9' X 9' TRANSFORMER ON CONCRETE PAD, PER DETAIL ON SHEET C–43

PR. UTILITY POLE. RELOCATE TRANSFORMER & SECONDARY SERVICE.

HALL COURT

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10 0 10 20
SCALE: 1"=10'

PERMIT LEVEL
NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY DATE
JOINT SITE PLAN APPLICATION	SJL 4/10/24
COMMENT RESPONSE	SJL 9/30/24
COMMENT RESPONSE 2	SJL 12/23/24

DRAWING NAME: PHASE 3 – UTILITY PLAN
PROJECT NAME: PHASE 3 – PHASED OXFORD STREET REDEVELOPMENT
CLIENT: REVELER DEVELOPMENT
188 STATE STREET, 3RD FLOOR, PORTLAND, ME 04101

ACORN ENGINEERING, INC.
ACORN ENGINEERING, INC.
PO BOX 3372, PORTLAND MAINE 04104
(207) 775–2655

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STATE OF MAINE
SAMUEL J. LEBEL
No. 16505
REGISTERED PROFESSIONAL ENGINEER
LICENSED
9/30/24

DRAWING NO.
C-23

GENERAL NOTES:

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2. DESIGN OF TEMPORARY SOIL RESTRAINT MEASURES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR IF NECESSARY FOR CONSTRUCTION.
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6. CONTRACTOR SHALL VERIFY BOTTOM AND TOP OF CURB ELEVATIONS ALONG BUILDING FRONTAGES PRIOR TO CONSTRUCTION OF THE FOUNDATIONS. CONTACT ENGINEER PRIOR TO CONSTRUCTION IF DISCREPANCIES ARE FOUND.

BUILDING HEIGHT CALCULATION:

AVERAGE GRADE: (29.40'+35.40'+42.25'+41.07')/4 = 37.03'

ROOF HEIGHT: 92.00'

BUILDING HEIGHT: 92.00' – 37.03' = 54.96'

HALL COURT

CEDAR ST. ONE–WAY

CHESTNUT ST. TWO–WAY

OXFORD ST. ONE–WAY

BASEMENT LEVEL:
PROPOSED 5–STORY BUILDING
197 OXFORD STREET
BASEMENT FFE: 30.00'

PROPOSED 5–STORY BUILDING
48 DWELLING UNITS

PROPOSED: HOUSING FIRST
207 OXFORD STREET
28 DWELLING UNITS

PROPOSED: AFFORDABLE HOUSING
197 OXFORD STREET
20 DWELLING UNITS

PR. TW: 31.15'
BW (NW): 30.00'
BW (SE): 29.65'

PR. TW: 30.80'
BW (NW): 28.50'
BW (SE): 29.30'

PR. DMH RIM: 28.40'
10" INV. IN: 25.63' (10" HEADER PIPE FROM R–TANK OVERFLOWS)
4" INV. IN: 22.61' (UNDERDRAIN FROM R–TANK WITH CAP AND 1" ECCENTRIC ORIFICE DRILLED ON CAP INSIDE OF CB)
(2) 4" INV. IN: 24.00' (FOUNDATION DRAINS)
12" INV. OUT: 22.31'

EX.: 25.69'

EX. EP: 26.56'

EX. EP: 26.51'

PR. TW: 28.50'
BW: 27.00'

PR. F–BASIN RIM: 27.90'
INV. OUT: 26.00'

PR. 25.25'

EX. BC: 26.24'
EX. TC: 26.67'

PR. BACKFLOW PREVENTER, TYP. OF 2, TO BE PLACED ON STORM DRAIN AND SEWER 1' OFF PROPERTY LINE. SEE C–21 FOR MORE INFORMATION ON SEWER.

POTENTIAL LOCATION OF DOGHOUSE MANHOLE ON EX. 18" SEWER MAIN.
RIM: 27.15'
INV. IN: 21.72' (12" STORMDRAIN FROM OCS)
INV. IN: 19.06' (EX. 18" SEWER)
INV. OUT: 18.66' (EX. 18" SEWER)

PR. 27.53'

PR. 27.60'

PR. 28.70'

EX. BC: 28.15'
PR. 1" LIP BETWEEN EXISTING PAVEMENT AND DRIVEWAY APRON: 28.23'

TRANSITION FROM 7" CURB TO 5"

EX. BC: 30.92'
PR. TC: 31.50'

PR. 4" UNDERDRAIN WITHIN SYSTEM, TYP. OF 2 UNDER EACH ROW OF TANKS.

PR. R–TANK SUBSURFACE STORMWATER DETENTION SYSTEM, PER DETAIL

PR. (4)–4" OVERFLOW PIPES FROM SYSTEM INTO 10" HEADER PIPE

PR. TW: 40.00'
PR. BW–SE: 36.00'
PR. TW–NW: 35.90'
PR. BW–NW: 31.63'

PR. TW: 36.50'
BW (NW): 30.05'
BW (SE): 36.25'

PR. TW: 36.50'
BW–S: 36.25'
BW–N: 30.00'

EX. BW: 31.66'
EX. TW: 35.70'

ROOF OUTLINE ABOVE, TYP.

PR. STORMFILTER VAULT TO COLLECT AND TREAT 25% OF THE ROOF RUNOFF. STORMFILTER TO HAVE AN OPEN GRATE TO COLLECT RUNOFF FROM THE BACK PATIO AREA. RIM APPROX.: 36.10'
6" INV. IN: 33.85' (FIELD INLET)
6" APPROX. INV. IN: 33.85' (ROOF LEADER)
8" INV. OUT: 29.60'

6"X8"X10" WYE TO RELAY 6" ROOF LEADER WITH UNTREATED ROOF RUNOFF AND TREATED STORMWATER FROM STORMFILTER VAULT TO BE DETAINED IN RTANK SUBSURFACE SYSTEM.
RIM: 36.00'
8" APPROX. INV. IN: 26.98' (STORM FILTER–TREATED)
6" INV. IN: 27.00' (ROOF LEADER–UNTREATED)
10" INV. OUT: 26.00' (10" TO R–TANKS)

PR. HOUSING FIRST EGRESS TO BACK PATIO AREA. PR. ¾" THRESHOLD BETWEEN BUILDING ENTRY AND LANDING. FFE IN STAIRWELL: 37.00'
SPOT GRADE AT LANDING: 36.96'

HALF INCH THRESHOLD BETWEEN BLDG FFE AND LANDING. PR. BLDG FFE: 30.00'
SPOT AT LANDING OUTSIDE OF AFFORDABLE HOUSING ENTRY DOOR: 29.96'. TYP. AT ALL DOORS

PR. RIDGE LINE /DRAINAGE DIVIDE LINE DELINEATING SURFACE RUNOFF FLOWS FROM THE COVERED PARKING AREA AND DRIVE AISLE.

OIL WATER SEPARATOR
RIM: 29.00'
INV. OUT: 24.70'

PR. 29.65'
PR. 29.45'
PR. 29.10'
PR. 29.55'
PR. 29.45'
PR. 29.35'
PR. 29.20'
PR. 29.40'
PR. 28.75'
PR. 29.95'
PR. 29.90'
PR. 29.90'
PR. 29.80'
PR. 30.00'
PR. 30.00'
PR. 30.00'

TIPDOWN FROM 7" CURB REVEAL TO 4" CURB REVEAL AT BUG. TYP. AT DRIVEWAYS ALONG EAST SIDE OF CEDAR STREET. FINAL GRADING AND DESIGN OF OFF–SITE IMPROVEMENTS IN COORDINATION WITH DPW.

32.93'

34.06'

34.32'

36.12'

TM 26–B–14
N/F MARY LEE BENNISON
27956/297

EX. BC: 37.52'
EX. TC: 37.90;

TRANSITION CURB REVEAL TO MATCH INTO EXISTING CURB LINE AT END OF FRONTAGE

EX. 37.90'

PR. 41.76'

PR. 41.04'

PR. 41.81'

PR. TW: 41.20'
BW–E: 41.10'
BW–W: 38.36'

PR. 39.38'

EX. BC: 38.75'
EX. TC: 39.03'
PR. TC: 39.33'
(7" CURB)

PR. L= 13.70'
WALKWAY, S=4.9%

BC: 39.55'
TC: 40.13'
(7" CURB)

EX. BC: 40.00'
PR. TC: 40.58'
(7" CURB)

PR. 40.64'

PR. 42.25'

PR. FOUNDATION DRAIN HIGH POINT AND CLEANOUT, TYP. OF 2

EX. BC: 41.45'
PR. TC: 42.03'

PROPERTY LINE

EX. 41.70'

PR. 42.10'

PR. 41.85'

FLUSH CURB, TYP.

PR. 6" SD. L=61', S=0.005

PR. BW: 39.40'

PR. FIELD INLET WITH BEEHIVE GRATE, PER DETAIL ON SHEET C–44. RIM: 38.70'

PR. 6" SD. L=27', S=0.005

PR. 41.10'

PR. 41.07'

PR. 41.80'

PR. 41.87'

PR. L= 14.85'
WALKWAY, S=4.7%

PR. L=30' ADA COMPLIANT RAMP PER ARCHITECT

PR. 39.53'

PR. RETAINING WALL AND RAILING ADJACENT TO RAMP, TYP. PER ARCHITECT

41.96' WITH ¾" THRESHOLD, TYP.

PR. FIELD INLET PER DETAIL, ON SHEET C–44. RIM: 41.90'

41.96' WITH ¾" THRESHOLD, TYP.

FFE: 42.00'

PR. 40.40'

PR. 40.30'

FFE: 42.00'

HALF INCH THRESHOLD BETWEEN BLDG FFE AND BRICK LANDING. PR. SPOT AT LANDING OUTSIDE OF HOUSING FIRST ENTRY DOOR: 41.96'

PR. 41.74'

PR. 42.10'

EX. BC: 40.77'
PR. TC: 41.35'
(7" REVEAL)

EX. BC: 41.21'
PR. TC: 41.79'

EX. BC: 40.26'
PR. TC: 40.84'
(7" REVEAL)

PR. STEPPED WALLS ALONG REAR PROPERTY LINE PER ARCHITECT

PR. FIELD INLET PER DETAIL ON SHEET C–44. RIM: 39.15'

PR. BW: 39.20'

PR. 39.25'

PR. L=30' ADA COMPLIANT RAMP PER ARCHITECT

PR. 39.50'

PR. STORMFILTER VAULT TO COLLECT AND TREAT 25% OF THE ROOF RUNOFF. STORMFILTER VAULT PER DETAIL ON SHEET C–45. SEE INSET FOR MORE INFORMATION.

PR. 36.85'

PR. 37.00' WITH ¾" THRESHOLD TO 36.96'

PR. 39.50'

PR. 39.42'

PR. 39.55'

PR. 39.48'

PR. 39.31'

PR. 39.50'

PR. 39.22'

PR. 30' RAMP, S=8%

PR. 41.86'

EX. BC: 38.93'
PR. TC: 39.51'
(7" REVEAL)

EX. BC: 38.42'
PR. TC: 39.00'
(7" REVEAL)

PR. CIP WALL WITH MIN. 18" REVEAL ABOVE PAVEMENT WHEN IN VEHICULAR TRAVEL WAY, PER STRUCTURAL ENGINEER

PR. R–TANK SUBSURFACE STORMWATER DETENTION SYSTEM, PER DETAIL ON SHEET C–45

PR. ROOF LEADER FOR 75% OF ROOF RUNOFF TO BE ROUTED TO SUBSURFACE DETENTION SYSTEM. REMAINING 25% TO BE ROUTED TO THE PR. STORMFILTER.

HALF INCH THRESHOLD BETWEEN BLDG FFE AND LANDING. PR. BLDG FFE: 42.00'
SPOT AT LANDING OUTSIDE OF AFFORDABLE HOUSING ENTRY DOOR: 41.96'

PR. (8) – 6.75" STEPS TO: 37.33'

PR. 37.00'

PR. 37.31'

PR. 37.27'

PR. 41.92'

EX. BC: 36.61'
PR. TC: 37.19'
(7" REVEAL)

EX. BC: 36.83'
PR. TC: 37.41'
(7" REVEAL)

EX. BC: 37.46'
PR. TC: 38.04'
(7" REVEAL)

SEE INSET FOR PR. GRADES IN THE COVERED PARKING AREA.

PR. BC: 26.66'
PR. TC: 27.24'

PROPOSED DOGHOUSE MANHOLE TO FACILITATE STORM DRAIN CONNECTION. SEE INSET FOR INVERTS

PR. 12" SD STORM DRAIN
L=40'
S=0.015

PR. 28.70'

PR. 28.75'

PR. BC: 28.20'
PR. TC: 28.62'

PR. 35.75'

PR. 35.40'

EX. BC: 35.70'
PR. TC: 36.28'
(7" REVEAL)

EX. BC: 34.91'
PR. TC: 35.49'
(7" REVEAL)

EX. CATCH BASIN HEADSTONE TO BE REMOVED AND REPLACED WITH CASCADE GRATE (3 FLANGE NEENAH 3589 LL4.) EX. CB RIM: 33.34'
TC: 33.92'

BEGIN 10' TIPDOWN CURB

BEGIN 7' TIPDOWN CURB
BC: 31.42'
TC: 32.00'

32.20'

FLUSH CURB

33.15'

EX. 18" V.I.T SEWER
L= 340'
S= 7.93%

EX. SMH RIM: 33.42'
INV. IN: 25.92' (18")
INV. OUT: 25.62' (18")

10 0 10 20

SCALE: 1"=10'

PERMIT LEVEL
NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY DATE
JOINT MAJOR SITE PLAN APPLICATION	SJL 4/11/24
COMMENT RESPONSE	SJL 9/30/24
COMMENT RESPONSE 2	SJL 12/23/24

DRAWING NAME: PHASE 1 – GRADING & DRAINAGE PLAN

PROJECT NAME: PHASE 1 – PHASED OXFORD STREET REDEVELOPMENT

CLIENT: AVESTA HOUSING
307 CUMBERLAND AVE, PORTLAND, ME 04101

ACORN ENGINEERING, INC.

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ACORN ENGINEERING, INC.
PO BOX 3372, PORTLAND MAINE 04104
(207) 775–2655

FILE: 1212.1_AE_CIVIL_PH1 RAGE

JN:	1212.1
SCALE:	AS NOTED
DESIGNED BY:	SJL
DRAWN BY:	DNM
CHECKED BY:	SJL

STATE OF MAINE
SAMUEL J. LEBEL
No. 16505
REGISTERED PROFESSIONAL ENGINEER
12/23/24

DRAWING NO.
C–31

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LANCASTER STREET
TWO–WAY

ELM STREET
ONE–WAY

CEDAR STREET
ONE–WAY

HALL COURT

PROPOSED 4" DRAIN MANHOLE:
RIM: 17.75'
12" INV. IN: 12.71'
12" INV. OUT: 12.61'

PROPOSED 4" DRAIN MANHOLE:
RIM: 17.75'
15" INV. IN: 13.62'
15" INV. OUT: 13.52'

PR. 15" PVC:
L=16'
S=0.005

PR. BACKFLOW PREVENTER

PROPOSED CB–3
RIM: 18.40'
12" INV. IN: 14.53
(2) 6" INV. IN: 13.75' (FOUNDATION DRAINS)
15" INV. OUT: 13.70'

PROPOSED GUTTERLINE TO CATCHBASIN

PR. 18.75'

12" PVC S=0.022 L=65'

UTILITY IMPROVEMENTS AS PART OF 89 ELM STREET REDEVELOPMENT SHOWN FOR REFERENCE.

RETAINING WALL PART OF 89 ELM STREET TO REMAIN. TW: 23.85' BW–SW: 19.00' BW–NE: 23.18'

PR.: FIELD INLET WITH BEEHIVE GRATE RIM: 23.25'

6" SD STORM DRAIN L=14', S=0.005

PR.: 6" SD TO TEE INTO SPRINGLINE OF 10" STORM DRAIN. INV. IN: 16.09'

PR. TO TIE OUTLET PIPE FROM 50 CEDAR R–TANK SYSTEM INTO CATCH BASIN ON 89 ELM. RIM: 25.50'
PR. 10" INV. IN: 21.50'
EX. 12" INV. IN: 16.52'
PR. 4" INV. IN: 21.82' (R–TANK UNDERDRAIN WITH CAP AND 1" ORIFICE DRILLED ON CAP INSIDE OF CB)
EX. 10" INV. OUT: 16.00' IN COORDINATION WITH STRUCTURAL ENGINEER

TW: 25.80' FLUSH WITH SIDEWALK
BW: 19.35'

PR. 4" UNDERDRAIN TO BYPASS STORM FILTER

PR.: 25.75'

F–BASIN RIM: 26.20'
TC: 26.70'

PR. SUBSURFACE STORMFILTER TREATMENT SYSTEM, PER DETAIL ON SHEET C–45. RIM: 27.45'
INV. IN: 23.83' (8") R–TANK OVERFLOW
INV. OUT: 18.69' (8")

PR. BC: 26.75'
TC: 27.25'

PR. TIPDOWN CURB TO 26.90'

PR. R–TANK SUBSURFACE STORMWATER DETENTION SYSTEM

PR. 4" UNDERDRAIN WITHIN SYSTEM, TYP. OF 2

PR. (3) – 4" OVERFLOW PIPES FROM R–TANK SYSTEM INTO 8" HEADER PIPE

PR. TIPDOWN CRUB TO 27.30'

PR.: 28.50'

CONTRACTOR TO VERIFY ELEVATION OF EXISTING WALL AND FOUNDATION AND REPORT ELEVATIONS TO CIVIL ENGINEER PRIOR TO CONSTRUCTION OF PARKING AREA

HIGH POINT: 28.90'. CONTRACTOR TO VERIFY IN FIELD ELEVATION OF EX. BUILDING FOUNDATION WALL AND CONFIRM WITH CIVIL ENGINEER.

PROPOSED 4" MOUNTABLE CURB
BC: 17.90'
TC: 18.23'

TRANSITION FROM 4" MOUNTABLE CURB TO VERTICAL GRANITE CURB WITH 7" REVEAL
BC: 17.82'
TC: 18.15'

VERTICAL GRANITE CURB WITH 7" REVEAL
BC: 17.77'
TC: 18.35'

PR. BC: 17.61'
TC: 18.19'

PR. BC: 17.55'
TC: 18.13'

EX. BC: 17.53'
PR. TC: 18.11'
(7" REVEAL)

PROPOSED TIPDOWN CURB TO: 18.00'

PR. FLUSH CURB

TIPDOWN TO 18.17'

PR.: 18.25'

PR.: 18.23'

PR.: 18.51'

PR.: 18.19'

PR. 18.25'

PR.: 18.63'

PR. 20.45'

FFE 20.52'

FOUR 6.75" RISERS UP TO 20.48'

FFE 20.52'

HALF INCH THRESHOLD BETWEEN BLDG FFE AND LANDING. PR. BLDG FFE AND SPOT AT LANDING. TYP. OUTSIDE EACH ENTRY WAY TO BUILDING.

PR. (8) – 7" RISER STEPS TO PR. TW: 23.21' AT LAST STEP SLIGHTLY VARIES WITH GRADE AND IS NOT TO EXCEED A 7" REVEAL.

PR.: 23.21'

FFE 23.25'

23.21' WITH HALF INCH THRESHOLD BETWEEN BLDG FFE AND LANDING TO 23.25'.

PROPOSED BUILDING:
50 CEDAR STREET
24–UNITS
(4,796 SF)

PR. TOW: 25.80'
PR. BW: 19.35'

PR.: 25.95'
BC (S): 26.75'
BC (N): 26.05'
TC: 27.05'

BC (S): 26.90'
BC (N): 26.35'
TC: 27.25'

BC (S): 26.93'
BC (N): 26.45'
TC: 27.25'

PR.: 26.50'

FFE 26.50'

FINAL ROOF LEADERS TBD BY ARCHITECT AND MEP. ROOF LEADERS TO BE ROUTED TO THE RTANK SYSTEM.

26.46' WITH HALF INCH THRESHOLD BETWEEN BLDG FFE AND LANDING TO 26.50'.

PR. FOUNDATION DRAIN HIGH POINT AND CLEANOUT, TYP. OF 2

PR. BC: 28.50'
TC: 29.00'

PR. BC: 28.20'
TC: 28.70'

PR. 28.33'

PR. 28.73'

PR. BC: 25.70'
TC: 26.28'

EX.: 25.75'

PR. BC: 27.00'
TC: 27.58'

TIPDOWN TO 27.80'

TIPDOWN CURB TO 27.65'

PR. 1" LIP BETWEEN EXISTING PAVEMENT AND DRIVEWAY APRON: 28.38' TO 28.46'

MATCH EX. CURB CUT AND INSTALL APPROX. 10 LF OF TIPDOWN CURB AND NEW SIDEWALK TO FACILITATE DRIVEWAY RAMP.

EX. BC: 28.63'
PR. TC: 29.21'

TC: 29.93'
BC: 29.35'

TC: 30.17'
BC: 29.59'

4' RAMP AND TIPDOWN CURB AT AN 8% SLOPE TO MATCH GRADE OF STREET.

TIPDOWN TO 29.85'

EX: 30.77'

PR. TOP OF CURB: 30.17'
BC–N: 29.92' (3" REVEAL)
BC–S: 29.62' (7" REVEAL)

EX.: 30.34'

EX: 30.46'

EX.: 30.96'

EX: 30.28'

SEE INSET FOR PRELIMINARY GRADING ALONG CEDAR STREET. FINAL GRADING AND DESIGN OF OFF–SITE IMPROVEMENTS TO BE DETERMINED IN COORDINATION WITH DPW.

EX. SMH RIM: 16.88'
48" INV. IN: 3.58'
48" INV. OUT: 3.48'

48" SEWER: 4.95'

EX. MH RIM: 17.60'
8" INV. IN: 8.20'
8" INV. OUT: 8.10'

APPROX. LOCATION OF BEND IN EX. SEWER. APPROX. INV. AT BEND: 13.47'

EX. CB RIM: 19.47'
HOOD: 13.87'

BEGIN TIPDOWN CURB: PR. BC: 19.80'
TC: 20.38'

PR. BC: 20.25'
TC: 20.83'

PR. BC: 22.42'
TC: 23.00'

EX.: 22.75'

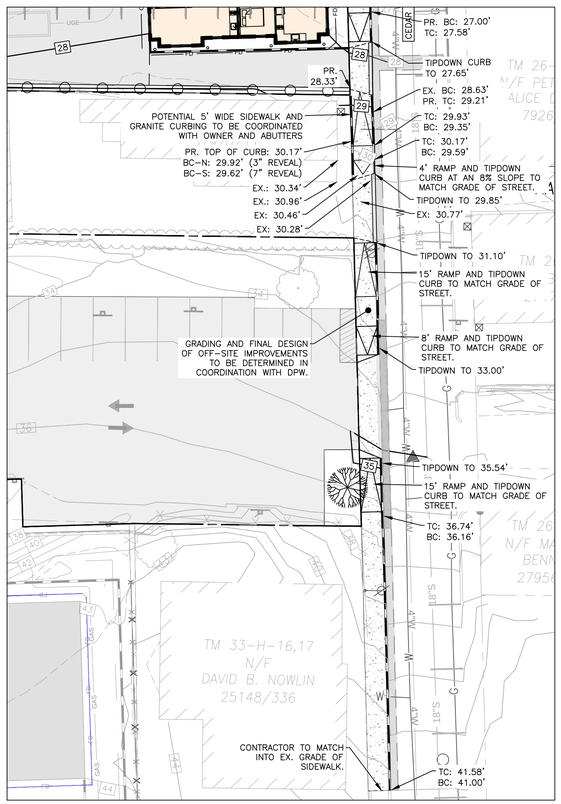
TM 26–A–12
N/F JAMES W. HALL
SARAH MICHNIEWICZ
23909/341

TM 26–A–9,10
N/F PETER P. & ALICE
D. AMES
7926/278

N/F AMELIA A. LABRECK
37970/11

LM STREET LLC
29779/236

TM 33–H–16,17
N/F
DAVID B. NOWLIN
25148/336



INSET SCALE: 1:20

10 0 10 20

SCALE: 1" = 10'

PERMIT LEVEL
NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY DATE
JOINT MAJOR SITE PLAN APPLICATION	SJL 4/10/24
COMMENT RESPONSE	SJL 6/25/24
COMMENT RESPONSE 2	SJL 12/23/24

PHASE 2 – GRADING PLAN

PROJECT NAME: PHASE 2 –PHASED OXFORD STREET REDEVELOPMENT

CLIENT: REVELER DEVELOPMENT
188 STATE STREET, 3RD FLOOR, PORTLAND, ME 04101

DRAWING NAME:

ACORN ENGINEERING, INC.
70 FORE RIVER PARKWAY, SUITE 350
PORTLAND, MAINE 04104
(207) 775–2655
PO BOX 1237, FREEPORT, MAINE 04032

THESE PLANS SHALL NOT BE MODIFIED WITHOUT THE WRITTEN PERMISSION FROM ACORN ENGINEERING, INC. AND ANY MODIFICATIONS MADE BY ANY PERSON OR OTHERWISE, SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO ACORN ENGINEERING, INC.

FILE: 1212.2_AE_CIVIL
JN: 1212
SCALE: AS NOTED
DESIGNED BY: SJL
DRAWN BY: DNM
CHECKED BY: SJL

STATE OF MAINE
Sam Lebel
SAMUEL J. LEBEL
No. 16505
PROFESSIONAL ENGINEER
LICENSED
12/23/24

DRAWING NO.
C-32

GENERAL NOTES:

1. ALL WORK WITHIN THE CITY STREET RIGHT OF WAY SHALL MEET CITY OF PORTLAND TECHNICAL MANUAL STANDARDS.
2. DESIGN OF TEMPORARY SOIL RESTRAINT MEASURES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR IF NECESSARY FOR CONSTRUCTION.
3. CONTRACTOR SHALL ENSURE THAT UNDERDRAINS ARE CONSTRUCTED WITH POSITIVE OUTLET TO PROPOSED CONNECTIONS.
4. CATCH BASIN INLET PROTECTION TO BE INSTALLED WITHIN ANY STRUCTURES DOWNGRADIENT OF ACTIVE CONSTRUCTION.
5. SEDIMENTATION BARRIERS ARE TO BE INSTALLED DOWNGRADIENT OF ALL ACTIVE CONSTRUCTION WORK PER DETAIL. BARRIERS TO NOT EXTEND PAST PROPERTY LINES; BARRIERS SHOWN OFFSET FROM PROPERTY LINES ON PLANS FOR VISUAL PURPOSES ONLY.
6. CONTRACTOR SHALL VERIFY BOTTOM AND TOP OF CURB ELEVATIONS ALONG BUILDING FRONTAGES PRIOR TO CONSTRUCTION OF THE FOUNDATIONS. CONTACT ENGINEER PRIOR TO CONSTRUCTION IF DISCREPANCIES ARE FOUND.

BUILDING HEIGHT CALCULATION:

AVERAGE GRADE: (11.90'+15.75'+18.75'+13.25'+14.91')/5 = 14.91'

ROOF HEIGHT: 49.70'

BUILDING HEIGHT: 34.79'

LANCASTER ST.
TWO-WAY

CEDAR ST.
ONE-WAY

CHESTNUT ST.
TWO-WAY

HALL COURT

EX. BC: 16.89'
PR. TC: 17.47'
(7" REVEAL)

PR. TIPDOWN CURB, MATCH EX. 17.45'

PR. TIPDOWN CURB, MATCH EX. 18.08'

10.00'

CURB REVEAL TRANSITION AT THIS POINT

EX. BC: 16.00'
PR. TC: 16.58'
(7" REVEAL)

EX. BC: 15.00'
PR. TC: 15.58'
(7" REVEAL)

EX. BC: 14.42'
PR. TC: 15.00'
(7" REVEAL)

EX. CURB CUT TO REMAIN. REDEFINE CURB CUT WITH 3' RADIAL GRANITE CURBING TO FACILITATE MODIFIED DRIVEWAY RAMP

PR.: 13.40'

EX. ELEV. 12.99

EX. BC: 12.50'
PR. TC: 13.08'
(7" REVEAL)

BC: 12.20'
TC: 12.78'
(7" REVEAL)

EX. BC: 11.66'
PR. TC: 12.24'
(7" REVEAL)

EX. BC: 11.52'
PR. TC: 12.10'
(7" REVEAL)

EX. ELEV. 11.34

EX. BC: 11.24'
PR. TC: 11.82'
(7" REVEAL)

EX. ELEV. 11.14

EX. BC: 11.12'
PR. TC: 11.70'
(7" REVEAL)

PR. 10" STORM DRAIN L=99' S=0.005

8" TIPDOWN CURB

PR. TIPDOWN CURB. MATCH EX. 11.08'

PR. CATCH BASIN RIM: 11.45'
10" INV. IN: 8.24'
8" INV. IN: 8.41'
(1) – 4" INV. IN: 8.75'
12" INV. OUT: 7.84'

PR.: 11.07'

PR. BACKFLOW PREVENTER ON STORM DRAIN AT THE PROPERTY LINE

PR. FLUSH CURB, TYP.

PR. TIPDOWN CURB. MATCH EX. 10.92'

PR. 12" STORM DRAIN L=32' S=0.005

EX. SMH RIM: 11.20'
INV. IN: 5.02' (18")
INV. IN: 5.82' (8")
INV. IN: 5.62' (6")
INV. OUT: 4.92' (18")

PR. 7" TIPDOWN CURB.

EX. CATCHBASIN TO BE RESET.
EX. RIM: 10.66'
PR. TC (HEADSTONE): 11.49'

PR. BACKFLOW PREVENTER ON FOUNDATION DRAIN

APPROX. LOCATION OF EX. 18" COMBINED SEWER, SLOPE OF SEWER VARIES ALONG CHESTNUT STREET. SLOPE FROM EX. MH TO PR. DOGHOUSE MH = 1.25% BASED ON DPW "CHESTNUT STREET SEWER" PLAN, SHEET 467, DATED 2/1959

PR. 8" STORM DRAIN L=110' S=0.005

APPROX. LOCATION OF PROPOSED 6' DOGHOUSE MANHOLE TO ACCEPT SANITARY AND STORM FLOWS FROM 158 LANCASTER STREET. PR. 6" PVC SEWER LATERAL TO MATCH SPRINGLINE OF EXISTING 18" SEWER MAIN WITH INSERTA-TEE. STORM DRAIN INVERT TO BE SET 18" HIGHER THAN SEWER INVERT. CONTRACTOR TO TEST PIT AND CONFIRM INVERT OF EX. SEWER AND CONFIRM WITH CIVIL ENGINEER PRIOR TO CONSTRUCTION.
RIM: 12.00'
12" INV. IN: 7.62' (STORM DRAIN)
18" APPROX. INV. OF EX. MAIN: 5.37'
6" INV. IN: 6.25' (SEWER)

EX. CATCHBASIN TO BE MODIFIED WITH PHASE 3 CURB LINE. INLET TO BE REPLACED AND RELOCATED. INSTALL HEADSTONE AND COORDINATE OUTLET WITH DPW.

RIM: 19.80'
TC (HEADSTONE): 20.63'

15" TIPDOWN CURB

BC-NW: 16.72'
TC/PARK: 17.30'

BC-NW: 15.73'
TC/PARK: 16.31'

BC-NW: 15.15'
TC/PARK: 16.00'

PR.: 13.90'

BC-NW: 17.02'
BC/PARK: 17.40'
TC: 17.58'

BC/PARK: 17.40'
TC: 17.90'

PR. TIPDOWN CURB TO 13.97'

PR.: 13.40'

BC: 13.47'
TC: 13.97'

PR.: 13.20'

PR. 12.90'

PR. TIPDOWN CURB: 13.25'

BC: 14.00'
TC: 14.50'

PR. FIELD INLET WITH BEEHIVE GRATE, RIM: 12.75'

PR. 8" ROOF LEADER TO BE ROUTED TO CATCH BASIN

PR. CATCH BASIN RIM: 13.25'
TC: 14.35'
8" INV. IN: 11.77'
10" INV. OUT: 11.67'

PR. TIPDOWN CURB TO 17.70'

PR. 12.60'

PR. 12.40'

BS: 12.25'

PR. 13.25'

PR. CAST IN PLACE WALL ALONG 30' LONG RAMP

PR. 30' LONG RAMP, S=6.6%

4 RISERS WITH 7" REVEAL

5 RISERS WITH 6.5" REVEAL

PR. 14.66' WITH 1/4" THRESHOLD UP TO 14.70'

BS: 11.95'

PR.: 11.72'

PR. 11.90'

PR. 11.52'

4 RISERS WITH 7" REVEAL

PR. 14.66' WITH 1/4" THRESHOLD UP TO 14.70'

PR. 12.27'

PR. 12.62'

PR. 14.55'

PR. 14.60'

16' RAMP @ 8.1% SLOPE

PR. 13.30'

PR. 13.30'

PR. 12.92'

EX. BC: 11.87'
PR. TC: 12.45'
(7" REVEAL)

EX. BC: 12.47'
PR. TC: 13.05'
(7" REVEAL)

PR. 13.22'

6 RISERS WITH MAX. 7" REVEAL. REVEAL AT LAST STEP VARIES WITH GRADE.

PR. 13.50'

PR. 13.78'

PR. 13.70'

EX. BC: 12.78'
PR. TC: 13.36'
(7" REVEAL)

PR. 17.16' WITH 1/4" THRESHOLD UP TO 17.20'

PR. 17.00'

PR. 17.07'

22' RAMP @ 8.25% SLOPE

EX. BC: 13.43'
PR. TC: 14.01'
(7" REVEAL)

PR. 14.10'

PR. 14.90'

EX. BC: 14.15'
PR. TC: 14.73'
(7" REVEAL)

PR. 15.20'

EX. BC: 14.45'
PR. TC: 15.03'
(7" REVEAL)

EX. ELEV. 15.18

PR. 4" FOUNDATION DRAIN

PR. BEEHIVE DRAIN INTO FOUNDATION DRAIN RIM: 18.25'

PR. 15.28'
PR. 15.28'
PR. 15.75'

PR. 18.75'

PR. 18.50'

TW: 21.50'
BW: 18.50'

PR. FOUNDATION DRAIN HIGH POINT AND CLEANOUT, PER DETAIL ON SHEET C-44. TYP. OF 2

PR. BEEHIVE FIELD INLET, RIM: 16.85'

TOP OF TRANSFORMER PAD WITH MIN. 6" REVEAL ABOVE FINAL GRADE, PER DETAIL

PR. LOCATION OF R-TANK SUBSURFACE DETENTION SYSTEM, PER DETAIL ON SHEET C-45. DOUBLE STACK R-TANK SYSTEM (8 ROWS, 9 CHAMBERS/ROW); (4)-4" OVERFLOW DRAINS TO A 10" HEADER PIPE, (4) – 4" UNDERDRAINS

PR. TIPDOWN CURB TO 14.62'

PR.: 14.75'

BW: 13.85'
TW: 17.00'

PR. 8" STORM DRAIN L=57' S=0.005

PR.: 14.30'

PR. TIPDOWN CURB TO 14.60'

EX. GUARDRAIL AND WALL TO REMAIN

PR. CLEANOUT AT HIGH POINT IN UNDERDRAIN.

