PLANNING BOARD

Tuesday, March 12, 2024 at 4:30 PM
Hybrid Meeting, Room 24 (Basement Level of City Hall) and Zoom

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

The Planning Board invites the public to attend the meeting in person or Zoom pursuant to the Remote Meeting Policy adopted by the Planning Board. Prior to the meeting, please check the Agenda Center (https://portlandme.portal.civicclerk.com) to view memos and reports which will be posted by the end of the day on the Friday before the Planning Board meeting. To submit written public comment on an agenda item, email planningboard@portlandmaine.gov. Submissions must be received by 12:00 pm the day before the Planning Board meeting to guarantee their inclusion in the agenda packet. All submissions must include the commenter's name and legal address. To help ensure your comment is submitted for the correct item, please include the name of the agenda item (see below).

REMOTE PARTICIPATION
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AGENDA:

WORKSHOP - 4:30 PM

i. Major Site Plan; 64 Pine Street, 64 Pine Street, LLC, Applicant. The Planning Board will hold a hybrid workshop to consider a major site plan application intended to facilitate the development of a mixed-use development with nine residential units, mechanical stacked parking for 18 vehicles, and a 1,282 square foot retail space. The project site totals 9,920 square feet, is located predominantly in the B-1 Neighborhood Business zone, with the rear of the property being located in the R-6 Residential zone. The property is also located within the West End Historic District and is subject to Certificate of Appropriateness review by the Historic Preservation Board. A project and plan summary are available

for viewing on the city's CSS Portal (https://css.portlandmaine.gov/) by referencing Plan Number PL-002678-2023.

ii. Major Site Plan and Subdivision Amendment; 244 Cumberland Ave, Lincoln Avenue Capital Northeast Developer, LLC, Applicant. The Planning Board will hold a hybrid workshop to consider a major site plan application intended to facilitate the development of a 55-unit age restricted affordable housing development at 244 Cumberland Avenue. The project site totals 19,570 square feet and is located within the B-3 Downtown Business Zone. This application is the second phase of the 385 Congress Street Master Development Plan (MDP). A project and plan summary are available for viewing on the city's CSS Portal (https://css.portlandmaine.gov/) by referencing Plan Number PL-002779-2024.

PUBLIC HEARING - 6:00 PM

1. ROLL CALL AND DECLARATION OF QUORUM

2. COMMUNICATION AND REPORTS

58 Fore St. - Geotechnical Study Communication

Approval Letter - 55 Cumberland Avenue

142 Free Street

3. REPORT OF ATTENDANCE AT THE MEETING HELD ON FEBRUARY 27, 2024

Workshop
Article 3 and 12 Text Amendments: Barker, Chann, Mazer, Murphy, Silk, Smith and Stanley present.

Public Hearing
142 Free Street: Barker, Chann, Mazer, Murphy, Silk and Stanley present. Smith recused
56 Cumberland Ave: Barker, Chann, Mazer, Murphy, Silk, Smith and Stanley present.

4. REPORTS OF DECISIONS AT THE MEETING HELD ON FEBRUARY 27, 2024

i. Major Site Plan; 2 West Commercial Street; MDOT Port Authority, Applicant. Barker motioned, and Silk seconded a motion to table the public hearing to a date certain of March 12, 2024. Vote 7-0.

ii. Historic District Designation; 142 Free Street; Portland Museum of Art, Applicant. Barker motioned, and Murphy seconded a motion to find that the building at 142 Free Street meets the minimum criteria for designation per Sec. 17.4.1(A) and demonstrates sufficient integrity per Sec. 17.4.2, and recommended to the City Council against reclassifying the building at 142 Free Street as a noncontributing structure. Vote 5-1, Chann opposed, and Smith recused.

iii. Major Site Plan; 56 Cumberland Ave; Fafnir Cumberland, LLC, Applicant. Barker motioned, and Stanley seconded a motion to approve the major site plan application. Vote 7-0.

5. NEW BUSINESS

i. Text Amendments to Articles 3 and 12 of the Land Use Code: Floodplain Management and Definitions, City of Portland, Applicant. The City is requesting that this item be tabled to the March 26, 2024 meeting.

ii. Major Site Plan; 2 West Commercial Street; MDOT Port Authority, Applicant. The Planning Board will hold a hybrid public hearing to consider a major site plan and site location of development application intended to facilitate the redevelopment of a portion of the International Marine Terminal site to allow for the installation of twelve, 50-foot tall, refrigerated container racking systems (reefer racks). The project will result in approximately

five acres of site disturbance, which will involve removal of existing bituminous and pervious pavement, and resurfacing in a new heavy-duty pavement to accommodate heavier traffic volumes. The subject property totals 18.6 acres and is zoned Waterfront Port Development Zone (WPDZ) and is located within the Shoreland Zone. A project and plan summary are available for viewing on the city's CSS Portal (https://css.portlandmaine.gov/) by referencing Plan Number PL-002443-2023.

To: Chair Mazer and Members of the Portland Planning Board
From: Natasha Kypfer, Senior Planner
Date: March 8, 2024
Subject: 64 Pine Street
Project ID: PL-002678-2023
Meeting Date: March 12, 2024

I. INTRODUCTION

At the workshop on March 12, the Planning Board will review a Major Site Plan proposal by 64 Pine Street, LLC, which proposes redevelopment of the property at 64 Pine Street in the West End neighborhood. The project would involve the demolition of the existing surface parking area and vacant one-story commercial building, formerly a restaurant and small neighborhood market, and construction of a four-story building with nine multi-family units on the upper floors, a commercial retail space (1,282 sq. ft.) on the ground level, and mechanical stacked parking for 18 vehicles within a structured parking area at ground level. Other improvements include reconstruction of the streetscape, and increased on-site stormwater management.

The Planning and Urban Development Department mailed 291 notices advertising this meeting to property owners within 500 feet of the site. A legal advertisement ran in the March 2, 2024 and the March 5, 2024 editions of the *Portland Press Herald*.

Applicant: 64 Pine Street, LLC
Applicant Representative: Brad Kaden, Sam Lebel, & Zach Stevens of Acorn Engineering

II. REQUIRED REVIEWS AND REQUESTED WAIVERS

Review	Applicable Standards
Major Site Plan Review	Section 14.6
Historic Preservation Review	Section 17.7.1

Waiver Requests	Applicable Standards
1. The applicant is requesting to have a 5" – 6" reveal, in order to match the existing reveals.	Technical Manual, Section 1., Figure I-12: Vertical Granite Curb, requires a 7" reveal.
2. The applicant is requesting to not have 2' radius corner granite pieces ("Bugs"), but instead have a radial curbing.	Technical Manual, Section 1., Figure I-9A: Residential Driveway Apron, requires a 2' radius corner granite pieces ("Bugs") at low-volume driveways.
3. The applicant is requesting to have a 12' driveway width for a two-way driveway.	Technical Manual, Standard 1.5.1.B, requires for two-way driveways, a 20' min. – 24' max.
4. The applicant is requesting to have a 20.27' drive aisle width associated with the covered 90-degree parking on site.	Technical Manual, Section 1., Figure I-16A: Vehicle Parking Dimensions, requires a min. drive aisle width of 24' for standard, right-angle parking.
5. The applicant is requesting to have a 9.07' separation from the abutting parcel's curb cut; the existing driveway separation is ~22.5'.	Technical Manual, Standard 1.5.1.C, requires driveway spacing of 50' along local streets.

III. PROJECT DATA

Existing Zoning	B-1 Neighborhood Business R-6 Residential* **Small sliver at rear of site.*
Historic District	West End Historic District
Property Size	9,920 sq. ft. (0.23 ac.) **Lots 056 C002 and C004 combined.*
Existing Use	(Vacant) Restaurant and Surface-level Parking Lot
Proposed Use	Multi-family Residential and Retail

	Existing	Proposed	Net Change
Building Footprint	4,629 sq. ft.	7,719 sq. ft.	+ 3,090 sq. ft.
Building Floor Area	4,629 sq. ft.	20,172 sq. ft.	+ 17,127 sq. ft.
Impervious Surface Area	90 %	84.6 %	- 5.4 %
Parking Spaces	11	19	+ 8
Bicycle Parking Spaces	2	9	+ 7

IV. EXISTING CONDITIONS AND SURROUNDING AREA

The project site is located within a dense, mixed-use area of the West End Neighborhood that serves as a neighborhood commercial node, with many businesses, including retail shops, cafes, and restaurants. The site is surrounded by multiple adjacent parcels, which are fully developed and include tenants such as the Chaval restaurant and the Soap Bubble Laundromat and, to the rear, the Reiche Community Center campus and greenspace.

Figure 1: View along and above Pine Street with subject property outlined, from CONNECTExplorer.

V. PROPOSED DEVELOPMENT

The proposed mixed-use development site (Plan 5) comprises 9,920 sq. ft. The lot has frontage along Pine Street. The anticipated development will include nine residential units, with mechanical stacked parking for

18 vehicles plus a single ADA-compliant parking space, and a 1,282 sq. ft. retail space the ground level. The residential units are all proposed as three-bedroom units, with three units occupying each floor for levels two, three, and four.

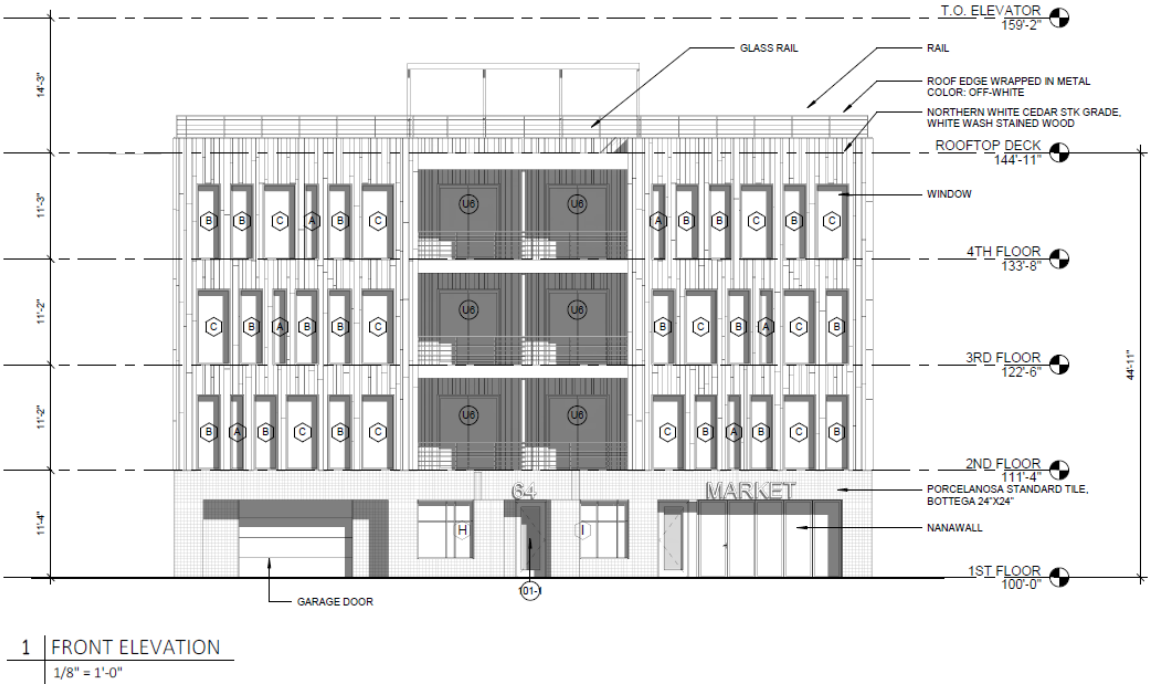


Figure 2: Snip from Exterior Elevations, Sheet A4.01 (see Plan 5), from applicant submittal.

VI. RIGHT, TITLE, AND INTEREST

The owners of the property, 64 Pine Street, LLC, have provided a Quitclaim from Norway Savings Bank without covenant recorded at the Cumberland County Registry of Deeds (Book 35505 Page 186) on March 7, 2019, as evidence of right, title, and interest in the property (Attachment C).

VII. FINANCIAL AND TECHNICAL CAPACITY

The applicant has submitted a letter from Camden National Bank, dated November 15, 2023, as demonstration of their financial capacity to complete the proposed development (Attachment G). Accompanying this, the applicant included the technical capacity documentation which includes details on the following project partners: Acorn Engineering, Invivid Architecture, and ALA (Attachment H).

VIII. ZONING ANALYSIS

DIMENSIONAL AND USE REQUIREMENTS

A zoning review has been conducted on this application and this project meets the requirements of the B-1 Neighborhood Business zone and R-6 Residential zone, see below.

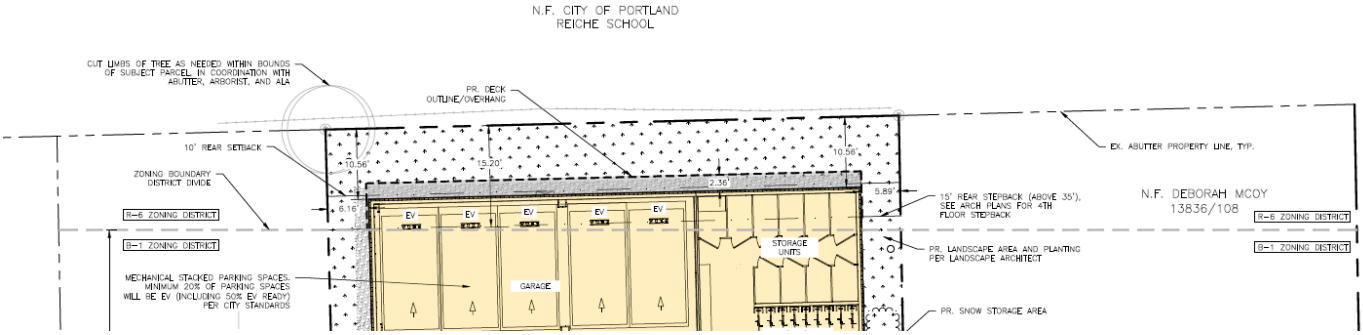


Figure 3: Snip from Site Plan, Sheet C-10 (see Plan 5), from applicant submittal which depicts B-1 and R-6 boundary line.

	Required	Proposed
Lot Area	n/a	9,920 sq. ft. (0.23 ac.) – Existing * **Lots 056 C002 and C004 combined.*
Lot Area Per Dwelling Unit	435 sq. ft.	1,102 sq. ft.
Street Frontage (Min.)	20'	85'
Front Setback (Min.)	10'	0.74'
Rear Setback (Min.)	10', or the average front yard depth of nearest developed lots if < 10'	10.56'
Side Setback (Min.)	None, except 5' if abutting residential zone	5.30' / 5.92'
Stepbacks	Side: 10' / Rear: 15'	Side: 10' / Rear: 15.20'
Floor Area (Max.)	10,000 sq. ft. total, non-residential uses on the first floor	1,282 sq. ft.
Structure Height (Max.)	45'	44.92' * **The pergola is required to be under the structure max. height.*
Lot Coverage (Max.)	Up to 100%	76.2 %
Impervious Surface Ratio (Max.)	90%	85.6%
Off-Street Parking	6	19

<u>B-1 Neighborhood Business Zone – Purpose Statement:</u> *To provide limited areas for the location of small-scale commercial establishments intended to serve a local market. Uses that are complimentary, quiet, and generally do not disturb the comfort and enjoyment of the adjoining neighborhood environment are encouraged, and should be designed for the pedestrian scale and to provide convenient access for nearby residents and workers to walk in to purchase goods and services. Buildings and uses shall be designed with attractive storefronts or similar features, with windows and doors convenient to a public sidewalk. This zone encourages mixed-use buildings, such as commercial first floor with residential uses above or combined retail/office uses in a multi-story structure. The zone also provides the opportunity for high residential density. Suitable locations for this zone may include street intersections and arterial streets with existing or proposed traditional neighborhood retail and service uses.*

The proposed uses of residential and commercial/retail are permitted uses within the B-1 Neighborhood Business zone per Table 6-C of the Land Use Code and R-6 Residential zone per Table 6-A.

IX. SITE PLAN STANDARDS

The proposed development has been reviewed by staff for conformance with the relevant review standards of the City of Portland's Site Plan Ordinance, Section 14.6. Staff comments are below.

1. Transportation Standards (Section 14.6.1)
   A. Impact on Surrounding Street Systems
   The proposed development involves the construction of a four-story building with nine multi-family residential units on Floors 2-4, with 1,282 square feet of commercial space, and off-street parking for 19 vehicles. According to the applicant, redevelopment of this site is not expected to generate increased traffic flows above the former use. The proposed project is not expected to have a substantial impact on traffic mobility and safety in the vicinity of the Pine Street area. Staff agrees with the applicant's assessment, and finds that the development complies with this standard.

   B. Access and Circulation
   From the applicant's materials, their proposal seeks to eliminate the existing surface parking and incorporate off-street parking within the structure through the use of a mechanical stacked parking system. Three granite block benches are proposed to be provided on the sidewalk, which Staff suggests details be provided for in order to confirm ADA compliance. Additionally, the applicant indicates the proposed driveway will be relocated to provide ample sight distance; the existing 23-foot curb cut is proposed to be closed and replaced with an 18.03-foot curb cut which is located northeast of the existing curb cut. As a result, the applicant is requesting to have a 9.07' separation from the abutting parcel's curb cut which requires a waiver from Section 1.5.1.C. of the Technical Manual, which has been requested. Staff suggests the applicant provide documentation from the property owners of the abutting lot detailing their current abandonment of the driveway.

   C. Public Transit Access
   The development is located immediately on Pine Street, upon which METRO bus service routes are operated, and a bus stop for Route 8 currently exists within 384±' of the subject property at the intersection of Pine Street and Lewis Street. Further, projects featuring fewer than 20 residential units are not subject to this standard. No additional upgrades are required by the applicant, and Staff determines this standard met.

   D. Parking
   Per Article 19, Table 19-A, multi-family development is required to provide one off-street parking space per dwelling unit. Additionally, retail uses are required to provide one space per 200 square feet of first floor area in excess of 2,000 square feet, plus one space per 700 square feet of floor area for retail space above ground level. Further, per Article 19, Table 19-B, transit proximate development and uses do not require off-street parking within ¼ mile of fixed route transit service. The development is located immediately on Pine Street, upon which METRO bus service routes are operated, and a bus stop for Route 8 currently exists within 384±' of the subject property at the intersection of Pine Street and Lewis Street, meaning that off-street parking is not required for this project.

However, the applicants are proposing to provide 19 off-street parking spaces, calculating for 2 parking spaces per residential unit, plus one ADA compliant space. A parking analysis was provided (Attachment S) by the applicant, which seeks to detail their rationale for providing greater than 10% of the minimum requirements of five parking spaces. Further, it should be noted that the proposed retail space is 1,282 sq. ft. in area, thus, is not required to provide off-street parking spaces. Additionally, nine bicycle parking spaces are proposed to be provided within a bike/ski/pedal storage room within the ground floor, which complies with the bicycle parking requirements in Table 19-A of the Land Use Code.

E. Transportation Demand Management (TDM)
A TDM Plan is not required for this project, as it does not meet the thresholds as detailed in the Land Use Code, Section 14.6.1.E.1.

2. Environmental Quality Standards (Section 14.6.2)
   A. Preservation of Significant Natural Features
   There are no significant natural features as defined in Sec. 14.6.2.A.1 on the subject property and therefore this standard does not apply.

   B. Landscape Preservation
   The site is minimally vegetated; however, the applicant is proposing to maintain two existing trees, one tree that is located at the rear perimeter of the subject property, along with another tree along Pine Street. Further, per Section 14.6.2.C.2.c, all residential development shall provide and/or preserve evergreen vegetated buffers where necessary to buffer the development from detrimental impacts of existing surrounding development. Staff suggests additional plantings be provided in order to fulfill this requirement.

   C. Site Landscaping and Buffers
   The site proposes reconstruction of the streetscape along Pine Street, including preservation of one existing street tree, and the planting of a new street tree. Further, abutting the existing residential structure along the northerly property boundary, a row of woody shrub (planting type to be decided) is proposed at an area of 590 square feet in total, to act as a buffer. Additionally, a partial green roof system is proposed totaling approximately 1,604 sq. ft. by way of sedum tray plantings. Based upon the number of residential units being developed, the applicant is responsible for providing the equivalent of nine street trees, at a rate of one tree per residential unit. The applicant is preserving one street tree and planting one additional street tree. Staff is recommending that the applicant pay a fee-in-lieu at a rate of $400 per tree. As the project is providing two street trees, this will total 7 trees, and so a total contribution of $2,800.

   D. Water Quality, Stormwater Management, and Erosion Controls
   The applicants have prepared and included a site-specific Stormwater Management Plan (Attachment J) and Erosion and Sedimentation Control Details (Attachment K), along with the provided narrative, it details both the temporary and permanent erosion control measures to be utilized by this project, including a siltation fence or erosion control berm that will be installed downgradient of any disturbed areas in order to trap run-off borne sediments until permanent stabilization is achieved; which would involve the placement of a minimum of 4 inches of loam, lime, and mulch on all disturbed areas.

3. Public Infrastructure and Community Safety Standards (Section 14.6.3)
   A. Consistency with City Master Plans
   The subject property seeks to provide nine residential units on a site wherein presently no residential dwellings exist, thereby contributing to the overall housing stock of the City. This contributes to the local goal within Portland's Plan 2030, Housing chapter, which states: "Encourage additional contextually appropriate housing density in and proximate to neighborhood centers, concentrations of services, and transit nodes and corridors as a means of supporting complete neighborhoods."

   B. Public Safety and Fire Prevention
   Per the applicant's submittal, the site has been designed to promote safe and inviting public access. Emergency accesses has been provided, in that the building and site layout provide adequate access from a life/safety perspective.

   C. Public Utilities
   The site will generally be making use of existing utility connections and the applicant is still in the process of confirming that utility providers are able to serve the development. Per the applicant's narrative, the development features water, sewer, and gas connections that will either be maintained, expanded, or replaced by a new line. For stormwater, while there is currently no drainage infrastructure on-site, this project proposes stormwater measures like foundation drains, field inlets, and R-Tanks to collect, store and redirect stormwater into the City's storm drain system. Further, electric/communication services are currently via overhead lines extending from Pine Street to the existing building. These services are proposed to be removed and installed subsurface.

4. Site Design Standards (Section 14.6.4)
   A. Massing, Ventilation, and Wind Impact
   This project proposes a shift in bulk and height (massing) by going from a one-story structure, to a larger four-story building. The proposed massing is fairly simple with all elevations continuing to the full height along the same plane. Furthermore, the HVAC proposed on the roof is proposed to be roof-mounted and is proposed to be screened with a wooden gate and fence. Roof-mounted mechanical equipment is considered a rooftop appurtenance, and is permitted to exceed the maximum building height set for the B-1 zone, based upon the rooftop appurtenance height exception, listed in Sec. 7.5.1.G. The pergola as proposed, however, does not meet the height requirements and would need to be removed in order for Staff to consider this standard met

   B. Shadow
   Per the Technical Manual Sec. 11, a preliminary shadow analysis is required for limited development within select zones as a study submitted with the applicable site plan applications that include new structures (or additions to structures) greater than 45 feet tall. As the proposed structure does not exceed 45 feet, this standard does not apply and this redevelopment is exempt.

   C. Snow and Ice Loading
   The applicant's narrative describes the proposal for snow storage on-site stating: "The Owner will be responsible for managing snow at their discretion and/or coordinating snow removal from the site when necessary. The large majority of the site will be structure and the parking lot will be

covered therefore snow plowing for this site is not required. Additionally, the rear 10' of the parcel is proposed to be landscape area and can be utilized to store a small amount of snow if required." A small snow storage area is indicated on the plan, at the south side of the site, to store the snow from the side yard walkway. Staff finds this standard met.

D. View Corridors
Per the City's design standards, the massing, location, and height of development shall not substantially obstruct public view corridors. The property is not located within an established view corridor; therefore, this standard is not applicable.

E. Historic Resources
The subject property is located within the West End Historic District, and therefore requires approval from the Historic Preservation Board (HP Board) for both the demolition of the existing noncontributing single-story commercial building, as well as for the construction of the new four-story mixed-use structure. The applicant appeared before the HP Board for preliminary review of new construction for a workshop on January 3, 2024 and again on February 21, 2024, meeting materials from the most recent HP Board Workshop are available to view online here: https://portlandme.portal.civicclerk.com/event/6716/files/agenda/14388. A public hearing will be scheduled for a future date with the HP Board.

F. Exterior Lighting
All development must adhere to the site lighting standards provided for in Section 10 and 12 of the Technical Manual: which includes requirements for site lighting, architectural and specialty lighting, and street lighting. This project proposes only site lighting at this time, with six individual slim LED AC/Emergency outdoor lights (wall packs) being proposed. These fixtures include shielding to ensure that all site lighting complies with the City's requirements for full-cutoff fixtures. Cuts sheet and photometric plans were provided with the submission (Attachment N).

G. Noise and Vibration
In the City, all HVAC, AHU, emergency generators, and similar equipment are required to meet applicable state and federal emissions requirements and are further required to be located and/or screened in such a manner as to mitigate noise and vibration impacts. This project proposes to locate all said equipment either within the interior of the site or atop the building on the roof, wherein they will be appropriately screened as necessary. Staff finds this standard is therefore considered met.

H. Signage and Wayfinding
Any signage associated with the redevelopment of this project will be required to be reviewed by the Permitting and Inspections Department separately, with a sign permit.

I. Zoning-related Design Standards
Design review of the project will be performed by the Historic Preservation Board, due to the site's location within the West End Historic District. The public hearing for this site plan application will be scheduled following the approval of the Certificate of Appropriateness application by the Historic Preservation Board.

X. NEIGBORHOOD MEETING AND PUBLIC COMMENT

The applicant held a neighborhood meeting on January 18, 2024, as required as part of this project, wherein five members of the public attended (Attachment V), as well as members of the project team, from Benchmark Real Estate, Acorn Engineering, Invivid Architecture, and Aceto Landscaping. Questions and concerns raised at the meeting were pertaining to: setbacks, landscaping, site lighting, unit costs, and potential tenancy of the retail space.

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

XI. NEXT STEPS

Planning Staff is seeking feedback from the Planning Board on:

- The proposed parking scheme, with 19 spaces to be provided on site for residential use
    - A Parking Analysis (Attachment S) was supplied, as required under Section 14.6.1.D.
- Proposed programming at roof-level, which includes spaces intended for habitation, such as a pergola and other rooftop amenities like a gas fire feature (Plan 29).

Further, the Project will need to secure a Certificate of Appropriateness and review by the Historic Preservation Board.

Staff will provide a discussion of each waiver as part of the public hearing report.

XII. ATTACHMENTS

Staff Attachments

1. Project Review Comments, First Submission, 1/9/2024

Applicant Documents

A. Cover Letter
AA. 64 Pine Street Comment Response #1
B. Major Site Plan Checklist
C. RTI Cover Page
D. Zoning Assessment
E. Easements
F. Waivers
G. Financial Capacity
H. Technical Capacity
I. Conformity with Land Use Ordinance
J. Stormwater Report
K. Erosion & Sedimentation Control
L. Fire Department Letter
M. Wastewater Capacity
N. Lighting
O. Arch Design Narrative
P. Utilities
Q. Construction Management Plan
R. Solid Waste Disposal

S. Parking Analysis
T. 64 Pine St., LLC Neighborhood Meeting Certification Letter
U. 64 Pine St., LLC Neighborhood Letter
V. 64 Pine St., LLC Neighborhood Meeting Sign-in
W. 64 Pine St., LLC Neighborhood Meeting Minutes

Plans

1. Cover Sheet & Legend
2. General Notes
3. Topographic Survey
4. Construction Management Plan
5. Site Plan
6. Utility Plan
7. Grading and Drainage Plan
8. Site Details
9. Utility Details – 1
10. Utility Details – 2
11. Drainage Details
12. Focal Point Details
13. Erosion & Sedimentation Control Details
14. A1.01 First Floor Plan
15. A1.02 Second Floor Plan
16. A1.03 Third Floor Plan
17. A1.04 Fourth Floor Plan
18. A1.05 Roof Plan
19. A4.01 Exterior Elevations – 1
20. A4.02 Exterior Elevations – 2
21. A5.01 Building Section – 1
22. A5.02 Building Section – 12
23. A5.03 Building Section – 3
24. Harding Steel – 1
25. Harding Steel – 2
26. L0-00 Cover
27. L0-01 Notes
28. L1-00 Ground Materials Plan
29. L1-01 Roof Materials
30. L1-02 Load Exhibit
31. L3-00 Landscape Details

Dear Brad Kaden and Sam Lebel,

We have completed our review of your application (PL-002678-2023), a major site plan project, proposing to build a new four-story building with nine residential units and 1,226± sq. ft. of retail space at 64 Pine Street, located in the B-1 Neighborhood Business zone and partially within the R-6 Residential zone. This development triggers major site plan review by the Planning Board, and is subject to the following regulations:

- Site Plan, Major – Article 14.6

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

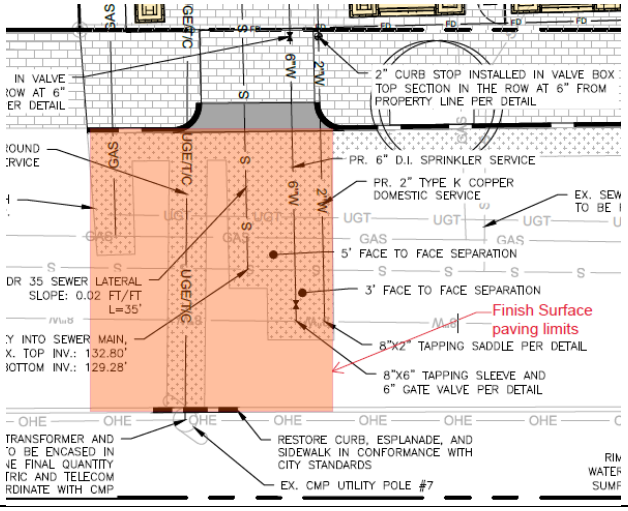
Next Steps
Please review all feedback and reach out to the project review manager, Natasha Kypfer, if you have any questions or would like to discuss this feedback in more detail. In order to proceed, the applicant shall prepare a written response to all feedback, and shall update plans, documents and other materials as necessary to address the comments. The applicant shall notify the project review manager when a resubmission is uploaded to ProjectDox. Once received, the project review manager will notify the applicant of their scheduled review timeline for this resubmission.

Sincerely,

Natasha Kypfer
Planner

Attachments

1. Site Plan Worksheet
2. Zoning Worksheet

Site Plan Review Standards (Sec. 14.6)		
Transportation Standards (Sec. 14.6.1)		
Standard	***Discussion***	***Finding***
Impact on Surrounding Street Systems	Overview: The applicant's proposal at the subject property, 64 Pine Street, seeks to redevelop the lot, which is currently utilized as a restaurant and a surface parking lot. The change of use proposed, is into a four-story building with nine multi-family residential units on Floors 2-4, and the ground floor containing a commercial use (tenant to be decided) and mechanical-stacked parking. According to the applicant, redevelopment of this site is not expected to generate increased traffic flows above the former use.	Not Met Additional information required.
	Updates Requested • Improvements and existing conditions in the ROW, including ROW, street, lanes, sidewalk, esplanade, driveways, and other improvements, shall be dimensioned on the plan view sheets, including at locations where width changes occur. Update the plans to reflect these changes. • The limited spot grades provided do not allow us to confirm that the proposed sidewalks are compliant (i.e. meet the min. cross slope and running slope). The applicant shall update the plans to provide spot grades and slopes at grade breaks for the proposed sidewalks, driveways (egress locations, steps) and at the end of the limits of the proposed improvements for the property. • Consolidate proposed service trenches to have one final trench repair (where possible). All pavement cuts in the City ROW shall be repaired per the Minor Excavation Pavement Repair Details (prior to paving the finished surface) found in the Rules and Regulations for Excavation Activity. • Update Driveway Detail. See notes on snips below.  	

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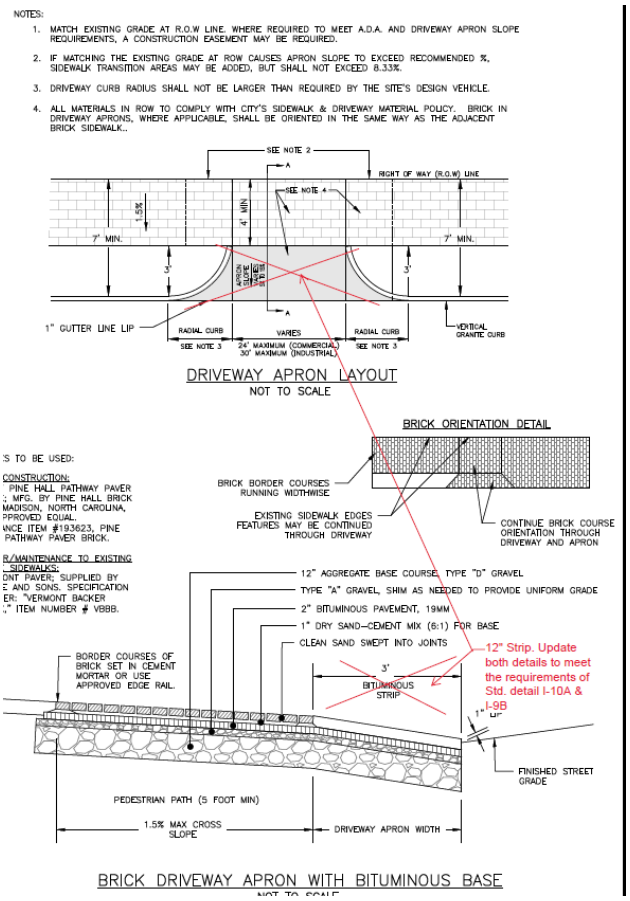

• The driveway width does not meet city standards and the applicant shall provide information in support of a waiver.
• The proposed driveway does not meet driveway separation standards. The abutting driveway does not appear to be used for vehicle access (or very limited use). I would note the project is reducing the driveway separation distance.
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<td>Access and Circulation</td>
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<u>Overview:</u> The proposed project is not be expected to have a substantial impact on traffic mobility and safety in the vicinity of the Pine Street area. From the applicant's materials, their proposal seeks to eliminate (the existing) surface parking and incorporate off-street parking within the structure, resulting in more effective land use, as well as better stormwater quality. Additionally, the applicant indicates the proposed driveway has been located to provide ample site distance from oncoming traffic on Pine Street, and the existing 23' curb cut is proposed to be closed and replaced with an 18' curb cut located northeast of the existing. The City's Traffic Engineer peer reviewer has reviewed the application materials and does not have any review comments or concerns related to traffic.

<u>Waiver requested for relief from Technical Manual Section 1.7.1., Figure I-12 where vertical granite curb is to have a 7" reveal,</u> stating:
Requesting waiver to have a 5" reveal. A 5" reveal is proposed to match the existing reveals along Pine Street.

<u>Waiver requested for relief from Technical Manual Section 1.7.1., Figure I-10A where driveway apron is to have a 12" bituminous strip at the base of the apron,</u> stating:
</td>
<td>Not Met

<u>Waivers Requested</u>

Additional information required.</td>
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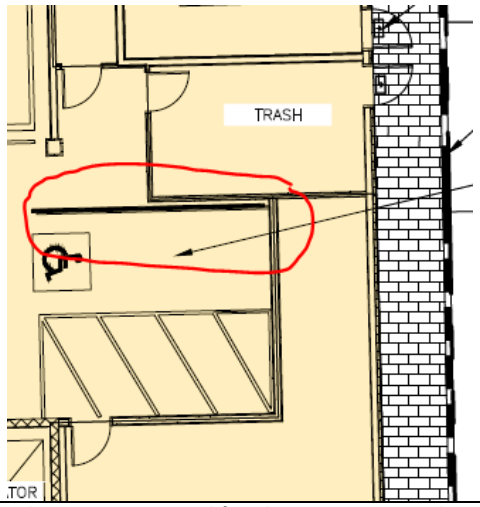
	Requesting waiver to have a 36" bituminous strip at the base of the apron. A larger bituminous strip will provide a more gradual transition to the sidewalk, ensuring vehicles do not bottom out. This dimension also matches the radial curb pieces which we favor in lieu of the typical "bug" which does not provide as much length to transition from the street grade to the elevated ADA sidewalk grade. Updates Requested • Please clarify whether there is 5' of "clear width" along the front walkway at Pine St, i.e. the path is clear of intrusions like electrical meters, gas meters, etc.	
Public Transit Access	Overview: The development is located immediately on Pine Street, upon which METRO bus service routes are operated, and a bus stop for Route 8 currently exists within 384±' of the subject property at the intersection of Pine Street and Lewis Street. No additional upgrades are required by the applicant. Updates Requested • No action is required.	Met
Parking	Overview: Per Article 19, Table 19-A, multi-family development is required to provide one off-street parking space per dwelling unit. Additionally, retail uses are required to provide one space per 200 square feet of first floor area in excess of 2,000 square feet, plus one space per 700 square feet of floor area for each upper floor. Per Article 19, Table 19-B, transit proximate development and uses do not require off-street parking within ¼ mile of fixed route transit service. The development is located immediately on Pine Street, upon which METRO bus service routes are operated, and a bus stop for Route 8 currently exists within 384±' of the subject property at the intersection of Pine Street and Lewis Street, meaning that off-street parking is not required for this project. However, the applicants are proposing to provide 19 off-street parking spaces, calculating for 2 parking spaces per residential unit, plus one ADA compliant space. The parking summary calculation table on the Site Plan (Sheet C-10) indicates 18 spaces are proposed via standard mechanical system spaces, however it is unclear how these are designed based on the Site Plan depicting 10 individual spaces, along with the ADA space. The plan also indicates a minimum of 20% of parking spaces will be EV. The proposed retail space is 1,282 square feet in area, thus, not required to provide off-street parking spaces. Further, this project is also required to provide bicycle parking, at a calculation of two spaces per every five residential units, plus two spaces for every 10 vehicle parking spaces for non-residential uses. Based upon the 9 residential units proposed, the applicant would be required to provide 4 bicycle parking spaces.	Not Met Additional information required.
	Updates Requested: • Information on the mechanical vehicle stacking system shall be provided. Further, Staff suggests a generator be provided on-site as a back-up for the mechanical parking system in the event of electrical outage(s). • The amount of provided off-street parking spaces is greater than 10% over the minimum requirement listed in Table 19-A; please provide a parking study in support of this count, otherwise the off-street parking count should be reduced to no more than ten parking spaces. • The parking aisle width does not meet City standards and the applicant shall provide information in support of a waiver. • The bike/ski/pedal storage room on the Site Plan appears to provide ample bicycle parking, but we request the applicant please include a note (or similar	

	parking summary calculation table) indicating the total spaces provided. Further, Staff suggests providing an exterior door at the bike room, so that residents do not have to navigate through the first-floor common space with their bicycle in tow. • Thank you for providing notation of EV infrastructure in keeping with Technical Manual Standard 1.14, please also include the requirement that an additional 50% of spaces must be made EV-ready. • Please clarify what the circled area (see snip below) parallel to the ADA-accessible parking space is; if it is a wall, or some sort of partition, it will be problematic for anyone trying to open their driver's side door (or passenger's side, if the vehicle is backed in). 	
Transportation Demand Management	Overview: A TDM Plan is not required for this project, as it does not meet the thresholds as detailed in the LUC Section 14.6.1.E.1. Updates Requested • No action is required.	Met
Environmental Quality Standards (Sec. 14.6.2)		
Standard	***Discussion***	***Finding***
Preservation of Significant Natural Features	Overview: The site disturbance for this project does not include disruption of any significant natural features nor are known endangered species or plants noted as existing on the site; the parcel(s) are already developed, with a single-story structure (previously operated as a restaurant) and a paved, surface parking lot. Updates Requested • No action is required.	Met

Landscape Preservation	Overview: The site is presently minimally vegetated, however, the applicants propose maintaining the existing tree located to rear of the lot, along the rear perimeter of the site (plan left), to remain.
	
	Updates Requested
	• Please include landscape plan that includes tree protection measures to be implemented for the existing 12" elm tree on Pine St. See Technical Manual for example.
	  ○ Please show position and style of tree protection fencing to be installed during construction
	  ○ Provide detailed notes on prohibitions within tree protection areas
		Not Met
		
		Additional information required.

	○ Provide explicit detail of alternative construction methods to be utilized when incursions into the biologically sensitive areas (root zones) of the existing trees is unavoidable ▪ Critical root zone for Elm is defined as a circle of radius 1.5' per inch of stem DBH centered on the stem • Please detail the pruning required for the Boxelder tree in the NE corner of the property ○ Refer to the ANSI A300 pruning standard	
Site Landscaping and Buffers	Overview: The site proposes reconstruction of the streetscape along Pine Street, including preservation of one existing street tree, and the planting of a new street tree. Further, abutting the existing residential structure along the northerly property boundary, a row of woody shrub (planting type tbd.) is proposed at an area of 590 square feet in total, to act as a buffer. Additionally, a partial green roof system is proposed totaling approximately 1,604 sq. ft. by way of sedum tray plantings.	Not Met Additional information required.
	Updates Requested • Please include species of proposed street tree on landscape plans ○ Please do not propose maple species or anything in the genus Acer as the greater Portland area is oversaturated with maple species that creates an acute susceptibility to Asian Longhorned Beetle infestation • The proposed project carries a street tree requirement of 9 trees (1 per residential unit) ○ With the proposed street tree, that leaves 8 remaining required street trees • The granite border treewell(s) in the sidewalk must comply with the Technical Manual Article 4, Figure IV-4B standard, in that they should be curved rather than rectangular; please update the plans accordingly.	
Water Quality, Stormwater Management and Erosion Control	Overview: The applicants have prepared and included a site-specific Stormwater Management Plan, which has been developed for the project to show compliance with the Technical Manual Section 5, including the basic standards of MEDEP Chapter 500. Further, the Erosion and Sedimentation Control Details (Sheet C-45), along with the provided narrative, details both the temporary and permanent erosion control measures to be utilized by this project, including: a siltation fence or erosion control berm shall be installed downgradient of any disturbed areas in order to trap run-off borne sediments until permanent stabilization is achieved and all disturbed areas shall receive a minimum 4" of loam, limed, and mulched.	Not Met Needs additional information.
	Updates Requested • The plan view of erosion control on the Construction Management Plan should include catch basin inlet protection for the existing catch basins located within the street in front of the project. • The piping layout at the southern corner of the site at the end of the R-Tank system and the proposed F-Basin is complex, wherein it appears that there is an extra 4" invert inlet to the F-Basin; please clarify. We recommend a detail view be included with the construction documents. • Roof drain connections are shown, but it is unclear where the foundation drain pipe connects into the storm drain system; please clarify. Further, at the northern corner of the site, it appears that the foundation drain crosses the property line; if this is intentional, it will likely require a license agreement. • Prior to authorizing a new stormwater connection into the combined sewer, DPW will require that the applicant provide an on-site stormwater detention volume equal to the greater of: 1" of rainfall times the impervious area within the project disturbance area or the projected average 24 hour daily sanitary	

	sewer flow being added to the combined sewer system by the project. It appears the proposed storage volume will need to be increased to provide detention for 1" of rainfall times site's proposed impervious area.	
Public Infrastructure and Community Safety Standards (Sec. 14.6.3)		
Standard	***Discussion***	***Finding***
Consistency with City Master Plans	Overview: The subject property seeks to provide nine residential units on a site wherein presently no residential dwellings exist, thereby contributing to the overall housing stock of the City. This contributes to the local goal within Portland's Plan 2030, Housing chapter, which states: "Encourage additional contextually appropriate housing density in and proximate to neighborhood centers, concentrations of services, and transit nodes and corridors as a means of supporting complete neighborhoods." Updates Requested • No action is required.	Met
Public Safety and Fire Prevention	Overview: Per the applicant's submittal, the site has been designed to promote safe and inviting public access. As well, emergency accesses has been provided, in that fire trucks and ambulances will be able to access all of the site and buildings. Updates Requested • No action required.	Met
Public Utilities	Overview: The site will generally be making use of existing utility connections and is still in process of confirming the ability to serve from the various utility service companies. Per the applicant's narrative water, sewer, and gas all have existing connections that will either be maintained, expanded, or a new line requested. For stormwater, while there is currently no drainage infrastructure on-site, this project proposes stormwater measures like foundation drains, field inlets, and R-Tanks to provide storage. Further, electric/communication is currently served by overhead services which are proposed to be removed and installed subsurface for electric and telecom from an existing utility pole on Pine Street. Updates Requested • Please provide the ability to serve letters, as received from each of the utility companies. • The demolition of the existing water service requires termination at the main per Portland Water District requirements. That area should be identified for trenching and repair. Similarly, it should be clarified if the sewer service removal will also require additional trenching. •	Not Met Needs additional information.
Site Design Standards (Sec. 14.6.4)		
Standard	***Discussion***	***Finding***
Massing, Ventilation and Wind Impact	Overview: This project proposes a shift in bulk and height (massing) by going from a single, one-story structure, to a larger, 9-unit and four-story building. The proposed massing is fairly simple with all elevations continuing to the full height along the same plane. Furthermore, the HVAC proposed on the roof is indicated as 19' x 20' mechanical on a concrete paver with pedestal system, to be screened with a wooden gate and fence. Updates Requested • Please address this standard within your required narrative, presently it refers to Section O, the Architectural Design Narrative, which itself does not specifically address this standard.	Not Met Needs additional information.

Shadow	Overview: Per the Technical Manual Sec. 11, a preliminary shadow analysis is required for all applicable site plan applications that include new structures (or additions to structures) greater than 45' tall. As the proposed structure does not exceed 45', this standard does not apply and this redevelopment is exempt. Updates Requested • No action is required.	Met
Snow and Ice Loading	Overview: The applicant's narrative describes the proposal for snow storage on-site stating: "The Owner will be responsible for managing snow at their discretion and/or coordinating snow removal from the site when necessary. The large majority of the site will be structure and the parking lot will be covered therefore snow plowing for this site is not required. Additionally, the rear 10' of the parcel is proposed to be landscape area and can be utilized to store a small amount of snow if required." However, a snow storage area is not noted on the plan itself. Updates Requested • Please indicate a snow storage area on the Site Plan, demonstrating the area(s) will not encroach on parking, walkways, or the any stormwater management systems.	Not Met Needs additional information.
View Corridors	Overview: Per the City's design standards, the massing, location, and height of development shall not substantially obstruct public view corridors. The property is not located within an established view corridor; therefore, this standard is not applicable. Updates Requested • No action required.	Met
Historic Resources	Overview: The subject property is within the West End Historic District, and therefore requires approval from the Historic Preservation Board for both the demolishment of the existing noncontributing single-story commercial building, as well as for the construction of the new four-story mixed-use structure. The applicant appeared before the HP Board for preliminary review of new construction as a first workshop item on January 3, 2024. Updates Requested • The applicant will ultimately need to seek approval from the Historic Preservation Board in the form of a Certificate of Appropriateness. Please revise your narrative to indicate the subject property is within an Historic District, as the current submittal states it is not.	Not Met In-Process with the HP Board.
Exterior Lighting	Overview: All development must adhere to the site lighting standards provided for in the Technical Manual, Section 12, for: site lighting, architectural and specialty lighting, and street lighting. This project proposes only site lighting at this time, with six individual slim LED AC/Emergency outdoor lights (wallpacks) are proposed over two structure planes, with appropriate shielding; the cuts sheet and photometric plans were provided with the submission. Updates Requested • No action required.	Met
Noise and Vibration	Overview: In the City, all HVAC, AHU, emergency generators, and similar equipment are required to meet applicable state and federal emissions requirements and are further required to be located and/or screened in such a manner as to mitigate noise and vibration impacts. This project proposes to locate all said equipment either within the interior of the site or atop the building on the roof, wherein they will be appropriately screened as necessary. Updates Requested	Met

	• No action required.	
Signage and Wayfinding	Overview: Any signage associated with the redevelopment of this project will be required to be reviewed by the Permitting and Inspections Department separately, with a sign permit. Updates Requested • No action is required.	Met
Design Standards	Overview: Design review of the project will be performed by either Historic Preservation staff or the Historic Preservation Board, due to the site's location within the West End Historic District. Updates Requested • No action is required.	Met
Other		
	• More attention should be paid to the Construction Management Plan (the overhead view, in particular). The narrative states the following items (see snip below) will be prepared on a plan for City staff to review prior to approval, which we kindly request to the maximum extent practical: **J. Construction Staging Area** 1. The Contractor shall submit a plan with locations depicted for the location of material staging areas, the location of on-site temporary construction trailers, the location of on-site truck delivery holding areas, the location of on-site truck washing stations, masonry mixing stations, the general location of the construction security fence and the general location of temporary construction dumpsters. This plan shall be submitted at or prior to the pre-construction meeting. Any open storage areas shall be shown on the plan. • The depiction of a construction entrance over the sidewalk is incongruous with the note the sidewalk will remain open. Ideally this entrance will not be located in the ROW. However, as the site is extremely tight, a Traffic Control Plan (TCP) will need to be submitted in conjunction with any impacts to the ROW. We would kindly request to see a concept of this prior to appearance before / approval by the Planning Board. If the project efforts do need to occupy a portion of the sidewalk or street for an extended period, a cross sectional view of the ROW will be required.	

Zoning Use Review (Article 6)

Use Permissions (Table 6-C)

Proposed Use	***Permitted, Conditional or Accessory Use***	***Zone***	***Use Std***
Multi-family Residential	Permitted	B-1, R-6* *Small sliver at rear of site	None
Retail		B-1	6.4.7

Zoning Dimensional Review (Article 7)

Dimensional Standards (Table 7-E)

Standard	***Requirement 1***	***Requirement 2***	***Proposed***	***Finding***
Lot Area	n/a	n/a	9,920 sq. ft.	Met
Lot Area per Dwelling Unit	435 sq. ft.	n/a	1,102 sq. ft.	Met
Street Frontage	20'	n/a	85'	Met
Front Setback (Max.)	10'	n/a	0.74'	Met
Rear Setback (Principal)	10', or the average front yard depth of nearest developed lots if < 10'	n/a	10.56'	Met
Side Setback	None, except 5' if abutting residential zone	n/a	5.30' / 5.92'	Met
Stepbacks	Side: 10' Rear: 15'	n/a	Side: 10'* Rear: 15.20'	*Please confirm.
Floor Area (Max.)	10,000 sq. ft. total, non-residential uses on the first floor	n/a	1,282 sq. ft.	Met
Structure Height (Max.)	45'	n/a	44.76'	**Please provide additional information.
Lot Coverage (Max)	n/a	n/a	76.2%	Met
Impervious Surface Ratio	90%	n/a	85.6%	Met

**For the overall height, please provide a measurement documenting the height from the average grade to the top of the floor for the rooftop deck. On the elevations, a measurement to the roof is listed, but it is unclear whether that includes the roof deck or not.

Further, please provide additional information on the proposed rooftop sauna amenity, specifically how it meets the definition for appurtenance (listed below), as it exceeds the maximum allowed building height. Section 3 of the LUC defines it as: "Appurtenance. A device or structure not designed for human occupancy and attached to the exterior of a building." A sauna, is not considered a rooftop appurtenance exempt from height restrictions under Section 7.5.1 (G); therefore, the sauna would need to be under 45'.

ACORN ENGINEERING, INC.

Planning and Urban Development Department
Attn: Matt Grooms, Development Review Manager
City of Portland, Maine
389 Congress Street, 4th Floor
Portland, ME 04101

November 17th, 2023

Subject: Major Site Plan Application
64 Pine Street Redevelopment

Matt:

On behalf of 64 Pine Street LLC, Acorn Engineering, Inc. (Acorn) is pleased to submit the accompanying package of submission materials related to the proposed redevelopment of 64 Pine Street, in Portland Maine (Chart 56 Map C, Lot 2 & Lot 4) within the B1 Neighborhood Business District. The project area abuts the B1 Neighborhood Business District at the front and sides of the property, while rear abuts the R6 Residential District. The project proposes to redevelop the lot, currently used as a parking lot and restaurant, into a 4-story building with 9 multi-family units on the upper floors with commercial use and mechanical stacked parking on the ground floor.
This infill project will feature several key improvements to the property and the City as a whole, including:

- 9 new housing units
- On-site stormwater management and net reduction in peak runoff
- Reconstruction of the streetscape including preservation of one existing street tree, and planting of a new tree
- Activation of the front façade and a public easement grant, effectively widening the public sidewalk while creating placemaking opportunities
- Elimination of surface parking and incorporation of off-street parking within the structure, resulting in more effective land use and better stormwater quality

64 Pine Street LLC, and the design team look forward to your review of this project. If you have any questions regarding these materials or the completeness of the application materials, please do not hesitate to contact us.

Sincerely,

Sam Lebel

Sam Lebel, P.E.
Project Manager
Acorn Engineering, Inc.

ACORN ENGINEERING, INC.

City of Portland Planning Department
Natasha Kypfer – Planner
389 Congress Street, 4th Floor
Portland, Maine 04101

February 23th, 2024

Subject: Comment Response Letter
64 Pine Street, Portland, Maine – Major Site Plan Application

On behalf of 64 Pine Street, LLC and the design team, Acorn Engineering is pleased to respond to the following comments from the City of Portland Planning Department review of the 64 Pine Street, Major Site Plan Application. The following is in response to the City Staff comments received January 9th, 2023.

Transportation Standards:

Comment: *Improvements and existing conditions in the ROW, including ROW, street, lanes, sidewalk, esplanade, driveways, and other improvements, shall be dimensioned on the plan view sheets, including at locations where width changes occur. Updated the plans to reflect these changes.*

Response: Please see Sheet C-10 for this additional information.

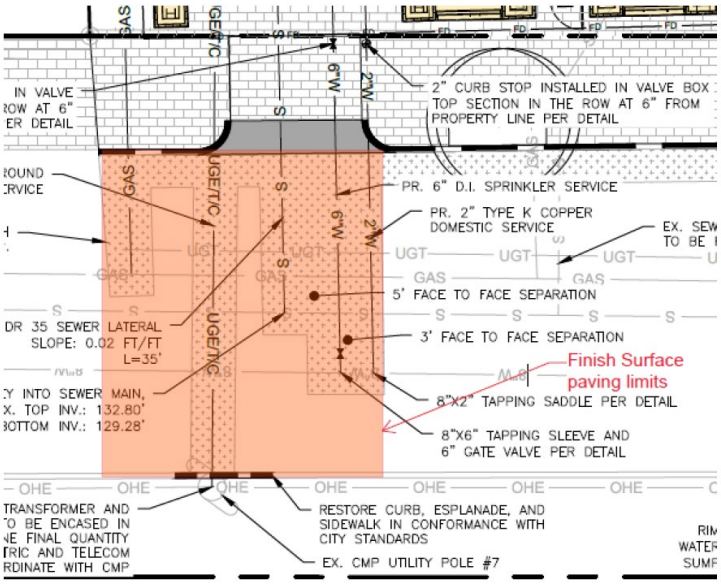
Comment: *The limited spot grades provided do not allow us to confirm that the proposed sidewalks are compliant (i.e. meet the min. cross slope and running slope). The applicant shall update the plans to provide spot grades and slopes at grade breaks for the proposed sidewalks, driveways (egress locations, steps) and at the end of the limits of the proposed improvements for the property.*

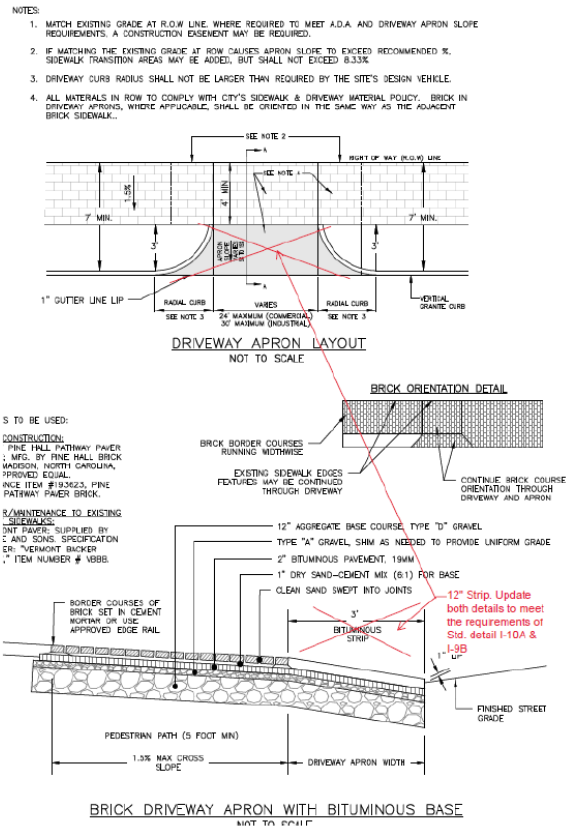
Response: Additional spot grades have been placed along the reconstructed ROW sidewalk. Please refer to C-30 for more information.

Comment: *Consolidate proposed service trenches to have one final trench repair (where possible). All pavement cuts in the City ROW shall be repaired per the Minor Excavation Pavement Repair Details (prior to paving the finished surface) found in the Rules and Regulations for Excavation Activity.*

Response: Proposed service trenches have been consolidated on C-20 to reduce the number of saw cuts within the ROW. Utility trench callout has been updated to reference the city's minor excavation pavement repair details. See Sheet C-20 for more information.

Comment: Update Driveway Detail. See notes on snips below.





Response: We have updated our plans to show a 12" pavement strip. See sheets C-10, C-30, and C-40 for additional information.

Comment: *The driveway width does not meet city standards and the applicant shall provide information in support of a waiver.*

Response: A waiver has been requested regarding the proposed driveway width. See Section F. Waivers for information.

Comment: *The proposed driveway does not meet driveway separation standards. The abutting driveway does not appear to be used for vehicle access (or very limited use). I would note the project is reducing the driveway separation distance.*

Response: Thank you for your comment. We have added a waiver request for the driveway separation distance.

Comment: *Please clarify whether there is 5' of clear width" along the front walkway at Pine St. i.e. the path is clear of intrusions like electrical meters, gas meters, etc.*

Response: Dimensional measurements and callouts have been added to the site plan to indicate a 5' minimum clear width along Pine Street. We anticipate electrical meters will be located on the northeast face of the building. See sheet C-10 and C-20 for more information.

Comment: *Information on the mechanical vehicle stacking system shall be provided. Further, Staff suggests a generator be provided on-site as a back-up for the mechanical parking system in the event of electrical outage(s).*

Response: This building doesn't require a generator. During a power outage, there is no risk to people, only an inconvenience that residents can't get their car out. Given the project's vicinity to schools and hospitals within the urban core, long-term power outages are not a concern to the Applicant. Drawings of the mechanical parking system are included with this submission package. Residents are able to take their bikes through the stair egress and out during power outages.

Comment: *The amount of provided off-street parking spaces is greater than 10% over the minimum requirement listed in Table 19-A; please provide a parking study in support of this count, otherwise the off-street parking count should be reduced to no more than ten parking spaces.*

Response: Please refer to Section S. Parking Analysis document for supporting documentation that supports the number of proposed parking spaces.

Comment: *The parking aisle width does not meet the City standards and the applicant shall provide information in support of a waiver.*

Response: A waiver has been requested regarding the proposed parking aisle width. We have conducted vehicle tracking movements and recommend various parking spaces are restricted to a permissible vehicle table as shown on Sheet C-10 and outlined in Section F. Waivers.

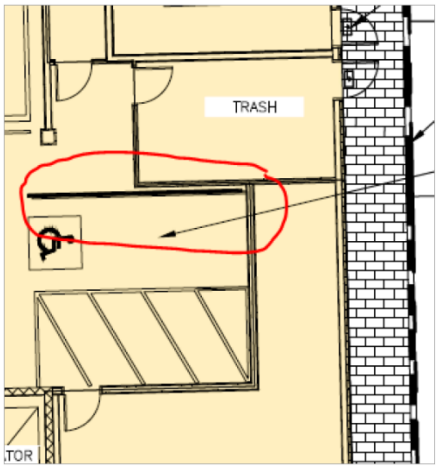
Comment: *The bike/ski/pedal storage room on the Site Plan appears to provide ample bicycle parking, but we request the applicant please include a note (or similar parking summary calculation table) indicating the total spaces provided. Further, Staff suggests providing an exterior door at the bike room, so that residents do not have to navigate through the first-floor common space with their bicycle in ROW.*

Response: A column has been added to the parking table on Sheet C-10 to address bicycle parking. To limit the number of egress locations on the side yard, we believe the stair egress door suffices as an entry to the bicycle room as there is an internal door that connects the two rooms.

Comment*: Thank you for providing notation of EV infrastructure in keeping with Technical Manual Standard 1.14, please also include the requirement that an additional 50% of spaces must be made EV-ready.*

Response: All 18 parking spaces located within the mechanical parking structure are anticipated to be equipped with EV charging stations. We added a note to the Site Plan that states 50% of spaces shall be EV ready). See sheet C-10 for additional information.

Comment: *Please clarify what the circled area (see snip below) parallel to the ADA-accessible parking space is; if it is a wall, or some sort of partition, it will be problematic for anyone trying to open their driver's side door (or passenger's side, if the vehicle is backed in).*



Response: The circled line is the parking space line striping. The line is to indicate the ADA parking space is 8'x18'. Dimensions have been added to sheet C-10. The user of the ADA space has an available 16' of width to park/maneuver within.

<u>Environmental Quality Standards:</u>

Comment: *Please include landscape plan that includes tree protection measures to be implemented for the existing 12" elm tree on Pine St. See Technical Manual for example.*

- *Please show position and style of tree protection fencing to be installed during construction.*
- *Provide detailed notes on prohibitions within tree protection areas*
- *Provide explicit detail of alternative construction methods to be utilized when incursions into the biologically sensitive areas (root zones) of the existing trees is unavoidable*
    - *Critical root zone for Elm id defined as a circle of radius 1.5' per inch of stem DBH centered on the stem.*

Response: A tree protection detail has been added to the Landscape Plan. See the revised Landscape Plan for additional information.

Comment: *Please detail the pruning required for the Boxelder tree in the NE corner of the property. Please show position and style of tree protection fencing to be installed during construction*

- *Refer to the ANSI A300 pruning standard.*

Response: See the revised Landscape Plan for additional information.

Comment: *Please include species of proposed street tree on landscape plans.*

- *Please do not propose maple species or anything in the genus Acer as the greater Portland area is oversaturated with maple species that creates an acute susceptibility to Asian Longhorned Beetle infestation.*

Response: The new street tree will be an elm tree to match the exisitng street tree on the project's frontage. See the revised Landscape Plan for additional information.

Comment: *The proposed project carries a street tree requirement of 9 trees (1 per residential unit)*

- *With the proposed street tree, that leaves 8 remaining required street trees.*

Response: Due to the confined street frontage along the lot, the design team is proposing one new street tree and one existing tree to remain undisturbed for a total of two street trees. The required fee will be contributed to the Street Tree Fund to compensate for this requirement.

Comment*: The granite border treewell(s) in the sidewalk must comply with the Technical Manual Article 4, Figure IV-4B standard, in that they should be curved rather than rectangular; please update the plans accordingly.*

Response: The landscape architect recommends rectangular tree pits to maximize the planted area and mirror the exisitng tree well that currently exists onsite. We are working with the landscape architect to finalize the tree well and granite block setback from the curb to account for street parking car door openings. It should be noted that the exisitng tree that is to remain currently has a rectangle flush granite curb tree box. Final Designs are forthcoming.

Comment*: The plan view of erosion control on the Construction Management Plan should include catch basin inlet protection for the existing catch basins located within the street in front of the project.*

Response: Catch Basin inlet protection for existing catch basins 1 & 2 along Pine street have been added to sheet C-03. See the revised Construction Management Plan for additional information.

Comment: *The piping layout at the southern corner of the site at the end of the R-Tank system and the proposed F-Basin is complex, where in it appears that there is an extra 4" invert inlet to the F-Basin; please clarify. We recommend a detail view be included with the construction documents.*

Response: The 4" underdrain below the tank system will be piped to the F basin such that a cap with a drilled hole can act as an orifice and be accessible. (2) 6" pipes will act as overflow bypassing the F basin. A detail has been provided on Sheet C-44 showing a cross section of the BMP system. Please see sheet C-30 and C-44 for additional information.

***Comment**: Roof drain connections are shown, but it is unclear where the foundation drain pipe connects into the storm drain system; please clarify. Further, at the northern corner of the site, it appears that the foundation drain crosses the property line; if this is intentional, it will likely require a license agreement.*

Response: The foundation drain connection to the stormdrain has been added to the plan set. See Sheet C-30 for additional information. The foundation drain is included as part of the foundation license and is to be developed and executed by the applicant and city at a later date, typical of past projects with a maximum front zoning setback. See note on the northern building corner of Sheet C-10 for additional information.

***Comment**: Prior to authorizing a new stormwater connection into the combined sewer, DPW will require that the applicant provide an on-site stormwater detention volume equal to the greater of 1" of rainfall times the impervious area within the project disturbance area or the projected average 24 hour daily sanitary sewer flow being added to the combined sewer system by the project. It appears the proposed storage volume will need to be increased to provide detention of 1" of rainfall times site's proposed impervious area.*

Response: The stormwater detention system has been increased to provide storage for 1" of rainfall over the site's impervious area. Please refer to Section J. Stormwater Report for more information.

<u>Public Infrastructure and Community Safety Standards:</u>

***Comment**: Please provide the ability to serve letters, as received from each of the utility companies.*

Response: Ability to serve letters, will be uploaded to the City's portal when received.

***Comment**: The demolition of the existing water service required termination at the main per Portland Water District requirements. That area should be identified for trenching and repair. Similarly, it should be clarified if the sewer service removal will also require additional trenching.*

Response: Our plans have been updated to show the existing water service will be terminated per Portland Water District's Standards. Trenching limits for the removal of existing utilities have been updated and can be seen on Sheet C-03 and Sheet C-20.

<u>Site Design Standards:</u>

***Comment**: Please address this standard within your required narrative, presently it refers to Section O, the Architectural Design Narrative, which itself does not specifically address this standard.*

Response: Please refer to the revised architectural design narrative for additional information.

***Comment**: Please indicate a snow storage area on the Site Plan, demonstrating the area(s) will no encroach on parking, walkways, or the any stormwater management systems.*

Response: Due to covered parking, it is anticipated that minimal snow removal will be required for this site. A small snow storage area has been added to the south side of the site to store the snow from the side yard walkway. See Sheet C-10 for additional information.

***Comment**: The applicant will ultimately need to seek approval from the Historic preservation Board in the form of A certificate of Appropriateness. Please revise your narrative to indicate the subject property is within an Historic District, as the current submittal states it is not.*

Response: Please refer to the revised architectural design narrative for additional information.

Other:

***Comment**: More attention should be paid to the Construction Management Plan (the overhead view, in particular). The narrative states the following items will be prepared on a plan for City staff to review prior to approval, which we kindly request to the maximum extent practical:*

- *The Contractor shall submit a plan with locations depicted for the location of material staging areas, the location of on-site temporary construction trailers, the location of on-site truck delivery holding areas, the location of on-site truck washing stations, masonry mixing stations, the general location of the construction security fence and the general location of temporary construction dumpsters. This plan shall be submitted at or prior to the pre-construction meeting. Any open storage areas shall be shown on the plan.*

Response: The project team is coordinating with the contractor to provide a more detailed construction management plan within the subsequent submission.

***Comment**: The depiction of a construction entrance over the sidewalk is incongruous with the note the sidewalk will remain open. Ideally this entrance will not be located in the ROW. However, as the site is extremely tight, a Traffic Control Plan (TCP) will need to be submitted in conjunction with any impacts to the ROW. We would kindly request to see a concept of this prior to appearance before/approval by the Planning Board. If the project efforts do need to occupy a portion of the sidewalk or street for an extended period, a cross sectional view of the ROW will be required.*

Response: Conceptual traffic control will be included within the forthcoming construction management plan noted above. Once the final project parameters are known, a formal TCP is anticipated to come during the building permit phase, typical of previous projects.

Zoning Dimensional Review:

***Comment**: Please confirm side stepbacks.*

Response: Side stepbacks are required for parcels that are abutting residential zones. This project's side yard does not abut a residential zoning district therefore is not subject to a side yard stepback.

***Comment**: Please provide additional information regarding Structure Height. For the overall height, please provide a measurement documenting the height from the average grade to the top of the floor for the rooftop deck. On the elevations, a measurement to the roof is listed, but it is unclear whether that includes the roof deck or not.*

Further, please provide additional information on the proposed rooftop sauna amenity, specifically how it meets the definition for appurtenance (listed below), as it exceeds the maximum allowed building height. Section 3 of the LUC defines it as: "Appurtenance. A device or structure not designed for human occupancy and attached to the exterior of a building." A sauna, is not considered a rooftop appurtenance exempt from height restrictions under Section 7.5.1 (G); therefore, the sauna would need to be under 45'.

Response: The building height has been revised to be below 45' and the sauna has been removed from the rooftop programming. Please refer to the revised elevations for additional information.

Please let us know if you have any additional questions or comments.

Sincerely,

Sam Lebel, P.E.
Project Manager
Acorn Engineering, Inc.

Zach Stevens, P.E.
Project Engineer
Acorn Engineering, Inc.

Revised Plans:

- 4. Construction Management Plan
- 5. Site Plan
- 6. Utility Plan
- 7. Grading Plan
- 8. Site Details – 1
- 9. Focal Point Details
- 20. A1.01 First Floor Plan
- 25. A4.01 Exterior Elevations
- 26. A4.02 Exterior Elevations
- 30. Harding Steel – 1
- 31. Harding Steel – 2
- 40. L0-00 Cover
- 41. L0-01 Notes
- 42. L1-00 Ground Material Plans
- 43. L1-01 Roof Materials Plans
- 45. L3-00 Landscape Details

Revised Documents:

- D. Zoning Assessment
- F. Waiver Requests
- J. Stormwater Report
- M. Wastewater Capacity
- O. Arch Design Narrative
- P. Utilities
- Q. Construction Management Plan
- S. Parking Analysis

CITY OF PORTLAND
Planning & Urban Development Department

MAJOR SITE PLAN
GENERAL DOCUMENT AND DRAWINGS CHECKLIST
Please submit each document as a separate PDF file.
Please confirm by electronically checking the boxes in the left-hand column.

** PLEASE FILL OUT AND UPLOAD THE ZONING ASSESSMENT TABLE AND WAIVER TABLE SEPARATELY AS NOTED BELOW **

At the time of application submission, please contact the Department of Public Works regarding E-911 addressing for your project.

GENERAL APPLICATION DOCUMENTS	
Yes NA	Project Description ● Cover letter with detailed project description
Yes NA	Completed Checklist (this document)
Yes NA	Evidence of Right, Title, and Interest ● Deeds, leases, or purchase and sales agreements
Yes NA	Evidence of State or Federal Approvals ● Permits or letters of non-jurisdiction, if applicable
Yes NA	Zoning Assessment (see Zoning Assessment Table) Summary of compliance with use and dimensional standards of the land use code
Yes NA	Site Plan Standards Assessment (see Section 14.6 of the land use code) ● Summary of project compliance with site plan standards of the land use code
Yes NA	Summary of Existing and/or Proposed Easements or Covenants, applicable. ● Evidence of existing easements and any proposed easements, covenants, public or private rights-of-way
Yes NA	Waiver Requests (see Waiver Table) ● Written request for waiver describing request and compliance with applicable waiver standards
Yes NA	Financial Capability ● Letter or evidence from a financial institution or third party verifying financial capacity to undertake project
Yes NA	Technical Capability ● Evidence of technical capability of applicant and consultants – resumes and/or examples of past projects

MAJOR SITE PLAN STANDARDS AND SUBMISSION CHECKLIST Provide assessment of compliance with standards and include supplemental documentation, as applicable. Please submit each document as a separate PDF file.	
TRANSPORTATION	
Yes NA	Impact on Surrounding Street Systems (14-14.6.1(A)) ● Describe incremental volume of traffic impacts and mitigation measures. If needed
Yes NA See Drawings	Access and Circulation (14-14.6.1(B)) Identify and describe the following: ● Site access and internal circulation, including ADA access ● Drive-up features, if applicable ● Loading and servicing needs, routes, and geometry, providing turning templates for delivery vehicles, if applicable ● Sidewalks and condition along street frontages and internal walkways ● Engineered details for ADA ramps and public sidewalks, meeting sidewalk material policy and construction requirements (Technical Manual, Section 1)
Yes NA	Public Transit (14-14.6.1(C)), if applicable Identify and describe the following: ● Existing available transit service and proposed transit improvements, including design details, such as easement, pad base, and shelter
Yes NA See Drawings	Off-Street Parking (14-14.6.1(D)), if applicable Identify and describe the following: ● Proposed vehicular and bicycle parking supply (including ADA-compliant parking) in relation to applicable parking requirements in Article 19 of the land use code ● Curb cut separation and parking layout (Technical Manual, Section 1) ● Construction details for bicycle racks ● Management plan for snow storage and removal
Yes NA	Transportation Demand Management (TDM) (14-14.6.1(E)), if applicable ● Provide TDM plan drafted in accordance with Technical Manual Section 1 requirements

ENVIRONMENTAL		
Yes	NA	**Preservation of Significant Natural Features (14-14.6.2(A)), if applicable** Identify and describe the following: ● High and moderate value waterfowl and wading habitat ● Aquifers (for Casco Bay Islands) ● Waterbodies (including wetlands, watercourses, significant vernal pools and floodplains) ● Proposed preservation areas and protection measures ● Documentation from environmental compliance consultants and determinations from applicable state and federal agencies
Yes	NA	**Landscape Preservation (14-14.6.2(B))** Identify and describe the following: ● Measures to preserve trees, including within required zoning setbacks (Technical Manual, Section 4) ● Measures to protect existing vegetation during construction
Yes	NA	**Site Landscaping and Buffers (14-14.6.2(C))** Identify and describe the following: ● Overall landscaping approach and consistency with standards ● The use of screening and buffering of service areas and between non-residential and residential uses ● Existing Heritage or Feature Trees on site and measures to preserve ● Compliance with street tree requirements
Yes	NA	**Water Quality, Stormwater Management, and Erosion Control (14-14.6.2(D))** Identify and describe the following: ● Erosion and sedimentation control plan and measures ● Evidence of compliance with Urban Impaired Stream Standards pursuant to DEP Chapter 500 stormwater law, as applicable ● Subsurface sanitary sewage disposal and groundwater protection measures

PUBLIC INFRASTRUCTURE AND COMMUNITY SAFETY	
Yes NA	**Consistency with City Master Plans (14-14.6.3(A))** ● Describe proposed easements, rights and improvements to connect or continue off-premises public infrastructure, as applicable
Yes NA	**Public Safety and Fire Prevention (14-14.6.3(B))** Identify and describe the following: ● Compliance with Crime Prevention through Environmental Design (CPTED) requirements (Technical Manual, Section 3) ● Emergency vehicle access ● Consistency with public safety standards (Technical Manual, Section 3)
Yes NA	**Availability and Adequacy of Public Utilities (14-14.6.3(C)) (Technical Manual, Sections 2 & 9)** Identify and describe the following: ● Electrical services, including providing underground services ● Existing and proposed connections for public utilities and required public utility upgrades ● Sewer line connections
SITE DESIGN	
Yes NA	**Massing, Ventilations and Wind Impact (14-14.6.4(A))** Identify and describe the following: ● Wind and ventilation impacts on adjoining structures and/or adjacent public spaces, including wind study, if applicable ● Bulk, location, or height impacts on adjoining structures
Yes NA	**Shadows (14-14.6.4(B)), if applicable** ● Provide shadow analysis of impacts on publicly accessible open space (Technical Manual, Section 11)
Yes NA	**Snow and Ice Loading (14-14.6.4(C))** ● Describe building design measures to prevent snow and ice from loading or falling onto adjacent properties or public ways
Yes NA	**View Corridors (14-14.6.4(D)), if applicable** ● Describe any protection of designated view corridors (Portland Design Manual, Appendix. 1)
Yes NA	**Historic Resources (14-14.6.4(E)), if applicable** Identify and describe the following: ● The site's status as a designated landmark, within a historic district or historic landscape district, or within 100 feet of any designated landmark, historic district, or historic landscape district ● Compliance with standards for preservation and documentation of archaeological resources

Yes	NA	Exterior Lighting (14-14.6.4(F)) ● Describe how the proposed site lighting will adhere to photometrics requirements as it relates to light trespass and full cutoff fixture design, pursuant to Technical Manual Section 12
Yes	NA	Noise and Vibration (14-14.6.4(G)) ● Provide data on noise levels for HVAC and other mechanical equipment, such as design specifications, to demonstrate consistency with state and federal noise emissions requirements as well as City code
Yes	NA	Signage and Wayfinding (14-14.6.4(H)), if applicable ● Provide signage plan showing the location, dimensions, height and setback of all existing and proposed signs ● Provide drawings of all commercial and directional signage on site
Yes	NA	Zone-Related Design Standards (14-14.6.4(I)) ● Address any applicable design review standards by zone, including compliance with Design Manual

MAJOR SITE PLAN
DRAWINGS CHECKLIST

Please upload the following DRAWINGS with the listed details into e-Plan as separate pdfs.

All drawings must be submitted in a 24 x 36 sheet size.

BOUNDARY SURVEY (stamped by a Maine Licensed Surveyor and drawn as per Technical Manual Sec. 13)

SITE PLAN(s) (stamped by a Maine Licensed Professional Engineer) including:

All sheets – Include a title block with project title and the following information:

- Project street address
- Name and address of property owner & applicant
- Licensed design professional, incl firm that produced plans
- North arrow
- Date of preparation and revision history block
- Tax parcel (chart, block, and lot) number

Existing Conditions Plan with the following:

- Existing structures, with distance from primary building façade(s) to the property line
- Approximate location of structures on abutting properties
- All streets and intersections adjacent to the site
- Existing driveways, pedestrian ways, and bicycle infrastructure, including dimensions and materials
- Existing public transit infrastructure
- Existing vehicle & bicycle parking areas
- Existing utilities on site and within adjacent rights-of-way
- Existing grades (two-foot contours preferred)
- Location of water courses, wetlands, and vegetation, or other significant natural features
- Existing soil conditions and location of test pits and borings
- Zoning boundary lines, including overlays
- Location of all existing easements and rights-of-way

Proposed Site Plan with the following:

- Proposed structures, including distance from primary building façade(s) to property lines
- Ground floor area, and finished floor elevations for all buildings
- Any proposed geometric modifications to streets and intersections adjacent to site
- Location, dimensions and materials of all proposed driveways, vehicle, bicycle, & pedestrian access ways with corresponding curb lines
- Engineered specifications/ cross-sections for proposed driveways, sidewalks & paved areas
- Location and dimensions of proposed loading areas, including turning templates
- Proposed transit infrastructure with dimensions/ engineering specifications
- Location of vehicle and bicycle parking with dimensions and engineering specifications
- Location of all snow storage areas
- Exterior lighting (please see Technical Manual Sec. 12 for photometrics requirements)
- Location of fire hydrants

• Location of solid waste management receptacles • Location of all proposed HVAC and mechanical equipment, including proposed screening, where applicable • Location of proposed easements and rights-of-way, including dimensions • Please utilize color-coding and/or hatches and shading to delineate changes between the pre and post development condition as needed
UTILITY PLAN including:
• Proposed electrical infrastructure • Location, sizing and directional flows of all proposed sewer and stormwater infrastructure • Location and dimensions of off-premises public or publicly accessible infrastructure adjacent to site • Electric utility infrastructure
GRADING AND DRAINAGE PLAN including:
• Proposed grades • Proposed stormwater management measures meeting Technical Manual (Section 5) standards • Any proposed alteration of a watercourse or wetlands • Any groundwater protection measures • Proposed buffers and preservation measures for wetlands or significant natural features
LANDSCAPE PLAN including:
• Existing vegetation to be preserved and preservation measures • Proposed landscaping, screening, and street trees, including caliper widths for trees • Planting schedule, including street trees
ARCHITECTURAL PLANS AND RENDERINGS including:
• Exterior building elevations, color renderings, illustrations of all sides • Axonometric and street-level views for structures greater than three stories in height • Provide context drawings, if applicable (Design Manual, page 1) • Floor plans
CONSTRUCTION MANAGEMENT PLAN including:
• Specifics on traffic control, sidewalk sheds, and pedestrian rerouting • Include a drawing and written narrative
OTHER
• Details and cross-sections, as necessary

C. Right, Title & Interest

See attached quitclaim deed for the project property.

JENSEN·BAIRD
GARDNER·HENRY
Attorneys at Law

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YORK COUNTY
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June 7, 2019

Thomas Landry
c/o 64 Pine Street LLC
100 Congress Street
Portland, ME 04101

RE: 64 Pine Street, Portland, Maine

Dear Tom,

Enclosed please find the original Quitclaim from Norway Savings Bank, as foreclosing mortgagee pursuant to Mortgages and Assignments of Rents from Madeline, LLC to 64 Pine Street LLC regarding the above-referenced property which has now been recorded on March 8, 2019 in the Cumberland County Registry of Deeds in Book 35505, Page 186. This deed should be retained along with other important papers for safekeeping.

Also, enclosed please find your original Chicago Title Insurance Company Owner Policy No. 7230619-216836136 for the above captioned real estate issued in the amount of $1,075,000.00. Please be sure to keep this policy in a safe place as well.

If you have any questions or need further information, please give me a call.

Sincerely,

Leslie E. Lowry, Esq.

~ Over 60 Years of Service ~

DLN: 1001940051790

MAINE REAL ESTATE TAX PAID

SHORT FORM QUITCLAIM (RELEASE) DEED WITHOUT COVENANT

NORWAY SAVINGS BANK, as foreclosing mortgagee (the "Grantor"), pursuant to Mortgages and Assignments of Rents from **MADELINE, LLC** (the "Borrower") to Norway Savings Bank (the "Bank"), said Mortgages dated May 2, 2017 and recorded in the Cumberland County Registry of Deeds in Book 33985, Page 58, and March 22, 2018 and recorded in said Registry in Book 34732, Page 97; and, in said Assignments of Rents recorded in Book 33985, Page 71 and Book 34732, Page 105 (the "Property"), FOR CONSIDERATION PAID, releases to **64 PINE STREET LLC**, a Maine limited liability company, with a mailing address of 10 Free Street, P.O. Box 4510, Portland, ME 04112, as buyer at the foreclosure auction on January 10, 2019 (the "Grantee"), certain real property, together with any improvements thereon, located at 64 Pine Street, Portland, Cumberland County, Maine and more particularly described on **Exhibit A** attached hereto and made a part hereof.

This deed is a conveyance of all right, title and interest of the grantor/mortgagee and all parties to said action, solely as to the property described herein pursuant to 14 M.R.S.A. § 6203-A. For compliance with 14 M.R.S.A. § 6203-A, reference is made to the Notice of Mortgagee's Sale of Real Estate, Fixtures, and Tangible and Intangible Personal Property of Miss M, Inc. and Madeline, LLC and recorded in the Cumberland County Registry of Deeds at Book 35311, Page 47, and the Affidavit of Sale recorded in the Cumberland County Registry of Deeds in Book 35448, Page 176.

IN WITNESS WHEREOF, NORWAY SAVINGS BANK has caused this instrument to be executed by SHAWN BALDWIN, its VICE PRESIDENT, thereunto duly authorized, this 7th day of MARCH, 2019.

WITNESS:

Name:

NORWAY SAVINGS BANK

By: Shawn Baldwin

Print Name: SHAWN BALDWIN

Title: VICE PRESIDENT

State of Maine
County of Cumberland, SS

Date: March 7, 2019

PERSONALLY APPEARED the above-named Shawn Baldwin of NORWAY SAVINGS BANK as aforesaid, and acknowledged the foregoing instrument to be his/her free act and deed in his/her said capacity and the free act and deed of said NORWAY SAVINGS BANK.

SEAL

Before me, Janice S. Brown

Notary Public/~~Attorney at Law~~

Commission Expires

JANICE S. BROWN
NOTARY PUBLIC, MAINE
MY COMMISSION EXPIRES MAY 11, 2021

Exhibit A

A certain lot or parcel of land, with the buildings and improvements thereon, situated on the southeasterly side of Pine Street, in the City of Portland, County of Cumberland and State of Maine, bounded and described as follows:

BEGINNING on the southeasterly side of said Pine Street at a point distant one hundred sixty (160) feet southwesterly from the intersection of said side of Pine Street with the southwesterly side of Brackett Street; thence southwesterly along said southeasterly side of Pine Street forty (40) feet to a point; thence southeasterly by a line parallel with the southwesterly side of Brackett Street one hundred sixteen and 61 hundredths (116.61) feet to a fence; thence by said fence northeasterly forty (40) feet to a point; thence northwesterly by a line parallel with said southwesterly side of Brackett Street one hundred fifteen and seventy-two hundredths (115.72) feet to the point of beginning.

ALSO, a certain lot or parcel of land, with the buildings thereon, situated on the southeasterly side of Pine Street, in the City of Portland, County of Cumberland and State of Main, bounded and described as follows:

Beginning at a point in the southeasterly side of Pine Street distant two hundred (200) feet southwesterly from an angle formed by Brackett and Pine Streets; thence running southeasterly at right angles with said Pine Street one hundred thirteen (113) feet, more or less, to land formerly of Arthur G. Huff; thence southwesterly on the line between this lot and said Huff land and land formerly of Daniel Knight, forty-five (45) feet, more or less, to land formerly owned by Benjamin F. Nelson; thence northwesterly by said Nelson land, land formerly owned by Joseph C. Perry and land now or formerly owned by Richard D. Berry, one hundred thirteen (113) feet, more or less, to said Pine Street; thence northeasterly on said Pine Street, forty-five (45) feet, more or less, to the point of beginning.

MEANING AND INTENDING to describe and to convey herein the same premises conveyed to Madeline, LLC by deed from Princess K, LLC dated May 2, 2017, recorded in the Cumberland County Registry of Deeds in Book 33985, Page 56.

Received
Recorded Register of Deeds
Mar 08,2019 02:24:19P
Cumberland County
Nancy A. Lane

CHICAGO TITLE
INSURANCE COMPANY

Policy No.: 1027-1-22521.12-2019.7230619-216836136

OWNER'S POLICY OF TITLE INSURANCE

Issued by

CHICAGO TITLE INSURANCE COMPANY

Any notice of claim and any other notice or statement in writing required to be given the Company under this Policy must be given to the Company at the address shown in Section 18 of the Conditions.

COVERED RISKS

SUBJECT TO THE EXCLUSIONS FROM COVERAGE, THE EXCEPTIONS FROM COVERAGE CONTAINED IN SCHEDULE B, AND THE CONDITIONS, CHICAGO TITLE INSURANCE COMPANY, a Florida corporation, (the "Company") insures as of Date of Policy and, to the extent stated in Covered Risks 9 and 10, after Date of Policy, against loss or damage, not exceeding the Amount of Insurance, sustained or incurred by the Insured by reason of:

1. Title being vested other than as stated in Schedule A.
2. Any defect in or lien or encumbrance on the Title. This Covered Risk includes but is not limited to insurance against loss from
   (a) A defect in the Title caused by
      (i) forgery, fraud, undue influence, duress, incompetency, incapacity, or impersonation;
      (ii) failure of any person or Entity to have authorized a transfer or conveyance;
      (iii) a document affecting Title not properly created, executed, witnessed, sealed, acknowledged, notarized, or delivered;
      (iv) failure to perform those acts necessary to create a document by electronic means authorized by law;
      (v) a document executed under a falsified, expired, or otherwise invalid power of attorney;
      (vi) a document not properly filed, recorded, or indexed in the Public Records including failure to perform those acts by electronic means authorized by law; or
      (vii) a defective judicial or administrative proceeding.
   (b) The lien of real estate taxes or assessments imposed on the Title by a governmental authority due or payable, but unpaid.
   (c) Any encroachment, encumbrance, violation, variation, or adverse circumstance affecting the Title that would be disclosed by an accurate and complete land survey of the Land. The term "encroachment" includes encroachments of existing improvements located on the Land onto adjoining land, and encroachments onto the Land of existing improvements located on adjoining land.
3. Unmarketable Title.
4. No right of access to and from the Land.
5. The violation or enforcement of any law, ordinance, permit, or governmental regulation (including those relating to building and zoning) restricting, regulating, prohibiting, or relating to
   (a) the occupancy, use, or enjoyment of the Land;
   (b) the character, dimensions, or location of any improvement erected on the Land;
   (c) the subdivision of land; or
   (d) environmental protection
   if a notice, describing any part of the Land, is recorded in the Public Records setting forth the violation or intention to enforce, but only to the extent of the violation or enforcement referred to in that notice.
6. An enforcement action based on the exercise of a governmental police power not covered by Covered Risk 5 if a notice of the enforcement action, describing any part of the Land, is recorded in the Public Records, but only to the extent of the enforcement referred to in that notice.
7. The exercise of the rights of eminent domain if a notice of the exercise, describing any part of the Land, is recorded in the Public Records.
8. Any taking by a governmental body that has occurred and is binding on the rights of a purchaser for value without Knowledge.
9. Title being vested other than as stated Schedule A or being defective
   (a) as a result of the avoidance in whole or in part, or from a court order providing an alternative remedy, of a transfer of all or any part of the title to or any interest in the Land occurring prior to the transaction vesting Title as shown in Schedule A because that prior transfer constituted a fraudulent or preferential transfer under federal bankruptcy, state insolvency, or similar creditors' rights laws; or
   (b) because the instrument of transfer vesting Title as shown in Schedule A constitutes a preferential transfer under federal bankruptcy, state insolvency, or similar creditors' rights laws by reason of the failure of its recording in the Public Records
      (i) to be timely, or
      (ii) to impart notice of its existence to a purchaser for value or to a judgment or lien creditor.
10. Any defect in or lien or encumbrance on the Title or other matter included in Covered Risks 1 through 9

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that has been created or attached or has been filed or recorded in the Public Records subsequent to Date of Policy and prior to the recording of the deed or other instrument of transfer in the Public Records that vests Title as shown in Schedule A.

The Company will also pay the costs, attorneys' fees, and expenses incurred in defense of any matter insured against by this Policy, but only to the extent provided in the Conditions.

IN WITNESS WHEREOF, CHICAGO TITLE INSURANCE COMPANY has caused this policy to be signed and sealed by it's duly authorized officers.

CHICAGO TITLE INSURANCE COMPANY

Countersigned:

By:
Authorized Officer or Agent
Leslie E. Lowry
Jensen Baird Gardner & Henry
10 Free St
PO Box 4510
Portland, ME 04112
Tel:207-775-7271
Fax:207-775-7935

By:

President

Attest:

Secretary

EXCLUSIONS FROM COVERAGE

The following matters are expressly excluded from the coverage of this policy, and the Company will not pay loss or damage, costs, attorneys' fees, or expenses that arise by reason of:

1. (a) Any law, ordinance, permit, or governmental regulation (including those relating to building and zoning) restricting, regulating, prohibiting, or relating to
   (i) the occupancy, use, or enjoyment of the Land;
   (ii) the character, dimensions or location of any improvement erected on the Land;
   (iii) the subdivision of land; or
   (iv) environmental protection;
   or the effect of any violation of these laws, ordinances, or governmental regulations. This Exclusion 1(a) does not modify or limit the coverage provided under Covered Risk 5.
   (b) Any governmental police power. This Exclusion 1(b) does not modify or limit the coverage provided under Covered Risk 6.
2. Rights of eminent domain. This Exclusion does not modify or limit the coverage provided under Covered Risk 7 or 8.
3. Defects, liens, encumbrances, adverse claims, or other matters:
   (a) created, suffered, assumed, or agreed to by the Insured Claimant;
   (b) not Known to the Company, not recorded in the Public Records at Date of Policy, but Known to the Insured Claimant and not disclosed in writing to the Company by the Insured Claimant prior to the date the Insured Claimant became an Insured under this policy;
   (c) resulting in no loss or damage to the Insured Claimant;
   (d) attaching or created subsequent to Date of Policy (however, this does not modify or limit the coverage provided under Covered Risk 9 and 10); or
   (e) resulting in loss or damage that would not have been sustained if the Insured Claimant had paid value for the Title.
4. Any claim, by reason of the operation of federal bankruptcy, state insolvency, or similar creditors' rights laws, that the transaction vesting the Title as shown in Schedule A, is
   (a) a fraudulent conveyance or fraudulent transfer; or
   (b) a preferential transfer for any reason not stated in Covered Risk 9 of this policy.
5. Any lien on the Title for real estate taxes or assessments imposed by governmental authority and created or attaching between Date of Policy and the date of recording of the deed or other instrument of transfer in the Public Records that vests Title as shown in Schedule A.

CONDITIONS

1. DEFINITION OF TERMS

The following terms when used in this policy mean:

(a)"Amount of Insurance": The amount stated in Schedule A, as may be increased or decreased by endorsement to this policy, increased by Section 8(b), or decreased by Sections 10 and 11 of these Conditions.

(b)"Date of Policy": The date designated as 'Date of Policy" in Schedule A.

(c)"Entity": A corporation, partnership, trust, limited liability company, or other similar legal entity.

(d)"Insured": The Insured named in Schedule A.

(i) The term "Insured" also includes

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CHICAGO TITLE INSURANCE COMPANY
ALTA OWNER POLICY

SCHEDULE A

Agent's File No. 22521.12

POLICY NUMBER	DATE & TIME OF POLICY	AMOUNT OF INSURANCE
Owner: 7230619-216836136	**March 8, 2019 @ 2:26 P.M.**	**$ 1,075,000.00**

ISSUED WITH LOAN POLICY NUMBERS:

1. Name of Insured: **64 Pine Street LLC**

2. The estate or interest in the Land that is encumbered by the Insured Mortgage is: **Fee Simple.**

3. Title to the estate or interest in the Land is at Date of Policy vested in:

   64 Pine Street LLC by virtue of a Quitclaim Deed without Covenant from Norway Savings Bank, as foreclosing mortgagee pursuant to Mortgages and Assignments of Rents from Madeline, LLC, dated March 7, 2019 and recorded at the Cumberland County Registry of Deeds in Book 35505, Page 186.

4. The Insured Mortgage and its assignments, if any, are described as follows:

   Mortgage from 64 Pine Street, LLC to Camden National Bank, in the original principal amount of $860,000.00, dated March 7, 2019 and recorded at the Cumberland County Registry of Deeds in Book 35505, Page 188.

   Assignment of Rents by and between 64 Pine Street, LLC and Camden National Bank, dated March 7, 2019 and recorded at the Cumberland County Registry of Deeds in Book 35505, Page 196.

5. The Land referred to in this policy is described as follows:

   Street Address: **64 Pine Street**
   City/Town: **Portland**
   County: **Cumberland**
   State/Zip: **Maine 04102**

   and is more specifically described on Exhibit A attached hereto and made a part hereof.

CHICAGO TITLE INSURANCE COMPANY

BY:_____
Leslie E. Lowry, Esq.
Jensen Baird Gardner & Henry

This policy is valid only if Schedule B is attached.

CHICAGO TITLE INSURANCE COMPANY
ALTA OWNER POLICY

Owner's Policy Number: **7230619-216836136**

SCHEDULE B – PART I

EXCEPTIONS FROM COVERAGE

This policy does not insure against loss or damage (and the Company will not pay costs, attorneys' fees or expenses) which arise by reason of:

1. Rights, facts, interests or claims of present tenants, lessees or parties in possession which are not shown by the Public Records, but which could be ascertained by an inspection of said Land or by making inquiry of persons in possession thereof.

2. Any liability for mechanics' or materialmen's liens.

3. Any encroachment, encumbrance, violation, variation, or adverse circumstance affecting the Title that would be disclosed by an accurate and complete survey of the Land. The term "encroachment" includes encroachments of existing improvements located on the Land onto adjoining land, and encroachments onto the Land of existing improvements located on adjoining land.

4. The Mortgage and its assignments, if any, referred to in Item 4 of Schedule A.

5. Real estate taxes, assessments and water and sewer charges which become due and payable subsequent to the date of policy.

6. IF THE INSURED PREMISES IS A CONDOMINIUM UNIT:

   Covenants, conditions, restrictions, reservations, easements, liens for assessments, options, powers of attorney, and limitations on Title, created by the laws of the state of the insured Land or set forth in the Master Deed or Declaration of Condominium, in the related By-Laws, in the Declaration of Trust, or Site Plans and Floor Plans as duly recorded in the appropriate land records office and as the same may have been lawfully amended, and in any instruments creating the estate or interest insured by this policy.

7. There is added after any Special Exception appearing in this Schedule B relative to covenants, conditions and restrictions, the following: '...but omitting any covenants or restrictions, if any, based upon race, color, religion, sex, sexual orientation, familial status, marital status, disability, handicap, national origin, ancestry, or source of income, as set forth in applicable, state or federal laws, except to the extent that said covenant or restriction is permitted by applicable law.'

8. The exact acreage or square footage of the Land will not be insured.

☒ For additional exceptions, if any, see attached Schedule B – Part I Continuation Sheet.

Exceptions deleted from a Loan Policy, if any, are not deleted from the Owner's Policy unless there is an endorsement attached authorizing specific deletions. Affirmative insurance language under any Schedule B exception does NOT apply to the Owner's Policy unless otherwise specified. Deletion of a specific survey exception from a Loan Policy, if any, does not delete Exception 3 above from the Owner's Policy.

CHICAGO TITLE INSURANCE COMPANY

BY: _____

CHICAGO TITLE INSURANCE COMPANY
ALTA OWNER POLICY

Owner's Policy Number: **7230619-216836136**

SCHEDULE B – PART I CONTINUATION SHEET

9. Any exception, reservation, restriction, easement or condition set out in the attached Exhibit A.

10. Rights, facts, interests or claims of present tenants, lessees or parties in possession which are not shown by the Public Records, but which could be ascertained by an inspection of said Land or by making inquiry of persons in possession thereof.

11. Rights of others in and to the use of appurtenant easements insured herein and terms and conditions relative to the use thereof.

CHICAGO TITLE INSURANCE COMPANY

BY: CBE

CHICAGO TITLE INSURANCE COMPANY
ALTA OWNER POLICY

Owner's Policy Number: **7230619-216836136**

LEGAL DESCRIPTION - EXHIBIT A

64 Pine Street, Portland, Maine

A certain lot or parcel of land with the buildings thereon, situated on the Southeasterly side of Pine Street, in Portland, County of Cumberland and State of Maine, bounded and described as follows: Beginning on the Southeasterly side of said Pine Street at a point distant one hundred and sixty (160) feet Southwesterly from the intersection of said Pine Street with the Southwesterly side of Brackett Street; thence Southwesterly along said Southeasterly side of Pine Street forty (40) feet to a point; thence Southeasterly by a line parallel with the Southwesterly side of Brackett Street one hundred and sixteen and sixty-one hundredths (116.61) feet to a fence; thence by said fence Northeasterly forty (40) feet to a point; thence Northwesterly by a line parallel with said Southwesterly side of Brackett Street one hundred fifteen and seventy-two Hundredths (115.72) feet to the point of beginning.

Also, a certain lot or parcel of land, with the buildings thereon, situated on the Southeasterly side of Pine Street, in Portland, County of Cumberland and State of Maine, bounded and described as follows: Beginning at a point in the Southeasterly side of Pine Street distant two hundred (200) feet Southwesterly from an angle formed by Brackett Street and Pine Streets; thence running Southeasterly at right angles with said Pine Street one hundred thirteen (113) feat, more or less, to land formerly of Arthur G. Huff; thence Southwesterly on the line between this lot and said Huff land and land formerly of Daniel Knight, forty-five (45) feet, more or less, to land formerly owned by Benjamin F. Nelson; thence Northwesterly by said-Nelson land, land formerly owned by Joseph C. Perry and land now or formerly of Richard D. Berry, one hundred thirteen (113) feet, more or less, to said Pine Street; thence Northeasterly on said Pine Street, forty-five (45) feet, more or less, to the point of beginning.

(A) successors to the Title of the Insured by operation of law as distinguished from purchase, including heirs, devisees, survivors, personal representatives, or next of kin;

(B) successors to an Insured by dissolution, merger, consolidation, distribution, or reorganization;

(C) successors to an Insured by its conversion to another kind of Entity;

(D) a grantee of an Insured under a deed delivered without payment of actual valuable consideration conveying the Title

(1)if the stock, shares, memberships, or other equity interests of the grantee are wholly-owned by the named Insured,

(2)if the grantee wholly owns the named Insured,

(3)if the grantee is wholly-owned by an affiliated Entity of the named Insured, provided the affiliated Entity and the named Insured are both wholly-owned by the same person or Entity, or

(4)if the grantee is a trustee or beneficiary of a trust created by a written instrument established by the Insured named in Schedule A for estate planning purposes.

(ii) With regard to (A), (B), (C), and (D) reserving, however, all rights and defenses as to any successor that the Company would have had against any predecessor Insured.

(e) "Insured Claimant": An Insured claiming loss or damage.

(f) "Knowledge" or "Known": Actual knowledge, not constructive knowledge or notice that may be imputed to an Insured by reason of the Public Records or any other records that impart constructive notice of matters affecting the Title.

(g)"Land": The land described in Schedule A, and affixed improvements that by law constitute real property. The term "Land" does not include any property beyond the lines of the area described in Schedule A, nor any right, title, interest, estate, or easement in abutting streets, roads, avenues, alleys, lanes, ways or waterways, but this does not modify or limit the extent that a right of access to and from the Land is insured by this policy.

(h)"Mortgage": Mortgage, deed of trust, trust deed, or other security instrument, including one evidenced by electronic means authorized by law.

(i) "Public Records": Records established under state statutes at Date of Policy for the purpose of imparting constructive notice of matters relating to real property to purchasers for value and without Knowledge. With respect to Covered Risk 5(d), "Public Records" shall also include environmental protection liens filed in the records of the clerk of the United States District Court for the district where the Land is located.

(j) "Title": The estate or interest described in Schedule A.

(k) "Unmarketable Title": Title affected by an alleged or apparent matter that would permit a prospective purchaser or lessee of the Title or lender on the Title to be released from the obligation to purchase, lease, or lend if there is a contractual condition requiring the delivery of marketable title.

2. CONTINUATION OF INSURANCE

The coverage of this policy shall continue in force as of Date of Policy in favor of an Insured, but only so long as the Insured retains an estate or interest in the Land, or holds an obligation secured by a purchase money Mortgage given by a purchaser from the Insured, or only so long as the Insured shall have liability by reason of warranties in any transfer or conveyance of the Title. This policy shall not continue in force in favor of any purchaser from the Insured of either (i) an estate or interest in the Land, or (ii) an obligation secured by a purchase money Mortgage given to the Insured.

3. NOTICE OF CLAIM TO BE GIVEN BY INSURED CLAIMANT

The Insured shall notify the Company promptly in writing (i) in case of any litigation as set forth in Section 5(a) of these Conditions, (ii) in case Knowledge shall come to an Insured hereunder of any claim of title or interest that is adverse to the Title, as insured, and that might cause loss or damage for which the Company may be liable by virtue of this policy, or (iii) if the Title, as insured, is rejected as Unmarketable Title. If the Company is prejudiced by the failure of the Insured Claimant to provide prompt notice, the Company's liability to the Insured Claimant under the policy shall be reduced to the extent of the prejudice.

4. PROOF OF LOSS

In the event the Company is unable to determine the amount of loss or damage, the Company may, at its option, require as a condition of payment that the Insured Claimant furnish a signed proof of loss. The proof of loss must describe the defect, lien, encumbrance, or other matter insured against by this policy that constitutes the basis of loss or damage and shall state, to the extent possible, the basis of calculating the amount of the loss or damage.

5. DEFENSE AND PROSECUTION OF ACTIONS

(a)Upon written request by the Insured, and subject to the options contained in Section 7 of these Conditions, the Company, at its own cost and without unreasonable delay, shall provide for the defense of an Insured in litigation in which any third party asserts a claim covered by this policy adverse to the Insured. This obligation is limited to only those stated causes of action alleging matters insured against by this policy. The Company shall have the right to select counsel of its choice (subject to the right of the Insured to object for reasonable cause) to represent the Insured as to those stated causes of action. It shall not be liable for and will not pay the fees of any other counsel. The Company will not pay any fees, costs, or expenses incurred by the Insured in the defense of those causes of action that allege matters not insured against by this policy.

(b)The Company shall have the right, in addition to the options contained in Section 7 of these Conditions, at its own cost, to institute and prosecute any action or proceeding or to do any other act that in its opinion may be necessary or desirable to establish the Title, as insured, or to prevent or reduce loss or damage to the Insured. The Company may take any appropriate action under the terms of this policy, whether or not it shall be liable to the Insured. The exercise of these rights shall not be an admission of liability or waiver of any provision of this policy. If the Company exercises its rights under this subsection, it must do so diligently.

(c)Whenever the Company brings an action or asserts a defense as required or permitted by this policy, the Company may pursue the litigation to a final determination by a court of competent jurisdiction, and it expressly reserves the right, in its sole discretion, to appeal from any adverse judgment or order.

6. DUTY OF INSURED CLAIMANT TO COOPERATE

(a)In all cases where this policy permits or requires the Company to prosecute or provide for the defense of any action or proceeding and any appeals, the Insured shall secure to the Company the right to so prosecute or provide defense in the action or proceeding, including the right to use, at its option, the name of the Insured for this purpose. Whenever requested by the Company, the Insured, at the Company's expense,

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shall give the Company all reasonable aid (i) in securing evidence, obtaining witnesses, prosecuting or defending the action or proceeding, or effecting settlement, and (ii) in any other lawful act that in the opinion of the Company may be necessary or desirable to establish the Title, or any other matter as insured. If the Company is prejudiced by the failure of the Insured to furnish the required cooperation, the Company's obligations to the Insured under the policy shall terminate, including any liability or obligation to defend, prosecute, or continue any litigation, with regard to the matter or matters requiring such cooperation.

(b)The Company may reasonably require the Insured Claimant to submit to examination under oath by any authorized representative of the Company and to produce for examination, inspection, and copying, at such reasonable times and places as may be designated by the authorized representative of the Company, all records, in whatever medium maintained, including books, ledgers, checks, memoranda, correspondence, reports, e-mails, disks, tapes, and videos whether bearing a date before or after Date of Policy, that reasonably pertain to the loss or damage. Further, if requested by any authorized representative of the Company, the Insured Claimant shall grant its permission, in writing, for any authorized representative of the Company to examine, inspect, and copy all of these records in the custody or control of a third party that reasonably pertain to the loss or damage. All information designated as confidential by the Insured Claimant provided to the Company pursuant to this Section shall not be disclosed to others unless, in the reasonable judgment of the Company, it is necessary in the administration of the claim. Failure of the Insured Claimant to submit for examination under oath, produce any reasonably requested information, or grant permission to secure reasonably necessary information from third parties as required in this subsection, unless prohibited by law or governmental regulation, shall terminate any liability of the Company under this policy as to that claim.

7. OPTIONS TO PAY OR OTHERWISE SETTLE CLAIMS; TERMINATION OF LIABILITY

In case of a claim under this policy, the Company shall have the following additional options:

(a)To Pay or Tender Payment of the Amount of Insurance.

To pay or tender payment of the Amount of Insurance under this policy together with any costs, attorneys' fees, and expenses incurred by the Insured Claimant that were authorized by the Company up to the time of payment or tender of payment and that the Company is obligated to pay.

Upon the exercise by the Company of this option, all liability and obligations of the Company to the Insured under this policy, other than to make the payment required in this subsection, shall terminate, including any liability or obligation to defend, prosecute, or continue any litigation.

(b) To Pay or Otherwise Settle With Parties Other Than the Insured or With the Insured Claimant.

(i) To pay or otherwise settle with other parties for or in the name of an Insured Claimant any claim insured against under this policy. In addition, the Company will pay any costs, attorneys' fees, and expenses incurred by the Insured Claimant that were authorized by the Company up to the time of payment and that the Company is obligated to pay; or

(ii)To pay or otherwise settle with the Insured Claimant the loss or damage provided for under this policy, together with any costs, attorneys' fees, and expenses incurred by the Insured Claimant that were authorized by the Company up to the time of payment and that the Company is obligated to pay.

Upon the exercise by the Company of either of the options provided for in subsections (b)(i) or (ii), the Company's obligations to the Insured under this policy for the claimed loss or damage, other than the payments required to be made, shall terminate, including any liability or obligation to defend, prosecute, or continue any litigation.

8. DETERMINATION AND EXTENT OF LIABILITY

This policy is a contract of indemnity against actual monetary loss or damage sustained or incurred by the Insured Claimant who has suffered loss or damage by reason of matters insured against by this policy.

(a)The extent of liability of the Company for loss or damage under this policy shall not exceed the lesser of

(i) the Amount of Insurance; or

(ii)the difference between the value of the Title as insured and the value of the Title subject to the risk insured against by this policy.

(b)If the Company pursues its rights under Section 5 of these Conditions and is unsuccessful in establishing the Title, as insured,

(i) the Amount of Insurance shall be increased by 10%, and

(ii)the Insured Claimant shall have the right to have the loss or damage determined either as of the date the claim was made by the Insured Claimant or as of the date it is settled and paid.

(c)In addition to the extent of liability under (a) and (b), the Company will also pay those costs, attorneys' fees, and expenses incurred in accordance with Sections 5 and 7 of these Conditions.

9. LIMITATION OF LIABILITY

(a)If the Company establishes the Title, or removes the alleged defect, lien or encumbrance, or cures the lack of a right of access to or from the Land, or cures the claim of Unmarketable Title, all as insured, in a reasonably diligent manner by any method, including litigation and the completion of any appeals, it shall have fully performed its obligations with respect to that matter and shall not be liable for any loss or damage caused to the Insured.

(b)In the event of any litigation, including litigation by the Company or with the Company's consent, the Company shall have no liability for loss or damage until there has been a final determination by a court of competent jurisdiction, and disposition of all appeals, adverse to the Title, as insured.

(c)The Company shall not be liable for loss or damage to the Insured for liability voluntarily assumed by the Insured in settling any claim or suit without the prior written consent of the Company.

10. REDUCTION OF INSURANCE; REDUCTION OR TERMINATION OF LIABILITY

All payments under this policy, except payments made for costs, attorneys' fees, and expenses, shall reduce the Amount of Insurance by the amount of the payment.

11. LIABILITY NONCUMULATIVE

The Amount of Insurance shall be reduced by any amount the Company pays under any policy insuring a Mortgage to which exception is taken in Schedule B or to which the Insured has agreed, assumed, or taken subject, or which is executed by an Insured after Date of Policy and which is a charge or lien on the Title, and the amount so paid shall be deemed a payment to the Insured under this policy.

12. PAYMENT OF LOSS

When liability and the extent of loss or damage have been

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definitely fixed in accordance with these Conditions, the payment shall be made within 30 days.

13. RIGHTS OF RECOVERY UPON PAYMENT OR SETTLEMENT

(a) Whenever the Company shall have settled and paid a claim under this policy, it shall be subrogated and entitled to the rights of the Insured Claimant in the Title and all other rights and remedies in respect to the claim that the Insured Claimant has against any person or property, to the extent of the amount of any loss, costs, attorneys' fees, and expenses paid by the Company. If requested by the Company, the Insured Claimant shall execute documents to evidence the transfer to the Company of these rights and remedies. The Insured Claimant shall permit the Company to sue, compromise, or settle in the name of the Insured Claimant and to use the name of the Insured Claimant in any transaction or litigation involving these rights and remedies.

If a payment on account of a claim does not fully cover the loss of the Insured Claimant, the Company shall defer the exercise of its right to recover until after the Insured Claimant shall have recovered its loss.

(b) The Company's right of subrogation includes the rights of the Insured to indemnities, guaranties, other policies of insurance, or bonds, notwithstanding any terms or conditions contained in those instruments that address subrogation rights.

14. THIS SECTION IS INTENTIONALLY DELETED

15. LIABILITY LIMITED TO THIS POLICY; POLICY ENTIRE CONTRACT

(a) This policy together with all endorsements, if any, attached to it by the Company is the entire policy and contract between the Insured and the Company. In interpreting any provision of this policy, this policy shall be construed as a whole.

(b) Any claim of loss or damage that arises out of the status of the Title or by any action asserting such claim shall be restricted to this policy.

(c) Any amendment of or endorsement to this policy must be in writing and authenticated by an authorized person, or expressly incorporated by Schedule A of this policy.

(d) Each endorsement to this policy issued at any time is made a part of this policy and is subject to all of its terms and provisions. Except as the endorsement expressly states, it does not (i) modify any of the terms and provisions of the policy, (ii) modify any prior endorsement, (iii) extend the Date of Policy, or (iv) increase the Amount of Insurance.

16. SEVERABILITY

In the event any provision of this policy, in whole or in part, is held invalid or unenforceable under applicable law, the policy shall be deemed not to include that provision or such part held to be invalid, but all other provisions shall remain in full force and effect.

17. CHOICE OF LAW; FORUM

(a) Choice of Law: The Insured acknowledges the Company has underwritten the risks covered by this policy and determined the premium charged therefor in reliance upon the law affecting interests in real property and applicable to the interpretation, rights, remedies, or enforcement of policies of title insurance of the jurisdiction where the Land is located.

Therefore, the court or an arbitrator shall apply the law of the jurisdiction where the Land is located to determine the validity of claims against the Title that are adverse to the Insured and to interpret and enforce the terms of this policy. In neither case shall the court or arbitrator apply its conflicts of law principles to determine the applicable law.

(b) Choice of Forum: Any litigation or other proceeding brought by the Insured against the Company must be filed only in a state or federal court within the United States of America or its territories having appropriate jurisdiction.

18. NOTICES, WHERE SENT

Any notice of claim and any other notice or statement in writing required to be given to the Company under this policy must be given to the Company at CHICAGO TITLE INSURANCE COMPANY, Attn: Claims Department, P.O. Box 45023, Jacksonville, FL 32232-5023.

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Portland, Maine Yes. Life's good here.

Planning & Urban Development Department

ZONING ANALYSIS Relevant Zone(s) B1 - Neighborhood Business

All Projects:

	Required	Proposed
Lot Size	N/A	9,920 SF
Area Per Dwelling Unit	435 SF	1,102 SF
Minimum Street Frontage	20 FT	85 FT
Front Yard Minimum	N/A	0.74 FT
Front Yard Maximum	10 FT	0.74 FT
Rear Yard	10 FT	10.56 FT
Yard Right	NONE	5.30 FT
Yard Left	NONE	5.92 FT
Side Street Setback	NONE	
Step Back	15*	15.20 FT
Maximum Lot Coverage	NONE	76.2%
Minimum Lot Coverage	NONE	76.2%
Maximum Height	45 FT	44.92 FT
Open Space	N/A	
Maximum Impervious Area	90%	84.6%
Pavement Setback	NONE	
Floor Area Ratio	NONE	
Off Street Parking Spaces	5	19
Loading Bays	N/A	
Other 1	10,000 SF**	1,282 SF
Other 2		
Other 3		

*Rear stepback required when building is above 35 ft when property line abuts a residential zone

**Maximum floor area with non-residential uses on first floor

E. Summary of Written Easements

Existing easements:

There is no existing easement information documented on the plan titled "Boundary Survey & Topographical Site Plan with Existing Conditions" prepared and identified by R.W. Eaton Associates dated 6/1/23.

Proposed Easements:

There are no proposed easements.

Standard to be Waived: Cite Ordinance or Technical Manual Standard	**Cite Standard Language:** Cite specific language of applicable Ordinance or Technical Manual Standard	**Waiver Being Sought:** Describe waiver being sought. Ex. – We are requesting a two-way parking lot drive aisle width of 20' feet.	**Justification for Waiver:** Address specific waiver criteria, if applicable, and document reasons for the waiver request.
Technical Manual 1. Transportation Systems and Street Design standards. Figure I-12 Vertical Granite Curb	Vertical granite curb to have a 7" reveal.	Requesting waiver to have a 5"-6" reveal	A 5" reveal is proposed to match the existing reveals on Pine Street on the north side, slowly transitioning to the existing 6" reveal on the south side.
Technical Manual 1. Transportation Systems and Street Design standards. Figure I-9A Residential Driveway Apron	Two-foot radius corner granite pieces ("Bugs") are required at low-volume driveways unless otherwise directed by DPW. At other driveways, standard flare/ tipdown treatments shall be used	Requesting waiver to not have two-foot radius corner granite pieces ("Bugs"), but instead have radial curbing.	Radial curbing pieces are requested in lieu of the typical "bug" to lengthen the transition from the street elevation to the elevated ADA sidewalk route. This is to avoid bottoming out and provide a smoother transition as the apron climbs 5".

Standard to be Waived: Cite Ordinance or Technical Manual Standard	Cite Standard Language: Cite specific language of applicable Ordinance or Technical Manual Standard	Waiver Being Sought: Describe waiver being sought. Ex. – We are requesting a two-way parking lot drive aisle width of 20' feet.	Justification for Waiver: Address specific waiver criteria, if applicable, and document reasons for the waiver request.
Technical Manual 1. Transportation Systems and Street Design standards. Section 1.5.1.B Driveway Width	For two-way driveways - greater than 10 residential parking spaces. (preferred): - 20 feet minimum, 24 feet maximum for residential/ commerical uses	Requesting waiver to have an 12 feet driveway width	We believe a 12' width will suffice for the short driveway that connects to the covered parking area restricted for 9 units. Given the short queing length and visibility, when the garage door is open then a car entering will know to yield to the exiting vehicle prior to entering the site.
Technical Manual 1. Transportation Systems and Street Design standards. Figure I-16A Vehicle Parking Dimensions	The minimum drive aisle width is 24 feet for standard, right-angle parking.	Requesting waiver to have an 20.27 foot drive aisle width associated with the covered 90 degree parking onsite.	A 20.27 foot wide drive aisle width is being proposed due to to urban site constraints and covered parking conditions. We are providing a permissible vehicle summary (size) associated with each parking space as a result of the limited drive aisle width. Buyers of the condo units will be aware of the limitations. See the Site Plan for additional information

Standard to be Waived: Cite Ordinance or Technical Manual Standard	**Cite Standard Language:** Cite specific language of applicable Ordinance or Technical Manual Standard	**Waiver Being Sought:** Describe waiver being sought. Ex. – We are requesting a two-way parking lot drive aisle width of 20' feet.	**Justification for Waiver:** Address specific waiver criteria, if applicable, and document reasons for the waiver request.
Technical Manual 1. Transportation Systems and Street Design standards. Section 1.5.1.C Driveway Spacing	Driveway spacing should be a minimum of 50 feet along local streets	Requesting waiver to have a 9.07' driveway separation from the abutting parcels curb cut	It should be noted that the subject parcel currently has 85' of street frontage and a driveway exists directly on each side of the parcel, therefore the parcel is unable to provide 50' of separation. The existing driveway separation is approximately 22.5' and we are requesting to reduce the separation to 9.07'. We believe this configuration takes the existing pattern of driveways in the surrounding context into account, and limits the impact to on street parking and existing street trees. Lastly, it should be noted that the existing curb cut 9' away from the proposed driveway is not currently being used for vehicular access. Should it be used in the future, it appears the curb cut would only allow access for 2 vehicles parked in tandem and therefore it would be an extremely low use driveway.

G. Financial Capacity

A letter from the Applicant's bank confirming financial capacity is attached to this section.

November 15, 2023

Re: Nine Unit Condominium Development at 64 Pine Street

To Whom It May Concern:

On behalf of Camden National Bank ("Bank") I am pleased to provide this letter in support of 64 Pine Street, LLC ("Developer") for the planned nine unit condominium development at 64 Pine Street in Portland ("Project"). Based on our review of the Project and the principal's successful track record with the Bank, we believe that the applicant will qualify for the financing needed to support the Project cost.

While this letter of support is not a commitment to lend, the Bank would welcome the opportunity to be a resource to the Developer for financing. This letter shall in no way obligate the Bank, or the Developer, beyond the scope and intent of this letter.

Please feel free to contact me with questions.

Sincerely,

Elliott Barry, Senior Vice President
Commercial Banking Officer
207.344.6852
ebarry@camdennational.com

H. Technical Capacity

Acorn Engineering specializes in providing urban redevelopment, civil/site design, environmental services, municipal consulting, and construction administration. Acorn Engineering, Inc. has successfully designed and permitted more than 20 Major/Minor Site Plan Applications over the past several years. See below for a partial list:

- Munjoy Heights
- 89 Anderson St. – East Bayside Lofts
- 121 Washington Ave
- 667 Congress St – the Hiawatha
- Cumberland Flats
- East End Lofts

Invivid Architecture, a distinguished Portland-based full-service architectural design firm, is wholly dedicated to crafting sophisticated designs and functional spaces. Our primary focus lies in diverse housing projects, spanning from affordable and market-rate rehabilitation and new construction to opulent, multi-million-dollar luxury condominium complexes. Additionally, the firm engages in hospitality and commercial development projects. The genesis of Invivid unfolded 20 years into the career of the founder, Virginie Stanley. Her over two-decade journey in the industry has been marked by a relentless pursuit of design excellence, earning her a distinguished reputation through her expansive and diverse portfolio. Invivid, prides itself on not only envisioning spaces but also on bringing them to life with a level of craftsmanship that defines our legacy of excellence.

ALA is a process-driven, landscape architecture and urban design firm committed to thoughtful, creative intervention at the intersection of environment, economics, art, and culture. ALA has worked on a number of important projects throughout Maine and the U.S. Locally, ALA has been the prime design consultant for the redevelopment of the 500-acre Scarborough Downs property in addition to numerous public and private development projects across Maine. ALA's clients include private developers, housing authorities, and municipalities.

I. Conformity with Land Use Ordinance

The following outline is made in accordance with the City of Portland Code of Ordinances, Chapter 14 Land Use, Article V Section 14.6.1-4

OVERVIEW

The proposed mixed-use residential buildings have been designed to conform to City standards where possible, as well as improve upon existing non-conformities. This project conforms with the majority of the applicable standards of Portland's Land Use Ordinance Section 14-526 as demonstrated in the following narrative.

14.6.1 Transportation Standards

A. Impact on Surrounding Street Systems:

a. The project will not create any significant hazard to safety on the surrounding street network. The site is located along Pine Street which is a local street according to the City of Portland Federal Street Classification map.

b. This project is not expected to increase traffic flows.

B. Access and Circulation:

1) In general

a. The development will provide safe access and internal circulation for both pedestrians, vehicles and emergency vehicles as seen on the Site Plan and in accordance with the Technical Manual.

b. Continuous internal walkways will be provided and will connect to the proposed sidewalk along Pine Street.

c. The proposed driveway has been located to provide ample site distance from oncoming traffic on Pine Street. Additionally, the existing 23-foot curb cut will be closed and replaced with an 18-foot curb cut located northeast of the existing curb cut.

d. The site does not feature drive-up services as mentioned in this requirement.

2) Loading and Servicing:

Various 60-minute and 30-minute parking spaces exist on Pine Street.

3) Curbs and Sidewalks:

a. The development proposes curbing and sidewalks to be installed in accordance with the City's Technical Manual. A brick sidewalk exists along Pine Street and will be rebuilt as part of the project.

b. There is an existing sidewalk along Pine Street. Any curbing or sidewalk disturbed during construction is to be repaired and rebuilt as necessary in conformance with City standards.

c. Not applicable

d. Not applicable

C. Public Transit Access:

1) Not applicable.

2) Not applicable.

3) Not applicable.

D. Parking:

1) Vehicular Parking

a. The proposed project will provide 18 parking spaces, which is anticipated to meet the requirements of the proposed uses within the new building.

b. A parking study is not required.

c. Not applicable.

d. The parking space and aisle dimensions are in conformance with the Technical Standards. Please refer to the Site Plan for more information.

2) Location and Required Number of Bicycle Parking Spaces:

a. The site plan includes an interior bicycle storage room of approximately 10 bicycles spaces. Additional indoor storage is available within the units themselves.

b. Not applicable

3) Snow Storage:

a. The Owner will be responsible for managing snow at their discretion and/or coordinating snow removal from the site when necessary. The large majority

of the site will be structure and the parking lot will be covered therefore snow plowing for this site is not required. Additionally, the rear 10' of the parcel is proposed to be landscape area and can be utilized to store a small amount of snow if required.

b. Snow storage areas will not encroach on parking, walkways, or stormwater management systems.

4) Electric Vehicle (EV) charging

a. The project will provide EV charging per the City Standards.

E. Transportation Demand Management (TDM):

1) A Transportation Demand Management (TDM) plan will not be required as part of this application.

14.6.2 Environmental Quality Standards

A. Preservation of Significant Natural Features:

1. The site does not consist of any significant natural features. There are no known endangered species or plants existing on the site.

2. Not applicable

3. Not applicable

B. Landscape Preservation:

1) The site will no disturb any significant natural features.

2) There is no existing vegetation on site.

3) There is one existing tree located in the back left of the lot to remain.

4) A waiver is not requested.

5) Not applicable.

C. Site Landscaping and Buffers

1) Within the B1 zone, shade trees or plantings will be installed per the City of Portland Technical Manual standards.

2) Buffers

   a. All solid waste will be indoors and out of site from the public way.

   b. Not applicable

   c. The existing buffers are to remain or be replanted along all residential abutters.

3) Parking Landscaping

   a. Not applicable

   b. Not applicable

   c. Not applicable

4) Street Trees

   a. One street tree is proposed to be removed and replaced as part of the proposed project.

   b. Not applicable.

D. Water Quality, Stormwater Management and Erosion Control:

a. The site drainage will not be directed to flow or pond onto adjacent lots. The runoff created from the site will be collected, attenuated, and released at a rate that does not exceed the existing condition.

b. Provisions are in place to ensure stormwater from the development will not exceed the pre-development flows.

c. Not applicable

d. A site-specific Stormwater Management Plan has been developed for the project to show compliance with Section 5 of the Technical Manual, including the basic standards of MEDEP Chapter 500. Please refer to sections J and K, the Erosion & Sedimentation Control and Stormwater Management Plans, respectively, for more information.

e. The development is not anticipated to pose a contamination risk to groundwater during or after construction. The project will be serviced by a public wastewater system. The development will provide for adequate and sanitary disposal of sewage in accordance with adequate the Technical Manual.

14.6.3 Public Infrastructure and Community Safety Standards

A. Consistency with City Master Plans:

a. The project has been designed to be consistent with the City's Zoning Ordinance and off-site infrastructure.

b. Not applicable.

B. Public Safety and Fire Prevention:

a. The site has been designed to promote safe and inviting public access.

b . Emergency access has been provided. Fire trucks and ambulances will be able to access all of the site and buildings.

C. Public Utilities

a . Requests for Ability to Serve letters have been sent to the respective companies. Responses are forthcoming.

b . The electrical service will be wired underground via a new pole mounted transformer as shown on the Utility Plan.

c . The new sewer and stormwater infrastructure will meet the provisions of the Technical Manual.

d . The project will be served by connection to the public sewer system within Pine Street. The stormwater management system is designed to meet the standards of Chapter 500.

e . Although not required, the project anticipates providing internal solid waste storage with private hauling of the waste.

16.4.4 Site Design Standards

A. **Massing, Ventilation and Wind Impact**:

a. Please refer to Section O, Architectural Design Narrative.

B. Shadows:

a. The shadows created by the building will not influence public open spaces.

C. Snow and Ice Loading:

a. The structure will not distribute snow and ice onto adjacent properties.

D. View Corridors:

a. Not applicable

E. Historic Resources:

a. The development is not located in a historic district, historic landscape district or City designated landmark.

b. The development is not located adjacent to designated landmarks, historic district, or historic landscape district.

c. It is our understanding that there are no known archaeological resources that exist on site.

F. Exterior Lighting:

a. Site Lighting

i. Exterior lighting will be designed to meet the requirements of Section 12 of the Technical Manual.

ii. Any lighting that may adversely impact the abutting residential properties will feature house-side shielding.

b. Architectural and Specialty Lighting

i. No architectural or specialty lighting is proposed, at this time.

ii. No up-lighting is proposed, at this time.

c. Street Lighting

i. No new street lights are proposed.

G. Noise and Vibration:

a. All proposed heating, ventilation and air conditioning equipment, and emergency generators are to meet the applicable state and federal emissions requirements as defined by the Architect. They are to be located within the interior of the site or the top of the building and will also be screened when necessary.

H. Signage and Wayfinding:

a. All street and wayfinding signage shall meet the requirements of the

Manual on Uniform Traffic Devices (MUTCD) and Division 22 of the City Code.

i. The project is not located in a historic district or subject to Article IX.

ii. Signage will complement the subject building and its immediate context.

iii. Signage will only be related to vehicular access.

iv. Signage will be facing downwardly to avoid glare and light spillover towards the sky.

v. No proposed signs will be located along rooftops.

b. All street and wayfinding signage shall meet the requirements of the Manual on Uniform Traffic Devices (MUTCD) and Division 22 of the City Code.

I. Design Standards.

a. The project has been designed to meet the standards set forth in the B1 zone. Please refer to the Site Plan for more information on the Space & Bulk Standards.

A C O R N
ENGINEERING, INC.

STORMWATER MANAGEMENT REPORT

Prepared For:

64 Pine Street LLC
104 Washington Avenue
Portland, Maine 04101

Prepared By:

Acorn Engineering, Inc.
PO Box 3372
Portland, Maine 04104

STATE OF MAINE
SAMUEL J. LEBEL
No. 16505
LICENSED
PROFESSIONAL ENGINEER
2/22/24

November 2023
Rev. February 2024

INTRODUCTION

Acorn Engineering, Inc. has been retained by 64 Pine LLC to provide civil engineering services for the proposed redevelopment of 64 Pine Street. The property consists of approximately 0.23 acres of land to be transformed into a 4-story building containing 9 residential units and a retail space on the ground floor. The project will reside at Map 56, Block C, Lots 002 & 004.

A stormwater analysis was prepared to demonstrate that the project will meet the requirements set forth by Maine DEP Chapter 500 Basic and General Standards and the following requirements from the City of Portland (the City):

- City of Portland Land Use Ordinance Article 14.6.2.D.
- City of Portland Technical Manual – Section 5 – Portland Stormwater Management Standards and Maine DEP Chapter 500 Stormwater Management.

EXISTING CONDITIONS

The project site has frontage on Pine Street. A boundary plan has been prepared by R.W. Eaton Associates, dated June 1st, 2023. The site primarily consists of an existing restaurant with a paved parking area.

The existing lot contains a single-story restaurant building. The grades are relatively flat (less than 5%) across the site with half the lot draining to the rear of the site and the other half draining toward the front of the site toward Pine Street.

PROPOSED DEVELOPMENT

The project features the redevelopment of one mixed-use building with 1 commercial unit and a total of 9 dwelling units. The site will feature covered parking, landscaping, and utility improvements.

The development will be served by the Portland Water District, underground power/cable/communications, natural gas and the municipal sewer system. The project anticipates incorporating Maine DEP approved stormwater Best Management Practices (BMP) to meet the General and Flooding Standards.

GENERAL STANDARDS – WATER QUALITY

All treatment BMPs proposed as part of this development were designed in accordance with The Maine Stormwater Management Design Manual Chapter 7.3 and 7.7.

Treatment Area

Due to the project resulting in less than 1,000 SF or greater of impervious area and less than 5,000 SF of redeveloped non-roof impervious area, treatment is not required as part of this project. However, it should be noted that a green roof is anticipated to be incorporated into

the building which would provide some level of water quality treatment. Please see the roof plans prepared by the architect and landscape architect for additional information.

FLOODING STANDARD – WATER QUANTITY

To meet the City's requirement of providing on-site detention volume for the greater volume of either 1" of rainfall times the impervious area within the project or the projected average 24 hour daily sanitary sewer flow being added to the combined sewer system will be provided using storage modules (R-Tanks). Only 263 CF is required storage for the addition of sanitary sewer flow, while 695 CF is required for 1" of rainfall times the impervious area as seen in Table 1 & 2 below. Through a series of roof drains, gutters, and a downspout, two thirds of the roof is proposed to be routed to 58 storage modules (R-Tanks) that will sit above crushed stone to provide storage before being collected by an orificed-controlled underdrain and piped to the street.

Table 1: Required Detention Volume				
	Existing	Proposed	Total Net Change	Storage Requirement
Projected 24 hour daily sanitary flows:	660 GPD	2,590 GPD	1,930 GPD	263 CF

Table 2: Required Detention Volume		
	Impervious Area Proposed	Storage Requirement
Projected 1" of rainfall times impervious area	8,535 SF	711 CF

The project proposes 58 subsurface R-Tanks to provide storage for the increased sewer flow of 695 CF to reach the city's requirement. It should be noted that the stormwater detention design is based on storing the increased sewer flows (per Table 1 above), as such the project is observing the 1" storm and routing 2/3 of the roof's runoff to the storage BMP onsite.

Table 3: Proposed Detention Volume	
Number of R-Tanks	Total Storage
58	715 CF

The proposed project was modeled using HydroCAD to verify that the post-development conditions do not exceed the pre-development conditions. A 24-hour SCS Type III storm distribution for the 2, 10, and 25-year storm events were used. The corresponding rainfall amounts for these storms are 3.10", 4.60", and 5.80" respectively.

Due to the numerous variables, and inherent inaccuracies with the modeling program used to calculate stormwater runoff it is custom at Acorn Engineering to round to the nearest whole number. However, due to the small size of the project and the minimal existing flows, the stormwater runoff shall be rounded to the nearest tenth of a cubic feet per second (cfs).

Time of Concentration (Tc)

The times of concentration for subcatchments in both the pre and post conditions were calculated by entering the flow path with the associated ground cover and slopes. HydroCAD then calculated the Tc's and incorporated the total Tc for each subcatchment into the model. When the calculated Tc was less than six minutes (0.1 hours), a direct entry of six minutes was used as advised by the TR-55 model. Consistent with previous submissions and best practices, the sheet flow length for any Tc path was capped at 100 feet.

Curve Number (CN)

Within the pre-development model, the vegetated areas were considered fair grass, and impervious areas consisted of either roof of existing building or pavement from parking lot.

Pre-Development

- Pavement, Roofs – CN 98
- 50-75% Grass Cover – Fair, HSG A – CN 49

Post-Development

- Pavement, Brick, Roofs – CN 98
- >75% Grass Cover (new landscaping) – Good, HSG A – CN 39

Pre-development Calculations

The pre-development model was broken into two separate subcatchments.

- Subcatchment 1 – This tributary includes the Northwestern side of the paved parking lot and the roof of the existing building. This area drains toward Pine Street.
- Subcatchment 2 – This tributary area includes the southeastern side of the paved parking lot adjacent to the existing building. This area drains toward the rear of the parcel away from Pine Street.

A pre-development watershed map developed for this project can be viewed in Attachment A and a copy of the HydroCAD calculations is included within Attachment C, of this report. Point of interest flow rates for the two sub catchments outlined above are as follows:

Table 4 – Pre-Development Point of Interest Flows

POI #	1" Storm Event (cfs)	2-Year Storm Event (cfs)	10-Year Storm Event (cfs)	25-Year Storm Event (cfs)
POI – 1 (Runoff to Pine Street)	0.14	0.47	0.71	0.89
POI – 2 (Runoff toward rear of parcel)	0.04	0.18	0.28	0.36

Total combined peak flow rates for the pre-development storm events are as follows:

Table 5 – Pre-Development Peak Stormwater Flows			
Drainage Area	2-Year Storm Event (cfs)	10-Year Storm Event (cfs)	25-Year Storm Event (cfs)
Total Runoff	0.66	0.99	1.26

Post-development Calculations

The post-development model was broken into three separate sub catchments.

- Subcatchment 1 – This tributary includes all of the new structures roof. This subcatchment will be directed to the proposed subsurface storage system onsite and ultimately be directed to Pine Street.
- Subcatchment 2 – This tributary includes the north, west, and south sides of the building. An f-basin will be utilized in the rear of the parcel to direct the stormwater to Pine Street.
- Subcatchment 3 - This tributary includes the east side of the building. This subcatchment will be directed to the proposed subsurface storage system onsite and ultimately be directed to Pine Street.

Total Peak flow rates for the post-development storm events are as follows:

Table 6 – Post-Development Peak Stormwater Flows			
Drainage Area	2-Year Storm Event (cfs)	10-Year Storm Event (cfs)	25-Year Storm Event (cfs)
Total Runoff	0.21	0.85	1.09

The post-development calculations include changes to the land use and the compensation provided by the stormwater BMPs. It should be noted that the post development is eliminating the runoff to the rear of the site (predevelopment POI #2) and as a result is minorly increasing the post development flow rate to Pine Street in comparison to the pre-developed condition. However, total peak flow rates in the post development are reduced in comparison to the total predevelopment flow rates for the 2,10,25-year storms.

The following table represents a comparison of pre- development and post-development condition peak runoff rates for the proposed development and tributary area.

Table 7 – Comparison of Peak Flows						
POI	2-Year Storm Event (cfs)		10-Year Storm Event (cfs)		25-Year Storm Event (cfs)	
	Pre	Post	Pre	Post	Pre	Post
Total Runoff	0.66	0.21	0.99	0.85	1.26	1.09

A post-development watershed map developed for this project can be viewed in Attachment B, and a copy of the HydroCAD calculations is included within Attachment C of this report.

SOILS

Onsite soil information includes the following:

- Soil Conservation Service Medium Intensity Soil Survey for Cumberland County
- United States Department of Agriculture Web Soil Survey

Given the soils information, listed above, no onsite wastewater is proposed; the applicant does not intend to perform a more intense hydric soil boundary delineation because the waiver requirements set forth in the City of Portland Technical Manual – Section 7 – Soil Survey, Rev. 6/17/11 are met.

The area within and surrounding the project includes soil types listed in the table below. The susceptibility of soils to erosion is indicated on a relative "K" scale of values over a range of 0.02 to 0.69. Higher "K" values indicate more erodible soils.

Table 8 - "K" Value		
Soils Type	**Subsurface**	**Substratum**
Hinkley Loamy Sand (HIB)	.17	.17

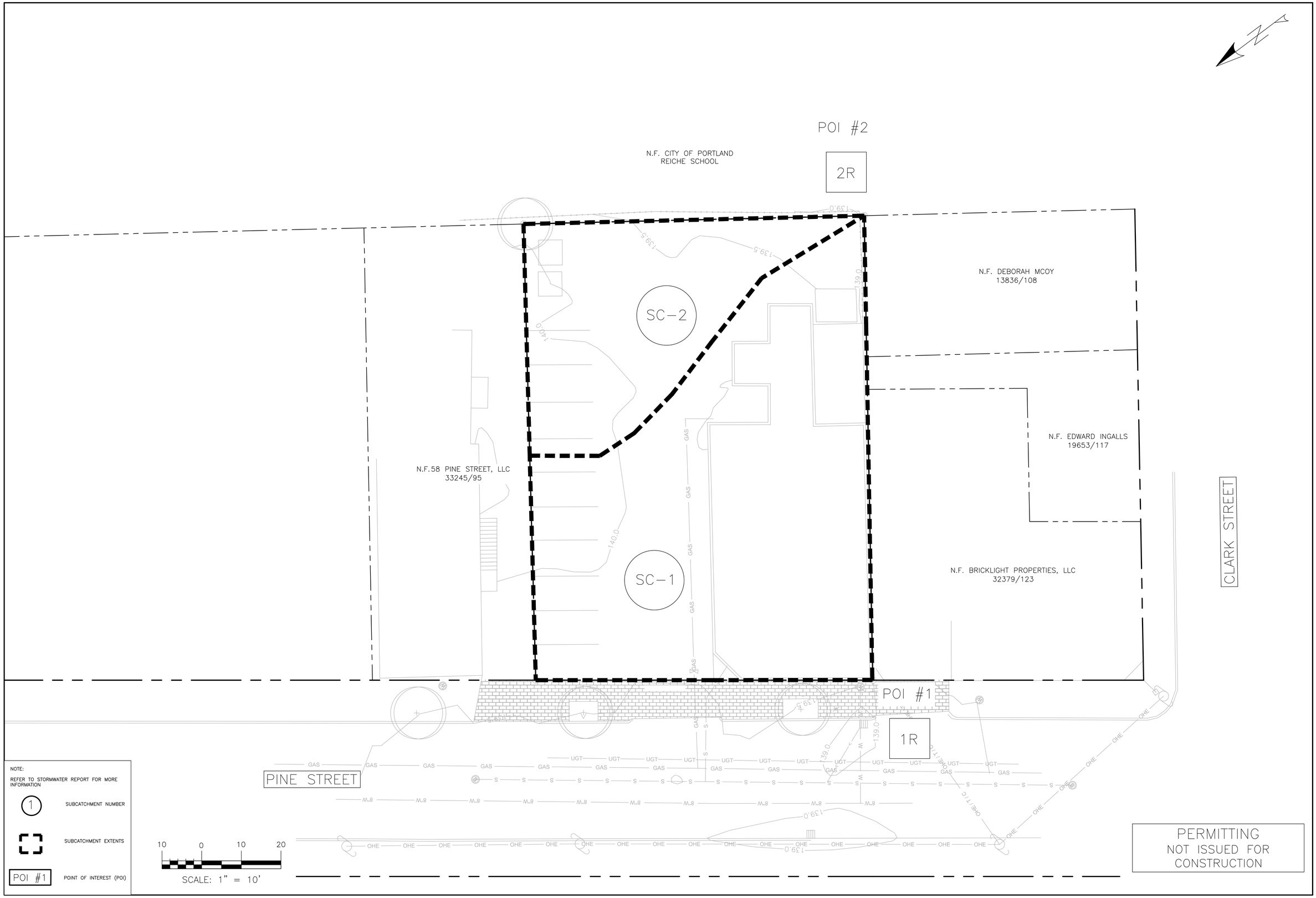
The soil "K" value for the soil, listed above, shows a low susceptibility to erosion. The site's susceptibility to erosion is sourced from the Soil Conservation Service Medium Intensity Soil Survey for Cumberland County.

CONCLUSION

The proposed development was designed to meet the requirements implemented by the MDEP under the Stormwater Management Statute (38 M.R.S.A. § 420-D) as well as the City of Portland Technical Manual – Section 5 – Portland Stormwater Management Standards. The proposed project as designed is not anticipated to cause flooding or erosion problems within the subject site, abutters' sites, nor within the right-of-way. Overall, the project will provide an improvement to stormwater runoff and overall management from several perspectives as outlined above.

ATTACHMENTS

Attachment A: Pre-Development Watershed Map
Attachment B: Post-Development Watershed Map
Attachment C: HydroCAD Calculations
Attachment D: Medium Intensity Web Soil Survey



ISSUED FOR	BY	DATE
50% DRAWINGS	SJL	9/15/23
DD SET	SJL	11/3/23
MAJOR SITE PLAN	SJL	11/17/23

DRAWING NAME: **PRE MAP**

PROJECT NAME: **64 PINE STREET REDEVELOPMENT**
64 PINE STREET, PORTLAND, MAINE 04012

CLIENT: 64 PINE STREET LLC
104 WASHINGTON AVENUE PORTLAND, MAINE 04101

ACORN ENGINEERING, INC.

THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM ACORN ENGINEERING, INC. ANY ALTERATIONS, AUTHORIZED OR OTHERWISE, SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO ACORN ENGINEERING, INC.

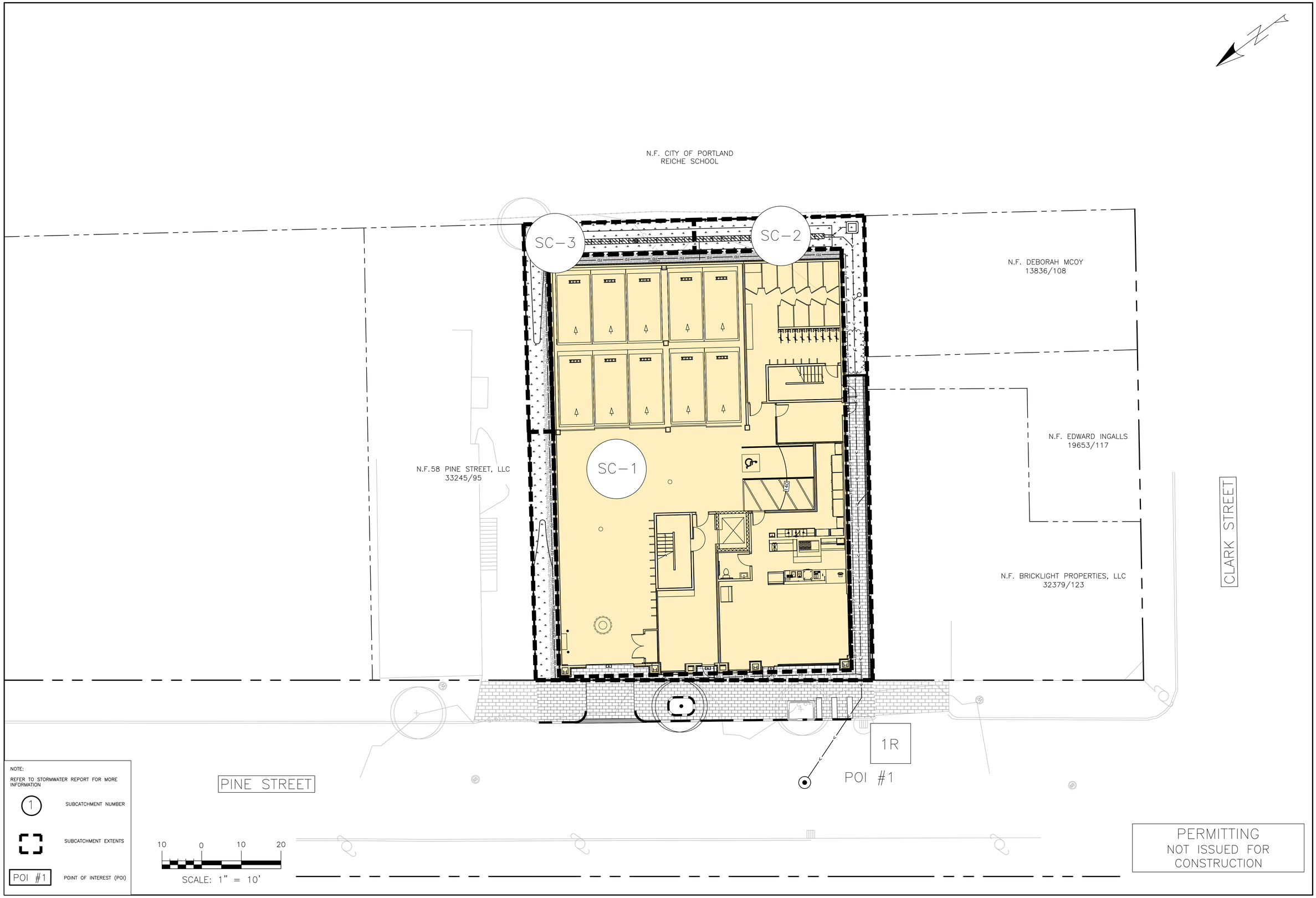
ACORN ENGINEERING, INC.
PO BOX 3372, PORTLAND MAINE 04104
(207) 775-2655

FILE:	1109.4_CIVIL
JN:	1109.4
SCALE:	AS NOTED
DESIGNED BY:	ZMS
DRAWN BY:	BJK
CHECKED BY:	SJL

STATE OF MAINE
SAMUEL J. LEBEL
No. 16505
LICENSED
PROFESSIONAL ENGINEER
11/17/23

DRAWING NO.

PRE



ISSUED FOR	BY	DATE
50% DRAWINGS	SJL	9/15/23
DD SET	SJL	11/3/23
MAJOR SITE PLAN	SJL	12/1/23
COMMENT REPONSE	SJL	2/23/24

DRAWING NAME: **POST MAP**

PROJECT NAME: **64 PINE STREET REDEVELOPMENT**
64 PINE STREET, PORTLAND, MAINE 04012

CLIENT: 64 PINE STREET LLC
104 WASHINGTON AVENUE PORTLAND, MAINE 04101

ACORN ENGINEERING, INC.

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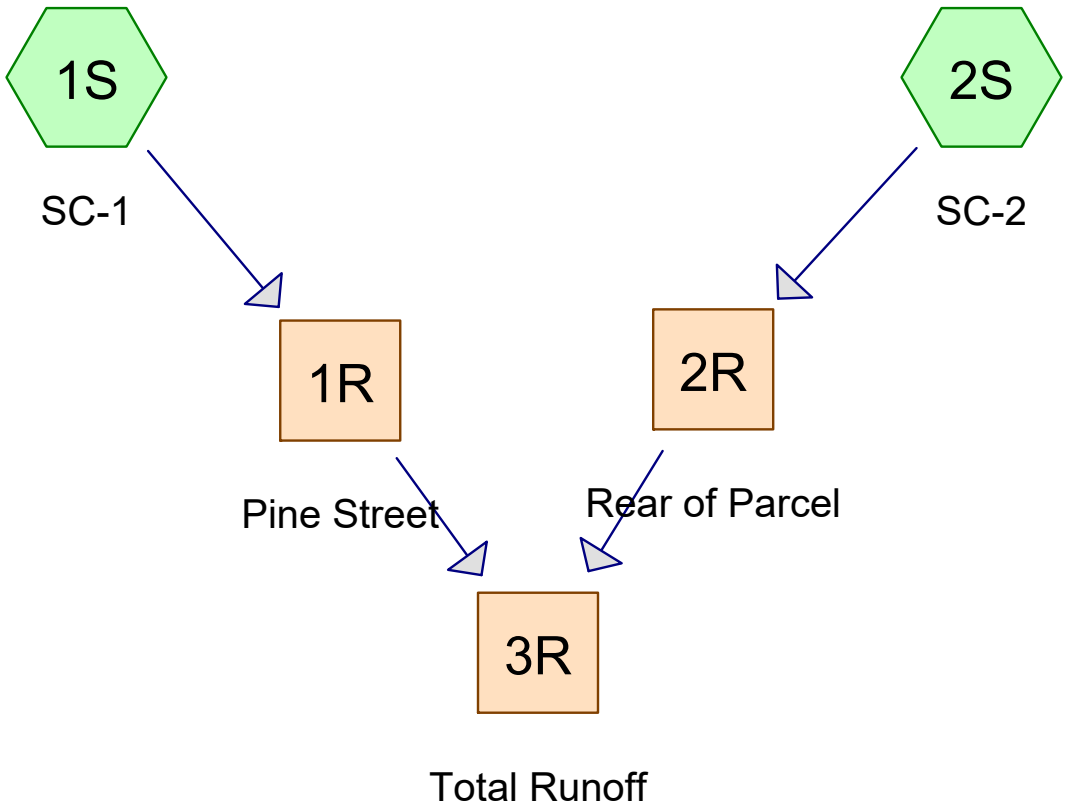
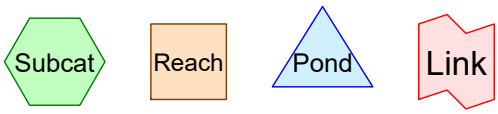
ACORN ENGINEERING, INC.
PO BOX 3372, PORTLAND MAINE 04104
(207) 775-2655

FILE:	1109.4_CIVIL
JN:	1109.4
SCALE:	AS NOTED
DESIGNED BY:	ZMS
DRAWN BY:	BJK
CHECKED BY:	SJL

STATE OF MAINE
SAMUEL J. LEBEL
No. 16505
LICENSED
PROFESSIONAL ENGINEER
2/23/24

DRAWING NO.
POST





Routing Diagram for 1109.4-PRE
Prepared by {enter your company name here}, Printed 2/22/2024
HydroCAD® 10.00-26 s/n 00620 © 2020 HydroCAD Software Solutions LLC

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.005	49	50-75% Grass cover, Fair, HSG A (1S, 2S)
0.160	98	Building & Pavement (1S)
0.063	98	Pavement (2S)
0.228	**97**	**TOTAL AREA**

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.005	HSG A	1S, 2S
0.000	HSG B	
0.000	HSG C	
0.000	HSG D	
0.223	Other	1S, 2S
0.228		**TOTAL AREA**

Ground Covers (all nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.005	0.000	0.000	0.000	0.000	0.005	50-75% Grass cover, Fair	1S, 2S
0.000	0.000	0.000	0.000	0.160	0.160	Building & Pavement	1S
0.000	0.000	0.000	0.000	0.063	0.063	Pavement	2S
0.005	**0.000**	**0.000**	**0.000**	**0.223**	**0.228**	**TOTAL AREA**	

Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: SC-1 Runoff Area=7,021 sf 99.50% Impervious Runoff Depth>2.68"
Tc=6.0 min CN=98 Runoff=0.47 cfs 0.036 af

Subcatchment 2S: SC-2 Runoff Area=2,893 sf 94.19% Impervious Runoff Depth>2.41"
Tc=6.0 min CN=95 Runoff=0.18 cfs 0.013 af

Reach 1R: Pine Street Inflow=0.47 cfs 0.036 af
Outflow=0.47 cfs 0.036 af

Reach 2R: Rear of Parcel Inflow=0.18 cfs 0.013 af
Outflow=0.18 cfs 0.013 af

Reach 3R: Total Runoff Inflow=0.66 cfs 0.049 af
Outflow=0.66 cfs 0.049 af

Total Runoff Area = 0.228 ac Runoff Volume = 0.049 af Average Runoff Depth = 2.60"
2.05% Pervious = 0.005 ac 97.95% Impervious = 0.223 ac

Summary for Subcatchment 1S: SC-1

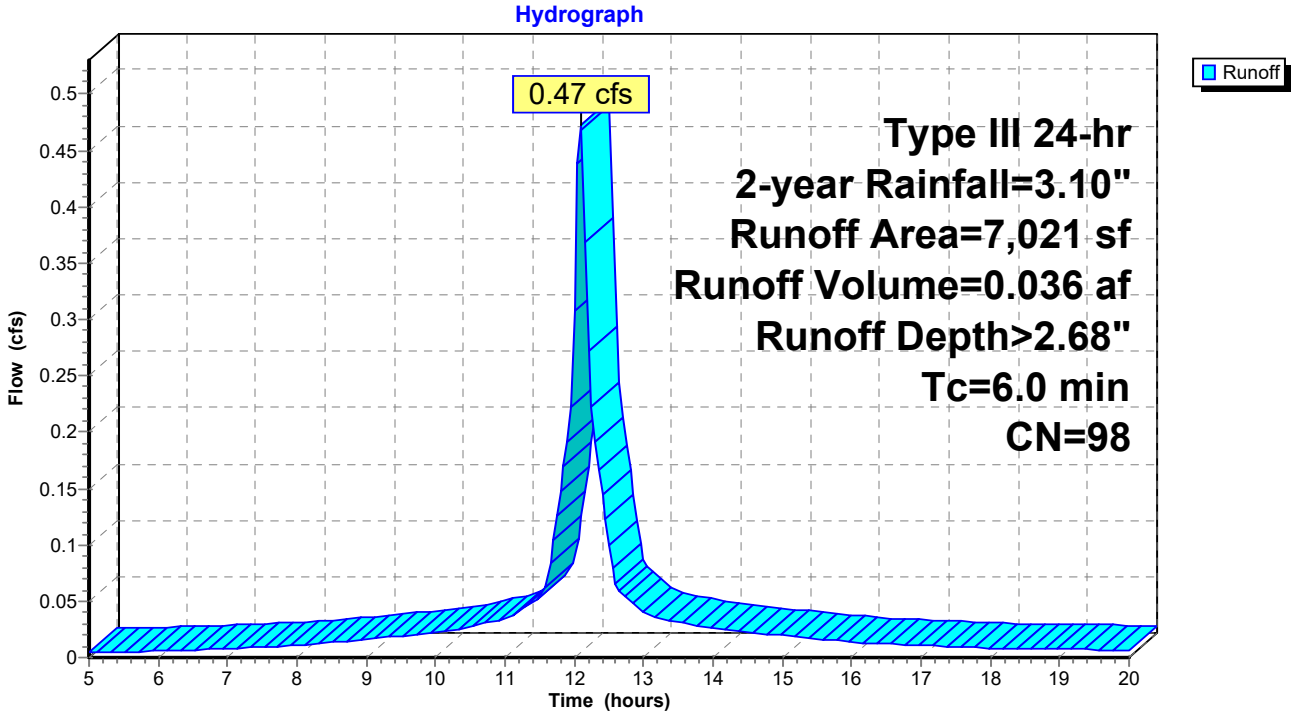
Runoff = 0.47 cfs @ 12.09 hrs, Volume= 0.036 af, Depth> 2.68"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-year Rainfall=3.10"

	Area (sf)	CN	Description
*	6,986	98	Building & Pavement
	35	49	50-75% Grass cover, Fair, HSG A
	7,021	98	Weighted Average
	35		0.50% Pervious Area
	6,986		99.50% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Min Direct Entry**

Subcatchment 1S: SC-1



Summary for Subcatchment 2S: SC-2

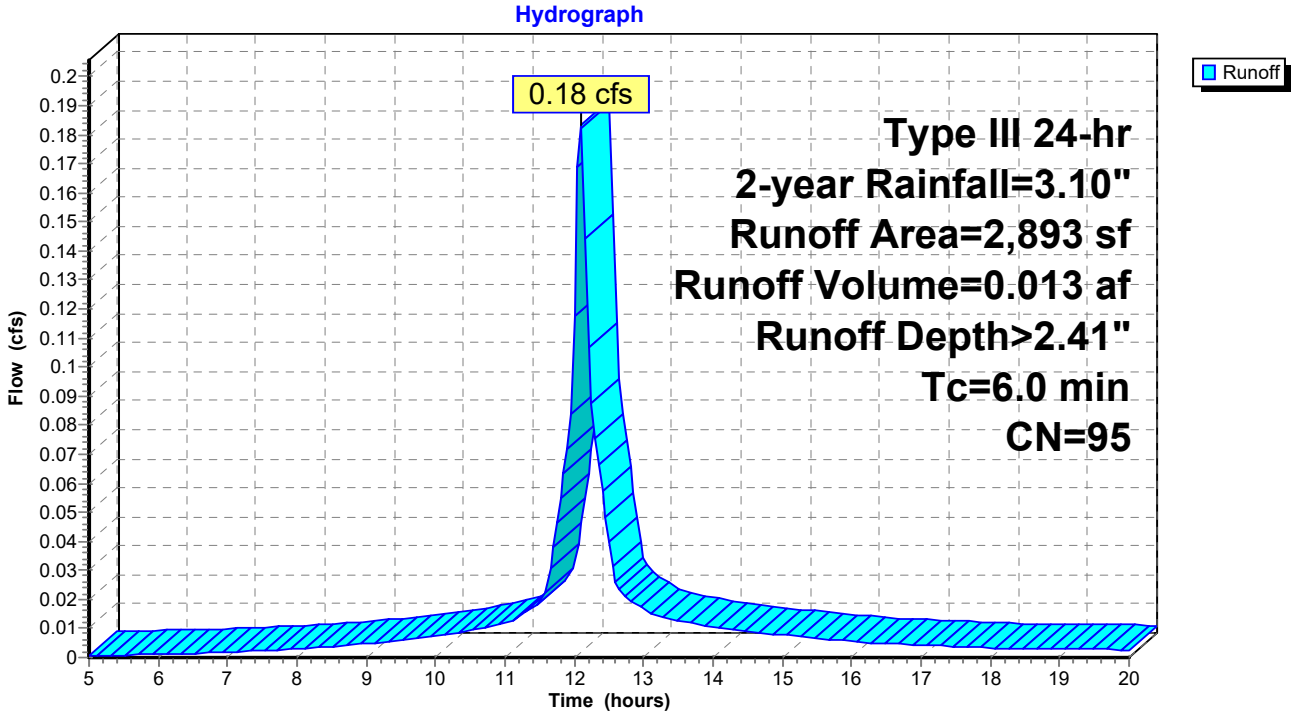
Runoff = 0.18 cfs @ 12.09 hrs, Volume= 0.013 af, Depth> 2.41"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-year Rainfall=3.10"

	Area (sf)	CN	Description
*	2,725	98	Pavement
	168	49	50-75% Grass cover, Fair, HSG A
	2,893	95	Weighted Average
	168		5.81% Pervious Area
	2,725		94.19% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Min Direct Entry**

Subcatchment 2S: SC-2

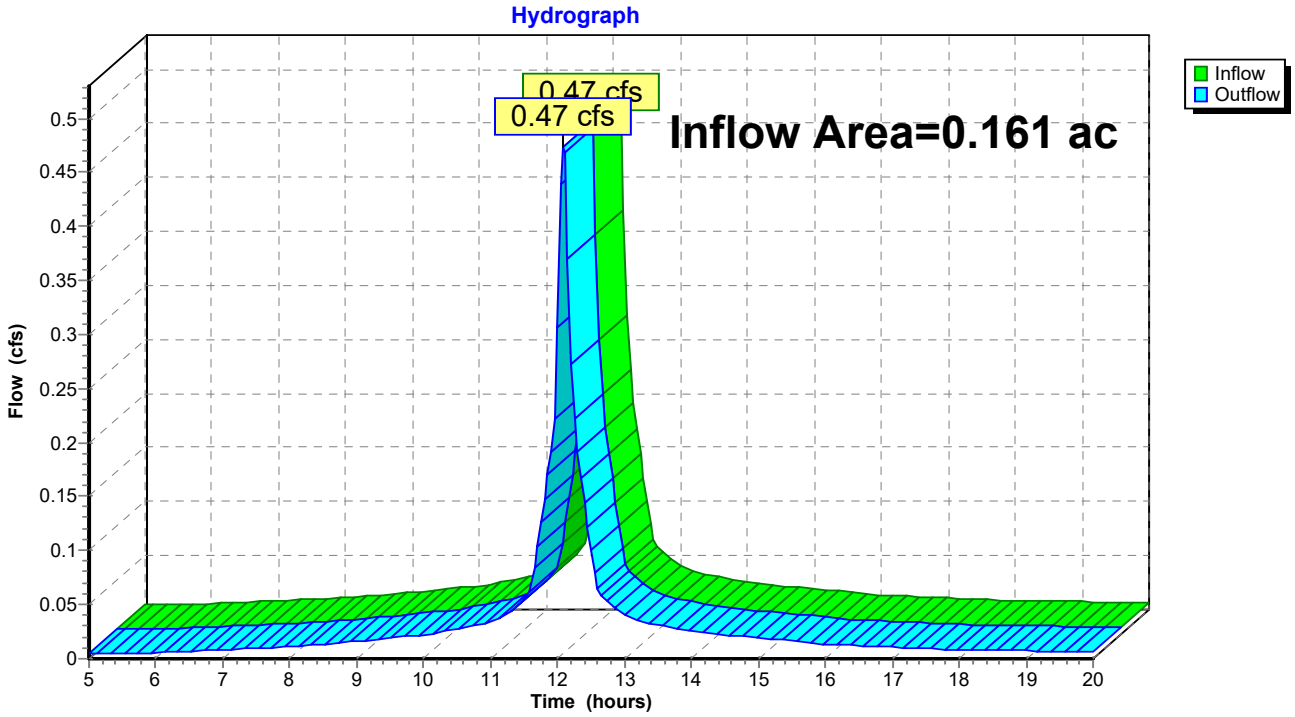


Summary for Reach 1R: Pine Street

Inflow Area = 0.161 ac, 99.50% Impervious, Inflow Depth > 2.68" for 2-year event
Inflow = 0.47 cfs @ 12.09 hrs, Volume= 0.036 af
Outflow = 0.47 cfs @ 12.09 hrs, Volume= 0.036 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Reach 1R: Pine Street

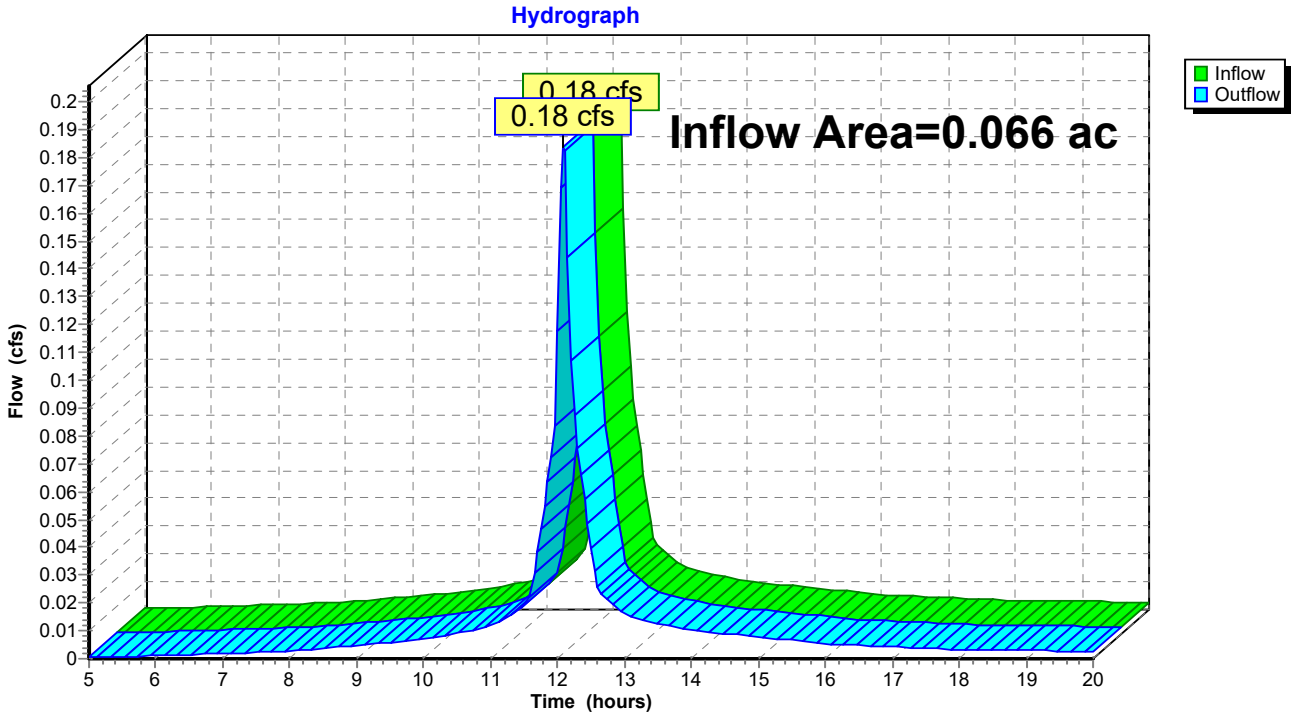


Summary for Reach 2R: Rear of Parcel

Inflow Area = 0.066 ac, 94.19% Impervious, Inflow Depth > 2.41" for 2-year event
Inflow = 0.18 cfs @ 12.09 hrs, Volume= 0.013 af
Outflow = 0.18 cfs @ 12.09 hrs, Volume= 0.013 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Reach 2R: Rear of Parcel

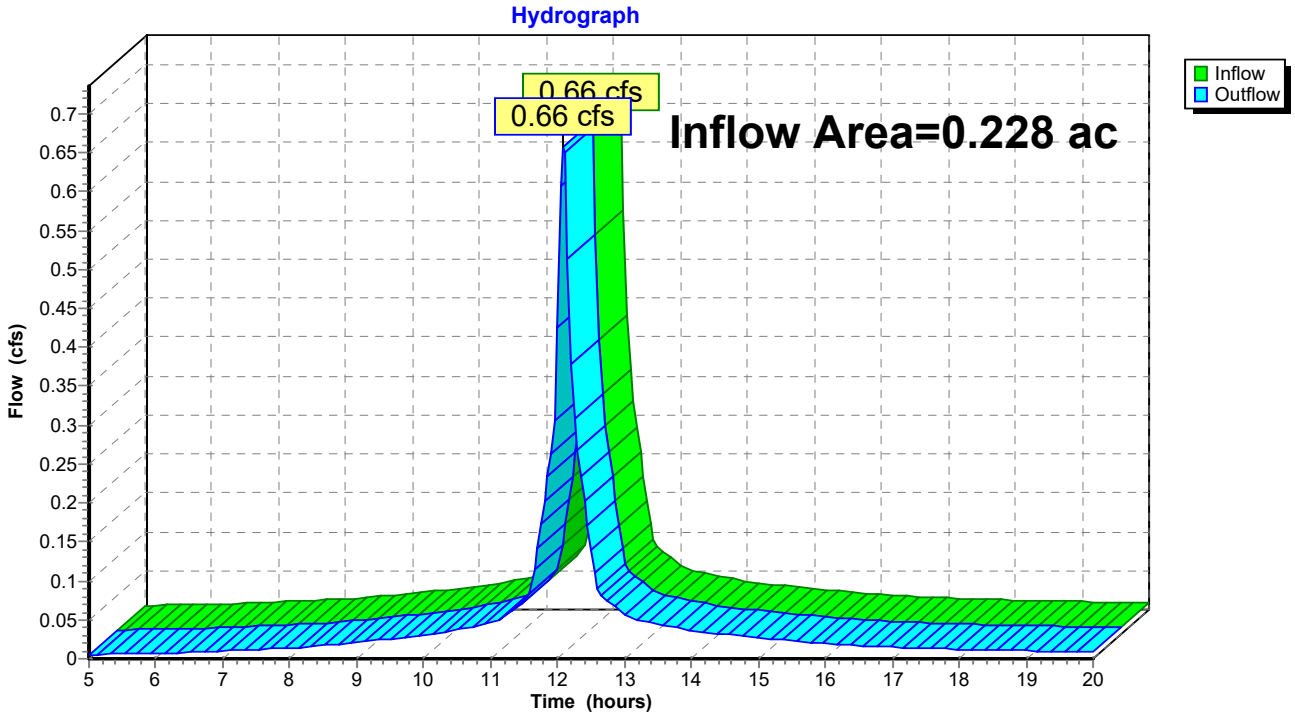


Summary for Reach 3R: Total Runoff

Inflow Area = 0.228 ac, 97.95% Impervious, Inflow Depth > 2.60" for 2-year event
Inflow = 0.66 cfs @ 12.09 hrs, Volume= 0.049 af
Outflow = 0.66 cfs @ 12.09 hrs, Volume= 0.049 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Reach 3R: Total Runoff



Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: SC-1 Runoff Area=7,021 sf 99.50% Impervious Runoff Depth>4.05"
Tc=6.0 min CN=98 Runoff=0.71 cfs 0.054 af

Subcatchment 2S: SC-2 Runoff Area=2,893 sf 94.19% Impervious Runoff Depth>3.79"
Tc=6.0 min CN=95 Runoff=0.28 cfs 0.021 af

Reach 1R: Pine Street Inflow=0.71 cfs 0.054 af
Outflow=0.71 cfs 0.054 af

Reach 2R: Rear of Parcel Inflow=0.28 cfs 0.021 af
Outflow=0.28 cfs 0.021 af

Reach 3R: Total Runoff Inflow=0.99 cfs 0.075 af
Outflow=0.99 cfs 0.075 af

Total Runoff Area = 0.228 ac Runoff Volume = 0.075 af Average Runoff Depth = 3.98"
2.05% Pervious = 0.005 ac 97.95% Impervious = 0.223 ac

Summary for Subcatchment 1S: SC-1

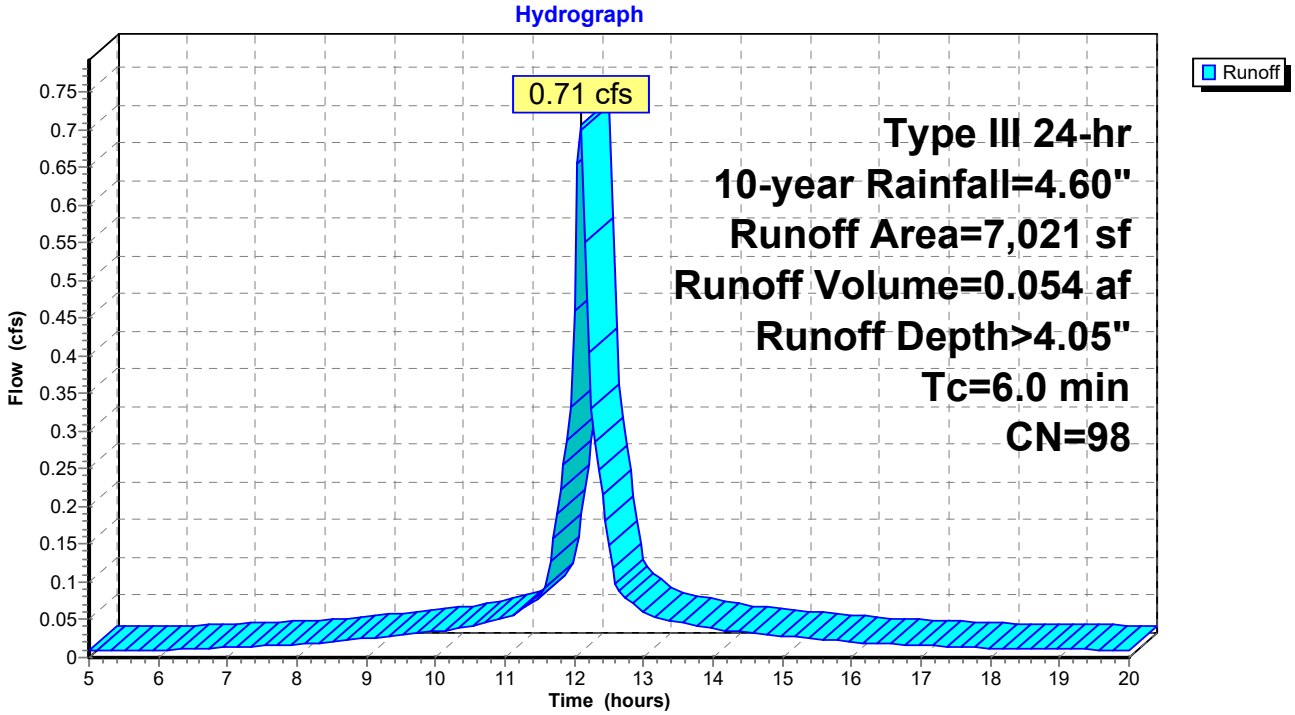
Runoff = 0.71 cfs @ 12.09 hrs, Volume= 0.054 af, Depth> 4.05"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-year Rainfall=4.60"

	Area (sf)	CN	Description
*	6,986	98	Building & Pavement
	35	49	50-75% Grass cover, Fair, HSG A
	7,021	98	Weighted Average
	35		0.50% Pervious Area
	6,986		99.50% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Min Direct Entry**

Subcatchment 1S: SC-1



Summary for Subcatchment 2S: SC-2

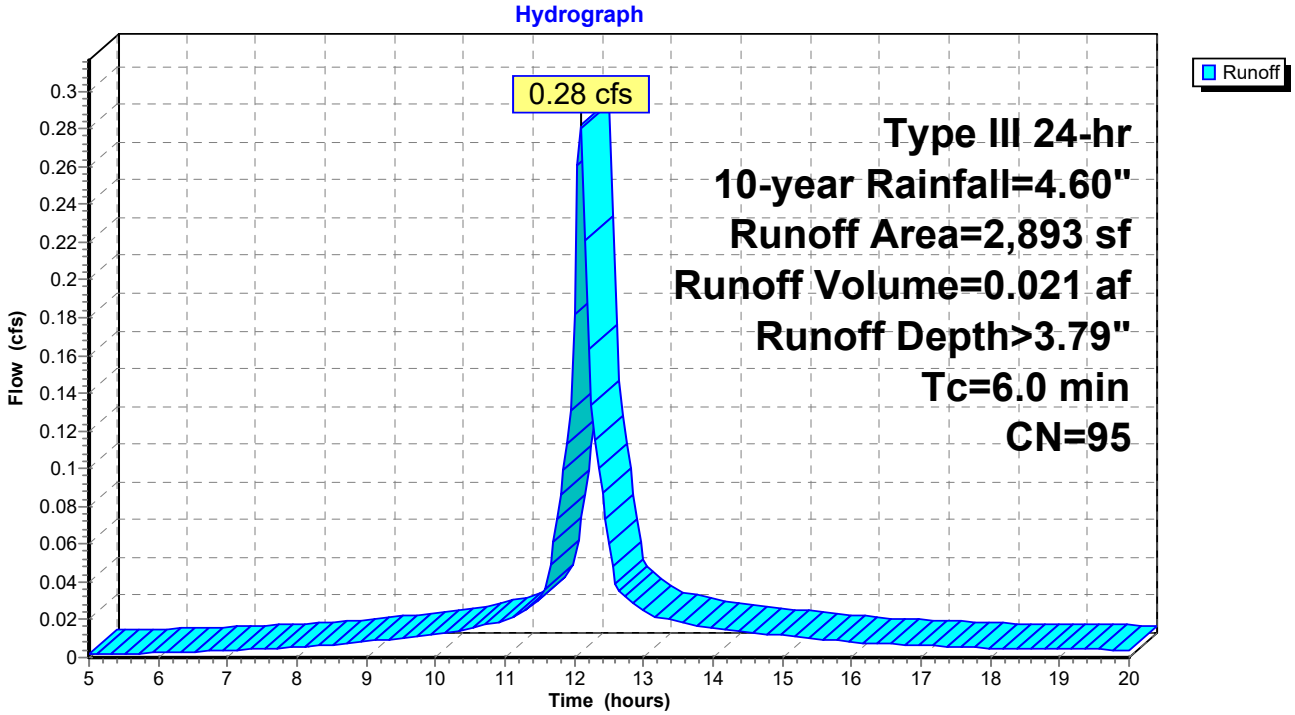
Runoff = 0.28 cfs @ 12.09 hrs, Volume= 0.021 af, Depth> 3.79"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-year Rainfall=4.60"

	Area (sf)	CN	Description
*	2,725	98	Pavement
	168	49	50-75% Grass cover, Fair, HSG A
	2,893	95	Weighted Average
	168		5.81% Pervious Area
	2,725		94.19% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Min Direct Entry**

Subcatchment 2S: SC-2

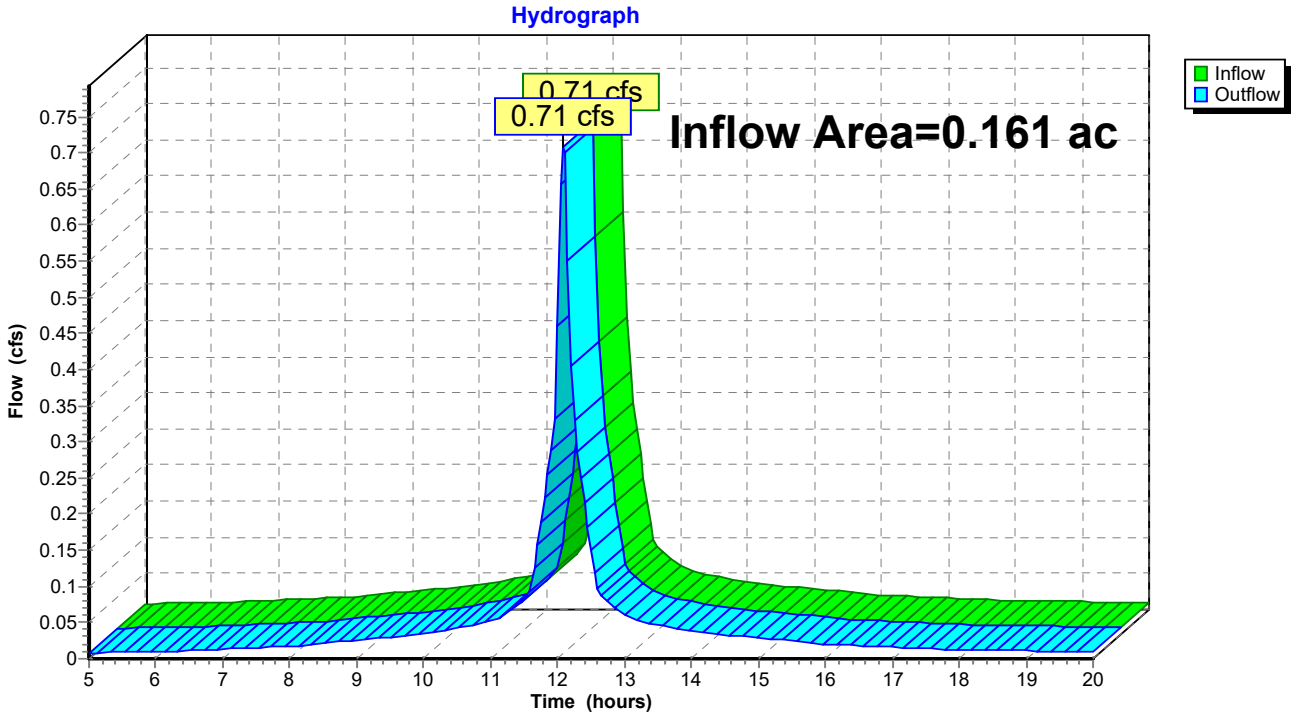


Summary for Reach 1R: Pine Street

Inflow Area = 0.161 ac, 99.50% Impervious, Inflow Depth > 4.05" for 10-year event
Inflow = 0.71 cfs @ 12.09 hrs, Volume= 0.054 af
Outflow = 0.71 cfs @ 12.09 hrs, Volume= 0.054 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Reach 1R: Pine Street

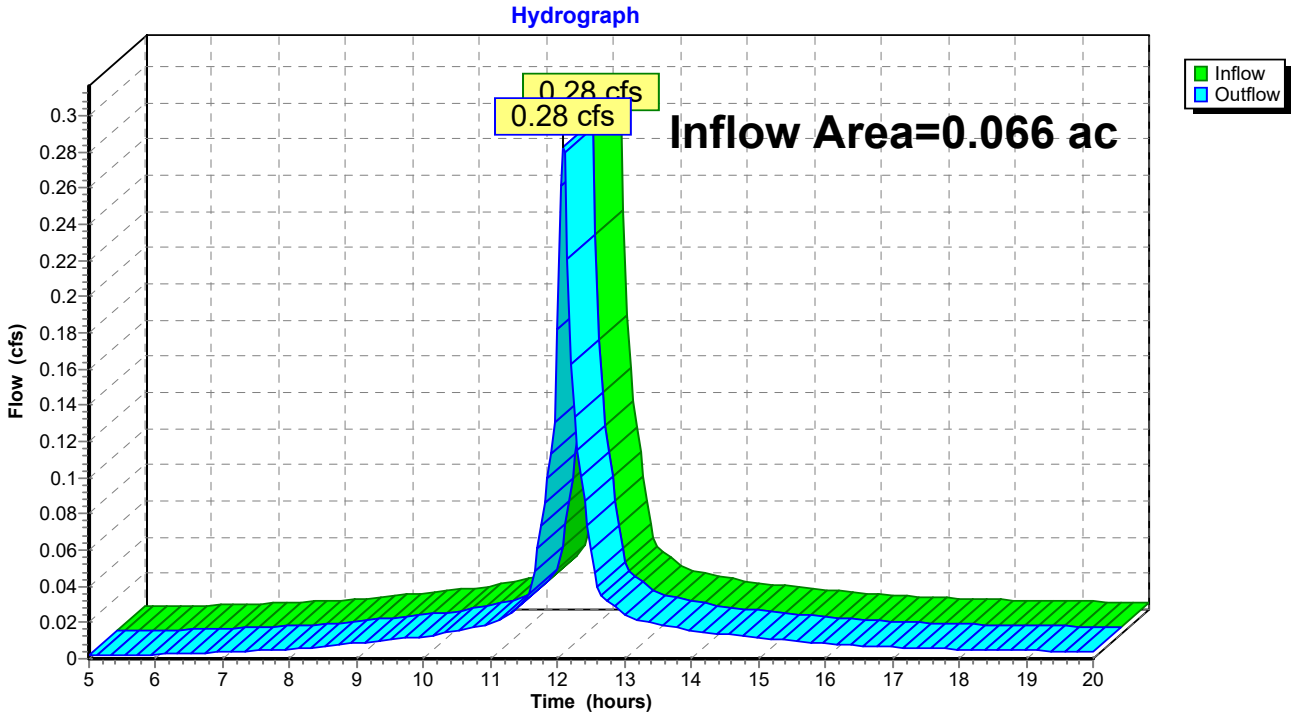


Summary for Reach 2R: Rear of Parcel

Inflow Area = 0.066 ac, 94.19% Impervious, Inflow Depth > 3.79" for 10-year event
Inflow = 0.28 cfs @ 12.09 hrs, Volume= 0.021 af
Outflow = 0.28 cfs @ 12.09 hrs, Volume= 0.021 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Reach 2R: Rear of Parcel

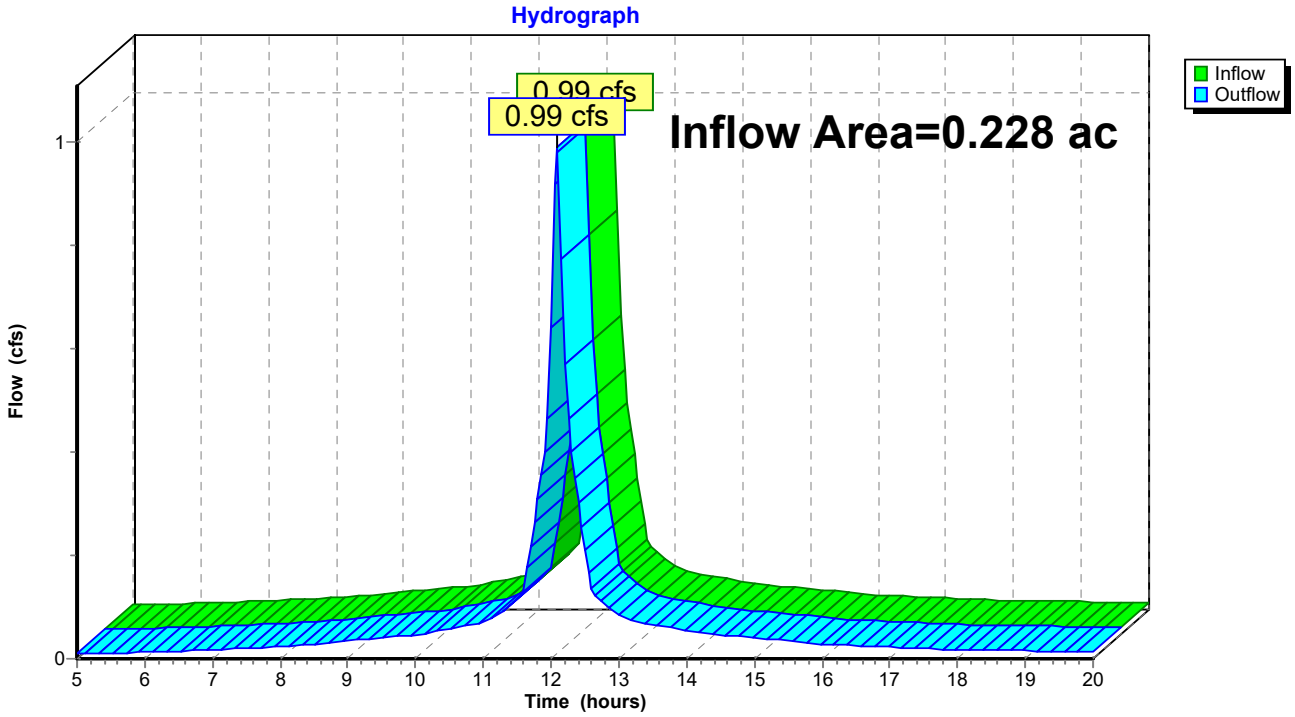


Summary for Reach 3R: Total Runoff

Inflow Area = 0.228 ac, 97.95% Impervious, Inflow Depth > 3.98" for 10-year event
Inflow = 0.99 cfs @ 12.09 hrs, Volume= 0.075 af
Outflow = 0.99 cfs @ 12.09 hrs, Volume= 0.075 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Reach 3R: Total Runoff



Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: SC-1 Runoff Area=7,021 sf 99.50% Impervious Runoff Depth>5.15"
Tc=6.0 min CN=98 Runoff=0.89 cfs 0.069 af

Subcatchment 2S: SC-2 Runoff Area=2,893 sf 94.19% Impervious Runoff Depth>4.90"
Tc=6.0 min CN=95 Runoff=0.36 cfs 0.027 af

Reach 1R: Pine Street Inflow=0.89 cfs 0.069 af
Outflow=0.89 cfs 0.069 af

Reach 2R: Rear of Parcel Inflow=0.36 cfs 0.027 af
Outflow=0.36 cfs 0.027 af

Reach 3R: Total Runoff Inflow=1.26 cfs 0.096 af
Outflow=1.26 cfs 0.096 af

Total Runoff Area = 0.228 ac Runoff Volume = 0.096 af Average Runoff Depth = 5.07"
2.05% Pervious = 0.005 ac 97.95% Impervious = 0.223 ac

Summary for Subcatchment 1S: SC-1

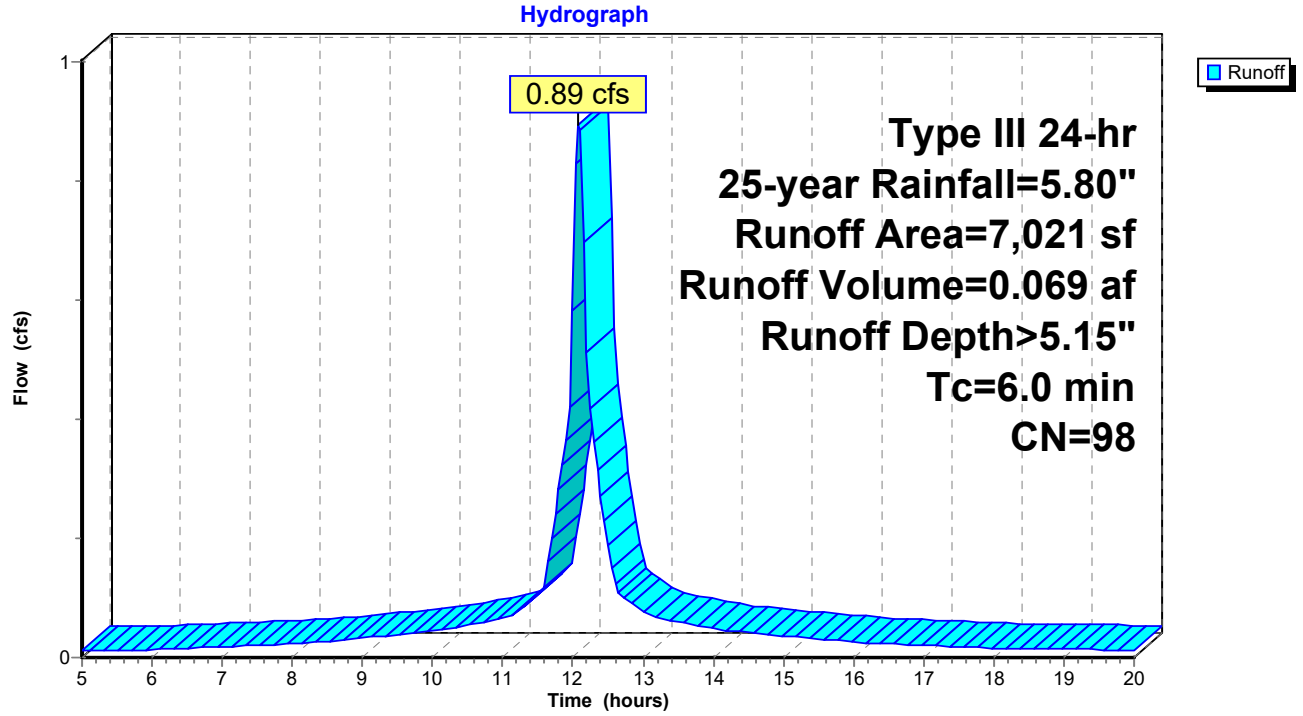
Runoff = 0.89 cfs @ 12.09 hrs, Volume= 0.069 af, Depth> 5.15"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-year Rainfall=5.80"

	Area (sf)	CN	Description
*	6,986	98	Building & Pavement
	35	49	50-75% Grass cover, Fair, HSG A
	7,021	98	Weighted Average
	35		0.50% Pervious Area
	6,986		99.50% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Min Direct Entry**

Subcatchment 1S: SC-1



Summary for Subcatchment 2S: SC-2

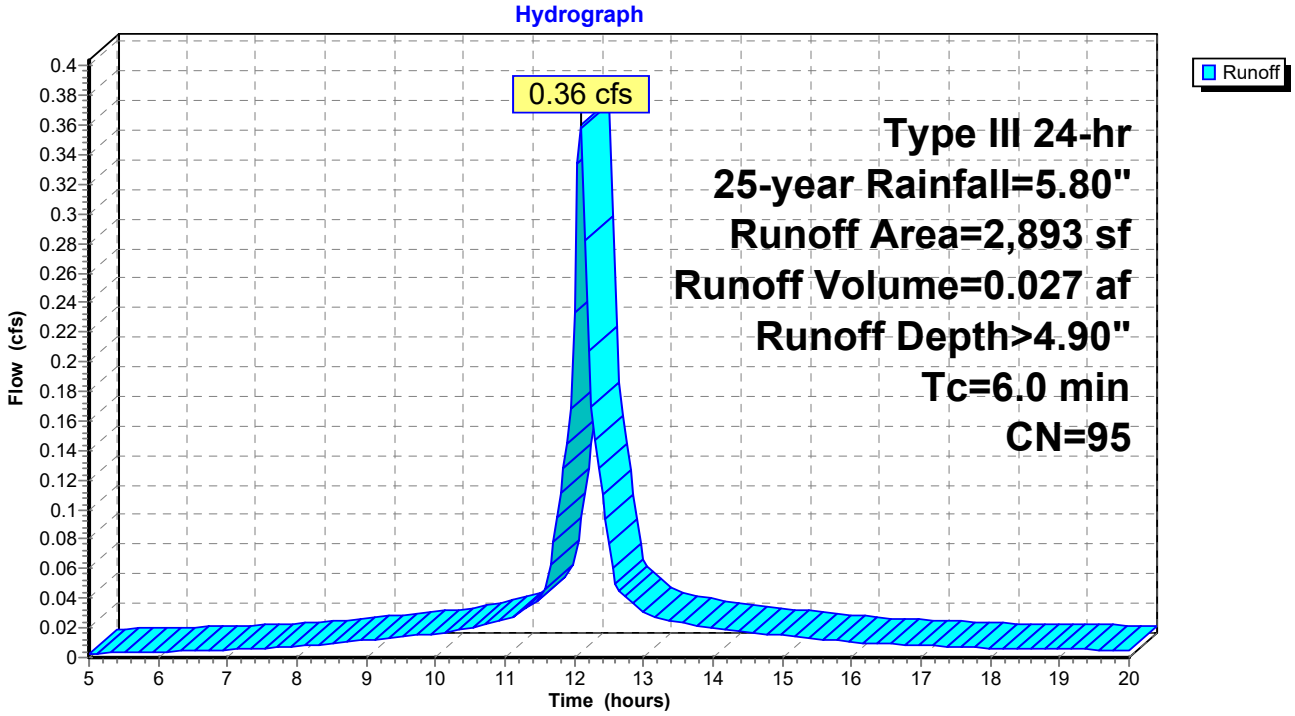
Runoff = 0.36 cfs @ 12.09 hrs, Volume= 0.027 af, Depth> 4.90"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-year Rainfall=5.80"

	Area (sf)	CN	Description
*	2,725	98	Pavement
	168	49	50-75% Grass cover, Fair, HSG A
	2,893	95	Weighted Average
	168		5.81% Pervious Area
	2,725		94.19% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Min Direct Entry**

Subcatchment 2S: SC-2

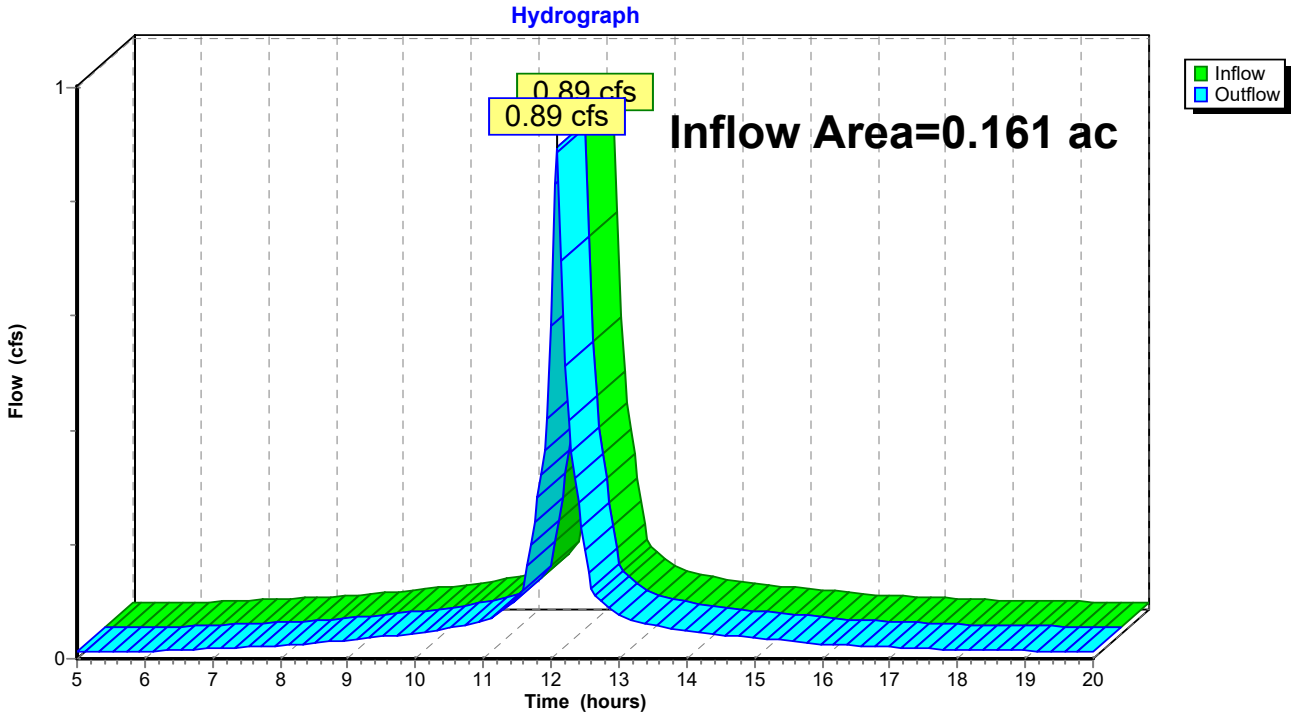


Summary for Reach 1R: Pine Street

Inflow Area = 0.161 ac, 99.50% Impervious, Inflow Depth > 5.15" for 25-year event
Inflow = 0.89 cfs @ 12.09 hrs, Volume= 0.069 af
Outflow = 0.89 cfs @ 12.09 hrs, Volume= 0.069 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Reach 1R: Pine Street

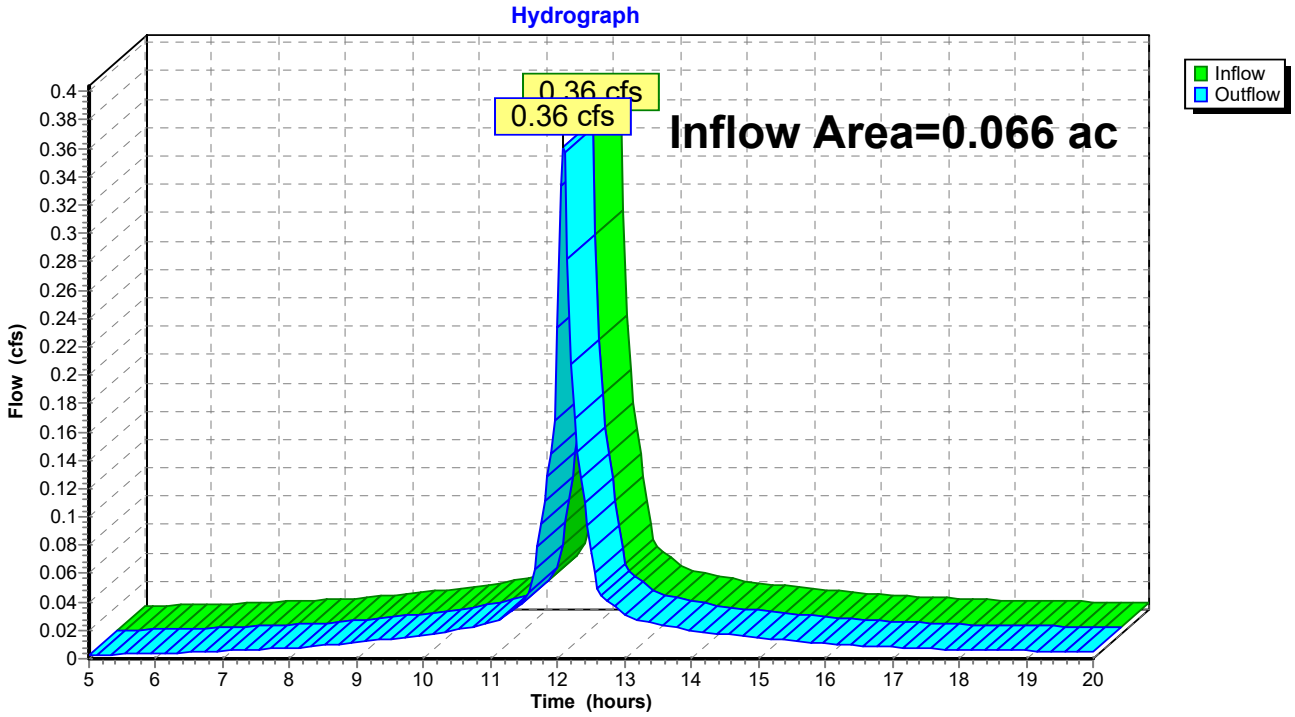


Summary for Reach 2R: Rear of Parcel

Inflow Area = 0.066 ac, 94.19% Impervious, Inflow Depth > 4.90" for 25-year event
Inflow = 0.36 cfs @ 12.09 hrs, Volume= 0.027 af
Outflow = 0.36 cfs @ 12.09 hrs, Volume= 0.027 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Reach 2R: Rear of Parcel

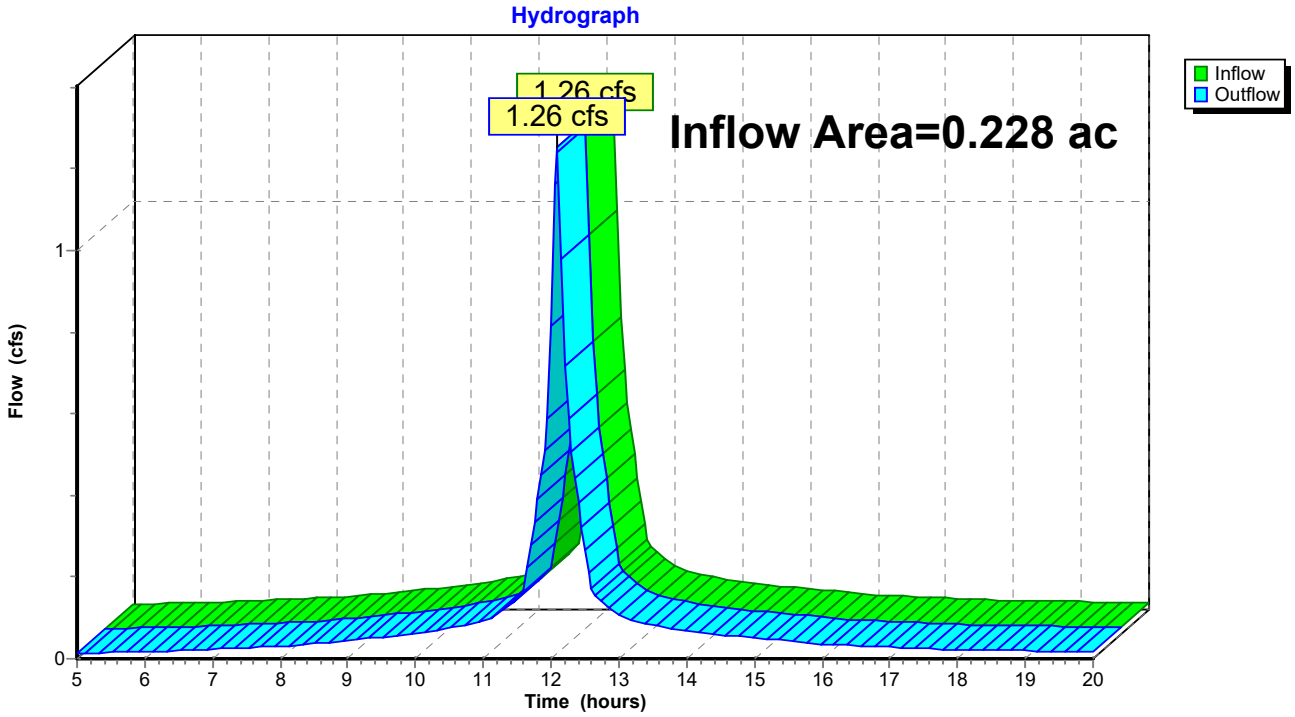


Summary for Reach 3R: Total Runoff

Inflow Area = 0.228 ac, 97.95% Impervious, Inflow Depth > 5.07" for 25-year event
Inflow = 1.26 cfs @ 12.09 hrs, Volume= 0.096 af
Outflow = 1.26 cfs @ 12.09 hrs, Volume= 0.096 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Reach 3R: Total Runoff



Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: SC-1 Runoff Area=7,021 sf 99.50% Impervious Runoff Depth>0.75"
Tc=6.0 min CN=98 Runoff=0.14 cfs 0.010 af

Subcatchment 2S: SC-2 Runoff Area=2,893 sf 94.19% Impervious Runoff Depth>0.53"
Tc=6.0 min CN=95 Runoff=0.04 cfs 0.003 af

Reach 1R: Pine Street Inflow=0.14 cfs 0.010 af
Outflow=0.14 cfs 0.010 af

Reach 2R: Rear of Parcel Inflow=0.04 cfs 0.003 af
Outflow=0.04 cfs 0.003 af

Reach 3R: Total Runoff Inflow=0.18 cfs 0.013 af
Outflow=0.18 cfs 0.013 af

Total Runoff Area = 0.228 ac Runoff Volume = 0.013 af Average Runoff Depth = 0.68"
2.05% Pervious = 0.005 ac 97.95% Impervious = 0.223 ac

Summary for Subcatchment 1S: SC-1

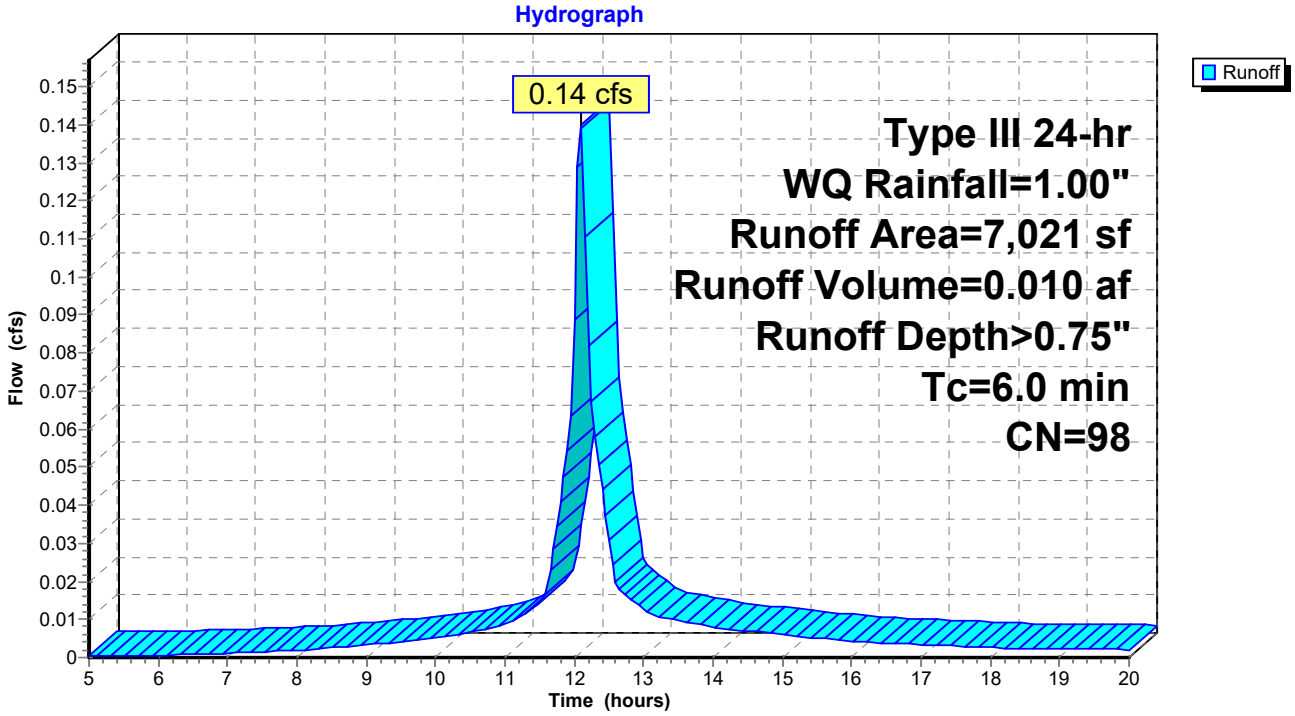
Runoff = 0.14 cfs @ 12.09 hrs, Volume= 0.010 af, Depth> 0.75"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr WQ Rainfall=1.00"

	Area (sf)	CN	Description
*	6,986	98	Building & Pavement
	35	49	50-75% Grass cover, Fair, HSG A
	7,021	98	Weighted Average
	35		0.50% Pervious Area
	6,986		99.50% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Min Direct Entry**

Subcatchment 1S: SC-1



Summary for Subcatchment 2S: SC-2

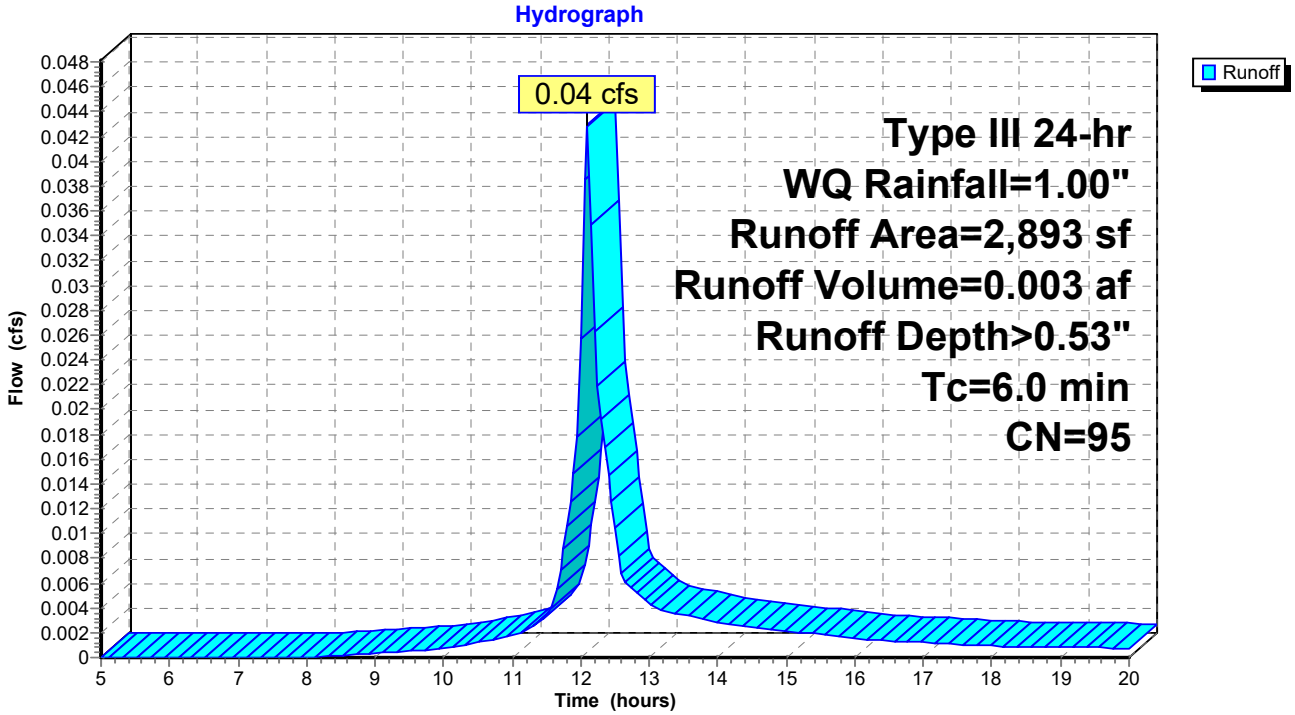
Runoff = 0.04 cfs @ 12.09 hrs, Volume= 0.003 af, Depth> 0.53"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr WQ Rainfall=1.00"

	Area (sf)	CN	Description
*	2,725	98	Pavement
	168	49	50-75% Grass cover, Fair, HSG A
	2,893	95	Weighted Average
	168		5.81% Pervious Area
	2,725		94.19% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Min Direct Entry**

Subcatchment 2S: SC-2

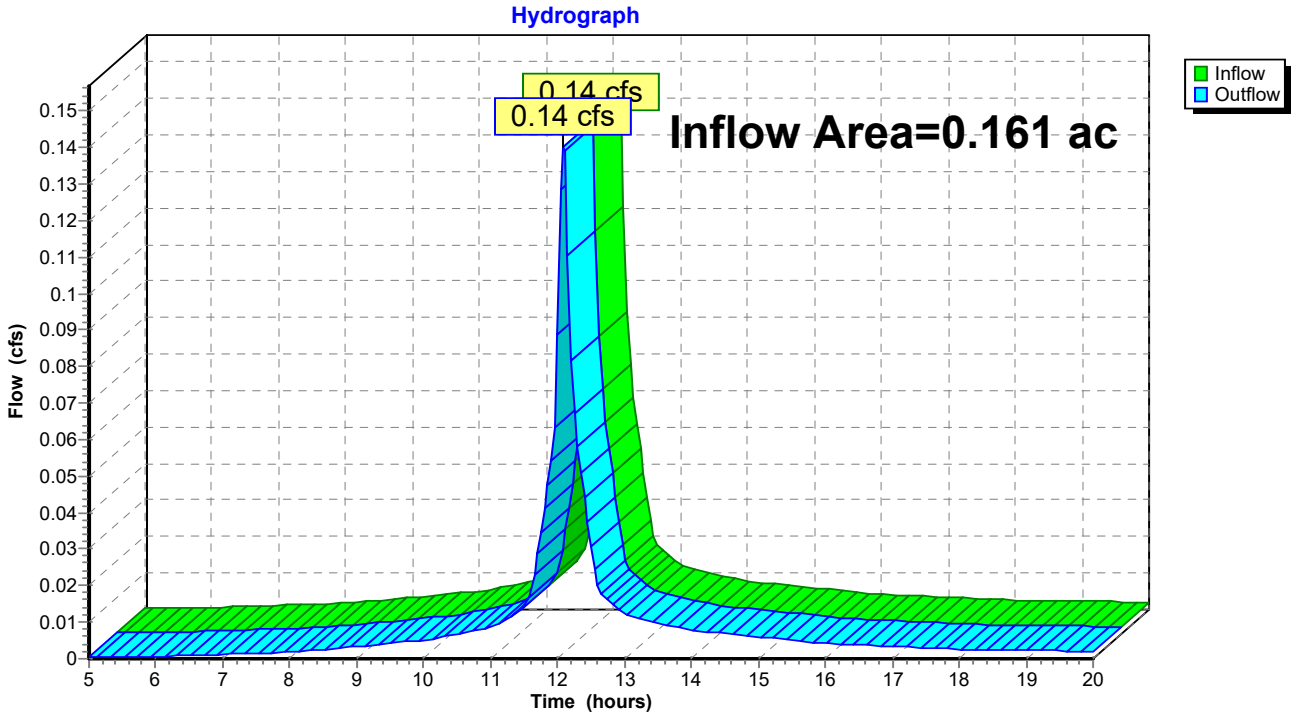


Summary for Reach 1R: Pine Street

Inflow Area = 0.161 ac, 99.50% Impervious, Inflow Depth > 0.75" for WQ event
Inflow = 0.14 cfs @ 12.09 hrs, Volume= 0.010 af
Outflow = 0.14 cfs @ 12.09 hrs, Volume= 0.010 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Reach 1R: Pine Street

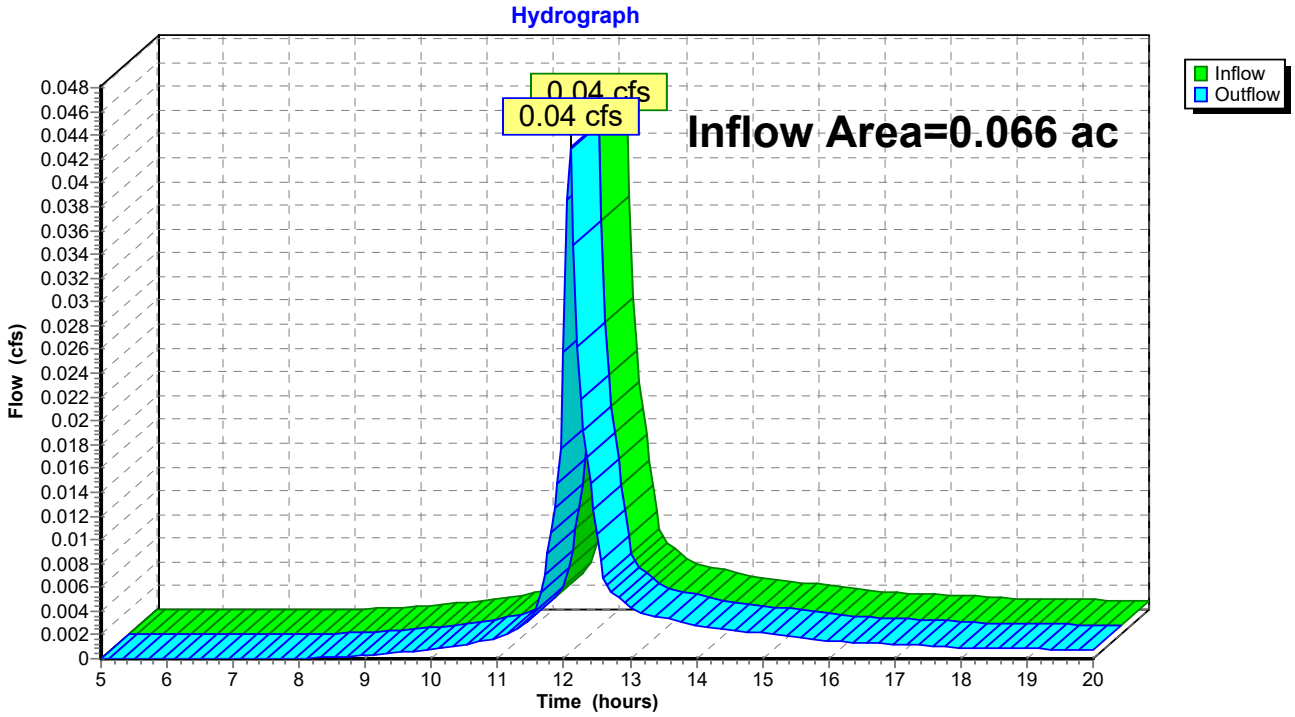


Summary for Reach 2R: Rear of Parcel

Inflow Area = 0.066 ac, 94.19% Impervious, Inflow Depth > 0.53" for WQ event
Inflow = 0.04 cfs @ 12.09 hrs, Volume= 0.003 af
Outflow = 0.04 cfs @ 12.09 hrs, Volume= 0.003 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Reach 2R: Rear of Parcel

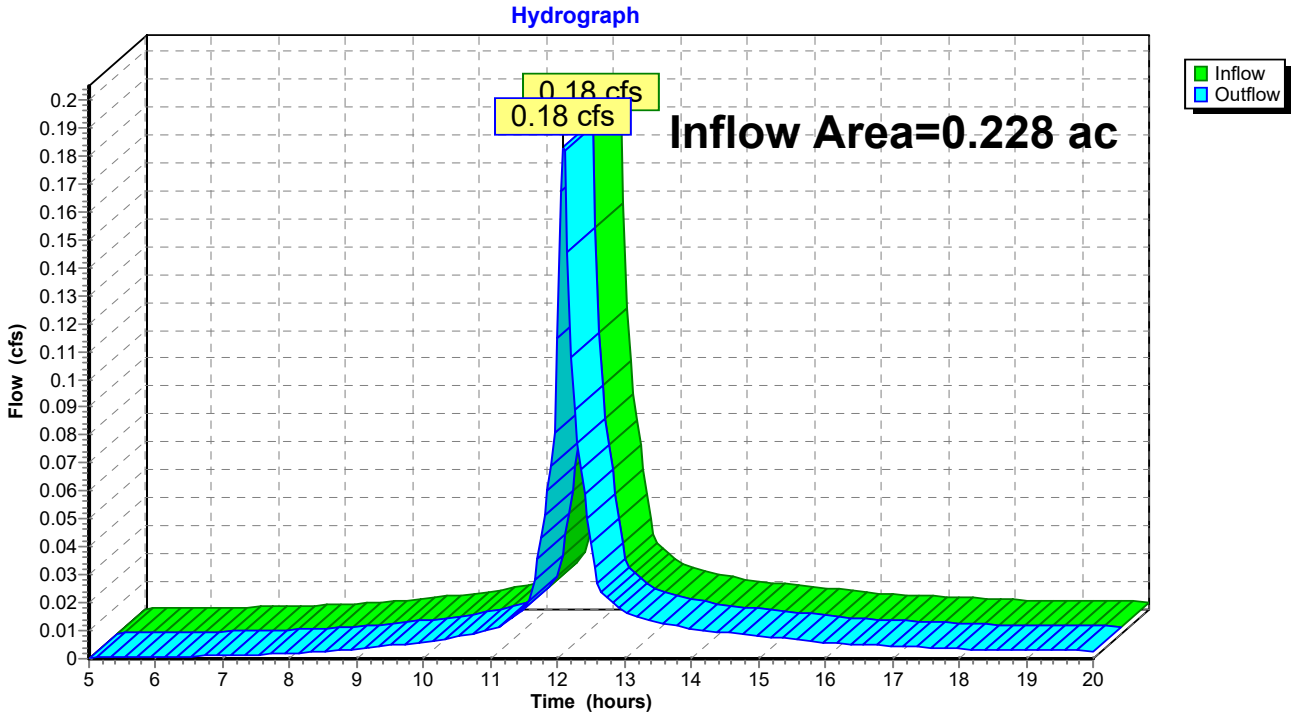


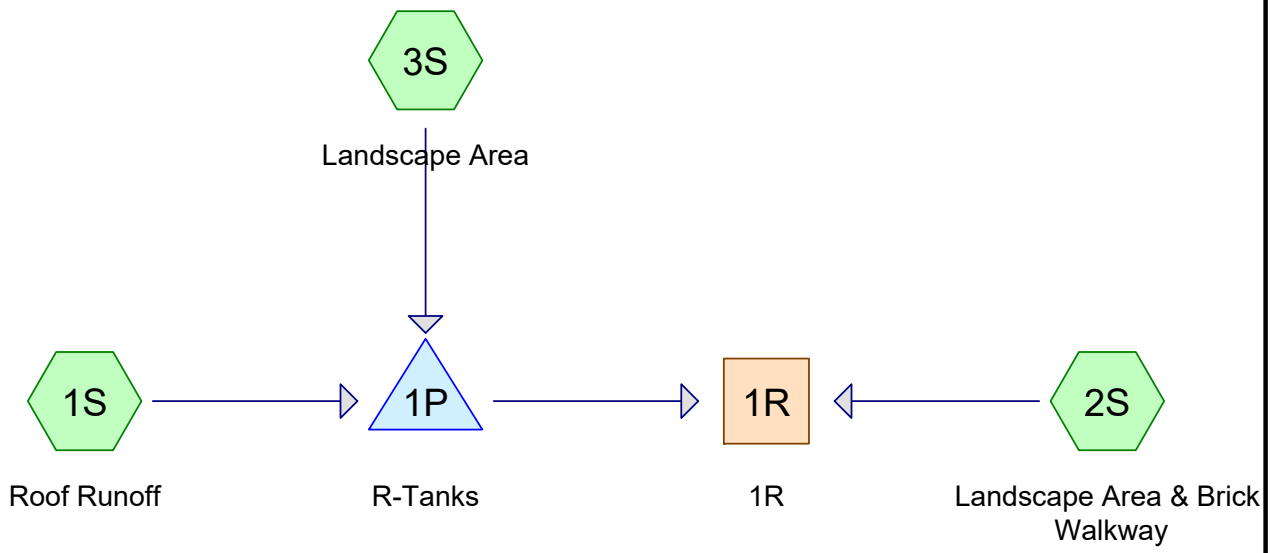
Summary for Reach 3R: Total Runoff

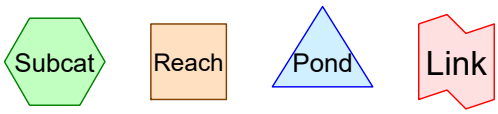
Inflow Area = 0.228 ac, 97.95% Impervious, Inflow Depth > 0.68" for WQ event
Inflow = 0.18 cfs @ 12.09 hrs, Volume= 0.013 af
Outflow = 0.18 cfs @ 12.09 hrs, Volume= 0.013 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Reach 3R: Total Runoff







Routing Diagram for 1109.4-POST
Prepared by {enter your company name here}, Printed 2/23/2024
HydroCAD® 10.00-26 s/n 00620 © 2020 HydroCAD Software Solutions LLC

Project Notes

Rainfall events imported from "1192.2_PRE_4.3.23.hcp"

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.029	39	>75% Grass cover, Good, HSG A (2S, 3S)
0.014	98	Brick sidewalk (2S)
0.005	98	Drip Edge (2S, 3S)
0.180	98	Roof (1S)
0.228	**91**	**TOTAL AREA**

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.029	HSG A	2S, 3S
0.000	HSG B	
0.000	HSG C	
0.000	HSG D	
0.199	Other	1S, 2S, 3S
0.228		**TOTAL AREA**

Ground Covers (all nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.029	0.000	0.000	0.000	0.000	0.029	>75% Grass cover, Good	2S, 3S
0.000	0.000	0.000	0.000	0.014	0.014	Brick sidewalk	2S
0.000	0.000	0.000	0.000	0.005	0.005	Drip Edge	2S, 3S
0.000	0.000	0.000	0.000	0.180	0.180	Roof	1S
0.029	**0.000**	**0.000**	**0.000**	**0.199**	**0.228**	**TOTAL AREA**	

Time span=0.50-50.00 hrs, dt=0.03 hrs, 1651 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: Roof Runoff Runoff Area=7,845 sf 100.00% Impervious Runoff Depth=2.87"
Tc=6.0 min CN=98 Runoff=0.54 cfs 0.043 af

Subcatchment 2S: Landscape Area & Brick Runoff Area=1,455 sf 49.83% Impervious Runoff Depth=0.68"
Tc=6.0 min CN=68 Runoff=0.02 cfs 0.002 af

Subcatchment 3S: Landscape Area Runoff Area=616 sf 14.61% Impervious Runoff Depth=0.07"
Tc=6.0 min CN=48 Runoff=0.00 cfs 0.000 af

Reach 1R: 1R Inflow=0.21 cfs 0.045 af
Outflow=0.21 cfs 0.045 af

Pond 1P: R-Tanks Peak Elev=137.33' Storage=726 cf Inflow=0.54 cfs 0.043 af
Outflow=0.19 cfs 0.043 af

Total Runoff Area = 0.228 ac Runoff Volume = 0.045 af Average Runoff Depth = 2.37"
12.67% Pervious = 0.029 ac 87.33% Impervious = 0.199 ac

Summary for Subcatchment 1S: Roof Runoff

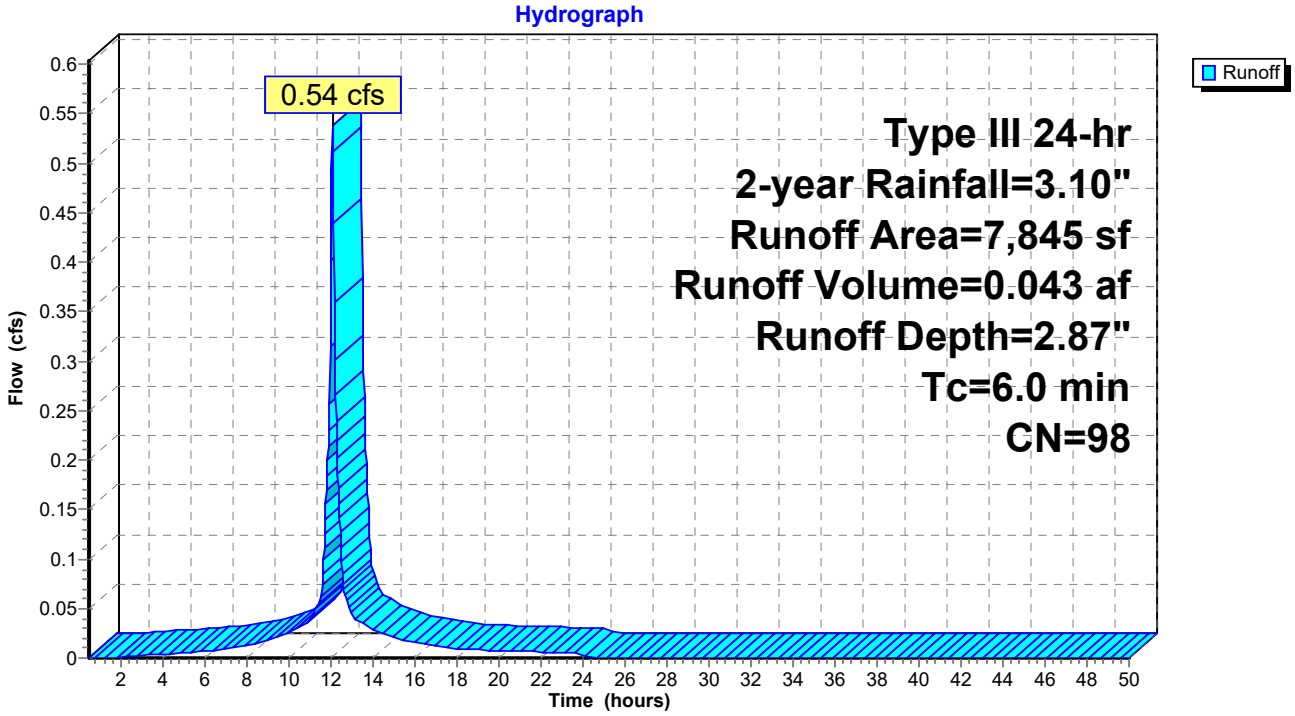
Runoff = 0.54 cfs @ 12.08 hrs, Volume= 0.043 af, Depth= 2.87"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.50-50.00 hrs, dt= 0.03 hrs
Type III 24-hr 2-year Rainfall=3.10"

	Area (sf)	CN	Description
*	7,845	98	Roof
	7,845		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Min Direct Entry**

Subcatchment 1S: Roof Runoff



Summary for Subcatchment 2S: Landscape Area & Brick Walkway

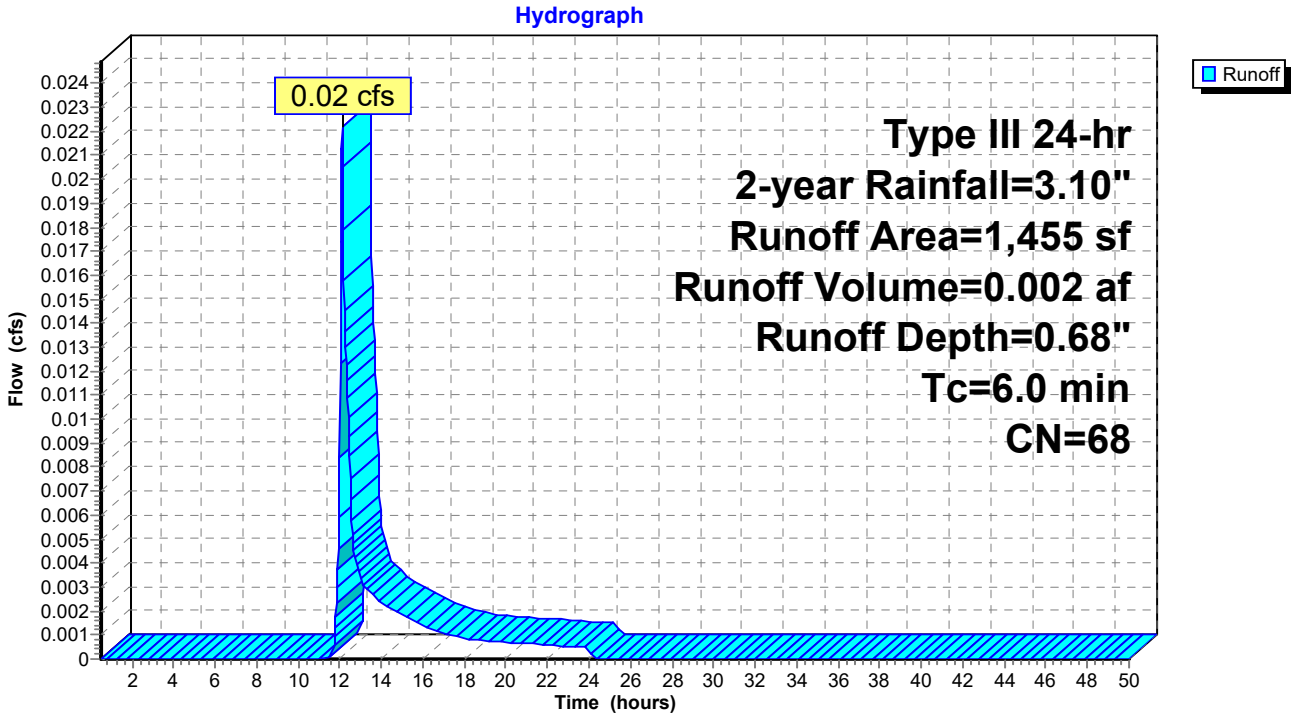
Runoff = 0.02 cfs @ 12.11 hrs, Volume= 0.002 af, Depth= 0.68"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.50-50.00 hrs, dt= 0.03 hrs
Type III 24-hr 2-year Rainfall=3.10"

	Area (sf)	CN	Description
	730	39	>75% Grass cover, Good, HSG A
*	595	98	Brick sidewalk
*	130	98	Drip Edge
	1,455	68	Weighted Average
	730		50.17% Pervious Area
	725		49.83% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Min Direct Entry**

Subcatchment 2S: Landscape Area & Brick Walkway



Summary for Subcatchment 3S: Landscape Area

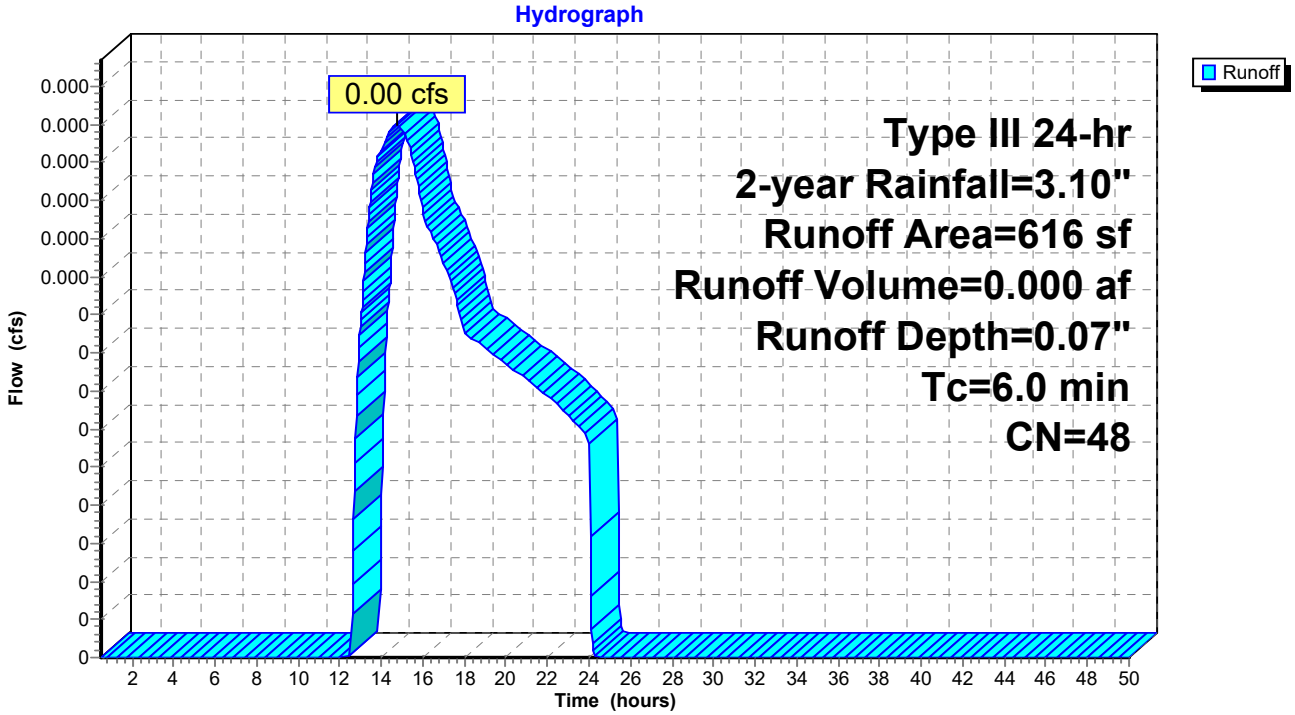
Runoff = 0.00 cfs @ 14.75 hrs, Volume= 0.000 af, Depth= 0.07"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.50-50.00 hrs, dt= 0.03 hrs
Type III 24-hr 2-year Rainfall=3.10"

	Area (sf)	CN	Description
	526	39	>75% Grass cover, Good, HSG A
*	90	98	Drip Edge
	616	48	Weighted Average
	526		85.39% Pervious Area
	90		14.61% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Direct Entry**

Subcatchment 3S: Landscape Area



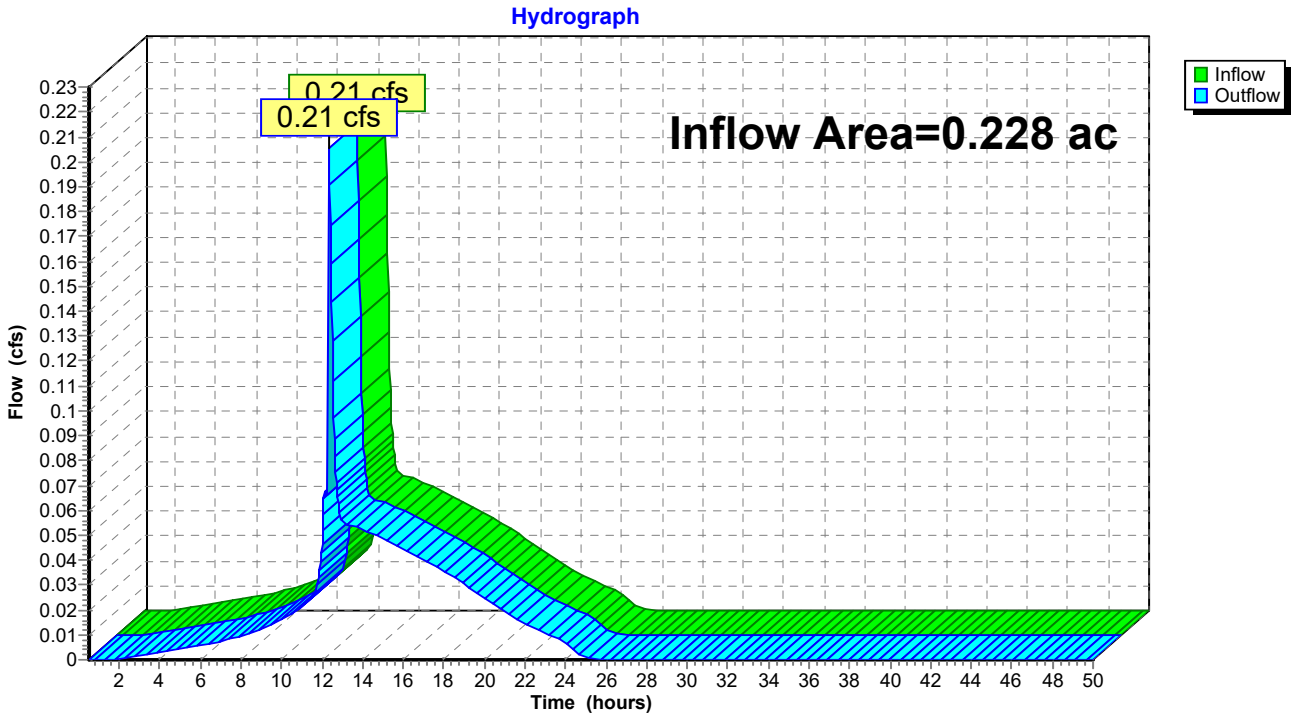
Summary for Reach 1R: 1R

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 0.228 ac, 87.33% Impervious, Inflow Depth = 2.37" for 2-year event
Inflow = 0.21 cfs @ 12.35 hrs, Volume= 0.045 af
Outflow = 0.21 cfs @ 12.35 hrs, Volume= 0.045 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.50-50.00 hrs, dt= 0.03 hrs

Reach 1R: 1R



Summary for Pond 1P: R-Tanks

[44] Hint: Outlet device #2 is below defined storage

Inflow Area =	0.194 ac, 93.78% Impervious, Inflow Depth = 2.66" for 2-year event				
Inflow =	0.54 cfs @	12.08 hrs, Volume=	0.043 af		
Outflow =	0.19 cfs @	12.35 hrs, Volume=	0.043 af, Atten= 64%, Lag= 15.8 min		
Primary =	0.19 cfs @	12.35 hrs, Volume=	0.043 af		

Routing by Stor-Ind method, Time Span= 0.50-50.00 hrs, dt= 0.03 hrs
Peak Elev= 137.33' @ 12.35 hrs Surf.Area= 383 sf Storage= 726 cf

Plug-Flow detention time= 136.5 min calculated for 0.043 af (100% of inflow)
Center-of-Mass det. time= 136.5 min (894.2 - 757.7)

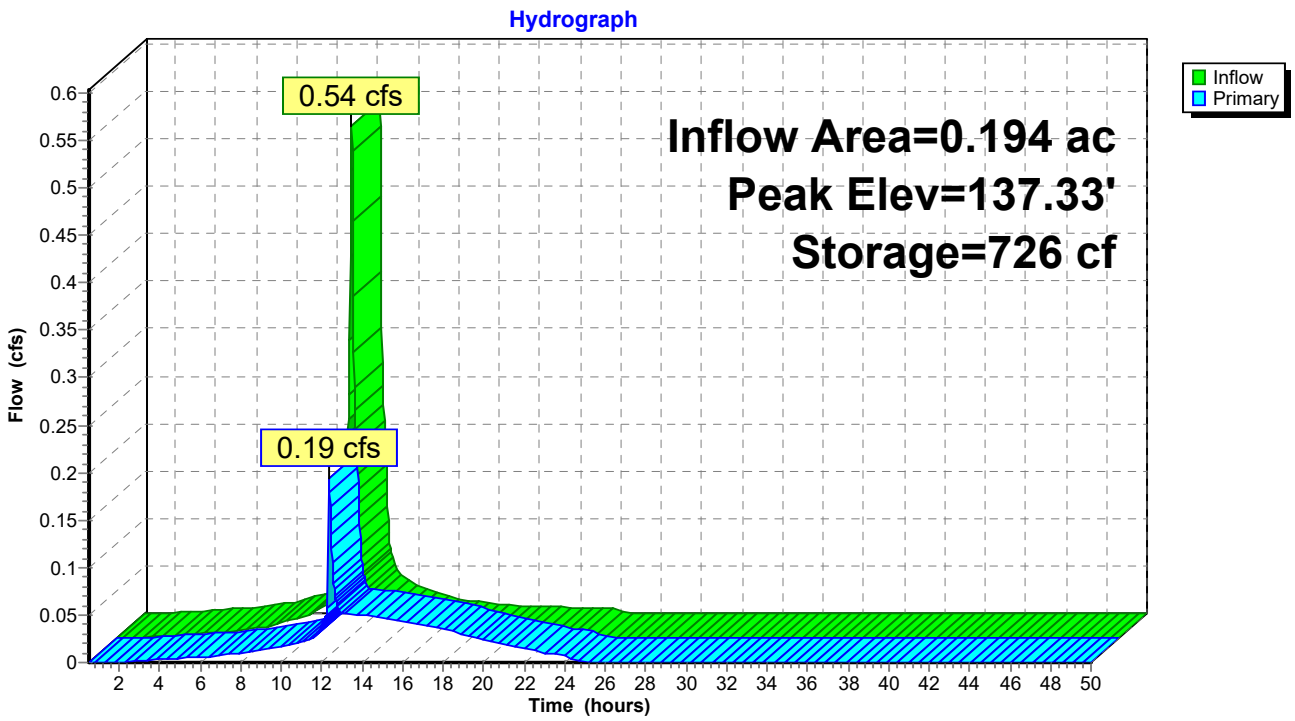
Volume	Invert	Avail.Storage	Storage Description
#1	133.40'	642 cf	**Stone Storage (Prismatic)**Listed below (Recalc) 1,869 cf Overall - 263 cf Embedded = 1,606 cf x 40.0% Voids
#2	134.90'	244 cf	**1.31'W x 2.35'L x 2.88'H Tanks** x 29 Inside #1 257 cf Overall x 95.0% Voids
#3	133.45'	6 cf	**4.0" Round Pipe Storage** Inside #1 L= 68.0' S= 0.0025 '/'
		893 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
133.40	383	0	0
138.28	383	1,869	1,869

Device	Routing	Invert	Outlet Devices
#1	Primary	133.40'	**8.0" Round 8" Outlet Pipe** L= 8.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 133.40' / 133.35' S= 0.0063 '/' Cc= 0.600 n= 0.010 PVC, smooth interior, Flow Area= 0.35 sf
#2	Device 1	133.35'	**1.0" Vert. Orifice** C= 0.600
#3	Device 1	137.28'	**6.0" Horiz. (2) 6" overflow pipes X 2.00** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.18 cfs @ 12.35 hrs HW=137.33' (Free Discharge)
└─**1=8" Outlet Pipe** (Passes 0.18 cfs of 1.68 cfs potential flow)
  ├─**2=Orifice** (Orifice Controls 0.05 cfs @ 9.55 fps)
  └─**3=(2) 6" overflow pipes** (Weir Controls 0.13 cfs @ 0.76 fps)

Pond 1P: R-Tanks



Time span=0.50-50.00 hrs, dt=0.03 hrs, 1651 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: Roof Runoff Runoff Area=7,845 sf 100.00% Impervious Runoff Depth=4.36"
Tc=6.0 min CN=98 Runoff=0.81 cfs 0.065 af

Subcatchment 2S: Landscape Area & Brick Runoff Area=1,455 sf 49.83% Impervious Runoff Depth=1.60"
Tc=6.0 min CN=68 Runoff=0.06 cfs 0.004 af

Subcatchment 3S: Landscape Area Runoff Area=616 sf 14.61% Impervious Runoff Depth=0.45"
Tc=6.0 min CN=48 Runoff=0.00 cfs 0.001 af

Reach 1R: 1R Inflow=0.85 cfs 0.070 af
Outflow=0.85 cfs 0.070 af

Pond 1P: R-Tanks Peak Elev=137.46' Storage=750 cf Inflow=0.81 cfs 0.066 af
Outflow=0.79 cfs 0.066 af

Total Runoff Area = 0.228 ac Runoff Volume = 0.070 af Average Runoff Depth = 3.71"
12.67% Pervious = 0.029 ac 87.33% Impervious = 0.199 ac

Summary for Subcatchment 1S: Roof Runoff

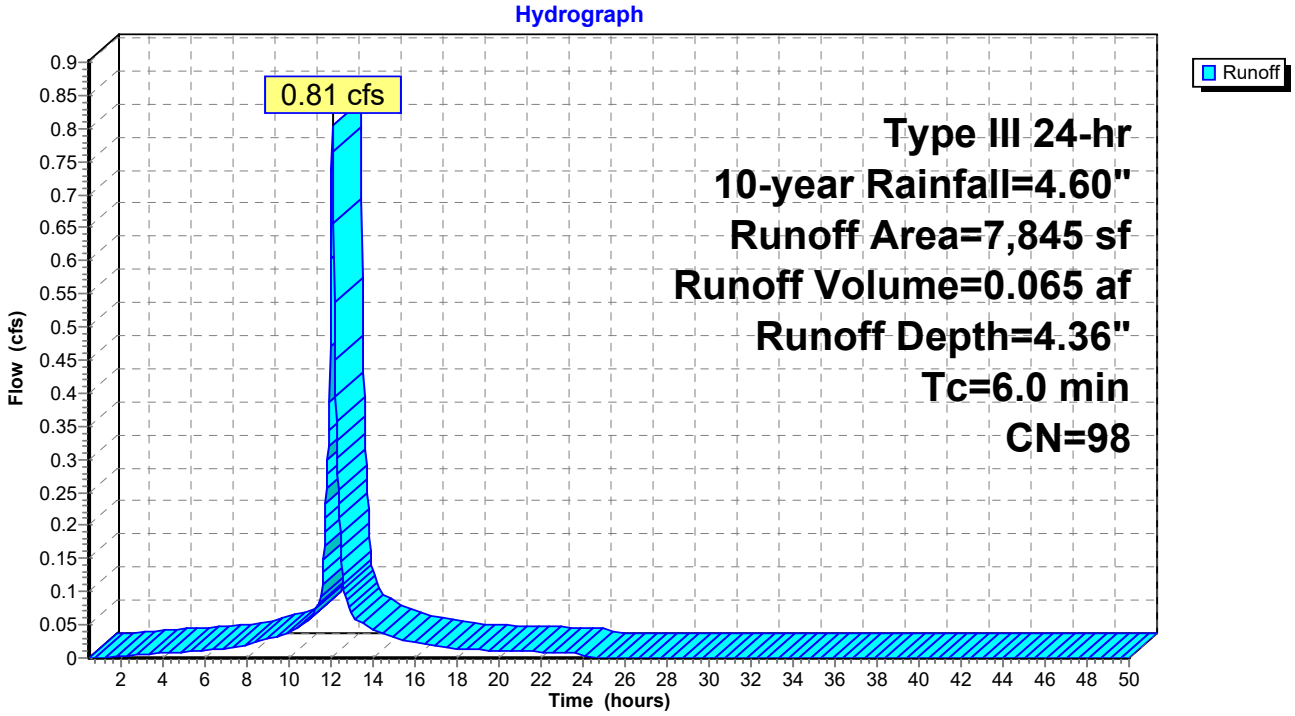
Runoff = 0.81 cfs @ 12.08 hrs, Volume= 0.065 af, Depth= 4.36"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.50-50.00 hrs, dt= 0.03 hrs
Type III 24-hr 10-year Rainfall=4.60"

	Area (sf)	CN	Description
*	7,845	98	Roof
	7,845		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Min Direct Entry**

Subcatchment 1S: Roof Runoff



Summary for Subcatchment 2S: Landscape Area & Brick Walkway

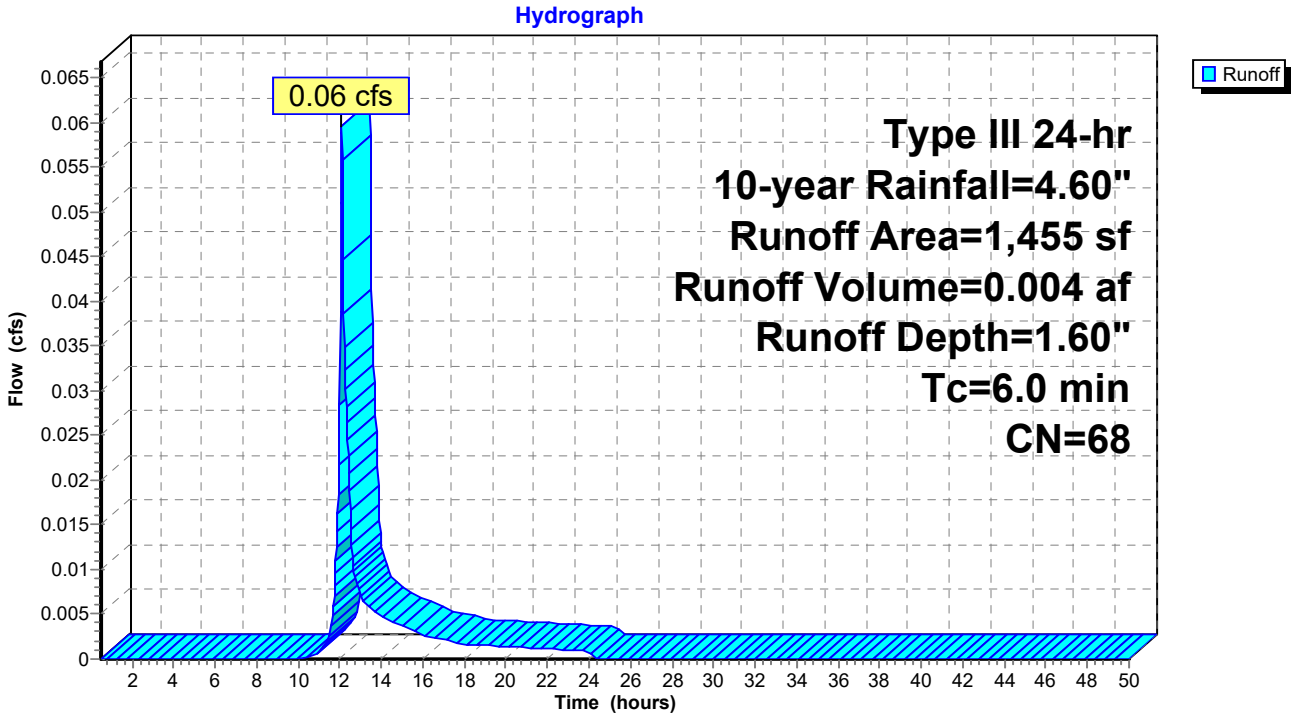
Runoff = 0.06 cfs @ 12.10 hrs, Volume= 0.004 af, Depth= 1.60"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.50-50.00 hrs, dt= 0.03 hrs
Type III 24-hr 10-year Rainfall=4.60"

	Area (sf)	CN	Description
	730	39	>75% Grass cover, Good, HSG A
*	595	98	Brick sidewalk
*	130	98	Drip Edge
	1,455	68	Weighted Average
	730		50.17% Pervious Area
	725		49.83% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Min Direct Entry**

Subcatchment 2S: Landscape Area & Brick Walkway



Summary for Subcatchment 3S: Landscape Area

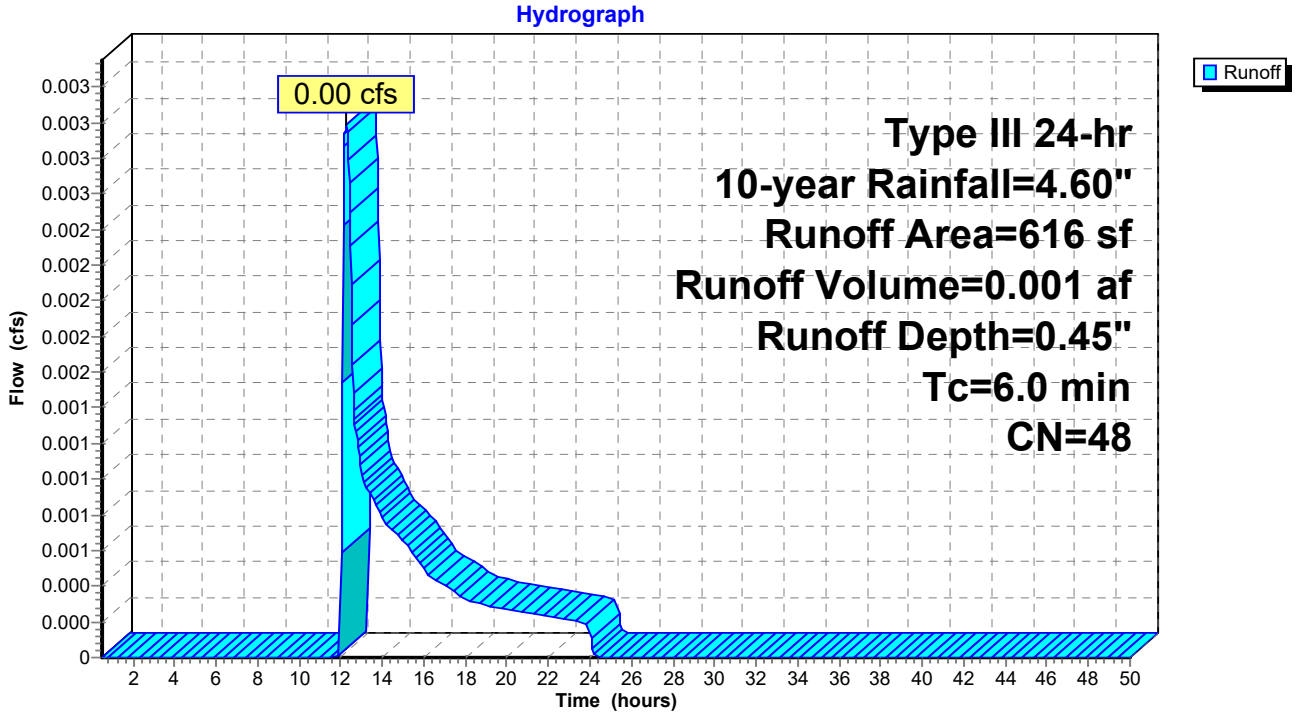
Runoff = 0.00 cfs @ 12.28 hrs, Volume= 0.001 af, Depth= 0.45"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.50-50.00 hrs, dt= 0.03 hrs
Type III 24-hr 10-year Rainfall=4.60"

	Area (sf)	CN	Description
	526	39	>75% Grass cover, Good, HSG A
*	90	98	Drip Edge
	616	48	Weighted Average
	526		85.39% Pervious Area
	90		14.61% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Direct Entry**

Subcatchment 3S: Landscape Area



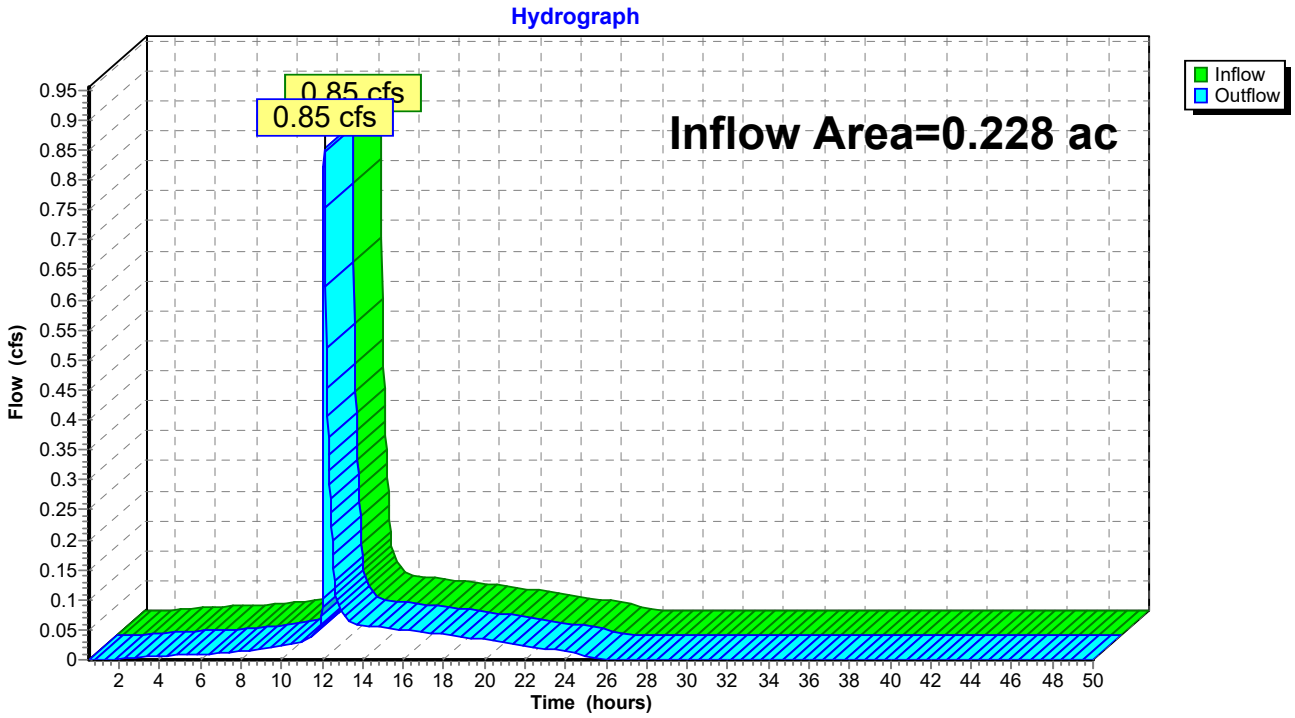
Summary for Reach 1R: 1R

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 0.228 ac, 87.33% Impervious, Inflow Depth = 3.71" for 10-year event
Inflow = 0.85 cfs @ 12.10 hrs, Volume= 0.070 af
Outflow = 0.85 cfs @ 12.10 hrs, Volume= 0.070 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.50-50.00 hrs, dt= 0.03 hrs

Reach 1R: 1R



Summary for Pond 1P: R-Tanks

[44] Hint: Outlet device #2 is below defined storage

Inflow Area =	0.194 ac, 93.78% Impervious, Inflow Depth = 4.08" for 10-year event				
Inflow =	0.81 cfs @	12.08 hrs, Volume=	0.066 af		
Outflow =	0.79 cfs @	12.10 hrs, Volume=	0.066 af, Atten= 2%, Lag= 1.1 min		
Primary =	0.79 cfs @	12.10 hrs, Volume=	0.066 af		

Routing by Stor-Ind method, Time Span= 0.50-50.00 hrs, dt= 0.03 hrs
Peak Elev= 137.46' @ 12.10 hrs Surf.Area= 383 sf Storage= 750 cf

Plug-Flow detention time= 117.0 min calculated for 0.066 af (100% of inflow)
Center-of-Mass det. time= 117.0 min (867.9 - 750.9)

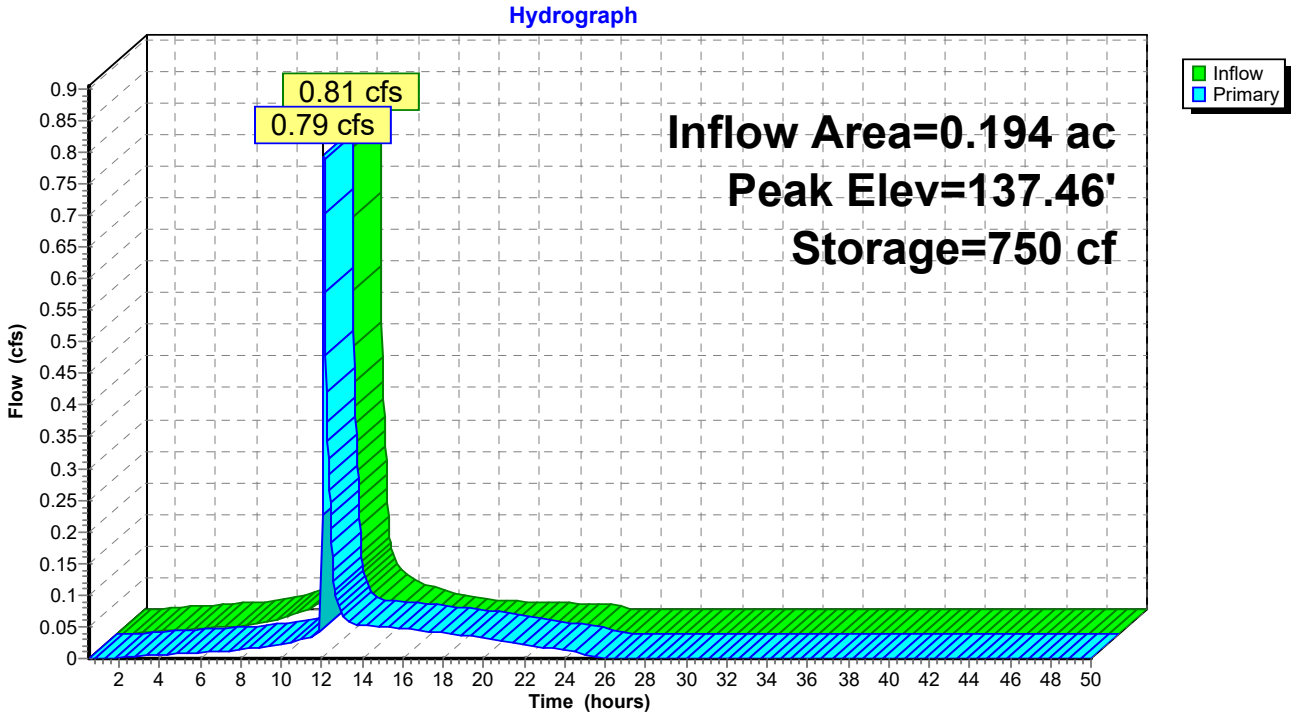
Volume	Invert	Avail.Storage	Storage Description
#1	133.40'	642 cf	**Stone Storage (Prismatic)**Listed below (Recalc) 1,869 cf Overall - 263 cf Embedded = 1,606 cf x 40.0% Voids
#2	134.90'	244 cf	**1.31'W x 2.35'L x 2.88'H Tanks** x 29 Inside #1 257 cf Overall x 95.0% Voids
#3	133.45'	6 cf	**4.0" Round Pipe Storage** Inside #1 L= 68.0' S= 0.0025 '/'
		893 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
133.40	383	0	0
138.28	383	1,869	1,869

Device	Routing	Invert	Outlet Devices
#1	Primary	133.40'	**8.0" Round 8" Outlet Pipe** L= 8.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 133.40' / 133.35' S= 0.0063 '/' Cc= 0.600 n= 0.010 PVC, smooth interior, Flow Area= 0.35 sf
#2	Device 1	133.35'	**1.0" Vert. Orifice** C= 0.600
#3	Device 1	137.28'	**6.0" Horiz. (2) 6" overflow pipes X 2.00** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.79 cfs @ 12.10 hrs HW=137.45' (Free Discharge)
└─**1=8" Outlet Pipe** (Passes 0.79 cfs of 1.71 cfs potential flow)
  ├─**2=Orifice** (Orifice Controls 0.05 cfs @ 9.69 fps)
  └─**3=(2) 6" overflow pipes** (Weir Controls 0.74 cfs @ 1.36 fps)

Pond 1P: R-Tanks



Time span=0.50-50.00 hrs, dt=0.03 hrs, 1651 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: Roof Runoff Runoff Area=7,845 sf 100.00% Impervious Runoff Depth=5.56"
Tc=6.0 min CN=98 Runoff=1.02 cfs 0.083 af

Subcatchment 2S: Landscape Area & Brick Runoff Area=1,455 sf 49.83% Impervious Runoff Depth=2.47"
Tc=6.0 min CN=68 Runoff=0.09 cfs 0.007 af

Subcatchment 3S: Landscape Area Runoff Area=616 sf 14.61% Impervious Runoff Depth=0.91"
Tc=6.0 min CN=48 Runoff=0.01 cfs 0.001 af

Reach 1R: 1R Inflow=1.09 cfs 0.091 af
Outflow=1.09 cfs 0.091 af

Pond 1P: R-Tanks Peak Elev=137.53' Storage=765 cf Inflow=1.03 cfs 0.085 af
Outflow=0.99 cfs 0.085 af

Total Runoff Area = 0.228 ac Runoff Volume = 0.091 af Average Runoff Depth = 4.82"
12.67% Pervious = 0.029 ac 87.33% Impervious = 0.199 ac

Summary for Subcatchment 1S: Roof Runoff

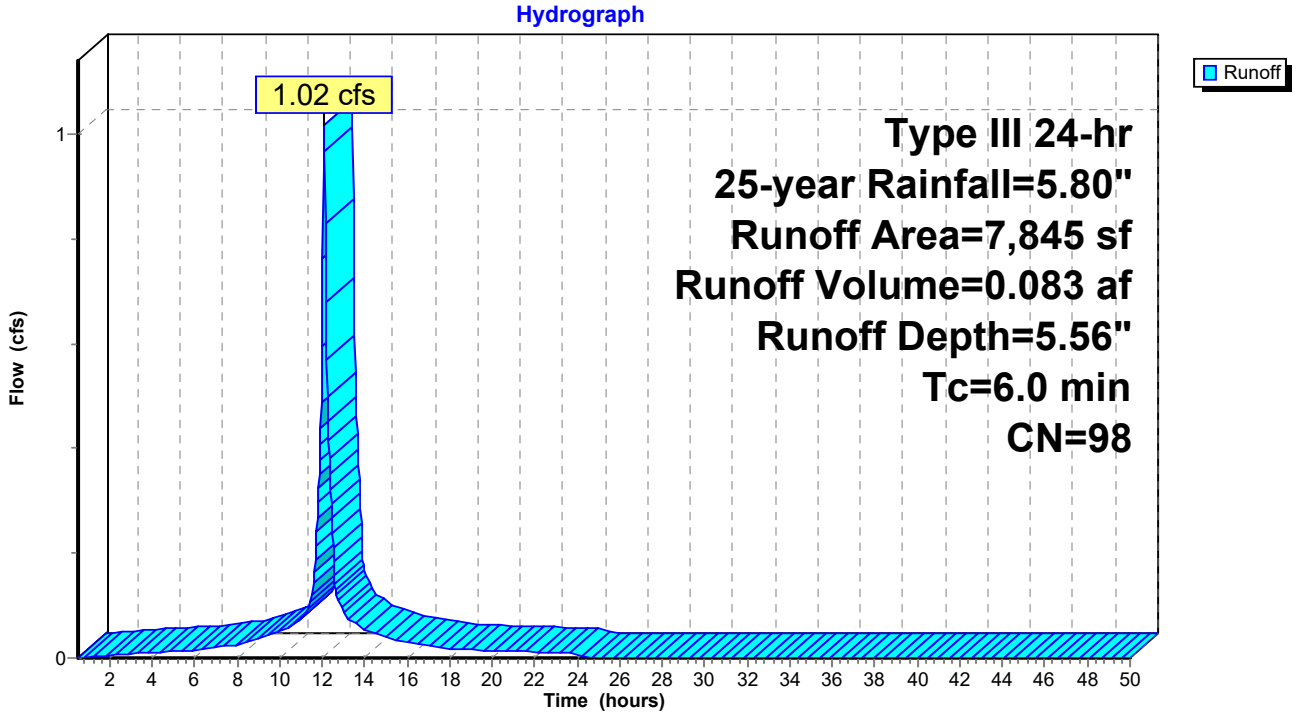
Runoff = 1.02 cfs @ 12.08 hrs, Volume= 0.083 af, Depth= 5.56"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.50-50.00 hrs, dt= 0.03 hrs
Type III 24-hr 25-year Rainfall=5.80"

	Area (sf)	CN	Description
*	7,845	98	Roof
	7,845		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Min Direct Entry**

Subcatchment 1S: Roof Runoff



Summary for Subcatchment 2S: Landscape Area & Brick Walkway

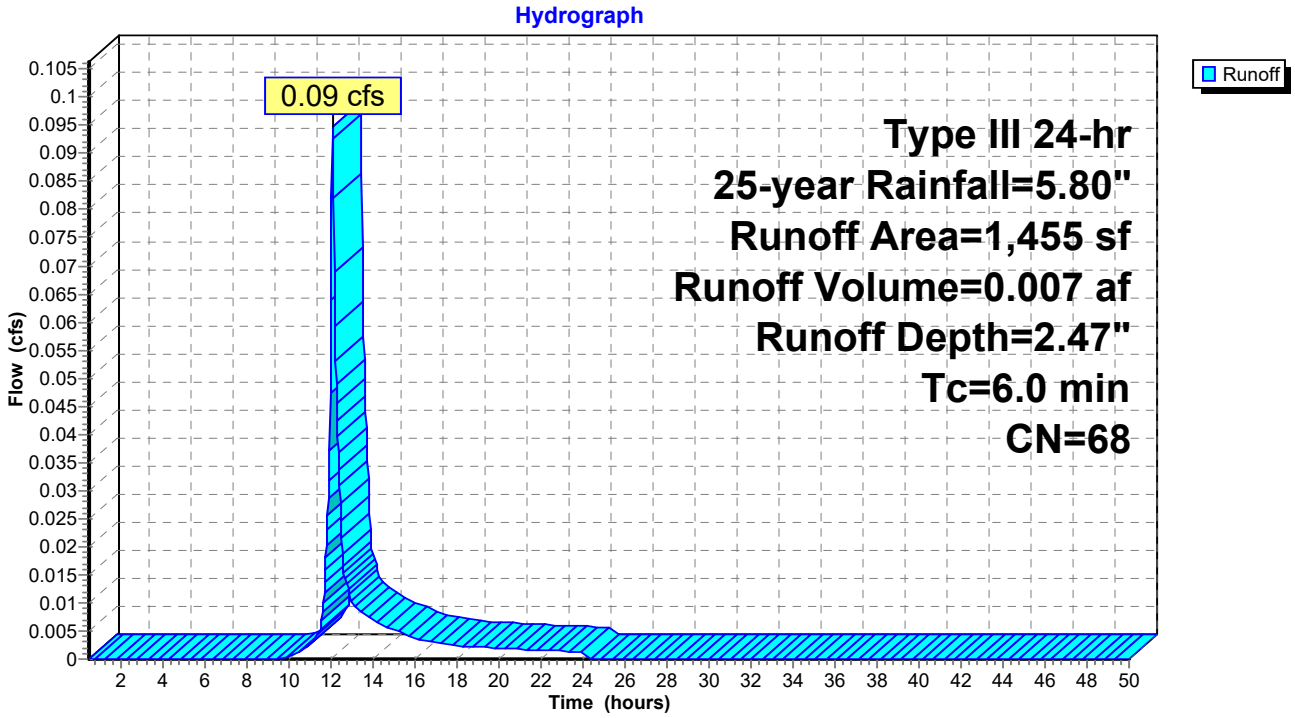
Runoff = 0.09 cfs @ 12.09 hrs, Volume= 0.007 af, Depth= 2.47"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.50-50.00 hrs, dt= 0.03 hrs
Type III 24-hr 25-year Rainfall=5.80"

	Area (sf)	CN	Description
	730	39	>75% Grass cover, Good, HSG A
*	595	98	Brick sidewalk
*	130	98	Drip Edge
	1,455	68	Weighted Average
	730		50.17% Pervious Area
	725		49.83% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Min Direct Entry**

Subcatchment 2S: Landscape Area & Brick Walkway



Summary for Subcatchment 3S: Landscape Area

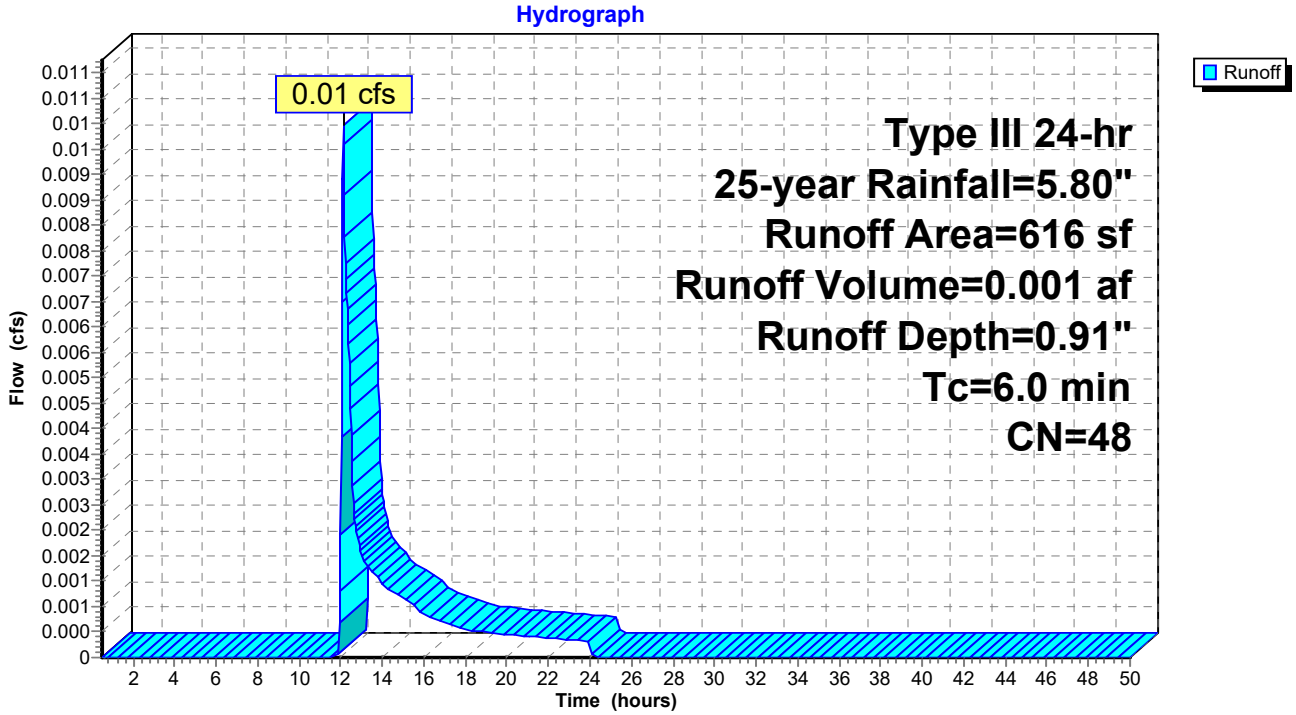
Runoff = 0.01 cfs @ 12.12 hrs, Volume= 0.001 af, Depth= 0.91"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.50-50.00 hrs, dt= 0.03 hrs
Type III 24-hr 25-year Rainfall=5.80"

	Area (sf)	CN	Description
	526	39	>75% Grass cover, Good, HSG A
*	90	98	Drip Edge
	616	48	Weighted Average
	526		85.39% Pervious Area
	90		14.61% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Direct Entry**

Subcatchment 3S: Landscape Area



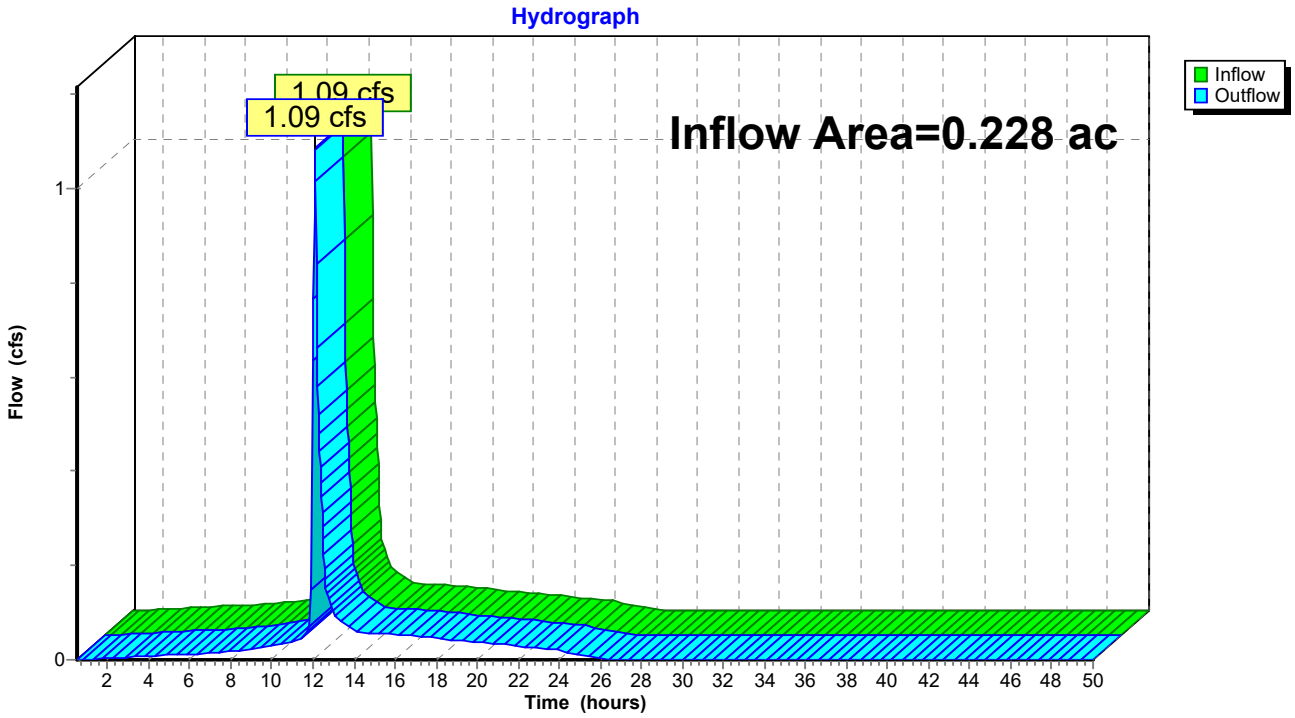
Summary for Reach 1R: 1R

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 0.228 ac, 87.33% Impervious, Inflow Depth = 4.82" for 25-year event
Inflow = 1.09 cfs @ 12.10 hrs, Volume= 0.091 af
Outflow = 1.09 cfs @ 12.10 hrs, Volume= 0.091 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.50-50.00 hrs, dt= 0.03 hrs

Reach 1R: 1R



Summary for Pond 1P: R-Tanks

[44] Hint: Outlet device #2 is below defined storage

Inflow Area =	0.194 ac, 93.78% Impervious, Inflow Depth = 5.22" for 25-year event				
Inflow =	1.03 cfs @	12.08 hrs,	Volume=	0.085 af	
Outflow =	0.99 cfs @	12.10 hrs,	Volume=	0.085 af,	Atten= 3%, Lag= 1.2 min
Primary =	0.99 cfs @	12.10 hrs,	Volume=	0.085 af	

Routing by Stor-Ind method, Time Span= 0.50-50.00 hrs, dt= 0.03 hrs
Peak Elev= 137.53' @ 12.10 hrs Surf.Area= 383 sf Storage= 765 cf

Plug-Flow detention time= 107.4 min calculated for 0.085 af (100% of inflow)
Center-of-Mass det. time= 107.4 min (855.1 - 747.7)

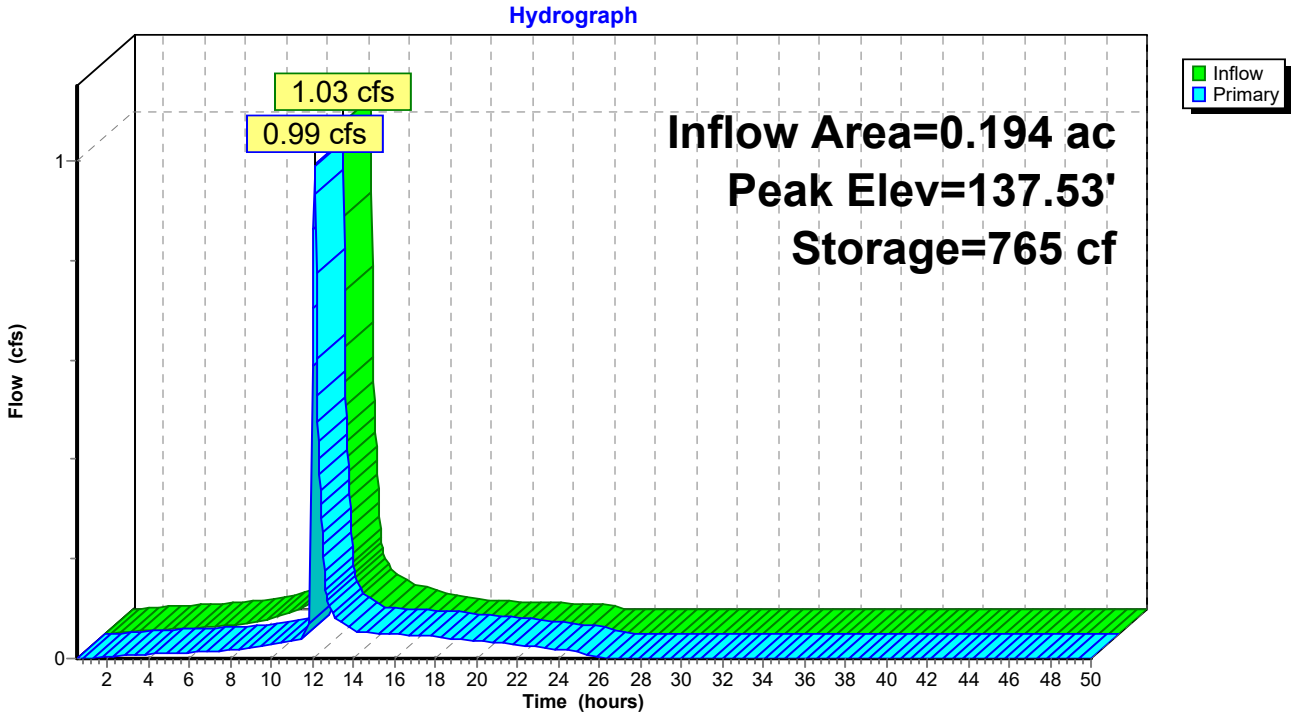
Volume	Invert	Avail.Storage	Storage Description
#1	133.40'	642 cf	**Stone Storage (Prismatic)**Listed below (Recalc) 1,869 cf Overall - 263 cf Embedded = 1,606 cf x 40.0% Voids
#2	134.90'	244 cf	**1.31'W x 2.35'L x 2.88'H Tanks** x 29 Inside #1 257 cf Overall x 95.0% Voids
#3	133.45'	6 cf	**4.0" Round Pipe Storage** Inside #1 L= 68.0' S= 0.0025 '/'
		893 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
133.40	383	0	0
138.28	383	1,869	1,869

Device	Routing	Invert	Outlet Devices
#1	Primary	133.40'	**8.0" Round 8" Outlet Pipe** L= 8.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 133.40' / 133.35' S= 0.0063 '/' Cc= 0.600 n= 0.010 PVC, smooth interior, Flow Area= 0.35 sf
#2	Device 1	133.35'	**1.0" Vert. Orifice** C= 0.600
#3	Device 1	137.28'	**6.0" Horiz. (2) 6" overflow pipes X 2.00** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.99 cfs @ 12.10 hrs HW=137.52' (Free Discharge)
└─**1=8" Outlet Pipe** (Passes 0.99 cfs of 1.72 cfs potential flow)
  ├─**2=Orifice** (Orifice Controls 0.05 cfs @ 9.78 fps)
  └─**3=(2) 6" overflow pipes** (Orifice Controls 0.93 cfs @ 2.38 fps)

Pond 1P: R-Tanks



Time span=0.50-50.00 hrs, dt=0.03 hrs, 1651 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: Roof Runoff Runoff Area=7,845 sf 100.00% Impervious Runoff Depth=1.12"
Tc=6.0 min CN=98 Runoff=0.22 cfs 0.017 af

Subcatchment 2S: Landscape Area & Brick Runoff Area=1,455 sf 49.83% Impervious Runoff Depth=0.03"
Tc=6.0 min CN=68 Runoff=0.00 cfs 0.000 af

Subcatchment 3S: Landscape Area Runoff Area=616 sf 14.61% Impervious Runoff Depth=0.00"
Tc=6.0 min CN=48 Runoff=0.00 cfs 0.000 af

Reach 1R: 1R Inflow=0.03 cfs 0.017 af
Outflow=0.03 cfs 0.017 af

Pond 1P: R-Tanks Peak Elev=135.12' Storage=277 cf Inflow=0.22 cfs 0.017 af
Outflow=0.03 cfs 0.017 af

Total Runoff Area = 0.228 ac Runoff Volume = 0.017 af Average Runoff Depth = 0.89"
12.67% Pervious = 0.029 ac 87.33% Impervious = 0.199 ac

Summary for Subcatchment 1S: Roof Runoff

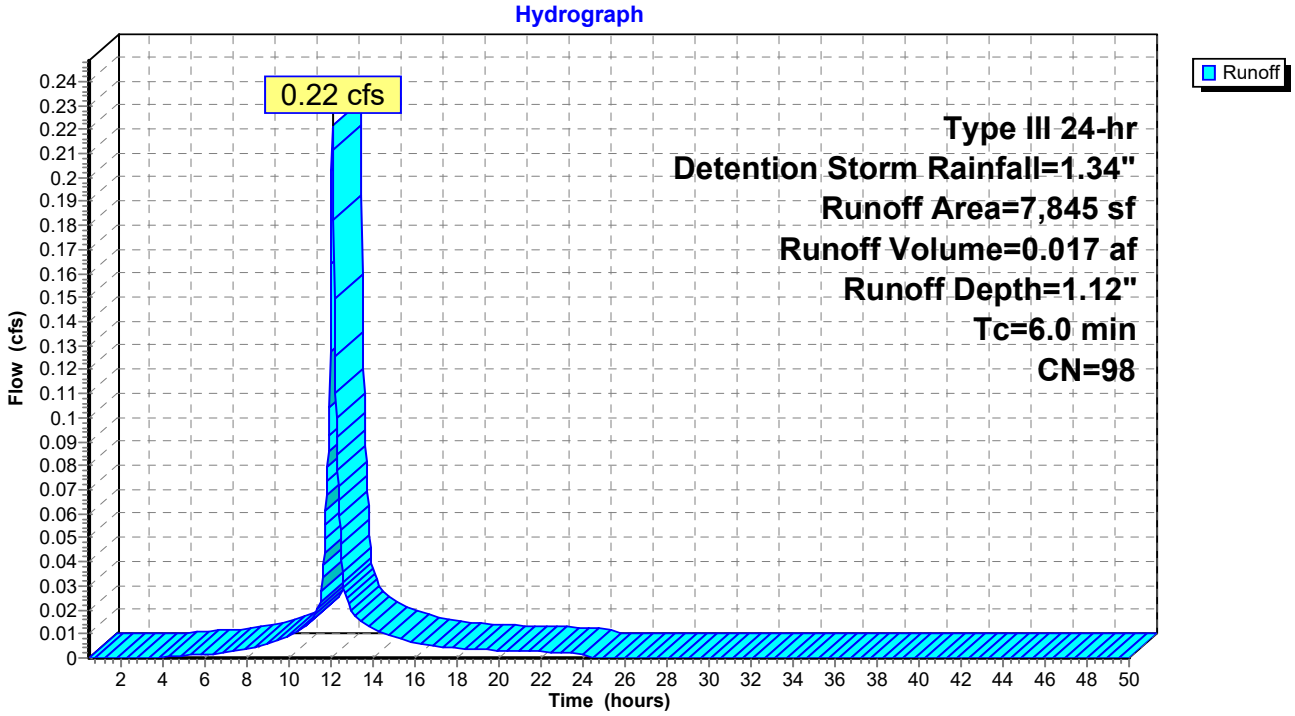
Runoff = 0.22 cfs @ 12.08 hrs, Volume= 0.017 af, Depth= 1.12"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.50-50.00 hrs, dt= 0.03 hrs
Type III 24-hr Detention Storm Rainfall=1.34"

	Area (sf)	CN	Description
*	7,845	98	Roof
	7,845		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Min Direct Entry**

Subcatchment 1S: Roof Runoff



Summary for Subcatchment 2S: Landscape Area & Brick Walkway

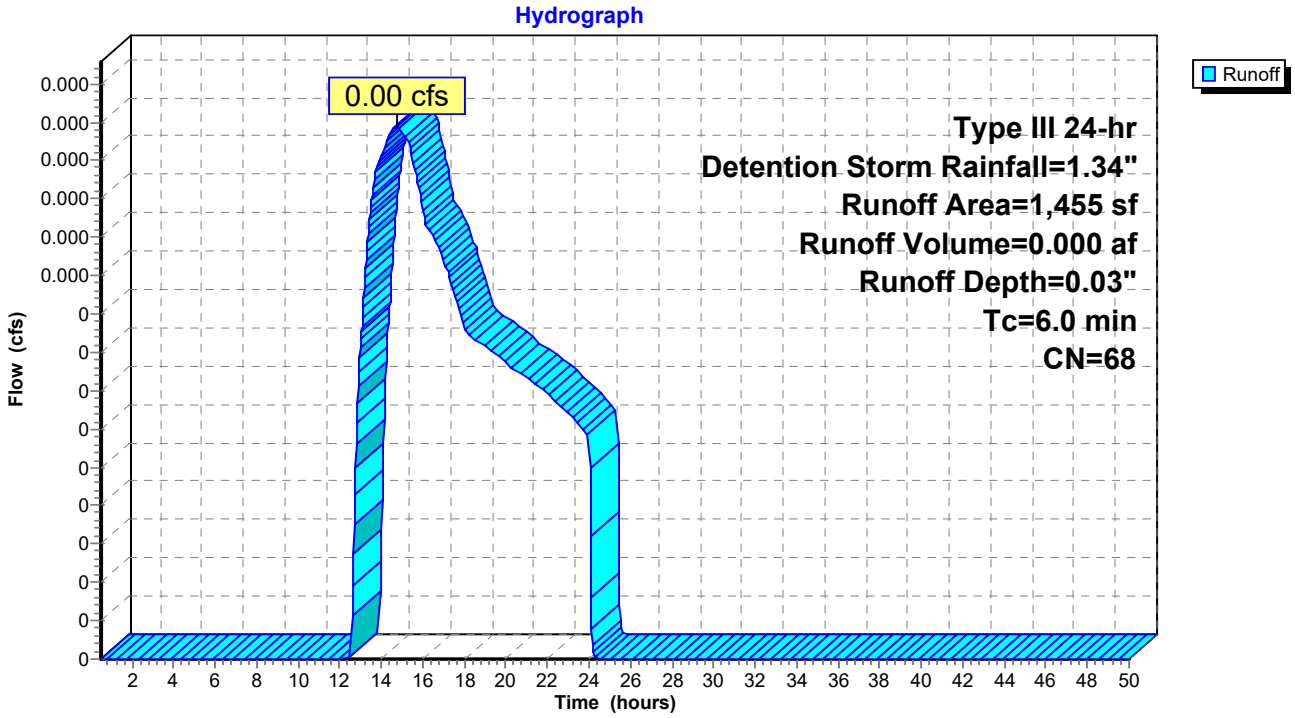
Runoff = 0.00 cfs @ 14.77 hrs, Volume= 0.000 af, Depth= 0.03"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.50-50.00 hrs, dt= 0.03 hrs
Type III 24-hr Detention Storm Rainfall=1.34"

	Area (sf)	CN	Description
	730	39	>75% Grass cover, Good, HSG A
*	595	98	Brick sidewalk
*	130	98	Drip Edge
	1,455	68	Weighted Average
	730		50.17% Pervious Area
	725		49.83% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Min Direct Entry**

Subcatchment 2S: Landscape Area & Brick Walkway



Summary for Subcatchment 3S: Landscape Area

[45] Hint: Runoff=Zero

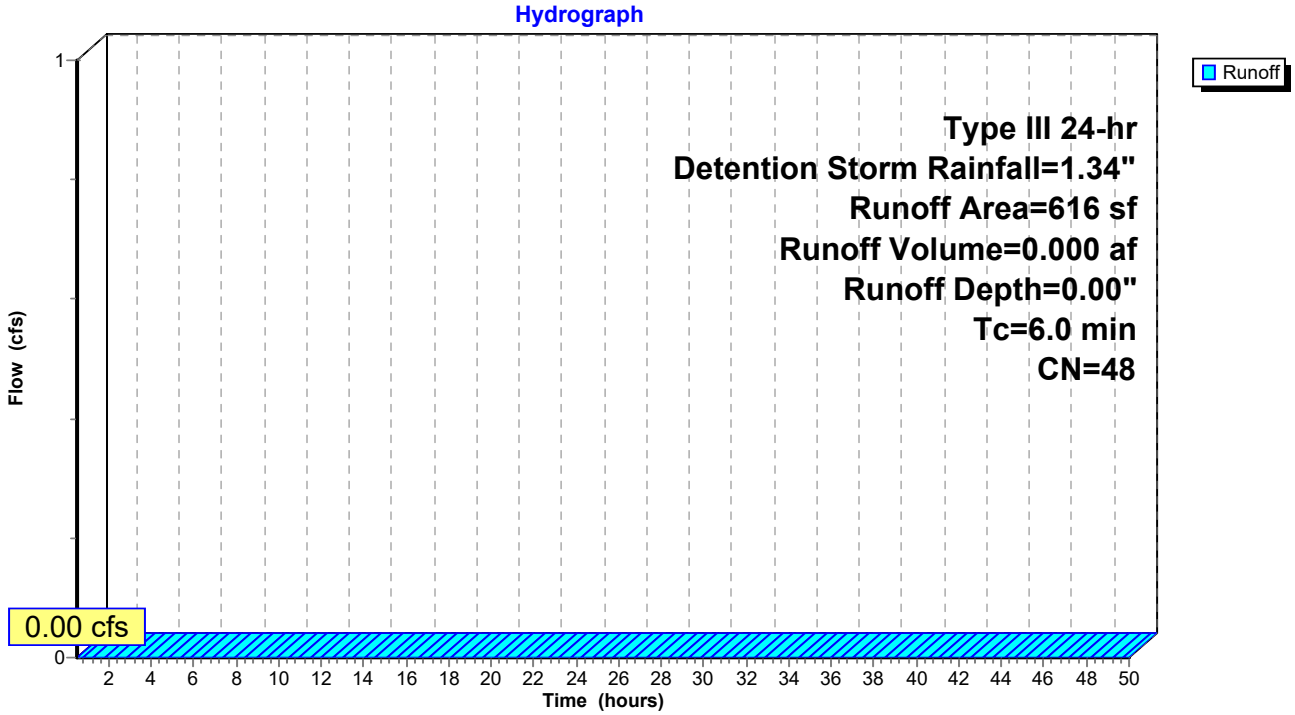
Runoff = 0.00 cfs @ 0.50 hrs, Volume= 0.000 af, Depth= 0.00"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.50-50.00 hrs, dt= 0.03 hrs
Type III 24-hr Detention Storm Rainfall=1.34"

	Area (sf)	CN	Description
	526	39	>75% Grass cover, Good, HSG A
*	90	98	Drip Edge
	616	48	Weighted Average
	526		85.39% Pervious Area
	90		14.61% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Direct Entry**

Subcatchment 3S: Landscape Area



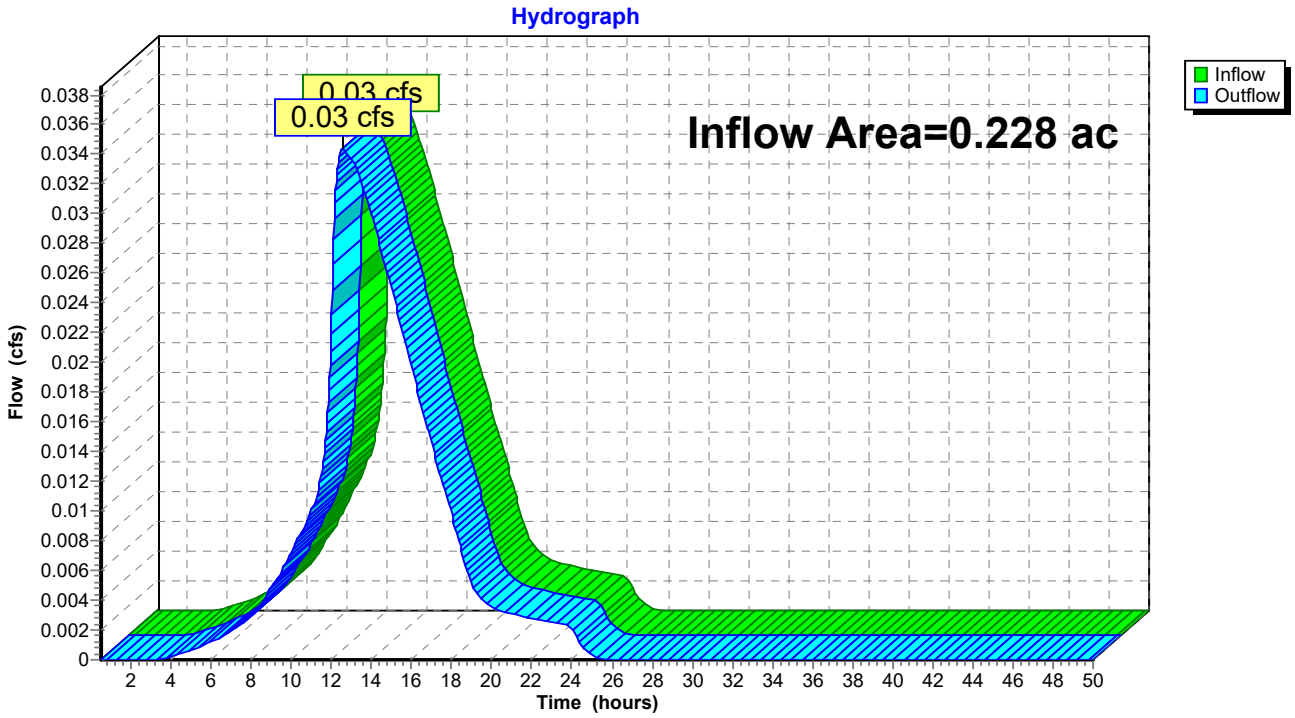
Summary for Reach 1R: 1R

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 0.228 ac, 87.33% Impervious, Inflow Depth = 0.89" for Detention Storm event
Inflow = 0.03 cfs @ 12.57 hrs, Volume= 0.017 af
Outflow = 0.03 cfs @ 12.57 hrs, Volume= 0.017 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.50-50.00 hrs, dt= 0.03 hrs

Reach 1R: 1R



Summary for Pond 1P: R-Tanks

[44] Hint: Outlet device #2 is below defined storage

Inflow Area =	0.194 ac, 93.78% Impervious, Inflow Depth = 1.04" for Detention Storm event				
Inflow =	0.22 cfs @	12.08 hrs, Volume=	0.017 af		
Outflow =	0.03 cfs @	12.57 hrs, Volume=	0.017 af, Atten= 85%, Lag= 29.0 min		
Primary =	0.03 cfs @	12.57 hrs, Volume=	0.017 af		

Routing by Stor-Ind method, Time Span= 0.50-50.00 hrs, dt= 0.03 hrs
Peak Elev= 135.12' @ 12.57 hrs Surf.Area= 383 sf Storage= 277 cf

Plug-Flow detention time= 81.0 min calculated for 0.017 af (100% of inflow)
Center-of-Mass det. time= 81.0 min (859.7 - 778.6)

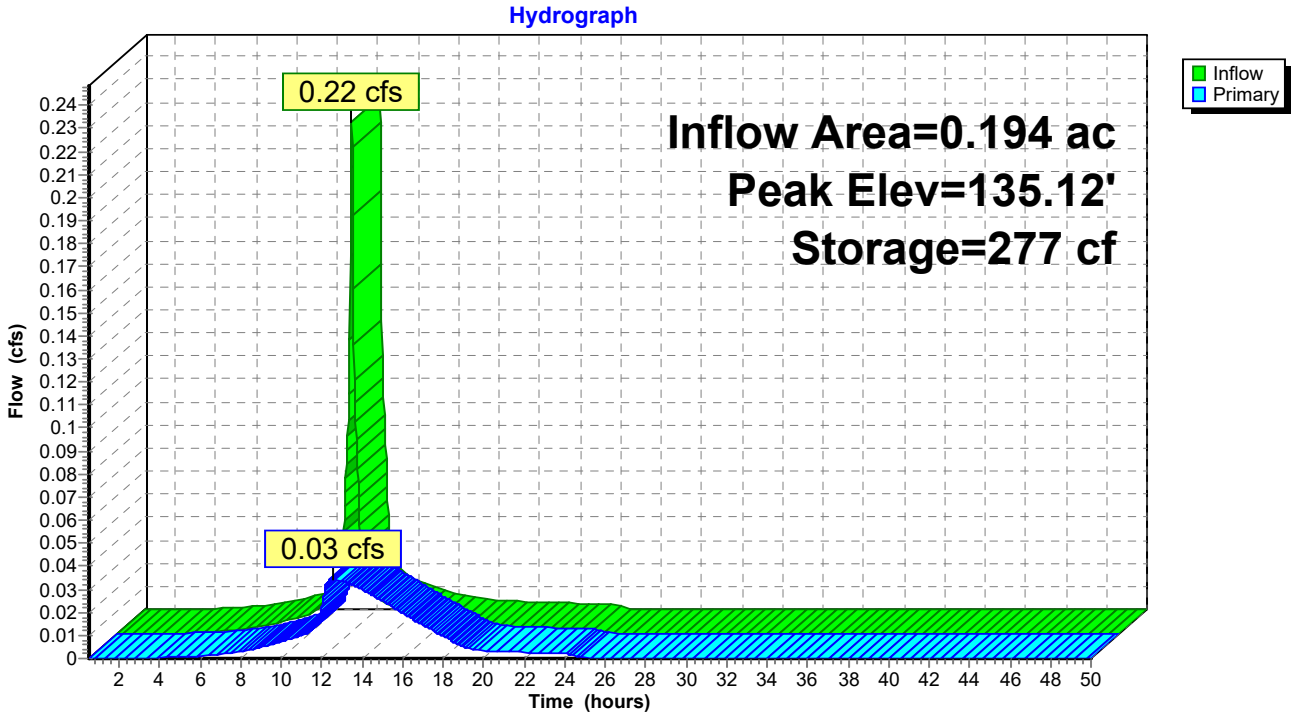
Volume	Invert	Avail.Storage	Storage Description
#1	133.40'	642 cf	**Stone Storage (Prismatic)**Listed below (Recalc) 1,869 cf Overall - 263 cf Embedded = 1,606 cf x 40.0% Voids
#2	134.90'	244 cf	**1.31'W x 2.35'L x 2.88'H Tanks** x 29 Inside #1 257 cf Overall x 95.0% Voids
#3	133.45'	6 cf	**4.0" Round Pipe Storage** Inside #1 L= 68.0' S= 0.0025 '/'
		893 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
133.40	383	0	0
138.28	383	1,869	1,869

Device	Routing	Invert	Outlet Devices
#1	Primary	133.40'	**8.0" Round 8" Outlet Pipe** L= 8.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 133.40' / 133.35' S= 0.0063 '/' Cc= 0.600 n= 0.010 PVC, smooth interior, Flow Area= 0.35 sf
#2	Device 1	133.35'	**1.0" Vert. Orifice** C= 0.600
#3	Device 1	137.28'	**6.0" Horiz. (2) 6" overflow pipes X 2.00** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.03 cfs @ 12.57 hrs HW=135.12' (Free Discharge)
└─**1=8" Outlet Pipe** (Passes 0.03 cfs of 1.04 cfs potential flow)
  ├─**2=Orifice** (Orifice Controls 0.03 cfs @ 6.31 fps)
  └─**3=(2) 6" overflow pipes** (Controls 0.00 cfs)

Pond 1P: R-Tanks



Time span=0.50-50.00 hrs, dt=0.03 hrs, 1651 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: Roof Runoff Runoff Area=7,845 sf 100.00% Impervious Runoff Depth=0.79"
Tc=6.0 min CN=98 Runoff=0.16 cfs 0.012 af

Subcatchment 2S: Landscape Area & Brick Runoff Area=1,455 sf 49.83% Impervious Runoff Depth=0.00"
Tc=6.0 min CN=68 Runoff=0.00 cfs 0.000 af

Subcatchment 3S: Landscape Area Runoff Area=616 sf 14.61% Impervious Runoff Depth=0.00"
Tc=6.0 min CN=48 Runoff=0.00 cfs 0.000 af

Reach 1R: 1R Inflow=0.03 cfs 0.012 af
Outflow=0.03 cfs 0.012 af

Pond 1P: R-Tanks Peak Elev=134.58' Storage=185 cf Inflow=0.16 cfs 0.012 af
Outflow=0.03 cfs 0.012 af

Total Runoff Area = 0.228 ac Runoff Volume = 0.012 af Average Runoff Depth = 0.63"
12.67% Pervious = 0.029 ac 87.33% Impervious = 0.199 ac

Summary for Subcatchment 1S: Roof Runoff

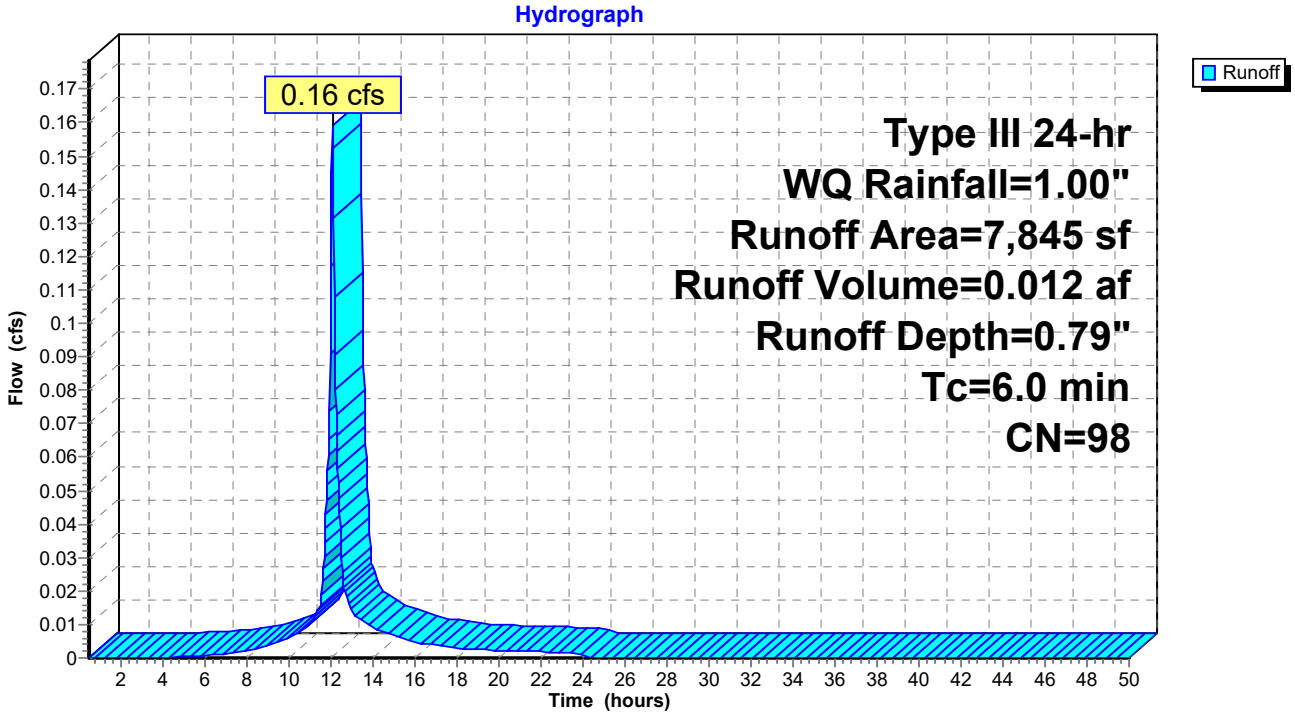
Runoff = 0.16 cfs @ 12.09 hrs, Volume= 0.012 af, Depth= 0.79"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.50-50.00 hrs, dt= 0.03 hrs
Type III 24-hr WQ Rainfall=1.00"

	Area (sf)	CN	Description
*	7,845	98	Roof
	7,845		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Min Direct Entry**

Subcatchment 1S: Roof Runoff



Summary for Subcatchment 2S: Landscape Area & Brick Walkway

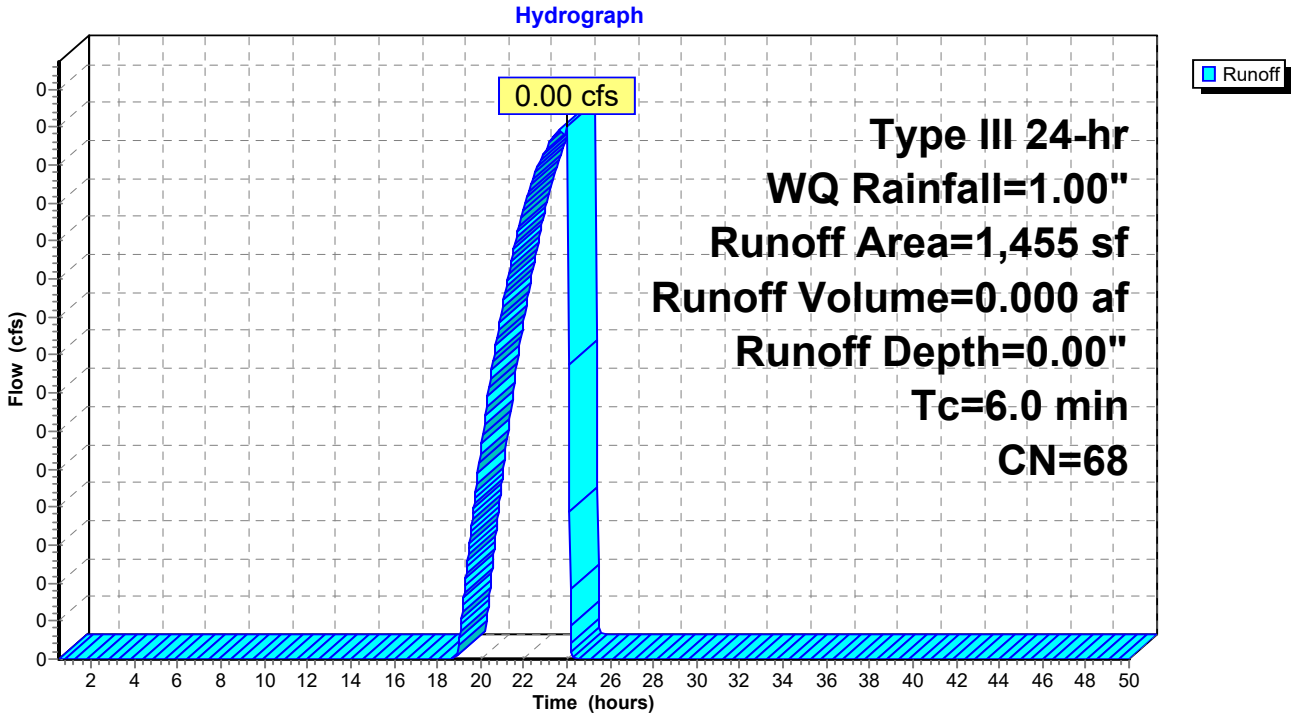
Runoff = 0.00 cfs @ 23.99 hrs, Volume= 0.000 af, Depth= 0.00"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.50-50.00 hrs, dt= 0.03 hrs
Type III 24-hr WQ Rainfall=1.00"

	Area (sf)	CN	Description
	730	39	>75% Grass cover, Good, HSG A
*	595	98	Brick sidewalk
*	130	98	Drip Edge
	1,455	68	Weighted Average
	730		50.17% Pervious Area
	725		49.83% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Min Direct Entry**

Subcatchment 2S: Landscape Area & Brick Walkway



Summary for Subcatchment 3S: Landscape Area

[45] Hint: Runoff=Zero

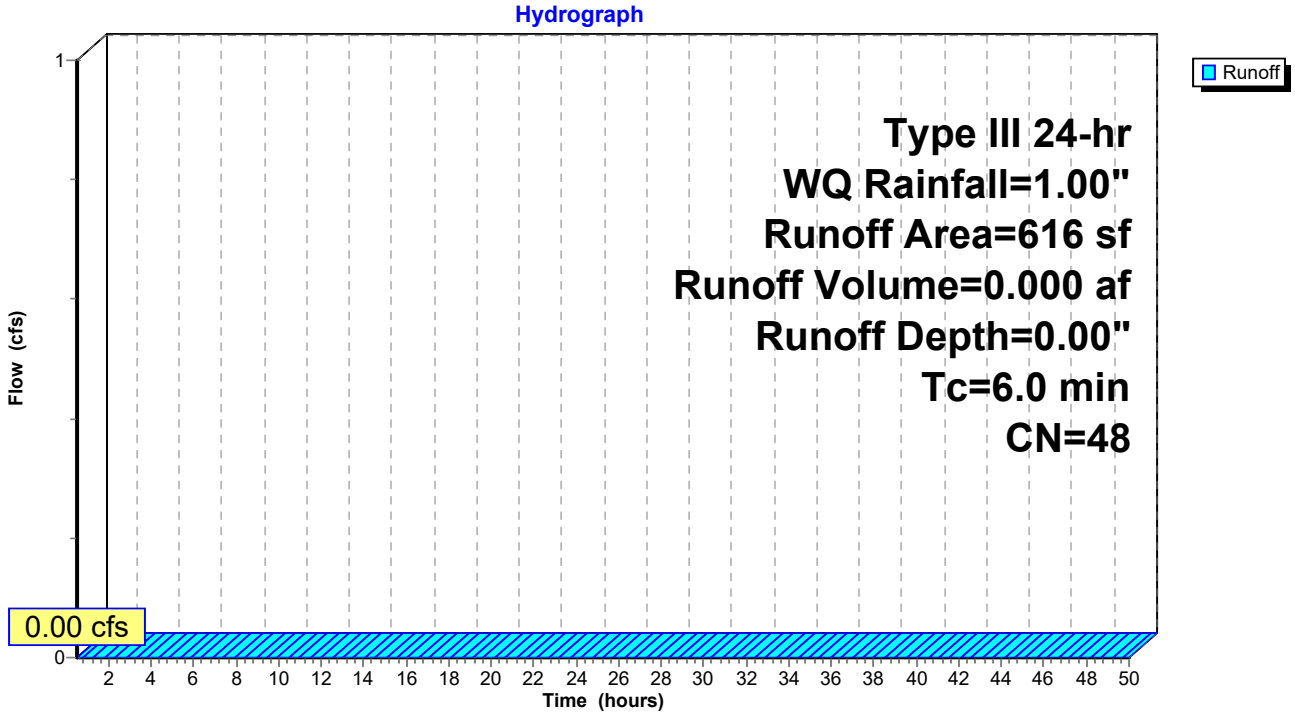
Runoff = 0.00 cfs @ 0.50 hrs, Volume= 0.000 af, Depth= 0.00"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.50-50.00 hrs, dt= 0.03 hrs
Type III 24-hr WQ Rainfall=1.00"

	Area (sf)	CN	Description
	526	39	>75% Grass cover, Good, HSG A
*	90	98	Drip Edge
	616	48	Weighted Average
	526		85.39% Pervious Area
	90		14.61% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Direct Entry**

Subcatchment 3S: Landscape Area



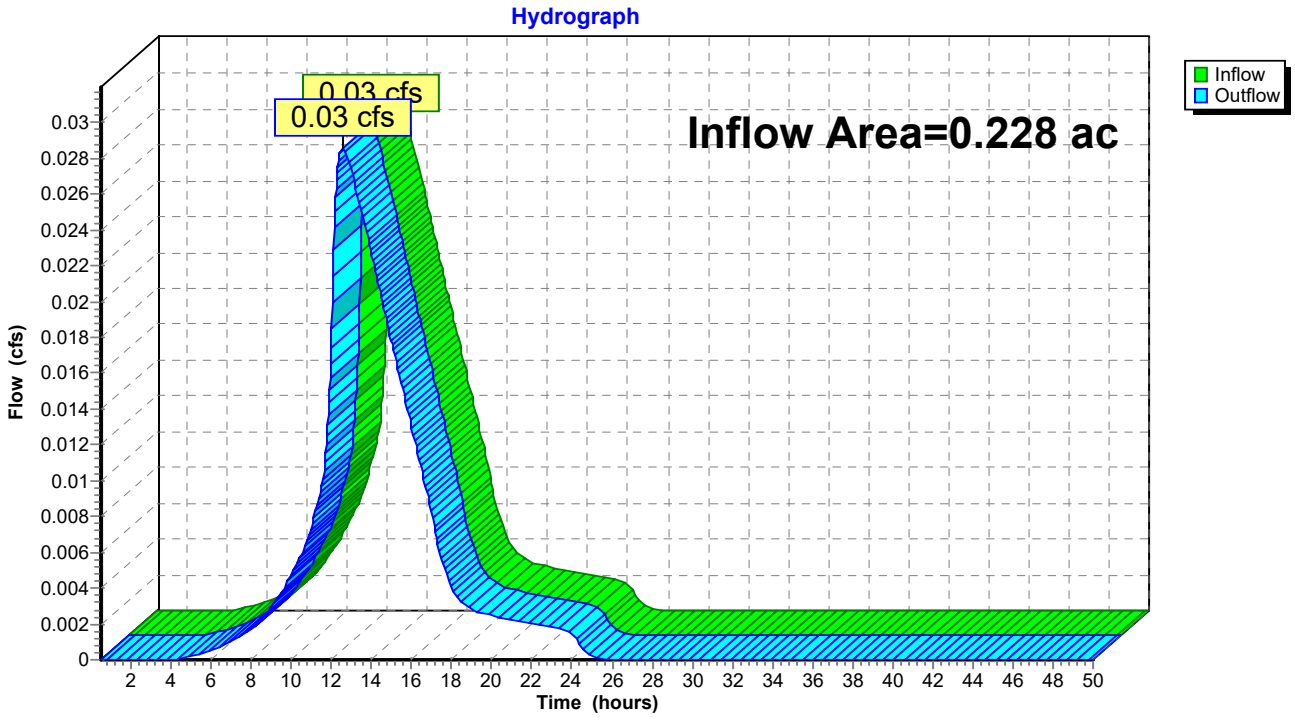
Summary for Reach 1R: 1R

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 0.228 ac, 87.33% Impervious, Inflow Depth = 0.63" for WQ event
Inflow = 0.03 cfs @ 12.54 hrs, Volume= 0.012 af
Outflow = 0.03 cfs @ 12.54 hrs, Volume= 0.012 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.50-50.00 hrs, dt= 0.03 hrs

Reach 1R: 1R



Summary for Pond 1P: R-Tanks

[44] Hint: Outlet device #2 is below defined storage

Inflow Area =	0.194 ac, 93.78% Impervious, Inflow Depth = 0.73" for WQ event				
Inflow =	0.16 cfs @	12.09 hrs, Volume=	0.012 af		
Outflow =	0.03 cfs @	12.54 hrs, Volume=	0.012 af, Atten= 82%, Lag= 27.3 min		
Primary =	0.03 cfs @	12.54 hrs, Volume=	0.012 af		

Routing by Stor-Ind method, Time Span= 0.50-50.00 hrs, dt= 0.03 hrs
Peak Elev= 134.58' @ 12.54 hrs Surf.Area= 383 sf Storage= 185 cf

Plug-Flow detention time= 66.0 min calculated for 0.012 af (100% of inflow)
Center-of-Mass det. time= 66.0 min (853.9 - 787.9)

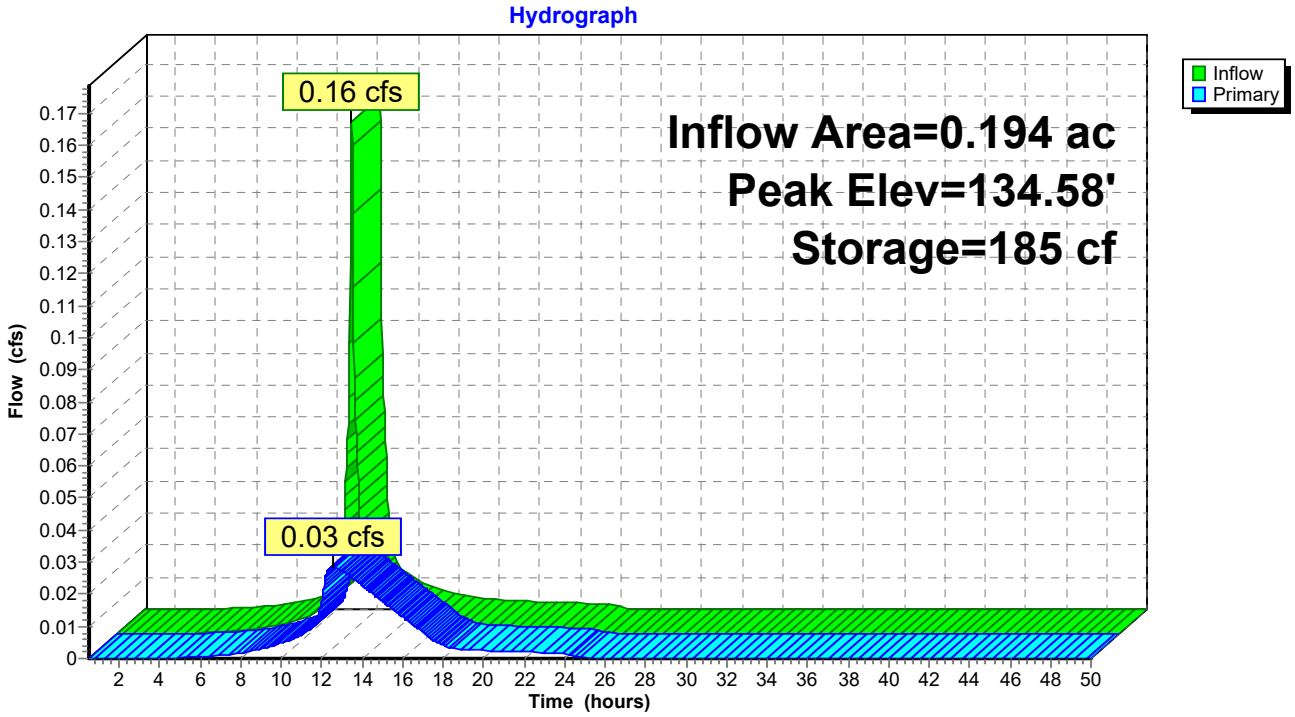
Volume	Invert	Avail.Storage	Storage Description
#1	133.40'	642 cf	**Stone Storage (Prismatic)**Listed below (Recalc) 1,869 cf Overall - 263 cf Embedded = 1,606 cf x 40.0% Voids
#2	134.90'	244 cf	**1.31'W x 2.35'L x 2.88'H Tanks** x 29 Inside #1 257 cf Overall x 95.0% Voids
#3	133.45'	6 cf	**4.0" Round Pipe Storage** Inside #1 L= 68.0' S= 0.0025 '/'
		893 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
133.40	383	0	0
138.28	383	1,869	1,869

Device	Routing	Invert	Outlet Devices
#1	Primary	133.40'	**8.0" Round 8" Outlet Pipe** L= 8.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 133.40' / 133.35' S= 0.0063 '/' Cc= 0.600 n= 0.010 PVC, smooth interior, Flow Area= 0.35 sf
#2	Device 1	133.35'	**1.0" Vert. Orifice** C= 0.600
#3	Device 1	137.28'	**6.0" Horiz. (2) 6" overflow pipes X 2.00** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.03 cfs @ 12.54 hrs HW=134.58' (Free Discharge)
└─**1=8" Outlet Pipe** (Passes 0.03 cfs of 0.82 cfs potential flow)
  ├─**2=Orifice** (Orifice Controls 0.03 cfs @ 5.24 fps)
  └─**3=(2) 6" overflow pipes** (Controls 0.00 cfs)

Pond 1P: R-Tanks



Hydrologic Soil Group—Cumberland County and Part of Oxford County, Maine
(PL)

Map Scale: 1:352 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 5 10 20 30

Feet: 0 15 30 60 90

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 19N WGS84

MAP LEGEND

Area of Interest (AOI)

Area of Interest (AOI)

Soils

Soil Rating Polygons

- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Soil Rating Lines

- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Soil Rating Points

- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Water Features

Streams and Canals

Transportation

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background

Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Cumberland County and Part of Oxford County, Maine
Survey Area Data: Version 19, Aug 30, 2022

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jun 19, 2020—Sep 20, 2020

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
HIB	Hinckley loamy sand, 3 to 8 percent slopes	A	0.2	100.0%
Totals for Area of Interest			**0.2**	**100.0%**

Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

Rating Options

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

K. EROSION & SEDIMENTATION CONTROL REPORT

Prepared For:

64 Pine Street LLC
104 Washington Avenue
Portland, Maine 04101

Prepared By:

Acorn Engineering, Inc.
PO Box 3372
Portland, Maine 04104

November 2023

INTRODUCTION

Acorn Engineering, Inc. has been retained by 64 Pine LLC to provide civil engineering services for the proposed redevelopment of 64 Pine Street. The property consists of approximately 0.23 acres of land to be transformed into a 4-story building containing 9 residential units and a retail space on the ground floor. The project will reside at Map 56, Block C, Lots 002 & 004.

The following Erosion and Sedimentation Control Report was developed in accordance with the City of Portland Technical Manual – Section 5 – Portland Stormwater Management Standards and the Maine DEP Chapter 500 Stormwater Management Appendix A and B (1), Amended August 12, 2015. This narrative also meets the standards required in the Maine DEP's Erosion & Sediment Control BMP's Manual, revised in 2016.

1.0 EXISTING CONDITIONS

The project site is bordered by Pine Street. A boundary plan has been prepared by R.W. Eaton Associates, dated June 1st, 2023. The site is 0.23 acres and primarily consists of an existing restaurant with a paved parking area.

Abutting Uses:

- North R-6 Zone — Multi Family Residential
- East B-1 Zone — Multi-Use Commercial
- South R-6 Zone — Governmental - School
- West B-1 Zone — Retail Services

1.1 Existing Soils

Onsite soil information derived from the following resources:

- Soil Conservation Service Medium Intensity Soil Survey for Cumberland County
- United States Department of Agriculture Web Soil Survey

The area within and surrounding the project includes soil types listed in the table below. The susceptibility of soils to erosion is indicated on a relative "K" scale of values over a range of 0.02 to 0.69. Higher "K" values indicate more erodible soils.

Table 1 - "K" Value		
Soils Type	**Subsurface**	**Substratum**
Hinckley loamy Sand	0.17	0.17

The soil "K" value for the soil, listed above, shows a low susceptibility to erosion. The site's susceptibility to erosion is from the Soil Conservation Service Medium Intensity Soil Survey for Cumberland County. Although the soil "K" value shows a low susceptibility to erosion,

implementation of the proposed Erosion & Sedimentation Measures by the contractor will be of the utmost importance given the sustained slope throughout the site.

1.2 Existing Erosion Problems

There are no signs of erosion.

1.3 Critical Areas

There are no signs of critical areas.

1.4 Protected Natural Resource

The client is not aware of the presence of any existing significant natural features located on the site as listed in Section 14-526 (b) 1. of the Land Use Code. The project is not located within a watershed classified as an Urban Impaired Stream by the Maine DEP.

1.5 Previous Construction Activity (5 years)

Acorn Engineering, Inc. is not aware of any construction related activities within the project limits within the past 5 years.

1.6 Timber Harvesting

Acorn Engineering, Inc. is not aware of any timber harvesting within the past five years.

2.0 EROSION CONTROL MEASURES AND SITE STABILIZATION

MDEP requires all projects to provide prior to construction an erosion and sediment control plan as part of the site development. The following temporary and permanent erosion and sedimentation control devices shall be implemented. Devices shall be installed as described in this report or within the plan set. See the Maine Erosion and Sediment Control Handbook for Construction: Best Management Practices for further reference.

2.1 Temporary Erosion Control Measures

The following temporary erosion and sedimentation control measures are planned for the project's construction period:

2.1.1 Crushed stone stabilized construction entrances shall be placed at all access points to the project site where there are disturbed areas prior to construction. The following specifications shall be followed at a minimum:

- Stone size shall be 2-3 inches or reclaimed or recycled concrete equivalent.
- The thickness of the entrance stone layer shall be no less than 6 inches.
- The entrance shall not be less than 20 feet wide, however not less than the full width of points where ingress or egress occurs. The length shall not be less than 50 feet in length.
- The stabilized construction entrance shall be underlain by a geotextile fabric (woven or non-woven) shall be placed over the entire entrance area.
- The entrance/exit shall be maintained to the extent that it will prevent the tracking of sediment onto public roadways.

2.1.2 Siltation fence or erosion control berm shall be installed downgradient of any disturbed areas to trap runoff borne sediments until permanent stabilization is achieved. The silt fence or erosion control berm shall be installed per the details provided in the plan set and inspected before and immediately after each rainfall and at least daily during prolonged rainfall. Repairs shall be made if there are any signs of erosion or sedimentation below the fence line or berm. If there are signs of undercutting at the center or the edges or impounding large volumes of water behind the fence or berm, the barrier shall be replaced with a stone check dam. When time for removal, it is recommended that silt fences be removed by cutting the fence material at ground level to avoid additional soil disturbance.

2.1.3 Hay mulch, including hydroseeding, is intended to provide cover for denuded or seeded areas until revegetation is established. Temporary mulch should be applied to areas that will not be actively worked for more than 14 days (7 days in sensitive areas). Mulch placed between April 15th and November 1st on slopes of less than 15 percent shall be covered by fabric netting and anchored with staples in accordance with the manufacturer's recommendation. Mulch

placed between November 1st and April 15th on slopes equal to or steeper than 8 percent and equal to or flatter than 2:1 shall use mats or fabric netting and anchored with staples in accordance with the manufacturer's recommendation.

2.1.4 At any time of the year, all slopes greater than 3:1 shall be stabilized with Double Net Erosion Control Blanket Bionet SC150BN by North American Green or Approved Equal, or Erosion Control Mix Slope Protection as detailed within the plans.

2.1.5 Pine Street shall be swept to control mud and dust from the construction site as necessary. Additional stone shall be added to the stabilized construction entrance to minimize the tracking of material off the site and onto the surrounding roadways.

2.1.6 During demolition, clearing and grubbing operations, stone check dams shall be installed at any areas of concentrated flow. The maximum height of the check dam shall not exceed 2 feet. The center of the check dam shall be 6 inches below the outer edges of the dam. The contractor shall mulch the side slopes and install stone check dams for all newly excavated ditch lines within 24 hours of their creation.

2.1.7 Silt fence stake spacing shall not exceed 6 feet unless the fence is supported with 14-gauge wire, in which case the maximum spacing shall not exceed 10 feet. The silt fence shall be "toed" into the ground.

2.1.8 Storm drain inlet protection shall be provided to storm drains using any of the following: hay bale drop inlet structures, silt fence drop inlet sediment filter, gravel and wire mesh drop inlet sediment filter, or curb inlet sediment filter. Barriers shall be inspected after every rainfall event and repaired as necessary. Sediments shall be removed when accumulation has reached ½ the design height.

2.1.9 Dust control shall be accomplished using any of the following: water, calcium chloride, stone, or an approved MDEP product. Dust control shall be applied as needed to accomplish dust control.

2.1.10 Temporary loam, seed, and mulching shall be used in areas where no other erosion control measure is used. Application rates for seeding are provided at the end of this report.

2.1.11 Stockpiles shall be stabilized and anchored within 7 days of formation unless a scheduled rain event occurs prior to the 7-day window, in which case the stockpile shall be stabilized prior to the rain event. Methods of stabilization shall be mulch, erosion control mix, or erosion control blankets/mats. Silt fence or a wood waste compost filter berm shall be placed downhill of any soil stockpile location.

2.1.12 For disturbance between November 1 and April 15, please refer to the winter stabilization plan in this report and the Maine Erosion and Sediment Control BMP manual for further information.

2.1.13 It is of the utmost importance that stormwater runoff and potential sediment from the construction site be diverted around the proposed underdrains until the trench is backfilled.

2.2 Permanent Erosion Control Measures

The following permanent erosion control measures are intended for post disturbance areas of the project.

2.2.1 All disturbed areas during construction, not subject to other proposed conditions, shall receive a minimum 4" of loam, limed, and mulched. Erosion control blankets or mats shall be placed over the mulch in areas noted in paragraph 5.2 of this report.

2.2.2 All stormwater devices shall be installed and tributary areas stabilized prior to receiving stormwater.

2.2.3 Refer to the Maine Erosion and Sediment Control BMP manual for additional information.

3.0 EROSION AND SEDIMENTATION CONTROL PLAN

3.1 The Construction Management & Erosion Control Plan is included within the plan set.

4.0 DETAILS AND SPECIFICATIONS

4.1 Erosion & Sedimentation Control Details and Specifications are included in the plan set.

5.0 STABILIZATION PLAN FOR WINTER CONSTRUCTION

Winter Construction consists of earthwork disturbance between the dates of November 1st and April 15th. If a construction site is not stabilized with pavement, a road gravel base, 75% mature vegetation cover, or riprap by November 15th, then the site shall be protected with over-winter stabilization. Any area not stabilized with pavement, vegetation, mulching, erosion control mix, erosion control mats, riprap, or gravel base on the road shall be considered open.

The contractor shall limit the work area to areas where work will occur within the subsequent 15 days so that it can be mulched one day prior to a snow event. The contractor shall stabilize

work areas prior to opening additional work areas to minimize areas without erosion control measures.

The following measures shall be implemented during winter construction periods:

5.1 Sediment Barriers

During frozen conditions, sediment barriers may consist of erosion control mix berms or any other recognized sediment barriers as frozen soil prevents the proper installation of hay bales or silt fences.

5.2 Mulching

All areas shall be considered to be denuded until seeded and mulched. Hay and straw mulch shall be applied at a rate of 150 lb. per 1,000 square feet or 3 tons/acre (twice the normal accepted rate of 75-lbs./1,000 s.f. or 1.5 tons/acre) and shall be properly anchored. Erosion control mix must be applied with a minimum 4-inch thickness. Mulch shall not be spread on top of snow. The snow shall be removed down to a one-inch depth or less prior to application. After each day of final grading, the area shall be properly stabilized with anchored hay or straw or erosion control matting. An area shall be considered to have been stabilized when exposed surfaces have been either mulched or adequately anchored so that the ground surface is not visible through the mulch. Between the dates of November 1st and April 15th, all mulch shall be anchored by either mulch netting, tracking, or wood cellulose fiber. The cover will be considered sufficient when the ground surface is not visible through the mulch. After November 1st, mulch and anchoring of all exposed soil shall occur at the end of each final grading workday.

5.3 Soil Stockpiling

Stockpiles of soil or subsoil shall be mulched for over winter protection with hay or straw at twice the normal rate or with a four-inch layer of erosion control mix. This shall be done within 24 hours of stocking and re-established prior to any rainfall or snowfall.

5.4 Seeding

Between the dates of October 15th and April 1st, loam or seed shall not be required. During periods of above-freezing temperatures, finished areas shall be fine graded and either protected with mulch or temporarily seeded and mulched until the final treatment can be applied. If the date is after November 1st and if the exposed area has not been loamed, final grading with a uniform surface, then the area may be dormant seeded at a rate of 3 times higher than specified for permanent seed and then mulched.

All dormant seeding beds shall be covered with overwintering mulch or an anchored erosion control blanket. If dormant seeding is used for the site, all disturbed areas shall receive 4" of loam and seed at an application rate of 5 lbs./1,000 s.f. All areas seeded during the winter shall be inspected in the spring for an adequate catch. All areas insufficiently vegetated (less than 75% catch) shall be revegetated by replacing loam, seed and mulch. If dormant seeding is not used for the site, all disturbed areas shall be revegetated in the spring.

5.5 Over winter stabilization of disturbed soils

By September 15th, all disturbed soils on areas having a slope less than 15% shall be seeded and mulched. If the disturbed areas are not stabilized by this date, then one of the following actions shall be taken to stabilize the soil for late fall and winter:

- Stabilize the soil with temporary vegetation – By October 1st, seed the disturbed soil with winter rye at a seeding rate of 3lbs per 1,000 s.f., lightly mulch the seeded soil with hay or straw at 75 lbs per 1,000 s.f., and anchor the mulch with plastic netting. Monitor growth of the rye over the next 30 days. If the rye fails to grow at least three inches or fails to cover at least 75% of the disturbed soil before November 1st, then mulch the area for over-winter protection.

- Stabilize the soil with sod – Stabilize the disturbed soil with properly installed sod by October 1st. Proper installation includes pinning the sod onto the soil with wire pins, rolling the sod to guarantee contact between the sod and underlying soil, and watering the sod to promote root growth into the disturbed soil.

- Stabilize the soil with mulch – By November 15th, mulch the disturbed soil by spreading hay or straw at a rate of at least 150 lbs per 1,000 s.f. on the area so that no soil is visible through the mulch. Immediately after applying the mulch, anchor the mulch with plastic netting to prevent wind from moving the mulch off the disturbed soil.

5.6 Over winter stabilization of disturbed slopes

All stone-covered slopes shall be constructed and stabilized by November 15th. All slopes to be vegetated shall be seeded and mulched by September 1st. A slope is considered a grade greater than 15%. If a slope to be vegetated is not stabilized by September 1st, then one of the following action shall be taken to stabilize the slope for late fall and winter:

- Stabilize the soil with temporary vegetation and erosion control mats – By October 1st, the disturbed slope shall be seeded with winter rye at a seeding rate of 3 lbs per 1,000 s.f. and then install erosion control mats or anchored mulch over the seeding. If the rye fails to grow at least three inches or fails to cover at least 75% of the slope by November 1st, then the contractor shall cover the slope with a layer of erosion control mix or with stone riprap.

- Stabilize the soil with sod – The disturbed slope shall be stabilized with properly installed sod for late-season stabilization after October 1st. Proper installation includes the contractor pinning the sod onto the slope with wire pins, rolling the sod to guarantee contact between the sod and underlying soil, and watering the sod to promote root growth into the disturbed soil. The contractor shall not use late-season sod installation to stabilize slopes having a grade greater than 3H:1V or having groundwater seeps on the slope face.

- Stabilize the soil with erosion control mix – Erosion control mix shall be properly installed by November 15th. The contractor shall not use erosion control mix to stabilize slopes having grades greater than 1H:1V or in areas with flowing water. Full contact between the blanket and the soil is critical for an effective erosion control cover.

- Stabilize the soil with stone riprap – Ditches and channels constructed in winter shall be stabilized with riprap. Riprap shall be layered over a nonwoven geotextile fabric blanket on top of a 6-inch layer of clean drainage sand. Place a layer of stone riprap on the slope by November 15th. A registered professional engineer shall be hired to determine the stone size needed for stability on the slope and to design a filter layer for underneath the riprap.

6.0 INSPECTION AND MAINTENANCE

A person with knowledge of erosion and stormwater control, including the standards and conditions in the permit, shall conduct periodic visual inspections of installed erosion control measures. The frequency of inspection shall occur at least once every week, as well as after a "storm event". A "storm event" shall consist of 0.5 inches of rain within a 24-hour period. The following Erosion and Sediment Control - Best Management Practices (BMP's) shall be inspected in the manner as described.

6.1 Sediment Barriers

Hay bale barriers, silt fences, and filter berms shall be inspected and repaired for the following if there are any signs of erosion or sedimentation below them. If there are signs of undercutting at the center or the edges of the barrier or impounding of large volumes of water behind them, sediment barriers shall be replaced with a temporary check dam. Should the fabric on a silt fence or filter barrier decompose or become ineffective prior to the end of the expected usable life and the barrier is still necessary, the fabric shall be replaced promptly. Sediment deposits should be removed when deposits reach approximately one-half the height of the barrier. Filter berms should be reshaped as needed. Any sediment deposits remaining in place after the silt fence or filter barrier is no longer required should be dressed to conform to the existing grade, prepared and seeded.

6.2 Stabilized Stone Construction Entrances

The exit shall be maintained in a condition that will prevent tracking of sediment onto public rights-of-way. The entrance/exit pad shall be inspected weekly and before and after each storm event. When the control pad becomes ineffective, the stone shall be removed along with the collected soil material and redistributed on-site in a stable manner. The entrance should then be reconstructed. The contractor shall sweep or wash pavement at exits, which have experienced mud-tracking onto the pavement or traveled way. When washing is required, it shall be done on an area stabilized with aggregate, which drains into an approved sediment trapping device. All sediment shall be prevented from entering storm drains, ditches, or waterways.

6.3 Mulched Areas

All mulches must be inspected periodically, in particular after rainstorms, to check for rill erosion. If less than 90% of the soil surface is covered by mulch, additional mulch shall be immediately applied. Nets must be inspected after rain events for dislocation or failure. If washouts or breakage occur, re-install the nets as necessary after repairing damage to the slope. Where mulch is used in conjunction with ornamental plantings, inspect periodically throughout the year to determine if mulch is maintaining coverage of the soil surface. Repair as needed.

6.4 Dust Control

When temporary dust control measures are used, repetitive treatment shall be applied as needed to accomplish control. Frequent reapplication of water may be necessary to mitigate dust occurring on warm sunny days, the distribution of water should not cause turbid runoff. Sweeping of paved road surface should occur during dry conditions and shall be swept from the centerline to the edge of the travel way, and shall not to be swept into a waterbody or wetland. Public roads may also require sweeping when necessary.

6.5 Stormwater Appurtenances

All underdrains, storm drains, and catch basins need to be operating effectively and free of debris.

6.6 Erosion and Sedimentation Control Inspections:

Acorn Engineering has personnel qualified to conduct Erosion and Sedimentation Control Inspections. For further information, contact:

Contact: Will Savage, PE
Telephone: (207) 775-2655

Qualifications:

- Maine Professional Engineering License #11419
- Maine DEP - Certified in Maintenance & Inspection of Stormwater BMP's Cert #14
- Certified Erosion, Sediment and Storm Water Inspector (CESSWI) Cert #0293
- Certified Professional in Erosion and Sediment Control (CPESC) Cert. #4620

The Contractor has sole responsibility for complying with the Erosion and Sedimentation Report/Plan, including control of fugitive dust. The Contractor shall be responsible for any monetary penalties resulting from failure to comply with these standards.

7.0 IMPLEMENTATION SCHEDULE

The following implementation sequence is intended to maximize the effectiveness of the above-described erosion control measures. Measures should be in accordance with the proper erosion control measures for the season in which construction will be conducted. Contractors should avoid overexposing disturbed areas and limit the amount of stabilization area.

1. Install a stabilized construction entrance in all locations where construction traffic will enter and exit the site.
2. Install perimeter silt fence or erosion control berm.
3. Install all other erosion control devices as necessary throughout the remainder of this schedule.
4. Commence installation of drainage infrastructure.
5. Commence earthwork operations associated with the parking lot construction.
6. Commence installation of utilities.
7. Continue earthwork and grading to subgrade as necessary for construction.
8. Complete installation of drainage infrastructure, as well as other utility work.
9. Complete remaining earthwork operations.
10. Install sub-base and base gravels in paved areas.
11. Install paving, curbing, and brickwork.
12. Loam, lime, fertilize, seed, and mulch disturbed areas and complete all landscaping.
13. Once the site is stabilized and mulching of landscape areas is complete, remove all temporary erosion control measures.
14. Touch up areas without a vigorous catch of grass with loam and seed.
15. Complete site signage and striping.
16. Execute proper maintenance and inspections of all temporary and permanent erosion control measures throughout the project.

The contractor shall re-vegetate disturbed areas as rapidly as possible. All areas shall be permanently stabilized within 7 days of final grading or before a storm event. The contractor shall incorporate planned inlets and drainage systems as early as possible into the construction phase.

The above implementation sequence should be generally followed by the site contractor. However, the contractor may construct several items simultaneously. The contractor shall submit to the owner a schedule of the completion of the work. If the contractor is to commence the construction of more than one item above, they shall limit the amount of exposed areas to those areas in which work is expected to be undertaken within the following 30 days.

8.0 CONCLUSION

The above erosion control narrative is intended to minimize any negative development impact caused by erosion and sedimentation. The contractor shall also refer to the Maine Erosion and Sediment Control BMP manual for additional information.

9.0 ATTACHMENTS

- Temporary Seeding Plan
- Permanent Seeding Plan

TEMPORARY SEEDING PLAN

Site Preparation

The seeded areas shall be feasibly graded out to provide the use of equipment for seedbed preparation, seeding, mulch application, and mulch anchoring. If necessary, the site may require additional temporary erosion control measures outlined in the Erosion Control report.

Seedbed Preparation

Fertilizer shall be applied to the site at a rate of 13.8 pounds per 1,000 square feet. The composition of the fertilizer shall be 10-10-10 (N-P2O5-K2O) or equivalent.

Limestone shall be applied to the site at a rate of 138 pounds per 1,000 square feet.

Seeding

The composition and amount of temporary seed applied to a site shall be determined by the following table:

Seed	Pounds / 1,000 S.F.	Recommended Seeding Dates
Winter Rye	2.57	Aug-15 to Oct-1
Oats	1.84	Apr-1 to Jul-1 Aug-15 to Sep-15
Annual Ryegrass	0.92	Apr-1 to Jul-1
Sudangrass	0.92	May-15 to Aug-15
Perennial	0.92	Aug-15 to Sep-15

Mulching

Mulch shall be applied at a rate of 70 lbs – 90 lbs per 1,000 square feet. The mulch shall be installed at a minimum depth of 4 inches. The seeded area shall be mulched immediately after seed is applied. Mulching during the winter season shall be double the normal amount.

Conclusion

Please refer to the Maine Erosion and Sediment Control BMP manual for additional information pertaining to temporary seeding and mulching.

PERMANENT SEEDING PLAN

Site Preparation

The seeded areas shall be feasibly graded out to provide the use of equipment for seedbed preparation, seeding, mulch application, and mulch anchoring. If necessary, the site may require additional temporary erosion control measures outlined in the Erosion Control report.

Seedbed Preparation

Fertilizer shall be applied to the site at a rate of 13.8 pounds per 1,000 square feet. The composition of the fertilizer shall be 10-10-10 (N-P2O5-K2O) or equivalent.

Limestone shall be applied to the site at a rate of 138 pounds per 1,000 square feet.

Seeding

The composition and amount of permanent seed applied to a site shall be determined by the following table:

Seed	Pounds / 1,000 S.F.
Kentucky Bluegrass	0.46
Creeping Red Fescue	0.46
Perennial Ryegrass	0.11
Total	1.03

Mulching

Mulch shall be applied at a rate of 70 lbs – 90 lbs per 1,000 square feet. The mulch shall be installed at a minimum depth of 4 inches. The seeded area shall be mulched immediately after seed is applied. Mulching during the winter season shall be double the normal amount.

Recommendations

Permanent seeding is recommended to be completed in the spring. Later summer seeding is allowed if completed prior to September 1st. If seeding cannot be accomplished during the periods recommended for permanent seeding, then the contractor shall perform temporary seeding per the temporary seeding plan.

Conclusion

Please refer to the Maine Erosion and Sediment Control BMP manual for additional information pertaining to permanent seeding and mulching.

A C O R N
ENGINEERING, INC.

Chief Keith Gautreau
City of Portland Fire Department
380 Congress St.
Portland, ME 04101

November 17, 2023

Subject: 64 Pine Street Redevelopment– Fire Department Checklist
Section L of Application

On behalf of 64 Pine Street, LLC, the design team is pleased to respond to the Portland Fire Department Site Review Checklist.

1. Name, address, telephone number of applicant

   64 Pine Street, LLC
   104 Washington Avenue
   Portland, Maine 04101
   (207) 939-5432

2. Name, address, telephone number of architect

   Invivid Architecture
   631 Stevens Avenue, Suite 200
   Portland, ME 04103
   (207) 939-7602

3. Proposed uses of any structures [NFPA and IBC classification]

   NFPA: Apartments/Mercantile
   IBC: R2 and M

4. Square footage of all structures, including decks [total and per story]

Existing Building		
Total	4695	**sf**

Proposed Building		
Ground	7,719	sf
2nd Floor	7,221	sf
3th Floor	7,221	sf
4th Floor	7,221	sf
Total	**29,382**	**sf**

5. Elevation of all structures

   Based upon the average grade plane defined by the IBC, the proposed building height is just under 45'. This height is below the allowable 45 feet within the B1 zone. Please refer to the building elevations provided by the architect for additional information.

6. Proposed fire protection of all structures

   The building will be serviced by a 6" sprinkler service with additional protection per code. Fire flows and requirements for system storage or booster pumping are subject to the fire professional design which will be performed prior to the request for a building permit.

7. Hydrant locations

   An existing hydrant is located approximately 200 ft south of the property along Pine Street. Hydrant flow data from the Portland Water District once received may be made available to the Fire Department upon request.

8. Water main size and location

   The redevelopment will be serviced by a new 6" sprinkler line and domestic water main within Pine Street. The building is expected to have internal sprinkler risers and a Fire Department pump connection.

9. Access to all structures [min. 2 sides]

   Access to the structure is provided directly on the public right-of-way along Pine Street.

10. Code summaries will be provided by the Architects upon request.

NFPA 1 – Chapter 18 Fire Department Access and Water Supply

18.2 Fire Department Access:

The project site is located in a developed area and is fronted by a public street. The following pavement street width is currently available:

- Pine Street: 45.50 feet

Per NFPA 1 – Chapter 18.2.3.2.2.1, all first story floors shall be located not more than 450 feet from a Fire Department access road.

City of Portland Technical Manual – Section 3 Public Safety

3.4.1 Every dead-end roadway more than one hundred fifty (150') feet in length shall provide a turnaround at the closed end. Turnarounds shall be designed to facilitate future street connectivity and shall always be designed to the right (refer to Figure I-5).

Response: Not applicable

3.4.2 Where possible, developments shall provide access for Fire Department vehicles to at least two sides of all structures. Access may be from streets, access roads, emergency access lanes, or parking areas.

Response: The building is accessible directly from the street.

3.4.3 Building setbacks, where required by zoning, shall be adequate to allow for emergency vehicle access and related emergency response activities and shall be evaluated based on the following factors:

- *Building Height.*
- *Building Occupancy.*
- *Construction Type.*
- *Impediments to the Structures.*
- *Safety Features Provided.*

Response: The proposed development layout has contemplated emergency access conditions and provides for safe and efficient access along a circuitous route through the site for emergency access. Vehicular access is from the street.

3.4.4. Fire Dept. access roads shall extend to within 50' of an exterior door providing access to the interior of the structure.

Response: The building will be provided with exterior doors that will be within 50' of a Fire Department access route.

3.4.5. Site access shall provide a minimum of nine (9) feet clearance height to accommodate ambulance access.

Response: There is no proposed vehicular site access.

3.4.6. Elevators shall be sized to accommodate an 80 x 24-inch stretcher.

Response: The proposed elevators will meet this requirement.

3.4.7. All structures are required to display the assigned street number. Numbers shall be clearly visible from the public right of way.

Response: The applicant is currently working with the City's Public Works Division to assign street addresses and numbering to meet City Standards.

Thank you for your review. Please let me know if you have any additional questions or comments.

Sincerely,

Sam Lebel

Sam Lebel, P.E.
Project Manager
Acorn Engineering, Inc.

M. Calculation of Wastewater Flowrate

The proposed project will include the redevelopment of a site that is currently occupied by an existing restaurant and parking lot. The existing site will be redeveloped into a mixed-use 4-story building with retail space on the first floor and residential units on floors two through four.

Based upon Section 4 of the Maine Subsurface Wastewater Disposal Rules, the project anticipates the following daily flows:

Estimate of Anticipated Daily Flows			
Classification of Water Demand	Number of Units	Gallons per Day per Unit	Total Gallons per Day
Existing Flow			
Eating Place, 2 meals/day (20 GPD per seat)	30 seats	20	600
Eating Place, 2 meals/day (12 GPD per employee)	5 employees	12	60
Total Gallons per Day (Existing)			660 GPD
Proposed Flow			
Employees at place of employment with no showers (12 GPD per employee)	1 unit (5 employees per unit)	12	60
Eating place, takeout	1 unit	100	100
3-Bedroom	9	270	2,430
Total Gallons per Day (Proposed)			2,590 GPD
Net Change			**+1,930 GPD**
*Values based on STATE OF MAINE: SUBSURFACE WASTEWTAER DISPOSAL RULES, most recent edition			

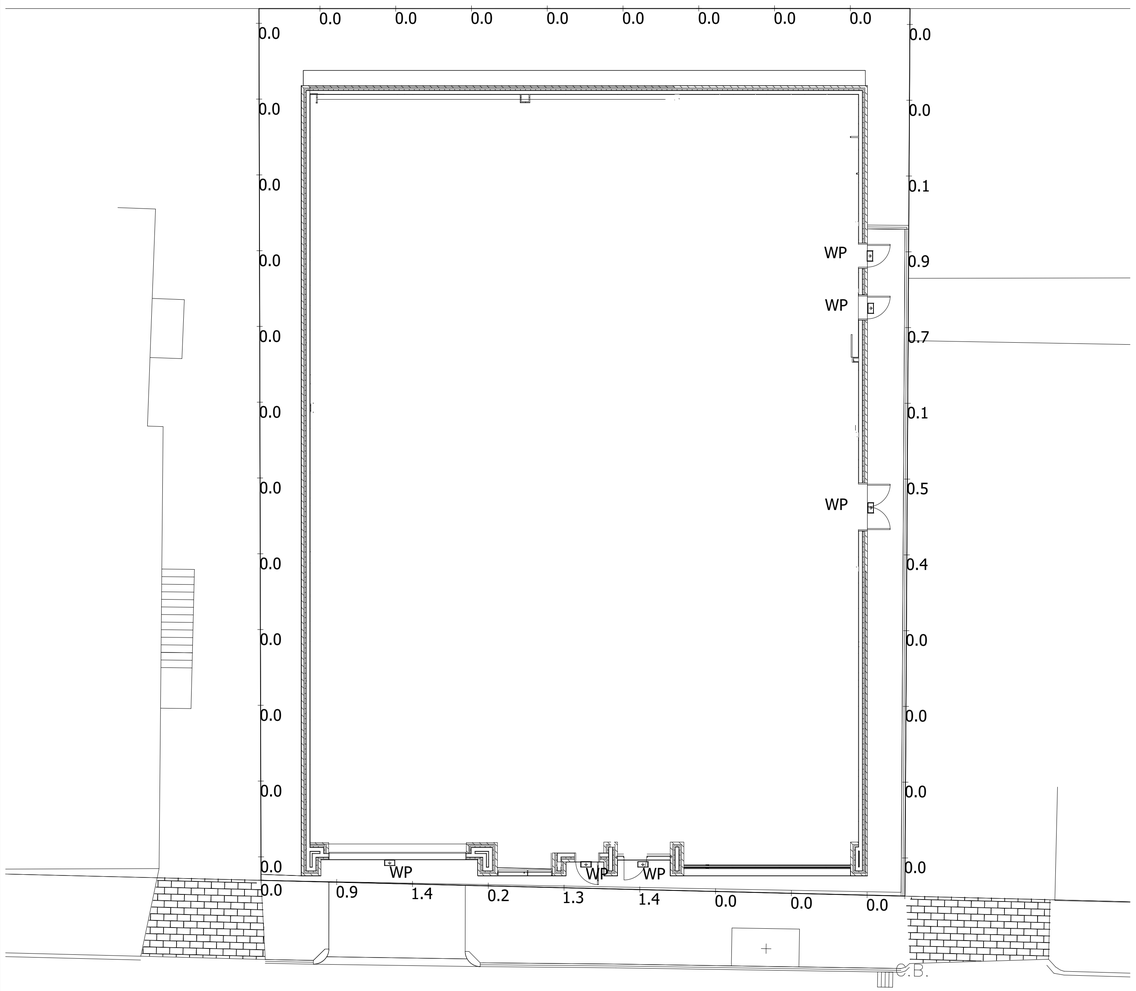
As seen above, the project anticipates an increase in daily flow rate of approximately 1,930 gallons per day. As proposed within the stormwater report, we will be providing onsite detention for an equivalent storage volume.

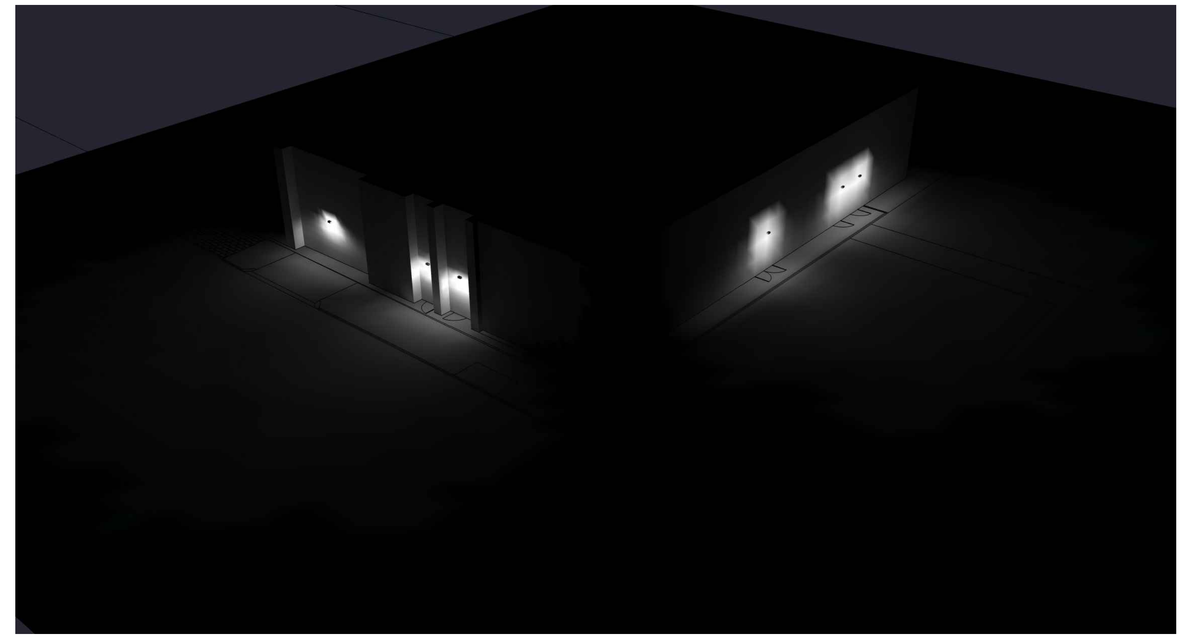
N. Lighting

Please find attached the cuts sheet and photometric plans for the proposed site lighting.

Luminaire Schedule							
Symbol	Qty	Label	Mounting Height	LLF	Lum. Lumens	Lum. Watts	Description
+	5	WP	8' - 0" AFG	0.900	1462	15	CUSO 3000K

Calculation Summary							
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
Property Line	Illuminance	Fc	0.19	1.4	0.0	N.A.	N.A.





10 0 5 10 20 40

1 inch = 10 - FT.

1. THIS LIGHTING DESIGN IS BASED ON LIMITED INFORMATION SUPPLIED BY OTHERS TO CURRENT. SITE DETAILS PROVIDED HEREON ARE REPRODUCED ONLY AS A VISUALIZATION AID. FIELD DEVIATIONS MAY SIGNIFICANTLY AFFECT PREDICTED PERFORMANCE. PRIOR TO INSTALLATION, CRITICAL SITE INFORMATION (POLE LOCATIONS, ORIENTATION, MOUNTING HEIGHT, ETC.) SHOULD BE COORDINATED WITH THE CONTRACTOR AND/OR SPECIFIER RESPONSIBLE FOR THE PROJECT.
2. LUMINAIRE DATA IS TESTED TO INDUSTRY STANDARDS UNDER LABORATORY CONDITIONS. OPERATING VOLTAGE AND NORMAL MANUFACTURING TOLERANCES OF LAMP, BALLAST, AND LUMINAIRE MAY AFFECT FIELD RESULTS.
3. CONFORMANCE TO FACILITY CODE AND OTHER LOCAL REQUIREMENTS IS THE RESPONSIBILITY OF THE OWNER AND/OR THE OWNER'S REPRESENTATIVE.

TITLE:

64 PINE STREET
PORTLAND, ME
SITE PHOTOMETRIC PLAN

REVISED FROM DRAWING NUMBER(S):
R1: 10/18/23

Current

DN BY:	DATE:	CHK BY:
DHK	10/13/23	N/A
REV. BY: DHK	DATE: 10/18/23	SCALE: AS NOTED
QUOTE: N/A	DRAWING / DESIGN NO.: A231999R1	

COMPASS®

DATE:	LOCATION:
TYPE:	PROJECT:
CATALOG #:	

CUSO

SLIM LED AC/EMERGENCY OUTDOOR LIGHT

tradeSELECT®

FEATURES

- Includes self-diagnostic/self-test feature to monitor proper operation
- Quick installation
- Universal 120-277VAC input, 60Hz.
- Includes long-life 7.2V Nickel Cadmium battery for UL recognized 90 minute operation
- Full re-charge within 24 hours
- Provided with water-proof test switch and AC-On indicator
- 0°C to 50°C Standard Model, -25°C to 50°C with optional heater
- UL924 and Wet Location Listed

UL924 NFPA 70 NFPA 101

SPECIFICATIONS

DESCRIPTION

- The CUSO Series is an architectural, low-profile outdoor light, offering "normally On" AC and emergency lighting with powerful LED illumination
- The housing is fully sealed and gasketed, and has an IP65 rating
- Designed for wall mounting with universal K/O pattern in back-plate for easy installation to most standard size junction boxes
- Includes a single ½" NPT conduit entry in the top, center of the housing
- Illumination provided by 8 high power LEDs which achieve 1,600 lumens in AC and 600 lumens in emergency
- Available in 3000K or 4000K color temperature
- Models at 3000K include a photo-sensor and PIR(passive infra-red) motion detector which cannot be altered
- The unit will only turn on in AC mode when motion is detected. Models at 4000K include a photo-sensor and do not include motion detector
- The unit can be controlled by a switch, timer or the photo-cell

APPLICATION

- The CUSO Series can be applied in areas that are susceptible to rain and severe moisture like parking decks, and outdoor commercial applications to meet all Path of Egress requirements

COMPLIANCES

- UL924 Listed for Wet Location
- NFPA 101
- NFPA 70
- OSHA

WARRANTY

- 5 year full unit warranty

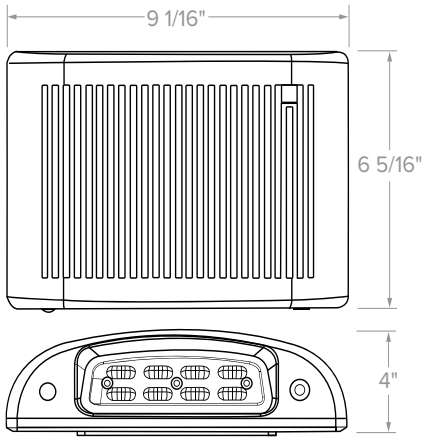
ENERGY CONSUMPTION

	Max.	Max. with heater
120VAC, 60Hz	3.59W	3.40W
277VAC, 60Hz	3.59W	3.40W

ORDERING GUIDE

Catalog Number	Description
CUSO DB	Outdoor AC/EM, 3000K, Photo-sensor and PIR Motion Detect, Self-Diag., Dark Bronze
CUSO DB-H	Outdoor AC/EM, 3000K, Photo-sensor and PIR Motion Detect, Self-Diag., Dark Bronze, Heater
CUSO BK	Outdoor AC/EM, 3000K, Photo-sensor and PIR Motion Detect, Self-Diag., Black
CUSO BK-H	Outdoor AC/EM, 3000K, Photo-sensor and PIR Motion Detect, Self-Diag., Black, Heater
CUSO WH	Outdoor AC/EM, 3000K, Photo-sensor and PIR Motion Detect, Self-Diag., White
CUSO WH-H	Outdoor AC/EM, 3000K, Photo-sensor and PIR Motion Detect, Self-Diag., White, Heater
CUSO4DB-ND	Outdoor AC/EM, 4000K, Photo-sensor, Self-Diag., Dark Bronze
CUSO4DB-H-ND	Outdoor AC/EM, 4000K, Photo-sensor, Self-Diag., Dark Bronze, Heater
CUSO4BK-ND	Outdoor AC/EM, 4000K, Photo-sensor, Self-Diag., Black
CUSO4BK-H-ND	Outdoor AC/EM, 4000K, Photo-sensor, Self-Diag., Black, Heater
CUSO4WH-ND	Outdoor AC/EM, 4000K, Photo-sensor, Self-Diag., White
CUSO4WH-H-ND	Outdoor AC/EM, 4000K, Photo-sensor, Self-Diag., White, Heater

DIMENSIONS



Single Carton Weight	4 lbs.
Master Carton Quantity	6 each

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O. Architectural Design Narrative

Please find attached the design narrative completed by Invivid Architecture.

Project Overview:
Name: 64 Pine
Location: 64 Pine Street, Portland Maine
Number of Units: 9 Luxury Condominiums, 1 Commercial Unit
Use: Residential, Commercial Unit, Mechanical Parking System

Design Concept:
Our design concept is rooted in the vision of seamlessly integrating modern living into the fabric of the historic West End. Recognizing the unique character of the neighborhood, our aim is to create a development that pays homage to the past while embracing the convenience and sustainability demands of contemporary life.

Key Design Features:

Historic District: The project is located within the historic district. We are closely working with the Historic Board to place character-defining elements of the district into our design while maintaining a contemporary, luxurious feel to the project.

Ecological Responsibility: The project places a strong emphasis on ecological responsibility, utilizing sustainable practices and materials throughout the development process.

Luxurious Condominiums: Comprising nine luxurious condominiums, the project caters to discerning residents who seek both opulence and sustainability in their living spaces.

Strategic Location: Situated in the heart of the West End, the development is strategically located adjacent to various amenities such as restaurants, retailers, bakers, and boutiques, fostering a vibrant and connected community.

Innovative Parking System: The first floor features a state-of-the-art mechanical parking system, optimizing space efficiency and addressing urban parking challenges.

Distinctive Exterior: The exterior design is characterized by clean, modern lines with warm natural wood materials, offering a nod to the historical context of the West End. A distinct base further ground the project in its surroundings.

Abundant Natural Light: The incorporation of extensive glass elements ensures that each unit is bathed in natural light, creating a bright and inviting living environment for residents.

Shared Roof Deck: A shared roof deck serves as a communal space for entertainment and relaxation. The deck features native, organic edible planting, contributing to a sustainable and aesthetically pleasing green space.

Massing, Ventilation, and wind impact: the bulk, location, or height of proposed building does not result in health or safety problems from reduction in ventilation to abutting structures or change the existing wind climate that would result in unsafe wind condition for users of the site or adjacent public spaces.
The bulk, location, or height of proposed building and structure minimizes any substantial diminution in the value or utility to neighboring structures and is not subject to a legal servitude in favor of the site being developed.
We locate all HVAC venting to direct exhaust away from public spaces and residential properties.

We believe that 64 Pine will not only enhance the architectural landscape of the West End but will also contribute positively to the neighborhood's vitality. We are committed to working collaboratively with the Planning Board to address any concerns and ensure that our project aligns seamlessly with the city's vision for urban development.

Thank you for considering our proposal. We look forward to the opportunity to bring this vision to life and contribute to the enduring charm of Portland's historic West End.

Sincerely,

Virginie Stanley
INVIVID ARCHITECTURE
631 Stevens Avenue, Suite 200
Portland, Maine 04103

P. Utilities

The proposed project will include installation of multiple utility services to the proposed building.

Water:

There is an existing 8" water main within Pine Street. It is proposed to tap a new 6" service line off the existing water main within Pine Street. The 6" line will serve as the sprinkler service and the 2" line will be for domestic services.

Sewer:

An existing 18" sewer exists in Pine Street. It is proposed to connect a 6" sewer lateral into the existing main in Pine Street. A backflow preventer is proposed at the property line before connecting into the existing sewer main.

Stormwater:

There is currently no drainage infrastructure on site. The proposed stormwater measures include generous vegetation, foundation drains, field inlets, and R-Tanks to provide storage. Please see the stormwater Management Report for more information.

Electric/Communications:

The site is currently served by overhead services. It is proposed to remove the existing overhead services and install subsurface electric and telecom from the existing utility pole on Pine Street. The project will require a new pole mounted transformer but that will be confirmed as the coordination with CMP progresses. See Sheet C-20 for additional information.

Ability to serve letters have been sent out to the respective utility companies in accordance with the City of Portland Code of Ordinances Chapter 14 Land Use. Responses from the utility companies are forthcoming.

Q. Construction Management Plan

Project Address: 64 Pine Street, Portland Maine, 04102

Project Description:

The proposed project includes the development of a 4-story mixed-used building with 9 residential units and 1 retail space.

Project Team Summary:

Owner:	64 Pine Street, LLC
General Contractor:	Great Falls Construction
Civil & Environmental Engineer:	Acorn Engineering, Inc.
Architect:	Invivid Architecture
Structural Engineer:	M2 Structural Engineering, P.C.

The Owner/GC and all subcontractors will work with the City of Portland and adjacent landowners to minimize any project impacts.

The GC will remain responsible for enforcement of all compliance with 1) all contract plans and specifications in their scope of work and 2) all site working conditions and safety requirements, day and night, for both persons and property, in each case for the duration of their work. These include OSHA, NIOSH, U.S. EPA, local ordinance and any other applicable governmental regulations. Both the Owner/GC and any subcontractors will remain responsible for safeguarding the general public.

The GC shall review all permits and conditions associated with the project. Refer to the Civil/Site Plan Set, Sheet C-03 Construction Management Plan for visual representation of the measures to be taken during construction.

The following outline has been developed in accordance with the City of Portland Construction Management Plan General Template and shall be referenced by the GC during construction.

A. Construction Management Principles

The control of noise, vibrations, ground movement, truck traffic, and other construction related factors will be of utmost importance. Care shall be taken to minimize these effects in the best interest of neighbors and the general public. GC to ensure that work hours conform to the City of Portland's Ordinance.

B. Development Review of Construction Management Plan

Logistics and safety program shall be submitted at or prior to the preconstruction meeting by the GC with all pertinent information required by the Maine Department of Transportation's Traffic Control Plan Standard Specification 652.3.3.

C. Performance Guarantees, Inspection Fees, Preconstruction Meeting, and Permits

Guarantees and fees will be paid at the time of the respective application. Sections 14-11 will be complied with all necessary permits will be obtained prior to work.

1. Street Opening and Street Occupancy Permits:

   Required permits regarding street opening and occupancy will be obtained from the Department of Public Works. The requests shall conform to the approved Construction Management Plan.

2. Blasting:

   Although not anticipated, if blasting occurs, it shall conform to Article VIII. In Chapter 14 of the City Code and Section 3.7 in the City's Technical Manual.

3. Building Code:

   Employ the best practices, as applicable, of Chapter 33 Safeguards During Construction, from the 2009 International Building Code. In addition to the best practices set forth in the Inclusionary Zoning Guidelines for Developers of rental housing.

D. Construction Administration and Communication

The Contractor will work closely with adjacent abutters, businesses, and all parties informed, as far in advance as possible, of scheduled work, particularly work anticipated to cause significant noise, vibrations, or dust. Communication in order to comply with all agreements, ordinances, and special permits will be of the utmost importance. Contractor and Subcontractor contact information shall be posted somewhere along the project's street frontage. Additional signage necessary for communication shall be provided but will be temporary and removed upon completion of the project.

E. Construction Schedule

The GC shall submit a construction timeline at or prior to the preconstruction meeting. Construction may occur during the daytime hours as defined in Section 17-18. Construction Activities for Building permit and City Code Section 25-129, Noise, dust and debris. Between September 1 and May 31, the following year, no person shall engage in construction activities generating noise exceeding 50 decibels, between the hours of 7 pm and 7 am of the following day within 500 feet of any buildings. From June 1 to August 31, construction activity may continue until 8 pm. No construction activity shall begin before 8 am on a Saturday, Sunday, or legal holiday. Extended hours or night work may be requested for special circumstances and street utility work if needed. These requests will be subject to approval by the Public Works Authority.

Deliveries will be scheduled between 7 am and 5 pm.

The estimated timeframe of the proposed project is outlined below:

Project Start Date:	Spring 2024
Project End Date:	Spring 2025

A more detailed work schedule shall be provided by the GC at or before the pre-construction meeting with the City.

F. Security

1. The Construction Management Plan, Sheet C-03, depicts all proposed fencing and other barriers, with the intent of separating pedestrian and vehicle circulation from the construction site. Construction entrances per detail shall be installed.

2. Structures undergoing construction, alteration, or demolition operations, including those in underground locations, shall comply with NFPA 1 Chapter 16. *Safeguarding Construction, Alteration, and Demolition Operations.*

3. Fire Safety Program: Prior to construction, an overall construction and demolition fire safety program shall be developed. Essential items to be emphasized include the following:
    - Good Housekeeping
    - On-site security
    - Installation of new fire protection systems as construction progresses
    - Preservation of existing systems during demolition
    - Organization and training of an on-site fire brigade
    - Development of a pre-fire plan with the local fire department
    - Rapid communication
    - Consideration of special hazards resulting from previous occupancies
    - Protection of existing structures and equipment from exposure fires resulting from construction, alteration, and demolition operations.

4. Blasting, if required, shall conform with all measures of Article VIII. Regulation of Explosives in the Land Use Code and Section 3.7 Standards for Blasting and Regulation of Explosives in Portland's Technical Manual.

5. Temporary security lighting shall be shown on the Construction Management Plan, and all fixtures shall be full cutoffs.

G. Construction Permitting and Traffic Control Plans

1. Construction Activity in Public Streets

   Construction activity in the public right-of-way shall be compliant with Chapter 25 Article VII of the City Code. At no time will it be permissible for construction

activity including delivery vehicle to close or block streets or affect public safety access without prior notice and approval of the Department of Public Works.

2. Sewer and Stormwater

Sewer and stormwater system connections are controlled by Chapters 24 and 32 of the City code of Ordinance. Required permits for new connections and/or abandonment of existing connections are available through the Street Opening Clerk at the Department of Public Works. Rules and Regulations for these utility systems are available through the City Engineer's office of the Department of Public Works and in Section II of the Technical Manual.

3. Traffic Control Plans

Construction activity that impacts the existing public street system must be controlled to protect the safety of the construction workers and all modes of the traveling public. The contractor shall submit a satisfactory "Maintenance of Traffic" (MOT) plan prior to any street opening permit approval. This document shall contain all pertinent information from the Maine Department of Transportation's Traffic Control Plan Standard Specification 652.3.3.

The MOT will address the work required for utility connections in Pine Street. Traffic will be channelized utilizing drums and cones. Proper signage will be installed prior to the through work zone. Alternating traffic will be controlled with flaggers. Trenches will be patched with pavement daily.

The MOT plan shall provide for the safe passage of the public through or along the construction work zone. It may be permissible to close a portion of the street during utility connections and/or detour a mode of traffic when absolutely necessary for safety. All requests shall be subject to City approval. MOT plans shall employ the appropriate techniques and devices as called for in the latest edition of the Manual on Uniform Traffic Control Devices (MUTCD). In addition:

- Construction speed signing may be used as needed to slow traffic.
- Traffic Control signs shall not be placed where they would create any obstructions to bicycles or pedestrians.
- Flaggers will be utilized when necessary.

All existing modes of travel in the work zone area shall be accommodated if impacted by the activity. The safe passage of pedestrians, bicyclists, transit providers, and motorists are of equal importance when planning and laying out the work zone; no pre-existing travel mode may be eliminated without the express approval of the Department of Public Works. The MOT should also address on-street parking impacts, including deliveries and parking for adjoining businesses and property owners, analysis of roadway capacity or diversion capacity if street closure or change to roadway capacity is required, and coordination with other on-going or future construction or utility projects in the vicinity.

- Traffic control bicycle and pedestrian facilities or routes through work zones shall be maintained until the bicycle and pedestrian facilities or routes are ready for safe operation. Traffic control will not be removed to allow auto travel at the expense of bicycle and pedestrians.
- Barrier systems utilized to separate the construction activity from the public street and /or sidewalk shall not inhibit sight distances, particularly for visibility of pedestrians and bicyclists.
- ADA compliance in all capacities shall be maintained.

Use of public parking spaces or the blockage of any portion of sidewalk for the purpose of construction activity shall require an occupancy permit and appropriate fee as assessed by the Department of Public Works.

H. Site Management and Controls

1. Regular trash and debris shall be managed appropriately, and its removal shall comply with all local, state, and federal regulations.

2. Street cleaning and sweeping shall be followed as outlined in the erosion and sedimentation control notes and report. Damage to the street shall be avoided and shall be the responsibility of the contractor.

3. Dust shall be controlled and shall comply with Section 25-129 and the erosion and sedimentation control notes, plan, and details.

4. Noise shall be controlled and shall comply with Section 17-18 and Section 25-129.

5. Rodent Control shall be provided, if applicable, by a professional exterminator and shall be consistent with Chapter 22 of the City Code.

6. Snow and Ice Removal shall be provided. Pursuant to Section 25-173, the Contractor shall ensure a safe means of travel within the work zone by the following steps:

    a. Snow/ice removal or commence automatically from 1" or greater of snow or ice
    b. Remove snow as needed within the work zone, including parking spaces. Driveways and site lines shall not be blocked by piles of snow.
    c. Clear all walks and ramps within the work zone
    d. Sand or salt as needed
    e. Clear all basin or drainage to help snow melt
    f. The above steps shall be carried out Sunday-Saturday including holidays.

I. Erosion & Sedimentation Control

1. The Contractor shall install all erosion and sedimentation controls as depicted on the approved Construction Management Plan, C-03, and the approved erosion and sedimentation control report, prior to the pre-construction meeting for inspection

by the City. The Contractor shall regularly inspect the control measures, no less than weekly and after storm events (0.5" or more in 24 hours). Additionally, temporary or permanent stormwater management systems shall be inspected and maintained to ensure working order. The Contractor shall document all inspection activities and corrective actions and be prepared to provide these documents for inspection by the City, Maine Department of Environmental Protection (MDEP) or the U.S. Environmental Protection Agency (EPA) upon request.

2. The Contractor to install catch basin inlet protection to existing catch basins located within the street in front of the project. Refer to approved Construction Management Plan, C-03, for specific location of the catch basins.

3. Due to the existing, sparse landscaping on site, no protection during construction will be necessary.

4. Stored materials shall be identified and avoid being located under/near trees.

J. Construction Staging Area

1. The Contractor shall submit a plan with locations depicted for the location of material staging areas, the location of on-site temporary construction trailers, the location of on-site truck delivery holding areas, the location of on-site truck washing stations, masonry mixing stations, the general location of the construction security fence and the general location of temporary construction dumpsters. This plan shall be submitted at or prior to the pre-construction meeting. Any open storage areas shall be shown on the plan.

2. Delivery Truck Holding Areas On-Site: The majority of materials delivered to the site will be scheduled such that they are able to be off-loaded immediately. On days when the construction activities require multiple truck deliveries, these deliveries will be carefully scheduled so that there is always adequate on-site area for the holding of trucks until they can be unloaded. Once at the site all vehicles will be brought within the fence line and will make every attempt to avoid queuing on public streets. If, for any reason, on-site holding of trucks is not feasible, an off-site location must be designated and shown on the submitted plan referenced above in J.1.

3. All deliveries for materials shall comply with the City's noise requirements.

K. Parking During Construction

1. Adequate parking for construction workers shall be provided on site or arrangements for off-street parking at an off-site location shall be provided.

2. Truck Routes and Volumes: The following quantities are estimated as part of the reconstruction:

    - Gravel & Stone – 200 CY. Earthwork subcontractor(s) pit to project site.

- Hot Mix Asphalt – 100 Tons. Paving subcontractor pit to project site.

L. Dewatering Plans

1. A basic dewatering plan for any construction work is required and shall be submitted by the Contractor. The plan must cover construction sites where groundwater is not expected but the impact of rainwater may require dewatering. The plan must include operating procedures, equipment to be used, including filters, erosion and sediment control measures, or other methods of removing sediment from approved discharges.

2. For construction work that will require frequent dewatering of groundwater from site, a dewatering plan must be prepared by the Contractor and approved by the Department of Public Works. Groundwater and/or soil testing may be required to determine course of action if treatment is necessary. Approval for all discharges to City infrastructure is required. The proposed plan must address the following:

   - Project duration, discharge location, storage equipment on-site, dewatering schematic, and emergency contact.
   - General requirements include trained staff on-site for all approve discharges and required site log for documentation of all discharges.
   - Storage and/or treatment process should include proper settling time and maintain proper use of filtering medium as required.
   - Contingency/maintenance plan for all dewatering equipment devices and filtration mediums.

   Any water that is removed from an excavation must be pumped from a perforated device buried in crush stone prior discharge and/or prior to storage and treatment. There will be no discharge allowed during precipitation events.

M. Special Measures as Necessary

No special measures are necessary for the proposed reconstruction.

R. Solid Waste Disposal

The property management company or Owner shall be responsible for locating the solid waste and recyclable material to the spaces allocated for solid waste storage as noted on the Site Plan (C-10).

A private hauler will be contracted for removal. The solid waste containers will be located within the building out of public view.

S. Parking Analysis

Per Land Use Code Section 19 Off Street Parking Table 19-B: Off Street Parking Minimums for residential uses is no off-street parking shall be required for the first four dwelling units, not counting accessory dwelling units, except as otherwise specified herein. This results in the required minimum amount of off-street parking for a 9 unit building with less than 2,000 sf of retail space to be 5 parking spaces. The project proposes the use of a mechanical vehicle parking system inside the building which provides space for a standard residential vehicle for a total of up to two (2) spaces per unit (18 spaces) which is greater than 10% of the minimum requirement of 5 parking spaces.

Based upon the Applicant's market research, there is a demand for these types of residential condominium buildings that include two parking spaces per unit that is presently not being met. Due to limited on-street parking along Pine Street and the surrounding neighborhood which among uses, is home to growing businesses, a school, a hospital, and newly built housing, providing additional parking within the building reduces spillover into the neighborhood and frees up on-street parking for other residents/customers in the area. By providing an internally stacked mechanical parking system for the residents, the project makes efficient use of space and minimizes the land area dedicated to parking.

Proposed Parking = 19 Off Street Parking Spaces. It is proposed to have 18 parking spaces (2 spaces per unit) within the mechanically stacked parking system. One additional ADA parking space will be provided. Given the type of proposed unit owners, bedroom count, unit size, lack of available on street parking, neighbors' concerns, and desire for flexibility, the applicant respectfully requests the Planning Board allow the applicant to exceed the minimum parking standard This is achieved by utilizing the higher first floor ceiling found in retail storefronts to implement a state-of-the-art mechanical stacker system. This additional parking therefore does not sacrifice other elements of the project as smart growth principles are being implemented by eliminating surface parking and providing a mixed-use building with active ground level frontage and housing above.

ACORN ENGINEERING, INC.

Planning Division
City of Portland, Maine
389 Congress Street, 4th Floor
Portland, ME 04101

January 29, 2024

Subject: 64 Pine Street, LLC Neighborhood Meeting

I, Sam Lebel, hereby certify that a neighborhood meeting was held on January 18, 2023, at 64 Pine Street at 5:30 pm.

I also certify that on January 4, 2024, invitations were mailed to the following:

1. All addresses on the mailing list provided by the Planning Division, which includes property owners within 500 feet of the proposed development.
2. Residents on the "interested parties" list.

Sincerely,

Sam Lebel

Sam Lebel, P.E.
Project Manager
Acorn Engineering, Inc.

Included with this certification are:

1. Copy of the invitation sent
2. Sign-in sheet
3. Meeting minutes

ACORN ENGINEERING, INC.

Dear Neighbor: January 4, 2024

On behalf of 64 Pine Street LLC, we are pleased to invite you to a neighborhood meeting to discuss the Major Site Plan Application for the proposed redevelopment of 64 Pine Street within the B1 Zoning District. The project proposes to redevelop the parking lot and former restaurant, into a 4-story building with 9 residential units on the upper floors and a ground level commercial space. The project will require approval from both the Planning Board and the Historic Preservation Board. Please refer to the meeting information below:

Meeting Location: 64 Pine Street, Portland, ME 04102
Meeting Date/Time: Thursday, January 18th, 2024, at 5:30 p.m.

A sign-in sheet will be circulated, and a record of the meeting will be taken. Both the sign-in sheet and record will be submitted to the Planning Board. If you have any questions, please call (207) 775-2655.

Sincerely,

Sam Lebel

Sam Lebel, P.E.
Project Manager
Acorn Engineering, Inc.

Note: Under the City of Portland land use code, an applicant for a major site plan, master development plan, subdivision of over five lots, or zoning map amendment is required to hold a neighborhood meeting within 30 days of an application being deemed complete and no less than seven calendar days before a public hearing. Should you wish to offer additional comments on this proposed development, you may forward them by e-mail to planning@portlandmaine.gov or by mail to the Planning and Urban Development Department, Planning Division, 4th Floor, 389 Congress Street Portland, ME 04101.

64 Pine Street, LLC
1/18/24 | 5:30 pm

Sign-in Sheet

Name	Email
Sean O'Neill	Sean-d-oneill@hotmail.com
George Russell	ghruss@yahoo.com
Colin Vettier	colin.vettier@gmail.com
Caitlin Ent	Caitlin.Ent@gmail.com
Ilma Lopez	Ilma.jeil.lopez@gmail.com
Project Team	
Tom Landry	tomlandry@benchmarkmaine.com
Nick Aceto	tomlandry@benchmarkmaine.com
Virginie Stanley	virginie@invividarchitecture.com
Taejoo Jeon	taejoo@invividarchitecture.com
Sam Lebel	slebel@acorn-engineering.com
Zachary Stevens	zstevens@acorn-engineering.com
Brad Kaden	bkaden@acorn-engineering.com

64 Pine Street, LLC
1/18/24 | 5:30 pm

Name	Email
SEAN J NEILL	sean_d_oneill@hotmail.com
GEORGE RUSSELL	ghruss@yahoo.com
Colin VETTIER	colin.vettier@gmail.com
Caitlin Entz	Caitlin.ent@gmail.com
ILMA [illegible]	ILMA.JEIL.LOPEZ@GMAIL.COM

ACORN ENGINEERING, INC.

64 Pine Street Neighborhood Meeting

Neighborhood Meeting Minutes
January 18, 2023 / 5:30 pm
64 Pine Street, Portland Maine

Project Team Attendees:

Tom Landry (TL): Developer/Presenter (Benchmark Real Estate)

Nick Aceto (NA): Landscape Architect/Presenter (Aceto)

Virginie Stanley (VS): Architect/Presenter (Invivid)

Taejoo Jeon (TJ): Architect (Invivid)

Sam Lebel (SL): Civil Engineer /Presenter (Acorn Engineering)

Zachary Stevens (ZS): Civil Engineer/Presenter (Acorn Engineering)

Brad Kaden (BK): Civil Engineer/Note Taker (Acorn Engineering)

The meeting started at approximately 5:40 pm.

Presentation:

Tom Landry:

- Welcomed the neighborhood attendees to the meeting.
- Gave a background and history of the lot regarding pervious ownership.
    - Explained the importance the recently vacant diner had to the neighborhood and community.
- Explained the process of purchasing the parcel and wanting to create an enjoyable and usable building on this piece of land.
- Illustrated the specifications of needing to modernize the proposed building with an ambitious concept.
- Communicated that correspondence between the city's planning department and the project team have been on going and we expect minor modifications to the rooftop programming.
    - The project team is trying to be creative to provide an active roof with various tenant amenities.

Zachary Stevens:

- Welcomed audience to the neighborhood meeting.
    - Explained neighborhood meeting is a city requirement for the Major Site Plan Application.
    - The scheduled planning board meeting with the city is on February 27th.
- Explained the existing lot condition and the current zoning designations.
- Explained the city's ordinance requirements and how they were met for this lot.
- Explained an overview of the site regarding the proposal to provide 19 parking spaces, 9 bicycle spaces, walkways along the right side of the building, landscaping at the left side and rear of lot, and rebuilding of sidewalk per city standards.
- Communicated all new utilities and stormwater infrastructure will be implemented to the site, including on-site detention.

Nick Aceto:

- Explained the goal of creating a sense of space for the site by enhancing the street scape.
- Replacing one of the elm trees and possibly adding another tree along the street to create a total of 2-3 street trees.
- Implementing glass doors that can open from both sides of the building to look out onto the street is a key design aspect we want to use.
- Proposing to provide granite benches on the project's frontage.
- Working with city to create an activate roof that is vegetated, provides amenity for residents, low plantings, solar panels, and movable furniture.

Virginie Stanley:

- Showed a visual of the street views of the buildings and neighbors along the Pine Street.
- Explained the location of the garage entrance, lobby, mechanical parking area, commercial/retail area, bike room, storage, and trash location.
- Explained the upper floor plans consisting of (3) 3-bedroom units on each floor.
- Showed the renderings of the proposed building for where the cafe/retail unit is proposed to be located, the glass door surrounding the building, and the illustration of the existing neighboring buildings.

<u>Comments, Questions & Answers:</u>

Please note that the following questions and answers were not recorded verbatim and aim to represent and summarize the actual questions, answers, and discussion that took place at the meeting.

Neighbor: How wide is the building from the property line.

- **Zach: The building is approximately 5 feet from the property line on the sides and 10 feet from the back property line.**

Neighbor: How close is the existing building on the left to the proposed building.

- **Virginie Stanley: The proposed building is to be 5 feet from the property line and the existing building looks to be 5-10 feet from their property line, equating to around 10 to 15 feet.**

Neighbor: Will there be landscaping all the way to the back of the lot?

- **Nick Aceto: We will be providing shrubs along the left side of the building, there will some landscaping at the rear of the parcel as well.**

Neighbor: Where will the stormdrain system be located?

- **Zach Stevens: All stormwater will be directed to the rear of the lot and the storage system will be located underground in the rear of the lot.**

Neighbor: Will there be lighting on the sides and rear of the building? We (abutting property) would like to work together to provide a cohesively lit alleyway to provide customer/tenant for both of our properties.

- **Virginie Stanley: We are proposing to have lighting on this building and we would be interested in investigating a lighting plan that promotes safety.**

Neighbor: What are your thoughts of keeping both alley ways (side yards) safely lit. In the past, I have had to call the police to remove people from this area.

- **Tom Landry: We figure the alley ways will be clear from people but are open to suggestion of providing lighting around the whole building. We possibly could put a fence or gate in the back of the lot to keep intruders from going back there.**

Neighbor: Is it possible to put pavement in the back of the lot?

- **Zach Stevens: The pervious count is 90% maximum, and we are already relatively close to that percentage so we are unable to put pavement back there.**

Neighbor: Is there any other public areas apart from the ground level commercial space?

- **Tom Landry: The only public space is going to be the café/retail unit on the first floor.**

Neighbor: Will abutting sites lose power or water during construction due to this project?

- **Zach Stevens: I believe the water main tap is a live tap.**
- **Sam Lebel: We don't anticipate any shutoffs will be required for this project but will follow up and do our best to provide a notice if that is not the case.**

Neighbor: The more communication the better so I can let my restaurant (abutting property) know when everything is proposed to happen.

- **Tom Landry: We can let you know and put together a communication feed of some sort. The tentative start of construction is Q3 of this year if all things line up. The project should take around 18-24 months to complete.**

Neighbor: Is the building panelized and crane needed?

- **Tom Landry: The building is not panelized and a crane will not be needed to the same extent. The sidewalks will be closed for no walking during construction.**

Neighbor: What are the prices for the units?

- **Tom Landry: The condo prices have not been selected and they will most likely come out a month or two before completion.**

Neighbor: It is it definitely café or is it café/retail?

- **Tom Landry: We are still not sure yet, but we do like both options. We have a concept we are excited about. We will have to wait and see what type of tenants are in the market.**

Neighbor: Is there a formal communication process?

- **Sam Lebel: No formal process to reach back out but we can make communication happen. We do have a planner if anyone wants her email. Two planning board meetings to come as well as two more Historic Preservation meeting.**

The meeting concluded at approximately 6:15 pm.

The abovementioned material was as interpreted and recorded from handwritten notes. Please note and relay any discrepancies or disputed information in the recorded minutes to the below address so that they can be reviewed, revised, and resubmitted, as necessary.

Recorded by,

Brad Kaden, EI
Design Engineer, Acorn Engineering, Inc.
bkaden@acorn-engineering.com

64 PINE STREET REDEVELOPMENT

64 PINE STREET, LLC
PORTLAND, MAINE

LEGEND

EXISTING

REFER TO THE EXISTING CONDITIONS PLAN FOR ADDITIONAL INFORMATION

PROPOSED

UNDERDRAIN
GREEN SPACE
UTILITY PAVEMENT CUTS
STRIPING
SEDIMENTATION BARRIER — ECB — ECB
EDGE OF EX. PAVEMENT
CURB
SIGN
LAMP OR LIGHT POLE
UTILITY POLE
GUY WIRE
WATER VALVE
FIRE HYDRANT
SEWER MANHOLE
CATCH BASIN
OIL WATER SEPARATOR
UNDERGROUND ELECTRIC LINE — UE — UE — UGE
UNDERGROUND WATER LINE — W — W — 1"W — 1"W
MINOR CONTOURS (1 FT) — 139
MAJOR CONTOURS (5 FT) — 140
GAS LINE — G — G
STORM DRAIN LINE — SD — SD — >
SEWER LINE — S — S — S
FOUNDATION DRAIN — FD
EXISTING/PROPOSED BUILDING
OVERHEAD ELECTRICAL/TELEPHONE/CABLE — OHE/T/C
PROPERTY LINE
SETBACKS

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CALL BEFORE YOU DIG
1-888-DIG-SAFE
1-888-344-7233

UTILITIES

SEWER

DEPARTMENT OF PUBLIC WORKS (DPW)
250 CANCO ROAD
PORTLAND, MAINE 04103
CONTACT: BRADLEY ROLAND, P.E.
(207) 874-8834

WATER

PORTLAND WATER DISTRICT
225 DOUGLASS STREET
PO BOX 3553
PORTLAND, MAINE 04104
ATTN: MEANS DIVISION
(207) 774-5961

ELECTRIC

CENTRAL MAINE POWER COMPANY (CMP)
162 CANCO ROAD
PORTLAND, MAINE 04103
CONTACT: KATHERINE DUMOUNT
(207) 242-5744

TELEPHONE

CONSOLIDATED COMMUNICATIONS
(FORMERLY FAIRPOINT)
45 FOREST AVENUE
PORTLAND, MAINE 04101
CONTACT: PAT MORRISON
(207) 745-9363

CABLE

SPECTRUM CABLE
118 JOHNSON ROAD
PORTLAND, MAINE, 04102
CONTACT: STEVEN HOLMES
(207) 631-1618

NATURAL GAS

UNITIL SERVICE CORP
1075 FOREST AVENUE
PORTLAND, ME 04103
CONTACT: SCOTT CARPENTER
(207) 541-2543

PROJECT TEAM

DEVELOPER

TOM LANDRY
72 PINE STREET, SUITE #16
PORTLAND, MAINE 04102
CONTACT: TOM LANDRY

CIVIL ENGINEER:

ACORN ENGINEERING, INC.
PORTLAND, MAINE
CONTACT: SAM LEBEL, P.E.
(207) 775-2655

SURVEYOR

R.W. EATON ASSOCIATES
WESTBROOK, MAINE
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INVIVID ARCHITECTURE
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CONTACT: NICK ACETO, R.L.A
(207) 221-3390

STRUCTURAL ENGINEER

M2 STRUCTURAL ENGINEERING, P.C.
WINDHAM, MAINE
CONTACT: MATT MILLER, P.E.
(207) 982-0983

MEP DESIGNER

ZADE ASSOCIATES, LLC.
QUINCY, MA
CONTACT: MUZAFFER MUCTEHITZADE, P.E.
(617) 338-4406

VICINITY MAP
SCALE: 1:200

ABBREVIATIONS

PARTIAL LIST OF ABBREVIATIONS AND THEIR CORRESPONDING MEANING. PLEASE CONTACT THE ENGINEER FOR ANY CLARIFICATION

APPROX.	APPROXIMATE
BC	BOTTOM OF CURB
BMP	BEST MANAGEMENT PRACTICE
BOT.	BOTTOM
CAD	COMPUTER AIDED DESIGN
CB	CATCH BASIN
CF	CUBIC FOOT
CIP	CAST IN PLACE
CL	CENTERLINE
CM	CONSTRUCTION MANAGER
CMP	CENTRAL MAINE POWER
CONC.	CONCRETE
CPP	CORRUGATED PLASTIC PIPE
CY	CUBIC YARD
DI	DUCTILE IRON PIPE
DIA.	DIAMETER
DIM.	DIMENSION
EA.	EACH
ELEC.	ELECTRICAL
ELEV.	ELEVATION
EQUIV.	EQUIVALENT
EST.	ESTIMATE
EX.	EXISTING
FFE	FINISH FLOOR ELEVATION
FT.	FEET
HDPE	HIGH DENSITY POLY ETHYLENE
ID	INNER DIAMETER
IN.	INCH
INV.	INVERT
L	LENGTH
MAX.	MAXIMUM
MDEP	MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION
MDOT	MAINE DEPARTMENT OF TRANSPORTATION
M.E.P	MECHANICAL, ELECTRICAL, PLUMBING DESIGNER
MFG.	MANUFACTURED
MH	MANHOLE
MIN.	MINIMUM
O.C.	ON CENTER
OD	OUTSIDE DIAMETER
OHE/T/C	OVERHEAD ELECTRIC/TELEPHONE/CABLE
PC	PRECAST
PE	PROFESSIONAL ENGINEER
PL	PROPERTY LINE
PLS	PROFESSIONAL LAND SURVEYOR
PROP.	PROPOSED
PSI	POUNDS PER SQUARE INCH
PVC	POLYVINYL CHLORIDE
PWD	PORTLAND WATER DISTRICT
R	RADIUS
RD	ROOF DRAIN
RET.	RETAINING
ROW	RIGHT OF WAY
S	SLOPE
SD	STORM DRAIN
SDR	STANDARD DIMENSION RATIO
SF	SQUARE FEET
SMH	SEWER MANHOLE
SPEC.	SPECIFICATION
TC	TOP OF CURB
TW	TOP OF WALL
TYP.	TYPICAL
UD	UNDERDRAIN
UGE	UNDERGROUND ELECTRIC
VIF	VERIFY IN FIELD

PERMITTING
NOT ISSUED FOR
CONSTRUCTION

ISSUED FOR	BY / DATE
50% DRAWINGS	SJL 9/15/23
DD SET	SJL 11/3/23
MAJOR SITE PLAN	SJL 11/17/23

DRAWING NAME: COVER SHEET & LEGEND
PROJECT NAME: 64 PINE STREET REDEVELOPMENT
64 PINE STREET, PORTLAND, MAINE 04012
CLIENT: 64 PINE STREET LLC
104 WASHINGTON AVENUE PORTLAND, MAINE 04101

ACORN ENGINEERING, INC.

THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM ACORN ENGINEERING, INC. ANY ALTERATIONS, ADDITIONS OR DELETIONS TO THIS DOCUMENT SHALL BE MADE WITHOUT LIABILITY TO ACORN ENGINEERING, INC. SOLE RISK AND

ACORN ENGINEERING, INC.
PO BOX 3372, PORTLAND MAINE 04104
(207) 775-2655

FILE:	1109.4_CIVIL
JN:	1109.4
SCALE:	AS NOTED
DESIGNED BY:	ZMS
DRAWN BY:	BJK
CHECKED BY:	SJL

STATE OF MAINE
SAMUEL J. LEBEL
No. 16505
LICENSED
PROFESSIONAL ENGINEER
11/17/23

DRAWING NO.
C-01

GENERAL NOTES:

1. THE CONTRACTOR SHALL CALL THE APPROPRIATE UTILITY COMPANIES AND DIG SAFE AT LEAST 72 HOURS PRIOR TO ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION FOR UTILITIES. OTHERWISE IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE LOCATION OF UNDERGROUND UTILITIES AND LOCATE ANY POTENTIAL CONFLICTS WITH THE APPROVED PLANS PRIOR TO CONSTRUCTION.

2. THE CONTRACTOR IS RESPONSIBLE FOR MAINTENANCE OF ALL EROSION CONTROL MEASURES SHOWN ON THE PLAN. IF DEEMED NECESSARY BY THE OWNER OR OWNER'S REPRESENTATIVE (IF APPLICABLE), ADDITIONAL EROSION CONTROL MEASURES SHALL BE INSTALLED AT NO ADDITIONAL COST TO THE OWNER.

3. THE CONTRACTOR SHALL PREPARE THEIR OWN MATERIAL SCHEDULE BASED ON THE PLANS AND FIELD VERIFICATION BY THE CONTRACTOR. ALL MATERIAL SCHEDULES SHOWN WITHIN THE PLAN SET ARE FOR GENERAL INFORMATION ONLY.

4. ALL CONSTRUCTION METHODS, TESTING AND MATERIALS SHALL CONFORM TO THE MAINE DEPARTMENT OF TRANSPORTATION SPECIFICATIONS, THE CITY OF PORTLAND AND SERVICING UTILITY REQUIREMENTS, IF ANY. IN CASES WHERE THESE CONFLICT THE MOST STRINGENT SPECIFICATION SHALL APPLY AT NO ADDITIONAL COST TO THE OWNER.

5. THE SITE CONTRACTOR SHALL MAINTAIN A SET OF PAPER AND CAD DRAWINGS WHICH SHALL RECORD THE ACTUAL LOCATION, DIMENSIONS, ELEVATIONS, MATERIALS OF THEIR WORK, INDICATING THEREON ALL VARIATIONS FROM THE CONTRACT DRAWINGS. THE CONTRACTOR SHALL PROVIDE THE OWNER WITH ONE COMPLETE SET OF REPRODUCIBLE RECORD DRAWINGS, IN .DWG FORMAT AND PAPER, STAMPED ''AS-BUILT''. IF AUTOCAD CAPABILITY IS NOT AVAILABLE, EXCLUDE FROM BID IN WRITING.

6. THE CONTRACTOR WILL REMAIN SOLELY AND COMPLETELY RESPONSIBLE FOR ENFORCEMENT OF AND COMPLIANCE WITH 1) ALL CONTRACT PLANS AND SPECIFICATIONS, 2) APPLICABLE INTERNATIONAL BUILDING CODE REQUIREMENTS, AND 3) ALL SITE WORKING CONDITIONS AND SAFETY REQUIREMENTS, DAY AND NIGHT, FOR BOTH PERSONS AND PROPERTY, IN EACH CASE BOTH BY THE CONTRACTOR AND ITS SUBCONTRACTORS. THESE INCLUDE ALL OSHA, NIOSH, U.S. EPA AND ANY OTHER APPLICABLE GOVERNMENTAL REGULATIONS.

7. BOUNDARY SURVEY & TOPOGRAPHICAL SITE PLAN WITH EXISTING CONDITIONS PREPARED BY R.W. EATON ASSOCIATES ON 6/1/23.

8. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING ACCESS TO THE SITE AT ALL TIMES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TEMPORARY MARKINGS, SIGNAGE AND INCIDENTALS TO MAINTAIN A SAFE VEHICLE AND PEDESTRIAN ACCESS THOUGH THE LIFE OF THE PROJECT. THE CONTRACTOR SHALL NOTIFY THE PORTLAND PUBLIC SAFETY DIVISION ROUTINELY REGARDING TEMPORARY IMPACTS OR CHANGES TO SITE ACCESS CONDITIONS.

9. CONTRACTOR TO DETERMINE SOIL CLASSIFICATION INDEPENDENTLY FOR TRENCH, SHORING, AND OTHER SIMILAR CONSTRUCTION MEANS AND METHODS APPLICATIONS.

10. NO HOLES, TRENCHES, OR STRUCTURES SHALL BE LEFT OPEN OR UNATTENDED OVERNIGHT IN ANY AREA ACCESSIBLE TO THE PUBLIC OR WITHIN THE PUBLIC RIGHT-OF-WAY.

11. THE CONTRACTOR SHALL CONDUCT A PRE-CONSTRUCTION SURVEY OF INTERIOR SUBGRADE AND ABOVE GRADE ACCESSIBLE WALLS, CEILINGS, FLOORS, ROOF AND VISIBLE EXTERIOR AS VIEWED FROM THE GRADE LEVEL. THIS SHALL BE COMPLETED AT A MINIMUM ADJACENT STRUCTURES. PROVIDE A COPY OF THE SURVEY TO THE OWNER. DOCUMENT WITH PICTURES AT A MINIMUM.

12. THE CONTRACTOR SHALL PROVIDE A GPS MODEL OF THE PROPERTY TO PROVIDE TO ACORN ENGINEERING.

13. THE CONTRACTOR SHALL SURVEY ROCK SURFACE PRIOR TO EXCAVATION AND DEVELOP VOLUME CALCULATIONS TO SHARE WITH THE ENGINEER, ACORN ENGINEERING INC. (ACORN), IF ANY.

14. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PRESERVATION OF ALL TREES AND SHRUBS ON THE PROJECT WHICH ARE NOT TO BE REMOVED.

15. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING ANY TRENCH PAVEMENT THAT HAS EXPERIENCED EXCESSIVE SETTLEMENT, CRACKING, OR OPENING OF JOINTS. REPAIRS MAY INCLUDE OVERLAY, REMOVAL OF WORK MAY BE NECESSARY AFTER THE FINAL ACCEPTANCE OF WORK OR PRIOR TO THE END OF THE WARRANTY PERIOD. THIS WORK SHALL BE DONE AT THE CONTRACTOR'S EXPENSE.

CIVIL SITE NOTES:

1. THE CONTRACTOR SHALL SUBMIT IN WRITING ANY REQUESTS TO ACORN TO MODIFY THE CONTRACT DOCUMENTS.

2. ALL SHOP, ERECTION, AND CONSTRUCTION DRAWINGS SHALL BE CHECKED AND STAMPED BY THE CONTRACTOR PRIOR TO SUBMISSION FOR ACORN'S REVIEW. ANY UNCHECKED OR NON-STAMPED SUBMITTALS WILL BE RETURNED WITHOUT REVIEW.

3. CONTRACTOR SHALL THOROUGHLY INSPECT AND SURVEY EXISTING STRUCTURES AND SITE TO VERIFY CONDITIONS THAT AFFECT THE WORK SHOWN ON THE DRAWINGS. CONTRACTOR TO NOTIFY ACORN OF ANY DISCREPANCIES PRIOR TO PROCEEDING.

4. DETAILS SHOWN APPLY TO ALL SIMILAR CONDITIONS UNLESS OTHERWISE INDICATED.

5. ALTHOUGH ALL DUE DILIGENCE HAS BEEN APPLIED TO MAKE THE DRAWINGS AS COMPLETE AS POSSIBLE, NOT ALL DETAILS ARE ILLUSTRATED, NOR IS EVERY EXCEPTION CONDITION ADDRESSED WITHIN THE CONTRACT DOCUMENTS.

6. ALL PROPRIETARY CONNECTIONS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

7. THE CONTRACTOR IS RESPONSIBLE FOR THE COORDINATION OF ALL WORK, INCLUDING DIMENSION AND LAYOUT VERIFICATION, MATERIALS COORDINATION, SHOP DRAWING REVIEW, AND THE WORK OF ANY SUBCONTRACTORS.

8. UNLESS OTHERWISE SPECIFICALLY INDICATED, THE DRAWINGS DO NOT DESCRIBE OR DIRECT MEANS OR METHODS OF CONSTRUCTION.

9. THE CONTRACTOR, IN THE PROPER SEQUENCE, SHALL PERFORM OR SUPERVISE ALL WORK NECESSARY TO ACHIEVE THE FINAL COMPLETED STRUCTURE, AND TO PROTECT THE STRUCTURE, WORKMEN, AND OTHERS DURING THE CONSTRUCTION. SUCH WORK SHALL INCLUDE, BUT NOT BE LIMITED TO, BRACING, SHORING FOR CONSTRUCTION EQUIPMENT, SHORING FOR EXCAVATION, FORMWORK, SCAFFOLDING, SAFETY DEVICES AND PROGRAMS OF ALL KINDS, SUPPORT AND BRACING FOR CRANES AND OTHER ERECTION EQUIPMENT.

10. DO NOT BACKFILL AGAINST RETAINING WALLS UNTIL SUPPORTING SLABS AND FLOOR FRAMING ARE IN PLACE AND SECURELY ANCHORED, UNLESS ADEQUATE BRACING IS PROVIDED. PRIOR TO BACKFILLING, CONCRETE SHALL BE CURED PER STRUCTURAL ENGINEER'S SPECIFICATIONS.

11. TEMPORARY BRACING SHALL REMAIN IN PLACE UNTIL ALL FLOORS, WALLS, ROOFS AND OTHER SUPPORTING ELEMENTS ARE IN PLACE, IF APPLICABLE.

12. ALL PAVEMENT JOINTS SHALL BE SAWCUT AND APPLIED WITH TACK COAT PRIOR TO PAVING TO PROVIDE A DURABLE AND UNIFORM JOINT.

13. ACORN BEARS NO RESPONSIBILITY FOR THE ABOVE ITEMS, AND SITE OBSERVATION VISITS DO NOT IN ANY WAY INCLUDE INSPECTION OF THEM.

14. EXCAVATIONS ACCOMPLISHED AS PART OF THIS PROJECT SHALL BE CONSTRUCTED IN ACCORDANCE WITH SUBPART P OF 29 CRF PART 1926.650-.652 (CONSTRUCTION STANDARD FOR EXCAVATIONS).

15. ALL TRENCH PAVEMENT REPAIR SHALL BE COMPLETED WITH THE USE OF A STREET PAVER WITH A SCREED WIDTH CAPABLE OF SPANNING THE FULL WIDTH OF THE TRENCH UNLESS OTHERWISE AUTHORIZED BY THE ENGINEER.

SPECIAL INSPECTION NOTES

1. ALL SITE SOILS-RELATED WORK AND FOOTING EXCAVATIONS PRIOR TO PLACING FORMS SHALL BE REVIEWED BY THE PROJECT GEOTECHNICAL ENGINEER.

2. ALL SITE DRAINAGE-RELATED WORK SHALL BE REVIEWED BY ACORN.

3. NORMAL REVIEWS BY LOCAL BUILDING DEPARTMENT. NOTIFY 48 HOURS PRIOR TO REQUIRED REVIEW.

4. REQUIRED SPECIAL INSPECTIONS PER I.B.C. SECTION 1705.6 BY AN APPROVED SPECIAL INSPECTOR RETAINED BY OWNER. CONTRACTOR TO COORDINATE SPECIAL INSPECTIONS.

5. SPECIAL INSPECTOR SHALL BE A QUALIFIED PERSON WHO SHALL DEMONSTRATE COMPETENCE, TO THE SATISFACTION OF THE BUILDING OFFICIAL, FOR INSPECTION OF THE PARTICULAR TYPE OF CONSTRUCTION OR OPERATION REQUIRING SPECIAL INSPECTION.

5.1. DUTIES AND RESPONSIBILITIES OF THE SPECIAL INSPECTOR SHALL BE TO OBSERVE AND/OR TEST THE WORK ASSIGNED AND OUTLINE ABOVE FOR CONFORMANCE WITH THE CONTRACT DOCUMENTS, ALL DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION.

5.2. THE SPECIAL INSPECTOR SHALL FURNISH REGULAR REPORTS TO THE BUILDING OFFICIAL, THE ARCHITECT AND ENGINEER OF RECORD, AND OTHER DESIGNATED PERSONS. PROGRESS REPORTS FOR CONTINUOUS INSPECTION SHALL BE FURNISHED WEEKLY. INDIVIDUAL REPORTS OF PERIODIC INSPECTIONS SHALL BE FURNISHED WITHIN ONE WEEK OF INSPECTION DATES. THE REPORTS SHALL NOTE UNCORRECTED DEFICIENCIES, AND NET CHANGES TO THE APPROVED CONSTRUCTION DOCUMENTS AUTHORIZED BY THE ENGINEER OF RECORD.

5.3. THE SPECIAL INSPECTOR SHALL SUBMIT A FINAL SIGNED REPORT WITHIN TEN DAYS OF THE FINAL INSPECTION STATING WHETHER THE WORK REQUIRING A SPECIAL INSPECTION WAS, TO THE BEST OF THE INSPECTOR'S KNOWLEDGE AND BELIEF, IN CONFORMANCE WITH THE APPROVED CONSTRUCTION DOCUMENTS AND THE APPLICABLE WORKMANSHIP PROVISIONS OF THE INTERNATIONAL BUILDING CODE. WORK NOT IN COMPLIANCE SHALL BE NOTED IN THE REPORT.

5.4. SPECIAL INSPECTOR SHALL BE EMPLOYED BY OWNER AND COORDINATED BY THE CONTRACTOR.

LAYOUT NOTES:

1. MONUMENTS DELINEATING PROPERTY LINES OR RIGHT OF WAYS SHALL NOT BE DISTURBED DURING CONSTRUCTION OPERATIONS. IN THE CASE A MONUMENT IS DISTURBED, AT THE CONTRACTOR'S EXPENSE, THE MONUMENT SHALL BE RESET TO ITS ORIGINAL LOCATION AND ELEVATION BY A LICENSED PROFESSIONAL LAND SURVEYOR.

2. ALL DIMENSIONS ON THE FOLLOWING SHEETS TAKE PRECEDENT OVER SCALED DIMENSIONS. EACH DRAWING WITH A BAR SCALE MEANS THAT THE DRAWING/DETAIL HAS BEEN SCALED AS ACCURATELY AS POSSIBLE, AND THE BAR SCALE IS FOR GENERAL REFERENCE ONLY. IF NO BAR SCALE IS PRESENT, THEN THERE IS NO SCALE TO THAT DRAWING/DETAIL. AT NO TIME SHOULD DRAWINGS BE SCALED FROM. ANY DISCREPANCIES BETWEEN DRAWINGS, DETAILS, SPECIFICATIONS AND THE FIELD CONDITION SHALL BE IMMEDIATELY REPORTED TO ACORN FOR FURTHER DIRECTIONS BEFORE ANY ADDITIONAL WORK PROCEEDS.

3. SIGNAGE, STRIPING, AND PAVEMENT MARKINGS SHALL BE IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).

4. ALL TRAFFIC CONTROL SIGNS INDICATED ON THE SITE LAYOUT PLAN ARE TO MEET ALL REQUIREMENTS & CONDITIONS OF THE CITY OF PORTLAND, MAINE DEPARTMENT OF TRANSPORTATION AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION.

5. THE CONTRACTOR SHALL OBTAIN THE SERVICES OF A LICENSED PROFESSIONAL LAND SURVEYOR TO PROVIDE A MINIMUM OF TWO TEMPORARY BENCHMARKS WITHIN THE SITE AND TO LOCATE PROPOSED STRUCTURE CORNERS.

6. CONTRACTOR TO ENSURE THAT ACCESS, INCLUDING BUT NOT LIMITED TO WALKWAYS, DRIVEWAYS, AND MAILBOXES ADJACENT TO THE PROJECT REMAIN FUNCTIONAL AND AVAILABLE FOR USE AT ALL TIMES.

PERMITTING NOTES

1. THIS PROJECT IS SUBJECT TO THE TERMS AND CONDITIONS OF MAJOR SITE PLAN APPLICATION FROM THE CITY OF PORTLAND.

2. THE CONTRACTOR SHALL REVIEW THE ABOVE REFERENCED PERMITS PRIOR TO SUBMITTING A BID FOR THIS PROJECT, AND INCLUDE COSTS AS NECESSARY TO COMPLY WITH THE CONDITIONS OF THESE PERMITS.

3. ALL WORK WITHIN THE PUBLIC RIGHT-OF-WAY REQUIRES A STREET OPENING PERMIT FROM THE CITY OF PORTLAND. ADDITIONALLY, COORDINATE WITH THE DEPARTMENT OF PUBLIC WORKS.

GRADING AND DRAINAGE NOTES:

1. TOPSOIL STRIPPED FROM THE SITE THAT IS SUITABLE FOR REUSE AS LOAM (MEETS THE REQUIREMENTS WITHIN SECTION 615 OF THE MDOT STANDARD SPECIFICATIONS, MOST RECENT VERSION AND IS FREE OF TRACEABLE AMOUNTS OF CONTAMINANTS) SHALL BE STOCKPILED WITHIN THE PROPOSED LIMIT OF WORK AREA. THE CONTRACTOR SHALL NOT ASSUME THAT ANY STRIPPED TOPSOIL WILL BE ACCEPTABLE FOR REUSE WITH THEIR ESTIMATE.

2. THE CONTRACTOR SHALL ANTICIPATE THAT GROUNDWATER WILL BE ENCOUNTERED DURING CONSTRUCTION AND SHALL INCLUDE SUFFICIENT COSTS WITHIN THEIR BID TO PROVIDE DEWATERING AS NECESSARY; NO SEPARATE PAYMENT SHALL BE MADE TO THE CONTRACTOR FOR DEWATERING. DEWATERING SHALL INCLUDE TREATMENT OF SILT THROUGH THE USE OF A DIRTBAG BY ACF ENVIRONMENTAL OR APPROVED EQUIVALENT. FLOWS FROM DEWATERING ACTIVITIES SHALL NOT BE DISCHARGED INTO SANITARY SEWERS.

3. THE OWNER SHALL BE RESPONSIBLE FOR OBTAINING ANY EASEMENT OR TEMPORARY CONSTRUCTION RIGHTS AS NECESSARY BY PRIVATE ADJACENT LAND OWNERS. THE CONTRACTOR SHALL NOT DISTURB ANY SOIL BEYOND THE PROPERTY LINE WITHOUT NOTIFYING AND OBTAINING SUCH EASEMENT OR TEMPORARY CONSTRUCTION RIGHT FROM THE ADJACENT LAND OWNERS. PRIOR TO THE CONTRACTOR PRICING THE WORK, THEY SHALL PROVIDE ACORN WITH PROOF OF SUCH EASEMENT OR TEMPORARY RIGHTS. SHOULD EASEMENTS OR TEMPORARY RIGHTS NOT BE AVAILABLE, THE CONTRACTOR SHALL INCLUDE COST FOR BRACING AND SHORING AS NECESSARY.

4. THE MINIMUM SLOPE SHALL MEET OR EXCEED 0.5% IN ALL CASES WHERE NOT NOTED ON THE GRADING PLAN. SLOPES IDENTIFIED ON THE GRADING PLAN TAKE PRECEDENT. ALL SLOPES SHALL BE AWAY FROM BUILDINGS AND TOP OF PAVEMENT SHALL BE AT OR BELOW EXISTING FINISH FLOOR ELEVATIONS.

5. CONTRACTOR TO REVIEW EXISTING SOIL CONDITIONS, TEST PITS, AND BORINGS. THERE WILL BE NO ADDITIONAL PAYMENT FOR UNSUITABLE SOILS.

6. ALL STORM DRAIN PIPE SHALL BE SMOOTH BORE INTERIOR PROVIDING A MANNINGS ROUGHNESS COEFFICIENT OF N=0.012 OR LESS.

7. ADJUST ALL MANHOLES, CATCH BASINS, CURB BOXES, ETC. WITHIN LIMITS OF WORK TO FINISH GRADE.

8. NATIVE SOILS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO LIMIT THE DISTURBANCE TO SUBGRADE SOILS. SHOULD THE SUBGRADE BECOME YIELDING OR DIFFICULT TO WORK, CONTACT ACORN. THE DISTURBED AREAS SHALL BE EXCAVATED AND BACKFILLED WITH COMPACTED SELECT FILL OR CRUSHED STONE AT NO ADDITIONAL EXPENSE TO THE OWNER.

EROSION CONTROL NOTES:

1. DISTURBED AREAS ARE DEFINED AS THOSE SURFACES WHERE EXISTING VEGETATION OR STRUCTURES HAVE BEEN REMOVED, EXPOSING NATIVE SOIL TO THE ELEMENTS.

2. ALL ROUTINE WORK ACTIVITIES SHALL BE CONDUCTED IN SUCH A WAY TO LIMIT THE AMOUNT OF DISTURBED AREA AT ONE TIME TO THE EXTENT PRACTICABLE.

3. PRIOR TO THE START OF ANY CLEARING/LAND DISTURBING ACTIVITIES, THE CONTRACTOR SHALL INSTALL APPLICABLE EROSION CONTROL DEVICES SUCH AS PERIMETER SILT FENCE, AND OTHER APPLICABLE MEASURES. IN THE EVENT THE CONTRACTOR IS NOT SURE A EROSION CONTROL MEASURE SHOULD BE IMPLEMENTED, THE CONTRACTOR SHALL CONTACT THE ENGINEER OF RECORD TO CONFIRM IMPLEMENTATION OF ANY EROSION CONTROL DEVICES.

4. ALL GROUND AREAS GRADED FOR CONSTRUCTION SHALL BE GRADED, LOAMED, SEEDED AND MULCH SHALL BE APPLIED AS SOON AS POSSIBLE WITHIN 7 DAYS FOLLOWING THE COMPLETION OF ANY SOIL DISTURBANCE, AND PRIOR TO ANY STORM EVENT.

5. EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE INSTALLED TO THE SATISFACTION OF THE CITY. THE CONTRACTOR SHALL REFERENCE THE APPROVED EROSION AND SEDIMENTATION CONTROL REPORT FOR TEMPORARY AND PERMANENT EROSION AND SEDIMENTATION CONTROL DEVICES IN ADDITION TO THE PLAN SET. THE CONTRACTOR SHALL ALSO REFER TO THE MAINE D.E.P.'S PERMIT CONDITIONS, FINDINGS OF FACT AND ORDER (IF ANY), AND THE CURRENT MAINE EROSION AND SEDIMENT CONTROL BMP MANUAL FOR ADDITIONAL INFORMATION.

6. PRIOR TO PAVING, THE CONTRACTOR SHALL REMOVE ALL SEDIMENT FROM STORM DRAINS, CATCH BASINS, AND APPURTENANCES.

7. REFER TO THE EROSION CONTROL DETAILS & NOTES FOR ADDITIONAL INFORMATION.

UTILITY NOTES:

1. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND ELEVATION OF THE EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED UPON RECORDS OF VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THIS INFORMATION IS NOT TO BE RELIED UPON AS BEING EXACT OR COMPLETE. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO TEST PIT TO DETERMINE THE EXACT LOCATION AND ELEVATION OF UTILITIES TO COORDINATE WITH THE PROPOSED CONNECTIONS OR CROSSING. ANY DISCREPANCIES SHALL BE IMMEDIATELY REPORTED TO ACORN FOR FURTHER DIRECTIONS BEFORE ANY ADDITIONAL WORK PROCEEDS.

2. CONTRACTOR SHALL, AT NO ADDITIONAL COST TO THE OWNER, CONDUCT EXPLORATORY EXCAVATIONS AT LOCATIONS WHERE PROPOSED EXCAVATION WILL INTERSECT WITH EXISTING UTILITIES, PRIOR TO THE ORDERING OF STRUCTURES.

3. CONTRACTOR SHALL, AT NO ADDITIONAL COST TO THE OWNER, CONDUCT EXPLORATORY EXCAVATIONS AT LOCATIONS WHERE PROPOSED EXCAVATION WILL INTERSECT WITH EXISTING UTILITIES, PRIOR TO THE ORDERING OF STRUCTURES.

4. ALL NEW SANITARY MANHOLES SHALL BE VACUUM TESTED AND SHOWN TO PASS PRIOR TO BACKFILLING. TESTING SHALL BE COMPLETED IN ACCORDANCE WITH TECHNICAL REPORT #16 (TR-16): GUIDES FOR THE DESIGN OF WASTEWATER TREATMENT WORKS, PREPARED BY THE NEW ENGLAND INTERSTATE WATER POLLUTION CONTROL COMMISSION.

5. SEWER MANHOLES SHALL BE 4' ID UNLESS OTHERWISE STATED ON THE PLANS.

6. CONTRACTOR TO PROVIDE 5.5' OF COVER FROM TOP OF PIPE TO FINISH GRADE FOR WATER MAINS.

7. THRUST BLOCKS SHALL BE USED FOR THRUST RESTRAINT ON WATER MAINS. DETAIL AND LIMITS FOR THRUST BLOCKS ARE SHOWN WITHIN THE PLAN SET.

8. WATER INFRASTRUCTURE SHALL BE TESTED IN ACCORDANCE WITH THE PORTLAND WATER DISTRICT DOCUMENT ''WATER AND SEWER CONSTRUCTION SPECIFICATIONS AND PROCEDURE'', MOST RECENT REVISION.

9. ALL REQUIRED FITTINGS FOR THE WATER MAIN ARE NOT SHOWN ON DRAWINGS. CONTRACTOR SHALL FURNISH AND INSTALL ALL NECESSARY FITTINGS REQUIRED TO CONSTRUCT THE WATER MAIN IN ACCORDANCE WITH CITY OF PORTLAND, STATE OF MAINE, AND AMERICAN WATER WORKS ASSOCIATION STANDARDS AND REGULATIONS.

10. CONTRACTOR SHALL COORDINATE WORK REGARDING ANY WATER MAIN CONNECTION AND WATER MAIN SHUTDOWN WITH THE PORTLAND WATER DISTRICT AT LEAST SEVEN (7) DAYS PRIOR TO CONSTRUCTION.

11. ALL WATER PIPE INSTALLATION SHALL CONFORM WITH THE PORTLAND WATER DISTRICT SPECIFICATIONS AND PROCEDURES, MOST RECENT EDITION.

12. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.

13. SEWER, GAS, TELEPHONE, ELECTRICITY, CABLE, WATER AND ANY OTHER UTILITY CONNECTIONS SHALL BE REVIEWED BY PLUMBING, ELECTRICAL, AND MECHANICAL DESIGNER FOR CONSISTENCY WITH THEIR PLANS PRIOR TO CONSTRUCTION.

14. COORDINATE EXIT POINT FOR SECONDARY UTILITY SERVICES WITH THE ARCHITECT/ELECTRICAL ENGINEER. SECONDARY LINE LOCATIONS NOT PROVIDED BY ACORN WITHIN THE UTILITY PLAN.

15. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN ALL THE NECESSARY PERMITS FOR THE INSTALLATION OF THE UTILITIES AND STORMDRAINS WITHIN THE PUBLIC RIGHT OF WAY. THE CONTRACTOR SHALL SUBMIT A MAINTENANCE OF TRAFFIC PLAN TO THE CITY IN ACCORDANCE WITH THE CITY OF PORTLAND TECHNICAL MANUAL PRIOR TO ANY WORK.

16. THE CONTRACTOR SHALL PROVIDE AND INSTALL ALL BOXES, FITTINGS, CONNECTORS, COVER PLATES AND OTHER MISCELLANEOUS ITEMS NOT NECESSARILY DETAILED ON THE DRAWINGS TO RENDER INSTALLATION OF UTILITIES COMPLETE AND OPERATIONAL AT NO EXTRA EXPENSE TO THE OWNER.

17. ALL UTILITY PIPES SHALL SLOPE UNIFORMLY BETWEEN ELEVATIONS INDICATED ON THE DRAWINGS. NO CRESTS OR SAGS IN THE PIPING WILL BE PERMITTED. ALL HORIZONTAL AND VERTICAL BENDS IN PRESSURIZED PIPE LINES SHALL BE SUITABLY RESTRAINED WITH THRUST BLOCKS OR RETAINER GLANDS. RETAINER GLANDS ALLOWED FOR DUCTILE IRON PIPE ONLY. PROVIDE ALL BENDS, HORIZONTAL AND VERTICAL, AS REQUIRED TO MEET THE GRADES AND ALIGNMENTS INDICATED ON THE DRAWINGS.

18. ALL WASTEWATER PIPING, EXCLUDING BUILDING DRAINS, AND ALL PRESSURIZED PIPING, TO INCLUDE WATER MAINS, INSTALLED BENEATH STRUCTURES SHALL BE ENCASED IN CONCRETE.

19. WHERE NEW PIPING IS TO BE CONNECTED TO EXISTING PIPING, THE CONTRACTOR SHALL FURNISH AND INSTALL ALL ADAPTERS, FITTINGS AND ADDITIONAL PIPE AS REQUIRED TO ENSURE A COMPLETE AND PROPERLY FUNCTIONING CONNECTION. CONTRACTOR TO VERIFY LOCATION, ELEVATION, ORIENTATION AND MATERIAL OF CONSTRUCTION. ADAPTERS AND FITTINGS ARE INCIDENTAL TO THE PIPE INSTALLATION.

20. WHENEVER POSSIBLE, WATER LINES SHOULD BE INSTALLED OVER WASTEWATER LINES. A MINIMUM SEPARATION OF 18 INCHES BETWEEN THE BOTTOM OF THE WATER LINE AND THE TOP OF THE WASTEWATER LINE SHALL BE MAINTAINED WHERE POSSIBLE. WHERE A WATER LINE CROSSES UNDER THE WASTEWATER LINE, A FULL LENGTH OF WASTEWATER PIPE SHALL BE CENTERED ABOVE THE WATER LINE SO THAT BOTH JOINTS WILL BE AS FAR FROM THE WATER LINE AS POSSIBLE,

21. THE CONTRACTOR SHALL BE ANTICIPATE THAT THE NATIVE SILT AND CLAY SOILS WILL NOT BE SUITABLE FOR PIPE TRENCH BACKFILL IN PAVED AREAS.

22. GROUNDWATER SHALL BE CONTROLLED TO A LEVEL OF AT LEAST ONE FOOT BELOW SUBGRADE OF THE PIPE OR STRUCTURE. THE CONTRACTOR SHALL MAINTAIN THE LOWERED GROUNDWATER LEVEL UNTIL CONSTRUCTION HAS BEEN COMPLETED TO SUCH AN EXTENT THAT THE STRUCTURES OR PIPES WILL NOT BE FLOATED OR OTHERWISE DAMAGED.

23. EXCAVATION TO SUBRADE IN NATIVE SILT AND CLAY SHALL BE COMPLETED WITH A SMOOTH EDGE BUCKET TO MINIMIZE SUBGRADE DISTURBANCE.

24. ALL ADJUSTMENTS TO FINISHED GRADE ARE TO BE COMPLETED BY THE CONTRACTOR. THE CONTRACTOR SHALL CONFIRM STRUCTURES THAT REQUIRE ADJUSTMENT WITH THE ENGINEER OR OWNERS REPRESENTATIVE PRIOR TO ADJUSTING FRAMES.

DEMOLITION NOTES:

1. THE FOLLOWING ITEMS ARE TYPICAL OF MATERIAL WHICH MAY BE ON SITE:

   - ROCK AND CONCRETE FOUNDATIONS
   - CONCRETE SLABS
   - BITUMINOUS ASPHALT PAVEMENT
   - CONCRETE PADS AND BLOCKS
   - FENCE POST AND FENCING
   - UNDERGROUND UTILITY LINES
   - ABOVE AND OR BELOW FUEL OIL AND PROPANE GAS TANKS
   - STORM DRAIN PIPES AND APPURTENANCE STRUCTURES
   - OTHER TRASH & MISCELLANEOUS SOLID WASTES

2. THE CONTRACTOR IS ADVISED TO VISIT THE SITE TO CONFIRM DEMOLITION ITEMS SINCE THE LIST IS NOT INCLUSIVE OF THE SITE CONDITIONS WHICH MAY BE ENCOUNTERED

3. ALL DISPOSAL OF DEMOLITION DEBRIS OR WASTE SHALL BE IN ACCORDANCE WITH ALL LOCAL, STATE, & FEDERAL REGULATIONS. CONTRACTORS SHALL PROVIDE OWNER WITH APPROPRIATE "BILLS OF LADING" DEMONSTRATING PROPER DISPOSAL OF ALL MATERIALS.

PERMITTING
NOT ISSUED FOR
CONSTRUCTION

ISSUED FOR	BY	DATE
50% DRAWINGS	SJL	9/15/23
DD SET	SJL	11/3/23
MAJOR SITE PLAN	SJL	11/17/23

DRAWING NAME: GENERAL NOTES

PROJECT NAME: 64 PINE STREET REDEVELOPMENT
64 PINE STREET, PORTLAND, MAINE 04012

CLIENT: 64 PINE STREET LLC
104 WASHINGTON AVENUE PORTLAND, MAINE 04101

ACORN ENGINEERING, INC.
PO BOX 3372, PORTLAND MAINE 04104
(207) 775-2655

THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM ACORN ENGINEERING, INC. IN ANY ALTERATIONS, AUTHORIZED OR UNAUTHORIZED, TO ACORN ENGINEERING, INC. SOLE RISK AND WITHOUT LIABILITY TO ACORN ENGINEERING, INC.

FILE:	1109.4_CIVIL
JN:	1109.4
SCALE:	AS NOTED
DESIGNED BY:	ZMS
DRAWN BY:	BJK
CHECKED BY:	SJL

STATE OF MAINE
SAMUEL J. LEBEL
No. 16505
LICENSED
PROFESSIONAL ENGINEER
11/17/23

DRAWING NO.
C-02

CERTIFICATION

RICHARD W. EATON P.L.S. # 2075

State of Maine
Cumberland ss Registry Of Deeds
Received_____ 20____
At____H____M____M., And
Recorded In Book____Page____

Attest:
_____
Register

General Notes:

1) Tax Map 56 Block C Lot 002 & 004

2) Total Area 9,920 Square Feet Or 0.23 Acres

2) Basis of Bearing, Maine State Plane NAD 1983 1802 West Zone Base Point, Granite Monument With DH at Pine & Brackett TT130-55-137, N298222.210 E2925903.492
Azimuth Point, Monument T124-23-1183, N297539.387, E2924869.394, S56-33'-46"W 1239.39' Feet

4) Elevation Of Sewer Inverts As Per Plan Reference 3 & 4 No Field Elevation Check

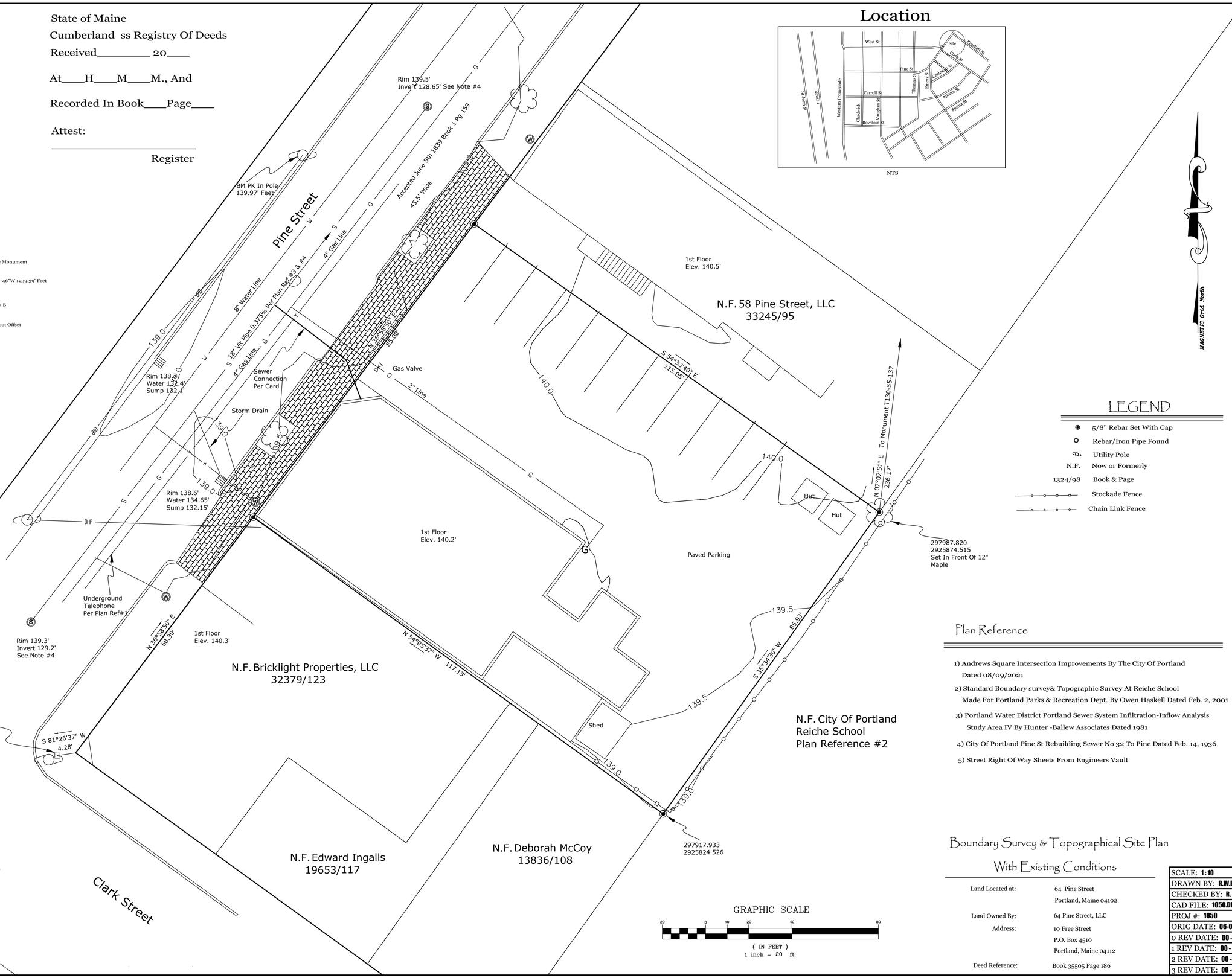
5) Flood Zone C Area Of Minimum Flooding Community Panel Number 230051 0013 B Panel 13 Of 17 Dated July 17, 1986

6) Bench Mark Is The Top Of A Drill Hole In Granite Monument Located On The 3 Foot Offset At The Easterly Corner Of Pine And Clark Street Elevation Is 139.41' Feet

Space & Bulk Standards:

Zone. B1 Neighborhood Business Zone

Mimium Lot Size	435 S.F.
Minimum Frontage	20'
Minimum Yard Dimensions	
Width	None
Rear Yard	None
Side Yard	None
Maximum Impervious Area	90%
Maximum Floor Area	10.000 S.F.
Minimun Lot Width	None
Maximum Building Height	45'



Location

NTS

LEGEND

- 5/8" Rebar Set With Cap
- Rebar/Iron Pipe Found
- Utility Pole
- N.F. Now or Formerly
- 1324/98 Book & Page
- Stockade Fence
- Chain Link Fence

Plan Reference

1) Andrews Square Intersection Improvements By The City Of Portland Dated 08/09/2021

2) Standard Boundary survey& Topographic Survey At Reiche School Made For Portland Parks & Recreation Dept. By Owen Haskell Dated Feb. 2, 2001

3) Portland Water District Portland Sewer System Infiltration-Inflow Analysis Study Area IV By Hunter -Ballew Associates Dated 1981

4) City Of Portland Pine St Rebuilding Sewer No 32 To Pine Dated Feb. 14, 1936

5) Street Right Of Way Sheets From Engineers Vault

GRAPHIC SCALE
20 0 10 20 40 80
(IN FEET)
1 inch = 20 ft.

R. W. EATON ASSOCIATES
LAND SURVEYING & REAL ESTATE
58 PLEASANT STREET, WESTBROOK, MAINE 04092
PHONE: 207-854-2402 EMAIL Dick@rweatonsurveyor.com

June 1st, 2023

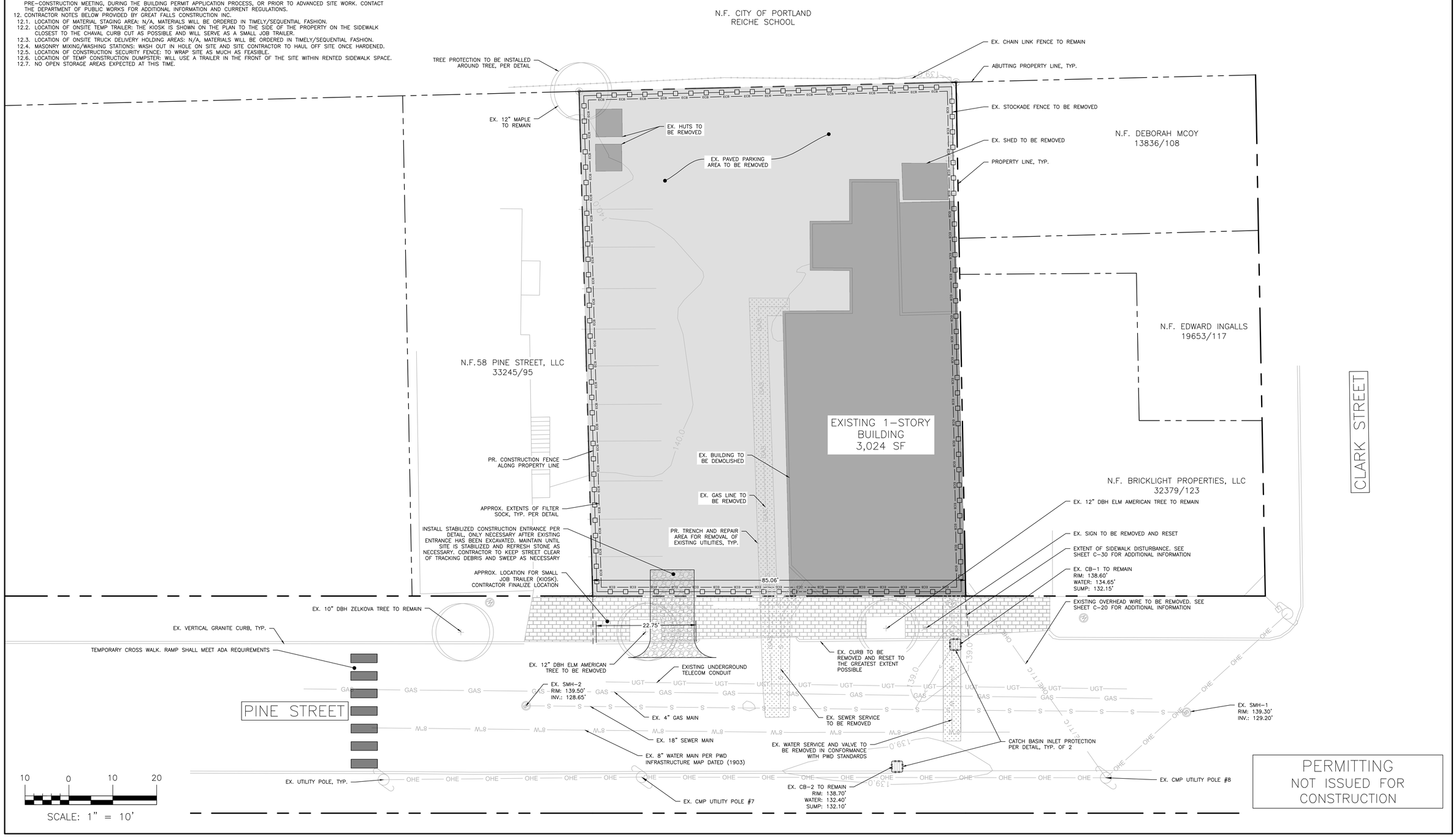
Boundary Survey & Topographical Site Plan
With Existing Conditions

Land Located at:	64 Pine Street Portland, Maine 04102
Land Owned By:	64 Pine Street, LLC
Address:	10 Free Street P.O. Box 4510 Portland, Maine 04112
Deed Reference:	Book 35505 Page 186

SCALE: 1:10
DRAWN BY: R.W.E.
CHECKED BY: R. W. E.
CAD FILE: 1050.DWG
PROJ #: 1050
ORIG DATE: 06-01-23
0 REV DATE: 00-00-00
1 REV DATE: 00-00-00
2 REV DATE: 00-00-00
3 REV DATE: 00-00-00

GENERAL NOTES:

1. EXISTING ASPHALT TO BE REMOVED SHALL BE STRIPPED AND PROPERLY DISPOSED OF OFFSITE.
2. ALL DISPOSAL OF DEMOLITION DEBRIS OR WASTE SHALL BE IN ACCORDANCE WITH ALL LOCAL, STATE, & FEDERAL REGULATIONS. CONTRACTOR SHALL PROVIDE OWNER WITH APPROPRIATE "BILLS OF LADING" TO DEMONSTRATE PROPER DISPOSAL OF ALL MATERIALS.
3. SITE DEMOLITION SHALL NOT OCCUR UNTIL PROPER ABATEMENT PROCEDURES HAVE OCCURRED. ABATEMENT, IF NECESSARY, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
4. THE CONTRACTOR SHALL CALL THE APPROPRIATE UTILITY COMPANIES AND DIG SAFE AT LEAST 72 HOURS PRIOR TO EXCAVATION TO REQUEST EXACT FIELD LOCATION FOR UTILITIES. OTHERWISE IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE LOCATION OF UNDERGROUND UTILITIES AND LOCATE POTENTIAL CONFLICT WITH THE APPROVED PLANS PRIOR TO CONSTRUCTION.
5. ALL CONSTRUCTION SIGNAGE IS TEMPORARY AND WILL BE REMOVED AT PROJECT COMPLETION. FINAL SIGNAGE WORDING AND PLACEMENT LOCATION TO BE ACCEPTED BY THE CITY.
6. SEDIMENT BARRIERS TO BE PLACED DIRECTLY ON THE FRONT AND SIDE PROPERTY LINES, DOWN GRADIENT OF THE PROPOSED PROJECT WORK PER DETAIL; FENCES ARE OFFSET OF THE PROPERTY LINES AS SHOWN ON THE PLAN FOR CLARITY PURPOSES AND DO NOT NECESSARILY DEPICT THE PHYSICAL LOCATION.
7. CONTRACTOR SHALL PLACE CATCH BASIN INLET PROTECTION ON CATCH BASINS AND FIELD INLETS DOWN-GRADIENT OF ALL NON-STABILIZED SURFACES, PER DETAIL.
8. DEMOLITION PLAN IS NOT INCLUSIVE OF ALL EXISTING ITEMS TO BE REMOVED AS PART OF SITE CONSTRUCTION INCLUDING BUT NOT LIMITED TO LANDSCAPING, UTILITIES, WORK WITHIN THE ROW, ETC. ALL DEMOLITION WORK SHALL BE IN ACCORDANCE WITH THE CITY OF PORTLAND REGULATIONS.
9. CONTRACTOR TO BE RESPONSIBLE FOR PROVIDING OFF-SITE PARKING TO EMPLOYEES; ON-SITE PARKING WILL NOT BE PROVIDED OR GUARANTEED. CONTRACTOR TO BE RESPONSIBLE FOR OBTAINING THE APPROPRIATE PERMITS FROM THE CITY FOR CLOSING ANY ON-STREET PARKING SPACES DURING THE CONSTRUCTION PERIOD.
10. CONTRACTOR SHALL BE RESPONSIBLE FOR SNOW REMOVAL ALONG CONSTRUCTION FENCE AND GATE.
11. CONTRACTOR TO SUBMIT A DEWATERING PLAN FOR REVIEW AND APPROVAL TO THE DEPARTMENT OF PUBLIC WORKS PRIOR TO THE PRE-CONSTRUCTION MEETING, DURING THE BUILDING PERMIT APPLICATION PROCESS, OR PRIOR TO ADVANCED SITE WORK. CONTACT THE DEPARTMENT OF PUBLIC WORKS FOR ADDITIONAL INFORMATION AND CURRENT REGULATIONS.
12. CONTRACTOR NOTES BELOW PROVIDED BY GREAT FALLS CONSTRUCTION INC.
    - 12.1. LOCATION OF MATERIAL STAGING AREA: N/A, MATERIALS WILL BE ORDERED IN TIMELY/SEQUENTIAL FASHION.
    - 12.2. LOCATION OF ONSITE TEMP TRAILER: THE KIOSK IS SHOWN ON THE PLAN TO THE SIDE OF THE PROPERTY ON THE SIDEWALK CLOSEST TO THE CHAVAL CURB CUT AS POSSIBLE AND WILL SERVE AS A SMALL JOB TRAILER.
    - 12.3. LOCATION OF ONSITE TRUCK DELIVERY HOLDING AREAS: N/A, MATERIALS WILL BE ORDERED IN TIMELY/SEQUENTIAL FASHION.
    - 12.4. MASONRY MIXING/WASHING STATIONS: WASH OUT IN HOLE ON SITE AND SITE CONTRACTOR TO HAUL OFF SITE ONCE HARDENED.
    - 12.5. LOCATION OF CONSTRUCTION SECURITY FENCE: TO WRAP SITE AS MUCH AS FEASIBLE.
    - 12.6. LOCATION OF TEMP CONSTRUCTION DUMPSTER: WILL USE A TRAILER IN THE FRONT OF THE SITE WITHIN RENTED SIDEWALK SPACE.
    - 12.7. NO OPEN STORAGE AREAS EXPECTED AT THIS TIME.



PERMITTING
NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY / DATE
50% DRAWINGS	SJL 9/15/23
DD SET	SJL 11/3/23
MAJOR SITE PLAN	SJL 12/1/23
COMMENT REPONSE	SJL 2/23/24

DRAWING NAME: **CONSTRUCTION MANAGEMENT PLAN**

PROJECT NAME: **64 PINE STREET REDEVELOPMENT**
64 PINE STREET, PORTLAND, MAINE 04012

CLIENT: 64 PINE STREET LLC
104 WASHINGTON AVENUE PORTLAND, MAINE 04101

ACORN ENGINEERING, INC.

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DESIGNED BY:	ZMS
DRAWN BY:	BJK
CHECKED BY:	SJL

STATE OF MAINE
SAMUEL J. LEBEL
No. 16505
LICENSED
PROFESSIONAL ENGINEER
2/23/24

DRAWING NO.
C-03

GENERAL NOTES:

1. ALL BRICK SIDEWALK AND VERTICAL GRANITE CURB TO BE REPLACED SHALL BE REBUILT TO CITY OF PORTLAND STANDARD.
2. ALL PAVEMENT STRIPING AND MARKINGS SHALL COMPLY TO CITY OF PORTLAND STANDARDS.
3. ANY ASPHALT TO BE REMOVED SHALL BE STRIPPED AND PROPERLY DISPOSED OF OFFSITE.
4. CURB TO BE REMOVED, STOCKPILED AND RESET IN ACCORDANCE WITH DETAIL. BROKEN CURB SHALL BE PROPERLY DISPOSED OF AND SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.
5. ALL RAMPS TO CONFORM TO ADA GUIDELINES. SLOPE SHALL NOT EXCEED 1 INCH PER FOOT.
6. ALL SITE SIGNAGE TO COMPLY WITH MUTCD STANDARDS. CONTRACTOR TO COORDINATE AND INSTALL.
7. FOLLOWING COMPLETION OF CONSTRUCTION, THE OWNER SHALL BE RESPONSIBLE FOR THE MAINTENANCE AND MANAGEMENT OF DRIVEWAYS, SITE LIGHTING, TRASH REMOVAL AND SNOW REMOVAL.
8. CONTRACTOR SHALL VERIFY BOTTOM AND TOP OF CURB ELEVATIONS ALONG BUILDING FRONTAGES PRIOR TO CONSTRUCTION OF THE FOUNDATIONS. CONTACT ENGINEER PRIOR TO CONSTRUCTION IF DISCREPANCIES ARE FOUND.
9. PLAN REFERENCES
   9.1. PLAN TITILED "BOUNDARY SURVEY & TOPOGRAPHICAL SITE PLAN WITH EXISTING CONDITIONS" PREPARED BY R.W. EATON ASSOCIATES DATED JUNE 1ST, 2023
10. FINAL EV LOCATIONS SUBJECT TO CHANGE BASED ON FINAL MEP DESIGN. MEP TO PROVIDE EV CHARGING STATION DESIGN AND CONDUIT ROUTING.

SPACE AND BULK STANDARDS

ZONING DISTRICT: B1	REQUIRED	PROPOSED
MINIMUM LOT AREA PER DWELLING UNIT (ON PENINSULA) [9,920 SF / 0.23 ACRES]	435 SF	1,102 SF
MINIMUM STREET FRONTAGE	20 FT	85 FT
MAXIMUM FRONT SETBACK	10 FT	0.74 FT
MINIMUM REAR SETBACK (PRINCIPAL)	10 FT	10.56 FT
MINIMUM SIDE SETBACK	NONE	5.30 FT
MIMIMUM REAR STEPBACK (ABOVE 35 FT WHEN PROPERTY LINE ABUTS A RESIDENTIAL ZONE)	15 FT	15.20 FT
MAXIMUM FLOOR AREA (NON-RESIDENTIAL USES ON FIRST FLOOR)	10,000 SF	1,282 SF
MAXIMUM STRUCTURE HEIGHT (ON-PENINSULA)	45 FT	44.92 FT
MAXIMUM LOT COVERAGE	NONE	76.2%
MAXIMUM IMPERVIOUS SURFACE RATIO	90%	84.6%

VEHICLE PARKING SUMMARY

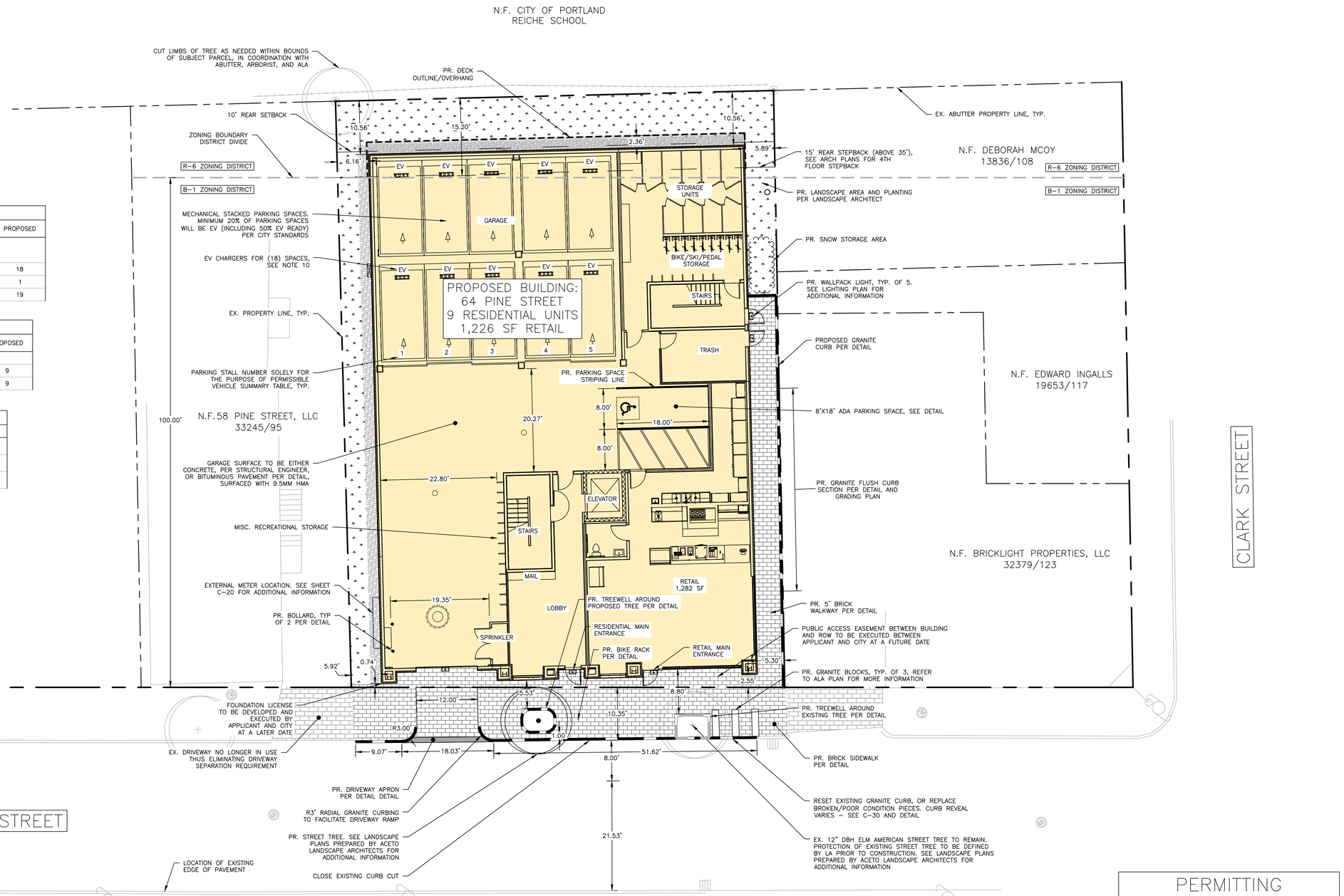
	SPACES REQUIRED	EXISTING	PROPOSED
RESIDENTIAL USES	1 PARKING SPACE PER UNIT REQUIRED AFTER THE FIRST FOUR UNITS = 5 SPACES		
STANDARD (9'x18')		11	18
ADA SPACE (8'x18')	1 SPACE PER 1 TO 25 PARKING SPACES	–	1
TOTAL VEHICLE SPACES	6	–	19

BICYCLE SUMMARY

	SPACES REQUIRED	EXISTING	PROPOSED
MULTIFAMILY	2 BICYCLE SPACES/ 5 UNITS		
BICYCLE SPACES		2	9
TOTAL BICYCLE SPACES	4	–	9

PERMISSIBLE VEHICLE SUMMARY

SPACES	MAX WHEEL BASE	MAX LENGTH	MAX WIDTH
1,2	9.4'	16.8'	6.3'
3	9.0'	15.3'	6.0'
4,5	8.7'	14.4'	6.0'



PERMITTING
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CONSTRUCTION

ISSUED FOR	BY DATE
50% DRAWINGS	SJL 9/15/23
DD SET	SJL 11/3/23
MAJOR SITE PLAN	SJL 12/1/23
COMMENT REPONSE	SJL 2/23/24

DRAWING NAME: SITE PLAN

PROJECT NAME: 64 PINE STREET REDEVELOPMENT
64 PINE STREET, PORTLAND, MAINE 04012

CLIENT: 64 PINE STREET LLC
104 WASHINGTON AVENUE PORTLAND, MAINE 04101

ACORN ENGINEERING, INC.

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ACORN ENGINEERING, INC.
PO BOX 3372, PORTLAND MAINE 04104
(207) 775-2655

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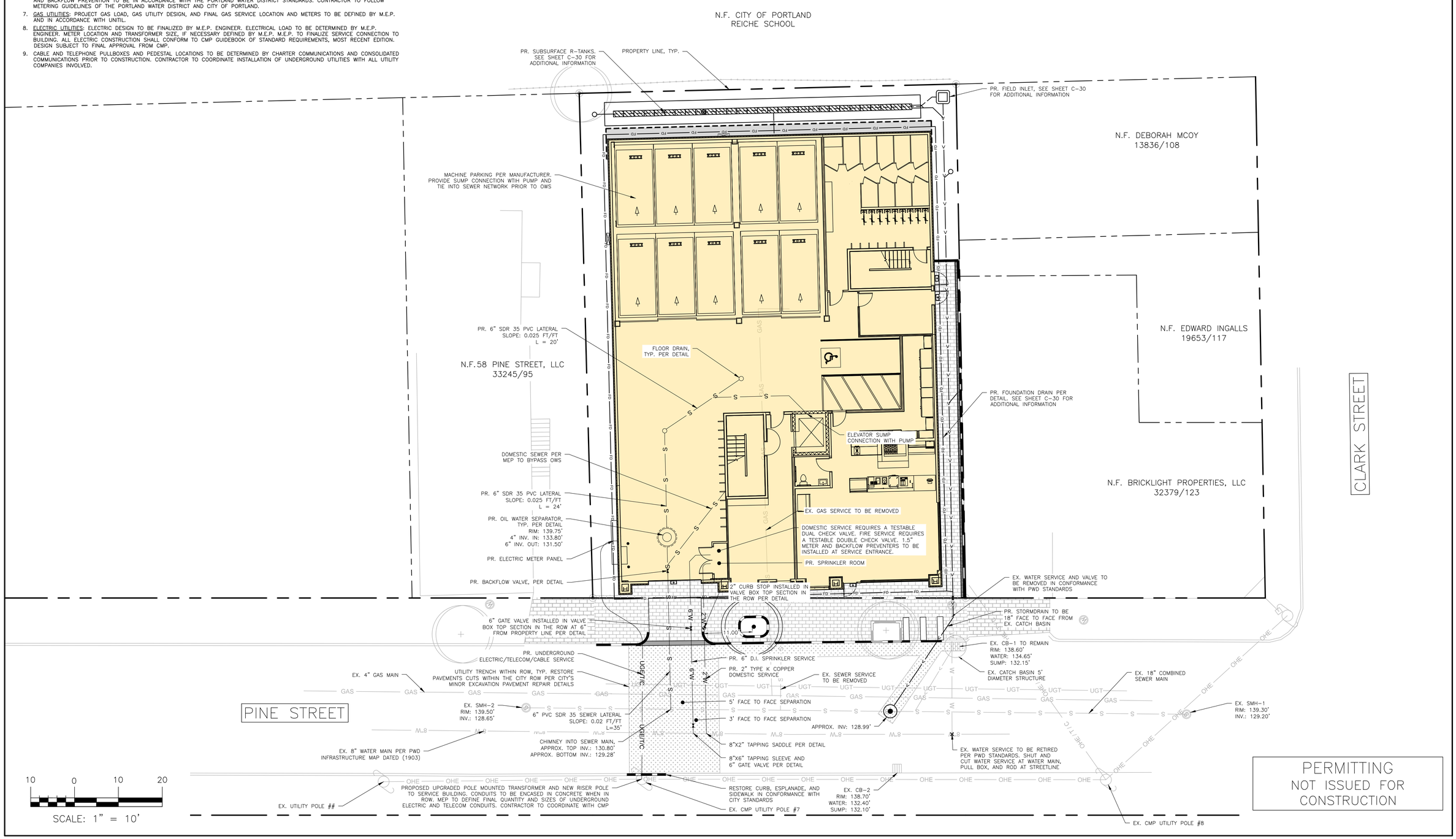
CHECKED BY:	SJL

STATE OF MAINE
SAMUEL J. LEBEL
No. 16505
LICENSED
PROFESSIONAL ENGINEER
2/23/24

DRAWING NO.
C-10

GENERAL NOTES:

1. LOCATION OF PROPOSED CONNECTIONS ARE APPROXIMATE. CONTRACTOR TO CONTACT ENGINEER IF FIELD INFORMATION VARIES FROM INFORMATION ON PLANS.
2. CONTRACTOR IS TO BE CAUTIONED THAT CERTAIN LOCATIONS AND/OR ELEVATIONS OF EXISTING UTILITIES HAVE BEEN PROVIDED THROUGH UTILITY COORDINATION OR OTHER OBSERVATIONS. INFORMATION IS NOT TO BE RELIED UPON AS EXACT OR COMPLETE. CONTRACTOR TO FIELD VERIFY AND COORDINATE WITH UTILITY COMPANY AND DIG SAFE NO LESS THAN 72 HOURS PRIOR TO ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF ALL UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS INDICATED IN THE CONTRACT DOCUMENTS. CONTRACTOR TO NOTIFY ENGINEER OF ANY DIFFERENTIATIONS FROM EXISTING CONDITIONS, INCLUDING UTILITY INFORMATION, PRIOR TO ANY CHANGES.
3. FOR ALL UTILITIES, ACORN ENGINEERING DESIGN LIMITS END AT EXTERIOR WALL OF BUILDING. METERING OF UTILITIES TO BE COMPLETED BY M.E.P. UNLESS SPECIFIED OTHERWISE.
4. CONTRACTOR TO COORDINATE WITH ARCHITECT ON FINAL UTILITY CONNECTIONS WITHIN THE BUILDING.
5. SEWER UTILITIES: CONTRACTOR TO COORDINATE WITH ARCHITECT FOR FINAL SERVICE CONNECTION. SEWER UTILITIES TO BE CONSTRUCTED IN ACCORDANCE WITH CITY OF PORTLAND TECHNICAL STANDARDS. VALVE FOR BACKFLOW PREVENTION SHALL BE INSTALLED WITHIN THE THE PROPERTY LINES FOR EACH CITY SEWER CONNECTION. CONTACT ENGINEER IF INVERT FIELD CONDITIONS VARY FROM DESIGN.
6. WATER UTILITIES: FINAL PIPE SIZING PROVIDED BY M.E.P. ENGINEER AND FIRE PROTECTION DESIGNER. INTERNAL METERING, BACKFLOW PREVENTION, AND PRESSURE REDUCERS TO BE COMPLETED BY M.E.P. ENGINEER. DOMESTIC WATER PIPE SIZES WILL DETERMINE THE FINAL WATER METERING OPTIONS. METER MAY BE SMALLER THAN PROPOSED WATER MAIN. WATER METERING, PRESSURE REDUCER AND BACKFLOW PREVENTION TO BE IN ACCORDANCE WITH THE PORTLAND WATER DISTRICT STANDARDS. CONTRACTOR TO FOLLOW METERING GUIDELINES OF THE PORTLAND WATER DISTRICT AND CITY OF PORTLAND.
7. GAS UTILITIES: PROJECT GAS LOAD, GAS UTILITY DESIGN, AND FINAL GAS SERVICE LOCATION AND METERS TO BE DEFINED BY M.E.P. AND IN ACCORDANCE WITH UNITIL.
8. ELECTRIC UTILITIES: ELECTRIC DESIGN TO BE FINALIZED BY M.E.P. ENGINEER. ELECTRICAL LOAD TO BE DETERMINED BY M.E.P. ENGINEER. METER LOCATION AND TRANSFORMER SIZE, IF NECESSARY DEFINED BY M.E.P. M.E.P. TO FINALIZE SERVICE CONNECTION TO BUILDING. ALL ELECTRIC CONSTRUCTION SHALL CONFORM TO CMP GUIDEBOOK OF STANDARD REQUIREMENTS, MOST RECENT EDITION. DESIGN SUBJECT TO FINAL APPROVAL FROM CMP.
9. CABLE AND TELEPHONE PULLBOXES AND PEDESTAL LOCATIONS TO BE DETERMINED BY CHARTER COMMUNICATIONS AND CONSOLIDATED COMMUNICATIONS PRIOR TO CONSTRUCTION. CONTRACTOR TO COORDINATE INSTALLATION OF UNDERGROUND UTILITIES WITH ALL UTILITY COMPANIES INVOLVED.



ISSUED FOR	BY	DATE
50% DRAWINGS	SJL	9/15/23
DD SET	SJL	11/3/23
MAJOR SITE PLAN	SJL	12/7/23
COMMENT REPONSE	SJL	2/23/24

DRAWING NAME: UTILITY PLAN

PROJECT NAME: 64 PINE STREET REDEVELOPMENT
64 PINE STREET, PORTLAND, MAINE 04012

CLIENT: 64 PINE STREET LLC
104 WASHINGTON AVENUE PORTLAND, MAINE 04101

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STATE OF MAINE
SAMUEL J. LEBEL
No. 16505
LICENSED
PROFESSIONAL ENGINEER
2/23/24

DRAWING NO.
C-20

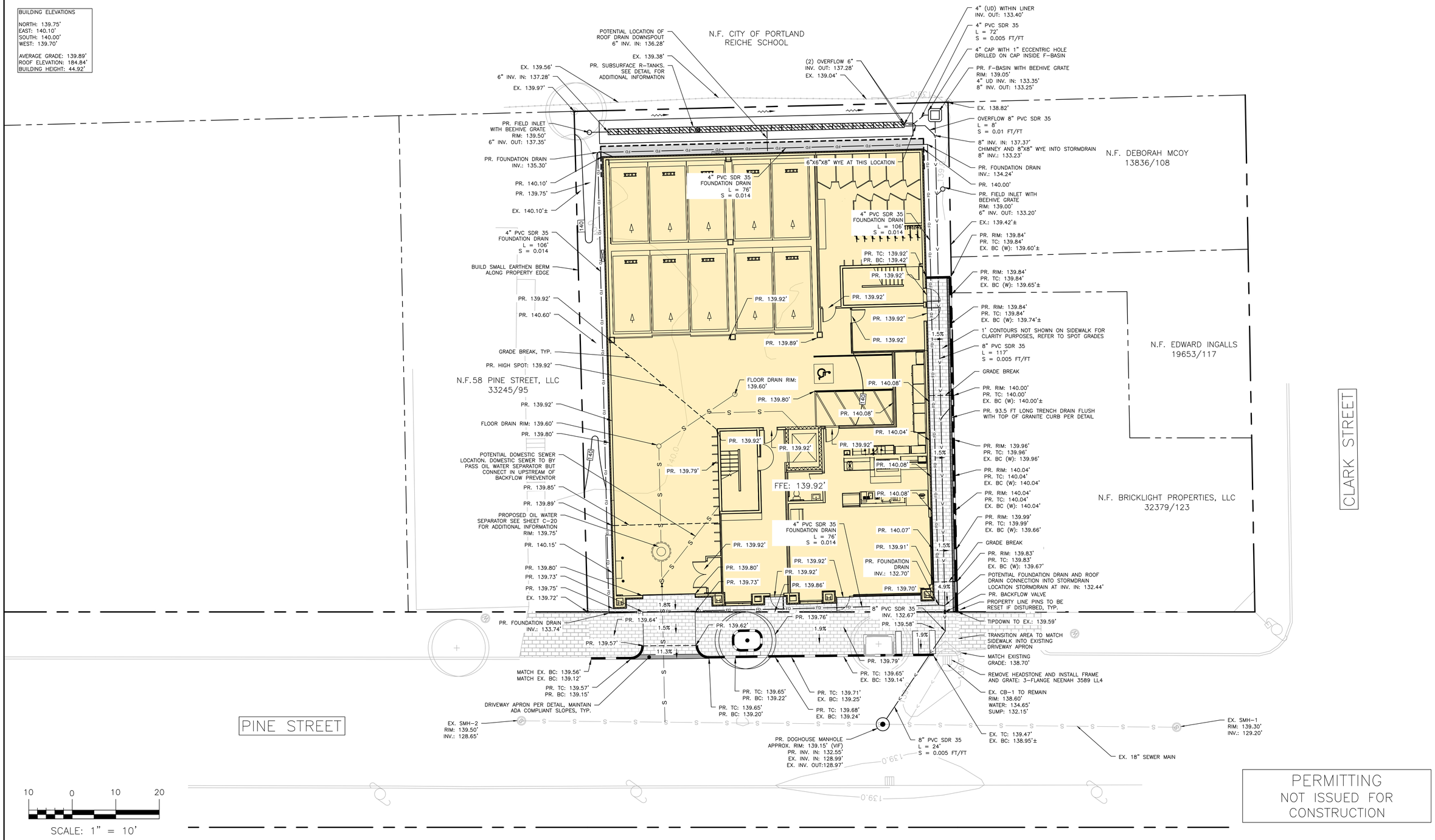
GENERAL NOTES:

1. ALL WORK WITHIN THE CITY STREET RIGHT OF WAY SHALL MEET CITY OF PORTLAND TECHNICAL MANUAL STANDARDS.
2. DESIGN OF TEMPORARY SOIL RESTRAINT MEASURES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR IF NECESSARY FOR CONSTRUCTION.
3. CONTRACTOR SHALL ENSURE THAT UNDERDRAINS ARE CONSTRUCTED WITH POSITIVE OUTLET TO PROPOSED CONNECTIONS.
4. CATCH BASIN INLET PROTECTION TO BE INSTALLED WITHIN ANY STRUCTURES DOWNGRADIENT OF ACTIVE CONSTRUCTION.
5. SEDIMENTATION BARRIERS ARE TO BE INSTALLED DOWNGRADIENT OF ALL ACTIVE CONSTRUCTION WORK PER DETAIL. BARRIERS TO NOT EXTEND PAST PROPERTY LINES; BARRIERS SHOWN OFFSET FROM PROPERTY LINES ON PLANS FOR VISUAL PURPOSES ONLY.
6. CONTRACTOR SHALL VERIFY BOTTOM AND TOP OF CURB ELEVATIONS ALONG BUILDING FRONTAGES PRIOR TO CONSTRUCTION OF THE FOUNDATIONS. CONTACT ENGINEER PRIOR TO CONSTRUCTION IF DISCREPANCIES ARE FOUND.

BUILDING ELEVATIONS

NORTH: 139.75'
EAST: 140.10'
SOUTH: 140.00'
WEST: 139.70'

AVERAGE GRADE: 139.89'
ROOF ELEVATION: 184.84'
BUILDING HEIGHT: 44.92'



10 0 10 20

SCALE: 1" = 10'

PERMITTING
NOT ISSUED FOR
CONSTRUCTION

ISSUED FOR	BY	DATE
50% DRAWINGS	SJL	9/15/23
DD SET	SJL	11/3/23
MAJOR SITE PLAN	SJL	12/1/23
COMMENT REPONSE	SJL	2/23/24

DRAWING NAME: GRADING PLAN

PROJECT NAME: 64 PINE STREET REDEVELOPMENT
64 PINE STREET, PORTLAND, MAINE 04012

CLIENT: 64 PINE STREET LLC
104 WASHINGTON AVENUE PORTLAND, MAINE 04101

ACORN ENGINEERING, INC.

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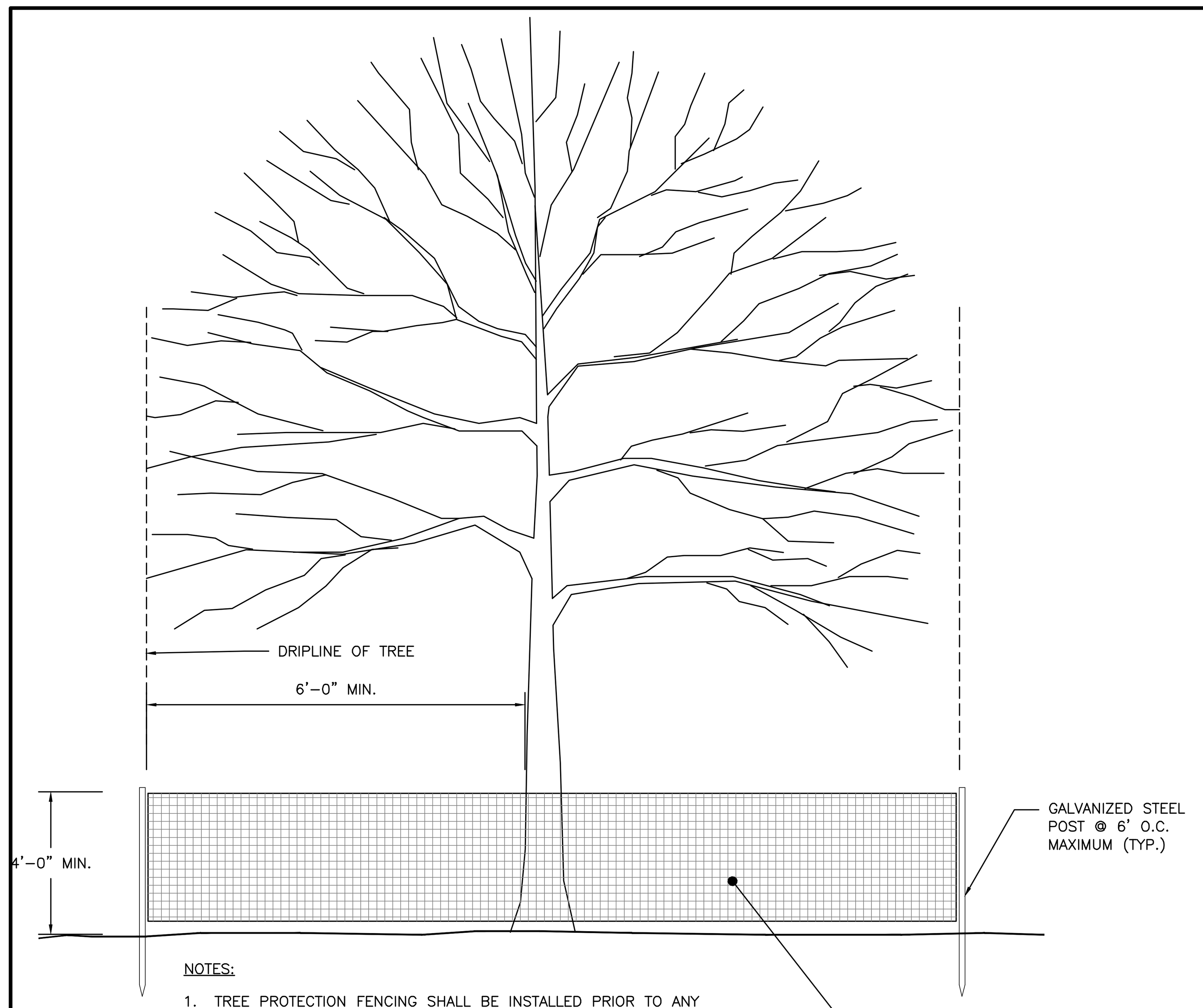
ACORN ENGINEERING, INC.
PO BOX 3372, PORTLAND MAINE 04104
(207) 775-2655

FILE:	1109.4_CIVIL
JN:	1109.4
SCALE:	AS NOTED
DESIGNED BY:	ZMS
DRAWN BY:	BJK
CHECKED BY:	SJL

STATE OF MAINE
SAMUEL J. LEBEL
No. 16505
LICENSED
PROFESSIONAL ENGINEER
2/23/24

DRAWING NO.
C-30



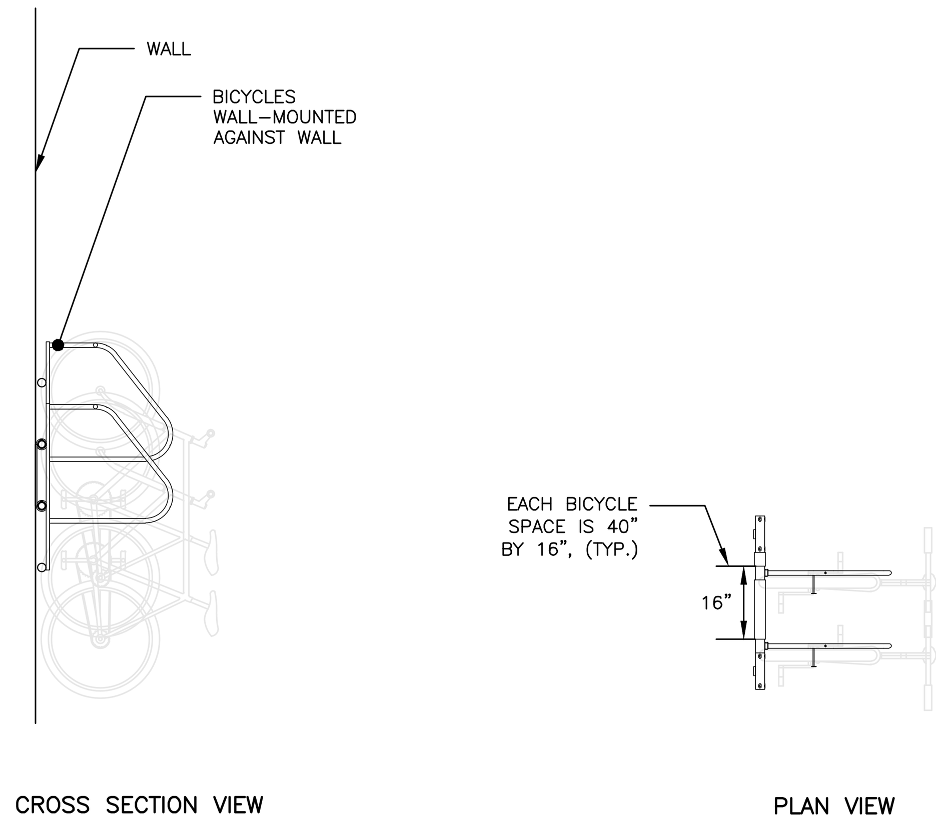
NOTES:

1. TREE PROTECTION FENCING SHALL BE INSTALLED PRIOR TO ANY CONSTRUCTION ACTIVITY.
2. INSTALL PROTECTIVE FENCING TO LIMIT OF DRIPLINE ON TREE OR A MINIMUM OF 6' FROM TRUNK WHEN NECESSARY, WITH PRIOR PERMISSION OF LANDSCAPE ARCHITECT.
3. DO NOT STORE CONSTRUCTION EQUIPMENT, MATERIALS, TOOLS, ETC. WITHIN PROTECTIVE FENCING.
4. MAINTAIN FENCING IN A NEAT AND ORDERLY FASHION THROUGHOUT CONSTRUCTION PERIOD.

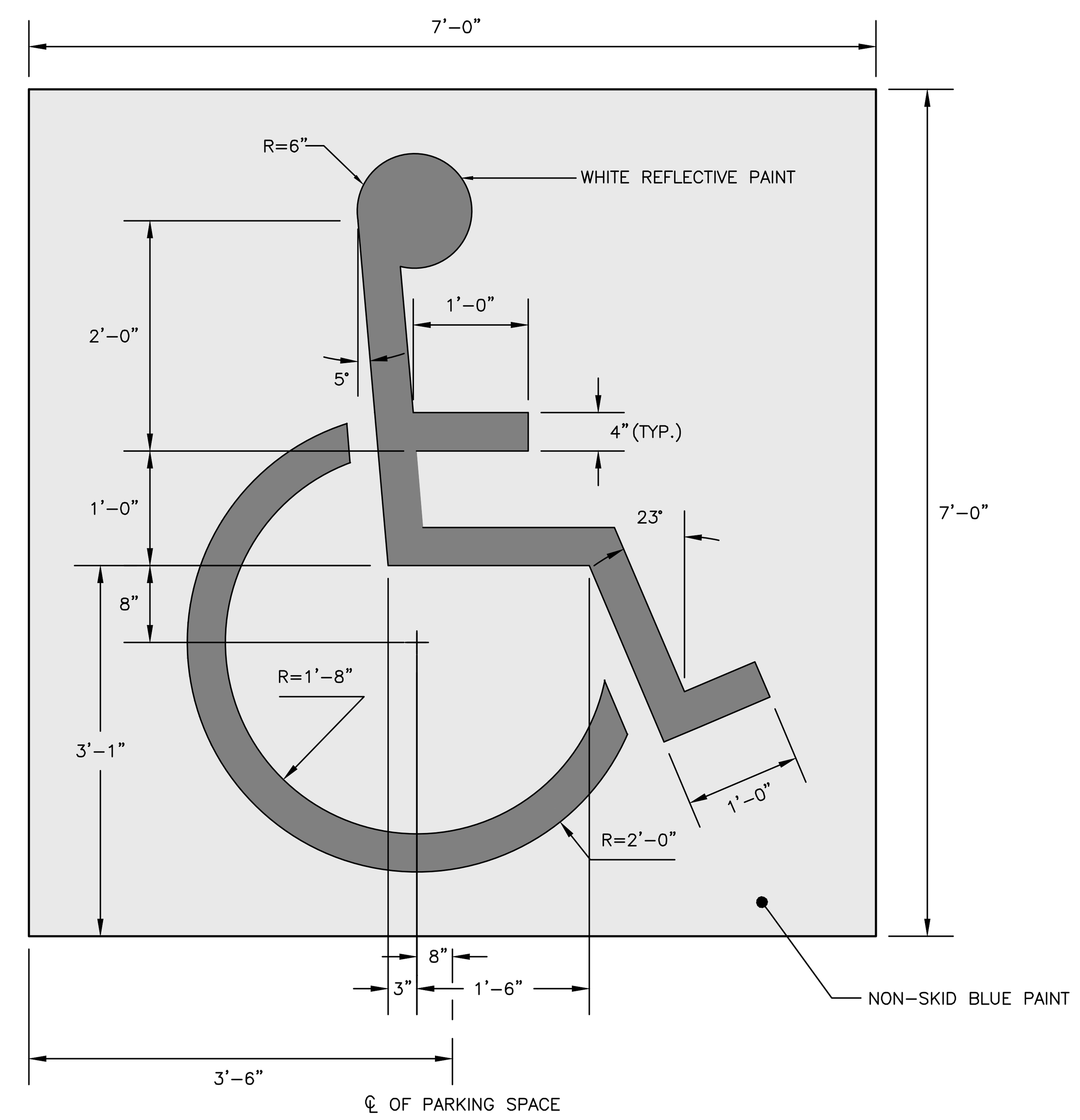
TREE PROTECTION DETAIL
NOT TO SCALE

NOTES:

1. FINAL LOCATION OF INTERIOR BICYCLE RACKS SHALL CONFORM TO ALL ARCHITECTURAL DRAWINGS. CONTRACTOR TO NOTIFY ENGINEER AND ARCHITECT WITH ANY DISCREPANCIES.
2. BICYCLE MOUNT SHALL BE ULTRA SPACE SAVER AS MANUFACTURED BY DERO, OR APPROVED EQUAL.
3. BICYCLES SHALL BE WALL MOUNTED IN ACCORDANCE WITH MANUFACTURERS' RECOMMENDATIONS.

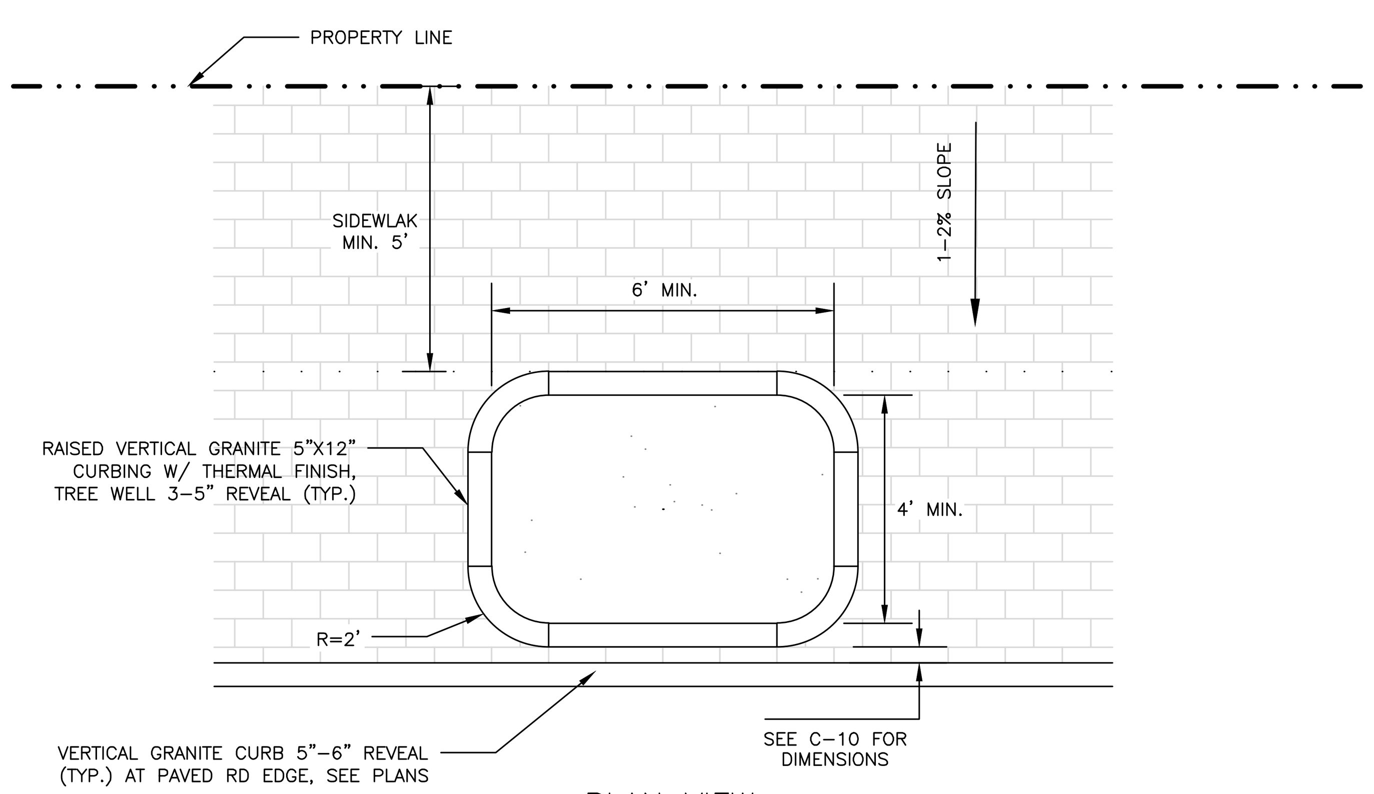


BICYCLE RACK INTERIOR
NOT TO SCALE



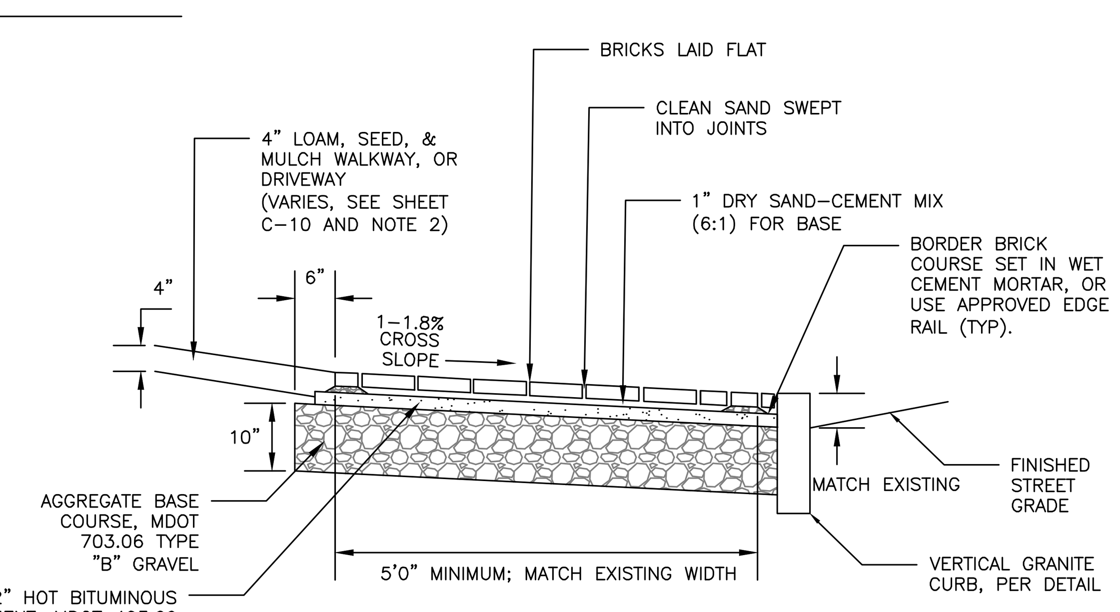
INTERNATIONAL BARRIER FREE SYMBOL
NOT TO SCALE

NOTES:
1. ALL TREE WELLS SHALL COMPLY WITH CITY TECHNICAL STANDARDS AND MUST BE APPROVED BY THE CITY ARBORIST
2. FINAL PLACEMENT LOCATION OF THE GRANITE CURB TREE WELL SHALL BE APPROVED BY DPW AND SHALL CONSIDER SIDEWALK WIDTH, STREET PARKING STATUS, ABOVE AND BELOW GROUND UTILITIES AND OTHER OBSTRUCTIONS
3. SIDEWALK MATERIAL POLICY. SEE SIDEWALK CONSTRUCTION DETAILS IN SECTION 1 OF THE TECHNICAL MANUAL
4. RAISED CURB TREE WELL OFFSETS FROM THE CURB LINE SHALL TAKE THE LOCATION OF ON-STREET PARKING INTO ACCOUNT.



PLAN VIEW

TREEWELL IN SIDEWALK
NOT TO SCALE



NOTES:

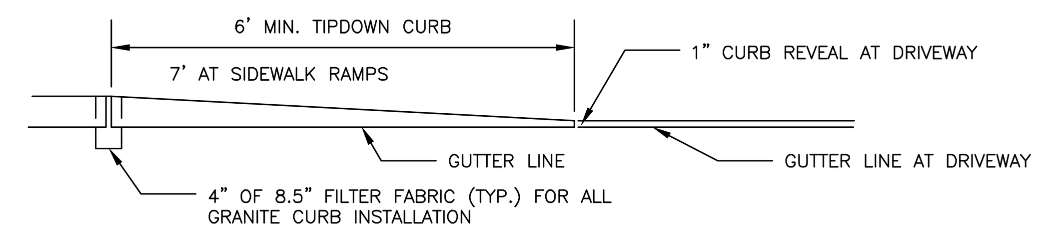
1. BRICKS TO BE USED:

   NEW CONSTRUCTION:
   4"X8" PINE HALL PATHWAY PAVER BRICK; MFG. BY PINE HALL BRICK CO., MADISON, NORTH CAROLINA. LACHANCE ITEM #193623;. PINE HALL PATHWAY PAVER BRICK.

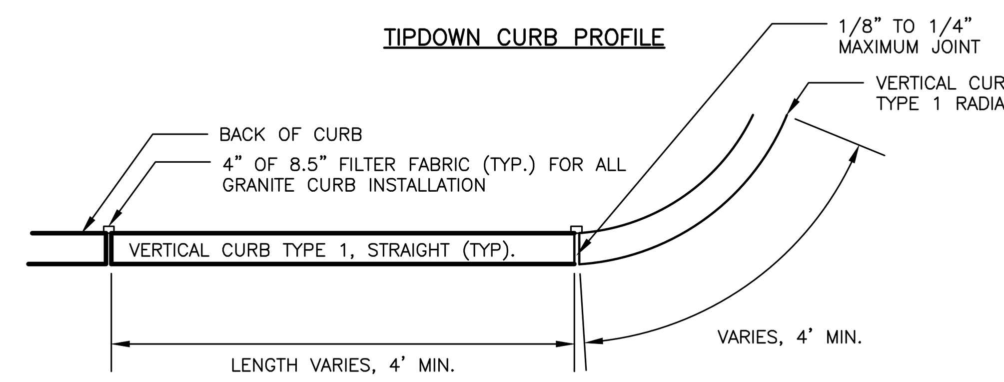
   REPAIR/MAINTENANCE TO EXISTING BRICK SIDEWALKS:
   VERMONT BACKER SUPPLIED BY GAGNE AND SONS SPECIFICATION NUMBER: "VERMONT PAVER BRICK", ITEM NUMBER #VBBB

2. INSTALL BRICK FLUSH UP TO BUILDING, PAVEMENT, STAIRS, CONCRETE SURFACES, CURB OR LANDSCAPED AREAS.

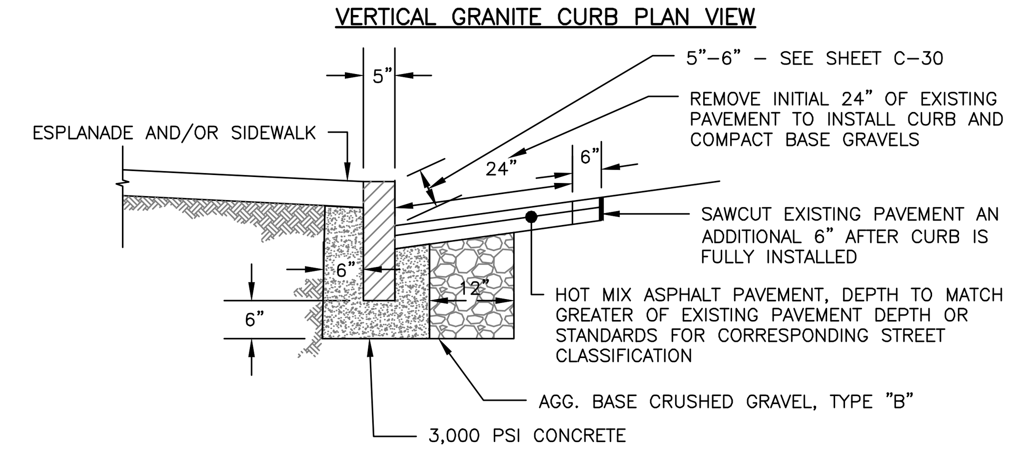
BRICK SIDEWALK WITH BITUMINOUS BASE DETAIL
NOT TO SCALE



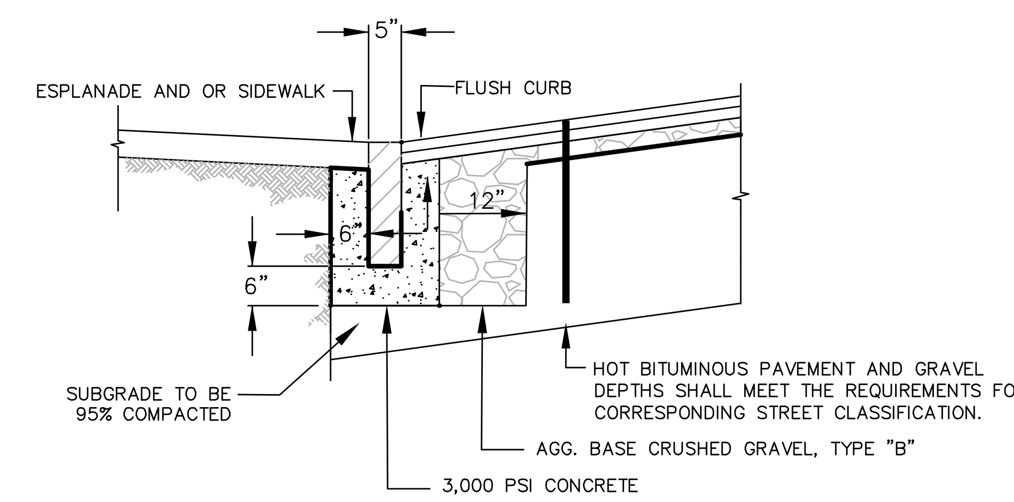
TIPDOWN CURB PROFILE



VERTICAL GRANITE CURB PLAN VIEW



VERTICAL GRANITE CURB WITH REVEAL CROSS SECTION

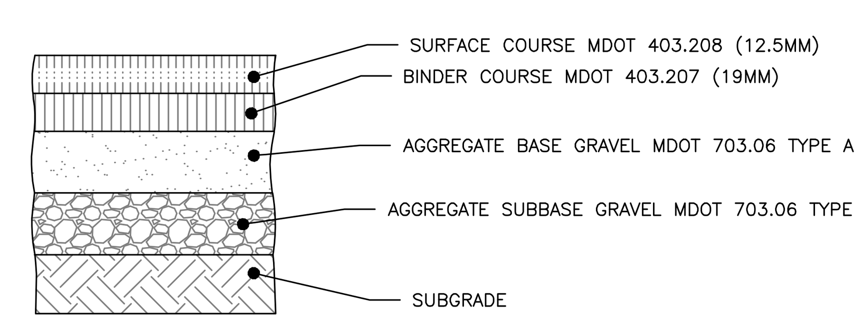


FLUSH VERTICAL GRANITE CURB CROSS SECTION

NOTES:

1. CURB SHALL BE RESET IN ACCORDANCE WITH MDOT 609.08 WITH THE EXCEPTION OF CURB SPACING TO BE INSTALLED PER DETAIL.
2. INDIVIDUAL PIECES OF CURB SHORTER THAN 4 L.F. ARE NOT ALLOWED, WITH THE EXCEPTION OF RADIAL CURB.
3. THE MINIMUM HEIGHT OF THE CONCRETE BACKING SHALL BE 10 INCHES OR TO THE BOTTOM OF THE HOT MIX ASPHALT PAVEMENT, WHICHEVER IS GREATER, MEASURED FROM THE BOTTOM OF THE CURB.
4. CURBING SHALL BE SET IN A 6-INCH BED OF POURED IN PLACE 3,000 PSI CONCRETE MIX.
5. WOODEN SHIMS MAY BE USED TO SET CURB.

VERTICAL GRANITE CURB AND TIPDOWN INSTALLATION IN EXISTING STREETS DETAIL
NOT TO SCALE



NOTE:

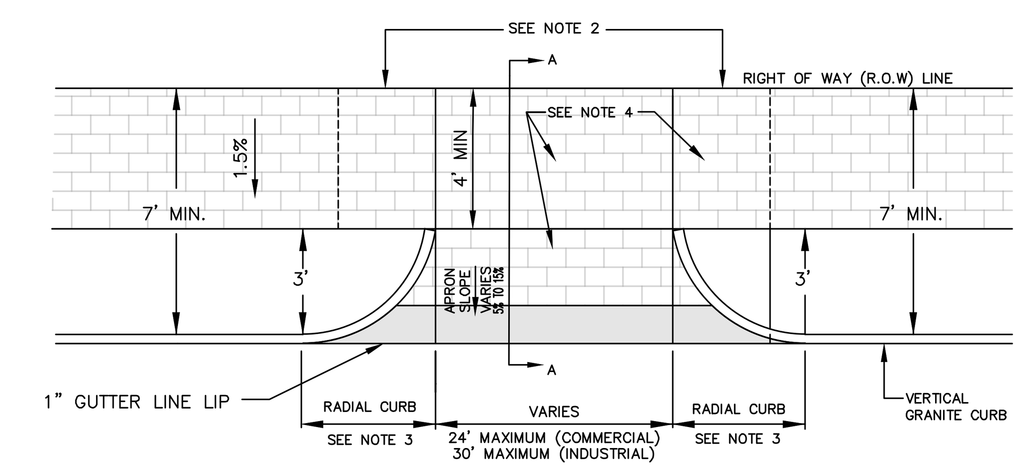
COMPACT THE AGGREGATE BASE TO 95% MAXIMUM DRY DENSITY IN ACCORDANCE WITH ASTM D-1557.

THICKNESS OF LAYERS	
STANDARD	LAYERS
2"	SURFACE COURSE MDOT 403.208 (12.5 mm)
3"	BINDER COURSE MDOT 403.207 (19 mm)
3"	AGGREGATE BASE GRAVEL MDOT 703.06 TYPE A
18"	AGGREGATE SUBBASE GRAVEL MDOT 703.06 TYPE D

PINE STREET PAVEMENT PROFILE
NOT TO SCALE

NOTES:

1. MATCH EXISTING GRADE AT R.O.W LINE. WHERE REQUIRED TO MEET A.D.A. AND DRIVEWAY APRON SLOPE REQUIREMENTS, A CONSTRUCTION EASEMENT MAY BE REQUIRED.
2. IF MATCHING THE EXISTING GRADE AT ROW CAUSES APRON SLOPE TO EXCEED RECOMMENDED %, SIDEWALK TRANSITION AREAS MAY BE ADDED, BUT SHALL NOT EXCEED 8.33%.
3. DRIVEWAY CURB RADIUS SHALL NOT BE LARGER THAN REQUIRED BY THE SITE'S DESIGN VEHICLE.
4. ALL MATERIALS IN ROW TO COMPLY WITH CITY'S SIDEWALK & DRIVEWAY MATERIAL POLICY. BRICK IN DRIVEWAY APRONS, WHERE APPLICABLE, SHALL BE ORIENTED IN THE SAME WAY AS THE ADJACENT BRICK SIDEWALK..



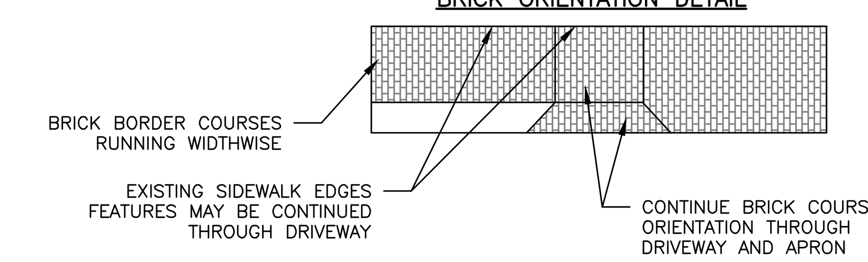
DRIVEWAY APRON LAYOUT
NOT TO SCALE

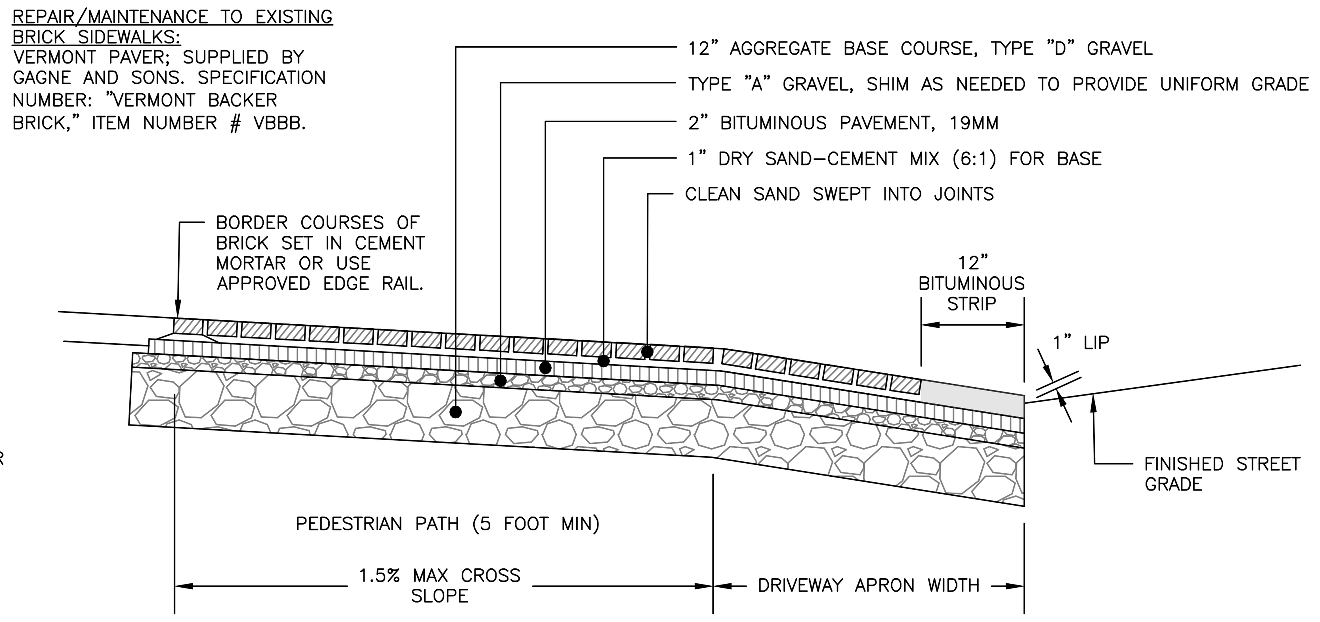
BRICKS TO BE USED:

NEW CONSTRUCTION:
4"X8" PINE HALL PATHWAY PAVER BRICK; MFG. BY PINE HALL BRICK CO., MADISON, NORTH CAROLINA, OR APPROVED EQUAL. LACHANCE ITEM #193623, PINE HALL PATHWAY PAVER BRICK.

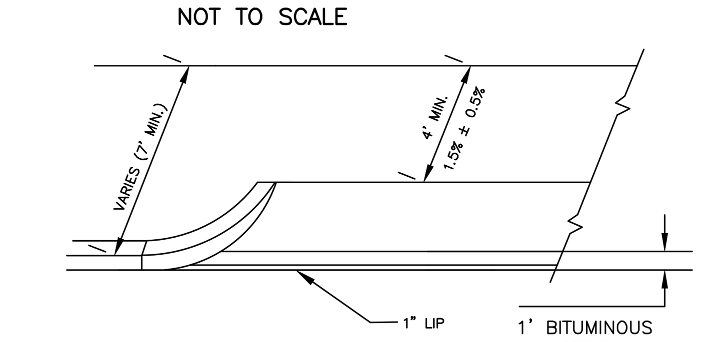
REPAIR/MAINTENANCE TO EXISTING BRICK SIDEWALKS:
VERMONT PAVER; SUPPLIED BY GAGNE AND SONS. SPECIFICATION NUMBER: "VERMONT BACKER BRICK," ITEM NUMBER # VBBB.

BRICK ORIENTATION DETAIL



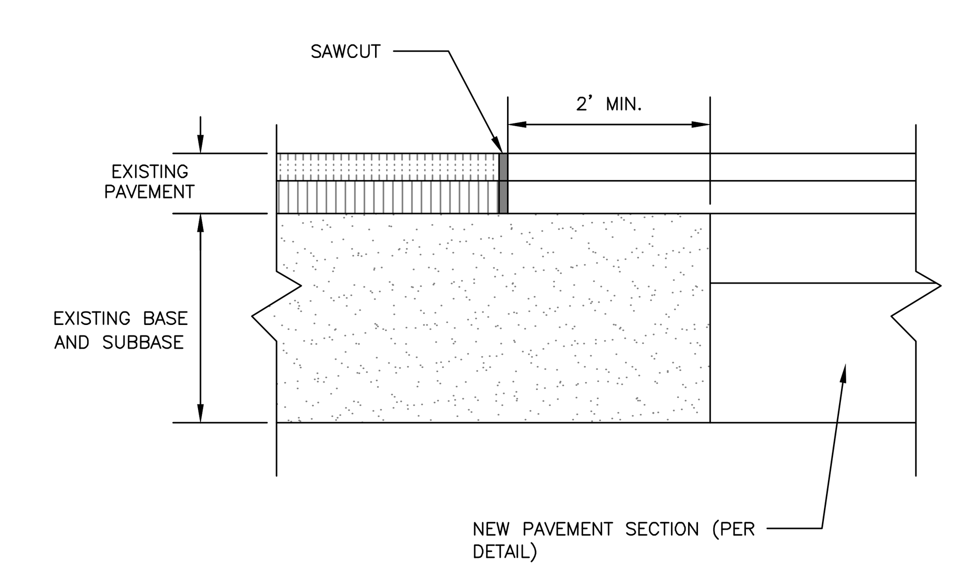


BRICK DRIVEWAY APRON WITH BITUMINOUS BASE
NOT TO SCALE



NOTES:

1. SAWCUT EXISTING PAVEMENT AND REMOVE 2' STRIP OF EXISTING PAVEMENT. CREATE UNIFORM AND RIGID BUTT JOINT AND APPLY BITUMINOUS TACK COAT AT AN APPLICATION RATE OF 0.10 TO 0.14 GALLONS PER SQUARE YARD PRIOR TO PLACEMENT OF NEW BITUMINOUS PAVEMENT.
2. THE NEW PAVEMENT SECTION SHALL MEET THE CITY OF LOCAL BITUMINOUS PAVEMENT SECTION DETAIL AT A MINIMUM OR THE THE EXISTING PAVEMENT AND AGGREGATE BASE AND SUBBASE DEPTH WHICHEVER IS GREATER.



PAVEMENT SAWCUT DETAIL
NOT TO SCALE

PERMITTING
NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY / DATE
50% DRAWINGS	SJL 9/15/23
DD SET	SJL 11/3/23
MAJOR SITE PLAN	SJL 12/1/23
COMMENT REPONSE	SJL 2/23/24

DRAWING NAME: SITE DETAILS – 1

PROJECT NAME: 64 PINE STREET REDEVELOPMENT
64 PINE STREET, PORTLAND, MAINE 04012

CLIENT: 64 PINE STREET LLC
104 WASHINGTON AVENUE PORTLAND, MAINE 04101

A C O R N ENGINEERING, INC.
ACORN ENGINEERING, INC.
PO BOX 3372, PORTLAND MAINE 04104
(207) 775-2655

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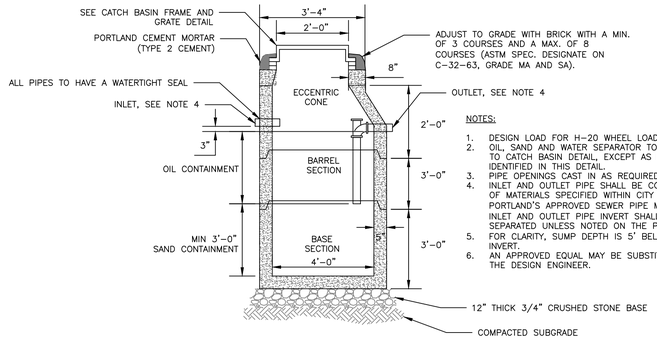
FILE:	1109.4_CIVIL
JN:	1109.4
SCALE:	AS NOTED
DESIGNED BY:	ZMS
DRAWN BY:	BJK
CHECKED BY:	SJL

STATE OF MAINE
SAMUEL J. LEBEL
No. 16505
LICENSED
PROFESSIONAL ENGINEER
2/23/24

DRAWING NO.
C-40



NOTES:

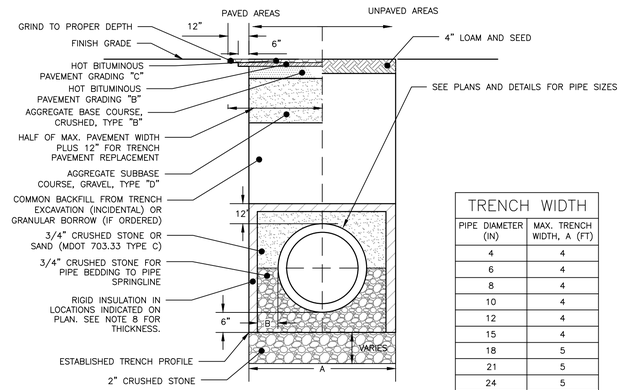
1. DESIGN LOAD FOR H-20 WHEEL LOAD.
2. OIL, SAND AND WATER SEPARATOR TO CONFORM TO CATCH BASIN DETAIL, EXCEPT AS EXPLICITLY IDENTIFIED IN THIS DETAIL.
3. PIPE OPENINGS CAST IN AS REQUIRED.
4. INLET AND OUTLET PIPE SHALL BE CONSTRUCTED OF MATERIALS SPECIFIED WITHIN CITY OF PORTLAND'S APPROVED SEWER PIPE MATERIALS. INLET AND OUTLET PIPE INVERT SHALL BE 3" SEPARATED UNLESS NOTED ON THE PLANS.
5. FOR CLARITY, SUMP DEPTH IS 5' BELOW OUTLET INVERT.
6. AN APPROVED EQUAL MAY BE SUBSTITUTED BY THE DESIGN ENGINEER.

4'-0" DIAMETER PRECAST OIL WATER SEPARATOR

NOT TO SCALE

DESIGN NOTES:

1. ANY ALTERNATE TRENCHING METHODS SHALL BE APPROVED IN ADVANCE BY THE CITY.
2. ALL CONSTRUCTION METHODS SHALL CONFORM TO THE CITY OF PORTLAND TECHNICAL STANDARDS FIGURE II-2.
3. BRACING & SHEETING OR OTHER TRENCH PROTECTION TO BE PROVIDED TO MEET APPLICABLE STATE AND O.S.H.A SAFETY STANDARDS. ALL SUCH TRENCH PROTECTION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
4. WHERE APPLICABLE, PERFORATIONS IN STORM DRAIN (PERF. SD) SHALL BE ORIENTED UP.
5. ALL STORM DRAINS SHALL BE PVC SDR 35 MIN PS-46 RATING OR OR IN ACCORDANCE WITH CITY OF PORTLAND TECHNICAL MANUAL , SECTION 2 – SANITARY SEWER AND STORM DRAIN – PART 2.5.2
6. IN PAVED AREAS, DEPTHS OF GRAVEL AND HOT MIX ASPHALT PAVEMENT SHALL MATCH THE GREATER OF EXISTING CONDITIONS OR THE REQUIREMENTS FOR THE CORRESPONDING STREET CLASSIFICATION.
7. THIS DETAIL SHALL BE APPLIED ONLY TO PIPE TRENCHES WITHIN OF THE CITY OF PORTLAND R.O.W.
8. STORM DRAIN COVER BETWEEN 2' AND 3' SHALL INCLUDE 4" OF RIGID INSULATION. COVER BETWEEN 3' AND 4' SHALL INCLUDE 2" RIGID INSULATION. OTHER UTILITIES: ADD 2" OF RIGID INSULATION FOR EACH FOOT ABOVE MINIMUM DEPTH.
9. DEPTH OF BITUMINOUS PAVEMENT AND AGGREGATE COURSES SHALL BE DETERMINED BY STREET CLASSIFICATION.
10. DIMENSION B SHALL BE SUFFICIENT TO ALLOW CRUSHED STONE BEDDING TO BE PLACED AND COMPACTED UNDER THE HAUNCHES OF THE PIPE; BUT IN ALL CASES DIMENSION B SHALL BE AT LEAST 9".
11. DIMENSION A IS THE MAXIMUM WIDTH ALLOWED FOR CALCULATING PAY QUANTITIES UNDER GRANULAR BORROW, CRUSHED STONE, STRUCTURAL EARTH EXCAVATION, AND STRUCTURAL ROCK EXCAVATION. DIMENSION A SHALL BE BASED ON PIPE DIAMETER D, AS SET FORTH IN THE TABLE BELOW.



TRENCH WIDTH	
PIPE DIAMETER (IN)	MAX. TRENCH WIDTH, A (FT)
4	4
6	4
8	4
10	4
12	4
15	4
18	5
21	5
24	5
36	7
48	8
54	8
60	9

ALLOWABLE PIPE MATERIALS:

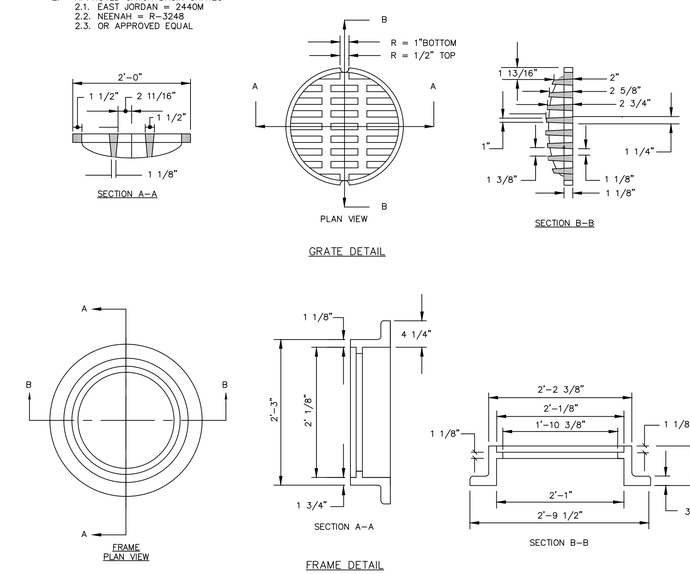
- REINFORCED CONCRETE PIPE (RCP) MIN. STRENGTH OF CLASS III
- PVC RING TYPE SEWER (SDR 35) OR EQUIVALENT, MIN PS-46 RATING
- PVC RING TYPE SEWER PIPE MEETING ASTM F 789
- DUCTILE IRON PIPE (DIP)
- ADS N-12 HP TRIPLE-WALL MIN PS-46 RATING
- ADS SANITITE HP MIN. PS-46

CITY OF PORTLAND TYPICAL PIPE TRENCH DETAIL

NOT TO SCALE

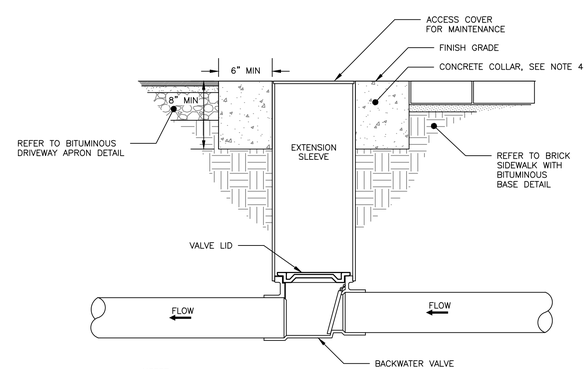
NOTES:

1. APPROVED CATCH BASIN FRAMES:
   1.1. EAST JORDAN = 7375Z
   1.2. NEENAH = R-3248
   1.3. OR APPROVED EQUAL
2. APPROVED CATCH BASIN GRATES
   2.1. EAST JORDAN = 2440M
   2.2. NEENAH = R-3248
   2.3. OR APPROVED EQUAL



OIL WATER SEPARATOR FRAME & GRATE

NOT TO SCALE



NOTES:

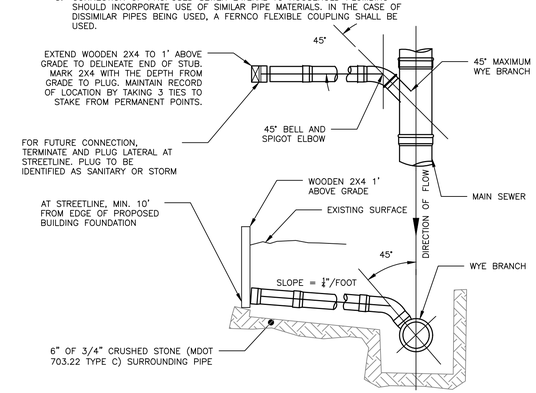
1. BACKFLOW VALVE TO BE PROVIDED BY AGRI DRAIN CORPORATION OR AN APPROVED EQUAL.
2. VALVE TO BE INSTALLED TO MANUFACTURER'S SPECIFICATIONS AND COMPLY WITH RULES AND REGULATIONS AS OUTLINED IN SECTION 2 OF THE CITY OF PORTLAND TECHNICAL MANUAL.
3. VALVE SHALL BE INSTALLED WITH A VALVE BOX AND COVER TO PROVIDE EASY ACCESS AND MAINTENANCE; VALVE COVER SHALL STATE "SEWER" ON LID FLUSH TO SURFACE. REFER TO VALVE & BOX COVER DETAIL FOR ADDITIONAL INFORMATION.
4. CONCRETE COLLAR AT A MINIMUM 24-HOUR COMPRESSIVE STRENGTH OF 3,000 PSI.

BACKFLOW VALVE ASSEMBLY

NOT TO SCALE

NOTES:

1. LOCATION WITH WARNING TAPE SHALL BE INSTALLED OVER CENTERLINE OF PIPE AT A MAXIMUM OF 24 INCHES BELOW FINISH GRADE.
2. SITE CONTRACTOR TO COORDINATE CONNECTION OF SEWER LATERAL TO HOUSEHOLD PLUMBING WITH ARCHITECTURAL CONTRACTOR
3. CONNECTION OF PROPOSED SEWER LATERAL TO HOUSEHOLD PLUMBING SHOULD INCORPORATE USE OF SIMILAR PIPE MATERIALS. IN THE CASE OF DISSIMILAR PIPES BEING USED, A FERNCO FLEXIBLE COUPLING SHALL BE USED.



SEWER AND STORM DRAIN TEE/WYE CONNECTION DETAIL

NOT TO SCALE

PERMITTING
NOT ISSUED FOR
CONSTRUCTION

ISSUED FOR	BY / DATE
50% DRAWINGS	SJL 9/15/23
DD SET	SJL 11/3/23
MAJOR SITE PLAN	SJL 11/17/23

DRAWING NAME: UTILITY DETAILS – 1

PROJECT NAME: 64 PINE STREET REDEVELOPMENT
64 PINE STREET, PORTLAND, MAINE 04012

CLIENT: 64 PINE STREET LLC
104 WASHINGTON AVENUE PORTLAND, MAINE 04101

ACORN ENGINEERING, INC.
ACORN ENGINEERING, INC.
PO BOX 3372, PORTLAND MAINE 04104
(207) 775-2655

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FILE:	1109.4_CIVIL
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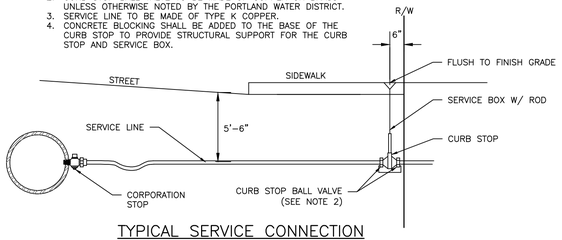
SCALE:	AS NOTED
DESIGNED BY:	ZMS
DRAWN BY:	BJK
CHECKED BY:	SJL

STATE OF MAINE
SAMUEL J. LEBEL
No. 16505
LICENSED
PROFESSIONAL ENGINEER
11/17/23

DRAWING NO.
C-41

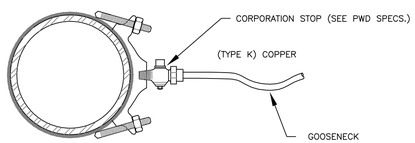
NOTES:

1. ALL MATERIALS AND INSTALLATION PROCEDURES MUST COMPLY WITH THE CITY OF PORTLAND WATER DISTRICT (PWD) SPECIFICATIONS.
2. CURB STOP BALL VALVE TO BE MADE OF COPPER OR BRASS UNLESS OTHERWISE NOTED BY THE PORTLAND WATER DISTRICT.
3. SERVICE LINE TO BE MADE OF TYPE K COPPER.
4. CONCRETE BLOCKING SHALL BE ADDED TO THE BASE OF THE CURB STOP TO PROVIDE STRUCTURAL SUPPORT FOR THE CURB STOP AND SERVICE BOX.



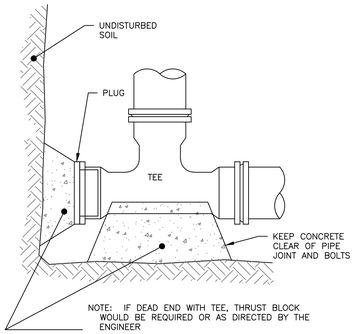
TYPICAL SERVICE CONNECTION

NOT TO SCALE

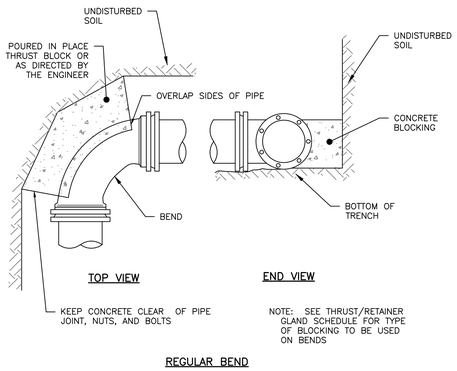


SERVICE SADDLE: 1-1/2" AND 2" C.C. THREAD

NOT TO SCALE

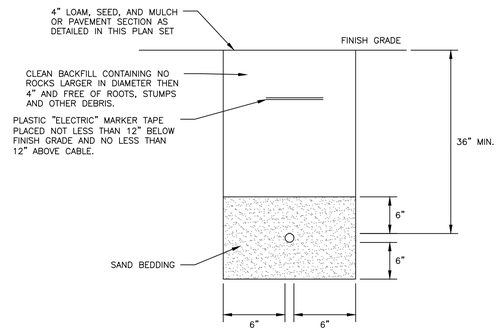


END SECTION



THRUST BLOCKING

NOT TO SCALE

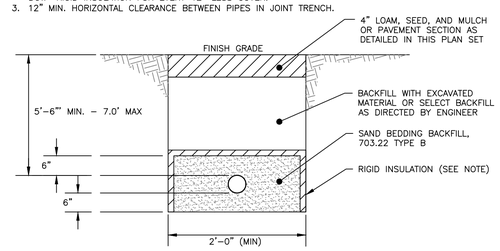


SECONDARY ELECTRICAL TRENCH

NOT TO SCALE

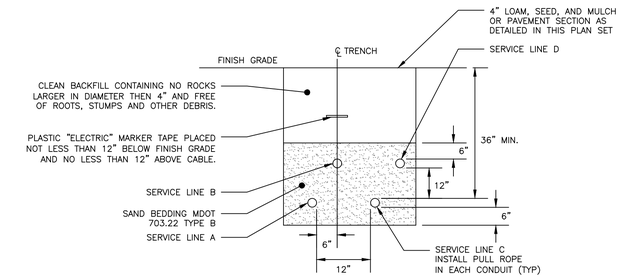
NOTES:

1. THE WATER TRENCH SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE SANFORD WATER DISTRICT STANDARD DETAILS & SPECIFICATIONS.
2. IF LESS THAN 5'-6" OF COVER IS POSSIBLE ADD 1 INCH OF "BLUE DOW" RIGID INSULATION FOR EVERY 12" LESS COVER.
3. 12" MIN. HORIZONTAL CLEARANCE BETWEEN PIPES IN JOINT TRENCH.



WATER SERVICE TRENCH SECTION DETAIL

NOT TO SCALE



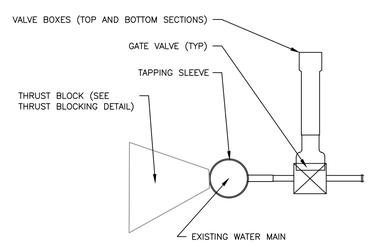
CONDUIT TYPE				
SERVICE	CONDUIT SIZE	GRASS AND PAVED AREAS	UTILITY	REMARKS
A	2-5"	SCHEDULE 40 PVC ELECTRICAL GRADE	PRIMARY POWER	SEE NOTE 1
B	2-4"	SCHEDULE 40 PVC	COMMUNICATION	–
C	2-4"	SCHEDULE 40 PVC ELECTRICAL GRADE	SPARE	IF REQUIRED
D	2-4"	SCHEDULE 40 PVC	CABLE	–

NOTES:

1. ONE CONDUIT CAPPED FOR SPARE, PROVIDE GALVANIZED STEEL LONG SWEEP AT RISER POLE AND EXTEND GALVANIZED CONDUIT TO 10" ABOVE GRADE AT POLE WITH STAND-OFF BRACKETS.
2. MINIMUM SEPARATION OF 24 INCHES BETWEEN PRIMARY CABLE/CONDUIT AND GAS LINES SHALL BE MAINTAINED.
3. CONDUITS WITHIN THE CITY RIGHT-OF-WAY SHALL BE ENCASED IN CONCRETE.

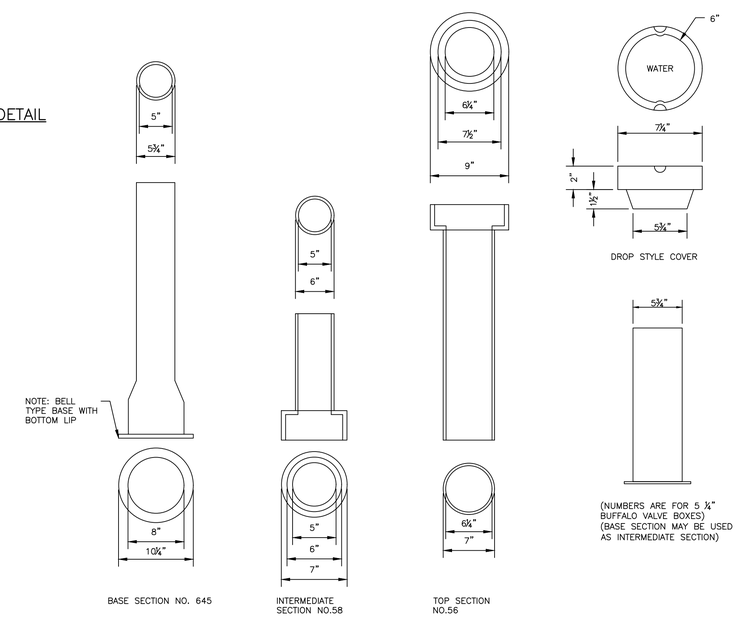
UTILITY TRENCH – PRIMARY AND SECONDARY POWER, TELEPHONE, AND CABLE

NOT TO SCALE



TAPPING SLEEVE AND VALVE

NOT TO SCALE



VALVE BOX & COVER

NOT TO SCALE

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CONSTRUCTION

ISSUED FOR	BY	DATE
50% DRAWINGS	SJL	9/15/23
DD SET	SJL	11/3/23
MAJOR SITE PLAN	SJL	11/17/23

DRAWING NAME: UTILITY DETAILS – 2

PROJECT NAME: 64 PINE STREET REDEVELOPMENT
64 PINE STREET, PORTLAND, MAINE 04012

CLIENT: 64 PINE STREET LLC
104 WASHINGTON AVENUE PORTLAND, MAINE 04101

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DESIGNED BY:	ZMS
DRAWN BY:	BJK
CHECKED BY:	SJL

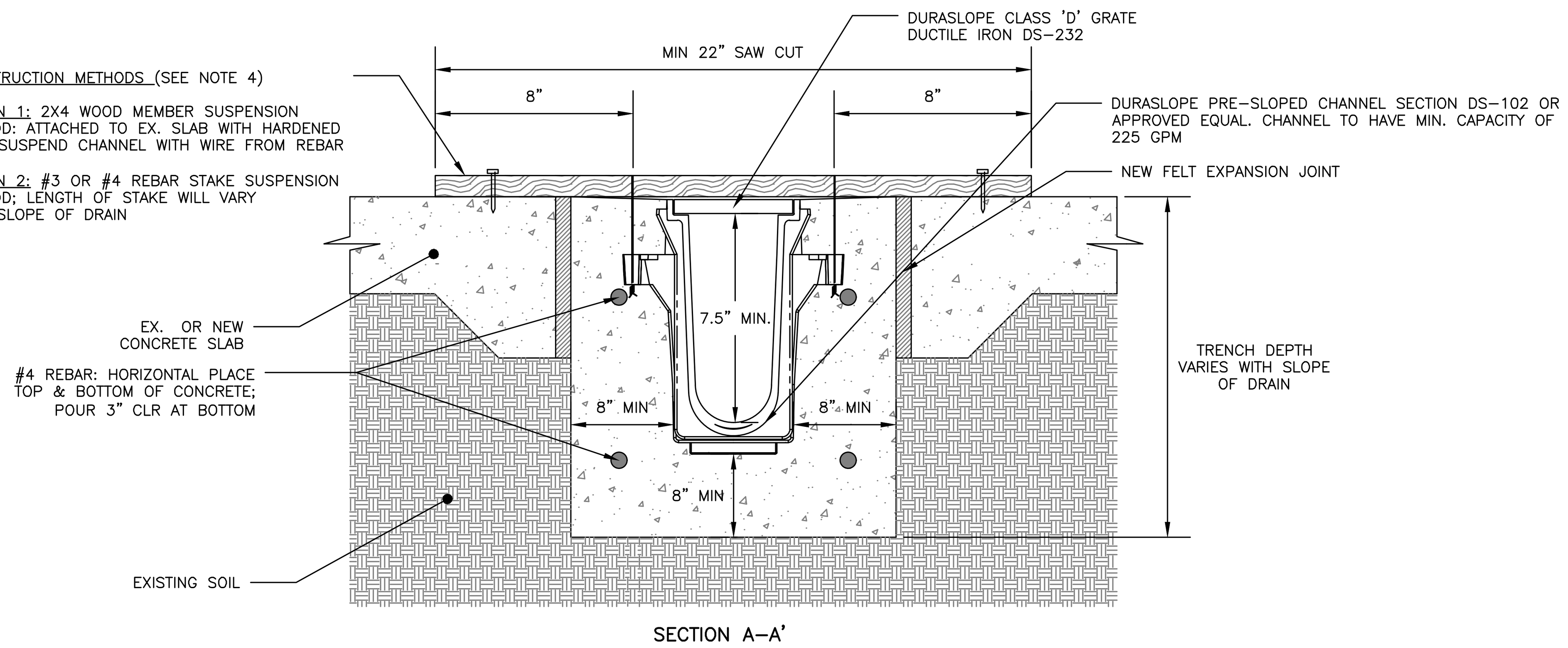
STATE OF MAINE
SAMUEL J. LEBEL
No. 16505
LICENSED
PROFESSIONAL ENGINEER
11/17/23

DRAWING NO.

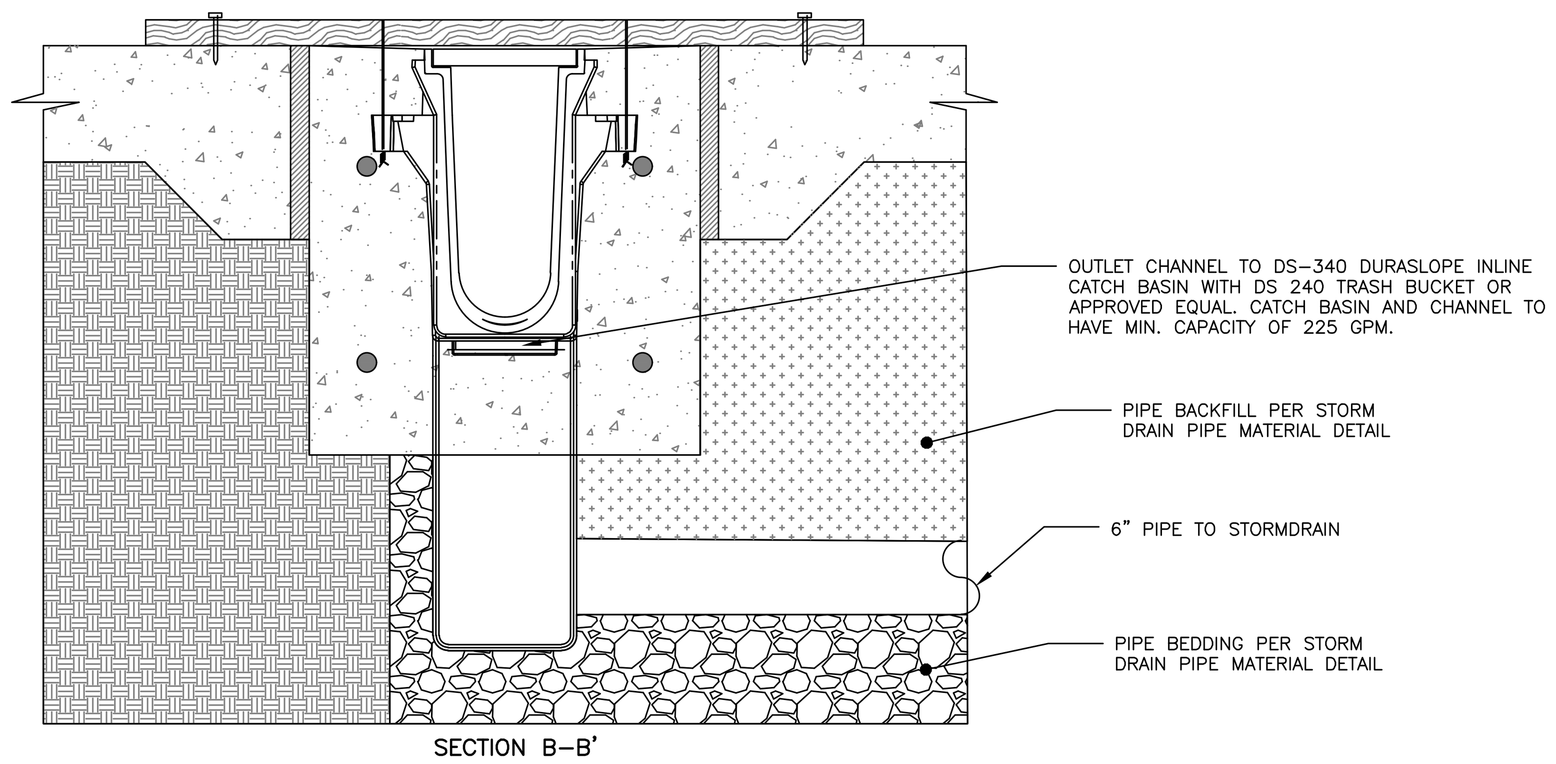
C-42

CONSTRUCTION METHODS (SEE NOTE 4)

OPTION 1: 2X4 WOOD MEMBER SUSPENSION METHOD: ATTACHED TO EX. SLAB WITH HARDENED NAIL; SUSPEND CHANNEL WITH WIRE FROM REBAR CLIPS
OPTION 2: #3 OR #4 REBAR STAKE SUSPENSION METHOD; LENGTH OF STAKE WILL VARY WITH SLOPE OF DRAIN



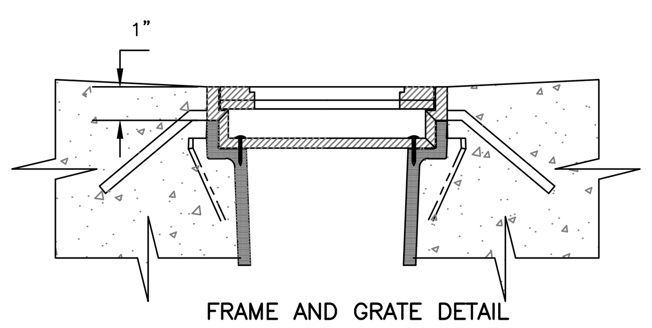
SECTION A-A'



SECTION B-B'

NOTES:

1. CHANNELS TO BE INSTALLED WITH A BLANK GRATE; GRATE TO BE PROTECTED FROM CONCRETE POUR (COVER HOLES WITH TAPE)
2. SET DRAIN IN CHANNEL SURROUNDED BY 8" OF CONCRETE OR THICKNESS OF THE CONCRETE SLAB WITH A MIN. OF 3500 PSI
3. AVOID FULL LOAD TRAFFIC FOR 28 DAYS OR UNTIL CONCRETE HAS COMPLETELY HARDENED
4. REFER TO MANUFACTURER'S INSTRUCTIONS FOR COMPLETE INSTALLATION DETAILS

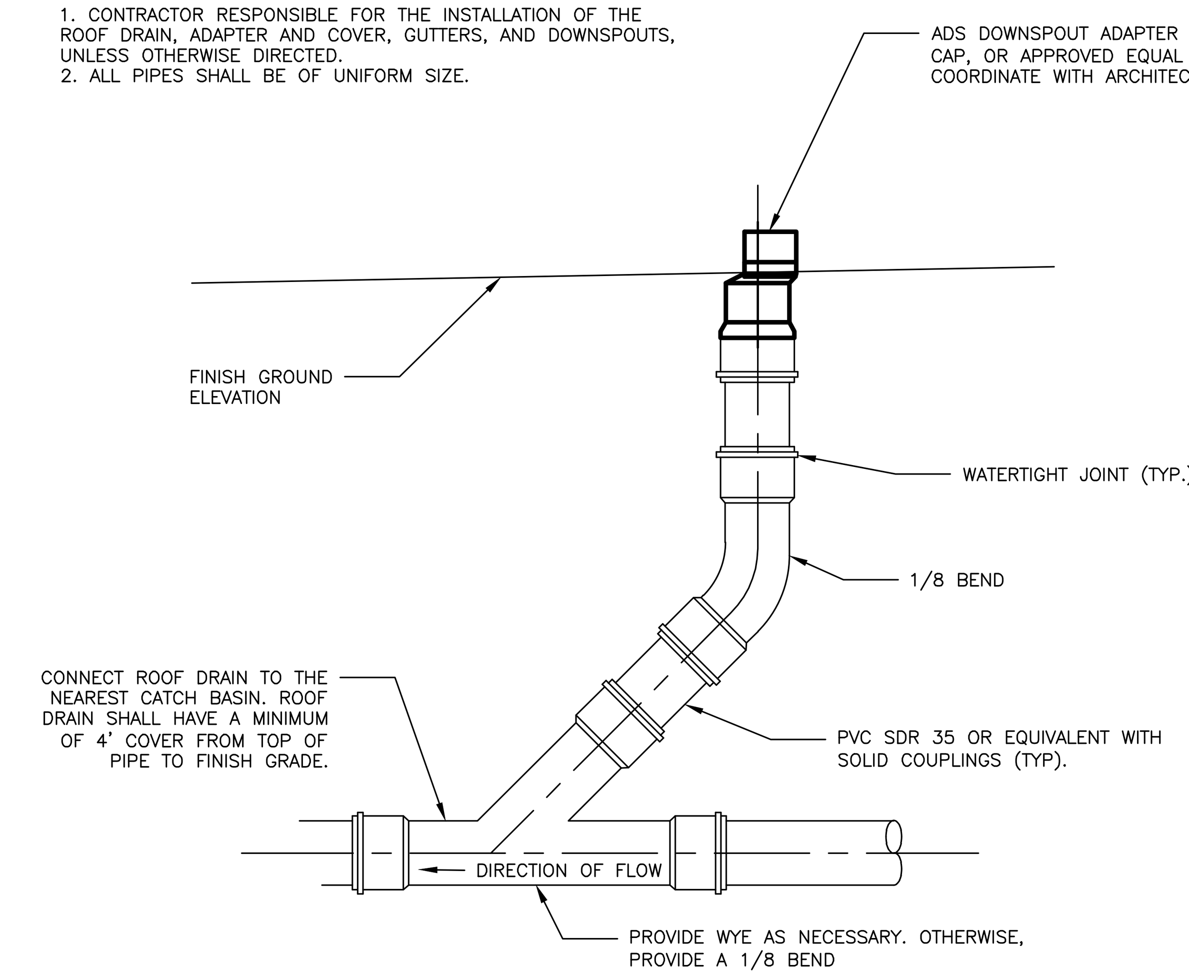


FRAME AND GRATE DETAIL

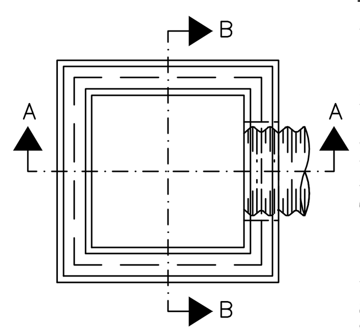
DURASLOPE CLASS D TRENCH DRAIN INSTALLATION
NOT TO SCALE

NOTES:

1. CONTRACTOR RESPONSIBLE FOR THE INSTALLATION OF THE ROOF DRAIN, ADAPTER AND COVER, GUTTERS, AND DOWNSPOUTS, UNLESS OTHERWISE DIRECTED.
2. ALL PIPES SHALL BE OF UNIFORM SIZE.



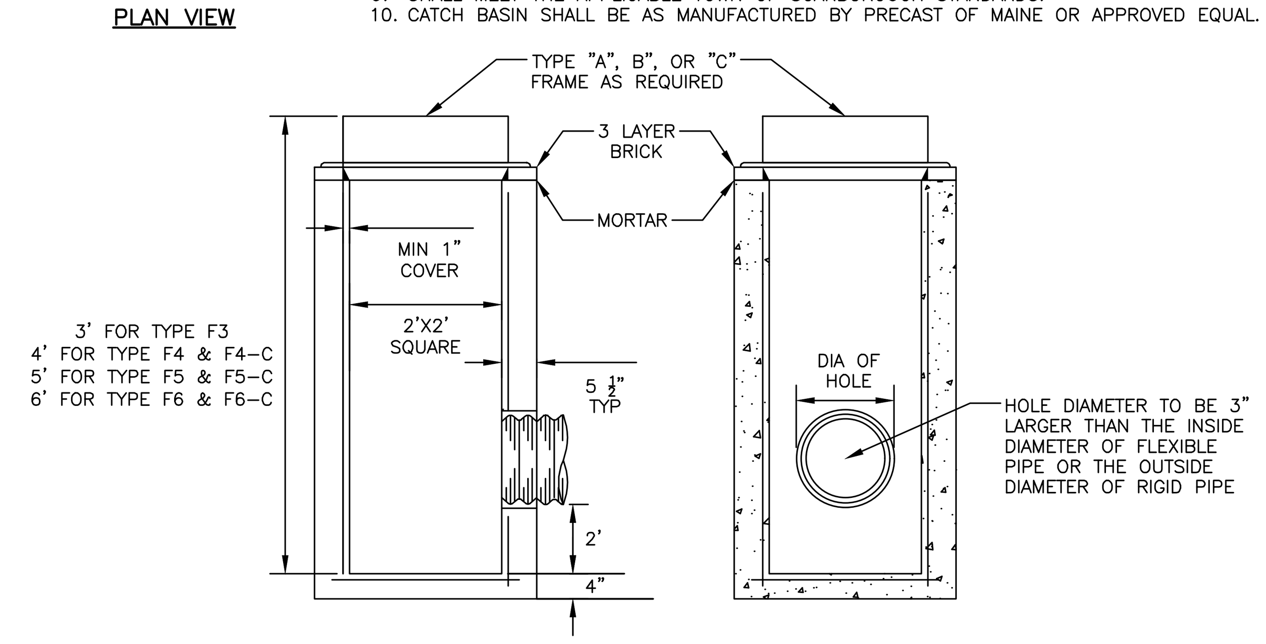
ROOF DRAIN DETAIL
NOT TO SCALE



PLAN VIEW

NOTES:

1. ENTIRE CATCH BASIN WITH EXCEPTION OF LEVELING BRICK FRAME AND GRATE TO BE PRECAST AS A SINGLE PORTLAND CEMENT CONCRETE UNIT, #4 REBAR MINIMUM 8" O.C. OR EQUIVALENT WITH ENGINEER OF RECORD'S APPROVAL.
2. FIBER-REINFORCED CONCRETE TO HAVE A MIN. OF 4,000 PSI COMPRESSIVE STRENGTH AT 28 DAYS.
3. DESIGN LOAD FOR H-20 WHEEL LOAD.
4. CATCH BASIN TO CONFORM TO ASTM-C478 SPECIFICATIONS.
5. REINFORCE TO 0.15 IN SQ./LF. JOINTS SEALED WITH RAM-NEK GASKET OR EQUAL.
6. POLYPROPYLENE STEPS 12" O.C.
   6.1. STEPS SHALL BE OFFSET AT NO MORE THAN 12" ON CENTER, STARTING FROM THE TOP OF THE MANHOLE FRAME AND SHALL BE FORGED ALUMINUM OR COPOLYMER POLYPROPYLENE STEPS.
7. EXTERIOR WATERPROOFING.
8. FLEXIBLE WATERTIGHT PIPE BOOTS TO CONFORM TO ASTM C-923.
9. SHALL MEET THE APPLICABLE TOWN OF SCARBOROUGH STANDARDS.
10. CATCH BASIN SHALL BE AS MANUFACTURED BY PRECAST OF MAINE OR APPROVED EQUAL.



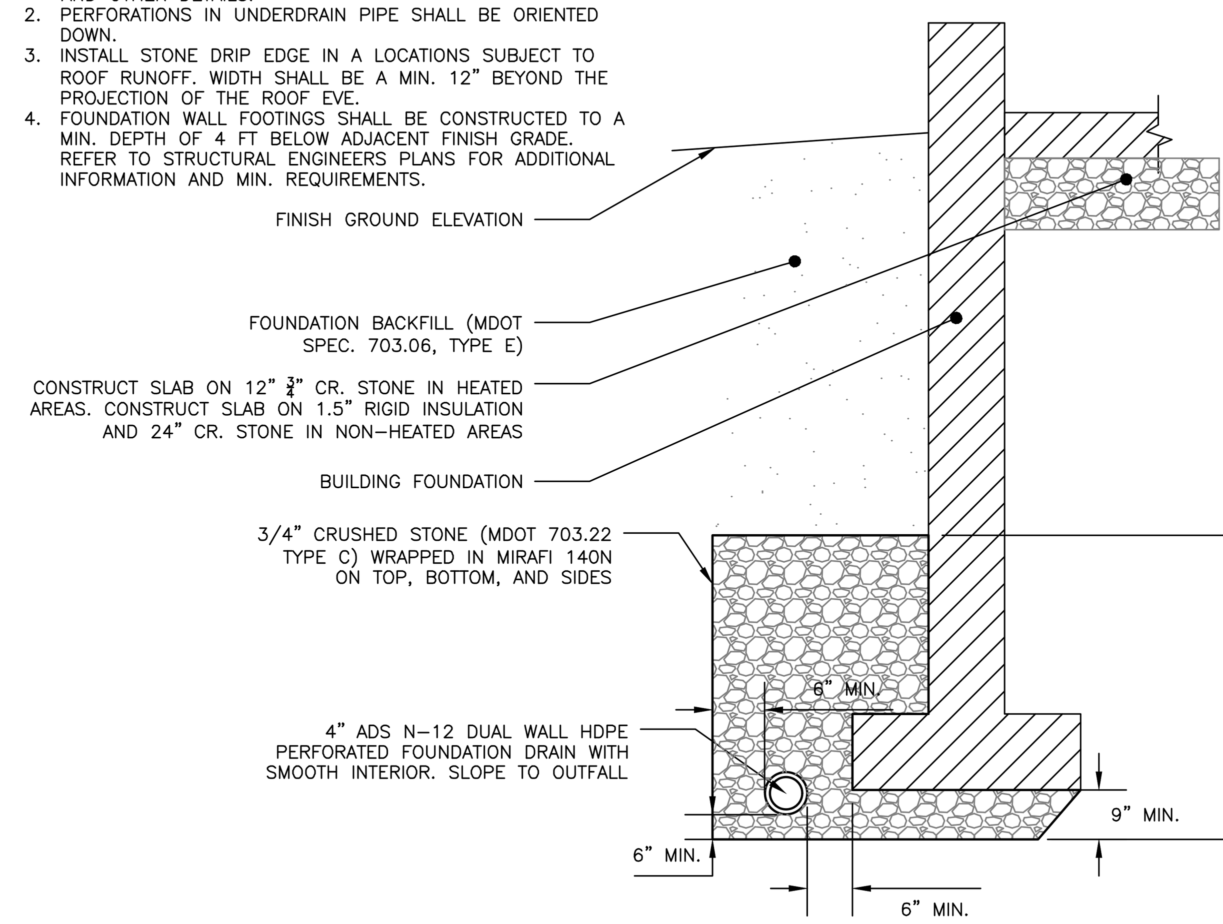
SECTION A-A

SECTION B-B

24" SQUARE CATCH BASIN "TYPE F"
NOT TO SCALE

NOTES:

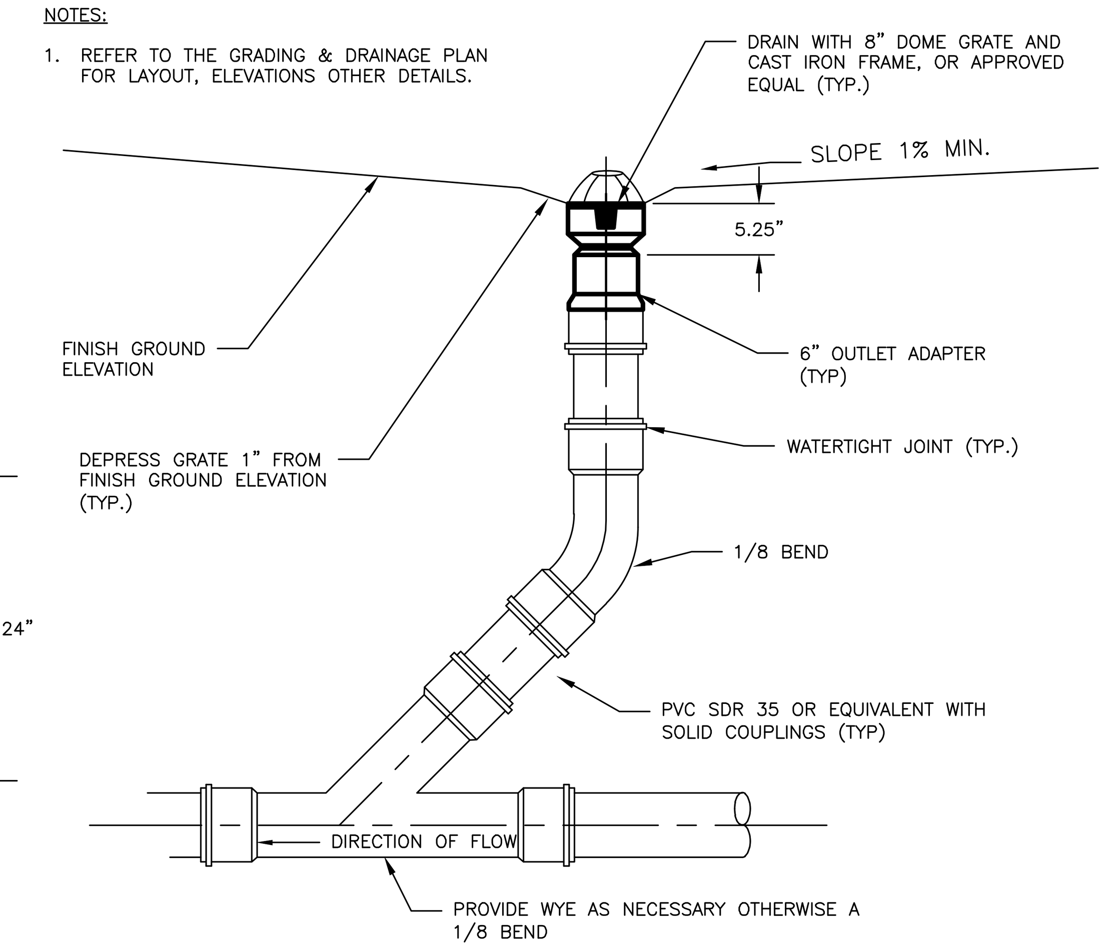
1. REFER TO THE BUILDING ARCHITECTS PLANS FOR THE BUILDING FOUNDATION, BACKFILL, ROOF DRAIN, SIDEWALK AND OTHER DETAILS.
2. PERFORATIONS IN UNDERDRAIN PIPE SHALL BE ORIENTED DOWN.
3. INSTALL STONE DRIP EDGE IN A LOCATIONS SUBJECT TO ROOF RUNOFF. WIDTH SHALL BE A MIN. 12" BEYOND THE PROJECTION OF THE ROOF EVE.
4. FOUNDATION WALL FOOTINGS SHALL BE CONSTRUCTED TO A MIN. DEPTH OF 4 FT BELOW ADJACENT FINISH GRADE. REFER TO STRUCTURAL ENGINEERS PLANS FOR ADDITIONAL INFORMATION AND MIN. REQUIREMENTS.