PR. BEEHIVE FIELD INLET, RIM: 16.25'

PR. UNDERDRAIN FOR REBUILT WALL, TO CONNECT INTO 8" STORM DRAIN

GRADING TO TIE INTO EXISTING TOPOGRAPHY AND AVOID DISTURBANCE OF EXISTING CHOKE CHERRY TREE TO GREATEST EXTENT FEASIBLE

PROPOSED STREET TREE AS PART OF PHASE 3 OFFSITE IMPROVEMENTS.

PROPOSED SIDEWALK UPGRADE AND CURBLINE BUMPOUT ALONG CEDAR STREET. SEE C-10 FOR MORE INFORMATION.

GRADING AND FINAL DESIGN OF OFF-SITE SIDEWALK IMPROVEMENTS TO BE DETERMINED IN COORDINATION WITH DPW

OHT / C

18"S

10 0 10 20
SCALE: 1"=10'

PERMIT LEVEL
NOT ISSUED FOR
CONSTRUCTION

ISSUED FOR	BY DATE
JOINT SITE PLAN APPLICATION	SJL 4/10/24
COMMENT RESPONSE	SJL 9/30/24
COMMENT RESPONSE 2	SJL 12/23/24

DRAWING NAME: PHASE 3 – GRADING PLAN

PROJECT NAME: PHASE 3 – PHASED OXFORD STREET REDEVELOPMENT

CLIENT: REVELER DEVELOPMENT
188 STATE STREET, 3RD FLOOR, PORTLAND, ME 04101

ACORN ENGINEERING, INC.

THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM ACORN ENGINEERING, INC. ANY ALTERATIONS, AUTHORIZED OR UNAUTHORIZED, ARE AT USER'S SOLE RISK AND WITHOUT LIABILITY TO ACORN ENGINEERING, INC.

ACORN ENGINEERING, INC.
PO BOX 3372, PORTLAND, MAINE 04104
(207) 775-2655

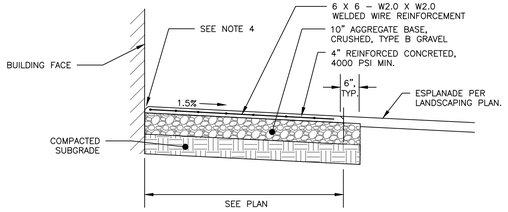
1212_AE_CIVIL

JN:	1212
SCALE:	AS NOTED
DESIGNED BY:	SJL
DRAWN BY:	DNM
CHECKED BY:	SJL

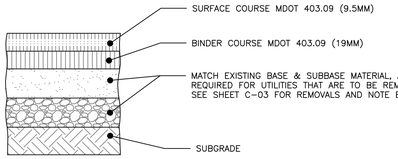
STATE OF MAINE
Sam LeBel
SAMUEL J. LEBEL
No. 16505
REGISTERED PROFESSIONAL ENGINEER
LICENSED
9/30/24

DRAWING NO.
C-33

NOTES:
1. AT A MINIMUM, TESTING SHALL CONSIST OF ENTRAINED AIR AND SLUMP TESTS ON SITE PRIOR TO POURING THE SIDEWALKS. ENTRAINED AIR TESTS SHALL BE DONE IN ACCORDANCE WITH AASHTO T152. TEST FIRST TWO LOADS AND EVERY THIRD LOAD THEREAFTER PROVIDED CONSISTENT RESULTS ARE ACHIEVED.
2. WELDED WIRE FABRIC SHALL BE PLACED 2 INCHES ABOVE THE CRUSHED GRAVEL, AND 2 INCHES FROM ALL FINISHED EDGES, EXPANSION JOINTS AND CURBS. ALL FABRIC JOINTS SHALL BE OVERLAPPED A MINIMUM OF 1 FOOT AND BE PROPERLY TIED. IF THE CONTRACTOR ELECTS TO USE REBAR, ONLY 4–GAUGE WILL BE ACCEPTABLE. IF THE CONTRACTOR ELECTS TO USE A PRE–MIXED FIBER MESH, A SPECIFICATION SHEET MUST BE SUBMITTED AND PRE–APPROVED BY THE ENGINEER PRIOR TO ITS APPLICATION.
3. SLABS SHALL BE PLACED ALTERNATELY IN LENGTHS NOT TO EXCEED 30 FEET OR AS DIRECTED AND SHALL BE SEPARATED BY AN EXPANSION JOINT OF PREFORMED EXPANSION FILLER ½ INCH IN THICKNESS.
4. WHEN CONSTRUCTED ADJACENT TO A BUILDING, RETAINING WALL OR OTHER FIXED STRUCTURE, A ½ INCH THICK PREFORMED JOINT FILLER SHALL BE USED BETWEEN THE SLAB AND THE STRUCTURE.
5. THE SIDEWALK SURFACE SHALL BE SCORED INTO BLOCK UNITS NO GREATER THAN 40 SQUARE FEET AS DIRECTED. THE DEPTH OF THE SCORING SHALL BE AT LEAST ONE QUARTER OF THE THICKNESS OF THE SLAB.
6. ANY MATCHING INTO EXISTING SIDEWALKS SHALL BE DONE SO WITH A CLEAN VERTICAL FACE CONNECTION.
7. THE SURFACE SHALL BE FINISHED TO PRODUCE A BROOMLIKE "BRUSHED" PATTERN. NO PLASTERING OF THE SURFACE WITH MORTAR WILL BE PERMITTED. THE FINISH SHALL RESULT IN A SURFACE OF UNIFORM TEXTURE AND COLOR. ALL OUTSIDE EDGES OF THE SLAB AND ALL JOINTS SHALL BE ROUNDED WITH A ½ INCH RADIUS EDGING TOOL.
8. CONCRETE SHALL BE CURED FOR 72 HOURS. CURING SHALL BE BY MEANS OF THOMPSON'S WATER SEAL AS MANUFACTURED BY E.A. THOMPSON CO., INC. OF MEMPHIS, TENNESSEE, BOILED LINSEED OIL, WHITE PIGMENTED CURING COMPOUND, OR BY OTHER APPROVED METHODS. CONCRETE SIDEWALK TO BE SEALED WITH CONSOLIDECK SALTGUARD WB OR APPROVED EQUAL 28 DAYS AFTER PLACEMENT. FOLLOW MANUFACTURER'S RECOMMENDATIONS FOR APPLICATION.
9. GENERAL CONTRACTOR TO COLLECT DELIVERY SLIPS AND TRANSFER TO THE OWNER.
10. REFER TO CITY OF PORTLAND CONCRETE SPECIFICATIONS SECTION 608 FOR MORE INFORMATION.



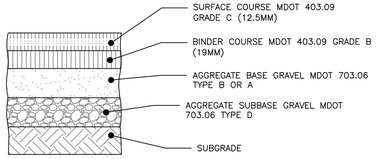
REINFORCED CONCRETE SIDEWALK
NOT TO SCALE



NOTE:
1. COMPACT AGGREGATES TO 95% MAXIMUM DRY DENSITY IN ACCORDANCE WITH ASTM D–1557.

THICKNESS OF LAYERS	
STANDARD	LAYERS
1–1/4"	SURFACE COURSE MDOT 403.09 (9.5mm)
1–3/4"	BINDER COURSE MDOT 403.09 (19mm)
3"	AGGREGATE BASE GRAVEL MDOT 703.06 TYPE A
12"	AGGREGATE SUBBASE GRAVEL MDOT 703.06 TYPE D

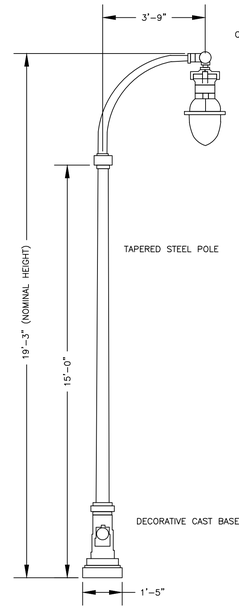
INTERNAL PAVEMENT PROFILE:
NOT TO SCALE



NOTE:
COMPACT SUBGRADE TO 95% MAXIMUM DRY DENSITY IN ACCORDANCE WITH ASTM D–1557

THICKNESS OF LAYERS	
STANDARD	LAYERS
1–1/2"	SURFACE COURSE MDOT 403.09 GRADE C (12.5mm)
2"	BINDER COURSE MDOT 403.09 GRADE B (19mm)
3"	AGGREGATE BASE GRAVEL MDOT 703.06 TYPE B OR A
15"	AGGREGATE SUBBASE GRAVEL MDOT 703.06 TYPE D

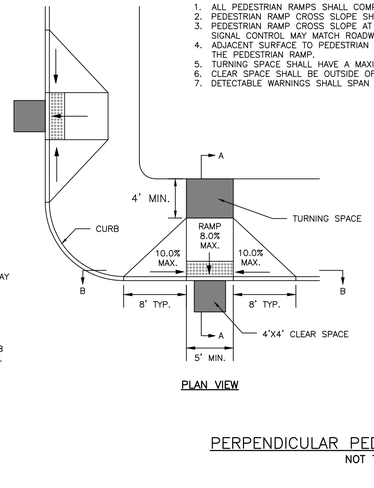
LOCAL BITUMINOUS PAVEMENT PROFILE
NOT TO SCALE



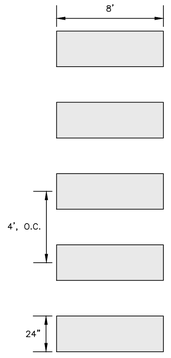
NOTES:
1. LUMINAIRE
HOLOPHANE ESPLANADE LED II
MODEL:ESL2–P20S–30K–AS–CWC–TG3–S–P7–NL2X2–BHDF13–200CMC
OR SPRING CITY COLUMBIA SERIES MODEL
ALMCLU–LE080/EVX/X2–30–CR3–GR14–LACLB–FED–CU
PENDANT MOUNT, CAST ALUMINUM HOUSING WITH STAINLESS STEEL HARDWARE. DROPPED REFRACTOR SHALL BE THERMAL RESISTANT BOROSILICATE GLASS. INTERNAL REFLECTOR AND PRISMATIC DIFFUSER SHALL PROVIDE AN IES TYPE IV DISTRIBUTION PATTERN. LED 3000K COLOR TEMPERATURE.
2. BRACKET ARM
HOLOPHANE OUC ROADWAY ARM MODEL OUC 6063–T6 OR SPRING COLUMBIA ARM MODEL AARCLA–1S–51–53–TN2.38/7.00–CU
ALUMINUM CROSSARM WITH A POST–TOP FITTING FOR A 3 ½" BY 8" TENON. SINGLE ARM 45° ORIENTED 180 DEGREES.
3. SLIP FITTER
HOLOPHANE BOSTON HARBOR SERIES MODEL BHLF–200–SCA/AS
2 ⅜" O.D. WITH SWIVEL CAST FITTER.
4. LIGHTING POLE
HOLOPHANE MODEL CM17CSB–CA–RAL6012
OR SPRING CITY CAMBRIDGE SERIES MODEL
SSHSM–G11–7.00–15.00–TN3.50/8.00–CU
SMOOTH, TAPERED STEEL POLE SMOOTH SHAFT RATED FOR A 90 MPH WIND LOAD WITH A 1.3 GUST FACTOR. PROVIDE FOUR HOT–TIPPED GALVANIZED STEEL L–TYPE ANCHOR BOLTS. LIGHTING POLE SHALL BE HOT TIP GALVANIZED PRIOR TO POWDER COAT PAINT.
5. DECORATIVE POLE BASE
HOLOPHANE CAMBRIDGE SERIES MODEL CM17CSB OR SPRING CITY CAMBRIDGE SERIES MODEL DWBCMB–17–CU
DECORATIVE CLAMSHELL CAST ALUMINUM BASE. HARDWARE SHALL BE STAINLESS STEEL.
6. DIMENSIONS
OVERALL HEIGHT = 19' 3"
POLE HEIGHT = 15' 0"
BRACKET ARM = 3' 9"
BASE DIAMETER = 17" TO 18"
7. FINISH
BLACK (STANDARD)

APPLICATION:
STREET/SIDEWALK LIGHTING
SPACING:
ONE SIDE: 80'–110' ON CENTER
PLACE IN FURNISHING ZONE OVERHANG TOWARDS STREET; WHERE FIXTURE CONFLICTS WITH OVERHEAD UTILITIES, MAY BE PLACED ON BACK OF SIDEWALK.

PENINSULA MEDIUM DECORATIVE LIGHTING ALONG LANCASTER STREET
NOT TO SCALE

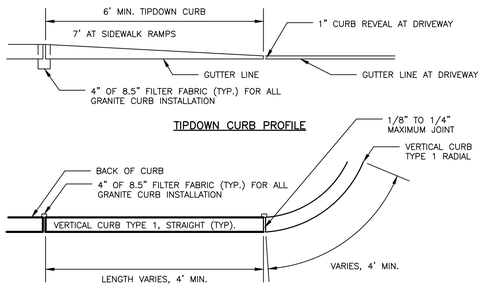


PERPENDICULAR PEDESTRIAN RAMP DETAIL
NOT TO SCALE



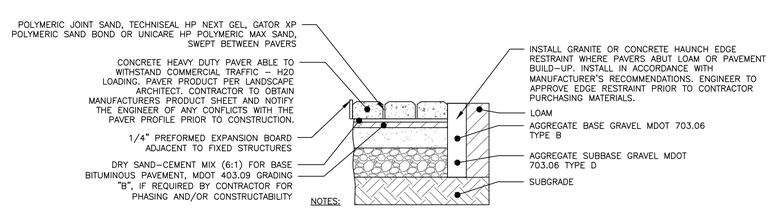
NOTE:
1. CROSSWALKS TO BE BUILT IN CONFORMANCE WITH MUTCD STANDARDS, LATEST EDITION.
2. CROSSWALKS ARE TO BE PAINTED WHITE MEETING MAINE DOT SPECIFICATIONS.
3. BLOCKS TO BE ORIENTED PARALLEL TO THE DIRECTION OF VEHICLE TRAFFIC.

BLOCK CROSSWALK
NOT TO SCALE



NOTES:
1. CURB SHALL BE RESET IN ACCORDANCE WITH MDOT 609.08 WITH THE EXCEPTION OF CURB SPACING TO BE INSTALLED PER DETAIL.
2. INDIVIDUAL PIECES OF CURB SHORTER THAN 4 L.F. ARE NOT ALLOWED, WITH THE EXCEPTION OF RADIAL CURB.
3. THE MINIMUM HEIGHT OF THE CONCRETE BACKING SHALL BE 10 INCHES OR TO THE BOTTOM OF THE HOT MIX ASPHALT PAVEMENT, WHICHEVER IS GREATER, MEASURED FROM THE BOTTOM OF THE CURB.
4. CURBING SHALL BE SET IN A 6–INCH BED OF POURED IN PLACE 3,000 PSI CONCRETE MIX.
5. WOODEN SHIMS MAY BE USED TO SET CURB.

VERTICAL GRANITE CURB AND TIPDOWN INSTALLATION IN EXISTING STREETS DETAIL
NOT TO SCALE

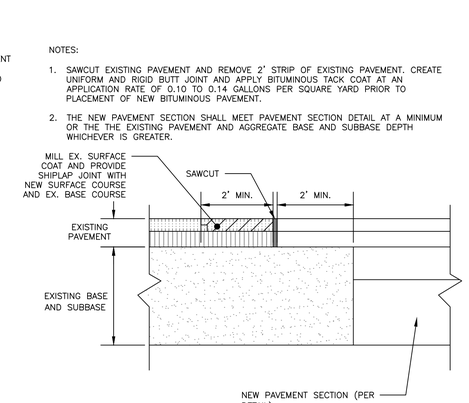


NOTES:
1. COMPACT SUBGRADE TO 95% MAXIMUM DRY DENSITY IN ACCORDANCE WITH ASTM D–1557
2. SURFACE AND AGGREGATE MATERIALS SHALL MEET THE CITY OF PORTLAND STANDARDS IN ADDITION TO MDOT STANDARDS.
3. JOINT SAND COMPRESSION STRENGTH: PROVEN RESISTANCE TO COMPRESSION OF 550 PSI AFTER DRYING FOR 7 DAYS UNDER CONTROLLED CONDITIONS (73 DEGREE F AT 50% HUMIDITY)

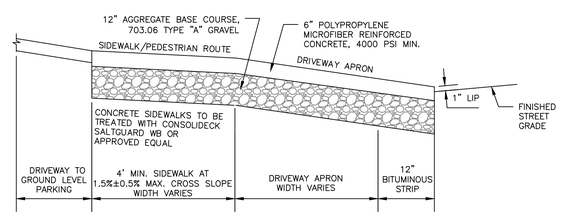
GRADATION REQUIREMENTS FOR JOINT SAND		
SIEVE SIZE	NATURAL SAND PERCENT PASSING	MANUFACTURED SAND PERCENT PASSING
NO. 4 (4.75mm)	100	100
NO. 8 (2.36mm)	95–100	95–100
NO. 16 (1.18mm)	70–100	70–100
NO. 30 (0.60mm)	40–75	40–75
NO. 50 (0.30mm)	10–30	20–40
NO. 100 (0.15mm)	2–15	10–25
NO. 200 (0.075)	0–1	0–10

THICKNESS OF LAYERS	
STANDARD	LAYERS
3.149"	CONCRETE PAVER (DEPTH TBD BASED UPON MANUFACTURER)
1"	DRY SAND–CEMENT MIX (6:1)
2"	BITUMINOUS MDOT 403.09 GRADING "B"
3"	AGGREGATE BASE GRAVEL MDOT 703.06 TYPE B
15"	AGGREGATE SUBBASE GRAVEL MDOT 703.06 TYPE D

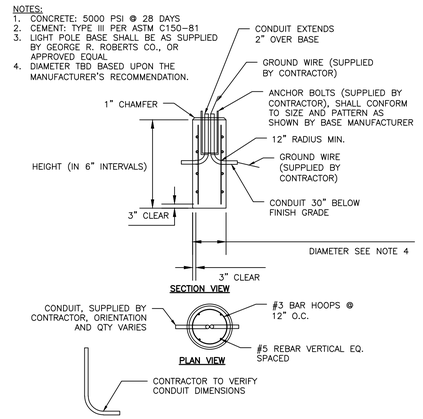
PAVER PROFILE
NOT TO SCALE



PAVEMENT SAWCUT DETAIL
NOT TO SCALE



REINFORCED CONCRETE DRIVEWAY APRON DETAIL
NOT TO SCALE



LIGHT POLE BASE
NOT TO SCALE

PERMIT LEVEL
NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY	DATE
JOINT MAJOR SITE PLAN APPLICATION	SJL	4/10/24
COMMENT RESPONSE	SJL	9/30/24

DRAWING NAME: SITE DETAILS – 1
PROJECT NAME: PHASED OXFORD STREET REDEVELOPMENT
CLIENT: AVESTA HOUSING & REVELER DEVELOPMENT
307 CUMBERLAND AVE, PORTLAND, ME 04101
188 STATE STREET, 3RD FLOOR, PORTLAND, ME 04101

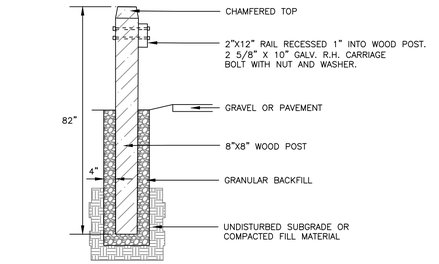
ACORN ENGINEERING, INC.
70 CENTER STREET, SACO, MAINE 04104
PO BOX 3300 (207) 775–2655

THESE PLANS SHALL NOT BE MODIFIED WITHOUT THE WRITTEN PERMISSION FROM ACORN ENGINEERING, INC. AND SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO ACORN ENGINEERING, INC.

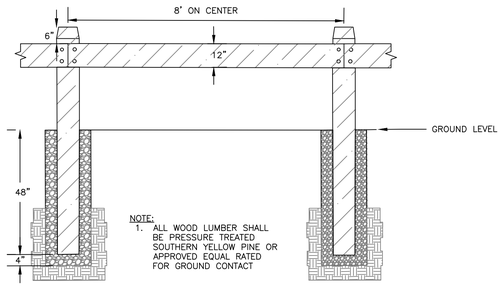
FILE:	1212_AE_CIVIL
JN:	1212.1
SCALE:	AS NOTED
DESIGNED BY:	SJL
DRAWN BY:	DNM
CHECKED BY:	SJL

STATE OF MAINE
SAMUEL J. LEBEL
No. 16505
REGISTERED PROFESSIONAL ENGINEER
LICENSED
9/30/24

DRAWING NO.
C-40



SIDE ELEVATION

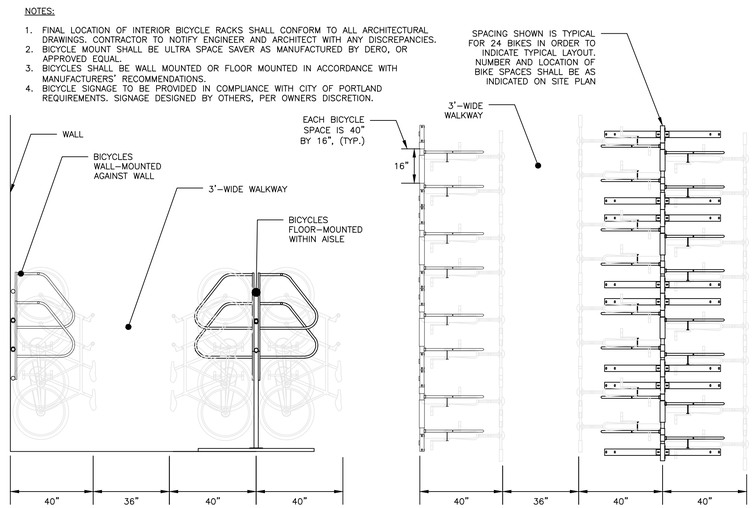


NOTE:
1. ALL WOOD LUMBER SHALL BE PRESSURE TREATED SOUTHERN YELLOW PINE OR APPROVED EQUAL RATED FOR GROUND CONTACT

FRONT ELEVATION

WOODEN GUARDRAIL DETAIL
NOT TO SCALE

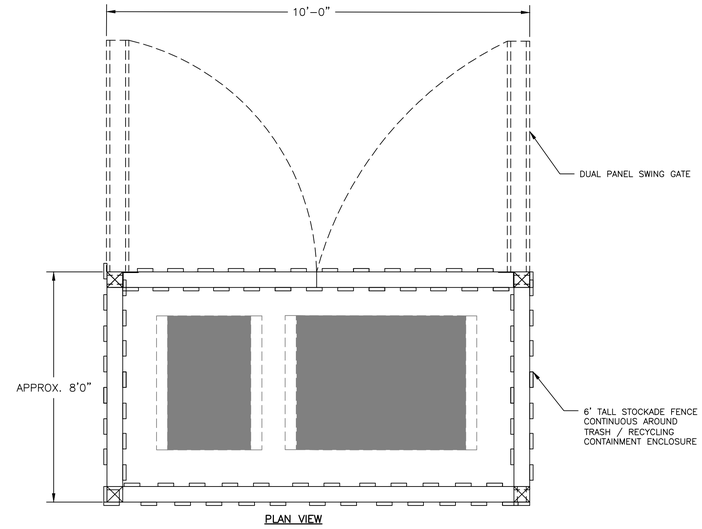
NOTES:
1. FINAL LOCATION OF INTERIOR BICYCLE RACKS SHALL CONFORM TO ALL ARCHITECTURAL DRAWINGS. CONTRACTOR TO NOTIFY ENGINEER AND ARCHITECT WITH ANY DISCREPANCIES.
2. BICYCLE MOUNT SHALL BE ULTRA SPACE SAVER AS MANUFACTURED BY DERO, OR APPROVED EQUAL.
3. BICYCLES SHALL BE WALL MOUNTED OR FLOOR MOUNTED IN ACCORDANCE WITH MANUFACTURERS' RECOMMENDATIONS.
4. BICYCLE SIGNAGE TO BE PROVIDED IN COMPLIANCE WITH CITY OF PORTLAND REQUIREMENTS. SIGNAGE DESIGNED BY OTHERS, PER OWNERS DISCRETION.



CROSS SECTION VIEW

PLAN VIEW

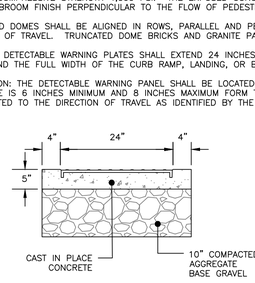
INTERIOR BICYCLE RACK DETAIL
NOT TO SCALE



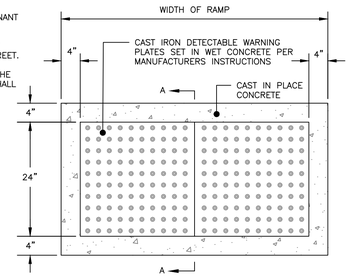
PLAN VIEW

TRASH ENCLOSURE DETAIL
NOT TO SCALE

NOTES:
1. ALL DETECTABLE WARNING PLATES SHALL BE UNCOATED CAST IRON. FOLLOW MANUFACTURER'S INSTRUCTIONS FOR INSTALLATION.
2. CAST IN PLACE CONCRETE SHALL MEET SPECIFICATIONS FOR MDOT CLASS A STRUCTURAL CONCRETE, MINIMUM COMPRESSIVE STRENGTH 4,000 PSI. THE EXPOSED CONCRETE BORDER SHALL RECEIVE A UNIFORM BROOM FINISH PERPENDICULAR TO THE FLOW OF PEDESTRIAN TRAFFIC.
3. TRUNCATED DOMES SHALL BE ALIGNED IN ROWS, PARALLEL AND PERPENDICULAR TO THE PREDOMINANT DIRECTION OF TRAVEL. TRUNCATED DOME BRICKS AND GRANITE PAVERS ARE NOT ALLOWED.
4. SIZE: THE DETECTABLE WARNING PLATES SHALL EXTEND 24 INCHES MINIMUM IN THE DIRECTION OF TRAVEL AND THE FULL WIDTH OF THE CURB RAMP, LANDING, OR BLENDED TRANSITION TO THE STREET.
5. ORIENTATION: THE DETECTABLE WARNING PANEL SHALL BE LOCATED SO THAT THE EDGE NEAREST THE CURB LINE IS 6 INCHES MINIMUM AND 8 INCHES MAXIMUM FORM THE CURB LINE. THE PANEL SHALL BE ORIENTED TO THE DIRECTION OF TRAVEL AS IDENTIFIED BY THE POINT OF EGRESS.



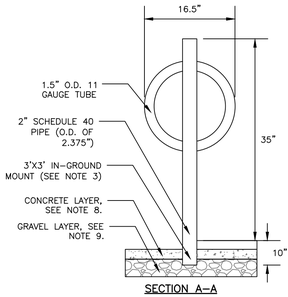
SECTION A-A



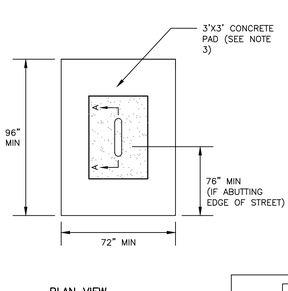
PLAN VIEW

SIDEWALK RAMP DETECTABLE WARNING PANEL
NOT TO SCALE

NOTES:
1. BICYCLE RACK SHALL HAVE CAPACITY FOR TWO BICYCLES.
2. BICYCLE RACK PARTS SHALL BE OF UNIFORM COLOR AND SHALL BE FINISHED IN ACCORDANCE WITH PRODUCT SPECIFICATION. PER CITY OF PORTLAND TECHNICAL STANDARDS ALL BIICYCLE RACKS WITHIN THE RIGHT-OF-WAY SHALL MATCH THE FURNITURE COLOR FOR THAT LOCATION AS DESCRIBED IN THE MUNICIPAL LIGHTING STANDARDS; IF NO DESIGNATED COLOR FOR THAT AREA EXISTS, BICYCLE RACKS SHALL BE BLACK.
3. BICYCLE RACK SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S MOST RECENT INSTALLATION RECOMMENDATIONS, AND SHALL BE INSTALLED WITH AN IN-GROUND MOUNT UNLESS OTHERWISE APPROVED BY ENGINEER.
4. BICYCLE RACK SHALL BE "DERO BIKE HITCH", AS MANUFACTURED BY DERO BIKE RACKS.
5. MINIMUM OFFSETS SHOWN. MANUFACTURER'S RECOMMENDED OFFSETS SHALL BE ENFORCED WHERE POSSIBLE.
6. MINIMUM DISTANCE BETWEEN BICYCLE RACKS SHALL BE 24". RECOMMENDED DISTANCE BETWEEN BICYCLE RACKS SHALL BE 38".
7. ALL OFFSETS ARE FROM OUTSIDE EDGES OF ITEMS.
8. CONCRETE SHALL BE 4000 PSI @28 DAYS. BOTTOM OF CONCRETE SHALL BE AT TOP OF SIDEWALK GRAVEL ELEVATION. DEPTH VARIES APRROX. 4"-7".
9. GRAVEL LAYER SHALL BE INSTALLED IN ACCORDANCE WITH BRICK SIDEWALK WITH BITUMINOUS BASE DETAIL, AND SHALL BE MAINEDOT 703.06 TYPE B.



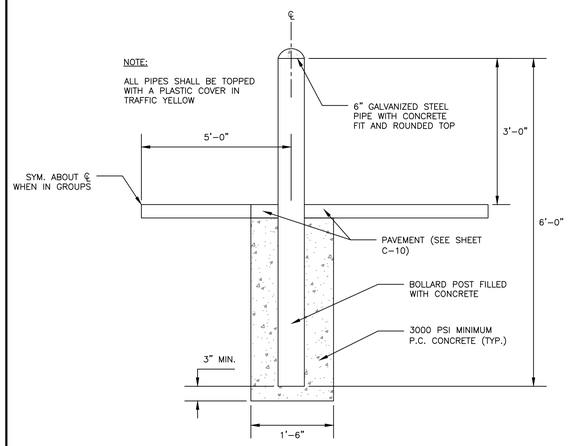
SECTION A-A



PLAN VIEW

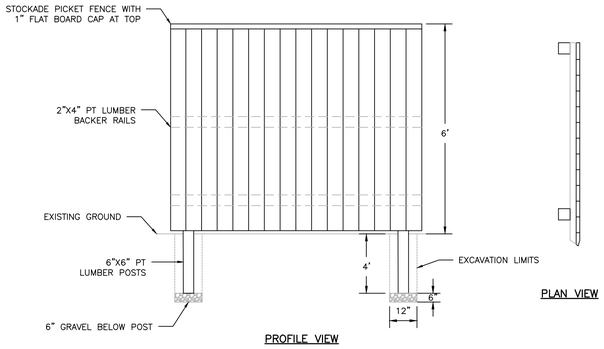
EXTERIOR BICYCLE RACK DETAIL
NOT TO SCALE

NOTE:
ALL PIPES SHALL BE TOPPED WITH A PLASTIC COVER IN TRAFFIC YELLOW



PIPE BOLLARD
NOT TO SCALE

NOTES:
1. INSTALL FENCE PER MANUFACTURERS SPECIFICATIONS
2. SEE SHEET C-10 FOR FENCE LOCATIONS

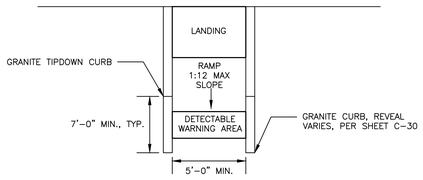


PROFILE VIEW

PLAN VIEW

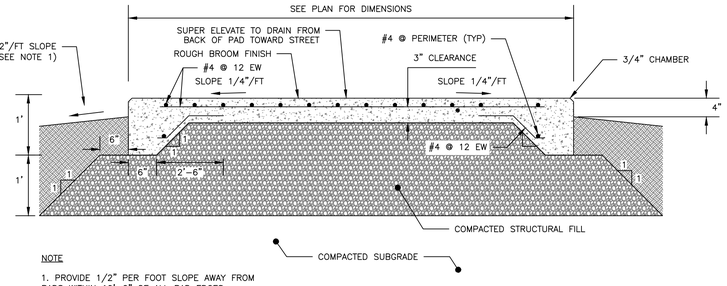
STOCKADE FENCE DETAIL
NOT TO SCALE

NOTES:
1. ALL RAMPS SHALL COMPLY WITH CITY OF BIDDEFORD AND ADA STANDARDS.
2. SIDEWALK MATERIAL SHALL BE PER CITY SIDEWALK MATERIAL POLICY.
3. FLARED SECTIONS SHOULD MATCH SURFACE MATERIAL USED FOR SIDEWALK CONSTRUCTION.



DESIGN ELEMENT	SLOPE IN DIRECTION OF TRAVEL	CROSS SLOPE
APPROACH	8.33% MAX	2%
LANDING	2%	2%
RAMP	8.33% MAX	MATCH STREET GRADE
SIDEWALK	PER C-30	2%

SIDEWALK RAMP LAYOUT
NOT TO SCALE



NOTE
1. PROVIDE 1/2" PER FOOT SLOPE AWAY FROM PADS WITHIN 10'-0" OF ALL PAD EDGES

SECTION

DUMPSTER PAD DETAIL
NOT TO SCALE

ISSUED FOR	BY	DATE
JOINT MAJOR SITE PLAN APPLICATION	SJL	4/10/24
COMMENT RESPONSE	SJL	7/30/24

DRAWING NAME: SITE DETAILS - 2

PROJECT NAME: PHASED OXFORD STREET REDEVELOPMENT

CLIENT: AVESTA HOUSING & REVELER DEVELOPMENT
307 CUMBERLAND AVE, PORTLAND, ME 04101
188 STATE STREET, 3RD FLOOR, PORTLAND, ME 04101

ACORN ENGINEERING, INC.