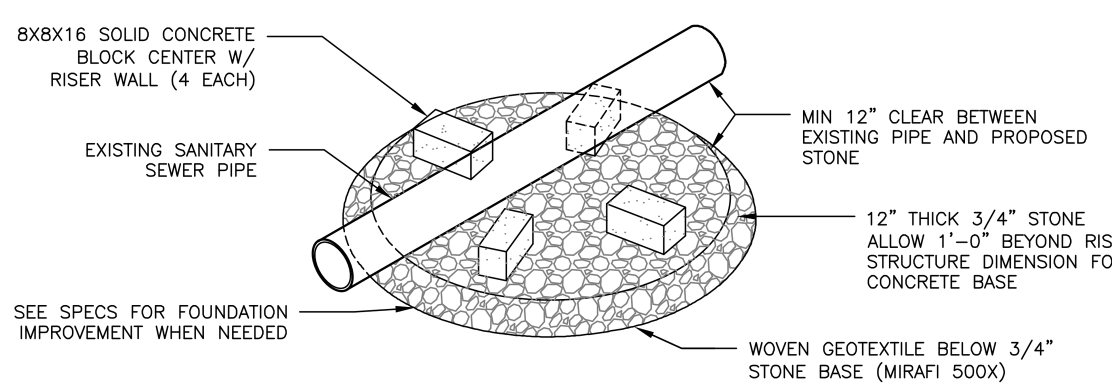
FOUNDATION DRAIN DETAIL
NOT TO SCALE

NOTES:

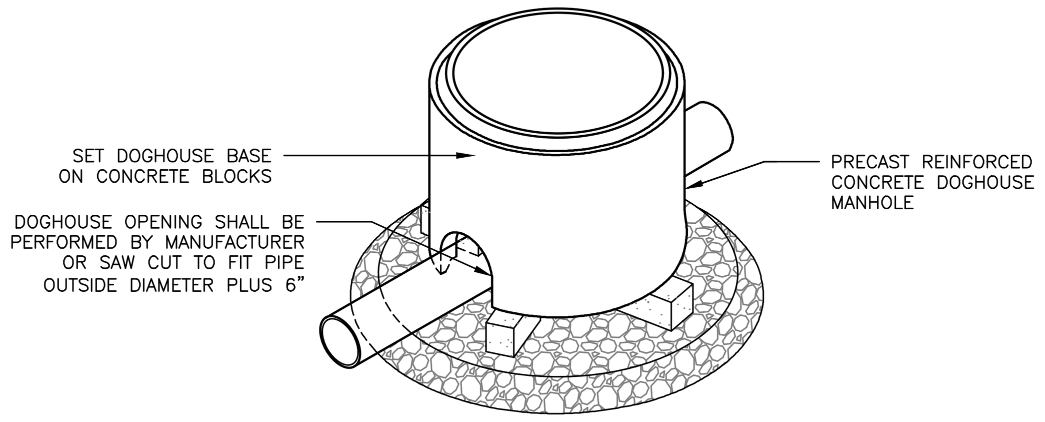
1. REFER TO THE GRADING & DRAINAGE PLAN FOR LAYOUT, ELEVATIONS OTHER DETAILS.



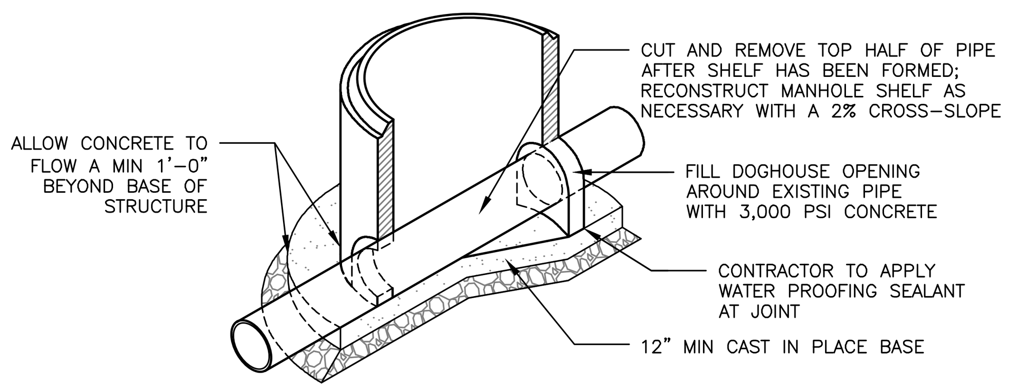
FIELD INLET BEEHIVE DRAIN
NOT TO SCALE



BASE ISOMETRIC VIEW



RISER ISOMETRIC VIEW



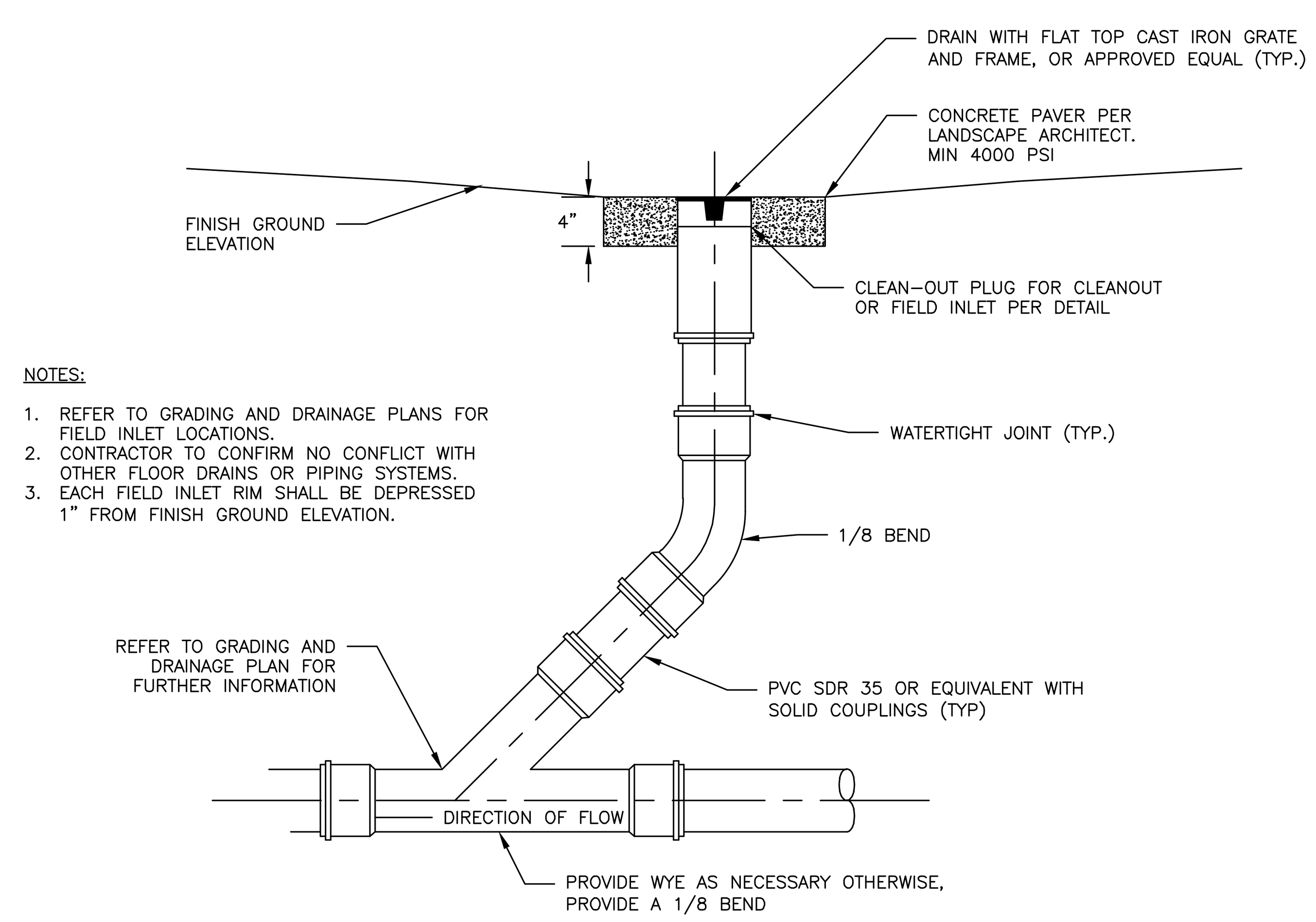
FOUNDATION SECTION VIEW

NOTES:
1. UNLESS OTHERWISE SPECIFIED, CONCRETE SHALL BE 4000 PSI @28 DAYS.
2. RECONSTRUCT INTERIOR MANHOLE INVERT AS NECESSARY TO ACCOMMODATE NEW PIPE.
3. THIS DETAIL IS INTENDED TO PROVIDE ADDITIONAL INFORMATION TO THE CONTRACTOR IN REGARDS TO THE CONNECTION OF THE DOGHOUSE MANHOLE BASE TO THE EXISTING SANITARY SEWER SYSTEM. MANHOLE INSTALLATION INFORMATION NOT EXPLICITLY REFERRED TO IN THIS DETAIL SHALL BE PER THE "STANDARD PRECAST SEWER MANHOLE" DETAIL

DOGHOUSE MANHOLE DETAIL
NOT TO SCALE

NOTES:

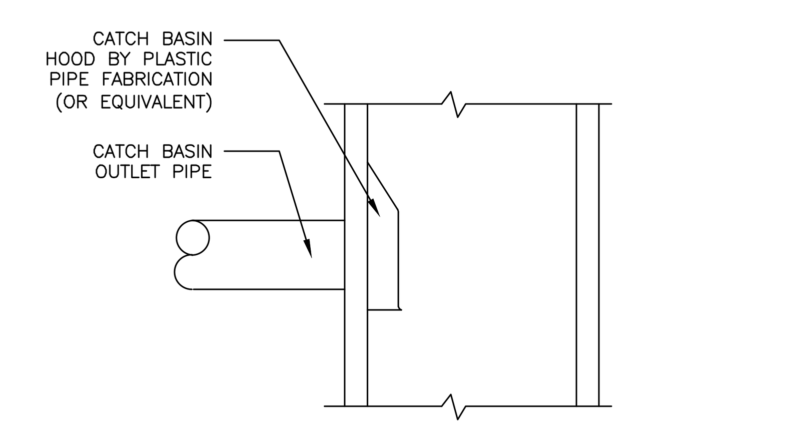
1. REFER TO GRADING AND DRAINAGE PLANS FOR FIELD INLET LOCATIONS.
2. CONTRACTOR TO CONFIRM NO CONFLICT WITH OTHER FLOOR DRAINS OR PIPING SYSTEMS.
3. EACH FIELD INLET RIM SHALL BE DEPRESSED 1" FROM FINISH GROUND ELEVATION.



FLOOR DRAIN / CLEANOUT IN THE TRAVEL WAY
NOT TO SCALE

NOTES:

1. INSTALL HOOD ON ALL OUTLETS 24" OR LESS.
2. PREFERRED STYLE DESIGNED TO ELIMINATE CEMENTING OF THE TRAP.
3. REFER TO MANUFACTURER'S RECOMMENDATIONS FOR INSTALLATION REQUIREMENTS



CATCH BASIN HOOD DETAIL
NOT TO SCALE

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CONSTRUCTION

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50% DRAWINGS	SJL 9/15/23
DD SET	SJL 11/3/23
MAJOR SITE PLAN	SJL 11/17/23

DRAWING NAME: **DRAINAGE DETAILS**

PROJECT NAME: **64 PINE STREET REDEVELOPMENT**
64 PINE STREET, PORTLAND, MAINE 04012

CLIENT: 64 PINE STREET LLC
104 WASHINGTON AVENUE PORTLAND, MAINE 04101

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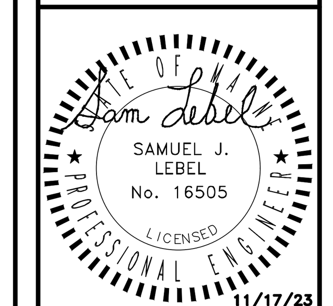
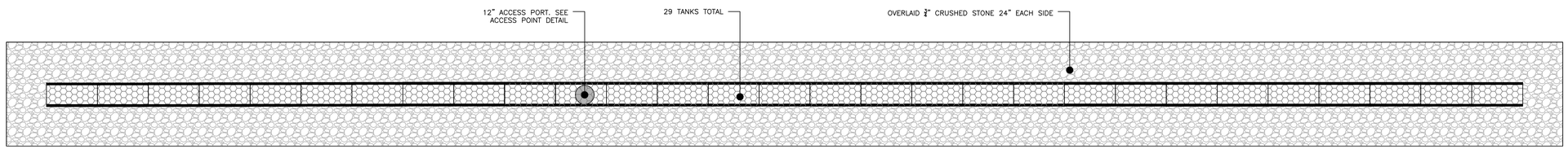
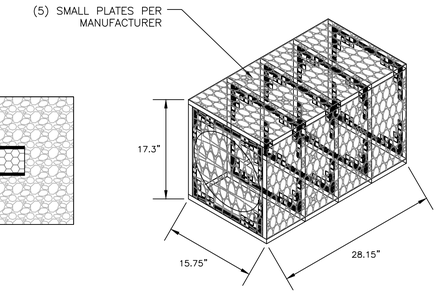


DRAWING NO.

C-43



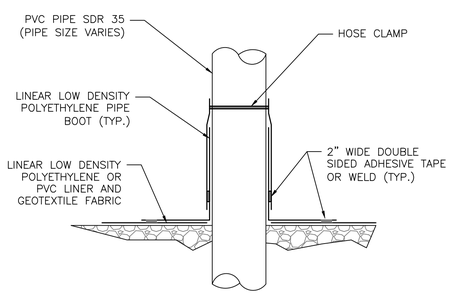
PLAN VIEW



ISOMETRIC VIEW

R–TANK MODULE DETAIL

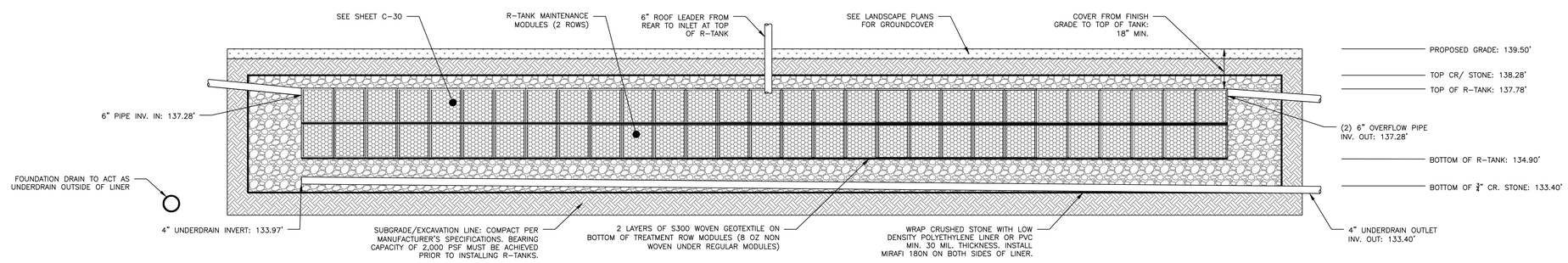
NOT TO SCALE



TYPICAL PIPE PENETRATION DETAIL

NOT TO SCALE

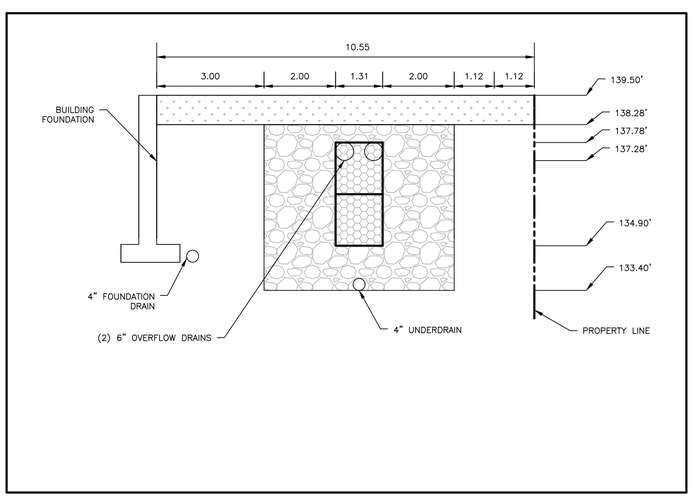
NOTES:
INSTALLATION TO MEET MANUFACTURER'S SPECIFICATIONS.



SECTION A–A

FOCAL POINT RAIN GARDEN WITH R–TANK TREATMENT ROW

NOT TO SCALE

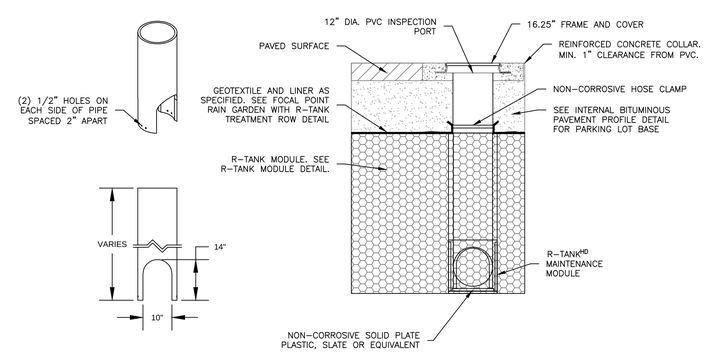


SECTION B–B

INSET OF DRAINAGE AREA IN BACK OF LOT

SCALE 1:2

NOTES
1. THE INSPECTION PORT IS USED IN THE MAINTENANCE MODULE TO INSPECT THE LEVEL OF SEDIMENT ACCUMULATION.
2. MINIMUM REQUIRED MAINTENANCE INCLUDES A QUARTERLY INSPECTION DURING THE FIRST YEAR OF OPERATION AND A YEARLY INSPECTION THEREAFTER. FLUSH MAINTENANCE ROW VIA THE ACCESS STRUCTURE FROM EITHER END AS NEEDED.
3. R–TANK^{HD} MAY BE USED IN TRAFFIC APPLICATIONS.
4. SEE TRAFFIC LOADING DETAIL FOR MINIMUM & MAXIMUM COVER REQUIREMENTS.
5. IF INSPECTION PORT IS LOCATED IN A NON–TRAFFIC AREA, A PLASTIC CAP CAN B USED IN LIEU OF A FRAME AND COVER WITH CONCRETE COLLAR



ACCESS PORT WITH SOLID COVER

NOT TO SCALE

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CONSTRUCTION

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50% DRAWINGS	SJL 9/15/23
DD SET	SJL 11/3/23
MAJOR SITE PLAN	SJL 12/1/23
COMMENT REPONSE	SJL 2/23/24

DRAWING NAME: FOCAL POINT DETAILS

PROJECT NAME: 64 PINE STREET REDEVELOPMENT
64 PINE STREET, PORTLAND, MAINE 04012

CLIENT: 64 PINE STREET LLC
104 WASHINGTON AVENUE PORTLAND, MAINE 04101

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CHECKED BY:	SJL

STATE OF MAINE
SAMUEL J. LEBEL
No. 16505
LICENSED
PROFESSIONAL ENGINEER
2/23/24

DRAWING NO.
C-44

1.0 EROSION CONTROL MEASURES AND SITE STABILIZATION

AS PART OF THE SITE DEVELOPMENT, THE FOLLOWING TEMPORARY AND PERMANENT EROSION AND SEDIMENTATION CONTROL DEVICES SHALL BE IMPLEMENTED. DEVICES SHALL BE INSTALLED AS DESCRIBED IN THIS REPORT OR WITHIN THE PLAN SET. SEE THE MAINE EROSION AND SEDIMENT CONTROL HANDBOOK FOR CONSTRUCTION: BEST MANAGEMENT PRACTICES FOR FURTHER REFERENCE.

1.1 TEMPORARY EROSION CONTROL MEASURES

THE FOLLOWING TEMPORARY EROSION AND SEDIMENTATION CONTROL MEASURES ARE PLANNED FOR THE PROJECT'S CONSTRUCTION PERIOD:

1.1.1 CRUSHED STONE STABILIZED CONSTRUCTION ENTRANCES SHALL BE PLACED AT ALL ACCESS POINTS TO THE PROJECT SITE WHERE THERE ARE DISTURBED AREAS. THE FOLLOWING SPECIFICATIONS SHALL BE FOLLOWED AT A MINIMUM:
- STONE SIZE SHALL BE 2–3 INCHES, OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
- THE THICKNESS OF THE ENTRANCE STONE LAYER SHALL BE NO LESS THAN 6 INCHES.
- THE ENTRANCE SHALL NOT BE LESS THAN 20 FEET WIDE, HOWEVER NOT LESS THAN THE FULL WIDTH OF POINTS WHERE INGRESS OR EGRESS OCCURS. THE LENGTH SHALL NOT BE LESS THAN 50 FEET IN LENGTH.
- GEOTEXTILE FABRIC (WOVEN OR NON–WOVEN) SHALL BE PLACED OVER THE ENTIRE ENTRANCE AREA.
- THE ENTRANCE/EXIT SHALL BE MAINTAINED TO THE EXTENT THAT IT WILL PREVENT THE TRACKING OF SEDIMENT ONTO PUBLIC ROAD WAYS.

1.1.2 SILTATION FENCE OR EROSION CONTROL BERM SHALL BE INSTALLED DOWN GRADIENT OF ANY DISTURBED AREAS TO TRAP RUNOFF BORNE SEDIMENTS UNTIL PERMANENT STABILIZATION IS ACHIEVED. THE SILT FENCE OR EROSION CONTROL BERM SHALL BE INSTALLED PER THE DETAILS PROVIDED IN THE PLAN SET AND INSPECTED BEFORE AND IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. REPAIRS SHALL BE MADE IF THERE ARE ANY SIGNS OF EROSION OR SEDIMENTATION BELOW THE FENCE LINE OR BERM. IF THERE ARE SIGNS OF UNDERCUTTING AT THE CENTER OR THE EDGES, OR IMPOUNDING OF LARGE VOLUMES OF WATER BEHIND THE FENCE OR BERM, THE BARRIER SHALL BE REPLACED WITH A STONE CHECK DAM.

1.1.3 HAY MULCH INCLUDING HYDRO SEEDING IS INTENDED TO PROVIDE COVER FOR DENUDED OR SEEDED AREAS UNTIL REVEGETATION IS ESTABLISHED. MULCH PLACED BETWEEN APRIL 15TH AND NOVEMBER 1ST ON SLOPES OF LESS THAN 15 PERCENT SHALL BE COVERED BY FABRIC NETTING AND ANCHORED WITH STAPLES IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATION. MULCH PLACED BETWEEN NOVEMBER 1ST AND APRIL 15TH ON SLOPES EQUAL TO OR STEEPER THAN 8 PERCENT AND EQUAL TO OR FLATTER THAN 2:1 SHALL USE MATS OR FABRIC NETTING AND ANCHORED WITH STAPLES IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATION.

1.1.4 AT ANY TIME OF THE YEAR, ALL SLOPES STEEPER THAN 3:1 SHALL BE STABILIZED WITH DOUBLE NET EROSION CONTROL BLANKET BIONET SC150BN BY NORTH AMERICAN GREEN OR APPROVED EQUAL, OR EROSION CONTROL MIX SLOPE PROTECTION AS DETAILED WITHIN THE PLANS.

1.1.5 PINE STREET SHALL BE SWEPT TO CONTROL MUD AND DUST FROM THE CONSTRUCTION SITE AS NECESSARY. ADD ADDITIONAL STONE TO THE STABILIZED CONSTRUCTION ENTRANCE TO MINIMIZE THE TRACKING OF MATERIAL OFF THE SITE AND ONTO THE SURROUNDING ROADWAYS.

1.1.6 DURING DEMOLITION, CLEARING AND GRUBBING OPERATIONS, STONE CHECK DAMS SHALL BE INSTALLED AT ANY AREAS OF CONCENTRATED FLOW. THE MAXIMUM HEIGHT OF THE CHECK DAM SHALL NOT EXCEED 2 FEET. THE CENTER OF THE CHECK DAM SHALL BE 6 INCHES BELOW THE OUTER EDGES OF THE DAM. THE CONTRACTOR SHALL MULCH THE SIDE SLOPES AND INSTALL STONE CHECK DAMS FOR ALL NEWLY EXCAVATED DITCH LINES WITHIN 24 HOURS OF THEIR CREATION.

1.1.7 SILT FENCE STAKE SPACING SHALL NOT EXCEED 6 FEET UNLESS THE FENCE IS SUPPORTED WITH 14 GAUGE WIRE IN WHICH CASE THE MAXIMUM SPACING SHALL NOT EXCEED 10 FEET. THE SILT FENCE SHALL BE "TOED" INTO THE GROUND.

1.1.8 STORMDRAIN INLET PROTECTION SHALL BE PROVIDED TO STORMDRAINS THROUGH THE USE OF ANY OF THE FOLLOWING: HAY BALE DROP INLET STRUCTURES, SILT FENCE DROP INLET SEDIMENT FILTER, GRAVEL AND WIRE MESH DROP INLET SEDIMENT FILTER, OR CURB INLET SEDIMENT FILTER. BARRIERS SHALL BE INSPECTED AFTER EVERY RAINFALL EVENT AND REPAIRED AS NECESSARY. SEDIMENTS SHALL BE REMOVED WHEN ACCUMULATION HAS REACHED ½ THE DESIGN HEIGHT.

1.1.9 DUST CONTROL SHALL BE ACCOMPLISHED BY THE USE OF ANY OF THE FOLLOWING: WATER, CALCIUM CHLORIDE, STONE, OR AN APPROVED MDEP PRODUCT. DUST CONTROL SHALL BE APPLIED AS NEEDED TO ACCOMPLISH DUST CONTROL.

1.1.10 TEMPORARY LOAM, SEED, AND MULCHING SHALL BE USED IN AREAS WHERE NO OTHER EROSION CONTROL MEASURE IS USED. APPLICATION RATES FOR SEEDING ARE PROVIDED AT THE END OF THIS REPORT.

1.1.11 STOCKPILES SHALL BE STABILIZED WITHIN 7 DAYS OF FORMATION UNLESS A SCHEDULED RAIN EVENT OCCURS PRIOR TO THE 7 DAY WINDOW, IN WHICH CASE THE STOCKPILE SHALL BE STABILIZED PRIOR TO THE RAIN EVENT. METHODS OF STABILIZATION SHALL BE MULCH, EROSION CONTROL MIX, OR EROSION CONTROL BLANKETS/MATS. SILT FENCE OR A WOOD WASTE COMPOST FILTER BERM SHALL BE PLACED DOWNHILL OF ANY SOIL STOCKPILE LOCATION.

1.1.12 FOR DISTURBANCE BETWEEN NOVEMBER 1 AND APRIL 15, PLEASE REFER TO WINTER STABILIZATION PLAN IN THIS REPORT AND THE MAINE EROSION AND SEDIMENT CONTROL BMP MANUAL FOR FURTHER INFORMATION.

1.1.13 IT IS OF THE UTMOST IMPORTANCE THAT STORMWATER RUNOFF AND POTENTIAL SEDIMENT FROM THE CONSTRUCTION SITE BE DIVERTED AROUND THE PROPOSED UNDERDRAINS UNTIL THE TRENCH IS BACKFILLED.

1.2 PERMANENT EROSION CONTROL MEASURES

THE FOLLOWING PERMANENT EROSION CONTROL MEASURES ARE INTENDED FOR POST DISTURBANCE AREAS OF THE PROJECT.

1.2.1 ALL DISTURBED AREAS DURING CONSTRUCTION, NOT SUBJECT TO OTHER PROPOSED CONDITIONS, SHALL RECEIVE A MINIMUM 4" OF LOAM AND SHALL BE LIMED, AND MULCHED.
EROSION CONTROL BLANKETS OR MATS SHALL BE PLACED OVER THE MULCH IN AREAS NOTED IN PARAGRAPH 4.2 OF THIS REPORT.

1.2.2 ALL STORMWATER DEVICES SHALL BE INSTALLED AND TRIBUTARY AREAS STABILIZED PRIOR RECEIVING STORMWATER.

1.2.3 REFER TO THE MAINE EROSION AND SEDIMENT CONTROL BMP MANUAL FOR ADDITIONAL INFORMATION.

2.0 EROSION AND SEDIMENTATION CONTROL PLAN

2.1 THE EROSION AND SEDIMENTATION CONTROL PLAN IS INCLUDED WITHIN THE PLAN SET.

3.0 DETAILS AND SPECIFICATIONS

3.1 EROSION CONTROL DETAILS AND SPECIFICATIONS ARE INCLUDED IN THE PLAN SET.

4.0 STABILIZATION PLAN FOR WINTER CONSTRUCTION

WINTER CONSTRUCTION CONSISTS OF EARTHWORK DISTURBANCE BETWEEN THE DATES OF NOVEMBER 1 AND APRIL 15. IF A CONSTRUCTION SITE IS NOT STABILIZED WITH PAVEMENT, A ROAD GRAVEL BASE, 75% MATURE VEGETATION COVER OR RIPRAP BY NOVEMBER 15, THEN THE SITE SHALL BE PROTECTED WITH OVER–WINTER STABILIZATION. ANY AREA NOT STABILIZED WITH PAVEMENT, VEGETATION, MULCHING, EROSION CONTROL MIX, EROSION CONTROL MATS, RIPRAP, OR GRAVEL BASE ON A ROAD SHALL BE CONSIDERED OPEN.

THE CONTRACTOR SHALL LIMIT THE WORK AREA TO AREAS THAT WORK WILL OCCUR IN DURING THE SUBSEQUENT 15 DAYS AND SO THAT IT CAN BE MULCHED ONE DAY PRIOR TO A SNOW EVENT. THE CONTRACTOR SHALL STABILIZE WORK AREAS PRIOR TO OPENING ADDITIONAL WORK AREAS TO MINIMIZE AREAS WITHOUT EROSION CONTROL MEASURES.

THE FOLLOWING MEASURES SHALL BE IMPLEMENTED DURING WINTER CONSTRUCTION PERIODS:

4.1 SEDIMENT BARRIERS

DURING FROZEN CONDITIONS, SEDIMENT BARRIERS MAY CONSIST OF EROSION CONTROL MIX BERMS OR ANY OTHER RECOGNIZED SEDIMENT BARRIERS AS FROZEN SOIL PREVENTS THE PROPER INSTALLATION OF HAY BALES OR SILT FENCES.

4.2 MULCHING

ALL AREAS SHALL BE CONSIDERED TO BE DENUDED UNTIL SEEDED AND MULCHED. HAY AND STRAW MULCH SHALL BE APPLIED AT A RATE OF 150 LB. PER 1,000 SQUARE FEET OR 3 TONS/ACRE (TWICE THE NORMAL ACCEPTED RATE OF 75–LBS./1,000 S.F. OR 1.5 TONS/ACRE) AND SHALL BE PROPERLY ANCHORED. EROSION CONTROL MIX MUST BE APPLIED WITH A MINIMUM 4 INCH THICKNESS. MULCH SHALL NOT BE SPREAD ON TOP OF SNOW. THE SNOW SHALL BE REMOVED DOWN TO A ONE–INCH DEPTH OR LESS PRIOR TO APPLICATION. AFTER EACH DAY OF FINAL GRADING, THE AREA SHALL BE PROPERLY STABILIZED WITH ANCHORED HAY OR STRAW OR EROSION CONTROL MATTING. AN AREA SHALL BE CONSIDERED TO HAVE BEEN STABILIZED WHEN EXPOSED SURFACES HAVE BEEN EITHER MULCHED OR ADEQUATELY ANCHORED SO THAT GROUND SURFACE IS NOT VISIBLE THROUGH THE MULCH. BETWEEN THE DATES OF NOVEMBER 1 AND APRIL 15, ALL MULCH SHALL BE ANCHORED BY EITHER MULCH NETTING, TRACKING OR WOOD CELLULOSE FIBER. THE COVER WILL BE CONSIDERED SUFFICIENT WHEN THE GROUND SURFACE IS NOT VISIBLE THROUGH THE MULCH. AFTER NOVEMBER 1ST, MULCHING AND ANCHORING OF ALL EXPOSED SOIL SHALL OCCUR AT THE END OF EACH FINAL GRADING WORKDAY.

4.3 SOIL STOCKPILING

STOCKPILES OF SOIL OR SUBSOIL SHALL BE MULCHED FOR OVER WINTER PROTECTION WITH HAY OR STRAW AT TWICE THE NORMAL RATE OR WITH A FOUR–INCH LAYER OF EROSION CONTROL MIX. THIS SHALL BE DONE WITHIN 24 HOURS OF STOCKING AND RE–ESTABLISHED PRIOR TO ANY RAINFALL OR SNOWFALL.

4.4 SEEDING

BETWEEN THE DATES OF OCTOBER 15TH AND APRIL 1ST, LOAM OR SEED SHALL NOT BE REQUIRED. DURING PERIODS OF ABOVE FREEZING TEMPERATURES FINISHED AREAS SHALL BE FINE GRADED AND EITHER PROTECTED WITH MULCH OR TEMPORARILY SEEDED AND MULCHED UNTIL SUCH TIME AS THE FINAL TREATMENT CAN BE APPLIED. IF THE DATE IS AFTER NOVEMBER 1ST AND IF THE EXPOSED AREA HAS NOT BEEN LOAMED, FINAL GRADING WITH A UNIFORM SURFACE, THEN THE AREA MAY BE DORMANT SEEDED AT A RATE OF 3 TIMES HIGHER THAN SPECIFIED FOR PERMANENT SEED AND THEN MULCHED.

DORMANT SEEDING MAY BE PLACED PRIOR TO THE PLACEMENT OF MULCH OR EROSION CONTROL BLANKETS. IF DORMANT SEEDING IS USED FOR THE SITE, ALL DISTURBED AREAS SHALL RECEIVE 4" OF LOAM AND SEED AT AN APPLICATION RATE OF 5 LBS/1,000 S.F. ALL AREAS SEEDED DURING THE WINTER SHALL BE INSPECTED IN THE SPRING FOR ADEQUATE CATCH. ALL AREAS INSUFFICIENTLY VEGETATED (LESS THAN 75% CATCH) SHALL BE REVEGETATED BY REPLACING LOAM, SEED AND MULCH. IF DORMANT SEEDING IS NOT USED FOR THE SITE, ALL DISTURBED AREAS SHALL BE REVEGETATED IN THE SPRING.

4.5 OVER WINTER STABILIZATION OF DISTURBED SOILS

BY SEPTEMBER 15TH, ALL DISTURBED SOILS ON AREAS HAVING A SLOPE LESS THAN 15% SHALL BE SEEDED AND MULCHED. IF THE DISTURBED AREAS ARE NOT STABILIZED BY THIS DATE, THEN ONE OF THE FOLLOWING ACTIONS SHALL BE TAKEN TO STABILIZE THE SOIL FOR LATE FALL AND WINTER:

- STABILIZE THE SOIL WITH TEMPORARY VEGETATION – BY OCTOBER 1ST, SEED THE DISTURBED SOIL WITH WINTER RYE AT A SEEDING RATE OF 3LBS PER 1,000 S.F., LIGHTLY MULCH THE SEEDED SOIL WITH HAY OR STRAW AT 75 LBS PER 1,000 S.F., AND ANCHOR THE MULCH WITH PLASTIC NETTING. MONITOR GROWTH OF THE RYE OVER THE NEXT 30 DAYS. IF THE RYE FAILS TO GROW AT LEAST THREE INCHES OR FAILS TO COVER AT LEAST 75% OF THE DISTURBED SOIL BEFORE NOVEMBER 1ST, THEN MULCH THE AREA FOR OVER–WINTER PROTECTION.
- STABILIZE THE SOIL WITH SOD – STABILIZE THE DISTURBED SOIL WITH PROPERLY INSTALLED SOD BY OCTOBER 1ST. PROPER INSTALLATION INCLUDES PINNING THE SOD ONTO THE SOIL WITH WIRE PINS, ROLLING THE SOD TO GUARANTEE CONTACT BETWEEN THE SOD AND UNDERLYING SOIL, AND WATERING THE SOD TO PROMOTE ROOT GROWTH INTO THE DISTURBED SOIL.
- STABILIZE THE SOIL WITH MULCH – BY NOVEMBER 15TH, MULCH THE DISTURBED SOIL BY SPREADING HAY OR STRAW AT A RATE OF AT LEAST 150 LBS PER 1,000 S.F. ON THE AREA SO THAT NO SOIL IS VISIBLE THROUGH THE MULCH. IMMEDIATELY AFTER APPLYING THE MULCH, ANCHOR THE MULCH WITH NETTING TO PREVENT WIND FROM MOVING THE MULCH OFF THE DISTURBED SOIL.

4.6 OVER WINTER STABILIZATION OF DISTURBED SLOPES

ALL STONE–COVERED SLOPES SHALL BE CONSTRUCTED AND STABILIZED BY NOVEMBER 15TH. ALL SLOPES TO BE VEGETATED SHALL BE SEEDED AND MULCHED BY SEPTEMBER 1ST. A SLOPE IS CONSIDERED A GRADE GREATER THAN 15%. IF A SLOPE TO BE VEGETATED IS NOT STABILIZED BY SEPTEMBER 1ST, THEN ONE OF THE FOLLOWING ACTION SHALL BE TAKEN TO STABILIZE THE SLOPE FOR LATE FALL AND WINTER:

- STABILIZE THE SOIL WITH TEMPORARY VEGETATION AND EROSION CONTROL MATS – BY OCTOBER 1ST THE DISTURBED SLOPE SHALL BE SEEDED WITH WINTER RYE AT A SEEDING RATE OF 3 LBS PER 1,000 S.F. AND THEN INSTALL EROSION CONTROL MATS OR ANCHORED MULCH OVER THE SEEDING. IF THE RYE FAILS TO GROW AT LEAST THREE INCHES OR FAILS TO COVER AT LEAST 75% OF THE SLOPE BY NOVEMBER 1ST, THEN THE CONTRACTOR SHALL COVER THE SLOPE WITH A LAYER OF EROSION CONTROL MIX OR WITH STONE RIPRAP.
- STABILIZE THE SOIL WITH SOD – THE DISTURBED SLOPE SHALL BE STABILIZED WITH PROPERLY INSTALLED SOD BY OCTOBER 1ST. PROPER INSTALLATION INCLUDES THE CONTRACTOR PINNING THE SOD ONTO THE SLOPE WITH WIRE PINS, ROLLING THE SOD TO GUARANTEE CONTACT BETWEEN THE SOD AND UNDERLYING SOIL, AND WATERING THE SOD TO PROMOTE ROOT GROWTH INTO THE DISTURBED SOIL. THE CONTRACTOR SHALL NOT USE LATE–SEASON SOD INSTALLATION TO STABILIZE SLOPES HAVING A GRADE GREATER THAN 3H:1V OR HAVING GROUNDWATER SEEPS ON THE SLOPE FACE.
- STABILIZE THE SOIL WITH EROSION CONTROL MIX – EROSION CONTROL MIX SHALL BE PROPERLY INSTALLED BY NOVEMBER 15TH. THE CONTRACTOR SHALL NOT USE EROSION CONTROL MIX TO STABILIZE SLOPES HAVING GRADES GREATER THAN 2H:1V OR HAVING GROUNDWATER SEEPS ON THE SLOPE FACE.
- STABILIZE THE SOIL WITH STONE RIPRAP – PLACE A LAYER OF STONE RIPRAP ON THE SLOPE BY NOVEMBER 15TH. A REGISTERED PROFESSIONAL ENGINEER SHALL BE HIRED TO DETERMINE THE STONE SIZE NEEDED FOR STABILITY ON THE SLOPE AND TO DESIGN A FILTER LAYER FOR UNDERNEATH THE RIPRAP.

5.0 INSPECTION AND MAINTENANCE

A PERSON WITH KNOWLEDGE OF EROSION AND STORMWATER CONTROL, INCLUDING THE STANDARDS AND CONDITIONS IN THE PERMIT, SHALL CONDUCT PERIODIC VISUAL INSPECTIONS OF INSTALLED EROSION CONTROL MEASURES. THE FREQUENCY OF INSPECTION SHALL OCCUR AT LEAST ONCE EVERY TWO WEEKS, AS WELL AS AFTER A "STORM EVENT". A "STORM EVENT" SHALL CONSIST 0.5 INCHES OF RAIN WITHIN A 24 HOUR PERIOD. THE FOLLOWING EROSION AND SEDIMENT CONTROL – BEST MANAGEMENT PRACTICES (BMP'S) SHALL INSPECTED IN THE MANNER AS DESCRIBED.

5.1 SEDIMENT BARRIERS

HAY BALE BARRIERS, SILT FENCES AND FILTER BERMS SHALL BE INSPECTED AND REPAIRED FOR THE FOLLOWING IF THERE ARE ANY SIGNS OF EROSION OR SEDIMENTATION BELOW THEM. IF THERE ARE SIGNS OF UNDERCUTTING AT THE CENTER OR THE EDGES OF THE BARRIER, OR IMPOUNDING OF LARGE VOLUMES OF WATER BEHIND THEM, SEDIMENT BARRIERS SHALL BE REPLACED WITH A TEMPORARY CHECK DAM. SHOULD THE FABRIC ON A SILT FENCE OR FILTER BARRIER DECOMPOSE OR BECOME INEFFECTIVE PRIOR TO THE END OF THE EXPECTED USABLE LIFE AND THE BARRIER IS STILL NECESSARY, THE FABRIC SHALL BE REPLACED PROMPTLY. SEDIMENT DEPOSITS SHOULD BE REMOVED WHEN DEPOSITS REACH APPROXIMATELY ONE–HALF THE HEIGHT OF THE BARRIER. FILTER BERMS SHOULD BE RESHAPED AS NEEDED. ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THE SILT FENCE OR FILTER BARRIER IS NO LONGER REQUIRED SHOULD BE DRESSED TO CONFORM TO THE EXISTING GRADE, PREPARED AND SEEDED.

5.2 STABILIZED STONE CONSTRUCTION ENTRANCES

THE EXIT SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OF SEDIMENT ONTO PUBLIC RIGHTS–OF–WAY. WHEN THE CONTROL PAD BECOMES INEFFECTIVE, THE STONE SHALL BE REMOVED ALONG WITH THE COLLECTED SOIL MATERIAL AND REDISTRIBUTED ON SITE IN A STABLE MANNER. THE ENTRANCE SHOULD THEN BE RECONSTRUCTED. THE CONTRACTOR SHALL SWEEP OR WASH PAVEMENT AT EXITS, WHICH HAVE EXPERIENCED MUD–TRACKING ON TO THE PAVEMENT OR TRAVELED WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH AGGREGATE, WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING STORM DRAINS, DITCHES, OR WATERWAYS.

5.3 MULCHED AREAS

ALL MULCHES MUST BE INSPECTED PERIODICALLY, IN PARTICULAR AFTER RAINSTORMS, TO CHECK FOR RILL EROSION. IF LESS THAN 90% OF THE SOIL SURFACE IS COVERED BY MULCH, ADDITIONAL MULCH SHALL BE IMMEDIATELY APPLIED. NETS MUST BE INSPECTED AFTER RAIN EVENTS FOR DISLOCATION OR FAILURE. IF WASHOUTS OR BREAKAGE OCCUR, RE–INSTALL THE NETS AS NECESSARY AFTER REPAIRING DAMAGE TO THE SLOPE. WHERE MULCH IS USED IN CONJUNCTION WITH ORNAMENTAL PLANTINGS, INSPECT PERIODICALLY THROUGHOUT THE YEAR TO DETERMINE IF MULCH IS MAINTAINING COVERAGE OF THE SOIL SURFACE. REPAIR AS NEEDED.

5.4 DUST CONTROL

WHEN TEMPORARY DUST CONTROL MEASURES ARE USED, REPETITIVE TREATMENT SHALL BE APPLIED AS NEEDED TO ACCOMPLISH CONTROL.

5.5 STORMWATER APPURTENANCES

ALL UNDERDRAINS, STORM DRAINS, AND CATCH BASINS NEED TO BE OPERATING EFFECTIVELY AND FREE OF DEBRIS.

5.6 EROSION AND SEDIMENTATION CONTROL INSPECTIONS:

ACORN ENGINEERING HAS PERSONNEL QUALIFIED TO CONDUCT EROSION AND SEDIMENTATION CONTROL INSPECTIONS. FOR FURTHER INFORMATION CONTACT:

CONTACT: WILL SAVAGE, PE
TELEPHONE: (207) 775–2655

QUALIFICATIONS:

- MAINE PROFESSIONAL ENGINEERING LICENSE #11419
- MAINE DEP – CERTIFIED IN MAINTENANCE & INSPECTION OF STORMWATER BMP'S CERT #14
- CERTIFIED EROSION, SEDIMENT AND STORM WATER INSPECTOR (CESSWI) CERT #0293
- CERTIFIED PROFESSIONAL IN EROSION AND SEDIMENT CONTROL (CPESC) CERT. #4620

THE CONTRACTOR HAS SOLE RESPONSIBILITY FOR COMPLYING WITH THE EROSION AND SEDIMENTATION REPORT/PLAN, INCLUDING CONTROL OF FUGITIVE DUST. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY MONETARY PENALTIES RESULTING FROM FAILURE TO COMPLY WITH THESE STANDARDS.

6.0 IMPLEMENTATION SCHEDULE

THE FOLLOWING IMPLEMENTATION SEQUENCE IS INTENDED TO MAXIMIZE THE EFFECTIVENESS OF THE ABOVE DESCRIBED EROSION CONTROL MEASURES. CONTRACTORS SHOULD AVOID OVEREXPOSING DISTURBED AREAS AND LIMIT THE AMOUNT OF STABILIZATION AREA.

1. INSTALL A STABILIZED CONSTRUCTION ENTRANCE IN ALL LOCATIONS WHERE CONSTRUCTION TRAFFIC WILL ENTER AND EXIT THE SITE.
2. INSTALL PERIMETER SILT FENCE OR EROSION CONTROL BERM.
3. INSTALL ALL OTHER EROSION CONTROL DEVICES AS NECESSARY THROUGHOUT THE REMAINDER OF THIS SCHEDULE.
4. COMMENCE INSTALLATION OF DRAINAGE INFRASTRUCTURE.
5. PRIORITIZE THE DOWNHILL SIDE TO CONTAIN RUNOFF WITHIN THE SITE WHILE PROVIDING AN ENGINEERED OUTLET WITH SILTATION BARRIER TO THE MUNICIPAL STORMWATER SYSTEM WITHIN PINE STREET.
6. COMMENCE EARTHWORK OPERATIONS, WALL AND FOUNDATION INSTALLATION.
7. COMMENCE INSTALLATION OF UTILITIES.
8. CONTINUE EARTHWORK AND GRADING TO SUBGRADE AS NECESSARY FOR CONSTRUCTION.
9. COMPLETE INSTALLATION OF DRAINAGE INFRASTRUCTURE, AS WELL AS OTHER UTILITY WORK.
10. COMPLETE REMAINING EARTHWORK OPERATIONS.
11. INSTALL SUB–BASE AND BASE GRAVELS IN PAVED AREAS.
12. INSTALL PAVING, CURBING AND BRICKWORK.
13. LOAM, LIME, FERTILIZE, SEED AND MULCH DISTURBED AREAS AND COMPLETE ALL LANDSCAPING.
14. ONCE THE SITE IS STABILIZED, 90% CATCH OF GRASS HAS BEEN OBTAINED, OR MULCHING OF LANDSCAPE AREAS IS COMPLETE REMOVE ALL TEMPORARY EROSION CONTROL MEASURES.
15. TOUCH UP AREAS WITHOUT A VIGOROUS CATCH OF GRASS WITH LOAM AND SEED.
16. COMPLETE SITE SIGNAGE AND STRIPING.
17. EXECUTE PROPER MAINTENANCE OF ALL TEMPORARY AND PERMANENT EROSION CONTROL MEASURES THROUGHOUT THE PROJECT.

THE ABOVE IMPLEMENTATION SEQUENCE SHOULD BE GENERALLY FOLLOWED BY THE SITE CONTRACTOR. HOWEVER, THE CONTRACTOR MAY CONSTRUCT SEVERAL ITEMS SIMULTANEOUSLY. THE CONTRACTOR SHALL SUBMIT TO THE OWNER A SCHEDULE OF THE COMPLETION OF THE WORK. IF THE CONTRACTOR IS TO COMMENCE THE CONSTRUCTION OF MORE THAN ONE ITEM ABOVE, THEY SHALL LIMIT THE AMOUNT OF EXPOSED AREAS TO THOSE AREAS IN WHICH WORK IS EXPECTED TO BE UNDERTAKEN DURING THE FOLLOWING 30 DAYS.

THE CONTRACTOR SHALL RE–VEGETATE DISTURBED AREAS AS RAPIDLY AS POSSIBLE. ALL AREAS SHALL BE PERMANENTLY STABILIZED WITHIN 7 DAYS OF FINAL GRADING OR BEFORE A STORM EVENT. THE CONTRACTOR SHALL INCORPORATE PLANNED INLETS AND DRAINAGE SYSTEMS AS EARLY AS POSSIBLE INTO THE CONSTRUCTION PHASE.

7.0 SEEDING PLAN

7.1 SITE PREPARATION

THE SEEDED AREAS SHALL BE FEASIBLY GRADED OUT TO PROVIDE THE USE OF EQUIPMENT FOR SEEDBED PREPARATION, SEEDING, MULCH APPLICATION, AND MULCH ANCHORING. IF NECESSARY, THE SITE MAY REQUIRE ADDITIONAL TEMPORARY EROSION CONTROL MEASURES OUTLINED IN THE EROSION CONTROL REPORT.

7.2 SEEDBED PREPARATION

FERTILIZER SHALL BE APPLIED TO THE SITE AT A RATE OF 13.8 POUNDS PER 1,000 SQUARE FEET. THE COMPOSITION OF THE FERTILIZER SHALL BE 10–10–10 (N–P205–K20) OR EQUIVALENT.

LIMESTONE SHALL BE APPLIED TO THE SITE AT A RATE OF 138 POUNDS PER 1,000 SQUARE FEET.

7.3 SEEDING

THE COMPOSITION AND AMOUNT OF TEMPORARY SEED APPLIED TO A SITE SHALL BE DETERMINED BY THE FOLLOWING TABLE:

TEMPORARY SEED APPLICATION RATES

SEED	LBS / ACRE	RECOMMENDED SEEDING DATES
WINTER RYE	2.57	8/15 TO 10/1
OATS	1.84	4/1 TO 7/1 8/15 TO 9/15
ANNUAL RYGRASS	0.92	4/1 TO 7/1
SUDANGRASS	0.92	5/15 TO 8/15
PERENNIAL	0.92	8/15 TO 9/15
TOTAL	7.17 LBS/ACRE	

PERMANENT SEED APPLICATION RATES

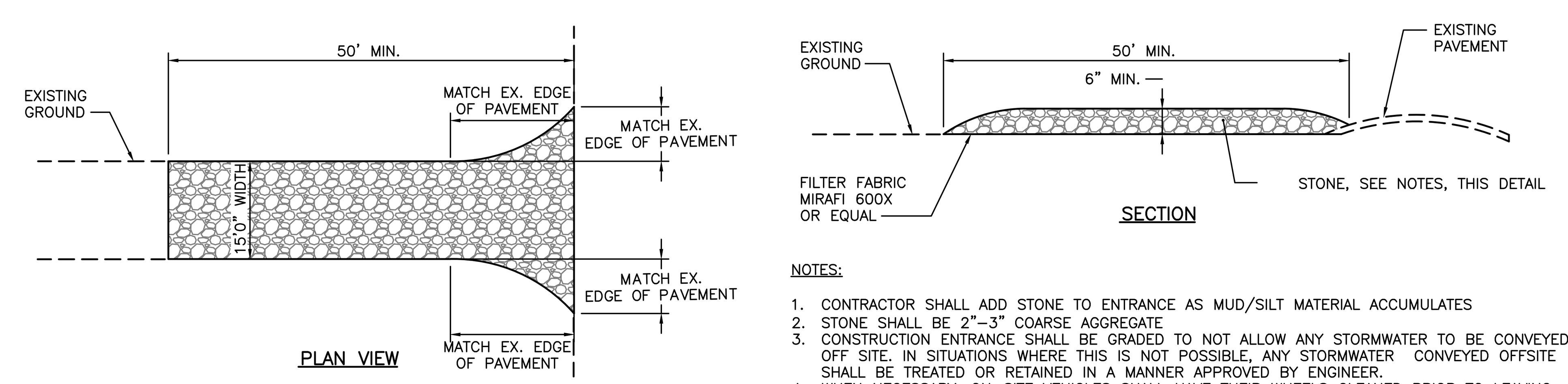
SEED	LBS / ACRE
KENTUCKY BLUEGRASS	20.00
CREEPING RED FESCUE	20.00
PERENNIAL RYEGRASS	4.80
TOTAL	44.8 LBS/ACRE

7.4 MULCHING

MULCH SHALL BE HARDWOOD AND APPLIED AT A RATE OF 70 LBS – 90 LBS PER 1,000 SQUARE FEET. THE MULCH SHALL BE INSTALLED AT A MINIMUM DEPTH OF 4 INCHES. THE SEEDED AREA SHALL BE MULCHED IMMEDIATELY AFTER SEED IS APPLIED. MULCHING DURING THE WINTER SEASON SHALL BE DOUBLE THE NORMAL AMOUNT. REFER TO DETAIL FOR MORE INFORMATION.

8.0 CONCLUSION

THE ABOVE EROSION CONTROL NARRATIVE IS INTENDED TO MINIMIZE THE DEVELOPMENT IMPACT BY IMPLEMENTING TEMPORARY AND PERMANENT EROSION CONTROL MEASURES. THE CONTRACTOR SHALL ALSO REFER TO THE MAINE EROSION AND SEDIMENT CONTROL BMP MANUAL FOR ADDITIONAL INFORMATION.



NOTES:

1. CONTRACTOR SHALL ADD STONE TO ENTRANCE AS MUD/SILT MATERIAL ACCUMULATES
2. STONE SHALL BE 2"–3" COARSE AGGREGATE
3. CONSTRUCTION ENTRANCE SHALL BE GRADED TO NOT ALLOW ANY STORMWATER TO BE CONVEYED OFF SITE. IN SITUATIONS WHERE THIS IS NOT POSSIBLE, ANY STORMWATER CONVEYED OFFSITE SHALL BE TREATED OR RETAINED IN A MANNER APPROVED BY ENGINEER.
4. WHEN NECESSARY, ON–SITE VEHICLES SHALL HAVE THEIR WHEELS CLEANED PRIOR TO LEAVING SITE.
5. CONSTRUCTION ENTRANCE SHALL BE GRADED IN A MANNER THAT PREVENTS TRACKING OF SEDIMENTS ONTO PUBLIC RIGHT–OF–WAY

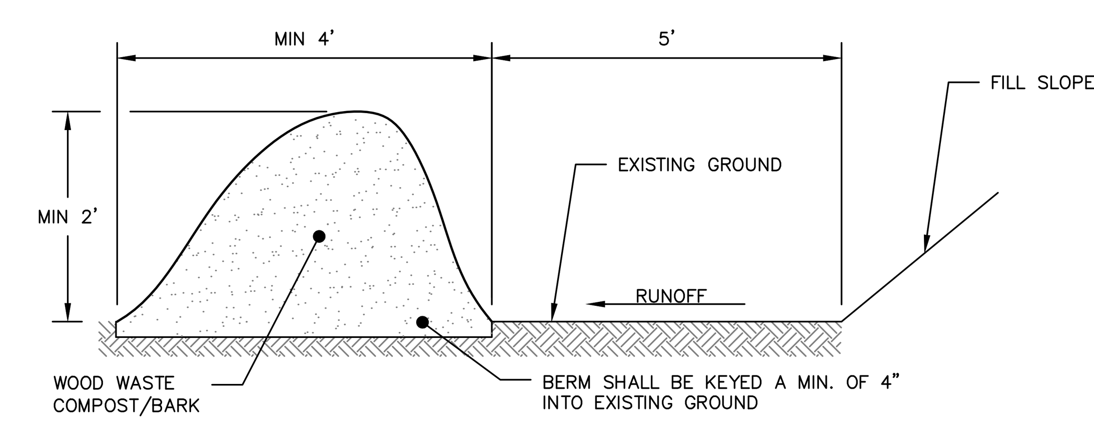
STABILIZED CONSTRUCTION ENTRANCE
NOT TO SCALE

NOTES:

1. THE EROSION CONTROL MIX SHALL CONFORM TO THE FOLLOWING STANDARDS AND IN ACCORDANCE WITH THE MAINE DOT CHAPTER 700, SECTION 717.04(D):

1.1. pH BETWEEN 5.0 – 8.0
1.2. PARTICLE SIZE (BY WEIGHT):
1.2.1. 100% PASSING A 150 MM (6 IN) SCREEN
1.2.2. 75 TO 85% PASSING A 19 MM (0.75 IN) SCREEN
1.3. SOLUBLE SALTS CONTENT < 4.0 MMHOS/CM
1.4. ORGANIC MATTER 20 TO 100% , DRY WEIGHT BASIS

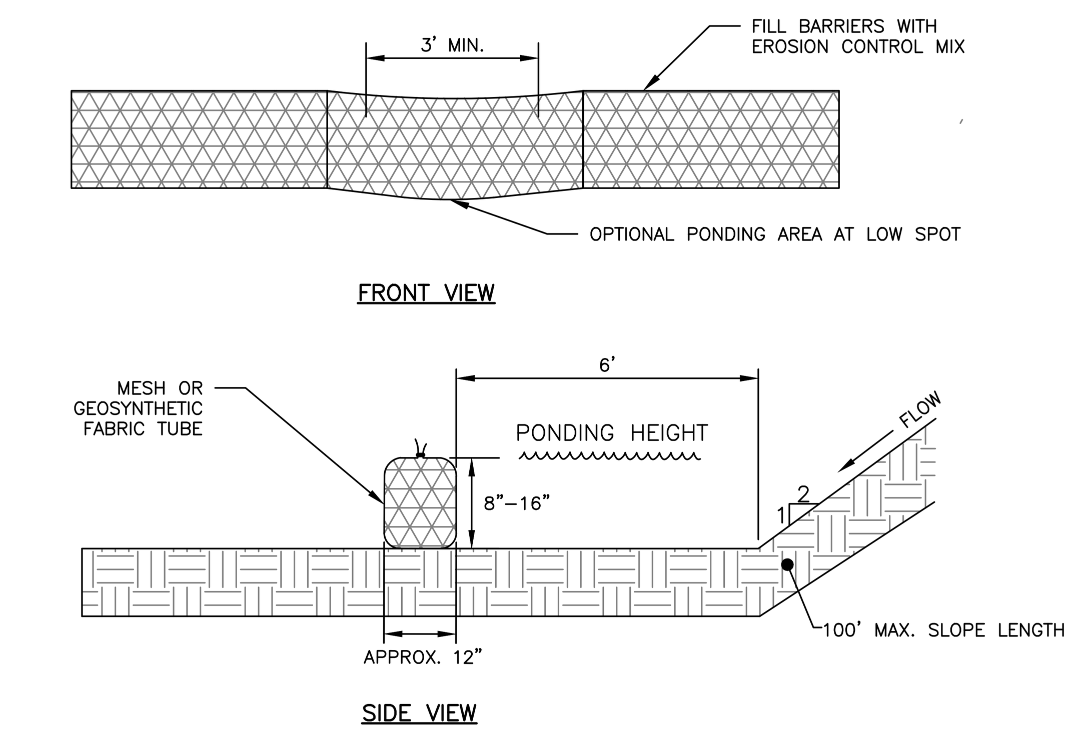
2. THE BERM SHOULD BE PLACED, UNCOMPACTED, ALONG A RELATIVELY LEVEL CONTOUR, WHEN NECESSARY THE BERM MAY BE PLACED PERPENDICULAR TO THE SLOPE ALONG THE PROPERTY LINE TO CONTAIN THE SEDIMENT PROVIDED A BERM IS LOCATED AT THE BASE OF THE SLOPE.
3. BERMS SHALL REMAIN IN PLACE UNTIL UPSTREAM AREA IS STABILIZED OR 90% CATCH OF VEGETATION IS ATTAINED. BERMS SHALL BE REMOVED OFFSITE OR BY SPREADING SUCH THAT NATIVE EARTH CAN BE SEEN BELOW.
4. DURING PERIODS OF WINTER CONSTRUCTION (NOV. 15 THROUGH APRIL 15), THE CONTRACTOR SHALL INSTALL EROSION CONTROL MIX BERMS IN LIEU OF SILT FENCE.



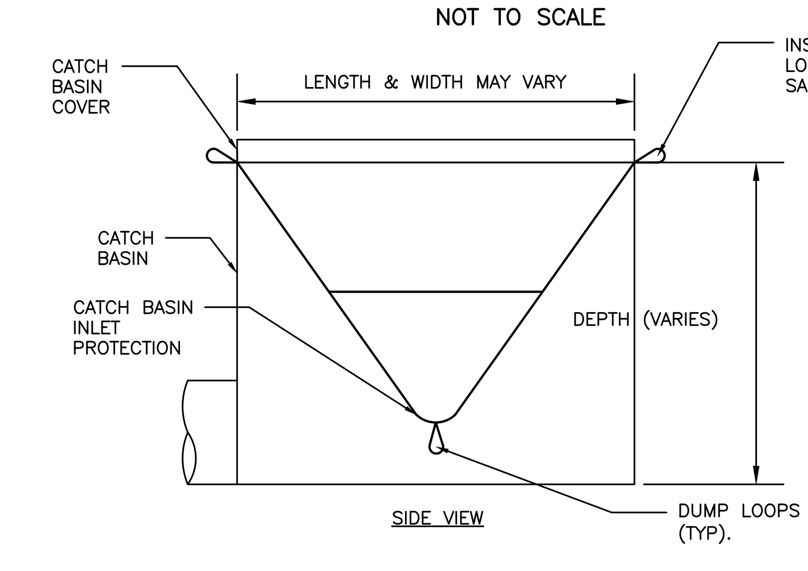
EROSION CONTROL MIX BERM DETAIL
NOT TO SCALE

NOTES:

1. FULL CONTACT WITH THE GROUND IS CRITICAL TO PREVENT SHORT CIRCUITING UNDER THE TUBE – THE GROUND SURFACE SHOULD BE SMOOTH AND LEVEL. IN WOODED AREAS, PROTRUDING ROOTS AND DEBRIS MAY NEED TO BE REMOVED. IN GRASSED AREAS, THE GRASS NEEDS TO BE EITHER MOWED OR COMPRESSED DOWN.
2. STAKING MAY BE NECESSARY ON STEEP SLOPES.
3. UPON FINAL STABILIZATION, THE TUBE CAN BE CUT OPEN AND THE MATERIAL SPREAD OUT ONTO THE GROUND. THE MESH MATERIAL SHOULD BE REMOVE.
4. LOOSE COMPOST MAY BE BACKFILLED ALONG THE UPSLOPE SIDE OF THE COMPOST FILTER SOCK, FILLING THE SEAM BETWEEN THE SOIL SURFACE AND THE DEVICE, IMPROVING FILTRATION AND SEDIMENT RETENTION.



FILTER SOCK DETAIL
NOT TO SCALE



NOTES:

1. CATCH BASIN INLET PROTECTION SHALL BE INSTALLED DOWNGRADIENT OF PROPOSED PROJECT AND ROUTINELY MAINTAINED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS
2. CATCH BASIN SIZE VARIES. CONTRACTOR TO ENSURE CATCH BASIN INLET PROTECTION MATCHES CATCH BASIN DIMENSIONS.
3. SILT SACK SHALL BE ACF ENVIRONMENTAL SILT SACK, TYPE A, OR APPROVED EQUAL.

CATCH BASIN INLET PROTECTION
NOT TO SCALE

PERMITTING
NOT ISSUED FOR
CONSTRUCTION

ISSUED FOR	BY / DATE
50% DRAWINGS	SJL 9/15/23
DD SET	SJL 11/3/23
MAJOR SITE PLAN	SJL 11/17/23

DRAWING NAME: EROSION & SEDIMENTATION CONTROL DETAILS

PROJECT NAME: 64 PINE STREET REDEVELOPMENT
64 PINE STREET, PORTLAND, MAINE 04012

CLIENT: 64 PINE STREET LLC
104 WASHINGTON AVENUE PORTLAND, MAINE 04101

ACORN ENGINEERING, INC.

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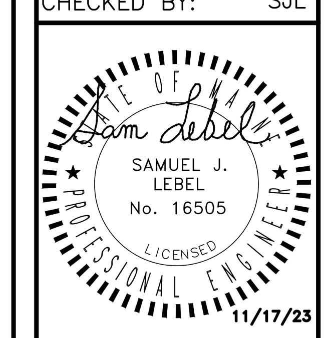
SCALE:	AS NOTED
DESIGNED BY:	ZMS
DRAWN BY:	BJK
CHECKED BY:	SJL



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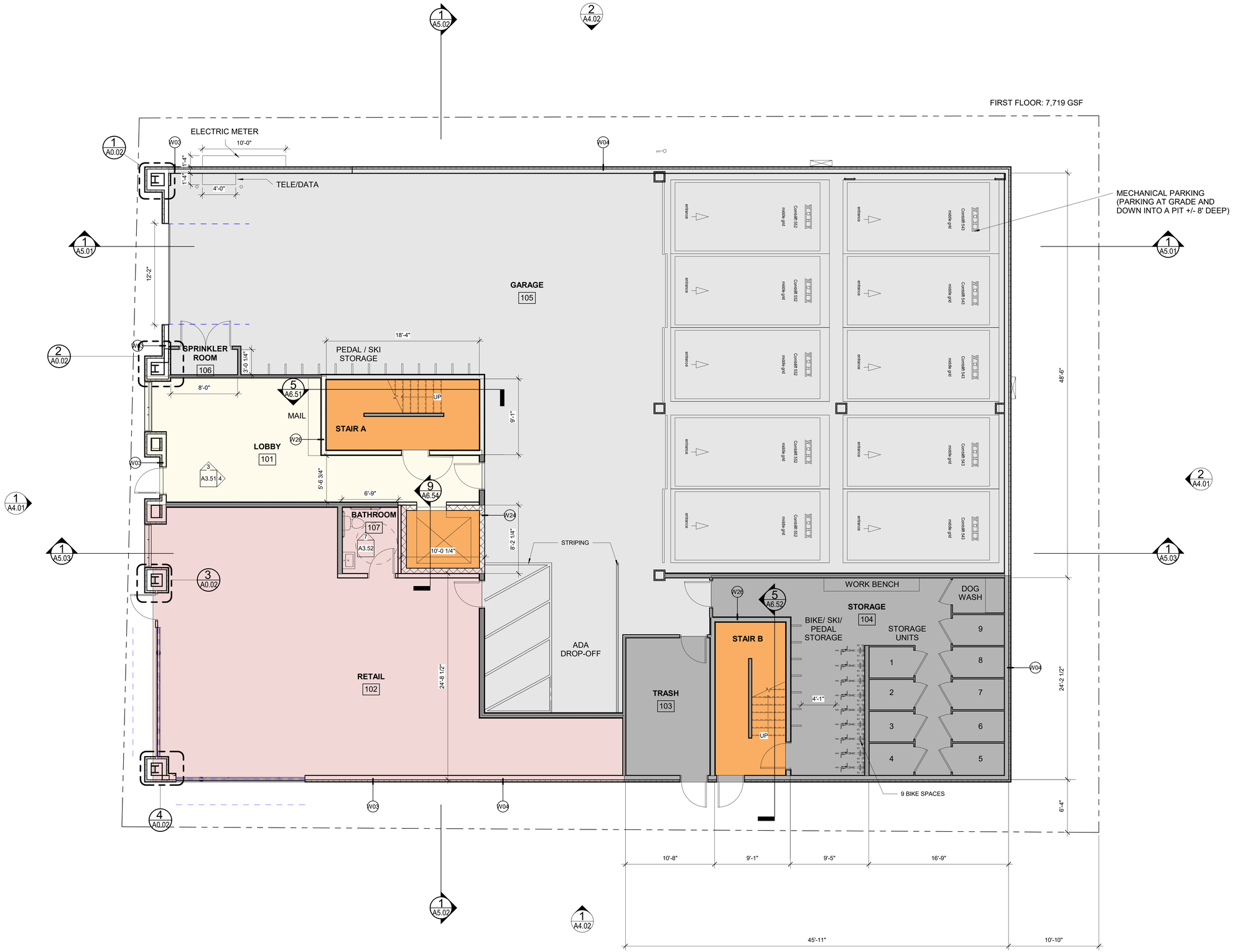
C-45



1 | 1ST FLOOR
3/16" = 1'-0"

architecture invivid
631 Stevens Ave Ste #200
Portland, ME 04103
207 - 939 - 7602

Project:

64 PINE STREET

64 Pine Street
Portland, Maine

Owner/Client:

TOM LANDRY

Consultant:

Revisions:

Key Plan:

FIRST FLOOR PLAN

Scale:
3/16" = 1'-0"

15 FEBRUARY, 2024

A1.01

1 | 2ND FLOOR
3/16" = 1'-0"

architecture invivid
631 Stevens Ave Ste #200
Portland, ME 04103
207 - 939 - 7602

Project:

64 PINE STREET

64 Pine Street
Portland, Maine

Owner/Client:

TOM LANDRY

Consultant:

Revisions:

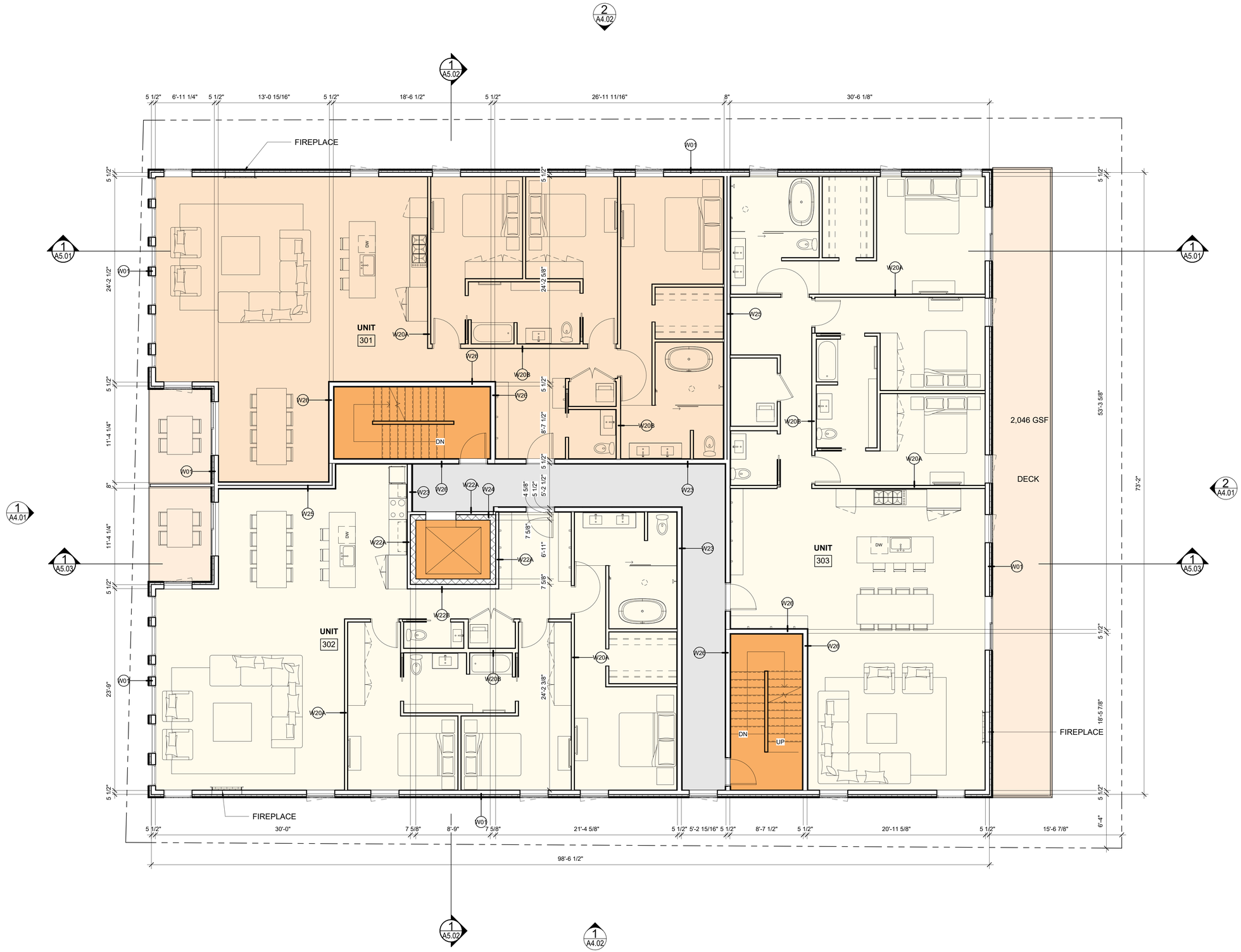
Key Plan:

SECOND FLOOR PLAN

Scale:
3/16" = 1'-0"

3 NOVEMBER, 2023

A1.02



1 | 3RD FLOOR
3/16" = 1'-0"

architecture invivid
631 Stevens Ave Ste #200
Portland, ME 04103
207 - 939 - 7602

Project:

64 PINE STREET

64 Pine Street
Portland, Maine

Owner/Client:

TOM LANDRY

Consultant:

Revisions:

Key Plan:

THIRD FLOOR PLAN

Scale:
3/16" = 1'-0"

3 NOVEMBER, 2023

A1.03

1 | 4TH FLOOR
3/16" = 1'-0"

architecture invivid
631 Stevens Ave Ste #200
Portland, ME 04103
207 - 939 - 7602

Project:

64 PINE STREET

64 Pine Street
Portland, Maine

Owner/Client:

TOM LANDRY

Consultant:

Revisions:

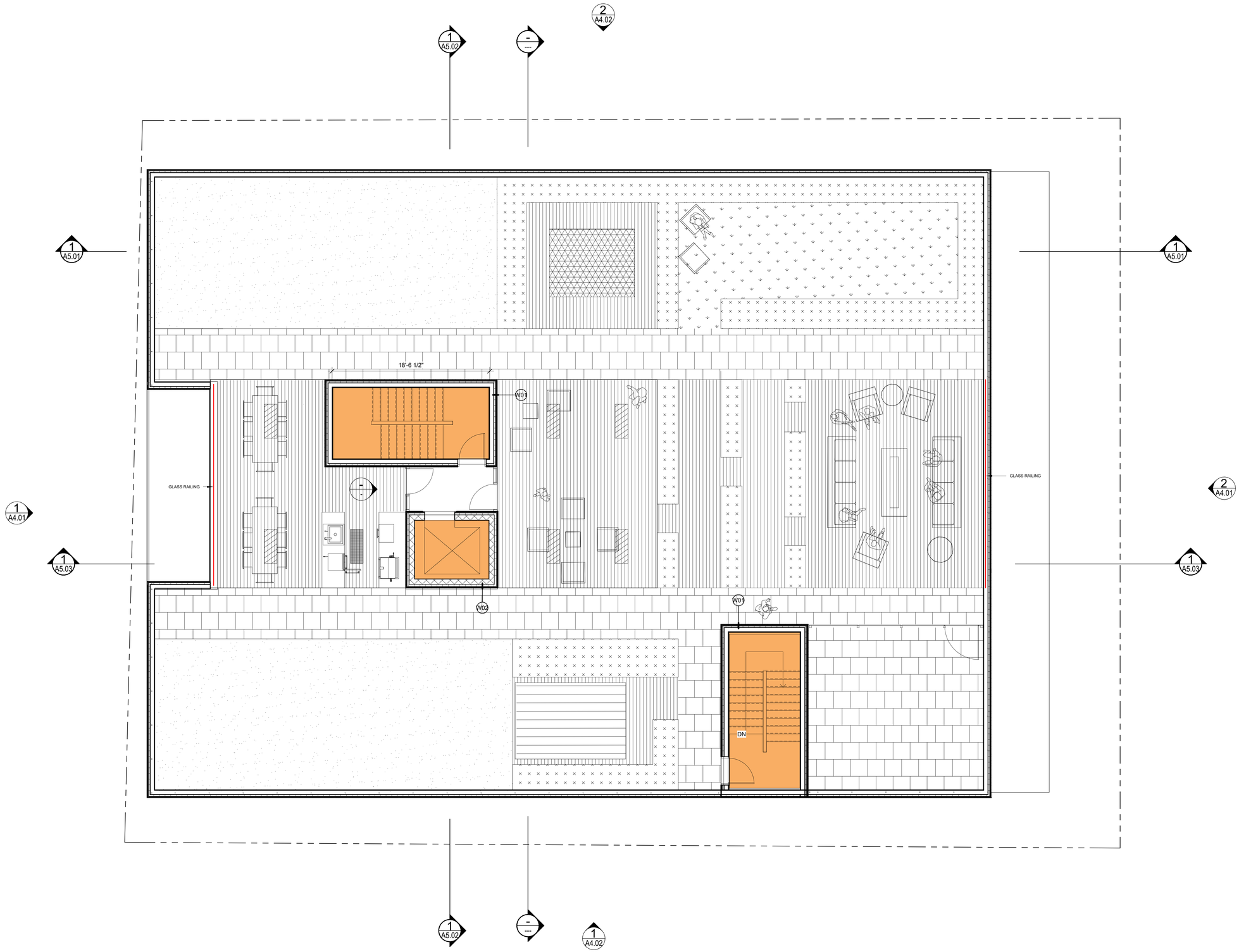
Key Plan:

FOURTH FLOOR PLAN

Scale:
3/16" = 1'-0"

3 NOVEMBER, 2023

A1.04



1 ROOF
3/16" = 1'-0"

architecture invivid
631 Stevens Ave Ste #200
Portland, ME 04103
207 - 939 - 7602

Project:

64 PINE STREET

64 Pine Street
Portland, Maine

Owner/Client:

TOM LANDRY

Consultant:

Revisions:

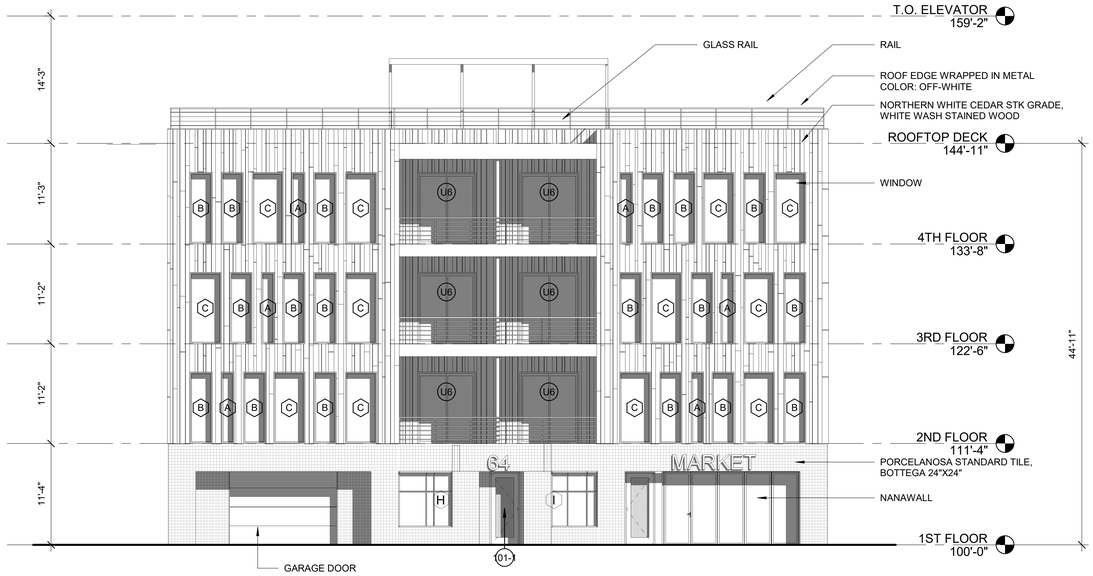
Key Plan:

ROOF PLAN

Scale:
3/16" = 1'-0"

3 NOVEMBER, 2023

A1.05

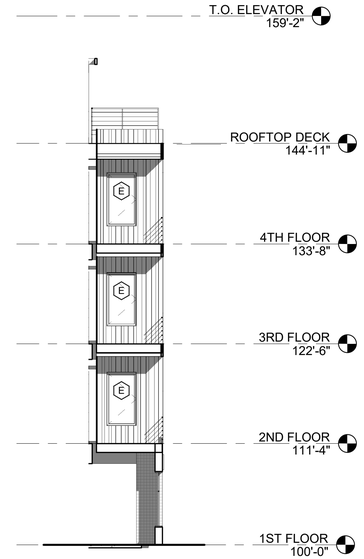


1 FRONT ELEVATION
1/8" = 1'-0"

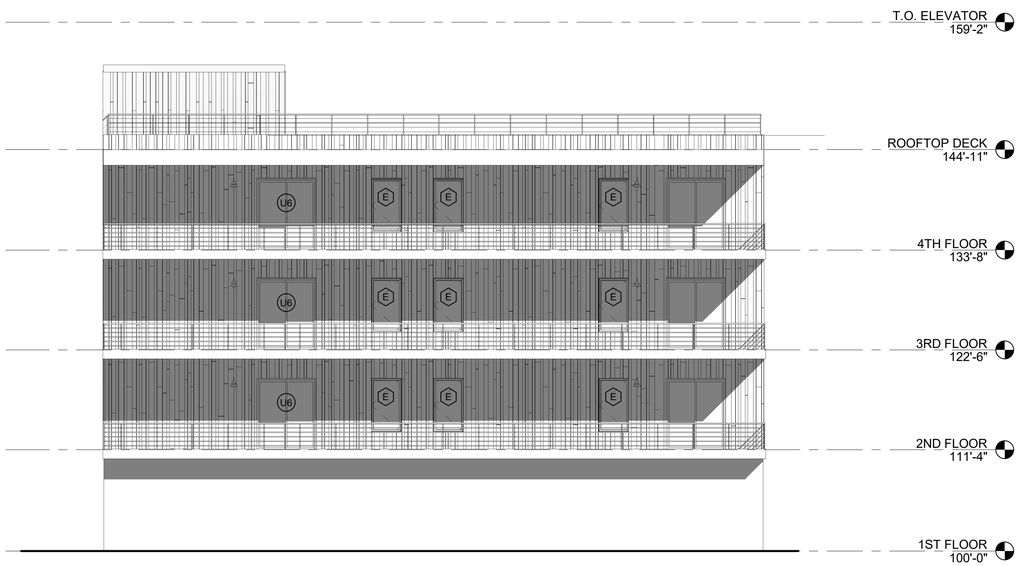
AVERAGE GRADE:

NORTH: 139.75'
EAST: 140.10'
SOUTH: 139.75'
WEST: 139.70'

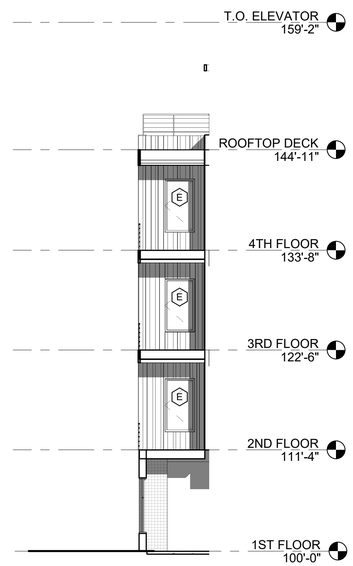
AVERAGE GRADE: 139.83'
ROOFTOP DECK: 184.84'
BUILDING HEIGHT: 44.92
FIRST FLOOR: 139.92' (100'-0")



3 TERRACE ELEVATION 2
1/8" = 1'-0"



2 REAR ELEVATION
1/8" = 1'-0"



4 TERRACE ELEVATION 1
1/8" = 1'-0"

architecture invivid
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207 - 939 - 7602

Project:

64 PINE STREET

64 Pine Street
Portland, Maine

Owner/Client:

TOM LANDRY

Consultant:

Revisions:

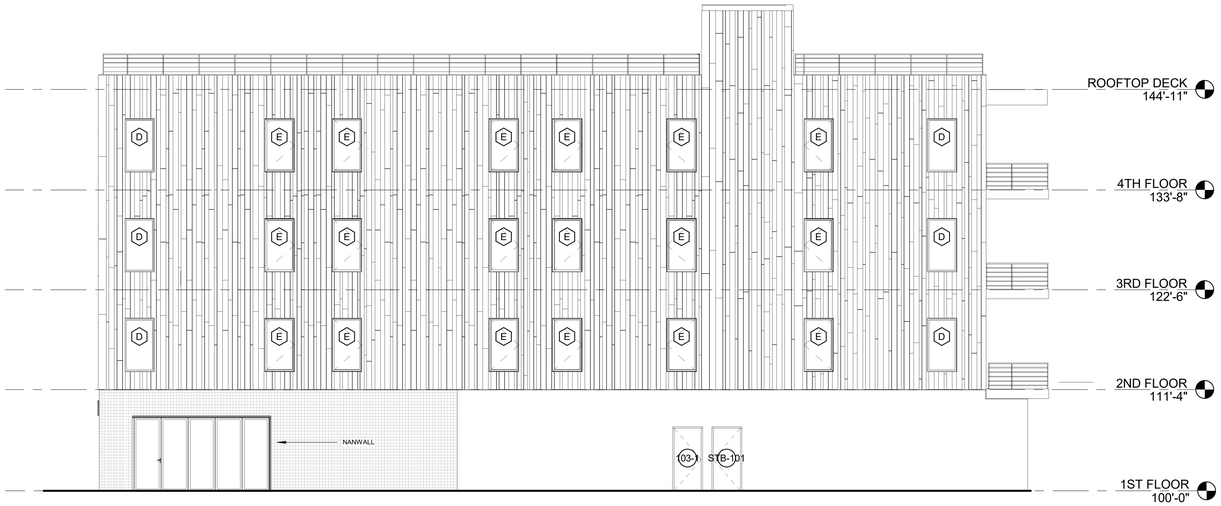
Key Plan:

EXTERIOR ELEVATIONS

Scale:
1/8" = 1'-0"

15 FEBRUARY, 2024

A4.01



1 RIGHT SIDE ELEVATION

1/8" = 1'-0"

2 LEFT SIDE ELEVATION

1/8" = 1'-0"

architecture invivid
631 Stevens Ave Ste #200
Portland, ME 04103
207 - 939 - 7602

Project:

64 PINE STREET

64 Pine Street
Portland, Maine

Owner/Client:

TOM LANDRY

Consultant:

Revisions:

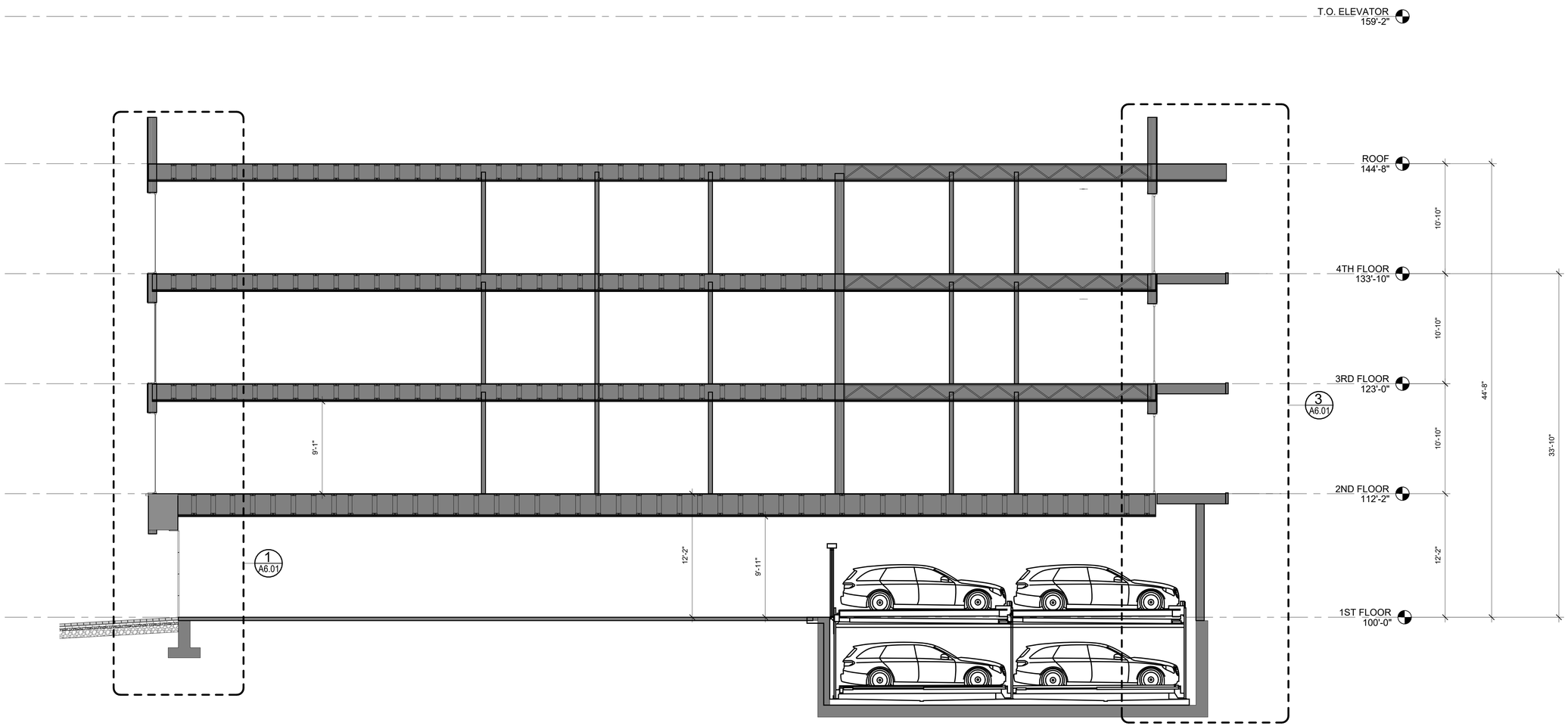
Key Plan:

EXTERIOR ELEVATIONS

Scale:
1/8" = 1'-0"

15 FEBRUARY, 2024

A4.02



1 Section 1

3/16" = 1'-0"

architecture invivid
631 Stevens Ave Ste #200
Portland, ME 04103
207 - 939 - 7602

Project:

64 PINE STREET

64 Pine Street
Portland, Maine

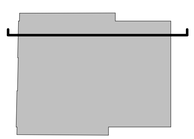
Owner/Client:

TOM LANDRY

Consultant:

Revisions:

Key Plan:

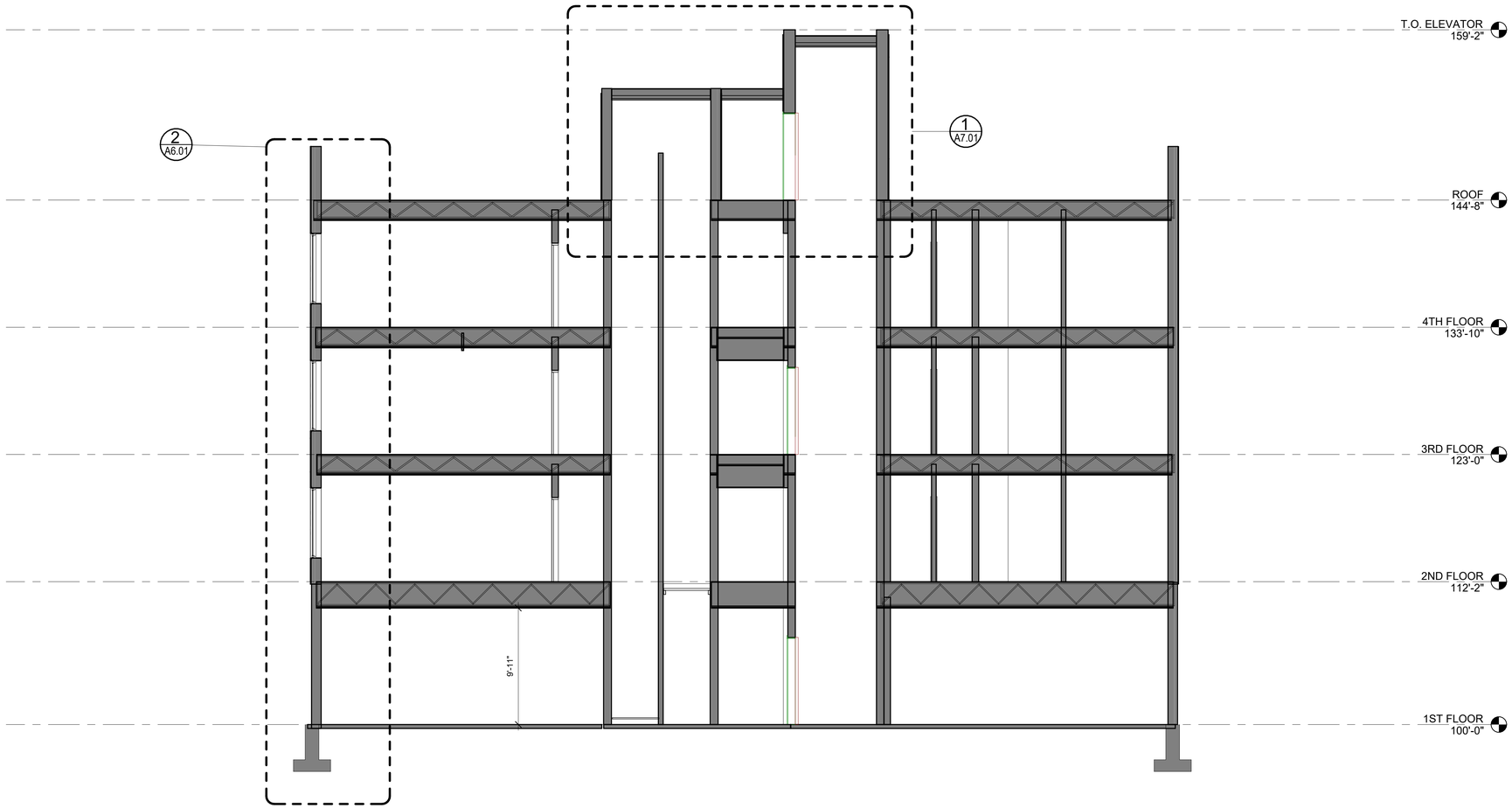


BUILDING SECTION

Scale:
As indicated

3 NOVEMBER, 2023

A5.01



1 Section 4
3/16" = 1'-0"

architecture invivid
631 Stevens Ave Ste #200
Portland, ME 04103
207 - 939 - 7602

Project:

64 PINE STREET

64 Pine Street
Portland, Maine

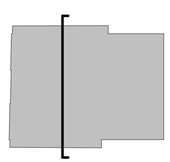
Owner/Client:

TOM LANDRY

Consultant:

Revisions:

Key Plan:

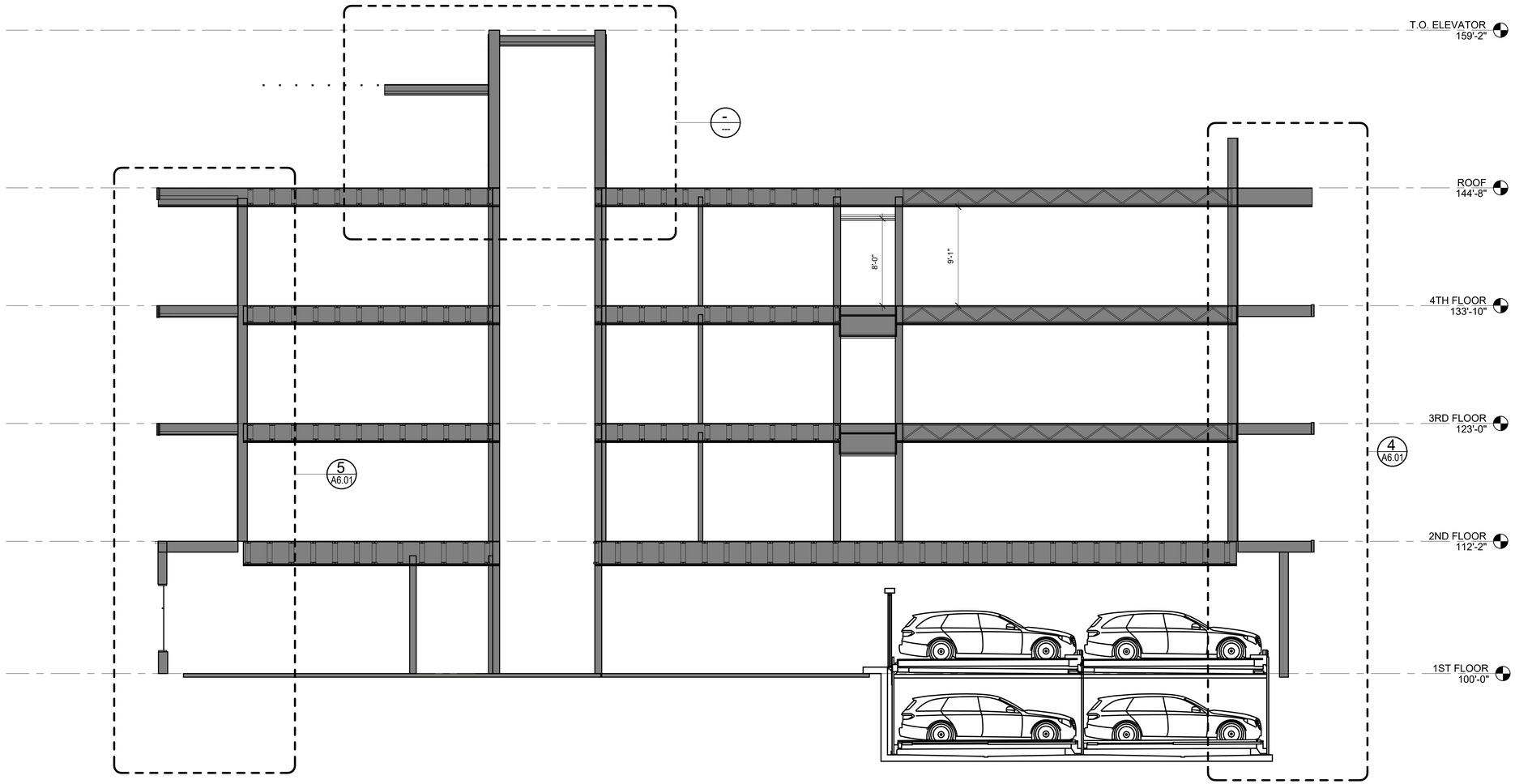


BUILDING SECTION

Scale:
As indicated

3 NOVEMBER, 2023

A5.02



1 Section 6
3/16" = 1'-0"

architecture invivid
631 Stevens Ave Ste #200
Portland, ME 04103
207 - 939 - 7602

Project:

64 PINE STREET

64 Pine Street
Portland, Maine

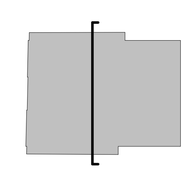
Owner/Client:

TOM LANDRY

Consultant:

Revisions:

Key Plan:



BUILDING SECTION

Scale:
As indicated

3 NOVEMBER, 2023

A5.03

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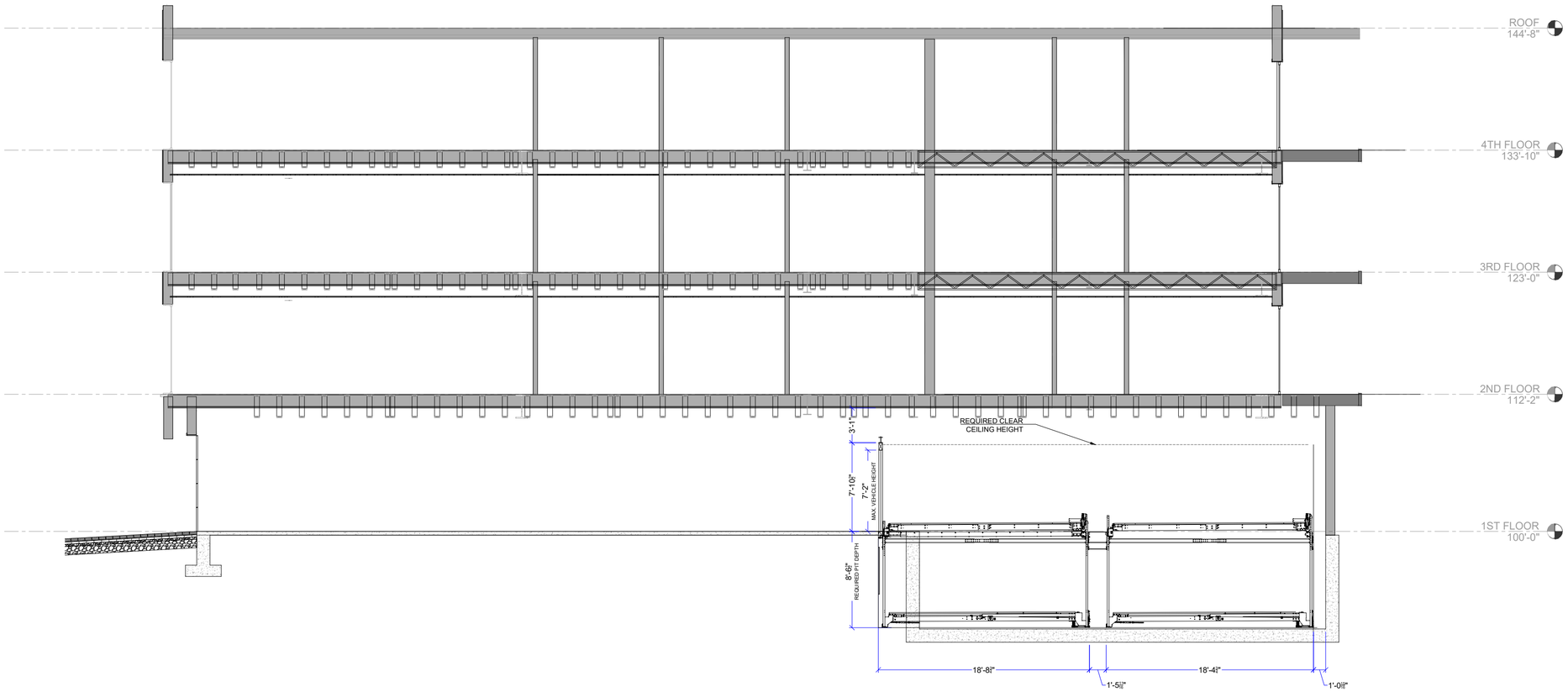

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Scale: 1/8":1'-0"	Issue Date: 11.13.2023
Designer: Harding Steel	
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Page No.: 2	Total Pages: 2

HARDING STEEL

02.15.2024 CITY REVISIONS
11.02.2023 PERMIT SUBMITTAL

SHEET INDEX
LANDSCAPE DRAWINGS

■	■	■	L0-00 COVER SHEET
■	■	■	L0-01 NOTES
■	■	■	L1-00 GROUND MATERIALS PLAN
■	■	■	L1-01 ROOF MATERIALS PLAN
■			L3-00 SITE DETAILS

VICINITY MAP:

LANDSCAPE ARCHITECT

ACETO LANDSCAPE ARCHITECTS
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INVIVID ARCHITECTURE
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ACORN ENGINEERING
SAM LEBEL
207 478 4327
slabel@acorn-engineering.com

ACETO LANDSCAPE ARCHITECTS
207 221 3390 | ACETOLA.COM

SEAL

LOCATION

64 PINE STREET
PORTLAND, ME 04102

PREPARED FOR

64 PINE STREET LLC
104 WASHINGTON AVENUE
PORTLAND, MAINE 04101

REVISIONS	DATE
SITE PLAN SUBMISSION	11.02.23
CITY COMMENT REV.	02.20.24

ISSUE DATE

FEBRUARY 20, 2024

SHEET TITLE

COVER

SHEET INFORMATION

L 0-00

NOT FOR CONSTRUCTION

LAYOUT AND MATERIALS NOTES

1. REVIEW CONTRACT DOCUMENTS AND FIELD CONDITIONS BEFORE COMMENCING WORK. REPORT ERRORS, OMISSIONS, OR INCONSISTENCIES PROMPTLY TO THE LANDSCAPE ARCHITECT.
2. CONTACT UTILITY COMPANIES AS REQUIRED BY STATE AND LOCAL REGULATIONS BEFORE DIGGING. LOCATE AND MARK EXISTING UTILITIES.
3. THE CONTRACTOR SHALL OBTAIN ALL PERMITS WHICH ARE NECESSARY TO PERFORM THE PROPOSED WORK.
4. WRITTEN DIMENSIONS SHALL TAKE PRECEDENCE OVER SCALED DIMENSIONS.
5. DIMENSIONS REFERRED TO AS "EQUAL" INDICATE SPACING WHICH IS EQUIDISTANT MEASURED TO THE CENTERLINES.
6. MEASUREMENTS ARE TO THE FINISHED FACE OF BUILDINGS, WALLS, OR OTHER FIXED SITE IMPROVEMENTS. DIMENSIONS TO CENTERLINES ARE IDENTIFIED.
7. INSTALL INTERSECTING ELEMENTS AT 90-DEGREE ANGLES, UNLESS OTHERWISE NOTED.
8. PROVIDE EXPANSION JOINTS WHERE FLATWORK MEETS VERTICAL STRUCTURES, SUCH AS WALLS, CURBS, STEPS, AND OTHER HARDSCAPE.
9. CONTROL JOINTS SHOULD BE SPACED NO GREATER THAN TEN (10) LINEAR FEET MAXIMUM, UNLESS OTHERWISE SPECIFIED.
10. CONTROL JOINT RECOMMENDATIONS TO MINIMIZE CRACKING SHALL BE SUBMITTED TO THE LANDSCAPE ARCHITECT FOR REVIEW AND APPROVAL.
11. ALL TOP OF WALLS AND FENCES ARE TO BE HELD LEVEL, UNLESS OTHERWISE SPECIFIED.
12. SAMPLES OF SPECIFIED MATERIALS SHALL BE SUBMITTED TO THE LANDSCAPE ARCHITECT FOR REVIEW AND APPROVAL PRIOR TO ORDERING.
13. THE CONTRACTOR SHALL PROVIDE A FULL-SCALE MOCKUP AND RECEIVE APPROVAL FROM THE LANDSCAPE ARCHITECT BEFORE BEGINNING CONSTRUCTION OF PAVEMENT.
14. ALL SITE FURNITURE LOCATIONS ARE TO BE STAKED BY CONTRACTOR AND APPROVED BY LANDSCAPE ARCHITECT PRIOR TO INSTALLATION.

PLANTING NOTES

1. CONTACT UTILITY COMPANIES AS REQUIRED BY STATE AND LOCAL REGULATIONS BEFORE DIGGING. LOCATE AND MARK EXISTING UTILITIES.
2. REFER TO CIVIL ENGINEER'S GRADING PLANS FOR FINAL GRADING AND UTILITY LOCATIONS.
3. THE CONTRACTOR SHALL OBTAIN ALL PERMITS WHICH ARE NECESSARY TO PERFORM THE PROPOSED WORK.
4. LANDSCAPE ARCHITECT TO REVIEW PLANT MATERIALS AT SOURCE OR BY PHOTOGRAPHS PRIOR TO DIGGING OR SHIPPING OF PLANT MATERIAL.
5. CONTRACTOR IS TO VERIFY ALL QUANTITIES. IF QUANTITIES ON PLANT LIST DIFFER FROM GRAPHIC INDICATIONS, GRAPHICS SHALL PREVAIL.
6. EXACT LOCATIONS OF TREES AND B&B SHRUBS ARE TO BE STAKED BY THE CONTRACTOR FOR LANDSCAPE ARCHITECT REVIEW AND APPROVAL PRIOR TO INSTALLATION. THE LANDSCAPE ARCHITECT RESERVES THE RIGHT TO ADJUST PLANTS TO EXACT LOCATION IN THE FIELD.
7. PLANT MATERIAL NOT MEETING THE STANDARDS CONTAINED WITHIN CONTRACT DOCUMENTS SHALL BE REPLACED AT NO COST TO THE OWNER.
8. PROVIDE MATCHING SIZES AND FORMS FOR EACH PLANT OF THE SAME SPECIES DESIGNATED ON THE DRAWINGS UNLESS OTHERWISE INDICATED.
9. ALL PLANT MATERIAL IS TO BE INSTALLED PLUMB/PER THE SPECIFICATIONS CONTAINED WITHIN THE CONTRACT DOCUMENTS.
10. PRUNE EXISTING AND/OR NEWLY PLANTED TREES ONLY AS DIRECTED BY THE LANDSCAPE ARCHITECT.
11. PLANT MATERIAL SHALL HAVE ALL WIRE, TWINE, BASKETS, BURLAP, AND ALL OTHER NON-BIODEGRADABLE CONTAINMENT MATERIAL REMOVED FROM THE TRUNK AND/OR ROOT BALL OF THE PLANT PRIOR TO PLANTING. ROOT BALLS SHALL BE FREE OF WEEDS.
12. FINISH GRADE OF PLANTING BEDS SHALL BE ONE (1) INCH BELOW ADJACENT PAVER OR HEADER, UNLESS OTHERWISE SPECIFIED.
13. MULCH OR PLANTING BED DRESSING SHALL BE PLACED IN ALL PLANTING AREAS AS SPECIFIED. MULCH OR PLANTING BED DRESSING SHALL NOT BE PLACED WITHIN SIX (6) INCHES OF TREE TRUNKS. MULCHING SHOULD BE REPEATED ANNUALLY DURING THE AUTUMN TO A 3" DEPTH, SOIL PEP MULCH SHALL BE USED UNLESS OTHERWISE SPECIFIED..
14. ALL PLANT MATERIAL SHOULD RECEIVE AN ORGANIC FERTILIZER IN LIMITED APPLICATION FOLLOWING INSTALLATION. TYPE AND APPLICATION RATE AND METHOD OF APPLICATION TO BE SPECIFIED BY THE CONTRACTOR & APPROVED BY THE LANDSCAPE ARCHITECT.
15. STOCKPILED PLANT MATERIAL TO BE PLACED IN THE SHADE AND PROPERLY HAND-WATERED UNTIL PLANTED.
16. PRESERVE & PROTECT ALL EXISTING VEGETATION INDICATED TO REMAIN AT ALL TIMES.
17. TO THE GREATEST EXTENT POSSIBLE, TOPSOIL THAT IS REMOVED DURING CONSTRUCTION SHALL BE STOCKPILED FOR LATER USE IN AREAS REQUIRING REVEGETATION/PLANTING.
18. ALL MATERIALS USED SHALL CONFORM TO THE GUIDELINES ESTABLISHED BY THE CURRENT AMERICAN STANDARDS FOR NURSERY STOCK, PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN.
19. ALL DISTURBED AREAS ARE TO BE REVEGETATED

SEEDING NOTES

1. REVEGETATED AREAS ARE TO BE HYRO-SEEDED, FOLLOWED BY THE APPLICATION OF STRAW MULCH.
2. APPLY STRAW MULCH AT A MINIMUM RATE OF 1.5 TONS PER ACRE OF AIR DRY MATERIAL. SPREAD STRAW MULCH UNIFORMLY OVER THE AREA WITH MECHANICAL MULCH SPREADER/CRIMPER. DO NOT MULCH WHEN WIND VELOCITY EXCEEDS 10 MPH.
3. IMMEDIATELY UPON COMPLETION OF THE MULCHING AND BINDING OPERATION, THE SEEDED AREAS SHALL BE IRRIGATED, KEEPING THE TOP 2 INCHES OF SOIL EVENLY MOIST UNTIL SEED HAS UNIFORMLY GERMINATED AND GROWN TO A HEIGHT OF 2 INCHES.
4. WATERING APPLICATION SHALL BE DONE IN A MANNER WHICH WILL PROVIDE UNIFORM COVERAGE BUT WHICH WILL NOT CAUSE EROSION, MOVEMENT, OR DAMAGE TO THE FINISHED SURFACE.

GRADING AND DRAINAGE NOTES

1. MATERIALS/WASTE CREATED BY REMOVAL PROCEDURES SHALL BE LEGALLY DISPOSED OF AWAY FROM THE JOB SITE.
2. NOTIFY LOCAL UNDERGROUND SERVICE COMPANIES FOR UTILITY FINDS 48 HOURS PRIOR TO ANY EXCAVATION.
3. THE CONTRACTOR IS TO REVIEW ARCHITECTURAL DRAWINGS FOR THE VERIFICATION OF CONNECTIONS TO DRAINS OVER STRUCTURE.
4. THE CONTRACTOR IS TO REVIEW ARCHITECTURAL DRAWINGS FOR THE VERIFICATION OF WATERPROOFING OF SLAB PENETRATIONS.
5. THE CONTRACTOR IS TO REVIEW CIVIL ENGINEER'S DRAWINGS FOR THE VERIFICATION OF CONNECTIONS TO DRAINS.
6. GRADING AND EXCAVATION WORK SHALL BE COMPLETED DURING DRY AND NON-FREEZING CONDITIONS.
7. POSITIVE DRAINAGE SHALL BE PROVIDED AWAY FROM ALL STRUCTURES.
8. SOIL COMPACTION SHALL BE 95% PROCTOR DENSITY MINIMUM BENEATH PAVEMENTS, STEPS, WALLS AND LIGHT FOUNDATIONS, UNLESS OTHERWISE SPECIFIED.

ABBREVIATIONS TABLE

APPROX	APPROXIMATE
ARCH	ARCHITECT
AVG	AVERAGE
B+B	BALED AND BURLAPPED
BF	BOTTOM OF FOOTING
BLDG	BUILDING
BM	BENCHMARK
BOC	BACK OF CURB
BR	BOTTOM OF RAMP
BS	BOTTOM OF STEP
BW	BOTTOM OF WAL
CAL	CALIPER
CAP	CAPACITY
CF	CUBIC FEET
CHAM	CHAMFER
CIP	CAST IN PLACE
CJ	CONTROL JOINT
CL	CENTER LINE
CLR	CLEARANCE
CM	CENTIMETER
CO	CLEAN OUT
COMP	COMPACTED
CONC	CONCRETE
CONST	CONSTRUCTION
CONT	CONTINUOUS
CONTR	CONTRACTOR
CU	CUBIC
CY	CUBIC YARD
DEMO	DEMOLISH, DEMOLITION
DIA	DIAMETER
DIM	DIMENSION
DTL	DETAIL
DWG	DRAWING
E	EAST
EA	EACH
EJ	EXPANSION JOINT
EL	ELEVATION
ELEC	ELECTRICAL
ENG	ENGINEER
EQ	EQUAL
EQUIP	EQUIPMENT
EST	ESTIMATE
E.W.	EACH WAY
EXIST	EXISTING
EXP	EXPANSION, EXPOSED
FFE	FINISHED FLOOR ELEVATION
FG	FINISHED GRADE
FIN	FINISH
FL	FLOW LINE
FOW	FACE OF WAL
FT	FOOT (FEET)
FTG	FOOTING
GA	GAUGE
GAL	GALVANIZED
GEN	GENERAL
HORIZ	HORIZONTAL
HP	HIGH POINT
HT	HEIGHT
ID	INSIDE DIAMETER
INV	INVERT ELEVATION
IN	INCH(ES)
INCL	INCLUDE(D)
IRR	IRRIGATION
JT	JOINT
LIN	LINEAR
LF	LINEAR FEET
LP	LOW POINT
LT	LIGHT
MATL	MATERIAL
MAX	MAXIMUM
MEMB	MEMBRANE
MD	MAIN DISCONNECT SWITCH
MH	MANHOLE
MIN	MINIMUM
MISC	MISCELLANEOUS
N	NORTH
NIC	NOT IN CONTRACT
NO	NUMBER
NOM	NOMINAL
NTS	NOT TO SCALE
OC	ON CENTER
OD	OUTSIDE DIAMETER
OPP	OPPOSITE
PAR	PARALLEL
PC	POINT OF CURVATURE
PE	POLYURETHANE
PERF	PERFORATED
PED	PEDESTRIAN
PI	POINT OF INTERSECTION
PL	PROPERTY LINE
PT	POINT, POINT OF TANGENCY
PVC	POLYVINYL CHLORIDE
PVMT	PAVEMENT
PVR	PAVER
QTY	QUANTITY
R	RADIUS
REF	REFERENCE
REINF	REINFORCE(D)
REQ'D	REQUIRED
REV	REVISION, REVISED
ROW	RIGHT OF WAY
RT	RIGHT
S	SOUTH
SS	SANITARY SEWER
SCH	SCHEDULE
SD	STORM DRAIN
SEC	SECTION
SF	SQUARE FOOT (FEET)
SHT	SHEET
SIM	SIMILAR
SNT	SEALANT
SPECS	SPECIFICATIONS
SQ	SQUARE
ST	STORM SEWER
SY	SQUARE YARD
STA	STATION
STD	STANDARD
STL	STEEL
STRL	STRUCTURAL
SYM	SYMMETRICAL
T&B	TOP AND BOTTOM
TBC	TOP OF BACK CURB
TC	TOP OF CURB
TF	TOP OF FOOTING
TRANS	ELECTRIC TRANSFORMER
TOC	TOP OF CONCRETE
TOPO	TOPOGRAPHY
TSL	TOP OF SLAB
TR	TOP OF RAMP
TS	TOP OF STEP
TW	TOP OF WAL
TYP	TYPICAL
VAR	VARIES
VERT	VERTICAL
VEH	VEHICLE
VOL	VOLUME
W/	WITH
W/O	WITHOUT
WT	WEIGHT
WWF	WELDED WIRE FABRIC
YD	YARD
@	AT

ACETO LANDSCAPE ARCHITECTS
207 221 3390 | ACETOLA.COM

SEAL

LOCATION

64 PINE STREET
PORTLAND, ME 04102

PREPARED FOR

64 PINE STREET LLC
104 WASHINGTON AVENUE
PORTLAND, MAINE 04101

REVISIONS	DATE
SITE PLAN SUBMISSION	11.02.23
CITY COMMENT REV.	02.20.24

ISSUE DATE

FEBRUARY 20, 2024

SHEET TITLE

NOTES
FOR CONCEPTUAL INTENT ONLY

SHEET INFORMATION

L 0-01

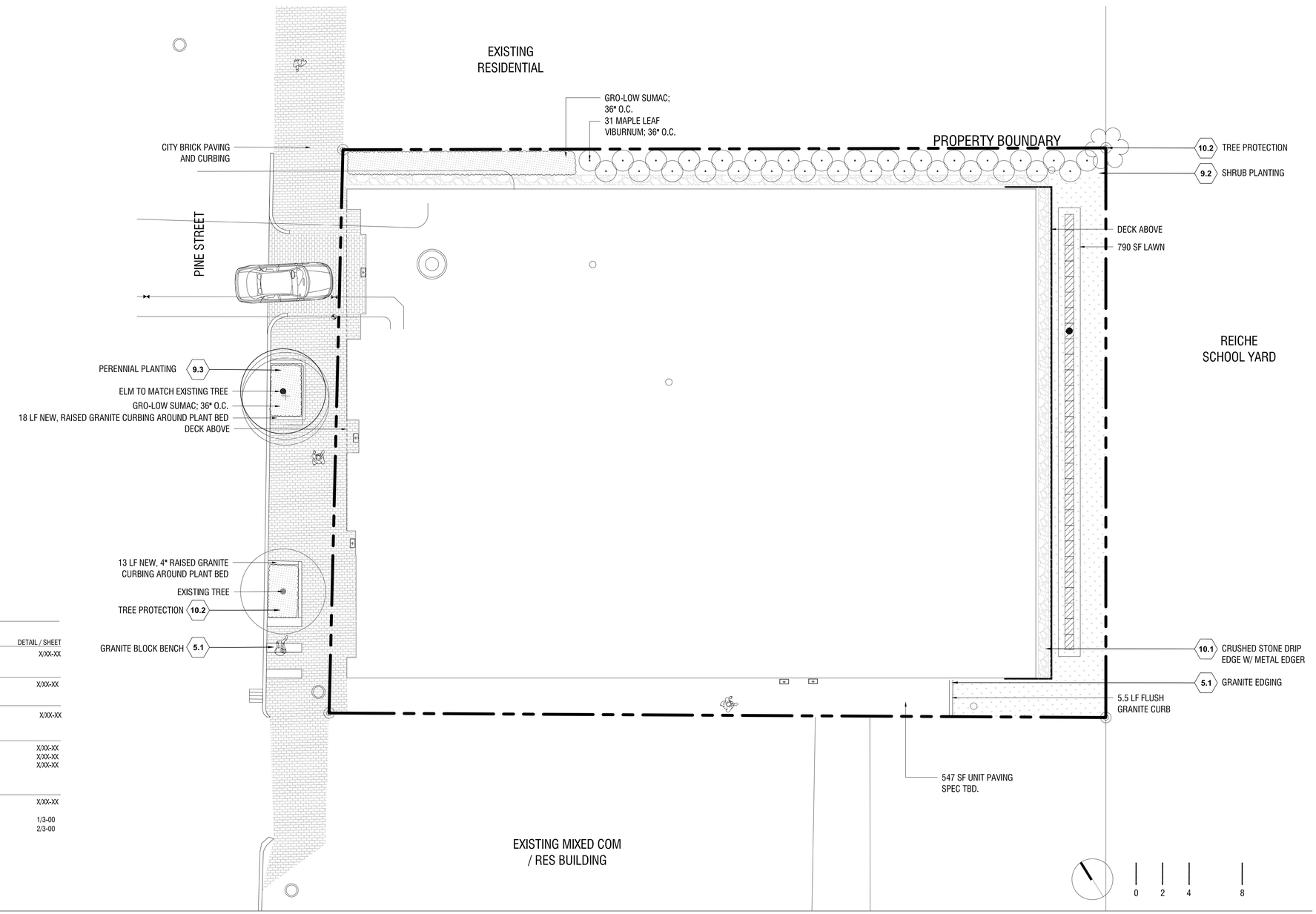
NOT FOR CONSTRUCTION

MATERIALS LEGEND

SYMBOL	
	GROUND PLANTING AREA - APPROX. 190 SF
	ROOF PLANTING AREA - APPROX. 1550 SF
	CONCRETE PAVERS - APPROX. 3000 SF
	SEDUM TRAYS - APPROX. XXX SF
	WOOD DECKING - APPROX. 1250 SF
	TURF ON STRUCTURE - APPROX. 373SF
	LAWN SEEDING - APPROX. 790 SF
	CRUSHED STONE - APPROX. 279 SF

SITE KEYNOTES:

		DETAIL / SHEET
1.0	PAVEMENTS, RAMPS, CURBS	
1.1	GRANITE EDGING	X/XX-XX
1.2	FLUSH GRANITE CURBING	X/XX-XX
1.3	CONCRETE PAVING ON PEDESTAL	X/XX-XX
1.4	WOOD DECKING ON PEDESTAL	X/XX-XX
1.5	LAWN ON STRUCTURE	X/XX-XX
2.0	JOINTING	
X.X	NOT USED AT THIS TIME	X/XX-XX
3.0	STEPS	
X.X	NOT USED AT THIS TIME	X/XX-XX
4.0	SITE WALLS/ EMBANKMENTS	
X.X	NOT USED AT THIS TIME	X/XX-XX
5.0	SITE FURNITURE	
5.1	GRANITE BLOCK BENCH	X/XX-XX
5.2	ROOF PLANTER	X/XX-XX
5.3	DAY BED HAMMOCK	X/XX-XX
5.4	PERGOLA	X/XX-XX
5.5	GAS HEATER	X/XX-XX
5.6	GAS FIRE FEATURE	X/XX-XX
5.7	OUTDOOR KITCHEN	X/XX-XX
6.0	RAILINGS, BARRIERS, FENCING	
6.1	GLASS RAILING	X/XX-XX
7.0	SITE LIGHTING	
X.X	NOT USED AT THIS TIME	X/XX-XX
8.0	DRAINAGE	
X.X	NOT USED AT THIS TIME	X/XX-XX
9.0	PLANTING AND LANDSCAPE	
9.1	SEDUM TRAY	X/XX-XX
9.2	SHRUB PLANTING	X/XX-XX
9.3	PERENNIAL PLANTING	X/XX-XX
10.0	MISCELLANEOUS ELEMENTS	
10.1	CRUSHED STONE DRIP EDGE W/ METAL EDGER	X/XX-XX
10.2	TREE PROTECTION: STREET TREE	1/3-00
10.3	TREE PROTECTION & PRUNING	2/3-00



ACETO LANDSCAPE ARCHITECTS
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SEAL

LOCATION

64 PINE STREET
PORTLAND, ME 04102

PREPARED FOR

64 PINE STREET LLC
104 WASHINGTON AVENUE
PORTLAND, MAINE 04101

REVISIONS	DATE
SITE PLAN SUBMISSION	11.02.23
CITY COMMENT REV.	02.20.24

ISSUE DATE

FEBRUARY 20, 2024

SHEET TITLE

GROUND MATERIALS PLAN

SHEET INFORMATION

L 1-00

NOT FOR CONSTRUCTION

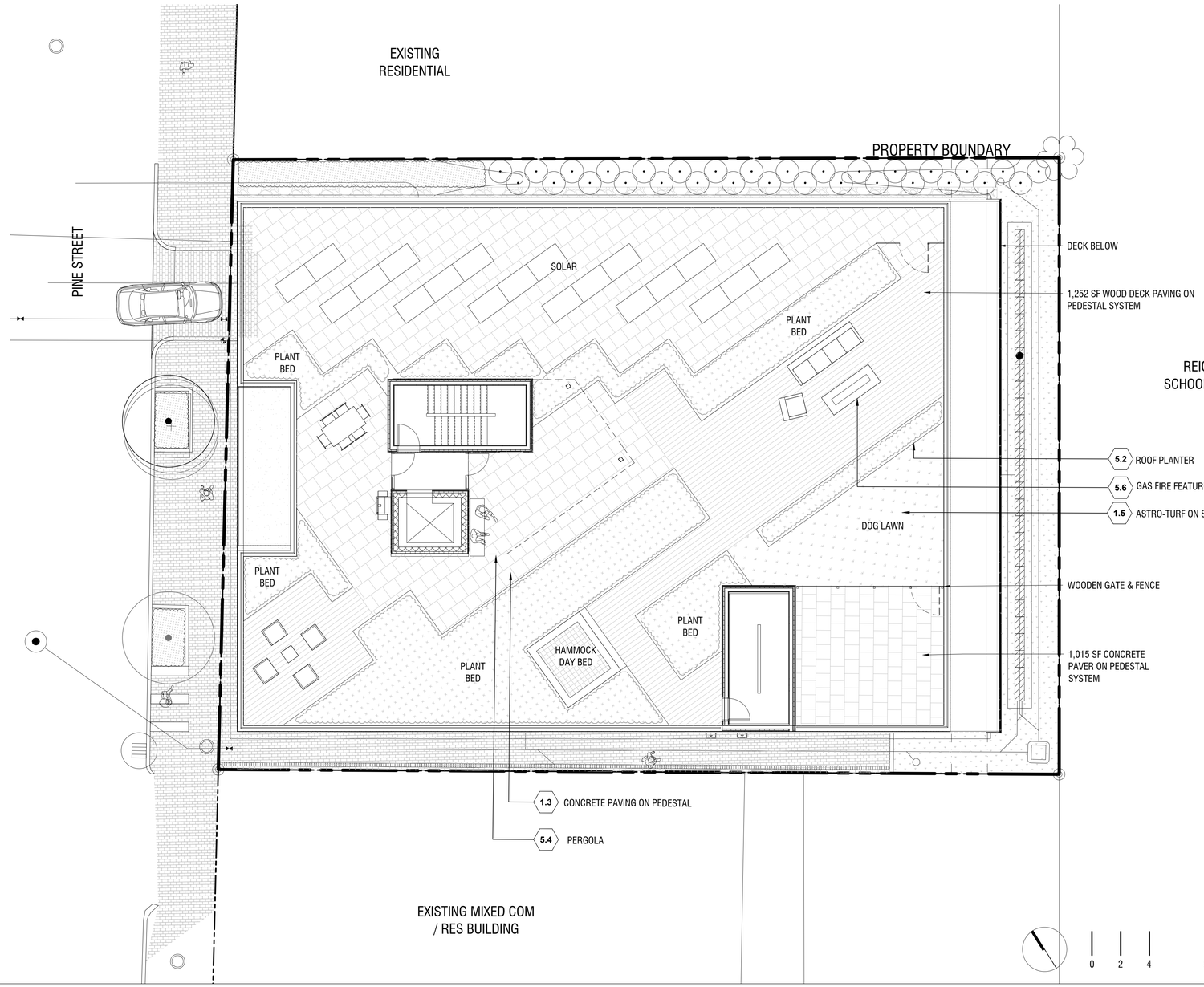
MATERIALS LEGEND

SYMBOL	
	GROUND PLANTING AREA - APPROX. 190 SF
	ROOF PLANTING AREA - APPROX. 1550 SF
	CONCRETE PAVERS - APPROX. 3000 SF
	SEDUM TRAYS - APPROX. XXX SF
	WOOD DECKING - APPROX. 1250 SF
	TURF ON STRUCTURE - APPROX. 373SF
	LAWN SEEDING - APPROX. 790 SF
	CRUSHED STONE - APPROX. 279 SF

SITE KEYNOTES:

		DETAIL / SHEET
1.0	PAVEMENTS, RAMPS, CURBS	
1.1	GRANITE EDGING	X/XX-XX
1.2	FLUSH GRANITE CURBING	X/XX-XX
1.3	CONCRETE PAVING ON PEDESTAL	X/XX-XX
1.4	WOOD DECKING ON PEDESTAL	X/XX-XX
1.5	LAWN ON STRUCTURE	X/XX-XX
2.0	JOINTING	
X.X	NOT USED AT THIS TIME	X/XX-XX
3.0	STEPS	
X.X	NOT USED AT THIS TIME	X/XX-XX
4.0	SITE WALLS/ EMBANKMENTS	
X.X	NOT USED AT THIS TIME	X/XX-XX
5.0	SITE FURNITURE	
5.1	GRANITE BLOCK BENCH	X/XX-XX
5.2	ROOF PLANTER	X/XX-XX
5.3	DAY BED HAMMOCK	X/XX-XX
5.4	PERGOLA	X/XX-XX
5.5	GAS HEATER	X/XX-XX
5.6	GAS FIRE FEATURE	X/XX-XX
5.7	OUTDOOR KITCHEN	X/XX-XX

		DETAIL / SHEET
6.0	RAILINGS, BARRIERS, FENCING	
6.1	GLASS RAILING	X/XX-XX
7.0	SITE LIGHTING	
X.X	NOT USED AT THIS TIME	X/XX-XX
8.0	DRAINAGE	
X.X	NOT USED AT THIS TIME	X/XX-XX
9.0	PLANTING AND LANDSCAPE	
9.1	SEDUM TRAY	X/XX-XX
9.2	SHRUB PLANTING	X/XX-XX
9.3	PERENNIAL PLANTING	X/XX-XX
10.0	MISCELLANEOUS ELEMENTS	
10.1	CRUSHED STONE DRIP EDGE W/ METAL EDGER	X/XX-XX
10.2	TREE PROTECTION	1/3-00



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SEAL

LOCATION

64 PINE STREET
PORTLAND, ME 04102

PREPARED FOR

64 PINE STREET LLC
104 WASHINGTON AVENUE
PORTLAND, MAINE 04101

REVISIONS	DATE
SITE PLAN SUBMISSION	11.02.23
CITY COMMENT REV.	02.20.24

ISSUE DATE

FEBRUARY 20, 2024

SHEET TITLE

ROOF MATERIALS PLAN

SHEET INFORMATION

L 1-01

NOT FOR CONSTRUCTION

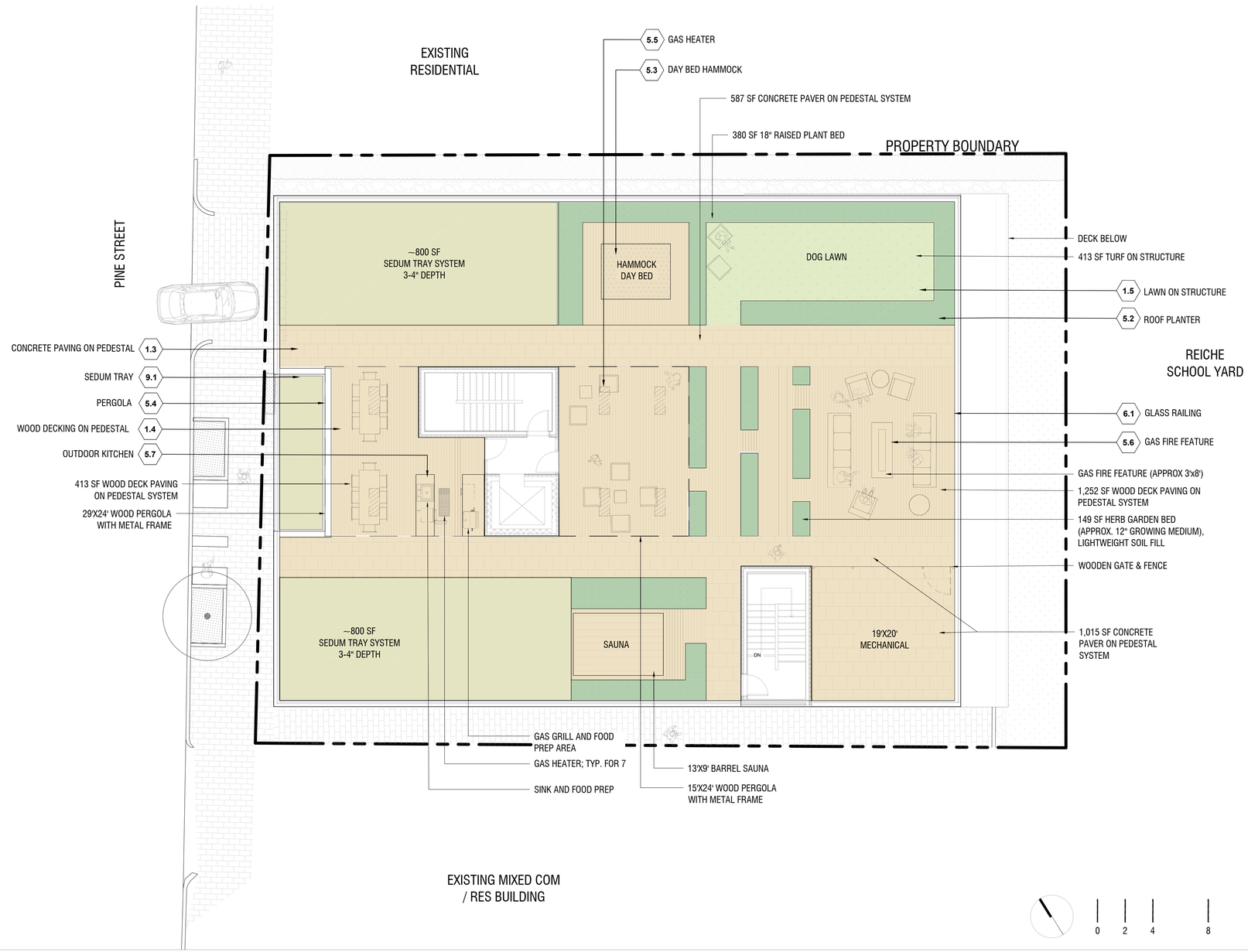
ROOF MATERIALS & LOAD ESTIMATE

SEEDUM TRAYS: APPROX 29-50 PSF	1,604 SF
LAWN ON STRUCTURE APPROX 50-60 PSF +LIVE LOAD	413 SF
RAISED PLANTERS: APPROX 80-90 PSF	694 SF
PEDESTAL PAVING: APPROX 25 PSF + LIVE LOAD	3,414 SF

SITE KEYNOTES:

		DETAIL / SHEET
1.0	PAVEMENTS, RAMPS, CURBS	
1.1	GRANITE EDGING	X/XX-XX
1.2	FLUSH GRANITE CURBING	X/XX-XX
1.3	CONCRETE PAVING ON PEDESTAL	X/XX-XX
1.4	WOOD DECKING ON PEDESTAL	X/XX-XX
1.5	LAWN ON STRUCTURE	X/XX-XX
2.0	JOINTING	
X.X	NOT USED AT THIS TIME	X/XX-XX
3.0	STEPS	
X.X	NOT USED AT THIS TIME	X/XX-XX
4.0	SITE WALLS/ EMBANKMENTS	
X.X	NOT USED AT THIS TIME	X/XX-XX
5.0	SITE FURNITURE	
5.1	GRANITE BLOCK BENCH	X/XX-XX
5.2	ROOF PLANTER	X/XX-XX
5.3	DAY BED HAMMOCK	X/XX-XX
5.4	PERGOLA	X/XX-XX
5.5	GAS HEATER	X/XX-XX
5.6	GAS FIRE FEATURE	X/XX-XX
5.7	OUTDOOR KITCHEN	X/XX-XX

		DETAIL / SHEET
6.0	RAILINGS, BARRIERS, FENCING	
6.1	GLASS RAILING	X/XX-XX
7.0	SITE LIGHTING	
X.X	NOT USED AT THIS TIME	X/XX-XX
8.0	DRAINAGE	
X.X	NOT USED AT THIS TIME	X/XX-XX
9.0	PLANTING AND LANDSCAPE	
9.1	SEDUM TRAY	X/XX-XX
9.2	SHRUB PLANTING	X/XX-XX
9.3	PERENNIAL PLANTING	X/XX-XX
10.0	MISCELLANEOUS ELEMENTS	
10.1	CRUSHED STONE DRIP EDGE W/ METAL EDGER	X/XX-XX



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SEAL

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PREPARED FOR

64 PINE STREET LLC
104 WASHINGTON AVENUE
PORTLAND, MAINE 04101

REVISIONS	DATE
SITE PLAN SUBMISSION	11.02.23

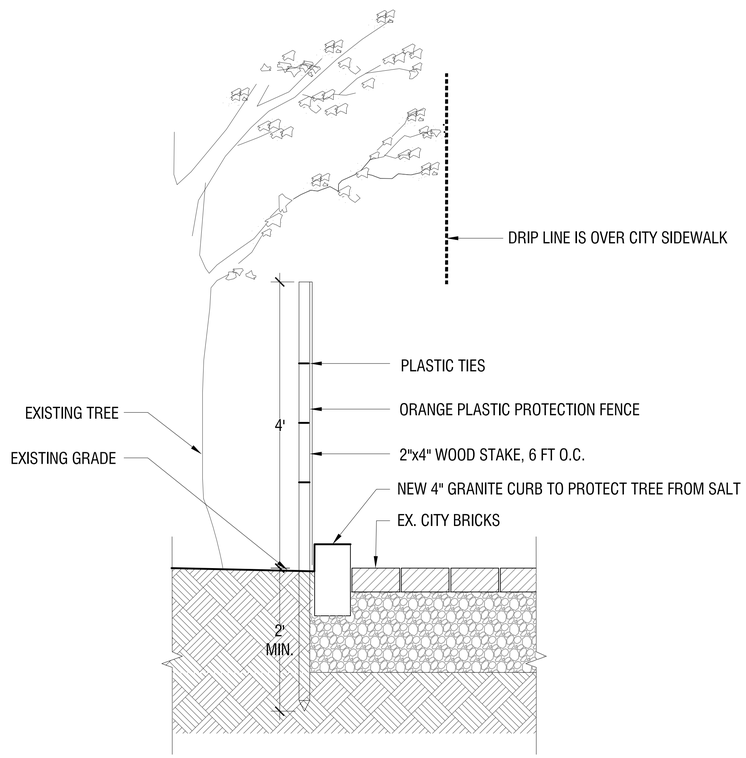
ISSUE DATE

NOVEMBER 02, 2023

SHEET TITLE

LOAD EXHIBIT

SHEET INFORMATION

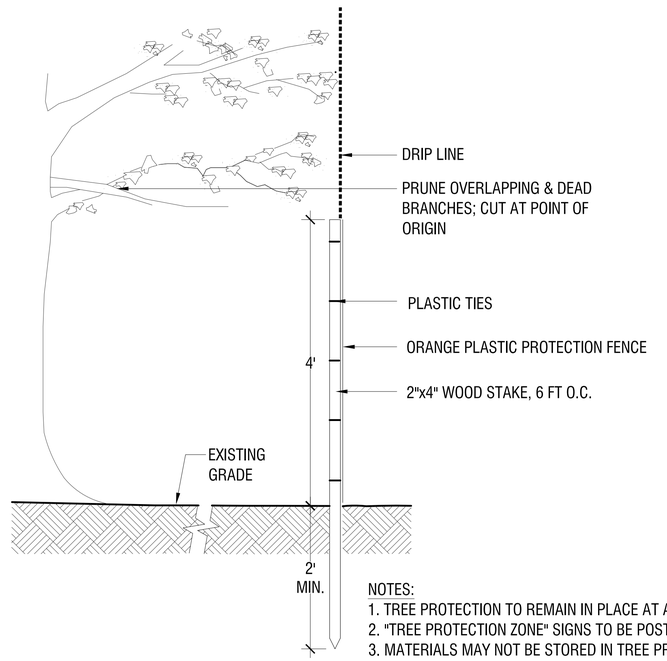


NOTES:
1. TREE PROTECTION TO REMAIN IN PLACE AT ALL TIMES
2. "TREE PROTECTION ZONE" SIGNS TO BE POSTED AROUND FENCED AREA
3. MATERIALS MAY NOT BE STORED IN TREE PROTECTION ZONE

1 TREE PROTECTION: STREET TREE

10.2

1":1'-0"



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1. TREE PROTECTION TO REMAIN IN PLACE AT ALL TIMES
2. "TREE PROTECTION ZONE" SIGNS TO BE POSTED AROUND FENCED AREA
3. MATERIALS MAY NOT BE STORED IN TREE PROTECTION ZONE
4. PRUNING SHALL TAKE PLACE IN LATE WINTER EARLY SRPING TO ENSURE LONG-TERM HEALTH OF TREE

2 TREE PROTECTION AND PRUNING

10.3

1":1'-0"

SITE KEYNOTES:

		DETAIL / SHEET
1.0	PAVEMENTS, RAMPS, CURBS	
1.1	GRANITE EDGING	X/XX-XX
1.2	FLUSH GRANITE CURBING	X/XX-XX
1.3	CONCRETE PAVING ON PEDESTAL	X/XX-XX
1.4	WOOD DECKING ON PEDESTAL	X/XX-XX
1.5	LAWN ON STRUCTURE	X/XX-XX
2.0	JOINTING	
X.X	NOT USED AT THIS TIME	X/XX-XX
3.0	STEPS	
X.X	NOT USED AT THIS TIME	X/XX-XX
4.0	SITE WALLS/ EMBANKMENTS	
X.X	NOT USED AT THIS TIME	X/XX-XX
5.0	SITE FURNITURE	
5.1	GRANITE BLOCK BENCH	X/XX-XX
5.2	ROOF PLANTER	X/XX-XX
5.3	DAY BED HAMMOCK	X/XX-XX
5.4	PERGOLA	X/XX-XX
5.5	GAS HEATER	X/XX-XX
5.6	GAS FIRE FEATURE	X/XX-XX
5.7	OUTDOOR KITCHEN	X/XX-XX

		DETAIL / SHEET
6.0	RAILINGS, BARRIERS, FENCING	
6.1	GLASS RAILING	X/XX-XX
7.0	SITE LIGHTING	
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8.0	DRAINAGE	
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9.0	PLANTING AND LANDSCAPE	
9.1	SEDUM TRAY	X/XX-XX
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10.2	TREE PROTECTION: STREET TREE	1/3-00
10.3	TREE PROTECTION & PRUNING	2/3-00

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FEBRUARY 20, 2024

SHEET TITLE

LANDSCAPE DETAILS

SHEET INFORMATION

L 3-00

Memorandum
Planning & Urban Development Department

To:	Chair Mazer & Members of the Planning Board
From:	Zach Powell
Date:	March 8, 2024
Re:	244 Cumberland Avenue – Phase 2 of 385 Congress Street MDP
Project ID:	PL-002779-2024
Meeting Date:	March 12, 2024

I. INTRODUCTION

385 Congress LLC and Lincoln Avenue Communities have submitted a Major Site Plan application to facilitate the construction of a ±54,872 square foot age-restricted multi-family building with 55 dwelling units and 65 structured parking spaces. This application is the second site plan application reviewed under the 385 Congress Street Master Development Plan (MDP), which was approved by the Planning Board on August 9, 2022.

Figure 1: Rendering of the Proposed Building at the Intersection of Cumberland Avenue & Myrtle Street.

This memorandum is intended to provide an overview of the project and discuss the initial review by City Staff.

The Planning and Urban Development Department mailed 122 notices advertising this meeting to property owners within 500 feet of the site. A legal advertisement ran in the March 2, 2024, and March 5, 2024 editions of the *Portland Press Herald*.

Applicant: 385 Congress, LLC & Lincoln Avenue Communities
Applicant Representative: Dan Riley, Sebago Technics

II. REQUIRED REVIEWS & PROJECT DATA

Review	Applicable Standards
Major Site Plan Review	§14.6 of the Land Use Code
Design Review	• 385 Congress Street MDP Design Standards (Attachment #) • B-3 & Multiple-Family Design Standards (§b & §i of the Design Manual) • Historic Preservation Advisory Review (§14.6.4(E)(2) of the Land Use Code)
Traffic Movement Permit Amendment	§14.3.2. of the Technical Manual

Existing Zoning	B-3 Downtown Commercial Zone Downtown Entertainment Overlay Zone	
Property Size	19,570 square feet (0.45 acres)	
Existing Use	Structured & Surface Parking	
Proposed Use	Multi-family	54,872 square feet
	Parking	29,322 square feet (65 spaces)

	Existing	Proposed	Net Change
Building Footprint	7,899 square feet	19,750 square feet	+11,851 square feet
Building Floor Area	0 square feet	54,872 square feet	+54,872 square feet
Parking Spaces	6 structured 30 surface	65 structured 0 surface	+29
Bicycle Parking Spaces	-	20	+20
EV Charging Stations	-	13	+13

III. RIGHT, TITLE, AND INTEREST

The current owner of the property (385 Congress LLC) has submitted a letter (Attachment C) stating that 385 Congress LLC has entered into a purchase agreement with Lincoln Avenue Communities to develop on the block in order to meet the inclusionary zoning requirements for future phases of the 385 Congress Street Master Development Plan (MDP). As part of the purchase agreement, 385 Congress LLC would sell the subject property below market-rate to Lincoln Avenue Communities, and Lincoln Avenue Communities would construct and sell the proposed 65 parking spaces back to 385 Congress LLC. 385 Congress LLC would lease back up to 15 parking spaces for the proposed development based on future need.

IV. FINANCIAL AND TECHNICAL CAPACITY

The applicant has provided a copy of the 2023 Lincoln Avenue Capital Annual Impact Report in Attachment G as demonstration of financial capacity.

Attachment H includes descriptions of the project team. The project team includes Lincoln Avenue Capital (Developers), Market Square Architects (Architecture), and Sebago Technics (Engineering). The combined experiences and portfolios of all partners demonstrate technical capacity.

V. SITE CONTEXT

The project site is 0.45 acres in area and is bounded by Myrtle Street to the South, Cumberland Avenue to the West, and private property to the North & East. Previously, the site was occupied by commercial and residential structures. In the 1960s, a portion of the site served as the printing facility for the Portland Press Herald. Currently occupied by surface and structured parking, totaling 36 spaces, which is utilized for both daily and monthly parking. The parking structure (±13,408 square feet) is proposed to be demolished to facilitate the development of the site.

The site serves as a transitional area in several regards, including:

- Transition from north to south: Two prominent blocks to the north contain no building coverage (Top of the Old Port Parking & Lincoln Park) whereas blocks to the south are densely developed (e.g., City Hall & Merrill Auditorium, the Press Hotel)
- Transition from west to east: Smaller-scale multi-family and institutional uses encompass much of the west side of Cumberland Avenue, whereas the scale of development notably increases east of Cumberland Avenue.
- Composition of City Blocks: Blocks to the west and south are occupied by numerous lots, whereas blocks to the east and north are encompassed by larger single lots, such as Central Fire Station, Top of the Old Port Parking, and Lincoln Park.

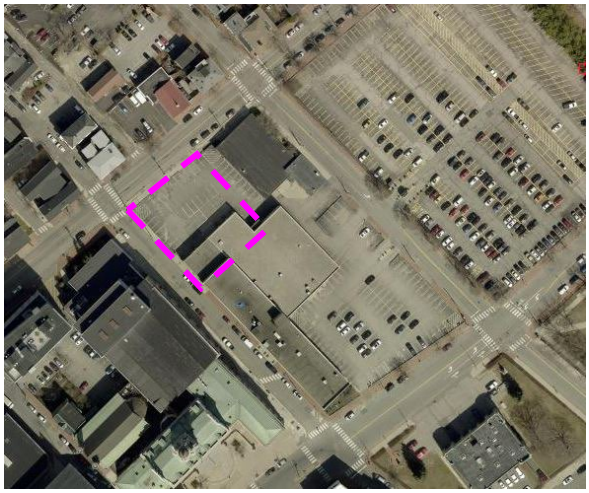


Figure 2: Aerial image of site.

- Transition from Downtown to the Bayside Neighborhood
- Auto-centric uses & building design to the north and northeast to urban, pedestrian-oriented development to the west, south, and southeast

The subject block and immediate area are well-served by public transit. Approximately two blocks to the southwest is METRO PULSE at Elm Street (Downtown Transportation Center), the hub for METRO where bus routes, #2, #4, #5, #7, and the Husky Line begin and end their routes. METRO bus routes #1, #7, #8, #9A, #9B, and the Biddeford Saco Old Orchard Beach Transit 60 Green line can be accessed along Congress Street within one block of the site. South Portland Bus routes 21, 24A, and 24B can be accessed along Congress Street roughly two blocks southwest of the site. METRO bus route 8 is located along Cumberland Avenue less than one block from the site.

VI. MASTER DEVELOPMENT PLAN & PROPOSED DEVELOPMENT

I. Master Development Plan (MDP)

On August 9, 2022, the Planning Board approved the 385 Congress Street MDP. The approved MDP is comprised of four phases as shown in **Figure 3**. Development of the subject property was included as part of Phase 3. Phase 3 conceptually proposed the construction of a ±180,050 square foot, 13-story building with 97 condominium units (Condominium B and Levels 0-2 of Condominium C), 4 retail units totaling ±6,900 square feet, and 130 enclosed parking spaces. A combination of private open space for each unit and common open space on the podium along Cumberland Avenue for the development were proposed. Waivers were granted for maximum front setbacks along Cumberland Avenue and Myrtle Street to provide expanded pedestrian areas & promote street-level activation.

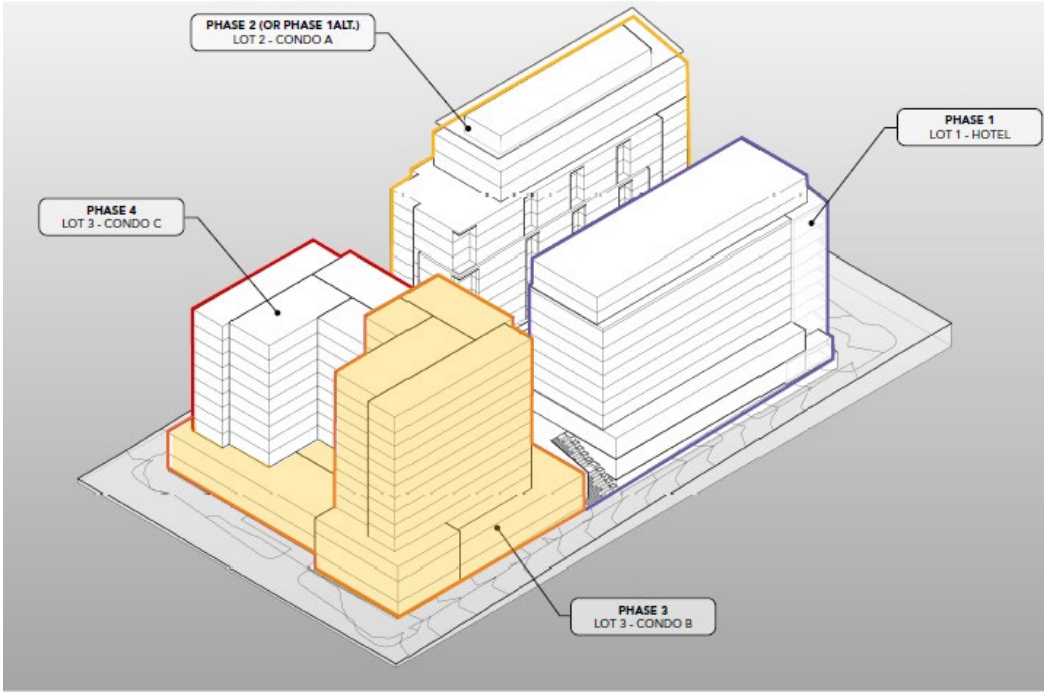


Figure 3: 385 Congress Street MDP Phasing Diagram, with Phase 3 highlighted in orange.

Figure 4: Rendering of proposed Phase 3 development including the construction of the podium level along the entire frontage of Cumberland Avenue and 10-story tower above.

Figure 5: Rendering of proposed development including the construction of a podium level to mid-block along Cumberland Avenue with a 5-story tower above.

II. Proposed Project

The subject application continues to propose a multi-family development with structured parking. Overall, the scale and extent of this phase has decreased in terms of height, number of parking spaces, and the number of dwelling units. Construction of the podium in the subject application only proposes to extend mid-block along Cumberland Avenue, whereas in the MDP, the podium to be developed as part of Phase three was shown extending to Pearl Street. Private open space is not provided for units as was originally depicted, although some units do contain a Juliet balcony. Common open space on the podium has shifted from along Cumberland Avenue to wrap around the interior portions of the building. Front setbacks that received waivers for expansion have been reduced from a maximum of 16 feet to 6 feet and are shown in a red outline in **Figure 8**.

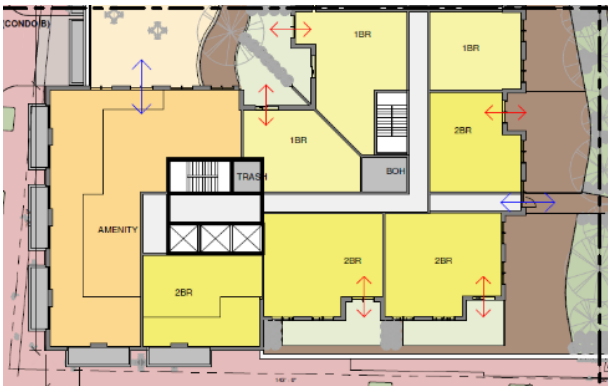


Figure 6: Rendered podium-level floor plan from MDP showing private patios for dwelling units, a common amenity space along Cumberland Avenue, and connection to the larger amenity deck for the MDP.

Figure 7: Podium-level floor plan for the proposed development showing common open space in green, with some units including doors that access the open space and some units having Juliet balconies.

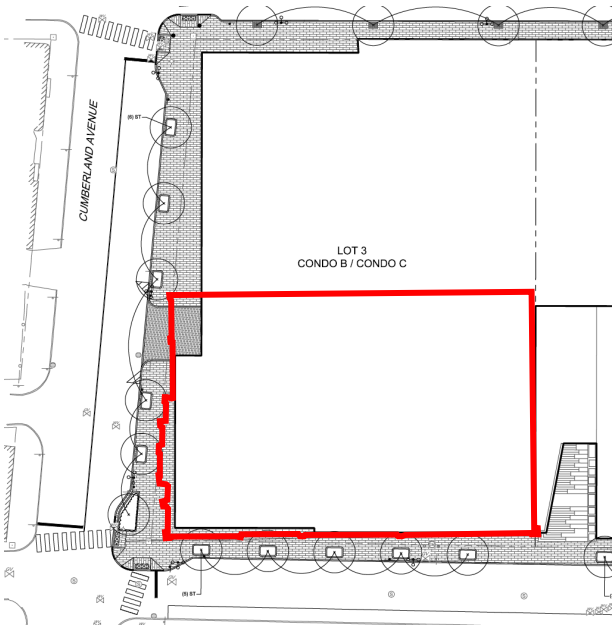


Figure 8: Site plan from MDP with expanded front setbacks and the proposed development building footprint outlined in red.

VII. ZONING ANALYSIS

The site is encompassed by the B-3 Downtown Business Zone and the Downtown Entertainment Overlay Zone. The purpose statement for the B-3 zone includes the following statements which are relevant to this proposal:

- *Encourage increased housing opportunity downtown for a diverse residential population;*
- *Enhance the pedestrian environment through the encouragement of intensive mixed-use activities, through the enhancement and maintenance of public and private open space, and through the enlivenment and increased attractiveness of the street environment;*
- *To encourage excellence in urban design;*

The zoning dimensional requirements are intentionally permissive in this urban downtown zone – in most cases the requirements are intended to create dense, taller buildings that fill the site and maintain a street wall line. Based upon the waivers granted during the review of the MDP and approval of the proposed subdivision, the submitted Major Site Plan application is mostly consistent with the zoning, including the B-3 zone purpose statement, use, dimensional standards, and the Downtown Height Overlay Map. Currently, the one zoning deficiency relates to the required street wall stepback along Myrtle Street.

The Downtown Height Overlay Map permits a maximum building height of up to 150 feet for this block, however there are separate stepback requirements, which limit the building height at the property boundary, and which require that the building be stepped back above that height. For this particular block, there is a stepback requirement along Myrtle Street, which goes into effect 72 feet east of Cumberland Avenue towards Congress Street. This stepback requires that the building be no more than 50 feet in height at the property boundary, and that no portion of building be above 50 feet unless stepped back a minimum of 15 feet from the edge of the Myrtle Street right-of-way. As proposed, the current stepback is 0 feet.

Table 1 - Zoning Dimensional Review (Article 7)

Dimensional Standards			
Standard	***Requirement***	***Proposed***	***Finding***
Street Frontage (Min)	*15 feet*	*290 feet*	Complies
Front Setback (Max)	*5 feet*	*6.5 feet*	MDP received waivers for expanded front setbacks.
Length of Undifferentiated Wall Along Publicly Accessible Way	*30 feet*	*17.5 feet*	Complies
Floor Area (Max)	*15,000 SF for each floor above 125 feet*	*Not Applicable*	Not Applicable
Structure Height (Max)	*150 feet*	*77 feet*	Complies
Street Wall Stepback (Downtown Height Overlay Map)	*Myrtle Street 72 feet east of the Intersection of Cumberland Avenue & Myrtle Street: 15 feet at 50 feet*	*Myrtle Street 72 feet east of the Intersection of Cumberland Avenue & Myrtle Street: 0 feet*	Does Not Comply
	All other frontages: 15 feet at 65 feet	*All other frontages: 15 feet at 65 feet*	Complies
Lot Coverage (Max)	*25% of lot area for portions of structures exceeding 125 feet in height*	*Not Applicable*	Not Applicable

VIII. DESIGN REVIEW

A design review & historic preservation advisory review was completed on February 28, 2024, conducted by Sean King, Urban Designer, Evan Schueckler, Historic Preservation Manager, and Zach Powell, Senior Planner. Key comments from the Design Review Memorandum (Attachment 3) are included below:

- Reorganization of ground-floor building programming towards a more pedestrian-oriented design, as depicted in the MDP (e.g., Shifting the utility alcove on Myrtle Street away from the front lot line, wrapping active uses around the corner of Cumberland Avenue & Myrtle Street)
- Maintaining expanded front setbacks (waivers for which were approved under the MDP) to facilitate streetscape improvements, given constraints related to street width & the necessity for street tree alternatives (e.g., planters, green wall feature)
- Request for additional information on changes to the common open space programming and an explanation as to why the proposed open spaces on the podium level do not connect
- Provide private amenity space for each unit through accessible balconies projecting or recessed from the façade as part of meeting multiple-family design standards for open space.
- Align with the surrounding architectural context through the use of a stronger base, middle, top design
- Unification of podium design with Phase 1 of the MDP (Hotel) (e.g., matching quality & type of masonry materiality)
- Expanding the use of the Ironspot brick to emphasize the intersection of Cumberland Avenue & Myrtle Street
- More consistent use of materiality and fenestration throughout the building
- Update elevations to incorporate an artistic treatment, landscape feature, or some combination to reduce the impact of northern & eastern interim blank facades

IX. TRAFFIC MOVEMENT PERMIT AMENDMENT

Given the changes in MDP phasing and the decreased scale of the proposed development, the Applicant has submitted an amendment request for the MDP Traffic Movement Permit. Changes to the sequencing of mitigation measures are included as part of the request, but no changes to the collective mitigation measures are proposed.

An updated Traffic Impact Analysis was submitted (Attachment I1) to assess changes in project impacts. Overall, the analysis concludes that the total number of anticipated trips has decreased, the level of service has improved (LOS E to A) through shifting one of the driveway entrances from Pearl Street to Cumberland Avenue, and no significant changes were documented in system capacity or corresponding trip assignments.

The analysis has been reviewed by Consulting Traffic Engineer Tom Errico, who concurs with the study methodology and conclusions. Given changes in traffic patterns in the City and how integral traffic light improvements were to the MDP TMP, a request has been made for a multi-way STOP warrant analysis at the intersection of Cumberland Avenue & Pearl Street. A multi-way STOP warrant analysis will help City Staff in determining whether the current traffic signal should be removed and replaced with a four-way STOP condition. If the analysis demonstrates that the existing traffic light should be replaced by a four-way STOP, Traffic Movement Permit conditions will be modified to remove mitigation related to the replacement of the traffic signal.

X. STAFF REVIEW

The proposed development has been reviewed by staff for conformance with the relevant review standards of §14.6 of the City's Land Use Code and an assessment of these standards is included below:

1. Transportation Standards (Section 14.6.1)

A. Impact on surrounding street systems

As mentioned above, Consulting Traffic Engineer, Tom Errico has reviewed the updates to the MDP TMP and has determined that the proposed changes from the original approval will generate less traffic and are not anticipated to result in negative impacts on the surrounding system.

Minor elements of the project, including the proposed conversion of two on-street parking spaces on Myrtle Street to be two 30-minute parking spaces, and the submission of turning templates for the intersection of Cumberland Avenue & Myrtle Street, are still under review.

B. Access and circulation

Included in the Parking section is a request for more information on the anticipated connections between the proposed parking garage and other portions of the site.

The Department of Public Works has requested updates to the proposed designs for crosswalks, curb ramps, and sidewalks along Cumberland Avenue, along with requirements to mill & overlay Myrtle & Cumberland Avenue after the buildout of all MDP phases.

C. Public transit access

A transit shelter is not required for the site since an existing shelter is located within ¼ of a mile of the site on Congress Street between Monument Square and Temple Street.

D. Parking

In the submitted site plan set, it is unclear whether the demolition of the two existing structures within the MDP boundary will occur as part of the proposed development or are tied to a different phase (i.e., previously approved hotel). The use of gravel as a parking surface is not permitted for parking lots intended for use ≥1 year. While portions of the building footprints to be demolished are proposed to be used for laydown areas, some of the areas are proposed to be used as interim parking. Given the introduction of new gravel areas, an updated erosion & sediment control plan shall be submitted to identify control measures to be used to mitigate post-demolition stormwater impacts.

The project proposes the construction of 63 automobile parking spaces when 1 per unit (55) is required. Given that the development is exceeding the minimum parking requirements by 10% or more, the submission of a parking study for the project is required to determine that the amount of parking is appropriate for the site. Parking space dimensions of 19' by 8.5' meet low-turnover minimum dimensions. The southern access aisle on the first floor does not meet the minimum width for a two-way aisle (24' required, 12' 8" proposed), as well as a number of the proposed aisle widths on the second story of the parking garage.

The proposed connection on the first-floor garage to the parking garage for the hotel should be identified, along with any proposed signage, physical barriers between the hotel & condo garage, and

safety measures (e.g., convex mirrors) to mitigate negative interactions between frequent valet drivers & residents.
The striping for the second-story parking does not enable the anticipated connection to a future condominium phase & associated parking. Updated application materials should revise striping to demonstrate the anticipated striping & connection point to the later condominium parking garage.

The proposed bicycle parking does not comply with the following Technical Manual standards:

§1.12.1.

- Separation from car parking by a physical barrier (No physical barrier is proposed between the interior bicycle spaces and adjacent parking spaces & access aisle)
- Be provided under covered areas and/or in secure storage lockers or rooms, if intended for long-term use (Some of the proposed spaces are located within the City right-of-way)

§1.12.4

- Provide directional signage if parking is not directly visible from the public right-of-way (No directional signage is included in the site plan set and/or architectural drawings)

Additionally, detail drawings are not provided for the racks proposed within the garage space. Staff recommends the inclusion of a grade-separated pedestrian connection to the proposed bicycle storage and consideration of relocating the proposed bicycle parking spaces to another portion of the ground floor.

A total of 14 electric vehicle (EV) automobile parking spaces are proposed when a minimum of 13 is required.

E. Transportation demand management (TDM)
Based on the proposed uses, the project is not required to design and implement a Transportation Demand Management Plan. Staff encourages the implementation of TDM strategies given the requirement for a parking study.

2. Environmental Quality Standards (Section 14.6.2)

A. Preservation of significant natural features
Not applicable since the site does not contain any existing significant natural features.

B. Landscape preservation
While the project site does not include any landscaping, removal of six existing on-site trees on other portions of the MDP site is shown on the site plan set. The trees proposed for removal are below 10" DBH. Removal of these trees facilitates an improved streetscape plan on Pearl and Congress Street that provides a more robust tree planting program & improved street-level activation.

C. Site landscaping and buffers
The submitted design includes a utility alcove along Myrtle Street that is partially screened by metal fencing. Staff find this approach to be ineffective at meeting screening requirements for ground-mounted utilities. Staff recommend that the utilities be relocated to the interior of the site and that the

design for this space be revised to be more pedestrian-oriented. This may be achieved for example, through the continuation of the masonry building wall with storefront windows.

A total of 55 street trees are required for the site based upon the number of residential units being proposed. Two street trees are proposed along Cumberland Avenue, which is based upon a previous recommendation from the City Arborist that street trees on Myrtle Street are not viable. Removal of the tree wells that are proposed in the curb bumpout is also recommended based upon space constraints and the plantings that are proposed.

In keeping with the use of planters that were approved for the Hotel along the Myrtle Street frontage, the application should include similar planters as the hotel along Myrtle Street. Consideration should be made for trellis or green wall features on both frontages and/or as a temporary solution on the northern elevation.

D. Water quality, Stormwater management, and Erosion Control

As mentioned under Parking, Consulting Stormwater Engineer Lauren Swett has requested that an Erosion & Sediment Control Plan be submitted to better outline what measures are proposed for the construction of the new building, as well as the demolition of the existing structures.

Ongoing work is continuing with Water Resources Staff on future stormwater infrastructure connections, as well as the review of an Ability to Serve application with the Portland Water District.

3. Public Infrastructure and Community Safety Standards (Section 14.6.3)

A. Consistency with City Master Plans

The Application is consistent with the Peninsula Transit Plan (2009) and One Climate Futures (2021) by proposing the construction of denser infill development within a walkable, transit-oriented location. The project supports several Comprehensive Plan goals including:

Housing

- "Increase, preserve, and modify the overall supply of housing city-wide to meet the needs, preferences and financial capabilities of all Portland residents"
- "Encourage additional contextually appropriate housing density in and proximate to neighborhood centers, concentrations of services, and transit nodes and corridors as a means of supporting complete neighborhoods."
- "Pursue policies to enable people who work in Portland to have the option to live in Portland."

Support Age-Friendly Housing Options

- "Create, promote, and facilitate safe, affordable, and practical housing solutions that will meet the evolving needs of Portland residents as they age."

B. Public safety and fire prevention

A new hydrant is proposed to be installed along Cumberland Avenue near the building entrance. As mentioned under Site Landscaping and Buffers, removal of the proposed tree planters in the bump out is requested as part of a larger reconfiguration and will provide the minimum 6 feet of clearance around the hydrant.

Two sides of the building are accessible from public roads and the building design does not present impediments to emergency response activities.

The Applicant shall confirm that the proposed elevators will be sized to accommodate 7' by 2' stretchers and that coordination has begun with Charles Wordell of the Department of Public Works to establish an E-911 address.

C. Availability and capacity of public utilities

The Applicant has submitted an Ability to Serve application with the Portland Water District and has contacted CMP during the MDP process about securing service for the site.

Copies of ability to serve letters from the Portland Water District and CMP will be required to be submitted prior to approval or recommended as a condition of approval.

4. Site Design Standards (Section 14.6.4)

A. Massing, ventilation, and wind impact

Based on the previous review during the MDP and the reduction in building height, the bulk, location, and height of the proposed building are not anticipated to result in negative effects on health, safety, or diminution in property value.

As requested as part of the design memorandum, updated roof & mechanical equipment screening plans have been requested to better understand the visual and ventilation impacts.

B. Shadows

Not applicable.

C. Snow and ice loading

City staff is requesting that the applicant submit additional information on how snow and ice loading will be handled for the podium level.

D. View corridors

The site is located adjacent to the Cumberland Avenue View Corridor but does not propose projections into the City right-of-way that would result in impacts to the visibility of the corridor.

E. Historic resources

The project is not located in a locally designated historic district but is located within 100 feet of the Congress Street Historic District. An advisory review of the application was completed as part of the design review memorandum.

The advisory review recommended clarifying the application of a base | middle | top building design, greater consistency in fenestration patterns and siding materiality, and improved street-level design.

F. Exterior lighting

Four Downtown Decorative street lights are included between Myrtle & Cumberland Avenue at a maximum height of 30 feet. In concert with the street lights, four wallpacks are proposed. While the wallpacks mostly meet site lighting standards, the inclusion of the wallpack cut sheet in the site plan set or photometric plan is required to confirm a maximum CCT of 3000K.

G. Noise and vibration

As requested as part of the design memorandum, updated roof & mechanical equipment screening plans have been requested to better understand the visual and ventilation impacts.

H. Signage and wayfinding

As mentioned in the transportation standards, signage updates will need to be made to better identify enclosed bicycle parking spaces and support safer interactions between pedestrians, cyclists & motorists in the garage.

As part of meeting the MDP design standards, the design memorandum recommends the integration of building entrance signage into the canopy to align with other buildings in the MDP.

I. Design standards

Comments on the review of the design of the structure are included in Section VIIII of this memo.

XI. NEIGHBORHOOD MEETING & PUBLIC COMMENT

The applicant held a Neighborhood Meeting on March 7th. Planning Staff have requested copies of meeting materials and an overview of the meeting will be provided at the March 12th workshop.

As of the writing of this memo, the Planning & Urban Development Department has not received public comments for this application.

XII. NEXT STEPS

Following the workshop, the Applicant will incorporate feedback from the Board and continue to address Staff comments as part of resubmission. Following a complete resubmission by the Applicant, Planning Staff will schedule a subsequent Planning Board meeting.

XIII. ATTACHMENTS

STAFF ATTACHMENTS

1. 385 Congress Street MDP Design Review Memorandum
2. City Zoning & Site Plan Worksheet
3. Design Review Memorandum
4. Staff Comments

APPLICANT DOCUMENTS

A. Project Description
B. Major Site Plan Checklist
C. Right, Title & Interest
D. Permitting & Approvals
E. Zoning Analysis Table
F. Existing and Proposed Easements
G. Financial Capacity
H. Technical Capability
I. Impact on Surrounding Streets
I1. Revised Traffic Memorandum

J. Access and Circulation
K. Public Transit.
L. Off-street Parking
M. Preservation of Natural Features
N. Landscape Preservation
O. Site Landscaping and Buffers
P. Water Quality, Stormwater, and Erosion Control
P1. Stormwater Management Report
Q. Consistency with Master Plans
R. Public Safety and Fire Prevention
S. Public Utilities
S1. Wastewater Capacity Application
T. Massing, Ventilation, and Wind Impacts
U. Building Height Average Grade Narrative & Diagrams
V. Shadows
W. Snow and Ice Loading
X. View Corridor
Y. Historic Resources
Z. Noise and Vibration
AA. Signage and Wayfinding
BB. Design & Site Plan Standards
CC. Construction Management Plan

APPLICANT DOCUMENTS

P1. Site Plan Set – Cover Sheet
P2. Site Plan Set- General Notes, Legend and Abbreviations
P3. Site Plan Set - Demolition Plan
P4. Site Plan Set -Overall Site Plan
P5. Site Plan Set – Site Plan - Level 0
P6. Site Plan Set – Overall Grading Plan
P7. Site Plan Set – Grading Plan Level 0
P8. Site Plan Set – Utility Plan
P9. Site Plan Set – Myrtle Street Plan & Profile
P10. Site Plan Set – Cumberland Avenue Plan & Profile
P11. Site Plan Set – Utility Schedules
P12. Site Plan Set – Landscape Plan
P13. Site Plan Set – Erosion Control Notes and Details
P14. Site Plan Set – Details 1
P15. Site Plan Set – Details 2
P16. Site Plan Set – Details 3
P17. Site Plan Set – Details 4
P18. Site Plan Set – Details 5
P19. Site Plan Set – Details 6
P20. Site Plan Set – Amended Subdivision Plan
P21. Site Plan Set - Easement Plan Lot 3
P22. Site Plan Set – Traffic Signal Plan of Cumberland Avenue at Pearl Street

P23. Photometric Plan
P24. Floor Plans – Lower Amenity/Garage
P25. Floor Plans – Garage
P26. Floor Plans – Level 1
P27. Floor Plans – Level 2
P28. Floor Plans – Level 3
P29. Floor Plans – Level 4
P30. Floor Plans – Level 5
P31. Elevations – South & West
P32. Elevations – North & East
P33. Rendering- Perspective at Corner of Cumberland Avenue & Myrtle Street
P34. Rendering – Perspective along Myrtle Street

Att. 1

Subject:	385 Congress Street – Master Development Plan
Zone:	B3
Date of Review:	Tuesday, August 2, 2022 Design Review
Reviewer(s):	Sean King (Urban Designer), Zachary Powell (Senior Planner), Kevin Kraft (Deputy Director)
Project ID:	PL-001970-2022

I. INTRODUCTION

The project at 385 Congress Street is subject to the Master Development Plan Review Standards, Land Use Code section 14.7.5 Design. The project is also within 100' of a historic district and included an advisory historic preservation design review.

The proposed Master Development Plan for a mixed-use hotel and condominium is only reviewed according to the Master Development Plan criteria. The project will be subject to future staff design review subject to the design standards of the City of Portland *Design Manual – **[b] B-3 Downtown Business Zone, Appendix 1***. Staff recommend the MDP approval include design guidelines that will apply to all subsequent site plan applications.

Based on the revised submission from August 1, 2022 and Planning Board comments, staff have the following comments as well as recommended Design Standards to apply to future Site Plan applications.

II. DESIGN REVIEW COMMENTS:

The project at 385 Congress Street shall meet the following standards of ***Master Development Plan Review Standards, Land Use Code Section 14.7.5 Design.***

A. Creation of a cohesive identity.

A master development plan shall be designed to create a cohesive identity through building scale, massing, and articulation;

Staff comment: The proposed development program includes a hotel and condominium units to occupy the entirety of the 385 Congress Street site, bordered by Congress Street, Cumberland Avenue, Pearl and Myrtle Streets. The proposed development intends to create a cohesive identity through building scale with a 1-2 story podium level continuous at the ground-level to activate and address the neighboring context and adjacent structures, notably City Hall, a hotel with ground floor retail, residential buildings and a place of assembly. The massing defined with stepbacks for the proposed towers of the hotel and multi-phased condominium units establishes vertical scale while reducing building height towards the residential character of Cumberland Avenue. The composition and articulation of the building facades shall maintain the master development plan

approach to activate the street frontage along the ground-floor with storefronts windows materials for screening, and rhythm of fenestration; the towers shall maintain a regular rhythm of vertically proportioned windows and sculpt massing to reduce the scale with façade composition in response to the street and mid-block "no build zone" that includes the amenity terrace and site access points.

Use of quality exterior material and architectural detailing at pedestrian scale;

Staff comment: The materials proposed meet this standard that provides pedestrian scaled façade composition through building entry canopies, storefront windows, fenestration screening materials at garage facades and signage. Each phase of site plan review shall include further details for materiality, color, articulation and quality.

Consistency of design and materials for streetscape and pedestrian amenities;

Staff comment: The proposed master development plan includes activation of streetscape and pedestrian amenities along highly traversed roadways. At Congress Street, the linear park creates an expansion of the public realm to allow for trees and tree wells, lighting, outdoor seating and brick sidewalk for pedestrian access. There is a delineation of surface material for pedestrian vs. vehicular that shall be maintained. The creation of the level 2 amenity terrace includes a unique approach to create public vs private zones that shall be suddenly delineated by changes in grade to accommodate sufficient soil depth for the tree planters, along with acute materiality. Street level pedestrian public access through monumental stairs to incorporate bench terrace seating, planters and greenscreens from Congress Street and Myrtle Street shall be maintained.

Framing of outdoor open space and linkages;

Staff comment: The proposed master development plan creates layers of outdoor open space and linkages to include the Congress Street linear park, Myrtle Street-scape, Cumberland Avenue active street, Pearl Street residential lobby and level 2 amenity terrace to reinforce public activation along the surrounding streets of the site. Each phase of site plan review shall include the adjoining open space as a continuation that shall utilize similarity of material, pedestrian amenities, and pedestrian connectivity. Under future site plan reviews, the Applicant should consider how street furniture, such as permanent outdoor seating, can be incorporated within the expanded sidewalk along Congress Street.

A clear conveyance of the function and significance of various buildings, entrances, and features;

Staff comment: The hotel in Phase 1 is differentiated from the condominium units primarily through the façade composition along Congress / Myrtle Street corner with a glass façade, regularity of fenestration for the hotel rooms and deeply recessed building entries with unobstructed glass along Congress Street. The condominium units, shown as three phases are primarily distinguished from the hotel by the storefront windows for the retail program and large fenestrations along the garage façade which shall be screened with high quality material to create an activated façade. Along with the retail program, the development shall incorporate MDP design standards for signage to be reviewed at each phase of site plan review. Additionally, the

condominium buildings include balconies projections and recessions into the façade composition that reinforces private access to open space.

And to generally comply with design and development standards of the zone in which it is located. – Met. In addition to the MDP review standards, the application will be reviewed under the B-3 design guidelines.

Proposed MDP Design Standards (to be applied to subsequent Site Plan applications)

- Materials

- Congress Street – Material placement, detail, and articulation should emphasize the established historic Congress Street patterns of massing, proportions, and façade composition regulating lines and building base. The ground floors will consider pedestrian comfort and scale, especially in the placement of doors, windows, canopies, and details in the materials and articulation. The hotel, in order to stand apart in character and use, will have a more contemporary expression but will continue the base and regulating lines found along Congress Street.

- Quality Exterior Materials includes the detailing, articulation, transition, durability, and visual interest of the materials, not only their selection and placement. These aspects will be reviewed with special attention to the ground floors and areas most visible to pedestrians.

- Façade composition - In Site Plan review the design shall provide depth, articulation, visual interest, and quality transitions. Historic buildings in the surrounding context should be considered precedent examples, especially on Congress Street.

- Cumberland Avenue - The condominium buildings along Cumberland Avenue should have a cohesive visual relationship in materiality, window type and pattern, and articulation elements that activate the ground-floor. The massing and function of the podium base along Cumberland shall be pedestrian scaled that responds to the surrounding neighborhood context.

- Streetscape design

- Congress Street / Cumberland Avenue – Establish active uses fronting the street. The sidewalk should be as wide as possible to accommodate street trees, tree wells, permanent outdoor seating, lighting and other pedestrian amenities in the furnishing zone. Planters or landscape areas should not be placed between the sidewalk and the building, with the exception of recessed building entries and/or access points. Final design shall be coordinated with City staff, especially to ensure viability of street trees and ease of maintenance.

- Interior Passages – Internal passages should employ CPTED principles as a best practice to make spaces that are safe, active, and inviting. Material selection and design should indicate private or public access. Design shall be legible and intuitive for pedestrians and cars, especially for wayfinding.

- Signage – Signage shall be integrated into the building design and respond to the storefront façade at the ground level and be pedestrian scaled, especially along the Congress Street historic district. Final design shall be coordinated with City staff.

Att. 2

Zoning Use Review (Article 6)

Use Permissions (Table 6-C)

Proposed Use	***Permitted, Conditional or Accessory Use***	***Zone***	***Use Std***
Multi-family dwelling	***Permitted***	***B-3***	-

Zoning Dimensional Review (Article 7)

Dimensional Standards

Standard	***Requirement***	***Proposed***	***Finding***
Street Frontage (Min)	*15 feet*	*290 feet*	Complies
Front Setback (Max)	*5 feet*	*6.5 feet*	MDP received waivers for expanded front setbacks.
Length of Undifferentiated Wall Along Publicly Accessible Way	*30 feet*	*17.5 feet*	Complies
Floor Area (Max)	*15,000 SF for each floor above 125 feet*	*Not Applicable*	Not Applicable
Structure Height (Max)	*150 feet*	*77 feet*	Complies
Street Wall Stepback (Downtown Height Overlay Map)	*Myrtle Street 72 feet east of the Intersection of Cumberland Avenue & Myrtle Street: 15 feet at 50 feet*	*Myrtle Street 72 feet east of the Intersection of Cumberland Avenue & Myrtle Street: 0 feet*	Does Not Comply
	All other frontages: 15 feet at 65 feet	*All other frontages: 15 feet at 65 feet*	Complies
Lot Coverage (Max)	*25% of lot area for portions of structures exceeding 125 feet in height*	*Not Applicable*	Not Applicable

Site Plan Review Standards (Sec. 14.6)

Transportation Standards (Sec. 14.6.1)

Standard	***Discussion***	***Finding***
Impact on Surrounding Street Systems	Overview: Consulting Traffic Engineer Tom Errico has reviewed the updates to the MDP TMP and has determined that the proposed changes from the original approval will generate less traffic and are not anticipated to result in negative impacts on the surrounding system. Based on the request for modifications to the MDP mitigation sequencing, the City is requesting a multi-way stop warrant analysis for the intersection of Cumberland Avenue & Pearl Street. Minor elements of the project, including 30-minute parking spaces and submission of turning templates for the intersection of Cumberland Avenue & Myrtle Street, are still under review.	Not Met
	Updates Requested • Conduct and submit a multi-way STOP warrant analysis for the intersection of Cumberland Avenue & Pearl Street.	