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ACORN ENGINEERING, INC.
FORT KENT, MAINE 04104
PO BOX 327
(207) 775-2655

FILE:	1212_AE_CIVIL
JN:	1212.1
SCALE:	AS NOTED
DESIGNED BY:	SJL
DRAWN BY:	DNM
CHECKED BY:	SJL

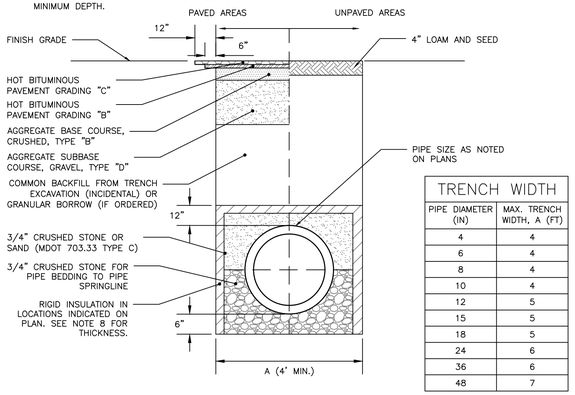
STATE OF MAINE
SAMUEL J. LEBEL
No. 16505
LICENSED PROFESSIONAL ENGINEER
9/30/24

DRAWING NO.
C-41

PERMIT LEVEL
NOT ISSUED FOR CONSTRUCTION

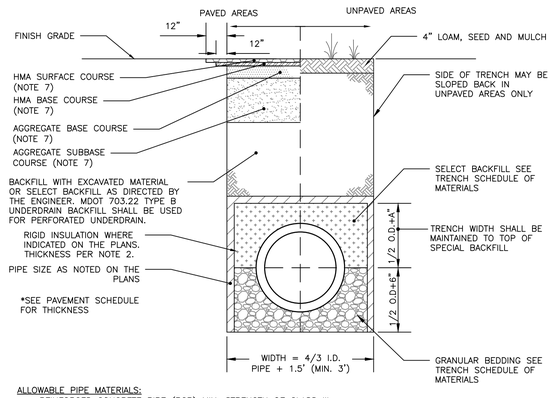
NOTES:

1. ANY ALTERNATE TRENCHING METHODS SHALL BE APPROVED IN ADVANCE BY THE CITY.
2. ALL CONSTRUCTION METHODS SHALL CONFORM TO THE CITY OF PORTLAND TECHNICAL STANDARDS FIGURE II-2.
3. BRACING & SHEETING OR OTHER TRENCH PROTECTION TO BE PROVIDED TO MEET APPLICABLE STATE AND O.S.H.A SAFETY STANDARDS. ALL SUCH TRENCH PROTECTION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
4. WHERE APPLICABLE, PERFORATIONS IN STORM DRAIN (PERF.SD) SHALL BE ORIENTED UP.
5. ALL STORM DRAINS SHALL BE PVC SDR 35 MIN PS-46 RATING OR OR IN ACCORDANCE WITH CITY OF PORTLAND TECHNICAL MANUAL , SECTION 2 – SANITARY SEWER AND STORM DRAIN – PART 2.5.2
6. IN PAVED AREAS, DEPTHS OF GRAVEL AND HOT MIX ASPHALT PAVEMENT SHALL MATCH THE GREATER OF EXISTING CONDITIONS OR THE REQUIREMENTS FOR THE CORRESPONDING STREET CLASSIFICATION.
7. THIS DETAIL SHALL BE APPLIED ONLY TO PIPE TRENCHES WITHIN OF THE CITY OF PORTLAND ROW.STORM DRAIN COVER BETWEEN 2' AND 3' SHALL INCLUDE 4" OF RIGID INSULATION. COVER BETWEEN 3' AND 4' SHALL INCLUDE 2' RIGID INSULATION. OTHER UTILITIES: ADD 2" OF RIGID INSULATION FOR EACH FOOT ABOVE MINIMUM DEPTH.



TRENCH WIDTH	
PIPE DIAMETER (IN)	MAX. TRENCH WIDTH, A (FT)
4	4
6	4
8	4
10	4
12	5
15	5
18	5
24	6
36	6
48	7

CITY OF PORTLAND TYPICAL PIPE TRENCH DETAIL
NOT TO SCALE



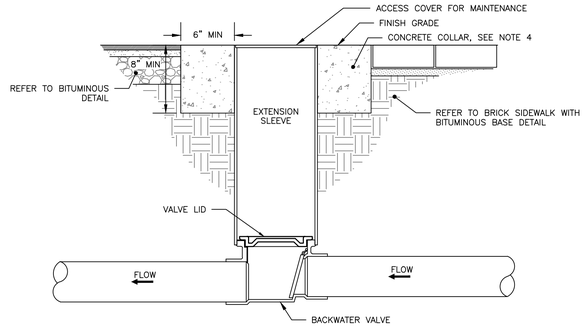
ALLOWABLE PIPE MATERIALS:
- REINFORCED CONCRETE PIPE (RCP) MIN. STRENGTH OF CLASS III
- PVC RING TYPE SEWER (SDR 35) OR EQUIVALENT, MIN PS-46 RATING
- PVC RING TYPE SEWER PIPE MEETING ASTM F 789
- DUCTILE IRON PIPE (DIP)
- ADS N-12 HP TRIPLE-WALL MIN PS-46 RATING
- ADS SANITITE HP MIN. PS-46

SCHEDULE OF MATERIALS		
TYPE OF PIPE	GRANULAR BEDDING	SELECT BACKFILL
CMP DUCTILE IRON RCP	MDOT 703.22 TYPE B UD BACKFILL	MDOT 703.22 TYPE B UD BACKFILL
PVC/HDPE	MDOT 703.22 TYPE C 3/4" CRUSHED STONE	MDOT 703.22 TYPE B UD BACKFILL
CMP	MDOT 703.22 TYPE C 3/4" CRUSHED STONE	MDOT 703.22 TYPE C 3/4" CRUSHED STONE

NOTES:

1. BRACING AND SHEETING OR OTHER TRENCH PROTECTION TO BE PROVIDED TO MEET APPLICABLE STATE AND O.S.H.A. SAFETY STANDARDS. ALL SUCH TRENCH PROTECTION TO BE THE RESPONSIBILITY OF THE CONTRACTOR.
2. STORM DRAIN COVER BETWEEN 2' AND 3' SHALL INCLUDE 4" OF RIGID INSULATION. COVER BETWEEN 3' AND 4' SHALL INCLUDE 2' RIGID INSULATION. OTHER UTILITIES: ADD 2" OF RIGID INSULATION FOR EACH FOOT ABOVE MINIMUM DEPTH.
3. INSTALL WARNING TAPE DIRECTLY ABOVE UTILITIES AT THE TOP OF SUBGRADE.
4. MINIMUM COVER
   - 4.1. 2'-0" – STORM DRAIN
   - 4.2. 5'-0" – SEWER
5. NO TREES SHALL BE PLANTED WITHIN 5' OF A SEWER PIPE OR SERVICE
6. THIS DETAIL SHALL BE APPLIED ONLY TO DRAINAGE PIPE TRENCHES OUTSIDE OF THE CITY OF BIDDEFORD ROW.
7. THICKNESS AS NOTED BY SURFACE DETAILS
8. ALL PROPOSED TREES PLANTED WITHIN 10' OF A STORM OR SEWER PIPE SHALL BE PLANTED AT A DEPTH NO GREATER THAN 3' DEEP. PERMEABLE LANDSCAPE FABRIC SHALL CREATE A ROOT BARRIER AROUND THE PIPES. CONTRACTOR SHALL COORDINATE WITH THE LANDSCAPE DRAWINGS.

STORM DRAIN AND SEWER TYPICAL TRENCH SECTION
NOT TO SCALE



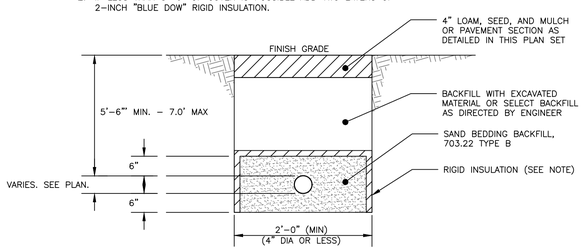
NOTES:

1. BACKFLOW VALVE TO BE PROVIDED BY AGRI DRAIN CORPORATION OR AN APPROVED EQUAL.
2. VALVE TO BE INSTALLED TO MANUFACTURER'S SPECIFICATIONS AND COMPLY WITH RULES AND REGULATIONS AS OUTLINED IN SECTION 2 OF THE CITY OF PORTLAND TECHNICAL MANUAL.
3. VALVE SHALL BE INSTALLED WITH A VALVE BOX AND COVER TO PROVIDE EASY ACCESS AND MAINTENANCE; VALVE COVER SHALL STATE "SEWER" ON LID FLUSH TO SURFACE. REFER TO VALVE & BOX COVER DETAIL FOR ADDITIONAL INFORMATION.
4. CONCRETE COLLAR AT A MINIMUM 24-HOUR COMPRESSIVE STRENGTH OF 3,000 PSI.

BACKFLOW VALVE ASSEMBLY
NOT TO SCALE

NOTES:

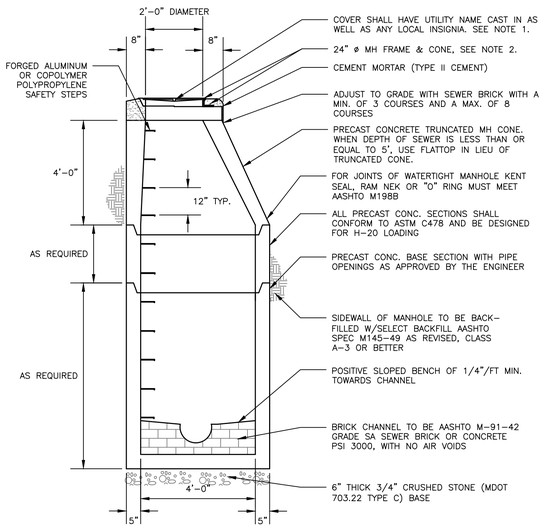
1. THE WATER TRENCH SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE PORTLAND WATER DISTRICT STANDARD DETAILS & SPECIFICATIONS.
2. IF LESS THAN 5'-6" OF COVER IS POSSIBLE ADD TWO LAYERS OF 2-INCH "BLUE DOW" RIGID INSULATION.



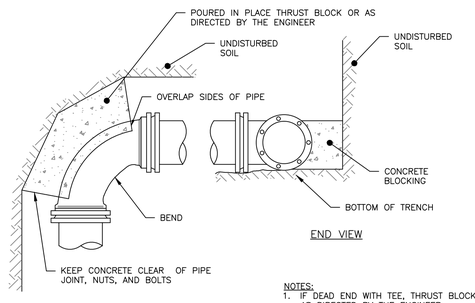
WATER SERVICE TRENCH SECTION DETAIL
NOT TO SCALE

NOTES:

1. WITHIN CITY OF PORTLAND ROW, STORM DRAIN MANHOLE SHALL CONFORM WITH "STANDARD PRECAST SEWER MANHOLE DETAIL", WITH THE EXCEPTION THAT THE COVER SHALL BE MARKED AS "DRAIN". REFER TO CITY OF PORTLAND TECHNICAL MANUAL, SECTION 2 – SANITARY SEWER AND STORM DRAIN, FIGURE II-1
2. SUBMITTAL REQUIRED FOR MANHOLES, MANHOLE FRAMES & MANHOLE COVERS

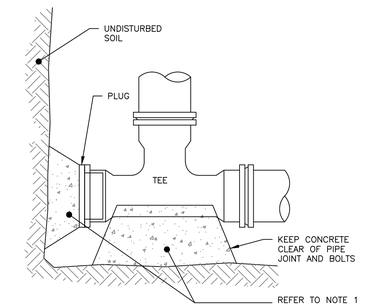


STANDARD PRECAST SEWER MANHOLE
NOT TO SCALE



TOP VIEW

END VIEW



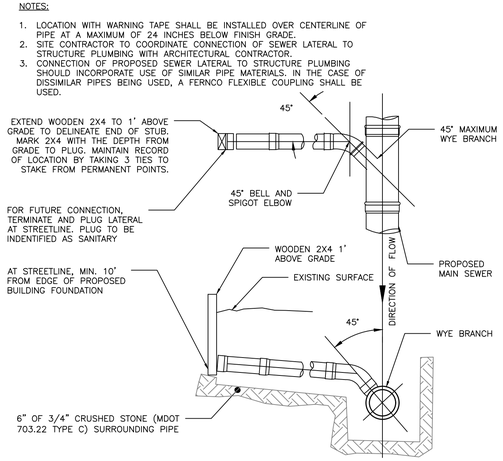
END SECTION

NOTES:
1. IF DEAD END WITH TEE, THRUST BLOCK WOULD BE REQUIRED OR AS DIRECTED BY THE ENGINEER
2. SEE THRUST/RETAINER GLAND SCHEDULE FOR TYPE OF BLOCKING TO BE USED ON BENDS

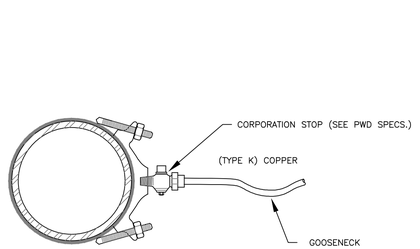
THRUST BLOCKING: REGULAR BEND
NOT TO SCALE

NOTES:

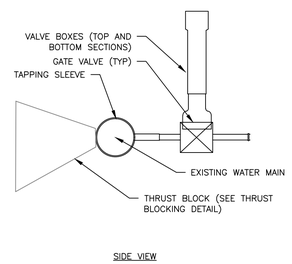
1. LOCATION WITH WARNING TAPE SHALL BE INSTALLED OVER CENTERLINE OF PIPE AT A MAXIMUM OF 24 INCHES BELOW FINISH GRADE.
2. SITE CONTRACTOR TO COORDINATE CONNECTION OF SEWER LATERAL TO STRUCTURE PLUMBING WITH ARCHITECTURAL CONTRACTOR.
3. CONNECTION OF PROPOSED SEWER LATERAL TO STRUCTURE PLUMBING SHOULD INCORPORATE USE OF SIMILAR PIPE MATERIALS. IN THE CASE OF DISSIMILAR PIPES BEING USED, A FERNCO FLEXIBLE COUPLING SHALL BE USED.



SEWER TEE/WYE CONNECTION DETAIL
NOT TO SCALE



SERVICE SADDLE: 1-1/2" AND 2" C.C. THREAD
NOT TO SCALE



SIDE VIEW

TAPPING SLEEVE AND VALVE
NOT TO SCALE

PERMIT LEVEL
NOT ISSUED FOR CONSTRUCTION

ISSUED FOR

	BY DATE
JOINT MAJOR SITE PLAN APPLICATION	SJL 4/10/25
COMMENT RESPONSE	SJL 7/30/25

DRAWING NAME: UTILITY DETAILS – 1

PROJECT NAME: PHASED OXFORD STREET REDEVELOPMENT

CLIENT: AVESTA HOUSING & REVELER DEVELOPMENT
307 CUMBERLAND AVE, PORTLAND, ME 04101
188 STATE STREET, 3RD FLOOR, PORTLAND, ME 04101

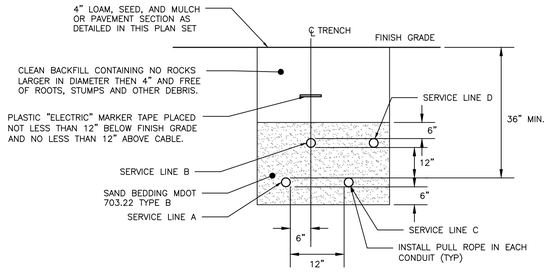
ACORN ENGINEERING, INC.
PO BOX 1237, OAKLAND, MAINE 04104
(207) 775-2655

THESE PLANS SHALL NOT BE MODIFIED WITHOUT THE WRITTEN AUTHORIZATION FROM ACORN ENGINEERING, INC. ANY MODIFICATIONS MADE TO THESE PLANS WITHOUT SUCH AUTHORIZATION, OR OTHERWISE, SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO ACORN ENGINEERING, INC.

FILE:	1212_AE_CIVIL
JN:	1212.1
SCALE:	AS NOTED
DESIGNED BY:	SJL
DRAWN BY:	DNM
CHECKED BY:	SJL

STATE OF MAINE — SAMUEL J. LEBEL — No. 16505 — PROFESSIONAL ENGINEER — LICENSED — 9/30/24

DRAWING NO. C-42



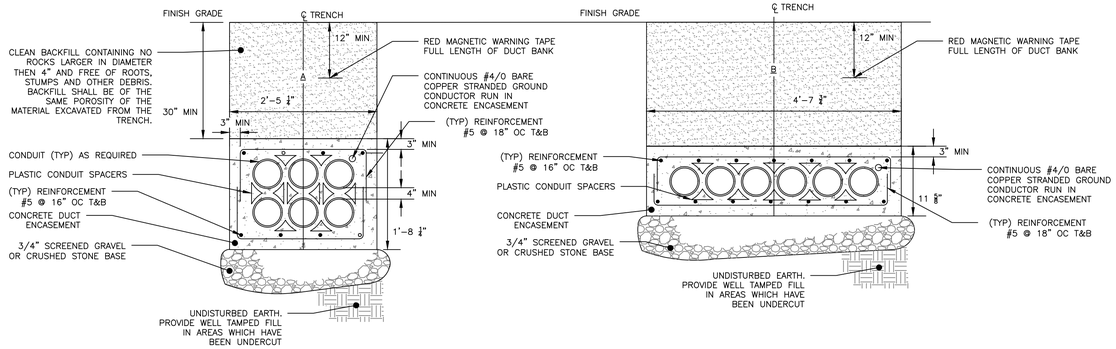
CONDUIT TYPE				
SERVICE	CONDUIT SIZE	GRASS AND PAVED AREAS	UTILITY	REMARKS
A	2–5"	SCHEDULE 40 PVC ELECTRICAL GRADE	PRIMARY POWER	SEE NOTE 1
B	2–4"	SCHEDULE 40 PVC	COMMUNICATION	–
C	2–4"	SCHEDULE 40 PVC ELECTRICAL GRADE	SPARE	IF REQUIRED
D	2–4"	SCHEDULE 40 PVC	CABLE	–

NOTES:

1. ONE CONDUIT CAPPED FOR SPARE, PROVIDE GALVANIZED STEEL LONG SWEEP AT RISER POLE AND EXTEND GALVANIZED CONDUIT TO 10" ABOVE GRADE AT POLE WITH STAND–OFF BRACKETS.
2. MINIMUM SEPARATION OF 24 INCHES BETWEEN PRIMARY CABLE/CONDUIT AND GAS LINES SHALL BE MAINTAINED.

UTILITY TRENCH:
PRIMARY AND SECONDARY POWER, TELEPHONE, AND CABLE

NOT TO SCALE



NOTES:

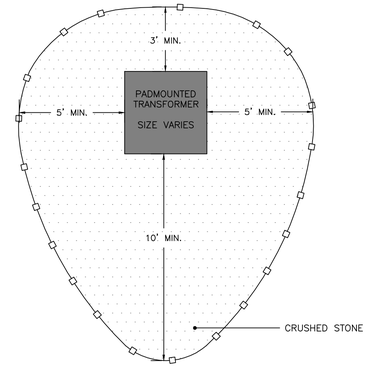
1. "A" WILL BE USED FOR MAJORITY OF INSTALLATION. DUCT BANK WILL NEED TO BE DEEPER AND NARROWER NEAR MANHOLES.
2. "B" WILL BE USED AS NEEDED. DUCT BANK WILL NEED TO BE WIDER AND SHALLOWER.
3. CONDUITS WITHIN THE CITY RIGHT–OF–WAY SHALL BE ENCASED IN CONCRETE.
4. FINAL SIZE OF CONDUITS TO BE SPECIFIED BY MEP, ELECTRICIAN, OR DESIGN/BUILD ELECTRICAL CONTRACTOR.
5. ALL CONSTRUCTION TO BE IN COMPLIANCE WITH CMP'S CONSTRUCTION STANDARDS AND THE LATEST EDITION OF THE NATIONAL ELECTRICAL SAFETY CODE.
6. ALL 90 DEGREE BENDS SHALL BE GALVANIZED LONG SWEEP BENDS. CONDUIT BELL ENDS REQUIRED AT SPLICE BOXES, TRANSFORMER BASES, AND SWITCH CABINETS.
7. CONDUITS SHALL BE PROPERLY PITCHED TO DRAIN INTO TRANSFORMER FOUNDATIONS, MANHOLES, OR SPLICE BOXES. THREE INCHES PER 100 FEET MINIMUM SLOPE. IF CONDUITS SLOW TOWARD THE RISER POLE, A COMPANY APPROVED DRAINAGE BOX AT THE RISER BASE SHALL BE INSTALLED.
8. INSTALL 1" (OR MULE TAPE) PULLING LINE IN EACH CONDUIT.
9. INSTALL 4/0 CU NEUTRAL IN CONDUIT DUCT BANK.
10. INSTALL CONDUIT SPACERS

PRIMARY POWER CONDUIT DUCT BANK

NOT TO SCALE

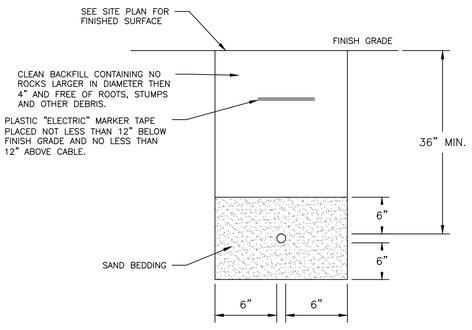
NOTES:

1. WHERE DANGER OF PLOW OR TRAFFIC DAMAGE EXISTS, BARRIERS CONSISTING OF CONCRETE FILLED 6 INCH IPS STEEL POSTS SET 4 FEET DEEP SHALL BE PROVIDED FOR PROTECTION (PRESSURE TREATED 6X6 INCH MIN. TIMBER POSTS MAY BE SUBSTITUTED IN RESIDENTIAL AREAS). POSTS SHALL NOT INTERFERE WITH TRANSFORMER ACCESS. GENERALLY THE POSTS SHALL BE LOCATED NEAR THE CORNERS OF THE TRANSFORMERS.
2. THE SETBACKS DEPICT CLEARANCES FROM OBSTRUCTIONS INCLUDING TREES, SHRUBS, AND FENCES.
3. THERE SHALL BE NO OPENINGS IN THE BUILDING WALL IN BACK OF, BESIDE, OR OVER THE TRANSFORMER UNLESS THE TRANSFORMER IS A MIN. OF 10 FEET FROM THE BUILDING.
4. SIDE CLEARANCES FROM DOORS OR WINDOWS SHALL NOT BE LESS THAN 10 FEET.
5. THERE SHALL BE A MIN. OF 10 FEET BETWEEN THE TRANSFORMER AND ANY GAS METER/REGULATOR, GAS RELIEF VALVE, GAS VENT DISCHARGE, GAS FILLING CONNECTION, OR PROPANE TANK. SOME INSURANCE COMPANIES MAY REQUIRE INCREASED CLEARANCES.
6. TRANSFORMER SHALL BE LOCATED FAR ENOUGH AWAY FROM BUILDING OVERHANGS SO THAT THEY WILL NOT BE SUBJECT TO DAMAGE BY FALLING ICE AND SNOW.
7. IF TRANSFORMER IS NOT INSTALLED IMMEDIATELY UPON THE INSTALLATION OF THE CABLE IN THE PAD, THE DEVELOPER SHALL PROVIDE AND INSTALL A CMP APPROVED CONCRETE, STEEL, OR FIBERGLASS COVER OVER THE PAD OPENING TO ELIMINATE EXPOSURE OF THE CABLE.



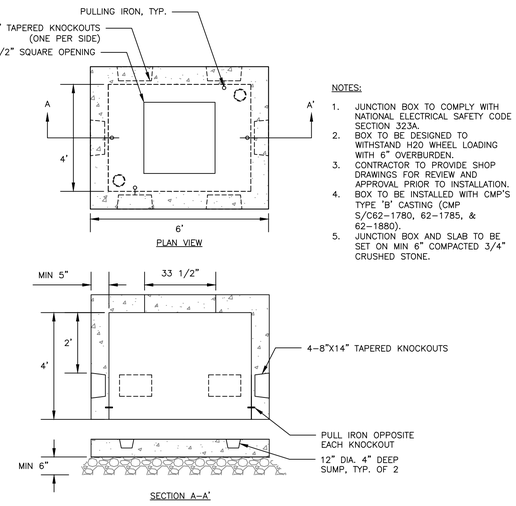
CMP TRANSFORMER SETBACKS

NOT TO SCALE



SECONDARY ELECTRICAL TRENCH

NOT TO SCALE

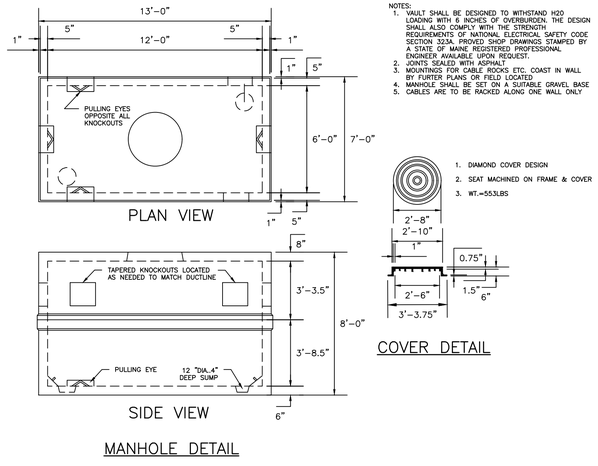


NOTES:

1. JUNCTION BOX TO COMPLY WITH NATIONAL ELECTRICAL SAFETY CODE SECTION 323A.
2. BOX TO BE DESIGNED TO WITHSTAND H20 WHEEL LOADING WITH 6" OVERBURDEN.
3. CONTRACTOR TO PROVIDE SHOP DRAWINGS FOR REVIEW AND APPROVAL PRIOR TO INSTALLATION.
4. BOX TO BE INSTALLED WITH CMP'S TYPE 'B' CASTING (CMP S/C62–1780, 62–1785, & 62–1880).
5. JUNCTION BOX AND SLAB TO BE SET ON MIN 6" COMPACTED 3/4" CRUSHED STONE.

CMP JUNCTION BOX (PULL BOX)

NOT TO SCALE



NOTES:

1. VAULT SHALL BE DESIGNED TO WITHSTAND H20 LOADING WITH 6 INCHES OF OVERBURDEN. THE DESIGN SHALL ALSO COMPLY WITH THE STRENGTH REQUIREMENTS OF NATIONAL ELECTRICAL SAFETY CODE SECTION 323A. PROVED SHOP DRAWINGS STAMPED BY A STATE OF MAINE REGISTERED PROFESSIONAL ENGINEER AVAILABLE UPON REQUEST.
2. JOINTS SEALED WITH ASPHALT
3. MOUNTINGS FOR CABLE RACKS ETC. COAST IN WALL BY FURTER PLANS OR FIELD LOCATED
4. MANHOLE SHALL BE SET ON A SUITABLE GRAVEL BASE
5. CABLES ARE TO BE RACKED ALONG ONE WALL ONLY

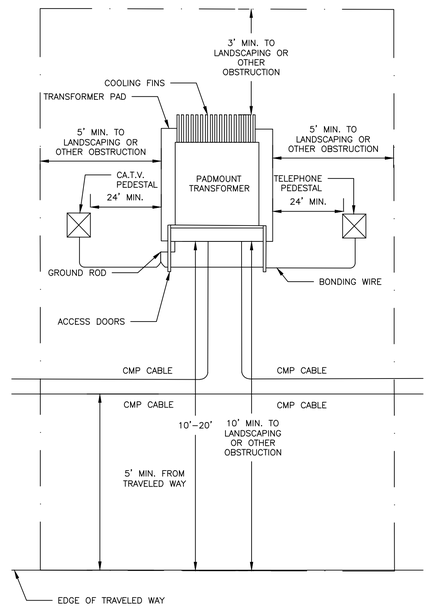
COVER DETAIL

MANHOLE DETAIL

NOT TO SCALE

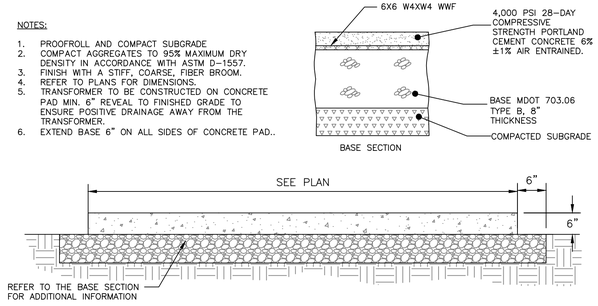
PRECAST CONCRETE 38Y MANHOLE DETAIL

NOT TO SCALE



9'X9' PAD MOUNTED TRANSFORMER

NOT TO SCALE



NOTES:

1. PROOFROLL AND COMPACT SUBGRADE
2. COMPACT AGGREGATES TO 95% MAXIMUM DRY DENSITY IN ACCORDANCE WITH ASTM D–1557.
3. FINISH WITH A STIFF, COARSE, FIBER BROOM.
4. REFER TO PLANS FOR DIMENSIONS.
5. TRANSFORMER TO BE CONSTRUCTED ON CONCRETE PAD MIN. 6" REVEAL TO FINISHED GRADE TO ENSURE POSITIVE DRAINAGE AWAY FROM THE TRANSFORMER.
6. EXTEND BASE 6" ON ALL SIDES OF CONCRETE PAD..

CONCRETE PAD DETAIL

NOT TO SCALE

PERMIT LEVEL
NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY DATE
JOINT MAJOR SITE PLAN APPLICATION	SJL 4/10/24
COMMENT RESPONSE	SJL 7/30/24

DRAWING NAME: UTILITY DETAILS – 2

PROJECT NAME: PHASED OXFORD STREET REDEVELOPMENT

CLIENT: AVESTA HOUSING & REVELER DEVELOPMENT
307 CUMBERLAND AVE, PORTLAND, ME 04101
188 STATE STREET, 3RD FLOOR, PORTLAND, ME 04101

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ACORN ENGINEERING, INC.
PO BOX 3207 KENNEBUNK, MAINE 04104
(207) 775–2655

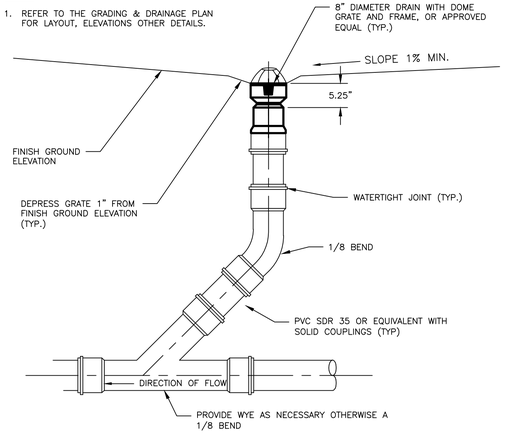
FILE:	1212_AE_CIVIL
JN:	1212.1
SCALE:	AS NOTED
DESIGNED BY:	SJL
DRAWN BY:	DNM
CHECKED BY:	SJL

STATE OF MAINE — SAMUEL J. LEBEL — No. 16505 — LICENSED PROFESSIONAL ENGINEER — 9/30/24

DRAWING NO.
C-43

NOTES:

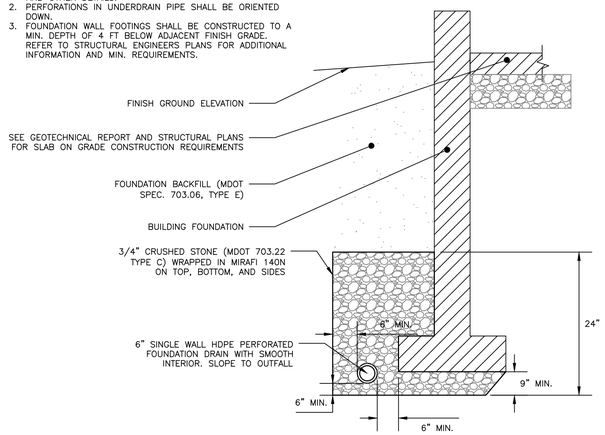
1. REFER TO THE GRADING & DRAINAGE PLAN FOR LAYOUT, ELEVATIONS OTHER DETAILS.



INLINE DRAIN DETAIL WITH BEEHIVE GRATE
NOT TO SCALE

NOTES:

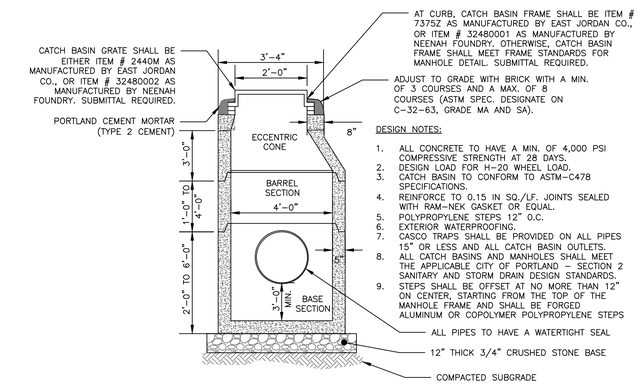
1. REFER TO THE BUILDING ARCHITECTS PLANS FOR THE BUILDING FOUNDATION, BACKFILL, ROOF DRAIN, SIDEWALK AND OTHER DETAILS.
2. PERFORATIONS IN UNDERDRAIN PIPE SHALL BE ORIENTED DOWN.
3. FOUNDATION WALL FOOTINGS SHALL BE CONSTRUCTED TO A MIN. DEPTH OF 4 FT BELOW ADJACENT FINISH GRADE. REFER TO STRUCTURAL ENGINEERS PLANS FOR ADDITIONAL INFORMATION AND MIN. REQUIREMENTS.



FOUNDATION DRAIN DETAIL
NOT TO SCALE

GENERAL NOTES FOR MANHOLES AND CATCH BASINS

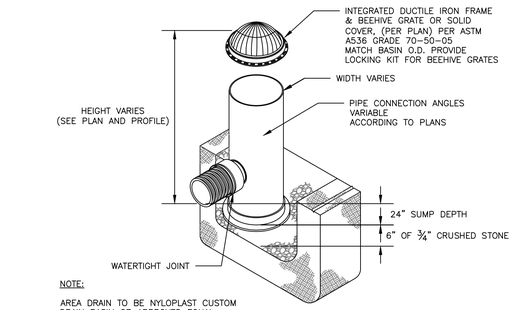
1. ALL CONCRETE SHALL HAVE A MINIMUM ULTIMATE COMPRESSIVE STRENGTH OF 4000 LBS. PER SQ. INCH AT THE END OF 28 DAYS, UNLESS OTHERWISE NOTED.
2. MANHOLES MAY BE CONSTRUCTED OF PRECAST REINFORCED CONCRETE, OR CAST IN PLACE.
3. PRECAST REINFORCED CONE BARREL MANUFACTURED PER ASTM SPEC. C-478.
4. ALL STORM MANHOLE COVERS SHALL BE SOLID AND SHALL HAVE ONE ⅞" DIAMETER DRILLED PICK HOLE LOCATED 8" FROM THE CENTER OF THE COVER.
5. ALL STORMWATER/DRAIN MANHOLE COVERS SHALL HAVE "DRAIN" CAST INTO THE COVER.
6. ALL MANHOLE RISERS SHALL BE ETHERIDGE 24" OR APPROVAL EQUAL.
7. CATCH BASIN FRAMES FOR TYPE A4 CATCH BASIN CURB INLETS SHALL BE ETHERIDGE DR5A OR APPROVED EQUAL.
8. CASTINGS SHALL CONFORM TO ASTM DESIGNATION A48-CLASS 35.
9. EXISTING MANHOLES, CATCH BASINS, FRAMES, AND COVERS SHALL BE SALVAGED BY THE CONTRACTOR, AND SHALL REMAIN THE PROPERTY OF THE CITY OF PORTLAND.



DESIGN NOTES:

1. ALL CONCRETE TO HAVE A MIN. OF 4,000 PSI COMPRESSIVE STRENGTH AT 28 DAYS.
2. DESIGN LOAD FOR H-20 WHEEL LOAD.
3. CATCH BASIN TO CONFORM TO ASTM-C478 SPECIFICATIONS.
4. REINFORCE TO 0.15 IN SQ./LF. JOINTS SEALED WITH RAM-NEK GASKET OR EQUAL.
5. POLYPROPYLENE STEPS 12" O.C.
6. EXTERIOR WATERPROOFING.
7. CASCO TRAPS SHALL BE PROVIDED ON ALL PIPES 15" OR LESS AND ALL CATCH BASIN OUTLETS.
8. ALL CATCH BASINS AND MANHOLES SHALL MEET THE APPLICABLE CITY OF PORTLAND - SECTION 2 SANITARY AND STORM DRAIN DESIGN STANDARDS.
9. STEPS SHALL BE OFFSET AT NO MORE THAN 12" ON CENTER, STARTING FROM THE TOP OF THE MANHOLE FRAME AND SHALL BE FORGED ALUMINUM OR COPOLYMER POLYPROPYLENE STEPS

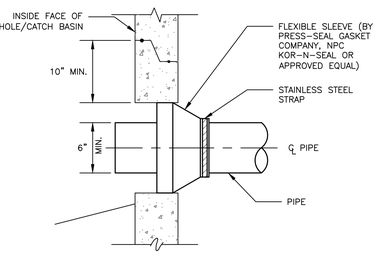
4'-0" DIAMETER PRECAST CATCH BASIN/MANHOLE DRAIN
NOT TO SCALE



NOTE:

AREA DRAIN TO BE NYLOPLAST CUSTOM DRAIN BASIN OR APPROVED EQUAL.

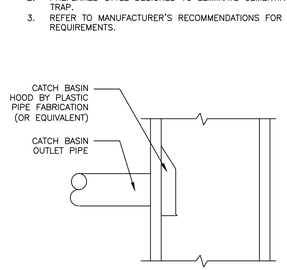
BEEHIVE DRAIN DETAIL
NOT TO SCALE



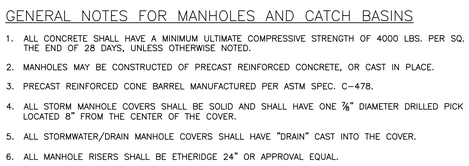
NEW PIPE TO NEW STRUCTURE CONNECTION DETAIL
NOT TO SCALE

NOTES:

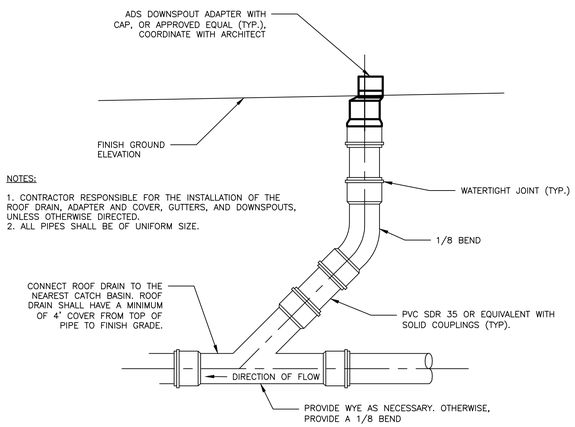
1. INSTALL HOOD ON ALL OUTLETS 24" OR LESS.
2. PREFERRED STYLE DESIGNED TO ELIMINATE CEMENTING OF THE TRAP.
3. REFER TO MANUFACTURER'S RECOMMENDATIONS FOR INSTALLATION REQUIREMENTS.



CATCH BASIN HOOD DETAIL
NOT TO SCALE



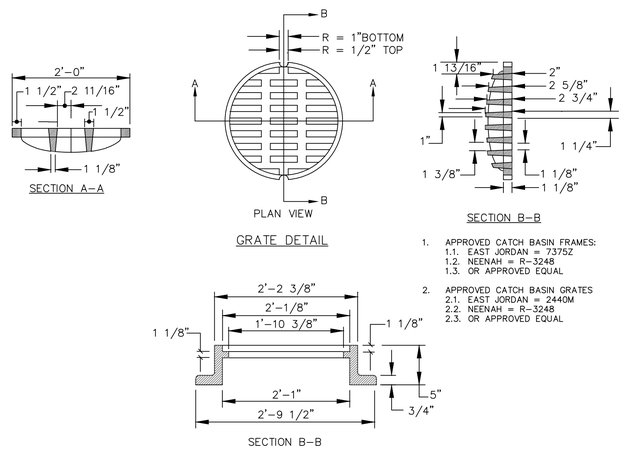
4' GRANITE HEADSTONE FOR CATCH BASIN INLET
NOT TO SCALE



NOTES:

1. CONTRACTOR RESPONSIBLE FOR THE INSTALLATION OF THE ROOF DRAIN, ADAPTER AND COVER, GUTTERS, AND DOWNSPOUTS, UNLESS OTHERWISE DIRECTED.
2. ALL PIPES SHALL BE OF UNIFORM SIZE.

ROOF DRAIN DETAIL
NOT TO SCALE

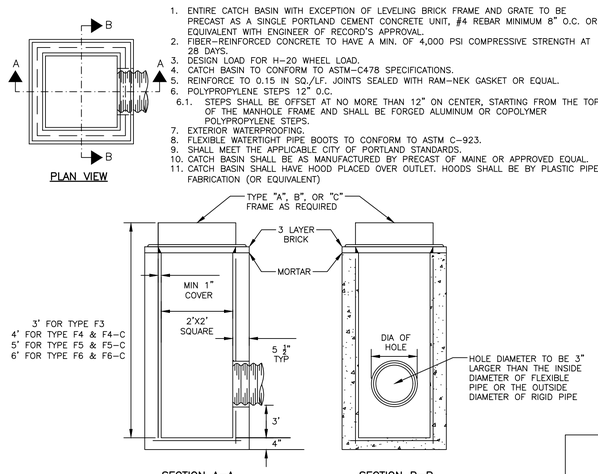


1. APPROVED CATCH BASIN FRAMES:
   1.1. EAST JORDAN = 7375Z
   1.2. NEENAH = R-3248
   1.3. OR APPROVED EQUAL
2. APPROVED CATCH BASIN GRATES
   2.1. EAST JORDAN = 2440M
   2.2. NEENAH = R-3248
   2.3. OR APPROVED EQUAL

CIRCULAR CATCH BASIN FRAME & GRATE W/O D-RING
NOT TO SCALE

NOTES:

1. ENTIRE CATCH BASIN WITH EXCEPTION OF LEVELING BRICK FRAME AND GRATE TO BE PRECAST AS A SINGLE PORTLAND CEMENT CONCRETE UNIT, #4 REBAR MINIMUM 8" O.C. OR EQUIVALENT WITH ENGINEER OF RECORD'S APPROVAL.
2. FIBER-REINFORCED CONCRETE TO HAVE A MIN. OF 4,000 PSI COMPRESSIVE STRENGTH AT 28 DAYS.
3. DESIGN LOAD FOR H-20 WHEEL LOAD.
4. CATCH BASIN TO CONFORM TO ASTM-C478 SPECIFICATIONS.
5. REINFORCE TO 0.15 IN SQ./LF. JOINTS SEALED WITH RAM-NEK GASKET OR EQUAL.
6. POLYPROPYLENE STEPS 12" O.C.
   6.1. STEPS SHALL BE OFFSET AT NO MORE THAN 12" ON CENTER, STARTING FROM THE TOP OF THE MANHOLE FRAME AND SHALL BE FORGED ALUMINUM OR COPOLYMER POLYPROPYLENE STEPS.
7. EXTERIOR WATERPROOFING.
8. FLEXIBLE WATERTIGHT PIPE BOOTS TO CONFORM TO ASTM C-923.
9. SHALL MEET THE APPLICABLE CITY OF PORTLAND STANDARDS.
10. CATCH BASIN SHALL BE AS MANUFACTURED BY PRECAST OF MAINE OR APPROVED EQUAL.
11. CATCH BASIN SHALL HAVE HOOD PLACED OVER OUTLET. HOODS SHALL BE BY PLASTIC PIPE FABRICATION (OR EQUIVALENT)



24" SQUARE CATCH BASIN "TYPE F"
NOT TO SCALE

PERMIT LEVEL
NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY DATE
JOINT MAJOR SITE PLAN APPLICATION	SJL 4/10/24
COMMENT RESPONSE	SJL 7/30/24

DRAWING NAME: DRAINAGE DETAILS - 1

PROJECT NAME: PHASED OXFORD STREET REDEVELOPMENT
188 STATE STREET, 3RD FLOOR, PORTLAND, ME 04101

CLIENT: AVESTA HOUSING & REVELER DEVELOPMENT
307 CUMBERLAND AVE, PORTLAND, ME 04101

ACORN ENGINEERING, INC.
PO BOX 3707, PORTLAND, MAINE 04104
(207) 775-2655

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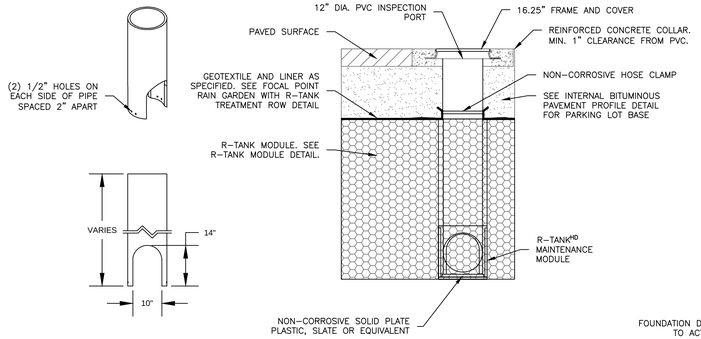
FILE: 1212_AE_CIVIL
JN: 1212.1
SCALE: AS NOTED
DESIGNED BY: SJL
DRAWN BY: DNM
CHECKED BY: SJL

STATE OF MAINE
Sam Lebel
SAMUEL J. LEBEL
No. 16505
PROFESSIONAL ENGINEER
LICENSED
9/30/24

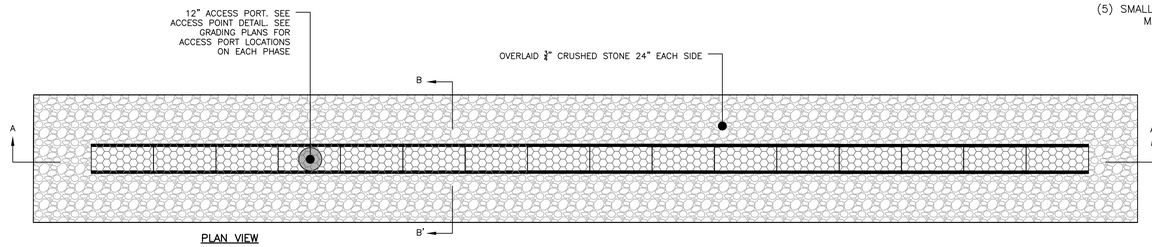
DRAWING NO.
C-44

R–TANK SUBSURFACE STORMWATER DETENTION SYSTEM OVERVIEW BY PHASE:			
	PHASE 1: 197 OXFORD ST.	PHASE 2: 50 CEDAR ST.	PHASE 3: 158 LANCASTER ST.
FINISHED GRADE:	28.40'	26.75	13.25'
TOP OF CRUSHED STONE:	26.95'	26.25'	13.00'
TOP OF R–TANK:	25.96'	25.25'	12.00'
OVERFLOW INVERT OUT:	25.63'	24.92'	11.67'
BOTTOM OF R–TANK:	23.13'	22.43'	9.18'
UNDERDRAIN INVERT OUT:	22.80'	22.09'	8.84'
BOTTOM OF STONE:	22.38'	21.68'	8.43'
TOTAL TANK COUNT	50	40	72
NUMBER OF 4" OVERFLOW DRAINS	4	3	4

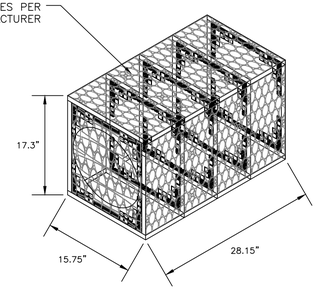
NOTES
1. THE INSPECTION PORT IS USED IN THE MAINTENANCE MODULE TO INSPECT THE LEVEL OF SEDIMENT ACCUMULATION.
2. MINIMUM REQUIRED MAINTENANCE INCLUDES A QUARTERLY INSPECTION DURING THE FIRST YEAR OF OPERATION AND A YEARLY INSPECTION THEREAFTER. FLUSH MAINTENANCE ROW VIA THE ACCESS STRUCTURE FROM EITHER END AS NEEDED.
3. R–TANK^{HD} MAY BE USED IN TRAFFIC APPLICATIONS.
4. SEE TRAFFIC LOADING DETAIL FOR MINIMUM & MAXIMUM COVER REQUIREMENTS.
5. IF INSPECTION PORT IS LOCATED IN A NON–TRAFFIC AREA, A PLASTIC CAP CAN B USED IN LIEU OF A FRAME AND COVER WITH CONCRETE COLLAR



ACCESS PORT WITH SOLID COVER
NOT TO SCALE



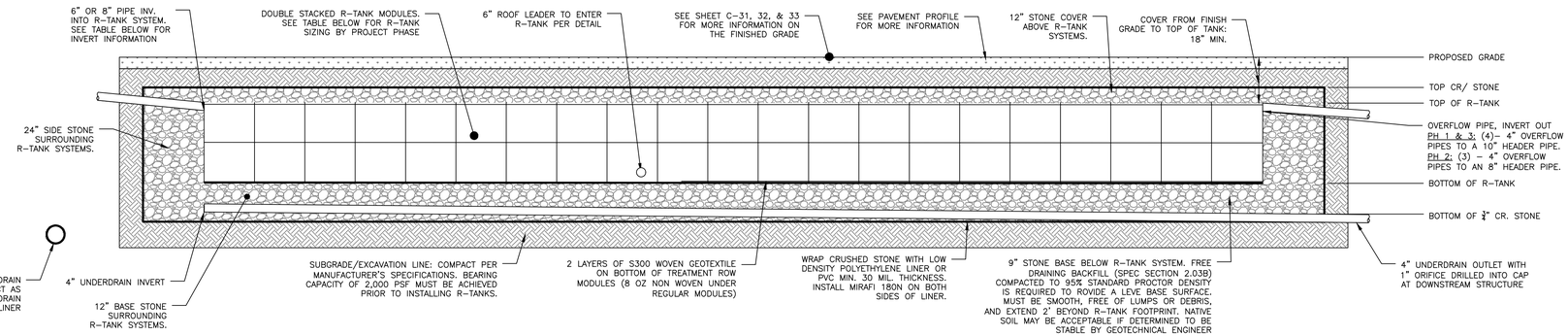
PLAN VIEW



ISOMETRIC VIEW

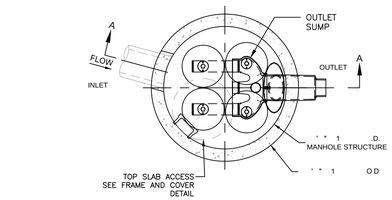
R–TANK MODULE DETAIL
NOT TO SCALE

NOTES:
INSTALLATION TO MEET MANUFACTURER'S SPECIFICATIONS.



SECTION A–A

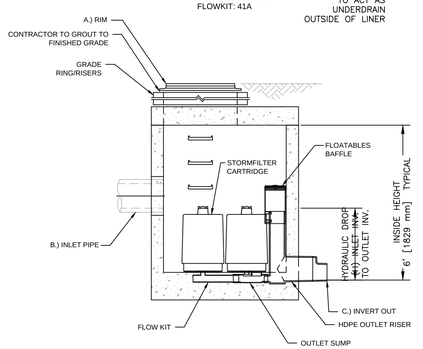
R–TANK SUBSURFACE DETENTION SYSTEM
NOT TO SCALE



PLAN VIEW
STANDARD OUTLET RISER
FLOWKIT: 41A

STORMFILTER DESIGN NOTES									
STORMFILTER TREATMENT CAPACITY IS A FUNCTION OF THE CARTRIDGE SELECTION AND THE NUMBER OF CARTRIDGES. THE STANDARD MANHOLE STYLE IS SHOWN WITH THE MAXIMUM NUMBER OF CARTRIDGES (4). VOLUME SYSTEM IS ALSO AVAILABLE WITH MAXIMUM 4 CARTRIDGES. ' ' ' I MANHOLE STORMF LTER PEA H DRA L APA T S1 FS L F THE S TE ND T ONS EX EED 1 FS L AN UPSTREAM BYPASS STRUCTURE IS REQUIRED. CARTRIDGE SELECTION									
CARTRIDGE HEIGHT	27" [686 mm]			18" [458 mm]			LOW DROP 1.8' [550 mm]		
RECOMMENDED HYDRAULIC DROP (H)	3.05' [930 mm]			2.3' [700 mm]					
SPECIFIC FLOW RATE (gpm/sf) [L/s/m^2]	2 [1.30]	1.67* [1.08]	1 [0.65]	2 [1.30]	1.67* [1.08]	1 [0.65]	2 [1.30]	1.67* [1.08]	1 [0.65]
CARTRIDGE FLOW RATE (gpm) [L/s]	22.5 [1.42]	18.79 [1.19]	11.25 [0.71]	15 [0.95]	12.53 [0.79]	7.5 [0.44]	10 [0.63]	8.35 [0.54]	5 [0.32]

* 1.67 gpm/sf [1.08 L/s/m^2] SPECIFIC FLOW RATE IS APPROVED WITH PHOSPHOSORB (PSORB) MEDIA ONLY



SECTION A-A

FOUNDATION DRAIN TO ACT AS UNDERDRAIN OUTSIDE OF LINER



FRAME AND COVER
(DIAMETER VARIES)
N.T.S.

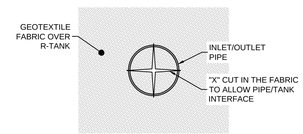
GENERAL NOTES
1. CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
2. DIMENSIONS MARKED WITH ( ) ARE REFERENCE DIMENSIONS. ACTUAL DIMENSIONS MAY VARY.
3. FOR SITE SPECIFIC DRAWINGS WITH DETAILED VAULT DIMENSIONS AND WEIGHTS, PLEASE CONTACT YOUR CONTECH ENGINEERED SOLUTIONS LLC REPRESENTATIVE. www.ContechES.com
4. STORMFILTER WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING.
5. STRUCTURE SHALL MEET AASHTO HS-20 LOAD RATING, ASSUMING EARTH COVER OF 0' - 5' [1524 mm] AND GROUNDWATER ELEVATION AT, OR BELOW, THE OUTLET PIPE INVERT ELEVATION. ENGINEER OF RECORD TO CONFIRM ACTUAL GROUNDWATER ELEVATION. CASTINGS SHALL MEET AASHTO M306 AND BE CAST WITH THE CONTECH LOGO.
6. FILTER CARTRIDGES SHALL BE MEDIA-FILLED, PASSIVE, SIPHON ACTUATED, RADIAL FLOW, AND SELF CLEANING. RADIAL MEDIA DEPTH SHALL BE 7-INCHES [178 mm]. FILTER MEDIA CONTACT TIME SHALL BE AT LEAST 38 SECONDS.
7. SPECIFIC FLOW RATE IS EQUAL TO THE FILTER TREATMENT CAPACITY (gpm) [L/s] DIVIDED BY THE FILTER CONTACT SURFACE AREA (sq ft)[m^2].
8. STORMFILTER STRUCTURE SHALL BE PRECAST CONCRETE CONFORMING TO ASTM C-478 AND AASHTO LOAD FACTOR DESIGN METHOD.

INSTALLATION NOTES
A. ANY SUB-BASE, BACKFILL DEPTH, AND/OR ANTI-FLOTATION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD.
B. CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE STORMFILTER STRUCTURE.
C. CONTRACTOR TO INSTALL JOINT SEALANT BETWEEN ALL STRUCTURE SECTIONS AND ASSEMBLE STRUCTURE.
D. CONTRACTOR TO PROVIDE, INSTALL, AND GROUT INLET PIPE(S).
E. CONTRACTOR TO PROVIDE AND INSTALL CONNECTOR TO THE OUTLET RISER STUB. STORMFILTER EQUIPPED WITH A DUAL DIAMETER HDPE OUTLET STUB AND SAND COLLAR. IF OUTLET PIPE IS LARGER THAN 8 INCHES [200 mm], CONTRACTOR TO REMOVE THE 8 INCH [200 mm] OUTLET STUB AT MOLDED-IN CUT LINE. COUPLING BY FERNCO OR EQUAL AND PROVIDED BY CONTRACTOR.
F. CONTRACTOR TO TAKE APPROPRIATE MEASURES TO PROTECT CARTRIDGES FROM CONSTRUCTION-RELATED EROSION RUNOFF.

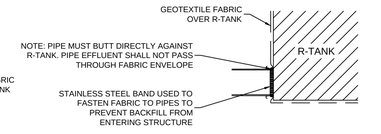
STORMFILTER INVERTS OVERVIEW:			
		PHASE 1: 197 OXFORD STREET:	PHASE 2: 50 CEDAR STREET:
A	RIM:	36.10'	27.45'
B	INVERT IN:	33.85'	21.74'
C	INVERT OUT:	29.60'	18.69'
	TOTAL CARTRIDGES:	2	2

STORMFILTER (SFMH60) SYSTEM
NOT TO SCALE

T AN X N THE FA R ENVELOPE THAT S SL HTL LARGER THAN THE PIPE. PULL THE FABRIC FLAPS AROUND THE PIPE, AND SEAL WITH A STAINLESS STEEL BAND.

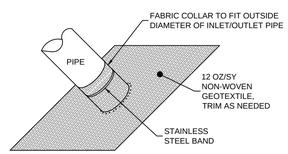


END VIEW OF PIPE/FABRIC CONNECTION

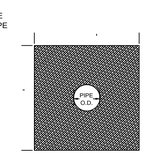


SIDE VIEW OF PIPE/FABRIC CONNECTION

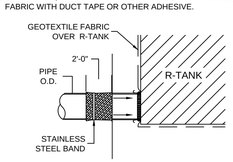
AFTER TANK WRAP IS SECURED TO PIPE, SLIDE BOOT AGAINST R-TANK AND SECURE WITH SECOND STAINLESS STEEL BAND, THEN ATTACH BOOT FLAP TO TANK ENVELOPE FABRIC WITH DUCT TAPE OR OTHER ADHESIVE.



GEOTEXTILE BOOT



FRONT VIEW OF GEOTEXTILE BOOT



SIDE VIEW OF GEOTEXTILE BOOT

R–TANK INLET/OUTLET WITH GEOTEXTILE BOOT
NOT TO SCALE

PERMIT LEVEL
NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY DATE
JOINT MAJOR SITE PLAN APPLICATION	SJL 4/10/24
COMMENT RESPONSE	SJL 7/30/24

DRAWING NAME: DRAINAGE DETAILS – 2
PROJECT NAME: PHASED OXFORD STREET REDEVELOPMENT
CLIENT: AVESTA HOUSING & REVELER DEVELOPMENT
307 CUMBERLAND AVE, PORTLAND, ME 04101
188 STATE STREET, 3RD FLOOR, PORTLAND, ME 04101

ACORN ENGINEERING, INC.
ENGINEERING — SURVEYING — PLANNING
ACORN ENGINEERING, INC.
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(207) 775–2655

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FILE:	1212_AE_CIVIL
JN:	1212.1
SCALE:	AS NOTED
DESIGNED BY:	SJL
DRAWN BY:	DNM
CHECKED BY:	SJL

STATE OF MAINE
SAMUEL J. LEBEL
No. 16505
REGISTERED PROFESSIONAL ENGINEER
LICENSED
9/30/24

DRAWING NO.
C-45

1.0 EROSION CONTROL MEASURES AND SITE STABILIZATION

AS PART OF THE SITE DEVELOPMENT, THE FOLLOWING TEMPORARY AND PERMANENT EROSION AND SEDIMENTATION CONTROL DEVICES SHALL BE IMPLEMENTED. DEVICES SHALL BE INSTALLED AS DESCRIBED IN THIS REPORT OR WITHIN THE PLAN SET. SEE THE MAINE EROSION AND SEDIMENT CONTROL HANDBOOK FOR CONSTRUCTION: BEST MANAGEMENT PRACTICES FOR FURTHER REFERENCE.

1.1 TEMPORARY EROSION CONTROL MEASURES

THE FOLLOWING TEMPORARY EROSION AND SEDIMENTATION CONTROL MEASURES ARE PLANNED FOR THE PROJECT'S CONSTRUCTION PERIOD:

1.1.1 CRUSHED STONE STABILIZED CONSTRUCTION ENTRANCES SHALL BE PLACED AT ALL ACCESS POINTS TO THE PROJECT SITE WHERE THERE ARE DISTURBED AREAS. THE FOLLOWING SPECIFICATIONS SHALL BE FOLLOWED AT A MINIMUM:
- STONE SIZE SHALL BE 2–3 INCHES, OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
- THE THICKNESS OF THE ENTRANCE STONE LAYER SHALL BE NO LESS THAN 6 INCHES.
- THE ENTRANCE SHALL NOT BE LESS THAN 20 FEET WIDE, HOWEVER NOT LESS THAN THE FULL WIDTH OF POINTS WHERE INGRESS OR EGRESS OCCURS. THE LENGTH SHALL NOT BE LESS THAN 50 FEET IN LENGTH.
- GEOTEXTILE FABRIC (WOVEN OR NON–WOVEN) SHALL BE PLACED OVER THE ENTIRE ENTRANCE AREA.
- THE ENTRANCE/EXIT SHALL BE MAINTAINED TO THE EXTENT THAT IT WILL PREVENT THE TRACKING OF SEDIMENT ONTO PUBLIC ROAD WAYS.

1.1.2 SILTATION FENCE OR EROSION CONTROL BERM SHALL BE INSTALLED DOWN GRADIENT OF ANY DISTURBED AREAS TO TRAP RUNOFF BORNE SEDIMENTS UNTIL PERMANENT STABILIZATION IS ACHIEVED. THE SILT FENCE OR EROSION CONTROL BERM SHALL BE INSTALLED PER THE DETAILS PROVIDED IN THE PLAN SET AND INSPECTED BEFORE AND IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. REPAIRS SHALL BE MADE IF THERE ARE ANY SIGNS OF EROSION OR SEDIMENTATION BELOW THE FENCE LINE OR BERM. IF THERE ARE SIGNS OF UNDERCUTTING AT THE CENTER OR THE EDGES, OR IMPOUNDING OF LARGE VOLUMES OF WATER BEHIND THE FENCE OR BERM, THE BARRIER SHALL BE REPLACED WITH A STONE CHECK DAM.

1.1.3 HAY MULCH INCLUDING HYDRO SEEDING IS INTENDED TO PROVIDE COVER FOR DENUDED OR SEEDED AREAS UNTIL REVEGETATION IS ESTABLISHED. MULCH PLACED BETWEEN APRIL 15TH AND NOVEMBER 1ST ON SLOPES OF LESS THAN 15 PERCENT SHALL BE COVERED BY FABRIC NETTING AND ANCHORED WITH STAPLES IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATION. MULCH PLACED BETWEEN NOVEMBER 1ST AND APRIL 15TH ON SLOPES EQUAL TO OR STEEPER THAN 8 PERCENT AND EQUAL TO OR FLATTER THAN 2:1 SHALL USE MATS OR FABRIC NETTING AND ANCHORED WITH STAPLES IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATION.

1.1.4 AT ANY TIME OF THE YEAR, ALL SLOPES STEEPER THAN 3:1 SHALL BE STABILIZED WITH DOUBLE NET EROSION CONTROL BLANKET BIONET SC150BN BY NORTH AMERICAN GREEN OR APPROVED EQUAL, OR EROSION CONTROL MIX SLOPE PROTECTION AS DETAILED WITHIN THE PLANS.

1.1.5 **CEDAR STREET, LANCASTER STREET, CHESTNUT STREET, AND HALL COURT** SHALL BE SWEPT TO CONTROL MUD AND DUST FROM THE CONSTRUCTION SITE AS NECESSARY. ADD ADDITIONAL STONE TO THE STABILIZED CONSTRUCTION ENTRANCE TO MINIMIZE THE TRACKING OF MATERIAL OFF THE SITE AND ONTO THE SURROUNDING ROADWAYS.

1.1.6 DURING DEMOLITION, CLEARING AND GRUBBING OPERATIONS, STONE CHECK DAMS SHALL BE INSTALLED AT ANY AREAS OF CONCENTRATED FLOW. THE MAXIMUM HEIGHT OF THE CHECK DAM SHALL NOT EXCEED 2 FEET. THE CENTER OF THE CHECK DAM SHALL BE 6 INCHES BELOW THE OUTER EDGES OF THE DAM. THE CONTRACTOR SHALL MULCH THE SIDE SLOPES AND INSTALL STONE CHECK DAMS FOR ALL NEWLY EXCAVATED DITCH LINES WITHIN 24 HOURS OF THEIR CREATION.

1.1.7 SILT FENCE STAKE SPACING SHALL NOT EXCEED 6 FEET UNLESS THE FENCE IS SUPPORTED WITH 14 GAUGE WIRE IN WHICH CASE THE MAXIMUM SPACING SHALL NOT EXCEED 10 FEET. THE SILT FENCE SHALL BE TOED INTO THE GROUND.

1.1.8 STORMDRAIN INLET PROTECTION SHALL BE PROVIDED TO STORMDRAINS THROUGH THE USE OF ANY OF THE FOLLOWING: HAY BALE DROP INLET STRUCTURES, SILT FENCE DROP INLET SEDIMENT FILTER, GRAVEL AND WIRE MESH DROP INLET SEDIMENT FILTER, OR CURB INLET SEDIMENT FILTER. BARRIERS SHALL BE INSPECTED AFTER EVERY RAINFALL EVENT AND REPAIRED AS NECESSARY. SEDIMENTS SHALL BE REMOVED WHEN ACCUMULATION HAS REACHED ½ THE DESIGN HEIGHT.

1.1.9 DUST CONTROL SHALL BE ACCOMPLISHED BY THE USE OF ANY OF THE FOLLOWING: WATER, CALCIUM CHLORIDE, STONE, OR AN APPROVED MDEP PRODUCT. DUST CONTROL SHALL BE APPLIED AS NEEDED TO ACCOMPLISH DUST CONTROL.

1.1.10 TEMPORARY LOAM, SEED, AND MULCHING SHALL BE USED IN AREAS WHERE NO OTHER EROSION CONTROL MEASURE IS USED. APPLICATION RATES FOR SEEDING ARE PROVIDED AT THE END OF THIS REPORT.

1.1.11 STOCKPILES SHALL BE STABILIZED WITHIN 7 DAYS OF FORMATION UNLESS A SCHEDULED RAIN EVENT OCCURS PRIOR TO THE 7 DAY WINDOW, IN WHICH CASE THE STOCKPILE SHALL BE STABILIZED PRIOR TO THE RAIN EVENT. METHODS OF STABILIZATION SHALL BE MULCH, EROSION CONTROL MIX, OR EROSION CONTROL BLANKETS/MATS. SILT FENCE OR A WOOD WASTE COMPOST FILTER BERM SHALL BE PLACED DOWNHILL OF ANY SOIL STOCKPILE LOCATION.

1.1.12 FOR DISTURBANCE BETWEEN NOVEMBER 1 AND APRIL 15, PLEASE REFER TO WINTER STABILIZATION PLAN IN THIS REPORT AND THE MAINE EROSION AND SEDIMENT CONTROL BMP MANUAL FOR FURTHER INFORMATION.

1.1.13 IT IS OF THE UTMOST IMPORTANCE THAT STORMWATER RUNOFF AND POTENTIAL SEDIMENT FROM THE CONSTRUCTION SITE BE DIVERTED AROUND THE PROPOSED UNDERDRAINS UNTIL THE TRENCH IS BACKFILLED.

1.2 PERMANENT EROSION CONTROL MEASURES

THE FOLLOWING PERMANENT EROSION CONTROL MEASURES ARE INTENDED FOR POST DISTURBANCE AREAS OF THE PROJECT.

1.2.1 ALL DISTURBED AREAS DURING CONSTRUCTION, NOT SUBJECT TO OTHER PROPOSED CONDITIONS, SHALL RECEIVE A MINIMUM 4 OF LOAM AND SHALL BE LIMED, AND MULCHED.

EROSION CONTROL BLANKETS OR MATS SHALL BE PLACED OVER THE MULCH IN AREAS NOTED IN PARAGRAPH 4.2 OF THIS REPORT.

1.2.2 ALL STORMWATER DEVICES SHALL BE INSTALLED AND TRIBUTARY AREAS STABILIZED PRIOR RECEIVING STORMWATER.

1.2.3 REFER TO THE MAINE EROSION AND SEDIMENT CONTROL BMP MANUAL FOR ADDITIONAL INFORMATION.

2.0 EROSION AND SEDIMENTATION CONTROL PLAN

2.1 THE EROSION AND SEDIMENTATION CONTROL PLAN IS INCLUDED WITHIN THE PLAN SET.

3.0 DETAILS AND SPECIFICATIONS

3.1 EROSION CONTROL DETAILS AND SPECIFICATIONS ARE INCLUDED IN THE PLAN SET.

4.0 STABILIZATION PLAN FOR WINTER CONSTRUCTION

WINTER CONSTRUCTION CONSISTS OF EARTHWORK DISTURBANCE BETWEEN THE DATES OF NOVEMBER 1 AND APRIL 15. IF A CONSTRUCTION SITE IS NOT STABILIZED WITH PAVEMENT, A ROAD GRAVEL BASE, 75% MATURE VEGETATION COVER OR RIPRAP BY NOVEMBER 15, THEN THE SITE SHALL BE PROTECTED WITH OVER–WINTER STABILIZATION. ANY AREA NOT STABILIZED WITH PAVEMENT, VEGETATION, MULCHING, EROSION CONTROL MIX, EROSION CONTROL MATS, RIPRAP, OR GRAVEL BASE ON A ROAD SHALL BE CONSIDERED OPEN.

THE CONTRACTOR SHALL LIMIT THE WORK AREA TO AREAS THAT WORK WILL OCCUR IN DURING THE SUBSEQUENT 15 DAYS AND SO THAT IT CAN BE MULCHED ONE DAY PRIOR TO A SNOW EVENT. THE CONTRACTOR SHALL STABILIZE WORK AREAS PRIOR TO OPENING ADDITIONAL WORK AREAS TO MINIMIZE AREAS WITHOUT EROSION CONTROL MEASURES.

THE FOLLOWING MEASURES SHALL BE IMPLEMENTED DURING WINTER CONSTRUCTION PERIODS:

4.1 SEDIMENT BARRIERS

DURING FROZEN CONDITIONS, SEDIMENT BARRIERS MAY CONSIST OF EROSION CONTROL MIX BERMS OR ANY OTHER RECOGNIZED SEDIMENT BARRIERS AS FROZEN SOIL PREVENTS THE PROPER INSTALLATION OF HAY BALES OR SILT FENCES.