	• Remove the proposed stop line on Cumberland Avenue at Myrtle Street. • Submit vehicle turning templates for a SU-30 truck, bus, and tractor-trailer vehicle for the intersection of Cumberland Avenue & Myrtle Street	
Access and Circulation	Overview: Included in the Parking section of this worksheet is a request for more information on the anticipated connections between the proposed parking garage and other portions of the site. DPW has requested updates to the proposed designs for crosswalks, curb ramps, and sidewalks along Cumberland Avenue, along with requirements to mill & overlay Myrtle & Cumberland Avenue after the MDP buildout. Updates Requested • Submit additional information on the proposed connections to the parking garage, along with any physical barriers and safety devices that will be implemented to ensure safe passage for cyclists, pedestrians, condo residents, and valets. • Update the application to incorporate comments from the Department of Public Works.	Not Met
Public Transit Access	Overview: A transit shelter is not required for the site since an existing shelter is located within ¼ of a mile of the site on Congress Street between Monument Square and Temple Street.	Met
Parking	Overview: In the submitted site plan set, it is unclear whether the demolition of the two existing structures within the MDP boundary will occur as part of the proposed development or are tied to a different phase (i.e., previously approved hotel, future condominium/s). The use of gravel as a parking surface is not permitted for parking lots intended for use ≥1 year. While portions of the building footprints to be demolished are proposed to be used for laydown areas, some of the areas are proposed to be used as interim parking. Given the introduction of new gravel areas, an updated erosion & sediment control plan shall be submitted to identify control measures to be used to mitigate post-demolition stormwater impacts. The project proposes the construction of 63 automobile parking spaces when 1 per unit (55) is required. Given that the development is exceeding the minimum parking requirements by 10% or more, the submission of a parking study for the project is required to determine that the amount of parking is appropriate for the site. Parking space dimensions of 19' by 8.5' meet low-turnover minimum dimensions. The southern access aisle on the first floor does not meet the minimum width for a two-way aisle (24' required, 12' 8" proposed), as well as a number of the proposed aisle widths on the second story of the parking garage. The proposed connection on the first-floor garage to the parking garage for the hotel should be identified, along with any proposed signage, physical barriers between the hotel & condo garage, and	Not Met

	safety measures (e.g., convex mirrors) to mitigate negative interactions between frequent valet drivers & residents. The striping for the second-story parking does not enable the anticipated connection to a future condominium phase & associated parking. Updated application materials should revise striping to demonstrate the anticipated striping & connection point to the later condominium parking garage. The proposed bicycle parking does not comply with the following Technical Manual standards: §1.12.1. • Separation from car parking by a physical barrier (No physical barrier is proposed between the interior bicycle spaces and adjacent parking spaces & access aisle) • Be provided under covered areas and/or in secure storage lockers or rooms, if intended for long-term use (Some of the proposed spaces are located within the City right-of-way) §1.12.4 • Provide directional signage if parking is not directly visible from the public right-of-way (No directional signage is included in the site plan set and/or architectural drawings) Additionally, detail drawings are not provided for the racks proposed within the garage space. Staff recommends the inclusion of a grade-separated pedestrian connection to the proposed bicycle storage and consideration of relocating the proposed bicycle parking spaces to another portion of the ground floor. 14 EV automobile parking spaces are proposed when a minimum of 13 is required.	
	Updates Requested: • Submit an erosion & sediment control plan that documents proposed ESC measures on a plan sheet and identifies control measures that mitigate post-demolition stormwater impacts • Submit a parking study demonstrating the need for 63 parking spaces when 55 are required. • Update application materials to show how the proposed garage will connect to other phases of the MDP, including any physical barriers & safety measures that will be proposed to minimize conflicts. Striping on the second floor of the garage should be updated to reflect the anticipated connection to the future condominium garage. • Update the application materials to comply with access aisle requirements of §1.10.3. of the Technical Manual. • Update the application materials to comply with §1.12.1. & §1.12.4. of the Technical Manual related to bicycle parking. • Submit detail drawings for the proposed on-site bicycle racks.	

	• Confirm that 22 bicycle parking spaces are being provided when only 20 are shown between the site plan & floor plan.	
Transportation Demand Management	Overview: Based on the proposed uses, the project is not required to design and implement a Transportation Demand Management Plan. Staff encourages the implementation of TDM strategies given the requirement for a parking study.	Met
Environmental Quality Standards (Sec. 14.6.2)		
Standard	***Discussion***	***Finding***
Preservation of Significant Natural Features	Overview: Not applicable since the site does not contain any existing significant natural features.	Met
Landscape Preservation	Overview: While the project site does not include any landscaping, removal of existing on-site trees on other portions of the MDP site is shown on the site plan set. The trees proposed for removal are below 10" DBH. Removal of these trees facilitates an improved streetscape plan on Pearl and Congress Street that provides a more robust tree planting program & improved street-level activation.	Met
Site Landscaping and Buffers	Overview: The submitted design includes a utility alcove along Myrtle Street with metal fencing. The ineffective and inappropriate opacity of the fencing shall be revised either through a combination of relocating utilities interior to the building and/or using a fenestration pattern that better reflects the pedestrian environment (e.g., Continuation of the masonry building wall with storefront windows). 55 street trees are required for the site with the planting of two street trees proposed along Cumberland Avenue, based on previous recommendation from the City Arborist that street trees on Myrtle Street are not viable. Removal of the tree wells proposed in the curb bumpout is also recommended based on space considerations and the plantings proposed for the planters. In keeping with alternative strategies used for the Hotel, the application should at a minimum be updated to include similar planters on the Myrtle Street frontage. Consideration should be made for trellis or green wall features on both frontages and/or as a temporary solution on the northern elevation.	Not Met
	Updates Requested • Update application materials to revise the location and screening of utilities/trash storage based on recommendations from the design memorandum. • Update application materials to remove tree wells from the curb bumpout and include planters that match planters approved on Myrtle Street for the hotel along the Myrtle Street frontage. • Update application materials or submit a narrative on other green landscaping solutions that can be implemented at the street level to achieve similar benefits of trees (e.g., reduction in heat island effect, air filtration).	
Water Quality, Stormwater	Overview: As mentioned under Parking, Consulting Stormwater Engineer Lauren Swett has requested an Erosion & Sediment	Not Met

Management and Erosion Control	Control Plan will need to be submitted to better outline what measures are proposed for the construction of the new building, as well as the demolition of the existing structures. Ongoing work is continuing with Water Resources Staff on future stormwater infrastructure connections, as well as the review of an Ability to Serve application with the Portland Water District. Updates Requested • Update application materials to address comments provided by Lauren Swett. • Continue to work with City Water Resources Staff through the Ability to Serve application process & stormwater infrastructure connections in Cumberland Avenue & Myrtle Street.	
Public Infrastructure and Community Safety Standards (Sec. 14.6.3)		
Standard	***Discussion***	***Finding***
Consistency with City Master Plans	Overview: The Application is consistent with the Peninsula Transit Plan (2009) and One Climate Futures (2021) by proposing the construction of denser infill development within a walkable, transit-oriented location.	Not Met
Public Safety and Fire Prevention	Overview: A new hydrant is proposed to be installed along Cumberland Avenue near the building entrance. As mentioned under Site Landscaping and Buffers, removal of the proposed tree planters in the bump out is requested as part of larger reconfiguration and will provide the minimum 6' of clearance around the hydrant. Two sides of the building are accessible from public roads and the building design does not present impediments to emergency response activities. The Applicant shall confirm that the proposed elevations will be sized to accommodate 7' by 2' stretchers and that coordination has begun with Charles Wordell (cww@portlandmaine.gov) to establish an E-911 address. Updates Requested • Update application materials to confirm that 7' by 2' stretchers can be accommodated in the proposed elevators. • Email the Department of Public Works to begin the E-911 address process, with Zach Powell copied on the email. The applicant team shall work with the Department of Public Works to identify any additional steps that need to be taken before site plan approval.	Not Met
Public Utilities	Overview: The Applicant has submitted an Ability to Serve application with the Portland Water District and has contacted CMP during the MDP process about securing service for the site. Copies of ability to serve letters from the Portland Water District and CMP will be required to be submitted prior to approval or recommended as a condition of approval.	Ongoing

	Updates Requested • If available prior to site plan approval, submit ability to serve letters from CMP and the Portland Water District.	
Site Design Standards (Sec. 14.6.4)		
Standard	***Discussion***	***Finding***
Massing, Ventilation, and Wind Impact	Overview: Based on the previous review during the MDP and the reduction in building height, the bulk, location, and height of the proposed building are not anticipated to result in negative effects on health, safety, or diminution in property value. As requested as part of the design memorandum, updated roof & mechanical equipment screening plans have been requested to better understand the visual and ventilation impacts. Updates Requested • Update roof plans to identify the location of mechanical equipment and proposed screening methods.	Not Met
Shadow	Overview: Shadow standards of §14.6.4(B) apply to development outside of the B-3, B-5, B-6, and B-7 zone. The proposed development is located in the B-3 zone.	Not Applicable
Snow and Ice Loading	Overview: As requested during the review of the hotel, additional information shall be submitted on how snow and ice loading will be handled for the podium level. Updates Requested • Update the snow and ice loading narrative to speak to how snow and ice will be removed for the podium level.	Not Met
View Corridors	Overview: The site is located adjacent to the Cumberland Avenue View Corridor, but does not propose projections into the City right-of-way that would result in impacts to the visibility of the corridor.	Met
Historic Resources	Overview: The project is not located in a locally designated historic district, but is located within 100 feet of the Congress Street Historic District. An advisory review of the application was completed as part of the design review memorandum. The advisory review recommended clarifying the application of a base | middle | top building design, greater consistency in fenestration patterns and siding materiality, and improved street-level design. Updates Requested • Submit a narrative detailing how application updates have or have not incorporated feedback from the advisory review.	Not Met
Exterior Lighting	Overview: Four Downtown Decorative street lights are included between Myrtle & Cumberland Avenue at a maximum height of 30 feet. In concert with the street lights, four wallpacks are proposed. While the wallpacks mostly meet site lighting standards, the inclusion of the wallpack cut sheet in the site plan set or photometric plan is required to confirm a maximum CCT of 3000K. Updates Requested • Update the site plan set or photometric plan to include a cut sheet for the proposed wallpack that identifies the maximum CCT as 3000K.	Not Met

Noise and Vibration	Overview: As requested as part of the design memorandum, updated roof & mechanical equipment screening plans have been requested to better understand the visual and ventilation impacts. Updates Requested • Update roof plans to identify the location of mechanical equipment and proposed screening methods.	Not Met
Signage and Wayfinding	Overview: As mentioned in the transportation standards, signage updates will need to be made to better identify enclosed bicycle parking spaces and support safer interactions between pedestrians, cyclists & motorists in the garage. As part of meeting the MDP design standards, the design memorandum recommends the integration of building entrance signage into the canopy to align with other buildings in the MDP. Updates Requested • Submit designs for wayfinding signage for bicycle parking, along with identifying on the site plan and/or architectural drawings the location for wayfinding signage. • Update architectural drawings to incorporate building entrance signage as part of the proposed canopy on Cumberland Avenue.	Not Met
Design Standards	Overview: Please refer to the comments provided in the design memorandum prepared by Urban Designer Sean King. Updates Requested • Update application materials to incorporate recommendations from the design memorandum.	Not Met

Other Comments

- Sheet C102 is referenced on the Cover Page, but is not included as part of the application submission. Submit a copy of Sheet C102 or remove reference to the sheet on the Cover Page
- City staff encourage the Applicant team to coordinate with the project team for Phase 1 of the 385 Congress Street Master Development Plan to determine if any construction activities, including street closures, can occur concurrently to minimize project impacts.

Att. 3

Subject:	244 Cumberland Avenue – Major Site Plan Review
Zone:	B3
Date of Review:	February 28, 2024 Design Review – Preliminary
Reviewer(s):	Sean King (Urban Designer), Zach Powell (Senior Planner), Evan Schueckler (Historic Preservation Manager)
Project ID:	PL-002779-2024

I. INTRODUCTION

The project at 244 Cumberland Avenue for the proposed fifty-five-unit multi-family residential condominiums is subject for design review according to the land use code article 14.7.5 for Master Development Plan Review Standards and to the land use code article 14.6.4.l for design standards in the B-3 zone and as a multi-family residential housing project. Applicable design standards from the City of Portland *Design Manual* are outlined in the design review comments section.

The project is also within 100' of a historic landmark and is subject to an advisory design review by Historic Preservation staff according to the land use code article 14.6.4.E-2.

The built context of the surrounding area contains a variety of building types, architectural styles and mix of uses that vary in height and proximity to the street typically found throughout Portland's downtown district. Numerous locally designated historical landmarks are within 2-blocks of the proposed development, including Portland City Hall, Chestnut Street Methodist Church, Masonic Temple, First Parish Church and Portland High School and several contributing historic structures in the Congress Street historic district that exhibit a variety of architectural ornamentation, materiality and form specific to the period during which these structures where built.

II. DESIGN REVIEW COMMENTS: red text denotes standards not met and require resubmission.

Master development plan (MDP) design standards, land use ordinance section 14.7.5, as adopted August 9, 2022 to be applied to subsequent major site plan applications:

A. Creation of a cohesive identity.

A master development plan shall be designed to create a cohesive identity through building scale, massing, and articulation;

Staff comment: The proposed multi-family condominium is partially located on Lot 3 with street frontages on Cumberland Avenue and Myrtle Street. The approved MDP demonstrated a cohesive identity by incorporating a 1-2 story podium level with ground-level activation, vertical building scale with stepbacks from the street wall and composition of the facades with regular rhythm of windows and sculpt massing to further reduce building scale.

The Applicant proposes a seven-story height with a two-story podium that incorporate stepbacks from the street-facing facades building. Staff finds the proposed building placement and layout deviates from the approved MDP with a minimal increase beyond the street build-to line at the corner of Cumberland Avenue and Myrtle Street and the building layout with the proposed amenity deck carved out from the Myrtle Street façade.

Staff finds the proposed development plan deviates from the approved MDP with a reduction of street activation along Myrtle Street, in particular, the proposed utility alcove is not conducive to the pedestrian environment. Staff recommends relocating the utility alcove either interior to the building or within a subsurface vault and programming at the ground-level with uses and materials that provide greatly usability of the street-level pedestrian environment (examples may include storefront windows that visually denote human occupiable uses, organized fenestration pattern and materiality that enhance the character of the street.)

Use of quality exterior material and architectural detailing at pedestrian scale;

Staff comment: The proposed multi-family condominium uses quality exterior material and architectural detailing at pedestrian scale to express the proposed base of the building with limestone block, modular brick and ironspot brick. Staff recommends the Applicant match the approved site plan masonry products from the hotel located at 385 Congress Street to maintain a cohesive identity through exterior materials at the podium levels or at the first thirty-five feet. In addition, the Applicant is encouraged to provide additional articulation along the first thirty-five feet that enhance the pedestrian environment, in particular along the facades with garage grills and expansive brick walls. Staff recommends the Applicant provide vegetation, sculptured artwork and/or additional architectural articulation with square brick colonnades to express entrances along the façade.

Consistency of design and materials for streetscape and pedestrian amenities;

Staff comment: The proposed multi-family condominium proposes the street trees in granite curbed tree wells, decorative lighting and brick pavers along Cumberland Avenue that are consistent with the approved MDP. Staff finds that the minimal increase in building setback from the street build-to line deviates from the approved MDP to allow pedestrian amenities, such as seating, planters and/or furnishings along Cumberland Avenue and Myrtle Street.

Framing of outdoor open space and linkages;

Staff comment: The proposed multi-family condominium development plan includes streetscape amenities along Cumberland Avenue with the bulb-out sidewalk extension into the right of way, Staff recommends the Applicant increase the setback beyond street build-to line if extension into the right of way is not allowed. The development plan includes a level 2 amenity terrace for common use by the residence, Staff requests that the Applicant explain why the open space terraces do not connect and if access to the Lot 1&2 amenity deck is provided as approved in the MDP.

A clear conveyance of the function and significance of various buildings, entrances, and features;

Staff comment: The proposed multi-family condominium conveys the corner of Cumberland Avenue and Myrtle Street as a clearly identified primary entrance for the residential lobby and promotes street activation with storefront windows and articulation at the first thirty-five feet. Staff recommends more enhancement of the building's base that enhance the corner, such as greater use of the ironspot brick on the façade and columns, and expansion of the building entry as a two-story expression to fit within the surrounding building context. Staff recommends the middle façade composition demonstrate greater consistency of fenestration pattern and expand or recess balconies for residents to access with an operable glass door that align with the approved MDP architectural character. Staff recommends the building top terminate and relate horizontally with a more consistent fenestration pattern.

And to generally comply with design and development standards of the zone in which it is located.

Staff comment: See B-3 Downtown Business zone design standards for the proposed multi-family condominium at 244 Cumberland, Lot 3 in section III.

*- **Materials***

- *Congress Street – Material placement, detail, and articulation should emphasize the established historic Congress Street patterns of massing, proportions, and façade composition regulating lines and building base;* ***Not applicable***

  Staff comment: Not applicable as 244 Cumberland Ave Lot 3 has no street frontage along Congress Street.

- *Quality Exterior Materials includes the detailing, articulation, transition, durability, and visual interest of the materials, both in their selection and placement. These aspects will be reviewed with special attention to the ground floors and areas most visible to pedestrians;*

  Staff comment: The proposed multi-family condominium on Lot 3 includes building exterior materials of limestone base, modular brick and ironspot brick that resemble the adjacent buildings in the approved MDP to relate to the surrounding context. The proposed building seeks to introduce cementitious siding in various colors and reveals to break down the building scale. Staff finds the arrangement of exterior materials throughout the base, middle, and top proportions of the building to not be cohesive in relationship to other phases of the approved MDP. Staff recommends incorporating a horizontal belt course along the building's 1-2 story base to delineate change in material and articulate different components of the building such as the overall building's composition (base, middle, top) which is consistent with the historical character of surrounding buildings. In addition, Staff recommends the Applicant match high-quality materials to the greatest extent possible and articulate building entries at the podium level; provide a clear fenestration pattern and material change that relate to façade plane changes for the middle façade composition.

- *Façade composition - In Site Plan review the design shall provide depth, articulation, visual interest, and quality transitions. Historic buildings in the surrounding context should be considered precedent examples, especially on Congress Street;*

Staff comment: The proposed multi-family condominium is subject to an advisory design review by the City's Historic Preservation staff in relationship to the surrounding historic buildings within the surrounding context.

- *Cumberland Avenue - The massing and function of the podium base along Cumberland shall be pedestrian scaled that responds to the surrounding neighborhood context.*

  Staff comment: The proposed multi-family condominium proposes a partial build-out of Lot3 along Cumberland Avenue. Staff finds the primary building entry that is recessed and articulated from the façade is appropriate. Staff finds the proposed storefront windows arranged at the corner of Cumberland Avenue and Myrtle Street provide appropriate visibility into the lobby and community spaces and recommend that the Applicant minimize the presence of vehicles at the podium level to the greatest extent possible, such as replacement of metal grates with glazing or similar products to compliment the residential character along Cumberland Avenue.

- Streetscape design

- *Congress Street / Cumberland Avenue;*

  Staff comment: The proposed development plan includes appropriate sidewalk widths to accommodate street trees, tree wells, permanent outdoor seating, lighting and planters in the public right-of-way.

- *Interior Passages – Internal passages should employ CPTED principles as a best practice to make spaces that are safe, active, and inviting. Material selection and design should indicate private or public access. Design shall be legible and intuitive for pedestrians and cars, especially for wayfinding;*

  Staff comment: Not applicable, the proposed multi-family condominium does not include any interior passages, residents to access level 2 amenity terrace through internal lobby or privately from units.

- *Signage – Signage shall be integrated into the building design and respond to the storefront façade at the ground level and be pedestrian scaled, especially along the Congress Street historic district;*

  Staff comment: The Applicant has provided signage above the primary entrance on Cumberland Avenue that is mounted to building. Staff recommends the Applicant incorporate into the proposed canopy for consistency with the other buildings within the MDP.

B-3 Downtown Business Zone design standards in the City of Portland Design Manual, *Land Use Code Section 14.6.4.I Design standards.*

§(b)(1)a.1. Relationship of pedestrian environment:

- *§(b)(1)a.1.i. General: The exterior design of portions of buildings within the first thirty-five (35) feet of height shall enhance the character, attractiveness, comfort, security, and usability of the street level pedestrian environment. Factors to be considered include the design, placement, character and quality of the following:*

  Staff comment: Staff recommends the Applicant relocate the utility alcove along Myrtle Street for a more compatible use (such as reorient the office uses to front the street with storefront windows) and provide greater articulation along the façade (such as brick columns to distinguish entrances and delineation of floors through masonry material changes to enhance the character of the pedestrian environment.

Figure 1: Staff comments to South Elevation – Myrtle Street

- *§(b)(1)a.1.i.1) Storefronts and building facades, including such factors as relationship to adjacent or nearby structures or open space, pedestrian character, materials and detailing, transparency (having a visible transmittance (VT) of .7 or higher) and contemporary design:*

  Staff comment: Staff finds the storefront elements that enhance the pedestrian character relates to adjacent structures in materiality, organization and pattern for the proposed use. Staff finds the transparency (VT of .7 or higher) to be met as shown in the proposed renderings at the ground floor podium level. Staff recommends the use of Ironspot brick at the corner columns to greater emphasize the primary building entrance and complimentary uses at the ground level on Cumberland Avenue.

Figure 2: Staff comments to West Elevation – Cumberland Avenue

- *§(b)(1)a.1.i.2) Building entrances, including such factors as compatibility with the building's façade, prominence along the street, access to the street, and accessibility for physically handicapped or for those with special needs:*

  Staff comment: Staff recommends the Applicant expand the visual presence of the primary entrance on Cumberland Avenue to relate to larger multifamily buildings within the surrounding context.

- *§(b)(1)a.1.i.3) Blank facades; and*

  Staff comment: The proposed multi-family condominium includes a two-story podium level for parked vehicles that the Applicant intends to screen with the building façade and metal grills along street-facing facades that Staff will continue to evaluate as appropriate to the surrounding context. Staff recommends that utility functions along the ground-level facades be minimized to the greatest extent possible to prioritize the enhancement of the pedestrian environment. Staff recommends complementary uses, such as community spaces, office or retail with storefront windows and sunshade protection, be incorporated along Cumberland Avenue and Myrtle Street facades at the ground level.

  In addition, Staff finds the interim blank façades at the north and east elevations to not support an attractive pedestrian-oriented environment and recommends the Applicant incorporate an artistic treatment, landscape feature, or some combination to reduce the visual impact and potential degradation of the façade. The phasing of future buildings may allow for the north and east elevations to be covered, in this case no special treatment is required.

- *§(b)(1)a.1.i.4) Special features, such as selective use of such features as building arcades and skywalks or elevated walkways:*

  Staff comment: Not applicable. The multifamily condominium on Lot 3 does not propose such special features.

- *§(b)(1)b. Pedestrian Activities District (PAD)*

  Staff comment: Not applicable. Lot 3 parcel is not located along a PAD overlay district.

- *§(b)(1)c. Pedestrian Activities District (PAD) encouragement areas shall be designed and constructed to be reasonably capable of being converted to accommodate uses permitted in the PAD overlay zone in accordance with the factors set forth in subsection b. of this section.* **Not applicable**

  Staff comment: Not applicable. Lot 3 parcel is not located along a PAD encouragement area.

- *§(b)(1)d. Sidewalk areas and open space: The design of publicly accessible sidewalk areas and open space shall complement the general pattern of the downtown pedestrian environment, conform to special City of Portland streetscape programs described in the Technical Manual, and enhance the attractiveness, comfort, security, and usability of the pedestrian environment. Factors to be considered include the design, placement, character, durability, and quality of the following:*

1. *Sidewalk, crosswalk, and street paving materials;*

Staff comment: The proposed development plan includes appropriate sidewalk widths along Lot 3 frontages as brick paving and expansion of the sidewalk with a bulb-out with crosswalks at the corner of Cumberland Avenue and Myrtle Street.

2. *Landscaping, planters, irrigation, and tree guards and grates;*

Staff comment: The proposed development plan includes two street trees in granite tree wells along Cumberland Avenue. Staff requests the Applicant include street trees as appropriate within tree wells at the corner of Cumberland and Myrtle Street. Staff request that the Applicant include landscape site elements, such as planters along the façade, greenscreen trellis attached to façade within the private property as an alternative to street trees along Myrtle Street.

3. *Lighting;*

Staff comment: The proposed development plan includes a decorative light fixture that is appropriate to meet municipal lighting standards.

4. *Pedestrian amenities such as benches and other seating, trash receptacles, kiosks, bus shelters, artwork, directional and informational signage, fountains, and other special features; and*

Staff comment: The proposed development plan does not include any seating, trash receptacles, artwork or directional signage, Staff recommends the Applicant incorporate furnishings into the plan and prioritize the corner where building is setback from the street build-to line.

5. Sidewalk vendors and sidewalk cafes.

Staff comment: The proposed development plan does not include sidewalk vendors and cafes which is appropriate based on the project description.

§(b)(1)e. Relationship to existing development:

1. *General: Proposed development shall respect, enhance, and be integrated with the existing character of the general pattern of development in the downtown, surrounding building environment and streetscape, as described and illustrated in the Downtown Urban Design Guidelines (Appendix 1). Factors to be considered include the relationship to the following existing patterns:*

   i. *Street walls and building setbacks;*

Staff comment: The prevailing street wall and building setbacks vary along the section of Cumberland Avenue between Franklin Arterial and Elm Street found within two blocks of the proposed multifamily condominium building. Staff finds the proposed building setback at the corner of Cumberland Avenue and Myrtle Street and along Myrtle Street provides additional surface area for pedestrians for comfortable passage.

   ii. *Open space;*

Staff comment: The proposed development plan does not propose any public open space.

   iii. *Building form, scale and massing;*

Staff comment: The proposed building design is appropriately scaled with stepbacks at the façade from the street frontages that Staff finds appropriate.

   iv. *Façade proportion and composition;*

Staff comment: The proposed building design begins to indicate a base, middle and top composition consistent with the surrounding buildings. Staff recommends incorporating a horizontal belt course to terminate the building's two-story base and a clear fenestration pattern with accessible balconies at the middle proportion of the building. Staff recommends a stronger termination of the building top, such as visible cornice or other architectural expression at the upper floor that is consistent with the character of surrounding buildings

   v. *Pedestrian circulation and building entrances;*

Staff comment: The proposed Lot 3 includes primary pedestrian circulation along existing streets reinforced by the proposed primary building entrance located on Cumberland Avenue.

vi. Parking,

Staff comment: The proposed development plan includes structured parking that is screened with metal grills set into the façade.

2. *Standards for increasing setback beyond street build-to line: A proposed development may exceed maximum setbacks:*

Staff comment: The proposed multifamily condominium increases the build-to line to provide additional paved surface adjacent to sidewalk along the street facing facades on Cumberland Avenue and Myrtle Street, does not substantially detract from the prevailing street wall and adds to the pedestrian environment that Staff finds appropriate to increase setback beyond street build-to line.

3. *Roof top appurtenances: All mechanical equipment, ventilating and air conditioning and other building systems, elevators, stairways, radio or television masts or equipment, or other rooftop elements not intended for human occupancy shall be fully enclosed in a manner consistent with the character, shape and materials of the principal building,*

Staff comment: The Applicant is requested to submit a roof plan and illustrate any rooftop appurtenance into the elevations and renderings for Staff review.

§(b)(1)f. Shadow impact on open space: The location, massing and orientation of portions of buildings in excess of sixty-five (65) feet in height shall be such that substantial shadow impacts on public plazas, parks, and other publicly accessible open space are avoided.

Staff comment: The proposed applicant has submitted a site plan application for a seven-story building, which is a reduction from the approved MDP shadow studies that represented a thirteen-story building. Staff finds there are no substantial shadow impacts on adjacent opens spaces, notably Lincoln Park and City Hall Plaza.

§(b)(1)g. Wind impacts: The location, massing, orientation and architectural design of a new building or a building addition shall be such that no significant adverse wind impacts are created.

Staff comment: The proposed building utilizes a variety of features to break down the building's mass and height by including a number of building setbacks to mitigate the potential impact of winds.

§(b)(1)h. Setbacks for existing structures: The location and design of proposed structures shall not create a detrimental impact on the structural integrity or the safety of adjacent structures or the occupants thereof;

Staff comment: The proposed Lot 3 multi-family condominium does not pose a detrimental impact on the structural integrity of any adjacent structures as it is standalone on a parcel

bounded on all sides by public streets. Existing structures to be demolished to construct hotel and surrounding surface parking.

§(b)(1)i. Building tops: Buildings or structures which exceed one hundred fifty (150) feet in height shall be designed so as to provide a distinctive top to the building which visually conveys a sense of interest and vertical termination to the building.

Staff comment: Not applicable, the proposed multifamily condominium building does not exceed 150 feet in height

MULTIPLE-FAMILY STANDARDS. Multiple-family shall meet the following standards:

1. *The exterior design of the proposed structure, shall be designed to complement and enhance the nearest residential neighborhood.*

   Staff comment: The proposed building design is located within Portland's B-3 Downtown Business zone and is compatible with the surrounding context. Staff has included comments in the B-3 Downtown Business design standards to assist the Applicant to enhance the Cumberland Avenue façade to the surrounding residential structures.

2. *The proposed development shall respect the existing relationship of buildings to public streets.*

   Staff comment: The proposed building location respects the existing relationship to public streets located at the street-facing property line or setback to allow for pedestrian amenities adjacent to the right of way.

3. *Open space on the site for all multiple-family development shall be integrated into the development site.*

   Staff comment: The proposed Lot 3 multi-family condominium provides open space with communal terraces located on the third floor for residents to access by a shared internal corridor. Staff requests the Applicant to explore the connectivity of the terrace amenity areas and propose an appropriate allocation of seating for the number of proposed units. Staff observes the "Juliet" balconies proposed as private open space and recommends the Applicant incorporate accessible balconies with operable door(s) or window(s) for each unit either as recessed or projections from the façade.

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

   Staff comment: The proposed Lot 3 multi-family condominium provides sufficient windows and interior unit storage at each residential unit.

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

Staff comment: Not applicable, no surface parking is proposed in the development plan.

6. *Multiple-family dwellings shall not be converted to lodging houses unless all units in building have been vacant for at least one (1) year.*

   Staff comment: Not applicable, the proposed multifamily condominium will not be converted to lodging houses.

III. HISTORIC PRESERVATION ADVISORY REVIEW

Article 14.6.4.E-2, states that developments within 100 feet of a historic district shall be generally compatible with the major character-defining elements of the portions of the historic districts in the immediate vicinity of the proposed development. This requirement is informally referred to as the Historic Preservation Advisory Review. In conducting this advisory review, a member of the Historic Preservation staff participates in the design review with the Urban Designer and Assigned Planner.

Character-defining elements of landmarks and historic districts are identified in the historic resources inventory and respective historic district designation reports, which can be found here: https://www.portlandmaine.gov/665/Historic-Districts.

For the purposes of this provision, "compatible" design shall be defined as design which respects the established building patterns and visual characteristics that exist in a given setting and, at the same time, is a distinct product of its own time. Historic Preservation staff has provided a written analysis of the proposed development's immediate context, identifying the major character-defining elements and any established building patterns that characterize the context.

The Congress Street Historic District:

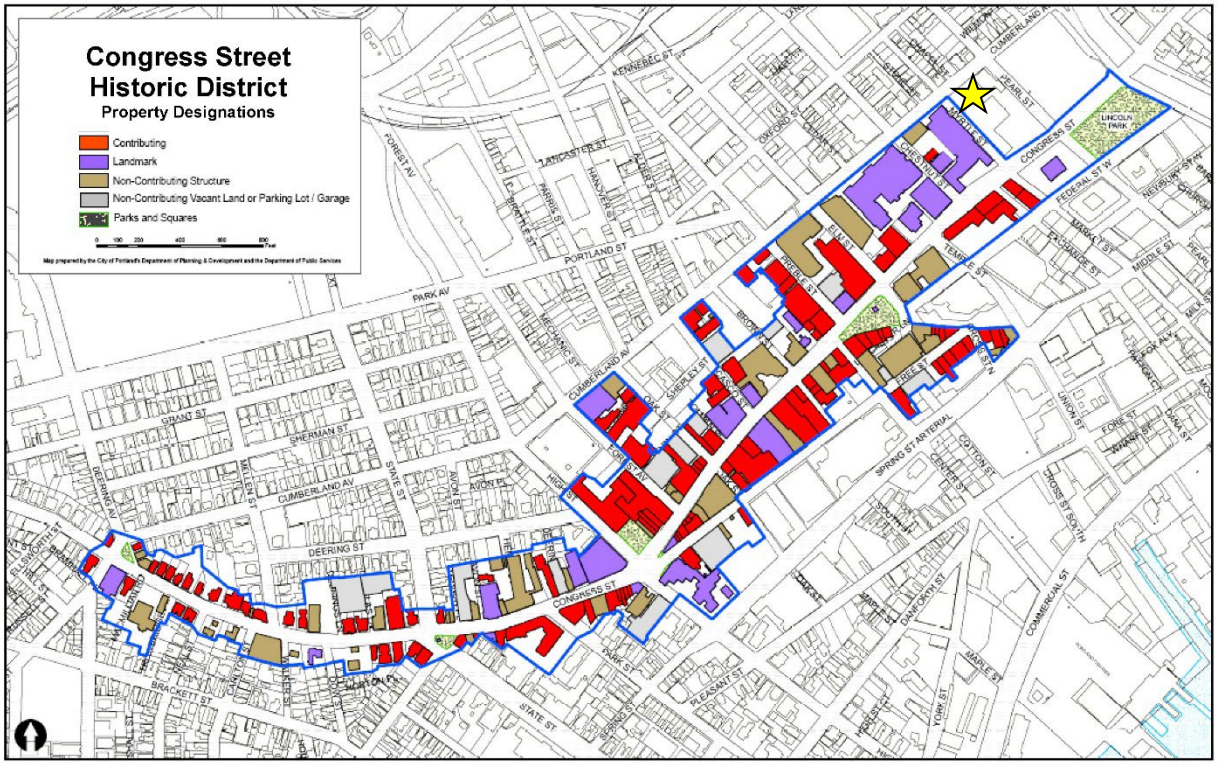


Figure 3 – Map of the Congress Street Historic District, a star shows the site of the proposed development.

The visual character of the Congress Street Historic District is rich and varied thanks to a layered historical development over time. The result is an area with structures from the eighteenth to twentieth centuries, and representing nearly every style of American architecture ranging from Colonial to Post Modern. The district also represents a variety of architectural typologies including residential, commercial, mixed-use, civic, religious, and institutional at widely varied scales. Structures range from two stories to fourteen, generally exhibiting a greater concentration of high-rise buildings than any other Historic District in Portland.

Despite the variety of styles, period, and scales of architecture within the district, there are several urban design characteristics that serve to unify the area. With few exceptions, the structures that line Congress are built up to the street, creating a strong street wall and sense of enclosure. In the majority of cases, these first floors contain storefronts with active commercial spaces. The majority of the commercial structures, particularly those built during the nineteenth and early twentieth century, have a unified massing broken up through layered rhythms of regular fenestration. Groupings of windows, ornamentation, or small shifts in wall plane are regularly utilized to break facades down into regular bays. These regular arrangements are typically only interrupted by prominent recessed entrances for the upper stories. Many buildings also share a basic visual organization with an identifiable base (storefront level), middle, and top (cornice or cap). The historic buildings also typically exhibit high quality materials and a high level of craftsmanship.

Figure 4: 2023 Google Street Views showing the former Portland Press Herald Building (left, 390 Congress Street) and 112 Exchange Street (right).

Figure 5: 2023 Google Street Views showing the Clapp Memorial Building (left, 443-449 Congress Street) and the Portland Masonic Temple Building (right, 415 Congress Street).

In the vicinity of the proposed development are several fine examples early twentieth-century commercial architecture which exhibit many of the unifying characteristics of the Congress Street Historic District. The structures feature relatively large, but unified masses that are scaled and broken down through the use of grouped windows, shifts in wall plane, and decorative details such as pilasters. The buildings are also broken down into the typical base-middle-top composition. The bases vary from one to two stories in height, while the tops feature prominent cornices and in some cases slightly stepped back attic levels. However, the vertical ordering of the façades is echoes across all three levels of the horizontal divisions. All four buildings also feature prominent entrances. The masonic temple utilizes a slightly recessed double-height central arch, while the Clapp memorial Building, former Press Herald Building, and 112 Exchange utilized modestly recessed entrances accentuated by awnings or ornate hoods.

Figure 6: 2023 Google Street View showing the Myrtle Street elevation of Merrill Auditorium.

Many of these same principles can also be seen on the Myrtle Street elevation of the Merrill Auditorium, directly across from the proposed development site. The buildings features a robust base of rusticated granite, with a primarily brick middle, and a prominent granite cornice. The middle is broken down into bays through pilasters and aligned windows, while the end bays are given additional prominence through the use of granite to anchor the building. The rhythm of the upper story windows is echoed in the base, tying the elements together. The use of the same materials across the whole façade help to unify the building, while the composition breaks down and scales a very large and solid façade.

Staff would encourage the applicant to consider whether there are opportunities to provide a more unified approach to the façade compositions, in particular along Cumberland Avenue and Myrtle Street. As proposed the building seems to arbitrarily change materials in ways that confuse the massing of the structure. Rather than reading as a unified building that is appropriately scaled, it appears as a jumble of masses that are layered onto each other. In particular, a single material or family of similarly-colored materials used across the two-story base could help to unify the structure. Staff would also recommend further study of the hierarchy and ordering of materials and colors at the upper stories. The use of a dark material at the primary entrance helps to call particular attention to it, while the application of the same color in other areas seems arbitrary and confusing. The use of lap siding also seems out of character on a building of this scale in a densely built urban area.

In addition to the composition of materials, staff would encourage further study of openings across the building, in particular at the first two stories. The use of a large, fenced-in utility alcove along Myrtle Street is very out of character with the context. This location would greatly benefit from a more active and engaging use such a storefront glazing with offices or other amenity spaces. Similarly, the grilled garage openings at the second level, while very atypical of mixed-use buildings in the context, should at least be restudied to have a clear relationship with the pattern of fenestration at the upper stories rather than creating a random rhythm. Restudy of these

elements could again help to further unify the design of the structure and improve its relationship with the historic context.

Zachary Powell <zpowell@portlandmaine.gov>

244 Cumberland Avenue Review

Lauren Swett <lswett@woodardcurran.com> Wed, Feb 28, 2024 at 2:43 PM
To: Zachary Powell <zpowell@portlandmaine.gov>
Cc: Justin Pellerin <jrp@portlandmaine.gov>

Hi Zach,

I have reviewed the application materials for 244 Cumberland Avenue, and I have the following comments:

- The project is required to comply with MaineDEP Chapter 500 and City of Portland Technical Manual Section 5 requirements for stormwater management. The project is part of a Master Development Plan, and portions of the lot have previously been evaluated as part of another project.
    - Basic Standards – The project is required to provide for erosion and sedimentation controls on the site. Notes and details relative to erosion and sedimentation control have been provided, but I did not see these measures shown on a plan view. Erosion control should be considered for the project site, the overall block with building demolition, and the adjacent roadway work. Please see below for additional comments relative to building demolition and overall site conditions.
    - General/Redevelopment Standards – The project does not meet the thresholds to require stormwater treatment in accordance with the General or Redevelopment Standards, and no specific treatment measures are required. Please see below for additional comments relative to building demolition and overall site conditions.
    - Flooding Standards – The project is proposing to install subsurface stormwater storage to manage flows from the site during a 1-inch rain event. It is noted that this system will need a stormwater maintenance agreement in place.
- The site plan shows that demolished building surfaces outside of the proposed Lot 3 Building area will be finished using gravel. More information on timing of this temporary condition should be provided, and this should be considered as part of any long-term stabilization plans. If these areas are to be left as gravel for an extended period of time, this needs to be considered as part of the evaluation of impervious and disturbed area on the site. In addition, some of these gravel surfaces extend to the public sidewalk, and in some cases drain towards those sidewalk areas. Until the surface areas are fully stabilized, perimeter erosion control measures will be necessary. It is recommended that planted surfaces be considered for any long-term building demolition areas that are not intended to be utilized for parking or construction staging.
- The Applicant has noted that they have reached out to utilities requesting for confirmation of utility ability to serve.
- The connection of the site stormwater system into a catch basin in the street is not typically accepted, but it is understood that the proposed stormdrain infrastructure in Cumberland Avenue is being installed as part of this project. The layout of the proposed stormwater infrastructure should be reviewed and approved by City of Portland staff. (Justin, I believe you requested to discuss this with them further – I'd suggest that the layout of the connection in Cumberland may need some adjustment to avoid the through-catch basin approach.)

Please let me know if there are any questions.

Thanks,

Lauren

Lauren Swett, PE*

Technical Manager | Principal

Woodard & Curran

207.558.3763 207.219.3591 woodardcurran.com

lswett@woodardcurran.com

12 Mountfort St, Portland, ME 04101

*Licensed in Maine, New Hampshire, and Georgia

Zachary Powell <zpowell@portlandmaine.gov>

244 Cumberland Avenue - Initial Traffic Review Comments

Tom Errico <thomas.errico@tylin.com> Wed, Feb 28, 2024 at 1:25 PM
To: "zpowell@portlandmaine.gov" <zpowell@portlandmaine.gov>
Cc: Jeremiah Bartlett <JBartlett@portlandmaine.gov>, Janine Ba <janineba@portlandmaine.gov>

Hi Zack – I have reviewed the application materials and offer the following initial traffic review comments.

- The applicant has conducted a Revised Traffic Impact Analysis in association with the entire 385 Congress Street Traffic Movement Permit. I concur with the methodologies employed for the study and the conclusions that the proposed revised plan will generate less traffic as compared to the original TMP and that there would be little change in the vehicle mobility analysis.
- The proposed Cumberland Avenue driveway is expected to operate with little vehicle delay.
- The applicant has requested that the TMP mitigation requirements be revised to reflect the sequence of development implementation. We will render a decision on this in the future.
- The applicant is proposing some 30-minute time-limit parking spaces on Cumberland Avenue and I will review this with John Peverada.
- The Stop Line on Cumberland Avenue at Myrtle Street shall be removed.
- In conjunction with the design of the Cumberland Avenue/Myrtle Street corner, vehicle turning templates shall be provided for a SU-30 truck, bus, and tractor-trailer vehicle.
- Given changes to traffic volumes and patterns in the area, the city requests that the applicant conduct a multi-way STOP warrant analysis at the Cumberland Avenue/Pearl Street intersection. The intent of this request is to determine if the traffic signal can be removed and replaced with a four-way STOP condition. If deemed feasible, the Traffic Movement Permit would be modified to remove the requirement for replacement of the traffic signal. The warrant analysis shall be based on collecting a 12-hour intersection turning movement count (March data would be acceptable) and methods contained in the MUTCD.

Please contact me if you have any questions.

Best regards,

Tom Errico, P.E.
NE TRAFFIC ENG. DIRECTOR
T +1 207.347.4354
M +1 207.400.0719

TYLin

12 Northbrook Drive
Building A, Suite One
Falmouth, ME 04105, United States

TYLin.com

Zachary Powell <zpowell@portlandmaine.gov>

PL-002779-2024 244 Cumberland Avenue DPW Comments

Janine Ba <janineba@portlandmaine.gov> Wed, Feb 28, 2024 at 8:25 AM
To: Zachary Powell <zpowell@portlandmaine.gov>
Cc: Justin Pellerin <jrp@portlandmaine.gov>, Keith Gray <kgray@portlandmaine.gov>, Benjamin Pearson <bnp@portlandmaine.gov>, Tom Errico <thomas.errico@tylin.com>, Lauren Swett <lswett@woodardcurran.com>, Jeremiah Bartlett <jbartlett@portlandmaine.gov>

Zachary,

Below are DPW's comments for PL-002779-2024 244 Cumberland Avenue Let me know if you have any questions.

PL-002779-2024
244 Cumberland Avenue
DPW Development Review Comments
02/28/2024

- DPW Transportation
  - The applicant shall make all existing pedestrian ramps and crosswalks leading to and from the property compliant per the City's Technical Manual section one. The applicant shall construct compliant pedestrian ramps and crosswalks as a part of this phase of work at the intersection of Cumberland Ave and Myrtle Street and the intersection of Cumberland Ave and Pearl Street if the signal improvements at this intersection will be done as a part of this phase of work.
  - Use tick marks to layout the proposed parking along both streets to identify tree planter and vehicle door conflicts. Make adjustments where needed.
  - It is the City's standard to have the sidewalk material continued through the driveway aprons at grade with the proposed sidewalk and not in excess of 2% cross-slope and not have continuous curb running through the driveway apron. The applicant shall depict the proposed driveway on the plans to meet the current City standards. The driveway shall be constructed in accordance with the City's Sidewalk and Driveway Apron Material Policy. The curb along the driveway shall not extend beyond the esplanade or into the pedestrian access route per detail I-9B. The bricks in the driveway shall be installed in the same direction as the sidewalk. The applicant shall also update the plans and provide spot grades and slopes for the proposed sidewalk and driveway improvements.
  - The applicant shall update the plans to label or provide spot grades and slopes for the proposed sidewalks, accessible ramps and driveways at grade breaks.
  - Existing conditions and proposed Improvements in the ROW shall be dimensions on the plan view sheets. For example ROW, street, lanes sidewalk, esplanade driveways (and other improvements) widths as well as when a width changes.
  - DPW does not support the use of curb extensions at the Cumberland Avenue and Myrtle Street intersection. The applicant shall redesign the corner

maintaining the existing radius / layout.

- The proposed trenches shall be repaired per the Minor Excavation Pavement Repair Details (prior to paving the finished surface) found in the Rules and Regulations for Excavation Activity.
- The applicant shall mill and overlay (2”) the finish surface of the existing pavement on Cumberland Avenue from the curb face to the centerline of the street and full width at the proposed driveway entrance.
- The applicant shall mill and overlay (2”) the finish surface of the existing pavement on Myrtle Street from curb face to curb face of the street.
- All required finished surface paving shall be complete at the time of build out of the block.

- DPW Water Resources
  - Per section 2.2.3 of the technical manual DPW is stipulating that projects which require a new stormwater connection into the City's combined sewer system are required to provide a stormwater detention volume equal to the greater of 1" of rainfall times the total impervious area within the project site's disturbance limits or the net increase in average daily sanitary sewer flow being added to the system by the project. Flows are to be controlled to a maximum discharge of 0.1 CFS until storage is maximized. It appears the applicant is meeting this requirement with the proposed contech 48" pipe storage system.
  - Water resources will be sending out an email to the applicant directly to discuss the proposed utility improvements in Myrtle Street and Cumberland Avenue.

--
Janine Ba
Project Engineer
City of Portland Department of Public Works
212 Canco Rd. Suite B
Portland, ME 04103
janineba@portlandmaine.gov
Desk: 207-874-8463
Cell: 207-245-2074

Zachary Powell <zpowell@portlandmaine.gov>

244 Cumberland Ave comments (very late)

Mark Reiland <mreiland@portlandmaine.gov> Tue, Mar 5, 2024 at 4:46 PM
To: Zachary Powell <zpowell@portlandmaine.gov>

Hi Zach,
here are the review comments for 244 Cumberland Ave, sorry for the delay:

244 Cumberland Ave

- The 55-unit development carries a street tree requirement of 55 trees
  - The landscape plan shows 2 elm street trees planted in raised granite tree wells along the Cumberland Ave frontage leaving an in-lieu contribution to the tree fund equivalent to 53 trees
    - 53 trees * $400/tree = $21,200
    - The cost of infrastructure upgrades for the 2 proposed street trees can be deducted from the in-lieu contribution amount
      - The city strongly encourages the incorporation of structural soil underneath the sidewalk in the vicinity of the proposed tree wells to provide adequate soil volume for rooting
        - Recommended soil volume for elm species is ~ 25 yd^3
  - The city is moving away from the raised granite curbing around tree wells due to the challenges they create for snow removal during winter operations and availability and cost of the granite pieces.
    - The raised granite curbing was proposed as a way to mitigate the harmful effects of de-icing salts applied to the sidewalk
      - The increased soil volume afforded by the structural soil and required drainage provide added protection against harmful desiccation from de-icing salts
        - Removing the granite curbing allows for a much smaller tree well opening that can be located flush with the surrounding sidewalk
  - The city strongly encourages the adoption of plant friendly ice melting techniques/products in the immediate vicinity of landscape plantings as part of routine site maintenance during winter months

Mark Reiland
City Arborist

City of Portland, Maine

212 Canco Road - Suite A
Portland, ME 04103

Zachary Powell <zpowell@portlandmaine.gov>

Comments for 244 Cumberland Avenue (PL-002779-2024) due Tomorrow

Jason Grant <jgrant@portlandmaine.gov> Thu, Feb 29, 2024 at 9:12 AM
To: Zachary Powell <zpowell@portlandmaine.gov>

Fire is fine with the project as proposed.

Jason Grant CFI-2, CFPE
Fire Marshal / Fire Prevention Coordinator
Portland Fire Prevention Bureau
fireprevention@portlandmaine.gov

[Quoted text hidden]

January 9, 2024

Mr. Matt Grooms
City of Portland
Office of Planning and Urban Development
Congress Street
Portland, ME 04101

RE: Major Site Plan and Amended Subdivision Application – The Lofts on Cumberland

Dear Mr. Grooms,

Lincoln Avenue Capital Northeast Developer LLC, an affiliate of Lincoln Avenue Communities (LAC), is pleased to present the enclosed materials for a Major Site Plan and Amended Subdivision Application for a portion Tax Map 27 Lot D003 to allow for up to 55 affordable multifamily residential units located on the corner of Cumberland Avenue and Myrtle Street.

As a mission-driven affordable housing developer and investment company, LAC is committed to creating high-quality, sustainable, affordable homes for low-income individuals, seniors, and families across the United States. Today, we serve 50,000+ residents in over 122 properties. Our New England office is comprised of myself and Scott W. Shaw, Vice President & Regional Project Partner.

Lincoln Avenue Communities does not just invest in properties, we invest in communities. Our team members share a passion for improving our residents' lives and creating a lasting impact in affordable housing. For more information, please see our enclosed Impact Report, which highlights our work across the country, including our economic impact, our resident services and community impact, and our emphasis on environmental sustainability.

Our proposed development is consistent with the City of Portland's Comprehensive Plan, as we plan to:

- Provide up to 55 units of affordable housing options for community members 55+ who have been burdened by increased housing and living costs.
- The units provided will be deed restricted to ensure affordability for the long term, at a minimum of 30 years.
- Our proposed development will service households earning up to $49,740 annually for a 1-person household, up to $56,820 annually for a 2-person household, and up to $63,900 annually for a 3-person household (based on 2023 income eligibility limits for households earning 60% area median income and below).
- On-site professional property management, supervision, and security will be provided. We work with Maloney Properties, a third-party affordable and workforce housing firm

that has strong ties to the communities in which they operate, are aligned with LAC and HUD standards, and are eager to make a positive impact in residents' lives.

- Foster partnerships on the municipal and state level through the utilization of state funding for Tax-Exempt Bonds, 4% or 9% Low Income Housing Tax Credits, and capital subsidy funds through MaineHousing.
- Improve lighting and beautification, for which the development provides a new opportunity to contribute to an improved streetscape and positively impact the community that the project will serve.
- Expand employment opportunities, for which there will be new, permanent employment opportunities for maintenance and leasing operations at the property, in addition to dozens of jobs in construction dedicated to the development of the property. There will also be a focus on providing opportunities for local subcontractors and state-certified minority and women-owned enterprises.

We look forward to continuing a successful path to provide much-needed affordable housing to the City of Portland with a refined design aesthetic, quality workmanship, and active community involvement. The Lincoln Avenue Communities team looks forward to working collaboratively with the wide array of stakeholders during this development from concept to completion.

Best,

Ted Seely

Ted Seely
Senior Project Manager/New England
Lincoln Avenue Communities – Greater Boston Office

Cc: Scott Shaw (LAC), Dan Riley (Sebago Technics), Mary Costigan (Bernstein Shur)

January 8, 2024
19371-04

Mr. Matt Grooms
City of Portland
Office of Planning and Urban Development
Congress Street
Portland, ME 04101

Major Site Plan and Amended Subdivision Application – The Lofts on Cumberland
Lot 3, 385 Congress Street Subdivision (244 Cumberland Avenue)

Dear Matt:

On behalf of Lincoln Avenue Capital Northeast Developer, LLC, (Applicant), an affiliate of Lincoln Avenue Communities, a mission-driven affordable housing developer, we are pleased to submit the enclosed application for a Major Site Plan and Amended Subdivision Application for a proposed 55-unit, age-restricted (55+) affordable housing development at Lot 3, of the 385 Congress Street Subdivision. A Master Plan of Development (MDP) was approved by the Planning Board on August 9, 2022, for the overall master planned site bounded by Congress Street, Myrtle Street, Cumberland Avenue, and Pearl Street. This attached application involves a reconfiguration of Lots 2 and 3 and the development of a portion of Lot 3, land currently identified on the City's parcel mapping as a portion Tax Map 27 Lot D003 with a street address of 365 Congress Street.

The applicant, Lincoln Avenue Capital Northeast Developer, LLC, has entered into a purchase agreement to acquire a portion of Lot 3, an approximately 19,570 sf area of land at the corner of Myrtle Street and Cumberland Avenue for the development of an age-restricted (55+) residential building. The applicant is pursuing financing for the project through the utilization of state funding for Tax-Exempt Bonds, 4% or 9% Low Income Housing Tax Credits, and capital subsidy funds through MaineHousing.

The subject site comprises 0.45 acres (19,570 sf) subdivided as part of the Master Plan process from a larger 2.26-acre parcel that occupied the city block bounded by Congress Street, Myrtle Street, Cumberland Avenue and Pearl Street. The site is fully developed with a surface parking lot and is used as a private parking facility. A portion of the site is occupied by the former Press Herald printing building.

In February 2022, the Planning Board approved a Major Site Plan for a Hotel on Lot 1 of the subdivision, abutting the project site to the east. The current landowner of the project site and the property to the north and northeast identified as Lots 2 and 3, 385 Congress Street, LLC, will retain the revised Lot 2 for the future development envisioned in the Master Plan of Development.

385 Congress Street, LLC is working collaboratively with the applicant in the purchase agreement such that the affordable housing units created by the Lofts on Cumberland project may be used to meet some or all of the Inclusionary Zoning requirements for the future market-rate residential development

of the remaining land. The Lot 3 property is being sold to the applicant at a below market rate so that the project will be affordable.

The project is proposed as a condominium. The affordable housing condominium will encompass the proposed affordable housing units and associated building systems and amenity space, the parking levels will constitute a separate condominium unit which are to be acquired by 385 Congress, LLC upon building occupancy.

The massing of the affordable housing project is consistent with the approved MDP for the site to create a cohesive design, scale, and massing with both the approved hotel project to the east and the anticipated future residential condominiums to the north and northeast as they are envisioned in the MDP. The Lot 3 building is proposed as a 7-story structure comprised of a 2-story podium activated at street level with entrances to residential amenities and supporting uses including fitness areas, community spaces, and office/administrative spaces; with the affordable housing units located in a 5-story tower rising from the podium. The overall building height is reduced, at 7 stories, compared to the 13 stories envisioned in the MDP.

The proposed development program includes a mix of one- and two-bedroom age-restricted residential units. The ground level (Level 0) will be comprised of the lobby, building amenities, and parking garage with driveway access and entrances on Cumberland Avenue. The Level 1 floor above will be comprised of a parking level. Consistent with MDP, the parking decks are not interconnected. The Level 1 level parking will be built out, but only accessed by vehicles when the future residential condominiums on the remaining subdivision land are developed as part of the MDP.

Parking

As an age-restricted affordable housing project, there is no ordinance-required parking. The proposed parking levels will, however, provide a total of 63 parking spaces (26 on Level 0 and 37 on Level 1). Per the purchase agreement, 385 Congress, LLC will acquire the parking area as a condominium unit.

Traffic

A Traffic Movement Permit was issued for the Master Development Plan on February 24, 2023. The conditions of the TMP outlined certain traffic improvements to be constructed at various milestones in the phased build-out of the MDP.

Included in the application is a memorandum requesting language revisions to the TMP conditions reflecting a revised sequence of construction; anticipating that the proposed affordable housing project may be constructed as the first phase of construction, rather than the third phase envisioned in the MDP. There is no request to alter or reduce the offsite improvements required by the TMP, simply to clarify the improvements that are to be constructed as part of the Affordable Housing project phase.

The memorandum includes an analysis documenting the reduced traffic demand of the Lofts on Cumberland project due to a reduction of the total number of residential units now proposed, and the reduced traffic generated by age-restricted affordable housing units compared to market rate units. This analysis does not seek to reduce the permitted number of trips for the MDP but is provided to demonstrate that placing the level 0 parking entrance on Cumberland Avenue does not significantly alter the TMP analysis, which assumed a Level 0 entrance on Pearl Street.

Stormwater Management

Stormwater drainage from Lot 3 will be directed to the existing combined sewer in Pearl Street in anticipation of a future City project to separate the combined sewer in this street. This approach is consistent with the Stormwater Management Plan presented in the MDP and in the site plan for the abutting Lot 1 Hotel site plan approval.

The project is the redevelopment of a fully developed site, creating less than one acre of impervious area such that an MDEP Chapter 500 Stormwater permit is not required.

The redevelopment project, upon completion, will result in less than 5,000 sf of non-rooftop impervious area on the site. As such, the City's Stormwater Standards for redevelopment do not require stormwater quality treatment meeting the MDEP General Standards.

The project proposes a subsurface detention system below the lower-level garage to detain runoff meeting the flooding standards. The proposed system will direct the separated site drainage intersection of Pearl Street and Cumberland to facilitate the City's future combined sewer separation efforts. The proposed system will detain and reduce flows from the site to the maximum extent practicable during a smaller 1" rain event to advance the City's Combined Sewer Overflow (CSO) objectives for this area of the City. This approach is consistent with the Stormwater management approach approved in the MDP and the Lot 1 Hotel site plan approval and as required by the City in its sewer capacity review findings for those developments.

Utilities

The remaining building utility services will be taken from the site's frontage.

- Sanitary sewer service is proposed to be connected to the existing sewer in Pearl Street.
- Domestic and Fire protection water will be taken from Myrtle Street.
- Gas service will be provided from the existing main in Cumberland Avenue.
- Electrical service will be provided from a Central Main Power (CMP) manhole installed in Pearl Street in 2021.
- Telecommunications will be taken from existing manholes in Pearl Street.

Building Design

The building is arranged in a classic 3-part composition – base, middle, and top. The base has a limestone and brick finish to conform to the predominant limestone of adjacent buildings. The middle and top of the elevation is a mix of Hardie lap siding and panels in several complementing palettes.

The building lobby entrance on Cumberland Avenue is designed with differentiated materials and a canopy above. This entry is fully accessible.

The streetscape design incorporates street trees in planters along the curb line. The planting design and materials present a cohesive design for the space.

Amenity Deck

Consistent with MDP, the project will feature private outdoor amenity space on the rooftop of the two-level podium. This space is designed to allow for a connection to the future public amenity space at this level envisioned in the MDP and to be constructed as part of the Lot 1 Hotel site plan approval.

Consistent with the MDP this building' amenity space will be private, for the use of the affordable housing project residents and guests. This private component is consistent with the MDP design. It is necessary to keep this area as a private (not public) space for the construction cost to be eligible for Maine Housing financing and tax credits. It is also necessary so that the affordable housing project will meet the City's inclusionary zoning requirements that require similar amenities to be provided for market rate and affordable units. The market rate units envisioned in the future phases will have access to similar private amenity spaces.

Conclusion

Thank you for your continued time and attention to this project. We look forward to continuing the design and review of the project with staff and the Planning Board.

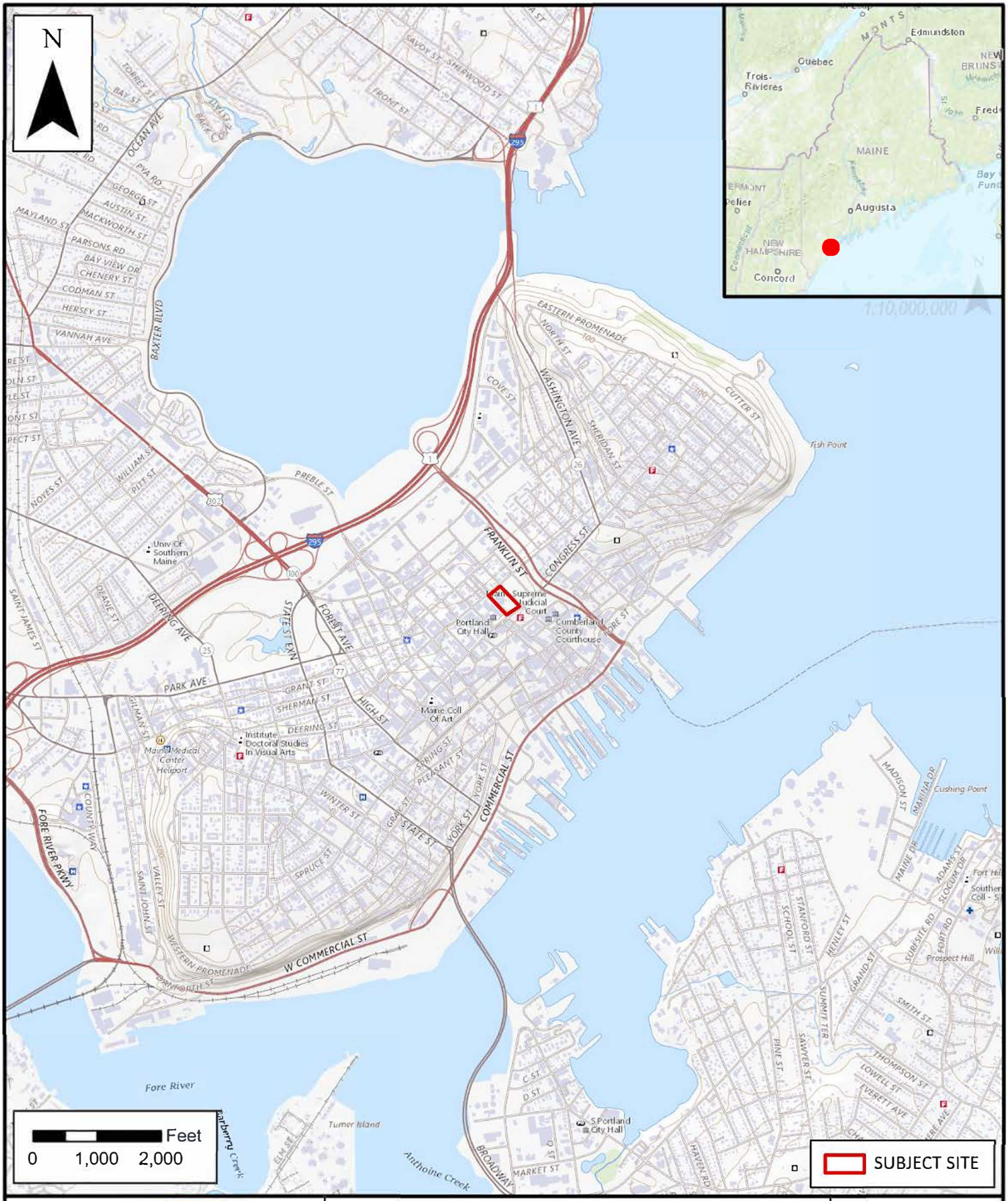
Sincerely,

SEBAGO TECHNICS, INC.

Daniel L. Riley, PE
Senior Vice President, Engineering

DLR/RLG
Enc.

Cc: Scott Shaw (LAC), Ted Seely (LAC), Mary Costigan (Bernstein Shur)



SEBAGO TECHNICS

WWW.SEBAGOTECHNICS.COM
75 John Roberts Rd. - Suite 4A
South Portland, ME 04106
Tel. 207-200-2100

LOCATION MAP

SCALE: 1:24,000

DATE: 9/16/2022

LOCATION:
385 CONGRESS STREET
PORTLAND, ME

INFORMATION:
MAINE GEOLIBRARY
USGS QUADRANGLE

Signage and Wayfinding 14-14.6.4 (H)

1. Signage location and scale will comply with the City Ordinances.
2. All on-site directional traffic signage will be sited in such a way as to not adversely affect visibility at intersections or offsite.

The proposed development will have minimal signage identifying the address of the building for residents and visitors. The building includes a two-way entrance drive to the first-floor parking garage along with a resident and visitor entrance on Cumberland Avenue. The entrances that are clearly defined by architectural design, canopies, and lighting, consistent with most multi-family developments in the City.

No free-standing on-site directional signage is proposed that would adversely impact site visibility.

The site is fully occupied by the building footprint and on-site wayfinding signage is not required to guide users to and from the facility.

Att. B

CITY OF PORTLAND
Planning & Urban Development Department

MAJOR SITE PLAN
GENERAL DOCUMENT AND DRAWINGS CHECKLIST
Please submit each document as a separate PDF file.
Please confirm by electronically checking the boxes in the left-hand column.

**** PLEASE FILL OUT AND UPLOAD THE ZONING ASSESSMENT TABLE AND WAIVER TABLE SEPARATELY AS NOTED BELOW ****

At the time of application submission, please contact the Department of Public Works regarding E-911 addressing for your project.

GENERAL APPLICATION DOCUMENTS	
Yes NA	**Project Description** ● Cover letter with detailed project description
Yes NA	**Completed Checklist** (this document)
Yes NA	**Evidence of Right, Title, and Interest** ● Deeds, leases, or purchase and sales agreements
Yes NA	**Evidence of State or Federal Approvals** ● Permits or letters of non-jurisdiction, if applicable
Yes NA	**Zoning Assessment** (see Zoning Assessment Table) Summary of compliance with use and dimensional standards of the land use code
Yes NA	**Site Plan Standards Assessment** (see Section 14.6 of the land use code) ● Summary of project compliance with site plan standards of the land use code
Yes NA	**Summary of Existing and/or Proposed Easements or Covenants, applicable.** ● Evidence of existing easements and any proposed easements, covenants, public or private rights-of-way
Yes NA	**Waiver Requests** (see Waiver Table) ● Written request for waiver describing request and compliance with applicable waiver standards
Yes NA	**Financial Capability** ● Letter or evidence from a financial institution or third party verifying financial capacity to undertake project
Yes NA	**Technical Capability** ● Evidence of technical capability of applicant and consultants – resumes and/or examples of past projects

MAJOR SITE PLAN
STANDARDS AND SUBMISSION CHECKLIST

Provide assessment of compliance with standards and include supplemental documentation, as applicable.
Please submit each document as a separate PDF file.

TRANSPORTATION		
Yes	**NA**	**Impact on Surrounding Street Systems (14-14.6.1(A))** ● Describe incremental volume of traffic impacts and mitigation measures. If needed
Yes	**NA**	**Access and Circulation (14-14.6.1(B))** Identify and describe the following: ● Site access and internal circulation, including ADA access ● Drive-up features, if applicable ● Loading and servicing needs, routes, and geometry, providing turning templates for delivery vehicles, if applicable ● Sidewalks and condition along street frontages and internal walkways ● Engineered details for ADA ramps and public sidewalks, meeting sidewalk material policy and construction requirements (Technical Manual, Section 1)
Yes	**NA**	**Public Transit (14-14.6.1(C)), if applicable** Identify and describe the following: ● Existing available transit service and proposed transit improvements, including design details, such as easement, pad base, and shelter
Yes	**NA**	**Off-Street Parking (14-14.6.1(D)), if applicable** Identify and describe the following: ● Proposed vehicular and bicycle parking supply (including ADA-compliant parking) in relation to applicable parking requirements in Article 19 of the land use code ● Curb cut separation and parking layout (Technical Manual, Section 1) ● Construction details for bicycle racks ● Management plan for snow storage and removal
Yes	**NA**	**Transportation Demand Management (TDM) (14-14.6.1(E)), if applicable** ● Provide TDM plan drafted in accordance with Technical Manual Section 1 requirements

ENVIRONMENTAL	
Yes NA	**Preservation of Significant Natural Features (14-14.6.2(A)), if applicable** Identify and describe the following: ● High and moderate value waterfowl and wading habitat ● Aquifers (for Casco Bay Islands) ● Waterbodies (including wetlands, watercourses, significant vernal pools and floodplains) ● Proposed preservation areas and protection measures ● Documentation from environmental compliance consultants and determinations from applicable state and federal agencies
Yes NA	**Landscape Preservation (14-14.6.2(B))** Identify and describe the following: ● Measures to preserve trees, including within required zoning setbacks (Technical Manual, Section 4) ● Measures to protect existing vegetation during construction
Yes NA	**Site Landscaping and Buffers (14-14.6.2(C))** Identify and describe the following: ● Overall landscaping approach and consistency with standards ● The use of screening and buffering of service areas and between non-residential and residential uses ● Existing Heritage or Feature Trees on site and measures to preserve ● Compliance with street tree requirements
Yes NA	**Water Quality, Stormwater Management, and Erosion Control (14-14.6.2(D))** Identify and describe the following: ● Erosion and sedimentation control plan and measures ● Evidence of compliance with Urban Impaired Stream Standards pursuant to DEP Chapter 500 stormwater law, as applicable ● Subsurface sanitary sewage disposal and groundwater protection measures

PUBLIC INFRASTRUCTURE AND COMMUNITY SAFETY	
Yes NA	**Consistency with City Master Plans (14-14.6.3(A))** ● Describe proposed easements, rights and improvements to connect or continue off-premises public infrastructure, as applicable
Yes NA	**Public Safety and Fire Prevention (14-14.6.3(B))** Identify and describe the following: ● Compliance with Crime Prevention through Environmental Design (CPTED) requirements (Technical Manual, Section 3) ● Emergency vehicle access ● Consistency with public safety standards (Technical Manual, Section 3)
Yes NA	**Availability and Adequacy of Public Utilities (14-14.6.3(C)) (Technical Manual, Sections 2 & 9)** Identify and describe the following: ● Electrical services, including providing underground services ● Existing and proposed connections for public utilities and required public utility upgrades ● Sewer line connections
SITE DESIGN	
Yes NA	**Massing, Ventilations and Wind Impact (14-14.6.4(A))** Identify and describe the following: ● Wind and ventilation impacts on adjoining structures and/or adjacent public spaces, including wind study, if applicable ● Bulk, location, or height impacts on adjoining structures
Yes NA	**Shadows (14-14.6.4(B)), if applicable** ● Provide shadow analysis of impacts on publicly accessible open space (Technical Manual, Section 11)
Yes NA	**Snow and Ice Loading (14-14.6.4(C))** ● Describe building design measures to prevent snow and ice from loading or falling onto adjacent properties or public ways
Yes NA	**View Corridors (14-14.6.4(D)), if applicable** ● Describe any protection of designated view corridors (Portland Design Manual, Appendix. 1)
Yes NA	**Historic Resources (14-14.6.4(E)), if applicable** Identify and describe the following: ● The site's status as a designated landmark, within a historic district or historic landscape district, or within 100 feet of any designated landmark, historic district, or historic landscape district ● Compliance with standards for preservation and documentation of archaeological resources

Yes	NA	**Exterior Lighting (14-14.6.4(F))** ● Describe how the proposed site lighting will adhere to photometrics requirements as it relates to light trespass and full cutoff fixture design, pursuant to Technical Manual Section 12
Yes	NA	**Noise and Vibration (14-14.6.4(G))** ● Provide data on noise levels for HVAC and other mechanical equipment, such as design specifications, to demonstrate consistency with state and federal noise emissions requirements as well as City code
Yes	NA	**Signage and Wayfinding (14-14.6.4(H)), if applicable** ● Provide signage plan showing the location, dimensions, height and setback of all existing and proposed signs ● Provide drawings of all commercial and directional signage on site
Yes	NA	**Zone-Related Design Standards (14-14.6.4(I))** ● Address any applicable design review standards by zone, including compliance with Design Manual

MAJOR SITE PLAN
DRAWINGS CHECKLIST

Please upload the following DRAWINGS with the listed details into e-Plan as separate pdfs.

All drawings must be submitted in a 24 x 36 sheet size.

BOUNDARY SURVEY (stamped by a Maine Licensed Surveyor and drawn as per Technical Manual Sec. 13)

SITE PLAN(s) (stamped by a Maine Licensed Professional Engineer) including:

All sheets – Include a title block with project title and the following information:

- Project street address
- Name and address of property owner & applicant
- Licensed design professional, incl firm that produced plans
- North arrow
- Date of preparation and revision history block
- Tax parcel (chart, block, and lot) number

Existing Conditions Plan with the following:

- Existing structures, with distance from primary building façade(s) to the property line
- Approximate location of structures on abutting properties
- All streets and intersections adjacent to the site
- Existing driveways, pedestrian ways, and bicycle infrastructure, including dimensions and materials
- Existing public transit infrastructure
- Existing vehicle & bicycle parking areas
- Existing utilities on site and within adjacent rights-of-way
- Existing grades (two-foot contours preferred)
- Location of water courses, wetlands, and vegetation, or other significant natural features
- Existing soil conditions and location of test pits and borings
- Zoning boundary lines, including overlays
- Location of all existing easements and rights-of-way

Proposed Site Plan with the following:

- Proposed structures, including distance from primary building façade(s) to property lines
- Ground floor area, and finished floor elevations for all buildings
- Any proposed geometric modifications to streets and intersections adjacent to site
- Location, dimensions and materials of all proposed driveways, vehicle, bicycle, & pedestrian access ways with corresponding curb lines
- Engineered specifications/ cross-sections for proposed driveways, sidewalks & paved areas
- Location and dimensions of proposed loading areas, including turning templates
- Proposed transit infrastructure with dimensions/ engineering specifications
- Location of vehicle and bicycle parking with dimensions and engineering specifications
- Location of all snow storage areas
- Exterior lighting (please see Technical Manual Sec. 12 for photometrics requirements)

• Location of fire hydrants • Location of solid waste management receptacles • Location of all proposed HVAC and mechanical equipment, including proposed screening, where applicable • Location of proposed easements and rights-of-way, including dimensions • Please utilize color-coding and/or hatches and shading to delineate changes between the pre and post development condition as needed
UTILITY PLAN including:
• Proposed electrical infrastructure • Location, sizing and directional flows of all proposed sewer and stormwater infrastructure • Location and dimensions of off-premises public or publicly accessible infrastructure adjacent to site • Electric utility infrastructure
GRADING AND DRAINAGE PLAN including:
• Proposed grades • Proposed stormwater management measures meeting Technical Manual (Section 5) standards • Any proposed alteration of a watercourse or wetlands • Any groundwater protection measures • Proposed buffers and preservation measures for wetlands or significant natural features
LANDSCAPE PLAN including:
• Existing vegetation to be preserved and preservation measures • Proposed landscaping, screening, and street trees, including caliper widths for trees • Planting schedule, including street trees
ARCHITECTURAL PLANS AND RENDERINGS including:
• Exterior building elevations, color renderings, illustrations of all sides • Axonometric and street-level views for structures greater than three stories in height • Provide context drawings, if applicable (Design Manual, page 1) • Floor plans
CONSTRUCTION MANAGEMENT PLAN including:
• Specifics on traffic control, sidewalk sheds, and pedestrian rerouting • Include a drawing and written narrative
OTHER
• Details and cross-sections, as necessary

Zone Related Design Standards 14-14.6.4 (I)

1.a. Development in the B-3, B-5, B-5b, and B-7 zones and in the B-6 and EWPZ zones shall be designed to support the development of dense, mixed-use neighborhoods with attractive, safe, and convenient street-level pedestrian environments.

The building and site is designed to comply with the design standards of the City of Portland Design Manual Section (b) B-3 Downtown Business Zone and the Pedestrian Activities District (PAD).

The proposed project is part of a Master Development Plan (MDP) approved by the Planning Board on August 9, 2022. The proposed development of Lot 3 has been revised since Master Plan approval reducing the height of the structure from 13 floors to seven floors; however, the design remains in compliance with the requirements of the Design Manual. The following items discuss the site design with reference to applicable sections of the ordinance and design guidelines that were highlighted in the MDP review.

Additional information related to building design is shown on the architectural plans submitted with the application.

- *§(b)(1)(a)(1)(i)(2) of the Design Manual states that building entrances, including such factors as compatibility with the building's façade, prominence along the street, access to the street, and accessibility for physically handicapped or for those with special needs are factors that should be considered.*

The building entrance on Cumberland Avenue has been designed with differentiated materials, slightly recessed doors and a canopy above, extending from the building face. This entry is fully accessible.

- *§ (b)(1)(e)(1) of the Design Manual states that proposed development shall respect, enhance, and be integrated with the existing character of the general pattern of development in the downtown, surrounding building environment and streetscape, as described and illustrated in the Downtown Urban Design Guidelines (Appendix 1). Factors to be considered include the relationship to the following existing patterns:*

  - *Street walls and building setbacks:*

    As part of the MDP review. The Cumberland Street elevation was pulled back from the property line at the corner of Myrtle Street for more pedestrian room amongst the street trees. The approved MDP includes waivers of the 5' maximum setback required by ordinance. The setbacks presented in the plan set are consistent with the MDP design and the approved waiver. Due to the change in building design, a minimal waiver of the maximum setback line is required, primarily due to the acute angle in the right of way at Congress and Myrtle Street.

The building design adheres to the B-3 zone requirements for maximum height of the street wall, overall building height and, step-back requirements.

- *Open space:*

  The proposed development does not include public open space. Open space is provided for residents and guests on the rooftop of the second level, consistent with the Master Development Plan.

- *Building form, scale and massing:*

  The form, scale and massing of the building is consistent with the approved MDP for the site. The proposed building is fewer stories than approved in the master plan yet is consistent in form with the overall proposed development of the block.

- *Facade proportion and composition:*

  The building is seven story structure. arranged in a classic 3-part composition – base, middle, and top. The base has a limestone and brick finish to conform to the predominant limestone of adjacent buildings. The middle and top of the elevation are a mix of Hardie lap siding and panels in several complementing palettes. ….

- *Pedestrian circulation and building entrances:*

  The site is framed by sidewalks along Cumberland Avenue and Mrytle Street. Access to the building is via an entrance on Cumberland Avenue. The entrance is differentiated from the façade and defined with varying architectural details and an entrance canopy

- *Parking:*

As an age-restricted, affordable housing development the project does not have a minimum parking requirement. The proposed development includes parking at Level 0 and Level 1 garages that will be constructed as a condominium unit and sold to the current land owner (385 Congress, LLC) to provide the parking envisioned in the approved Master Plan for 385 Congress Street. Once sold the applicant will lease up to 14 spaces in the ground level (Level 0) parking for its use. The expectation is that the majority of those living in the building will not own or rely on private vehicles and will use public transportation available in the immediate vicinity of the project.

Site Plan Standards Assessment

The Proposed project has been designed in compliance with the site plan standards as outlined in 14.6 of the land use code. Please see the submittal materials for how each of the specific standards are met.

Att. C

385 CONGRESS, LLC
2730 Transit Rd
West Seneca, NY 14224

January 10, 2024

Matt Brooms
City of Portland
Office of Urban Planning and Development
Congress Street
Portland, ME 04101

Dear Mr. Brooms,

The purpose of this letter is to confirm that 385 Congress Street, LLC has entered into an agreement with Lincoln Ave Communities to sell a certain parcel of land located on the corner of Myrtle and Cumberland Street. It is our understanding that the land referenced herein, will be further improved with an age restricted affordable housing project. The land is being offered to Lincoln Ave Communities at a substantial discount to market value, in consideration that the units developed will satisfy 385 Congress Street LLC's obligations as outlined under the inclusionary zoning requirements in connection with the development of the remaining parcel for which a Master Plan has been approved by the City of Portland.

If you have any questions or concerns, please so not hesitate to contact me.

Sincerely,

Joseph Dasco
Authorized Agent

Construction Management Plan
Lot 3 385 Congress Street Subdivision
January 8, 2024

Project Team:	Lincoln Avenue Capitol Northeast Developer, LLC	(Owner/Applicant)
	Sebago Technics, Inc.	(Site/Civil Engineer)
	Market Square Architects	(Architect)

General Contractor/ Construction Manager: Undetermined

Introduction

This Construction Management Plan has been prepared to outline the minimum requirements and construction management principles that the Applicant and their General Contractor/Construction Manager (GC/CM) will be required to perform to minimize impacts from the construction, such as noise, vibrations, ground movement, truck traffic, and other construction related factors.

This plan has been prepared prior to land use approvals, final building design or the selection of a GC/CM for the project. It is anticipated that the selected GC/GM will prepare a final Construction Management Plan based on their means and methods of construction.

The Planning Authority and the Department of Public Works may require seek revisions to an approved Construction Management Plan or require a condition of approval that states an applicant shall coordinate a project's construction schedule with the timing of nearby construction activity, in order to avoid cumulative impacts on a neighborhood.

Construction Management Principles

All aspects of this Construction Management Plan are designed and intended to mitigate or minimize construction-related impacts to public ways (including Cumberland Avenue, Pearl Street, and Myrtle Street), surrounding neighborhood(s), and ongoing operations of Merrill Auditorium, City Hall, and other abutters. The CG/CM will work collaboratively with Applicant., project consultants, subcontractors, and The City of Portland to ensure the most efficient and least disruptive construction project possible. This goal will be attained through detailed and consistent planning, coordination, execution, and communication with all parties and stakeholders.

Development and Review of Construction Management Plan:

The GC/CM will refine and update the Construction Management Plan throughout the course of the project as conditions change and to optimize the logistical and safety-related measures being employed in the interest of public safety. The overriding goal is to eliminate or minimize adverse impacts to the construction site, surrounding areas and public ways by protecting the public, local residents, construction personnel, and property, while simultaneously ensuring pedestrian and other adjacent abutter activities can continue in a safe manner. Please refer to the attached proposed Construction Management Site Logistics Plan.

Performance Guarantees, Inspection Fees, Preconstruction Meetings, & Permits:

Prior to scheduling a preconstruction meeting and the issuance of city-required permits, Applicant and the GC/CM shall meet all requirements contained in Section 14-530 Development Review Fees and Post Approval Requirements and 14-532 General Requirements and Enforcement of Portland's Land Use Code.

Other permits, as applicable for utility connections and road opening include storm drain, sewer, natural gas, and electrical connections in Pearl Street and Cumberland Avenue. Water and electrical connections shall be made in Myrtle Street.

Street Opening & Street Occupancy Permit:

Construction activity in a public right-of-way is controlled by Chapter 25 and sewer and stormwater system connections are controlled by Chapter 24 and 32 of the Land Use Code.

All required permits shall be obtained through the Department of Public Works and the requests shall conform with the approved construction management plan. Temporary lane closures are anticipated during utility construction in Cumberland Avenue for 3-4 weeks. Impacting the intersection of Cumberland Avenue and Pearl Street for 1-2 weeks.

Utility Construction in Myrtle Street will require closure for the Water Main installation for 2-3 weeks.

Strategies can be employed to minimize impacts to Merrill Auditorium by taking part of the road and providing access from Congress Street while work is performed at Cumberland Avenue. One lane may potentially remain open if excavation safety can be achieved based on the contractor's means and methods for excavation support. This work will be coordinated with Merrill Auditorium schedule. All temporary-directional signage and traffic control to be utilized during this work will conform to MUTCD standards..

Blasting:

Blasting, if required, shall conform with all measures of Article VIII. Regulation of Explosives in the Land Use Code and Section 3.7 Standards for Blasting and Regulation of Explosives in Portland's Technical Manual.

Based on preliminary Geotech findings, rock is not expected.

It is anticipated that Urban Fill will be encountered on-site. This material will be reused on-site or removed to a DEP licensed land fill or beneficial use site.

Pile Driving/Shoring/Sheeting:

The project may include deep foundations such as pile driving, sheeting, or shoring. These activities could result in ground vibration in and around the immediate vicinity. To pro-actively mitigate the effects of this work, the GC/CM will provide a preconstruction survey and documentation of existing conditions on the 385 block and abutting properties as necessary and in accordance with local regulations.

Appropriate plans will be developed for review by the City as necessary to mitigate any potential impacts to surrounding properties, buildings, or structures and findings will be shared in advance of the commencement of work.

Building Code:

The project will employ the best practices, as applicable, of Chapter 33 Safeguards During Construction, from the 2015 International Building Code.

Construction Administration and Communication:

The Applicant and GC/CM will implement a continuous communication strategy and program through the preconstruction and construction phases of the project.

The communication strategy is intended to ensure that construction operations are performed in accordance with all agreements, ordinances, and special permits applicable to this project. Th GC/CM will work closely with the Applicant., adjacent abutters, businesses, and nearby construction sites, and will keep parties regularly informed, as far in advance as possible, of scheduled work, particularly work anticipated to cause significant noise, vibrations, or dust. The GC/CM will also prominently display appropriate signage indicating construction entrances and exits, pedestrian access around the site, and signage directing visitors to the construction field office.

Site signage to also include GC/CM 24hr/7days/wk. contact information. All temporary signage is to be modified appropriately as conditions may change and will be removed at the conclusion of the project.

Construction Schedule:

Construction is anticipated to commence Fall 2024 and be substantially complete by Spring 2026. The schedule will be refined as the design evolves.

Work hours are to follow City of Portland Sections 17-18, Construction Activities for Building Permit, and Section 25- 129, Noise, dust, and debris.

Work hours will generally be restricted to 7:00 am – 5:00 pm, Monday through Friday. In the event of Saturday work, hours are to be limited to 8:00 am – 4:00 pm. Any further off-hour work will be coordinated directly with the City.

Material deliveries will comply with normal work hours. This project is anticipated to utilize "just in time" delivery techniques with the intent that materials delivered to the site are promptly installed/put in place. A temporary storage location for materials is identified on the Site Logistics Plan document. All construction-related deliveries will travel from 295 to Franklin Arterial to Cumberland Avenue.

Security & Public Safety:

As depicted in the Site Logistics Plan, the entire project site will be enclosed by temporary chain link construction fencing. Primary construction site access to be swinging gate entrance from Cumberland Avenue with secondary/emergency gated access points on Pearl Street and Myrtle Street. Gates will be secured during non-working hours and equipped with "Knox" boxes/padlocks as required by the City of Portland Fire Department.

Project work activities will be conducted in accordance with GC/CM safety policies and OSHA regulations and will further comply with applicable City of Portland and/or State of Maine safety-related regulations. A comprehensive Fire Safety/Fire Dept Access and Fire Safety Plan will be developed, and reviewed with the City of Portland prior to implementation as well as a project incident response process to be followed in the event of emergencies.

In the interest of public safety and City of Portland requirements, appropriate informational and directional signage with other precautions as required will be provided directing pedestrians around the immediate areas of the enclosed construction site.

Construction Activity in Public Streets:

In order to minimize impacts, disruption, and provide safe and efficient passage, GC/CM will implement best practices traffic control in compliance with all City of Portland requirements during the duration of the project. This includes signage, measures to mitigate idling construction-related delivery traffic, construction service vehicles, traffic flaggers, temporary traffic flow modifications, signage & barriers at temporary partial street closings, and any other measures required to control work taking place in public ways.

In instances where utility connection excavations may need to be left open overnight, measures including barriers, traffic/pedestrian signage, trench plate covers, and other mandated requirements will be implemented.

Stormwater:

Stormwater water system connections (in addition to water and electrical connections) will be required. Tie-in connections to existing services are designed to occur In Cumberland Avenue and Pearl Street.

Traffic Control Plans:

Construction activities that impact the existing public street system will be controlled to protect the safety of the construction workers, pedestrians, and the traveling public. In addition to utility connections, temporary lane and sidewalk closures on Cumberland Avenue and Myrtle Street are anticipated during the period of construction.

Traffic control measures are described above and will be further articulated and elaborated upon for specific relevant activities and as part of street opening or street occupancy/sidewalk occupancy permitting. See attached GC/CM Site Logistic plan.

Detailed schedules will be provided when the site contractor is contracted.

Site Management and Controls:

GC/CM will implement and manage a continuous program of containing soils onsite, public street cleaning, and onsite dust control. This program is to comply with City of Portland requirements and will include tracking pads at construction exits, water trucks to control dust, street sweeping equipment, and other measures that are required.

Trash dumpsters will be utilized onsite for regular removal of all construction-related trash & debris. The site and building areas under construction will be kept orderly and as clean as possible throughout the construction period.

Noise and vibration will be maintained at minimal levels and will follow all City of Portland requirements as defined in Sections 17-18 of the City Code as well as Section 25-129 on Noise, Dust and Debris.

Snow plowing and surface treatment of the project site within the limits of construction will be the responsibility of the GC/CM.

Rodent Control will be provided, if applicable, by a professional exterminator consistent with Chapter 22 of the City Code

Erosion Control and Preservation of Trees:

Prior to commencement of construction activities, erosion and sedimentation controls as contained in the approved erosion and sedimentation control plan shall be installed. These controls shall be inspected regularly and maintained on a consistent basis.

All tree and other landscaping preservation measures shall be as depicted in the landscaping design documents. Any onsite material storage will be away from any existing to remain landscaping plantings.

Construction Staging Area:

Refer to the Site Logistics Plan for anticipated locations of temporary site office and/or storage trailers and material staging and storage areas. Dumpster locations to be dependent on optimal locations based on activities. Truck wheel washing stations to be located at entry/exit points to the site.

Deliveries:

Material deliveries will be carefully planned to not encumber the site or adjacent public way with material delivery vehicles. All efforts will be made to avoid queueing of delivery vehicles on public ways. During times of consistent deliveries of large quantities of construction products, an offsite remote marshalling area will be utilized for trucking. Truck deliveries will enter the site at the Cumberland Avenue and Pearl Street construction gates.

Truck Routes:

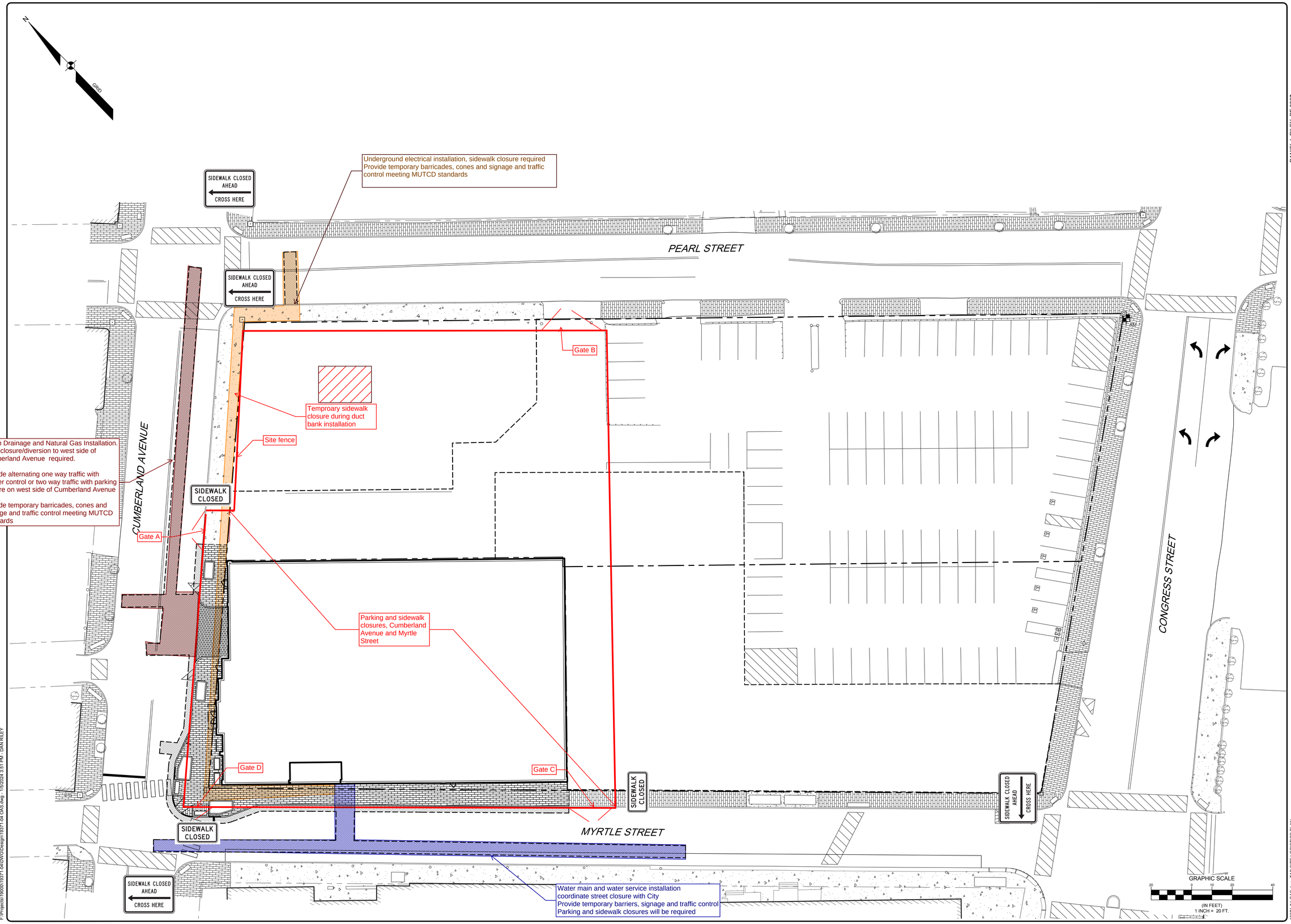
It is anticipated truck deliveries will arrive at the Cumberland Avenue gate from Franklin Arterial and Interstate 295.

Contractor Parking:

GC/CM will provide some contractor parking on site. Depending on the timing of the Lot 3 project with the other phases of the master plan GC/CM may be able to use the existing lots on the block for contractor parking. If this is not available, GC/CM will secure offsite parking or have contractors park in public pay-for parking lots.

Dewatering Plan:

The site contractor will be responsible for the site dewatering plan and once contracted will provide a detailed plan. We anticipate minimal groundwater based on the preliminary geotechnical report. GC/CM will treat rainwater by pumping to a filter pit that will contain layers of filter fabric 4'-6' deep of ¾" crushed stone. The stone will be maintained and replaced as needed



NOT FOR CONSTRUCTION

DANIEL L RILEY PE 9967

REV	BY	DATE	STATUS
A	DLR	01/08/2024	ISSUED FOR SITE PLAN REVIEW

THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM SEBAGO TECHNICS, INC. ANY ALTERATIONS, AS PROVIDED OR OTHERWISE, SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO SEBAGO TECHNICS INC.

SEBAGO TECHNICS
WWW.SEBAGOTECHNICS.COM
75 John Roberts Rd.
Suite B-4
South Portland, ME 04106
Tel. 207-200-2100

SITE LOGISTICS PLAN

OF:

HERALD SQUARE

386 CONGRESS STREET
PORTLAND, MAINE

FOR:

LINCOLN AVENUE CAPITAL

14 HAPVEST WAY
NEW MARKET, NH 03857

DESIGNED	DJS
DRAWN	MRS
CHECKED	DLR
DATE	01/08/2024
SCALE	1" = 20'
PROJECT	19371-04

DRAWING 1 OF 1

19371-04 QAS.dwg, TAB:SITE LOGISTICS PLAN

F:\Projects\19000\19371-04\DWG\Design\19371-04 QAS.dwg , 1/8/2024 3:51 PM , DAN RILEY

Evidence of State or Federal Approvals

Not Applicable. No State or Federal approvals are required for this project at this time.

The project is a phase of development identified in the approved Master Plan of Development for 385 Congress Street approved by the Planning Board on August 9, 2020 (reference City of Portland Planning Department Project Number PL-001970-2022); and a subdivsion approval by the Planning Board on January 24, 2023 (reference City of Portland Planning Departmetn Project Number PL-2332-2023).

Portland, Maine — Yes. Life's good here.

Planning & Urban Development Department

ZONING ANALYSIS Relevant Zone(s) B3

All Projects:

	Required	Proposed
Lot Size	none	19,570 sf
Area Per Dwelling Unit	none	none
Minimum Street Frontage	15 ft	112ft/177ft
Front Yard Minimum	none	N/A
Front Yard Maximum	5	6.5'
Rear Yard	none	none
Yard Right	none	none
Yard Left	none	none
Side Street Setback	none	none
Step Back	15'	15'-17'
Maximum Lot Coverage	100%	100%
Minimum Lot Coverage	none	none
Maximum Height	150 ft	77 ft 10 in
Open Space	none	none
Maximum Impervious Area	100%	100%
Pavement Setback	none	N/A
Floor Area Ratio	none	N/A
Off Street Parking Spaces	0**	63**
Loading Bays	0***	0
Other 1		
Other 2		
Other 3		

*front yard consists of sidewalk

**Project is 100% affordable age restricted housing, no minimum parking required

***Project is entirely residential, no loading bay required per Table 19-C

Existing and Proposed Easements or Covenants

Existing Easements

The First Ammended Subdivsion Plan attached to this application shows "Setback Covenants" created over portions of Lots 1, 2 and 3 in the deed conveying Lot 1 from 385 Congress, LLC to Fathom Congress, LLC and recorded in the Cumberland County Registry of Deeds in book 39992 pages 249-253. The Setback Covenants restrict construction of buildings, above elevation 80' and 100'. The language of the covenants taken from the above referenced deed are as follows:

Grantor and Grantee hereby further agree and covenant as follows (the "Setback Covenants"):

1. Grantor, its successors and assigns, covenants and agrees with Grantee, its successors and assigns, with respect to Lot 2, and for the benefit of Lot 1, that no building shall be constructed or located on Lot 2 closer than twenty-seven and one-half (27.5) feet from the boundary between Lot 2 and Lot 1 above elevation eighty (80) feet (NVGD 1929 datum).

2. Grantor, its successors and assigns, covenants and agrees with Grantee, its successors and assigns, with respect to Lot 3, and for the benefit of Lot 1 on the Subdivision Plan, that no building shall be constructed or located on Lot 3 closer than twenty-three and eight one hundredths (23.08) feet from the boundary between Lot 3 and Lot 1 above elevation eighty (80) feet (NVGD 1929 datum).

3. Grantee, its successors and assigns, covenants and agrees with Grantor, its successors and assigns, with respect to Lot 1, that:

   a. no building shall be constructed or located on Lot 1 closer than twenty-seven and one-half (27.5) feet from the boundary between Lot 1 and Lot 2 above elevation eighty (80) feet (NGVD 1929 datum); provided, however that notwithstanding the

foregoing any building constructed on Lot 1 may extend by up to six (6) feet for a total width of eighty (80) feet into the 27.5 foot set back area from Lot 2 referenced above up to elevation 100 feet (NGVD 1929 datum); and

b. no building shall be constructed or located in Lot 1 closer than twenty-six and ninety-two one hundredths (26.92) feet from the boundary between Lot 1 and Lot 3 above elevation eighty (80) feet (NGVD 1929 datum); provided, however, that notwithstanding the foregoing any building constructed in Lot 1 may extend by up to twelve (12) feet into the 26.92 foot set back area from Lot 3 referenced above up to elevation 100 feet (NGVD 1929 datum).

The foregoing Setback Covenants touch and concern Lot 1, Lot 2, and Lot 3 and shall run with the land comprising Lot 1, Lot 2 and Lot 3.

The Elevations depicted are NGVD29 per City Standards as verified by a United States Coast & Geodetic Survey brass disk located in a granite block of the City Hall building having a published elevation of 69.99' (NAVD88 68.95').

Proposed Easements

Proposed Easements

The following items provide draft language for proposed easements shown on the Lot 3 Easement Plan anticipating that final language and easements will be coordinate and submitted to the City of Portland prior to Certificate of Occupancy based on the final construction of the Lot 3 Affordable Housing Project

Sidewalk Easement (Cumberladn Avenue and Myrtle Street)

The purpose of the easement granted herein by the Owner (Grantor) is to grant public pedestrian access in, on, and over the easement area which shall function as an ADA-compliant sidewalk for pedestrian, bicycle and similar non-motorized pedestrian uses subject, however, to such rules or ordinances that the Grantee may adopt from time to time in the interests of public safety. Notwithstanding the foregoing, wheelchair and emergency vehicles as well as snow removal equipment shall be permitted in accordance with applicable federal and/or state laws regulating accessibility for such devices, vehicles, or equipment. The City of Portland (Grantee) shall have the right, but not the obligation, to install, maintain, replace and repair the sidewalk for public use and enjoyment on and over Easement Area. Maintenance and repair responsibilities within the Easement Area shall belong solely to the Grantor, its successors and assigns. It shall be the responsibility of the Grantor to remove snow and ice from said Easement Area and to otherwise comply with all laws, rules, regulations, and ordinances governing the removal of snow and ice therefrom. Grantee shall have the right but not the obligation to repair or maintain the Easement Area when Grantee, in its sole discretion, deems such repairs or maintenance necessary to ensure public safety.

The Easement Area shall, as provided and permitted herein, be maintained as a sidewalk for the uses set forth and described herein and the Grantor shall not use or permit any use, condition, or state of disrepair that would be contrary to or otherwise inhibit such uses.

Financial Capability

The proposed project will be developed and financed by Lincoln Avenue Capital Northeast Developer, LLC (an affiliate of Lincoln Avenue Capital).

Attached please find the Lincoln Avenue Capital Annual Impact Report as proof of financial capability:

LINCOLN AVENUE CAPITAL LLC AND AFFILIATES

SUMMARIZED FINANICIAL INFORMATION
AND INDEPENDENT ACCOUNTANT'S REPORT

JUNE 30, 2023

TIDWELL group

TIDWELL group

INDEPENDENT ACCOUNTANT'S REPORT

To the Owners

Lincoln Avenue Capital LLC and Affiliates

Management is responsible for the preparation and fair presentation of the accompanying Summarized Balance Sheet of Lincoln Avenue Capital LLC and Affiliates as of June 30, 2023 in accordance with accounting principles generally accepted in the United States of America. We have performed a compilation engagement in accordance with Statements on Standards for Accounting and Review Services Committee of the AICPA. We did not audit or review the Summarized Balance Sheet of Lincoln Avenue Capital LLC and Affiliates nor were we required to perform any procedures to verify the accuracy or completeness of the information provided by management. We do not express an opinion, a conclusion, nor provide any assurance on the Summarized Balance Sheet of Lincoln Avenue Capital LLC and Affiliates.

Management has elected to make certain departures from accounting principles generally accepted in the United States of America. These departures include not consolidating certain underlying real estate assets and measuring investments in real estate at a different measurement than fair value as defined by accounting standards.

Management has elected to omit substantially all the disclosures required by the accounting principles generally accepted in the United States of America. If the omitted disclosures were included in the financial statements, they might influence the user's conclusions about the company's Summarized Balance Sheet. Accordingly, the financial statements are not designed for those who are not informed about such matters.

Tidwell Group, LLC

Atlanta, Georgia
August 28, 2023

LINCOLN AVENUE CAPITAL LLC AND AFFILIATES*

SUMMARIZED BALANCE SHEET

As of June 30, 2023

ASSETS	Lincoln Avenue Capital LLC	Lincoln Avenue Capital Management LLC	LAC Guarantor Holdings LLC	Eliminations	LAC and Affiliates (combined)	
[redacted]						
[redacted]						(1)
[redacted]						(2)
[redacted]						(3)
[redacted]						(4)
Total assets	**193,781,982**	**104,695,898**	**3,850,418**	**(62,858,296)**	**239,470,002**	
Total liabilities	59,210,339	161,066,416	3,904	(59,011,782)	161,268,877	(5)
Net assets	**$ 134,571,643**	**$ (56,370,518)**	**$ 3,846,514**	**$ (3,846,514)**	**$ 78,201,125**	

* Certain affiliate entities have been omitted from this report.

(1) The Company records cash held in escrow with third-party escrow agents that is restricted in any manner, such as held in escrow with a qualified intermediary associated with an exchange transaction under Section 1031 of the United States Internal Revenue Code, as Restricted cash.

(2) Among the amount, $2,621,698 is expected to be received within 12 months of Balance Sheet date.

(3) As of the balance sheet date, Lincoln Avenue Capital LLC ("LAC") has direct and indirect ownership interests in 6 real estate properties and one land parcel across 3 U.S. states and totaling 1,156 residential units. Further, Lincoln Avenue Capital Management LLC ("LACM") has indirect ownership in 14 real estate properties across 8 U.S. states and totaling 2,373 residential units. The Company's investments in real estate are reported at their estimated fair value, less existing debt, pre-payment penalties associated with extinguishing such debt, and proceeds allocable to third-party ownership. In estimating fair value, we consider multiple techniques including discounted cash flow models, direct capitalization, and multiples of cash flow after debt service.

(4) Other assets balance consists primarily of Due from affiliates, Notes receivable, Pursuit costs, Equity investments, Fees receivable, and Right-of-use asset, net, as well as other miscellaneous assets such as Fixed assets and prepaid assets. Intercompany receivable, Notes receivable, and Accrued interest between LAC and its corporate operating entity LACM have been eliminated. Also, Equity investment in LAC Guarantor Holdings LLC has been elminated.

(5) Total liabilities balance consists primarily of Accounts payable and accrued expenses, Notes payable, Due to affiliates, and Right-of-use liabilities, net. Intercompany payable, Notes payable, and Accrued interest between LAC and LACM have been eliminated.

ABOUT LINCOLN AVENUE CAPITAL

These financial statements contain the combined accounts of Lincoln Avenue Capital LLC, Lincoln Avenue Capital Management LLC, and LAC Guarantor Holdings LLC (collectively, the "Company," "Us," "Our," or "We"). The Company is a leading developer and investor in affordable housing real estate nationwide and is headquartered in Santa Monica, California.

Each real estate holding has a unique single-purpose entity ("SPE") that is the legal owner/borrower of the real estate. Lincoln Avenue Capital LLC is a holding company that maintains ownership in real estate properties through interests in the underlying SPEs. Lincoln Avenue Capital Management LLC is the corporate management/operating entity that is responsible for our corporate overhead, including employee salaries, and earns fees from each SPE for advisory and management services. LAC Guarantor Holdings LLC serves as guarantor for real estate properties under the Company's ownership in exchange for corresponding guarantor fees. Both Lincoln Avenue Capital Management LLC and LAC Guarantor Holdings LLC may also hold a minority interest in real estate properties and/or related developer entities.

Since our founding in 2016, we have been driven by a commitment to provide individuals and families with quality, sustainable, and affordable homes while delivering social, environmental, and financial returns.

We measure our impact against a triple bottom line and believe that businesses thrive when they are delivering financial, social, and environmental returns. The challenges from the pandemic have only brought greater focus to the importance of our work. COVID-19 has revealed the inextricable link between affordable housing and public health – and heightened the pressing need for quality, affordable homes.

Our company brings together a diverse and innovative team – with a range of experience inside the affordable housing industry and across the business, government, and nonprofit sectors – all of whom are focused on putting forward solutions that will generate returns for generations to come.

Our vision is to raise the standards in affordable housing investing, ownership, and development with integrity, excellence, teamwork, and accountability. Our team members are dedicated to this vision, while creating long-term value for our stakeholders and in the communities we operate. The Company's investments strengthen communities. We create and implement a range of innovative solutions to support our residents and communities.

LINCOLN AVENUE CAPITAL LLC &
LINCOLN AVENUE CAPITAL MANAGEMENT LLC (*)

SCHEDULE OF INVESTMENTS IN REAL ESTATE

As of June 30, 2023

INVESTMENTS IN REAL ESTATE	Cost	Fair Value	Unrealized Gains / (Losses)
[redacted]	$ -	$ 9,121,464	$ 9,121,464
[redacted]	273,806	5,577,180	5,303,374
[redacted]	-	9,576,655	9,576,655
[redacted]	-	16,158,637	16,158,637
[redacted]	-	7,017,819	7,017,819
[redacted]	7,580,639	3,790,320	(3,790,319)
[redacted]	1,000,000	1,000,000	-
[redacted]	1	1	-
[redacted]	3	3	-
[redacted]	1,018	1,015	(3)
[redacted]	1	1	-
[redacted]	-	2	2
Total investments in real estate	**$ 8,855,468**	**$ 52,243,097**	**$ 43,387,629**

(*) Further has interest in 9 additional Real Estate properties without current fair value : [redacted]

LINCOLN AVENUE CAPITAL LLC &
LAC GUARANTOR HOLDINGS LLC

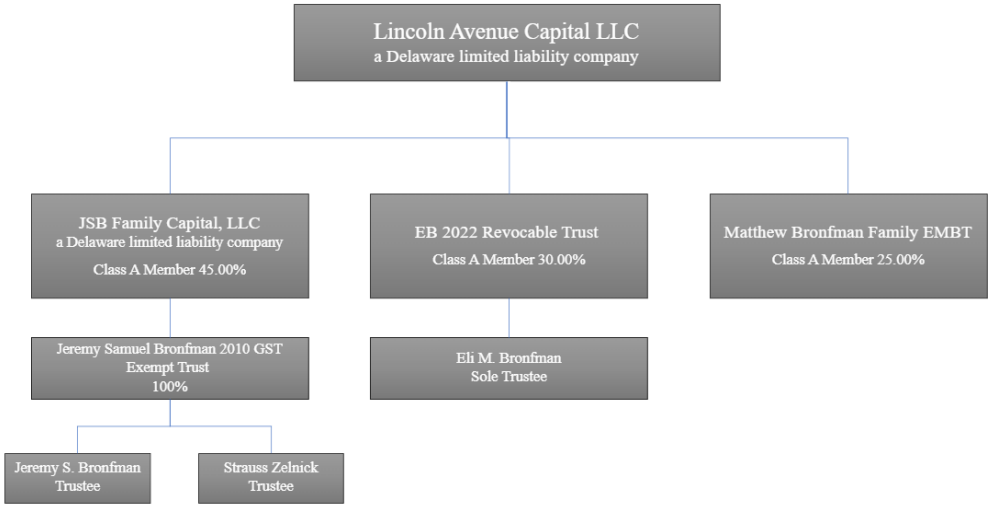
SCHEDULE OF DEVELOPMENT FEE RECEIVABLE

As of June 30, 2023

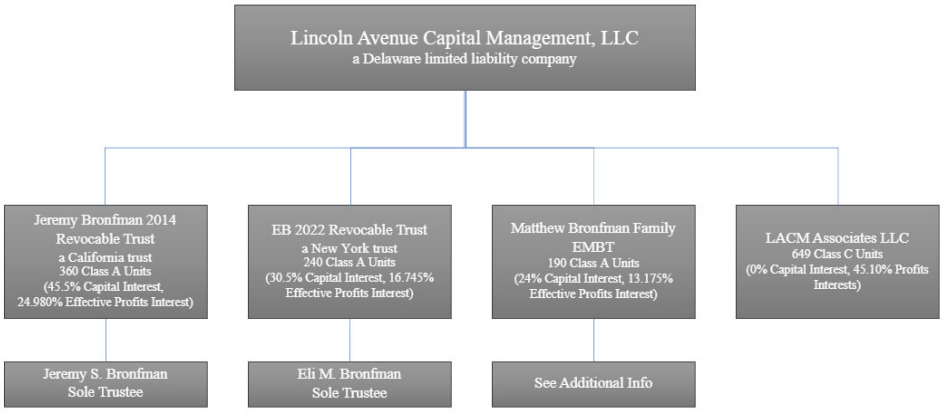
DEVELOPMENT FEE RECEIVABLE	% of units completed	Amount earned	Amount paid to date	Developer fee receivable
[redacted]	100%	$ 4,528,936	$ 4,528,936	$ -
[redacted]	100%	3,339,834	3,339,834	-
[redacted]	100%	2,552,575	2,552,575	-
[redacted]	100%	4,167,158	4,167,158	-
[redacted]	100%	7,234,971	7,234,971	-
[redacted]	100%	7,029,386	-	7,029,386
[redacted]	100%	9,018,138	1,820,003	7,198,135
[redacted]	100%	84,060	12,930	71,130
[redacted]	100%	309,889	-	309,889
[redacted]	100%	47,777	35,043	12,734
[redacted]	100%	520,032	16,233	503,799
[redacted]	82%	16,496	-	16,496
[redacted]	32%	1,899,133	-	1,899,133
[redacted]	43%	14,656	-	14,656
Total Development Fee Receivable		**$ 40,763,041**	**$ 23,707,683**	**$ 17,055,358**

ORGANIZATIONAL STRUCTURES

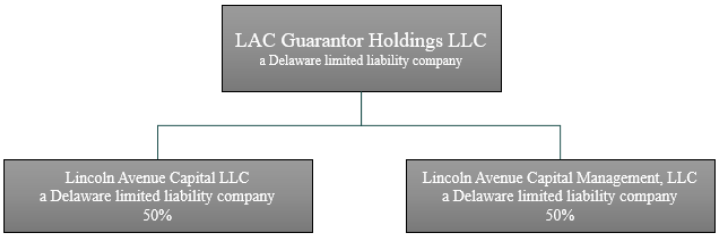
Lincoln Avenue Capital LLC



Lincoln Avenue Capital Management LLC



LAC Guarantor Holdings LLC



Technical Capability

There is a highly qualified team of developer, architects, and engineers that have been compiled for the proposed project.

The proposed residential building is to be developed by Lincoln Avenue Capital Northeast Developer, LLC. Please see the additional information included as part of this exhibit.

Architect
Architectural services for the development are to be provided by Market Square Architects, PLLC.

Market Square Architects is a Portsmouth, New Hampshire based architectural firm that has managed projects across the country in both residential and commercial sectors. Please see the additional information included as part of this exhibit for additional qualification information.

Civil/Survey/Permitting
Civil engineering, surveying, and permitting services are being provided by Sebago Technics.

Sebago Technics, Inc. (STI) is a multi-disciplined engineering firm with 40 years of experience, that offers a wide range of services specializing in land development, planning, permitting, and engineering design services. We maintain a staff of multi-disciplinary professionals to provide services in the areas of general civil engineering, road and utility infrastructure design, construction management, permitting, landscape architecture, soil science, wetlands science, land surveying, and environmental services.

Please see the attached STI resumes for Dan Riley, P.E.

About Lincoln Avenue Capital

Lincoln Avenue Capital (LAC) is a mission-driven affordable housing developer that is dedicated to creating long-term value in the communities we operate. We are one of the nation's fastest-growing developers, investors, and operators of affordable and workforce housing, providing high-quality, sustainable homes for lower- and moderate-income individuals, seniors, and families nationwide.

Our vision is to raise the standards in affordable housing development with integrity, excellence, teamwork, and accountability. LAC proudly serves residents across 26 states, with a portfolio of 120+ properties comprising 22,000+ units as of 2023. Our areas of focus include new construction, workforce housing, and preservation projects.

With a regional office located in Massachusetts, LAC is committed to making it easier for people to live where they work in communities where high-quality, sustainable, affordable homes are needed. Current projects in development in the Northeast include Residences at Chestnut, a 192-unit all-affordable project located in Manchester, New Hampshire; 1471 Blue Hill Avenue, a 41-unit all-affordable project located in Boston, Massachusetts; and Residences at 322 Washington, a 51-unit all-affordable project located in Providence, Rhode Island.

Our New England regional office is comprised of Scott Shaw, Vice President and Regional Project Partner, and Ted Seely, Senior Project Manager (refer to *Staff Biographies and Resumes* section for more information).

We believe that creating and preserving affordable housing is one of the most important causes of our time. We don't just invest in properties; we invest in communities.

Enclosures: Lincoln Avenue Capital Annual Impact Report

ROOTED in IMPACT

2022

LINCOLN AVENUE CAPITAL

IMPACT REPORT

Providing Affordable Homes.
Strengthening Communities.

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A Message from Our CEO

Lincoln Avenue Capital was founded with the mission to expand access to high-quality, affordable homes for families, individuals, and seniors. This work is more important than ever amid historic inflation and a nationwide housing affordability crisis that have weighed heavily on communities across the country.

Today, we're proud that more than ***50,000 residents*** *at* ***119 properties*** *across* ***22 states*** *call an LAC community their home.*

These complex challenges have inspired us to continue developing innovative housing solutions that embody the bold and creative spirit of our growing company. Over the past year, we've reaffirmed our commitment to preserve and create thousands of affordable housing units, and we are excited to have recently broken ground on several ground-up developments, adding much-needed units to communities across the country.

Today, we're proud that more than 50,000 residents at 119 properties across 22 states call an LAC community their home. We've maintained a resident-first approach across our portfolio, connecting families, individuals, and seniors with local organizations, health resources, and opportunities to further their educational and career goals. We've also deepened our commitment to advancing stakeholder engagement, sustainability, and corporate responsibility principles and identified new ways to expand partnerships with like-minded community leaders, businesses, and nonprofits.

Rooted in Impact, our 2022 Impact Report, highlights the transformative effect of quality, affordable homes not only on individual livelihoods, but also on the local communities we serve. We're excited to continue this important work in 2023 as we strive to expand our impact as one of the leading affordable housing developers in the United States.

Jeremy Bronfman, *Chief Executive Officer*

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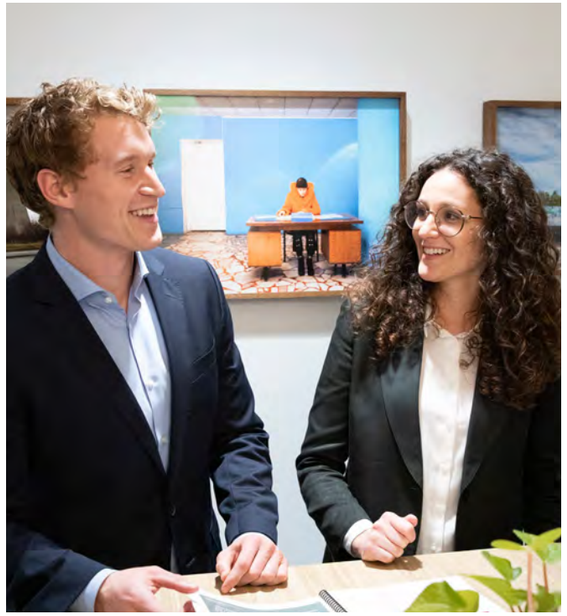
1 OUR COMPANY



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Who We Are

Lincoln Avenue Capital is one of the nation's leading providers of affordable housing.

We work to expand access to high-quality, sustainable, and affordable homes in communities where they're needed through acquisitions, rehabilitations, and ground-up developments. Our fast-growing team of leading industry professionals is at the forefront of creating and implementing innovative solutions to America's affordable housing shortage, with a focus on delivering financial, social, and environmental returns.

Our Firm at a Glance

119 communities

22,000 units

22 states

105 team members

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Our Team

Lincoln Avenue Capital is headquartered in New York City and Santa Monica, with regional offices in Colorado, Texas, and Virginia, and additional team members in 13 states throughout the country. We have a national perspective and deep local knowledge of real estate development in a variety of markets.

Our Organization:

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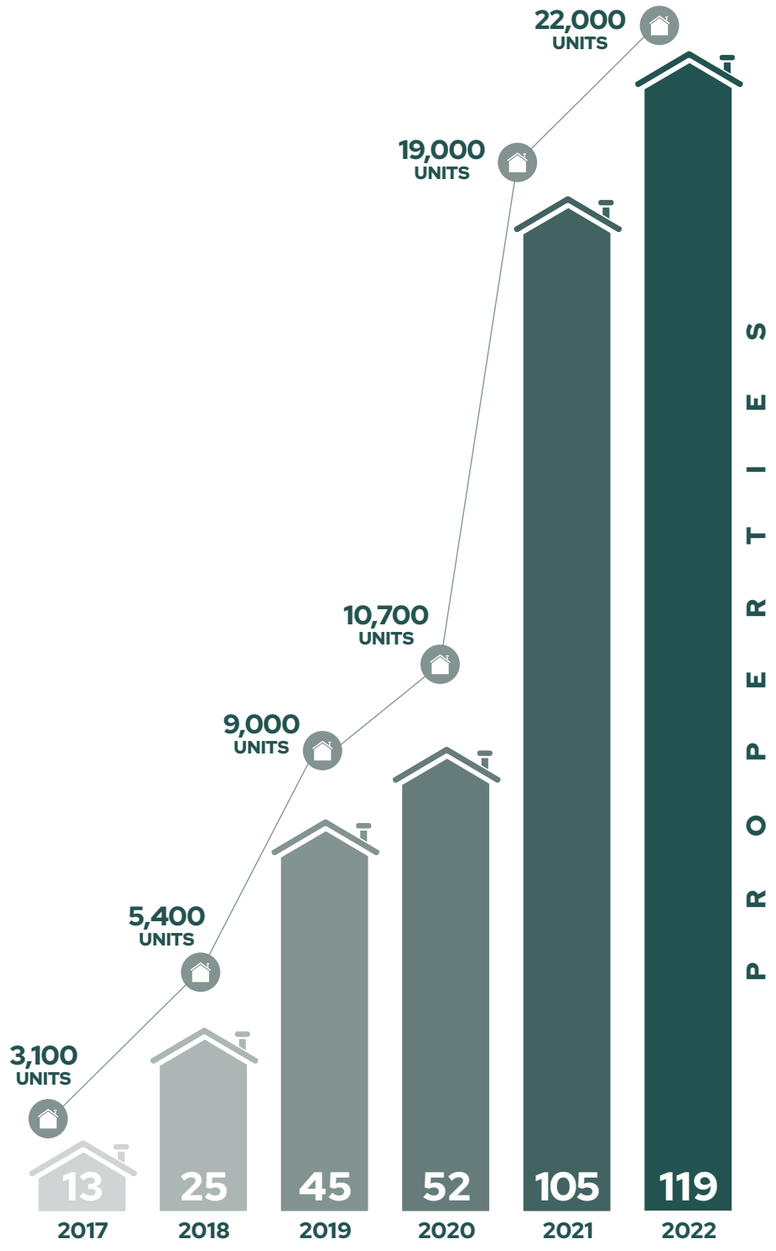
Serving Residents in 22 States

Arizona
Arkansas
California
Florida
Georgia
Illinois
Indiana
Kentucky
Louisiana
Maryland
Michigan
Minnesota
North Carolina
Nevada
New York
Oregon
South Carolina
Tennessee
Texas
Virginia
Washington
Wyoming



Our Growth

Lincoln Avenue Capital acquired more than 4,000 units across 24 properties to its portfolio in 2022, expanding to new states including Arizona, Maryland, Minnesota, and Wyoming and throughout communities in need of affordable housing. **LAC now provides housing to Americans in 22 states – with more to come in the year ahead.**

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Areas of Focus

How We're Addressing America's Affordable Housing Shortage

Americans are struggling with escalating housing costs in communities throughout the country. To help confront this crisis, Lincoln Avenue Capital works to preserve existing affordable housing and to develop new units that add to the nation's affordable and workforce housing supply.

New Construction

Developing new units is essential to expanding the nation's housing stock. We are accelerating our efforts to build new affordable homes from the ground up throughout the United States.

Preservation

LAC is committed to preserving existing affordable housing properties, to ensure that these critical units are not converted to market-rate rentals. We work to not only protect the affordability of current units, but also to enhance the quality of the homes that we provide for our residents.

Workforce Housing

Lincoln Avenue Capital provides long-term stability for working families and individuals by preserving at-risk naturally occurring affordable housing (NOAH) for residents earning between 80% - 120% of the local area median income (AMI), allowing more people to live closer to where they work.

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CASE STUDIES

Preserving Affordable Homes in West Palm Beach

The Greater South Florida region has experienced substantial economic and population growth in recent years. With housing costs rising in tandem, there is a significant need for long-term affordable housing options within the community.

- Lincoln Avenue Capital acquired Malibu Bay, a 264-unit community located near the West Palm Beach waterfront, in 2020. The acquisition includes a 30-year sustainability component.
- With financing from the Housing Finance Authority of Palm Beach County, Citi Community Capital, and the Florida Housing Finance Corporation, LAC invested $8 million into renovating the property. This included full interior unit renovations, kitchen and appliance upgrades, and reimagined gardening and landscaping.
- The renovations also incorporated sustainability features, including low-flow plumbing and water fixtures, high-efficiency LED lighting, and energy-efficient appliances and systems, helping prolong the life of the property.

Promoting Affordable Housing Through the Housing Partnership Equity Trust

HOUSING PARTNERSHIP EQUITY TRUST

In early 2022, Lincoln Avenue Capital acquired a majority stake in the Housing Partnership Equity Trust (HPET), a social purpose real estate investment fund that invests in affordable housing across the United States.

- Established in 2012, HPET was built on the idea that more private capital would be attracted to affordable housing if a real estate investment trust (REIT) could be formed with some of the nation's largest and most respected nonprofit developers and operators of affordable multifamily housing.

"Building and preserving affordable housing is one of the most important social causes of our time. HPET has pioneered and proven a powerful model for bringing together private and nonprofit partners to develop and sustain affordable and workforce housing that strengthens communities. Lincoln Avenue Capital is well equipped to build on this success."

—**Jeremy Bronfman**, *CEO and Founder*

Partnering to Develop Affordable Homes from the Ground Up

In 2022, Lincoln Avenue Capital accelerated its efforts to add new affordable homes to the nation's housing stock by acquiring two land parcels in the Tampa Bay area. On these lots, LAC is building a new family and senior community from the ground up.

- The two properties, The Savoy at 301 and the 301 Flats, will provide 572 new, income-restricted housing units, including 248 senior units, to one of the nation's fastest-growing metro areas.
- The property will maintain rent restrictions for at least 30 years, providing long-term stability for residents.

BRADENTON, FLORIDA

2	572	248
LOTS	UNITS	SENIOR UNITS

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2

ECONOMIC IMPACT

"Increasing access to high-quality, affordable homes improves life for all Americans. Lincoln Avenue Capital is committed to leveraging innovative solutions to address the nation's affordable housing crisis and provide greater financial stability for individuals, seniors, and families."

– **Eli Bronfman**
Managing Partner

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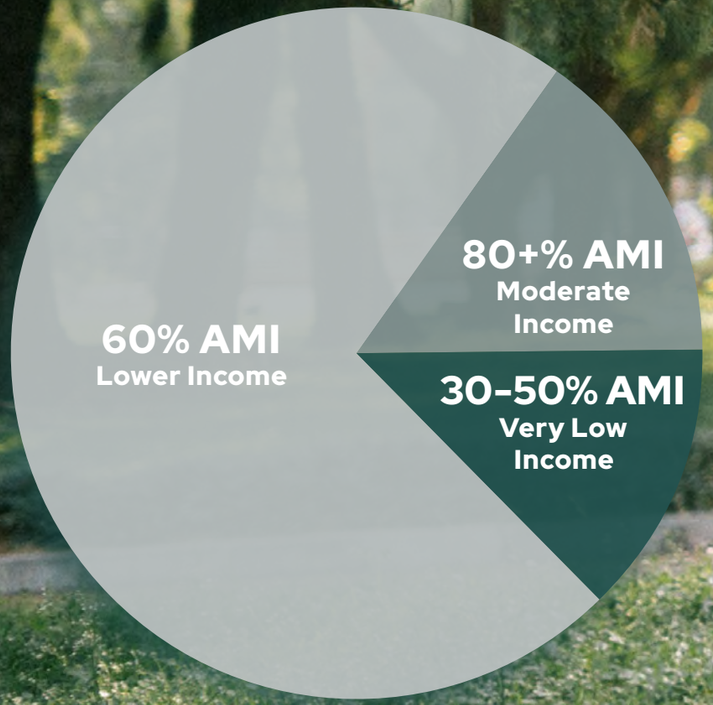
Who We Serve

LAC is proud to be a leading developer of quality, affordable homes in communities throughout the United States. Today, we serve lower- and middle-income individuals, families, and seniors in 22 states.



*These statistics reflect properties for which LAC is the general partner.

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Maximizing Our Impact Through Regional Growth

In 2022, LAC expanded its impact in communities throughout the United States through an emphasis on regional growth and utilization of the 9% Low Income Housing Tax Credit. Supported by new offices in Colorado, Texas, and Virginia, as well as our nine regional project partners throughout the country, LAC's pipeline of new ground-up affordable developments has grown significantly over the past year.

Advocating for Affordable Housing Policy Improvements

The 9% Low-Income Housing Tax Credit (LIHTC) is a vital tool used by affordable housing organizations to finance the development, preservation, and rehabilitation of the affordable units that communities need. The federal government caps the number of 9% LIHTCs allocated to each state. By increasing these allocations, policymakers could spur the construction of nearly 300,000 affordable units over the next decade.

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2
BUILDINGS

279
UNITS

100%
AFFORDABLE

Regional Project Partner Spotlight – Nick Bracco

LAC's robust network of Regional Project Partners (RPPs) allows us to implement innovative solutions to the housing shortages in communities throughout the United States. Our RPPs have spent years and sometimes decades living and working in their communities, giving them unique insight, motivation, and a solutions-oriented approach to their work.

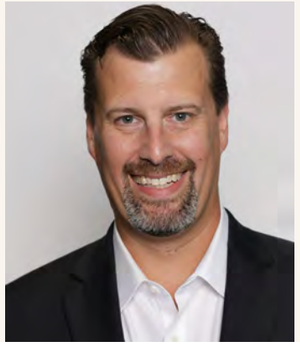
The Residences at Government Center II

Nick Bracco, Vice President and Regional Project Partner based in the Washington D.C. area, has two decades of development experience that spans thousands of units across the region.

Nick maintains deep ties to the housing community in Northern Virginia and currently serves as Board President of the Northern Virginia Affordable Housing Alliance and Executive Committee Member of the Affordable Housing Advisory Council of Fairfax County, among other local leadership positions.

Nick is currently leading LAC's ground-up development of the Residences at Government Center II in Fairfax, Va., a planned two-building, 279-unit property that will be 100% affordable in one of the nation's most expensive rental markets. The majority of units will be available to individuals and families earning 60% of the area median income (AMI).

The property will be situated at the foot of the Fairfax County Government Center and include space for a variety of support services including daycare, telehealth, educational programs, multi-purpose lawns, and other publicly available services. Programs will be operated by Cornerstones, Inc., a local nonprofit partner in Reston, Va.



"Northern Virginia is not just where I work, it's where I call home. Partnering with Lincoln Avenue Capital's expert team to help alleviate the housing challenges that many families are experiencing in my community—which has an acutely growing need for affordable housing—is a deeply fulfilling and personal opportunity."

– **Nick Bracco**
Vice President and Regional Project Partner for Virginia, Maryland, and the District of Columbia.

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3

RESIDENT SERVICES AND COMMUNITY IMPACT

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Our Approach to Asset Services

Lincoln Avenue Capital believes that a quality, affordable home can be a building block to a better future.

We're proud to invest not only in our properties, but also in our residents through a variety of programs and on-site resources.

Our Resident-First Approach

- LAC hosts Family Resource Days across the country to connect our residents with local nonprofits and service providers. In 2022, we hosted eight Family Resource Days to help our residents access educational and career development programs, nutrition assistance, health services, and many other valuable resources.
- The services we provide are driven by direct input from our residents, through initiatives like resident surveys that help our team identify and address their needs.

Leading Property Management with Local Roots

The property management firms that serve our residents have deep ties to the communities in which they operate, and they share our commitment to making a lasting impact on the lives of our residents.

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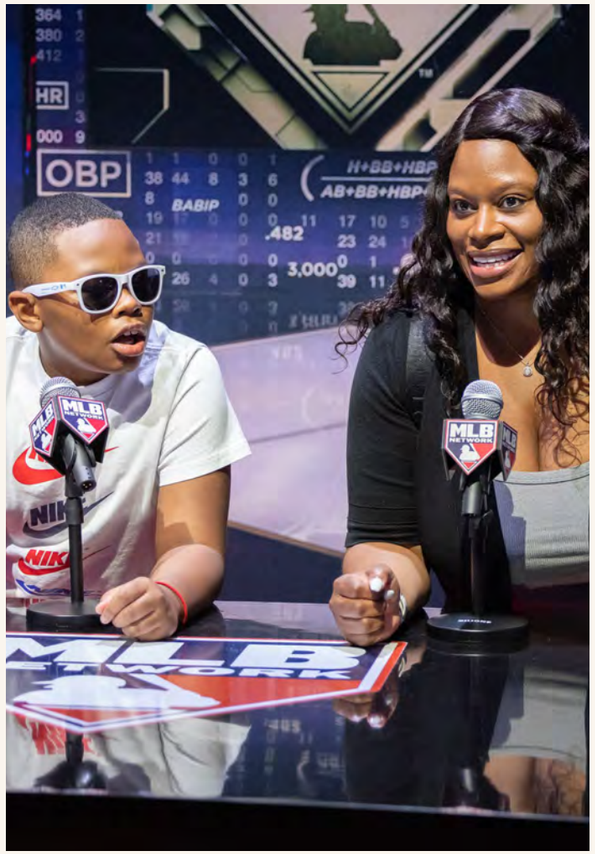
CASE STUDY

Baseball Hall of Fame

"The Baseball Hall of Fame's afterschool program has enhanced the lives of families at Lincoln Avenue Capital's properties by bringing students of the community together to engage in educational activities."

*—**Ashley Lunt**, program instructor at Zephyr Pointe Apartments in Reno, Nev.*

Lincoln Avenue Capital continued its work with the Baseball Hall of Fame and Morgan Stanley to provide educational opportunities for students in lower-income communities, including at LAC properties. The Multi-City Afterschool Program is an award-winning educational curriculum that teaches core subjects for third-grade through eighth-grade students through the lens of baseball.



In July 2022, LAC, Morgan Stanley and the Hall of Fame sponsored and coordinated a field trip for children and parents in Chatsworth, Calif., to visit Play Ball Park at Major League Baseball All-Star Week in Los Angeles. Through this interactive event, residents of Waterstone Apartments — our 354-unit affordable and workforce housing community in Chatsworth — participated in educational activities such as baseball trivia, a "Tools of the Trade" history of baseball equipment over the years, and other exhibits.

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CASE STUDY

Family Resource Days

Family Resource Days connect our residents with local organizations that provide health care, food assistance, tutoring and career services, rental assistance, and other programs and resources. These important events are also an opportunity for residents to enjoy complimentary meals from local vendors, connect with their neighbors, and engage in a variety of outdoor activities.

In 2022, we held eight Family Resource Days across the country, including in Arlington, TX; Everett, WA; Florida City, Jacksonville, Miami, Orlando and Sanford, FL; and Summerville, SC.

"We are committed to supporting and improving the overall health and wellness of our residents through community events such as Family Resource Days, which provide our residents with the opportunity to discover and access local resources, and build a deeper sense of community."

—**Rebecca Schultz**,
Vice President of Asset Management

Family Resource Day:
Paddock on Park Row

During a Family Resource Day in August, residents of Paddock on Park Row Apartments met with representatives from local service providers including the Arlington Housing Authority, Envision Center, Mission Arlington, Workforce Solutions, Wright Care Benefits and Arlington Charities. These providers shared information about employment assistance, food supplies, free cell phones, banking opportunities and afterschool programs for children, among other helpful resources.

2022

8 FAMILY RESOURCE DAYS

Children received complimentary haircuts from the A&M Barber Academy and free school supplies from LAC. Residents were also provided free meals from a local food truck. Members of the Arlington Police Department and Arlington Fire Department attended the event to meet with residents as well.

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4 ENVIRONMENTAL SUSTAINABILITY

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Investing in Sustainability and Improving Resiliency

LAC actively seeks opportunities to enhance the energy efficiency and environmental sustainability of its portfolio by improving water efficiency, energy efficiency, and green energy production. All LAC rehabilitations prioritize lowering utility consumption through the installation of more efficient appliances and water-use systems.

Solar Panels: In 2022, we enrolled in a portfolio-wide assessment for solar and renewable energy upgrades in partnership with the International Center for Appropriate and Sustainable Technology, with a goal of a major renewable energy implementation across our existing properties in the coming years.

Water Consumption: Malibu Bay and Cabana Club collectively saw an average reduction in water consumption of 23.5% after our renovations.

Energy Consumption at Malibu Bay, Park City, and Santa Clara II

Following our rehabilitations at three LAC properties, we achieved:

-27%
AVERAGE REDUCTION
in Source Energy Use Intensity (the total amount of raw fuel that is required to operate a property)

-29%
AVERAGE REDUCTION
in Site Energy Use Intensity (the annual amount of all the energy the properties consume on-site, regardless of the source)

-32%
AVERAGE REDUCTION
in Greenhouse Gas (GHG) Emissions (kilogram per square foot) when compared to the pre-renovation 2021 energy baseline.

Building Low Environmental Impact New Construction

As a mission-driven developer of quality, affordable homes, LAC is committed to developing communities that are both sustainable and environmentally friendly. All of LAC's ground-up construction projects utilize solar panels when appropriate, and we work with local landscape designers to create climate-conscious landscaping to reduce irrigation needs.

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CASE STUDY

240 UNITS

20 UNITS

TO VETERANS AND THEIR FAMILIES

"As an impact-driven company, we're proud to deliver housing relief to veterans, families, and individuals in communities like Colorado Springs where sustainable, affordable homes are most needed."

—**Ben Taylor**, *Vice President and Project Partner.*

InterQuest Ridge

In October, LAC broke ground on InterQuest Ridge, a 240-unit ground-up development in northern Colorado Springs that will be 100% affordable. The development includes industry-leading environmental sustainability features including energy-efficient appliances, solar panels, and electric vehicle charging stations, and it will be National Green Building Standard (NGBS) Bronze Certified.

Upon completion, InterQuest Ridge will set aside 20 units to meet the housing needs of underserved veterans and their families in Colorado Springs, which has one of the highest veteran populations in the country. The property will bring high-quality affordable housing to an area with no other affordable units within five miles.

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5

LOOKING AHEAD

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Our Work Continues
Investing in ESG

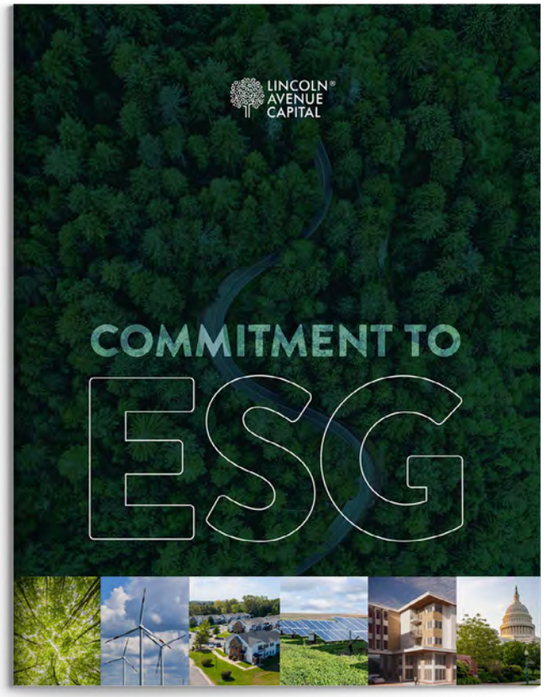
As a impact-focused affordable housing organization, LAC aims to foster communities that advance Environmental, Social, and Governance (ESG) principles.

Environmental Strategy

LAC is committed to developing a green and resilient portfolio. Our organization works with best-in-class general contractors and hires staff with deep expertise in sustainability. We leverage a range of sustainability and resiliency features, strategies, and best practices to significantly reduce the environmental impact and carbon footprint of the properties we develop and rehabilitate. Additionally, LAC is taking proactive steps to mitigate the effects of climate risks across our portfolio. This includes enrolling 39 communities in Keep Safe Florida, a comprehensive technical support system created to help affordable housing owners in the Miami, Orlando, and Tampa regions with tools and resources to assess and address threats from climate change and natural disasters. The insight we have gained through this collaboration informs our property resiliency strategy.

Social Impact

As a mission-driven affordable housing organization, we invest in the communities in which we operate. We take a resident-first approach, working thoughtfully and diligently to provide an array of on-site resources. We work with more than 60 government and nonprofit partners across the country that are attuned to their communities' needs. We look forward to expanding and measuring our impact in the coming years.



Corporate Governance

As LAC continues to grow its team and portfolio, we are committed to developing an open, merit-based working environment that supports and empowers employees. Throughout the company, LAC's policies reflect our dedication to creating opportunities for team members to excel, grow, and advance their careers.

Formalizing Our Efforts

In 2022, LAC published its inaugural *Commitment to ESG* abstract, detailing our plans to continue and expand upon existing efforts and, critically, to benchmark the impact of our work. This commitment charts the course we will follow for years to come as we develop a comprehensive, transparent, and stakeholder driven ESG strategy across our nationwide portfolio.

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Impactful Policy for America's Housing Shortage

LAC is committed to supporting the community of practice around affordable housing and community development. Our key areas of advocacy focus in 2022 included:

- Advocating for the adoption of the Affordable Housing Credit Improvement Act;
- Implementing key renewable energy provisions and sustainability incentives from the Inflation Reduction Act;
- Engaging with state and local communities on leveraging state and local fiscal recovery funds to support affordable and workforce housing production; and
- Engaging of comments and testimony to 27 housing finance agencies supporting supply-side-oriented Qualified Allocation Plan (QAP) policies.

We are deeply engaged in and contributed to numerous national and state coalitions that support the strengthening and expansion of critical federal affordable resources. We are proud members of the Affordable Housing Tax Credit Coalition, the ACTION Campaign, the National Housing & Rehabilitation Association, the National Leased Housing Association, and the National Multi Housing Council, as well as more than a dozen state and local affordable housing coalitions.

Providing Innovative Policy Leadership

Thom Amdur joined Lincoln Avenue Capital in 2022 as our Senior Vice President for Policy & Impact, overseeing LAC's public affairs, state and federal policy advocacy, and impact initiatives.

A nationally recognized leader in affordable housing and community development policy, Thom previously served as President of the National Housing & Rehabilitation Association (NH&RA), where he received the NHP Foundation's Affordable Housing Advocacy Award in 2018. He contributes to numerous community development organizations and has been published in a variety of industry journals including *Tax Credit Advisor, Independent Banker,* and the *Novogradac Journal of Tax Credits.*

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In the News

MHN MULTI-HOUSING NEWS

Snap Sessions

LAC Builds Affordable Housing in Colorado

By Andy Rosa August 4, 2022

Construction has already begun and the first units are slated to come online next year.

Lincoln Avenue Capital has secured financing for the construction of the affordable 240-unit InterQuest Ridge Apartments in Colorado Springs, Colo. Construction already began in July, with the first units slated to come online in the summer of 2023 and the whole project expected to wrap up in the summer of 2024. A total of 20 units will be set aside for underserved veterans and their families in Colorado Springs who are associated with the Mt. Carmel Veterans Service Center.

In April, the developer applied to receive $43 million in tax-exempt bonds for the development. The company received $41.3 million in bonds from **Colorado Housing and Finance Authority**, later assigned to **Citibank**. The bank also provided a $17.7 million taxable mortgage, according to El Paso county records. **Aegon** provided an equity investment in federal low-income housing tax credits, while **Colorado Department of Local Affairs** provided a gap loan.

Affordable housing in Colorado Springs

According to public records, the property will have 30 one-bedroom units, 90 two-bedroom units, 108 three-bedroom units and 12 four-bedroom units. Community amenities are slated to include a clubhouse with a full kitchen, an outdoor pool area with seating, a covered pavilion with barbeque grills, a fitness center with a yoga room and a playground. The development will seek **National Green Building Standard** Bronze Certification.

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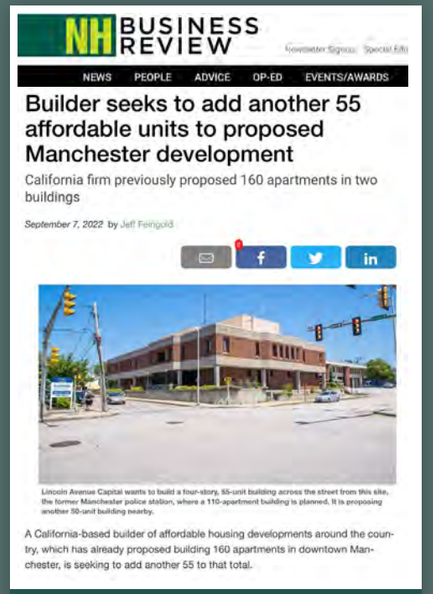

NH BUSINESS REVIEW

NEWS PEOPLE ADVICE OP-ED EVENTS/AWARDS

Builder seeks to add another 55 affordable units to proposed Manchester development

California firm previously proposed 160 apartments in two buildings

September 7, 2022 by Jeff Feingold

Lincoln Avenue Capital wants to build a four-story, 55-unit building across the street from this site, the former Manchester police station, where a 110-apartment building is planned. It is proposing another 50-unit building nearby.

A California-based builder of affordable housing developments around the country, which has already proposed building 160 apartments in downtown Manchester, is seeking to add another 55 to that total.

READ MORE >

FFX NOW Fairfax County local news

Planning Commission approves affordable apartment buildings at county government center

Fatimah Waseem January 17, 2023 at 3:00pm

A rendering of the proposed Residences at Government Center II development (via Fairfax County)

A major public-private partnership for affordable housing on the Fairfax County Government Center campus is moving forward.

The Fairfax County Planning Commission voted Wednesday (Jan. 11) in approval of a plan to build 291-unit apartment buildings dedicated for affordable housing, a 10,000-square-foot daycare, and a service facility on the site.

Lincoln Avenue Capital and the Fairfax County Redevelopment Housing Authority plan to develop the 4.5-acre site through the partnership, titled The Residences at Government Center II — a model that has been adopted by the county in each magisterial district to boost the stock of long-term affordable housing.

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WMTV 15 NBC MADISON nbc15.com

From hot dogs to housing, first developments on former Oscar Mayer plant

FIGURE 13 - Today (at left) and Vision (above)

By Mara Lisagroli

Published: Jan. 5, 2023 at 5:04 PM PST

MADISON, Wis. (WMTV) - After operating on Madison's north side for almost 100 years, the Oscar Mayer plant closed its doors for good in 2017. Now, for one of the first times since its closure, developers are breaking ground on the Oscar Mayer campus to create affordable housing.

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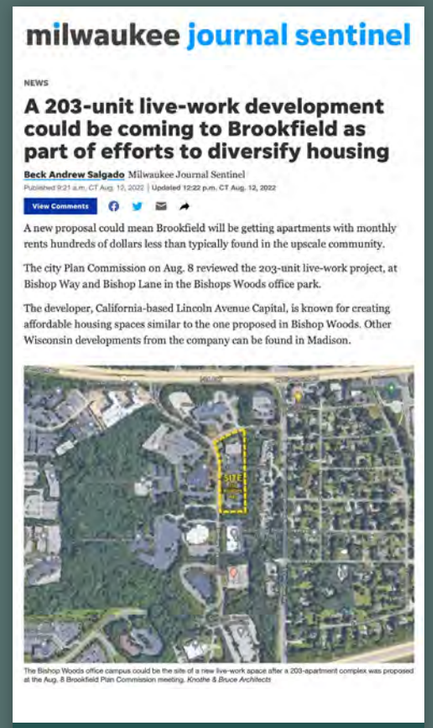

milwaukee journal sentinel

NEWS

A 203-unit live-work development could be coming to Brookfield as part of efforts to diversify housing

Beck Andrew Salgado Milwaukee Journal Sentinel

Published 9:21 a.m. CT Aug. 12, 2022 | Updated 12:22 p.m. CT Aug. 12, 2022

View Comments

A new proposal could mean Brookfield will be getting apartments with monthly rents hundreds of dollars less than typically found in the upscale community.

The city Plan Commission on Aug. 8 reviewed the 203-unit live-work project, at Bishop Way and Bishop Lane in the Bishops Woods office park.

The developer, California-based Lincoln Avenue Capital, is known for creating affordable housing spaces similar to the one proposed in Bishop Woods. Other Wisconsin developments from the company can be found in Madison.

The Bishop Woods office campus could be the site of a new live-work space after a 203-apartment complex was proposed at the Aug. 8 Brookfield Plan Commission meeting. Knothe & Bruce Architects

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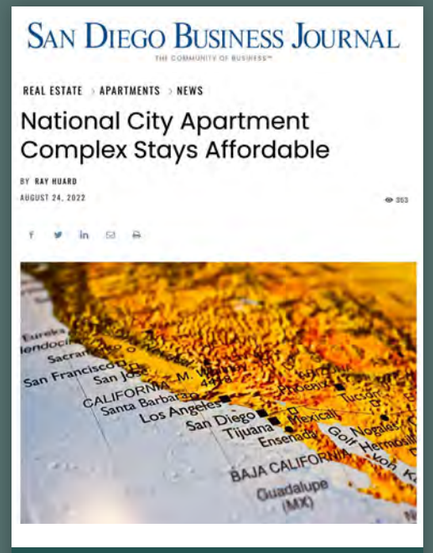

SAN DIEGO BUSINESS JOURNAL

REAL ESTATE › APARTMENTS › NEWS

National City Apartment Complex Stays Affordable

BY RAY HUARD

AUGUST 24, 2022

READ MORE >

NEWS4 ON YOUR SIDE

Reno approves subsidies for two large affordable housing complexes

RENO, Nev. (News 4 & Fox 11) — Two large affordable apartment complexes are expected to break ground soon after the Reno City Council approved fee reductions during their meeting Wednesday.

Council members gave the final green light to the Copper Mesa apartments in the North Valleys and the Pinyon Apartments project near Moana Lane and Neil Road.

Together, the two projects will bring nearly 550 low-income units to the Reno market. Tenants will only be able to

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LOS ANGELES

401 Wilshire Blvd., Ste. 1070, Santa Monica, CA 90401

Tel: 1.424.222.8253

NEW YORK

680 Fifth Ave., Floor 17, New York, NY 10019

Tel: 1.646.585.5525

Staff Biographies and Resumes

Scott W. Shaw – Vice President Regional Project Partner

Scott is responsible for all aspects of project development including evaluating project feasibility, securing financing for acquisition and development, and permitting activities.

He brings more than 23 years of experience in development and asset management to the team, 19 years of which have been focused on affordable housing development. Scott has extensive experience in the industry and has established himself as an expert in developing new construction multifamily housing all involved with mixed-finance and mixed income structuring utilizing Low Income Housing Tax Credits. Scott has been involved in the successful development of more than 30 housing projects totaling over $750 million.

Scott will be responsible for all aspects of the development, beginning with obtaining necessary municipal approvals, responding to state and local RFPs for funding, completing an application to the Maine State Housing Finance Authority for all applicable and required project financing, through to loan closings, construction, and rental lease-up.

Ted Seely – Senior Project Manager, Greater Boston Office

Ted is responsible for the day-to-day management of project development in all aspects of the process including collaboration with third-party partners such as project consultants, state and local agencies, project lenders, and community stakeholders.

With 10 years of affordable housing development and city planning experience, Ted brings demonstrated knowledge of public-private partnerships and capital subsidy programs including Low Income Housing Tax Credits, Tax-Exempt Bonds, HOME Investment Partnerships Program, National Housing Trust Fund, Section 8 Program, and other state and federal programs.

Ted has coordinated more than 20 new construction developments serving as a Senior Project Manager for the City of New York, Project Coordinator for a Massachusetts-based affordable

housing developer, and most recently as the LIHTC Program Manager for the state of New Hampshire.

Ted will provide additional capacity in supporting all aspects of the development life cycle, from securing financing to coordinating loan closings, construction oversight, and property sales and lease-up.

Scott W. Shaw
Hingham, MA 02043

Professional Experience:

September 2021 - Present
Lincoln Avenue Capital
Hingham MA/Santa Monica CA
Vice President, Regional Project Partner

Development of new production and adaptive rehabilitation/historic conversion workforce and affordable housing development utilizing 9% LIHTC, 4% LIHTC and Federal/State Historic credits for developments located in Massachusetts, Connecticut, New Hampshire and Rhode Island.

Real Estate and Community Development professional with 23 years of multi state experience in design, planning, financing, production and management of affordable rental and ownership housing. Creative and accomplished leader with 16 years of executive and management responsibilities in non-profit and for-profit sectors. Depth of knowledge in structuring and administering mixed income, market and affordable housing with commercial retail elements and asset building programs for very low, low and moderate, workforce and market income individuals and families.

Specialties: Site Negotiation, Real Estate Finance, Community and Housing Development; Affordable Housing; Project and Program Design; Inclusionary Zoning; Asset Management, Workforce Housing, 4/9% Tax Credits, ARPA funds, Grant Writing, Applications, Bond Financing and Contract Management, Strategic Planning; Public and Non-Profit Administration; Budgeting; Market/Mixed Income

October 2019 – September 2021
NOAH, East Boston, MA
Director of Development, Acquisitions & Asset Management

Responsible for organization development, acquisitions, and asset management, including: All aspects of affordable development from identification of potential sites and taking them through 8609. Market evaluation through various tools to identify acquisition opportunity and recommend markets and sub-markets to target for acquisitions. Research zoning codes to determine requirements for development and negotiate Letter of Intent/Purchase and Sale Agreements. Foster relationships with local officials to obtaining local approvals and local sources commitment, maintain relationships direct attorney's, lenders, brokers architects, civil engineers, environmental engineers, local officials, citizens group and all other consultants required for public entitlement, site permits and all aspects of application submissions. Perform finance underwriting, deal structuring including negotiation of debt and equity financing and related closings for NOAH CDC. Manage project costs, development proformas and project Sources and Uses. Work closely with Project Management to ensure adequate operating expenses and reserves are provided for. Review plans and specifications to assure a complete scope of construction is captured and identified. Provide analysis and oversight of the CDC existing management portfolio including re-structuring for refinance opportunities and identify areas of concern to increase portfolio cash flow. Maintain close relationships with government officials and government funding agencies including ongoing review of QAP. Present to NOAH Board and Real Estate Committee projects evaluated for their approval.

August 2018 – October 2019
Dakota Partners, Waltham, MA
VP Development & Acquisitions

Supervise and oversee a development department and a staff of 7 for Dakota Partners developing in MA, NH, RI, VA, CT, NY. Foster new ventures and joint ventures, together with key stakeholders, institutional partners, and with nonprofit/profit developers.

Highly effective communication and presentation skills to navigate the development process through the multitude of public and private steps required to create a successful project. Participate in feasibility analysis and due diligence of real estate acquisitions. Research zoning codes to determine requirements for development of apartment projects. Direct activities with attorneys, architects, civil engineers, environmental engineers and other consultants to plan projects related to public entitlement, site permits and acquisition due diligence. Coordinate consultant team to produce efficient site/utility design for project which meets local and state requirements. Review plans and specification to assure a complete scope of construction is captured and identified. Work with local citizen groups, governmental bodies and other interested parties to obtain necessary project permits and entitlements. Work with local and state utilities to design cost effective and efficient solutions to serving projects. Monitor and assure timely completion of the entitlement process within established pre-development budget and schedule.

May 2017 – August 2018
Allston Brighton Community Development Corporation
Director of Real Estate/Asset Management (Acquisitions and Development) Allston/Brighton MA

Stabilize the existing ABCDC portfolio and foster new ventures, together with key stakeholders, institutional partners, and private/nonprofit developers. Direct, support and mentor Resident Service and Development staff of 4. Responsibilities include: Strategic planning to seek new community based real estate opportunities and conducting early stage feasibility analysis, finance analysis, financial underwriting, assembling financing and submitting applications for grants, equity (4% and 9%), and bond/loan programs, managing permitting, planning, local approvals and the community process, soliciting, negotiating, and overseeing third party consultant services and project teams, manage/direct closings for purchase, construction/permanent loans, and equity investments, overseeing project budgets, the construction process and construction management and project schedule, ensuring compliance with funding requirements and city, state, and federal regulations. Oversee the asset management of Allston Brighton Community Development Corporation existing 500 plus unit portfolio.

August 2010 – April 2020
S Development Corp/Sole Proprietor

As owner of S Development Consulting, LLC, I provided project management and development services to various clients that need increased capacity to implement specific real estate projects. This service represents the culmination of over 20 years of acquisitions/development housing industry experience that began with hands on maintenance and property management experience and grew through NY, Mass and NJ area non-profit and for-profit affordable housing developers. My various assignments involve working with community based not for profit Community Housing Development and Service

Organizations to ensure the preservation of affordable housing and services through occupied rehabilitation or creation of new housing production through adaptive rehabilitation, historic rehabilitation, new construction for community benefit redevelopment.

Specialties: Site Selection and feasibility, financial analysis, financial underwriting, project management construction/permanent closings, coordinating due diligence support to nonprofit organizations to provide effective communication and presentation to community leaders, municipalities, grant proposal development, estimating, manage 3rd party consultants such as architect, engineer market analyst and appraiser, local approvals, program design, project administration, and state LIHTC application submission.

2006-2010
Executive Committee Director/Senior Director Development Tax Credit/Public Housing Rochester Housing Authority

Responsible for $12mm annual/$48mm overall CFP allocation from HUD for public housing unit modernization rehabilitation and energy efficiency upgrades. Responsible for HUD- REAC (Real Estate Assessment Center) Department-direct management and training for staff of 4 in an overall department of 12. Responsible for and direct 4 Construction Rehabilitation Specialists for the implementation of public housing unit modernization funds. Responsible for the implementation of the Authority's asset management and physical maintenance of over 2,000 public housing units and direct management and training of 5 supervision staff in an overall department of 85. Effectively communicate and present to a diverse Board of Commissioners and Commissioner Committees at their monthly meetings, make presentations to a diverse resident community relations board and to municipal zoning and planning boards. Worked effectively to resolve employee conflicts or labor conflict as head of Employer Union Relations board. Create budgets, conduct financial analysis, conduct underwriting, prepare, and submit all aspect of grant and funding applications.

2004-2006
The DiMarco Group - Director Affordable Housing Development

Responsible for the strategic implementation of the company's New York State affordable low-income housing developments and redevelopments, principally financed utilizing low income housing tax credits (4% and 9%LIHTC), from inception to certificate of occupancy. Responsibilities included: Developing and maintaining professional relationships with state and federal funding agencies and joint venture partners, investors, and municipal development planners. Lead in obtaining local municipal project approvals. Directing and coordinating third party design professionals to include design review, adhering to company building specs and floor plans. Lead in financial underwriting, pre-syndication, equity, construction load and permanent loan closings including cost certification and 8609 certificate issuances. Reviewing and recommending approval of construction change orders. Overseeing the preparation of the construction punch list and ensure work completion. Submitting New York State funding applications and Federal HUD or Rural Development funding applications. Foster, coordinate and lead Joint Venture relationship with PathStone Development a 501c3 not for profit Housing, Service and Development organization. Effective communication, coordinating and following through on development details with Municipal and Political Community, President and CFO, Construction, Property Management, Legal, Accounting, and Insurance Departments.

1999-2004
Conifer Realty/Home Properties Inc. – Project Director

Project Director – responsible for the strategic implementation of multi-state affordable low-income housing developments, principally financed utilizing low-income housing tax credits (4% and 9%LIHTC), from inception to certificate of occupancy.

Responsibilities included: Developing and maintaining professional relationships with state and federal funding agencies and joint venture partners, investors, and municipal development planners. Lead in obtaining local municipal project approvals. Directing and coordinating third party design professionals to include design review, adhering to Conifer building specs and floor plans. Lead in financial underwriting, pre-syndication, equity, construction load and permanent loan closings including cost certification and 8609 certificate issuances. Reviewing and recommending approval of construction change orders. Overseeing the preparation of the construction punch list and ensure work completion. Submitting multi-state funding applications – primarily in NY NJ and PA. Direct and mentor 2 Project Coordinators. Maintain Joint Venture relationships with not-for-profit Community Housing Development Organizations. Communicating, coordinating, and following through on development details with Municipal and Political Community, Resident Relations Boards, Construction, Property Management, Legal, Accounting, and Insurance Department.

Education:

- AAS-Business Monroe Community College 1993

Business Affiliations:

- Current Member CHAPA (Massachusetts)
- Current Member CHAPA Production & Preservation Committee
- Prior Member New York State Association for Affordable Housing NYSAFAH
- NYS Rural Housing Coalition, Board of Director (2004-2006)
- ACM/Lead Paint Technician Certificate (2015-2019)

Funding Experience Sampling:

- Massachusetts DHCD/Mass Development Finance Agency/ Mass Housing
- Massachusetts Passive House Funds
- Massachusetts Housing Investment Corporation
- Massachusetts Department of Revenue Brownfields Program
- City of Boston – Department of Neighborhood Development
- CEDAC – Community Economic Development Assistance Corporation
- Massachusetts Housing Partnership
- New York State Homes and Community Renewal and Housing Finance Agency
- Connecticut DOH/CHFA
- New Hampshire Housing Finance Agency
- Rhode Island Housing
- Virginia DHCD
- Pennsylvania Housing Finance Agency
- New Jersey Housing Mortgage Finance Agency/DCA (LIHTC 4%/9%, Bonds, USA)
- Mass Housing
- USDA – Rural Development
- HUD - Housing Authorities-Section 8 Program, MA Rental Voucher Program
- Federal Home Loan Bank

Project Name/ Location/ Developer/Year Completed	# of Units	Development Summary	Role in Project	Budget
Lincoln Avenue Capital - Current **Local Office - Hingham MA** **Corporate – Santa Monica CA** Manchester NH – 4% LIHTC (351 Chestnut St) Manchester NH – 9% LIHTC (Merrimack St) Manchester NH – 4% or 9% (80 Merrimack St Mattapan (Boston MA) – 9% LIHTC Rhode Island – providence 4/9 Twin Connecticut	 98 44 44 48 80		Vice President Regional Project Partner	 $30mm $14mm $14mm $26mm $33mm
Neighborhood of Affordable Housing (NOAH **East Boston MA (2019-2020)** Ayer Commons – 9% LIHTC Attleboro Commons – 4% LIHTC/Bonds/Historic Aileron Rental – 9% LIHTC Union Block – 9% LIHTC/Historic Credits SPPS Refinance – 4% LIHTC Coppersmith – 9% LIHTC Brownfields Credits	 10 6 11 0 33 38 12 6	All aspects of development - Sought site, negotiated sale agreements, 40B local approvals, underwrite, funding application submissions closings, construction oversight, perm conversion to 8609. Conduct multiple layers/tasks of due diligence – Locations include: East Boston. Ayer, Attleboro, Taunton. Construction stage, application stage, construction ILP admittance stage, underwriting stage, final close out. Other sources include: HOME/FHLB/HSF/AFTF/Workforce etc	Lead as Director of Development Acquisitions and Asset Management	 $26.5mm $25.7mm $16.7mm $18.5mm $54.0mm $28.5mm
Dakota Partners **Waltham MA (2018-2019)** Yarmouth Commons – MA Depot Village – Hanson MA OXOBOXO – Montville CT Lincoln Lofts – Lincoln RI Brookside Terrace I East Friars Ct -Hudson NH Nettles Drive – Virginia	 80 69 72 45 48 47 96	All aspects of development - Direct development team on owner construction oversight, requisition draw process for construction loan, equity installment disbursement s and soft funding requisitions from involved agencies. Train/mentor staff. Obtain financing and carryover leading/directing all aspects of closing; construction loan, syndication and with State agencies, subsidy layer review, AHAP, environmental close outs etc. Other sources include: 9% LIHTC various state soft HOME/FHLB/HSF/AFTF/Workforce etc	Lead all aspects as VP Acquisitions Development	 $29mm $24mm $33mm $20mm $22mm $15mm $60mm

Carol Ave Cooperative Allston Brighton, MA Developer: Allston Brighton CDC 4th quarter 2017	33	Facilitate and negotiate the acquisition of a cooperative with existing regulatory agreement to own and operate as an affordable rental community.	Scott Shaw as Director of Real Estate, Project Oversight	$11.5mm
Commonwealth & Glenville Boston/Allston, MA Developer: Allston Brighton CDC 2017	235	Mixed income rehabilitation of 235 units in 17 buildings. Consolidation of two nonprofit controlled HUD 236 projects. 4% LIHTC and new tax-exempt bond and historic credits.	Scott Shaw as Director of Real Estate – Project Director	$57.4mm

All Bright Homeownership Lower Allston/ North Brighton, MA Developer: Allston Brighton CDC	13	Facilitate and negotiate the purchase of e homes in Allston Brighton target area, through a cooperative grant agreement with Harvard, BPDA and DND; rehabilitate and resell with an ownership deed restriction to aid in the reduction of investor owned properties in the Lower Allston/ North Brighton Community	Scott Shaw as Director of Real Estate Program oversight	$6.5mm
Hano Homes Allston Brighton, MA Developer: Allston Brighton CDC 2017	20	Direct the acquisition of the 99.99% Investor Limited Partnership from MHIC. Structure and reposition the development for future rehabilitation with 9% LIHTC. Creation of 20 new homes in 10 townhome structured buildings in 2001 by ABCDC	Scott Shaw as Director of Real Estate	$9.5mm
Moyer Carriage **Lofts** Syracuse, NY 2018/2019	118	Negotiated to obtain site, underwrite and prepare finance applications, procure HFA middle income and new construction soft funds, city funds PILOT (IDA) QCT and state federal credits adaptive rehabilitation to create units. Engage and direct architect, civil, historic consultant, market analyst appraiser and environmental firms. LIHTC	Lead all aspects as VP Acquisitions Development	$52mm
Arbor **Lofts** Albany **NY** 2018/201 9	75	Negotiated to obtain site, underwrite and prepare finance applications, procure HFA middle income and new construction soft funds, city funds PILOT (IDA) QCT and state federal credits adaptive rehabilitation to create units. Engage and direct architect, civil, historic consultant, market analyst appraiser/environmental firms. LIHTC	Lead all aspects as VP Acquisitions Development	$32mm

Project Name/ Location/ Developer/Year Completed	# of Units	Development Summary	Role in Project	Development Budget
The Lofts at Globe Mills Utica, NY Developer: KCG Development 2014-2017	130	Redevelopment/adaptive rehabilitation of existing historic Globe Mills building built in the late 1800's. Create 130 mixed use/mixed income rental units. (60%-130%ami) Utilize 4% credits, historic credits, bonds and leveraged municipal funds. NYS – Housing Finance Agency	Scott Shaw Development Consultant – All Aspects	$39.7mm
Ogden and Farmington Senior Ogden NY and Farmington, NY Developer: Home Leasing/Chatham Hsg	166	Creation of new construction affordable senior housing utilizing LIHTC, bond financing, soft leveraged financing from NYS and IDDP funds and FHLB-NY grant funds	Scott Shaw as Director of Real Estate	$28.7M
J.O.S.A.N.A. Single Family LLC Rochester, NY Developer: Chatham Housing & Development	10	New Construction of 10 – 3 bedroom single family homes, all Project Based Section 8 meeting a set aside to house homeless Veteran families. Homes to be sold as affordable homeownership.	Scott Shaw Director of Affordable Development – All aspects	$ 2.5M
Ferry Station Camden NJ Developer: Conifer Realty 2005	525	Rehabilitation and modernization of multifamily units through tax credit financing issued by NJHMFA. All aspects of development from funding application, construction admin and construction tax credit and permanent loan close out	Scott Shaw Project Development Director	$25M
Jefferson Park Apartments Fairport, NY Developer: Conifer Realty 1999	69	New Construction of 69 senior affordable apartments. Financed by – East Rochester Housing Authority bonds and LIHTC, local HOME funds, local CDBG funds, Project based Section 8 and Federal Home Loan Bank - NY	Scott Shaw Project Coordinator	$6.5M

Ted Seely

Newmarket, NH • tseely@lincolnavecap.com

PROFESSIONAL EXPERIENCE

Lincoln Avenue Capital

Senior Project Manager, Development ***Apr 2022 – Present***

- Provide technical support throughout the development life cycle including evaluation and execution of property acquisitions, financing, and ground-up new construction from conception through project lease-up and stabilization.
- Manage day-to-day project development operations, collaborate with third-party consultants, federal, state, and local government officials, private lenders, and community stakeholders to achieve successful and timely project outcomes.
- Expert in debt and equity financing and underwriting, including 4%/9% LIHTC, Tax-Exempt Bonds, HUD-HOME and HTF, CDBG funds, Section 8 and 811, and various other state subsidy programs and long-term debt products.
- Maintain familiarity with all federal cross-cutting requirements including, but not limited to, environmental review (24 CFR 58), Uniform Relocation Act, Section 3 Program, Davis Bacon, historic review, and Subsidy Layering Review.

New Hampshire Housing Finance Authority

Asset Manager, Management and Development ***Oct 2021 – Apr 2022***

- Managed portfolio of 35 projects that received financing through NH Housing programs to ensure quality administration and property maintenance. Programs included HUD's Section 8 Performance Based Contract Administration (PBCA) program, HUD-HOME, LIHTC, Section 811, among others.
- Conducted Management and Operating Reviews including financial audits, tenant file review, and property inspections.

Program Manager, Low-Income Housing Tax Credit Program ***Jul 2020 - Oct 2021***

- Managed the day-to-day operations of the LIHTC program for the state of New Hampshire, the primary source of multi-family development funding for affordable housing projects across the state and nationally.
- Served as the Authority's liaison to external partners, including borrowers, contractors, investors, participating lenders, and other governmental agencies involved in the financing and construction of multi-family developments.
- Evaluated and underwrote project funding applications for LIHTCs and the Authority's multi-family financing programs.
- Team lead for updating the Qualified Allocation Plan, including coordinating developer forums, public hearings, and interdivisional meetings to gather feedback to address statewide housing needs. Reviewed/evaluated other states' QAPs.
- Tracked LIHTC program data including project information, allocations, state credit ceiling, and carryover credits.
- Filed required IRS reporting documents including 8609s and 8610s and ensure that supporting documents such as Carryover Agreements are prepared and executed in a timely manner.

Program Manager, Supportive Housing Program ***Nov 2019 - Jul 2020***

- Worked closely with mission-driven, nonprofit development partners to provide housing assistance to chronically homeless households, adults with substance use disorders, developmental disabilities, veterans, and individuals reentering the community from incarceration. Projects incorporated wrap-around supportive services such as intensive case management, rehabilitation, health care, continuing education, and workforce development programs.
- Administered federal and state housing resources in accordance with Authority financing programs including HOME Investment Partnerships program, National Housing Trust Fund, Section 811 Project Rental Assistance, Project-Based Section 8 Vouchers, and the New Hampshire Affordable Housing Fund.
- Managed Supportive Housing projects from design development through construction completion.
- Coordinated partnerships with state and local government entities such as the New Hampshire Department of Health and Human Services, private service providers, community groups, and families.
- Evaluated and underwrote project funding applications received from bi-annual Request for Proposals. Determined project feasibility and compliance with various funding source requirements.
- Continuously assessed the effectiveness and appropriateness of program rules and policies. Recommended specific changes when rules and policies failed to generate the intended outcomes.

Dakota Partners, Inc.

Development Project Coordinator ***Nov 2018 - Nov 2019***

- Managed pre-development and development phases for 5 projects totaling $96.8M in total development costs, 237 affordable rental units, 68 condos in Massachusetts, Rhode Island, and Connecticut.
- Evaluated project feasibility and prepared and analyzed development budgets and operating expenses.

- Worked closely with public and private lenders on applications for project financing.
- Directed activities with attorneys, architects, civil engineers, environmental engineers and other consultants related to design development, construction plans and specs, local site approvals, permits, and other due diligence.
- Assured timely completion of closing due diligence with state agencies and financial institutions.
- Tracked construction flow of funds and managed monthly requisitioning of funds.
- Coordinated lease-up process and transition of projects to property management.

NYC Dept. of Housing Preservation and Development, New York, NY

Senior Project Manager, Multi-family New Construction Finance ***Mar 2018 - Nov 2018***

Project Manager, Multi-family New Construction Finance ***Mar 2015 - Mar 2018***

- Responsible for closing 13 projects amounting to $645M in total development costs, 1,339 units of affordable housing across Brooklyn, Manhattan, and the Bronx.
- Managed portfolio of 11 project proposals consisting of city and state 4% Bond and 9% Tax Credit deals.
- Engaged external partners as the primary point of contact including for-profit and nonprofit developers, banks, tax credit syndicators and investors, general contractors, and other capital funding government agencies.
- Analyzed and underwrote complex multifamily real estate transactions in compliance with federal, state, and city regulations with an emphasis on affordability, tax benefit analysis, and cash flow projections.
- Coordinated loan closings with other HPD divisions including planning, legal, finance, and architectural teams.
- Supported planning staff in the issuance of Requests for Proposals and evaluated new project proposals.

Topology, LLC, Morristown, NJ

Independent Contractor ***Jun 2014 - Mar 2015***

- Collaborated with the director of Topology's New Jersey office to provide project management support in fulfillment of Town Planner duties for which Topology was contracted, including scheduling and coordinating project applications.
- Reviewed project applications and authored briefs for the Planning Board and Zoning Board of Adjustment.
- Provided research assistance for redevelopment plans, Master Plan updates, and development of a Form-Based Code.

Pratt Graduate Center for Planning and the Environment

Assistant to Program Chair, Programs for Sustainable Planning and Development ***Jun 2013 - Jun 2014***

- Supported program faculty and staff on use of department facilities and budgeting to support daily operations.
- Coordinated department events including public lectures, panel discussions, workshops, and student presentations.

TED Talks, New York, NY

Ad Operations Manager ***Sep 2011 - Jun 2013***

- Actively managed inventory of all online sponsorships, and supported new business opportunities with TED.com partners.

Google, Chicago, IL

Media Manager ***Jun 2009 - Sep 2011***

- Coordinated large-scale media campaigns for YouTube Partner Operations through collaboration with external marketing teams, agencies, and sales management on contract approval, campaign launch, optimization, and reporting analysis.

EDUCATION

Masters of Science in City & Regional Planning

Pratt Institute, New York, NY ***May 2015***

- Editor for department bi-annual planning magazine
- Co-chair of the Diversity Initiatives Group

Bachelor of Arts in Political Science & Communication

University of Pittsburgh, Pittsburgh, PA ***May 2006***

- Navy ROTC, Carnegie Mellon University
- Studied at University of Edinburgh, Scotland, UK

PROFESSIONAL SKILLS

- Project management; financial modeling/underwriting; RE market analysis; planning and zoning; business development.

Introduction to Sebago Technics, Inc.

Year Established: 1981 (38 years in business)

About Us: Sebago Technics, Inc. (STI) is a consulting firm of more than 70 design professionals and technical staff providing services throughout New England. From the start, our business plan was simple: "to provide quality, cost-effective civil engineering services that are responsive to a customer's goals, schedule and budget." Our One Company capabilities and resources provide clients with experience and solutions to respond to their planning, permitting and design needs.

Structure: Employee-owned since 1998

Services: Civil, environmental, transportation & traffic engineering; municipal engineering; local/state/federal permitting and planning; land surveying & laser scanning; GIS; landscape architecture; environmental services; and natural resources.

Employee Disciplines:
Professional Engineers, Civil Engineers, Transportation Engineers, Landscape Architects, Professional Land Surveyors, Survey Technicians, CADD Designers, Wetland Scientist, Soil Scientist, Construction Inspectors, Community Planner, Environmental Scientists, GIS Professionals, Marketing, Administrative & Financial

Professional Focus: Sebago Technics provides engineering and planning services to both public and private sector clients. In the municipal and government sectors we have provided multiple discipline services through General Services Contracts (GSC) and project specific contracts. A few examples include the Portland Jetport, City of Portland Public Services, City of South Portland, City of Lewiston, City of Westbrook and several smaller communities. Our municipal sector work includes street and utility infrastructure design, municipal facility planning and specialty work such as Island marine and solid waste planning & engineering.

Location: South Portland, ME

Primary Geographic Service Area: Maine, New Hampshire, Vermont, Massachusetts

Web Site: www.sebagotechnics.com

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DANIEL L. RILEY, PE, CFM

Vice President, Engineering

Mr. Riley joined Sebago Technics, Inc. (STI) in August of 2001. Mr. Riley now serves as Vice President of Engineering with over 29 years of experience in the civil engineering field on projects for the private sector, as well as federal and municipal clients. He has a diverse background in civil engineering, municipal infrastructure and site design, permitting including institutional, commercial and residential development.

He is experienced and well versed in presenting complex, controversial and publicly sensitive issues to a variety of audiences. Mr. Riley's project management and technical experience involves a range of municipal and private sector projects. He has been directly involved in South Portland's significant CSO facility plan implementation and infrastructure projects including leading the design, planning and presentations to the public and City Council.

Mr. Riley has developed an outstanding relationship with permitting agencies in Southern Maine, the South Portland Planning Board and City Council. Prior to joining Sebago Technics, Mr. Riley worked as a professional engineer in Colorado specializing in water resources engineering. In that role, he managed projects for federal and municipal clients, including stormwater master planning studies and floodplain analysis and delineation projects. He has also assisted communities with the implementation of Stormwater Management Utilities.

EXPERIENCE

General Engineering Services Contract – City of South Portland, ME: Mr. Riley has been the Contract Manager and Lead Engineer for Sebago Technics' General Engineering Services Contract with the City of South Portland. In that role, he is responsible for coordinating the firm's services and providing engineering support for City Departments including Planning and Development, Bus/Transportation and Waterfront, Public Works, and Parks and Recreation. He has been directly responsible for the management of projects related to the City's CSO Facility Plan and related sewer and water resource projects.

- Thornton Heights-Pleasantdale Sewer Separation
- Greenbelt Trunk Line SWMM Modeling and Replacement Design
- Sawyer Street Culvert Replacement
- Willard Beach Outfall Replacement
- Trout Brook Culvert Study
- Public Works Facility, Preliminary Design through bond vote
- Knightville Sewer Separation Phase 1 and Phase 2 and Mill Creek Transit Hub
- Mussey Street Sewer Trunkline Replacement & Mussey Street/Pine Street Sewer Separation

Combined Sewer Separation Projects – City of Portland, ME: Mr. Riley has been the Project Manager for several of Sebago Technics' Sewer Separation contracts with the City of Portland since 2010. Notable relevant projects include:

- Fall Brook Watershed Study-City of Portland Public Services Department
- Woodford Street and Melrose Street: Design and Inspection Services 2016-2017
- Forest Avenue, Deering Street and Ocean Avenue: Design and Inspection Services 2017-2018
- Mackworth-Ocean and Walnut Street: Design Services 2018-2019 for construction in 2020-2021

EDUCATION

Villanova University, Villanova, PA
Bachelor of Science, Civil Engineering
1991

REGISTRATIONS

Professional Engineer:
Maine #9967
Colorado: #32176

Certified Floodplain Manager
#32249

MEMBERSHIPS

Chi Epsilon, National Civil Engineering Honor Society

Association of State Floodplain Managers (ASFPM)

SEBAGO TECHNICS

Impact on Surrounding Street Systems 14-14.6.1 (A)

The proposed project will not create or aggravate any significant hazard to safety on the surrounding street network nor will it substantially increase congestion on any street which is already at a level of service below Level "D". In designing the proposed layout of the project considerable attention has been placed on vehicular circulation and possible impacts to the surrounding area.

The proposed project involves the construction of a 7-story building to be utilized for affordable housing. The existing Master Plan and TMP permit included Lot 3 as larger, market rate condominium development. The proposed program reduces the density of the project by 42 units and replaces 55 market rate units with age- restricted affordable housing units. The revised Lot 3 program will result in a decrease in generated traffic compared to the traffic permitted in the project's TMP, resulting in reduced impacts impacts to the surrounding area.

A Traffic Movement Permit for the Master Development Plan was issued on February 24, 2023. Enclosed within this current Lot 3 application is a memorandum documenting the trip generation reduction of the proposed program compared to the TMP trips.

Given the change in sequencing of the development program compared to the sequence anticipated in the TMP mitigation, the Applicant is proposing to adjust the off-site mitigation sequence and thresholds outlined in the TMP to align with the lot numbers as opposed to phases of the development. This is to intended to tie the mitigation requirements to a specific building development regardless of the timing of its construction.

This proposed change would clarify that the traffic signal upgrade at Congress Street and Pearl Street is tied to the occupancy of Lot 1, and the traffic signal upgrade at Pearl Street and Cumberland Avenue is tied to occupancy of the remaining residential units as part of Lot 2.

It remains recommended that the first development on the site be responsible for the installation of the pedestrian signal heads at the Cumberland Avenue and Pearl Street intersection as a condition of occupancy. As currently anticipated, the first development may be the proposed affordable housing project and therefore, it is recommended for this project to complete these efforts. Suggested modifications for the remaining mitigation, altering the verbiage by lot as opposed to phase, is attached to this memorandum.

Att. I1

SEBAGO TECHNICS

CIVIL ENGINEERING ▪ SURVEYING ▪ LANDSCAPE ARCHITECTURE

Memorandum

19371-04

To: Dan Riley, P.E., CFM, Sebago Technics

From: Nikki Conant, P.E., Sebago Technics

Griffin Steinman, EI, Sebago Technics

Date: January 8, 2024

STATE OF MAINE
NICOLE L. CONANT
No. 16089
LICENSED
PROFESSIONAL ENGINEER
01/08/23

Subject: Revised Traffic Impact Analysis, 385 Congress Street, Portland

The purpose of this memorandum is to summarize traffic impacts from development revisions located at 385 Congress Street in Portland, Maine. The original development was granted a Traffic Movement Permit (TMP) from the City of Portland, approved for a 156-room hotel, 11,560 square feet (SF) of retail space (classified as high-turnover sit-down restaurant), and 297 dwelling units of high-rise multi-family housing.

The development program is proposed to be revised, altering the residential portion of the project to 200 high-rise multi-family units and 55 multi-family units of affordable senior housing. Additionally, the retail portion of the development is reduced by 1,690 SF to a revised total of 9,870 SF. The development is also proposing to relocate the Level 0 driveway from Pearl Street to Cumberland Avenue as originally proposed in the Master Plan of Development for 385 Congress Street.

The revised traffic impact analysis (including trip generation, distribution, assignment, and capacity analysis), in this memorandum utilizes the means and methodologies originally included as part of the Traffic Movement Permit Application dated September 6, 2022 by Sebago Technics, Inc. (Sebago) as well as the follow up revised Section 7 Traffic Study dated December 15, 2022 also by Sebago. As such this memorandum summarizes the change from the total approved trip generation, provides a revised capacity analysis, and the suggested corresponding change in sequence and timing of the required mitigation. No revisions to the mitigation measures are proposed.

Trip Generation

Permitted

Trip generation was completed utilizing the 11th Edition of the Institute of Transportation Engineers (ITE), *Trip Generation Manual.* Table 1 outlines the land use codes (LUCs) and independent variables used for the calculation.

Table 1 – Permitted Trip Generation Land Use Summary

Use	*Land Use Code*	*Independent Variable*	*Setting/Location*
Residential	222 – Multifamily Housing (High-Rise)	297 Dwelling Units	Dense Multi-Use Urban
Hotel & Restaurant	310 – Hotel	156 Rooms	Dense Multi-Use Urban
Residential Retail	932 – High-Turnover (Sit-Down) Restaurant	11,560 Square Feet	General Urban/Suburban

The following tables detail the trip generation calculation for each of the above listed land use codes as utilized in the TMP, and repeated here for reference.

Table 2 – ITE Trip Generation
LUC 222 – Multifamily Housing (High-Rise)
297 Dwelling Units

Time Period	*Average Rate per Dwelling Unit*	*Trips*	*Entering**	*Exiting**
AM Peak Hour of Adjacent Street (7 – 9 AM)	0.24	71	29 (41%)	42 (59%)
AM Peak Hour of Generator	0.26	77	8 (10%)	69 (90%)
PM Peak Hour of Adjacent Street (4 – 6 PM)	0.20	59	30 (50%)	29 (50%)
PM Peak Hour of Generator	0.15	45	30 (66%)	15 (34%)

**Distributions for LUC 222 as previously permitted. Distributions were updated by ITE 12/9/22.*

Table 3 – ITE Trip Generation
LUC 310 – Hotel
156 Rooms

Time Period	*Average Rate per Room*	*Trips*	*Entering*	*Exiting*
AM Peak Hour of Adjacent Street (7 – 9 AM)	0.31	48	19 (39%)	29 (61%)
AM Peak Hour of Generator	0.33	51	26 (51%)	25 (49%)
PM Peak Hour of Adjacent Street (4 – 6 PM)	0.21	33	16 (44%)	18 (56%)
PM Peak Hour of Generator	0.34	53	16 (30%)	37 (70%)

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Table 4 – ITE Trip Generation
LUC 932 – High Turnover Sit-Down Restaurant
11,560 SF

Time Period	*Average Rate per 1,000 SF*	*Trips*	*Entering*	*Exiting*
AM Peak Hour of Adjacent Street (7 – 9 AM) *	-	-	-	-
AM Peak Hour of Generator	13.68	158	90 (57%)	68 (43%)
PM Peak Hour of Adjacent Street (4 – 6 PM)	9.05	105	64 (61%)	41 (39%)
PM Peak Hour of Generator	16.35	189	96 (51%)	93 (49%)

**It was assumed that if the commercial space is programmed as high-turnover sit-down restaurant(s) that they would be closed in the AM Peak Hour of the Adjacent Street.*

The permitted total unadjusted trip generation for the development is shown in Table 5, found by summing the values shown in Table 2 through Table 4.

Table 5 – Total Permitted ITE Trip Generation

Time Period	*LUC 222*	*LUC 310*	*LUC 932*	*Total*
AM Peak Hour of Adjacent Street (7 – 9 AM)	71	48	-	119
AM Peak Hour of Generator	77	51	158	286
PM Peak Hour of Adjacent Street (4 – 6 PM)	59	33	105	197
PM Peak Hour of Generator	45	53	189	287

As demonstrated in Table 5, the trip generation summarized in the TMP was estimated to generate a total of 286 trips and 287 trips in the AM and PM peak hours of the generator, respectively.

Proposed

The revised development program is summarized in Table 6.

Table 6 – Revised Development Program Summary

Building	*Number of Levels*	*Multifamily Units*	*Affordable Senior Units*	*Hotel Rooms*	*Commercial Square Footage*
Myrtle Street Tower (Lot 1)	12	9	-	156	660
Pearl Street Tower (Lot 2A)	12	110	-	-	4,000
Cumberland Ave Tower (Lot 2B)	12	81	-	-	5,210
Herald Square Tower (Lot 3)	7	-	55	-	-
TOTAL	-	200	55	156	9,870

Trip generation for the revised residential portion of the development based on 200 high-rise multi-family units and 55 multi-family units of affordable senior housing is shown in Tables 7 and 8. For the senior housing, LUC 223 – Affordable Housing with the land use subcategory senior and setting dense multi-use urban was utilized as its defined by ITE as "housing that is rented at below market rate to households that include at least one employed member." The land use subcategory was determined

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based on the definition of "sites with both minimum age thresholds and income limitations for its tenants."

Table 7 – Revised ITE Trip Generation
LUC 222 – Multifamily Housing (High-Rise)
200 Dwelling Units

Time Period	*Average Rate per Dwelling Unit*	*Trips*	*Entering**	*Exiting**
AM Peak Hour of Adjacent Street (7 – 9 AM)	0.24	48	12 (25%)	36 (75%)
AM Peak Hour of Generator	0.26	52	5 (10%)	47 (90%)
PM Peak Hour of Adjacent Street (4 – 6 PM)	0.20	40	29 (73%)	11 (27%)
PM Peak Hour of Generator	0.15	30	20 (66%)	10 (34%)

**Entering and exiting distributions were updated 12/9/2022 by ITE after the submission of the original TMP.*

Table 8 – Revised ITE Trip Generation
LUC 223 – Affordable Housing – Senior – Dense Multi-Use Urban
55 Dwelling Units

Time Period	*Average Rate per Dwelling Unit*	*Trips*	*Entering*	*Exiting*
AM Peak Hour of Adjacent Street (7 – 9 AM)	0.09	5	2 (37%)	3 (63%)
AM Peak Hour of Generator	0.18	10	3 (35%)	7 (65%)
PM Peak Hour of Adjacent Street (4 – 6 PM)	0.14	8	4 (57%)	4 (43%)
PM Peak Hour of Generator	0.18	10	5 (55%)	5 (45%)

Trip generation for the revised restaurant/retail portion of the development is shown in Table 9.

Table 9 – Revised ITE Trip Generation
LUC 932 – High Turnover Sit-Down Restaurant
9,870 SF

Time Period	*Average Rate per 1,000 SF*	*Trips*	*Entering*	*Exiting*
AM Peak Hour of Adjacent Street (7 – 9 AM) *	-	-	-	-
AM Peak Hour of Generator	13.68	135	77 (57%)	58 (43%)
PM Peak Hour of Adjacent Street (4 – 6 PM)	9.05	89	54 (61%)	35 (39%)
PM Peak Hour of Generator	16.35	161	82 (51%)	79 (49%)

**It was assumed that if the commercial space is programmed as high-turnover sit-down restaurant(s) that they would be closed in the AM peak hour of the adjacent street.*

As such, a comparison of the total trip generation for the revised development program is shown in Table 10.

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Table 10 – Total Revised ITE Trip Generation

Time Period	*LUC 222*	*LUC 223*	*LUC 310*	*LUC 932*	*Total*	*+/- from TMP*
AM Peak Hour of Adjacent Street (7 – 9 AM)	48	5	48	-	**101**	-18
AM Peak Hour of Generator	52	10	51	135	**248**	-38
PM Peak Hour of Adjacent Street (4 – 6 PM)	40	8	33	89	**170**	-27
PM Peak Hour of Generator	30	10	53	161	**254**	-33

Based on the above, the proposed development program revision is estimated to generate 248 trips and 254 trips in the AM and PM peak hour periods, respectively. Both peak hours see less trips during each period than what was allocated in the TMP.

Revised Trip Assignment Diagrams

The traffic diagrams have been updated for the revised buildout and driveway location. The revised diagrams are also broken down by lot number. The diagrams are included in the attached Appendix and are outlined as follows:

1. 2022 Existing Count Data
2. 2028 No-Build Volumes
3. AM Trip Assignment – Lot 1 Hotel Primary
4. AM Trip Assignment – Lot 1 Hotel Valet Trips
5. AM Trip Assignment – Lot 1 Residential High Rise
6. AM Trip Assignment – Lot 1 Total
7. AM Trip Assignment – Lot 2 Residential High Rise
8. AM Trip Assignment – Lot 3 Residential Senior
9. AM Trip Assignment – TOTAL
10. PM Trip Assignment – Lot 1 Hotel Primary
11. PM Trip Assignment – Lot 1 Hotel Valet Trips
12. PM Trip Assignment – Lot 1 Residential High Rise
13. PM Trip Assignment – Lot 1 Retail/Restaurant
14. PM Trip Assignment – Lot 1 Total
15. PM Trip Assignment – Lot 2 Residential High Rise
16. PM Trip Assignment – Lot 2 Retail/Restaurant
17. PM Trip Assignment – Lot 2 Total
18. PM Trip Assignment – Lot 3 Residential Senior
19. PM Trip Assignment – TOTAL
20. AM Trip Assignment Comparison to Approved TMP
21. PM Trip Assignment Comparison to Approved TMP
22. 2028 Build Volumes

As highlighted in Figures 20 and 21, the change in development did not significantly change the distribution in traffic at the study area intersections.

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Revised Capacity Analysis

Capacity analysis for the study area intersections was performed utilizing Synchro/SimTraffic v11 to calculate both 95th percentile queue lengths and the control delay, or the average amount of delay that a vehicle experiences as it travels through an intersection or section of roadway. The analysis was completed applying the average of ten (10) SimTraffic simulation runs, each consisting of a 15-minute seeding interval and a one-hour recording interval.

Level of Service (LOS) is determined by the control delay, in terms of A through F, with A being optimal and F being unacceptable. The LOS and control delay for signalized and unsignalized intersections is depicted in the Highway Capacity Manual 6 and shown in Table 11.

Table 11 – Level of Service from Control Delay

Level of Service (LOS)	*Signalized Control Delay (Sec./Vehicle)*	*Unsignalized Control Delay (Sec./Vehicle)*
A	≤10	≤10
B	>10-≤20	>10-≤15
C	>20-≤35	>15-≤25
D	>35-≤55	>25-≤35
E	>55-≤80	>35-≤50
F	>80	>50

The analysis includes the following intersections:

1. Congress Street at Pearl Street (Signalized)
2. Cumberland Avenue at Pearl Street (Signalized)
3. Congress Street at Myrtle Street (Unsignalized)
4. Cumberland Avenue at Myrtle Street (Unsignalized)
5. Pearl Street at Site Driveway (Level 1) and Top of the Old Port Parking (Unsignalized)
6. Cumberland Avenue at Site Driveway (Level 0) (Unsignalized)
7. Myrtle Street at Site Driveway (Unsignalized)
8. Congress Street at Site Driveway (Unsignalized)

Capacity analysis for the signalized and unsignalized intersections of the study area was completed utilizing the outlined methodologies during the AM and PM analysis periods. The results for the delay in seconds per vehicle (s/veh) along with the corresponding levels of service for the 2028 no-build as well as the previously approved, and newly proposed 2028 Build conditions in are shown in Tables 12 through 19. For both the no-build and build analysis, existing signal timings were used at the signalized intersections. It is important to note that the modeling efforts retained the methodologies agreed upon as a part of the previous TMP.

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Table 12 – Level of Service from Control Delay
Congress Street at Pearl Street
Signalized

Movement	*2028 AM Period*			*2028 PM Period*		
	No-Build *Delay (LOS)*	*TMP Build* *Delay (LOS)*	*Revised Build* *Delay (LOS)*	*No-Build* *Delay (LOS)*	*TMP Build* *Delay (LOS)*	*Revised Build* *Delay (LOS)*
Pearl SEL	16.6 (B)	17.8 (B)	17.3 (B)	49.8 (D)	48.7 (D)	52.0 (D)
Pearl SET	12.9 (B)	13.0 (B)	13.1 (B)	22.8 (C)	28.3 (C)	27.7 (C)
Pearl SER	8.6 (A)	10.5 (B)	11.1 (B)	17.6 (B)	21.4 (C)	22.5 (B)
Pearl NWL	17.0 (B)	20.7 (C)	23.1 (C)	29.9 (C)	32.2 (C)	36.3 (D)
Pearl NWT	14.3 (B)	14.9 (B)	15.6 (B)	27.7 (C)	34.8 (C)	34.1 (C)
Pearl NWR	5.8 (A)	7.1 (A)	7.6 (A)	23.2 (C)	26.9 (C)	29.3 (C)
Congress NEL	18.9 (B)	18.4 (B)	18.9 (B)	13.9 (B)	17.3 (B)	14.5 (B)
Congress NET	7.4 (A)	6.7 (A)	6.9 (A)	8.7 (A)	8.5 (A)	8.5 (A)
Congress NER	4.6 (A)	4.0 (A)	3.7 (A)	5.2 (A)	5.5 (A)	4.7 (A)
Congress SWL	15.0 (B)	14.3 (B)	15.1 (B)	15.1 (B)	14.9 (B)	13.4 (B)
Congress SWT	10.6 (B)	10.8 (B)	11.4 (B)	8.3 (A)	9.6 (A)	8.6 (A)
Congress SWR	8.2 (A)	8.2 (A)	7.3 (A)	6.2 (A)	7.9 (A)	6.1 (A)
INTERSECTION	10.9 (B)	10.9 (B)	11.3 (B)	16.4 (B)	19.2 (B)	19.3 (B)

Table 13 – Level of Service from Control Delay
Cumberland Avenue at Pearl Street
Signalized

Movement	*2028 AM Period*			*2028 PM Period*		
	No-Build *Delay (LOS)*	*TMP Build* *Delay (LOS)*	*Revised Build* *Delay (LOS)*	*No-Build* *Delay (LOS)*	*TMP Build* *Delay (LOS)*	*Revised Build* *Delay (LOS)*
Pearl SEL	12.0 (B)	10.2 (B)	9.8 (A)	20.9 (C)	18.4 (B)	18.4 (B)
Pearl SET	9.5 (A)	10.5 (B)	10.0 (B)	10.0 (A)	16.3 (B)	11.3 (B)
Pearl SER	4.8 (A)	5.3 (A)	4.6 (A)	5.8 (A)	8.3 (A)	7.0 (A)
Pearl NWL	10.2 (B)	10.2 (B)	11.0 (B)	13.9 (B)	8.3 (A)	14.1 (B)
Pearl NWT	8.7 (A)	7.0 (A)	8.2 (A)	14.1 (B)	8.7 (A)	14.2 (B)
Pearl NWR	3.0 (A)	4.0 (A)	4.8 (A)	10.3 (B)	5.1 (A)	10.2 (B)
Cumberland NEL	10.0 (B)	11.6 (B)	10.1 (B)	11.4 (B)	14.4 (B)	11.0 (B)
Cumberland NET	6.5 (A)	8.5 (A)	6.8 (A)	9.2 (A)	11.0 (B)	8.3 (A)
Cumberland NER	3.9 (A)	4.9 (A)	3.7 (A)	6.3 (A)	9.0 (A)	5.2 (A)
Cumberland SWL	10.8 (B)	13.1 (B)	11.8 (B)	14.9 (B)	22.3 (C)	14.2 (B)
Cumberland SWT	9.2 (A)	10.8 (B)	10.9 (B)	8.6 (A)	14.1 (B)	9.4 (A)
Cumberland SWR	5.9 (A)	8.1 (A)	7.1 (A)	5.7 (A)	9.6 (A)	6.7 (A)
INTERSECTION	8.1 (A)	9.2 (A)	8.6 (A)	10.7 (B)	11.0 (B)	10.5 (B)

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Table 14 – Level of Service from Control Delay
Congress Street at Myrtle Street
Unsignalized

Movement	*2028 AM Period*			*2028 PM Period*		
	No-Build *Delay (LOS)*	*TMP Build* *Delay (LOS)*	*Revised Build* *Delay (LOS)*	*No-Build* *Delay (LOS)*	*TMP Build* *Delay (LOS)*	*Revised Build* *Delay (LOS)*
Myrtle NWL	9.8 (A)	9.3 (A)	9.2 (A)	12.7 (B)	15.6 (C)	12.0 (B)
Myrtle NWT	10.0 (A)	10.6 (B)	10.1 (B)	14.2 (B)	16.8 (C)	12.6 (B)
Myrtle NWR	5.5 (A)	5.2 (A)	5.4 (A)	9.0 (A)	12.5 (B)	8.4 (A)
Congress NEL	3.8 (A)	3.6 (A)	4.0 (A)	3.0 (A)	3.2 (A)	3.4 (A)

Table 15 – Level of Service from Control Delay
Cumberland Avenue at Myrtle Street
Unsignalized

Movement	*2028 AM Period*			*2028 PM Period*		
	No-Build *Delay (LOS)*	*TMP Build* *Delay (LOS)*	*Revised Build* *Delay (LOS)*	*No-Build* *Delay (LOS)*	*TMP Build* *Delay (LOS)*	*Revised Build* *Delay (LOS)*
Myrtle NWL	7.4 (A)	6.7 (A)	6.2 (A)	8.8 (A)	11.6 (B)	8.6 (A)
Myrtle NWT	3.0 (A)	1.9 (A)	1.7 (A)	5.3 (A)	5.8 (A)	4.4 (A)
Myrtle NWR	4.6 (A)	4.3 (A)	4.0 (A)	6.3 (A)	8.4 (A)	6.2 (A)
Cumberland NEL	2.5 (A)	2.6 (A)	3.1 (A)	3.3 (A)	2.1 (A)	1.6 (A)

Table 16 – Level of Service from Control Delay
Pearl Street at Site Driveway and Top of the Old Port Parking
Unsignalized

Movement	*2028 AM Period*			*2028 PM Period*		
	No-Build *Delay (LOS)*	*TMP Build* *Delay (LOS)*	*Revised Build* *Delay (LOS)*	*No-Build* *Delay (LOS)*	*TMP Build* *Delay (LOS)*	*Revised Build* *Delay (LOS)*
Pearl SEL	4.2 (A)	3.0 (A)	3.6 (A)	7.1 (A)	5.7 (A)	8.6 (A)
Pearl NWL	1.9 (A)	3.2 (A)	2.8 (A)	3.9 (A)	7.2 (A)	4.9 (A)
Site NEL	-	6.4 (A)	5.3 (A)	10.1 (B)	17.0 (C)	7.6 (A)
Site NER	-	3.2 (A)	3.8 (A)	4.7 (A)	4.3 (A)	4.3 (A)
Old Port Parking SWL	8.4 (A)	1.7 (A)	7.6 (A)	7.3 (A)	11.5 (B)	11.5 (B)
Old Port Parking SWR	3.2 (A)	1.5 (A)	2.1 (A)	6.9 (A)	13.3 (B)	7.7 (A)

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Table 17 – Level of Service from Control Delay
Cumberland Avenue at Site Driveway
Unsignalized

Movement	*2028 AM Period*			*2028 PM Period*		
	No-Build *Delay (LOS)*	*TMP Build* *Delay (LOS)*	*Revised Build* *Delay (LOS)*	*No-Build* *Delay (LOS)*	*TMP Build* *Delay (LOS)*	*Revised Build* *Delay (LOS)*
Site NWL	-	-	7.0 (A)	-	-	7.5 (A)
Site NWR	-	-	6.0 (A)	-	-	7.8 (A)
Cumberland SWL	-	-	2.8 (A)	-	-	6.3 (A)

Table 18 – Level of Service from Control Delay
Myrtle Street at Site Driveway
Unsignalized

Movement	*2028 AM Period*			*2028 PM Period*		
	No-Build *Delay (LOS)*	*TMP Build* *Delay (LOS)*	*Revised Build* *Delay (LOS)*	*No-Build* *Delay (LOS)*	*TMP Build* *Delay (LOS)*	*Revised Build* *Delay (LOS)*
Site SWR	-	3.2 (A)	3.2 (A)	-	4.8 (A)	4.4 (A)

Table 19 – Level of Service from Control Delay
Congress Street at Site Driveway
Unsignalized

Movement	*2028 AM Period*			*2028 PM Period*		
	No-Build *Delay (LOS)*	*TMP Build* *Delay (LOS)*	*Revised Build* *Delay (LOS)*	*No-Build* *Delay (LOS)*	*TMP Build* *Delay (LOS)*	*Revised Build* *Delay (LOS)*
College NEL	-	3.3 (A)	3.7 (A)	-	3.1 (A)	3.6 (A)

As shown above, all movements are expected to operate at LOS “D” or better and do not significantly differ from the results provided in the approved previous analysis. It should be noted that the previous TMP had a second access to Pearl Street where exiting left-turn movements were operating at LOS “E.” The new driveway to Cumberland Avenue is estimated to operate at LOS “A.” SimTraffic reports for the revised trip generation are included in the attached Appendix for reference.

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Queue Analysis

Table 20 through Table 27 includes the calculated 95th Percentile Queues for the study area intersections.

Table 20 – Queueing Analysis Summary
Congress Street at Pearl Street

Lane Group (Storage Length)	*95th Percentile Queue Length (Feet)*					
	2028 AM No-Build	*2028 AM TMP Build*	*2028 AM Rev. Build*	*2028 PM No-Build*	*2028 PM TMP Build*	*2028 PM Rev. Build*
Pearl SE LTR	98	152	133	119	153	150
Pearl NW LTR	75	80	83	292	325	327
Congress NE L	58	64	60	93	114	102
Congress NE TR (75')	**91**	**87**	**86**	**106**	**105**	**100**
Congress SW L (45')	**86**	**93**	**94**	**59**	**58**	**54**
Congress SW TR	238	236	254	137	165	139

Table 21 – Queueing Analysis Summary
Cumberland Avenue at Pearl Street

Lane Group (Storage Length)	*95th Percentile Queue Length (Feet)*					
	2028 AM No-Build	*2028 AM TMP Build*	*2028 AM Rev. Build*	*2028 PM No-Build*	*2028 PM TMP Build*	*2028 PM Rev. Build*
Pearl SE LTR	82	86	80	79	109	91
Pearl NW LTR	57	58	64	189	73	185
Cumberland NE LTR	99	114	100	145	165	111
Cumberland SW LTR	138	155	158	108	172	124

Table 22 – Queueing Analysis Summary
Congress Street at Myrtle Street

Lane Group (Storage Length)	*95th Percentile Queue Length (Feet)*					
	2028 AM No-Build	*2028 AM TMP Build*	*2028 AM Rev. Build*	*2028 PM No-Build*	*2028 PM TMP Build*	*2028 PM Rev. Build*
Myrtle NW LTR	79	85	78	164	196	141
Congress NE LT	34	38	34	27	68	47
Congress SW TR	0	3	2	2	7	7

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Table 23 – Queueing Analysis Summary
Cumberland Avenue at Myrtle Street

Lane Group (Storage Length)	*95th Percentile Queue Length (Feet)*					
	2028 AM No-Build	*2028 AM TMP Build*	*2028 AM Rev. Build*	*2028 PM No-Build*	*2028 PM TMP Build*	*2028 PM Rev. Build*
Myrtle NW LTR	49	91	56	65	103	96
Cumberland NE LT	8	8	16	15	56	32
Cumberland SW TR	0	2	3	0	0	7

Table 24 – Queueing Analysis Summary
Pearl Street at Site Driveway and Top of the Old Port Parking

Lane Group (Storage Length)	*95th Percentile Queue Length (Feet)*					
	2028 AM No-Build	*2028 AM TMP Build*	*2028 AM Rev. Build*	*2028 PM No-Build*	*2028 PM TMP Build*	*2028 PM Rev. Build*
Pearl SE LTR	40	83	52	10	67	57
Pearl NW LTR	30	12	18	22	90	26
Site NE LTR	23	26	23	36	31	28
Old Port Parking SW LTR	13	13	17	49	71	66

Table 25 – Queueing Analysis Summary
Cumberland Avenue at Site Driveway

Lane Group (Storage Length)	*95th Percentile Queue Length (Feet)*					
	2028 AM No-Build	*2028 AM TMP Build*	*2028 AM Rev. Build*	*2028 PM No-Build*	*2028 PM TMP Build*	*2028 PM Rev. Build*
Site NW LR	-	-	38	-	-	38
Cumberland NE TR	-	-	37	-	-	72
Cumberland SW LT	-	-	16	-	-	54

Table 26 – Queueing Analysis Summary
Myrtle Street at Site Driveway

Lane Group (Storage Length)	*95th Percentile Queue Length (Feet)*					
	2028 AM No-Build	*2028 AM TMP Build*	*2028 AM Rev. Build*	*2028 PM No-Build*	*2028 PM TMP Build*	*2028 PM Rev. Build*
Myrtle NW TR	0	11	0	0	15	6
Site SWR	-	48	45	-	47	44

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Table 27 – Queueing Analysis Summary
Congress Street at Site Driveway

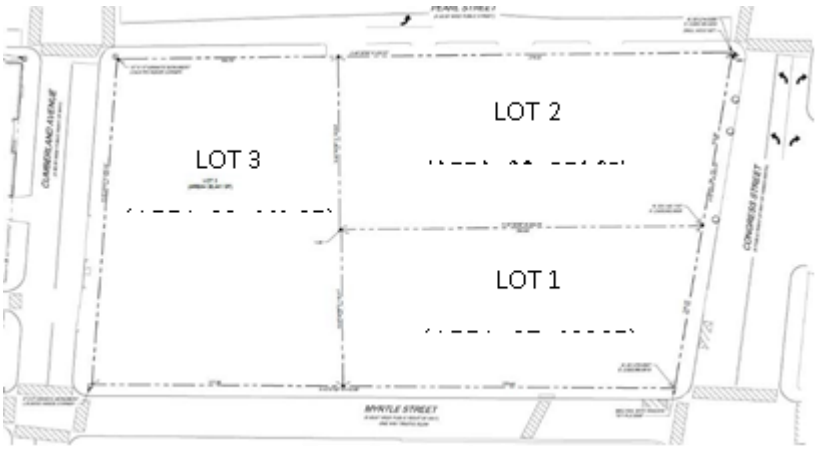
Lane Group (Storage Length)	*95th Percentile Queue Length (Feet)*					
	2028 AM No-Build	*2028 AM TMP Build*	*2028 AM Rev. Build*	*2028 PM No-Build*	*2028 PM TMP Build*	*2028 PM Rev. Build*
Congress NE LT	-	22	29	-	26	28
Congress SW TR	-	5	9	-	5	0

The calculated 95th percentile queue lengths are expected to be similar between the no-build and build conditions at all intersections, showing no significant changes for the revised building program. The garage door opening delay is not expected to impact traffic as queues to enter the site were often not exceeding one car and were often the result of the queues from the existing traffic signals. It should be noted that the queue for northbound Cumberland Avenue at the site drive was attributed to the queue at the Pearl Street traffic signal and not associated to the parking garage.

Revised Phasing and Mitigation

The original TMP was issued for the Master Plan based on phases, as follows:

- Phase 1 (Lot 1): Located at the Congress Street and Myrtle Street corner, including the 156-room hotel, 660 SF of associated restaurant space, and nine (9) residential condos.
- Phase 2 (Lot 2): Located at the Congress Street and Pearl Street corner with 110 residential condos and 4,000 SF of associated retail space.



Map of Subdivision Approved on January 24, 2023 Planning Board Hearing.

- Phase 3 (Lot 3): included the remaining development on Cumberland Avenue made up of a total of 179 residential condos and 6,900 SF of associated retail space.

As part of the approved TMP from the City of Portland, the development was required to upgrade the entire traffic signal system at the intersection of Congress Street and Pearl Steet and install pedestrian signal heads at the intersection of Pearl Street and Cumberland Avenue prior to occupancy of Phase 1 (the hotel on Lot 1). The proposed project now intends to alter the timing of the development, with a portion of Lot 3 expected as part of the first phase.

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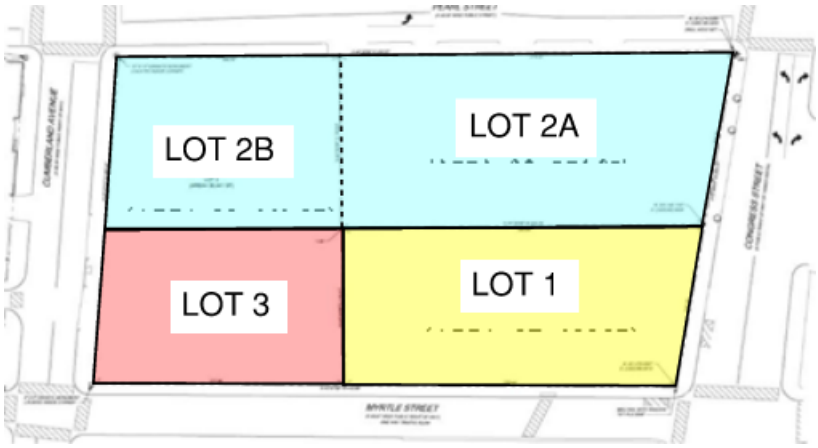
On the northwest corner at Cumberland Avenue and Myrtle Street, development is proposed as 55 units of 55+ senior affordable housing. Trip generation for the Lot 3 development, shown previously in Table 8, was estimated to generate 10 trips in the AM and PM peak hour periods, respectively.

Given the change in sequencing of the development program compared to the sequence anticipated in the TMP mitigation, the Applicant is proposing to adjust the off-site mitigation sequence and thresholds outlined in the TMP to align with the lot numbers as opposed to phases of the development. This is intended to tie the mitigation requirements to a specific building development regardless of the timing of its construction.

This proposed change would clarify that the traffic signal upgrade at Congress Street and Pearl Street is tied to the occupancy of Lot 1, and the traffic signal upgrade at Pearl Street and Cumberland Avenue is tied to occupancy of the remaining residential units as part of Lot 2.

It remains recommended that the first development on the site be responsible for the installation of the pedestrian signal heads at the Cumberland Avenue and Pearl Street intersection as a condition of occupancy. As currently anticipated, the first development may be the proposed affordable housing project and therefore, it is recommended for this project to complete these efforts. Suggested modifications for the remaining mitigation, altering the verbiage by lot as opposed to phase, are included in the Appendix.



Proposed Change in Lot Identification

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Conclusion

Sebago Technics, Inc. has completed their revised traffic impact assessment of the 385 Congress Street development and provides the following conclusions:

- The proposed development program revision is estimated to generate 248 trips and 254 trips in the AM and PM peak hours of the generator, respectively. Both peak hours are estimated to generate less trips than allocated in the approved TMP.
- There did not appear to be a significant change in the capacity analysis results for the revised development program and corresponding trip assignments from what was approved in the previous TMP.
- The relocated Level 0 site driveway on Cumberland Avenue operated at a LOS "A", an improvement over the approved TMP which had a LOS "E" when making a left turn from the Level 0 Pearl Street driveway.
- It is requested to alter the verbiage in the signed Traffic Movement Permit to require mitigation by lot as opposed to phase to better align with different possible sequences of development.

Attachments

Revised Traffic Memorandum Appendix

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Revised Traffic Memorandum Appendix

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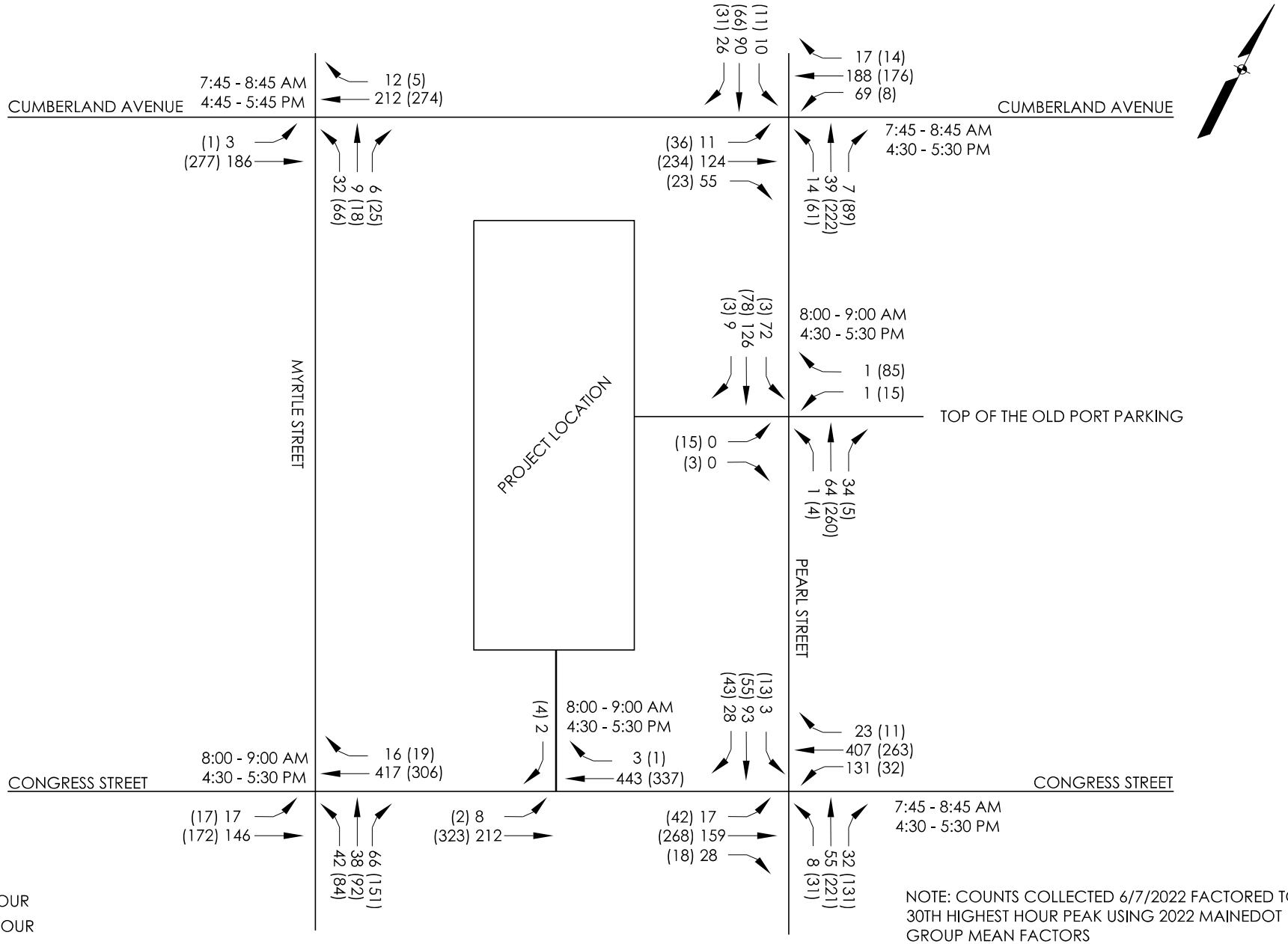

LEGEND

XX = AM PEAK HOUR

(XX) = PM PEAK HOUR

NOTE: COUNTS COLLECTED 6/7/2022 FACTORED TO 30TH HIGHEST HOUR PEAK USING 2022 MAINEDOT GROUP MEAN FACTORS

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2022 EXISTING COUNT DATA

OF: 385 CONGRESS STREET DEVELOPMENT

SCALE: N.T.S

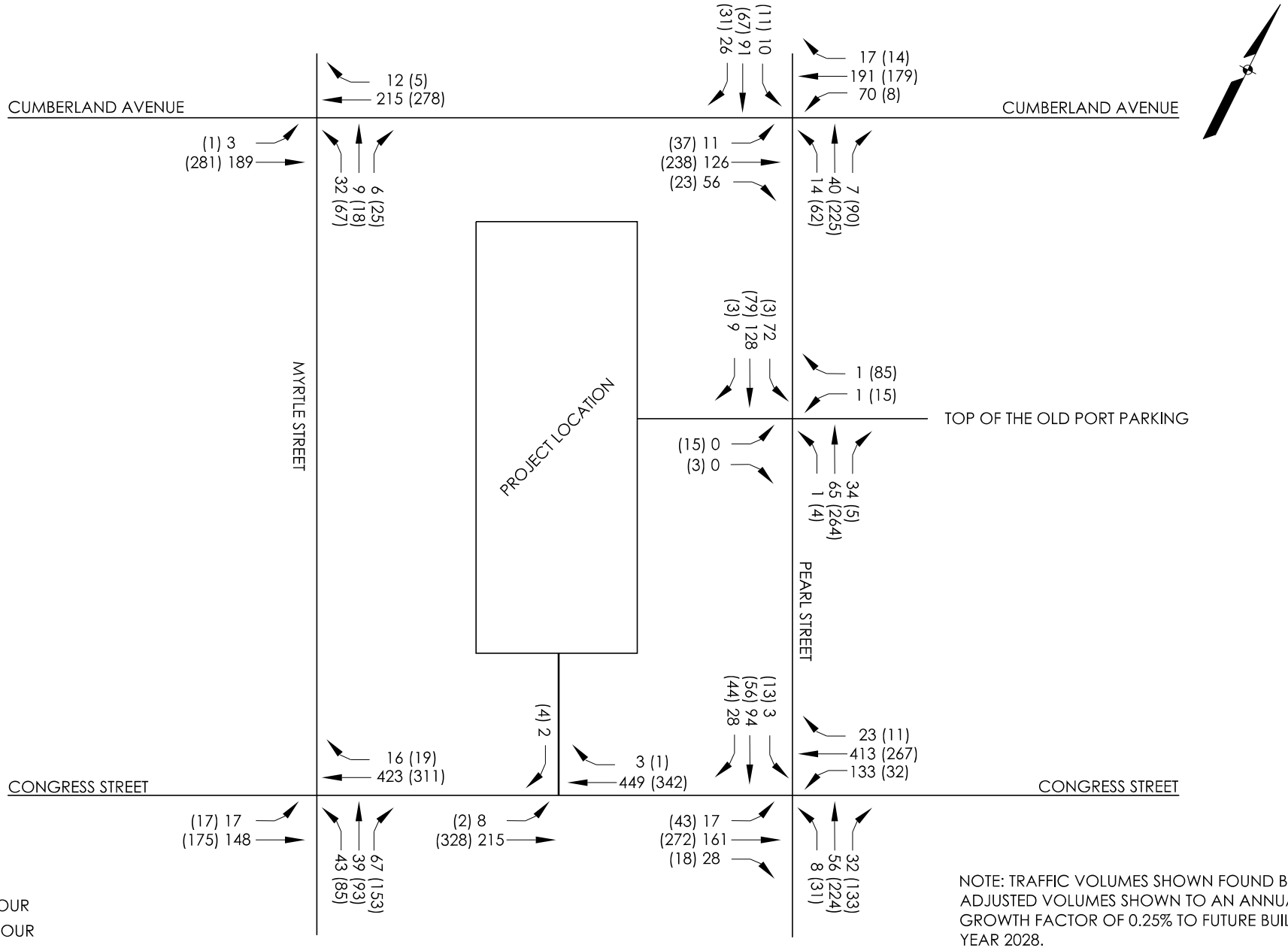
DATE: 1/5/24

LOCATION: 385 CONGRESS ST
PORTLAND, MAINE

FOR: 385 CONGRESS STREET, LLC
2730 TRANSIT ROAD
WEST SENECA, NY 14224

SHEET: 1 OF 22

...\19371-04 Traffic Diagrams.dgn



LEGEND

XX = AM PEAK HOUR

(XX) = PM PEAK HOUR

NOTE: TRAFFIC VOLUMES SHOWN FOUND BY ADJUSTED VOLUMES SHOWN TO AN ANNUAL GROWTH FACTOR OF 0.25% TO FUTURE BUILD YEAR 2028.

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2028 NO-BUILD VOLUMES

OF: 385 CONGRESS STREET DEVELOPMENT

SCALE: N.T.S

DATE: 1/5/24

LOCATION: 385 CONGRESS ST
PORTLAND, MAINE

FOR: 385 CONGRESS STREET, LLC
2730 TRANSIT ROAD
WEST SENECA, NY 14224

SHEET: 2 OF 22

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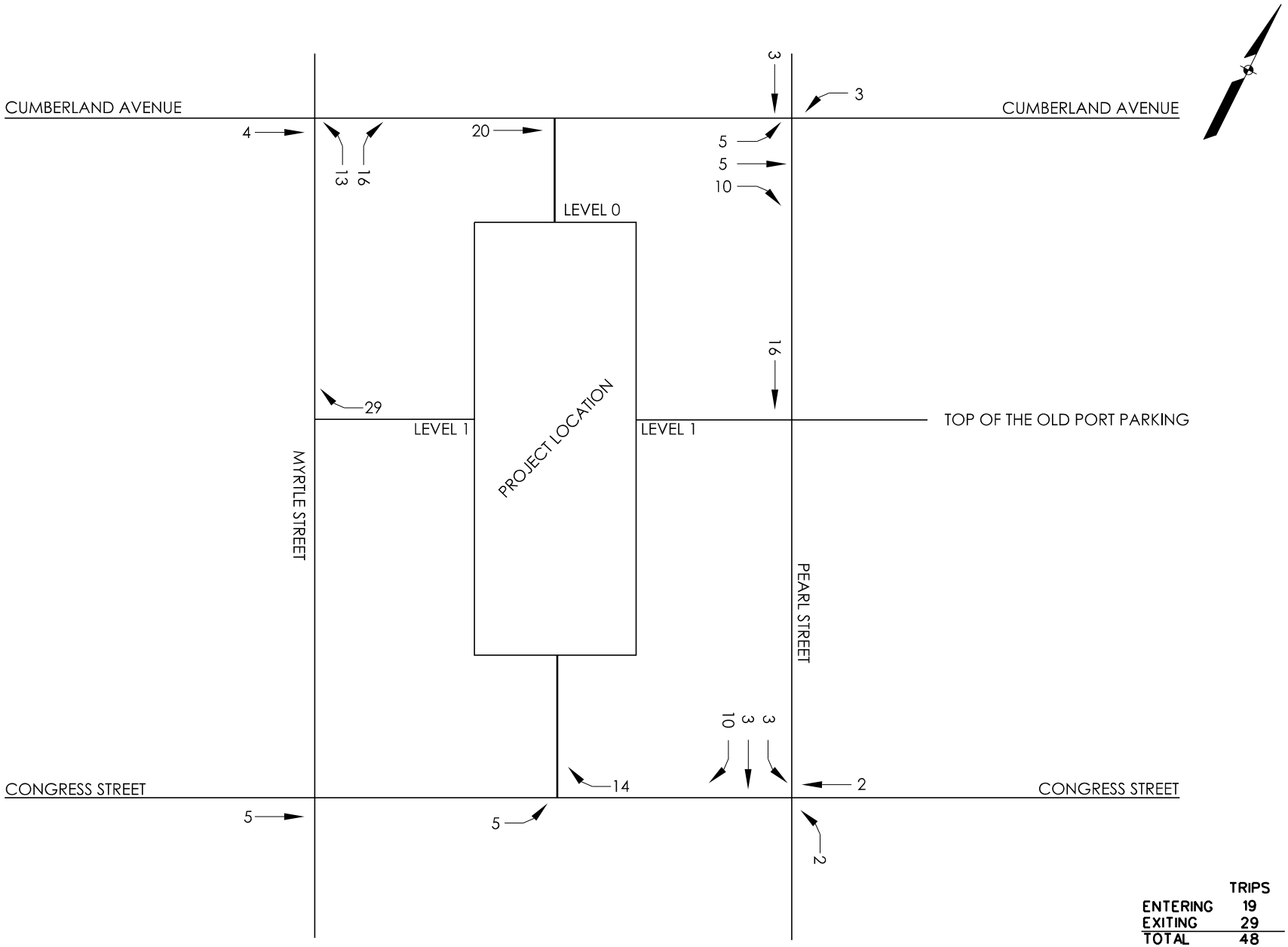

	TRIPS
ENTERING	19
EXITING	29
TOTAL	48

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AM TRIP ASSIGNMENT - LOT 1 HOTEL PRIMARY

OF: 385 CONGRESS STREET DEVELOPMENT

SCALE: N.T.S

DATE: 1/5/24

LOCATION: 385 CONGRESS ST
PORTLAND, MAINE

FOR: 385 CONGRESS STREET, LLC
2730 TRANSIT ROAD
WEST SENECA, NY 14224

SHEET: 3 OF 22

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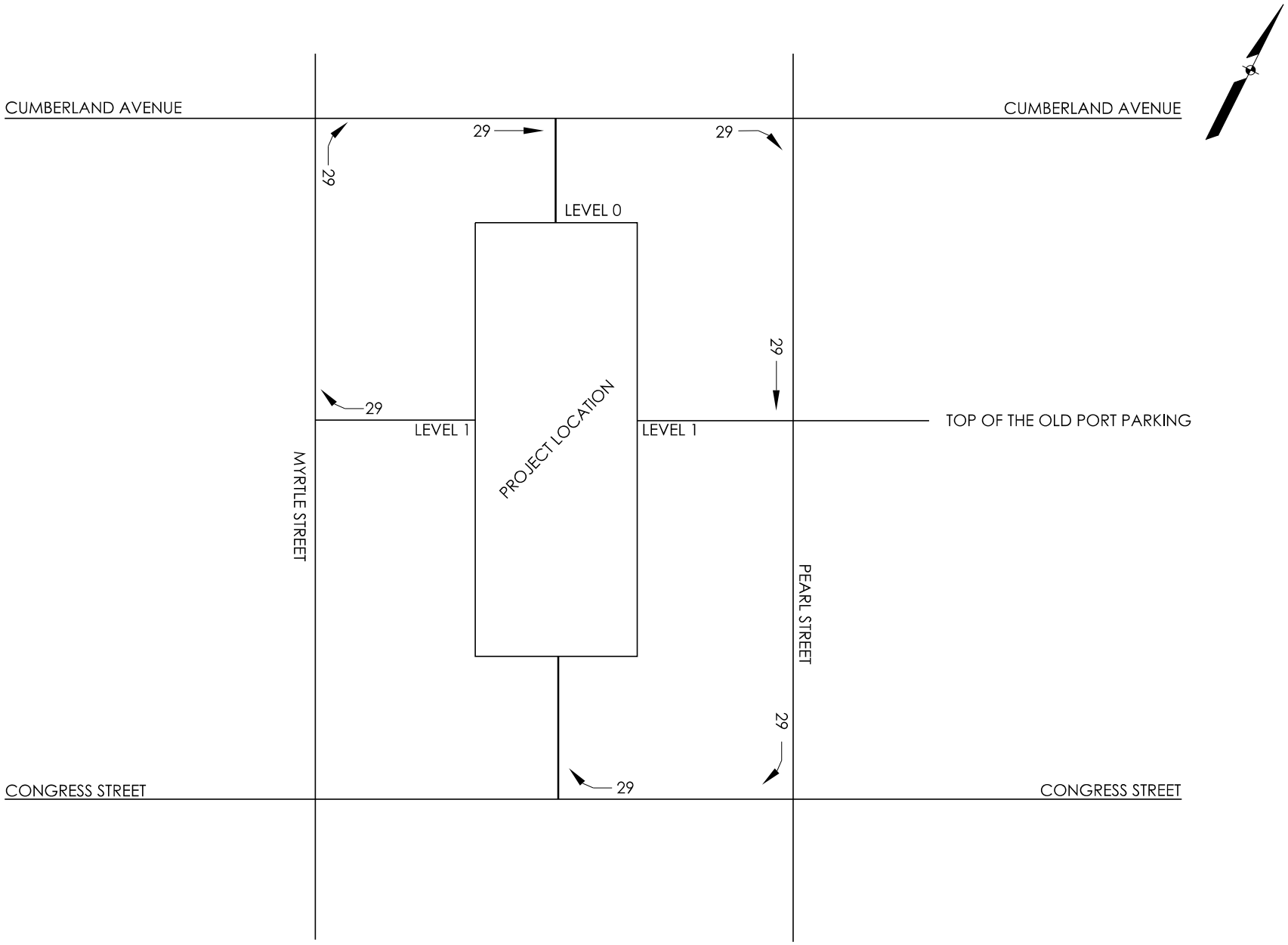

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AM TRIP ASSIGNMENT - LOT 1 HOTEL VALET TRIPS
OF: 385 CONGRESS STREET DEVELOPMENT

SCALE: N.T.S
DATE: 1/5/24

LOCATION: 385 CONGRESS ST
PORTLAND, MAINE

FOR: 385 CONGRESS STREET, LLC
2730 TRANSIT ROAD
WEST SENECA, NY 14224

SHEET: 4 OF 22

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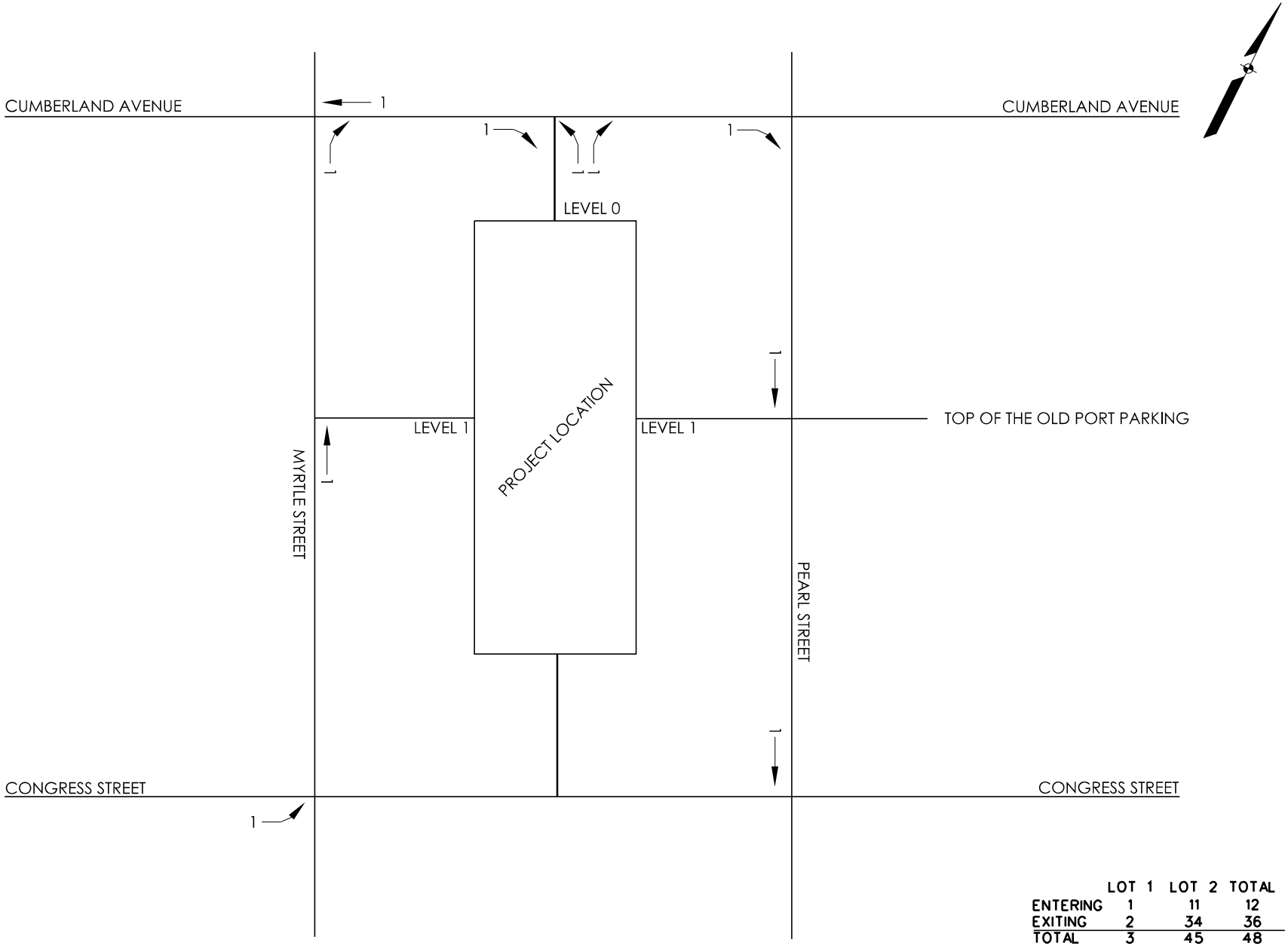

	LOT 1	LOT 2	TOTAL
ENTERING	1	11	12
EXITING	2	34	36
TOTAL	3	45	48

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AM TRIP ASSIGNMENT - LOT 1 RESIDENTIAL - HIGHRISE

OF: 385 CONGRESS STREET DEVELOPMENT

SCALE: N.T.S

DATE: 1/5/24

LOCATION: 385 CONGRESS ST
PORTLAND, MAINE

FOR: 385 CONGRESS STREET, LLC
2730 TRANSIT ROAD
WEST SENECA, NY 14224

SHEET: 5 OF 22

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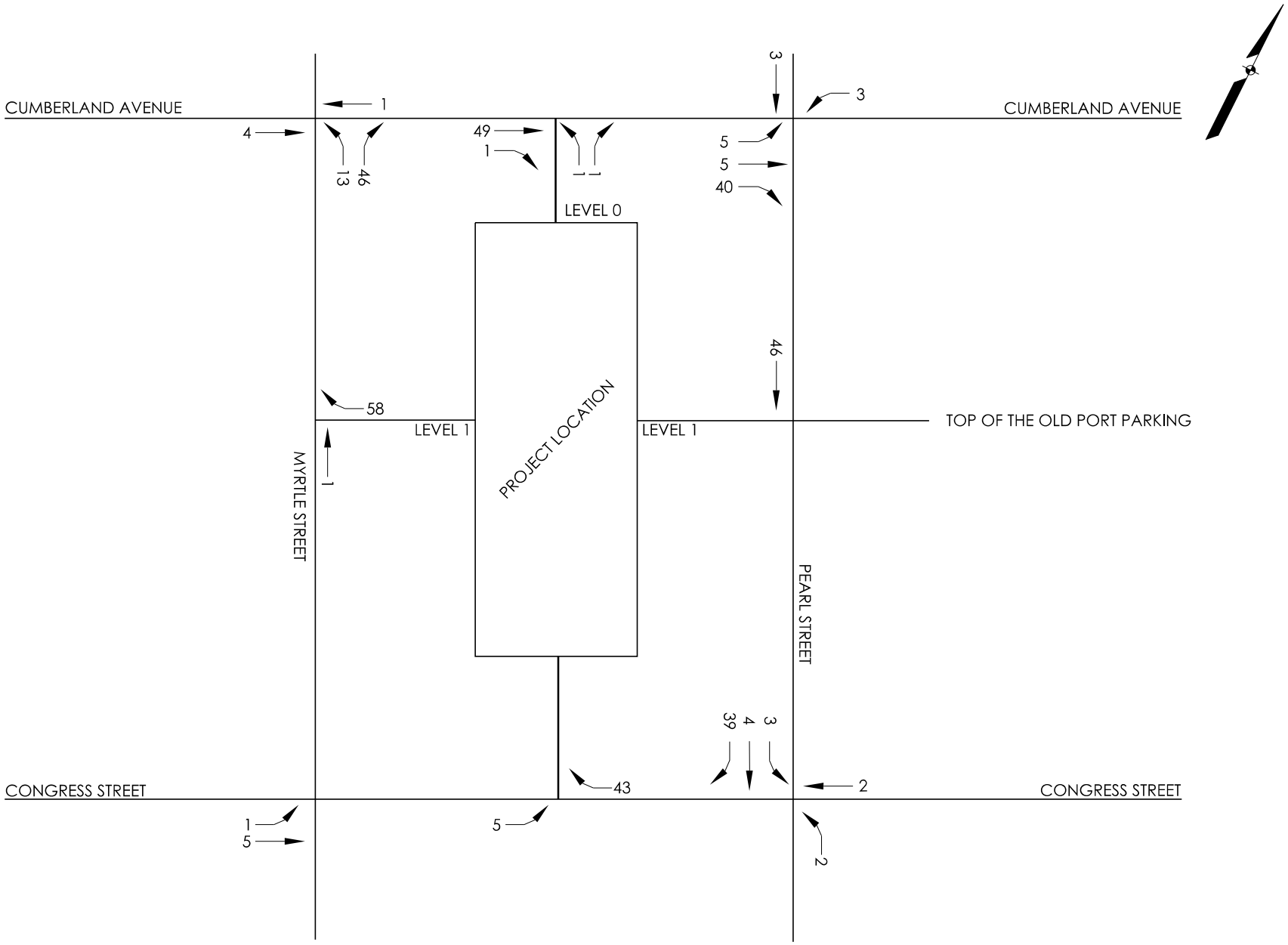

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AM TRIP ASSIGNMENT - LOT 1 TOTAL

OF: 385 CONGRESS STREET DEVELOPMENT

SCALE: N.T.S

DATE: 1/5/24

LOCATION: 385 CONGRESS ST
PORTLAND, MAINE

FOR: 385 CONGRESS STREET, LLC
2730 TRANSIT ROAD
WEST SENECA, NY 14224

SHEET: 6 OF 22

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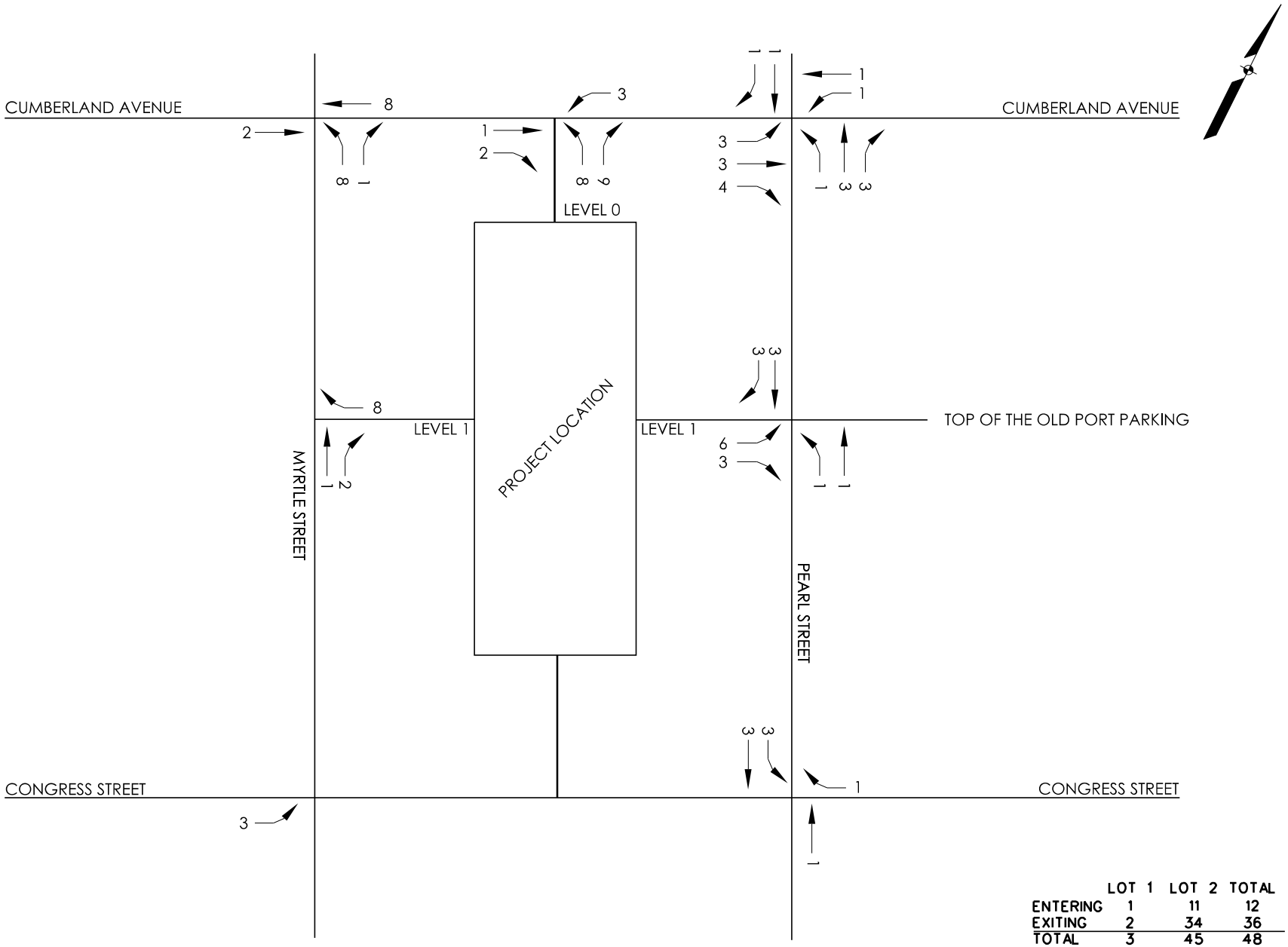

	LOT 1	LOT 2	TOTAL
ENTERING	1	11	12
EXITING	2	34	36
TOTAL	3	45	48

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AM TRIP ASSIGNMENT - LOT 2 RESIDENTIAL - HIGHRISE

OF: 385 CONGRESS STREET DEVELOPMENT

SCALE: N.T.S

DATE: 1/5/24

LOCATION: 385 CONGRESS ST
PORTLAND, MAINE

FOR: 385 CONGRESS STREET, LLC
2730 TRANSIT ROAD
WEST SENECA, NY 14224

SHEET: 7 OF 22

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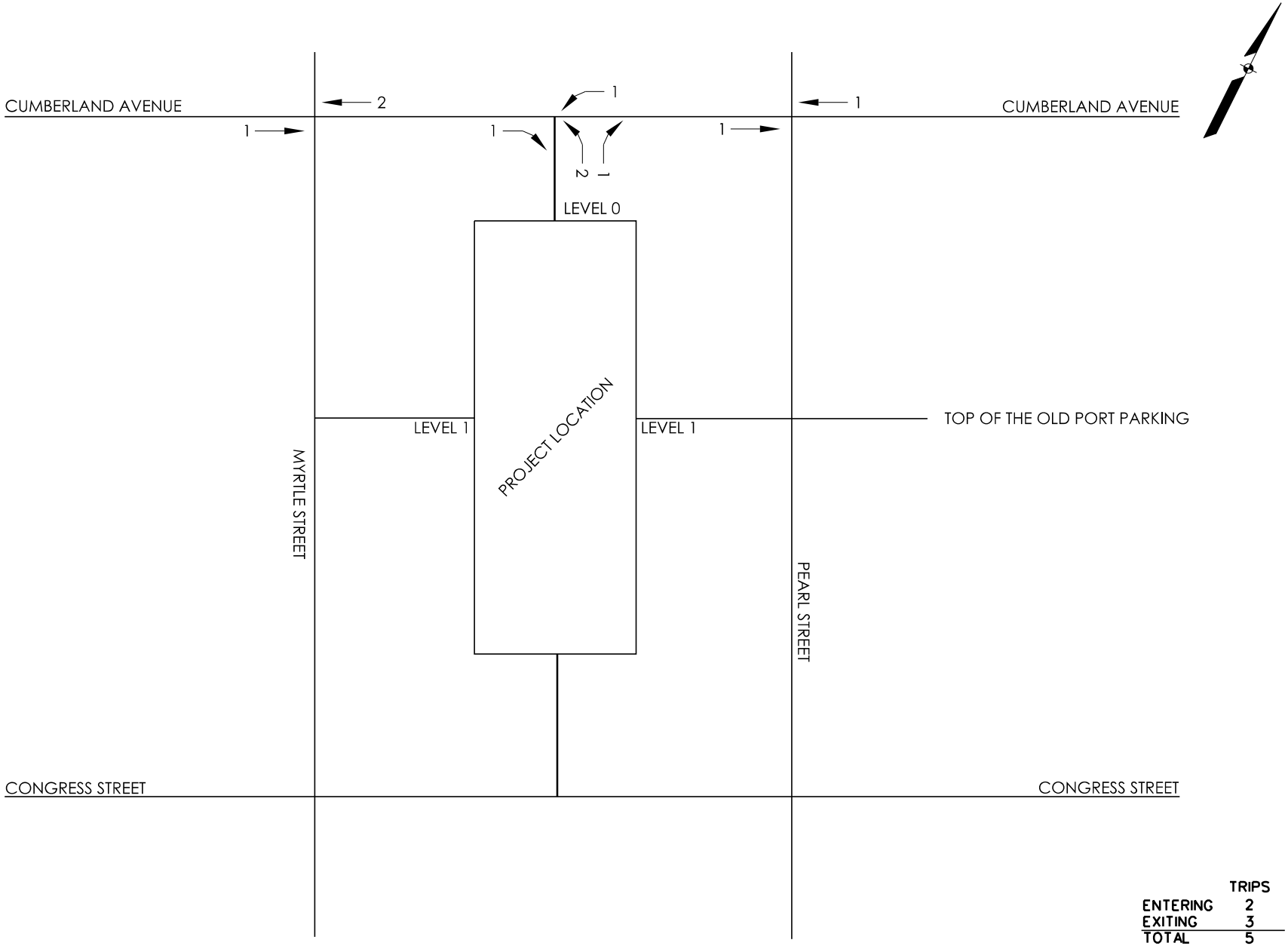

	TRIPS
ENTERING	2
EXITING	3
TOTAL	5

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AM TRIP ASSIGNMENT - LOT 3 RESIDENTIAL - SENIOR

OF: 385 CONGRESS STREET DEVELOPMENT

SCALE: N.T.S

DATE: 1/5/24

LOCATION: 385 CONGRESS ST
PORTLAND, MAINE

FOR: 385 CONGRESS STREET, LLC
2730 TRANSIT ROAD
WEST SENECA, NY 14224

SHEET: 8 OF 22

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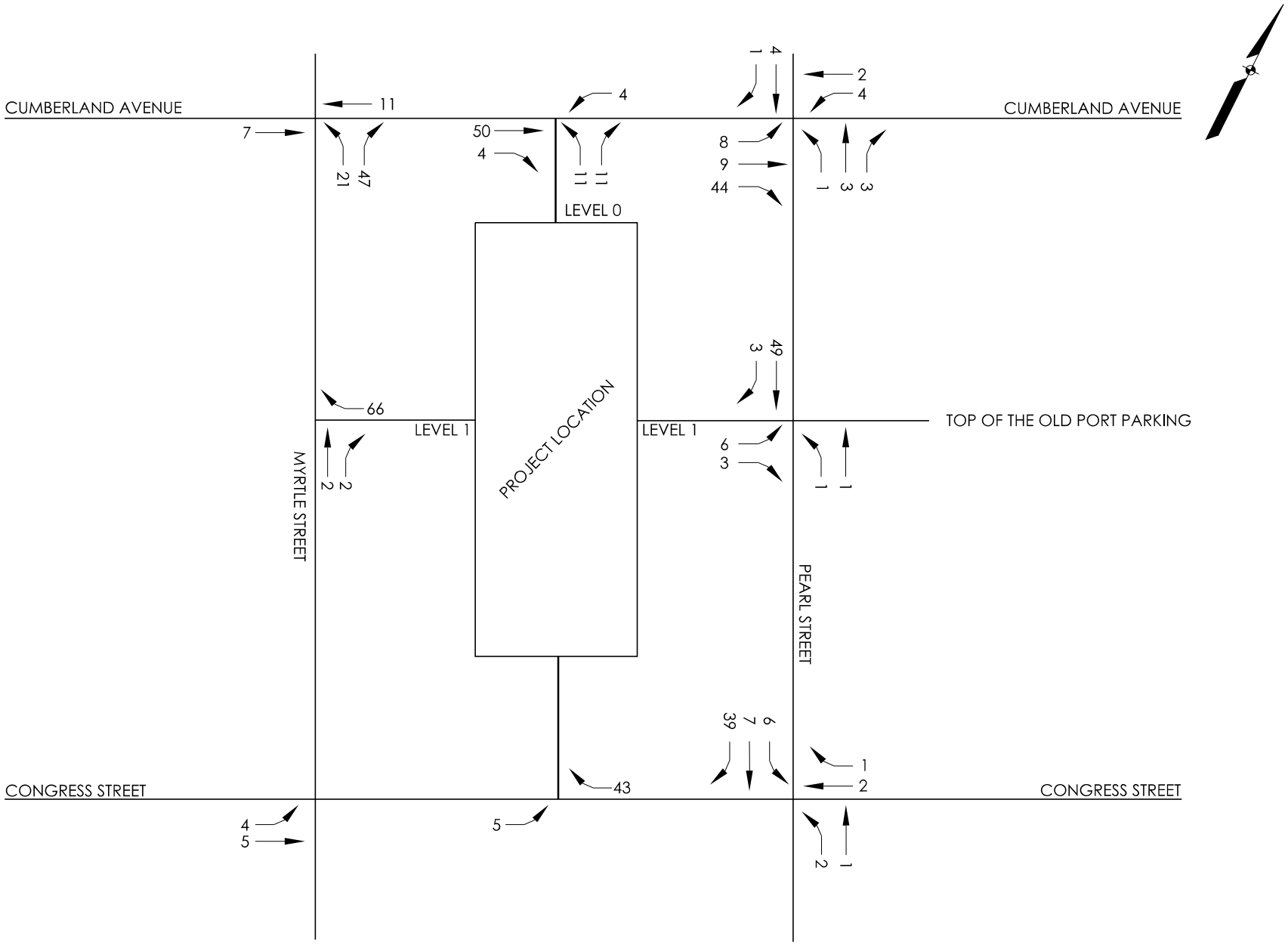

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AM TRIP ASSIGNMENT - TOTAL

OF: 385 CONGRESS STREET DEVELOPMENT

SCALE: N.T.S

DATE: 1/5/24

LOCATION: 385 CONGRESS ST
PORTLAND, MAINE

FOR: 385 CONGRESS STREET, LLC
2730 TRANSIT ROAD
WEST SENECA, NY 14224

SHEET: 9 OF 22

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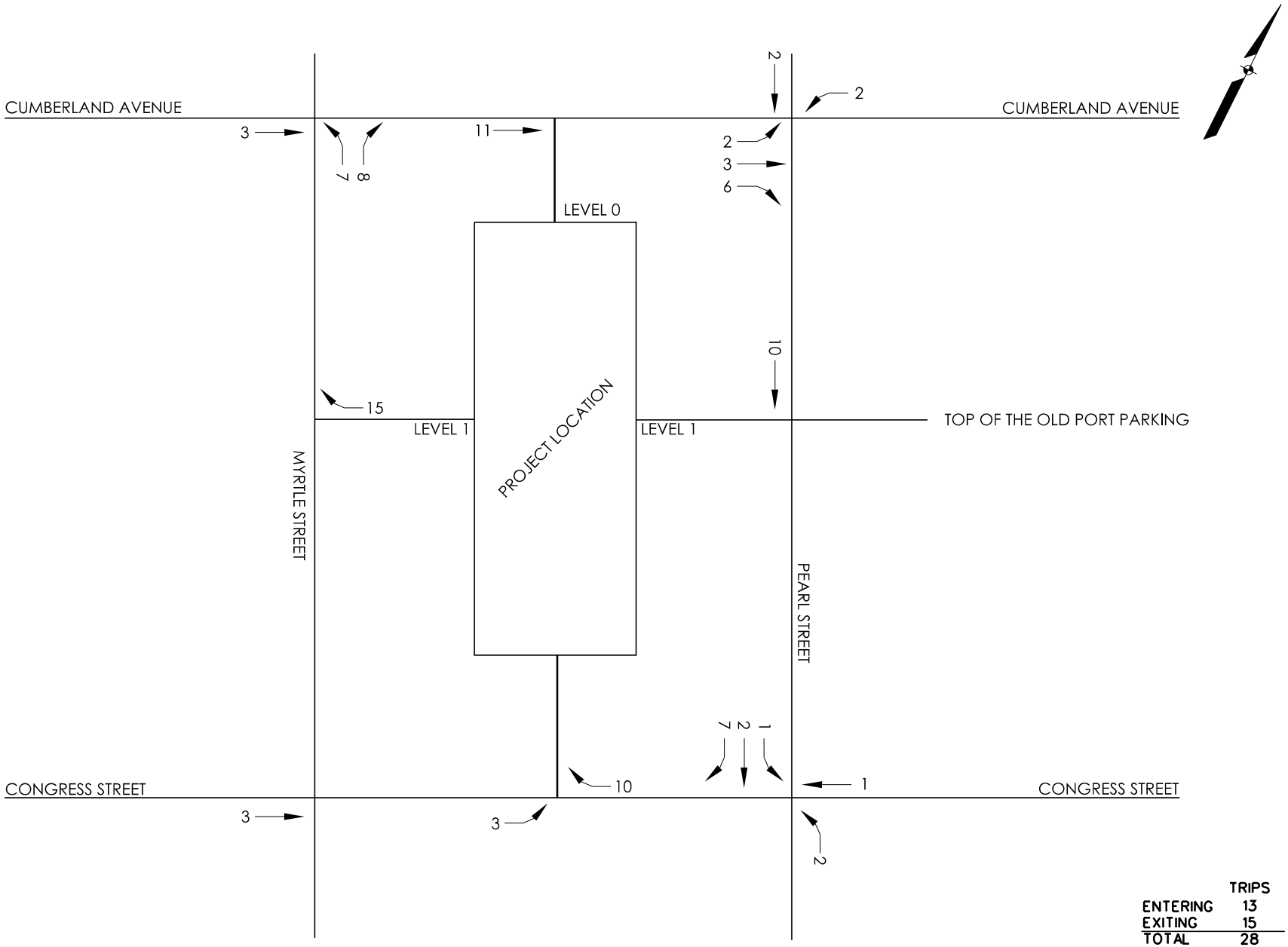

	TRIPS
ENTERING	13
EXITING	15
TOTAL	28

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PM TRIP ASSIGNMENT - LOT 1 HOTEL PRIMARY

OF: 385 CONGRESS STREET DEVELOPMENT

SCALE: N.T.S

DATE: 1/5/24

LOCATION: 385 CONGRESS ST
PORTLAND, MAINE

FOR: 385 CONGRESS STREET, LLC
2730 TRANSIT ROAD
WEST SENECA, NY 14224

SHEET: 10 OF 22

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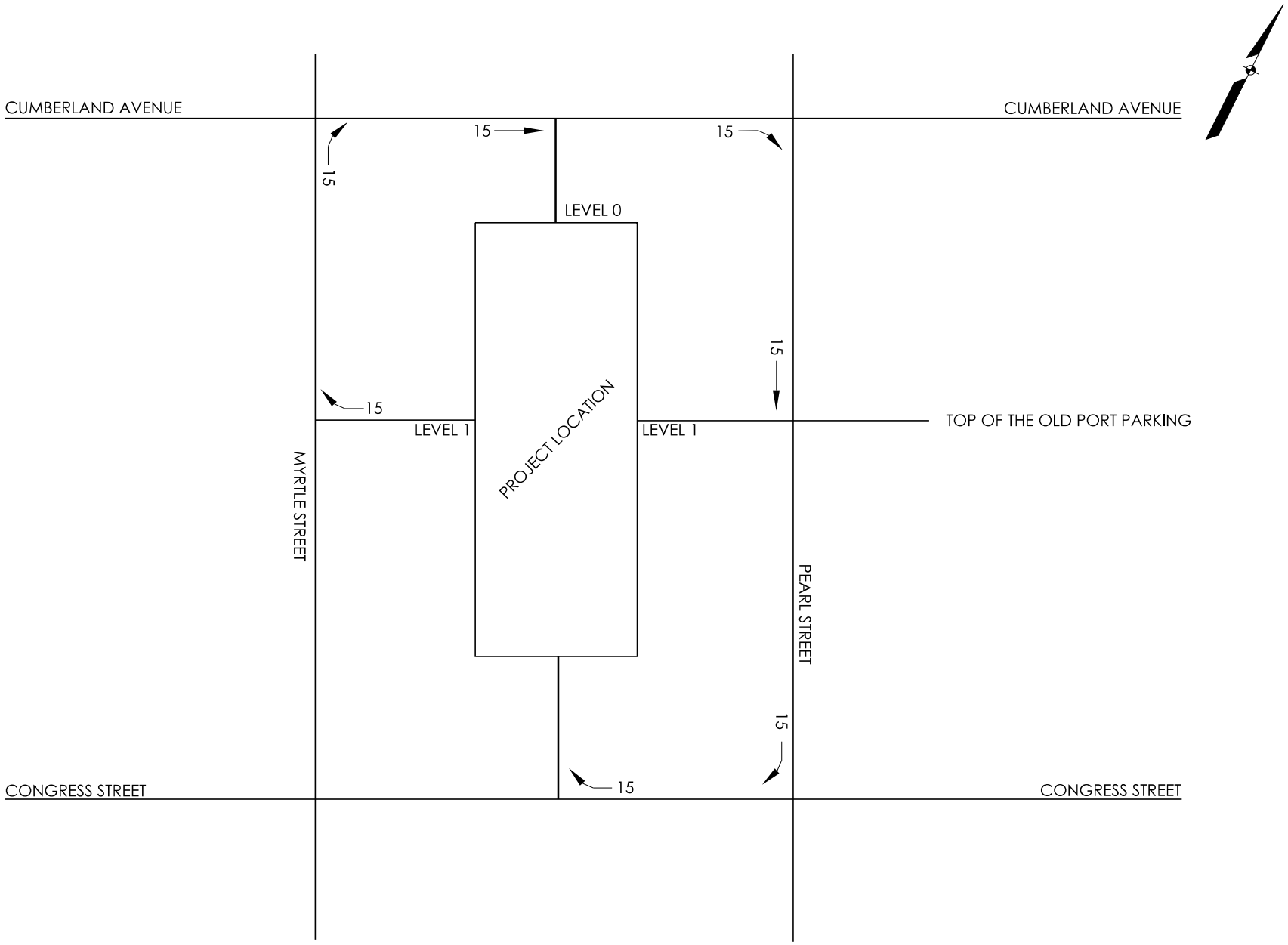

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PM TRIP ASSIGNMENT - LOT 1 HOTEL VALET TRIPS
OF: 385 CONGRESS STREET DEVELOPMENT

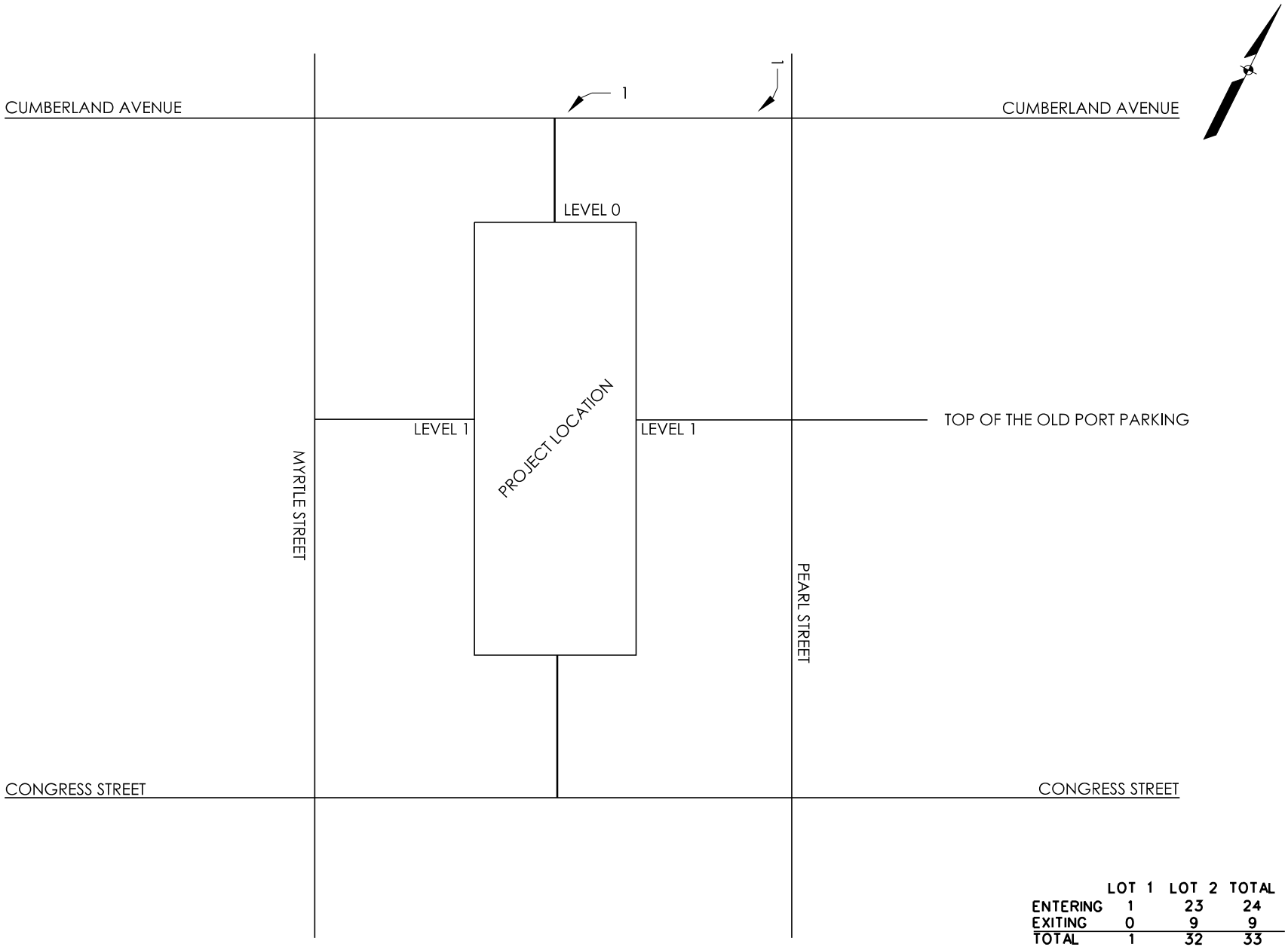
SCALE: N.T.S
DATE: 1/5/24

LOCATION: 385 CONGRESS ST
PORTLAND, MAINE

FOR: 385 CONGRESS STREET, LLC
2730 TRANSIT ROAD
WEST SENECA, NY 14224

SHEET: 11 OF 22

...\19371-04 Traffic Diagrams.dgn



	LOT 1	LOT 2	TOTAL
ENTERING	1	23	24
EXITING	0	9	9
TOTAL	1	32	33

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PM TRIP ASSIGNMENT - LOT 1 RESIDENTIAL - HIGHRISE

OF: 385 CONGRESS STREET DEVELOPMENT

SCALE: N.T.S

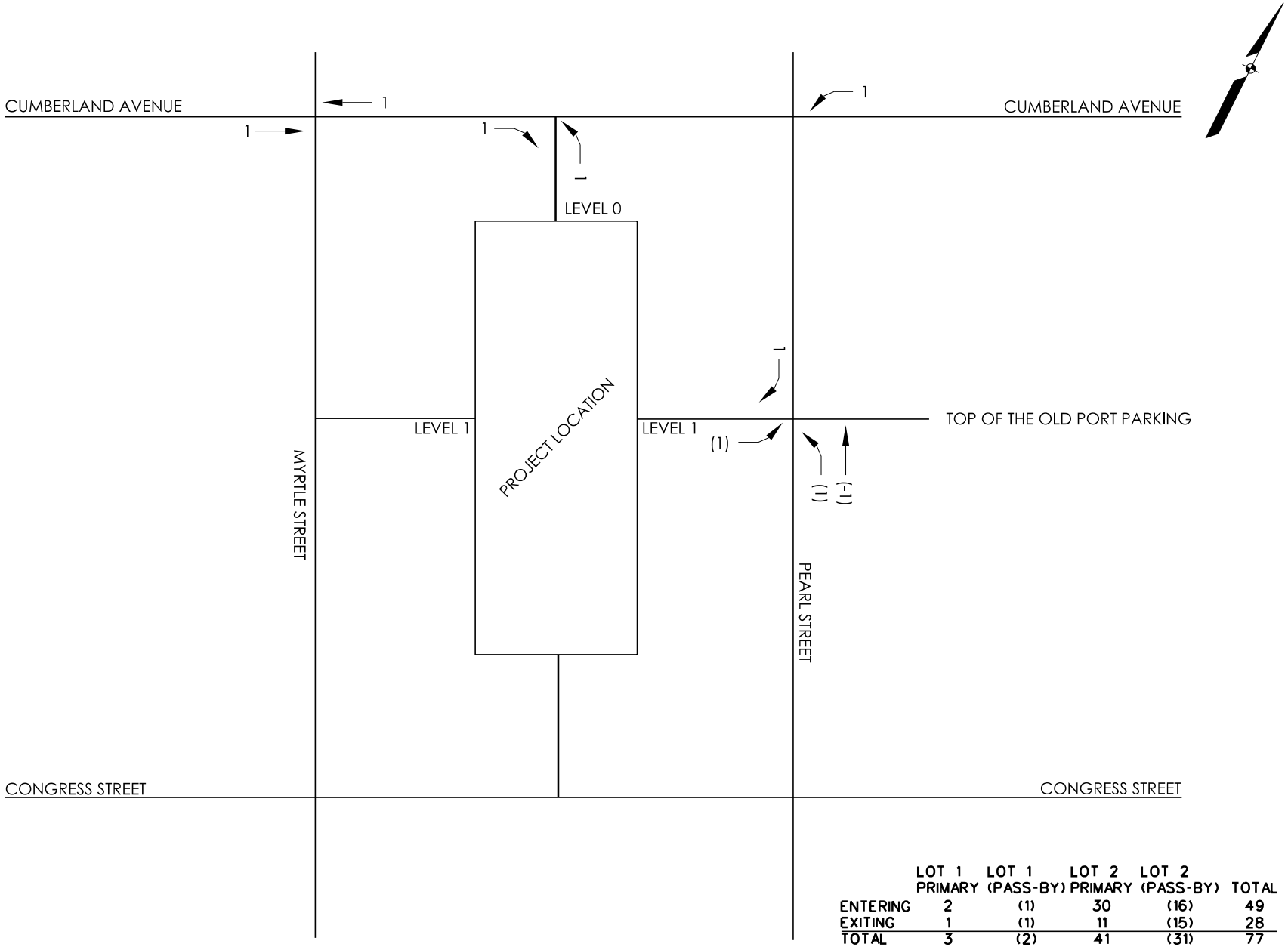
DATE: 1/5/24

LOCATION: 385 CONGRESS ST
PORTLAND, MAINE

FOR: 385 CONGRESS STREET, LLC
2730 TRANSIT ROAD
WEST SENECA, NY 14224

SHEET: 12 OF 22

...\19371-04 Traffic Diagrams.dgn



	LOT 1 PRIMARY	LOT 1 (PASS-BY)	LOT 2 PRIMARY	LOT 2 (PASS-BY)	TOTAL
ENTERING	2	(1)	30	(16)	49
EXITING	1	(1)	11	(15)	28
TOTAL	3	(2)	41	(31)	77

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PM TRIP ASSIGNMENT - LOT 1 RETAIL/RESTAURANT

OF: 385 CONGRESS STREET DEVELOPMENT

SCALE: N.T.S

DATE: 1/5/24

LOCATION: 385 CONGRESS ST
PORTLAND, MAINE

FOR: 385 CONGRESS STREET, LLC
2730 TRANSIT ROAD
WEST SENECA, NY 14224

SHEET: 13 OF 22

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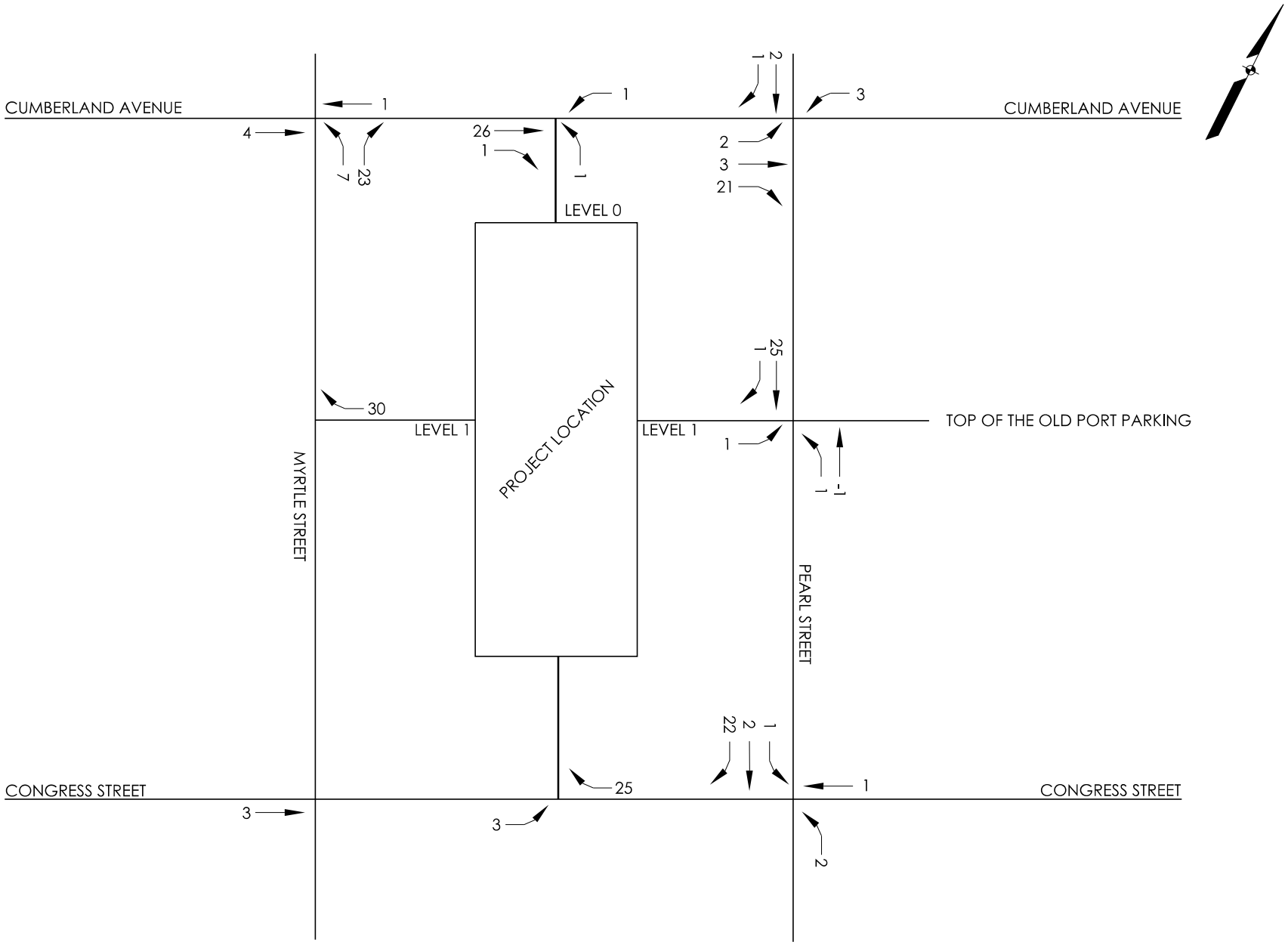

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PM TRIP ASSIGNMENT - LOT 1 TOTAL

OF: 385 CONGRESS STREET DEVELOPMENT

SCALE: N.T.S

DATE: 1/5/24

LOCATION: 385 CONGRESS ST
PORTLAND, MAINE

FOR: 385 CONGRESS STREET, LLC
2730 TRANSIT ROAD
WEST SENECA, NY 14224

SHEET: 14 OF 22

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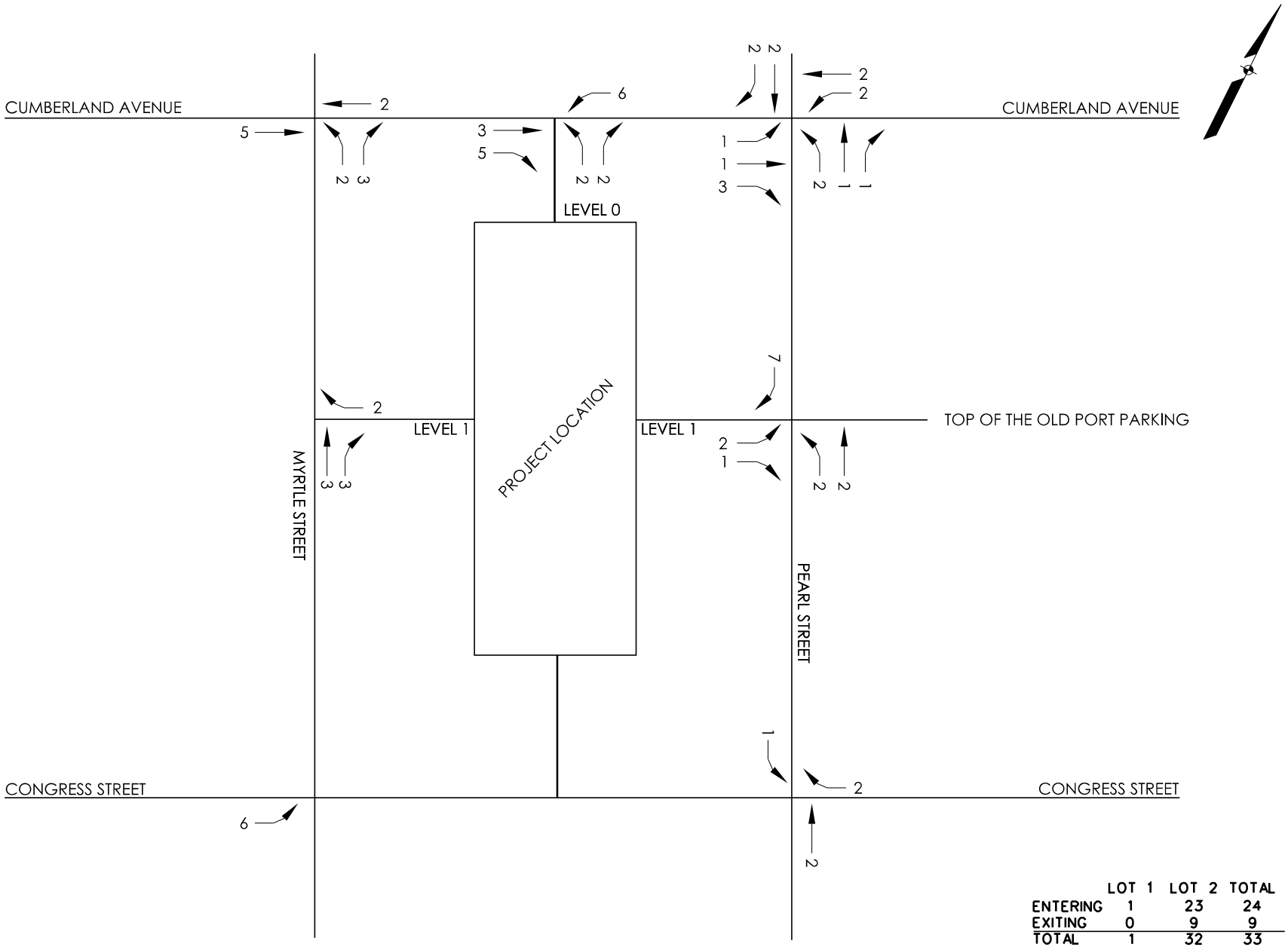

	LOT 1	LOT 2	TOTAL
ENTERING	1	23	24
EXITING	0	9	9
TOTAL	1	32	33

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PM TRIP ASSIGNMENT - LOT 2 RESIDENTIAL - HIGHRISE

OF: 385 CONGRESS STREET DEVELOPMENT

SCALE: N.T.S

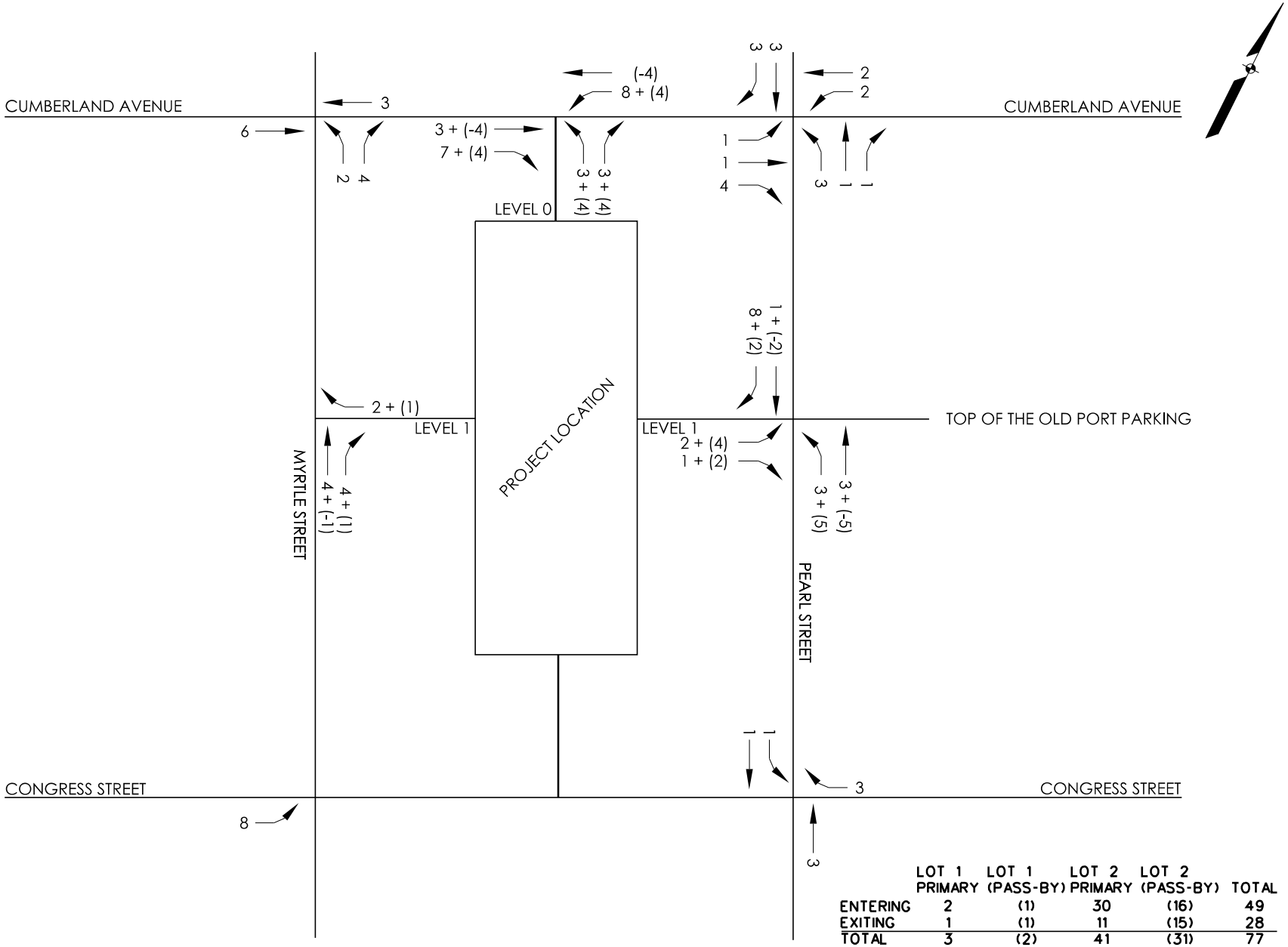
DATE: 1/5/24

LOCATION: 385 CONGRESS ST
PORTLAND, MAINE

FOR: 385 CONGRESS STREET, LLC
2730 TRANSIT ROAD
WEST SENECA, NY 14224

SHEET: 15 OF 22

...\19371-04 Traffic Diagrams.dgn



	LOT 1 PRIMARY	LOT 1 (PASS-BY)	LOT 2 PRIMARY	LOT 2 (PASS-BY)	TOTAL
ENTERING	2	(1)	30	(16)	49
EXITING	1	(1)	11	(15)	28
TOTAL	3	(2)	41	(31)	77

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Tel. 207-200-2100

PM TRIP ASSIGNMENT - LOT 2 RETAIL/RESTAURANT

OF: 385 CONGRESS STREET DEVELOPMENT

SCALE: N.T.S

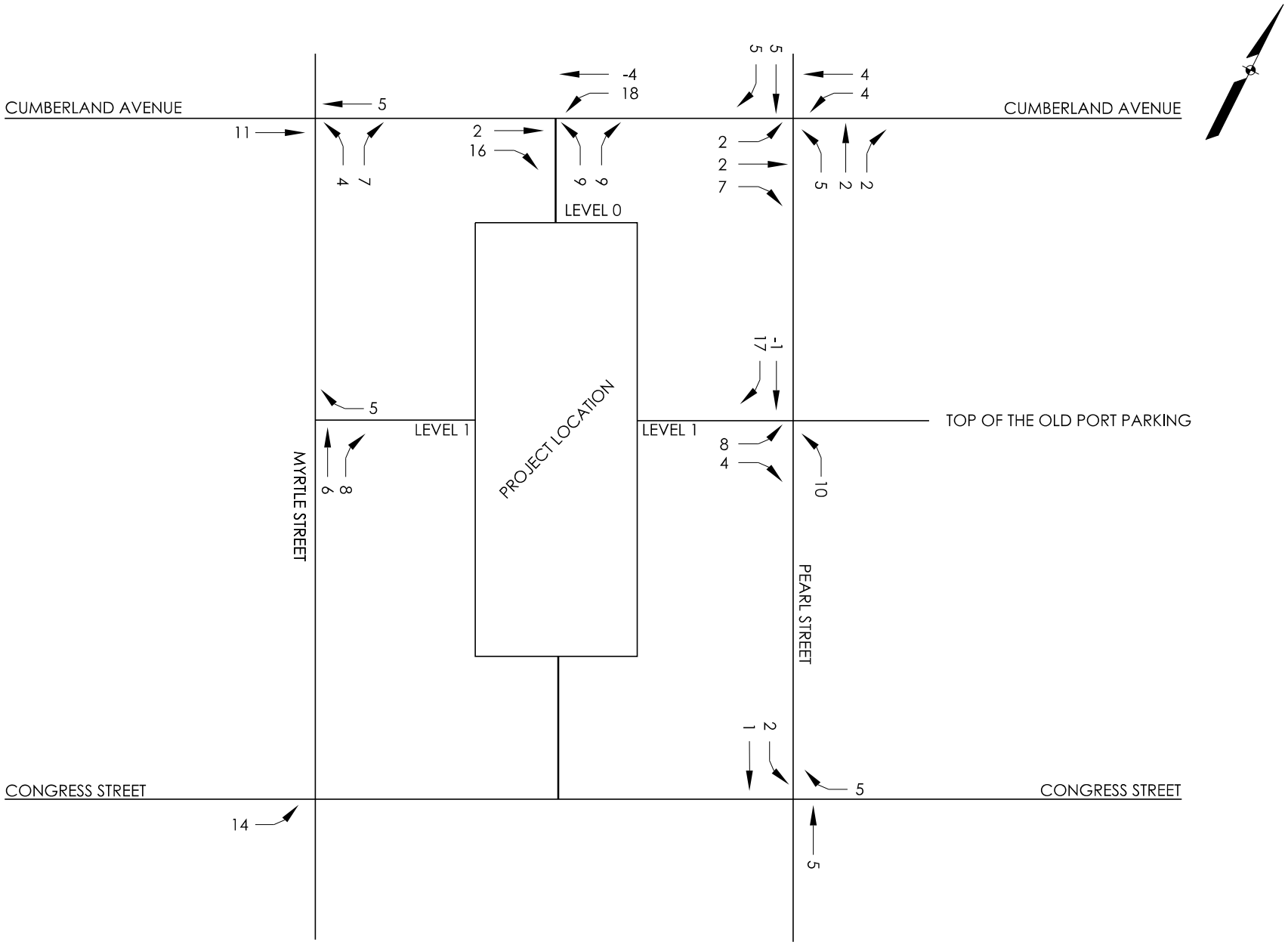
DATE: 1/5/24

LOCATION: 385 CONGRESS ST
PORTLAND, MAINE

FOR: 385 CONGRESS STREET, LLC
2730 TRANSIT ROAD
WEST SENECA, NY 14224

SHEET: 16 OF 22

...\19371-04 Traffic Diagrams.dgn



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PM TRIP ASSIGNMENT - LOT 2 TOTAL

OF: 385 CONGRESS STREET DEVELOPMENT

SCALE: N.T.S

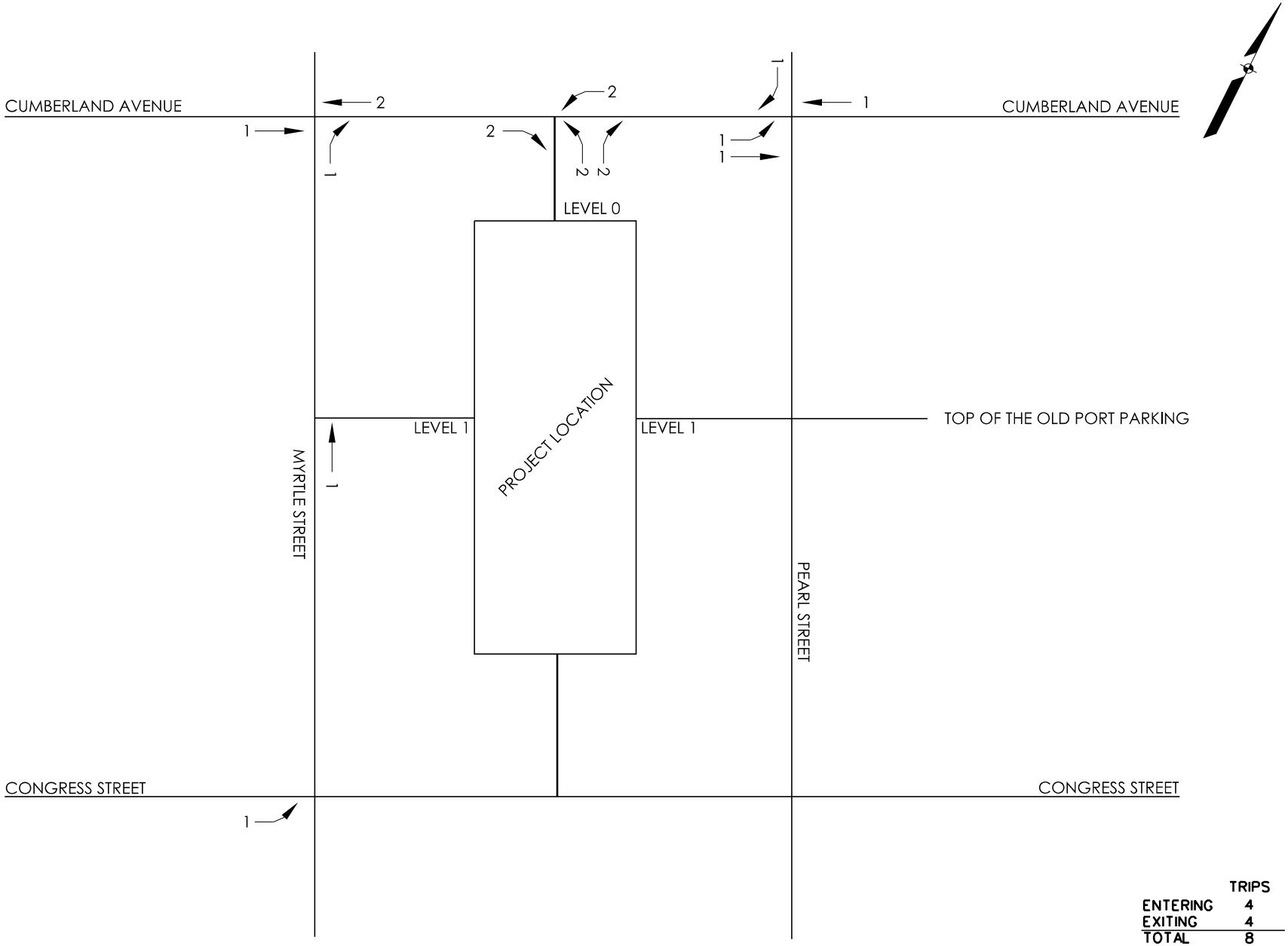
DATE: 1/5/24

LOCATION: 385 CONGRESS ST
PORTLAND, MAINE

FOR: 385 CONGRESS STREET, LLC
2730 TRANSIT ROAD
WEST SENECA, NY 14224

SHEET: 17 OF 22

...\19371-04 Traffic Diagrams.dgn



	TRIPS
ENTERING	4
EXITING	4
TOTAL	8

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Suite 4A
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Tel. 207-200-2100

PM TRIP ASSIGNMENT - LOT 3 RESIDENTIAL - SENIOR

OF: 385 CONGRESS STREET DEVELOPMENT

SCALE: N.T.S

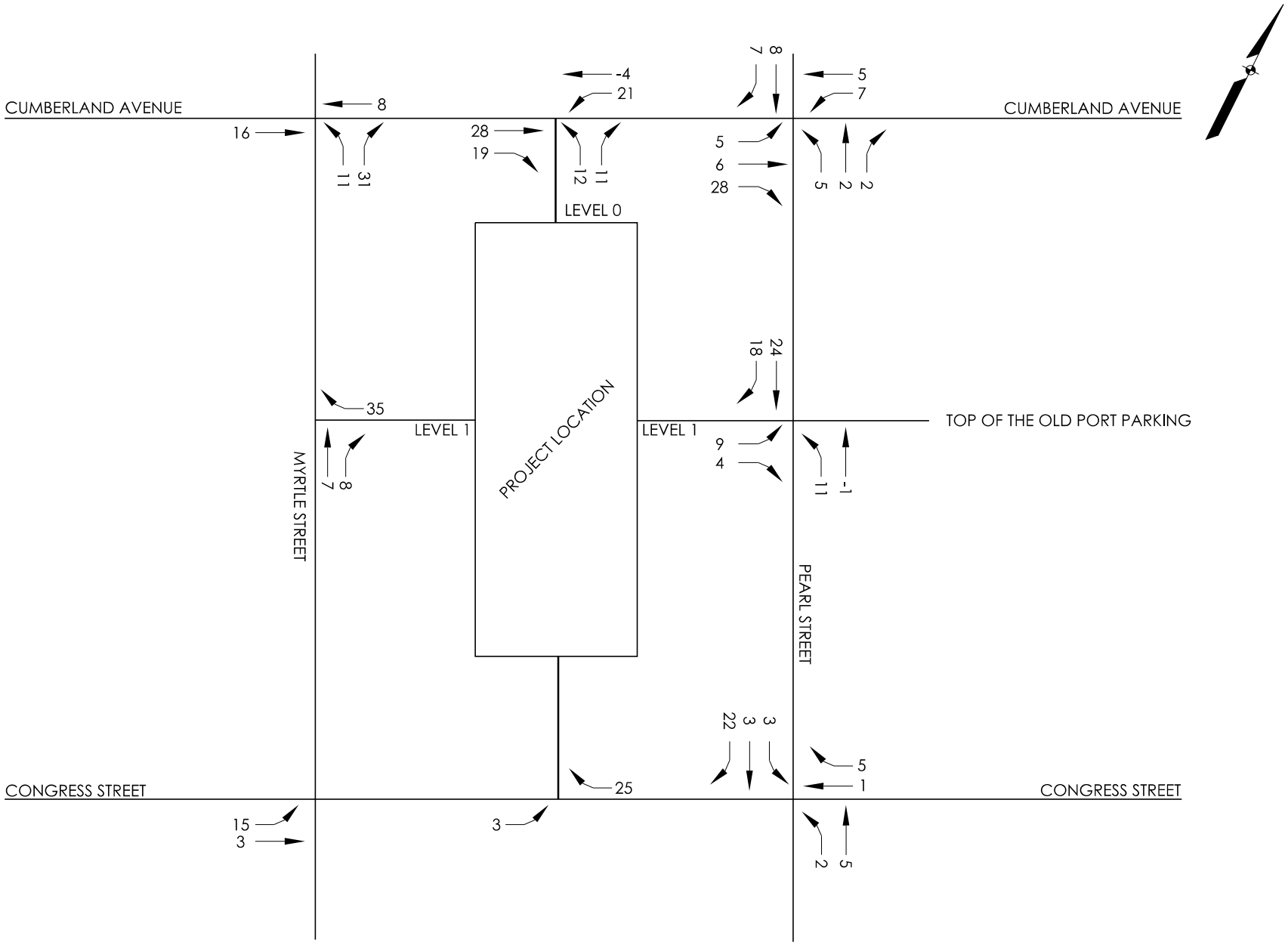
DATE: 1/5/24

LOCATION: 385 CONGRESS ST
PORTLAND, MAINE

FOR: 385 CONGRESS STREET, LLC
2730 TRANSIT ROAD
WEST SENECA, NY 14224

SHEET: 18 OF 22

...\19371-04 Traffic Diagrams.dgn



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Tel. 207-200-2100

PM TRIP ASSIGNMENT - TOTAL

OF: 385 CONGRESS STREET DEVELOPMENT

SCALE: N.T.S

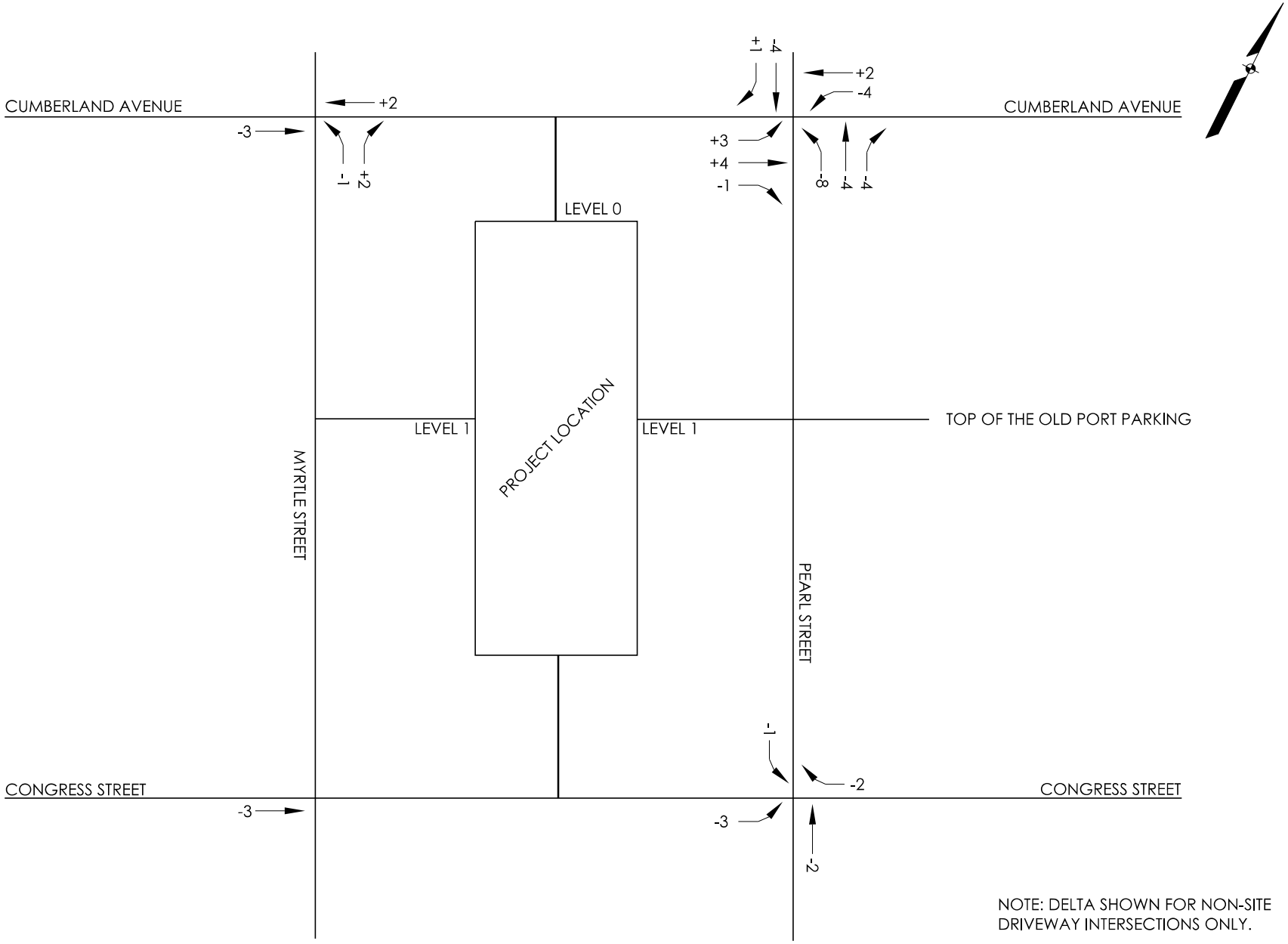
DATE: 1/5/24

LOCATION: 385 CONGRESS ST
PORTLAND, MAINE

FOR: 385 CONGRESS STREET, LLC
2730 TRANSIT ROAD
WEST SENECA, NY 14224

SHEET: 19 OF 22

...\19371-04 Traffic Diagrams.dgn



NOTE: DELTA SHOWN FOR NON-SITE DRIVEWAY INTERSECTIONS ONLY.

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AM TRIP ASSIGNMENT - COMPARISON TO APPROVED TMP
OF: 385 CONGRESS STREET DEVELOPMENT

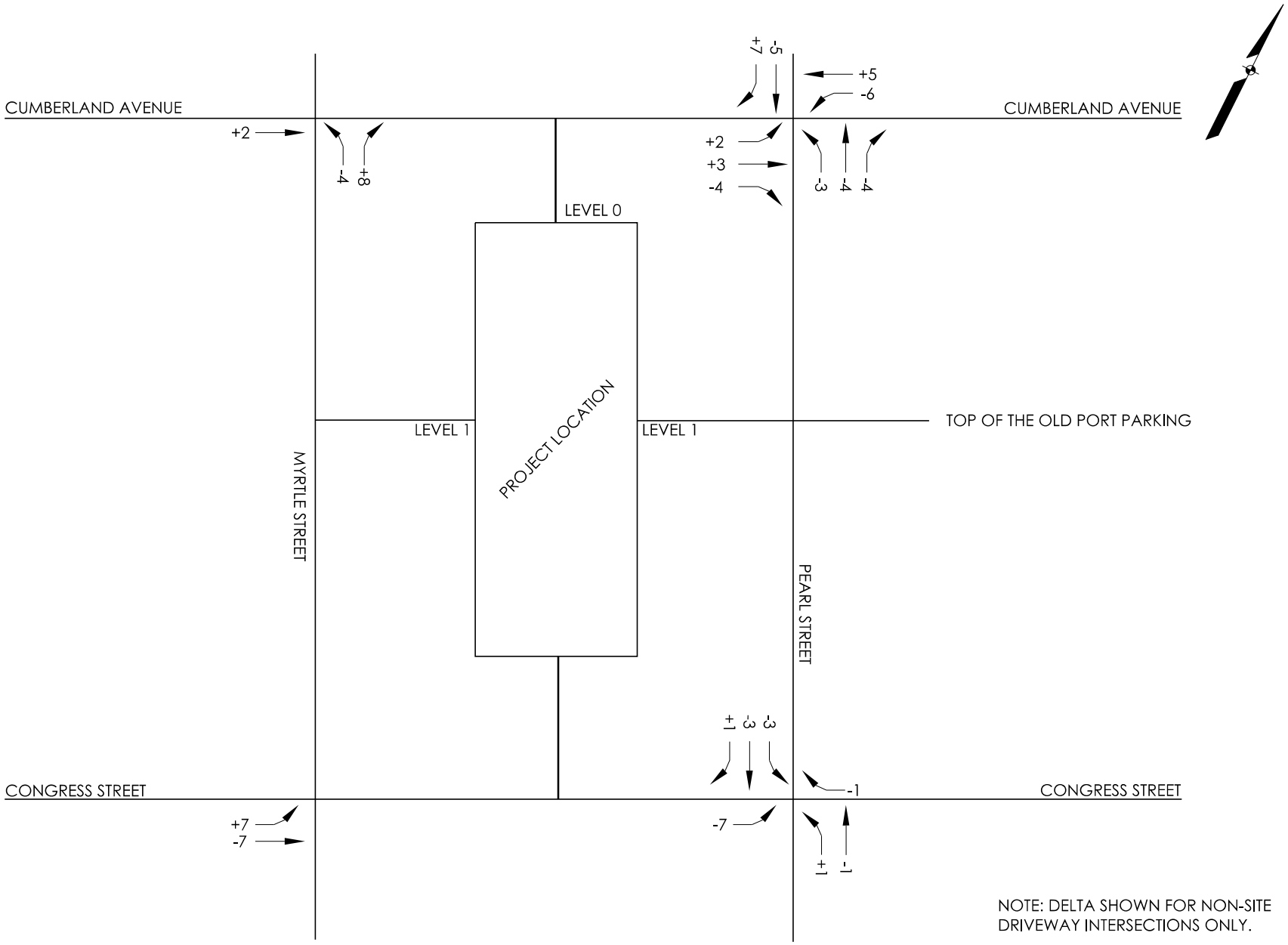
SCALE: N.T.S
DATE: 1/5/24

LOCATION: 385 CONGRESS ST
PORTLAND, MAINE

FOR: 385 CONGRESS STREET, LLC
2730 TRANSIT ROAD
WEST SENECA, NY 14224

SHEET: 20OF 22

...\19371-04 Traffic Diagrams.dgn



NOTE: DELTA SHOWN FOR NON-SITE DRIVEWAY INTERSECTIONS ONLY.

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PM TRIP ASSIGNMENT - COMPARISON TO APPROVED TMP

OF: 385 CONGRESS STREET DEVELOPMENT

SCALE: N.T.S

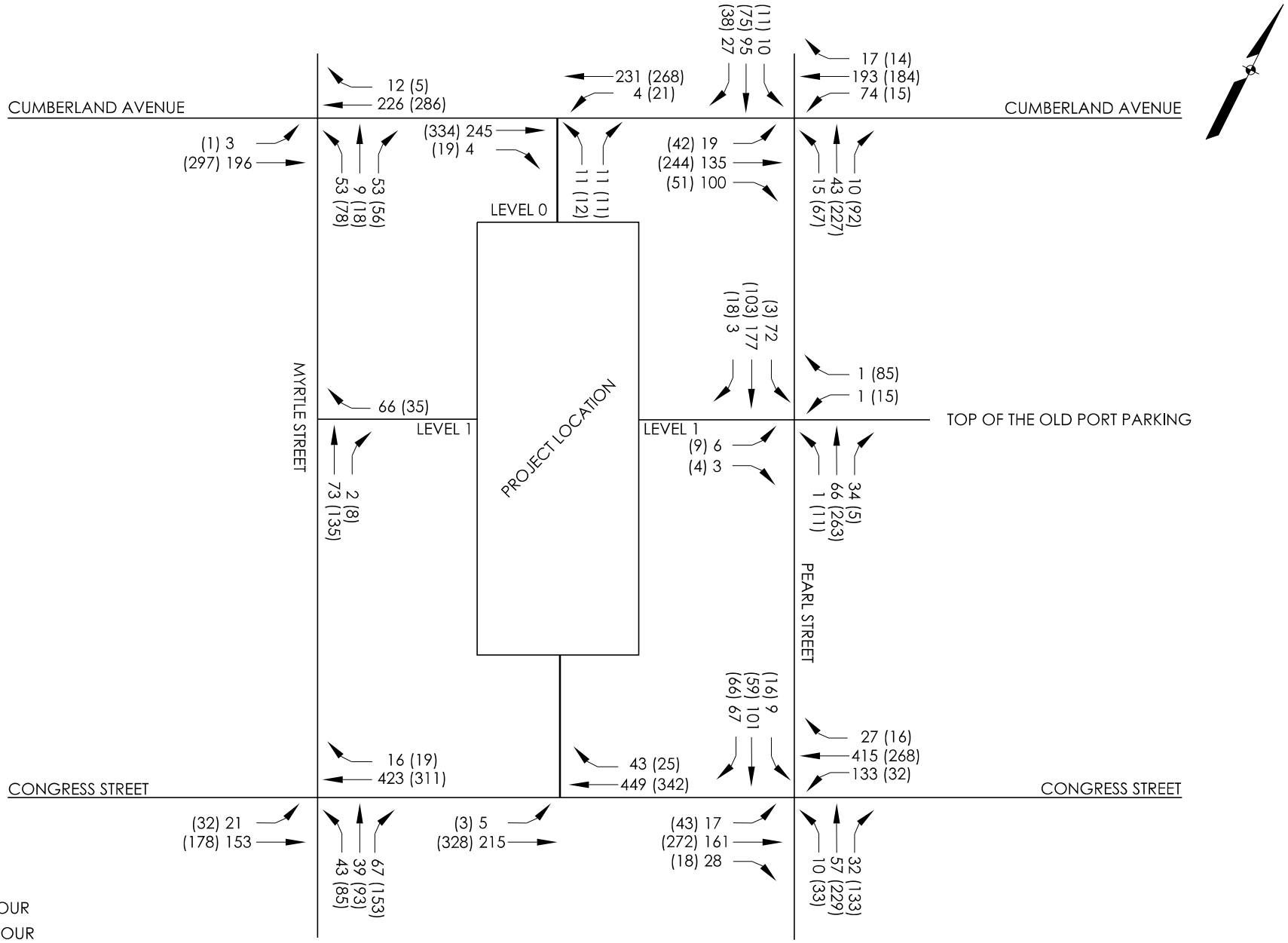
DATE: 1/5/24

LOCATION: 385 CONGRESS ST
PORTLAND, MAINE

FOR: 385 CONGRESS STREET, LLC
2730 TRANSIT ROAD
WEST SENECA, NY 14224

SHEET: 21 OF 22

...\19371-04 Traffic Diagrams.dgn



LEGEND

XX = AM PEAK HOUR

(XX) = PM PEAK HOUR

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Suite 4A
South Portland, ME 04106
Tel. 207-200-2100

2028 BUILD VOLUMES

OF: 385 CONGRESS STREET DEVELOPMENT

SCALE: N.T.S

DATE: 1/5/24

LOCATION: 385 CONGRESS ST
PORTLAND, MAINE

FOR: 385 CONGRESS STREET, LLC
2730 TRANSIT ROAD
WEST SENECA, NY 14224

SHEET: 22 OF 22

...\19371-04 Traffic Diagrams.dgn

Trip Generation

LUC	**310**			**Hotel**						
IV	**156**			**Rooms**	**Dense Multi-Use Urban**					
	Rate/Equation	M	B	Total Trips	Entering %	Exiting %	Entering Trips	Exiting Trips	No. Studies	Check
AM Peak Hour of Adjacent Street	0.31	0.31	0	48	39%	61%	19	29	3	48
PM Peak Hour of Adjacent Street	0.21	0.21	0	33	44%	56%	15	18	2	33
AM Peak Hour of Generator	0.33	0.33	0	51	51%	49%	26	25	3	51
PM Peak Hour of Generator	0.34	0.34	0	53	30%	70%	16	37	3	53

LUC	**222**			**Multifamily Housing (Highrise)**						
IV	**200**			**DU**	**Dense Multi-Use Urban**					
	Rate/Equation	M	B	Total Trips	Entering %	Exiting %	Entering Trips	Exiting Trips	No. Studies	Check
AM Peak Hour of Adjacent Street	0.24	0.24	0	48	25%	75%	12	36	5	48
PM Peak Hour of Adjacent Street	0.2	0.2	0	40	73%	27%	29	11	5	40
AM Peak Hour of Generator	0.26	0.26	0	52	10%	90%	5	47	1	52
PM Peak Hour of Generator	0.15	0.15	0	30	66%	34%	20	10	1	30

LUC	**223**			**Affordable Housing – Senior Housing (Highrise)**						
IV	**55**			**DU**	**Dense Multi-Use Urban**					
	Rate/Equation	M	B	Total Trips	Entering %	Exiting %	Entering Trips	Exiting Trips	No. Studies	Check
AM Peak Hour of Adjacent Street	0.09	0.09	0	5	37%	63%	2	3	10	5
PM Peak Hour of Adjacent Street	0.14	0.14	0	8	57%	43%	4	4	10	8
AM Peak Hour of Generator	0.18	0.18	0	10	35%	65%	3	7	9	10
PM Peak Hour of Generator	0.18	0.18	0	10	55%	45%	5	5	10	10

LUC	**932**			**High-Turnover (Sit-Down) Restaurant**						
IV	**9.87**			**GFA**	**General Urban/Suburban**					
	Rate/Equation	M	B	Total Trips	Entering %	Exiting %	Entering Trips	Exiting Trips	No. Studies	Check
AM Peak Hour of Adjacent Street	9.57	9.57	0	0	55%	45%	0	0	37	0
PM Peak Hour of Adjacent Street	9.05	9.05	0	89	61%	39%	54	35	104	89
AM Peak Hour of Generator	13.68	13.68	0	135	57%	43%	77	58	58	135
PM Peak Hour of Generator	16.35	16.35	0	161	51%	49%	82	79	58	161

Summary	**Total Trips**	**Entering Trips**	**Exiting Trips**
AM Peak Hour of Adjacent Street	101	33	68
PM Peak Hour of Adjacent Street	170	102	68
AM Peak Hour of Generator	248	111	137
PM Peak Hour of Generator	254	123	131

	AM Peak Hour Adjacent Street			PM Peak Hour of Adjacent Street		
Unadjusted Total Trips	**TOTAL**	**ENTERING**	**EXITING**	**TOTAL**	**ENTERING**	**EXITING**
Restaurant-Retail	0	0	0	89	54	35
Residential - Highrise	48	12	36	40	29	11
Hotel	48	19	29	33	15	18
Residential - Senior	5	2	3	8	4	4
Total	**101**	**33**	**68**	**170**	**102**	**68**

	AM Peak Hour Adjacent Street			PM Peak Hour of Adjacent Street		
Internal	**TOTAL**	**ENTERING**	**EXITING**	**TOTAL**	**ENTERING**	**EXITING**
Restaurant	0	0	0	12	5	7
Residential - Highrise	0	0	0	7	5	2
Hotel	0	0	0	5	2	3
Residential - Senior						
Total	**0**	**0**	**0**	**24**	**12**	**12**
	AM Peak Hour Adjacent Street			**PM Peak Hour of Adjacent Street**		
External (Unadjusted - Internal)	**TOTAL**	**ENTERING**	**EXITING**	**TOTAL**	**ENTERING**	**EXITING**
Restaurant	0	0	0	77	49	28
Residential - Highrise	48	12	36	33	24	9
Hotel	48	19	29	28	13	15
Residential - Senior	5	2	3	8	4	4
Total	**101**	**33**	**68**	**146**	**90**	**56**
TOTAL CHECK (INT+EXT)	101	33	68	170	102	68

Pass-By Trips	AM Peak Hour Adjacent Street			PM Peak Hour of Adjacent Street		
	TOTAL	**ENTERING**	**EXITING**	**TOTAL**	**ENTERING**	**EXITING**
Restaurant	0	0	0	33	17	16
Residential - Highrise	0	0	0	0	0	0
Hotel	0	0	0	0	0	0
Residential - Senior	0	0	0	0	0	0
TOTAL	**0**	**0**	**0**	**33**	**17**	**16**

Primary Trips (External - Pass-By)	AM Peak Hour Adjacent Street			PM Peak Hour of Adjacent Street		
	TOTAL	**ENTERING**	**EXITING**	**TOTAL**	**ENTERING**	**EXITING**
Restaurant	0	0	0	44	32	12
Residential - Highrise	48	12	36	33	24	9
Hotel	48	19	29	28	13	15
Residential - Senior	5	2	3	8	4	4
Total	101	33	68	113	73	40

NCHRP 684 Internal Trip Capture Estimation Tool			
Project Name:	Congress/Pearl Block	**Organization:**	Sebago Technics
Project Location:	385 Congress Street, Portland	**Performed By:**	GRS
Scenario Description:		**Date:**	12/19/2023
Analysis Year:		**Checked By:**	
Analysis Period:	**AM Street Peak Hour - Adj. Street**	**Date:**	

Table 1-A: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)

Land Use	Development Data (*For Information Only*)			Estimated Vehicle-Trips[3]		
	ITE LUCs[1]	Quantity	Units	Total	Entering	Exiting
Office				0		
Retail				0		
Restaurant	932	10	KSF	0	0	0
Cinema/Entertainment				0		
Residential	222	200	Units	48	12	36
Hotel	310	156	Rooms	48	19	29
All Other Land Uses[2]	223	55	Units	5	2	3
				101	33	68

Table 2-A: Mode Split and Vehicle Occupancy Estimates

Land Use	Entering Trips			Exiting Trips		
	Veh. Occ.[4]	% Transit	% Non-Motorized	Veh. Occ.[4]	% Transit	% Non-Motorized
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						
All Other Land Uses[2]						

Table 3-A: Average Land Use Interchange Distances (Feet Walking Distance)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						

Table 4-A: Internal Person-Trip Origin-Destination Matrix*

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	0	0	0	0
Retail	0		0	0	0	0
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	0	0	0	0		0
Hotel	0	0	0	0	0	

Table 5-A: Computations Summary

	Total	Entering	Exiting
All Person-Trips	101	33	68
Internal Capture Percentage	0%	0%	0%
External Vehicle-Trips[5]	101	33	68
External Transit-Trips[6]	0	0	0
External Non-Motorized Trips[6]	0	0	0

Table 6-A: Internal Trip Capture Percentages by Land Use

Land Use	Entering Trips	Exiting Trips
Office	N/A	N/A
Retail	N/A	N/A
Restaurant	N/A	N/A
Cinema/Entertainment	N/A	N/A
Residential	0%	0%
Hotel	0%	0%

[1]Land Use Codes (LUCs) from *Trip Generation Manual*, published by the Institute of Transportation Engineers.

[2]Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator.

[3]Enter trips assuming no transit or non-motorized trips (as assumed in ITE *Trip Generation Manual*).

[4]Enter vehicle occupancy assumed in Table 1-A vehicle trips. If vehicle occupancy changes for proposed mixed-use project, manual adjustments must be made to Tables 5-A, 9-A (O and D). Enter transit, non-motorized percentages that will result with proposed mixed-use project complete.

[5]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A.

[6]Person-Trips

*Indicates computation that has been rounded to the nearest whole number.

Estimation Tool Developed by the Texas A&M Transportation Institute - Version 2013.1

Project Name:	Congress/Pearl Block
Analysis Period:	**AM Street Peak Hour - Adj Street**

Table 7-A: Conversion of Vehicle-Trip Ends to Person-Trip Ends

Land Use	Table 7-A (D): Entering Trips			Table 7-A (O): Exiting Trips		
	Veh. Occ.	Vehicle-Trips	Person-Trips*	Veh. Occ.	Vehicle-Trips	Person-Trips*
Office	1.00	0	0	1.00	0	0
Retail	1.00	0	0	1.00	0	0
Restaurant	1.00	0	0	1.00	0	0
Cinema/Entertainment	1.00	0	0	1.00	0	0
Residential	1.00	12	12	1.00	36	36
Hotel	1.00	19	19	1.00	29	29

Table 8-A (O): Internal Person-Trip Origin-Destination Matrix (Computed at Origin)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	0	0	0	0
Retail	0		0	0	0	0
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	1	0	7	0		0
Hotel	22	4	3	0	0	

Table 8-A (D): Internal Person-Trip Origin-Destination Matrix (Computed at Destination)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	0	0	0	0
Retail	0		0	0	0	0
Restaurant	0	0		0	1	1
Cinema/Entertainment	0	0	0		0	0
Residential	0	0	0	0		0
Hotel	0	0	0	0	0	

Table 9-A (D): Internal and External Trips Summary (Entering Trips)

Destination Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	0	0	0	0	0	0
Retail	0	0	0	0	0	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	0	12	12	12	0	0
Hotel	0	19	19	19	0	0
All Other Land Uses[3]	0	2	2	2	0	0

Table 9-A (O): Internal and External Trips Summary (Exiting Trips)

Origin Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	0	0	0	0	0	0
Retail	0	0	0	0	0	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	0	36	36	36	0	0
Hotel	0	29	29	29	0	0
All Other Land Uses[3]	0	3	3	3	0	0

[1]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A

[2]Person-Trips

[3]Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator

*Indicates computation that has been rounded to the nearest whole number.

NCHRP 684 Internal Trip Capture Estimation Tool			
Project Name:	Congress/Pearl Block	**Organization:**	Sebago Technics
Project Location:	385 Congress Street, Portland	**Performed By:**	GRS
Scenario Description:		**Date:**	12/19/2023
Analysis Year:		**Checked By:**	
Analysis Period:	**PM Street Peak Hour - Adj. Street**	**Date:**	

Table 1-P: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)

Land Use	Development Data (*For Information Only*)			Estimated Vehicle-Trips[3]		
	ITE LUCs[1]	Quantity	Units	Total	Entering	Exiting
Office				0		
Retail				0		
Restaurant	932	10	KSF	89	54	35
Cinema/Entertainment				0		
Residential	222	200	Units	40	29	11
Hotel	310	156	Rooms	33	15	18
All Other Land Uses[2]	223	55	Units	8	4	4
				170	102	68

Table 2-P: Mode Split and Vehicle Occupancy Estimates

Land Use	Entering Trips			Exiting Trips		
	Veh. Occ.[4]	% Transit	% Non-Motorized	Veh. Occ.[4]	% Transit	% Non-Motorized
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						
All Other Land Uses[2]						

Table 3-P: Average Land Use Interchange Distances (Feet Walking Distance)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						

Table 4-P: Internal Person-Trip Origin-Destination Matrix*

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	0	0	0	0
Retail	0		0	0	0	0
Restaurant	0	0		0	5	2
Cinema/Entertainment	0	0	0		0	0
Residential	0	0	2	0		0
Hotel	0	0	3	0	0	

Table 5-P: Computations Summary

	Total	Entering	Exiting
All Person-Trips	170	102	68
Internal Capture Percentage	14%	12%	18%
External Vehicle-Trips[5]	146	90	56
External Transit-Trips[6]	0	0	0
External Non-Motorized Trips[6]	0	0	0

Table 6-P: Internal Trip Capture Percentages by Land Use

Land Use	Entering Trips	Exiting Trips
Office	N/A	N/A
Retail	N/A	N/A
Restaurant	9%	20%
Cinema/Entertainment	N/A	N/A
Residential	17%	18%
Hotel	13%	17%

[1]Land Use Codes (LUCs) from *Trip Generation Manual*, published by the Institute of Transportation Engineers.
[2]Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator.
[3]Enter trips assuming no transit or non-motorized trips (as assumed in ITE *Trip Generation Manual*).
[4]Enter vehicle occupancy assumed in Table 1-P vehicle trips. If vehicle occupancy changes for proposed mixed-use project, manual adjustments must be made
[5]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P.
[6]Person-Trips
*Indicates computation that has been rounded to the nearest whole number.

Estimation Tool Developed by the Texas A&M Transportation Institute - Version 2013.1

Project Name:	Congress/Pearl Block
Analysis Period:	**PM Street Peak Hour - Adj Street**

Table 7-P: Conversion of Vehicle-Trip Ends to Person-Trip Ends

Land Use	Table 7-P (D): Entering Trips				Table 7-P (O): Exiting Trips		
	Veh. Occ.	Vehicle-Trips	Person-Trips*		Veh. Occ.	Vehicle-Trips	Person-Trips*
Office	1.00	0	0		1.00	0	0
Retail	1.00	0	0		1.00	0	0
Restaurant	1.00	54	54		1.00	35	35
Cinema/Entertainment	1.00	0	0		1.00	0	0
Residential	1.00	29	29		1.00	11	11
Hotel	1.00	15	15		1.00	18	18

Table 8-P (O): Internal Person-Trip Origin-Destination Matrix (Computed at Origin)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	0	0	0	0
Retail	0		0	0	0	0
Restaurant	1	14		3	6	2
Cinema/Entertainment	0	0	0		0	0
Residential	0	5	2	0		0
Hotel	0	3	12	0	0	

Table 8-P (D): Internal Person-Trip Origin-Destination Matrix (Computed at Destination)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	1	0	1	0
Retail	0		16	0	13	3
Restaurant	0	0		0	5	11
Cinema/Entertainment	0	0	2		1	0
Residential	0	0	8	0		2
Hotel	0	0	3	0	0	

Table 9-P (D): Internal and External Trips Summary (Entering Trips)

Destination Land Use	Person-Trip Estimates				External Trips by Mode*		
	Internal	External	Total		Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	0	0	0		0	0	0
Retail	0	0	0		0	0	0
Restaurant	5	49	54		49	0	0
Cinema/Entertainment	0	0	0		0	0	0
Residential	5	24	29		24	0	0
Hotel	2	13	15		13	0	0
All Other Land Uses[3]	0	4	4		4	0	0

Table 9-P (O): Internal and External Trips Summary (Exiting Trips)

Origin Land Use	Person-Trip Estimates				External Trips by Mode*		
	Internal	External	Total		Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	0	0	0		0	0	0
Retail	0	0	0		0	0	0
Restaurant	7	28	35		28	0	0
Cinema/Entertainment	0	0	0		0	0	0
Residential	2	9	11		9	0	0
Hotel	3	15	18		15	0	0
All Other Land Uses[3]	0	4	4		4	0	0

[1]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P

[2]Person-Trips

[3]Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator

*Indicates computation that has been rounded to the nearest whole number.

Summary of All Intervals

Run Number	1	2	3	4	5	6	7
Start Time	6:45	6:45	6:45	6:45	6:45	6:45	6:45
End Time	8:00	8:00	8:00	8:00	8:00	8:00	8:00
Total Time (min)	75	75	75	75	75	75	75
Time Recorded (min)	60	60	60	60	60	60	60
# of Intervals	5	5	5	5	5	5	5
# of Recorded Intervals	4	4	4	4	4	4	4
Vehs Entered	1819	1838	1852	1874	1844	1813	1815
Vehs Exited	1808	1835	1849	1874	1848	1810	1821
Starting Vehs	19	12	15	17	25	16	22
Ending Vehs	30	15	18	17	21	19	16
Travel Distance (mi)	340	341	343	350	350	340	341
Travel Time (hr)	22.1	22.1	22.6	22.8	23.0	22.7	22.7
Total Delay (hr)	7.4	7.4	7.6	7.5	7.7	7.9	7.9
Total Stops	1557	1508	1581	1636	1573	1615	1582
Fuel Used (gal)	14.8	15.1	15.2	15.3	15.4	15.1	15.2

Summary of All Intervals

Run Number	8	9	10	Avg
Start Time	6:45	6:45	6:45	6:45
End Time	8:00	8:00	8:00	8:00
Total Time (min)	75	75	75	75
Time Recorded (min)	60	60	60	60
# of Intervals	5	5	5	5
# of Recorded Intervals	4	4	4	4
Vehs Entered	1828	1754	1871	1832
Vehs Exited	1829	1762	1869	1832
Starting Vehs	16	17	27	9
Ending Vehs	15	9	29	13
Travel Distance (mi)	351	326	352	343
Travel Time (hr)	23.3	21.9	23.8	22.7
Total Delay (hr)	8.0	7.6	8.5	7.7
Total Stops	1595	1552	1699	1587
Fuel Used (gal)	15.6	14.6	15.7	15.2

Interval #0 Information Seeding

Start Time	6:45
End Time	7:00
Total Time (min)	15

Volumes adjusted by Growth Factors.

No data recorded this interval.

Interval #1 Information Recording

Start Time	7:00
End Time	7:15
Total Time (min)	15

Volumes adjusted by Growth Factors, Anti PHF.

Run Number	1	2	3	4	5	6	7
Vehs Entered	410	424	412	425	393	421	408
Vehs Exited	406	419	406	427	392	418	409
Starting Vehs	19	12	15	17	25	16	22
Ending Vehs	23	17	21	15	26	19	21
Travel Distance (mi)	78	78	78	82	76	80	79
Travel Time (hr)	4.9	5.1	4.9	5.3	4.8	5.2	5.0
Total Delay (hr)	1.5	1.7	1.5	1.7	1.5	1.7	1.6
Total Stops	326	349	310	373	324	365	334
Fuel Used (gal)	3.4	3.5	3.4	3.6	3.2	3.5	3.4

Interval #1 Information Recording

Start Time	7:00
End Time	7:15
Total Time (min)	15

Volumes adjusted by Growth Factors, Anti PHF.

Run Number	8	9	10	Avg
Vehs Entered	433	418	416	414
Vehs Exited	435	415	428	414
Starting Vehs	16	17	27	9
Ending Vehs	14	20	15	13
Travel Distance (mi)	84	79	81	80
Travel Time (hr)	5.2	5.1	5.2	5.1
Total Delay (hr)	1.6	1.6	1.7	1.6
Total Stops	342	327	371	339
Fuel Used (gal)	3.6	3.4	3.6	3.5

Interval #2 Information Recording

Start Time	7:15
End Time	7:30
Total Time (min)	15

Volumes adjusted by PHF, Growth Factors.

Run Number	1	2	3	4	5	6	7
Vehs Entered	585	579	610	582	628	583	565
Vehs Exited	576	561	603	572	617	581	558
Starting Vehs	23	17	21	15	26	19	21
Ending Vehs	32	35	28	25	37	21	28
Travel Distance (mi)	105	103	110	103	116	104	100
Travel Time (hr)	7.5	6.8	7.8	7.0	8.2	7.4	7.2
Total Delay (hr)	2.8	2.3	3.0	2.4	3.1	2.9	2.8
Total Stops	569	469	576	511	589	567	524
Fuel Used (gal)	4.7	4.6	5.1	4.6	5.4	4.8	4.7

Interval #2 Information Recording

Start Time	7:15
End Time	7:30
Total Time (min)	15

Volumes adjusted by PHF, Growth Factors.

Run Number	8	9	10	Avg
Vehs Entered	603	568	593	590
Vehs Exited	585	558	580	576
Starting Vehs	14	20	15	13
Ending Vehs	32	30	28	22
Travel Distance (mi)	112	103	107	107
Travel Time (hr)	8.1	7.5	7.8	7.5
Total Delay (hr)	3.2	2.9	3.1	2.8
Total Stops	578	578	584	554
Fuel Used (gal)	5.1	4.9	5.0	4.9

Interval #3 Information Recording

Start Time	7:30
End Time	7:45
Total Time (min)	15

Volumes adjusted by Growth Factors, Anti PHF.

Run Number	1	2	3	4	5	6	7
Vehs Entered	387	401	401	419	402	388	435
Vehs Exited	402	415	418	426	421	394	432
Starting Vehs	32	35	28	25	37	21	28
Ending Vehs	17	21	11	18	18	15	31
Travel Distance (mi)	76	76	75	79	79	76	83
Travel Time (hr)	4.7	5.0	4.7	5.0	5.1	4.9	5.3
Total Delay (hr)	1.5	1.6	1.5	1.6	1.7	1.6	1.7
Total Stops	314	338	344	360	342	339	360
Fuel Used (gal)	3.2	3.3	3.3	3.4	3.4	3.3	3.6

Interval #3 Information Recording

Start Time	7:30
End Time	7:45
Total Time (min)	15

Volumes adjusted by Growth Factors, Anti PHF.

Run Number	8	9	10	Avg
Vehs Entered	405	410	423	406
Vehs Exited	417	421	429	415
Starting Vehs	32	30	28	22
Ending Vehs	20	19	22	12
Travel Distance (mi)	80	78	82	78
Travel Time (hr)	5.2	5.1	5.4	5.0
Total Delay (hr)	1.7	1.7	1.8	1.6
Total Stops	345	365	369	344
Fuel Used (gal)	3.5	3.4	3.6	3.4

Interval #4 Information Recording

Start Time	7:45
End Time	8:00
Total Time (min)	15

Volumes adjusted by Growth Factors, Anti PHF.

Run Number	1	2	3	4	5	6	7
Vehs Entered	437	434	429	448	421	421	407
Vehs Exited	424	440	422	449	418	417	422
Starting Vehs	17	21	11	18	18	15	31
Ending Vehs	30	15	18	17	21	19	16
Travel Distance (mi)	81	83	80	86	79	80	79
Travel Time (hr)	5.1	5.2	5.1	5.5	4.9	5.2	5.2
Total Delay (hr)	1.6	1.6	1.6	1.7	1.5	1.7	1.8
Total Stops	348	352	351	392	318	344	364
Fuel Used (gal)	3.5	3.6	3.4	3.7	3.3	3.4	3.5

Interval #4 Information Recording

Start Time	7:45
End Time	8:00
Total Time (min)	15

Volumes adjusted by Growth Factors, Anti PHF.

Run Number	8	9	10	Avg
Vehs Entered	387	358	439	415
Vehs Exited	392	368	432	418
Starting Vehs	20	19	22	12
Ending Vehs	15	9	29	13
Travel Distance (mi)	75	66	83	79
Travel Time (hr)	4.8	4.3	5.4	5.1
Total Delay (hr)	1.5	1.4	1.9	1.6
Total Stops	330	282	375	343
Fuel Used (gal)	3.3	2.9	3.6	3.4

5: Congress St. & Pearl St. Performance by movement

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Denied Del/Veh (s)	0.4	0.2	0.3	0.2	0.2	0.2	0.0	0.0	0.0	3.3	0.8	0.8
Total Del/Veh (s)	21.1	12.9	10.8	20.8	14.3	7.5	15.7	7.3	4.1	14.1	11.0	8.2

5: Congress St. & Pearl St. Performance by movement

Movement	All
Denied Del/Veh (s)	0.8
Total Del/Veh (s)	11.0

6: Cumberland Ave & Pearl St. Performance by movement

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Denied Del/Veh (s)	0.1	0.2	0.2	0.0	0.0	0.0	0.6	0.2	0.1	0.3	0.3	0.3
Total Del/Veh (s)	11.0	10.0	5.7	11.1	8.1	4.8	9.8	7.0	3.5	11.5	9.6	6.6

6: Cumberland Ave & Pearl St. Performance by movement

Movement	All
Denied Del/Veh (s)	0.2
Total Del/Veh (s)	8.3

9: Congress St. & Myrtle St. Performance by movement

Movement	NWL	NWT	NWR	NEL	NET	SWT	SWR	All
Denied Del/Veh (s)	0.2	0.2	0.2	0.2	0.2	0.0	0.0	0.1
Total Del/Veh (s)	9.2	9.2	4.9	4.0	0.5	0.4	0.1	1.8

10: Cumberland Ave & Myrtle St. Performance by movement

Movement	NWL	NWT	NWR	NEL	NET	SWT	SWR	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.1	0.2	0.0	0.0	0.1
Total Del/Veh (s)	6.4	1.9	4.1	1.9	0.2	0.2	0.1	1.2

13: Site/Old Port Parking & Pearl St. Performance by movement

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NER	SWL	SWT	SWR	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	3.2	1.2	1.3	2.3	1.1	1.3	5.3	3.8	5.0	1.5	1.8	1.6

17: Cumberland Ave & Site Performance by movement

Movement	NWL	NWR	NET	NER	SWL	SWT	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	7.3	5.2	0.5	0.5	3.4	0.8	0.9

18: Myrtle St. & Site Performance by movement

Movement	NWT	NWR	SWR	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.0
Total Del/Veh (s)	1.1	0.7	3.2	2.1

20: Congress St. & Site Performance by movement

Movement	NEL	NET	SWT	SWR	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	4.0	0.3	1.3	0.8	1.0

Total Zone Performance

Denied Del/Veh (s)	0.7
Total Del/Veh (s)	102.4

Intersection: 5: Congress St. & Pearl St.

Movement	SE	NW	NE	NE	SW	SW
Directions Served	LTR	LTR	L	TR	L	TR
Maximum Queue (ft)	175	103	108	98	84	311
Average Queue (ft)	67	42	17	50	49	133
95th Queue (ft)	131	83	64	90	95	242
Link Distance (ft)	175	364	109			350
Upstream Blk Time (%)	0		0	0		0
Queuing Penalty (veh)	0		1	0		0
Storage Bay Dist (ft)				75	45	
Storage Blk Time (%)			0	3	8	24
Queuing Penalty (veh)			0	1	37	32

Intersection: 6: Cumberland Ave & Pearl St.

Movement	SE	NW	NE	SW
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	113	77	96	186
Average Queue (ft)	44	29	57	77
95th Queue (ft)	84	63	99	148
Link Distance (ft)	372	185	80	434
Upstream Blk Time (%)			2	
Queuing Penalty (veh)			6	
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 9: Congress St. & Myrtle St.

Movement	NW	NE	SW
Directions Served	LTR	LT	TR
Maximum Queue (ft)	91	63	4
Average Queue (ft)	42	8	0
95th Queue (ft)	70	36	3
Link Distance (ft)	355	469	82
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 10: Cumberland Ave & Myrtle St.

Movement	NW	NE	SW
Directions Served	LTR	LT	TR
Maximum Queue (ft)	91	18	5
Average Queue (ft)	35	1	0
95th Queue (ft)	70	10	0
Link Distance (ft)	232	288	75
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 13: Site/Old Port Parking & Pearl St.

Movement	SE	NW	NE	SW
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	75	31	25	25
Average Queue (ft)	11	2	7	2
95th Queue (ft)	43	17	24	14
Link Distance (ft)	185	175	10	42
Upstream Blk Time (%)			1	0
Queuing Penalty (veh)			0	0
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 17: Cumberland Ave & Site

Movement	NW	NE	SW
Directions Served	LR	TR	LT
Maximum Queue (ft)	29	58	24
Average Queue (ft)	13	6	1
95th Queue (ft)	37	34	13
Link Distance (ft)	16	75	80
Upstream Blk Time (%)	3	0	
Queuing Penalty (veh)	1	1	
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 18: Myrtle St. & Site

Movement	NW	SW
Directions Served	TR	R
Maximum Queue (ft)	3	57
Average Queue (ft)	0	29
95th Queue (ft)	3	48
Link Distance (ft)	139	11
Upstream Blk Time (%)		4
Queuing Penalty (veh)		3
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 20: Congress St. & Site

Movement	NE	SW
Directions Served	LT	TR
Maximum Queue (ft)	47	17
Average Queue (ft)	4	1
95th Queue (ft)	25	10
Link Distance (ft)	82	109
Upstream Blk Time (%)	0	
Queuing Penalty (veh)	0	
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Zone Summary

Zone wide Queuing Penalty: 81

Summary of All Intervals

Run Number	1	2	3	4	5	6	7
Start Time	3:45	3:45	3:45	3:45	3:45	3:45	3:45
End Time	5:00	5:00	5:00	5:00	5:00	5:00	5:00
Total Time (min)	75	75	75	75	75	75	75
Time Recorded (min)	60	60	60	60	60	60	60
# of Intervals	5	5	5	5	5	5	5
# of Recorded Intervals	4	4	4	4	4	4	4
Vehs Entered	2144	2240	2105	2186	2177	2163	2171
Vehs Exited	2155	2235	2121	2188	2185	2166	2172
Starting Vehs	37	22	40	28	37	34	27
Ending Vehs	26	27	24	26	29	31	26
Travel Distance (mi)	418	434	411	425	426	422	421
Travel Time (hr)	37.4	31.2	29.2	37.9	32.8	31.0	30.9
Total Delay (hr)	19.4	12.5	11.5	19.6	14.3	12.7	12.8
Total Stops	2195	2264	2134	2267	2339	2384	2289
Fuel Used (gal)	21.2	20.1	18.8	21.3	20.3	19.9	19.8

Summary of All Intervals

Run Number	8	9	10	Avg
Start Time	3:45	3:45	3:45	3:45
End Time	5:00	5:00	5:00	5:00
Total Time (min)	75	75	75	75
Time Recorded (min)	60	60	60	60
# of Intervals	5	5	5	5
# of Recorded Intervals	4	4	4	4
Vehs Entered	2147	2141	2174	2165
Vehs Exited	2148	2150	2164	2167
Starting Vehs	31	29	24	26
Ending Vehs	30	20	34	20
Travel Distance (mi)	420	420	423	422
Travel Time (hr)	29.6	31.8	30.0	32.2
Total Delay (hr)	11.5	13.7	11.8	14.0
Total Stops	2189	2245	2236	2255
Fuel Used (gal)	19.3	19.7	19.4	20.0

Interval #0 Information Seeding

Start Time	3:45
End Time	4:00
Total Time (min)	15

Volumes adjusted by Growth Factors.

No data recorded this interval.

Interval #1 Information Recording

Start Time	4:00
End Time	4:15
Total Time (min)	15

Volumes adjusted by Growth Factors, Anti PHF.

Run Number	1	2	3	4	5	6	7
Vehs Entered	479	518	475	477	488	484	520
Vehs Exited	496	520	485	474	491	487	529
Starting Vehs	37	22	40	28	37	34	27
Ending Vehs	20	20	30	31	34	31	18
Travel Distance (mi)	96	101	94	93	96	96	106
Travel Time (hr)	6.7	6.7	6.3	6.3	6.6	6.5	7.8
Total Delay (hr)	2.5	2.3	2.3	2.4	2.4	2.3	3.3
Total Stops	501	496	477	491	493	495	594
Fuel Used (gal)	4.4	4.5	4.2	4.2	4.3	4.3	4.9

Interval #1 Information Recording

Start Time	4:00
End Time	4:15
Total Time (min)	15

Volumes adjusted by Growth Factors, Anti PHF.

Run Number	8	9	10	Avg
Vehs Entered	497	475	534	495
Vehs Exited	500	477	528	498
Starting Vehs	31	29	24	26
Ending Vehs	28	27	30	24
Travel Distance (mi)	98	93	106	98
Travel Time (hr)	6.9	6.3	7.5	6.7
Total Delay (hr)	2.7	2.3	2.9	2.5
Total Stops	508	475	586	511
Fuel Used (gal)	4.5	4.2	4.9	4.4

Interval #2 Information Recording

Start Time	4:15
End Time	4:30
Total Time (min)	15

Volumes adjusted by PHF, Growth Factors.

Run Number	1	2	3	4	5	6	7
Vehs Entered	694	672	669	679	717	678	643
Vehs Exited	649	655	650	672	695	665	618
Starting Vehs	20	20	30	31	34	31	18
Ending Vehs	65	37	49	38	56	44	43
Travel Distance (mi)	126	125	123	127	135	128	118
Travel Time (hr)	15.0	10.1	9.5	13.3	11.7	10.6	9.3
Total Delay (hr)	9.5	4.6	4.1	7.8	5.8	5.1	4.2
Total Stops	750	725	654	705	790	784	662
Fuel Used (gal)	7.3	6.1	5.8	6.8	6.8	6.4	5.8

Interval #2 Information Recording

Start Time	4:15
End Time	4:30
Total Time (min)	15

Volumes adjusted by PHF, Growth Factors.

Run Number	8	9	10	Avg
Vehs Entered	656	677	660	677
Vehs Exited	647	655	646	655
Starting Vehs	28	27	30	24
Ending Vehs	37	49	44	41
Travel Distance (mi)	122	126	122	125
Travel Time (hr)	8.9	11.6	9.2	10.9
Total Delay (hr)	3.6	6.1	3.9	5.5
Total Stops	632	724	688	713
Fuel Used (gal)	5.7	6.5	5.8	6.3

Interval #3 Information Recording

Start Time	4:30
End Time	4:45
Total Time (min)	15

Volumes adjusted by Growth Factors, Anti PHF.

Run Number	1	2	3	4	5	6	7
Vehs Entered	484	519	469	508	507	484	490
Vehs Exited	525	519	504	509	536	508	502
Starting Vehs	65	37	49	38	56	44	43
Ending Vehs	24	37	14	37	27	20	31
Travel Distance (mi)	101	101	97	102	104	98	95
Travel Time (hr)	9.7	7.3	7.1	11.3	8.0	6.8	6.7
Total Delay (hr)	5.3	3.0	2.9	6.9	3.5	2.6	2.6
Total Stops	504	520	496	545	577	528	513
Fuel Used (gal)	5.3	4.7	4.6	5.6	5.0	4.6	4.4

Interval #3 Information Recording

Start Time	4:30
End Time	4:45
Total Time (min)	15

Volumes adjusted by Growth Factors, Anti PHF.

Run Number	8	9	10	Avg
Vehs Entered	479	505	501	491
Vehs Exited	490	525	505	512
Starting Vehs	37	49	44	41
Ending Vehs	26	29	40	23
Travel Distance (mi)	99	103	99	100
Travel Time (hr)	6.9	7.6	6.9	7.8
Total Delay (hr)	2.6	3.1	2.6	3.5
Total Stops	519	551	506	526
Fuel Used (gal)	4.6	4.8	4.4	4.8

Interval #4 Information Recording

Start Time	4:45
End Time	5:00
Total Time (min)	15

Volumes adjusted by Growth Factors, Anti PHF.

Run Number	1	2	3	4	5	6	7
Vehs Entered	487	531	492	522	465	517	518
Vehs Exited	485	541	482	533	463	506	523
Starting Vehs	24	37	14	37	27	20	31
Ending Vehs	26	27	24	26	29	31	26
Travel Distance (mi)	94	107	97	103	90	101	101
Travel Time (hr)	6.1	7.1	6.4	6.9	6.5	7.1	7.1
Total Delay (hr)	2.1	2.6	2.2	2.5	2.6	2.7	2.7
Total Stops	440	523	507	526	479	577	520
Fuel Used (gal)	4.2	4.8	4.3	4.6	4.2	4.6	4.7

Interval #4 Information Recording

Start Time	4:45
End Time	5:00
Total Time (min)	15

Volumes adjusted by Growth Factors, Anti PHF.

Run Number	8	9	10	Avg
Vehs Entered	515	484	479	501
Vehs Exited	511	493	485	501
Starting Vehs	26	29	40	23
Ending Vehs	30	20	34	20
Travel Distance (mi)	100	97	96	99
Travel Time (hr)	6.9	6.4	6.4	6.7
Total Delay (hr)	2.6	2.3	2.3	2.5
Total Stops	530	495	456	503
Fuel Used (gal)	4.6	4.3	4.3	4.4

5: Congress St. & Pearl St. Performance by movement

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Denied Del/Veh (s)	6.9	11.6	7.2	1.9	2.6	3.1	0.0	0.0	0.0	3.6	0.4	0.3
Total Del/Veh (s)	54.0	28.9	21.8	31.0	32.5	27.2	13.8	8.5	5.1	15.0	8.0	5.8

5: Congress St. & Pearl St. Performance by movement

Movement	All
Denied Del/Veh (s)	2.1
Total Del/Veh (s)	18.3

6: Cumberland Ave & Pearl St. Performance by movement

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Denied Del/Veh (s)	0.2	0.2	0.2	0.1	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.3
Total Del/Veh (s)	16.9	10.3	5.2	14.4	14.6	10.8	11.2	8.6	5.6	12.6	8.6	5.1

6: Cumberland Ave & Pearl St. Performance by movement

Movement	All
Denied Del/Veh (s)	0.2
Total Del/Veh (s)	10.5

9: Congress St. & Myrtle St. Performance by movement

Movement	NWL	NWT	NWR	NEL	NET	SWT	SWR	All
Denied Del/Veh (s)	0.4	0.4	0.4	0.2	0.2	0.0	0.0	0.2
Total Del/Veh (s)	14.5	14.8	9.7	3.3	0.7	0.3	0.1	5.0

10: Cumberland Ave & Myrtle St. Performance by movement

Movement	NWL	NWT	NWR	NEL	NET	SWT	SWR	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.4	0.3	0.0	0.0	0.1
Total Del/Veh (s)	8.7	4.5	5.7	3.4	0.4	0.3	0.1	1.8

13: Site/Old Port Parking & Pearl St. Performance by movement

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.4	0.0	0.6
Total Del/Veh (s)	9.7	2.3	2.2	5.2	1.7	1.9	6.8		3.7	9.8	2.3	7.3

13: Site/Old Port Parking & Pearl St. Performance by movement

Movement	All
Denied Del/Veh (s)	0.1
Total Del/Veh (s)	3.2

17: Cumberland Ave & Site Performance by movement

Movement	NWL	NWR	NET	NER	SWL	SWT	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	7.9	8.0	1.3	1.8	5.9	1.1	1.6

18: Myrtle St. & Site Performance by movement

Movement	NWT	NWR	SWR	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.0
Total Del/Veh (s)	1.2	1.2	4.6	1.8

20: Congress St. & Site Performance by movement

Movement	NEL	NET	SWT	SWR	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	4.1	0.4	0.8	0.9	0.7

Total Zone Performance

Denied Del/Veh (s)	1.5
Total Del/Veh (s)	246.5

Intersection: 5: Congress St. & Pearl St.

Movement	SE	NW	NE	NE	SW	SW
Directions Served	LTR	LTR	L	TR	L	TR
Maximum Queue (ft)	196	340	127	100	77	174
Average Queue (ft)	71	167	39	64	20	71
95th Queue (ft)	150	315	103	101	56	137
Link Distance (ft)	175	364	109			350
Upstream Blk Time (%)	2	5	1	0		
Queuing Penalty (veh)	3	0	3	0		
Storage Bay Dist (ft)				75	45	
Storage Blk Time (%)			0	7	1	13
Queuing Penalty (veh)			1	3	4	4

Intersection: 6: Cumberland Ave & Pearl St.

Movement	SE	NW	NE	SW
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	109	198	105	138
Average Queue (ft)	41	115	76	58
95th Queue (ft)	85	189	111	113
Link Distance (ft)	372	185	80	434
Upstream Blk Time (%)		1	7	
Queuing Penalty (veh)		4	24	
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 9: Congress St. & Myrtle St.

Movement	NW	NE	SW
Directions Served	LTR	LT	TR
Maximum Queue (ft)	218	67	8
Average Queue (ft)	83	14	0
95th Queue (ft)	164	47	6
Link Distance (ft)	355	469	82
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 10: Cumberland Ave & Myrtle St.

Movement	NW	NE	SW
Directions Served	LTR	LT	TR
Maximum Queue (ft)	111	53	9
Average Queue (ft)	44	4	0
95th Queue (ft)	82	27	6
Link Distance (ft)	232	288	75
Upstream Blk Time (%)	0		
Queuing Penalty (veh)	0		
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 13: Site/Old Port Parking & Pearl St.

Movement	SE	NW	NE	SW
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	63	72	25	65
Average Queue (ft)	5	5	8	42
95th Queue (ft)	41	34	27	68
Link Distance (ft)	185	175	10	42
Upstream Blk Time (%)	0		2	6
Queuing Penalty (veh)	0		0	6
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 17: Cumberland Ave & Site

Movement	NW	NE	SW
Directions Served	LR	TR	LT
Maximum Queue (ft)	29	81	78
Average Queue (ft)	15	22	12
95th Queue (ft)	38	70	52
Link Distance (ft)	16	75	80
Upstream Blk Time (%)	4	1	0
Queuing Penalty (veh)	1	4	1
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 18: Myrtle St. & Site

Movement	NW	SW
Directions Served	TR	R
Maximum Queue (ft)	3	47
Average Queue (ft)	0	22
95th Queue (ft)	3	47
Link Distance (ft)	139	11
Upstream Blk Time (%)		2
Queuing Penalty (veh)		1
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 20: Congress St. & Site

Movement	NE	SW
Directions Served	LT	TR
Maximum Queue (ft)	57	5
Average Queue (ft)	5	0
95th Queue (ft)	30	5
Link Distance (ft)	82	109
Upstream Blk Time (%)	0	
Queuing Penalty (veh)	0	
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Zone Summary

Zone wide Queuing Penalty: 60

CITY OF PORTLAND, MAINE

PLANNING BOARD

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February 24, 2023

Joseph Dasco
385 Congress Street LLC
383 Commercial Street
Portland, ME 04101

Marieke Thormann
Fathom Companies
80 Exchange Street
Portland, ME 04101

Project Name:	385 Congress Street	Project ID:	PL-001970-2022
Address:	385 Congress Street	CBL:	012 P027001

Applicant:	385 Congress Street LLC & Fathom Companies
Planner:	Zach Powell

Dear Joesph Dasco and Marieke Thormann:

On February 14, 2023, the Planning Board approved a Traffic Movement Permit application for the proposed phased mixed-use development at 385 Congress Street. The Planning Board voted (6-0, Silk Absent) to approve the application with the following conditions as presented below:

PRIOR TO BUILDING PERMIT SUBMISSION FOR ~~PHASE~~ LOT 1 (HOTEL)

1. The Applicant shall update the site plan set to state that the City will review conditions on Pearl Street post-occupancy and determine the feasibility of on-street parking in a future phase of the MDP, offset the eastbound Congress Street left-turn lane off-set STOP bar by 15 feet, and replace site plan key note 17 on site plan sheet 5 with a metered parking sign (PS6).

PRIOR TO ISSUANCE OF BUILDING PERMIT FOR ~~PHASE~~ LOT 1 (HOTEL)

2. The Applicant shall submit a scope of work for the traffic monitoring program of the valet operations for review and approval by the Planning Authority. The scope of work shall outline specific actions that will be taken by the hotel/valet vendor if vehicle queuing problems are identified.

PRIOR TO ISSUANCE OF CERTIFICATE OF OCCUPANCY FOR ~~PHASE~~ LOT 1 (HOTEL)

3. The Applicant shall upgrade the entire traffic signal system at the intersection of Congress & Pearl Street (except for the controller cabinet, unless modification to equipment may be needed for a full functioning signal) to meet the City's Traffic Signal Policy and Guidance Manual. This upgrade shall include mast arm supports. Sidewalk ADA upgrades may be required to meet MaineDOT's policy regarding ADA upgrades associated with a signal project that disturbs the ground

PRIOR TO ISSUANCE OF CERTIFICATE OF OCCUPANCY FOR LOTS 1, 2, OR 3

4. The Applicant shall install pedestrian signal heads at the intersection of Cumberland Avenue & Pearl Street.

POST OCCUPANCY CONDITIONS FOR ~~PHASE~~ LOT 1 (HOTEL)

5. The Applicant shall be required to perform a traffic monitoring program of the valet operations and queuing conditions. The monitoring study shall be performed within the first month of occupancy, three months after occupancy, and annually for at least three years. At the conclusion of Year 3, City Staff shall make a determination on continuation. The monitoring program shall be conducted under normal traffic system conditions and when Myrtle Street is closed. The monitoring program shall report at a minimum vehicle arrival/departure volumes, number of valet personnel, vehicle queuing, impacts of the co-location of automobile and bicycle parking, and photographs of conditions

MAJOR SITE PLAN APPLICATION ~~PHASE 2~~LOT 2 (CONDO A)

6. As part of the Major Site Plan application for ~~Phase~~ Lot 2 (Condo A) the Applicant shall submit signal plans for an upgrade to the entire traffic system for the intersection of Cumberland & Pearl Street.

PRIOR TO ISSUANCE OF A CERTIFICATE OF OCCUPANCY FOR ~~PHASE 3~~LOT 2 (CONDO B)

7. The Applicant shall upgrade the entire traffic signal system at the intersection of Cumberland & Pearl Street (except for the controller cabinet, unless modification to equipment may be needed for a full functioning signal) to meet the City's Traffic Signal Policy and Guidance Manual. This upgrade shall include mast arm supports. Sidewalk ADA upgrades may be required to meet MaineDOT's policy regarding ADA upgrades associated with a signal project that disturbs the ground

The approval is based on the submitted plans and findings related to site plan review as contained in the Planning Board report dated February 10, 2023 for application #PL-002156-2022, which is attached.

If there are any questions, please contact Zach Powell at 207-756-8083 or at zpowell@portlandmaine.gov.

Access and Circulation 14-14.6.1 (B)

1. *In general*

   a. The proposed project involves the re-development of a fully developed property currently used for parking. Internal vehicular circulation will be entirely on site and within the proposed parking garage.

      The project proposes a two-lane (entering/exiting) vehicular entrance on Cumberland Avenue to the parking garage.

      The proposed driveway meets the applicable standards of the City of Porltand Technical Standards Section 1.5.1.

      - The proposed development consolidates existing curb cuts, reducing the number of curb cuts on the east side of Cumberland Avenue (between Myrtle Street and Pearl Street) from two (2) to one (1)

   b. The proposed development site is comprised of a portion of a developed City block with sidewalks. The proposed project will result in improvements to the existing sidewalk and provides for better pedestrian circulation along Cumberland Avenue. The proposed development maintains the existing public sidewalk that is located along Cumberland Avenue and Myrtle Street. The main entrance to the building will be from Cumberland Avenue.

   c. All points of access and egress to the site have been located to avoid conflicts with existing turning movements and traffic flows.

2. *Loading and servicing*

   The proposed project has been designed to provide safe access for delivery vehicles servicing the site. Consistent with developments in similar settings in Portland, loading and service vehicle access is proposed internal to the building, accessed from the site entrances on the street.

   Loading and servicing access will not impede vehicle circulation, bicycle or pedestrian movement, or parking. Reference the plan set for loading area placement.

   As this is a residential project, a dedicated loading bay is not required.

3. *Curb and sidewalks*

   The proposed project site has existing city sidewalks on its street frontages. These sidewalks will be improved as part of the project. All proposed public sidewalk improvements will be designed based on the standards of the City Technical Manual.

All street curbing will consist of new or reset existing granite curb installed in accordance with the details found in the City Technical Manual.

Public Transit 14-14.6.1(C)

1. A transit shelter is not required.

   The site is located along an existing public transit route with a transit shelter located on Congress Street between Temple Street and Elm Street, less than ¼ mile from the site.

   The site is nearby to a number of public transit bus lines. The project is located on Cumberland Avenue with direct access to METRO Bus route 8. Congress Street has direct access to METRO Bus routes 1, 2, 4, 5, 7, 8, 9a & 9b and South Portland Bus Service routes 21, 24a & 24b. the nearest METRO Bus stop on Cumberland is located between Myrtle and Stone Street and on Congress Street at City Hall.

2. Not applicable

Off-Street Parking 14-14.6.1 (D)

1. *Vehicular Parking:* The proposed housing development is for age restricted, affordable housing therefore no parking is required. However, the project is being developed in accordance with the approved Master Development plan, cooperatively with the land owner 385 Congress, LLC and will construct a total of 63 off street parking spaces on two levels.

   As part of the project's purchase agreement. The applicant will construct the parking as a condominium unit which upon completion is to be sold to 385 Congress Street, LLC. The parking will be designed in accordance with the requirements in the city's Techncial Standards as a low turnover residential use.

2. *Bicycle Parking:* Bicycle parking racks for 40% of the residential units (22 bicylces) will be on site adjacent to the buildign entrance and within the Level 0 garage. Please see the plan set for the proposed location of the bicycle parking.

3. *Snow Storage:* There are no snow storage areas on site for the proposed project. Sidewalks will be cleared of snow in accordance with the City of Portland ordinance.

4. *Electric Vehicle charging:* The proposed project adheres to the applicable EV standards as outlined in the City Technical Manual. Level 2 or higher EV charging will be provided for a minimum of 20% of the propsoed parking spaces.

Preservation of Significant Natural Features 14-14.6.2(A)

The proposed project area is a previously developed, urban parcel. The project area comprises a portion of a city block that is bounded by Cumberland Avenue on the northwest, Myrtle Street on the southwest, Congress Street on the southeast, and Pearl Street on the northeast. The site is developed with a paved parking area and concrete sidewalks. Vegetation is limited to small amounts of landscaping. There are no natural waterways or wetlands on or within proximity of the project site.

Please see the plan set for the existing conditions plan.

Landscape Preservation 14-14.6.2 (B)

1. The proposed project site is a previously developed, urban parcel currently used for surface parking with no significant trees or landscaped areas on the site. There are no trees or landscaping proposed for preservation. The proposed project includes planting boxes along Cumberland Avenue.

2. There are no trees 10 inches DBH or greater within the project setbacks requiring preservation. This provision of the Ordinance is not applicable to the site.

Please see the plan set for the proposed landscaping plan.

Site Landscaping and Buffers 14-14.6.2(C)

The proposed project has been designed to be in compliance with the applicable landscape and buffering requirements of the City Ordinance. The project is located in the B-3 zone where there is no required setback.

1. Landscaping. This provision of the ordinance does not apply at this site.

   A landscape plan has been provided within the plan set identifying the proposed planting at street level of street trees in curbed tree wells. Landscaping has been provided as outlined in the City of Portland zoning requirements.

   Please see the Landscape plan.

2. Buffers.
   a. Loading and service areas, including trash service areas, are internal to the building behind doors. No site screening for these features is required or proposed.

      There are no ground mounted utility structures proposed. The building's mechanical systems are roof mounted and screened. Please refer to the building plans and elevations.

   b. The project does not abut a residential zone. This provision of the ordinance is not applicable.

      The project is an age restricted (55+) affordable housing development in a no-setback zone. Screening the residential units from existing surrounding development is not required or proposed.

3. Parking and vehicle display lot landscaping.
   Not applicable. There is no proposed surface parking associated with this project.

4. Street Trees. The proposed project includes a 55-unit age restricted affordable housing building located on the corner of Cumberland Ave and Myrtle Street. As part of this development that applicant is proposing curbed tree wells along Cumberland Avenue and Myrtle Street at the corner of Cumberland Avenue.

   As part of the pprroved MDP, it was determined that Street trees on Myrtle Street are not viable and not required.

   Please see the Landscape plan for additional information.

Water Quality, Stormwater Management, and Erosion Control 14-14.6.2(D)

1. The subject site is a portion of a fully developed city block. The proposed redevelopment plan has been designed to meet the applicable City standards for stormwater management to minimize to the extent practicable the rate of runoff from the lot.

   Based on consultation with City staff the drainage plan includes directing the proposed site's runoff to the existing combined sewer in Pearl Street in anticipation of a future City project to separate the combined sewer in this street. This reduces runoff entering the City's combined sewer in Myrtle Street. The proposed design does not increase runoff in the City's combined sewer in Pearl Street system in the 1-inch 24-hour rainfall event associated with the City's CSO control plans. There are minimal increases in runoff in the Pearl Street combined sewer during the 2-, 10- and 25-year storm events. The increases do not exceed the capacity of the system at the study point. Please see the stormwater management plan.

2. The proposed project has been designed to be in compliance with the stormwater management standards of the City Technical Manual. Please see the stormwater management plan.

3. The proposed development does not propose any stormwater infiltration or other practices that would be expected to pose a risk of groundwater contamination either during or post-construction. Please see the plan set and the stormwater management plan.

Att. P1

SEBAGO TECHNICS

CIVIL ENGINEERING ▪ SURVEYING ▪ LANDSCAPE ARCHITECTURE

STORMWATER MANAGEMENT REPORT

For

385 CONGRESS STREET, LOT 3
PORTLAND, MAINE

Prepared for

Lincoln Avenue Capital
Northeast Developers, LLC
14 Harvest Way
Newmarket, New Hampshire 03857

January 8, 2024

STATE OF MAINE
DANIEL
L
RILEY
No. 9967
LICENSED
PROFESSIONAL ENGINEER

01/09/2024

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STORMWATER MANAGEMENT REPORT
385 CONGRESS STREET
LOT 3 OF 385 CONGRESS STREET SUBDIVISION
PORTLAND, MAINE

1. Introduction

This Stormwater Management Plan and Report presents analyses performed to address stormwater management for the proposed development of Lot 3 of the 385 Congress Street Subdivision. The stormwater management controls outlined in this report are designed to suit the proposed development and to comply with applicable state and local regulatory requirements.

The project is comprised of the proposed development of a seven-story age restricted affordable housing building on Lot 3, a site occupying 0.45 acres located at the corner of Myrtle Street and Cumberland Avenue in Portland. Lot 3 is a portion of a larger 2.26-acre parcel bounded by Congress Street, Myrtle Street, Cumberland Avenue, and Pearl Street. The project is one of three phases for a Master Plan of Development for this larger site approved by the planning board in August 2022. An adjacent hotel project on Lot 1 of the subdivision was approved by the planning board in February 2023 and has not begun construction.

Development of the site is subject to the City of Portland's post-construction stormwater management standards, which adopt the MDEP Chapter 500 Basic, General, and Flooding standards, including the redevelopment standards, as incorporated into the City of Portland Land Use Ordinance and Site Plan review regulations. The project is a redevelopment project resulting in less than 5,000 sf or non-rooftop impervious area. As such, the City's stormwater standards for redevelopment do not require stormwater quality treatment.

The site is located in an area served by a combined sewer system where the City of Portland seeks to mitigate and reduce combined sewer overflow (CSO) events. The design storm event for CSO evaluation is a 1" rainfall, 24-hour design storm (CSO Storm).

Based on discussions with City staff during the Master Development Plan and Lot 1 Site Plan Review, the stormwater analysis and the proposed detention system have been designed to reduce the rate of runoff from the project site to the extent practicable during this 1" CSO Storm event.

The project site and the remaining land are currently fully developed with two buildings and surface parking. The site generally slopes from east to west (Congress Street toward Cumberland Avenue) with an approximately 12' change in grade along Myrtle Street and Pearl Street. The existing site includes a system of catch basins that connect into the City's combined sewer in the surrounding streets, ultimately discharging to the west along Myrtle Street and Pearl Street toward Marginal Way.

The City is undertaking a study for the future construction of storm drainage and sanitary sewer separation along Pearl Street from Marginal Way to Congress Street. In anticipation of future offsite improvements, Staff have requested that the projects associated with the Master Plan of Development for the property:

- Separate their sanitary sewer and storm drainage on site prior to connection into the City system;
- Direct as much of the storm drainage from the project site (and remaining land identified as Lot 1 and Lot 2) to the combined sewer in Pearl Street, with a connection near Cumberland Avenue to facilitate future separation, and;
- Detain and reduce the peak rate of runoff from the redeveloped areas of the site to the extent practicable during a 1-inch, 24-hour rainfall event to reduce flows during the City's CSO storm event.

2. Existing Conditions

The City's drainage system abutting the site is a combined sewer system tributary to an overflow location at the Back Cove discharging into Casco Bay. Base flow in the system is conveyed to the Portland wastewater treatment plant. This site is not tributary to any urban impaired streams or significant pond or lake watersheds defined in Chapter 502 of the Maine Department of Environmental Protection (MDEP) regulations.

The proposed development area of the site is not located in an identified flood zone shown on the FEMA Flood Insurance Rate Map for the City of Portland, Community Panel 2300510013B dated July 17, 1986. A copy of the Flood Insurance Rate Map is attached in appendix 4.

3. Soils

Soil information for the site was obtained from the USGS United States Department of Agriculture and Natural Resource Conservation Service's Web Soil Survey site. Boring logs from the site's geotechnical exploration reports indicate a groundwater depth of approximately 15 feet. The Hydrologic Groups (HSG) of the soils on site as classified by the Soil Conservation Service is as follows:

Soil Map Symbol	Soil Name	Slope (%)	HSG
HIB	Hinckley loamy sand	3-8	A

Hydrologic Soil Group boundaries are delineated on the Watershed Map. A copy of the Medium Intensity Soil Survey is included in Appendix 3.

4. Proposed Site Improvements

The proposed development consists of a subdivision plan amendment revising the lot line between Lots 2 and 3 and a major site plan review for the development of the revised Lot 3. The revised Lot 3 will be redeveloped as an affordable housing project building with ground-level (Level 0) and first-floor (Level 1) parking.

The abutting Lot 1 to the east was approved as a proposed hotel and condominium development in September of 2023. Lot 2 is the remaining land retained by the owner for future development, currently envisioned as a residential condominium development. A common structured parking garage will be constructed at the Cumberland Avenue and Congress Street levels of the proposed Lot 3 building and the future buildings on Lots 1 and 2.

5. Hydrologic Modeling

In order to evaluate drainage characteristics as a result of the proposed development, a quantitative analysis was performed to determine peak runoff rates in the pre-development and post-development conditions. The evaluation was performed using the methodology outlined in the USDA Soil Conservation Service's "Urban Hydrology for Small Watersheds - Technical Release #55 (TR-55)". HydroCAD computer software was utilized to perform the calculations.

6. Existing Conditions Model

The pre-development watershed plan consists of four subcatchments labeled 1.1S through 2.2S in the HydroCAD model. Two locations are identified as Points of Analysis (POA) for comparing peak runoff rates. These two POAs represent flows in the existing combined sewers in Pearl Street at Cumberland Avenue (POA-1) and Myrtle Street at Cumberland Avenue (POA-2).

POA-1 is located at the northerly (plan northwest) corner of the larger project site where runoff from the site is tributary to the 18" diameter combined sewer in Pearl Street at Cumberland Avenue. Subcatchments 1.1S represents on-site areas tributary to POA-1 and Subcatchment 1.2S represents offsite areas to the northeast contributing runoff to this point of analysis. The total modeled drainage area tributary to POA-1 in the pre-development condition is approximately 4.04 acres.

POA-2 is located at the westerly (plan southwest) corner of the larger project site where runoff from the site is tributary to the combined sewer in Myrtle Street at Cumberland Avenue. Subcatchments 2.1S and 2.2S represent on-site and offsite areas tributary to POA-2 contributing runoff to this point of analysis. The total modeled drainage area tributary to POA-2 in the pre-development condition is approximately 1.54 acres.

7. Proposed Conditions Model

The post-development watershed presents a consistent overall drainage area tributary to the points of analysis; subdividing the area into its anticipated post development subcatchments that will result from the proposed redevelopment of the site.

POA-1:

In the post-development model, subcatchment 10.1S represents offsite areas draining to POA-1 and is unaffected by the proposed development.

Subcatchment 10.2S represents the existing onsite area that will remain undeveloped.

Subcatchment 10.3S represents the project site for an affordable housing project. As part of the current Site Plan application for Lot 3, this area will be minimally improved. Draining generally in its existing condition revised with connections to the proposed storm drain serving lot 3.

The proposed development of Lot 3 will include detention to store the required Stormwater Quality (WQv) volume and to provide peak runoff control provided by a corrugated metal pipe (CMP) detention system.

Analysis has been performed to evaluate two conditions:

- Assuming Lot 3 is constructed in isolation, with Lot 1 and Lot 2 remaining undeveloped. The overall post-development tributary area tributary to POA-1 increases to 4.52 acres; an increase of 0.48 acres due to the redirection of storm drainage from Myrtle Street (POA-2) to Pearl Street (POA-1) as requested by the City to facilitate its future combined sewer separation objectives. Refer to Plan Sheet 2 of 3 “Proposed Conditions SWM Plan – Lot 3 Only”.

- Assuming Lot 1 is developed as currently approved along with Lot 3, the overall post-development tributary area tributary to POA-1 increases to 4.48 acres; an increase of 0.44 acres due to the redirection of storm drainage from Myrtle Street (POA-2) to Pearl Street (POA-1) as requested by the City to facilitate its future combined sewer separation objectives. This analysis incorporates the stormwater management systems approved in the Hotel Site Plan Review. Refer to Plan Sheet 3 of 3 “Proposed Conditions SWM Plan – Full”.

The planned Hotel development on Lot 1 is proposed to include a treatment and detention system comprised of a 48” diameter CMP subsurface detention. A preliminary design of the full build-out condition for Lot 1 and Lot 3 is included in the analysis.

Upon installation of the Lot 1 and Lot 3 system, peak flows at POA-1 are reduced to pre-development levels detaining runoff associated with the re-direction of tributary areas from POA -2 to POA-1 that has been requested by the City.

POA-2:

In the Post-development model subcatchments 20.1S represents off-site areas draining to the Myrtle Street combined sewer.

Analysis has been performed to evaluate two conditions:

- Assuming Lot 3 is constructed in isolation, and Lot 1 and Lot 2 remain undeveloped. The drainage area at POA-1 sees a corresponding increase in tributary area.

and

- Assuming Lot 1 and Lot 3 are developed as currently proposed. The drainage area at POA-1 sees a corresponding increase in tributary area.

8. Stormwater Management

Municipal Requirements

The project is the redevelopment of a fully developed site, creating less than one acre of impervious area such that an MDEP Chapter 500 Stormwater permit is not required.

The redevelopment of Lot 3, upon completion, will result in less than 5,000 sf of non-rooftop impervious area on the site. As such, the City's Stormwater Standards for Redevelopment (Technical Manual Section 5.II.D) do not apply and stormwater quality treatment to meet the General Standards is not required.

The City of Portland Technical Manual Section II-C states that all Level III site plans are required to meet the Maine DEP Chapter 500 flooding standard.

The project proposes a subsurface detention system below the lower-level garage to detain runoff meeting the flooding standards. The proposed system will direct the separated site drainage to the intersection of Pearl Street and Cumberland Avenue to facilitate the City's future combined sewer separation efforts. The proposed system will detain and reduce flows from the site to the maximum extent practicable during a smaller 1" rain event to advance the City's Combined Sewer Overflow (CSO) objectives for this area of the City. This approach is consistent with the Stormwater management approach approved in the MDP for the project site and the Lot 1 Hotel site plan approval and as required by the City in its sewer capacity review findings for those developments.

Basic Standard - Chapter 500, Section 4(B)

The MDEP Basic Standards apply to all City site plans, requiring that grading or other construction activities on the site do not impede or otherwise alter drainage ways to have an unreasonable adverse impact. We have avoided adverse impacts by providing an Erosion & Sedimentation Control Plan, and an Inspection, Maintenance and Housekeeping Plan (Appendix 2) to be implemented during construction and post-construction stabilization of the site. These construction requirements have been developed following Best Management Practice guidelines.

General Standard - Chapter 500, Section 4(C)

The MDEP General Standards do not apply as this project disturbs less than one acre and creates less than one acre of impervious area.

Redevelopment Standards - Chapter 500, Section (C)(2)(d), City Technical Standards – Section II-D

Because the General Standards do not apply to this project, the MDEP Redevelopment Standards also do not apply.

The redevelopment of Lot 3, upon completion, will result in less than 5,000 sf of non-rooftop impervious area on the site. As such, the City's Stormwater Standards for Redevelopment (Technical Manual Section 5.II.D) do not apply and stormwater quality treatment to meet the General Standards is not required.

Because the project is located in a combined sewer watershed, flooding control has been provided to reduce rates of runoff in the 1" CSO storm event.

Flooding Standard - Chapter 500, Section 4(F), City Technical Standards – Section II-C

The City of Portland Technical Manual Section 5.II-C states that all Level III site plans are required to meet the Maine DEP Chapter 500 flooding standard.

The Flooding Standard requires a project's stormwater management system detain, retain, or result in the infiltration of stormwater from 24-hour storms of the 2, 10, and 25-year frequencies such that the peak flows of stormwater from the project site do not exceed the peak flows of stormwater prior to undertaking the project. Minor increases that do not exceed the capacity of existing systems may be approved on a case-by-case basis.

To address this standard, a runoff evaluation was performed using the methodology outlined in the USDA Soil Conservation Service's "Urban Hydrology for Small Watersheds - Technical Release #55 (TR-55)". HydroCAD computer software was utilized to perform the calculations.

Because the site will be developed in phases as outlined in the approved master plan, the site has been evaluated in two (2) conditions:

- Assuming Lot 3 is developed in isolation with Lot 1 and Lot 2 remaining undeveloped and
- Assuming Lot 1 and Lot 3 are developed as proposed with below-grade detention systems.

For this report it is anticipated that Lot 3 will be developed first and will include a 48" diameter CMP detention system as a standalone project.

The remaining land will be developed concurrently or later, with a second 48" diameter CMP detention system to meet the flooding standards.

Runoff curve numbers were determined for each of the watersheds by measuring the area of each hydrologic soil group within each type of land cover. Pre-development land cover was determined based on survey data, field reconnaissance and aerial photography. Post-development land cover is based on the proposed construction.

Times of concentration were determined from site topographic maps in accordance with SCS procedures, with a minimum of 6 minutes (0.1 hour).

The 24-hour rainfall values utilized in the hydrologic model were obtained from Appendix H of MDEP's Chapter 500: Stormwater Management (effective date August 2015). Rainfall values for Cumberland County (Southeast) are listed in the table below.