4.2 MULCHING

ALL AREAS SHALL BE CONSIDERED TO BE DENUDED UNTIL SEEDED AND MULCHED. HAY AND STRAW MULCH SHALL BE APPLIED AT A RATE OF 150 LB. PER 1,000 SQUARE FEET OR 3 TONS/ACRE (TWICE THE NORMAL ACCEPTED RATE OF 75–LBS./1,000 S.F. OR 1.5 TONS/ACRE) AND SHALL BE PROPERLY ANCHORED. EROSION CONTROL MIX MUST BE APPLIED WITH A MINIMUM 4 INCH THICKNESS. MULCH SHALL NOT BE SPREAD ON TOP OF SNOW. THE SNOW SHALL BE REMOVED DOWN TO A ONE–INCH DEPTH OR LESS PRIOR TO APPLICATION. AFTER EACH DAY OF FINAL GRADING, THE AREA SHALL BE PROPERLY STABILIZED WITH ANCHORED HAY OR STRAW OR EROSION CONTROL MATTING. AN AREA SHALL BE CONSIDERED TO HAVE BEEN STABILIZED WHEN EXPOSED SURFACES HAVE BEEN EITHER MULCHED OR ADEQUATELY ANCHORED SO THAT GROUND SURFACE IS NOT VISIBLE THROUGH THE MULCH. BETWEEN THE DATES OF NOVEMBER 1 AND APRIL 15, ALL MULCH SHALL BE ANCHORED BY EITHER MULCH NETTING, TRACKING OR WOOD CELLULOSE FIBER. THE COVER WILL BE CONSIDERED SUFFICIENT WHEN THE GROUND SURFACE IS NOT VISIBLE THROUGH THE MULCH. AFTER NOVEMBER 1ST, MULCHING AND ANCHORING OF ALL EXPOSED SOIL SHALL OCCUR AT THE END OF EACH FINAL GRADING WORKDAY.

4.3 SOIL STOCKPILING

STOCKPILES OF SOIL OR SUBSOIL SHALL BE MULCHED FOR OVER WINTER PROTECTION WITH HAY OR STRAW AT TWICE THE NORMAL RATE OR WITH A FOUR–INCH LAYER OF EROSION CONTROL MIX. THIS SHALL BE DONE WITHIN 24 HOURS OF STOCKING AND RE–ESTABLISHED PRIOR TO ANY RAINFALL OR SNOWFALL.

4.4 SEEDING

BETWEEN THE DATES OF OCTOBER 15TH AND APRIL 1ST, LOAM OR SEED SHALL NOT BE REQUIRED. DURING PERIODS OF ABOVE FREEZING TEMPERATURES FINISHED AREAS SHALL BE FINE GRADED AND EITHER PROTECTED WITH MULCH OR TEMPORARILY SEEDED AND MULCHED UNTIL SUCH TIME AS THE FINAL TREATMENT CAN BE APPLIED. IF THE DATE IS AFTER NOVEMBER 1ST AND IF THE EXPOSED AREA HAS NOT BEEN LOAMED, FINAL GRADING WITH A UNIFORM SURFACE, THEN THE AREA MAY BE DORMANT SEEDED AT A RATE OF 3 TIMES HIGHER THAN SPECIFIED FOR PERMANENT SEED AND THEN MULCHED.

DORMANT SEEDING MAY BE PLACED PRIOR TO THE PLACEMENT OF MULCH OR EROSION CONTROL BLANKETS. IF DORMANT SEEDING IS USED FOR THE SITE, ALL DISTURBED AREAS SHALL RECEIVE 4 OF LOAM AND SEED AT AN APPLICATION RATE OF 5 LBS/1,000 S.F. ALL AREAS SEEDED DURING THE WINTER SHALL BE INSPECTED IN THE SPRING FOR ADEQUATE CATCH. ALL AREAS INSUFFICIENTLY VEGETATED (LESS THAN 75% CATCH) SHALL BE REVEGETATED BY REPLACING LOAM, SEED AND MULCH. IF DORMANT SEEDING IS NOT USED FOR THE SITE, ALL DISTURBED AREAS SHALL BE REVEGETATED IN THE SPRING.

4.5 OVER WINTER STABILIZATION OF DISTURBED SOILS

BY SEPTEMBER 15TH, ALL DISTURBED SOILS ON AREAS HAVING A SLOPE LESS THAN 15% SHALL BE SEEDED AND MULCHED. IF THE DISTURBED AREAS ARE NOT STABILIZED BY THIS DATE, THEN ONE OF THE FOLLOWING ACTIONS SHALL BE TAKEN TO STABILIZE THE SOIL FOR LATE FALL AND WINTER:

- STABILIZE THE SOIL WITH TEMPORARY VEGETATION – BY OCTOBER 1ST, SEED THE DISTURBED SOIL WITH WINTER RYE AT A SEEDING RATE OF 3LBS PER 1,000 S.F., LIGHTLY MULCH THE SEEDED SOIL WITH HAY OR STRAW AT 75 LBS PER 1,000 S.F., AND ANCHOR THE MULCH WITH PLASTIC NETTING. MONITOR GROWTH OF THE RYE OVER THE NEXT 30 DAYS. IF THE RYE FAILS TO GROW AT LEAST THREE INCHES OR FAILS TO COVER AT LEAST 75% OF THE DISTURBED SOIL BEFORE NOVEMBER 1ST, THEN MULCH THE AREA FOR OVER–WINTER PROTECTION.

- STABILIZE THE SOIL WITH SOD – STABILIZE THE DISTURBED SOIL WITH PROPERLY INSTALLED SOD BY OCTOBER 1ST. PROPER INSTALLATION INCLUDES PINNING THE SOD ONTO THE SOIL WITH WIRE PINS, ROLLING THE SOD TO GUARANTEE CONTACT BETWEEN THE SOD AND UNDERLYING SOIL, AND WATERING THE SOD TO PROMOTE ROOT GROWTH INTO THE DISTURBED SOIL.

- STABILIZE THE SOIL WITH MULCH – BY NOVEMBER 15TH, MULCH THE DISTURBED SOIL BY SPREADING HAY OR STRAW AT A RATE OF AT LEAST 150 LBS PER 1,000 S.F. ON THE AREA SO THAT NO SOIL IS VISIBLE THROUGH THE MULCH. IMMEDIATELY AFTER APPLYING THE MULCH, ANCHOR THE MULCH WITH NETTING TO PREVENT WIND FROM MOVING THE MULCH OFF THE DISTURBED SOIL.

4.6 OVER WINTER STABILIZATION OF DISTURBED SLOPES

ALL STONE–COVERED SLOPES SHALL BE CONSTRUCTED AND STABILIZED BY NOVEMBER 15TH. ALL SLOPES TO BE VEGETATED SHALL BE SEEDED AND MULCHED BY SEPTEMBER 1ST. A SLOPE IS CONSIDERED A GRADE GREATER THAN 15%. IF A SLOPE TO BE VEGETATED IS NOT STABILIZED BY SEPTEMBER 1ST, THEN ONE OF THE FOLLOWING ACTION SHALL BE TAKEN TO STABILIZE THE SLOPE FOR LATE FALL AND WINTER:

- STABILIZE THE SOIL WITH TEMPORARY VEGETATION AND EROSION CONTROL MATS – BY OCTOBER 1ST THE DISTURBED SLOPE SHALL BE SEEDED WITH WINTER RYE AT A SEEDING RATE OF 3 LBS PER 1,000 S.F. AND THEN INSTALL EROSION CONTROL MATS OR ANCHORED MULCH OVER THE SEEDING. IF THE RYE FAILS TO GROW AT LEAST THREE INCHES OR FAILS TO COVER AT LEAST 75% OF THE SLOPE BY NOVEMBER 1ST, THEN THE CONTRACTOR SHALL COVER THE SLOPE WITH A LAYER OF EROSION CONTROL MIX OR WITH STONE RIPRAP.

- STABILIZE THE SOIL WITH SOD – THE DISTURBED SLOPE SHALL BE STABILIZED WITH PROPERLY INSTALLED SOD BY OCTOBER 1ST. PROPER INSTALLATION INCLUDES THE CONTRACTOR PINNING THE SOD ONTO THE SLOPE WITH WIRE PINS, ROLLING THE SOD TO GUARANTEE CONTACT BETWEEN THE SOD AND UNDERLYING SOIL, AND WATERING THE SOD TO PROMOTE ROOT GROWTH INTO THE DISTURBED SOIL. THE CONTRACTOR SHALL NOT USE LATE–SEASON SOD INSTALLATION TO STABILIZE SLOPES HAVING A GRADE GREATER THAN 3H:1V OR HAVING GROUNDWATER SEEPS ON THE SLOPE FACE.

- STABILIZE THE SOIL WITH EROSION CONTROL MIX – EROSION CONTROL MIX SHALL BE PROPERLY INSTALLED BY NOVEMBER 15TH. THE CONTRACTOR SHALL NOT USE EROSION CONTROL MIX TO STABILIZE SLOPES HAVING GRADES GREATER THAN 2H:1V OR HAVING GROUNDWATER SEEPS ON THE SLOPE FACE.

- STABILIZE THE SOIL WITH STONE RIPRAP – PLACE A LAYER OF STONE RIPRAP ON THE SLOPE BY NOVEMBER 15TH. A REGISTERED PROFESSIONAL ENGINEER SHALL BE HIRED TO DETERMINE THE STONE SIZE NEEDED FOR STABILITY ON THE SLOPE AND TO DESIGN A FILTER LAYER FOR UNDERNEATH THE RIPRAP.

5.0 INSPECTION AND MAINTENANCE

A PERSON WITH KNOWLEDGE OF EROSION AND STORMWATER CONTROL, INCLUDING THE STANDARDS AND CONDITIONS IN THE PERMIT, SHALL CONDUCT PERIODIC VISUAL INSPECTIONS OF INSTALLED EROSION CONTROL MEASURES. THE FREQUENCY OF INSPECTION SHALL OCCUR AT LEAST ONCE EVERY TWO WEEKS, AS WELL AS AFTER A STORM EVENT . A STORM EVENT SHALL CONSIST 0.5 INCHES OF RAIN WITHIN A 24 HOUR PERIOD. THE FOLLOWING EROSION AND SEDIMENT CONTROL – BEST MANAGEMENT PRACTICES (BMP'S) SHALL INSPECTED IN THE MANNER AS DESCRIBED.

5.1 SEDIMENT BARRIERS

HAY BALE BARRIERS, SILT FENCES AND FILTER BERMS SHALL BE INSPECTED AND REPAIRED FOR THE FOLLOWING IF THERE ARE ANY SIGNS OF EROSION OR SEDIMENTATION BELOW THEM. IF THERE ARE SIGNS OF UNDERCUTTING AT THE CENTER OR THE EDGES OF THE BARRIER, OR IMPOUNDING OF LARGE VOLUMES OF WATER BEHIND THEM, SEDIMENT BARRIERS SHALL BE REPLACED WITH A TEMPORARY CHECK DAM. SHOULD THE FABRIC ON A SILT FENCE OR FILTER BARRIER DECOMPOSE OR BECOME INEFFECTIVE PRIOR TO THE END OF THE EXPECTED USABLE LIFE AND THE BARRIER IS STILL NECESSARY, THE FABRIC SHALL BE REPLACED PROMPTLY. SEDIMENT DEPOSITS SHOULD BE REMOVED WHEN DEPOSITS REACH APPROXIMATELY ONE–HALF THE HEIGHT OF THE BARRIER. FILTER BERMS SHOULD BE RESHAPED AS NEEDED. ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THE SILT FENCE OR FILTER BARRIER IS NO LONGER REQUIRED SHOULD BE DRESSED TO CONFORM TO THE EXISTING GRADE, PREPARED AND SEEDED.

5.2 STABILIZED STONE CONSTRUCTION ENTRANCES

THE EXIT SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OF SEDIMENT ONTO PUBLIC RIGHTS–OF–WAY. WHEN THE CONTROL PAD BECOMES INEFFECTIVE, THE STONE SHALL BE REMOVED ALONG WITH THE COLLECTED SOIL MATERIAL AND REDISTRIBUTED ON SITE IN A STABLE MANNER. THE ENTRANCE SHOULD THEN BE RECONSTRUCTED. THE CONTRACTOR SHALL SWEEP OR WASH PAVEMENT AT EXITS, WHICH HAVE EXPERIENCED MUD–TRACKING ON TO THE PAVEMENT OR TRAVELED WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH AGGREGATE, WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING STORM DRAINS, DITCHES, OR WATERWAYS.

5.3 MULCHED AREAS

ALL MULCHES MUST BE INSPECTED PERIODICALLY, IN PARTICULAR AFTER RAINSTORMS, TO CHECK FOR RILL EROSION. IF LESS THAN 90% OF THE SOIL SURFACE IS COVERED BY MULCH, ADDITIONAL MULCH SHALL BE IMMEDIATELY APPLIED. NETS MUST BE INSPECTED AFTER RAIN EVENTS FOR DISLOCATION OR FAILURE. IF WASHOUTS OR BREAKAGE OCCUR, RE–INSTALL THE NETS AS NECESSARY AFTER REPAIRING DAMAGE TO THE SLOPE. WHERE MULCH IS USED IN CONJUNCTION WITH ORNAMENTAL PLANTINGS, INSPECT PERIODICALLY THROUGHOUT THE YEAR TO DETERMINE IF MULCH IS MAINTAINING COVERAGE OF THE SOIL SURFACE. REPAIR AS NEEDED.

5.4 DUST CONTROL

WHEN TEMPORARY DUST CONTROL MEASURES ARE USED, REPETITIVE TREATMENT SHALL BE APPLIED AS NEEDED TO ACCOMPLISH CONTROL.

5.5 STORMWATER APPURTENANCES

ALL UNDERDRAINS, STORM DRAINS, AND CATCH BASINS NEED TO BE OPERATING EFFECTIVELY AND FREE OF DEBRIS.

5.6 EROSION AND SEDIMENTATION CONTROL INSPECTIONS:

ACORN ENGINEERING HAS PERSONNEL QUALIFIED TO CONDUCT EROSION AND SEDIMENTATION CONTROL INSPECTIONS. FOR FURTHER INFORMATION CONTACT:

CONTACT: WILL SAVAGE, PE
TELEPHONE: (207) 775–2655

QUALIFICATIONS:

- Ø MAINE PROFESSIONAL ENGINEERING LICENSE #11419
- Ø MAINE DEP – CERTIFIED IN MAINTENANCE & INSPECTION OF STORMWATER BMP'S CERT #14
- Ø CERTIFIED EROSION, SEDIMENT AND STORM WATER INSPECTOR (CESSWI) CERT #0293
- Ø CERTIFIED PROFESSIONAL IN EROSION AND SEDIMENT CONTROL (CPESC) CERT. #4620

THE CONTRACTOR HAS SOLE RESPONSIBILITY FOR COMPLYING WITH THE EROSION AND SEDIMENTATION REPORT/PLAN, INCLUDING CONTROL OF FUGITIVE DUST. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY MONETARY PENALTIES RESULTING FROM FAILURE TO COMPLY WITH THESE STANDARDS.

6.0 IMPLEMENTATION SCHEDULE

THE FOLLOWING IMPLEMENTATION SEQUENCE IS INTENDED TO MAXIMIZE THE EFFECTIVENESS OF THE ABOVE DESCRIBED EROSION CONTROL MEASURES. CONTRACTORS SHOULD AVOID OVEREXPOSING DISTURBED AREAS AND LIMIT THE AMOUNT OF STABILIZATION AREA.

1. INSTALL A STABILIZED CONSTRUCTION ENTRANCE IN ALL LOCATIONS WHERE CONSTRUCTION TRAFFIC WILL ENTER AND EXIT THE SITE.
2. INSTALL PERIMETER SILT FENCE OR EROSION CONTROL BERM.
3. INSTALL ALL OTHER EROSION CONTROL DEVICES AS NECESSARY THROUGHOUT THE REMAINDER OF THIS SCHEDULE.
4. COMMENCE INSTALLATION OF DRAINAGE INFRASTRUCTURE.
5. PRIORITIZE THE DOWNHILL SIDE TO CONTAIN RUNOFF WITHIN THE SITE WHILE PROVIDING AN ENGINEERED OUTLET WITH SILTATION BARRIER TO THE MUNICIPAL STORMWATER SYSTEM WITHIN CEDAR STREET AND CHESTNUT STREET.
6. COMMENCE EARTHWORK OPERATIONS, WALL AND FOUNDATION INSTALLATION.
7. COMMENCE INSTALLATION OF UTILITIES.
8. CONTINUE EARTHWORK AND GRADING TO SUBGRADE AS NECESSARY FOR CONSTRUCTION.
9. COMPLETE INSTALLATION OF DRAINAGE INFRASTRUCTURE, AS WELL AS OTHER UTILITY WORK.
10. COMPLETE REMAINING EARTHWORK OPERATIONS.
11. INSTALL SUB–BASE AND BASE GRAVELS IN PAVED AREAS.
12. INSTALL PAVING, CURBING AND BRICKWORK.
13. LOAM, LIME, FERTILIZE, SEED AND MULCH DISTURBED AREAS AND COMPLETE ALL LANDSCAPING.
14. ONCE THE SITE IS STABILIZED, 90% CATCH OF GRASS HAS BEEN OBTAINED, OR MULCHING OF LANDSCAPE AREAS IS COMPLETE REMOVE ALL TEMPORARY EROSION CONTROL MEASURES.
15. TOUCH UP AREAS WITHOUT A VIGOROUS CATCH OF GRASS WITH LOAM AND SEED.
16. COMPLETE SITE SIGNAGE AND STRIPING.
17. EXECUTE PROPER MAINTENANCE OF ALL TEMPORARY AND PERMANENT EROSION CONTROL MEASURES THROUGHOUT THE PROJECT.

THE ABOVE IMPLEMENTATION SEQUENCE SHOULD BE GENERALLY FOLLOWED BY THE SITE CONTRACTOR. HOWEVER, THE CONTRACTOR MAY CONSTRUCT SEVERAL ITEMS SIMULTANEOUSLY. THE CONTRACTOR SHALL SUBMIT TO THE OWNER A SCHEDULE OF THE COMPLETION OF THE WORK. IF THE CONTRACTOR IS TO COMMENCE THE CONSTRUCTION OF MORE THAN ONE ITEM ABOVE, THEY SHALL LIMIT THE AMOUNT OF EXPOSED AREAS TO THOSE AREAS IN WHICH WORK IS EXPECTED TO BE UNDERTAKEN DURING THE FOLLOWING 30 DAYS.

THE CONTRACTOR SHALL RE–VEGETATE DISTURBED AREAS AS RAPIDLY AS POSSIBLE. ALL AREAS SHALL BE PERMANENTLY STABILIZED WITHIN 7 DAYS OF FINAL GRADING OR BEFORE A STORM EVENT. THE CONTRACTOR SHALL INCORPORATE PLANNED INLETS AND DRAINAGE SYSTEMS AS EARLY AS POSSIBLE INTO THE CONSTRUCTION PHASE.

7.0 SEEDING PLAN

7.1 SITE PREPARATION

THE SEEDED AREAS SHALL BE FEASIBLY GRADED OUT TO PROVIDE THE USE OF EQUIPMENT FOR SEEDBED PREPARATION, SEEDING, MULCH APPLICATION, AND MULCH ANCHORING. IF NECESSARY, THE SITE MAY REQUIRE ADDITIONAL TEMPORARY EROSION CONTROL MEASURES OUTLINED IN THE EROSION CONTROL REPORT.

7.2 SEEDBED PREPARATION

FERTILIZER SHALL BE APPLIED TO THE SITE AT A RATE OF 13.8 POUNDS PER 1,000 SQUARE FEET. THE COMPOSITION OF THE FERTILIZER SHALL BE 10–10–10 (N–P205–K20) OR EQUIVALENT.

LIMESTONE SHALL BE APPLIED TO THE SITE AT A RATE OF 138 POUNDS PER 1,000 SQUARE FEET.

7.3 SEEDING

THE COMPOSITION AND AMOUNT OF TEMPORARY SEED APPLIED TO A SITE SHALL BE DETERMINED BY THE FOLLOWING TABLE:

TEMPORARY SEED APPLICATION RATES

SEED	LBS / ACRE	RECOMMENDED SEEDING DATES
WINTER RYE	2.57	8/15 TO 10/1
OATS	1.84	4/1 TO 7/1 8/15 TO 9/15
ANNUAL RYGRASS	0.92	4/1 TO 7/1
SUDANGRASS	0.92	5/15 TO 8/15
PERENNIAL	0.92	8/15 TO 9/15
TOTAL	7.17 LBS/ACRE	

PERMANENT SEED APPLICATION RATES

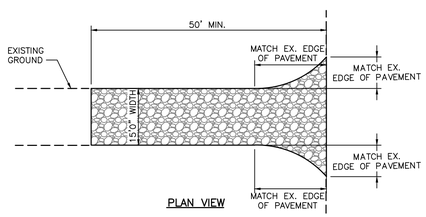
SEED	LBS / ACRE
KENTUCKY BLUEGRASS	20.00
CREEPING RED FESCUE	20.00
PERENNIAL RYEGRASS	4.80
TOTAL	44.8 LBS/ACRE

7.4 MULCHING

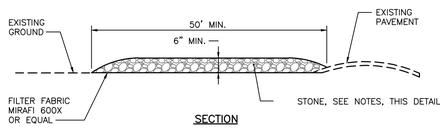
MULCH SHALL BE HARDWOOD AND APPLIED AT A RATE OF 70 LBS – 90 LBS PER 1,000 SQUARE FEET. THE MULCH SHALL BE INSTALLED AT A MINIMUM DEPTH OF 4 INCHES. THE SEEDED AREA SHALL BE MULCHED IMMEDIATELY AFTER SEED IS APPLIED. MULCHING DURING THE WINTER SEASON SHALL BE DOUBLE THE NORMAL AMOUNT. REFER TO DETAIL FOR MORE INFORMATION.

8.0 CONCLUSION

THE ABOVE EROSION CONTROL NARRATIVE IS INTENDED TO MINIMIZE THE DEVELOPMENT IMPACT BY IMPLEMENTING TEMPORARY AND PERMANENT EROSION CONTROL MEASURES. THE CONTRACTOR SHALL ALSO REFER TO THE MAINE EROSION AND SEDIMENT CONTROL BMP MANUAL FOR ADDITIONAL INFORMATION.



PLAN VIEW

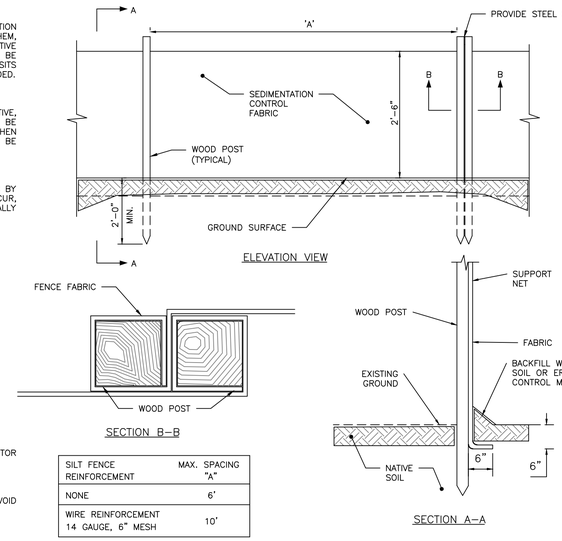


SECTION

NOTES:

1. CONTRACTOR SHALL ADD STONE TO ENTRANCE AS MUD/SILT MATERIAL ACCUMULATES
2. STONE SHALL BE 2"–3" COARSE AGGREGATE
3. CONSTRUCTION ENTRANCE SHALL BE GRADED TO NOT ALLOW ANY STORMWATER TO BE CONVEYED OFF SITE. IN SITUATIONS WHERE THIS IS NOT POSSIBLE, ANY STORMWATER CONVEYED OFFSITE SHALL BE TREATED OR RETAINED IN A MANNER APPROVED BY ENGINEER.
4. WHEN NECESSARY, ON–SITE VEHICLES SHALL HAVE THEIR WHEELS CLEANED PRIOR TO LEAVING SITE.
5. CONSTRUCTION ENTRANCE SHALL BE GRADED IN A MANNER THAT PREVENTS TRACKING OF SEDIMENTS ONTO PUBLIC RIGHT–OF–WAY

STABILIZED CONSTRUCTION ENTRANCE
NOT TO SCALE



ELEVATION VIEW

SECTION B–B

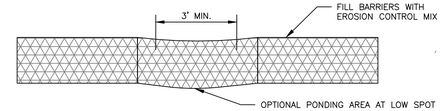
SECTION A–A

SILT FENCE REINFORCEMENT	MAX. SPACING "A"
NONE	6'
WIRE REINFORCEMENT 14 GAUGE, 6" MESH	10'

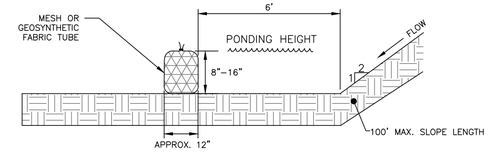
SILTATION FENCE DETAIL
NOT TO SCALE

NOTES:

1. FULL CONTACT WITH THE GROUND IS CRITICAL TO PREVENT SHORT CIRCUITING UNDER THE TUBE – THE GROUND SURFACE SHOULD BE SMOOTH AND LEVEL. IN WOODED AREAS, PROTRUDING ROOTS AND DEBRIS MAY NEED TO BE REMOVED. IN GRASSED AREAS, THE GRASS NEEDS TO BE EITHER MOWED OR COMPRESSED DOWN.
2. STAKING MAY BE NECESSARY ON STEEP SLOPES.
3. UPON FINAL STABILIZATION, THE TUBE CAN BE CUT OPEN AND THE MATERIAL SPREAD OUT ONTO THE GROUND. THE MESH MATERIAL SHOULD BE REMOVE.
4. LOOSE COMPOST MAY BE BACKFILLED ALONG THE UPSLOPE SIDE OF THE COMPOST FILTER SOCK, FILLING THE SEAM BETWEEN THE SOIL SURFACE AND THE DEVICE, IMPROVING FILTRATION AND SEDIMENT RETENTION.

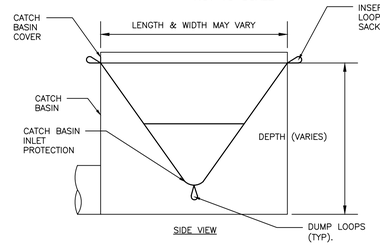


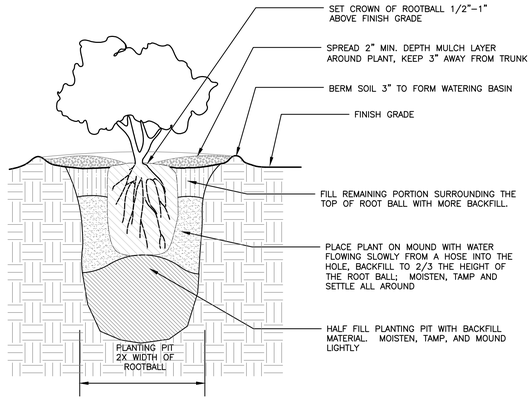
FRONT VIEW



SIDE VIEW

FILTER SOCK DETAIL
NOT TO SCALE


CATCH BASIN COVER
LENGTH & WIDTH MAY VARY
INSERT 1" REBAR IN



BACKFILL AMENDMENTS

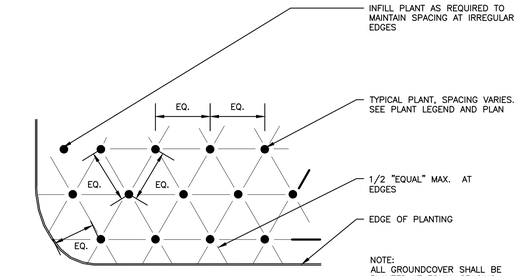
A) WHERE NATIVE TOP SOIL IS PRESENT IN PLANTING AREAS, NO SOIL AMENDMENT IS RECOMMENDED. THE NATIVE SOIL SHOULD BE SOFT AND FRIABLE. LARGE ROCKS AND CLODS ARE TO BE REMOVED FROM BACKFILL.

NOTES

A) PLANT PIT TO BE DUG TWICE AS DEEP AND TWICE AS WIDE AS PLANT CONTAINER.
B) PRIOR TO ANY BACKFILLING, FILL PLANTING PIT WITH WATER AND ALLOW TO PERCOLATE INTO SUBSOIL
C) FORM WATERING BASIN USING REMAINING BACKFILL AND NATIVE SOIL
D) WATER THOROUGHLY, FILLING THE BASIN WITH WATER AND SPRINKING AROUND TO SETTLE BACKFILL, MULCH AND BERM.
E) ALLOW TO SOAK IN AND REPEAT.

6 NATIVE SHRUB PLANTING DETAIL

N.T.S.



3 GROUNDCOVER SPACING

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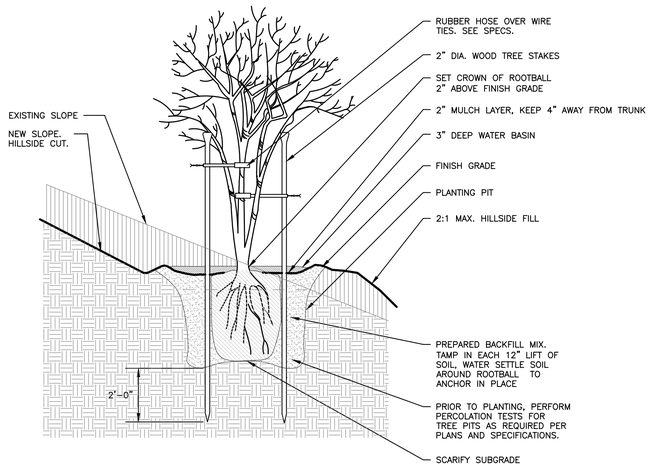
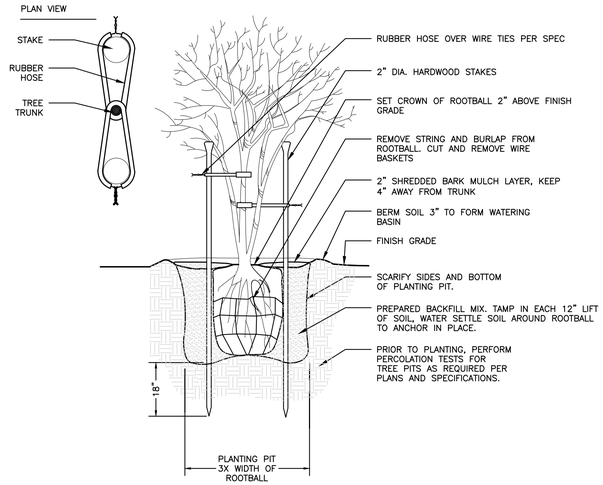


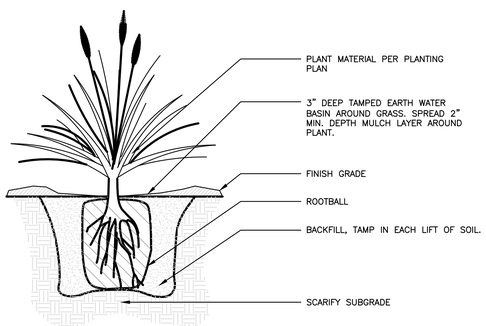
5 TREE PLANTING ON SLOPE DETAIL

N.T.S.



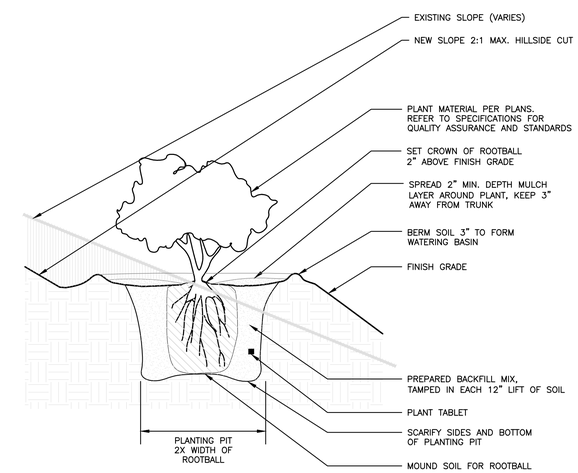
2 TREE PLANTING DETAIL

N.T.S.



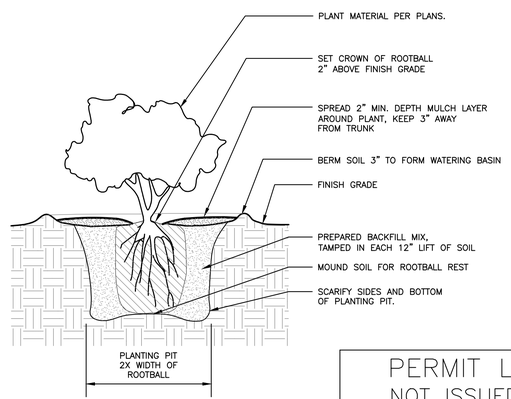
7 ORNAMENTAL GRASS PLANTING

N.T.S.



4 SHRUB PLANTING ON SLOPE DETAIL

N.T.S.



1 SHRUB PLANTING DETAIL

N.T.S.

PERMIT LEVEL
NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY DATE
JOINT MAJOR SITE PLAN APPLICATION	SJL 8/16/24
COMMENT RESPONSE	SJL 9/30/24

DRAWING NAME: PHASE 1 – PLANTING DETAILS

PROJECT NAME: PHASE 1 – PHASED OXFORD STREET REDEVELOPMENT

CLIENT: AVESTA HOUSING
307 CUMBERLAND AVE, PORTLAND, ME 04101

LANDSCAPE ARCHITECTURE

THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM ACORN ENGINEERING, INC. ANY ALTERATIONS, AUTHORIZED OR UNAUTHORIZED, SHALL WORK AND WITHOUT LIABILITY TO ACORN ENGINEERING, INC.

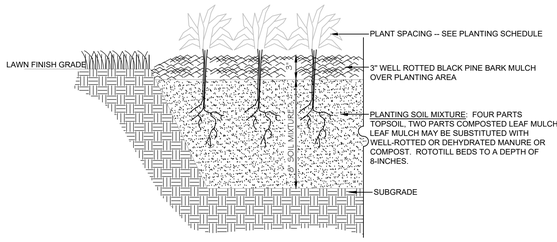
ACORN ENGINEERING, INC.
PO BOX 3372, PORTLAND MAINE 04104
(207) 775-2655

A C O R N

FILE:	1212.1_AE_LA
JN:	1212.1
SCALE:	AS NOTED
DESIGNED BY:	ALDV
DRAWN BY:	ALDV
CHECKED BY:	SJL

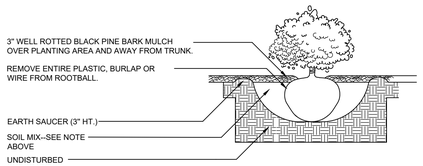
LICENSED LANDSCAPE ARCHITECT
ALEXIS LOPEZ DELVECCHIO
LAR5303
9/30/2024
STATE OF MAINE

DRAWING NO.
L-03



01 PLANTING BED AND MULCH DETAIL

SCALE: N.T.S.



PLANT INSTALLATION NOTES:
DIG HOLE AT LEAST 2 TIMES THE WIDTH OF ROOT BALL AND AS DEEP AS THE ROOT BALL (NO DEEPER). SET ROOT BALL CENTERED, WITH TOP AT GROUND LEVEL OR SLIGHTLY HIGHER. CORRECT HOLE DEPTH AS NEEDED.

FOR DECIDUOUS AND NEEDLED EVERGREEN TREES AND SHRUBS: 1 FULL WHEELBARROW EXISTING SOIL, 3 SHOVEL WELL ROTTED MANURE, OR OTHER COMPOSTED ORGANIC MATERIAL.

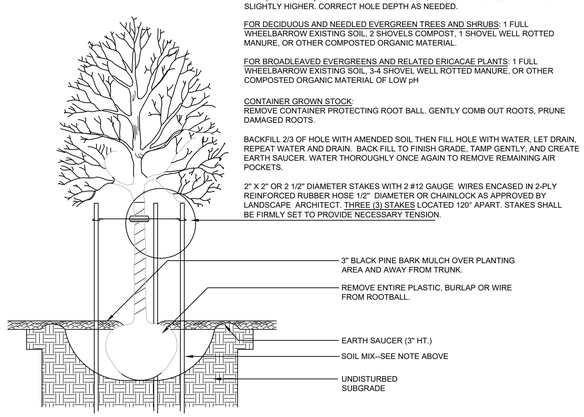
FOR BROADLEAVED EVERGREENS AND RELATED ERICACAE PLANTS: 1 FULL WHEELBARROW EXISTING SOIL, 3-4 SHOVELS COMPOST, 1 SHOVEL WELL ROTTED MANURE, OR OTHER COMPOSTED ORGANIC MATERIAL OF LOW pH

CONTAINER GROWN STOCK:
REMOVE CONTAINER PROTECTING ROOT BALL. GENTLY COMB OUT ROOTS, PRUNE DAMAGED ROOTS.

BACKFILL 2/3 OF HOLE WITH AMENDED SOIL THEN FILL HOLE WITH WATER, LET DRAIN, REPEAT WATER AND DRAIN. BACK FILL TO FINISH GRADE, TAMP GENTLY, AND CREATE EARTH SAUCER. WATER THOROUGHLY ONCE AGAIN TO REMOVE REMAINING AIR POCKETS.

02 SHRUB INSTALLATION

SCALE: N.T.S.



PLANT INSTALLATION NOTES:
DIG HOLE AT LEAST 2 TIMES THE WIDTH OF ROOT BALL AND AS DEEP AS THE ROOT BALL (NO DEEPER). SET ROOT BALL CENTERED, WITH TOP AT GROUND LEVEL OR SLIGHTLY HIGHER. CORRECT HOLE DEPTH AS NEEDED.

FOR DECIDUOUS AND NEEDLED EVERGREEN TREES AND SHRUBS: 1 FULL WHEELBARROW EXISTING SOIL, 2 SHOVELS COMPOST, 1 SHOVEL WELL ROTTED MANURE, OR OTHER COMPOSTED ORGANIC MATERIAL.

FOR BROADLEAVED EVERGREENS AND RELATED ERICACAE PLANTS: 1 FULL WHEELBARROW EXISTING SOIL, 3-4 SHOVEL WELL ROTTED MANURE, OR OTHER COMPOSTED ORGANIC MATERIAL OF LOW pH

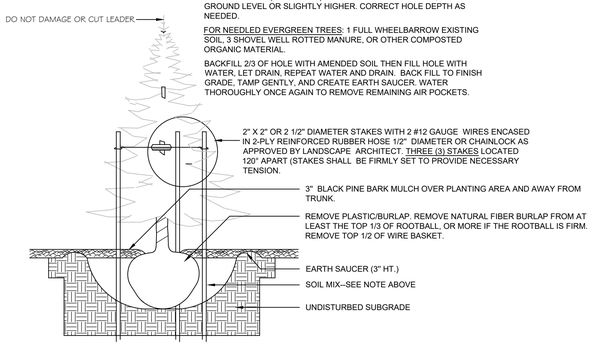
CONTAINER GROWN STOCK:
REMOVE CONTAINER PROTECTING ROOT BALL. GENTLY COMB OUT ROOTS, PRUNE DAMAGED ROOTS.

BACKFILL 2/3 OF HOLE WITH AMENDED SOIL THEN FILL HOLE WITH WATER, LET DRAIN, REPEAT WATER AND DRAIN. BACK FILL TO FINISH GRADE, TAMP GENTLY, AND CREATE EARTH SAUCER. WATER THOROUGHLY ONCE AGAIN TO REMOVE REMAINING AIR POCKETS.

2" X 2" OR 2 1/2" DIAMETER STAKES WITH 2 #12 GAUGE WIRES ENCASED IN 2-PLY REINFORCED RUBBER HOSE 1/2" DIAMETER OR CHAINLOCK AS APPROVED BY LANDSCAPE ARCHITECT. THREE (3) STAKES LOCATED 120° APART. STAKES SHALL BE FIRMLY SET TO PROVIDE NECESSARY TENSION.

03 DECIDUOUS TREE DETAIL

SCALE: N.T.S.



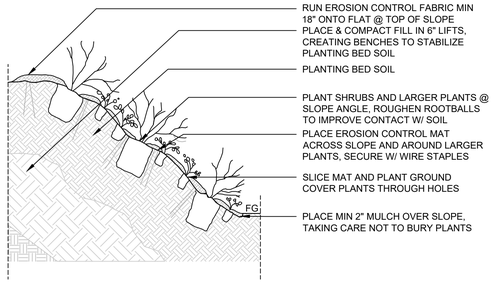
PLANT INSTALLATION NOTES:
DIG HOLE AT LEAST 2 TIMES THE WIDTH OF ROOT BALL AND AS DEEP AS THE ROOT BALL (NO DEEPER). SET ROOT BALL CENTERED, WITH TOP AT GROUND LEVEL OR SLIGHTLY HIGHER. CORRECT HOLE DEPTH AS NEEDED.

FOR NEEDLED EVERGREEN TREES: 1 FULL WHEELBARROW EXISTING SOIL, 3 SHOVEL WELL ROTTED MANURE, OR OTHER COMPOSTED ORGANIC MATERIAL.

BACKFILL 2/3 OF HOLE WITH AMENDED SOIL THEN FILL HOLE WITH WATER, LET DRAIN, REPEAT WATER AND DRAIN. BACK FILL TO FINISH GRADE, TAMP GENTLY, AND CREATE EARTH SAUCER. WATER THOROUGHLY ONCE AGAIN TO REMOVE REMAINING AIR POCKETS.

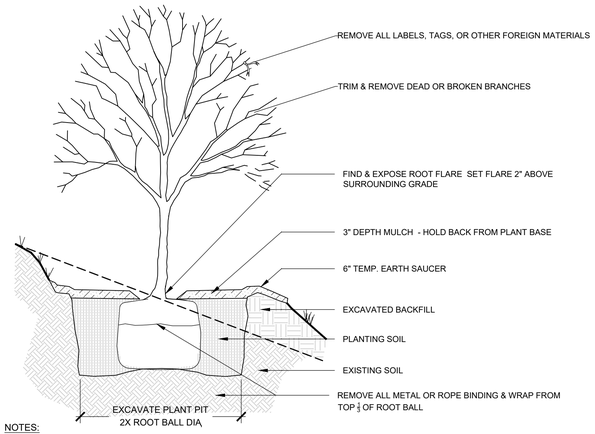
04 CONIFEROUS TREE DETAIL

SCALE: N.T.S.



05 SLOPE PLANTING DEATIL

SCALE: N.T.S.

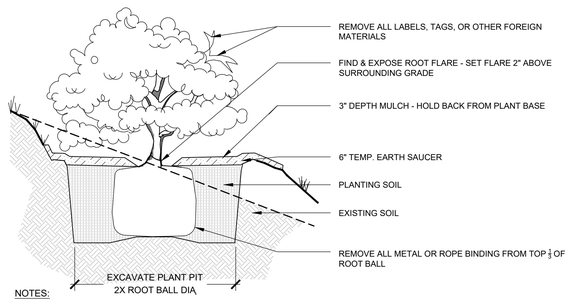


NOTES:

1. TREE TO BE SET PLUMB.
2. SECURE TREE AS MAY BE REQUIRED ACCORDING TO TREE SIZE, LOCATION, & WIND/WEATHER CONDITIONS.
3. IF USING ROOTBALL STABILIZATION, FOLLOW MANUFACTURER'S RECOMMENDATIONS.

06 TREE PLANTING ON SLOPE

SCALE: N.T.S.

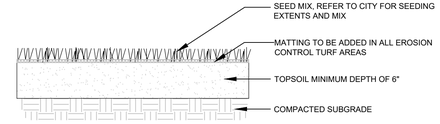


NOTES:

1. SHRUB TO BE SET PLUMB.
2. SECURE SHRUB AS MAY BE REQUIRED ACCORDING TO SIZE, LOCATION, & WIND/WEATHER CONDITIONS.
3. IF USING ROOTBALL STABILIZATION, FOLLOW MANUFACTURER'S RECOMMENDATIONS.

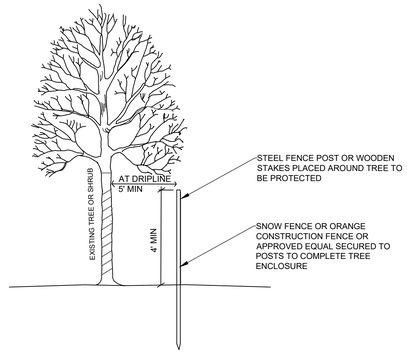
07 SHRUB PLANTING ON SLOPE

SCALE: N.T.S.



08 LAWN SEED MIX

SCALE: N.T.S.



09 TREE PROTECTION

SCALE: N.T.S.

NOTE: This drawing is PRELIMINARY REVIEW ONLY. It is NOT intended for use as a construction document.

Prepared For:

REVELER, LLC
188 STATE STREET, 3RD FLOOR
PORTLAND, ME 04101

Prepared By:

Dry landscape architecture, l.l.c
31 miller ave.
biddeford, me 04005

Date:
APRIL 17, 2023

Issued For:
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Title: DETAILS

158 Lancaster Street & 50 Cedar Street

PHASE 2 & 3

Portland ME 04103

Revisions:

1ST WORKSHOP COMMENTS REV.1 - 09.30.2024
2ND WORKSHOP COMMENTS REV.2 - 12.23.2024

North:

Sheet No.: L5

Scale: AS NOTED

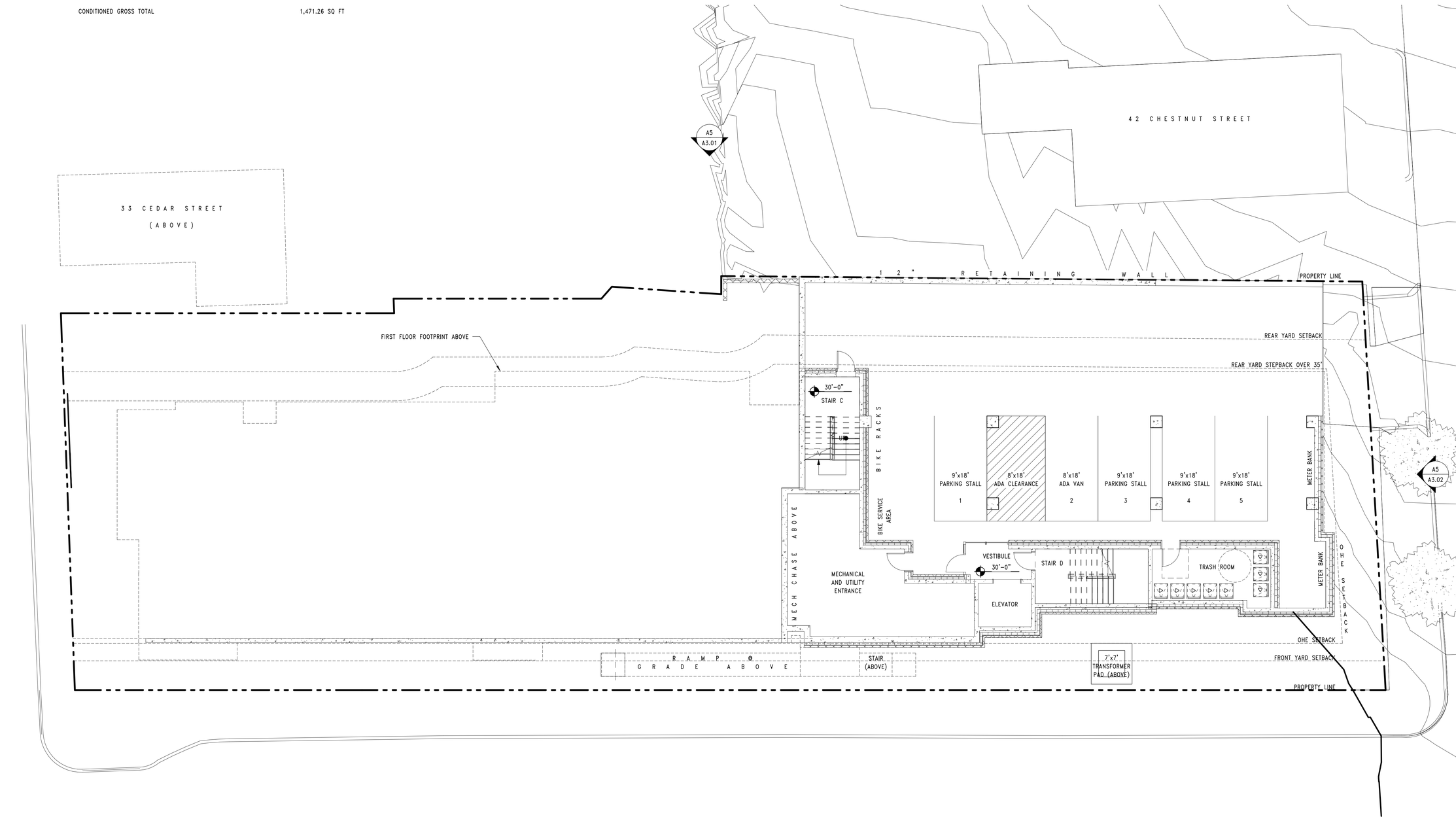
C:\Users\DRY-1\OneDrive\Documents\OneDrive\DRY-1\A Projects\50 Cedar+158 Lancaster\CAD\details.dwg dry-1 12/23/2024

BASEMENT PARKING LEVEL

TOTAL PARKING STALLS — FIVE (5) (INCLUDES 1 ADA VAN STALL)

SQ FT CALCULATIONS

CONDITIONED GROSS TOTAL — 1,471.26 SQ FT



A5 **00 BASEMENT LEVEL PARKING**

REFERENCED FROM: A3.01 SCALE: 1/8" = 1'-0"

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BASEMENT PARKING LEVEL
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REVISIONS

DRAWING NUMBER

A1.00

SCALE: 1/8" = 1'-0"

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12/20/2024 12:48:38 PM

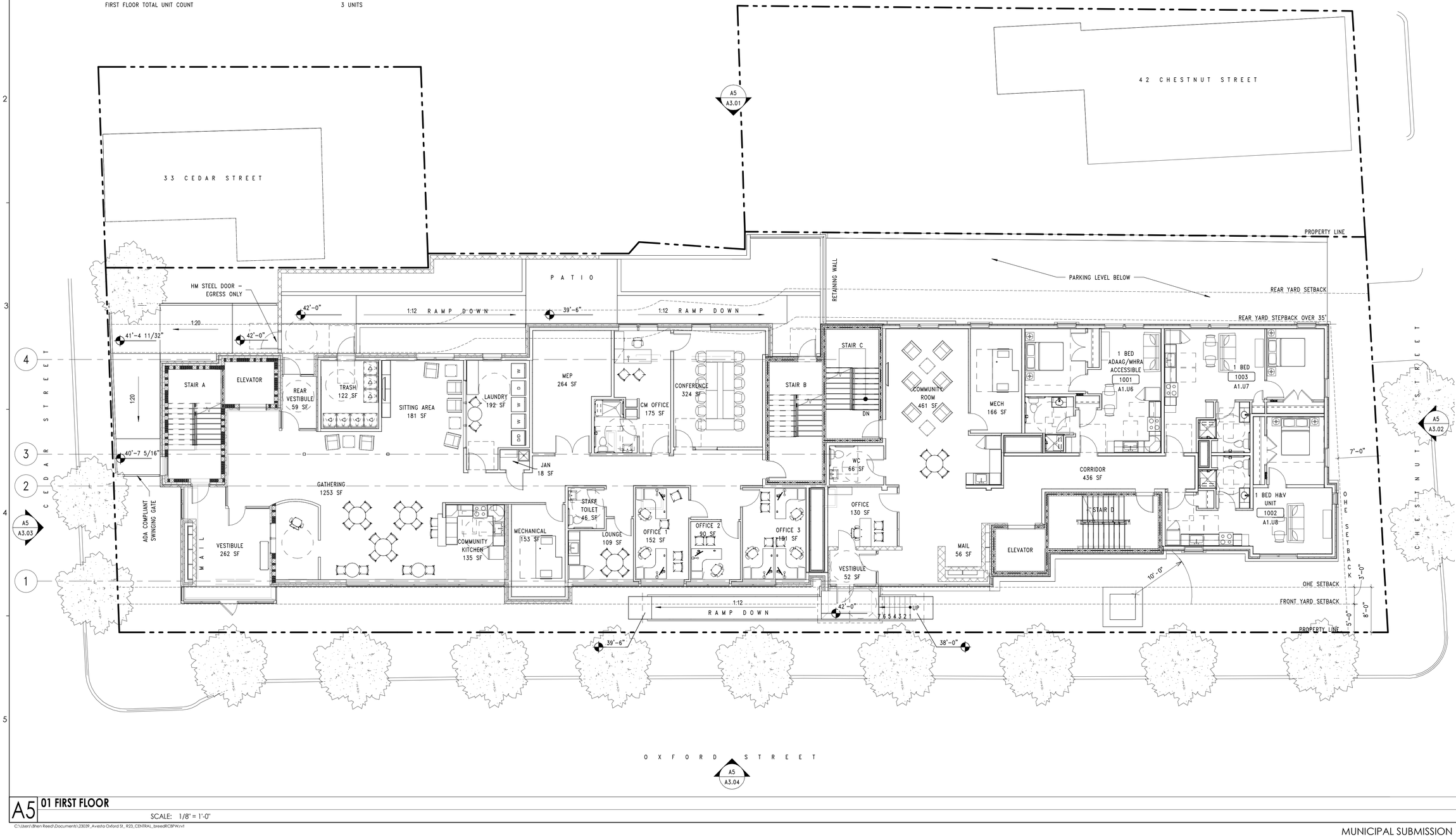
MUNICIPAL SUBMISSION No. 3 - PUBLIC HEARING

FIRST FLOOR SQ FT CALCULATIONS

FIRST FLOOR GROSS TOTAL	8,904 SQ FT (5,016 SF H-1 + 3,888 SF AH)

FIRST FLOOR UNIT COUNTS

0 BEDROOM	0 UNITS (0 H-1 + 0 AH)
1 BEDROOM	3 UNITS (0 H-1 + 3 AH)
FIRST FLOOR TOTAL UNIT COUNT	3 UNITS



A5 01 FIRST FLOOR

SCALE: 1/8" = 1'-0"

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FIRST FLOOR PLAN

CWS PROJECT NUMBER: 23039

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DRAWING NUMBER

A1.10

SCALE: 1/8" = 1'-0"

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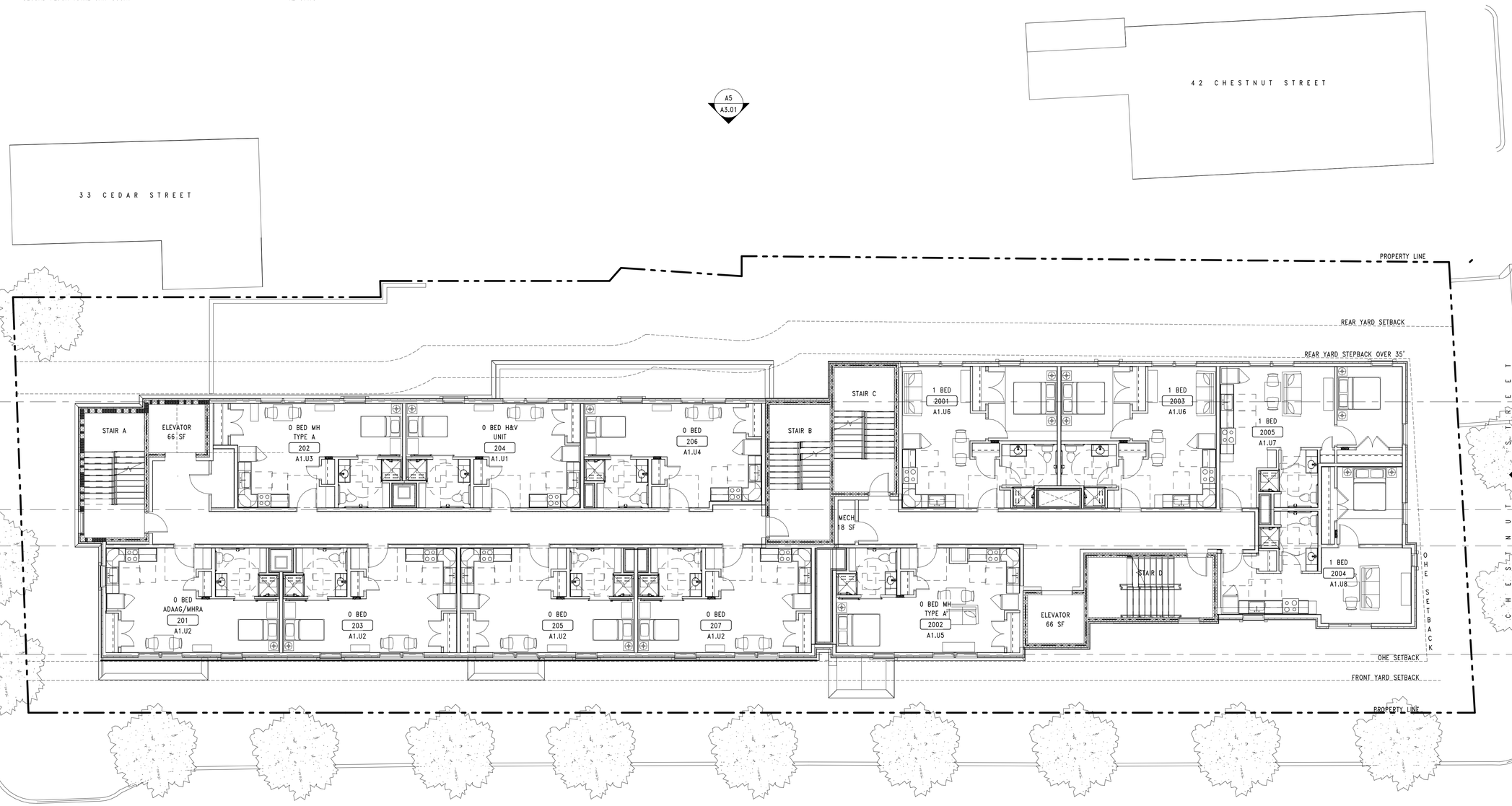
SECOND FLOOR SQ FT CALCULATIONS

SECOND FLOOR GROSS TOTAL	8,482 SQ FT (4,603 SF H-1 + 3,878 SF AH)

SECOND FLOOR UNIT COUNTS

0 BEDROOM	8 UNITS (7 H-1 + 1 AH)
1 BEDROOM	4 UNITS (0 H-1 + 4 AH)
SECOND FLOOR TOTAL UNIT COUNT	12 UNITS



A5 02 SECOND FLOOR
REFERENCED FROM: A3.01 SCALE: 1/8" = 1'-0"

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CWS PROJECT NUMBER: 23039

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DRAWING NUMBER
A1.20

SCALE: 1/8" = 1'-0"
DATE: 2024 | 12 | 18

12/20/2024 11:05:42 AM

MUNICIPAL SUBMISSION No. 3 - PUBLIC HEARING

THIRD FLOOR SQ FT CALCULATIONS

THIRD FLOOR GROSS TOTAL	8,482 SQ FT (4,603 SF H-1 + 3,878 SF AH)

THIRD FLOOR UNIT COUNTS

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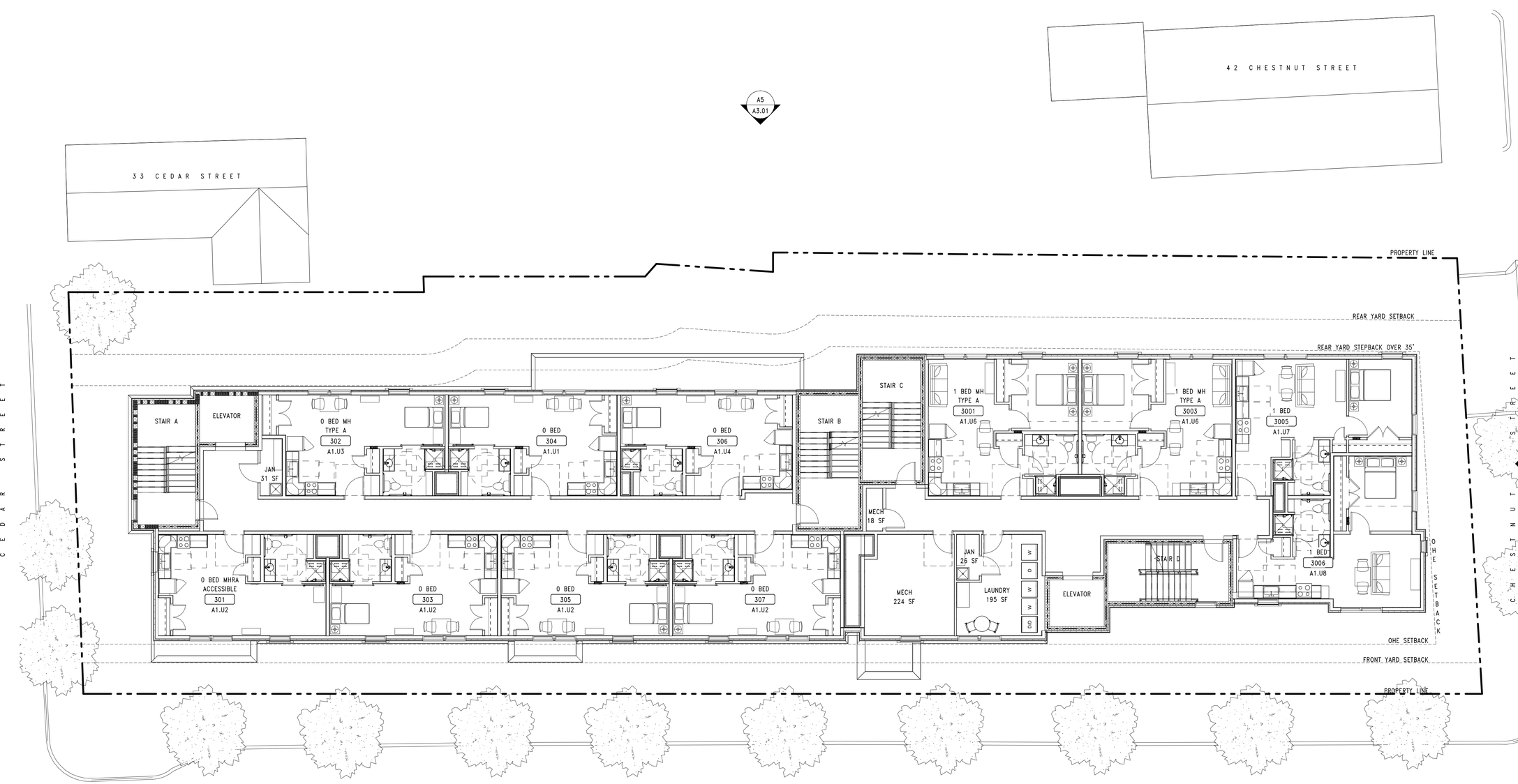
1 BEDROOM	4 UNITS (0 H-1 + 4 AH)
SECOND FLOOR TOTAL UNIT COUNT	11 UNITS



A5 **03 THIRD FLOOR**
REFERENCED FROM: A3.01 SCALE: 1/8" = 1'-0"

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A1.30

SCALE: 1/8" = 1'-0"
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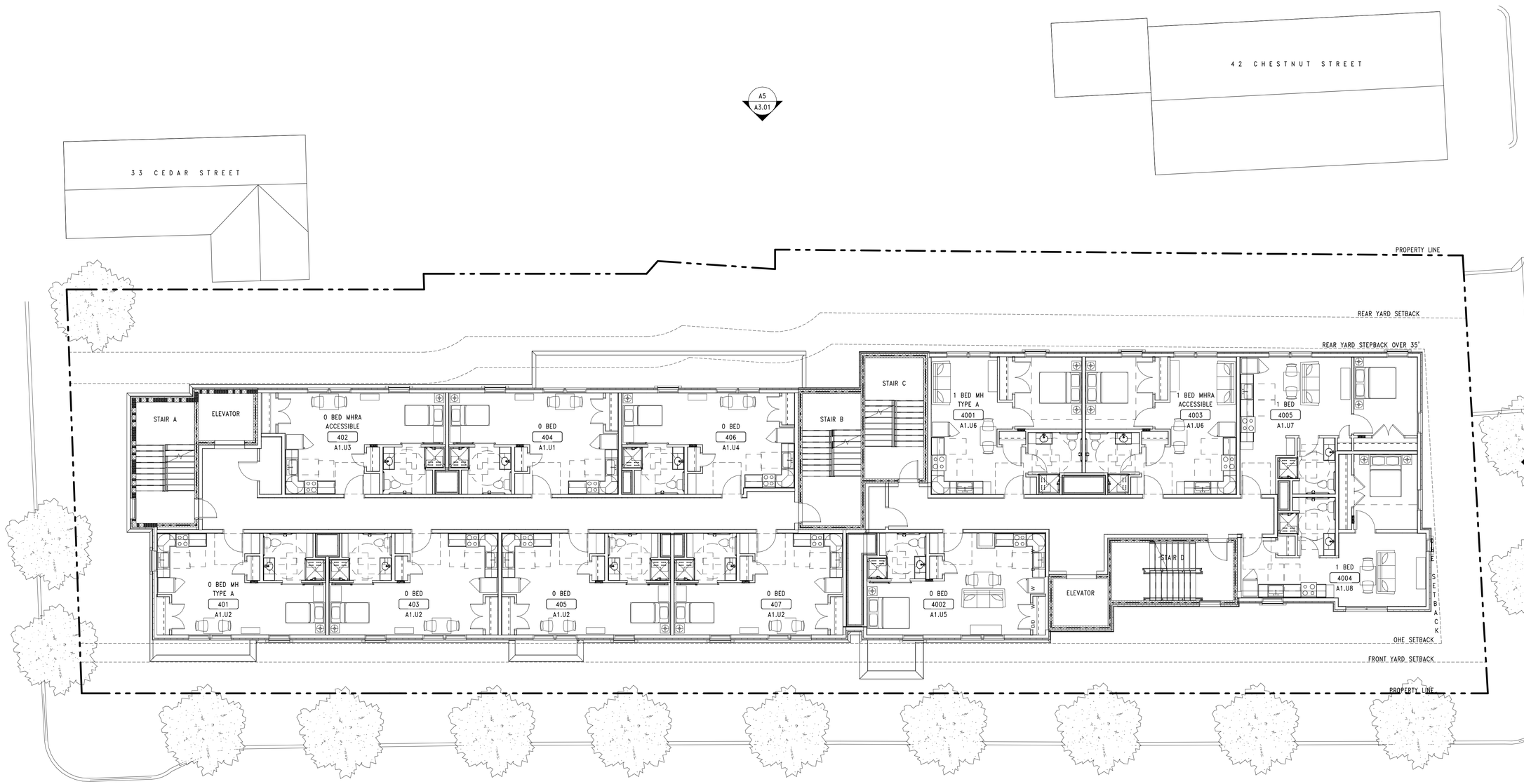
FOURTH FLOOR SQ FT CALCULATIONS

FOURTH FLOOR GROSS TOTAL	8,482 SQ FT (4,603 SF H-1 + 3,878 SF AH)

FOURTH FLOOR UNIT COUNTS

0 BEDROOM	8 UNITS (7 H-1 + 1 AH)
1 BEDROOM	4 UNITS (0 H-1 + 4
SECOND FLOOR TOTAL UNIT COUNT	12 UNITS



A5 04 FOURTH FLOOR

REFERENCED FROM: A3.01 SCALE: 1/8" = 1'-0"

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FOURTH FLOOR PLAN

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A1.40

SCALE: 1/8" = 1'-0"

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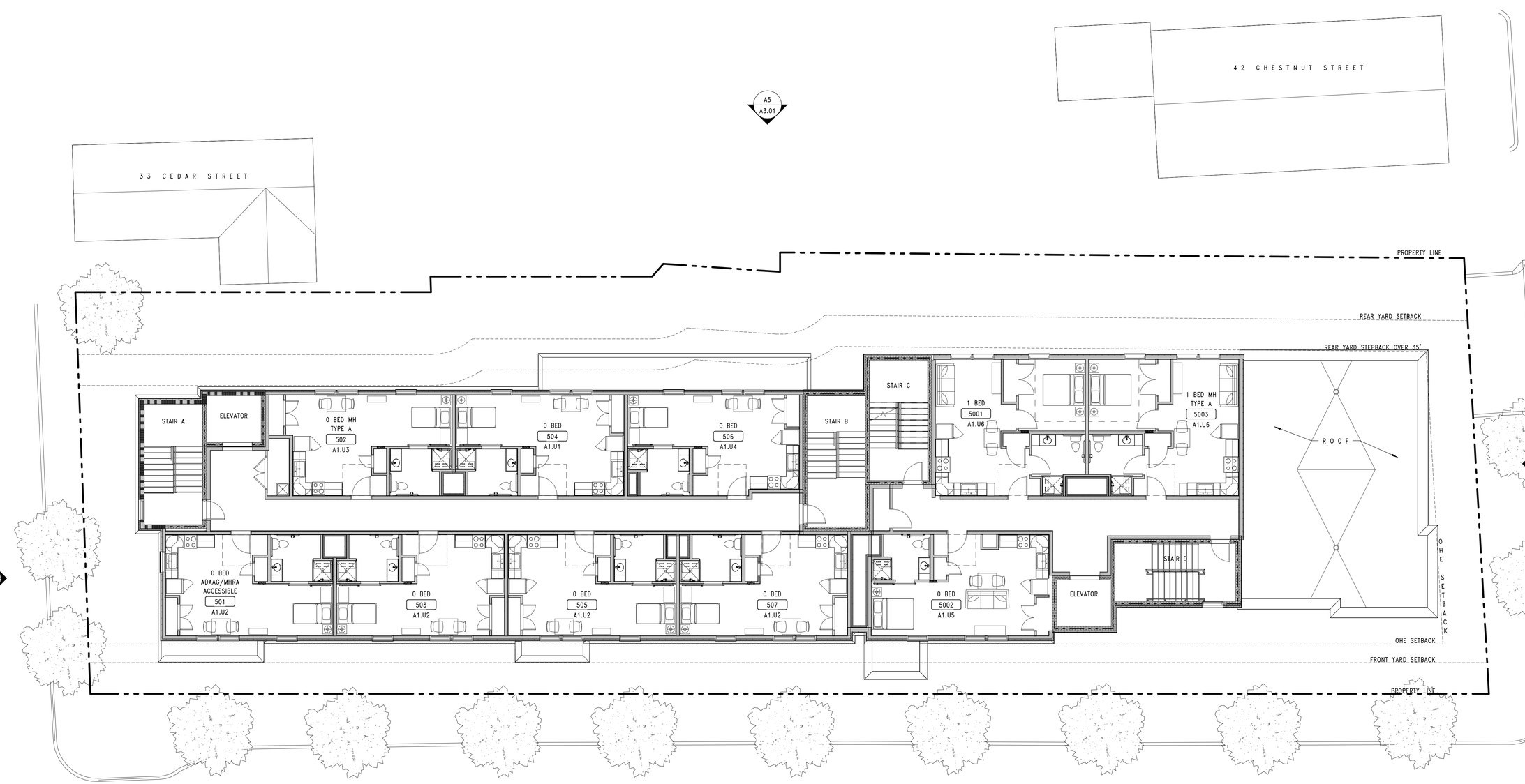
MUNICIPAL SUBMISSION No. 3 - PUBLIC HEARING