Storm Frequency Precipitation (in./24 hr) Cumberland County (Southeast)	
2-year	3.1
10-year	4.6
25-year	5.8

Analysis No. 1 Lot 3 Developed in Isolation

The following table presents the results of the peak runoff calculations at the analysis points for the existing and proposed conditions upon completion of the Lot 3 development. These results assume that the remaining land on Lots 1 and 2 drains in its pre-development condition.

Peak Runoff Rate Summary Table			
Analysis Point	**Storm Event**	**Existing Conditions (cfs)**	**Proposed Conditions (cfs)**
POA-1	1-Inch	3.3	3.3
	2-year	11.9	13.0
	10-year	18.0	19.5
	25-year	22.8	24.9
POA-2	1-Inch	1.3	0.9
	2-year	4.6	3.2
	10-year	6.9	4.7
	25-year	8.7	6.0

The results indicate that the peak rate of runoff at POA 1 in Pearl Street is slightly increased in all storm events evaluated. This is expected due to the requested diversion of runoff to Pearl Street and consistent with stormwater management plan approved for the adjacent Lot 1 project.

The HydroCAD calculations for this analysis are appended to this report (Appendix 1) along with the Stormwater Management Plans (Appendix 5).

To confirm that the Lot 3 project meets the flooding standard the following table compares the peak rates of runoff from the Lot 3 building site in isolation. This analysis presents the results for pond node 1P representing the system detaining runoff from the building rooftop (subcatchment 10.3S

Peak Runoff Rate Summary Table			
Analysis Point	**Storm Event**	**Un-Detained Runoff Subcatchment 10.3S (cfs)**	**Detention System Discharge Node 1P (cfs)**
10.3S Pond 1P	1-Inch	0.4	Less than 0.1
	2-year	1.3	1.0
	10-year	1.9	1.4
	25-year	2.4	2.3

Analysis No. 2 Lot 1 and Lot 3 Fully Developed

The following table presents the results of the peak runoff calculations at the analysis points for the existing and proposed conditions upon the construction of both the proposed Lot 1 and the Lot 3 detention and treatment systems.

Peak Runoff Rate Summary Table			
Analysis Point	**Storm Event**	**Existing Conditions (cfs)**	**Proposed Conditions (cfs)**
POA-1	1-Inch	3.3	3.1
	2-year	11.9	11.9
	10-year	18.0	17.8
	25-year	22.8	22.7
POA-2	1-Inch	1.3	1.0
	2-year	4.6	3.3
	10-year	6.9	4.9
	25-year	8.7	6.2

The results indicate that the peak rate of runoff is at or reduced from predevelopment rates in all storm events evaluated. The HydroCAD calculations for this analysis are appended to this report (Appendix 1) along with the Stormwater Management Plans (Appendix 5).

9. Summary

The proposed development has been designed to manage stormwater runoff through Best Management Practices meeting the applicable City of Portland Stormwater Management Standards. Peak rates of runoff from the project site are reduced from the pre-development conditions for the 1”, 2, 10, and 25-year storm events.

Prepared by:

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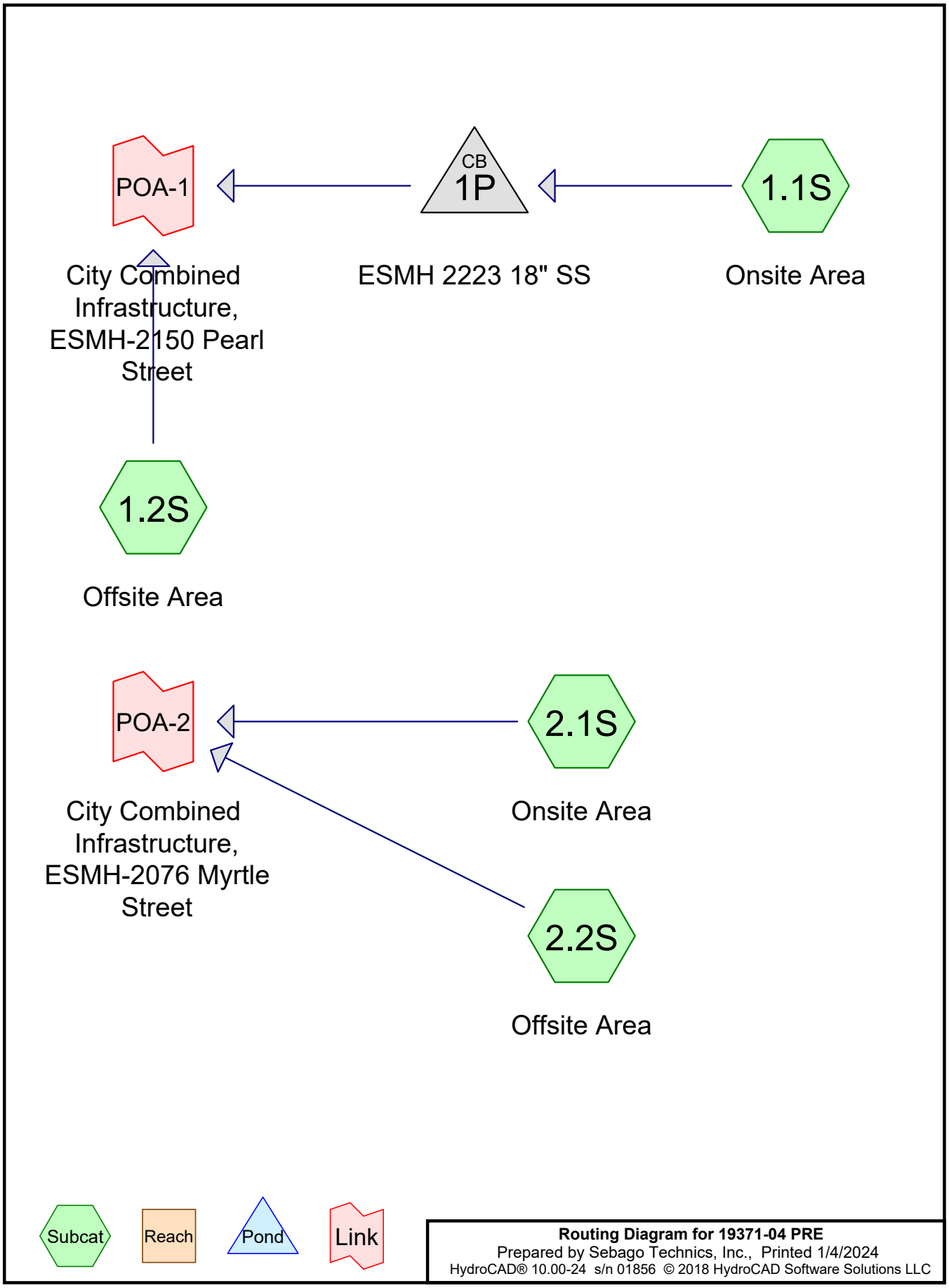
No. 9967
LICENSED
PROFESSIONAL ENGINEER

01/09/2024

Appendix 1A

Hydrologic Modeling - Existing Conditions (HydroCAD) Summary



Routing Diagram for 19371-04 PRE
Prepared by Sebago Technics, Inc., Printed 1/4/2024
HydroCAD® 10.00-24 s/n 01856 © 2018 HydroCAD Software Solutions LLC

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.063	39	>75% Grass cover, Good, HSG A (1.1S, 1.2S, 2.1S)
5.511	98	Paved parking & Roofs (1.1S, 1.2S, 2.1S, 2.2S)
5.574	**97**	**TOTAL AREA**

Time span=0.00-60.00 hrs, dt=0.01 hrs, 6001 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment1.1S: Onsite Area Runoff Area=77,085 sf 97.07% Impervious Runoff Depth=0.63"
Tc=6.0 min CN=96 Runoff=1.3 cfs 0.093 af

Subcatchment1.2S: Offsite Area Runoff Area=98,796 sf 99.77% Impervious Runoff Depth=0.79"
Tc=6.0 min CN=98 Runoff=2.0 cfs 0.149 af

Subcatchment2.1S: Onsite Area Runoff Area=21,392 sf 98.85% Impervious Runoff Depth=0.71"
Tc=6.0 min CN=97 Runoff=0.4 cfs 0.029 af

Subcatchment2.2S: Offsite Area Runoff Area=45,519 sf 100.00% Impervious Runoff Depth=0.79"
Tc=6.0 min CN=98 Runoff=0.9 cfs 0.069 af

Pond 1P: ESMH 2223 18" SS Peak Elev=40.22' Inflow=1.3 cfs 0.093 af
15.0" Round Culvert n=0.013 L=54.5' S=0.0406 '/' Outflow=1.3 cfs 0.093 af

Link POA-1: City Combined Infrastructure, ESMH-2150 Pearl Street Inflow=3.3 cfs 0.242 af
Primary=3.3 cfs 0.242 af

Link POA-2: City Combined Infrastructure, ESMH-2076 Myrtle Street Inflow=1.3 cfs 0.098 af
Primary=1.3 cfs 0.098 af

Total Runoff Area = 5.574 ac Runoff Volume = 0.340 af Average Runoff Depth = 0.73"
1.13% Pervious = 0.063 ac 98.87% Impervious = 5.511 ac

Time span=0.00-60.00 hrs, dt=0.01 hrs, 6001 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment1.1S: Onsite Area Runoff Area=77,085 sf 97.07% Impervious Runoff Depth=2.65"
Tc=6.0 min CN=96 Runoff=5.1 cfs 0.391 af

Subcatchment1.2S: Offsite Area Runoff Area=98,796 sf 99.77% Impervious Runoff Depth=2.87"
Tc=6.0 min CN=98 Runoff=6.8 cfs 0.542 af

Subcatchment2.1S: Onsite Area Runoff Area=21,392 sf 98.85% Impervious Runoff Depth=2.76"
Tc=6.0 min CN=97 Runoff=1.5 cfs 0.113 af

Subcatchment2.2S: Offsite Area Runoff Area=45,519 sf 100.00% Impervious Runoff Depth=2.87"
Tc=6.0 min CN=98 Runoff=3.1 cfs 0.250 af

Pond 1P: ESMH 2223 18" SS Peak Elev=41.05' Inflow=5.1 cfs 0.391 af
15.0" Round Culvert n=0.013 L=54.5' S=0.0406 '/' Outflow=5.1 cfs 0.391 af

Link POA-1: City Combined Infrastructure, ESMH-2150 Pearl Street Inflow=11.9 cfs 0.933 af
Primary=11.9 cfs 0.933 af

Link POA-2: City Combined Infrastructure, ESMH-2076 Myrtle Street Inflow=4.6 cfs 0.363 af
Primary=4.6 cfs 0.363 af

Total Runoff Area = 5.574 ac Runoff Volume = 1.295 af Average Runoff Depth = 2.79"
1.13% Pervious = 0.063 ac 98.87% Impervious = 5.511 ac

Time span=0.00-60.00 hrs, dt=0.01 hrs, 6001 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment1.1S: Onsite Area Runoff Area=77,085 sf 97.07% Impervious Runoff Depth=4.14"
Tc=6.0 min CN=96 Runoff=7.8 cfs 0.610 af

Subcatchment1.2S: Offsite Area Runoff Area=98,796 sf 99.77% Impervious Runoff Depth=4.36"
Tc=6.0 min CN=98 Runoff=10.2 cfs 0.825 af

Subcatchment2.1S: Onsite Area Runoff Area=21,392 sf 98.85% Impervious Runoff Depth=4.25"
Tc=6.0 min CN=97 Runoff=2.2 cfs 0.174 af

Subcatchment2.2S: Offsite Area Runoff Area=45,519 sf 100.00% Impervious Runoff Depth=4.36"
Tc=6.0 min CN=98 Runoff=4.7 cfs 0.380 af

Pond 1P: ESMH 2223 18" SS Peak Elev=42.04' Inflow=7.8 cfs 0.610 af
15.0" Round Culvert n=0.013 L=54.5' S=0.0406 '/' Outflow=7.8 cfs 0.610 af

Link POA-1: City Combined Infrastructure, ESMH-2150 Pearl Street Inflow=18.0 cfs 1.435 af
Primary=18.0 cfs 1.435 af

Link POA-2: City Combined Infrastructure, ESMH-2076 Myrtle Street Inflow=6.9 cfs 0.554 af
Primary=6.9 cfs 0.554 af

Total Runoff Area = 5.574 ac Runoff Volume = 1.988 af Average Runoff Depth = 4.28"
1.13% Pervious = 0.063 ac 98.87% Impervious = 5.511 ac

Summary for Subcatchment 1.1S: Onsite Area

Runoff = 9.9 cfs @ 12.08 hrs, Volume= 0.786 af, Depth= 5.33"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-YEAR Rainfall=5.80"

	Area (sf)	CN	Description
*	74,829	98	Paved parking & Roofs
	2,256	39	>75% Grass cover, Good, HSG A
	77,085	96	Weighted Average
	2,256		2.93% Pervious Area
	74,829		97.07% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Direct Entry**

Summary for Subcatchment 1.2S: Offsite Area

Runoff = 12.9 cfs @ 12.08 hrs, Volume= 1.051 af, Depth= 5.56"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-YEAR Rainfall=5.80"

	Area (sf)	CN	Description
*	98,565	98	Paved parking & Roofs
	231	39	>75% Grass cover, Good, HSG A
	98,796	98	Weighted Average
	231		0.23% Pervious Area
	98,565		99.77% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Direct Entry**

Summary for Subcatchment 2.1S: Onsite Area

Runoff = 2.8 cfs @ 12.08 hrs, Volume= 0.223 af, Depth= 5.44"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-YEAR Rainfall=5.80"

	Area (sf)	CN	Description
*	21,146	98	Paved parking & Roofs
	246	39	>75% Grass cover, Good, HSG A
	21,392	97	Weighted Average
	246		1.15% Pervious Area
	21,146		98.85% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Direct Entry**

Summary for Subcatchment 2.2S: Offsite Area

Runoff = 5.9 cfs @ 12.08 hrs, Volume= 0.484 af, Depth= 5.56"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-YEAR Rainfall=5.80"

	Area (sf)	CN	Description
*	45,519	98	Paved parking & Roofs
	45,519		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Direct Entry**

Summary for Pond 1P: ESMH 2223 18" SS

Inflow Area = 1.770 ac, 97.07% Impervious, Inflow Depth = 5.33" for 25-YEAR event
Inflow = 9.9 cfs @ 12.08 hrs, Volume= 0.786 af
Outflow = 9.9 cfs @ 12.08 hrs, Volume= 0.786 af, Atten= 0%, Lag= 0.0 min
Primary = 9.9 cfs @ 12.08 hrs, Volume= 0.786 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Peak Elev= 43.12' @ 12.08 hrs
Flood Elev= 48.67'

Device	Routing	Invert	Outlet Devices
#1	Primary	39.67'	**15.0" Round Culvert** L= 54.5' Ke= 0.500 Inlet / Outlet Invert= 39.67' / 37.46' S= 0.0406 '/' Cc= 0.900 n= 0.013 Clay tile, Flow Area= 1.23 sf

Primary OutFlow Max=9.9 cfs @ 12.08 hrs HW=43.11' TW=0.00' (Dynamic Tailwater)
└─**1=Culvert** (Inlet Controls 9.9 cfs @ 8.08 fps)

Summary for Link POA-1: City Combined Infrastructure, ESMH-2150 Pearl Street

Inflow Area = 4.038 ac, 98.59% Impervious, Inflow Depth = 5.46" for 25-YEAR event
Inflow = 22.8 cfs @ 12.08 hrs, Volume= 1.837 af
Primary = 22.8 cfs @ 12.08 hrs, Volume= 1.837 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs

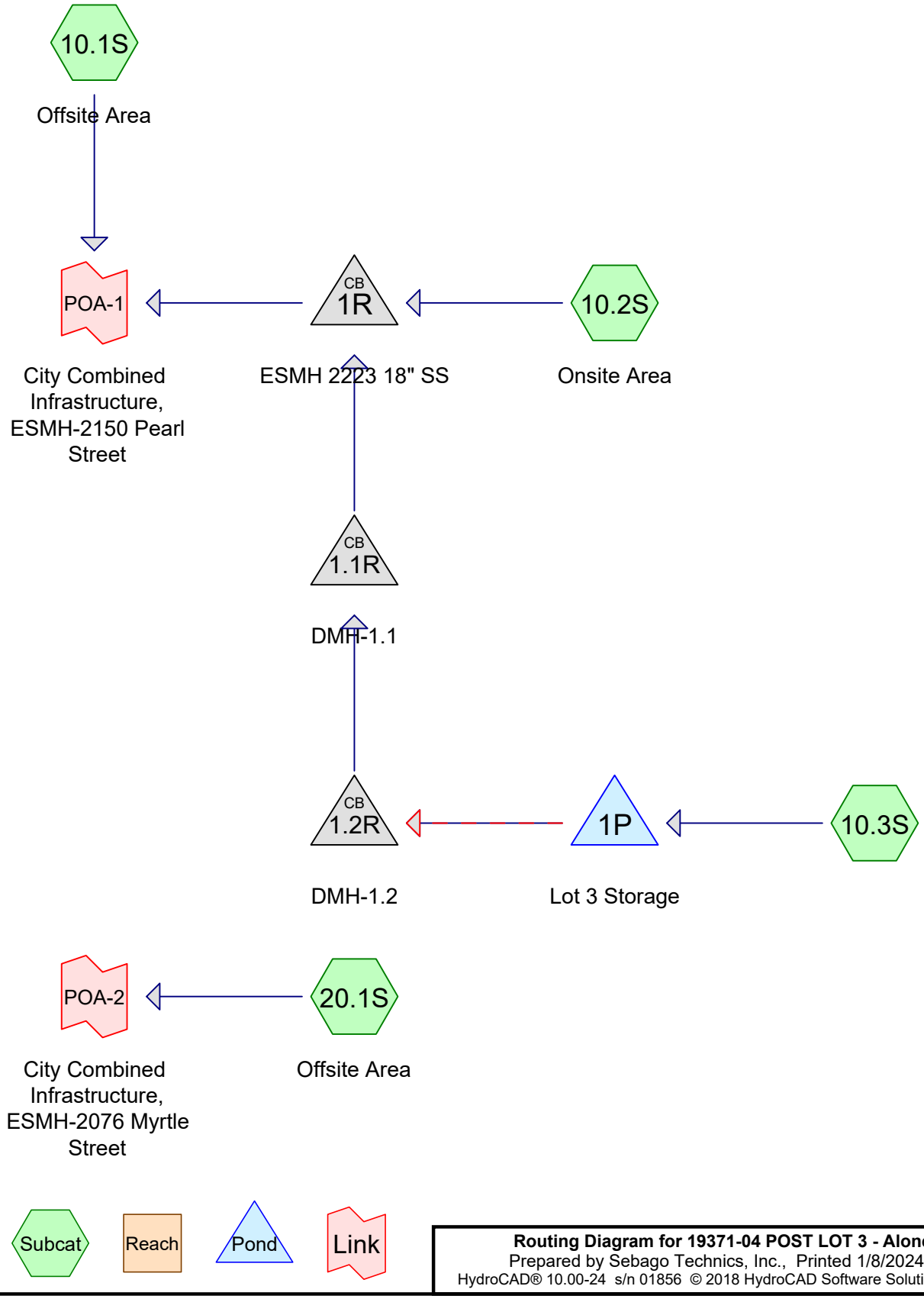
Summary for Link POA-2: City Combined Infrastructure, ESMH-2076 Myrtle Street

Inflow Area = 1.536 ac, 99.63% Impervious, Inflow Depth = 5.52" for 25-YEAR event
Inflow = 8.7 cfs @ 12.08 hrs, Volume= 0.707 af
Primary = 8.7 cfs @ 12.08 hrs, Volume= 0.707 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs

Appendix 1B

Hydrologic Modeling - Proposed Conditions (HydroCAD) Summary



Routing Diagram for 19371-04 POST LOT 3 - Alone
Prepared by Sebago Technics, Inc., Printed 1/8/2024
HydroCAD® 10.00-24 s/n 01856 © 2018 HydroCAD Software Solutions LLC

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.070	39	>75% Grass cover, Good, HSG A (10.1S, 10.2S, 20.1S)
5.504	98	Paved parking & Roofs (10.1S, 10.2S, 10.3S, 20.1S)
5.574	**97**	**TOTAL AREA**

Time span=0.00-60.00 hrs, dt=0.01 hrs, 6001 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment10.1S: Offsite Area Runoff Area=110,319 sf 98.74% Impervious Runoff Depth=0.71"
Tc=6.0 min CN=97 Runoff=2.1 cfs 0.149 af

Subcatchment10.2S: Onsite Area Runoff Area=68,007 sf 97.73% Impervious Runoff Depth=0.71"
Tc=6.0 min CN=97 Runoff=1.3 cfs 0.092 af

Subcatchment10.3S: Runoff Area=18,628 sf 100.00% Impervious Runoff Depth=0.79"
Tc=6.0 min CN=98 Runoff=0.4 cfs 0.028 af

Subcatchment20.1S: Offsite Area Runoff Area=45,838 sf 99.75% Impervious Runoff Depth=0.79"
Tc=6.0 min CN=98 Runoff=0.9 cfs 0.069 af

Pond 1.1R: DMH-1.1 Peak Elev=41.02' Inflow=0.0 cfs 0.028 af
18.0" Round Culvert n=0.012 L=168.0' S=0.0060 '/' Outflow=0.0 cfs 0.028 af

Pond 1.2R: DMH-1.2 Peak Elev=41.38' Inflow=0.0 cfs 0.028 af
18.0" Round Culvert n=0.012 L=47.0' S=0.0055 '/' Outflow=0.0 cfs 0.028 af

Pond 1P: Lot 3 Storage Peak Elev=43.48' Storage=636 cf Inflow=0.4 cfs 0.028 af
Outflow=0.0 cfs 0.028 af

Pond 1R: ESMH 2223 18" SS Peak Elev=40.18' Inflow=1.3 cfs 0.120 af
18.0" Round Culvert n=0.013 L=54.5' S=0.0406 '/' Outflow=1.3 cfs 0.120 af

Link POA-1: City Combined Infrastructure, ESMH-2150 Pearl Street Inflow=3.3 cfs 0.269 af
Primary=3.3 cfs 0.269 af

Link POA-2: City Combined Infrastructure, ESMH-2076 Myrtle Street Inflow=0.9 cfs 0.069 af
Primary=0.9 cfs 0.069 af

Total Runoff Area = 5.574 ac Runoff Volume = 0.338 af Average Runoff Depth = 0.73"
1.26% Pervious = 0.070 ac 98.74% Impervious = 5.504 ac

Time span=0.00-60.00 hrs, dt=0.01 hrs, 6001 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment10.1S: Offsite Area Runoff Area=110,319 sf 98.74% Impervious Runoff Depth=2.76"
Tc=6.0 min CN=97 Runoff=7.5 cfs 0.582 af

Subcatchment10.2S: Onsite Area Runoff Area=68,007 sf 97.73% Impervious Runoff Depth=2.76"
Tc=6.0 min CN=97 Runoff=4.6 cfs 0.359 af

Subcatchment10.3S: Runoff Area=18,628 sf 100.00% Impervious Runoff Depth=2.87"
Tc=6.0 min CN=98 Runoff=1.3 cfs 0.102 af

Subcatchment20.1S: Offsite Area Runoff Area=45,838 sf 99.75% Impervious Runoff Depth=2.87"
Tc=6.0 min CN=98 Runoff=3.2 cfs 0.251 af

Pond 1.1R: DMH-1.1 Peak Elev=41.48' Inflow=1.0 cfs 0.102 af
18.0" Round Culvert n=0.012 L=168.0' S=0.0060 '/' Outflow=1.0 cfs 0.102 af

Pond 1.2R: DMH-1.2 Peak Elev=41.83' Inflow=1.0 cfs 0.102 af
18.0" Round Culvert n=0.012 L=47.0' S=0.0055 '/' Outflow=1.0 cfs 0.102 af

Pond 1P: Lot 3 Storage Peak Elev=44.90' Storage=1,462 cf Inflow=1.3 cfs 0.102 af
Outflow=1.0 cfs 0.102 af

Pond 1R: ESMH 2223 18" SS Peak Elev=40.85' Inflow=5.5 cfs 0.461 af
18.0" Round Culvert n=0.013 L=54.5' S=0.0406 '/' Outflow=5.5 cfs 0.461 af

Link POA-1: City Combined Infrastructure, ESMH-2150 Pearl Street Inflow=13.0 cfs 1.043 af
Primary=13.0 cfs 1.043 af

Link POA-2: City Combined Infrastructure, ESMH-2076 Myrtle Street Inflow=3.2 cfs 0.251 af
Primary=3.2 cfs 0.251 af

Total Runoff Area = 5.574 ac Runoff Volume = 1.294 af Average Runoff Depth = 2.79"
1.26% Pervious = 0.070 ac 98.74% Impervious = 5.504 ac

Time span=0.00-60.00 hrs, dt=0.01 hrs, 6001 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment10.1S: Offsite Area Runoff Area=110,319 sf 98.74% Impervious Runoff Depth=4.25"
Tc=6.0 min CN=97 Runoff=11.3 cfs 0.897 af

Subcatchment10.2S: Onsite Area Runoff Area=68,007 sf 97.73% Impervious Runoff Depth=4.25"
Tc=6.0 min CN=97 Runoff=7.0 cfs 0.553 af

Subcatchment10.3S: Runoff Area=18,628 sf 100.00% Impervious Runoff Depth=4.36"
Tc=6.0 min CN=98 Runoff=1.9 cfs 0.156 af

Subcatchment20.1S: Offsite Area Runoff Area=45,838 sf 99.75% Impervious Runoff Depth=4.36"
Tc=6.0 min CN=98 Runoff=4.7 cfs 0.383 af

Pond 1.1R: DMH-1.1 Peak Elev=41.72' Inflow=1.4 cfs 0.156 af
18.0" Round Culvert n=0.012 L=168.0' S=0.0060 '/' Outflow=1.4 cfs 0.156 af

Pond 1.2R: DMH-1.2 Peak Elev=41.99' Inflow=1.4 cfs 0.156 af
18.0" Round Culvert n=0.012 L=47.0' S=0.0055 '/' Outflow=1.4 cfs 0.156 af

Pond 1P: Lot 3 Storage Peak Elev=45.32' Storage=1,671 cf Inflow=1.9 cfs 0.156 af
Outflow=1.4 cfs 0.156 af

Pond 1R: ESMH 2223 18" SS Peak Elev=41.36' Inflow=8.2 cfs 0.708 af
18.0" Round Culvert n=0.013 L=54.5' S=0.0406 '/' Outflow=8.2 cfs 0.708 af

Link POA-1: City Combined Infrastructure, ESMH-2150 Pearl Street Inflow=19.5 cfs 1.605 af
Primary=19.5 cfs 1.605 af

Link POA-2: City Combined Infrastructure, ESMH-2076 Myrtle Street Inflow=4.7 cfs 0.383 af
Primary=4.7 cfs 0.383 af

Total Runoff Area = 5.574 ac Runoff Volume = 1.988 af Average Runoff Depth = 4.28"
1.26% Pervious = 0.070 ac 98.74% Impervious = 5.504 ac

Summary for Subcatchment 10.1S: Offsite Area

Runoff = 14.3 cfs @ 12.08 hrs, Volume= 1.149 af, Depth= 5.44"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-YEAR Rainfall=5.80"

	Area (sf)	CN	Description
*	108,927	98	Paved parking & Roofs
	1,392	39	>75% Grass cover, Good, HSG A
	110,319	97	Weighted Average
	1,392		1.26% Pervious Area
	108,927		98.74% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Direct Entry**

Summary for Subcatchment 10.2S: Onsite Area

Runoff = 8.8 cfs @ 12.08 hrs, Volume= 0.708 af, Depth= 5.44"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-YEAR Rainfall=5.80"

	Area (sf)	CN	Description
*	66,461	98	Paved parking & Roofs
	1,546	39	>75% Grass cover, Good, HSG A
	68,007	97	Weighted Average
	1,546		2.27% Pervious Area
	66,461		97.73% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Direct**

Summary for Subcatchment 10.3S:

Runoff = 2.4 cfs @ 12.08 hrs, Volume= 0.198 af, Depth= 5.56"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-YEAR Rainfall=5.80"

	Area (sf)	CN	Description
*	18,628	98	Paved parking & Roofs
	18,628		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Direct**

Summary for Subcatchment 20.1S: Offsite Area

Runoff = 6.0 cfs @ 12.08 hrs, Volume= 0.488 af, Depth= 5.56"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-YEAR Rainfall=5.80"

	Area (sf)	CN	Description
*	45,722	98	Paved parking & Roofs
	116	39	>75% Grass cover, Good, HSG A
	45,838	98	Weighted Average
	116		0.25% Pervious Area
	45,722		99.75% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Direct Entry**

Summary for Pond 1.1R: DMH-1.1

Inflow Area = 0.428 ac,100.00% Impervious, Inflow Depth = 5.56" for 25-YEAR event
Inflow = 2.3 cfs @ 12.12 hrs, Volume= 0.198 af
Outflow = 2.3 cfs @ 12.12 hrs, Volume= 0.198 af, Atten= 0%, Lag= 0.0 min
Primary = 2.3 cfs @ 12.12 hrs, Volume= 0.198 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Peak Elev= 42.23' @ 12.11 hrs
Flood Elev= 48.60'

Device	Routing	Invert	Outlet Devices
#1	Primary	40.95'	**18.0" Round Culvert** L= 168.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 40.95' / 39.95' S= 0.0060 '/' Cc= 0.900 n= 0.012 Corrugated PP, smooth interior, Flow Area= 1.77 sf

Primary OutFlow Max=2.6 cfs @ 12.12 hrs HW=42.21' TW=41.93' (Dynamic Tailwater)
└**1=Culvert** (Outlet Controls 2.6 cfs @ 2.23 fps)

Summary for Pond 1.2R: DMH-1.2

Inflow Area = 0.428 ac,100.00% Impervious, Inflow Depth = 5.56" for 25-YEAR event
Inflow = 2.3 cfs @ 12.12 hrs, Volume= 0.198 af
Outflow = 2.3 cfs @ 12.12 hrs, Volume= 0.198 af, Atten= 0%, Lag= 0.0 min
Primary = 2.3 cfs @ 12.12 hrs, Volume= 0.198 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs

Peak Elev= 42.41' @ 12.12 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	41.31'	**18.0" Round Culvert** L= 47.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 41.31' / 41.05' S= 0.0055 '/' Cc= 0.900 n= 0.012, Flow Area= 1.77 sf

Primary OutFlow Max=2.2 cfs @ 12.12 hrs HW=42.39' TW=42.21' (Dynamic Tailwater)
└─**1=Culvert** (Outlet Controls 2.2 cfs @ 2.28 fps)

Summary for Pond 1P: Lot 3 Storage

Inflow Area =	0.428 ac,100.00% Impervious, Inflow Depth = 5.56" for 25-YEAR event			
Inflow =	2.4 cfs @	12.08 hrs, Volume=	0.198 af	
Outflow =	2.3 cfs @	12.12 hrs, Volume=	0.198 af, Atten= 7%, Lag= 1.9 min	
Primary =	2.3 cfs @	12.12 hrs, Volume=	0.198 af	

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Peak Elev= 45.52' @ 12.12 hrs Surf.Area= 391 sf Storage= 1,755 cf

Plug-Flow detention time= 202.6 min calculated for 0.198 af (100% of inflow)
Center-of-Mass det. time= 202.8 min (948.4 - 745.7)

Volume	Invert	Avail.Storage	Storage Description
#1	42.00'	1,885 cf	**48.0" Round Pipe Storage** x 2 L= 75.0'

Device	Routing	Invert	Outlet Devices
#1	Primary	41.31'	**18.0" Round Culvert** L= 47.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 41.31' / 41.05' S= 0.0055 '/' Cc= 0.900 n= 0.012, Flow Area= 1.77 sf
#2	Device 1	41.31'	**0.7" Vert. Orifice** C= 0.600
#3	Device 1	44.40'	**16.0" W x 3.0" H Vert. WQV Orifice** C= 0.600
#4	Device 1	45.40'	**5.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s)

Primary OutFlow Max=2.3 cfs @ 12.12 hrs HW=45.52' TW=42.39' (Dynamic Tailwater)
└─**1=Culvert** (Passes 2.3 cfs of 15.0 cfs potential flow)
  ├─**2=Orifice** (Orifice Controls 0.0 cfs @ 8.51 fps)
  ├─**3=WQV Orifice** (Orifice Controls 1.6 cfs @ 4.79 fps)
  └─**4=Sharp-Crested Rectangular Weir** (Weir Controls 0.6 cfs @ 1.11 fps)

Summary for Pond 1R: ESMH 2223 18" SS

Inflow Area =	1.989 ac, 98.22% Impervious, Inflow Depth = 5.47" for 25-YEAR event			
Inflow =	10.8 cfs @	12.10 hrs, Volume=	0.907 af	
Outflow =	10.8 cfs @	12.10 hrs, Volume=	0.907 af, Atten= 0%, Lag= 0.0 min	
Primary =	10.8 cfs @	12.10 hrs, Volume=	0.907 af	

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs

Peak Elev= 42.03' @ 12.10 hrs
Flood Elev= 48.67'

Device	Routing	Invert	Outlet Devices
#1	Primary	39.67'	**18.0" Round Culvert** L= 54.5' Ke= 0.500 Inlet / Outlet Invert= 39.67' / 37.46' S= 0.0406 '/' Cc= 0.900 n= 0.013 Clay tile, Flow Area= 1.77 sf

Primary OutFlow Max=10.8 cfs @ 12.10 hrs HW=42.02' TW=0.00' (Dynamic Tailwater)
└─**1=Culvert** (Inlet Controls 10.8 cfs @ 6.10 fps)

Summary for Link POA-1: City Combined Infrastructure, ESMH-2150 Pearl Street

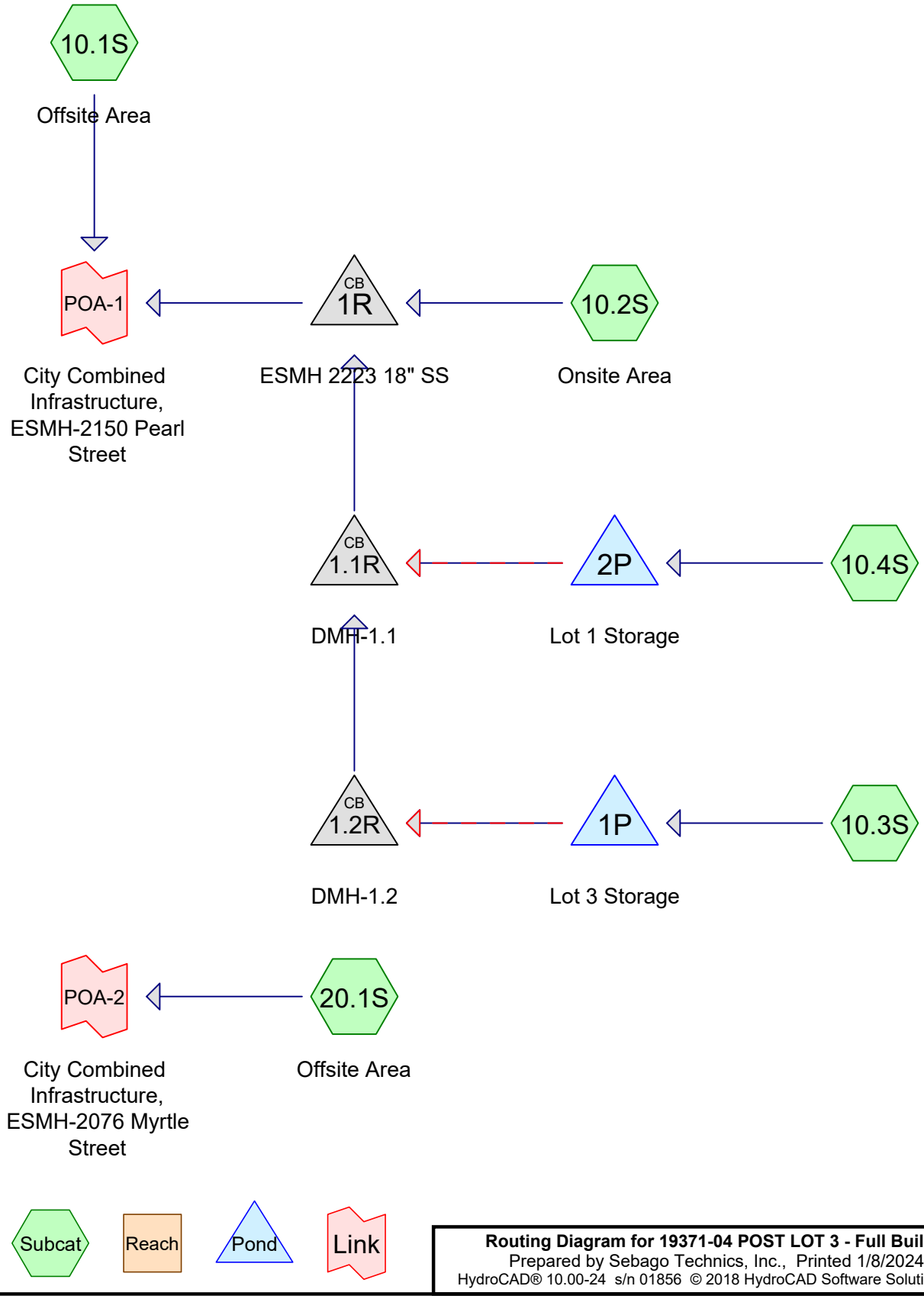
Inflow Area = 4.521 ac, 98.51% Impervious, Inflow Depth = 5.46" for 25-YEAR event
Inflow = 24.9 cfs @ 12.09 hrs, Volume= 2.056 af
Primary = 24.9 cfs @ 12.09 hrs, Volume= 2.056 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs

Summary for Link POA-2: City Combined Infrastructure, ESMH-2076 Myrtle Street

Inflow Area = 1.052 ac, 99.75% Impervious, Inflow Depth = 5.56" for 25-YEAR event
Inflow = 6.0 cfs @ 12.08 hrs, Volume= 0.488 af
Primary = 6.0 cfs @ 12.08 hrs, Volume= 0.488 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs



Routing Diagram for 19371-04 POST LOT 3 - Full Buildout
Prepared by Sebago Technics, Inc., Printed 1/8/2024
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Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.102	39	>75% Grass cover, Good, HSG A (10.1S, 10.2S, 20.1S)
5.472	98	Paved parking & Roofs (10.1S, 10.2S, 10.3S, 10.4S, 20.1S)
5.574	**97**	**TOTAL AREA**

Time span=0.00-60.00 hrs, dt=0.01 hrs, 6001 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment10.1S: Offsite Area Runoff Area=112,589 sf 97.74% Impervious Runoff Depth=0.71"
Tc=6.0 min CN=97 Runoff=2.1 cfs 0.152 af

Subcatchment10.2S: Onsite Area Runoff Area=40,187 sf 96.16% Impervious Runoff Depth=0.63"
Tc=6.0 min CN=96 Runoff=0.7 cfs 0.048 af

Subcatchment10.3S: Runoff Area=18,628 sf 100.00% Impervious Runoff Depth=0.79"
Tc=6.0 min CN=98 Runoff=0.4 cfs 0.028 af

Subcatchment10.4S: Runoff Area=23,708 sf 100.00% Impervious Runoff Depth=0.79"
Tc=6.0 min CN=98 Runoff=0.5 cfs 0.036 af

Subcatchment20.1S: Offsite Area Runoff Area=47,680 sf 99.23% Impervious Runoff Depth=0.79"
Tc=6.0 min CN=98 Runoff=1.0 cfs 0.072 af

Pond 1.1R: DMH-1.1 Peak Elev=41.24' Inflow=0.4 cfs 0.064 af
18.0" Round Culvert n=0.012 L=168.0' S=0.0060 '/' Outflow=0.4 cfs 0.064 af

Pond 1.2R: DMH-1.2 Peak Elev=41.39' Inflow=0.0 cfs 0.028 af
18.0" Round Culvert n=0.012 L=47.0' S=0.0055 '/' Outflow=0.0 cfs 0.028 af

Pond 1P: Lot 3 Storage Peak Elev=43.48' Storage=636 cf Inflow=0.4 cfs 0.028 af
Outflow=0.0 cfs 0.028 af

Pond 1R: ESMH 2223 18" SS Peak Elev=40.12' Inflow=1.0 cfs 0.113 af
18.0" Round Culvert n=0.013 L=54.5' S=0.0406 '/' Outflow=1.0 cfs 0.113 af

Pond 2P: Lot 1 Storage Peak Elev=45.42' Storage=362 cf Inflow=0.5 cfs 0.036 af
Outflow=0.4 cfs 0.036 af

Link POA-1: City Combined Infrastructure, ESMH-2150 Pearl Street Inflow=3.1 cfs 0.264 af
Primary=3.1 cfs 0.264 af

Link POA-2: City Combined Infrastructure, ESMH-2076 Myrtle Street Inflow=1.0 cfs 0.072 af
Primary=1.0 cfs 0.072 af

Total Runoff Area = 5.574 ac Runoff Volume = 0.337 af Average Runoff Depth = 0.72"
1.83% Pervious = 0.102 ac 98.17% Impervious = 5.472 ac

Time span=0.00-60.00 hrs, dt=0.01 hrs, 6001 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment10.1S: Offsite Area Runoff Area=112,589 sf 97.74% Impervious Runoff Depth=2.76"
Tc=6.0 min CN=97 Runoff=7.6 cfs 0.594 af

Subcatchment10.2S: Onsite Area Runoff Area=40,187 sf 96.16% Impervious Runoff Depth=2.65"
Tc=6.0 min CN=96 Runoff=2.7 cfs 0.204 af

Subcatchment10.3S: Runoff Area=18,628 sf 100.00% Impervious Runoff Depth=2.87"
Tc=6.0 min CN=98 Runoff=1.3 cfs 0.102 af

Subcatchment10.4S: Runoff Area=23,708 sf 100.00% Impervious Runoff Depth=2.87"
Tc=6.0 min CN=98 Runoff=1.6 cfs 0.130 af

Subcatchment20.1S: Offsite Area Runoff Area=47,680 sf 99.23% Impervious Runoff Depth=2.87"
Tc=6.0 min CN=98 Runoff=3.3 cfs 0.262 af

Pond 1.1R: DMH-1.1 Peak Elev=41.63' Inflow=1.8 cfs 0.232 af
18.0" Round Culvert n=0.012 L=168.0' S=0.0060 '/' Outflow=1.8 cfs 0.232 af

Pond 1.2R: DMH-1.2 Peak Elev=41.88' Inflow=1.0 cfs 0.102 af
18.0" Round Culvert n=0.012 L=47.0' S=0.0055 '/' Outflow=1.0 cfs 0.102 af

Pond 1P: Lot 3 Storage Peak Elev=44.90' Storage=1,462 cf Inflow=1.3 cfs 0.102 af
Outflow=1.0 cfs 0.102 af

Pond 1R: ESMH 2223 18" SS Peak Elev=40.68' Inflow=4.3 cfs 0.436 af
18.0" Round Culvert n=0.013 L=54.5' S=0.0406 '/' Outflow=4.3 cfs 0.436 af

Pond 2P: Lot 1 Storage Peak Elev=46.32' Storage=963 cf Inflow=1.6 cfs 0.130 af
Outflow=0.9 cfs 0.130 af

Link POA-1: City Combined Infrastructure, ESMH-2150 Pearl Street Inflow=11.9 cfs 1.030 af
Primary=11.9 cfs 1.030 af

Link POA-2: City Combined Infrastructure, ESMH-2076 Myrtle Street Inflow=3.3 cfs 0.262 af
Primary=3.3 cfs 0.262 af

Total Runoff Area = 5.574 ac Runoff Volume = 1.292 af Average Runoff Depth = 2.78"
1.83% Pervious = 0.102 ac 98.17% Impervious = 5.472 ac

Time span=0.00-60.00 hrs, dt=0.01 hrs, 6001 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment10.1S: Offsite Area Runoff Area=112,589 sf 97.74% Impervious Runoff Depth=4.25"
Tc=6.0 min CN=97 Runoff=11.5 cfs 0.915 af

Subcatchment10.2S: Onsite Area Runoff Area=40,187 sf 96.16% Impervious Runoff Depth=4.14"
Tc=6.0 min CN=96 Runoff=4.1 cfs 0.318 af

Subcatchment10.3S: Runoff Area=18,628 sf 100.00% Impervious Runoff Depth=4.36"
Tc=6.0 min CN=98 Runoff=1.9 cfs 0.156 af

Subcatchment10.4S: Runoff Area=23,708 sf 100.00% Impervious Runoff Depth=4.36"
Tc=6.0 min CN=98 Runoff=2.4 cfs 0.198 af

Subcatchment20.1S: Offsite Area Runoff Area=47,680 sf 99.23% Impervious Runoff Depth=4.36"
Tc=6.0 min CN=98 Runoff=4.9 cfs 0.398 af

Pond 1.1R: DMH-1.1 Peak Elev=41.80' Inflow=2.5 cfs 0.353 af
18.0" Round Culvert n=0.012 L=168.0' S=0.0060 '/' Outflow=2.5 cfs 0.353 af

Pond 1.2R: DMH-1.2 Peak Elev=42.04' Inflow=1.4 cfs 0.156 af
18.0" Round Culvert n=0.012 L=47.0' S=0.0055 '/' Outflow=1.4 cfs 0.156 af

Pond 1P: Lot 3 Storage Peak Elev=45.32' Storage=1,671 cf Inflow=1.9 cfs 0.156 af
Outflow=1.4 cfs 0.156 af

Pond 1R: ESMH 2223 18" SS Peak Elev=40.97' Inflow=6.3 cfs 0.671 af
18.0" Round Culvert n=0.013 L=54.5' S=0.0406 '/' Outflow=6.3 cfs 0.671 af

Pond 2P: Lot 1 Storage Peak Elev=47.11' Storage=1,528 cf Inflow=2.4 cfs 0.198 af
Outflow=1.1 cfs 0.198 af

Link POA-1: City Combined Infrastructure, ESMH-2150 Pearl Street Inflow=17.8 cfs 1.586 af
Primary=17.8 cfs 1.586 af

Link POA-2: City Combined Infrastructure, ESMH-2076 Myrtle Street Inflow=4.9 cfs 0.398 af
Primary=4.9 cfs 0.398 af

Total Runoff Area = 5.574 ac Runoff Volume = 1.985 af Average Runoff Depth = 4.27"
1.83% Pervious = 0.102 ac 98.17% Impervious = 5.472 ac

Summary for Subcatchment 10.1S: Offsite Area

Runoff = 14.6 cfs @ 12.08 hrs, Volume= 1.173 af, Depth= 5.44"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-YEAR Rainfall=5.80"

	Area (sf)	CN	Description
*	110,048	98	Paved parking & Roofs
	2,541	39	>75% Grass cover, Good, HSG A
	112,589	97	Weighted Average
	2,541		2.26% Pervious Area
	110,048		97.74% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Direct Entry**

Summary for Subcatchment 10.2S: Onsite Area

Runoff = 5.2 cfs @ 12.08 hrs, Volume= 0.410 af, Depth= 5.33"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-YEAR Rainfall=5.80"

	Area (sf)	CN	Description
*	38,642	98	Paved parking & Roofs
	1,545	39	>75% Grass cover, Good, HSG A
	40,187	96	Weighted Average
	1,545		3.84% Pervious Area
	38,642		96.16% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Direct**

Summary for Subcatchment 10.3S:

Runoff = 2.4 cfs @ 12.08 hrs, Volume= 0.198 af, Depth= 5.56"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-YEAR Rainfall=5.80"

	Area (sf)	CN	Description
*	18,628	98	Paved parking & Roofs
	18,628		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Direct**

Summary for Subcatchment 10.4S:

Runoff = 3.1 cfs @ 12.08 hrs, Volume= 0.252 af, Depth= 5.56"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-YEAR Rainfall=5.80"

	Area (sf)	CN	Description
*	23,708	98	Paved parking & Roofs
	23,708		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Direct**

Summary for Subcatchment 20.1S: Offsite Area

Runoff = 6.2 cfs @ 12.08 hrs, Volume= 0.507 af, Depth= 5.56"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-YEAR Rainfall=5.80"

	Area (sf)	CN	Description
*	47,313	98	Paved parking & Roofs
	367	39	>75% Grass cover, Good, HSG A
	47,680	98	Weighted Average
	367		0.77% Pervious Area
	47,313		99.23% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Direct Entry**

Summary for Pond 1.1R: DMH-1.1

Inflow Area = 0.972 ac,100.00% Impervious, Inflow Depth = 5.56" for 25-YEAR event
Inflow = 3.4 cfs @ 12.12 hrs, Volume= 0.450 af
Outflow = 3.4 cfs @ 12.12 hrs, Volume= 0.450 af, Atten= 0%, Lag= 0.0 min
Primary = 3.4 cfs @ 12.12 hrs, Volume= 0.450 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Peak Elev= 42.07' @ 12.12 hrs
Flood Elev= 48.60'

Device	Routing	Invert	Outlet Devices
#1	Primary	40.95'	**18.0" Round Culvert**

L= 168.0' CPP, square edge headwall, Ke= 0.500
Inlet / Outlet Invert= 40.95' / 39.95' S= 0.0060 '/' Cc= 0.900
n= 0.012 Corrugated PP, smooth interior, Flow Area= 1.77 sf

Primary OutFlow Max=3.5 cfs @ 12.12 hrs HW=42.07' TW=41.34' (Dynamic Tailwater)
└─**1=Culvert** (Outlet Controls 3.5 cfs @ 3.47 fps)

Summary for Pond 1.2R: DMH-1.2

Inflow Area = 0.428 ac,100.00% Impervious, Inflow Depth = 5.56" for 25-YEAR event
Inflow = 2.3 cfs @ 12.12 hrs, Volume= 0.198 af
Outflow = 2.3 cfs @ 12.12 hrs, Volume= 0.198 af, Atten= 0%, Lag= 0.0 min
Primary = 2.3 cfs @ 12.12 hrs, Volume= 0.198 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Peak Elev= 42.30' @ 12.12 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	41.31'	**18.0" Round Culvert** L= 47.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 41.31' / 41.05' S= 0.0055 '/' Cc= 0.900 n= 0.012, Flow Area= 1.77 sf

Primary OutFlow Max=2.2 cfs @ 12.12 hrs HW=42.29' TW=42.07' (Dynamic Tailwater)
└─**1=Culvert** (Outlet Controls 2.2 cfs @ 2.51 fps)

Summary for Pond 1P: Lot 3 Storage

Inflow Area = 0.428 ac,100.00% Impervious, Inflow Depth = 5.56" for 25-YEAR event
Inflow = 2.4 cfs @ 12.08 hrs, Volume= 0.198 af
Outflow = 2.3 cfs @ 12.12 hrs, Volume= 0.198 af, Atten= 7%, Lag= 1.9 min
Primary = 2.3 cfs @ 12.12 hrs, Volume= 0.198 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Peak Elev= 45.52' @ 12.12 hrs Surf.Area= 391 sf Storage= 1,755 cf

Plug-Flow detention time= 202.6 min calculated for 0.198 af (100% of inflow)
Center-of-Mass det. time= 202.8 min (948.4 - 745.7)

Volume	Invert	Avail.Storage	Storage Description
#1	42.00'	1,885 cf	**48.0" Round Pipe Storage** x 2 L= 75.0'

Device	Routing	Invert	Outlet Devices
#1	Primary	41.31'	**18.0" Round Culvert** L= 47.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 41.31' / 41.05' S= 0.0055 '/' Cc= 0.900 n= 0.012, Flow Area= 1.77 sf
#2	Device 1	41.31'	**0.7" Vert. Orifice** C= 0.600
#3	Device 1	44.40'	**16.0" W x 3.0" H Vert. WQV Orifice** C= 0.600
#4	Device 1	45.40'	**5.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s)

Primary OutFlow Max=2.3 cfs @ 12.12 hrs HW=45.52' TW=42.29' (Dynamic Tailwater)
└─**1=Culvert** (Passes 2.3 cfs of 15.3 cfs potential flow)
  ├─**2=Orifice** (Orifice Controls 0.0 cfs @ 8.65 fps)
  ├─**3=WQV Orifice** (Orifice Controls 1.6 cfs @ 4.79 fps)
  └─**4=Sharp-Crested Rectangular Weir** (Weir Controls 0.6 cfs @ 1.11 fps)

Summary for Pond 1R: ESMH 2223 18" SS

Inflow Area =	1.894 ac, 98.13% Impervious, Inflow Depth = 5.45" for 25-YEAR event				
Inflow =	8.4 cfs @	12.10 hrs,	Volume=	0.860 af	
Outflow =	8.4 cfs @	12.10 hrs,	Volume=	0.860 af,	Atten= 0%, Lag= 0.0 min
Primary =	8.4 cfs @	12.10 hrs,	Volume=	0.860 af	

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Peak Elev= 41.39' @ 12.10 hrs
Flood Elev= 48.67'

Device	Routing	Invert	Outlet Devices
#1	Primary	39.67'	**18.0" Round Culvert** L= 54.5' Ke= 0.500 Inlet / Outlet Invert= 39.67' / 37.46' S= 0.0406 '/' Cc= 0.900 n= 0.013 Clay tile, Flow Area= 1.77 sf

Primary OutFlow Max=8.3 cfs @ 12.10 hrs HW=41.38' TW=0.00' (Dynamic Tailwater)
└─**1=Culvert** (Inlet Controls 8.3 cfs @ 4.72 fps)

Summary for Pond 2P: Lot 1 Storage

Inflow Area =	0.544 ac,100.00% Impervious, Inflow Depth = 5.56" for 25-YEAR event				
Inflow =	3.1 cfs @	12.08 hrs,	Volume=	0.252 af	
Outflow =	1.3 cfs @	12.27 hrs,	Volume=	0.252 af,	Atten= 57%, Lag= 11.1 min
Primary =	1.3 cfs @	12.27 hrs,	Volume=	0.252 af	

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Peak Elev= 47.90' @ 12.27 hrs Surf.Area= 533 sf Storage= 2,021 cf

Plug-Flow detention time= 40.3 min calculated for 0.252 af (100% of inflow)
Center-of-Mass det. time= 40.5 min (786.1 - 745.7)

Volume	Invert	Avail.Storage	Storage Description
#1	44.55'	2,262 cf	**48.0" Round Pipe Storage** x 2 L= 90.0'

Device	Routing	Invert	Outlet Devices
#1	Primary	44.55'	**12.0" Round Culvert** L= 4.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 44.55' / 44.43' S= 0.0300 '/' Cc= 0.900 n= 0.012 Corrugated PP, smooth interior, Flow Area= 0.79 sf
#2	Device 1	44.55'	**0.6" Vert. Orifice** C= 0.600
#3	Device 1	45.10'	**8.0" W x 3.0" H Vert. WQV Orifice** C= 0.600
#4	Device 1	48.02'	**5.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s)

Primary OutFlow Max=1.3 cfs @ 12.27 hrs HW=47.90' TW=41.80' (Dynamic Tailwater)
└─**1=Culvert** (Passes 1.3 cfs of 6.4 cfs potential flow)
  ├─**2=Orifice** (Orifice Controls 0.0 cfs @ 8.77 fps)
  ├─**3=WQV Orifice** (Orifice Controls 1.3 cfs @ 7.87 fps)
  └─**4=Sharp-Crested Rectangular Weir** (Controls 0.0 cfs)

Summary for Link POA-1: City Combined Infrastructure, ESMH-2150 Pearl Street

Inflow Area = 4.479 ac, 97.91% Impervious, Inflow Depth = 5.45" for 25-YEAR event
Inflow = 22.7 cfs @ 12.09 hrs, Volume= 2.033 af
Primary = 22.7 cfs @ 12.09 hrs, Volume= 2.033 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs

Summary for Link POA-2: City Combined Infrastructure, ESMH-2076 Myrtle Street

Inflow Area = 1.095 ac, 99.23% Impervious, Inflow Depth = 5.56" for 25-YEAR event
Inflow = 6.2 cfs @ 12.08 hrs, Volume= 0.507 af
Primary = 6.2 cfs @ 12.08 hrs, Volume= 0.507 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs

Appendix 2

Inspection, Maintenance and Housekeeping Plan

INSPECTION, MAINTENANCE, AND HOUSEKEEPING PLAN

For:
385 CONGRESS STREET
LOT 3 OF 385 CONGRESS STREET SUBDIVISION
PORTLAND, MAINE

By:
Sebago Technics, Inc.
75 John Roberts Road, Suite 4A
South Portland, Maine

Introduction

The following plan outlines the anticipated inspection and maintenance procedures for the erosion and sedimentation control measures and stormwater management facilities for the project. This plan outlines housekeeping requirements that shall be followed during and after construction. These procedures shall be followed to ensure the intended function of the designed measures and to prevent unreasonably adverse impacts to the surrounding environment.

The procedures outlined in this Inspection, Maintenance and Housekeeping Plan are provided as an overview of the anticipated practices to be used on this site. In some instances, additional measures may be required due to unexpected conditions. For additional detail on any of the erosion and sedimentation control measures or stormwater management devices to be utilized on this project, refer to the most recently revised edition of the "Maine Erosion and Sedimentation Control BMP" manual and/or the "Stormwater Management for Maine: Best Management Practices" manual as published by the Maine Department of Environmental Protection (MDEP).

During Construction

1. **Inspection:** During construction, it is the Contractor's responsibility to comply with the inspection and maintenance procedures outlined in this section. These responsibilities include inspecting disturbed and impervious areas, erosion control measures, materials storage areas that are exposed to precipitation, and locations where vehicles enter or exit the site. These areas shall be inspected at least once a week as well as before and after a storm event (0.5" of rainfall), and prior to completing permanent stabilization measures. A person with knowledge of erosion and stormwater control, including the standards and conditions in any applicable permits, shall conduct the inspections.

2. **Maintenance:** All measures shall be maintained in an effective operating condition until areas are permanently stabilized. If Best Management Practices (BMPs) need to be maintained or modified, additional BMPs are necessary, or other corrective action is needed, implementation must be completed within 7 calendar days and prior to any storm event (0.5" of rainfall).

3. **Documentation:** A log summarizing the inspections and any corrective action taken must be maintained on-site. The log must include the name(s) and qualifications of the person making the inspections, the date(s) of the inspections, and major observations about the operation and maintenance of erosion and sedimentation controls, material storage areas, and vehicle access

points to the site. Major observations must include BMPs that need maintenance, BMPs that failed to operate as designed or proved inadequate for a particular location, and locations where additional BMPs are needed. For each BMP requiring maintenance, BMP needing replacement, and location needing additional BMPs, note in the log the corrective action taken and when it was taken. The log must be made accessible to the appropriate regulatory agency upon request. The permittee shall retain a copy of the log for a period of at least three years from the completion of permanent stabilization.

4. **Specific Inspection and Maintenance Tasks:** The following is a list of erosion control and stormwater management measures and the specific inspection and maintenance tasks to be performed during construction.

A. Sediment Barriers:

- Hay bale barriers, silt fences, and filter berms shall be inspected immediately after each rainfall and at least daily during prolonged rainfall.
- If the fabric on a silt fence or filter barrier should decompose or become ineffective prior to the end of the expected usable life and the barrier is still necessary, it shall be replaced.
- Sediment deposits should be removed after each storm event (0.5" of rainfall). They must be removed before deposits reach approximately one-half the height of the barrier.
- Filter berms shall be reshaped as needed.
- Any sediment deposits remaining in place after the silt fence or filter barrier is no longer required should be dressed to conform to the existing grade, prepared, and seeded.

B. Erosion Control Blankets:

- Inspect these reinforced areas semi-annually and after significant rainfall events for slumping, sliding, seepage, and scour. Pay close attention to unreinforced areas adjacent to the erosion control blankets, which may experience accelerated erosion.
- Review all applicable inspection and maintenance procedures recommended by the specific blanket manufacturer. These tasks shall be included in addition to the requirements of this plan.

C. Stabilized Construction Entrances/Exits:

- The exit shall be maintained in a condition that will prevent tracking of sediment onto public rights-of-way.
- When the control pad becomes ineffective, the stone shall be removed along with the collected soil material. The entrance should then be reconstructed.
- Areas that have received mud-tracking or sediment deposits shall be swept or washed. Washing shall be done on an area stabilized with aggregate, which drains into an approved sediment-trapping device (not into storm drains, ditches, or waterways).

D. Temporary Seed and Mulch:

- Mulched areas should be inspected after rain events to check for rill erosion.
- If less than 90% of the soil surface is covered by mulch, additional mulch shall be applied in bare areas.
- In applications where seeding and mulch have been applied in conjunction with erosion control blankets, the blankets must be inspected after rain events for dislocation or undercutting.
- Mulch shall continue to be reapplied until 95% of the soil surface has established temporary vegetative cover.

E. Stabilized Temporary Drainage Swales:

- Sediment accumulation in the swale shall be removed once the cross section of the swale is reduced by 25%.
- The swales shall be inspected after rainfall events. Any evidence of sloughing of the side slopes or channel erosion shall be repaired and corrective action should be taken to prevent reoccurrence of the problem.
- In addition to the stabilized lining of the channel (i.e., erosion control blankets), stone check dams may be needed to further reduce channel velocity.

F. Catch basins:

- Inspect and, if required, clean-out basins at least once a year, preferably in early spring.
- Cleaning of catch basins will be required when sediment of at least 6 inches accumulates in the sump.
- Clean out must include the removal and legal disposal of accumulated sediments and debris at the bottom of the basin, at any inlet grates, at any inflow channels to the basin, and at any pipes between basins.

5. **Housekeeping:** The following general performance standards apply to the proposed project.

A. Spill prevention: Controls must be used to prevent pollutants from being discharged from materials on-site, including storage practices to minimize exposure of the materials to stormwater, and appropriate spill prevention, containment, and response planning and implementation.

B. Groundwater protection: During construction, liquid petroleum products and other hazardous materials with the potential to contaminate groundwater may not be stored or handled in areas of the site draining to an infiltration area. An "infiltration area" is any area of the site that by design or as a result of soils, topography and other relevant factors, accumulates runoff that infiltrates into the soil. Dikes, berms, sumps, and other forms of secondary containment that prevent discharge to groundwater may be used to isolate portions of the site for the purposes of storage and handling of these materials.

C. Fugitive sediment and dust: Actions must be taken to ensure that activities do not result in noticeable erosion of soils or fugitive dust emissions during or after construction. Oil

may not be used for dust control.

D. Debris and other materials: Litter, construction debris, and chemicals exposed to stormwater must be prevented from becoming a pollutant source.

E. Trench or foundation dewatering: Trench dewatering is the removal of water from trenches, foundations, cofferdams, ponds, and other areas within the construction area that retain water after excavation. In most cases, the collected water is heavily silted and hinders correct and safe construction practices. The collected water must be removed from the ponded area, either through gravity or pumping, and must be spread through natural wooded buffers or removed to areas that are specifically designed to collect the maximum amount of sediment possible, like a cofferdam sedimentation basin. Avoid allowing the water to flow over disturbed areas of the site. Equivalent measures may be taken if approved.

Post-Construction

1. **Inspection:** After construction, it is the responsibility of the owner or assigned heirs to comply with the inspection and maintenance procedures outlined in this section. All measures must be maintained in effective operating condition. The owner shall inspect and maintain the BMPs, including but not limited to any parking areas, catch basins, drainage swales, treatment and detention systems, pipes and related structures, in accordance with municipal and state inspection, cleaning and maintenance requirements of the approved post-construction stormwater management plan.

2. **Specific Inspection and Maintenance Tasks:** The following is a list of permanent erosion control and stormwater management measures and the inspection and maintenance tasks to be performed after construction. If the BMP requires maintenance, repair or replacement to function as intended by the approved post-construction stormwater management plan, the owner or operator of the BMP shall take corrective action(s) to address the deficiency or deficiencies as soon as possible after the deficiency is discovered and shall provide a record of the deficiency and corrective action(s) to the local municipality in the annual report.

A. Vegetated Areas:

- Inspect vegetated areas, particularly slopes and embankments, early in the growing season or after heavy rains (>0.5”) to identify active or potential erosion problems.
- Replant bare areas or areas with sparse growth. Where rill erosion is evident, armor the area with an appropriate lining or divert the erosive flows to on-site areas able to withstand the concentrated flows.

B. Removal of Winter Sand:

- Clear accumulations of winter sand in parking lots.
- Accumulations on pavement may be removed by pavement sweeping.

3. Documentation:

A. The owner or operator of a BMP or a qualified post-construction stormwater inspector hired by that person, shall, as required by the local municipality, provide a completed and signed certification on a form provided by the local municipality, certifying that the person has inspected the BMP(s) and that they are adequately maintained and functioning as intended by the approved post-construction stormwater management plan, or that they required maintenance or repair, including the record of the deficiency and corrective action(s) taken.

B. A log summarizing the inspections and any corrective action taken must be maintained. The log must include the name(s) and qualifications of the person making the inspections, the date(s) of the inspections, and major observations about the operation and maintenance of controls. Major observations must include BMPs that need maintenance, BMPs that failed to operate as designed or proved inadequate for a particular location, and locations where additional BMPs are needed. For each BMP requiring maintenance, BMP needing replacement, and location needing additional BMPs, note in the log the corrective action taken and when it was taken. The log must be made accessible to the appropriate regulatory agency upon request. A sample "Stormwater Inspection and Maintenance Form" has been included as Attachment 1 of this Inspection, Maintenance, and Housekeeping Plan.

4. Duration of Maintenance: Perform maintenance as described and required for any associated permits unless and until the system is formally accepted by a municipality or quasi-municipal district, or is placed under the jurisdiction of a legally created association that will be responsible for the maintenance of the system. Upon such assumption of responsibility, the association becomes a co-permittee for this purpose only and must comply with all terms and conditions of the permit.

Appendix 3

Subsurface Investigations

Soil Map—Cumberland County and Part of Oxford County, Maine

Map Scale: 1:1,330 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 15 30 60 90

Feet: 0 50 100 200 300

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 19N WGS84

MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features

- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features

- Streams and Canals

Transportation

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background

- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Cumberland County and Part of Oxford County, Maine
Survey Area Data: Version 18, Aug 31, 2021

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jul 22, 2021—Oct 7, 2021

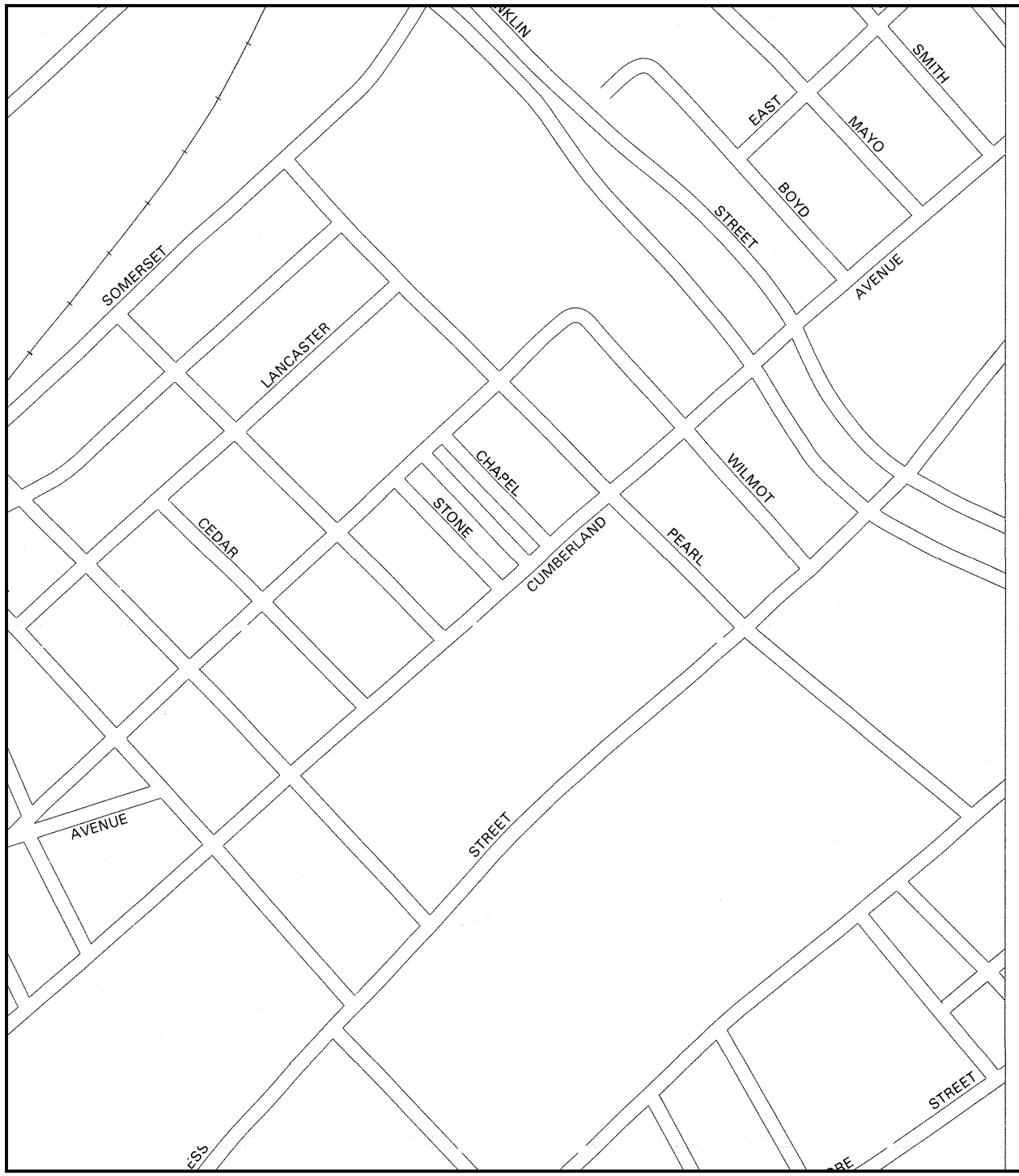
The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
HIB	Hinckley loamy sand, 3 to 8 percent slopes	3.0	100.0%
Totals for Area of Interest		**3.0**	**100.0%**

Appendix 4

Flood Insurance Rate Map



APPROXIMATE SCALE

400 0 400 FEET

NATIONAL FLOOD INSURANCE PROGRAM

FIRM
FLOOD INSURANCE RATE MAP

CITY OF
PORTLAND, MAINE
CUMBERLAND COUNTY

PANEL 13 OF 17
(SEE MAP INDEX FOR PANELS NOT PRINTED)

COMMUNITY-PANEL NUMBER
230051 0013 B

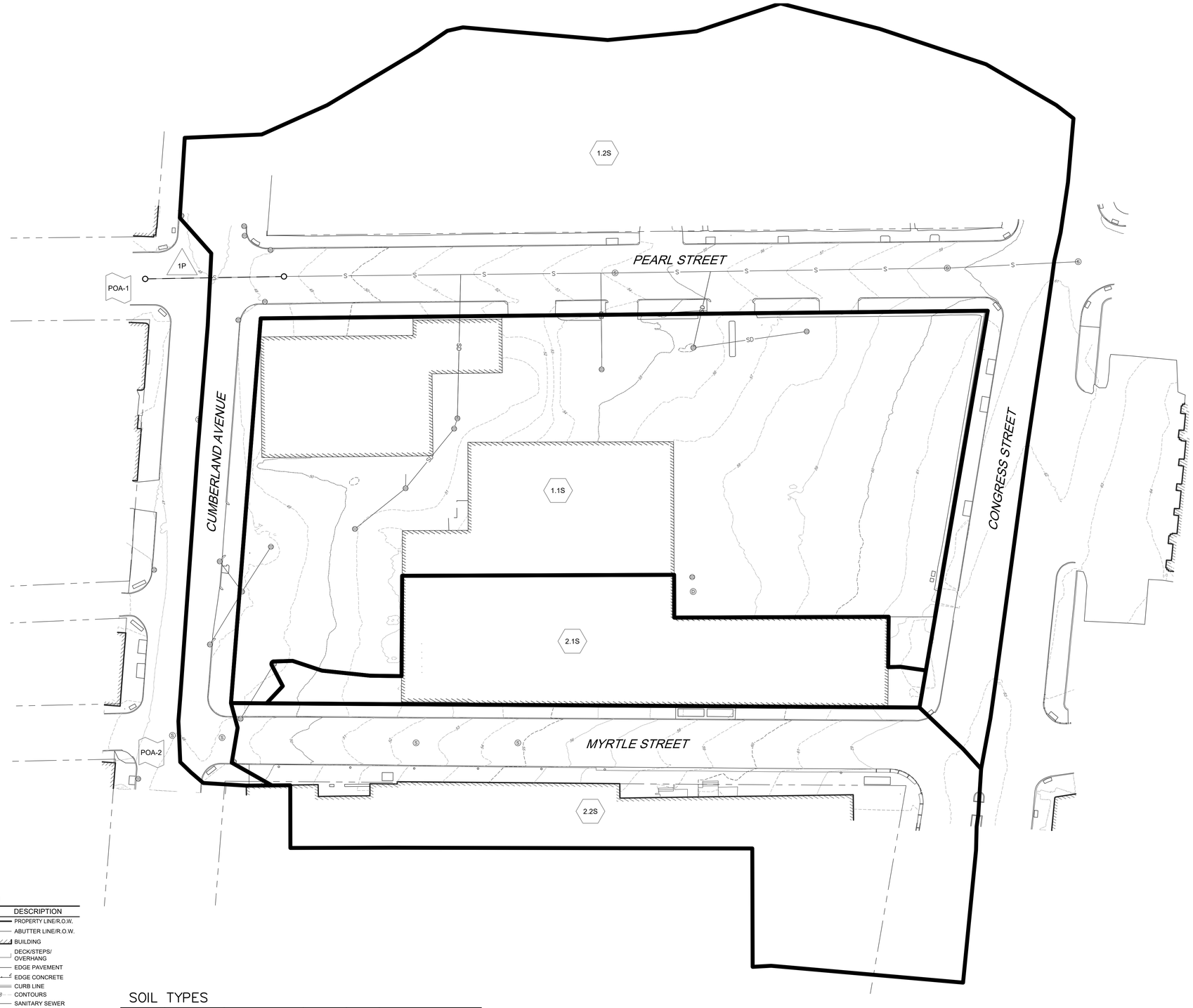
EFFECTIVE DATE:
JULY 17, 1986

Federal Emergency Management Agency

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov

Appendix 5

Stormwater Management Plans



LOT 3 BUILDOUT:

STORMWATER PEAK DISCHARGE SUMMARY TABLE						
POINT OF ANALYSIS	2-YEAR STORM		10-YEAR STORM		25-YEAR STORM	
	PRE (CFS)	POST (CFS)	PRE (CFS)	POST (CFS)	PRE (CFS)	POST (CFS)
POA-1	11.9	13.0	18.0	19.5	22.8	24.9
POA-2	4.6	3.2	6.9	4.7	8.7	6.0

FUTURE BUILDOUT:

STORMWATER PEAK DISCHARGE SUMMARY TABLE						
POINT OF ANALYSIS	2-YEAR STORM		10-YEAR STORM		25-YEAR STORM	
	PRE (CFS)	POST (CFS)	PRE (CFS)	POST (CFS)	PRE (CFS)	POST (CFS)
POA-1	11.9	11.9	18.0	17.8	22.8	22.7
POA-2	4.6	3.3	6.9	4.9	8.7	6.2

EXISTING CONDITIONS LEGEND

- WATERSHED BOUNDARY
- A — B: TIME OF CONCENTRATION
- REACH
- #### : SUBCATCHMENT LABEL
- #### : REACH
- #### : POINT OF ANALYSIS
- #### : STORMWATER TREATMENT/DETENTION POND
- HSG # / HSG #: SOILS BOUNDARY

LEGEND

EXISTING	DESCRIPTION
	PROPERTY LINE/R.O.W.
	ABUTTER LINE/R.O.W.
	BUILDING
	DECK/STEPS/ OVERHANG
	EDGE PAVEMENT
	EDGE CONCRETE
	CURB LINE
120 118	CONTOURS
S	SANITARY SEWER
Ⓢ	SANITARY MANHOLE
SD	STORM DRAIN
Ⓓ	DRAINAGE MANHOLE
	CATCH BASIN

SOIL TYPES

SYMBOL	SOIL SERIES	PHASE	SLOPE	HSG	DRAINAGE CLASS
HIB	HINCKLEY	LOAMY SAND	3–8%	A	EXCESSIVELY DRAINED

NOTES:

1. EXISTING CONDITIONS INFORMATION IS BASED ON AN ELECTRONIC SURVEY FILE PREPARED BY SEBAGO TECHINCS, INC. IN DECEMBER 2019. TOPOGRAPHIC INFORMATION IS BASED ON A COMBINATION OF SURVEYED DATA WITHIN THE LIMITS OF PROPOSED WORK.
2. ON-SITE SOIL INFORMATION IS BASED ON THE NATURAL RESOURCES CONSERVATION SERVICE (NRCS) CUSTOM SOIL RESOURCE REPORT FOR CUMBERLAND COUNTY, MAINE, DATED MAY 26, 2022.

GRAPHIC SCALE
30 0 15 30 60
(IN FEET)
1 INCH = 30 FT.

DANIEL L. RILEY, PE 9987

REV.	BY:	DATE:	STATUS:
A	DLR	01/08/2024	SUBMITTED FOR SITE PLAN REVIEW

THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM SEBAGO TECHNICS, INC. ANY ALTERATIONS, ALTHOUGH OTHERWISE SEALED, THE USER'S SOLE RISK AND WITHOUT LIABILITY TO SEBAGO TECHNICS, INC.

SEBAGO TECHNICS
WWW.SEBAGOTECHNICS.COM
75 John Roberts Rd.
Suite A
South Portland, ME 04106
Tel. 207-200-2100

EXISTING CONDITIONS SWM PLAN

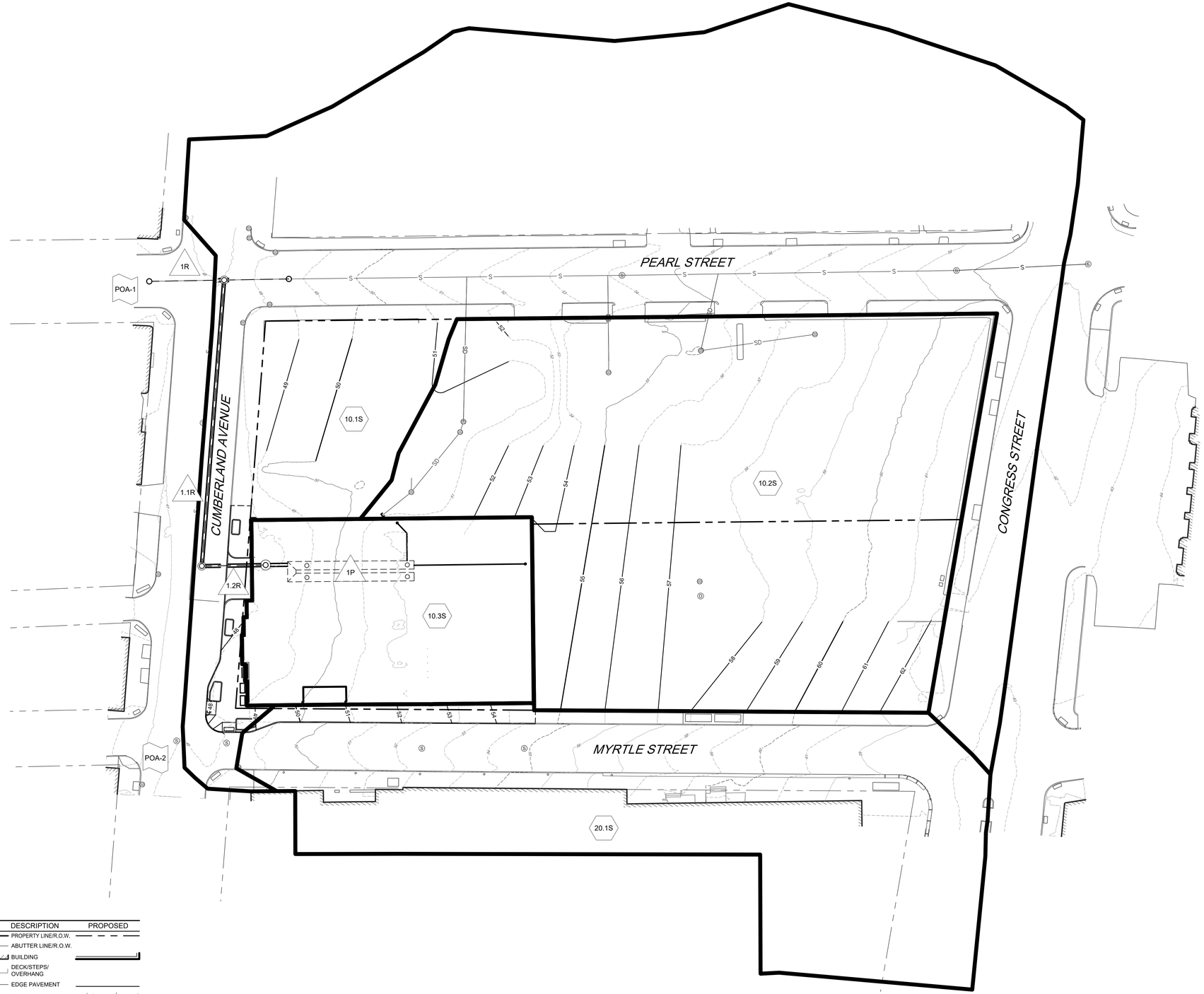
OF:
HERALD SQUARE 385 CONGRESS STREET LOT 3
385 CONGRESS STREET
PORTLAND, MAINE

FOR:
LINCOLN AVENUE CAPITAL NORTHEAST DEVELOPERS, LLC
14 HARVEST WAY
NEWMARKET, NH 03857

DESIGNED	DJS
DRAWN	DJS
CHECKED	DLR
DATE	01/08/24
SCALE	1" = 30'
PROJECT	19371-04

SHEET 1 OF 3

19371-04 SVP.dwg, TAB:PRE



LOT 3 BUILDOUT:

STORMWATER PEAK DISCHARGE SUMMARY TABLE						
POINT OF ANALYSIS	2-YEAR STORM		10-YEAR STORM		25-YEAR STORM	
	PRE (CFS)	POST (CFS)	PRE (CFS)	POST (CFS)	PRE (CFS)	POST (CFS)
POA-1	11.9	13.0	18.0	19.5	22.8	24.9
POA-2	4.6	3.2	6.9	4.7	8.7	6.0

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STORMWATER PEAK DISCHARGE SUMMARY TABLE						
POINT OF ANALYSIS	2-YEAR STORM		10-YEAR STORM		25-YEAR STORM	
	PRE (CFS)	POST (CFS)	PRE (CFS)	POST (CFS)	PRE (CFS)	POST (CFS)
POA-1	11.9	11.9	18.0	17.8	22.8	22.7
POA-2	4.6	3.3	6.9	4.9	8.7	6.2

PROPOSED CONDITIONS LEGEND

- WATERSHED BOUNDARY
- A — B: TIME OF CONCENTRATION
- REACH
- #### : SUBCATCHMENT LABEL
- #### : REACH
- #### : POINT OF ANALYSIS
- #### : STORMWATER TREATMENT/DETENTION POND
- HSG # / HSG #: SOILS BOUNDARY

LEGEND

EXISTING	DESCRIPTION	PROPOSED
	PROPERTY LINE/R.O.W.	
	ABUTTER LINE/R.O.W.	
	BUILDING	
	DECK/STEPS/ OVERHANG	
	EDGE PAVEMENT	
	EDGE CONCRETE	
	CURB LINE	
120 118	CONTOURS	120
SD	STORM DRAIN	SD
D	DRAINAGE MANHOLE	
	CATCH BASIN	

SOIL TYPES

SYMBOL	SOIL SERIES	PHASE	SLOPE	HSG	DRAINAGE CLASS
HIB	HINCKLEY	LOAMY SAND	3–8%	A	EXCESSIVELY DRAINED

NOTES:

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2. ON-SITE SOIL INFORMATION IS BASED ON THE NATURAL RESOURCES CONSERVATION SERVICE (NRCS) CUSTOM SOIL RESOURCE REPORT FOR CUMBERLAND COUNTY, MAINE, DATED MAY 26, 2022.

GRAPHIC SCALE
30 0 15 30 60
(IN FEET)
1 INCH = 30 FT.

DANIEL L. RILEY, PE 9987

REV.	BY:	DATE:	STATUS:
A	DLR	01/08/2024	SUBMITTED FOR SITE PLAN REVIEW

THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM SEBAGO TECHNICS, INC. ANY ALTERATIONS, AUTHORIZED OR OTHERWISE, SHALL LIE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO SEBAGO TECHNICS, INC.

SEBAGO TECHNICS
WWW.SEBAGOTECHNICS.COM
75 John Roberts Rd.
Suite A
South Portland, ME 04106
Tel. 207-200-2100

PROPOSED CONDITIONS SWM PLAN - ALONE

OF:

HERALD SQUARE 385 CONGRESS STREET LOT 3

385 CONGRESS STREET
PORTLAND, MAINE

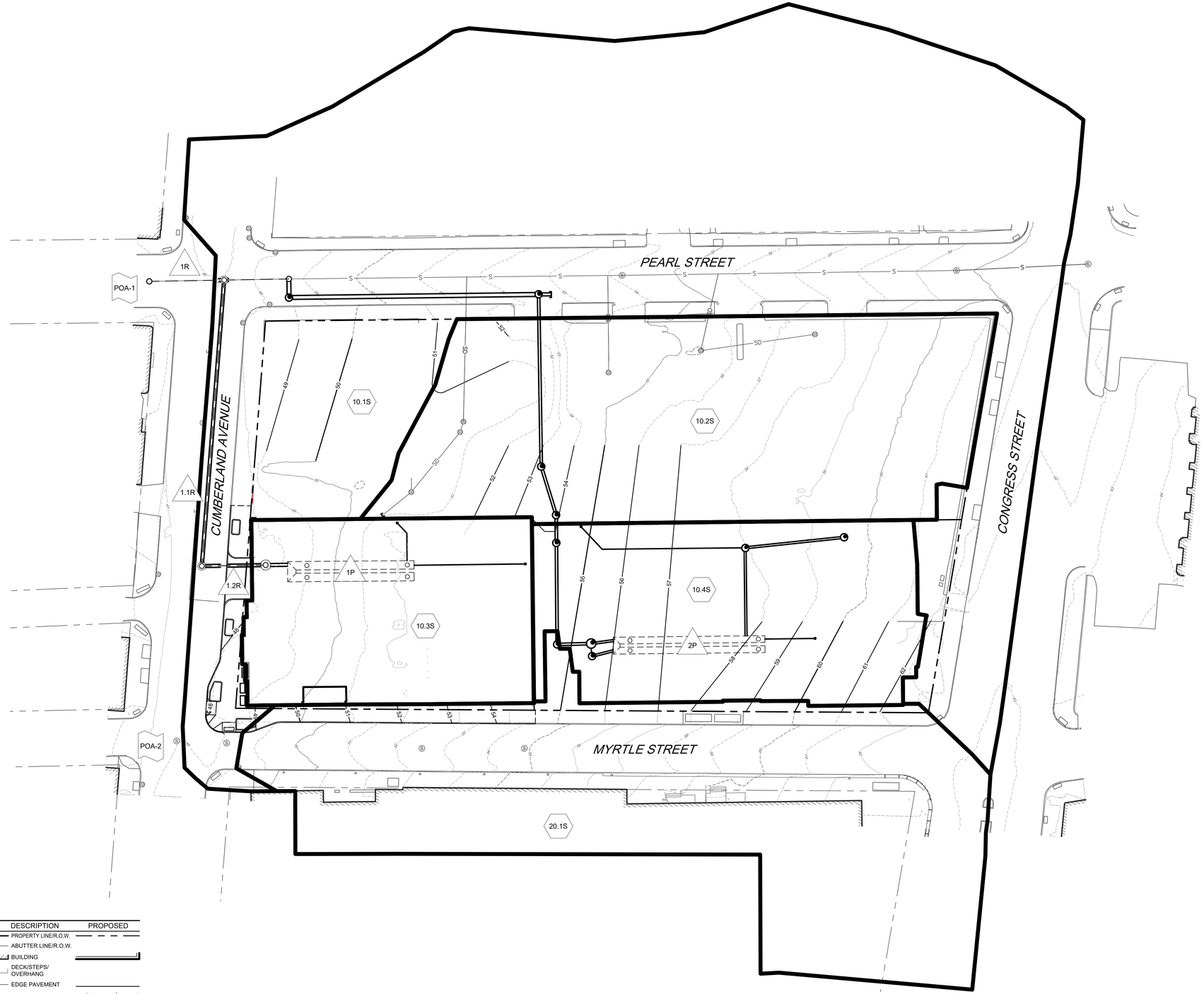
FOR:

LINCOLN AVENUE CAPITAL NORTHEAST DEVELOPERS, LLC
14 HARVEST WAY
NEWMARKET, NH 03857

DESIGNED	DJS
DRAWN	DJS
CHECKED	DLR
DATE	01/08/24
SCALE	1" = 30'
PROJECT	19371-04

SHEET 2 OF 3

19371-04 SWP.dwg, TAB:POST-ALONE



LOT 3 BUILDOUT:

STORMWATER PEAK DISCHARGE SUMMARY TABLE						
POINT OF ANALYSIS	2-YEAR STORM		10-YEAR STORM		25-YEAR STORM	
	PRE (CFS)	POST (CFS)	PRE (CFS)	POST (CFS)	PRE (CFS)	POST (CFS)
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FUTURE BUILDOUT:

STORMWATER PEAK DISCHARGE SUMMARY TABLE						
POINT OF ANALYSIS	2-YEAR STORM		10-YEAR STORM		25-YEAR STORM	
	PRE (CFS)	POST (CFS)	PRE (CFS)	POST (CFS)	PRE (CFS)	POST (CFS)
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PROPOSED CONDITIONS LEGEND

- WATERSHED BOUNDARY
- A — B: TIME OF CONCENTRATION
- REACH
- #### : SUBCATCHMENT LABEL
- #### : REACH
- #### : POINT OF ANALYSIS
- #### : STORMWATER TREATMENT/DETENTION POND
- HSG # / HSG #: SOILS BOUNDARY

LEGEND

EXISTING	DESCRIPTION	PROPOSED
	PROPERTY LINE/R.O.W.	
	ABUTTER LINE/R.O.W.	
	BUILDING	
	DECK/STEPS/ OVERHANG	
	EDGE PAVEMENT	
	EDGE CONCRETE	
	CURB LINE	
120 118	CONTOURS	120
SD	STORM DRAIN	SD
D	DRAINAGE MANHOLE	
	CATCH BASIN	

SOIL TYPES

SYMBOL	SOIL SERIES	PHASE	SLOPE	HSG	DRAINAGE CLASS
HIB	HINCKLEY	LOAMY SAND	3–8%	A	EXCESSIVELY DRAINED

NOTES:

1. EXISTING CONDITIONS INFORMATION IS BASED ON AN ELECTRONIC SURVEY FILE PREPARED BY SEBAGO TECHINCS, INC. IN DECEMBER 2019. TOPOGRAPHIC INFORMATION IS BASED ON A COMBINATION OF SURVEYED DATA WITHIN THE LIMITS OF PROPOSED WORK.
2. ON-SITE SOIL INFORMATION IS BASED ON THE NATURAL RESOURCES CONSERVATION SERVICE (NRCS) CUSTOM SOIL RESOURCE REPORT FOR CUMBERLAND COUNTY, MAINE, DATED MAY 26, 2022.

GRAPHIC SCALE
30 0 15 30 60
(IN FEET)
1 INCH = 30 FT.

DANIEL L. RILEY, PE 9987

REV.	BY:	DATE:	STATUS:
A	DLR	01/08/2024	SUBMITTED FOR SITE PLAN REVIEW

THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM SEBAGO TECHNICS, INC. ANY ALTERATIONS, AS PROVIDED ON OTHERWISE, SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO SEBAGO TECHNICS, INC.

SEBAGO TECHNICS
WWW.SEBAGOTECHNICS.COM
75 John Roberts Rd.
Suite A
South Portland, ME 04106
Tel. 207-200-2100

PROPOSED CONDITIONS SWM PLAN - FULL

OF:
HERALD SQUARE 385 CONGRESS STREET LOT 3
385 CONGRESS STREET
PORTLAND, MAINE
FOR:
LINCOLN AVENUE CAPITAL NORTHEAST DEVELOPERS, LLC
14 HARVEST WAY
NEWMARKET, NH 03857

DESIGNED	DJS
DRAWN	MRS
CHECKED	DLR
DATE	01/08/24
SCALE	1" = 30'
PROJECT	19371-04

SHEET 3 OF 3

19371-04 SWP.dwg, TAB:POST-FULL

Consistency with City Master Plans 14-14.6.3 (A)

1. The proposed project has been designed to be consistent with the City Master Plans. The proposed development has been reviewed as part of the Larger 385 Congress Street Master Plan of Devolvement (MDP) approved by the Planning Board on August 9, 2022. In its review the City found that the MDP was consistent with the Council approved masterplans by:
   - Proposing the construction of dense housing in Downtown and pedestrian enhancements such as curb extensions and expanded sidewalks to promote walkability and traffic calming (Peninsula Transit Plan, 2009); and
   - Providing infill development within a transit-oriented location with pedestrian-oriented streets to make walking more inviting, and connection to bus routes, bike networks, and other mobility options easier to access to other parts of the city. Providing residential density as well as employment and job density that can support and drive transit ridership as well as walk to work opportunities (One Climate Future, 2021).

   The Comprehensive Plan, Portland's Plan 2030 goals and policies (state and local) relevant to the proposed plan were reviewed in the MDP. The plan aligns with these vision statements and goals by infilling an underdeveloped site primarily used for automobile parking located at the heart of Portland's walkable downtown. Along with increasing housing units within downtown, the proposed infill project potentially reduces the need for new construction in green field or outlying areas and dependency on single occupancy vehicles, which promotes more sustainable development practices.

2. There is no existing off premises public infrastructure that requires easements across the property. The proposed subdivision plan provides for easement on the site to allow public sidewalks to extend to the building line.

Please see the plan set and the Master Plan for additional information regarding compliance the City Master Plans.

Public Safety and Fire Prevention 14-14.6.3 (B)

1. The proposed project has been designed following public safety principles for Crime Prevention through Environmental Design:

    a. The proposed building design provides natural surveillance that promotes visibility of public spaces and areas. The public entrance to the building is well-lit and visible along Cumberland Avenue, a minor arterial.

    b. The proposed development has been designed with security access control measures to prevent unauthorized access to the site. The parking structure garage door will be equipped with security systems to control access.

    c. The site has been designed with the appropriate territorial reinforcements to promote a sense of ownership and responsibility. The site design includes varying materials on the public streets to provide visual identification of the fully public right of way and sidewalks.

2. The proposed project has been designed to provide adequate emergency vehicle access to the site as outlined in the Technical Manual.

Please see the plan set for the site plans, building plans and landscape plan detailing the site features related to his subject.

Availability and Adequacy of Public Utilities 14-14.6.3 (C)

1. The development will not overburden sanitary sewers and storm drains, water lines, or other public infrastructure and utilities.

   The proposed project is part of a larger project with an approved Master Plan of Development (MDP). A Sewer capacity application for the entire development was included in the MDP review. A Sewer capacity application for the current phase of the project is included in the application

   The Portland Water District has been consulted related to service to the condominium development. A formal request for capacity confirmation has been submitted to the District and will be provided when it is received. The site is located on a block with access to existing water mains in Myrtle Street, Cumberland Avenue and Congress Street, including a 16" main in Congress Street. Upgrades to the existing main in Myrtle Street were proposed as part of the previously approved Hotel portion of the Master Plan.

   Included in the application is a Stormwater Management Plan detailing the proposed site drainage improvements and stormwater treatment proposed.

2. As part of the MDP design and planning, consultation was made with CMP regarding electrical service. Based on those discussions underground electrical service is proposed from CMP's recently installed manhole in Pearl Street, just east of Cumberland Avenue and extended along Cumberland Avenue to the building transformers located on site, along Myrtle Street.

3. All proposed sanitary sewers, storm drains, water lines or other utilities are designed and are to be constructed in accordance with the applicable provisions of the City Technical manual. Please see the utility plan and details.

4. The proposed development will be connected to the existing public sanitary system per City requirements. Please see the utility plan.

5. The proposed project has been designed to provide temporary storage for trash and recyclables within the building with contracted curbside disposal. There is no outdoor storage of trash or recyclables proposed. Please refer to the building plans.

Please see the site and building plans for additional information.

CITY OF PORTLAND WASTEWATER CAPACITY APPLICATION

Portland Dept. of Public Works -
Water Resources
212 Canco Road
Portland, Maine 04103

Date: January 5, 2024

Bradley Roland, P.E.
Water Resources Division
Department of Public Works
212 Canco Road
Portland, ME 04103

1. Please, Submit Utility, Site, and Locus Plans.

Site Address: 385 Congress Street (Lot 3)

Chart Block Lot Number: 27/D/003

Proposed Use: Residential
Previous Use: Parking, former Printing and Commercial
Existing Sanitary Flows: 0 (vacant) GPD
Existing Process Flows: N/A GPD
Description and location of City sewer that is to receive the proposed building sewer lateral.
Existing sewer main in Pearl Street
at Cumberland Avenue

Site Category

Commercial *(see part 4 below)*	
Industrial *(complete part 5 below)*	
Governmental	
Residential	X
Other *(specify)*	

Clearly, indicate the proposed connections, on the submitted plans.

2. Please, Submit Contact Information.

City Planner's Name: Zachary Powell Phone: (207) 756-8083
Owner/Developer Name: Lincoln Avenue Capital Northeast Developers, LLC
Owner/Developer Address: 14 Harvest Way, Newmarket, New Hampshire 03857
Phone: 646-255-7451 Fax: E-mail: tseely@lincolnavecap.com
Engineering Consultant Name: Sebago Technics, Inc.
Engineering Consultant Address: 75 John Roberts Road, Suite 4A, South Portland, ME 04106
Phone: 207-200-2080 Fax: 207-856-2206 E-mail: driley@sebagotechnics.com

Note: Consultants and Developers should allow +/- 15 days, for capacity status, prior to Planning Board Review.

3. Please, Submit Domestic Wastewater Design Flow Calculations.

Estimated Domestic Wastewater Flow Generated: 9,900 GPD (Lot 3)
Peaking Factor/ Peak Times: N/A
Specify the source of design guidelines: *(i.e.* X *"Handbook of Subsurface Wastewater Disposal in Maine," "Plumbers and Pipe Fitters Calculation Manual," __ Portland Water District Records, __ Other (specify)*

Note: Please submit calculations showing the derivation of your design flows, either on the following page, in the space provided, or attached, as a separate sheet.

4. Please, Submit External Grease Interceptor Calculations.

Total Drainage Fixture Unit (DFU) Values: N/A

Size of External Grease Interceptor: N/A

Retention Time: N/A

Peaking Factor/ Peak Times: N/A

Note: In determining your restaurant process water flows, and the size of your external grease interceptor, please use The Uniform Plumbing Code. Note: In determining the retention time, sixty (60) minutes is the minimum retention time. Note: Please submit detailed calculations showing the derivation of your restaurant process water design flows, and please submit detailed calculations showing the derivation of the size of your external grease interceptor, either in the space provided below, or attached, as a separate sheet.

5. Please, Submit Industrial Process Wastewater Flow Calculations

Estimated Industrial Process Wastewater Flows Generated: N/A GPD

Do you currently hold Federal or State discharge permits? Yes ____ No ____

Is the process wastewater termed categorical under CFR 40? Yes ____ No ____

OSHA Standard Industrial Code (SIC): *(http://www.osha.gov/oshstats/sicser.html)*

Peaking Factor/Peak Process Times: _____

Note: On the submitted plans, please show where the building's domestic sanitary sewer laterals, as well as the building's industrial-commercial process wastewater sewer laterals exits the facility. Also, show where these building sewer laterals enter the city's sewer. Finally, show the location of the wet wells, control manholes, or other access points; and, the locations of filters, strainers, or grease traps.

Note: Please submit detailed calculations showing the derivation of your design flows, either in the space provided, or attached, as a separate sheet.

SEBAGO TECHNICS
75 John Roberts Road, Suite 4A
South Portland, Maine 04106
(207) 200-2100 FAX (207) 856-2206

JOB	19371-04 385 Congress, Lot 3		
SHEET NO.	1	OF	1
CALCULATED BY	DJS	DATE	1/5/2024
CHECKED BY	DLR	DATE	1/5/2024
FILE NAME		SCALE	

Sanitary Sewer Flows

Design Flow: **9,900** Averge Daily Flow (gpd)

Condominiums

55	Units	x	180	gallons/day =	9,900	gpd
				Subtotal	**9,900**	**gpd**

Sewer capacity flows are calculated in accordance with "Handbook of Subsurface Wastewater Disposal in Maine"

Massing, Ventilations and Wind Impact 14-14.6.4 (A)

1. The bulk, location, or height of the proposed building shall not result in health or safety problems from a reduction in ventilation to abutting structures or changes to the existing wind climate that would result in unsafe wind conditions for users of the site and/or adjacent public spaces.
2. The bulk, location, or height of the proposed building will not result in any substantial diminution in the value or utility of neighboring structures.
3. The proposed development will locate all HVAC venting mechanisms to direct exhaust away from public spaces and residential properties adjacent to the site.

The proposed development of Lot 3 has changed since Master Plan approval presenting a somewhat reduced scale building. The building massing is consistent with the approved Master Plan in terms of its location and form with a two-level podium and tower rising above. The height of the building is lower, at 7 stories compared to the 13 stories envisioned in the master plan. The building height, setbacks, and lot coverage conform with the Zoning standards or have received setback waivers consistent with the Land Use Ordinance criteria and will not result in health or safety problems from reductions in ventilation to abutting structures or create unsafe wind conditions.

The proposed building is located on a site that is currently used for surface parking. The development is not expected to diminish the value of nearby structures.

HVAC equipment is proposed on the building rooftop or within the structure and is designed in accordance with applicable Land Use Ordinance requirements and applicable building codes.

Building Height Average Grade Narrative

This narrative summarizes the average grade calculations for the proposed Lofts at Cumberland project at 385 Congress Street- Lot 3. The site is located in the area of Phase 3 (Condo B Phase) of the Master Development (MDP) Plan of 385 Congress Street.

This project proposes an average grade estimate of 51.2 feet for the Lofts at Cumberland building as a standalone project. This elevation compares favorably to the Elevation 51.0' estimated MDP height calculation plan dated July 21, 2022.

Diagram 1 Average Grade 51.2 Feet

Diagram 1 (attached) is the average grade calculation based on the current conditions of the site and assuming that the Herald Square Project is built in isolation. This diagram is provided to demonstrate that the building will be in compliance in the development scenario where the Lot 2 structure is not built as approved in the MDP.

To avoid a circumstance where the top elevation of the building approved by the Planning Board would need to be revisited, due to a future change in the ground conditions, we are documenting that the building is in compliance as a stand alone building ath te time of site plan approval.

Diagram 2 Average Grade MDP Elevation 51.0 Feet

Diagram 2 (attached) is the height calculation presented in the MDP with a proposed average grade of 51.0'. Reference clarifying notes that have been added for the calculation performed.

In the Master Plan review, several buildout sequences were evaluated. Depending on the sequence of construction and the grade conditions when the Herald Square building permit is applied for, the average grade at the corners of Lot 3 lower or rise a few inches from the grade calculated under the stand-alone site condition.

Reference Narratives

For reference in interpreting Diagram 2, the average grade narrative from the Master Development Plan is presented below in italics.

Building Height Average Grade Narrative (MDP) July 21, 2022

The Master Development plan proposes a buildout of the site to include three buildings with construction at street level as discussed in the phasing plans and narrative.

The construction of the Hotel on Lot 1, the 'Condo A' building on Lot 2 along Congress Street and the 'Condo B' Building on Cumberland Avenue will include all of the street level construction. The 'Condo C' tower will be a vertical addition above a portion of the 'Condo B' structure.

Based on this sequence and the construction the applicant proposes two measurements of average grade for the determination of building height.

- *An average grade on 57.8' (57'-9") for the Hotel on Lot 1 and the Condo A Building fronting on Congress Street and;*
- *An average grade of 51.0' (51'-0") for the Condo B (and Condo C vertical addition) buildings on*

Cumberland Avenue

These elevations represent the average grades at the four corners of the three buildings that comprise the street-level structures as shown in the attached sketch.

It is understood that in the interim condition, between construction phases the average grade of Lot 1 may be higher than the average grade, and the average height of Condo A may be lower than the average due to the sloping grades of the streets adjacent to the site and the grades on the undeveloped areas of the site in the interim condition.

- *The estimated average grade of Lot 1 taken in isolation could be as high as 58.4' (currently estimated at 58.2')*
- *The estimated average grade of Condo A taken in isolation could be as low as 57.0'*
- *The Condo B/Condo C construction will follow Lot 1 and Condo A and will not be constructed prior to these phases; therefore, an interim condition is not expected for the Condo B/Condo C building.*

We request the following as a condition in the Master Development Plan approval:

1. *The average grade for determining building heights for Lot 1 and the Condo A building with frontage on Congress Street shall be not lower than 57.8' (57'-9") based on the full buildout of these phases.*

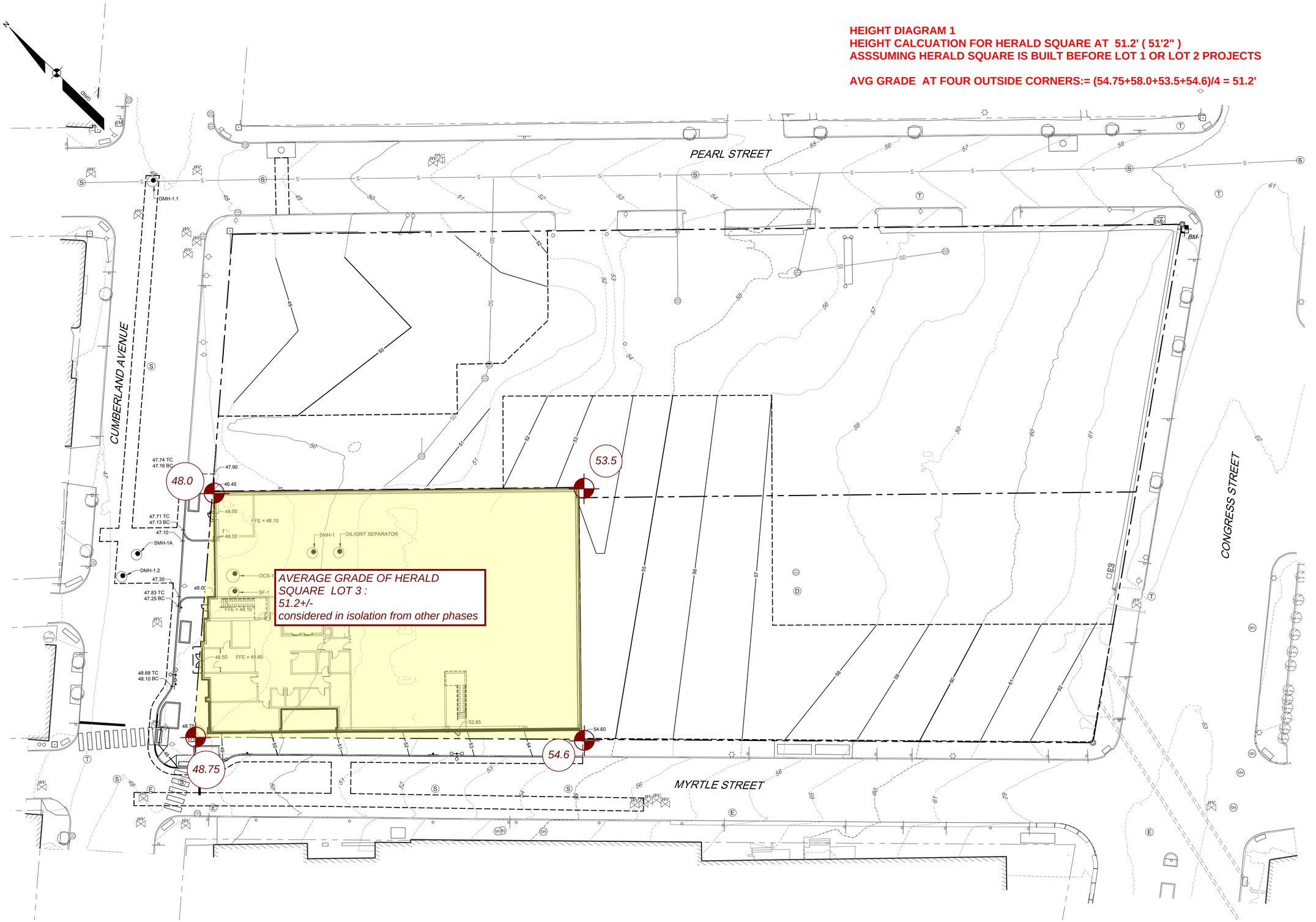
   This elevation shall be established and remain in effect for the term of the Master Development Plan approval. If, upon expiration of the Master Development Plan only one of these buildings is constructed, the City may require interim grading on the remaining undeveloped areas of the site to ensure that the average grade assumed in the Master Development Plan is met.

2. *The average grade for determining heights for the Condo B/Condo C structure shall be not less than 51.0' (51'-0") based on the finished sidewalk grades at the four corners of the Condo B building.*

Please refer to the enclosed building height diagram documenting the assumed average grades

HEIGHT DIAGRAM 1
HEIGHT CALCUATION FOR HERALD SQUARE AT 51.2' (51'2")
ASSSUMING HERALD SQUARE IS BUILT BEFORE LOT 1 OR LOT 2 PROJECTS

AVG GRADE AT FOUR OUTSIDE CORNERS:= (54.75+58.0+53.5+54.6)/4 = 51.2'



NOT FOR CONSTRUCTION

PROGRESS PRINT

DANIEL L RILEY PE 9967

REV.	BY	DATE	STATUS
A	DLR	10/24/2023	SKETCH

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SEBAGO TECHNICS
WWW.SEBAGOTECHNICS.COM
75 John Roberts Rd.
Suite A
South Portland, ME 04106
Tel. 207-200-2100

BUILDING AVERAGE GRADE EXHIBIT
OF:
HERALD SQUARE
385 CONGRESS STREET
PORTLAND, MAINE
FOR:
LINCOLN AVENUE CAPITAL
14 HARVEST WAY
NEW MARKET, NH 03857

DESIGNED	DLR
DRAWN	MRS
CHECKED	DLR
DATE	10/24/2023
SCALE	1" = 20'
PROJECT	19371-04

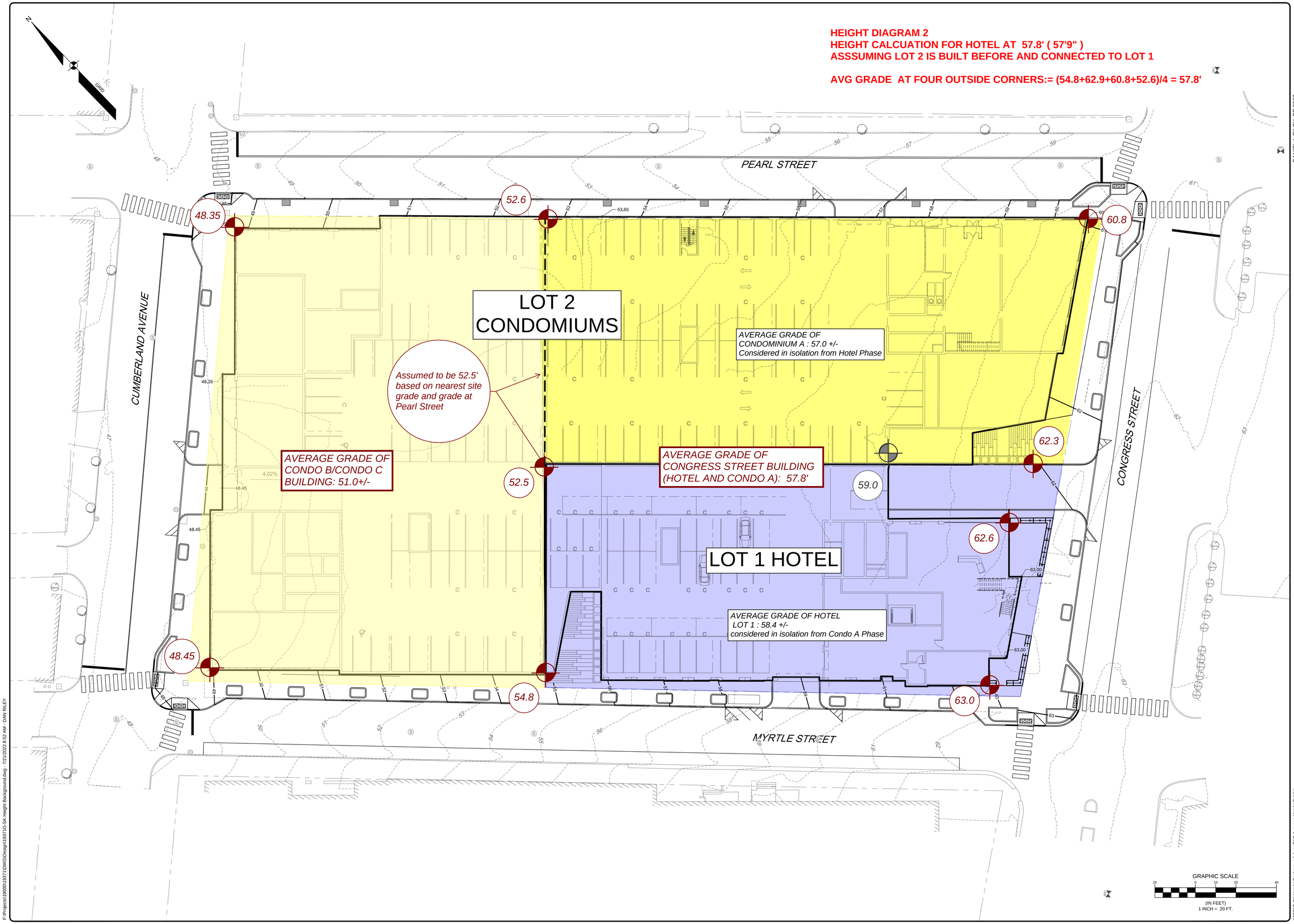
DRAWING C-200

19371-04 OAG.dwg, TAB C-200 OVERALL GRADING PLAN

\\ST-FS01\data\Projects\19000\19371-04\DWG\Design\19371-04 OAG.dwg - 12/18/2023 7:39 PM - DAN RILEY

HEIGHT DIAGRAM 2
HEIGHT CALCUATION FOR HOTEL AT 57.8' (57'9")
ASSSUMING LOT 2 IS BUILT BEFORE AND CONNECTED TO LOT 1

AVG GRADE AT FOUR OUTSIDE CORNERS:= (54.8+62.9+60.8+52.6)/4 = 57.8'



NOT FOR CONSTRUCTION

DANIEL L RILEY PE 9967

REV	BY	DATE	STATUS
B	DLR	07/21/2022	RESPONSE TO MDP REVIEW COMMENTS
A	DLR	03/25/2022	MASTER PLAN APPLICATION

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SEBAGO TECHNICS
WWW.SEBAGOTECHNICS.COM
75 John Roberts Rd.
Suite A
South Portland, ME 04106
Tel. 207-200-2100

AVERAGE HEIGHT EXHIBIT

OF:
385 CONGRESS STREET
CONGRESS STREET AND PEARL STREET
PORTLAND, MAINE

FOR:
385 CONGRESS STREET, LLC.
2720 TRANSIT ROAD
WEST SENECA, NY 14224

DESIGNED	DJS
DRAWN	DAB
CHECKED	DLR
DATE	02/04/2022
SCALE	1" = 20'
PROJECT	19371

SHEET 1 OF 1

19371G-SK Height Background.dwg, TAB:Average Height Exhibit

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Shadows 14-14.6.4 (B)

The proposed project is located in the B3 zone. The proposed building will not result in adverse impacts of shadows on publicly accessible open space.

A shadow study was conducted for the approved Master Plan. The proposed development involves the construction of a seven-story building, less than 80' tall in a zone with a 150' height limit.

The Master Development Plan (PL-001970-2022) provided an extensive discussion of shadows based on a proposed development for the site which included a taller structure of 13 stories, over 140 feet tall.

Based on the reduced buildign height it is expected tht shadow impacts will be less than those approved as part of the MDP. Please see the shadow study plans in the Master Development Plan shadow study (PL-001970-2022).

Snow and Ice Loading 14-14.6.4 (C)

The proposed project will not result in the accumulation of significant amounts of snow and ice from loading or falling offsite. The building is designed with a flat roof with architectural designs consistent with building code requirements, to prevent snow and ice from falling onto adjacent properties or public ways.

Snow removal will be a routine maintenance function and will be removed by shovel and snowblower equipment from the upper deck as necessary, similar to any other public/private space of similar size and configuration. The owner will comply with City ordinance requirements for snow removal from the public sidewalks along the site frontage in the same manner as other properties in the City.

Please refer to building plans and elevations.

View Corridor 14-14.6.4 (D)

The massing, location, and height of the proposed development will not substantially obstruct a public view corridor identified in the Downtown Vision View Corridor Protection Plan. The proposed project area is not located within a protected view corridor.

The building form, street wall, and step-backs are consistent with the zoning ordinance and Master Plan of Development which evaluated views in the vicinity of the project. The proposed building is reduced in height (seven stories) compared to the MDP evaluation which is considered a 13-story building at this location.

Please see view studies included in the application documents and the Master Plan submission for additional information.

Historic Resources 14-14.6.4 (E)

1. The proposed development is not located in a designated historic district.

2. The proposed development is located on the corner of Cumberland Avenue and Myrle Street which is adjacent to an historically significant building (City Hall). The proposed development will be generally compatible with the major character-defining elements of the district in the immediate vicinity of the proposed development. The proposed development site is located in an area of the City that, like much of Portland, is a mix of modern and historic structures. The surrounding area is a blend of modern and traditional architecture that are the hallmark of a vibrant City. The proposed design will be compatible with the surrounding area. The proposed development has been designed to work cohesively with the historic fabric of the surrounding area. Please see the Master Development Plan which includes supportive information regarding Neighborhood Context.

3. The proposed project area is a previously developed site with no known historic or archaeological resources.

Noise and Vibration 14-14.6.4 (G)

All heating, ventilation, and air conditioning equipment, air handling units, emergency generators, and similar equipment shall meet applicable state and federal emissions requirements and shall be located away from abutting residential properties. The B-3 Zone Noise Standard is 60 dB during the day and evening and 55 dB at night.

HVAC, air handling units, and the emergency generator will be installed on the building rooftop. Domestic hot water boilers will be located within a mechanical room on each floor, with exterior condensers grouped on the roof behind a screen wall, approximately 8-10' back from the roof edge. The generator will be enclosed in a sound attenuation enclosure if required to meet the Municipal sound level requirements.

Vibrations will be mitigated by locating equipment on concrete housekeeping pads with vibration isolation pads and springs if required by building codes.

Both vibration and noise will be reviewed by the project acoustic consultant and further mitigation will be provided as required for building code compliance.

THE LOFTS AT CUMBERLAND

365 CONGRESS STREET
LOT 3 385 CONGRESS STREET SUBDIVISION
PORTLAND, MAINE

APPLICANT:

LINCOLN AVENUE CAPITAL
NORTHEAST DEVELOPERS, LLC

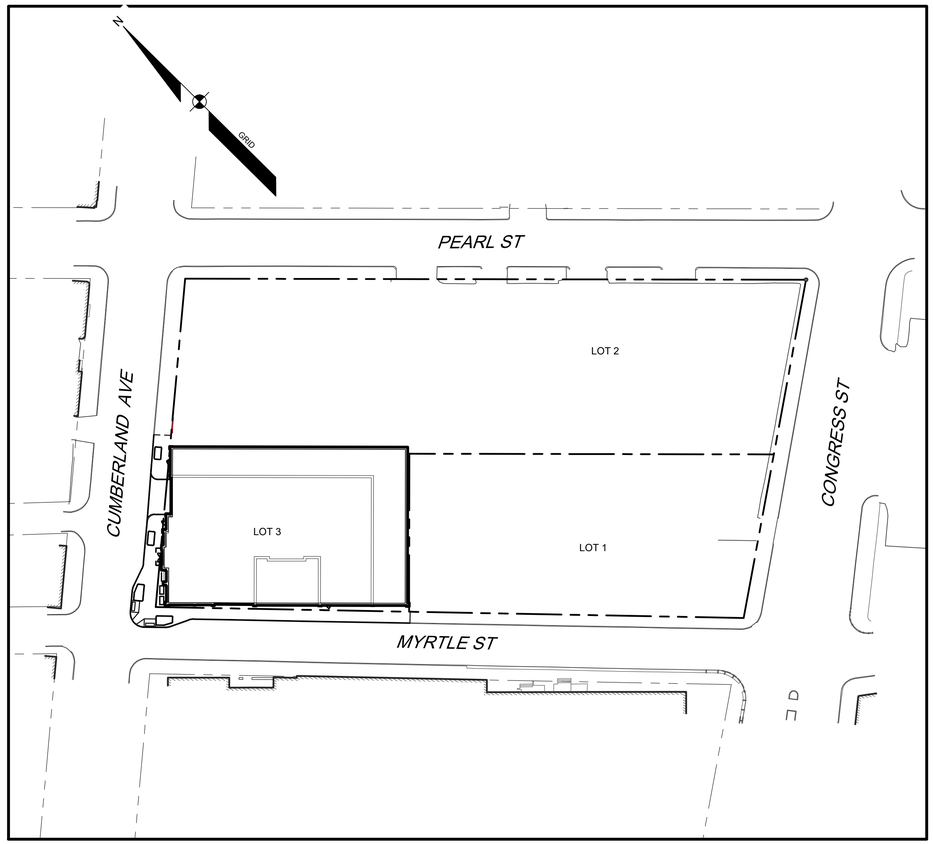
14 HARVEST WAY
NEW MARKET, NH 03857

ENGINEER/SURVEYOR/ LANDSCAPE ARCHITECT:

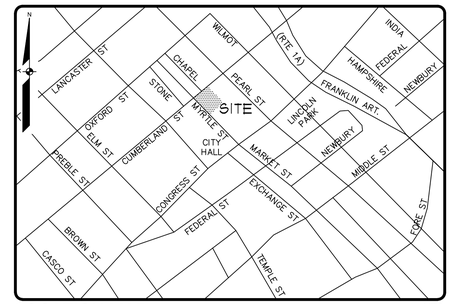
SEBAGO TECHNICS
WWW.SEBAGOTECHNICS.COM
75 John Roberts Rd.
Suite 4A
South Portland, ME 04106
Tel. 207-200-2100

PROJECT ARCHITECT:

MARKET SQUARE ARCHITECTS
104 CONGRESS STREET SUITE 203
PORTSMOUTH, NH 03801



GRAPHIC SCALE
50 0 25 50 100
(IN FEET)
1 INCH = 50 FT.



LOCATION MAP NTS

SHEET LIST TABLE

SHEET	TITLE
G-001	COVER SHEET
G-002	GENERAL NOTES, LEGEND AND ABBREVIATIONS
C-002	DEMOLITION PLAN
C-100	OVERALL SITE PLAN
C-101	SITE PLAN - LEVEL 0
C-102	SITE PLAN - LEVEL 2
C-200	OVERALL GRADING PLAN
C-201	GRADING PLAN LEVEL 0
C-300	UTILITY PLAN
C-301	MYRTLE STREET - PLAN AND PROFILE
C-302	CUMBERLAND AVE - PLAN AND PROFILE
C-303	UTILITY SCHEDULES
C-401	LANDSCAPE PLAN
C-500	EROSION CONTROL NOTES AND DETAILS
C-501	DETAILS 1
C-502	DETAILS 2
C-503	DETAILS 3
C-504	DETAILS 4
C-505	DETAILS 5
C-506	DETAILS 6
1 OF 1	FIRST AMENDED SUBDIVISION PLAN
1 OF 1	EASEMENT PLAN LOT 3
T-100	TRAFFIC SIGNAL PLAN OF CUMBERLAND AVE AT PEARL ST

NOT FOR CONSTRUCTION

STATE OF MAINE
DANIEL L RILEY
No. 9967
PROFESSIONAL ENGINEER
01/08/2024

DANIEL L RILEY PE 9967

REV.	BY	DATE	STATUS
A	DLR	01/08/2024	ISSUED FOR SITE PLAN REVIEW

THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM SEBAGO TECHNICS, INC. ANY ALTERATIONS, AUTHORIZED OR OTHERWISE, SHALL BE AT THE USERS SOLE RISK AND WITHOUT LIABILITY TO SEBAGO TECHNICS INC.

SEBAGO TECHNICS
WWW.SEBAGOTECHNICS.COM
75 John Roberts Rd.
Suite 4A
South Portland, ME 04106
Tel. 207-200-2100

COVER SHEET
OF:
THE LOFTS AT CUMBERLAND
365 CONGRESS STREET
PORTLAND, MAINE
FOR:
LINCOLN AVENUE CAPITAL NORTHEAST DEVELOPERS, LLC
14 HARVEST WAY
NEW MARKET, NH 03857

DESIGNED	DJS
DRAWN	MRS
CHECKED	DLR
DATE	01/08/2024
SCALE	1" = 50'
PROJECT	19371-04

DRAWING G-001

F:\Projects\19000\19371-04\DWG\Design\19371-04 C.dwg - 1/8/2024 1:53 PM - RICHARD G. LEWIS

19371-04 C.dwg, TAB:COVER SHEET

LEGEND

EXISTING		PROPOSED
	PROPERTY LINE/R.O.W.	
	ABUTTER LINE/R.O.W.	
	DEED LINE/R.O.W.	
	TIE LINE	
	SETBACK	
	EASEMENT	
	BUFFER	
	FLOODPLAIN	
	FLOODWAY	
	CENTERLINE	
	MONUMENT	
	IRON PIPE/ROD	
	DRILL HOLE	
C1/L1	DEED CALL	
C1/L1	CURVE/LINE NO.	C1/L1
	SOILS	
	ZONE LINE	
	ZONE LINE ON PL	
BENCHMARK DESCRIPTION WITH ELEVATION	BENCHMARK	
	SURVEY CONTROL	
TP-1	TEST PIT	
MW-1	MONITORING WELL	
B-1	BORING	
	BUILDING	
	DECK/STEPS/ OVERHANG	
	EDGE WETLAND	
	WETLANDS	
	UPLANDS	
	STREAM	
	LEDGE	
	EDGE PAVEMENT	
	PAVEMENT SAWCUT	
	EDGE CONCRETE	
	PAVEMENT PAINT	
	EDGE GRAVEL	
	CURB LINE	
	EDGE OF WATER	
	TREELINE	
120 118	CONTOURS	120
×120.00	SPOT GRADE	+120.00
	CHAIN LINK FENCE	
X	BARB WIRE FENCE	X
	STOCKADE FENCE	
	GUARD RAIL	
	STONE WALL	
	RETAINING WALL	
	DECIDUOUS TREE	
	CONIFEROUS TREE	
	BOLLARD	
	SIGN	
	RAILROAD	
G	GAS	G
GV	GAS GATE VALVE	GV
GM	GAS METER	
G	GAS MANHOLE	
W	WATER	W
WV	WATER GATE VALVE	WV
WSO	WATER SHUT OFF	WSO
	HYDRANT	
W	WATER MANHOLE	
W	WELL	W
S	SANITARY SEWER	S
FM	FORCE MAIN	FM
S	SANITARY MANHOLE	
SD	STORM DRAIN	SD
UD	UNDER DRAIN	UD
D	DRAINAGE MANHOLE	
	CATCH BASIN	
OHU	OVERHEAD UTILITY	OHU
UGU	UNDERGROUND UTILITY	UGU
T	TRANSFORMER PAD	T
E	ELECTRICAL MANHOLE	E
EM	ELECTRIC METER	
H	HVAC UNIT	
T	TELEPHONE MANHOLE	
	LIGHT POLE	
	UTILITY POLE	
	GUY WIRE	
	DRAINAGE DITCH	
	EROSION CONTROL BLANKET	
	FILTER BARRIER	FB
	RIPRAP	
	CHECK DAM	
	INLET PROTECTION	
	BOULDER	
	STREAM	

LANDSCAPE LEGEND

- MULCH LINE
- STREET TREES
- SHRUBS
- LANDSCAPE PLANTING BEDS
- CITY SIDEWALK BRICK
- DRIVEWAY BRICK
- BENCHES
- PEDESTAL PAVERS (ROOF))

STRIPING LEGEND

- SINGLE WHITE LANE LINE
- DOUBLE YELLOW CENTERLINE
- WHITE CROSSWALK STRIPING
- WHITE STOP BAR STRIPING
- WHITE NO PARKING STRIPING

GENERAL NOTES

1. THE RECORD OWNER OF THE PARCEL IS 385 CONGRESS LLC BY DEED DATED OCTOBER 20, 2017 AND RECORDED AT THE CUMBERLAND COUNTY REGISTRY OF DEEDS (CCRD) IN BOOK 34401, PAGE 214.
2. THE PROPERTY IS SHOWN AS A PORTION OF LOT D003 ON THE CITY OF PORTLAND TAX MAP 27 AND IS LOCATED IN THE B3 DOWNTOWN BUSINESS DISTRICT.
3. SPACE AND BULK CRITERIA FOR THE B3 DISTRICT ARE AS FOLLOWS:

MINIMUM LOT SIZE:	N/A
MINIMUM STREET FRONTAGE:	15 FEET
MINIMUM FRONT YARD:	N/A
MAXIMUM FRONT YARD:	5 FEET
MINIMUM SIDE YARD:	N/A
MINIMUM REAR YARD:	N/A
MAXIMUM BUILDING HEIGHT:	150 FEET
MAXIMUM BUILDING HEIGHT AT STREET WALL:	65 FEET
MAXIMUM LOT COVERAGE:	100%

* SEE ORDINANCE FOR MORE PARTICULAR INFORMATION, INCLUDING BUILDING STEP-BACK REQUIREMENTS.

4. TOTAL AREA OF PARCEL IS APPROXIMATELY 0.45 ACRES.
5. THE BOUNDARY IS BASED ON PLAN REFERENCE 6F. TOPOGRAPHIC INFORMATION SHOWN HEREON. SEBAGO TECHNICS INC. UPDATED RECORDS RESEARCH FROM 2009 TO DATE REGARDING THE BOUNDARY INFORMATION.
6. IS BASED UPON FIELD WORK PERFORMED BY SEBAGO TECHNICS, INC. OCTOBER , 2019.
7. PLAN REFERENCES:
8. PLAN OF CITY BUILDING LOT, PORTLAND, ME, DATED AUGUST 1908 BY THE CITY OF PORTLAND ENGINEER, AND ON FILE WITH THE PORTLAND DEPARTMENT OF PUBLIC WORKS AS 159/5.
   A. PORTLAND DEPARTMENT OF PUBLIC WORKS STREET WORKSHEETS AND BLUESHEETS FOR STREETS BOUNDING THE LOCUS PARCEL AND ON FILE WITH THE PORTLAND DEPARTMENT OF PUBLIC WORKS AS 159/5.
   B. PLAN OF PROPERTY IN PORTLAND, ME. MADE FOR GUY GANNETT PUBLISHING CO. BY H.I. & E.C. JORDAN - SURVEYORS, DATED JULY 1964 AND ON FILE WITH THE PORTLAND DEPARTMENT OF PUBLIC WORKS AS 663/2.
   C. NEW MECHANICAL BUILDING, GUY GANNETT PUBLISHING COMPANY, PORTLAND, ME, TUNNEL PLAN AND SECTIONS BY LOCKWOOD, GREENE ENGINEERS, INC, REVISED THROUGH MAY 12, 1965 AND ON FILE WITH THE PORTLAND DEPARTMENT OF PUBLIC WORKS AS 203/2.
   D. PLAN OF PROPERTY IN PORTLAND, ME. MADE FOR GUY GANNETT PUBLISHING PUBLISHING CO. BY H.I. & E.C. JORDAN - SURVEYORS, REVISED THROUGH FEBRUARY 6, 1973 AND ON FILE WITH OWEN HASKELL INC.
   E. ALTA/ACSM LAND TITLE SURVEY OF CONGRESS STREET SITE, 385 CONGRESS STREET, PORTLAND, ME DATED JULY 1, 2009 BY SEBAGO TECHNICS INC, PROJECT NUMBER 09235.
   F. F. ALTA/NSPS LAND TITLE SURVEY OF CONGRESS/PEARL BLOCK CONGRESS STREET AND PEARL STREET , PORTLAND, ME DATED FEBRUARY 11, 2022 BY SEBAGO TECHNICS, INC. FOR FATHOM COMPANIES PROJECT NUMBER 19371-02
   G. SUBDIVISION PLAN OF 385 CONGRESS STREET MADE FOR 385 CONGRESS STREET, LLC DATED JANUARY 11, 2023 BY SEBAGO TECHNICS, INC. PROJECT NUMBER 19371 AND RECORDED IN THE CUMBERLAND COUNTY REGISTREY OF DEEDS IN PLAN BOOK 223 PAGE 32.
9. PLAN ORIENTATION IS GRID NORTH, MAINE STATE PLANE COORDINATE SYSTEM, WEST ZONE 1802-NAD83, ELEVATIONS DEPICTED HEREON ARE NGVD29 PER CITY STANDARDS AS VERIFIED BY A UNITED STATES COAST & GEODETIC SURVEY BRASS DISK LOCATED IN A GRANITE BLOCK OF THE CITY HALL BUILDING HAVING A PUBLISHED ELEVATION OF 69.66' (NAVD88 68.95')
10. THE CITY OF PORTLAND DISCONTINUED THAT PORTION OF CHAPEL STREET ``RUNNING FROM CONGRESS STREET TO CUMBERLAND STREET" BY ORDER OF CITY COUNCIL ON FEBRUARY 5, 1973 AND RECORDED AT THE CITY OF PORTLAND RECORDS IN VOLUME 89, PAGE 61. PUBLIC AND PRIVATE RIGHTS MAY EXIST FOR PUBLIC HIGHWAY AND UTILITIES THAT STILL LIE WITHIN THE LIMITS OF CHAPEL STREET. SEBAGO TECHNICS, INC. SUGGEST LEGAL COUNSEL BE SOUGHT TO CLARIFY THE INTEREST OF OTHERS IN THESE RIGHTS.
11. PURSUANT TO A CONVERSATION BETWEEN SEBAGO TECHNICS, INC. AND THE PORTLAND WATER DISTRICT, THE WATER LINE SHOWN AS BEING LOCATED IN THE DISCONTINUED PORTION OF CHAPEL STREET HAS BEEN REMOVED AND NO LONGER EXISTS.
12. UTILITY INFORMATION DEPICTED HEREON, UNLESS OTHERWISE NOTED, IS OF QUALITY LEVEL D PER AMERICAN SOCIETY OF CIVIL ENGINEERS (ASCE) STANDARD CI/ASCE 38-02. UTILITIES DEPICTED HEREON MAY NOT NECESSARILY REPRESENT ALL EXISTING UTILITIES. CONTRACTORS AND/OR DESIGNERS NEED TO CONTACT DIG-SAFE SYSTEMS, INC. (1-888-DIG-SAFE) AND FIELD VERIFY EXISTING UTILITIES WITHIN THE PROJECT AREA PRIOR TO CONSTRUCTION AND/OR EXCAVATION.
13. THE LOCUS PROPERTY AS DEPICTED HEREON DOES NOT FALL WITHIN A SPECIAL FLOOD HAZARD AREA AS DELINEATED ON THE FLOOD INSURANCE RATE MAP FOR PORTLAND, MAINE, CUMBERLAND COUNTY, COMMUNITY-PANEL NUMBER 230051 0013 B, HAVING AN EFFECTIVE DATE OF JULY 17 1986. THE LOCUS FALLS WITHIN AN AREA IDENTIFIED AS ZONE C, AREAS OF AREAS OF MINIMAL FLOODING.
14. BENCHMARK: BM-1EASTERLY BOLT AT BASE OF UTILITY POLE ELEVATION: 61.55 (NGVD29)
15. PRIOR TO ISSUANCE OF A BUILDING PERMIT FOR ANY PHASE OF THE SUBDIVISION A PERFORMANCE GUARANTEE MUST BE SUBMITTED TO AND APPROVED BY THE CITY OF PORTLAND.
16. ALL WORK SHALL CONFORM TO THE APPLICABLE CODES AND ORDINANCES.
17. CONTRACTOR SHALL VISIT THE SITE AND FAMILIARIZE HIM OR HERSELF WITH ALL CONDITIONS AFFECTING THE PROPOSED WORK AND SHALL MAKE PROVISIONS AS TO THE COST THEREOF. CONTRACTOR SHALL BE RESPONSIBLE FOR FAMILIARIZING HIM OR HERSELF WITH ALL CONTRACT DOCUMENTS, FIELD CONDITIONS AND DIMENSIONS AND CONFIRMING THAT THE WORK MAY BE ACCOMPLISHED AS SHOWN PRIOR TO PROCEEDING WITH CONSTRUCTION. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO THE COMMENCEMENT OF WORK.
18. CONTRACTOR SHALL NOTIFY ENGINEER OF ALL PRODUCTS OR ITEMS NOTED AS "EXISTING" WHICH ARE NOT FOUND IN THE FIELD.
19. PROVIDE ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND OWNER'S REQUIREMENTS UNLESS SPECIFICALLY OTHERWISE INDICATED OR WHERE LOCAL CODES OR REGULATIONS TAKE PRECEDENCE.
20. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS IN THE FIELD PRIOR TO FABRICATION AND ERECTION OF ANY MATERIAL. ANY UNUSUAL CONDITIONS SHALL BE REPORTED TO THE ATTENTION OF THE ENGINEER.
21. CONTRACTOR SHALL CLEAN AND REMOVE DEBRIS AND SEDIMENT DEPOSITED ON PUBLIC STREETS, SIDEWALKS, ADJACENT AREAS, OR OTHER PUBLIC WAYS DUE TO CONSTRUCTION.
22. CONTRACTOR SHALL INCORPORATE PROVISIONS AS NECESSARY IN CONSTRUCTION TO PROTECT EXISTING STRUCTURES, PHYSICAL FEATURES, AND MAINTAIN SITE STABILITY DURING CONSTRUCTION. CONTRACTOR SHALL RESTORE ALL AREAS TO ORIGINAL CONDITION AND AS DIRECTED BY DESIGN DRAWINGS.
23. SITE CONTRACTOR SHALL OBTAIN ALL REQUIRED PERMITS PRIOR TO CONSTRUCTION.
24. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED IN ACCORDANCE WITH "MAINE EROSION AND SEDIMENT CONTROL BMPS" PUBLISHED BY THE BUREAU OF LAND AND WATER QUALITY OF THE MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION, LATEST EDITION. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO POSSESS A COPY OF THE EROSION CONTROL PLAN AT ALL TIMES.
25. THE CONTRACTOR IS HEREBY CAUTIONED THAT ALL SITE FEATURES SHOWN HEREON ARE BASED ON FIELD OBSERVATIONS BY THE SURVEYOR AND BY INFORMATION PROVIDED BY UTILITY COMPANIES. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR SHALL CONTACT DIG SAFE (811) AT LEAST THREE (3) BUT NOT MORE THAN THIRTY (30) DAYS PRIOR TO COMMENCEMENT OF EXCAVATION OR DEMOLITION TO VERIFY HORIZONTAL AND VERTICAL LOCATION OF ALL UTILITIES.
26. CONTRACTOR SHALL BE AWARE THAT DIG SAFE ONLY NOTIFIES ITS "MEMBER" UTILITIES ABOUT THE DIG. WHEN NOTIFIED, DIG SAFE WILL ADVISE CONTRACTOR OF MEMBER UTILITIES IN THE AREA. CONTRACTOR IS RESPONSIBLE FOR IDENTIFYING AND CONTACTING NON-MEMBER UTILITIES DIRECTLY. NON-MEMBER UTILITIES MAY INCLUDE TOWN OR CITY WATER AND SEWER DISTRICTS AND SMALL LOCAL UTILITIES, AS WELL AS USG PUBLIC WORKS SYSTEMS.
27. CONTRACTORS SHALL BE RESPONSIBLE FOR COMPLIANCE WITH THE REQUIREMENTS OF 23 MRSA 3360-A. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE WITH THE APPROPRIATE UTILITIES TO OBTAIN AUTHORIZATION PRIOR TO RELOCATION OF ANY EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THESE PLANS. IF A UTILITY CONFLICT ARISES, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE OWNER, THE MUNICIPALITY AND APPROPRIATE UTILITY COMPANY PRIOR TO PROCEEDING WITH ANY RELOCATION.
28. ALL PAVEMENT MARKINGS AND DIRECTIONAL SIGNAGE SHOWN ON THE PLAN SHALL CONFORM TO THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) STANDARDS.
29. ALL PAVEMENT JOINTS SHALL BE SAWCUT PRIOR TO PAVING TO PROVIDE A DURABLE AND UNIFORM JOINT.
30. NO HOLES, TRENCHES OR STRUCTURES SHALL BE LEFT OPEN OVERNIGHT IN ANY EXCAVATION ACCESSIBLE TO THE PUBLIC OR IN PUBLIC RIGHTS-OF-WAY.
31. IMMEDIATELY UPON COMPLETION OF CUTS/FILLS, THE CONTRACTOR SHALL STABILIZE DISTURBED AREAS IN ACCORDANCE WITH EROSION CONTROL NOTES AND AS SPECIFIED ON PLANS.
32. THE CONTRACTOR SHALL BE FULLY AND SOLELY RESPONSIBLE FOR THE REMOVAL, REPLACEMENT AND RECTIFICATION OF ALL DAMAGED AND DEFECTIVE MATERIAL AND WORKMANSHIP IN CONNECTION WITH THE CONTRACT WORK. THE CONTRACTOR SHALL REPLACE OR REPAIR AS DIRECTED BY THE OWNER ALL SUCH DAMAGED OR DEFECTIVE MATERIALS WHICH APPEAR WITHIN A PERIOD OF ONE YEAR FROM THE DATE OF SUBSTANTIAL COMPLETION.
33. ALL WORK PERFORMED BY THE GENERAL CONTRACTOR AND/OR TRADE SUBCONTRACTOR SHALL CONFORM TO THE REQUIREMENTS OF LOCAL, STATE OR FEDERAL LAWS, AS WELL AS ANY OTHER GOVERNING REQUIREMENTS, WHETHER OR NOT SPECIFIED ON THE DRAWINGS.
34. WHERE THE TERMS "APPROVED EQUAL", "OTHER APPROVED", "EQUAL TO", "ACCEPTABLE" OR OTHER GENERAL QUALIFYING TERMS ARE USED IN THESE NOTES, IT SHALL BE UNDERSTOOD THAT REFERENCE IS MADE TO THE RULING AND JUDGEMENT OF SEBAGO TECHNICS, INC.
35. THE GENERAL CONTRACTOR SHALL PROVIDE ALL NECESSARY PROTECTION FOR THE WORK UNTIL TURNED OVER TO THE OWNER.
36. THE GENERAL CONTRACTOR SHALL MAINTAIN A CURRENT AND COMPLETE SET OF CONSTRUCTION DRAWINGS ON SITE DURING ALL PHASES OF CONSTRUCTION FOR USE OF ALL TRADES.
37. THE CONTRACTOR SHALL TAKE FULL RESPONSIBILITY FOR ANY CHANGES AND DEVIATION OF APPROVED PLANS NOT AUTHORIZED BY THE ARCHITECT/ENGINEER AND/OR CLIENT/OWNER.
38. DETAILS ARE INTENDED TO SHOW END RESULT OF DESIGN. ANY MODIFICATION TO SUIT FIELD DIMENSION AND CONDITION SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL PRIOR TO ANY WORK.
39. BEFORE THE FINAL ACCEPTANCE OF THE PROJECT, THE CONTRACTOR SHALL REMOVE ALL EQUIPMENT AND MATERIALS, REPAIR OR REPLACE PRIVATE OR PUBLIC PROPERTY WHICH MAY HAVE BEEN DAMAGED OR DESTROYED DURING CONSTRUCTION, CLEAN THE AREAS WITHIN AND ADJACENT TO THE PROJECT WHICH HAVE BEEN OBSTRUCTED BY HIS/HER OPERATIONS, AND LEAVE THE PROJECT AREA NEAT AND PRESENTABLE.
40. ALL GRAVITY CONDUIT PIPES SHALL BE INSTALLED USING A PIPE LASER AND TARGET SYSTEM THROUGH THE PIPE. ON PIPE RUNS 50 FEET OR LESS, THE THE CONTRACTOR SHALL REQUEST ENGINEER'S APPROVAL TO USE A GROUND LASER.
41. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING FLOW THROUGH THE EXISTING CLOSED STORM DRAINAGE SYSTEM DURING CONSTRUCTION AND SHALL SUBMIT A WORK PLAN FOR APPROVAL BY THE DESIGN ENGINEER.

GRADING & EROSION NOTES

1. SIDESLOPES SHALL NOT BE STEEPER THAN 3:1 (H:V) EXCEPT AS OTHERWISE IDENTIFIED ON THIS PLAN. ALL SIDESLOPES STEEPER THAN 3:1 (H: V) SHALL BE LINED WITH EROSION CONTROL BLANKET, OR ADDITIONAL MEASURES AS INDICATED.
2. ALL SEDIMENT AND EROSION CONTROL MEASURES SHALL BE INSTALLED IN ACCORDANCE WITH "MAINE EROSION AND SEDIMENT CONTROL BMPS" MANUAL PUBLISHED BY BUREAU OF LAND AND WATER QUALITY MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION, LATEST EDITION. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO POSSESS A COPY OF THE EROSION CONTROL PLAN AT ALL TIMES.
3. ALL AREAS DISTURBED DURING CONSTRUCTION AND NOT RESTORED WITH IMPERVIOUS SURFACES (BUILDINGS, PAVEMENTS, WALKS, ETC.) SHALL RECEIVE LOAM AND SEED PER DETAIL.
4. SEE UTILITY DRAWINGS FOR PIPE AND STRUCTURE DATA TABLES.

CONSTRUCTION PLAN

1. PROVIDE EROSION CONTROL MEASURES PRIOR TO SITE DISTURBANCE.
2. GRADING AND CLEARING LIMITS SHALL NOT ENCROACH ON ADJACENT PROPERTIES UNLESS NOTED OTHERWISE ON THE PLANS.
3. OPEN AREAS SHALL BE LIMITED TO AREAS BEING WORKED IN. THE AREA STRIPPED OF EXISTING VEGETATION AT ANY GIVEN TIME SHALL BE MINIMIZED AND BE PHASED WHERE PRACTICAL SO THAT AREAS ARE REVEGETATED AND PERMANENTLY STABILIZED BEFORE ADDITIONAL AREAS ARE STRIPPED OF EXISTING VEGETATION. STABILIZE CONSTRUCTION AREAS BY USE OF RIPRAP, SEED, MULCH, OR OTHER GROUND COVER WITHIN ONE WEEK FROM THE TIME IT WAS ACTIVELY WORKED. SURFACES SHALL BE STABILIZED PRIOR TO DIRECTING STORMWATER RUNOFF TOWARD STORMWATER BMPS. PLEASE REFER TO DRAINAGE PLANS FOR WATERSHED AREAS.

LANDSCAPE NOTES

1. PLANT QUANTITIES SHOWN ON PLANT LISTS ARE FOR CONVENIENCE TO THE CONTRACTOR ONLY. THE CONTRACTOR IS RESPONSIBLE FOR ALL PLANT MATERIAL INSTALLATION AS SHOWN ON PLANS.
2. SIZE AND GRADING STANDARDS OF PLANT MATERIALS SHALL CONFORM TO THE LATEST EDITION OF "U.S.A. STANDARD FOR NURSERY STOCK," BY THE AMERICAN ASSOCIATION OF NURSERYMEN, INC.
3. ALL PLANT MATERIAL SHALL BE FREE FROM INSECTS AND DISEASE.
4. ALL PLANTING SHALL BE DONE IN ACCORDANCE WITH ACCEPTABLE HORTICULTURAL PRACTICES. THIS IS TO INCLUDE PROPER PLANTING MIX, PLANT BED AND TREE PIT PREPARATION, PRUNING, STAKING OR GUYING, WRAPPING, SPRAYING, FERTILIZATION, PLANTING AND ADEQUATE MAINTENANCE UNTIL ACCEPTANCE BY THE OWNER.
5. PLANT MATERIAL SHALL BE GUARANTEED FOR A PERIOD OF ONE YEAR BY THE CONTRACTOR AND A PERIOD OF TWO YEARS THEREAFTER BY THE OWNER FROM DATE OF INSTALLATION. DURING THE ONE YEAR GUARANTEE PERIOD, DEAD PLANT MATERIAL SHALL BE REPLACED AT NO COST TO THE OWNER. AT THE END OF THE ONE YEAR PERIOD, THE CONTRACTOR SHALL OBTAIN FINAL ACCEPTANCE FROM THE OWNER.
6. ALL GRASS, OTHER VEGETATION AND DEBRIS SHALL BE REMOVED FROM ALL PLANTING AREAS PRIOR TO PLANTING.
7. EXISTING TREES TO BE PRESERVED WILL BE PROTECTED DURING CONSTRUCTION AND SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR.
8. THE LANDSCAPE CONTRACTOR IS ADVISED OF THE PRESENCE OF THE UNDERGROUND UTILITIES AND SHALL VERIFY THE EXISTENCE AND LOCATION OF SAME BEFORE COMMENCING AND DIGGING OPERATIONS. THE LANDSCAPE CONTRACTOR SHALL REPLACE OR REPAIR UTILITIES, PAVING, WALKS, CURBING, ETC. DAMAGED IN PERFORMANCE OF THIS JOB AT NO ADDITIONAL COST TO THE OWNER.
9. ALL SHRUB BEDS SHALL BE MULCHED WITH 3" CLEAN SHREDDED DARK BROWN BARK MULCH.
10. THE CONTRACTOR SHALL PROVIDE 4" LOAM FOR ALL AREAS TO BE SODDED OR SEEDED. PLANTING AREAS SHALL RECEIVE 12" ROLLED THICKNESS OF LOAM. THE LANDSCAPE CONTRACTOR SHALL COORDINATE SUBGRADE PREPARATION WITH THE GENERAL CONTRACTOR PRIOR TO PLACING LOAM.
11. ANY DEVIATION FROM THE LANDSCAPE PLAN, INCLUDING PLANT LOCATION, SELECTION, SIZE, QUANTITY OR CONDITION SHALL BE REVIEWED AND APPROVED BY THE OWNER AND LANDSCAPE ARCHITECT (AND MUNICIPAL AUTHORITY, IF APPLICABLE) PRIOR TO INSTALLATION ON SITE.
12. WHERE INDICATED ON PLAN, PLANTING SOIL MIXTURE FOR PERENNIAL AND ANNUAL FLOWER BED AREAS SHALL CONSIST OF FOUR PARTS TOPSOIL, TWO PARTS SPHAGNUM PEAT MOSS, AND ONE PART HORTICULTURAL PERLITE BY VOLUME. PEAT MOSS MAY BE SUBSTITUTED WITH WELL-ROTTED OR DEHYDRATED MANURE OR COMPOST. ROTOTILL BEDS TO A DEPTH OF 8 INCHES.
13. DURING CLEANING OF SITE AND PRIOR TO TREE AND SHRUB INSTALLATION, CONTRACTOR SHALL REMOVE INVASIVE PLANTS. AREAS WHERE INVASIVE PLANTS ARE REMOVED AND NO OTHER PLANTING IS PROPOSED, AREA SHALL BE LOAM AND SEEDED.

UTILITY NOTES

1. UTILITY INFORMATION DEPICTED HEREON IS COMPILED USING PHYSICAL EVIDENCE LOCATED IN THE FIELD. UTILITIES DEPICTED HEREON MAY NOT NECESSARILY REPRESENT ALL EXISTING UTILITIES. CONTRACTORS AND/OR DESIGNERS NEED TO CONTACT DIG-SAFE SYSTEMS, INC. (1-888-DIG-SAFE) AND FIELD VERIFY EXISTING UTILITIES PRIOR TO CONSTRUCTION AND/OR EXCAVATION. PROTECT EXISTING ONSITE SEWER PIPE AND ADJUST MANHOLE RIMS TO GRADE WHERE APPLICABLE.
2. ALL GRAVITY CONDUIT PIPES SHALL BE INSTALLED USING A PIPE LASER AND TARGET SYSTEM THROUGH THE PIPE. ON PIPE RUNS 50 FEET OR LESS, THE CONTRACTOR SHALL REQUEST ENGINEER'S APPROVAL TO USE OR NOT USE A GROUND LASER.
3. MAINTAIN MINIMUM 5'-6" OF COVER ABOVE TOP OF WATER SERVICE PIPE.
4. MAINTAIN MINIMUM 10 FEET HORIZONTAL SEPARATION BETWEEN WATER SERVICES AND OTHER UTILITIES. MAINTAIN MINIMUM 18 INCHES VERTICAL SEPARATION BETWEEN WATER SERVICES AND OTHER UTILITIES.
5. LOWER OR RAISE WATER SERVICES AS REQUIRED TO MAINTAIN MINIMUM 12 INCH VERTICAL SEPARATION FROM OTHER UTILITIES. WATER SERVICES CROSSING SEWERS SHALL MAINTAIN 12 INCH MINIMUM SEPARATION BETWEEN THE BOTTOM OF WATER LINE AND TOP OF SEWER UNLESS NOTED OTHERWISE ON THE PLANS.
6. PIPE:
   - SEWER PIPE SHALL BE SDR 35 PVC OR APPROVED EQUAL.
   - FORCEMAIN PIPE SHALL BE DR-11 HDPE OR APPROVED EQUAL.
   - STORMDRAIN SHALL BE ADS N-12 DUAL WALL HDPE PIPE WITH SMOOTH-WALLED INTERIOR OR APPROVED EQUAL UNLESS NOTED OTHERWISE ON THE UTILITY PLANS.
   - WATER PIPE AND FITTINGS SHALL CONFORM TO PORTLAND WATER DISTRICT WATER PIPING SPECIFICATIONS. MAIN WATER SERVICE PIPE SHALL BE DUCTILE IRON, CLASS 52 PUSH-ON PIPE MEETING THE REQUIREMENTS OF AWWA/ANSI C-111/A21.11 (LATEST REVISION). PIPE SHALL BE CEMENT-LINED AWWA/ANSI C104/A21.4 WITH LINING TWICE THE THICKNESS SPECIFIED, AND COATED TWICE WITH A BITUMINOUS SEAL COATING. PROVIDE THRUST BLOCKS AT ALL WATER SERVICE BENDS.
7. COORDINATE FOUNDATION UNDERDRAIN LOCATIONS WITH ARCHITECTURAL AND STRUCTURAL DRAWINGS.
8. COORDINATE GREASE INTERCEPTOR LOCATIONS WITH ARCHITECTURAL & PLUMBING DRAWINGS.
9. COORDINATE UTILITY INVERTS AT BUILDING WITH ARCHITECTURAL, STRUCTURAL AND PLUMBING DRAWINGS.
10. COORDINATE LOCATION OF SEWER, WATER, GAS, FOUNDATION DRAINS AND ROOF DRAIN INVERTS AT THE BUILDING WITH ARCHITECTURAL DRAWINGS.
11. WATER SERVICE ENTRANCE DESIGNS TO INCLUDE METERS AND BACKFLOW PREVENTERS TO MEET ALL STANDARDS AND REQUIREMENTS OF THE PORTLAND WATER DISTRICT.
12. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY GRADE CHANGES THAT WILL IMPACT STORM DRAINAGE INFRASTRUCTURE OR OTHER UTILITIES.
13. UTILITIES WITHIN 5 FEET FROM FACE OF BUILDING ARE COORDINATED ON RELEVANT M.E.P. DRAWINGS. CONTRACTOR SHALL COORDINATE INVERTS, CONNECTIONS AND MATERIALS WITH ALL DRAWINGS.
14. CONTRACTOR SHALL FURNISH AND INSTALL TRENCHING, MATERIALS AND BACKFILL FOR ALL UTILITIES. ELECTRICAL AND TELECOM/DATA PROVIDERS WILL PULL PRIMARY SERVICE TO TRANSFORMER AND PANEL. CONTRACTOR RESPONSIBLE FOR TIMING AND COORDINATION WITH UTILITIES AND DRAWINGS. COORDINATE WITH ELECTRICAL DRAWINGS FOR CONDUIT SCHEDULE, TYPE AND SIZES.
15. COORDINATE ALL WATER RELATED WORK WITH PORTLAND WATER DISTRICT.
16. UTILITY CONTACTS:

ELECTRIC:
CENTRAL MAINE POWER (CMP)
JAMIE COUGH, ENERGY SERVICES ADVISOR
(207) 629-1489
ACCOUNT#
- 10300876197
- 10300876218
- 10300876227
- 10300876228

WATER:
PORTLAND WATER DISTRICT
ROBERT BARTELS, ENGINEER
(207) 774-5961

TELECOMMUNICATIONS
FAIRPOINT
PATRICK MORRISON
(207) 535-4271

NATURAL GAS
UNITL
TBD

UTILITY DEMOLITION NOTES

1. PROTECT EXISTING BOUNDARY LINE MONUMENTATION. IF DISTURBED, EXISTING MONUMENTATION TO BE RESET BY A PROFESSIONAL LAND SURVEYOR.
2. DEMOLITION OF UTILITIES REQUIRING TREE REMOVAL SHALL BE COORDINATED WITH THE OWNER AND IN ACCORDANCE WITH PROJECT PLANS.
3. UTILITY DEMOLITION SHALL BE COMPLETED IN COORDINATION WITH NEW INFRASTRUCTURE. CONTRACTOR SHALL ENSURE EXISTING SURFACE DRAINAGE IS MAINTAINED DURING CONSTRUCTION.
4. EXISTING SEWER AND STORM DRAINAGE INFRASTRUCTURE TO REMAIN ACTIVE DURING CONSTRUCTION AND UPON COMPLETION OF PROJECT. DEMOLITION/CONSTRUCTION ACTIVITIES SHALL NOT INTERFERE OR IMPEDE EXISTING FLOWS. CONTRACTOR SHALL PROVIDE BYPASS PUMPING AS REQUIRED DURING SEWER AND STORM DEMOLITION AND NEW CONSTRUCTION. DAMAGE TO EXISTING SEWER INFRASTRUCTURE SHALL BE REPAIRED BY CONTRACTOR AT THEIR EXPENSE.
5. PROTECT EXISTING UTILITIES NOT CALLED OUT TO BE REMOVED DURING CONSTRUCTION.
6. DEMOLITION SHOWN IS FOR MAJOR SITE ELEMENTS TO BE DEMOLISHED. OTHER MINOR DEMOLITION MAY BE REQUIRED AS PART OF CONSTRUCTION AND SHALL BE CONSIDERED INCIDENTAL TO THE COST OF CONSTRUCTION. COORDINATE ALL DEMOLITION WORK WITH SITE AND BUILDING DRAWINGS.
7. PRIOR TO ANY DEMOLITION, THE CONTRACTOR SHALL SUBMIT A SEQUENCE OF DEMOLITION PLANS TO THE OWNER. THIS PLAN SHALL DEPICT LOCATIONS OF PROPOSED TERMINATIONS AND ANY TEMPORARY SERVICES THAT WILL BE NEEDED.
8. CONTRACTOR REQUIRED TO CONFIRM/MAINTAIN BENCHMARKS. IF IMPACTED CONTRACTOR IS RESPONSIBLE FOR NOTIFICATION/RELOCATION AND COORDINATION WITH PROJECT TEAM.

TYPICAL ABBREVIATIONS

AC	ACRE
AFG	ABOVE FINISH GRADE
APPROX.	APPROXIMATELY
BC	BOTTOM OF CURB
BCC	BITUMINOUS CONCRETE CURB
BIT	BITUMINOUS
BLDG	BUILDING
BW	BOTTOM OF WALL
CB	CATCH BASIN
CONC	CONCRETE
CONT	CONTINUOUS
DI	DUCTILE IRON
DIA	DIAMETER
DMH	DRAIN MANHOLE
E.W.	EACH WAY
ELEV	ELEVATION
FFE	FINISH FLOOR ELEVATION
FIN. GR.	FINISH GRADE
FTG	FOOTING
HDPE	HIGH DENSITY POLYETHYLENE
HGT	HEIGHT
HMA	HOT MIX ASPHALT
INV	INVERT
L/A	LANDSCAPE AREA
LF	LINEAR FEET
OC	ON CENTER
PVC	POLYVINYL CHLORIDE
PWD	PORTLAND WATER DISTRICT
R	RADIUS
R.O.W.	RIGHT OF WAY
S.F.	SQUARE FEET
SCH	SCHEDULE
SCSC	SLIPFORM CONCRETE SLOPED CURB
SCVC	SLIPFORM CONCRETE VERTICAL CURB
SD	STORM DRAIN
SGC	SLOPED GRANITE CURB
SMH	SEWER MANHOLE SPECS SPECIFICATIONS
SS	SANITARY SEWER
SSGC	SALAVAGED SLOPED GRANITE CURB
SVGC	SALAVAGED VERTICAL GRANITE CURB
TC	TOP OF CURB
TW	TOP OF WALL
TYP	TYPICAL
VGC	VERTICAL GRANITE CURB
VIF	VERIFY IN FIELD

PARKING SUMMARY

LOT 3 AFFORDABLE HOUSING DEVELOPMENT
REQUIRED PARKING

AFFORDABLE HOUSING UNITS		55
PARKING REQUIRED (ZONING)	NONE	0
BIKE PARKING REQUIRED (ZONING)	2 per 5 UNITS	22
PROPOSED PARKING GARAGE		
	LEVEL 0	26
	LEVEL 1	37
TOTAL PARKING CONDO B/C		63
TOTAL PARKING PROPOSED:	63	DELTA
PARKING REQUIRED (ZONING)	0	+63
BIKE PARKING PROPOSED	22	

NOT FOR CONSTRUCTION

DANIEL L RILEY, PE 9967

STATE OF MAINE
DANIEL L RILEY
No. 9967
LICENSED
PROFESSIONAL ENGINEER
01/08/2024

REV:	BY:	DATE:	STATUS:
A	DLR	01/08/2024	ISSUED FOR SITE PLAN REVIEW

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75 John Roberts Rd.
Suite 4A
South Portland, ME 04106
Tel. 207-200-2100

GENERAL NOTES, LEGEND AND ABBREVIATIONS
OF:
THE LOFTS AT CUMBERLAND
365 CONGRESS STREET
PORTLAND, MAINE
FOR:
LINCOLN AVENUE CAPITAL NORTHEAST DEVELOPERS, LLC
14 HARVEST WAY
NEW MARKET, NH 03857

DESIGNED	DJS
DRAWN	MRS
CHECKED	DLR
DATE	01/08/2024
SCALE	N/A
PROJECT	19371-04

DRAWING G-002

19371-04 NL.dwg, TAB:GENERAL NOTES LEGEND AND ABBREVIATIONS

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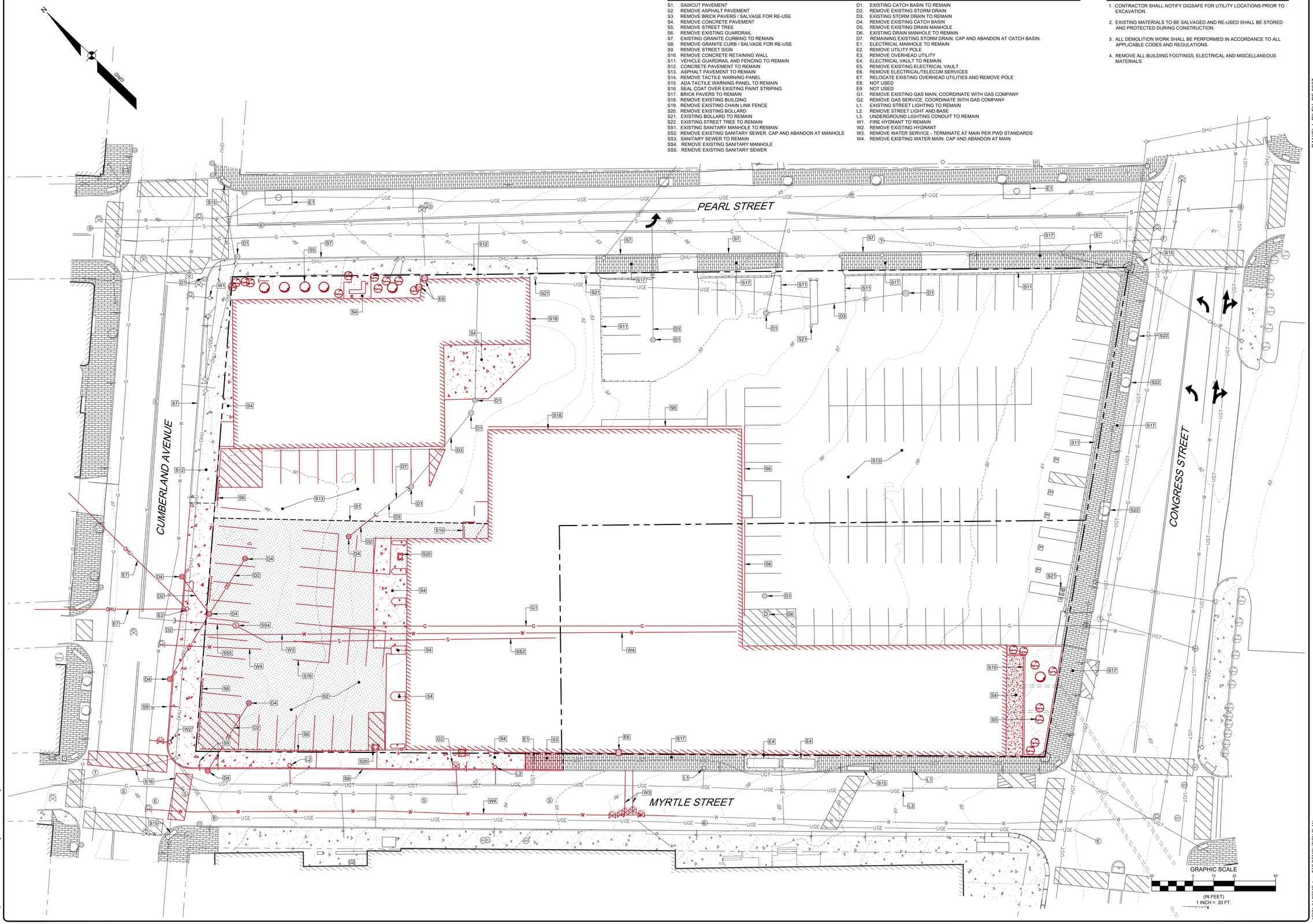
DEMOLITION KEY

S1. SAWCUT PAVEMENT
S2. REMOVE ASPHALT PAVEMENT
S3. REMOVE BRICK PAVERS / SALVAGE FOR RE-USE
S4. REMOVE CONCRETE PAVEMENT
S5. REMOVE STREET TREE
S6. REMOVE EXISTING GUARDRAIL
S7. EXISTING GRANITE CURBING TO REMAIN
S8. REMOVE GRANITE CURB / SALVAGE FOR RE-USE
S9. REMOVE STREET SIGN
S10. REMOVE CONCRETE RETAINING WALL
S11. VEHICLE GUARDRAIL AND FENCING TO REMAIN
S12. CONCRETE PAVEMENT TO REMAIN
S13. ASPHALT PAVEMENT TO REMAIN
S14. REMOVE TACTILE WARNING PANEL
S15. ADA TACTILE WARNING PANEL TO REMAIN
S16. SEAL COAT OVER EXISTING PAINT STRIPING
S17. BRICK PAVERS TO REMAIN
S18. REMOVE EXISTING BUILDING
S19. REMOVE EXISTING CHAIN LINK FENCE
S20. REMOVE EXISTING BOLLARD
S21. EXISTING BOLLARD TO REMAIN
S22. EXISTING STREET TREE TO REMAIN
SS1. EXISTING SANITARY MANHOLE TO REMAIN
SS2. REMOVE EXISTING SANITARY SEWER, CAP AND ABANDON AT MANHOLE
SS3. SANITARY SEWER TO REMAIN
SS4. REMOVE EXISTING SANITARY MANHOLE
SS5. REMOVE EXISTING SANITARY SEWER

D1. EXISTING CATCH BASIN TO REMAIN
D2. REMOVE EXISTING STORM DRAIN
D3. EXISTING STORM DRAIN TO REMAIN
D4. REMOVE EXISTING CATCH BASIN
D5. REMOVE EXISTING DRAIN MANHOLE
D6. EXISTING DRAIN MANHOLE TO REMAIN
D7. REMAINING EXISTING STORM DRAIN. CAP AND ABANDON AT CATCH BASIN.
E1. ELECTRICAL MANHOLE TO REMAIN
E2. REMOVE UTILITY POLE
E3. REMOVE OVERHEAD UTILITY
E4. ELECTRICAL VAULT TO REMAIN
E5. REMOVE EXISTING ELECTRICAL VAULT
E6. REMOVE ELECTRICAL/TELECOM SERVICES
E7. RELOCATE EXISTING OVERHEAD UTILITIES AND REMOVE POLE
E8. NOT USED
E9. NOT USED
G1. REMOVE EXISTING GAS MAIN, COORDINATE WITH GAS COMPANY
G2. REMOVE GAS SERVICE, COORDINATE WITH GAS COMPANY
L1. EXISTING STREET LIGHTING TO REMAIN
L2. REMOVE STREET LIGHT AND BASE
L3. UNDERGROUND LIGHTING CONDUIT TO REMAIN
W1. FIRE HYDRANT TO REMAIN
W2. REMOVE EXISTING HYDRANT
W3. REMOVE WATER SERVICE - TERMINATE AT MAIN PER PWD STANDARDS
W4. REMOVE EXISTING WATER MAIN. CAP AND ABANDON AT MAIN

DEMOLITION NOTES

1. CONTRACTOR SHALL NOTIFY DIGSAFE FOR UTILITY LOCATIONS PRIOR TO EXCAVATION.
2. EXISTING MATERIALS TO BE SALVAGED AND RE-USED SHALL BE STORED AND PROTECTED DURING CONSTRUCTION.
3. ALL DEMOLITION WORK SHALL BE PERFORMED IN ACCORDANCE TO ALL APPLICABLE CODES AND REGULATIONS.
4. REMOVE ALL BUILDING FOOTINGS, ELECTRICAL AND MISCELLANEOUS MATERIALS.



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STATE OF MAINE
DANIEL L. RILEY
No. 9967
PROFESSIONAL ENGINEER
01/08/2024

DANIEL L RILEY, PE 9967

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DEMOLITION PLAN

OF:
THE LOFTS AT CUMBERLAND
365 CONGRESS STREET
PORTLAND, MAINE

FOR:
LINCOLN AVENUE CAPITAL NORTHEAST DEVELOPERS, LLC
14 HARVEST WAY
NEW MARKET, NH 03857

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DRAWING C-002

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19371-04 DEMO.dwg; TAB:DEMOLITION PLAN

ON STREET PARKING SCHEDULE

1. PARKING SIGNS MEETING CITY OF PORTLAND STANDARDS SHALL BE INSTALLED AT THE LOCATIONS INDICATED. SIGNAGE PROVIDED SHALL BE REVIEWED AND APPROVED BY THE CITY PARKING DIRECTOR. THE PARKING SCHEDULE SHALL BE AS NOTED BELOW UNLESS OTHERWISE APPROVED BY THE PLANNING AUTHORITY.
   - A. SPACES ON MYRTLE STREET SHALL BE 30 MINUTE TIME LIMIT PARKING.
   - B. SPACES ON CUMBERLAND AVENUE BETWEEN MYRTLE STREET AND PEARL STREET SHALL BE 2 HOUR TIME LIMIT PARKING
2. THE CITY WILL REVIEW CONDITIONS ON PEARL STREET POST-OCCUPANCY AND DETERMINE THE FEASIBILITY OF ON-STREET PARKING IN THE FUTURE

LIGHTING FIXTURES LEGEND

A

CITY OF PORTLAND STANDARD STREET LIGHT- TECHNICAL STANDARDS FIGURE X-5F SEE DETAILS, COLOR GREEN

TOP LUMINAIRE: HOLOPHANE ESPLANADE SERIES ESPL2 P20 30K AS-CMC-TG3-S-P7-NL2x2-BDHF13-200CMC
LOWER LUMINAIRES: (2) HOLOPHANE PEDESTRIAN ESPLANADE SERIES ESPL2 P20 30K AS-CMC-TG3-S-P7-NL2x2-BDHF13-200CMC

REFER TO CITY OF PORTLAND TECHNICAL STANDARDS SECTION 10 MUNICIPAL STREET LIGHTING STANDARDS FOR SPECIFICATIONS

SITE PLAN KEY NOTES

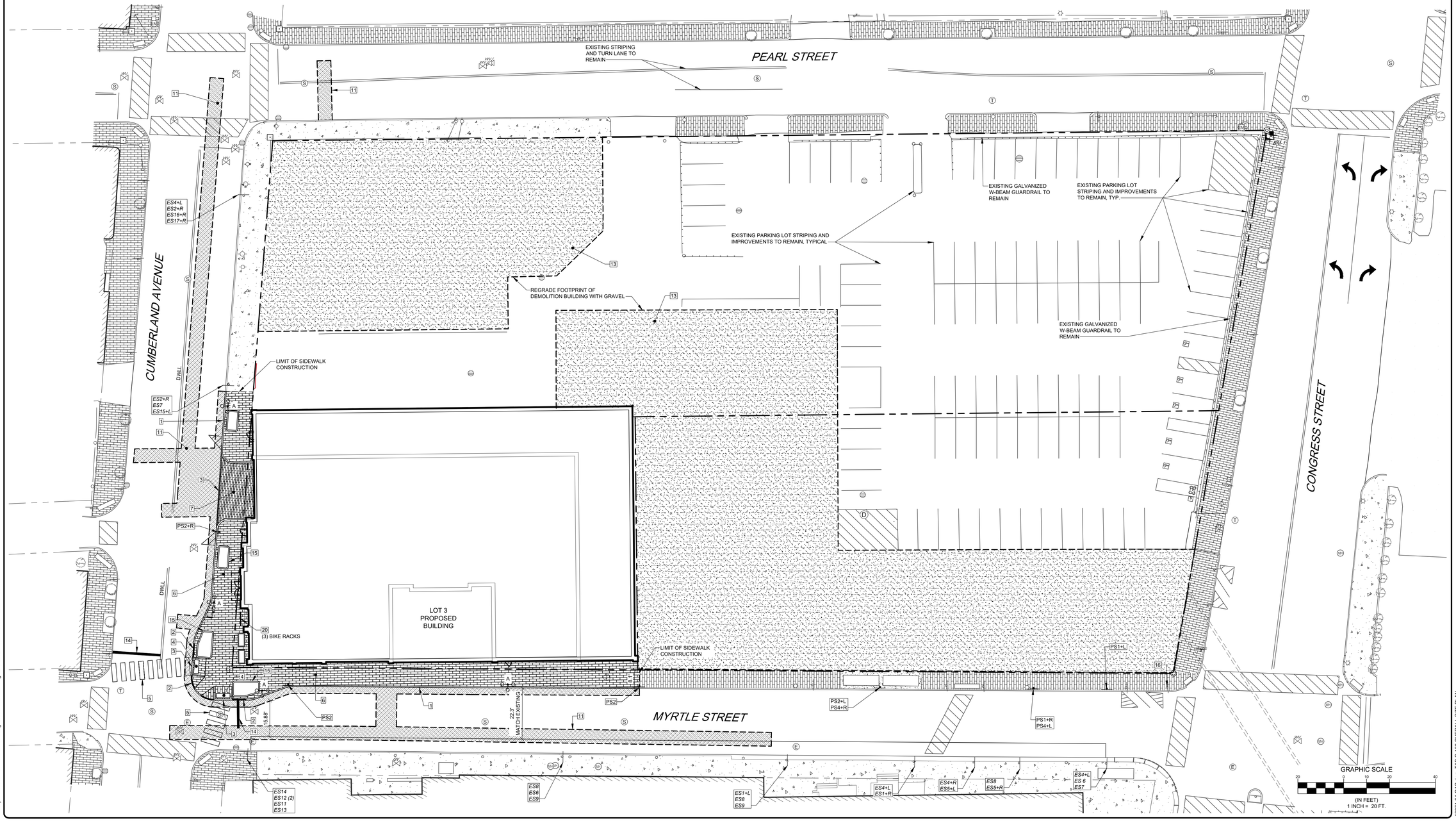
1 RESET SALVAGED GRANITE CURB
2 GRANITE CURB TIP DOWN
3 FLUSH GRANITE CURB
4 2' X 6' TRUNCATED DOME PLATES
5 2' X 2' SOLID WHITE PAINT BARS, 2' APART, 8 ' WIDE
6 BRICK PAVERS
7 BRICK DRIVEWAY APRON
8 NEW TYPE 1 VERTICAL GRANITE CURB
9 LIGHT FIXTURE A - CITY STANDARD FIGURE X - 5F (COLOR GREEN)
10 NOT USED
11 ASPHALT PAVING
12 NOT USED
13 REGRADE WITH GRAVEL IN DEMOLISHED BUILDING AREAS
14 12" SOLID WHITE PAINTED STOP BAR
15 RAISED GRANITE CURB TREE WELL
16 MYRTLE STREET + ONE WAY SIGN
17 NOT USED
18 NOT USED
19 NOT USED
20 BIKE RACK- DERO DOWNTOWN, BLACK INSTALL PER CITY OF PORTLAND TECHNICAL STANDARDS
21 NOT USED
22 NOT USED
23 NOT USED
24 NOT USED
25 NOT USED
26 NOT USED
27 NOT USED
28 NOT USED

STREET PARKING SIGN KEY NOTES

PS1+R	30 MINUTE COMMERCIAL LOADING ZONE (6AM-6PM)+ RIGHT ARROW
PS1+L	30 MINUTE COMMERCIAL LOADING ZONE (6AM-6PM) + LEFT ARROW
PS2	30 MINUTE PARKING
PS2+R	30 MINUTE PARKING + RIGHT ARROW
PS2+L	30 MINUTE PARKING + LEFT ARROW
PS3	2 HOUR PARKING
PS4	NO PARKING ANY TIME
PS4+R	NO PARKING ANY TIME + RIGHT ARROW
PS4+L	NO PARKING ANY TIME+ LEFT ARROW
PS6	METERED PARKING

EXISTING PARKING SIGN KEY NOTES

ES1+R	*30 MINUTE COMMERCIAL LOADING ZONE (6AM-6PM) + RIGHT ARROW*
ES1+L	*30 MINUTE COMMERCIAL LOADING ZONE + LEFT ARROW*
ES2	*30 MINUTE PARKING*
ES2+R	*30 MINUTE PARKING + RIGHT ARROW*
ES2+L	*30 MINUTE PARKING + LEFT ARROW*
ES3	*NOT USED*
ES4	*NO PARKING ANY TIME*
ES4+R	*NO PARKING ANY TIME + RIGHT ARROW*
ES4+L	*NO PARKING ANY TIME + LEFT ARROW*
ES5	*HANDICAP RESERVED PARKING*
ES5+R	*HANDICAP RESERVED PARKING + RIGHT ARROW*
ES5+L	*HANDICAP RESERVED PARKING + RIGHT ARROW*
ES6	*PASSPORT PARKING ZONE 7103*
ES7	*SNOW HAULING YELLOW ZONE*
ES8	*NO PARKING THIS SIDE OF STREET*
ES9	*TURN OFF ENGINE*
ES10	*30 MINUTE PARKING*
ES11	*STOP*
ES 12	*ONE WAY*
ES13	*DO NOT ENTER*
ES 14	*STREET NAME (MYRTLE STREET)*
ES 15	*2 HOUR PARKING + LEFT ARROW*
ES 16	*2 HOUR PARKING + RIGHT ARROW*
ES 17	*BLUE PARKING SIGN + RIGHT ARROW*



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DANIEL L RILEY PE 9967

STATE OF MAINE DANIEL L RILEY No. 9967 PROFESSIONAL ENGINEER
01/08/2024

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OVERALL SITE PLAN

OF:
THE LOFTS AT CUMBERLAND
365 CONGRESS STREET
PORTLAND, MAINE

FOR:
LINCOLN AVENUE CAPITAL NORTHEAST DEVELOPERS, LLC
14 HARVEST WAY
NEW MARKET, NH 03857

DESIGNED	DJS
DRAWN	MRS
CHECKED	DLR
DATE	01/08/2024
SCALE	1" = 20'
PROJECT	19371-04

DRAWING C-100

19371-04 OAS.dwg, TAB:C-100 OVERALL SITE PLAN

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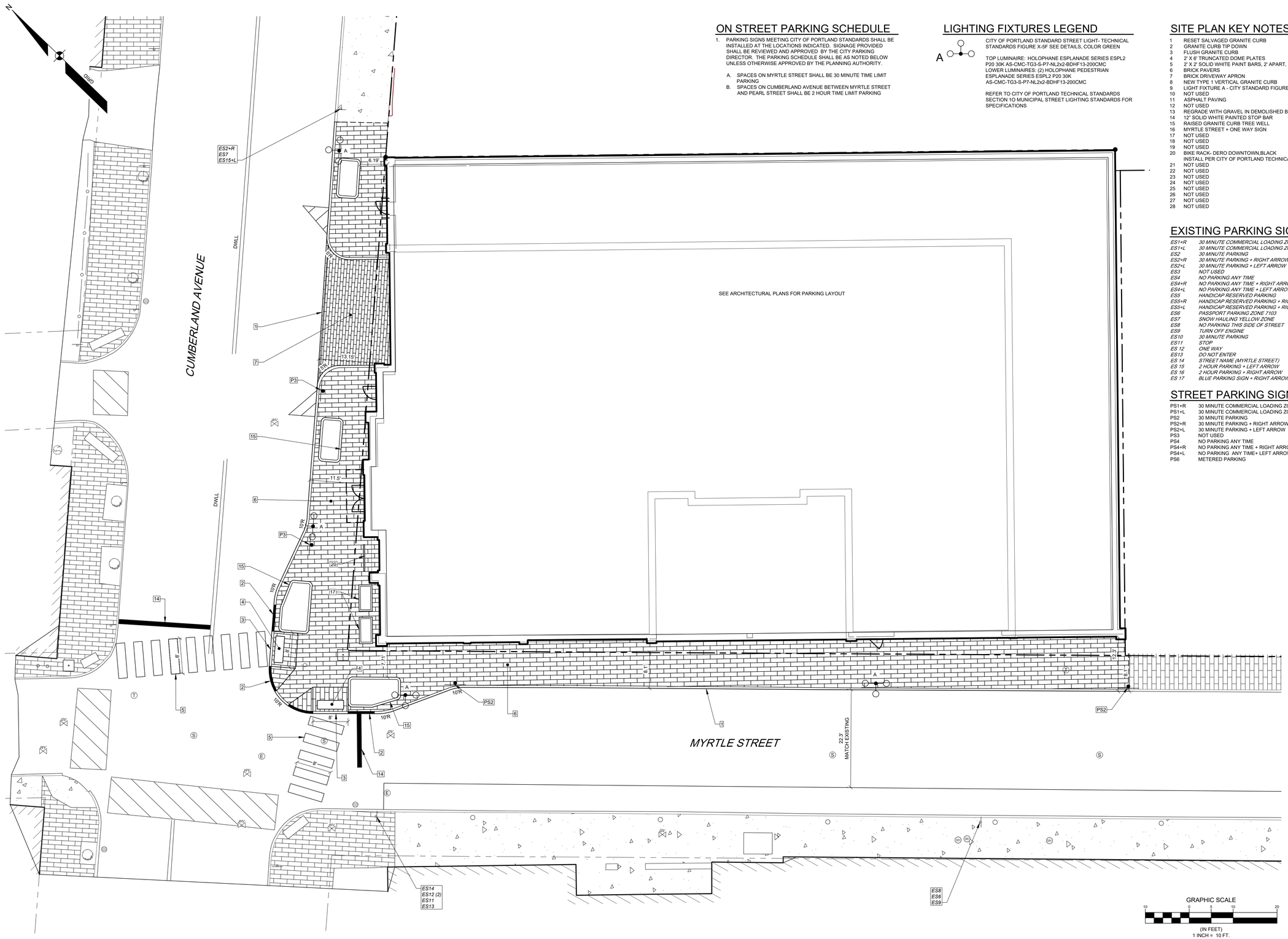

ON STREET PARKING SCHEDULE

1. PARKING SIGNS MEETING CITY OF PORTLAND STANDARDS SHALL BE INSTALLED AT THE LOCATIONS INDICATED. SIGNAGE PROVIDED SHALL BE REVIEWED AND APPROVED BY THE CITY PARKING DIRECTOR. THE PARKING SCHEDULE SHALL BE AS NOTED BELOW UNLESS OTHERWISE APPROVED BY THE PLANNING AUTHORITY.