FIFTH FLOOR SQ FT CALCULATIONS

FIFTH FLOOR GROSS TOTAL	7,282 SQ FT (4,603 SF H-1 + 2,679 SF AH)

FIFTH FLOOR UNIT COUNTS

0 BEDROOM	8 UNITS (7 H-1 + 1 AH)
1 BEDROOM	2 UNITS (0 H-1 + 2 AH)
SECOND FLOOR TOTAL UNIT COUNT	10 UNITS



A5 05 FIFTH FLOOR

REFERENCED FROM: A3.01 SCALE: 1/8" = 1'-0"

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FIFTH FLOOR PLAN

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A1.50

SCALE: 1/8" = 1'-0"

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MUNICIPAL SUBMISSION No. 3 - PUBLIC HEARING



A5 **NORTH ELEVATION**

REFERENCED FROM: A1.00 SCALE: 1/8" = 1'-0"

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A3.01

SCALE: 1/8" = 1'-0"

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MUNICIPAL SUBMISSION No. 3 - PUBLIC HEARING



A5 **EAST ELEVATION**

REFERENCED FROM: A1.00 SCALE: 1/8" = 1'-0"

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A3.02

SCALE: 1/8" = 1'-0"

DATE: 2024 | 12 | 18

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MUNICIPAL SUBMISSION No. 3 - PUBLIC HEARING



A5 **WEST ELEVATION**

REFERENCED FROM: A1.00 SCALE: 1/8" = 1'-0"

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WEST ELEVATION

CWS PROJECT NUMBER: 23039

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A3.03

SCALE: 1/8" = 1'-0"

DATE: 2024 | 12 | 18

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MUNICIPAL SUBMISSION No. 3 - PUBLIC HEARING



A5 SOUTH ELEVATION

REFERENCED FROM: A1.00 SCALE: 1/8" = 1'-0"

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SOUTH ELEVATION

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A3.04

SCALE: 1/8" = 1'-0"

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MUNICIPAL SUBMISSION No. 3 - PUBLIC HEARING

CEDAR STREET

LANCASTER STREET

4,796 SF FLOOR PLATE

SLAB STEPS UPHILL AT MIDPOINT OF BUILDING

ONE BEDROOM UNIT 101 567 SF

TYPE A STUDIO UNIT 103 436 SF

STUDIO UNIT 105 436 SF

TYPE A ONE BEDROOM UNIT 107 567 SF

ONE BEDROOM UNIT 102 575 SF

BIKE ROOM 110 86 SF

STUDIO UNIT 104 394 SF

STUDIO UNIT 106 394 SF

BIKE ROOM 112 86 SF

ONE BEDROOM UNIT 108 575 SF

UTILITY ROOM 111 48 SF

UTILITY ROOM 113 48 SF

TRANSOM WINDOW

ROOF DRAINS TO DISCHARGE BELOW GRADE HERE

2'-0" | 22'-3¾" | 8'-10¼" | 33'-5" | 8'-10¼" | 22'-3¾" | 2'-0"

2'-6" | 11'-2" | 12'-6" | 25'-0" | 10'-0" | 50'-0"

2'-0" | 22'-1" | 25'-9½" | 25'-9" | 22'-1½" | 2'-0"

99'-9"

0 4' 8' 16' 32'

1 FIRST FLOOR PLAN
1/4" = 1'-0"

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MULTI-FAMILY BUILDING

50 CEDAR STREET
PORTLAND, MAINE

RSA
RYAN SENATORE
ARCHITECTURE
500 CONGRESS STREET, SUITE 2
PORTLAND, MAINE 04101
O: 207-747-5159
C: 207-650-6414
senatorearchitecture.com

CONSULTANTS:

REVISIONS:

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DATE:

PROJECT No. 2312

DRAWN BY: RRT, CRS

CHECKED BY: RJS

SCALE: AS NOTED

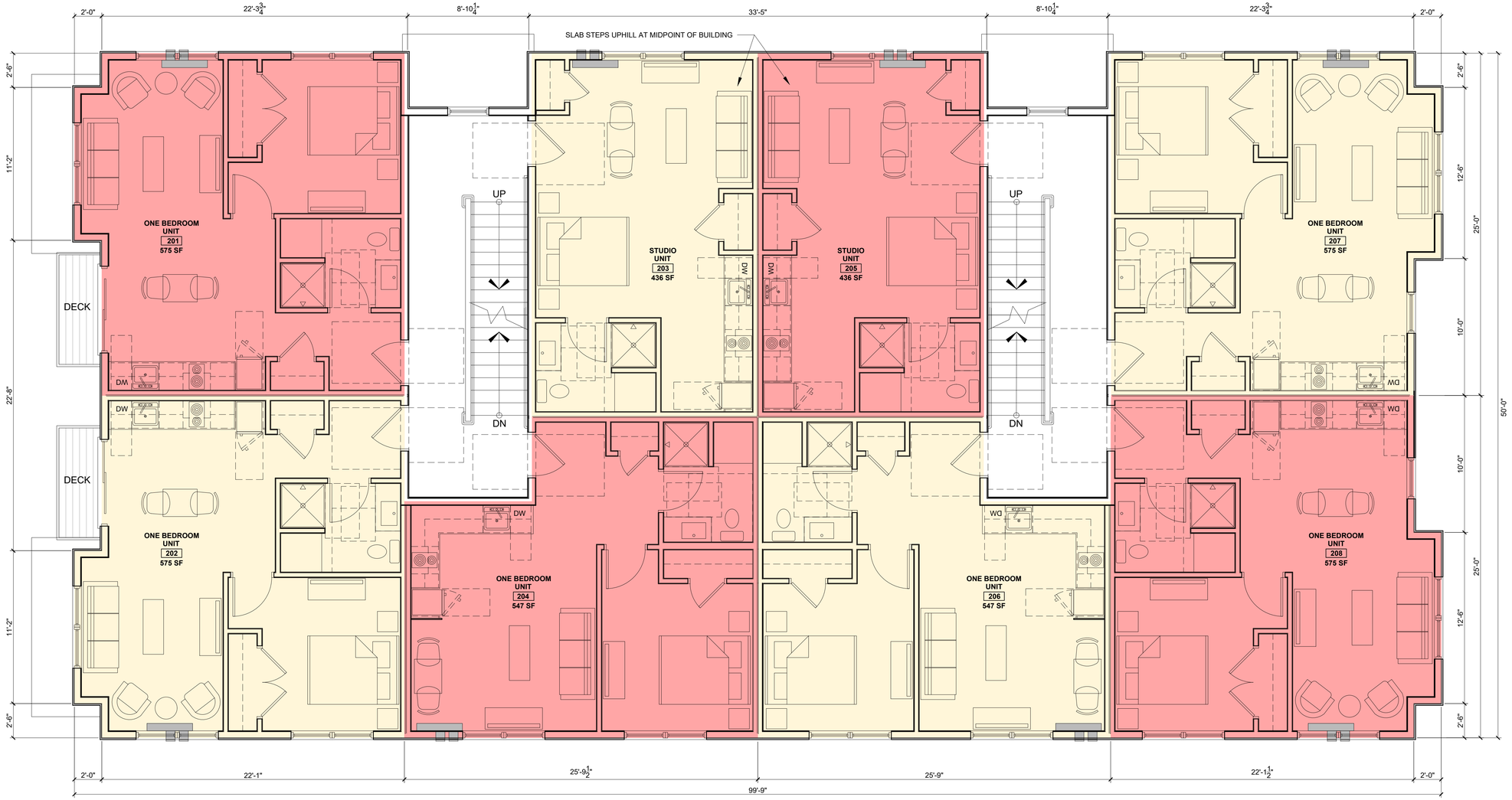
SHEET TITLE:
FIRST FLOOR PLAN

A1-1

CEDAR STREET

4,796 SF FLOOR PLATE

LANCASTER STREET



N TRUE NORTH

0 4' 8' 16' 32'

1 SECOND FLOOR PLAN
1/4" = 1'-0"

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MULTI-FAMILY BUILDING

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DECEMBER 23, 2024

DATE:

PROJECT No. 2312

DRAWN BY: RRT, CRS

CHECKED BY: RJS

SCALE: AS NOTED

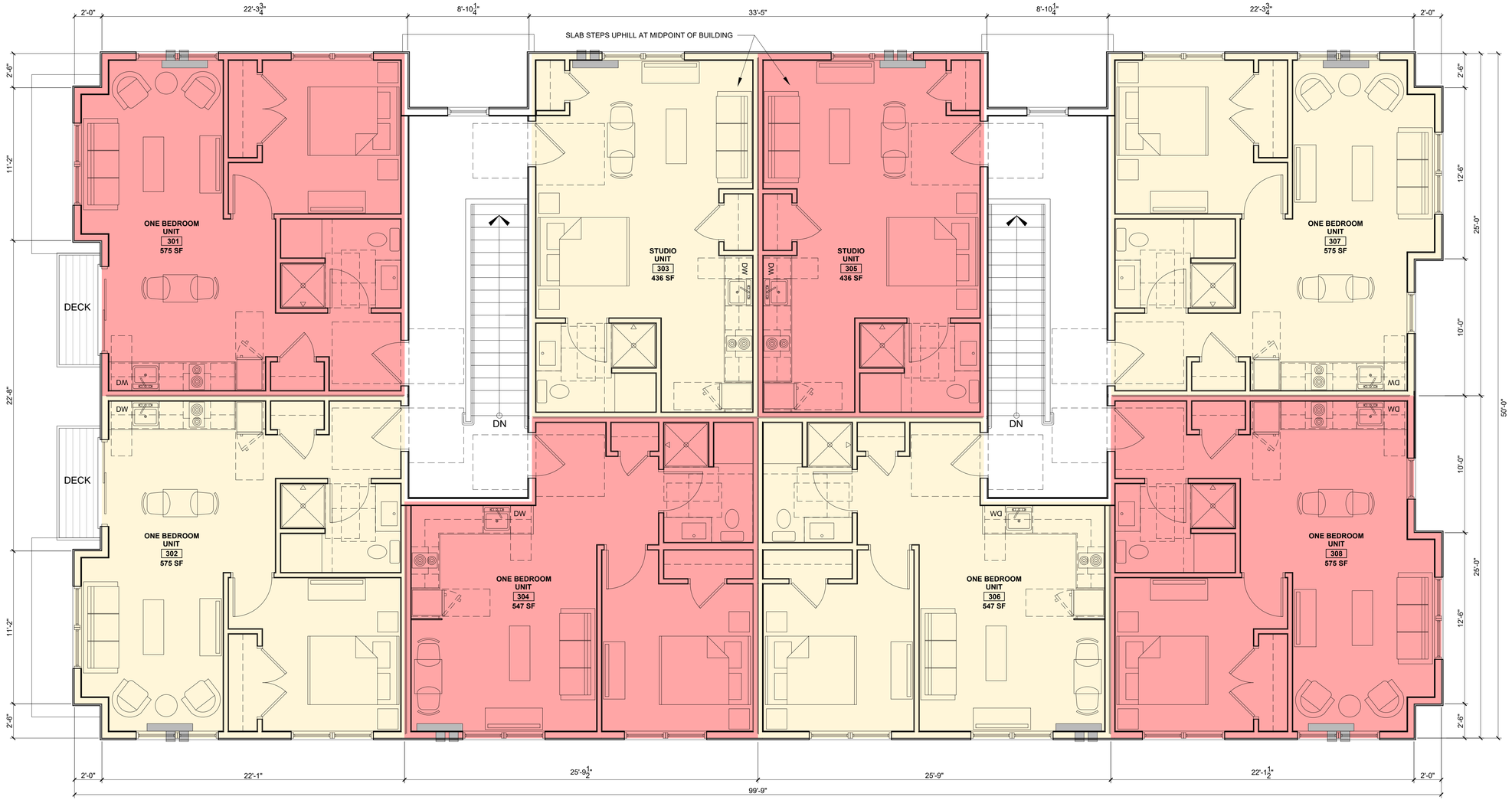
SHEET TITLE:
SECOND FLOOR PLAN

A1-2

CEDAR STREET

4,796 SF FLOOR PLATE

LANCASTER STREET





0 4' 8' 16' 32'

1 THIRD FLOOR PLAN
1/4" = 1'-0"

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MULTI-FAMILY BUILDING

50 CEDAR STREET
PORTLAND, MAINE

RYAN SENATORE
ARCHITECTURE
500 CONGRESS STREET, SUITE 2
PORTLAND, MAINE 04101
O: 207-747-5159
C: 207-650-6414
senatorearchitecture.com

CONSULTANTS:

REVISIONS:

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DECEMBER 23, 2024

DATE:	
PROJECT No.	2312
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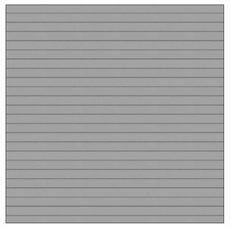
SCALE:	AS NOTED

SHEET TITLE:
THIRD FLOOR PLAN

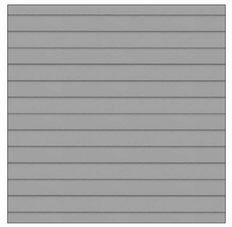
A1-3



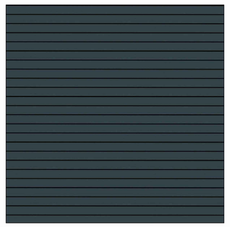
COLOR #1 (WHITE)
5” LAP SIDING



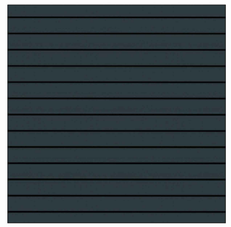
COLOR #2 (GRAY)
5” LAP SIDING



COLOR #2 (GRAY)
9” ARTISAN SQUARE



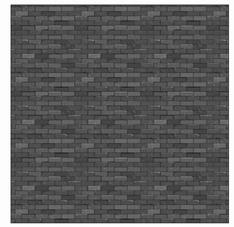
COLOR #3 (EVENING BLUE)
5” LAP SIDING



COLOR #3 (EVENING BLUE)
9” ARTISAN SQUARE



COLOR #4 (BLACK)
DOORS AND WINDOWS



COLOR #5 (DARK GRAY)
BRICK



1 WEST ELEVATION
1/4" = 1'-0"

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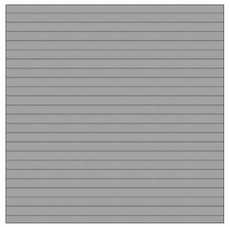
CHECKED BY:	RJS
SCALE:	AS NOTED

SHEET TITLE:
WEST ELEVATION

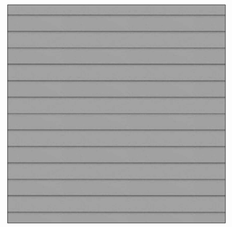
A2-0



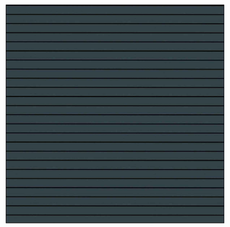
COLOR #1 (WHITE)
5” LAP SIDING



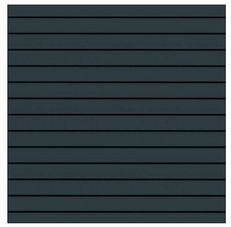
COLOR #2 (GRAY)
5” LAP SIDING



COLOR #2 (GRAY)
9” ARTISAN SQUARE



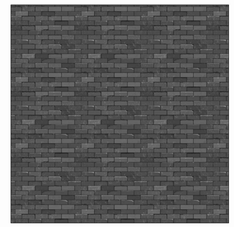
COLOR #3 (EVENING BLUE)
5” LAP SIDING



COLOR #3 (EVENING BLUE)
9” ARTISAN SQUARE



COLOR #4 (BLACK)
DOORS AND WINDOWS



COLOR #5 (DARK GRAY)
BRICK



1 NORTH ELEVATION
1/4" = 1'-0"

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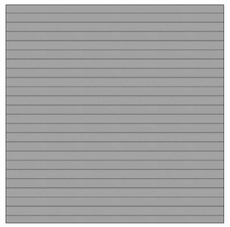
PROJECT No.	2312
DRAWN BY:	RRT, CRS
CHECKED BY:	RJS
SCALE:	AS NOTED

SHEET TITLE:
NORTH
ELEVATION

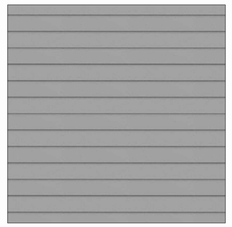
A2-1



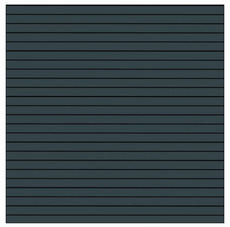
COLOR #1 (WHITE)
5” LAP SIDING



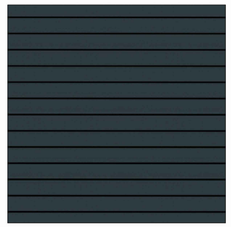
COLOR #2 (GRAY)
5” LAP SIDING



COLOR #2 (GRAY)
9” ARTISAN SQUARE



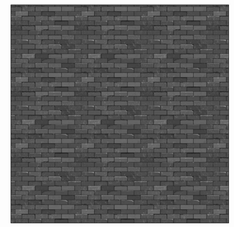
COLOR #3 (EVENING BLUE)
5” LAP SIDING



COLOR #3 (EVENING BLUE)
9” ARTISAN SQUARE



COLOR #4 (BLACK)
DOORS AND WINDOWS



COLOR #5 (DARK GRAY)
BRICK



1 EAST ELEVATION
1/4" = 1'-0"

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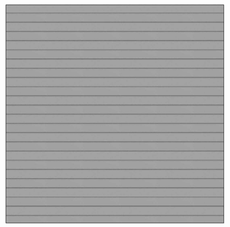
CHECKED BY:	RJS
SCALE:	AS NOTED

SHEET TITLE:
EAST
ELEVATION

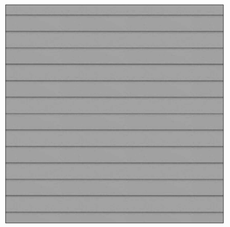
A2-2



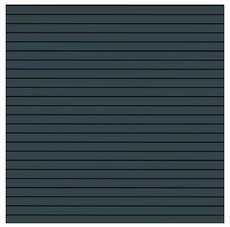
COLOR #1 (WHITE)
5” LAP SIDING



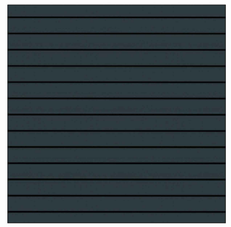
COLOR #2 (GRAY)
5” LAP SIDING



COLOR #2 (GRAY)
9” ARTISAN SQUARE



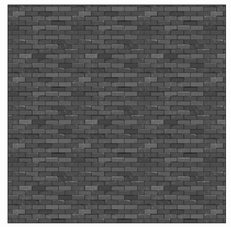
COLOR #3 (EVENING BLUE)
5” LAP SIDING



COLOR #3 (EVENING BLUE)
9” ARTISAN SQUARE



COLOR #4 (BLACK)
DOORS AND WINDOWS



COLOR #5 (DARK GRAY)
BRICK



1 SOUTH ELEVATION
1/4" = 1'-0"

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SCALE:	AS NOTED

SHEET TITLE:
SOUTH ELEVATION

A2-3



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SHEET TITLE:
PERSPECTIVE 1

P1



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SHEET TITLE:
PERSPECTIVE 2

P2



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SCALE:	AS NOTED

SHEET TITLE:
PERSPECTIVE 3

P3



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C: 207-650-6414
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SCALE:	AS NOTED

SHEET TITLE:
PERSPECTIVE 4

P4



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SCALE:	AS NOTED

SHEET TITLE:
PERSPECTIVE 5

P5



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SHEET TITLE:
PERSPECTIVE 6

P6



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SHEET TITLE:
PERSPECTIVE 7

P7



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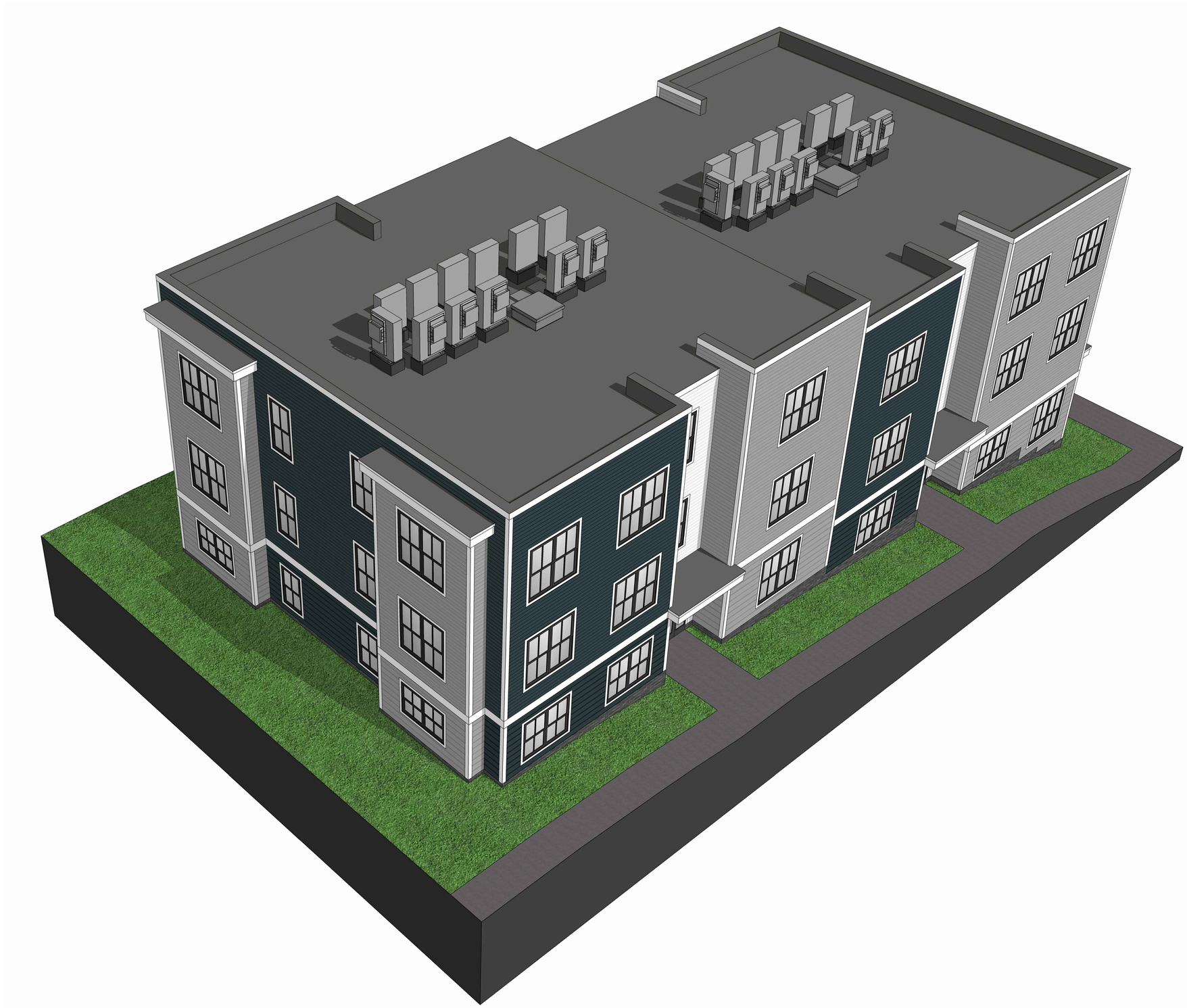
SCALE:	AS NOTED

SHEET TITLE:
PERSPECTIVE 8

P8



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SCALE:	AS NOTED

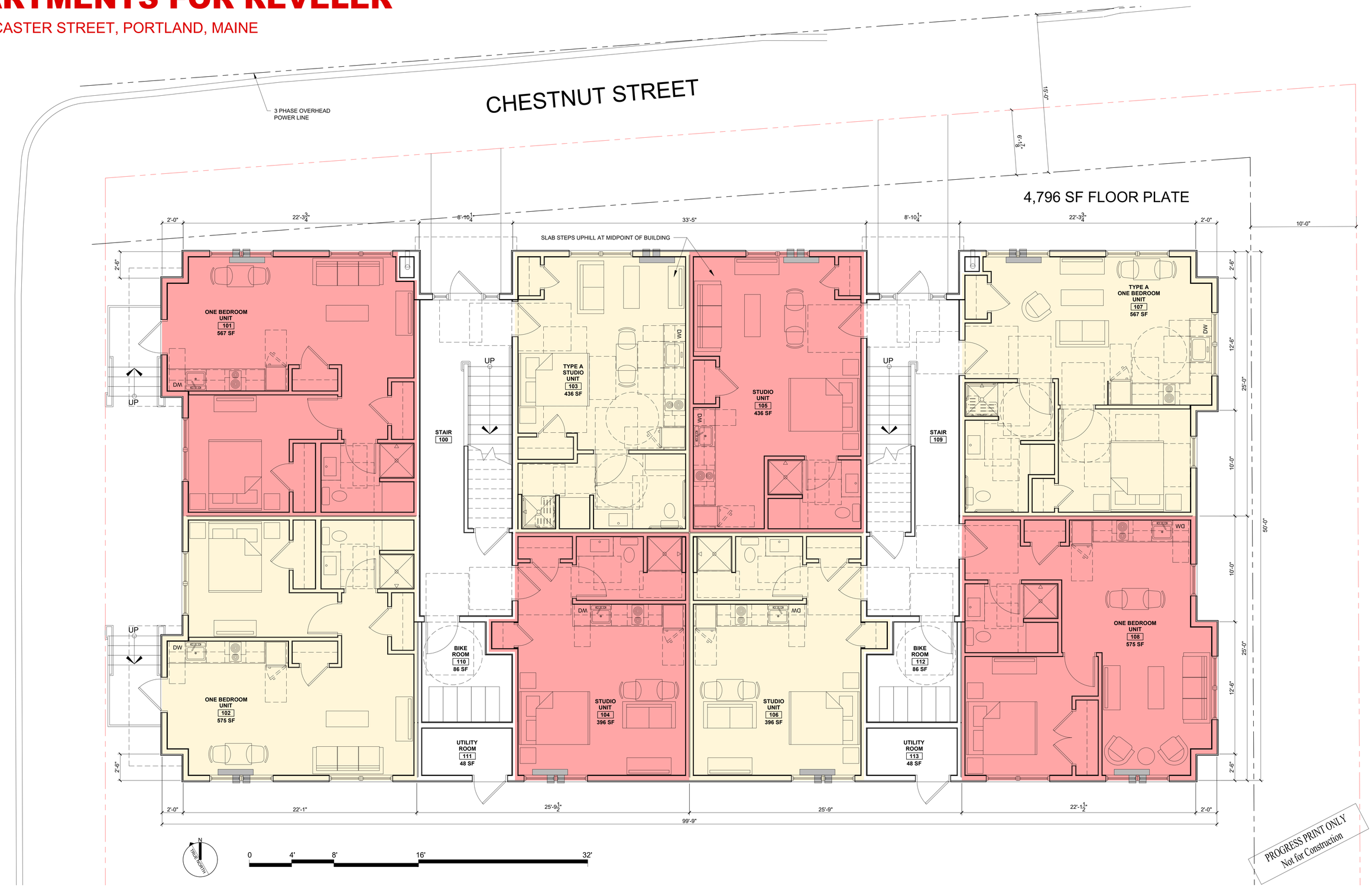
SHEET TITLE:
PERSPECTIVE 9

P9

APARTMENTS FOR REVELER

158 LANCASTER STREET, PORTLAND, MAINE

DECEMBER 23, 2024



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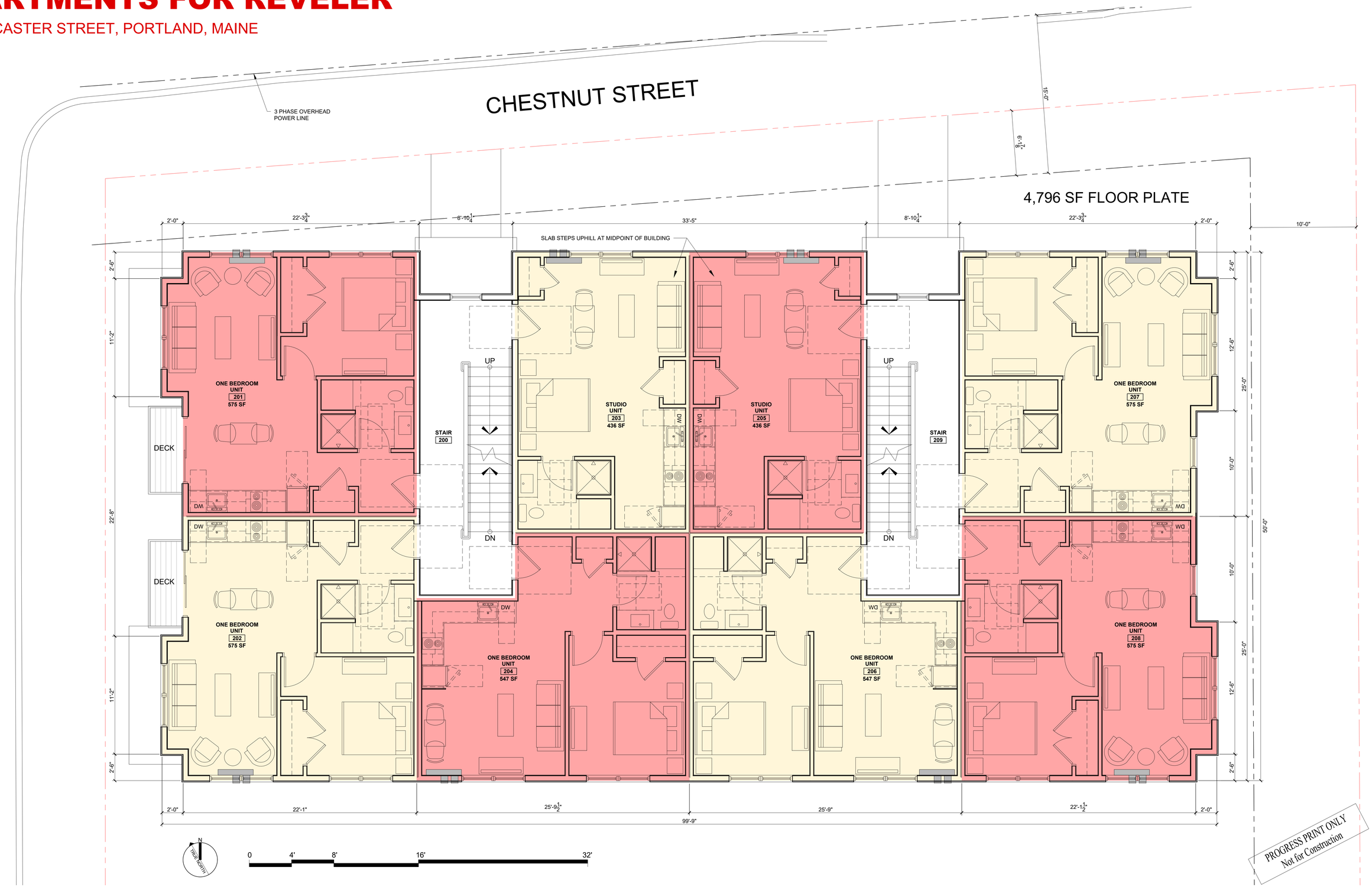
1 FIRST FLOOR PLAN
1/4" = 1'-0"

RYAN SENATORE **ARCHITECTURE**

APARTMENTS FOR REVELER

158 LANCASTER STREET, PORTLAND, MAINE

DECEMBER 23, 2024



1 SECOND FLOOR PLAN
1/4" = 1'-0"

PROGRESS PRINT ONLY
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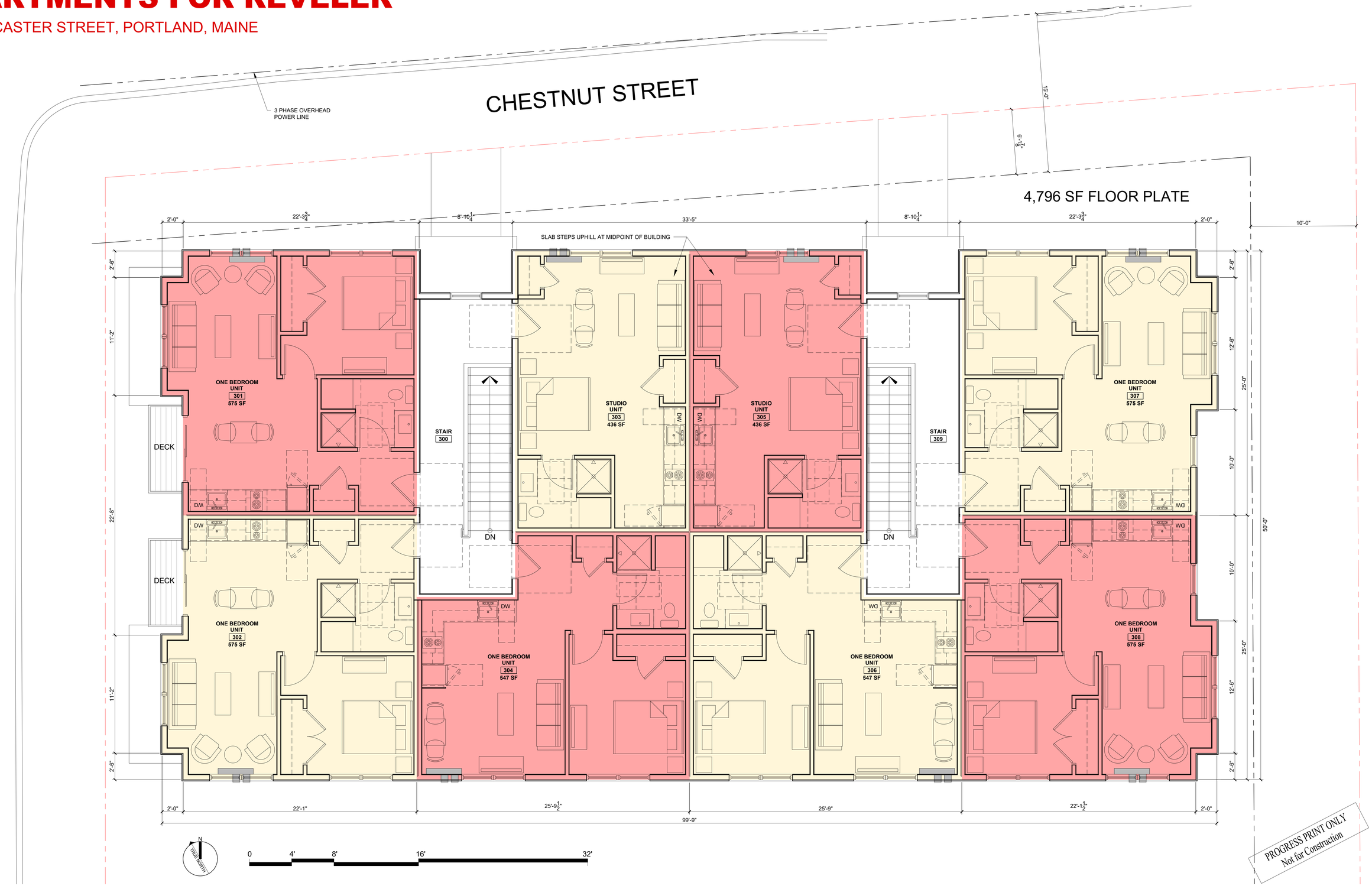
RYAN SENATORE **ARCHITECTURE**

APARTMENTS FOR REVELER

158 LANCASTER STREET, PORTLAND, MAINE

DECEMBER 23, 2024



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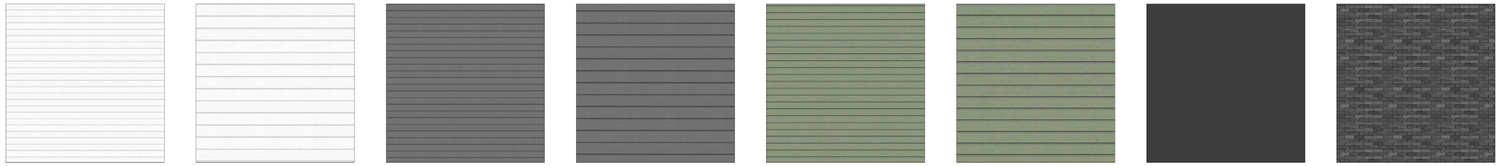
1 THIRD FLOOR PLAN
1/4" = 1'-0"

RYAN SENATORE **ARCHITECTURE**

APARTMENTS FOR REVELER

158 LANCASTER STREET, PORTLAND, MAINE

DECEMBER 23, 2024



COLOR #1 (WHITE)
5" LAP SIDING

COLOR #1 (WHITE)
9" ARTISAN SQUARE

COLOR #2 (GRAY)
5" LAP SIDING

COLOR #2 (GRAY)
9" ARTISAN SQUARE

COLOR #3 (GREEN)
5" LAP SIDING

COLOR #3 (GREEN)
9" ARTISAN SQUARE

COLOR #4 (BLACK)
DOORS AND WINDOWS

COLOR #5 (DARK GRAY)
BRICK



1 WEST ELEVATION
1/4" = 1'-0"

PROGRESS PRINT ONLY
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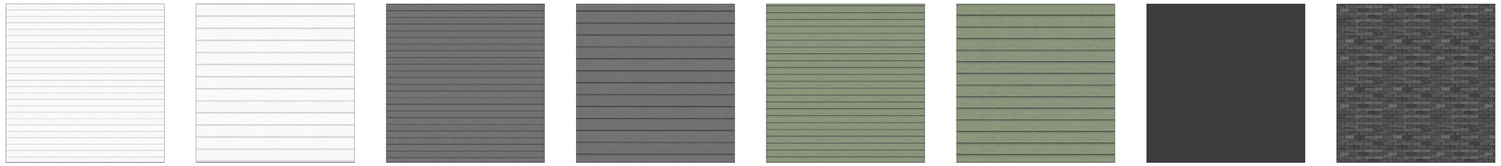
RYAN SENATORE **ARCHITECTURE**

APARTMENTS FOR REVELER

158 LANCASTER STREET, PORTLAND, MAINE

DECEMBER 23, 2024



COLOR #1 (WHITE)
5" LAP SIDING

COLOR #1 (WHITE)
9" ARTISAN SQUARE

COLOR #2 (GRAY)
5" LAP SIDING

COLOR #2 (GRAY)
9" ARTISAN SQUARE

COLOR #3 (GREEN)
5" LAP SIDING

COLOR #3 (GREEN)
9" ARTISAN SQUARE

COLOR #4 (BLACK)
DOORS AND WINDOWS

COLOR #5 (DARK GRAY)
BRICK



1 NORTH ELEVATION
1/4" = 1'-0"

PROGRESS PRINT ONLY
Not for Construction

RYAN SENATORE **ARCHITECTURE**

APARTMENTS FOR REVELER

158 LANCASTER STREET, PORTLAND, MAINE

DECEMBER 23, 2024

COLOR #1 (WHITE)
5" LAP SIDING

COLOR #1 (WHITE)
9" ARTISAN SQUARE

COLOR #2 (GRAY)
5" LAP SIDING

COLOR #2 (GRAY)
9" ARTISAN SQUARE

COLOR #3 (GREEN)
5" LAP SIDING

COLOR #3 (GREEN)
9" ARTISAN SQUARE

COLOR #4 (BLACK)
DOORS AND WINDOWS

COLOR #5 (DARK GRAY)
BRICK



1 EAST ELEVATION
1/4" = 1'-0"

PROGRESS PRINT ONLY
Not for Construction

RYAN SENATORE **ARCHITECTURE**

APARTMENTS FOR REVELER

158 LANCASTER STREET, PORTLAND, MAINE

DECEMBER 23, 2024

COLOR #1 (WHITE)
5" LAP SIDING

COLOR #1 (WHITE)
9" ARTISAN SQUARE

COLOR #2 (GRAY)
5" LAP SIDING

COLOR #2 (GRAY)
9" ARTISAN SQUARE

COLOR #3 (GREEN)
5" LAP SIDING

COLOR #3 (GREEN)
9" ARTISAN SQUARE

COLOR #4 (BLACK)
DOORS AND WINDOWS

COLOR #5 (DARK GRAY)
BRICK



1 SOUTH ELEVATION
1/4" = 1'-0"

PROGRESS PRINT ONLY
Not for Construction

RYAN SENATORE **ARCHITECTURE**

APARTMENTS FOR REVELER

158 LANCASTER STREET, PORTLAND, MAINE

DECEMBER 23, 2024



1 VIEW FROM CORNER OF LANCASTER AND CHESTNUT STREET
NTS

PROGRESS PRINT ONLY
Not for Construction

RYAN SENATORE **ARCHITECTURE**

APARTMENTS FOR REVELER

158 LANCASTER STREET, PORTLAND, MAINE

DECEMBER 23, 2024



1 VIEW FROM CHESTNUT STREET
NTS

PROGRESS PRINT ONLY
Not for Construction

RYAN SENATORE **ARCHITECTURE**

APARTMENTS FOR REVELER

158 LANCASTER STREET, PORTLAND, MAINE

DECEMBER 23, 2024



1 VIEW FROM CORNER OF CHESTNUT STREET AND COMMUNITY GARDEN
NTS

PROGRESS PRINT ONLY
Not for Construction

RYAN SENATORE **ARCHITECTURE**

APARTMENTS FOR REVELER

158 LANCASTER STREET, PORTLAND, MAINE

DECEMBER 23, 2024



1 VIEW FROM LANCASTER STREET
NTS

PROGRESS PRINT 0...
Not for Construction

RYAN SENATORE **ARCHITECTURE**

APARTMENTS FOR REVELER

158 LANCASTER STREET, PORTLAND, MAINE

SEPTEMBER 30, 2024



1 OVERHEAD VIEW 1
NTS

PROGRESS PRINT ONLY
Not for Construction

RYAN SENATORE **ARCHITECTURE**

APARTMENTS FOR REVELER

158 LANCASTER STREET, PORTLAND, MAINE

SEPTEMBER 30, 2024



1 OVERHEAD VIEW 2
NTS

PROGRESS PRINT ONLY
Not for Construction

RYAN SENATORE **ARCHITECTURE**

Joint Site Plan Application- Open Space & Tree Summary



Site Acreage

197 Oxford Street (Phase 1)	1	.35 acres
50 Cedar Street (Phase 2)	2	.53 acres
158 Lancaster Street (Phase 3)	3	.41 acres
Total		***1.29 acres***

Proposed Open Space

197 Oxford Street (Phase 1)	1	20% +/-
50 Cedar Street (Phase 2)	2	21.8% +/-
158 Lancaster Street (Phase 3)	3	41.9% +/-

Trees Total (proposed/existing)

197 Oxford Street (Phase 1)	1	18
50 Cedar Street (Phase 2)	2	28
158 Lancaster Street (Phase 3)	3	22

Trees Removed

197 Oxford Street (Phase 1)	1	14
50 Cedar Street (Phase 2)	2	0
158 Lancaster Street (Phase 3)	3	6

197 Oxford Street + 50 Cedar Street + 158 Lancaster Street
Portland, ME

Joint Site Plan Application- Plan View



197 Oxford Street + 50 Cedar Street + 158 Lancaster Street
Portland, ME

Joint Site Plan Application- Site Map

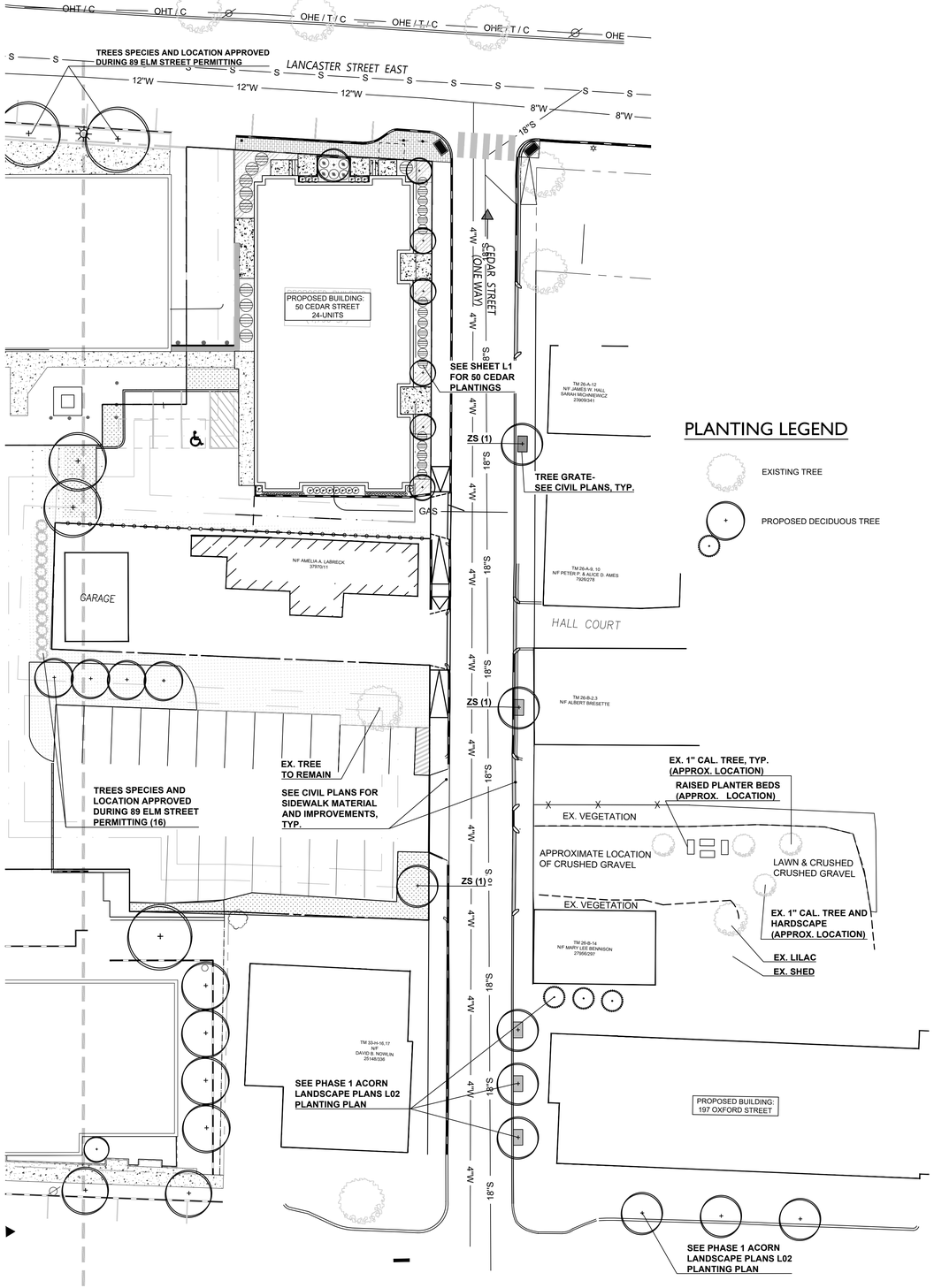


197 Oxford Street + 50 Cedar Street + 158 Lancaster Street
Portland, ME

Joint Site Plan Application- Sidewalk Improvement Plan



197 Oxford Street + 50 Cedar Street + 158 Lancaster Street
Portland, ME

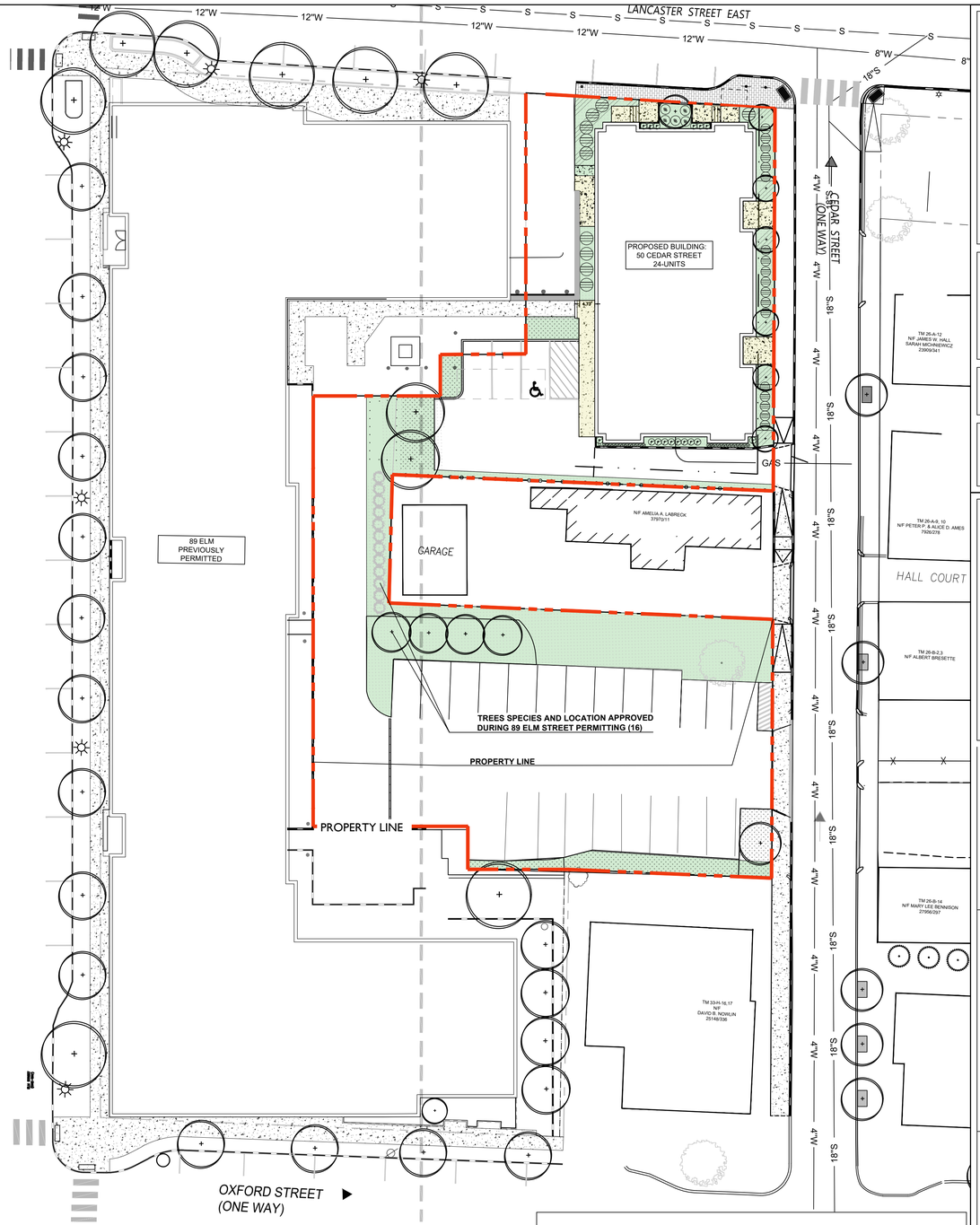


PLANTING LEGEND

EXISTING TREE

PROPOSED DECIDUOUS TREE

CEDAR STREET SIDEWALK IMPROVEMENTS



OPEN SPACE EXHIBIT

OPEN SPACE SUMMARY– LOT SIZE 23,250 SF

	MR	COLOR
LANDSCAPED OPEN SPACE– 5079 SF	21.8%	
HARDSCAPED OPEN SPACE – 621 SF	2.7%	
TOTAL OPEN SPACE	21.82%	

NOTE: This drawing is PRELIMINARY REVIEW ONLY. It is NOT intended for use as a construction document.

Prepared For:

REVELER, LLC
188 STATE STREET, 3RD FLOOR
PORTLAND, ME 04101

Prepared By:

Dry landscape architecture, l.l.c
31 miller ave.
biddeford, me 04005

Date:
APRIL 17, 2023

Issued For:
PERMITTING DOCUMENTS

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Title:
OPEN SPACE EXHIBIT & PLANTING PLAN

50 Cedar Street

PHASE 2

Portland ME 04103

Revisions:
1ST WORKSHOP COMMENTS REV.1 - 09.30.2024
2ND WORKSHOP COMMENTS REV.2 - 12.23.2024

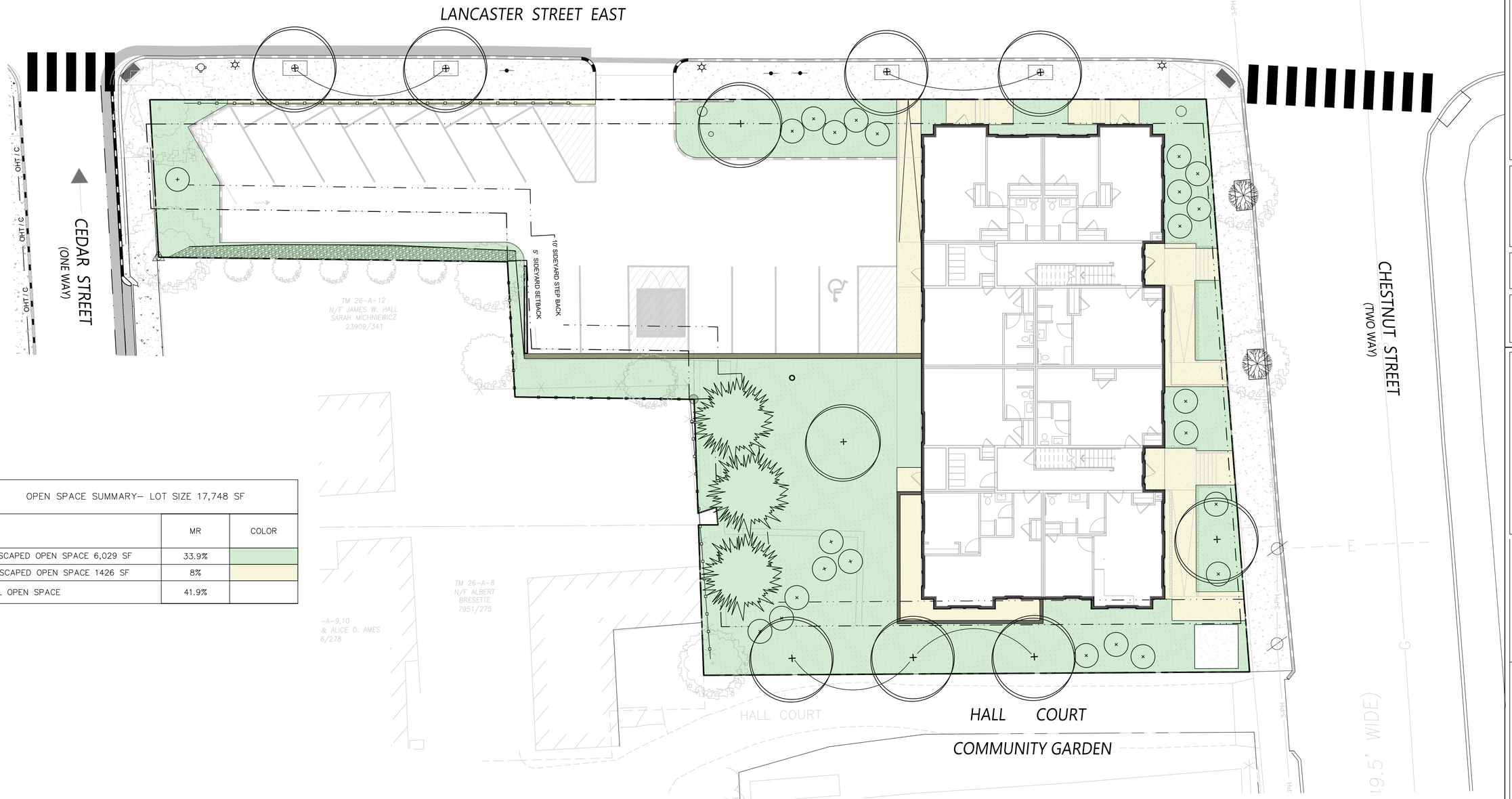
North:

Sheet No.: L2

Scale: 1" = 20'-0"

0 10 20 40

C:\Users\DRY-LO\OneDrive\Documents\Onedrive\DRY-LA\Projects\50 Cedar+ 158 Lancaster\CAD\50 Cedar Street sketch Plan Submission REV 2 12.23.2024.dwg dry-l 12/23/2024



OPEN SPACE SUMMARY– LOT SIZE 17,748 SF		
	MR	COLOR
LANDSCAPED OPEN SPACE 6,029 SF	33.9%	
HARDSCAPED OPEN SPACE 1426 SF	8%	
TOTAL OPEN SPACE	41.9%	

Prepared For:

REVELER, LLC
188 STATE STREET, 3RD FLOOR
PORTLAND, ME 04101

Prepared By:
Dry landscape architecture, l.l.c
31 miller ave.
biddeford, me 04005

Date:
APRIL 16, 2024

Issued For:
PERMITTING DOCUMENTS

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Title: OPEN SPACE EXHIBIT

158 Lancaster Street

PHASE 3

Portland ME 04103

Revisions:
1ST WORKSHOP COMMENTS REV.1 - 09.30.2024
2ND WORKSHOP COMMENTS REV.2 - 12.23.2024

North:

Sheet No.: L4

Scale: 1" = 10'-0"

0 5 10 20

NOTE: This drawing is PRELIMINARY REVIEW ONLY. It is NOT intended for use as a construction document.

C:\Users\DRY-LO\OneDrive\Documents\OneDrive\DRY-LA\Projects\50 Cedar • 158 Lancaster\CAD\158 Lancaster-sketch Plan Submission REV 2 - 12.23.2024.dwg dry-l 12/23/2024

APARTMENTS FOR REVELER

158 LANCASTER STREET, PORTLAND, MAINE

DECEMBER 23, 2024









PROGRESS PRINT ONLY
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1 PRECIDENT IMAGES
NTS

RYAN SENATORE **ARCHITECTURE**


SLOW


Cedar St



A5 **PERSPECTIVE VIEW - PARKING AT CHESTNUT ST**

REFERENCED FROM: SCALE:

C:\Users\bhen Reed\Documents\23039_Avesta Oxford St_ R23_CENTRAL_breedRCBPW.rvt

CWS ARCHITECTURE + INTERIOR DESIGN

PLANNING + DESIGN
CONSTRUCTION SERVICES

DESIGNER

CWS ARCHITECTURE + INTERIOR DESIGN
264 US ROUTE ONE, SUITE 100-2A
SCARBOROUGH, ME 04074
207 774 4441
CWSARCH.COM

OWNER

AVESTA

OWNER ADDRESS

PROJECT

AVESTA OXFORD

PROJECT ADDRESS

DRAWING

PERSPECTIVE VIEW PARKING ENTRANCE AT CHESTNUT

CWS PROJECT NUMBER: 23039

REVISIONS

DRAWING NUMBER

3D.4

SCALE:

DATE: 2024 | 12 | 18

12/23/2024 11:04:55 AM

MUNICIPAL SUBMISSION No. 3 - PUBLIC HEARING

AVESTA OXFORD
FIRST FLOOR LIGHTING & SECURITY DIAGRAM

SECURED HOUSING FIRST INDOOR GATHERING/ COMMON AREA

SECURED HOUSING FIRST OUTDOOR GATHERING/ COMMON AREA

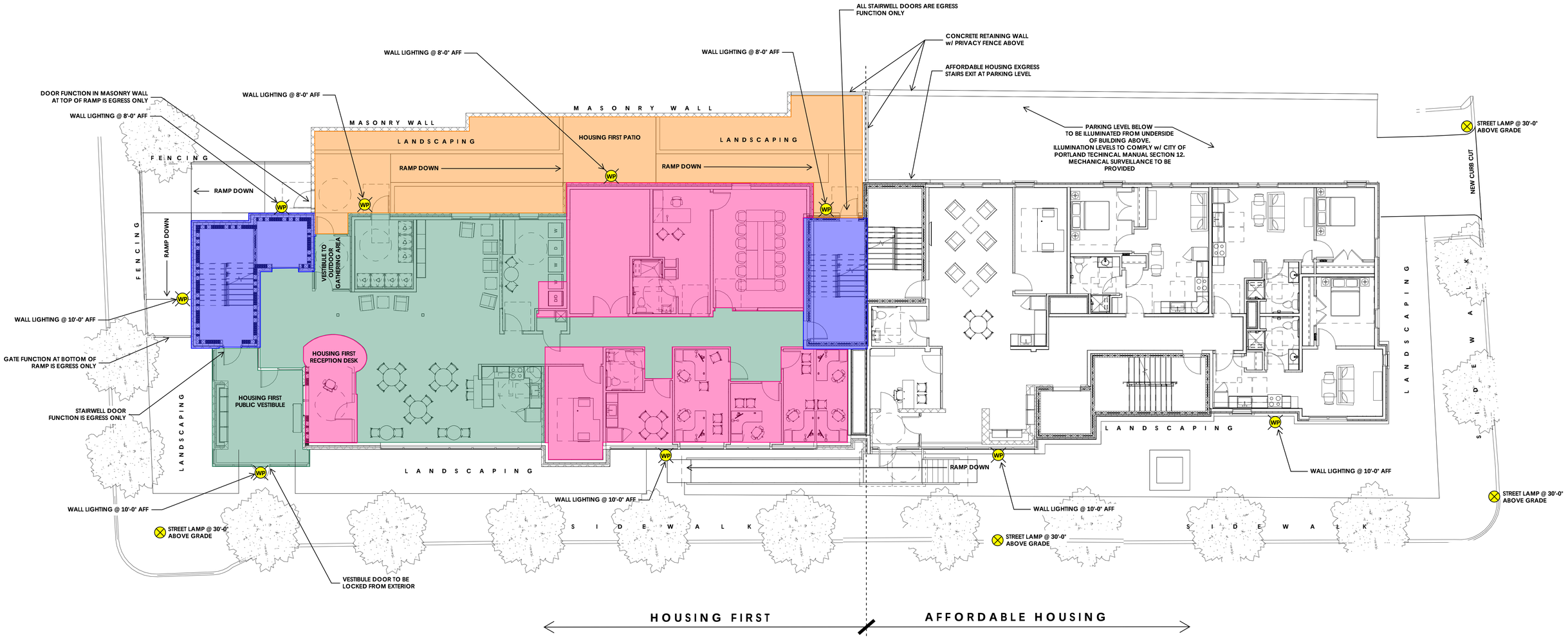
HOUSING FIRST STAFF/ SUPPORT AREA

HOUSING FIRST VERTICAL EGRESS

OUTDOOR SCONCE

STREET LAMP

*NOTE - SECURITY CAMERAS WILL BE PROVIDED; LAYOUT TO PROVIDE TOTAL LOT COVERAGE



CWS ARCHITECTURE + INTERIOR DESIGN

DECEMBER 18, 2024

CWS ARCHITECTURE + INTERIOR DESIGN

PLANNING + DESIGN
CONSTRUCTION SERVICES

DESIGNER

CWS ARCHITECTURE + INTERIOR DESIGN
264 US ROUTE ONE, SUITE 100-2A
SCARBOROUGH, ME 04074
207 774 4441
CWSARCH.COM

OWNER

AVESTA

OWNER ADDRESS

PROJECT

AVESTA OXFORD

PROJECT ADDRESS

DRAWING

BIRDS EYE
REAR ELEVATION

CWS PROJECT NUMBER: 23039

REVISIONS

DRAWING NUMBER

3D.3

SCALE:

DATE: 2024 | 12 | 18

12/20/2024 1:04:24 AM

A5 **BIRDS EYE REAR ELEVATION**

REFERENCED FROM: SCALE:

C:\Users\Rhen Reed\Documents\23039_Avesta Oxford St_ R23_CENTRAL_breedRCBPW.rvt

MUNICIPAL SUBMISSION No. 3 - PUBLIC HEARING

CWS ARCHITECTURE + INTERIOR DESIGN

PLANNING + DESIGN
CONSTRUCTION SERVICES

DESIGNER

CWS ARCHITECTURE + INTERIOR DESIGN
264 US ROUTE ONE, SUITE 100-2A
SCARBOROUGH, ME 04074
207 774 4441
CWSARCH.COM

OWNER

AVESTA

OWNER ADDRESS

PROJECT

AVESTA OXFORD

PROJECT ADDRESS

DRAWING

PERSPECTIVE VIEW
OXFORD & CEDAR

CWS PROJECT NUMBER: 23039

REVISIONS

DRAWING NUMBER

3D.1

SCALE:

DATE: 2024 | 12 | 18

12/20/2024 11:04:09 AM

A5 **OXFORD & CEDAR - RENDER**

REFERENCED FROM: SCALE:

C:\Users\Rhen Reed\Documents\23039_Avesta Oxford St_ R23_CENTRAL_breedRC8PW.rvt

MUNICIPAL SUBMISSION No. 3 - PUBLIC HEARING

REFERENCES:

1. EXISTING CONDITIONS PROVIDED BY "TOPOGRAPHIC SURVEY BAYSIDE PARCELS LANCASTER, PREBLE, ELM, CEDAR, CHESTNUT AND OXFORD STREETS, PORTLAND, MAINE" PREPARED FOR BUSH WATSON DATED DECEMBER 6, 2022 BY OWEN HASKELL, INC.UTILITY INFORMATION OBTAINED FROM PORTLAND WATER DISTRICT MAPPING, UNITIL MAPPING, AND THE CITY OF PORTLAND GIS DATA CATALOG.
2. ADDITIONAL EXISTING INFORMATION FROM CAD FILE PROVIDED BY OWEN HASKELL, INC. OF "BOUNDARY & TOPOGRAPHIC SURVEY AT 117 PREBLE STREET, PORTLAND, MAINE" DATED SEPTEMBER 28, 2015.

LANCASTER STREET
HANOVER STREET
ADLER STREET
PREBLE STREET
38' WIDE – ONE WAY
KENNEBEC STREET
30' WIDE – ONE WAY
ELM STREET
30' WIDE – ONE WAY
CEDAR STREET
20' WIDE – ONE WAY
CHESTNUT STREET
TWO–WAY
OXFORD STREET
ONE–WAY
PORTLAND STREET
CUMBERLAND AVE

117 PREBLE ST
165–185 LANCASTER ST.
MDP PHASE 5A:
195 LANCASTER ST.
MDP PHASE 5B:
163 LANCASTER ST.
MDP PHASE 4:
149 LANCASTER ST.
ZONE B7
ZONE B3
ZONE R6
MDP PHASE 1B:
196 LANCASTER ST.
MDP PHASE 1A:
89 ELM ST.
JSPA
PHASE 2:
50 CEDAR
ST.
JSPA PHASE 3:
158 LANCASTER ST.
81 PREBLE ST.
78 CHESTNUT ST.
MDP PHASE 5C:
235 OXFORD ST.
JSPA PHASE 1:
197 OXFORD ST.
62 ELM ST.
MDP PHASE 2:
60 ELM ST.
MDP PHASE 3:
315 CUMBERLAND AVE

PROJECT BOUNDARY LEGEND:

WEST BAYSIDE MASTER DEVELOPMENT PLAN PROJECT BOUNDARY:

197 OXFORD STREET REDEVELOPMENT JOINT SITE PLAN APPLICATION PROJECT BOUNDARY:

PROJECT BOUNDARY LINES

ZONING DISTRICT BOUNDARY LINE

50 0 50 100
SCALE: 1" = 50'

CONCEPT
NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY DATE
COMMENT RESPONSE	SJL 9/30/24

DRAWING NAME: WEST BAYSIDE MDP & 197 OXFORD ST. JSPA OVERALL PLAN

PROJECT NAME: WEST BAYSIDE MASTER DEVELOPMENT PLAN

CLIENT: WEST BAYSIDE PARTNERS, LLC
188 STATE STREET, 3RD FLOOR, PORTLAND, ME 04101

ACORN ENGINEERING, INC.

THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN AUTHORIZATION FROM ACORN ENGINEERING, INC. OR OTHERWISE, SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO ACORN ENGINEERING, INC.

ACORN ENGINEERING, INC.
PO BOX 4593, PORTLAND, MAINE 04104
(207) 775-2655

FILE: 1093.13_CIVIL
JN: 1093.13
SCALE: AS NOTED
DESIGNED BY: SJL
DRAWN BY: ZMS
CHECKED BY: WHS

STATE OF MAINE
SAMUEL J. LEBEL
No. 16505
LICENSED PROFESSIONAL ENGINEER
9/30/24

DRAWING NO.
C-99