   A. SPACES ON MYRTLE STREET SHALL BE 30 MINUTE TIME LIMIT PARKING
   B. SPACES ON CUMBERLAND AVENUE BETWEEN MYRTLE STREET AND PEARL STREET SHALL BE 2 HOUR TIME LIMIT PARKING

LIGHTING FIXTURES LEGEND

A

CITY OF PORTLAND STANDARD STREET LIGHT- TECHNICAL STANDARDS FIGURE X-5F SEE DETAILS, COLOR GREEN

TOP LUMINAIRE: HOLOPHANE ESPLANADE SERIES ESPL2 P20 30K AS-CMC-TG3-S-P7-NL2x2-BDHF13-200CMC
LOWER LUMINAIRES: (2) HOLOPHANE PEDESTRIAN ESPLANADE SERIES ESPL2 P20 30K AS-CMC-TG3-S-P7-NL2x2-BDHF13-200CMC

REFER TO CITY OF PORTLAND TECHNICAL STANDARDS SECTION 10 MUNICIPAL STREET LIGHTING STANDARDS FOR SPECIFICATIONS

SITE PLAN KEY NOTES

1 RESET SALVAGED GRANITE CURB
2 GRANITE CURB TIP DOWN
3 FLUSH GRANITE CURB
4 2' X 6' TRUNCATED DOME PLATES
5 2' X 2' SOLID WHITE PAINT BARS, 2' APART, 8 ' WIDE
6 BRICK PAVERS
7 BRICK DRIVEWAY APRON
8 NEW TYPE 1 VERTICAL GRANITE CURB
9 LIGHT FIXTURE A - CITY STANDARD FIGURE X - 5F (COLOR GREEN)
10 NOT USED
11 ASPHALT PAVING
12 NOT USED
13 REGRADE WITH GRAVEL IN DEMOLISHED BUILDING AREAS
14 12' SOLID WHITE PAINTED STOP BAR
15 RAISED GRANITE CURB TREE WELL
16 MYRTLE STREET + ONE WAY SIGN
17 NOT USED
18 NOT USED
19 NOT USED
20 BIKE RACK- DERO DOWNTOWN,BLACK
INSTALL PER CITY OF PORTLAND TECHNICAL STANDARDS
21 NOT USED
22 NOT USED
23 NOT USED
24 NOT USED
25 NOT USED
26 NOT USED
27 NOT USED
28 NOT USED

EXISTING PARKING SIGN KEY NOTES

ES1+R 30 MINUTE COMMERCIAL LOADING ZONE (6AM-6PM) + RIGHT ARROW
ES1+L 30 MINUTE COMMERCIAL LOADING ZONE + LEFT ARROW
ES2 30 MINUTE PARKING
ES2+R 30 MINUTE PARKING + RIGHT ARROW
ES2+L 30 MINUTE PARKING + LEFT ARROW
ES3 NOT USED
ES4 NO PARKING ANY TIME
ES4+R NO PARKING ANY TIME + RIGHT ARROW
ES4+L NO PARKING ANY TIME + LEFT ARROW
ES5 HANDICAP RESERVED PARKING
ES5+R HANDICAP RESERVED PARKING + RIGHT ARROW
ES5+L HANDICAP RESERVED PARKING + RIGHT ARROW
ES6 PASSPORT PARKING ZONE 7103
ES7 SNOW HAULING YELLOW ZONE
ES8 NO PARKING THIS SIDE OF STREET
ES9 TURN OFF ENGINE
ES10 30 MINUTE PARKING
ES11 STOP
ES 12 ONE WAY
ES13 DO NOT ENTER
ES 14 STREET NAME (MYRTLE STREET)
ES 15 2 HOUR PARKING + LEFT ARROW
ES 16 2 HOUR PARKING + RIGHT ARROW
ES 17 BLUE PARKING SIGN + RIGHT ARROW

STREET PARKING SIGN KEY NOTES

PS1+R 30 MINUTE COMMERCIAL LOADING ZONE (6AM-6PM)+ RIGHT ARROW
PS1+L 30 MINUTE COMMERCIAL LOADING ZONE (6AM-6PM) + LEFT ARROW
PS2 30 MINUTE PARKING
PS2+R 30 MINUTE PARKING + RIGHT ARROW
PS2+L 30 MINUTE PARKING + LEFT ARROW
PS3 NOT USED
PS4 NO PARKING ANY TIME
PS4+R NO PARKING ANY TIME + RIGHT ARROW
PS4+L NO PARKING ANY TIME+ LEFT ARROW
PS6 METERED PARKING

NOT FOR CONSTRUCTION

DANIEL L RILEY, PE 9967

STATE OF MAINE
DANIEL L RILEY
No. 9967
PROFESSIONAL ENGINEER
01/08/2024

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SITE PLAN - LEVEL 0
OF:
THE LOFTS AT CUMBERLAND
365 CONGRESS STREET
PORTLAND, MAINE
FOR:
LINCOLN AVENUE CAPITAL NORTHEAST DEVELOPERS, LLC
14 HARVEST WAY
NEW MARKET, NH 03857

DESIGNED	DJS
DRAWN	MRS
CHECKED	DLR
DATE	01/08/2024
SCALE	1" = 10'
PROJECT	19371-04

DRAWING C-101

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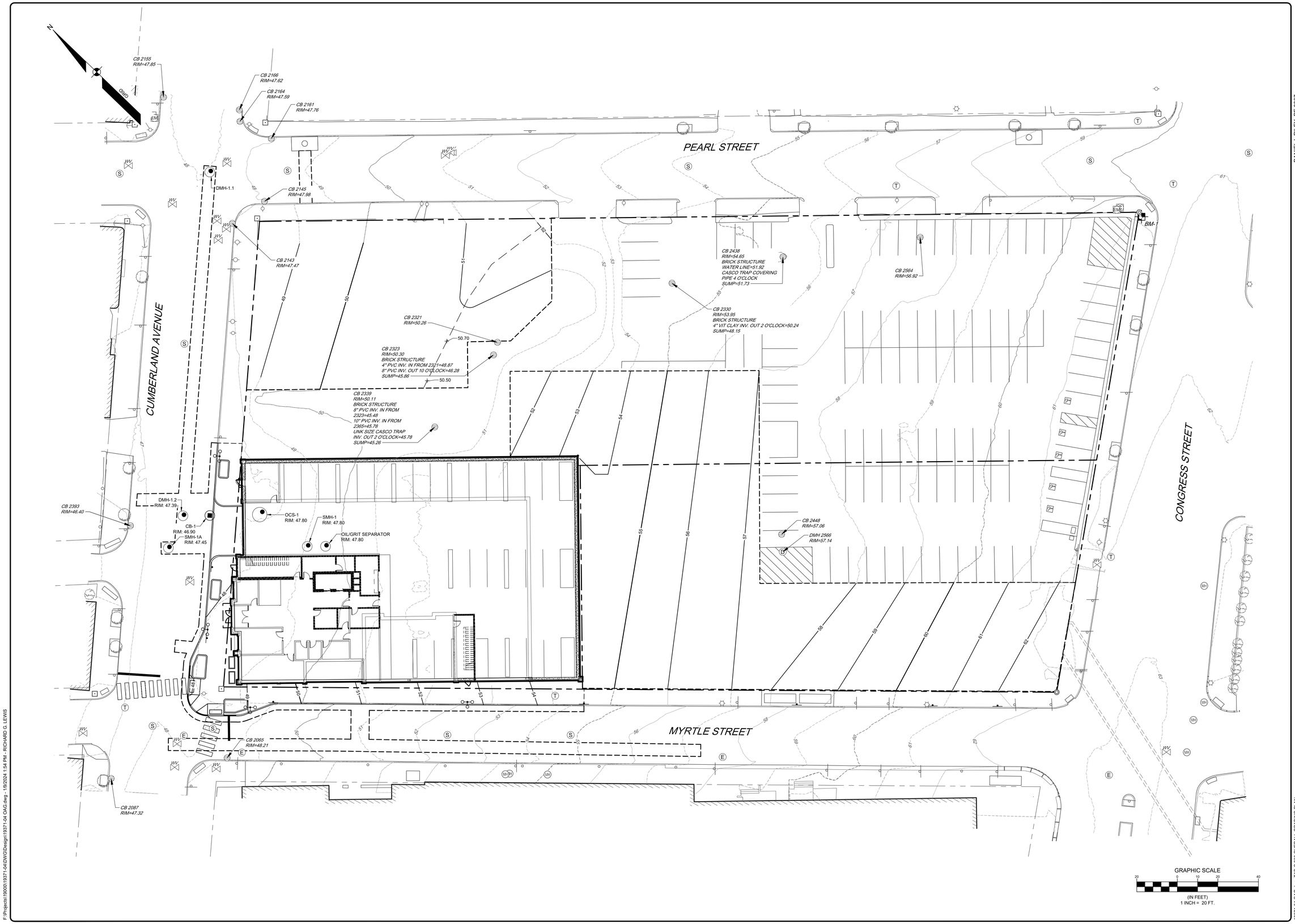
19371-04 S.dwg, TAB:C-101 SITE PLAN - LEVEL 0



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OVERALL GRADING PLAN

OF:

THE LOFTS AT CUMBERLAND

365 CONGRESS STREET
PORTLAND, MAINE

FOR:

LINCOLN AVENUE CAPITAL NORTHEAST DEVELOPERS, LLC
14 HARVEST WAY
NEW MARKET, NH 03857

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PROJECT	19371-04

DRAWING C-200

19371-04 OAG.dwg, TAB:C-200 OVERALL GRADING PLAN

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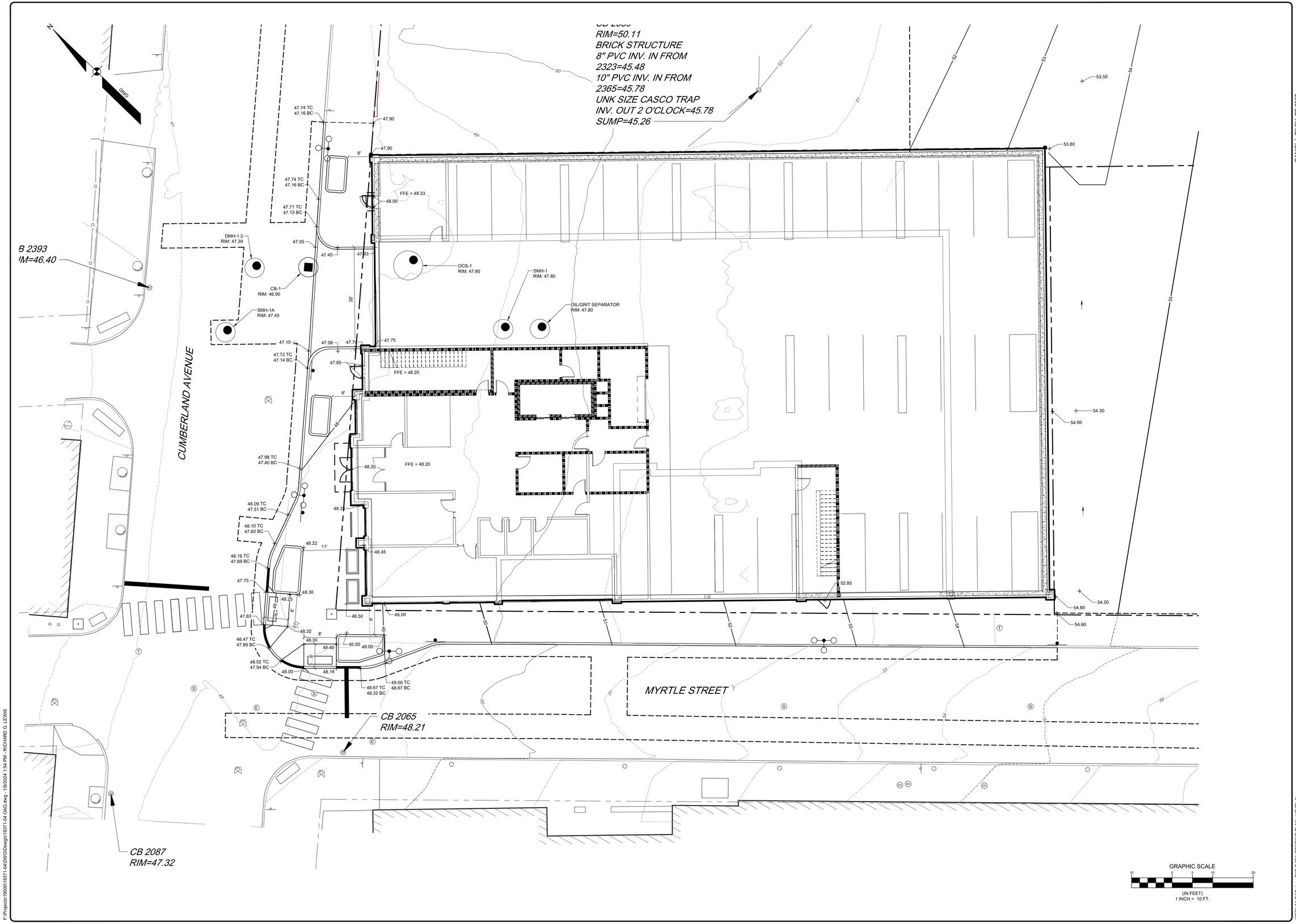

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GRADING PLAN - LEVEL 0

OF:

THE LOFTS AT CUMBERLAND

365 CONGRESS STREET
PORTLAND, MAINE

FOR:

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14 HARVEST WAY
NEW MARKET, NH 03857

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LIGHTING FIXTURES LEGEND

CITY OF PORTLAND STANDARD STREET LIGHT- TECHNICAL STANDARDS FIGURE X-5F SEE DETAILS

TOP LUMINAIRE: HOLOPHANE ESPLANADE SERIES ESPL2 P20 30K AS-CMC-TG3-S-P7-NL2x2-BDHF13-200CMC
LOWER LUMINAIRES: (2) HOLOPHANE PEDESTRIAN ESPLANADE SERIES ESPL2 P20 30K AS-CMC-TG3-S-P7-NL2x2-BDHF13-200CMC

REFER TO CITY OF PORTLAND TECHNICAL STANDARDS SECTION 1O MUNICIPAL STREET LIGHTING STANDARDS FOR SPECIFICATIONS

UTILITY PLAN KEY NOTES

DRAINAGE:
D1 CATCH BASIN (CB)
D2 DRAIN MANHOLE (DMH)
D3 STORM DRAIN MAIN (SD)

ELECTRICAL:
E1 6' X 12' SUBMERSIBLE TRANSFORMER
E2 (3) 5" PVC AND (2) 4" PVC CONDUITS
E3 REMOVE EXISTING UTILITY POLE
E4 EXISTING OVERHEAD ELECTRIC LINE TO BE SWAPPED TO UNDERGROUND ELECTRIC
E5 6' X 12' ELECTRICAL MANHOLE
E6 CMP NETWORK TRANSFORMER VAULT

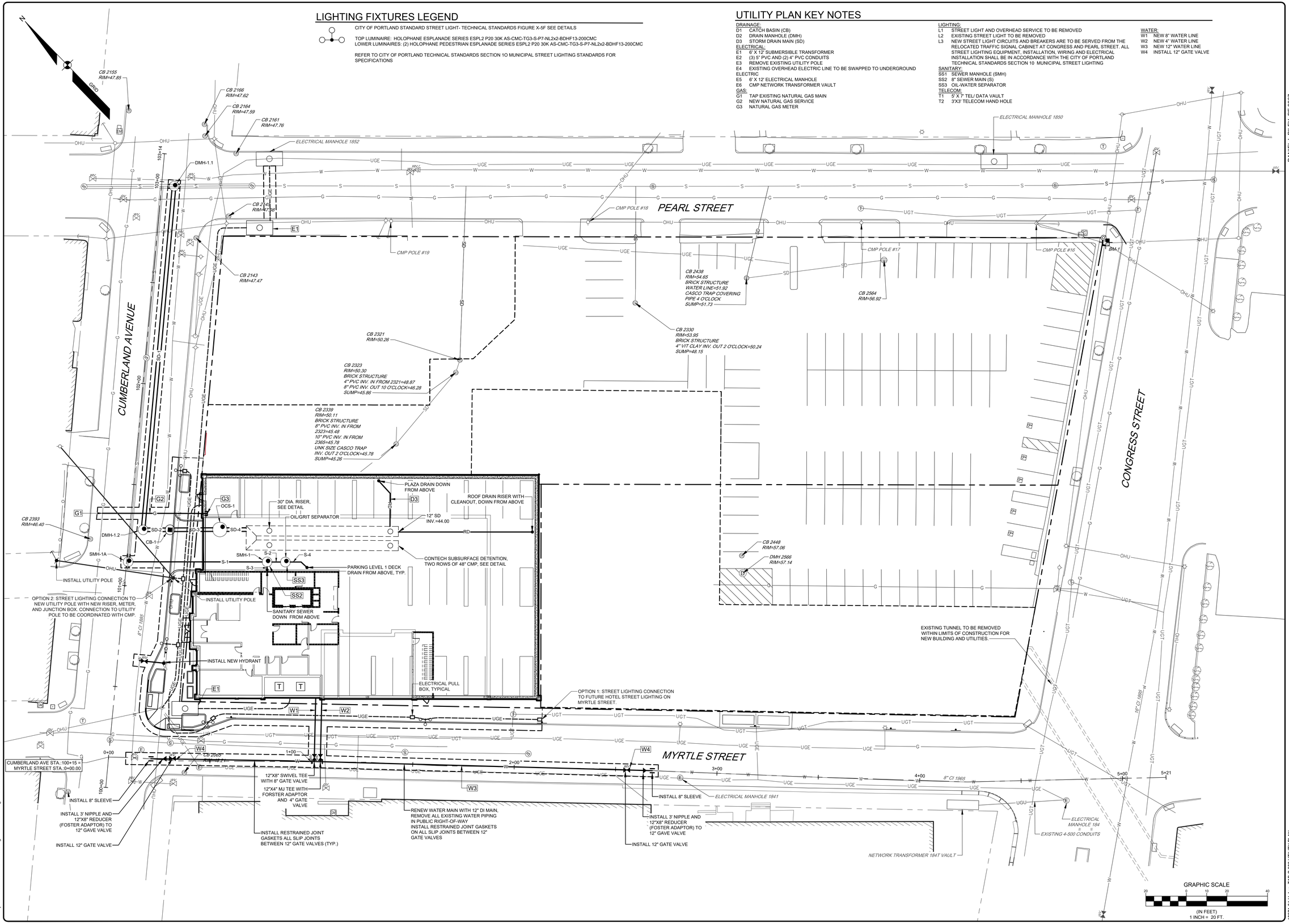
GAS:
G1 TAP EXISTING NATURAL GAS MAIN
G2 NEW NATURAL GAS SERVICE
G3 NATURAL GAS METER

LIGHTING:
L1 STREET LIGHT AND OVERHEAD SERVICE TO BE REMOVED
L2 EXISTING STREET LIGHT TO BE REMOVED
L3 NEW STREET LIGHT CIRCUITS AND BREAKERS ARE TO BE SERVED FROM THE RELOCATED TRAFFIC SIGNAL CABINET AT CONGRESS AND PEARL STREET. ALL STREET LIGHTING EQUIPMENT, INSTALLATION, WIRING AND ELECTRICAL INSTALLATION SHALL BE IN ACCORDANCE WITH THE CITY OF PORTLAND TECHNICAL STANDARDS SECTION 10 MUNICIPAL STREET LIGHTING

SANITARY:
SS1 SEWER MANHOLE (SMH)
SS2 8" SEWER MAIN (S)
SS3 OIL-WATER SEPARATOR

TELECOM:
T1 5' X 7' TEL/ DATA VAULT
T2 3'X3' TELECOM HAND HOLE

WATER:
W1 NEW 8" WATER LINE
W2 NEW 4" WATER LINE
W3 NEW 12" WATER LINE
W4 INSTALL 12" GATE VALVE



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DANIEL L RILEY, PE 9967

STATE OF MAINE DANIEL L. RILEY PROFESSIONAL ENGINEER PROGRESS 01/08/2024

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DRAWN	MRS
CHECKED	DLR
DATE	01/08/2024
SCALE	1" = 20'
PROJECT	19371-04

DRAWING C-300

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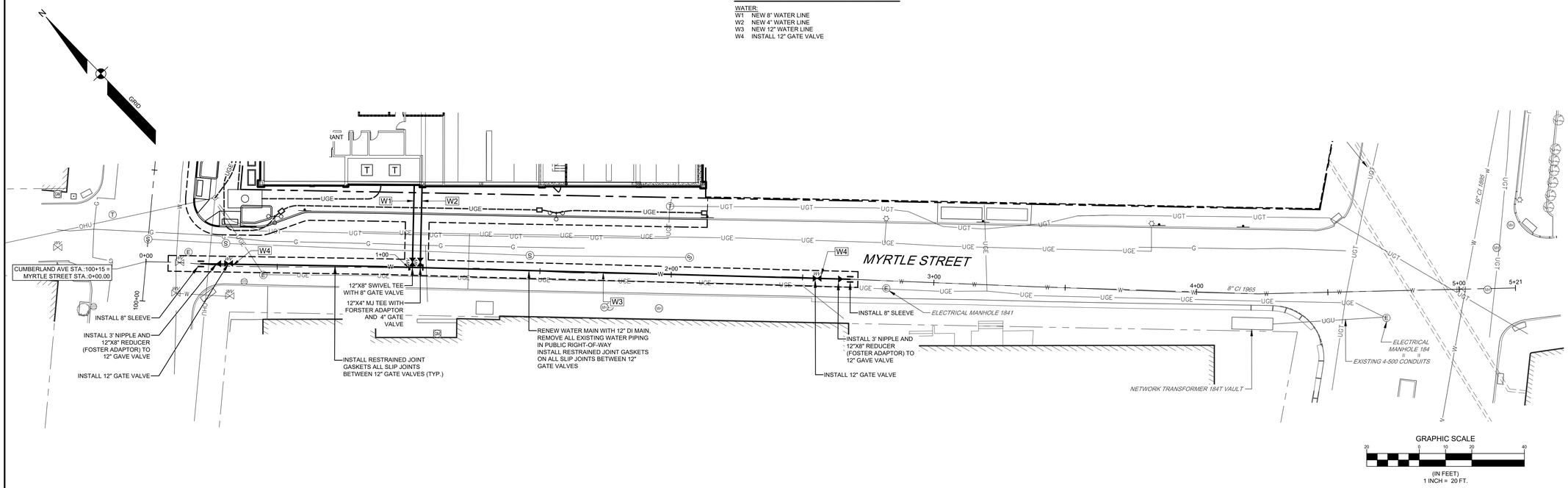
19371-04-U.dwg, TAB:C-300 UTILITY PLAN

UTILITY PLAN KEY NOTES

WATER:
W1 NEW 8" WATER LINE
W2 NEW 4" WATER LINE
W3 NEW 12" WATER LINE
W4 INSTALL 12" GATE VALVE



GRAPHIC SCALE
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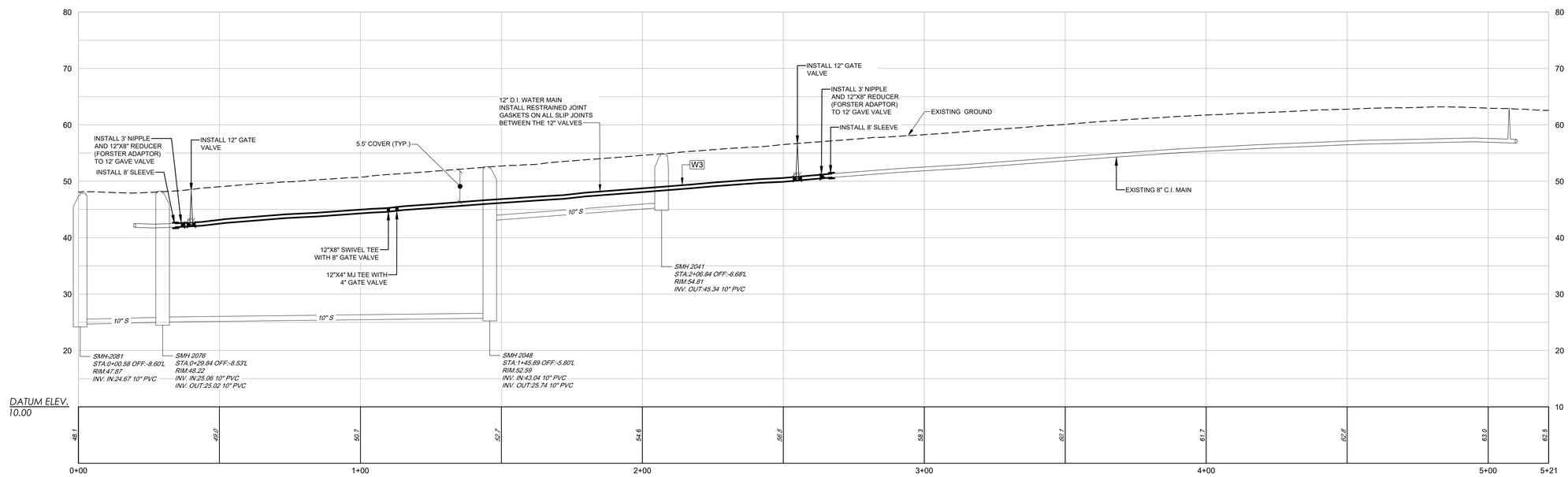
(IN FEET)
1 INCH = 20 FT.



MYRTLE STREET

SCALE:
1" = 20' H
1" = 10' V

NOTES:

1. DEPTH OF EXISTING ELECTRICAL, COMMUNICATION, AND GAS UTILITIES ARE UNKNOWN. CONTRACTOR SHALL VERIFY DEPTHS PRIOR TO CONSTRUCTION. ANY CONFLICTS SHALL BE COMMUNICATED TO ENGINEER.
2. WATER MAIN INSTALLATION TO START AT CONGRESS STREET AND LAY TOWARD CUMBERLAND AVENUE.

NOT FOR CONSTRUCTION

DANIELL L RILEY PE 9967

STATE OF MAINE
DANIEL L. RILEY
PROFESSIONAL ENGINEER
PROGRESS PRINT
01/08/2024

REV	BY	DATE	STATUS
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Tel. 207-200-2100

MYRTLE STREET - PLAN AND PROFILE
OF:
THE LOFTS AT CUMBERLAND
365 CONGRESS STREET
PORTLAND, MAINE
FOR:
LINCOLN AVENUE CAPITAL NORTHEAST DEVELOPERS, LLC
14 HARVEST WAY
NEW MARKET, NH 03857

DESIGNED	DJS
DRAWN	MRS
CHECKED	DLR
DATE	01/08/2024
SCALE	1" = 20'
PROJECT	19371-04

DRAWING C-301

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19371-04-U.dwg, TAB:C-301 MYRTLE STREET - PLAN AND PROFILE

UTILITY PLAN KEY NOTES

WATER:
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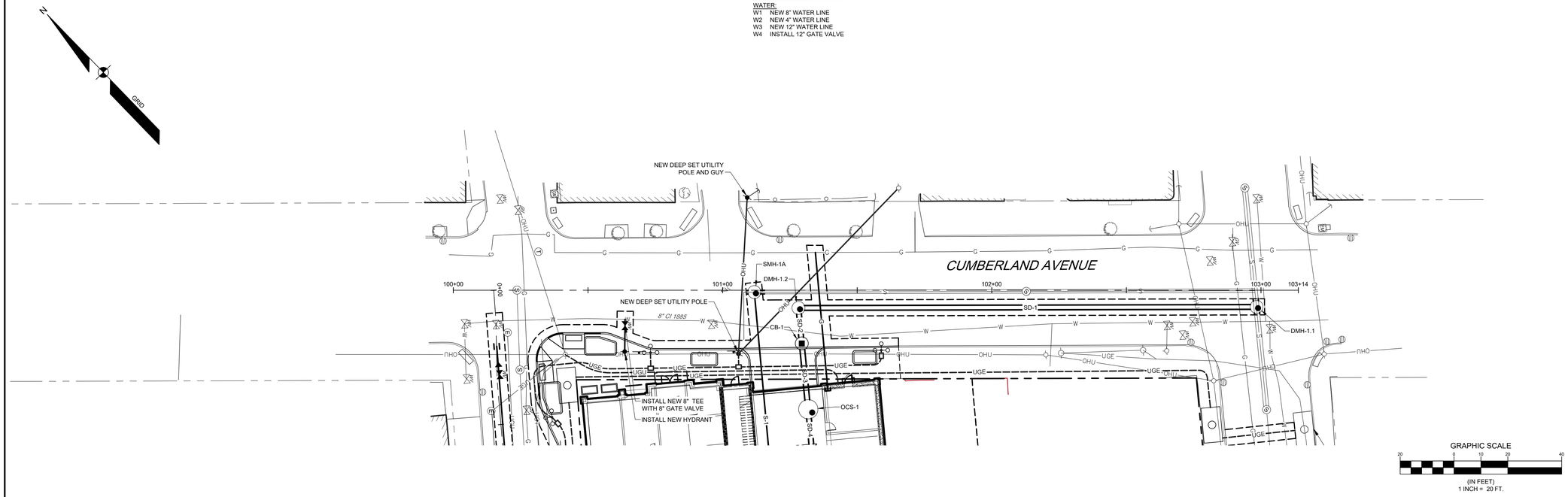
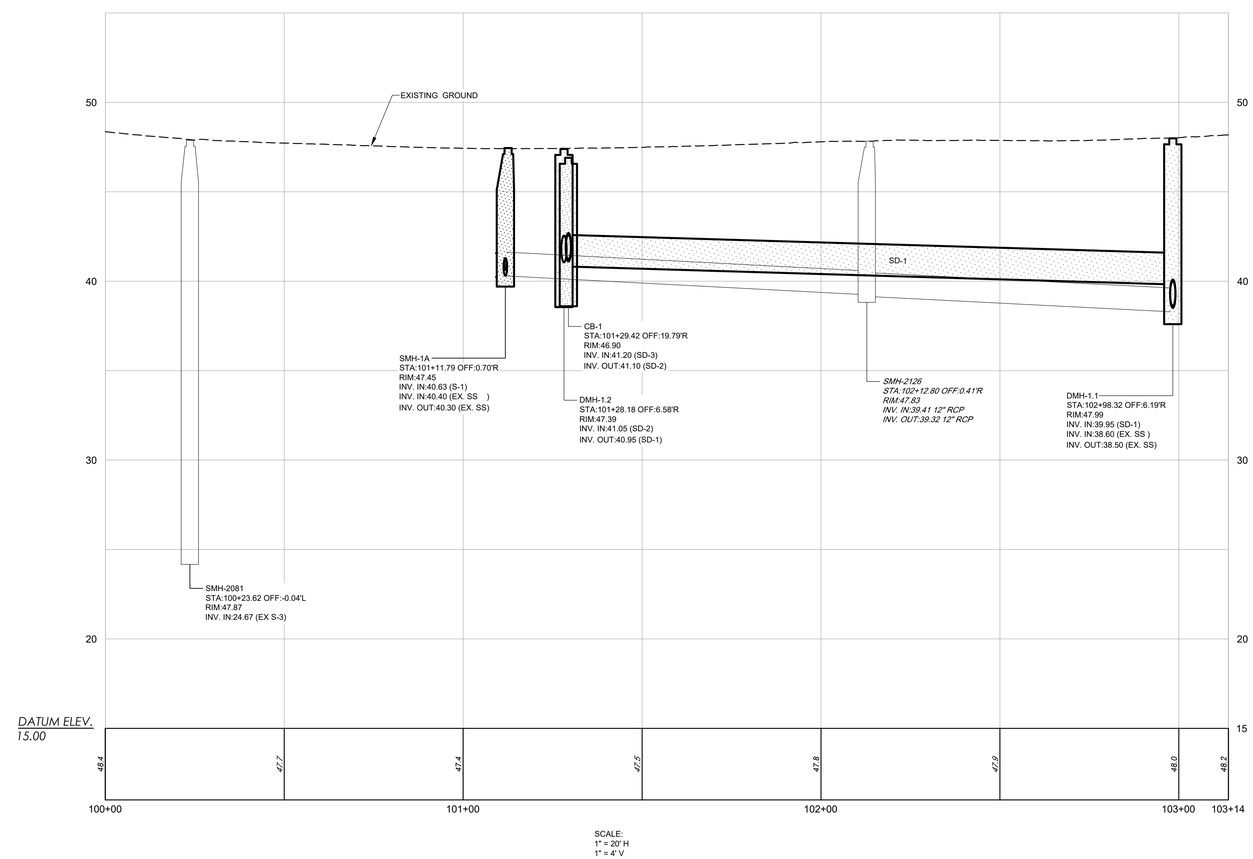
W2 NEW 4" WATER LINE
W3 NEW 12" WATER LINE
W4 INSTALL 12" GATE VALVE





CUMBERLAND AVE

NOTES:

1. DEPTH OF EXISTING ELECTRICAL, COMMUNICATION, AND GAS UTILITIES ARE UNKNOWN. CONTRACTOR SHALL VERIFY DEPTHS PRIOR TO CONSTRUCTION. ANY CONFLICTS SHALL BE COMMUNICATED TO ENGINEER.

NOT FOR CONSTRUCTION

DANIEL L RILEY PE 9967

STATE OF MAINE
DANIEL L. RILEY
PROFESSIONAL ENGINEER
PROGRESS
01/08/2024

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CUMBERLAND AVE - PLAN AND PROFILE
OF:
THE LOFTS AT CUMBERLAND
365 CONGRESS STREET
PORTLAND, MAINE
FOR:
LINCOLN AVENUE CAPITAL NORTHEAST DEVELOPERS, LLC
14 HARVEST WAY
NEWMARKET, NH 03857

DESIGNED	DJS
DRAWN	MRS
CHECKED	DLR
DATE	01/08/2024
SCALE	1" = 20'
PROJECT	19371-04

DRAWING C-302

19371-04-U.dwg, TAB:C-302 CUMBERLAND AVE - PLAN AND PROFILE

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STRUCTURE TABLE

POINT #	STRUCTURE TYPE	RIM EL.	INV.	INV. EL.	SIZE	TYPE	LOCATION (N=12)	COMMENTS
2041	SMH	54.78	IN	49.43	12	VIT CLAY	3	
			IN	49.49	4	VIT CLAY	6	
			IN	46.39	10	VIT CLAY	4	
			IN	45.56	UNK	UNK	5	FULL OF SEDIMENT
			OUT	45.34	UNK	UNK	11	FULL OF SEDIMENT
			SHELF	45.81				
2048	SMH	52.54	IN	42.99	18	VIT CLAY	4	
			IN	35.70	UNK	UNK	4	
			IN	36.23	8	VIT CLAY	3	
			IN	26.54	UNK	UNK	7	TOP OF PIPE
			IN	25.79	UNK	UNK	4	
			OUT	25.69	UNK	UNK	4	
2061	CBR	48.09	OUT	44.12	8	PVC	7	HOOD
			SUMP	42.12				
2065	CBR	48.25	IN	44.81	8	VIT CLAY	8	
			OUT	44.71	8	UNK	2	
			SUMP	40.71				
2076	SMH	48.19	IN	41.34	12	VIT CLAY	3	
			IN	25.03	UNK	UNK	4	
			OUT	24.99	UNK	UNK	10	
2081	SMH	47.90	IN	38.77	18	VIT CLAY	4	
			IN	24.67	18	VIT CLAY	4	
			OUT	24.67	18	VIT CLAY	10	
			SHELF	25.77				
2106	CBR	47.27	OUT	43.46	UNK	UNK	10	HOOD
			SUMP	40.26				
2124	CBR	47.00	IN	44.75	12	VIT CLAY	6	
			OUT	47.05	0	NONE	NONE	NO OUT VISIBLE
			SUMP	40.05				
2126	SMH	47.80	IN	39.41	12	VIT CLAY	8	
			OUT	39.32	12	VIT CLAY	2	
			SHELF	40.03				
2143	CBR	47.40	OUT	45.27	10	VIT CLAY	3	
			SUMP	45.17				
2145	CBR	47.95	IN	44.48	8	VIT CLAY	9	
			OUT	43.78	12	VIT CLAY	12	
			SUMP	42.98				
2150	MH	47.77	IN	37.46	18	VIT CLAY	4	
			OUT	37.21	18	VIT CLAY	10	
			SHELF	38.11				
2161	CBR	47.77	OUT	43.36	12	UNK	8	
			SUMP	40.76				
2164	CBR	47.54	IN	44.26	8	VIT CLAY	4	
			IN	44.19	8	VIT CLAY	2	
			OUT	43.49	12	UNK	9	
			SUMP	40.09				
2166	CBR	47.59	OUT	44.42	8	VIT CLAY	8	
			SUMP	44.02				
2223	SMH	48.67	IN	39.72	15	VIT CLAY	4	
			OUT	39.62	15	VIT CLAY	10	
			SHELF	40.77				
2386	SMH	54.12	IN	44.67	15	VIT CLAY	4	
			OUT	44.62	15	VIT CLAY	10	
			SHELF	45.69				

STORM DRAIN STRUCTURE DATA

STRUCTURE	RIM	INV. IN	INV. OUT:	DIAM.
CB-1	46.90	41.20 (SD-3)	41.10 (SD-2)	48"
DMH-1.1	47.99	39.95 (SD-1) 38.60 (EX. SS)	38.50 (EX. SS)	48"
DMH-1.2	47.39	41.05 (SD-2)	40.95 (SD-1)	48"
OCS-1	47.80	41.90 (SD-4)	41.31 (SD-3)	72"

SANITARY SEWER STRUCTURE DATA

STRUCTURE	RIM	INV. IN	INV. OUT:	DIAM.
OIL/GRIT SEPARATOR	47.80	42.80 (S-4)	41.26 (S-2)	48"
SMH-1	47.80	41.20 (S-2) 41.20 (S-3)	41.10 (S-1)	48"
SMH-1A	47.45	40.63 (S-1) 40.40 (EX. SS)	40.30 (EX. SS)	48"

STORM DRAIN PIPE DATA

NAME	SIZE	LENGTH	SLOPE
SD-1	18"	166'	0.60%
SD-2	18"	9'	0.54%
SD-3	18"	20'	0.56%
SD-4	18"	10'	1.00%

SANITARY SEWER PIPE DATA

NAME	SIZE	LENGTH	SLOPE
S-1	8"	64'	0.73%
S-2	8"	5'	1.19%
S-3	8"	2'	5.35%
S-4	8"	6'	1.73%

NOT FOR CONSTRUCTION

DANIEL L RILEY, PE 9967

STATE OF MAINE
DANIEL L. RILEY
PROGRESS PRINT
PROFESSIONAL ENGINEER
01/08/2024

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UTILITY SCHEDULES
OF:
THE LOFTS AT CUMBERLAND
365 CONGRESS STREET
PORTLAND, MAINE
FOR:
LINCOLN AVENUE CAPITAL NORTHEAST DEVELOPERS, LLC
14 HARVEST WAY
NEW MARKET, NH 03857

DESIGNED	DJS
DRAWN	MRS
CHECKED	DLR
DATE	01/08/2024
SCALE	N.T.S.
PROJECT	19371-04

DRAWING C-303

19371-04-U.dwg, TAB:C-303 UTILITY SCHEDULES

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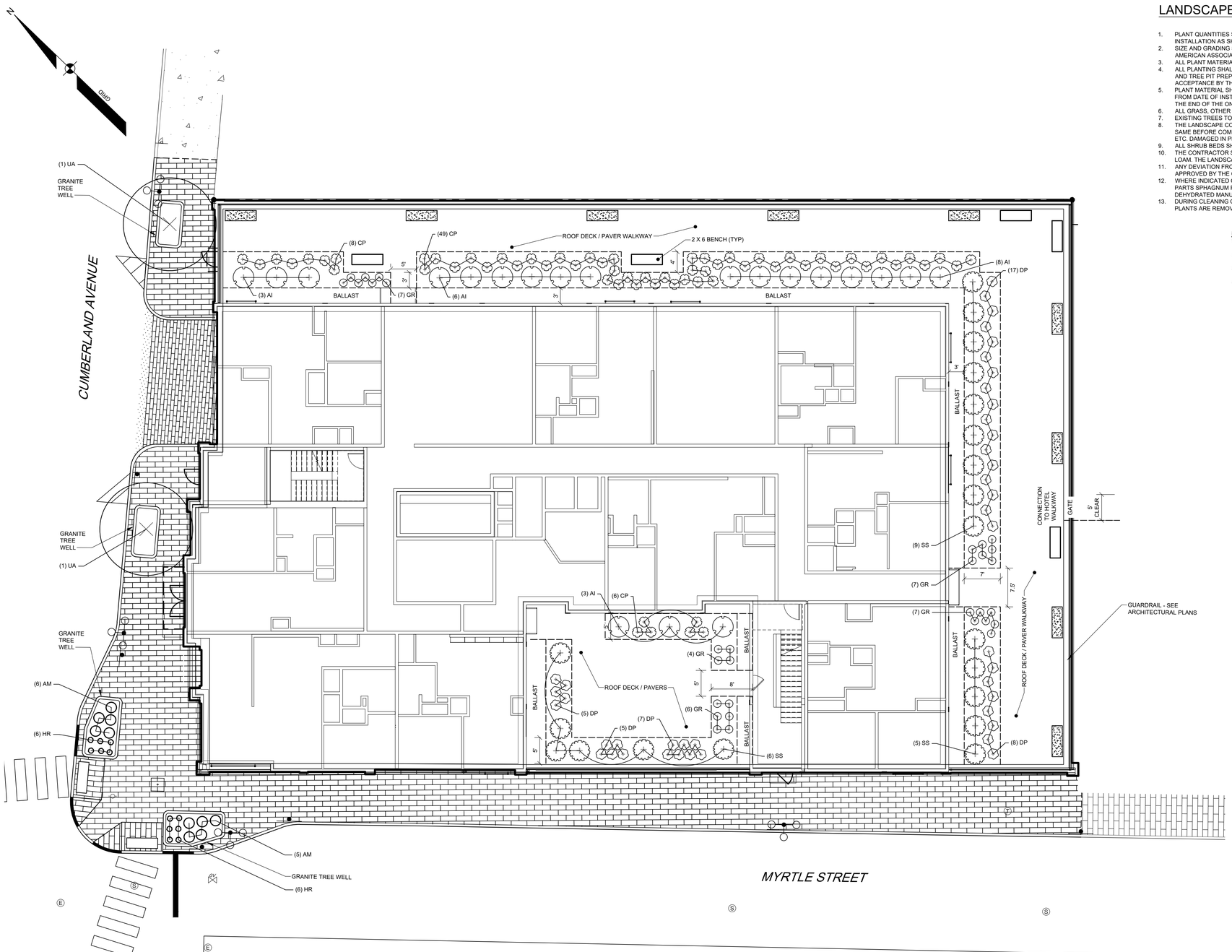
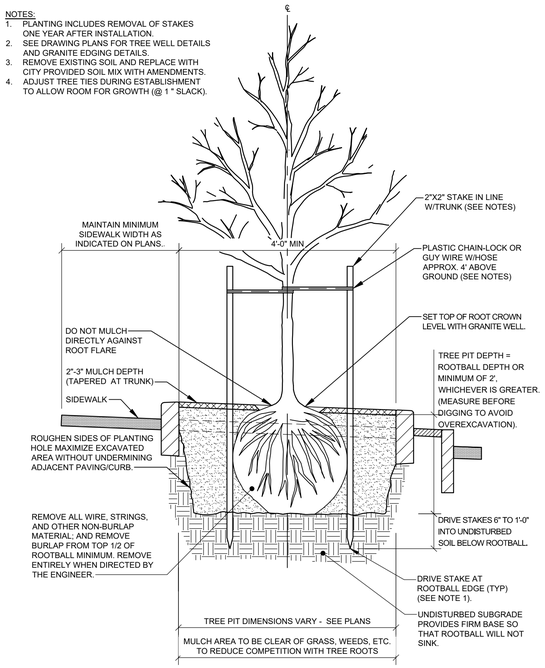


LANDSCAPE NOTES

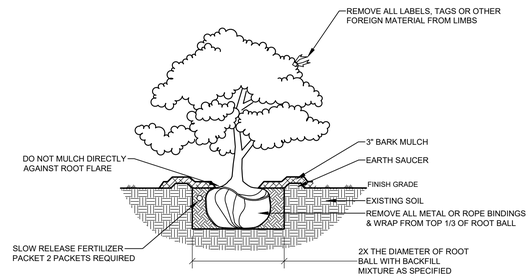
1. PLANT QUANTITIES SHOWN ON PLANS ARE FOR CONVENIENCE TO THE CONTRACTOR ONLY. THE CONTRACTOR IS RESPONSIBLE FOR ALL PLANT MATERIAL INSTALLATION AS SHOWN ON PLANS.
2. SIZE AND GRADING STANDARDS OF PLANT MATERIALS SHALL CONFORM TO THE LATEST EDITION OF "U.S.A. STANDARD FOR NURSERY STOCK," BY THE AMERICAN ASSOCIATION OF NURSERYMEN, INC.
3. ALL PLANT MATERIAL SHALL BE FREE FROM INSECTS AND DISEASE.
4. ALL PLANTING SHALL BE DONE IN ACCORDANCE WITH ACCEPTABLE HORTICULTURAL PRACTICES. THIS IS TO INCLUDE PROPER PLANTING MIX, PLANT BED AND TREE PIT PREPARATION, PRUNING, STAKING OR GUYING, WRAPPING, SPRAYING, FERTILIZATION, PLANTING AND ADEQUATE MAINTENANCE UNTIL ACCEPTANCE BY THE OWNER.
5. PLANT MATERIAL SHALL BE GUARANTEED FOR A PERIOD OF ONE YEAR BY THE CONTRACTOR AND A PERIOD OF TWO YEARS THEREAFTER BY THE OWNER FROM DATE OF INSTALLATION. DURING THE ONE YEAR GUARANTEE PERIOD, DEAD PLANT MATERIAL SHALL BE REPLACED AT NO COST TO THE OWNER. AT THE END OF THE ONE YEAR PERIOD, THE CONTRACTOR SHALL OBTAIN FINAL ACCEPTANCE FROM THE OWNER.
6. ALL GRASS, OTHER VEGETATION AND DEBRIS SHALL BE REMOVED FROM ALL PLANTING AREAS PRIOR TO PLANTING.
7. EXISTING TREES TO BE PRESERVED WILL BE PROTECTED DURING CONSTRUCTION AND SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR.
8. THE LANDSCAPE CONTRACTOR IS ADVISED OF THE PRESENCE OF THE UNDERGROUND UTILITIES AND SHALL VERIFY THE EXISTENCE AND LOCATION OF SAME BEFORE COMMENCING AND DIGGING OPERATIONS. THE LANDSCAPE CONTRACTOR SHALL REPLACE OR REPAIR UTILITIES, PAVING, WALKS, CURBING, ETC. DAMAGED IN PERFORMANCE OF THIS JOB AT NO ADDITIONAL COST TO THE OWNER.
9. ALL SHRUB BEDS SHALL BE MULCHED WITH 3" CLEAN SHREDDED DARK BROWN BARK MULCH.
10. THE CONTRACTOR SHALL PROVIDE 4" LOAM FOR ALL AREAS TO BE SODDED OR SEEDED. PLANTING AREAS SHALL RECEIVE 12" ROLLED THICKNESS OF LOAM. THE LANDSCAPE CONTRACTOR SHALL COORDINATE SUBGRADE PREPARATION WITH THE GENERAL CONTRACTOR PRIOR TO PLACING LOAM.
11. ANY DEVIATION FROM THE LANDSCAPE PLAN, INCLUDING PLANT LOCATION, SELECTION, SIZE, QUANTITY OR CONDITION SHALL BE REVIEWED AND APPROVED BY THE OWNER AND LANDSCAPE ARCHITECT (AND MUNICIPAL AUTHORITY, IF APPLICABLE) PRIOR TO INSTALLATION ON SITE.
12. WHERE INDICATED ON PLAN, PLANTING SOIL MIXTURE FOR PERENNIAL AND ANNUAL FLOWER BED AREAS SHALL CONSIST OF FOUR PARTS TOPSOIL, TWO PARTS SPHAGNUM PEAT MOSS, AND ONE PART HORTICULTURAL PERLITE BY VOLUME. PEAT MOSS MAY BE SUBSTITUTED WITH WELL-ROTTED OR DEHYDRATED MANURE OR COMPOST. ROTOTILL BEDS TO A DEPTH OF 8 INCHES.
13. DURING CLEANING OF SITE AND PRIOR TO TREE AND SHRUB INSTALLATION, CONTRACTOR SHALL REMOVE INVASIVE PLANTS. AREAS WHERE INVASIVE PLANTS ARE REMOVED AND NO OTHER PLANTING IS PROPOSED SHALL BE LOAMED AND SEEDED.

NOTES:
1. PLANTING INCLUDES REMOVAL OF STAKES ONE YEAR AFTER INSTALLATION.
2. SEE DRAWING PLANS FOR TREE WELL DETAILS AND GRANITE EDGING DETAILS.
3. REMOVE EXISTING SOIL AND REPLACE WITH CITY PROVIDED SOIL MIX WITH AMENDMENTS.
4. ADJUST TREE TIES DURING ESTABLISHMENT TO ALLOW ROOM FOR GROWTH (@ 1" SLACK).



SIDEWALK GRANITE TREE WELL PLANTING DETAIL

NOT TO SCALE



DECIDUOUS & EVERGREEN SHRUB

NOT TO SCALE

LANDSCAPE LEGEND

MULCH LINE / EDGING

STREET TREES

SHRUBS

CITY SIDEWALK BRICK

DRIVEWAY BRICK

BENCHES*

PLANTER 2' X 6'

PEDESTAL PAVERS (ROOF DECK)

*SCARBOROUGH BENCH BY LANDSCAPE FORMS OR APPROVED EQUAL

GRAPHIC SCALE

10 0 5 10 20

(IN FEET)
1 INCH = 10 FT.

PLANT SCHEDULE

CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE
TREES				
UA	2	ULMUS AMERICANA 'PRINCETON'	PRINCETON AMERICAN ELM	2-2.5" CAL.
SHRUBS				
AI	20	ARUNCUS X 'CHANTILLY LACE'	CHANTILLY LACE GOATSBEARD	#2
AM	10	ARONIA MELANOCARPA	LOW SCAPE MOUND® BLACK CHOKEBERRY	#3
CP	63	COMPTONIA PEREGRINA	SWEET FERN	#2
DP	42	DENNSTAEDTIA PUNCTILOBULA	HAY-SCENTED FERN	#2
GR	31	GERANIUM X 'ROZANNE'	ROZANNE CRANESBILL	#2
HR	12	HEMEROCALLIS X 'ROSY RETURNS'	ROSY RETURNS DAYLILY	#2
SS	20	SORBARIA SORBIFOLIA 'SEM'	SEM FALSE SPIRAEA	#2

NOT FOR CONSTRUCTION

AMY BELL SEGAL RLA 2265

REV	BY	DATE	STATUS
B	DLR	01/25/2024	ISSUED FOR SITE PLAN REVIEW
A	DLR	01/08/2024	ISSUED FOR SITE PLAN REVIEW

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PROJECT	19371-04

DRAWING C-401

19371-04 LS.dwg, TAB:C-401 LANDSCAPE PLAN

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EROSION CONTROL MEASURES

PRE-CONSTRUCTION PHASE

PRIOR TO THE BEGINNING OF ANY CONSTRUCTION, SEDIMENT BARRIERS (SILT FENCE) WILL BE STAKED/INSTALLED ACROSS THE SLOPE(S), ON THE CONTOUR AT OR JUST BELOW THE LIMITS OF CLEARING OR GRUBBING, AND/OR JUST ABOVE ANY ADJACENT PROPERTY LINE OR WATERCOURSE TO PROTECT AGAINST CONSTRUCTION RELATED EROSION. THE PLACEMENT OF SEDIMENT BARRIERS SHALL BE COMPLETED IN ACCORDANCE WITH GUIDELINES ESTABLISHED IN BEST MANAGEMENT PRACTICES AND IN ACCORDANCE WITH THIS EROSION CONTROL PLAN AND DETAILS IN THIS PLAN SET. THIS NETWORK IS TO BE MAINTAINED BY THE CONTRACTOR UNTIL ALL EXPOSED SLOPES HAVE AT LEAST 90% VIGOROUS PERENNIAL VEGETATIVE COVER TO PREVENT EROSION. TEMPORARY EROSION CONTROL MEASURES SHALL BE REMOVED WITHIN 30 DAYS AFTER PERMANENT STABILIZATION IS ATTAINED.

PRIOR TO ANY CLEARING OR GRUBBING, A CONSTRUCTION ENTRANCE/EXIT SHALL BE CONSTRUCTED AT THE INTERSECTION OF THE PROPOSED ENTRANCES AND EXISTING ROADWAY TO AVOID TRACKING OF MUD, DUST AND DEBRIS FROM THE SITE.

PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL PREPARE A DETAILED SCHEDULE AND MARKED UP PLAN INDICATING AREAS AND COMPONENTS OF THE WORK AND KEY DATES SHOWING DATE OF DISTURBANCE AND COMPLETION OF THE WORK. THE CONTRACTOR SHALL SCHEDULE A PRE-CONSTRUCTION MEETING WITH THE MUNICIPAL STAFF. THREE COPIES OF THE SCHEDULE AND MARKED UP PLAN SHALL BE PROVIDED TO THE MUNICIPALITY THREE DAYS PRIOR TO THE SCHEDULED PRE-CONSTRUCTION MEETING. SPECIAL ATTENTION SHALL BE GIVEN TO THE 14 DAY LIMIT OF DISTURBANCE IN THE SCHEDULE ADDRESSING TEMPORARY AND PERMANENT VEGETATION MEASURES.

CONSTRUCTION AND POST-CONSTRUCTION PHASE

AREAS UNDERGOING ACTUAL CONSTRUCTION SHALL ONLY EXPOSE THAT AMOUNT OF MINERAL SOIL NECESSARY FOR PROGRESSIVE AND EFFICIENT CONSTRUCTION. AN AREA CONSIDERED OPEN IS ANY AREA NOT STABILIZED WITH PAVEMENT, VEGETATION, MULCHING, EROSION CONTROL MATS, RIPRAP OR GRAVEL BASE ON A ROAD, SUCH AS ACTIVE EXCAVATION AND ACTIVE GRADING. LIMIT THE EXPOSED AREA TO THOSE AREAS IN WHICH WORK IS ACTIVELY OCCURRING OR CAN BE MULCHED IN THE SAME DAY. OPEN AREAS SHALL BE ANCHORED WITH TEMPORARY EROSION CONTROL AS SHOWN ON THE DESIGN PLANS AND AS DESCRIBED WITHIN THIS EROSION CONTROL PLAN WITHIN SEVEN (7) DAYS OF DISTURBANCE. AREAS LOCATED WITHIN 100 FEET OF STREAMS SHALL BE ANCHORED WITH TEMPORARY EROSION CONTROL WITHIN SEVEN (7) DAYS. REFER TO WINTER EROSION CONTROL NOTES FOR THE TREATMENT OF OPEN AREAS AFTER OCTOBER 1ST OF THE CONSTRUCTION YEAR.

THE CONTRACTOR MUST INSTALL ANY ADDED MEASURES WHICH MAY BE NECESSARY TO CONTROL EROSION/SEDIMENTATION FROM THE SITE DEPENDENT UPON THE ACTUAL SITE AND WEATHER CONDITIONS. CONTINUATION OF EARTHWORK OPERATIONS ON ADDITIONAL AREAS SHALL NOT BEGIN UNTIL THE EXPOSED SOIL SURFACE ON THE AREA BEING WORKED HAS BEEN STABILIZED, IN ORDER TO MINIMIZE AREAS WITHOUT EROSION CONTROL PROTECTION.

EROSION CONTROL APPLICATIONS & MEASURES
THE PLACEMENT OF EROSION CONTROL MEASURES SHALL BE COMPLETED IN ACCORDANCE WITH GUIDELINES ESTABLISHED IN BEST MANAGEMENT PRACTICES AND IN ACCORDANCE WITH THE EROSION CONTROL PLAN AND DETAILS IN THE PLAN SET.

1. TEMPORARY MULCHING:

ALL DISTURBED AREAS SHALL BE MULCHED WITH MATERIALS SPECIFIED BELOW PRIOR TO ANY STORM EVENT. ALL DISTURBED AREAS NOT FINAL GRADED WITHIN 14 DAYS SHALL BE MULCHED. DISTURBED AREAS ADJACENT TO NATURAL RESOURCES THAT ARE NOT GRADED WITHIN SEVEN (7) DAYS SHALL BE MULCHED. ALSO, AREAS, WHICH HAVE BEEN TEMPORARILY OR PERMANENTLY SEEDED, SHALL BE MULCHED IMMEDIATELY FOLLOWING SEEDING. EROSION CONTROL BLANKETS ARE RECOMMENDED TO BE USED AT THE BASE OF GRASSED WATERWAYS AND ON SLOPES GREATER THAN 33%. MULCH ANCHORING SHOULD BE USED ON SLOPES GREATER THAN 5% AFTER SEPTEMBER 15TH OF THE CONSTRUCTION YEAR (SEE WINTER EROSION CONTROL NOTES).
TYPES OF MULCH:

HAY OR STRAW: SHALL BE APPLIED AT A RATE OF 75 LBS/1,000 S.F. (1.5 TONS PER ACRE).

EROSION CONTROL MIX: SHALL BE PLACED EVENLY AND MUST PROVIDE 100% SOIL COVERAGE. EROSION CONTROL MIX SHALL BE APPLIED SUCH THAT THE THICKNESS ON SLOPES 3:1 OR LESS IS 2 INCHES PLUS 1/2 INCH PER 20 FEET OF SLOPE UP TO 100 FEET. THE THICKNESS ON SLOPES BETWEEN 3:1 AND 2:1 SHALL BE 4 INCHES PLUS 1/2 INCH PER 20 FEET OF SLOPE UP TO 100 FEET. THIS SHALL NOT BE USED ON SLOPES GREATER THAN 2:1.

EROSION CONTROL BLANKET: SHALL BE INSTALLED SUCH THAT CONTINUOUS CONTACT BETWEEN THE MAT AND THE SOIL IS OBTAINED. INSTALL BLANKETS AND STAPLE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

2. SOIL STOCKPILES:

STOCKPILES OF SOIL OR SUBSOIL SHALL BE MULCHED WITH HAY OR STRAW AT A RATE OF 75 LBS/1,000 S.F. (1.5 TONS PER ACRE) OR WITH A FOUR-INCH LAYER OF WOOD WASTE EROSION CONTROL MIX. THIS WILL BE DONE WITHIN 24 HOURS OF STOCKING AND RE-ESTABLISHED PRIOR TO ANY RAINFALL. ANY SOIL STOCKPILE WILL NOT BE PLACED (EVEN COVERED WITH HAY OR STRAW) WITHIN 100 FEET FROM ANY NATURAL RESOURCES. SEDIMENT BARRIERS SHALL BE INSTALLED DOWNGRADIENT OF STOCKPILES, AND STORMWATER SHALL BE PREVENTED FROM RUNNING ONTO THE STOCKPILE.

3. NATURAL RESOURCES PROTECTION:

ANY AREAS WITHIN 100 FEET FROM ANY NATURAL RESOURCES SHALL BE MULCHED USING TEMPORARY MULCHING (AS DESCRIBED IN PART 1 OF THIS SECTION) WITHIN 7 DAYS OF EXPOSURE OR PRIOR TO ANY STORM EVENT. SEDIMENT BARRIERS (AS DESCRIBED IN PART 4 OF THIS SECTION) SHALL BE PLACED BETWEEN ANY NATURAL RESOURCE AND THE DISTURBED AREA. PROJECTS CROSSING THE NATURAL RESOURCE SHALL BE PROTECTED A MINIMUM DISTANCE OF 100 FEET ON EITHER SIDE FROM THE RESOURCE.

4. SEDIMENT BARRIERS:

PRIOR TO THE BEGINNING OF ANY CONSTRUCTION, SEDIMENT BARRIERS SHALL BE STAKED ACROSS THE SLOPE(S), ON THE CONTOUR AT OR JUST BELOW THE LIMITS OF CLEARING OR GRUBBING, AND/OR JUST ABOVE ANY ADJACENT PROPERTY LINE OR WATERCOURSE TO PROTECT AGAINST CONSTRUCTION RELATED EROSION. SEDIMENT BARRIERS SHALL BE MAINTAINED BY THE CONTRACTOR UNTIL ALL EXPOSED SLOPES HAVE AT LEAST 90% VIGOROUS PERENNIAL VEGETATIVE COVER TO PREVENT EROSION.

SILT FENCE: SHALL BE INSTALLED PER THE DETAIL ON THE PLANS. THE EFFECTIVE HEIGHT OF THE FENCE SHALL NOT EXCEED 36 INCHES. IT IS RECOMMENDED THAT SILT FENCE BE REMOVED BY CUTTING THE FENCE MATERIALS AT GROUND LEVEL SO AS TO AVOID ADDITIONAL SOIL DISTURBANCE.

HAY BALES: SHALL NOT BE INSTALLED ADJACENT TO WETLAND. INSTALL PER THE DETAIL ON THE PLANS. BALES SHALL BE WIRE-BOUND OR STRING-TIED AND THESE BINDINGS MUST REMAIN PARALLEL WITH THE GROUND SURFACE DURING INSTALLATION TO PREVENT DETERIORATION OF THE BINDINGS. BALES SHALL BE INSTALLED WITHIN A MINIMUM 4 INCH DEEP TRENCH LINE WITH ENDS OF ADJACENT BALES TIGHTLY ABUTTING ONE ANOTHER.

EROSION CONTROL MIX: SHALL NOT BE USED ADJACENT TO WETLANDS. INSTALL PER THE DETAIL ON THE PLANS. THE MIX SHALL CONSIST PRIMARILY OF ORGANIC MATERIAL AND CONTAIN A WELL-GRADED MIXTURE OF PARTICLE SIZES AND MAY CONTAIN ROCKS LESS THAN 4 INCHES IN DIAMETER. THE MIX COMPOSITION SHALL MEET THE STANDARDS DESCRIBED WITHIN THE MDEP BEST MANAGEMENT PRACTICES. NO TRENCHING IS REQUIRED FOR INSTALLATION OF THIS BARRIER. EROSION CONTROL MIX BERMS SHALL NOT BE USED AT THE BOTTOM OF STEEP SLOPES (>8%) OR SLOPES WITH FLOWING WATER.

CONTINUOUS CONTAINED BERM: SHALL BE INSTALLED PER THE DETAIL ON THE PLANS. THIS SEDIMENT BARRIER IS EROSION CONTROL MIX PLACED WITHIN A SYNTHETIC TUBULAR NETTING AND PERFORMS AS A STURDY SEDIMENT BARRIER THAT WORKS WELL ON HARD GROUND SUCH AS FROZEN CONDITIONS, TRAVELED AREAS OR PAVEMENT. NO TRENCHING IS REQUIRED FOR INSTALLATION OF THIS BARRIER.

5. TEMPORARY CHECK DAMS:

SHALL BE INSTALLED PER THE DETAIL ON THE PLANS. CHECK DAMS ARE TO BE PLACED WITHIN DITCHES/ SWALES AS SPECIFIED ON THE DESIGN PLANS IMMEDIATELY AFTER FINAL GRADING. CHECK DAMS SHALL BE 2 FEET HIGH. TEMPORARY CHECK DAMS MAY BE REMOVED ONLY AFTER THE ROADWAYS ARE PAVED AND THE VEGETATED SWALE ARE ESTABLISHED WITH AT LEAST 90% OF VIGOROUS PERENNIAL GROWTH. THE AREA BENEATH THE CHECK DAM MUST BE SEEDED AND MULCHED IMMEDIATELY AFTER REMOVAL OF THE CHECK DAM.

STONE CHECK DAMS: STONE DAMS SHOULD BE CONSTRUCTED OF 2 TO 3 INCH STONE AND PLACED SUCH THAT COMPLETE COVERAGE OF THE SWALE IS OBTAINED AND THAT THE CENTER OF THE DAM IS 6 INCHES LOWER THAT THE OUTER EDGES.

HAY BALE CHECK DAMS: BALES SHALL BE WIRE-BOUND OR STRING-TIED. BALES SHALL BE INSTALLED WITHIN A MINIMUM 4 INCH DEEP TRENCH LINE WITH ENDS OF ADJACENT BALES TIGHTLY ABUTTING ONE ANOTHER. HAY BALES SHALL BE PLACED SUCH THAT COMPLETE COVERAGE OF THE SWALE IS OBTAINED AND THAT THE CENTER OF THE DAM IS 6 INCHES LOWER THAT THE OUTER EDGES.

MANUFACTURED CHECK DAMS: MANUFACTURED CHECK DAMS, AS SPECIFIED IN THE DETAIL ON THE PLANS, MAY BE USED IF AUTHORIZED BY THE PROPER LOCAL, STATE OR FEDERAL REGULATING AGENCIES. THESE UNITS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURE'S RECOMMENDATIONS.

6. STORMDRAIN INLET PROTECTION:

INLET PROTECTION SHALL BE PLACED AROUND A STORMDRAIN DROP INLET OR CURB INLET PRIOR TO PERMANENT STABILIZATION OF THE IMMEDIATE AND UPSTREAM DISTURBED AREAS. THEY SHALL BE CONSTRUCTED IN A MANNER THAT WILL FACILITATE CLEAN-OUT AND DISPOSAL OF TRAPPED SEDIMENTS AND MINIMIZE INTERFERENCE WITH CONSTRUCTION ACTIVITIES. ANY RESULTANT PONDING OF WATER FROM THE PROTECTION METHOD MUST NOT CAUSE EXCESSIVE INCONVENIENCE OR DAMAGE TO ADJACENT AREAS OR STRUCTURES.

HAY BALE DROP INLET PROTECTION: WE DO NOT RECOMMEND THE USE OF HAY BALES AS INLET PROTECTION.

CONCRETE BLOCK AND STONE INLET SEDIMENT FILTER (DROP OR CURB INLET): SHALL BE INSTALLED PER THE DETAIL ON THE PLANS. THE HEIGHT OF THE CONCRETE BLOCK BARRIER CAN VARY BUT MUST BE BETWEEN 12 AND 24 INCHES TALL. A MINIMUM OF 1 INCH CRUSHED STONE SHALL BE USED.

MANUFACTURED SEDIMENT BARRIERS AND FILTER (DROP OR CURB INLET): MANUFACTURED FILTERS, AS SPECIFIED IN THE DETAIL ON THE PLANS, MAY BE USED IF INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

7. STABILIZED CONSTRUCTION ENTRANCE/EXIT:

PRIOR TO CLEARING AND/OR GRUBBING THE SITE A STABILIZED CONSTRUCTION ENTRANCE/EXIT SHALL BE CONSTRUCTED WHEREVER TRAFFIC WILL EXIT THE CONSTRUCTION SITE ONTO A PAVED ROADWAY IN ORDER TO MINIMIZE THE TRACKING OF SEDIMENT AND DEBRIS FROM THE CONSTRUCTION SITE ONTO PUBLIC ROADWAYS. THE ENTRANCES AND ADJACENT ROADWAY AREAS SHALL BE PERIODICALLY SWEPT TO FURTHER MINIMIZE THE TRACKING OF MUD, DUST OR DEBRIS FROM THE CONSTRUCTION AREA. THE TERM “SWEEP” IS UNDERSTOOD TO MEAN REMOVAL AND RECOVERY OF TRACKED SEDIMENT WITH A STREET SWEEPER, NOT BRUSHING THE MATERIAL INTO SWALES OR STRUCTURES WITH A MECHANICAL BROOM. STABILIZED CONSTRUCTION EXITS SHALL BE CONSTRUCTED IN AREAS SPECIFIED ON THE PLANS AND AS DETAILED ON THE PLANS. THE CONTRACTOR SHALL MAINTAIN THE STABILIZED CONSTRUCTION ENTRANCE UNTIL ALL DISTURBED AREAS ARE STABILIZED.

DUST CONTROL:

DUST CONTROL DURING CONSTRUCTION SHALL BE ACHIEVED BY THE USE OF A WATERING TRUCK TO PERIODICALLY SPRINKLE THE EXPOSED ROADWAY AREAS AS NECESSARY TO REDUCE DUST DURING THE DRY MONTHS. APPLYING OTHER DUST CONTROL PRODUCTS SUCH AS CALCIUM CHLORIDE OR OTHER MANUFACTURED PRODUCTS ARE ALLOWED IF AUTHORIZED BY THE PROPER LOCAL, STATE AND/OR FEDERAL REGULATING AGENCIES. HOWEVER, IT IS THE CONTRACTOR'S ULTIMATE RESPONSIBILITY TO MITIGATE DUST AND SOIL LOSS FROM THE SITE. IF OFFSITE TRACKING OCCURS, PUBLIC ROADS SHOULD BE SWEPT IMMEDIATELY AND NOT LESS THAN ONCE A WEEK AND PRIOR TO SIGNIFICANT STORM EVENTS.

TEMPORARY VEGETATION:

TEMPORARY VEGETATION SHALL BE APPLIED TO DISTURBED AREAS THAT WILL NOT RECEIVE FINAL GRADING FOR PERIODS UP TO 12 MONTHS. THIS PROCEDURE SHOULD BE USED EXTENSIVELY IN AREAS ADJACENT TO NATURAL RESOURCES. SEEDBED PREPARATION AND APPLICATION OF SEED SHALL BE CONDUCTED AS INDICATED IN THE PERMANENT VEGETATION SECTION OF THIS NARRATIVE. SPECIFIC SEEDS (FAST GROWING AND SHORT LIVING) SHALL BE SELECTED FROM THE MAINE EROSION AND SEDIMENT CONTROL BMP MANUALS FOR CONTRACTORS AND ENGINEERS, 2016 OR LATEST REVISION. ALTERNATIVE EROSION CONTROL MEASURES SHOULD BE USED IF SEEDING CAN NOT BE DONE BEFORE SEPTEMBER 15TH OF THE CONSTRUCTION YEAR.

PERMANENT VEGETATION:

REVEGETATION MEASURES SHALL COMMENCE IMMEDIATELY UPON COMPLETION OF FINAL GRADING OF AREAS TO BE LOAMED AND SEEDED. THE APPLICATION OF SEED SHALL BE CONDUCTED BETWEEN APRIL 1ST AND OCTOBER 1ST OF THE CONSTRUCTION YEAR, PLEASE REFER TO THE WINTER EROSION CONTROL NOTES FOR MORE DETAIL. REVEGETATION MEASURES SHALL CONSIST OF THE FOLLOWING:

SEEDBED PREPARATION:

A. FOUR (4) INCHES OF LOAM SHALL BE SPREAD OVER DISTURBED AREAS AND SMOOTHED TO A UNIFORM SURFACE. LOAM SHALL BE FREE OF SUBSOIL, CLAY LUMPS, STONES AND OTHER OBJECTS OVER 2 INCHES OR LARGER IN ANY DIMENSION, AND WITHOUT WEEDS, ROOTS OR OTHER OBJECTIONABLE MATERIAL.

B. SOILS TESTS SHALL BE TAKEN AT THE TIME OF SOIL STRIPPING TO DETERMINE FERTILIZATION REQUIREMENTS. SOILS TESTS SHALL BE TAKEN PROMPTLY AS TO NOT INTERFERE WITH THE 14-DAY LIMIT ON SOIL EXPOSURE. BASED UPON TEST RESULTS, SOIL AMENDMENTS SHALL BE INCORPORATED INTO THE SOIL PRIOR TO FINAL SEEDING. IN LIEU OF SOIL TESTS, SOIL AMENDMENTS MAY BE APPLIED AS FOLLOWS:

ITEM	APPLICATION RATE
10-20-20 FERTILIZER (N-P205-K20 OR EQUAL)	18.4 LBS./1,000 S.F.
GROUND LIMESTONE (50% CALCIUM & MAGNESIUM OXIDE)	138 LBS./1,000 S.F.

C. WORK LIME AND FERTILIZER INTO THE SOIL AS NEARLY AS PRACTICAL TO A DEPTH OF 4 INCHES WITH PROPER EQUIPMENT. ROLL THE AREA TO FIRM THE SEEDBED EXCEPT ON CLAY OR SILTY SOILS OR COARSE SAND.

APPLICATION OF SEED:

A. SEEDING: SHALL BE CONDUCTED BETWEEN APRIL 1ST AND OCTOBER 1ST OF THE CONSTRUCTION YEAR. GENERALLY A SEED MIXTURE MAY BE APPLIED AS FOLLOWS: (CONSERVATION MIX)

SEED TYPE	APPLICATION RATE
FESCUE, FAWN	0.34 LBS/1,000 S.F. (15 LBS/ACRE)
BIRD'S FOOT TREFOIL, VARIETY NOT STATED	0.28 LBS/1,000 S.F. (12 LBS/ACRE)
ANNUAL RYEGRASS	0.18 LBS/1,000 S.F. (8 LBS/ACRE)
TIMOTHY, CLIMAX	0.18 LBS/1,000 S.F. (8 LBS/ACRE)
ALSIKE CLOVER	0.11 LBS/1,000 S.F. (5 LBS/ACRE)
REDTOP	0.05 LBS/1,000 S.F. (2 LBS/ACRE)
TOTAL	1.14 LBS/1,000 S.F. (50 LBS/ACRE)

NOTE: A SPECIFIC SEED MIXTURE SHOULD BE CHOSEN TO MATCH THE SOILS CONDITION OF THE SITE. VARIOUS AGENCIES CAN RECOMMEND SEED MIXTURES. MDEP RECOMMENDED SEED MIXTURES ARE IN THE EROSION AND SEDIMENT CONTROL BMP MANUAL DATED 2016 OR LATEST REVISION.

B. HYDROSEEDING: SHALL BE CONDUCTED ON PREPARED AREAS WITH SLOPES LESS THAN 2:1. LIME AND FERTILIZER MAY BE APPLIED SIMULTANEOUSLY WITH THE SEED. RECOMMENDED SEEDING RATES MUST BE INCREASED BY 10% WHEN HYDROSEEDING.

C. MULCHING: SHALL COMMENCE IMMEDIATELY AFTER SEED IS APPLIED. REFER TO THE TEMPORARY MULCHING SECTION OF THIS NARRATIVE FOR DETAILS.

SODDING:
FOLLOWING SEEDBED PREPARATION, SOD CAN BE APPLIED IN LIEU OF SEEDING IN AREAS WHERE IMMEDIATE VEGETATION IS MOST BENEFICIAL SUCH AS DITCHES, AROUND STORMWATER DROP INLETS AND AREAS OF AESTHETIC VALUE. SOD SHOULD BE LAID AT RIGHT ANGLES TO THE DIRECTION OF FLOW, STARTING AT THE LOWEST ELEVATION. SOD SHOULD BE ROLLED OR TAMPED DOWN TO EVEN OUT THE JOINTS ONCE LAID DOWN. WHERE FLOW IS PREVALENT THE SOD MUST BE PROPERLY ANCHORED DOWN. IRRIGATE THE SOD IMMEDIATELY AFTER INSTALLATION. IN MOST CASES, SOD CAN BE ESTABLISHED BETWEEN APRIL 1ST AND NOVEMBER 15TH OF THE CONSTRUCTION YEAR, HOWEVER, REFER TO THE WINTER EROSION CONTROL NOTES FOR ANY ACTIVITIES AFTER OCTOBER 1ST.

STANDARDS FOR TIMELY STABILIZATION:

STANDARD FOR THE TIMELY STABILIZATION OF DISTURBED SLOPES -- THE CONTRACTOR WILL CONSTRUCT AND STABILIZE STONE-COVERED SLOPES BY NOVEMBER 15. THE CONTRACTOR WILL SEED AND MULCH ALL SLOPES TO BE VEGETATED BY SEPTEMBER 15. THE MDEP WILL CONSIDER ANY AREA HAVING A GRADE GREATER THAN 15% (10H:1V) TO BE A SLOPE. IF THE CONTRACTOR FAILS TO STABILIZE ANY SLOPE TO BE VEGETATED BY SEPTEMBER 15, THEN THE CONTRACTOR WILL TAKE ONE OF THE FOLLOWING ACTIONS TO STABILIZE THE SLOPE FOR LATE FALL AND WINTER.
A. STABILIZE THE SOIL WITH TEMPORARY VEGETATION AND EROSION CONTROL MATS -- BY OCTOBER 1 THE CONTRACTOR WILL SEED THE DISTURBED SLOPE WITH WINTER RYE AT A SEEDING RATE OF 3 POUNDS PER 1,000 SQUARE FEET AND APPLY EROSION CONTROL MATS OVER THE MULCHED SLOPE. THE CONTRACTOR WILL MONITOR GROWTH OF THE RYE OVER THE NEXT 30 DAYS. IF THE RYE FAILS TO GROW AT LEAST THREE INCHES OR COVER AT LEAST 75% OF THE DISTURBED SLOPE BY NOVEMBER 1, THEN THE APPLICANT WILL COVER THE SLOPE WITH A LAYER OF WOOD WASTE COMPOST AS DESCRIBED IN ITEM 2(C.) OF THIS STANDARD OR WITH STONE RIPRAP AS DESCRIBED IN ITEM 2(D.) OF THIS STANDARD.
B. STABILIZE THE SLOPE WITH SOD -- THE CONTRACTOR WILL STABILIZE THE DISTURBED SLOPE WITH PROPERLY INSTALLED SOD BY OCTOBER 1. PROPER INSTALLATION INCLUDES THE APPLICANT PINNING THE SOD ONTO THE SLOPE WITH WIRE PINS, ROLLING THE SOD TO GUARANTEE CONTACT BETWEEN THE SOD AND UNDERLYING SOIL, AND WATERING THE SOD TO PROMOTE ROOT GROWTH INTO THE DISTURBED SOIL. THE APPLICANT WILL NOT USE LATE-SEASON SOD INSTALLATION TO STABILIZE SLOPES HAVING A GRADE GREATER THAN 33% (3H:1V).
C. STABILIZE THE SLOPE WITH WOOD WASTE COMPOST -- THE CONTRACTOR WILL PLACE A SIX-INCH LAYER OF WOOD WASTE COMPOST ON THE SLOPE BY NOVEMBER 15. PRIOR TO PLACING THE WOOD WASTE COMPOST, THE APPLICANT WILL REMOVE ANY SNOW ACCUMULATION ON THE DISTURBED SLOPE. THE APPLICANT WILL NOT USE WOOD WASTE COMPOST TO STABILIZE SLOPES HAVING GRADES GREATER THAN 50% (2H:1V) OR HAVING GROUNDWATER SEEPS ON THE SLOPE FACE.
D. STABILIZE THE SLOPE WITH STONE RIPRAP -- THE CONTRACTOR WILL PLACE A LAYER OF STONE RIPRAP ON THE SLOPE BY NOVEMBER 15. THE APPLICANT WILL HIRE A REGISTERED PROFESSIONAL ENGINEER TO DETERMINE THE STONE SIZE NEEDED FOR STABILITY AND TO DESIGN A FILTER LAYER FOR UNDERNEATH THE RIPRAP.

STANDARD FOR THE TIMELY STABILIZATION OF DISTURBED SOILS -- BY SEPTEMBER 15 THE CONTRACTOR WILL SEED AND MULCH ALL DISTURBED SOILS ON AREAS HAVING A SLOPE LESS THAN 15%. IF THE CONTRACTOR FAILS TO STABILIZE THESE SOILS BY THIS DATE, THEN THE CONTRACTOR WILL TAKE ONE OF THE FOLLOWING ACTIONS TO STABILIZE THE SOIL FOR LATE FALL AND WINTER.
A. STABILIZE THE SOIL WITH TEMPORARY VEGETATION -- BY OCTOBER 1 THE CONTRACTOR WILL SEED THE DISTURBED SOIL WITH WINTER RYE AT A SEEDING RATE OF 3 POUNDS PER 1000 SQUARE FEET, LIGHTLY MULCH THE SEEDED SOIL WITH HAY OR STRAW AT 75 POUNDS PER 1000 SQUARE FEET, AND ANCHOR THE MULCH WITH PLASTIC NETTING. THE APPLICANT WILL MONITOR GROWTH OF THE RYE OVER THE NEXT 30 DAYS. IF THE RYE FAILS TO GROW AT LEAST THREE INCHES OR COVER AT LEAST 75% OF THE DISTURBED SOIL BEFORE NOVEMBER 15, THEN THE APPLICANT WILL MULCH THE AREA FOR OVER-WINTER PROTECTION AS DESCRIBED IN ITEM 3(C.) OF THIS STANDARD.
B. STABILIZE THE SOIL WITH SOD -- THE APPLICANT WILL STABILIZE THE DISTURBED SOIL WITH PROPERLY INSTALLED SOD BY OCTOBER 1. PROPER INSTALLATION INCLUDES THE APPLICANT PINNING THE SOD ONTO THE SOIL WITH WIRE PINS, ROLLING THE SOD TO GUARANTEE CONTACT BETWEEN THE SOD AND UNDERLYING SOIL, AND WATERING THE SOD TO PROMOTE ROOT GROWTH INTO THE DISTURBED SOIL.
C. STABILIZE THE SOIL WITH MULCH -- BY NOVEMBER 15 THE APPLICANT WILL MULCH THE DISTURBED SOIL BY SPREADING HAY OR STRAW AT A RATE OF AT LEAST 150 POUNDS PER 1000 SQUARE FEET ON THE AREA SO THAT NO SOIL IS VISIBLE THROUGH THE MULCH. PRIOR TO APPLYING THE MULCH, THE APPLICANT WILL REMOVE ANY SNOW ACCUMULATION ON THE DISTURBED AREA. IMMEDIATELY AFTER APPLYING THE MULCH, THE APPLICANT WILL ANCHOR THE MULCH WITH PLASTIC NETTING TO PREVENT WIND FROM MOVING THE MULCH OFF THE DISTURBED SOIL.

1. MAINTENANCE MEASURES SHALL BE APPLIED AS NEEDED DURING THE ENTIRE CONSTRUCTION CYCLE. AFTER EACH RAINFALL, SNOW STORM OR PERIOD OF THAWING AND RUNOFF, AND AT LEAST EVERY SEVEN (7) DAYS, THE CONTRACTOR SHALL PERFORM A VISUAL INSPECTION OF ALL INSTALLED EROSION CONTROL MEASURES. THE CONTRACTOR SHALL PERFORM REPAIRS NO LATER THAN THE END OF THE NEXT WORKDAY, TO ALLOW CONTINUED PROPER FUNCTIONING OF THE EROSION CONTROL MEASURE. THE CONTRACTOR SHALL PROVIDE THE NECESSARY REGULATING AGENCIES WITH WRITTEN DOCUMENTATION DESCRIBING DATES OF INSPECTIONS AND NECESSARY FOLLOW-UP WORK TO MAINTAIN EROSION CONTROL MEASURES MEETING THE REQUIREMENTS OF THIS PLAN WITHIN SEVEN (7) DAYS.

2. FOLLOWING THE TEMPORARY AND/OR FINAL SEEDINGS, THE CONTRACTOR SHALL INSPECT THE WORK AREA SEMIMONTHLY UNTIL THE SEEDINGS HAVE BEEN ESTABLISHED. ESTABLISHED MEANS A MINIMUM OF 90% OF AREAS VEGETATED WITH VIGOROUS GROWTH. RESEEDING SHALL BE CARRIED OUT BY THE CONTRACTOR WITH FOLLOW-UP INSPECTIONS IN THE EVENT OF ANY FAILURES UNTIL VEGETATION IS ADEQUATELY ESTABLISHED.

HOUSEKEEPING:

1. SPILL PREVENTION. CONTROLS MUST BE USED TO PREVENT POLLUTANTS FROM CONSTRUCTION AND WASTE MATERIALS STORED ON SITE TO ENTER STORMWATER, WHICH INCLUDES STORAGE PRACTICES TO MINIMIZE EXPOSURE OF THE MATERIALS TO STORMWATER. THE SITE CONTRACTOR OR OPERATOR MUST DEVELOP, AND IMPLEMENT AS NECESSARY, APPROPRIATE SPILL PREVENTION, CONTAINMENT, AND RESPONSE PLANNING MEASURES.

2. GROUNDWATER PROTECTION. DURING CONSTRUCTION, LIQUID PETROLEUM PRODUCTS AND OTHER HAZARDOUS MATERIALS WITH THE POTENTIAL TO CONTAMINATE GROUNDWATER MAY NOT BE STORED OR HANDLED IN AREAS OF THE SITE DRAINING TO AN INFILTRATION AREA. AN "INFILTRATION AREA" IS ANY AREA OF THE SITE THAT BY DESIGN OR AS A RESULT OF SOILS, TOPOGRAPHY AND OTHER RELEVANT FACTORS ACCUMULATES RUNOFF THAT INFILTRATES INTO THE SOIL. DIKES, BERMS, SUMPS, AND OTHER FORMS OF SECONDARY CONTAINMENT THAT PREVENT DISCHARGE TO GROUNDWATER MAY BE USED TO ISOLATE PORTIONS OF THE SITE FOR THE PURPOSES OF STORAGE AND HANDLING OF THESE MATERIALS. ANY PROJECT PROPOSING INFILTRATION OF STORMWATER MUST PROVIDE ADEQUATE PRE-TREATMENT OF STORMWATER PRIOR TO DISCHARGE OF STORMWATER TO THE INFILTRATION AREA, OR PROVIDE FOR TREATMENT WITHIN THE INFILTRATION AREA, IN ORDER TO PREVENT THE ACCUMULATION OF FINES, REDUCTION IN INFILTRATION RATE, AND CONSEQUENT FLOODING AND DESTABILIZATION.

3. FUGITIVE SEDIMENT AND DUST. ACTIONS MUST BE TAKEN TO ENSURE THAT ACTIVITIES DO NOT RESULT IN NOTICEABLE EROSION OF SOILS OR FUGITIVE DUST EMISSIONS DURING OR AFTER CONSTRUCTION. OIL MAY NOT BE USED FOR DUST CONTROL, BUT OTHER WATER ADDITIVES MAY BE CONSIDERED AS NEEDED. A STABILIZED CONSTRUCTION ENTRANCE (SCE) SHOULD BE INCLUDED TO MINIMIZE TRACKING OF MUD AND SEDIMENT. IF OFF-SITE TRACKING OCCURS, PUBLIC ROADS SHOULD BE SWEPT IMMEDIATELY AND NO LESS THAN ONCE A WEEK AND PRIOR TO SIGNIFICANT STORM EVENTS. OPERATIONS DURING DRY MONTHS, THAT EXPERIENCE FUGITIVE DUST PROBLEMS, SHOULD WET DOWN UNPAVED ACCESS ROADS ONCE A WEEK OR MORE FREQUENTLY AS NEEDED WITH A WATER ADDITIVE TO SUPPRESS FUGITIVE SEDIMENT AND DUST.

4. DEBRIS AND OTHER MATERIALS. MINIMIZE THE EXPOSURE OF CONSTRUCTION DEBRIS, BUILDING AND LANDSCAPING MATERIALS, TRASH, FERTILIZERS, PESTICIDES, HERBICIDES, DETERGENTS, SANITARY WASTE AND OTHER MATERIALS TO PRECIPITATION AND STORMWATER RUNOFF. THESE MATERIALS MUST BE PREVENTED FROM BECOMING A POLLUTANT SOURCE.

5. EXCAVATION DE-WATERING. EXCAVATION DE-WATERING IS THE REMOVAL OF WATER FROM TRENCHES, FOUNDATIONS, COFFER DAMS, PONDS, AND OTHER AREAS WITHIN THE CONSTRUCTION AREA THAT RETAIN WATER AFTER EXCAVATION. IN MOST CASES THE COLLECTED WATER IS HEAVILY SILTED AND HINDERS CORRECT AND SAFE CONSTRUCTION PRACTICES. THE COLLECTED WATER REMOVED FROM THE PONDED AREA, EITHER THROUGH GRAVITY OR PUMPING, MUST BE SPREAD THROUGH NATURAL WOODED BUFFERS OR REMOVED TO AREAS THAT ARE SPECIFICALLY DESIGNED TO COLLECT THE MAXIMUM AMOUNT OF SEDIMENT POSSIBLE, LIKE A COFFERDAM SEDIMENTATION BASIN. AVOID ALLOWING THE WATER TO FLOW OVER DISTURBED AREAS OF THE SITE. EQUIVALENT MEASURES MAY BE TAKEN IF APPROVED BY THE DEPARTMENT.

6. AUTHORIZED NON-STORMWATER DISCHARGES. IDENTIFY AND PREVENT CONTAMINATION BY NON-STORMWATER DISCHARGES. WHERE ALLOWED NON-STORMWATER DISCHARGES EXIST, THEY MUST BE IDENTIFIED AND STEPS SHOULD BE TAKEN TO ENSURE THE IMPLEMENTATION OF APPROPRIATE POLLUTION PREVENTION MEASURES FOR THE NON-STORMWATER COMPONENT(S) OF THE DISCHARGE. AUTHORIZED NON-STORMWATER DISCHARGES ARE:
   A. DISCHARGES FROM FIREFIGHTING ACTIVITY;
   B. FIRE HYDRANT FLUSHINGS;
   C. VEHICLE WASHWATER IF DETERGENTS ARE NOT USED AND WASHING IS LIMITED TO THE EXTERIOR OF VEHICLES (ENGINE, UNDERCARRIAGE AND TRANSMISSION WASHING IS PROHIBITED);
   D. DUST CONTROL RUNOFF IN ACCORDANCE WITH PERMIT CONDITIONS;
   E. ROUTINE EXTERNAL BUILDING WASHDOWN, NOT INCLUDING SURFACE PAINT REMOVAL, THAT DOES NOT INVOLVE DETERGENTS;
   F. PAVEMENT WASHWATER (WHERE SPILLS/LEAKS OF TOXIC OR HAZARDOUS MATERIALS HAVE NOT OCCURRED, UNLESS ALL SPILLED MATERIAL HAD BEEN REMOVED) IF DETERGENTS ARE NOT USED;
   G. UNCONTAMINATED AIR CONDITIONING OR COMPRESSOR CONDENSATE;
   H. UNCONTAMINATED GROUNDWATER OR SPRING WATER;
   I. FOUNDATION OR FOOTER DRAIN-WATER WHERE FLOWS ARE NOT CONTAMINATED;
   J. UNCONTAMINATED EXCAVATION DEWATERING;
   K. POTABLE WATER SOURCES INCLUDING WATERLINE FLUSHINGS; AND
   L. LANDSCAPE IRRIGATION.

7. UNAUTHORIZED NON-STORMWATER DISCHARGES. THE DEPARTMENT'S APPROVAL DOES NOT AUTHORIZE A DISCHARGE THAT IS MIXED WITH A SOURCE OF NON-STORMWATER, OTHER THAN THOSE DISCHARGES. SPECIFICALLY, THE DEPARTMENT'S APPROVAL DOES NOT AUTHORIZE DISCHARGES OF THE FOLLOWING:
   A. WASTEWATER FROM THE WASHOUT OR CLEAN OUT OF CONCRETE, STUCCO, PAINT, FORM RELEASE OILS, CURING COMPOUNDS OR OTHER CONSTRUCTION MATERIALS;
   B. FUELS, OILS OR OTHER POLLUTANTS USED IN VEHICLE AND EQUIPMENT OPERATION AND MAINTENANCE;
   C. SOAPS, SOLVENTS, OR DETERGENTS USED IN VEHICLE AND EQUIPMENT WASHING; AND
   D. TOXIC OR HAZARDOUS SUBSTANCES FROM A SPILL OR OTHER RELEASE.

WINTER EROSION CONTROL MEASURES

THE WINTER CONSTRUCTION PERIOD IS FROM NOVEMBER 1 THROUGH APRIL 15. IF THE CONSTRUCTION SITE IS NOT STABILIZED WITH PAVEMENT, A ROAD GRAVEL BASE, 75% MATURE VEGETATION COVER OR RIPRAP BY NOVEMBER 1 THEN THE SITE NEEDS TO BE PROTECTED WITH OVER-WINTER STABILIZATION. AN AREA CONSIDERED OPEN IS ANY AREA NOT STABILIZED WITH PAVEMENT, VEGETATION, MULCHING, EROSION CONTROL MATS, RIPRAP OR GRAVEL BASE ON A ROAD. LIMIT THE EXPOSED AREA TO THOSE AREAS IN WHICH WORK IS EXPECTED TO BE UNDER TAKEN DURING THE PROCEEDING 15 DAYS AND THAT CAN BE MULCHED IN ONE DAY PRIOR TO ANY SNOW EVENT. ALL AREAS SHALL BE CONSIDERED TO BE DENUDED UNTIL THE SUBBASE GRAVEL IS INSTALLED IN ROADWAY AREAS OR THE AREAS OF FUTURE LOAM AND SEED HAVE BEEN LOAMED, SEEDED AND MULCHED. HAY AND STRAW MULCH RATE SHALL BE A MINIMUM OF 150 LBS./1,000 S.F. (3 TONS/ACRE) AND SHALL BE PROPERLY ANCHORED. THE CONTRACTOR MUST INSTALL ANY ADDED MEASURES WHICH MAY BE NECESSARY TO CONTROL EROSION/SEDIMENTATION FROM THE SITE DEPENDENT UPON THE ACTUAL SITE AND WEATHER CONDITIONS. CONTINUATION OF EARTHWORK OPERATIONS ON ADDITIONAL AREAS SHALL NOT BEGIN UNTIL THE EXPOSED SOIL SURFACE ON THE AREA BEING WORKED HAS BEEN STABILIZED, IN ORDER TO MINIMIZE AREAS WITHOUT EROSION CONTROL PROTECTION.

1. SOIL STOCKPILES

   STOCKPILES OF SOIL OR SUBSOIL WILL BE MULCHED FOR OVER WINTER PROTECTION WITH HAY OR STRAW AT TWICE THE NORMAL RATE OR AT 150 LBS/1,000 S.F. (3 TONS PER ACRE) OR WITH A FOUR-INCH LAYER OF WOOD WASTE EROSION CONTROL MIX. THIS WILL BE DONE WITHIN 24 HOURS OF STOCKING AND RE-ESTABLISHED PRIOR TO ANY RAINFALL OR SNOWFALL. ANY SOIL STOCKPILE WILL NOT BE PLACED (EVEN COVERED WITH HAY OR STRAW) WITHIN 100 FEET FROM ANY NATURAL RESOURCES.

2. NATURAL RESOURCES PROTECTION

   ANY AREAS WITHIN 100 FEET FROM ANY NATURAL RESOURCES, IF NOT STABILIZED WITH A MINIMUM OF 75% MATURE VEGETATION CATCH, SHALL BE MULCHED BY DECEMBER 1 AND ANCHORED WITH PLASTIC NETTING OR PROTECTED WITH EROSION CONTROL MATS. DURING WINTER CONSTRUCTION, A DOUBLE LINE OF SEDIMENT BARRIERS (I.E. SILT FENCE BACKED WITH HAY BALES OR EROSION CONTROL MIX) WILL BE PLACED BETWEEN ANY NATURAL RESOURCE AND THE DISTURBED AREA.

   PROJECTS CROSSING THE NATURAL RESOURCE SHALL BE PROTECTED A MINIMUM DISTANCE OF 100 FEET ON EITHER SIDE FROM THE RESOURCE. EXISTING PROJECTS NOT STABILIZED BY DECEMBER 1 SHALL BE PROTECTED WITH THE SECOND LINE OF SEDIMENT BARRIER TO ENSURE FUNCTIONALITY DURING THE SPRING THAW AND RAINS.

3. SEDIMENT BARRIERS

   DURING FROZEN CONDITIONS, SEDIMENT BARRIERS SHALL CONSIST OF WOOD WASTE FILTER BERMS AS FROZEN SOIL PREVENTS THE PROPER INSTALLATION OF HAY BALES AND SEDIMENT SILT FENCES.

4. MULCHING

   ALL AREA SHALL BE CONSIDERED TO BE DENUDED UNTIL AREAS OF FUTURE LOAM AND SEED HAVE BEEN LOAMED, SEEDED AND MULCHED. HAY AND STRAW MULCH SHALL BE APPLIED AT A RATE OF 150 LB. PER 1.000 SQUARE FEET OR 3 TONS/ACRE (TWICE THE NORMAL ACCEPTED RATE OF 75-LBS./1,000 S.F. OR 1.5 TONS/ACRE) AND SHALL BE PROPERLY ANCHORED. MULCH SHALL NOT BE SPREAD ON TOP OF SNOW. THE SNOW WILL BE REMOVED DOWN TO A ONE-INCH DEPTH OR LESS PRIOR TO APPLICATION. AFTER EACH DAY OF FINAL GRADING, THE AREA WILL BE PROPERLY STABILIZED WITH ANCHORED HAY OR STRAW OR EROSION CONTROL MATTING. AN AREA SHALL BE CONSIDERED TO HAVE BEEN STABILIZED WHEN EXPOSED SURFACES HAVE BEEN EITHER MULCHED WITH STRAW OR HAY AT A RATE OF 150 LB. PER 1.000 SQUARE FEET (3TONS/ACRE) AND ADEQUATELY ANCHORED THAT GROUND SURFACE IS NOT VISIBLE THOUGH THE MULCH.

   BETWEEN THE DATES OF SEPTEMBER 1 AND APRIL 15, ALL MULCH SHALL BE ANCHORED BY EITHER PEG LINE, MULCH NETTING, ASPHALT EMULSION CHEMICAL, TRACK OR WOOD CELLULOSE FIBER. WHEN GROUND SURFACE IS NOT VISIBLE THOUGH THE MULCH THEN COVER IS SUFFICIENT.
   AFTER NOVEMBER 1ST, MULCH AND ANCHORING OF ALL BARE SOIL SHALL OCCUR AT THE END OF EACH FINAL GRADING WORK DAY.

5. MULCHING ON SLOPES AND DITCHES

   SLOPES SHALL NOT BE LEFT EXPOSED FOR ANY EXTENDED TIME OF WORK SUSPENSION UNLESS FULLY MULCHED AND ANCHORED WITH PEG AND NETTING OR WITH EROSION CONTROL BLANKETS. MULCHING SHALL BE APPLIED AT A RATE OF 230 LBS/1,000 S.F. ON ALL SLOPES GREATER THAN 8%. MULCH NETTING SHALL BE USED TO ANCHOR MULCH IN ALL DRAINAGE WAYS WITH A SLOPE GREATER THAN 3% FOR SLOPES EXPOSED TO DIRECT WINDS AND FOR ALL OTHER SLOPES GREATER THAN 5%. EROSION CONTROL BLANKETS SHALL BE USED IN LIEU OF MULCH IN ALL DRAINAGE WAYS WITH SLOPES 8%. EROSION CONTROL MIX CAN BE USED TO SUBSTITUTE EROSION CONTROL BLANKETS ON ALL SLOPES EXCEPT DITCHES.

6. SEEDING

   BETWEEN THE DATES OF OCTOBER 15 AND APRIL 1ST, LOAM OR SEED WILL NOT BE REQUIRED. DURING PERIODS OF ABOVE FREEZING TEMPERATURES FINISHED AREAS SHALL BE FINE GRADED AND EITHER PROTECTED WITH MULCH OR TEMPORARILY SEEDED AND MULCHED UNTIL SUCH TIME AS THE FINAL TREATMENT CAN BE APPLIED. IF THE DATE IS AFTER NOVEMBER 1ST AND IF THE EXPOSED AREA HAS BEEN LOOMED, FINAL GRADED WITH A UNIFORM SURFACE, THEN THE AREA MAY BE DORMANT SEEDED AT A RATE OF 3 TIMES HIGHER THAN SPECIFIED FOR PERMANENT SEED AND THEN MULCHED. DORMANT SEEDING MAY BE SELECTED TO BE PLACED PRIOR TO THE PLACEMENT OF MULCH AND FABRIC NETTING ANCHORED WITH STAPLES. IF DORMANT SEEDING IS USED FOR THE SITE, ALL DISTURBED AREAS SHALL RECEIVE 4' OF LOAM AND SEED AT AN APPLICATION RATE OF 5LBS/1000 S.F. ALL AREAS SEEDED DURING THE WINTER WILL BE INSPECTED IN THE SPRING FOR ADEQUATE CATCH. ALL AREAS SUFFICIENTLY VEGETATED (LESS THAN 75% CATCH) SHALL BE REVEGETATED BY REPLACING LOAM, SEED AND MULCH. IF DORMANT SEEDING IS NOT USED FOR THE SITE, ALL DISTURBED AREAS SHALL BE REVEGETATED IN THE SPRING. SEED TYPE SHALL BE WINTER RYE.

7. INSPECTION AND MONITORING

   MAINTENANCE MEASURES SHALL BE APPLIED AS NEEDED DURING THE ENTIRE CONSTRUCTION SEASON. AT A MINIMUM, AFTER EACH RAINFALL, SNOW STORM OR PERIOD OF THAWING AND RUNOFF, THE SITE CONTRACTOR SHALL PERFORM A VISUAL INSPECTION OF ALL INSTALLED EROSION CONTROL MEASURES AND PERFORM REPAIRS AS NEEDED TO INSURE THEIR CONTINUOUS FUNCTION.
   FOLLOWING THE TEMPORARY AND OR FINAL SEEDING AND MULCHING, THE CONTRACTOR SHALL IN THE SPRING INSPECT AND REPAIR ANY DAMAGES AND/ OR UNESTABLISHED SPOTS. ESTABLISHED VEGETATIVE COVER MEANS A MINIMUM OF 90% OF AREAS VEGETATED WITH VIGOROUS GROWTH.

STANDARDS FOR TIMELY STABILIZATION OF CONSTRUCTION SITES DURING WINTER

1. STANDARD FOR THE TIMELY STABILIZATION OF DITCHES AND CHANNELS -- THE APPLICANT WILL CONSTRUCT AND STABILIZE ALL STONE-LINED DITCHES AND CHANNELS ON THE SITE BY NOVEMBER 15. THE APPLICANT WILL CONSTRUCT AND STABILIZE ALL GRASS-LINED DITCHES AND CHANNELS ON THE SITE BY SEPTEMBER 15. IF THE APPLICANT FAILS TO STABILIZE A DITCH OR CHANNEL TO BE GRASS-LINED BY SEPTEMBER 15, THEN THE APPLICANT WILL TAKE ONE OF THE FOLLOWING ACTIONS TO STABILIZE THE DITCH FOR LATE FALL AND WINTER.

   INSTALL A SOD LINING IN THE DITCH -- THE APPLICANT WILL LINE THE DITCH WITH PROPERLY INSTALLED SOD BY OCTOBER 1. PROPER INSTALLATION INCLUDES THE APPLICANT PINNING THE SOD ONTO THE SOIL WITH WIRE PINS, ROLLING THE SOD TO GUARANTEE CONTACT BETWEEN THE SOD AND UNDERLYING SOIL, WATERING THE SOD TO PROMOTE ROOT GROWTH INTO THE DISTURBED SOIL, AND ANCHORING THE SOD WITH JUTE OR PLASTIC MESH TO PREVENT THE SOD STRIPS FROM SLOUGHING DURING FLOW CONDITIONS.
   INSTALL A STONE LINING IN THE DITCH --THE APPLICANT WILL LINE THE DITCH WITH STONE RIPRAP BY NOVEMBER 15. THE APPLICANT WILL HIRE A REGISTERED PROFESSIONAL ENGINEER TO DETERMINE THE STONE SIZE AND LINING THICKNESS NEEDED TO WITHSTAND THE ANTICIPATED FLOW VELOCITIES AND FLOW DEPTHS WITHIN THE DITCH. IF NECESSARY, THE APPLICANT WILL REGRADE THE DITCH PRIOR TO PLACING THE STONE LINING SO TO PREVENT THE STONE LINING FROM REDUCING THE DITCH'S CROSS-SECTIONAL AREA.

2. STANDARD FOR THE TIMELY STABILIZATION OF DISTURBED SLOPES -- THE APPLICANT WILL CONSTRUCT AND STABILIZE STONE-COVERED SLOPES BY NOVEMBER 15. THE APPLICANT WILL SEED AND MULCH ALL SLOPES TO BE VEGETATED BY SEPTEMBER 15. THE DEPARTMENT WILL CONSIDER ANY AREA HAVING A GRADE GREATER THAN 15% (10H:1V) TO BE A SLOPE. IF THE APPLICANT FAILS TO STABILIZE ANY SLOPE TO BE VEGETATED BY SEPTEMBER 15, THEN THE APPLICANT WILL TAKE ONE OF THE FOLLOWING ACTIONS TO STABILIZE THE SLOPE FOR LATE FALL AND WINTER.

   STABILIZE THE SOIL WITH TEMPORARY VEGETATION AND EROSION CONTROL MATS -- BY OCTOBER 1 THE APPLICANT WILL SEED THE DISTURBED SLOPE WITH WINTER RYE AT A SEEDING RATE OF 3 POUNDS PER 1000 SQUARE FEET AND APPLY EROSION CONTROL MATS OVER THE MULCHED SLOPE. THE APPLICANT WILL MONITOR GROWTH OF THE RYE OVER THE NEXT 30 DAYS. IF THE RYE FAILS TO GROW AT LEAST THREE INCHES OR COVER AT LEAST 75% OF THE DISTURBED SLOPE BY NOVEMBER 1, THEN THE APPLICANT WILL COVER THE SLOPE WITH A LAYER OF WOOD WASTE COMPOST AS DESCRIBED IN ITEM III OF THIS CONDITION OR WITH STONE RIPRAP AS DESCRIBED IN ITEM IV OF THIS CONDITION.

   STABILIZE THE SLOPE WITH SOD -- THE APPLICANT WILL STABILIZE THE DISTURBED SLOPE WITH PROPERLY INSTALLED SOD BY OCTOBER 1. PROPER INSTALLATION INCLUDES THE APPLICANT PINNING THE SOD ONTO THE SLOPE WITH WIRE PINS, ROLLING THE SOD TO GUARANTEE CONTACT BETWEEN THE SOD AND UNDERLYING SOIL, AND WATERING THE SOD TO PROMOTE ROOT GROWTH INTO THE DISTURBED SOIL. THE APPLICANT WILL NOT USE LATE-SEASON SOD INSTALLATION TO STABILIZE SLOPES HAVING A GRADE GREATER THAN 33% (3H:1V).

   STABILIZE THE SLOPE WITH WOOD WASTE COMPOST -- THE APPLICANT WILL PLACE A SIX-INCH LAYER OF WOOD WASTE COMPOST ON THE SLOPE BY NOVEMBER 15. PRIOR TO PLACING THE WOOD WASTE COMPOST, THE APPLICANT WILL REMOVE ANY SNOW ACCUMULATION ON THE DISTURBED SLOPE. THE APPLICANT WILL NOT USE WOOD WASTE COMPOST TO STABILIZE SLOPES HAVING GRADES GREATER THAN 50% (2H:1V) OR HAVING GROUNDWATER SEEPS ON THE SLOPE FACE.

   STABILIZE THE SLOPE WITH STONE RIPRAP -- THE APPLICANT WILL PLACE A LAYER OF STONE RIPRAP ON THE SLOPE BY NOVEMBER 15. THE APPLICANT WILL HIRE A REGISTERED PROFESSIONAL ENGINEER TO DETERMINE THE STONE SIZE NEEDED FOR STABILITY AND TO DESIGN A FILTER LAYER FOR UNDERNEATH THE RIPRAP.

3. STANDARD FOR THE TIMELY STABILIZATION OF DISTURBED SOILS -- BY SEPTEMBER 15 THE APPLICANT WILL SEED AND MULCH ALL DISTURBED SOILS ON AREAS HAVING A SLOPE LESS THAN 15%. IF THE APPLICANT FAILS TO STABILIZE THESE SOILS BY THIS DATE, THEN THE APPLICANT WILL TAKE ONE OF THE FOLLOWING ACTIONS TO STABILIZE THE SOIL FOR LATE FALL AND WINTER.
   STABILIZE THE SOIL WITH TEMPORARY VEGETATION -- BY OCTOBER 1 THE APPLICANT WILL SEED THE DISTURBED SOIL WITH WINTER RYE AT A SEEDING RATE OF 3 POUNDS PER 1000 SQUARE FEET, LIGHTLY MULCH THE SEEDED SOIL WITH HAY OR STRAW AT 75 POUNDS PER 1000 SQUARE FEET, AND ANCHOR THE MULCH WITH PLASTIC NETTING. THE APPLICANT WILL MONITOR GROWTH OF THE RYE OVER THE NEXT 30 DAYS. IF THE RYE FAILS GROW AT LEAST THREE INCHES OR COVER AT LEAST 75% OF THE DISTURBED SOIL BEFORE NOVEMBER 15, THEN THE APPLICANT WILL MULCH THE AREA FOR OVER-WINTER PROTECTION AS DESCRIBED IN ITEM III OF THIS STANDARD.
   STABILIZE THE SOIL WITH SOD -- THE APPLICANT WILL STABILIZE THE DISTURBED SOIL WITH PROPERLY INSTALLED SOD BY OCTOBER 1. PROPER INSTALLATION INCLUDES THE APPLICANT PINNING THE SOD ONTO THE SOIL WITH WIRE PINS, ROLLING THE SOD TO GUARANTEE CONTACT BETWEEN THE SOD AND UNDERLYING SOIL, AND WATERING THE SOD TO PROMOTE ROOT GROWTH INTO THE DISTURBED SOIL.
   STABILIZE THE SOIL WITH MULCH -- BY NOVEMBER 15 THE APPLICANT WILL MULCH THE DISTURBED SOIL BY SPREADING HAY OR STRAW AT A RATE OF AT LEAST 150 POUNDS PER 1000 SQUARE FEET ON THE AREA SO THAT NO SOIL IS VISIBLE THROUGH THE MULCH. PRIOR TO APPLYING THE MULCH, THE APPLICANT WILL REMOVE ANY SNOW ACCUMULATION ON THE DISTURBED AREA. IMMEDIATELY AFTER APPLYING THE MULCH, THE APPLICANT WILL ANCHOR THE MULCH WITH PLASTIC NETTING TO PREVENT WIND FROM MOVING THE MULCH OFF THE DISTURBED SOIL.

NOT FOR CONSTRUCTION

DANIEL L RILEY, PE 9967

STATE OF MAINE
PROGRESS PRINT
PROFESSIONAL ENGINEER
01/08/2024

REV:	BY:	DATE:	STATUS:
A	DLR	01/08/2024	ISSUED FOR SITE PLAN REVIEW

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South Portland, ME 04106
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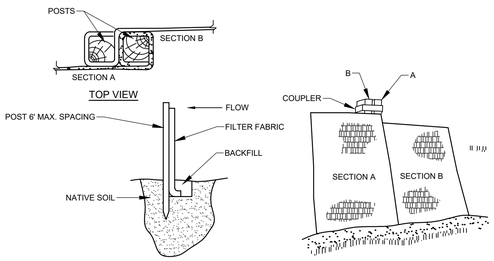
EROSION CONTROL NOTES AND DETAILS
OF:
THE LOFTS AT CUMBERLAND
365 CONGRESS STREET
PORTLAND, MAINE
FOR:
LINCOLN AVENUE CAPITAL NORTHEAST DEVELOPERS, LLC
14 HARVEST WAY
NEW MARKET, NH 03857

DESIGNED	DJS
DRAWN	MRS
CHECKED	DLR
DATE	01/08/2024
SCALE	N.T.S.
PROJECT	19371-04

DRAWING C-500

19371-04 D.dwg, TAB:C-500 EROSION CONTROL NOTES AND DETAILS

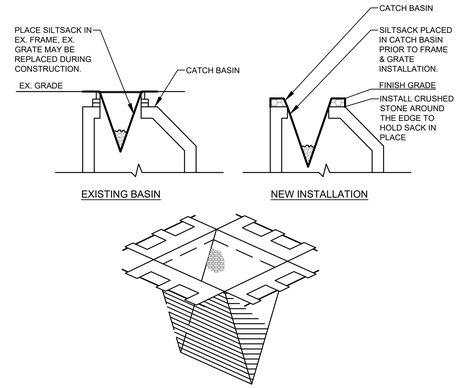
F:\Projects\19000\19371-04\DWG\Design\19371-04 D.dwg - 1/9/2024 1:54 PM - RICHARD G. LEWIS



INSTALLATION:

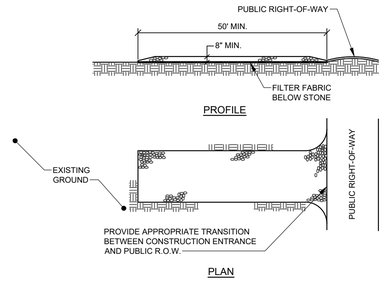
1. EXCAVATE A 6"x 6" TRENCH ALONG THE LINE OF PLACEMENT FOR THE FILTER BARRIER.
2. UNROLL A SECTION AT A TIME AND POSITION THE POSTS AGAINST THE BACK (DOWNSTREAM) WALL OF THE TRENCH.
3. DRIVE POSTS INTO THE GROUND UNTIL APPROXIMATELY 2" OF FABRIC IS LYING ON THE TRENCH BOTTOM.
4. LAY THE TOE-IN FLAP OF FABRIC ONTO THE UNDISTURBED BOTTOM OF THE TRENCH, BACKFILL THE TRENCH AND TAMP THE SOIL. TOE-IN CAN ALSO BE ACCOMPLISHED BY LAYING THE FABRIC FLAP ON UNDISTURBED GROUND AND PILING AND TAMPING FILL AT THE BASE, BUT MUST BE ACCOMPANIED BY AN INTERCEPTION DITCH.
5. JOIN SECTION AS SHOWN ABOVE.
6. BARRIER SHALL BE MIRAFI SILT FENCE OR EQUAL.

FILTER BARRIER
NOT TO SCALE



NOTES:
PRIOR TO FINAL GRADING AND PAVING OPERATIONS BEGIN A CATCH BASIN INSERT (SUCH AS A SILT SACK OR A DANDY BAG I) MUST BE INSTALLED IN EACH BASIN PER MANUFACTURES INSTRUCTIONS. HAY BALES SHOULD BE REMOVED ONCE INSERTS ARE INSTALLED.

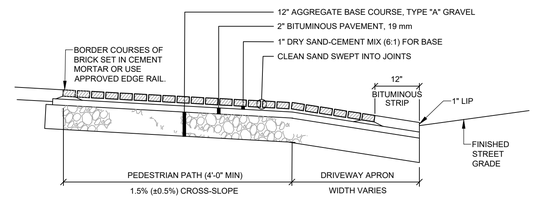
CATCH BASIN PROTECTION DETAIL (FOR PAVED AREAS)
NOT TO SCALE



NOTES:

1. STONE SIZE- AASHTO DESIGNATION M43, SIZE NO. 2 (2 1/2" TO 1 1/2"), USE CRUSHED STONE.
2. LENGTH- AS SHOWN ON PLANS, MIN. 50 FEET.
3. THICKNESS- NOT LESS THAN EIGHT (8) INCHES.
4. WIDTH- NOT LESS THAN FULL WIDTH OF ALL POINT OF INGRESS OR EGRESS.
5. MAINTENANCE- THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHT-OF-WAY MUST BE REMOVED IMMEDIATELY.

STABILIZED CONSTRUCTION ENTRANCE
NOT TO SCALE

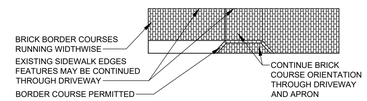


BRICKS TO BE USED:

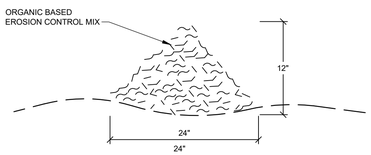
NEW CONSTRUCTION:
4"x8" PINE HALL PATHWAY PAVER BRICK; MFG. BY PINE HALL BRICK CO., MADISON, NORTH CAROLINA. LACHANCE ITEM # 193623, PINE HALL PATHWAY PAVER BRICK.

REPAIR /MAINTENANCE TO EXISTING BRICK SIDEWALKS:
VERMONT PAVER; SUPPLIED BY GAGNE AND SONS.
SPECIFICATION NUMBER: "VERMONT BACKER BRICK",
ITEM NUMBER # VBBB

BRICK DRIVEWAY APRON WITH BITUMINOUS BASE
NOT TO SCALE



BRICK ORIENTATION DETAIL



COMPOSITION:

EROSION CONTROL MIX SHALL BE MANUFACTURED ON OR OFF THE PROJECT SITE SUCH THAT ITS COMPOSITION IS IN ACCORDANCE WITH THE MDEP MAINE EROSION AND SEDIMENT CONTROL BMP MANUAL, LAST REVISED 3/2003 OR LATER. IT MUST CONSIST PRIMARILY OF ORGANIC MATERIAL, SEPARATED AT THE POINT OF GENERATION, AND MAY INCLUDE: SHREDDED BARK, STUMP GRINDINGS, COMPOSTED BARK, OR ACCEPTABLE MANUFACTURED PRODUCTS. WOOD AND BARK CHIPS, GROUND CONSTRUCTION DEBRIS OR REPROCESSED WOOD PRODUCTS WILL NOT BE ACCEPTABLE AS THE ORGANIC COMPONENT OF THE MIX.

INSTALLATION:

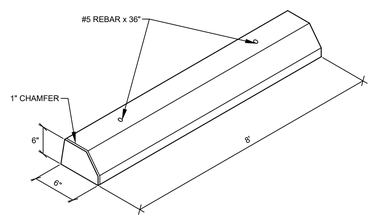
1. THE BARRIER MUST BE PLACED ACROSS THE SLOPE, ALONG THE CONTOUR.

2. EXISTING GROUND SHALL BE PREPARED SUCH THAT THE BARRIER MAY LIE NEARLY FLAT ALONG THE GROUND TO AVOID THE CREATION OF VOIDS AND BRIDGES IN ORDER TO MINIMIZE THE POTENTIAL OF WASH OUTS UNDER THE BARRIER

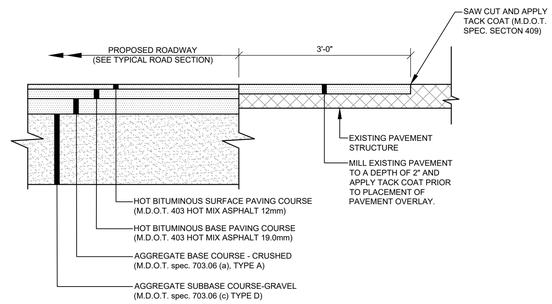
3. THE BARRIER SHALL BE A MINIMUM OF 1 FOOT HIGH (AS MEASURED ON THE UPHILL SIDE) AND 2 FEET WIDE FOR SLOPES LESS THAN 5% IN GRADE AND SHALL BE WIDER TO ACCOMMODATE THE ADDITIONAL RUNOFF.

4. EROSION CONTROL MIX CAN BE INSTALLED WHERE SILT FENCE IS ILLUSTRATED ON THE DESIGN PLANS IN AREAS EXCEPT IN, BUT NOT LIMITED TO, THE FOLLOWING AREAS: WETLAND AREAS, AT POINTS OF CONCENTRATED FLOW, BELOW CULVERT OUTLET APRONS, AROUND CATCH BASINS AND CLOSED STORM SYSTEMS AND AT THE BOTTOM OF STEEP SLOPES THAT ARE MORE THAN 50 FEET FROM TOP TO BOTTOM.

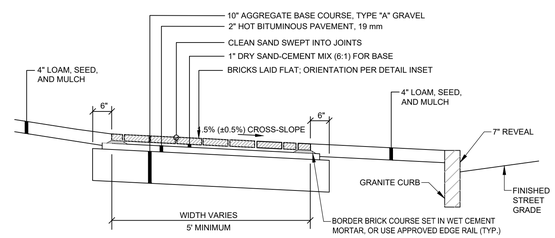
EROSION CONTROL MIX BERM
NOT TO SCALE



CONCRETE WHEEL STOP
NOT TO SCALE



PAVEMENT JOINT
NOT TO SCALE

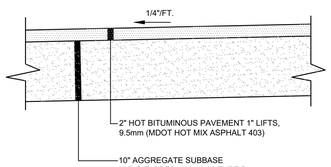


BRICKS TO BE USED:

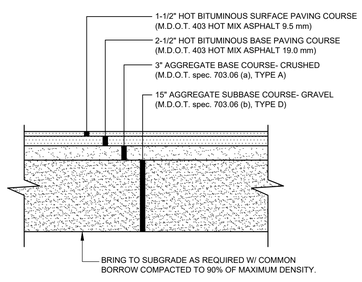
NEW CONSTRUCTION:
4"x8" PINE HALL PATHWAY PAVER BRICK; MFG. BY PINE HALL BRICK CO., MADISON, NORTH CAROLINA, OR APPROVED EQUAL.. LACHANCE ITEM # 193623, PINE HALL PATHWAY PAVER BRICK, OR APPROVED EQUAL..

REPAIR /MAINTENANCE TO EXISTING BRICK SIDEWALKS:
VERMONT PAVER; SUPPLIED BY GAGNE AND SONS.
SPECIFICATION NUMBER:
"VERMONT BACKER BRICK",
ITEM NUMBER # VBBB,
OR APPROVED EQUAL

BRICK SIDEWALK WITH BITUMINOUS BASE
NOT TO SCALE



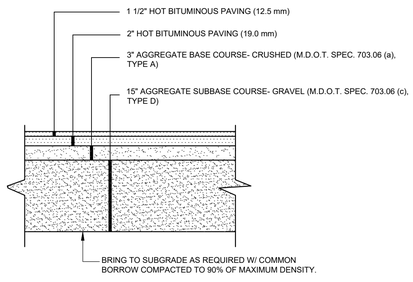
BITUMINOUS SIDEWALK
NOT TO SCALE



NOTES:

1. COMPACT GRAVEL SUBBASE, BASE COURSE TO 92% OF MAXIMUM DENSITY USING HEAVY ROLLER COMPACTION.
2. CONTRACTOR SHALL SET GRADE STAKES MARKING SUBBASE AND FINISH GRADE ELEVATIONS FOR CONSTRUCTION REFERENCE.
3. CONTRACTOR MAY REPLACE BITUMINOUS PAVING SECTION WITH TWO (2) 1-1/2" LIFTS OF 12.5mm SUPERPAVE MIX. SUBMIT PAVEMENT MIX DESIGN PRIOR TO CONSTRUCTION.

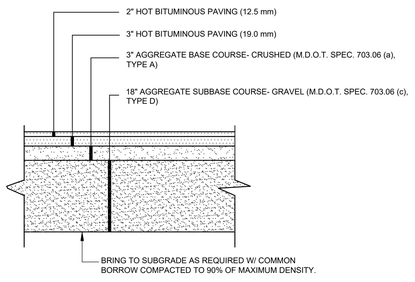
PAVED PARKING LOT SECTION
NOT TO SCALE



NOTES:
1. COMPACT GRAVEL SUBBASE, BASE COURSE TO 95% OF MAXIMUM DENSITY USING HEAVY ROLLER COMPACTION.

2. CONTRACTOR SHALL SET GRADE STAKES MARKING SUBBASE AND FINISH GRADE ELEVATIONS FOR CONSTRUCTION REFERENCE.

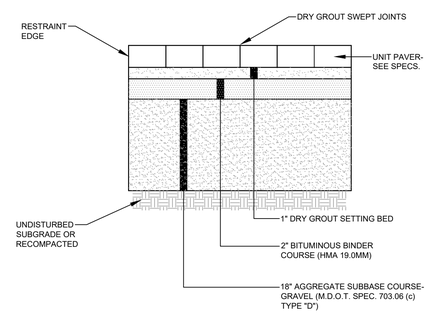
ROADWAY SECTION - MYRTLE & PEAR STREET
NOT TO SCALE



NOTES:
1. COMPACT GRAVEL SUBBASE, BASE COURSE TO 95% OF MAXIMUM DENSITY USING HEAVY ROLLER COMPACTION.

2. CONTRACTOR SHALL SET GRADE STAKES MARKING SUBBASE AND FINISH GRADE ELEVATIONS FOR CONSTRUCTION REFERENCE.

ROADWAY SECTION - CUMBERLAND AVENUE
NOT TO SCALE



UNIT PAVER
NOT TO SCALE

NOT FOR CONSTRUCTION

DANIEL L RILEY PE 9967

STATE OF MAINE
DANIEL L. RILEY
PROFESSIONAL ENGINEER
PROGRESS PRINT
01/08/2024

REV	BY	DATE	STATUS
A	DLR	01/08/2024	ISSUED FOR SITE PLAN REVIEW

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75 John Roberts Rd.
Suite A
South Portland, ME 04106
Tel. 207-200-2100

DETAILS 1
OF:
THE LOFTS AT CUMBERLAND
365 CONGRESS STREET
PORTLAND, MAINE
FOR:
LINCOLN AVENUE CAPITAL NORTHEAST DEVELOPERS, LLC
14 HARVEST WAY
NEW MARKET, NH 03857

DESIGNED	DJS
DRAWN	MRS
CHECKED	DLR
DATE	01/08/2024
SCALE	N.T.S.
PROJECT	19371-04

DRAWING C-501

19371-04 D.dwg; TAB:C-501 DETAILS 1

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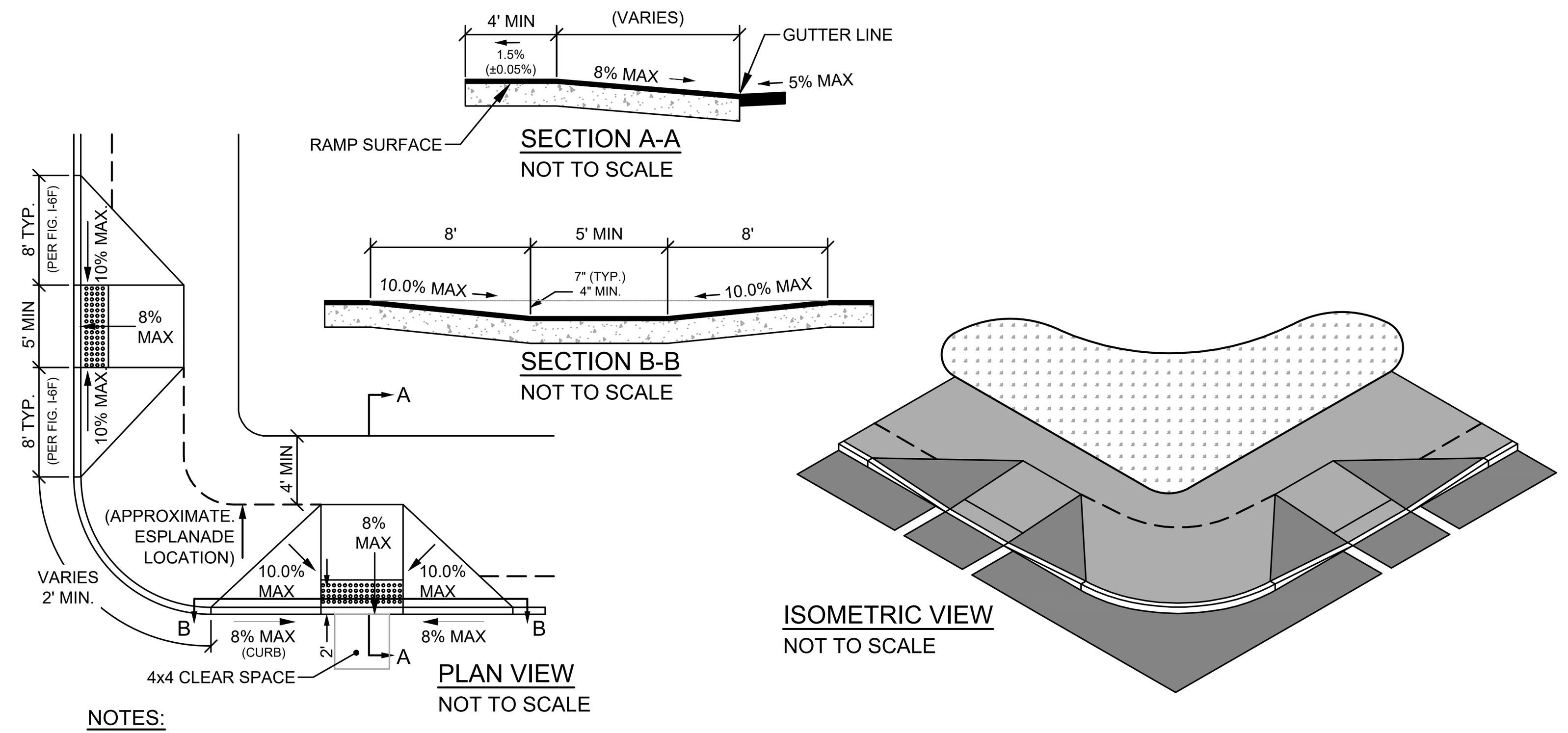
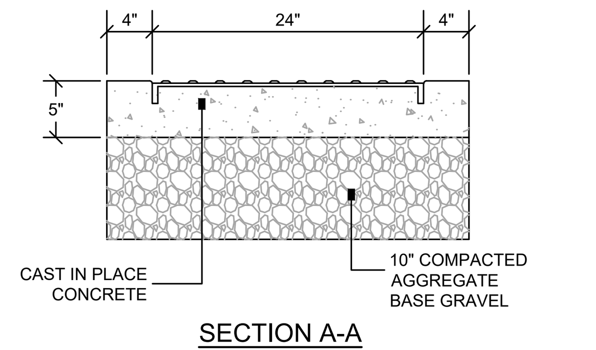
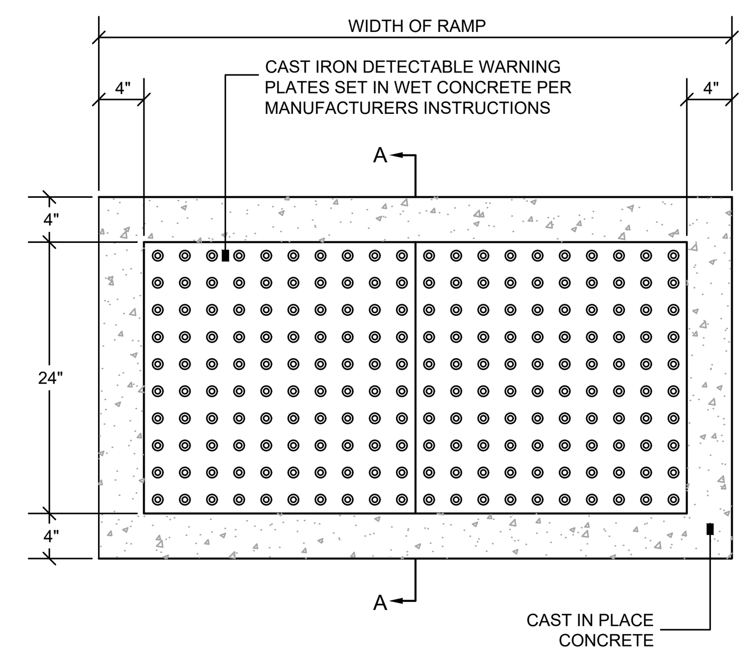


NOTES:
1. THIS DESIGN IS THE PREFERRED OPTION WHEN THE SIDEWALK WIDTH IS GREATER THAN 6.5'. USE OTHER OPTIONS ONLY WHEN REQUIRED BY DESIGN CONSTRAINTS.
2. A MINIMUM CURB REVEAL OF 4" IS REQUIRED AT THE APEX OF THE CURB RADIUS.
3. MINIMUM TERMINAL CURB LENGTH SHALL BE 4 FEET.
4. SIDEWALK MATERIAL PER CITY SIDEWALK MATERIAL POLICY.

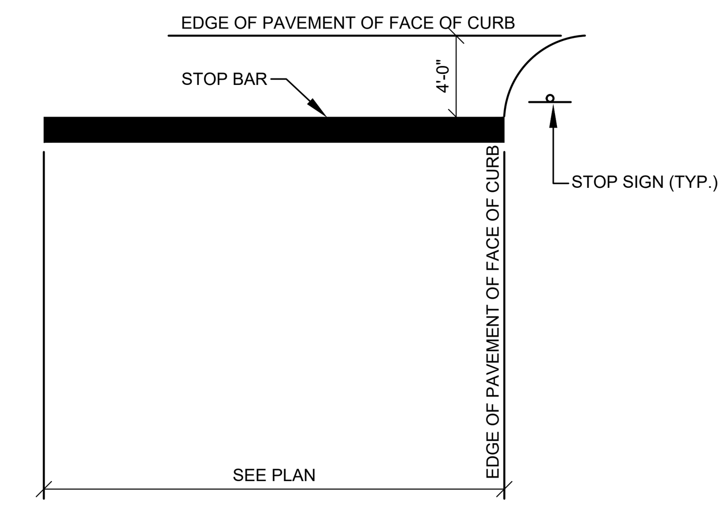
PERPENDICULAR ADA RAMP - SIDEWALK WIDTH GREATER THAN 6.5' WIDE WITH OR WITHOUT ESPLANADE
NOT TO SCALE

NOTE:
1. ALL DETECTABLE WARNING PLATES SHALL BE UNCOATED CAST IRON. FOLLOW MANUFACTURER'S INSTRUCTIONS FOR INSTALLATION.
2. CAST IN PLACE CONCRETE SHALL MEET SPECIFICATIONS FOR MDOT CLASS A STRUCTURAL CONCRETE, MINIMUM COMPRESSIVE STRENGTH 4,000 PSI. THE EXPOSED CONCRETE BORDER SHALL RECEIVE A UNIFORM BROOM FINISH PERPENDICULAR TO THE FLOW OF PEDESTRIAN TRAFFIC.
3. TRUNCATED DOMES SHALL BE ALIGNED IN ROWS, PARALLEL AND PERPENDICULAR TO THE PREDOMINANT DIRECTION OF TRAVEL. TRUNCATED DOME BRICKS AND GRANITE PAVERS ARE NOT ALLOWED.
4. SIZE: THE DETECTABLE WARNING PLATES SHALL EXTEND 24 INCHES MINIMUM IN THE DIRECTION OF TRAVEL AND THE FULL WIDTH OF THE CURB RAMP, LANDING, OR BLENDED TRANSITION TO THE STREET.
5. ORIENTATION: THE DETECTABLE WARNING PANEL SHALL BE LOCATED SO THAT THE EDGE NEAREST THE CURB LINE IS 6 INCHES MINIMUM AND 8 INCHES MAXIMUM FROM THE CURB LINE. THE PANEL SHALL BE ORIENTED TO THE DIRECTION OF TRAVEL AS IDENTIFIED BY THE POINT OF EGRESS.



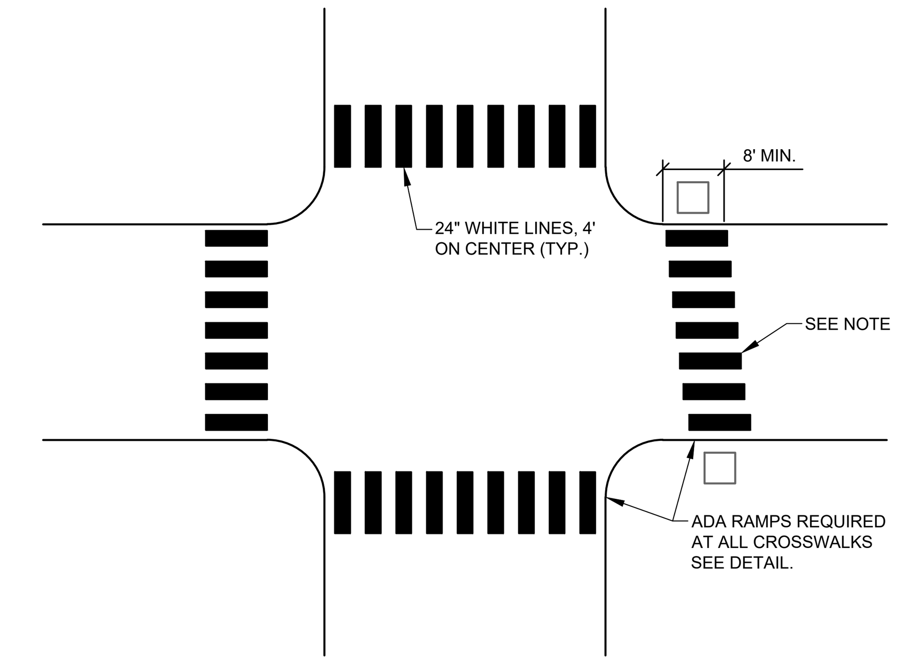


SIDEWALK RAMP DETECTABLE WARNING PANEL
NOT TO SCALE



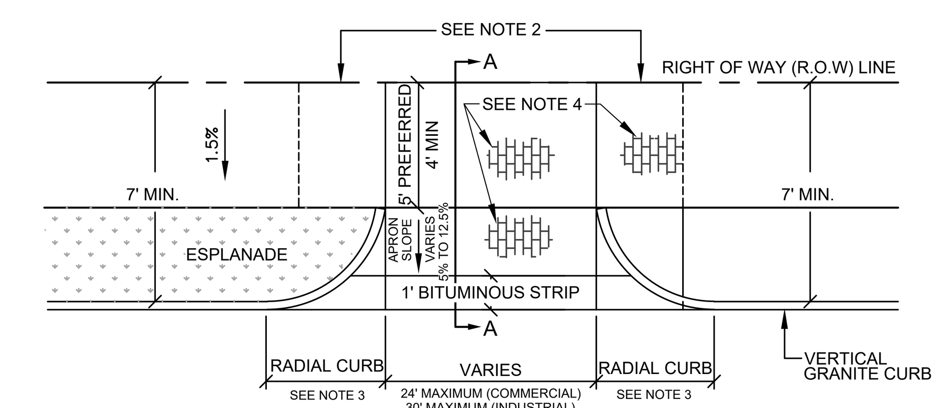
NOTE:
1. WORDS AND ARROWS FOR DRIVEWAYS SHALL BE APPLIED ACCORDING TO REQUIREMENTS AS OUTLINED IN SECTION 3B OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS.
2. THESE WORDS AND BAR ARE TO BE PAINTED REFLECTIVE WHITE.

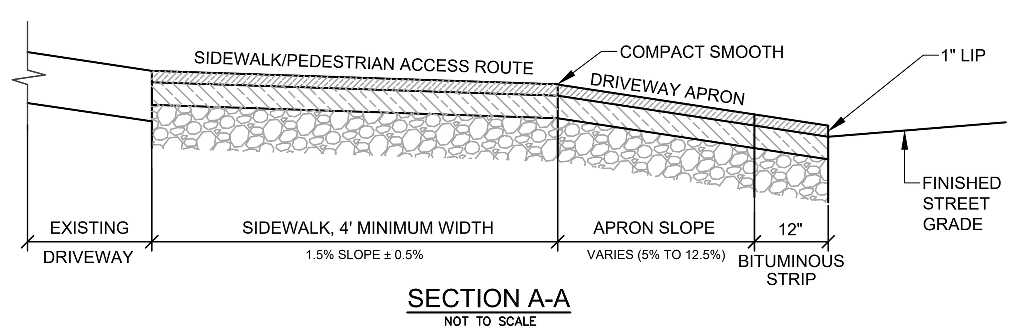
STOP BAR
NOT TO SCALE

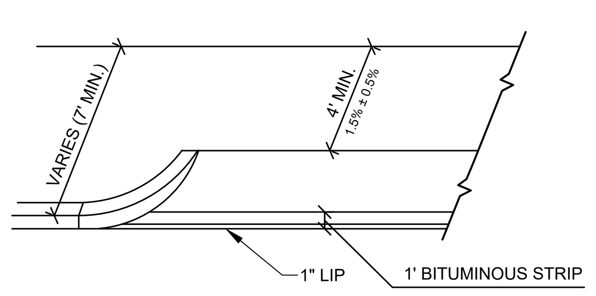


NOTES:
1. CROSSWALK BLOCKS SHALL BE STAGGERED AND REMAIN PARALLEL TO THE ROADWAY CENTERLINE AT SKEWED CROSSING LOCATIONS.
2. CROSSWALK MARKINGS LOCATED ON ARTERIAL STREETS SHALL BE APPLIED WITH A THERMOPLASTIC MATERIAL (OR APPROVED EQUAL) MEETING ALL MANUFACTURER AND MUTCD REQUIREMENTS.
3. THE ESTABLISHMENT PERIOD FOR CROSSWALK MARKINGS SHALL BE BASED ON MANUFACTURER'S SPECIFICATIONS AND SHALL AT A MINIMUM MEET MAINE DOT STANDARD SPECIFICATION 627.07 ESTABLISHMENT PERIOD REQUIREMENTS.

CROSSWALK MARKINGS
NOT TO SCALE

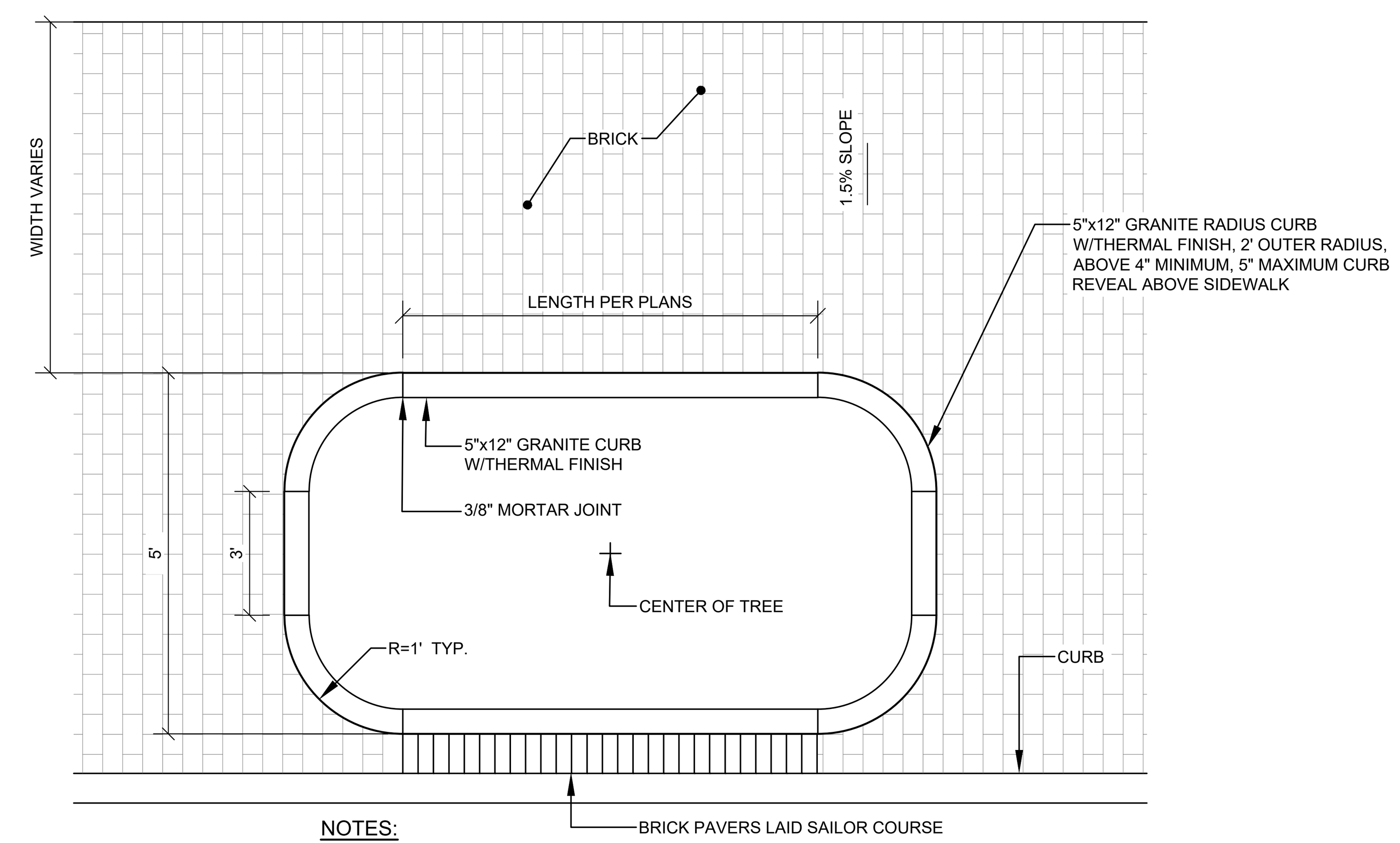






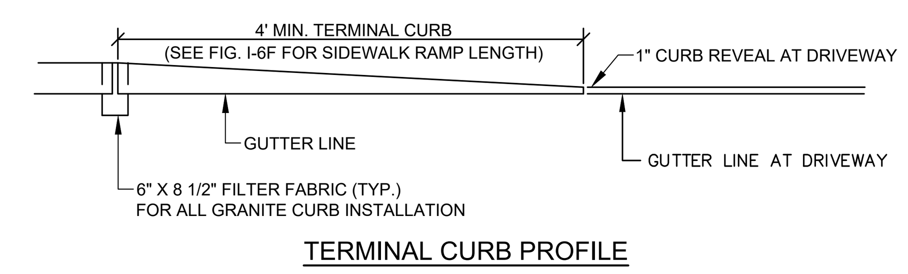
NOTES:
1. MATCH EXISTING GRADE AT R.O.W LINE. WHERE REQUIRED TO MEET A.D.A. AND DRIVEWAY APRON SLOPE REQUIREMENTS, A CONSTRUCTION EASEMENT MAY BE REQUIRED.
2. IF MATCHING THE EXISTING GRADE AT ROW CAUSES APRON SLOPE TO EXCEED RECOMMENDED %, SIDEWALK TRANSITION AREAS MAY BE ADDED, BUT SHALL NOT EXCEED 8.33%.
3. DRIVEWAY CURB RADIUS SHALL NOT BE LARGER THAN REQUIRED BY THE SITE'S DESIGN VEHICLE.
4. ALL MATERIALS IN ROW TO COMPLY WITH CITY'S SIDEWALK & DRIVEWAY MATERIAL POLICY. BRICK IN DRIVEWAY APRONS, WHERE APPLICABLE, SHALL BE ORIENTED IN THE SAME WAY AS THE ADJACENT BRICK SIDEWALK..

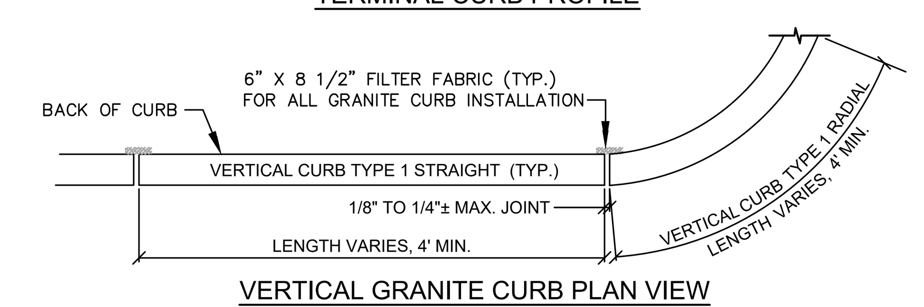
STANDARD COMMERCIAL DRIVEWAY APRON LAYOUT
NOT TO SCALE

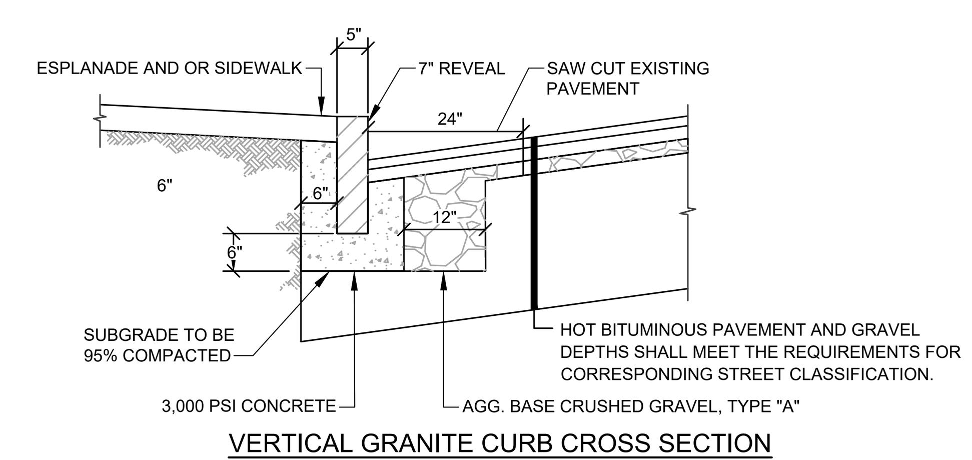


NOTES:
1. ALL TREE WELLS SHALL COMPLY WITH CITY TECHNICAL STANDARDS AND MUST BE APPROVED BY THE CITY ARBORIST: JEFF TARLING (207) 808-5400.
2. SIDEWALK MATERIAL PER CITY SIDEWALK MATERIAL POLICY.
3. NEW CONSTRUCTION:
4"x8" PINE HALL PATHWAY PAVER BRICK; MFG. BY PINE HALL BRICK CO., MADISON, NORTH CAROLINA. LACHANCE ITEM #193623, PINE HALL PATHWAY PAVER BRICK.

TREEWELL IN BRICK SIDEWALK
NOT TO SCALE

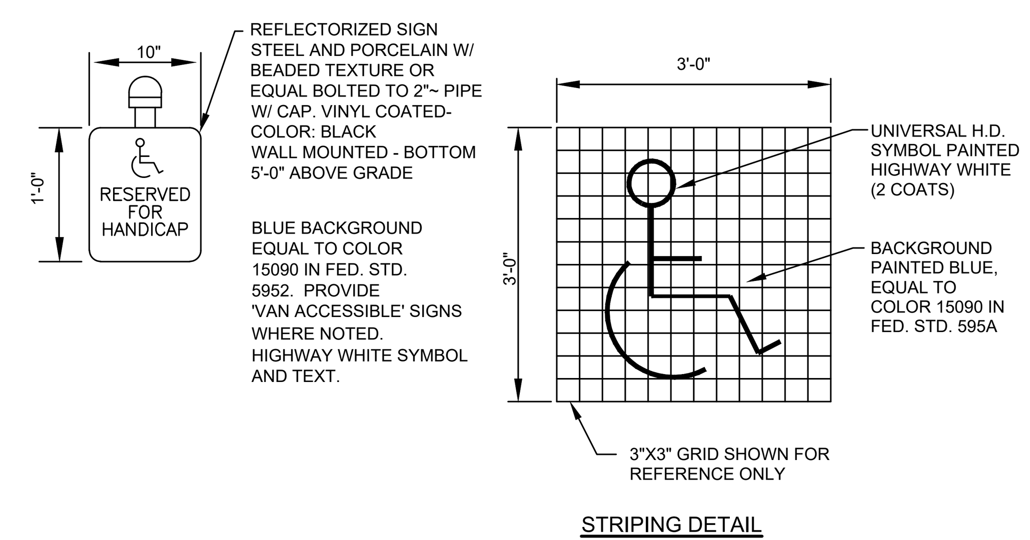




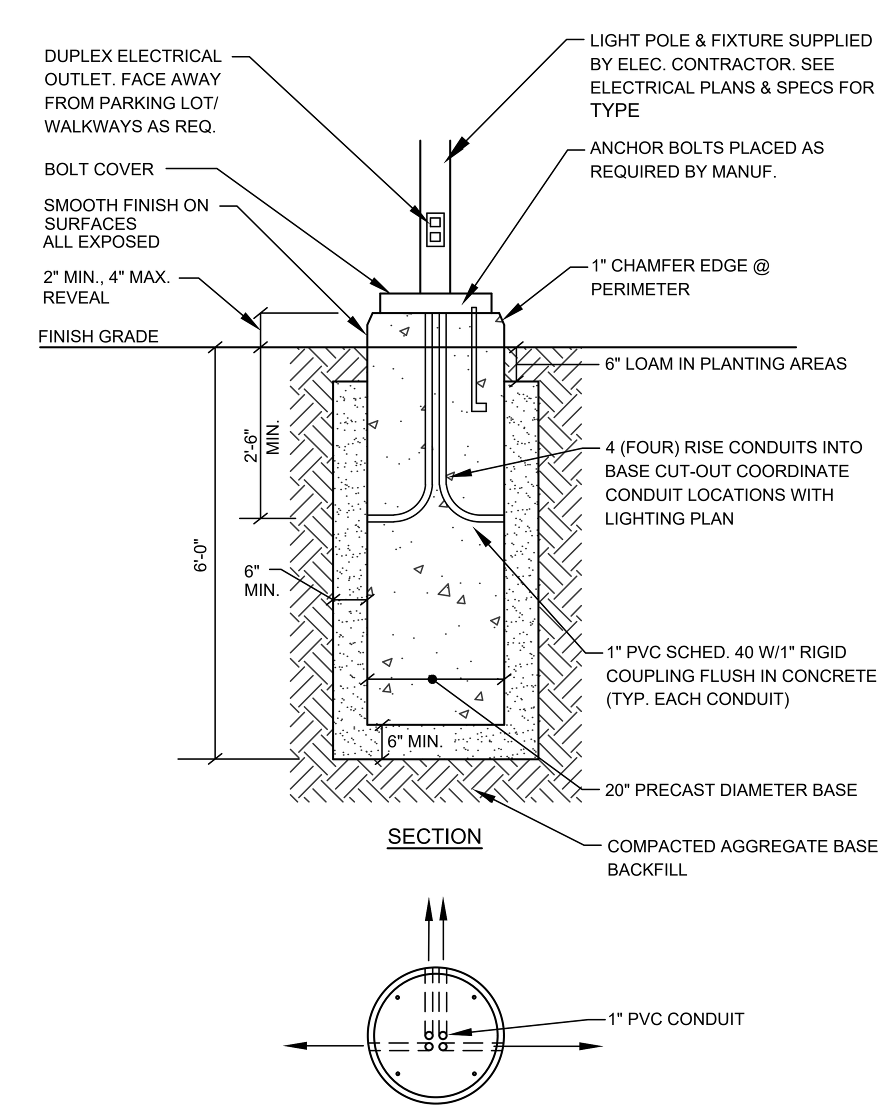


NOTES:
1. INDIVIDUAL PIECES OF CURB SHORTER THAN 4 L.F. ARE NOT ALLOWED, WITH THE EXCEPTION OF RADIAL CURB.
2. THE MINIMUM HEIGHT OF THE CONCRETE BACKING SHALL BE 10-INCHES OR TO THE BOTTOM OF THE HOT MIX ASPHALT PAVEMENT, WHICHEVER IS GREATER, MEASURED FROM THE BOTTOM OF CURB.
3. CURBING SHALL BE SET IN A 6-INCH BED OF POURED IN PLACE 3,000 PSI CONCRETE MIX.
4. WOODEN SHIMS MAY BE USED TO SET CURB.

VERTICAL GRANITE CURB
NOT TO SCALE

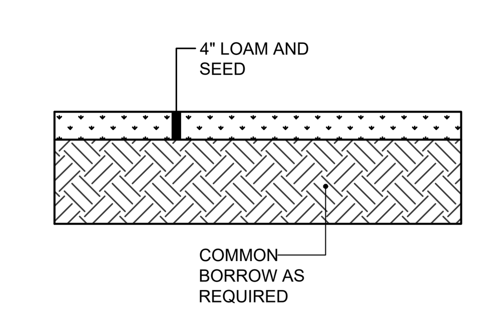


HANDICAP SIGNS AND STRIPING
NOT TO SCALE

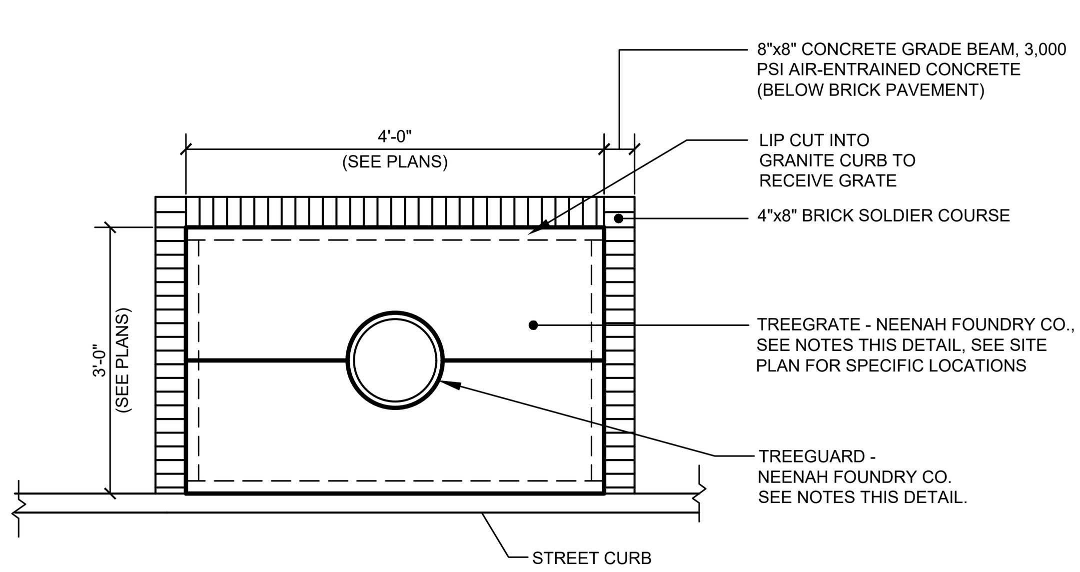


NOTES:
1. CONCRETE f'c=5000 psi. @ 28 DAYS WITH STEEL REINFORCEMENT.
2. CONDUIT AND ANCHOR BOLTS PLACED AS REQUIRED PROVIDED BY ELECTRICAL CONSTRACTOR.
3. PROVIDE 2 COATS BITUMINOUS DAMPROOFING FOR ALL CONCRETE BELOW GRADE.

STANDARD LIGHT POLE BASE
NOT TO SCALE

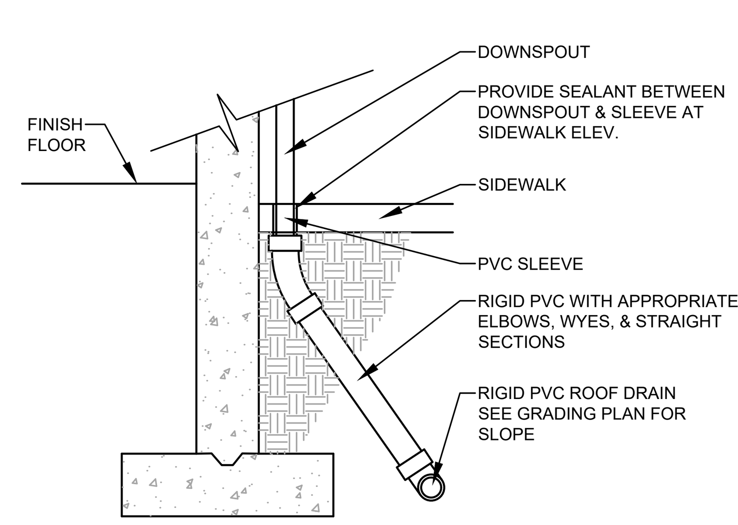


LOAM & SEED SECTION
NOT TO SCALE



NOTES:
1. USE R-8808 W/ 12" EXPANDABLE OPENING FOR TREE GRATE #1.
2. USE R-8802-4 W/ 18" EXPANDABLE OPENING FOR TREE GRATE #2.

TREE GRATE DETAIL
NOT TO SCALE



NOTE:
1. SEE PLANS FOR DOWNSPOUT AND ROOF DRAIN LEADER SIZES..

ROOF DRAIN CONNECTOR
NOT TO SCALE

NOT FOR CONSTRUCTION

DANIEL L RILEY, PE 9967
STATE OF MAINE DANIEL L RILEY No. 9967 LICENSED PROFESSIONAL ENGINEER — PROGRESS PRINT
01/08/2024

REV:	BY:	DATE:	STATUS:
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DRAWING C-502

19371-04 D.dwg, TAB:C-502 DETAIL 2

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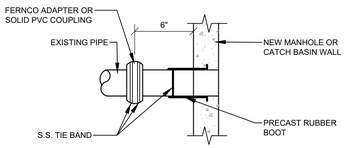
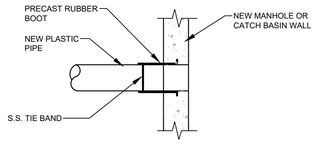
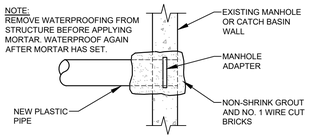


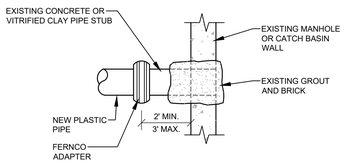
METHOD 1- EXISTING PIPE INTO NEW STRUCTURE



METHOD 2- NEW CONSTRUCTION



METHOD 3- NEW PIPE INTO EXISTING STRUCTURE



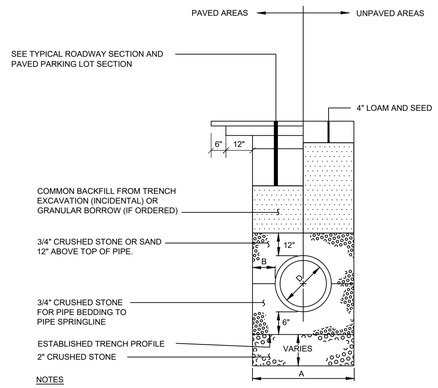
METHOD 4- NEW PIPE INTO EXISTING STRUCTURE STUB

NOTE:
1. REMOVE WATERPROOFING FROM STRUCTURE BEFORE APPLYING MORTAR. WATERPROOF AGAIN AFTER MORTAR HAS SET.

2. EXISTING MANHOLE OR CATCH BASIN SHALL BE CORE DRILLED FOR PIPE INSTALLATION. IF PIPE DIAMETER IS SO LARGE THAT CORE DRILLING IS PROHIBITED, THE CONTRACTOR MAY SAW CUT THE STRUCTURE TO CREATE PIPE OPENING. THE NEW OPENING MUST THEN BE SEALED AND WATERTIGHT BOTH INSIDE AND OUTSIDE THE STRUCTURE.

PLASTIC PIPE CONNECTIONS

NOT TO SCALE



NOTES

1. ALTERNATIVE CONSTRUCTION METHODS OR PAYMENT METHODS SHALL BE APPROVED IN ADVANCE BY THE CITY.
2. IN PAVED AREAS, DEPTHS OF GRAVEL AND HOT MIX ASPHALT PAVEMENT SHALL MATCH THE GREATER OF EXISTING CONDITIONS OR THE REQUIREMENTS FOR THE CORRESPONDING STREET CLASSIFICATION.
3. DIMENSION "B" SHALL BE SUFFICIENT TO ALLOW CRUSHED STONE BEDDING TO BE PLACED AND COMPACTED UNDER THE HAUNCHES OF THE PIPE; BUT IN ALL CASES DIMENSION "B" SHALL BE AT LEAST 9".
4. DIMENSION "A" IS THE MAXIMUM WIDTH ALLOWED FOR CALCULATING PAY QUANTITIES UNDER GRANULAR BORROW, CRUSHED STONE, STRUCTURAL EARTH EXCAVATION, AND STRUCTURAL ROCK EXCAVATION. DIMENSION "A" SHALL BE BASED ON PIPE DIAMETER "D", AS SET FORTH IN THE FOLLOWING TABLE.

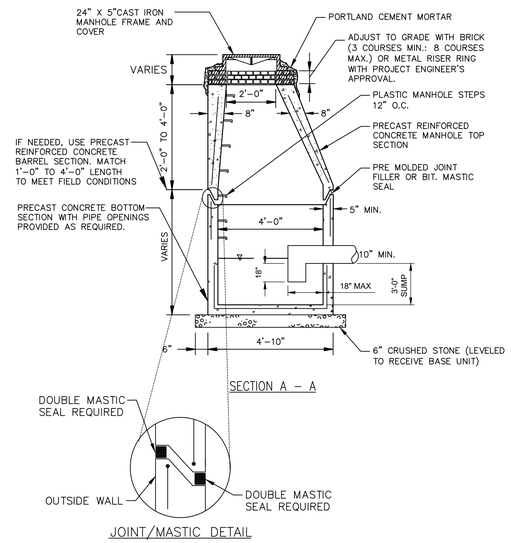
PIPE DIAMETER, "D" (INCHES)	MAX. TRENCH WIDTH, "A" (FEET)
4	4.0
6	4.0
8	4.0
10	4.0
12	5.0
15	5.0
18	5.0

NOTES:
DEPTH OF BITUMINOUS PAVEMENT AND AGGREGATE COURSES SHALL BE DETERMINED BY STREET CLASSIFICATION.

ANY ALTERNATE TRENCHING OR PAYMENT METHODS SHALL BE APPROVED IN ADVANCE BY THE CITY OF PORTLAND, DEPARTMENT OF PUBLIC SERVICES.

TYPICAL PIPE TRENCH INSTALLATION

NOT TO SCALE



NOTE:
1. FOR USE IN PARTIALLY OR TOTALLY ENCLOSED PARKING GARAGES, AUTOMOTIVE REPAIR FACILITIES OR ANY OTHER PROPOSED STRUCTURE WHERE DEEMED APPROPRIATE BY THE CITY ENGINEER.

2. DISCHARGE SHALL BE TO SANITARY SEWER.

3. A VENT PIPE MAY BE REQUIRED THAT HAS A VERTICAL OUTLET OFF TO THE SIDE OF THE STRUCTURE.

4. AN OIL ABSORBENT BOOM IS REQUIRED TO BE PLACED WITHIN THE MANHOLE ON THE WATER SURFACE AND REPLACED AT A MINIMUM ANNUALLY.

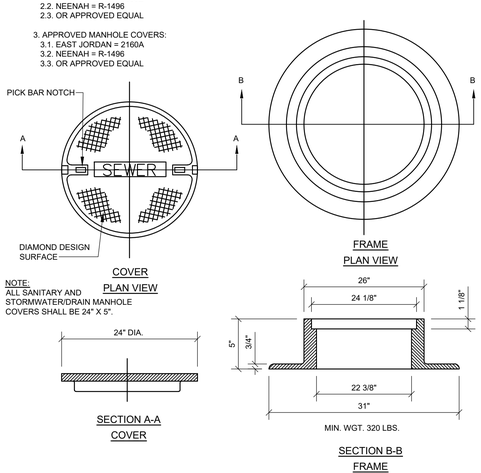
OIL /GRIT SEPARATOR

NOT TO SCALE

NOTE:
1. ALL SANITARY MANHOLE COVERS SHALL HAVE "SEWER" CAST INTO THE COVER. ALL STORMWATER/DRAIN MANHOLE COVERS SHALL HAVE "DRAIN" CAST INTO THE COVER.

2. APPROVED MANHOLE FRAMES:
2.1. EAST JORDAN = 1690Z
2.2. NEENAH = R-1496
2.3. OR APPROVED EQUAL

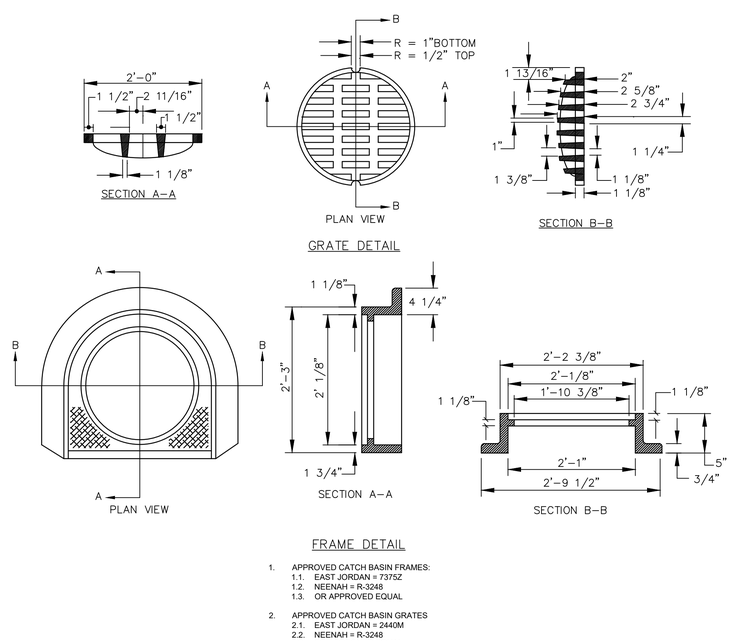
3. APPROVED MANHOLE COVERS:
3.1. EAST JORDAN = 2160A
3.2. NEENAH = R-1496
3.3. OR APPROVED EQUAL



NOTE:
ALL SANITARY AND STORMWATER/DRAIN MANHOLE COVERS SHALL BE 24" X 5".

CAST IRON MANHOLE FRAME AND COVER

NOT TO SCALE



1. APPROVED CATCH BASIN FRAMES:
1.1. EAST JORDAN = 7375Z
1.2. NEENAH = R-3248
1.3. OR APPROVED EQUAL

2. APPROVED CATCH BASIN GRATES
2.1. EAST JORDAN = 2440M
2.2. NEENAH = R-3248
2.3. OR APPROVED EQUAL

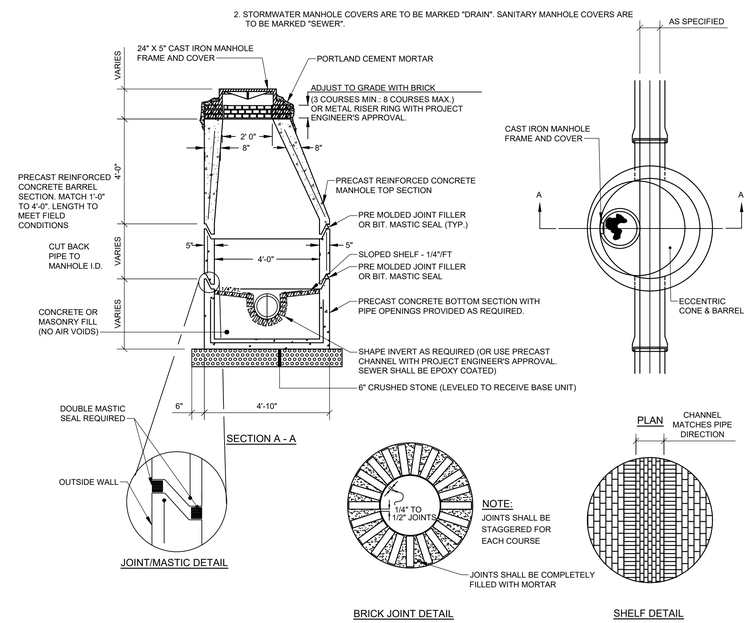
CATCH BASIN FRAME & GRATE

NOT TO SCALE

NOTE:

1. MANHOLE CHANNELS REQUIRING CHANGE OF ALIGNMENT, TO BE BUILT ON SMOOTH RADIUS. IF SIDE PIPES ENTER, CHANNEL TO BE SHAPED TO RECEIVE ADDED SIDE FLOW.

2. STORMWATER MANHOLE COVERS ARE TO BE MARKED "DRAIN". SANITARY MANHOLE COVERS ARE TO BE MARKED "SEWER".



PRECAST CONCRETE MANHOLE

NOT TO SCALE

NOT FOR CONSTRUCTION

DANIEL L RILEY PE 9967

STATE OF MAINE
DANIEL L. RILEY
No. 9967
PROFESSIONAL ENGINEER
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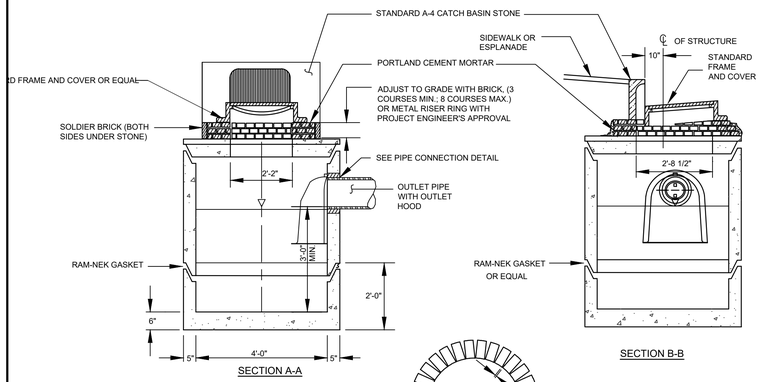
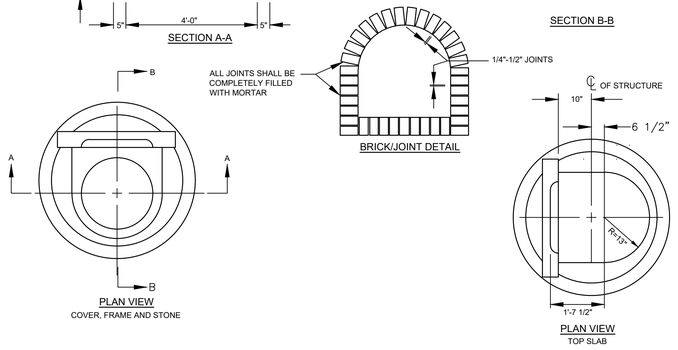
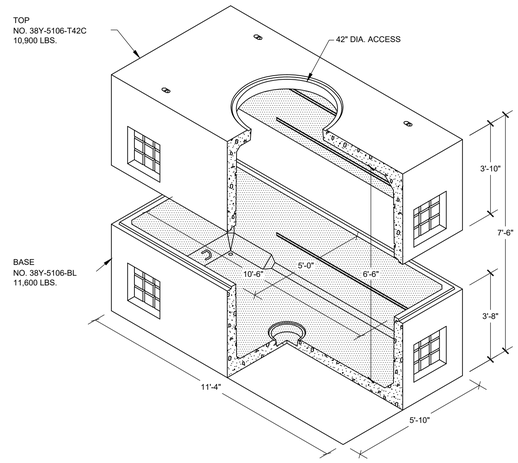
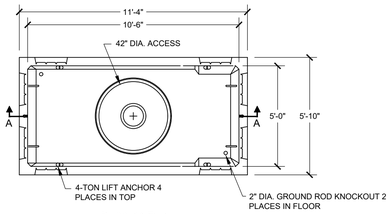


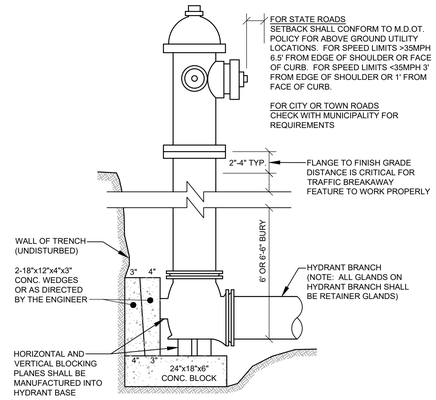


PRECAST CONCRETE CATCH BASIN - TYPE "E"

NOT TO SCALE

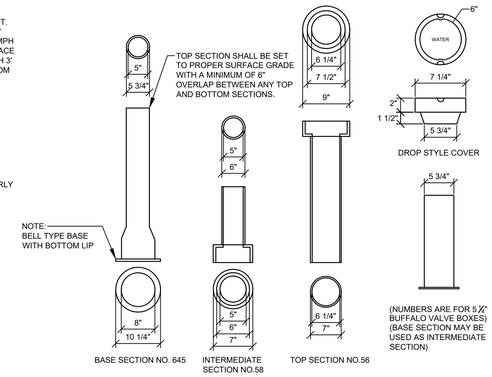






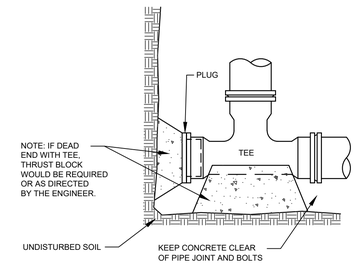
HYDRANT INSTALLATION

NOT TO SCALE



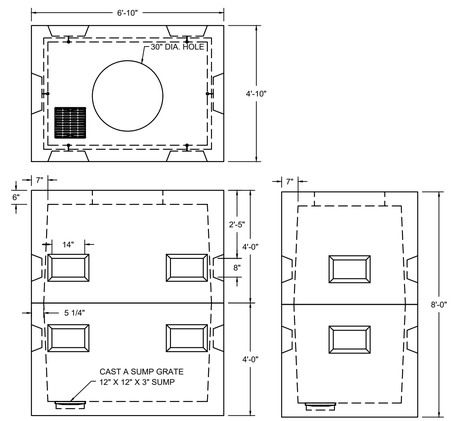
VALVE BOX & COVER

NOT TO SCALE



STANDARD TEE BLOCKING

NOT TO SCALE

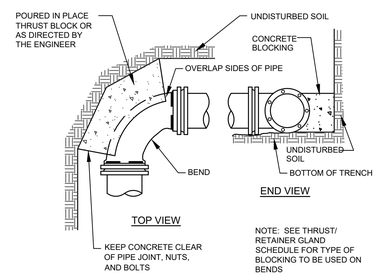


NOTES:

1. FURNISH AND INSTALL 32" DIA X 6" H-20 RATED FRAME AND MANHOLE COVER LETTERED "COMMUNICATIONS".
2. FURNISH AND INSTALL RISER RINGS AND MASONRY TO ACHIEVE REQUIRED DEPTH AND ALLOW FOR FUTURE ADJUSTMENT TO GRADE.
3. CONCRETE TO BE 5,000 PSI AT 28 DAYS.
4. VAULT TO BE RATED FOR H-20 LOADING.

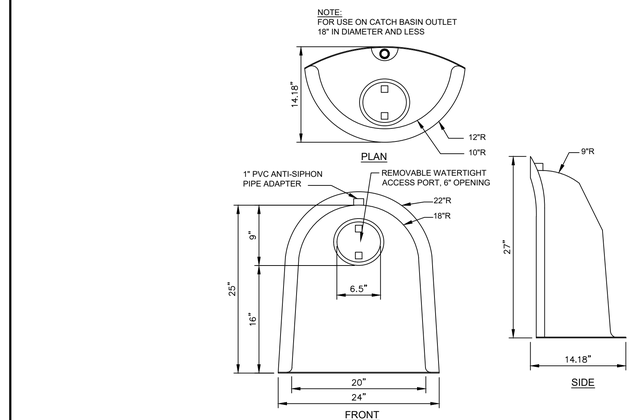
TELECOMMUNICATION MANHOLE

NOT TO SCALE



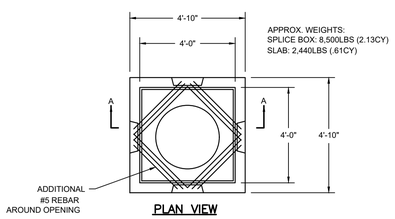
STANDARD BEND BLOCKING

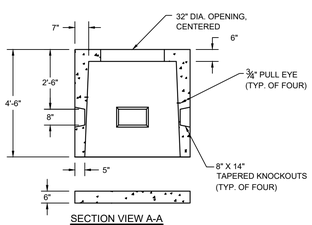
NOT TO SCALE

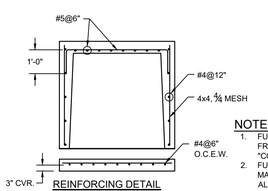


CATCH BASIN HOOD

NOT TO SCALE





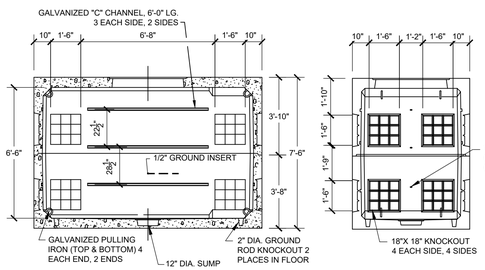


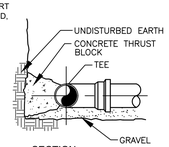
NOTES:

1. FURNISH AND INSTALL 32" DIA X 6" H-20 RATED FRAME AND MANHOLE COVER LETTERED "COMMUNICATIONS".
2. FURNISH AND INSTALL RISER RINGS AND MASONRY TO ACHIEVE REQUIRED DEPTH AND ALLOW FOR FUTURE ADJUSTMENT TO GRADE.
3. CONCRETE TO BE 5,000 PSI AT 28 DAYS.
4. VAULT TO BE RATED FOR H-20 LOADING.
5. REINFORCING STEEL TO BE GRADE 60, BLACK.

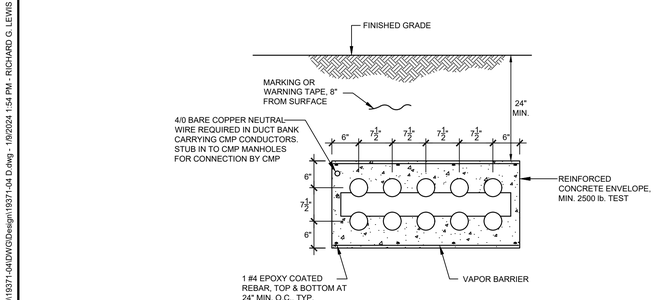
4x4 UTILITY SPLICE BOX

NOT TO SCALE





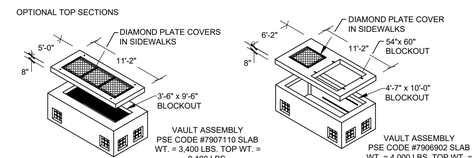
CONCRETE THRUST BLOCK SIZE REQUIREMENTS				
		SQ. FT. OF BEARING ON UNDISTURBED SOIL		
FITTINGS		90° BENDS	45° BENDS	TEES AND PLUGS
PIPE SIZE	6"	4.0	2.0	3.0
	8"	8.0	4.0	6.0
	12"	15	10	10



TYPICAL DUCT BANK CROSS-SECTION

NOT TO SCALE

OPTIONAL TOP SECTIONS

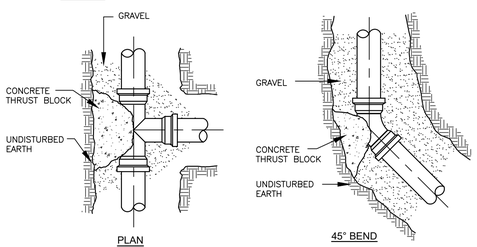


NOTE:

1. FURNISH AND INSTALL 42" FRAME, MANHOLE COVER PER CMP STANDARDS.
2. FURNISH AND INSTALL RISER RINGS AND MASONRY TO ACHIEVE REQUIRED DEPTH AND ALLOW FOR FUTURE ADJUSTMENT TO GRADE.
3. BASIS OF DESIGN IS 3GY MANHOLE BY OLD CASTLE PRECAST MANHOLES SHALL MEET UTILITY OWNERS SPECIFICATIONS.
4. INSTALL GROUNDING RODS OR GROUNDING GRID, SEE ELECTRICAL PLANS & SPECIFICATIONS FOR GROUNDING REQUIREMENTS.

ELECTRICAL MANHOLE

NOT TO SCALE



TEE AND BEND DETAIL

NOT TO SCALE

NOT FOR CONSTRUCTION

DANIEL L RILEY PE 9967

STATE OF MAINE DANIEL L. RILEY PROFESSIONAL ENGINEER PROGRESS PRINT 01/08/2024

REV	BY	DATE	STATUS
A	DLR	01/08/2024	ISSUED FOR SITE PLAN REVIEW

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SEBAGO TECHNICS
WWW.SEBAGOTECHNICS.COM
75 John Roberts Rd.
Suite A
South Portland, ME 04106
Tel. 207-200-2100

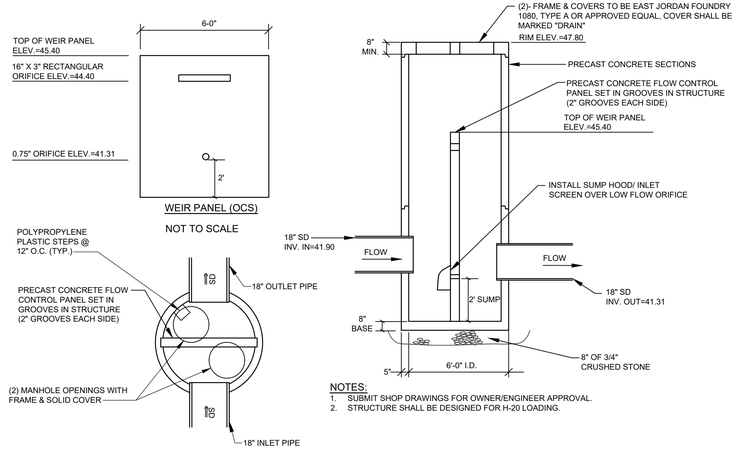
DETAILS 4
OF:
THE LOFTS AT CUMBERLAND
365 CONGRESS STREET
PORTLAND, MAINE
FOR:
LINCOLN AVENUE CAPITAL NORTHEAST DEVELOPERS, LLC
14 HARVEST WAY
NEW MARKET, NH 03857

DESIGNED	DJS
DRAWN	MRS
CHECKED	DLR
DATE	01/08/2024
SCALE	N.T.S.
PROJECT	19371-04

DRAWING C-504

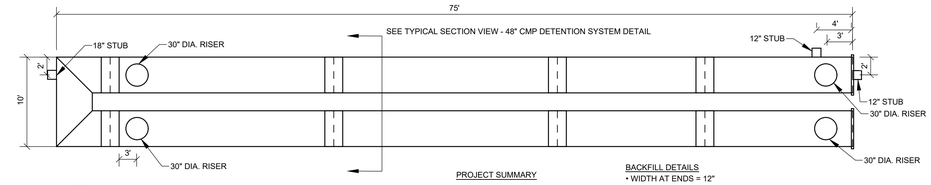
19371-04 D.dwg , TAB:C-504 DETAILS 4

F:\Projects\19000\19371-04\DWG\design\19371-04 D.dwg , 1/8/2024 1:54 PM , RICHARD G. LEWIS



NOTES:
1. SUBMIT SHOP DRAWINGS FOR OWNER/ENGINEER APPROVAL.
2. STRUCTURE SHALL BE DESIGNED FOR H-20 LOADING.

OUTLET CONTROL STRUCTURE (OCS-1)
NOT TO SCALE



NOTES

- ALL RISER AND STUB DIMENSIONS ARE TO CENTERLINE. ALL ELEVATIONS, DIMENSIONS, AND LOCATIONS OF RISERS AND INLETS, SHALL BE VERIFIED BY THE ENGINEER OF RECORD PRIOR TO RELEASING FOR FABRICATION.
- ALL FITTINGS AND REINFORCEMENT COMPLY WITH ASTM A998.
- ALL RISERS AND STUBS ARE 2⅔" x ½" CORRUGATION AND 16 GAGE UNLESS OTHERWISE NOTED.
- RISERS TO BE FIELD TRIMMED TO GRADE.
- QUANTITY OF PIPE SHOWN DOES NOT PROVIDE EXTRA PIPE FOR CONNECTING THE SYSTEM TO EXISTING PIPE OR DRAINAGE STRUCTURES. OUR SYSTEM AS DETAILED PROVIDES NOMINAL INLET AND/OR OUTLET PIPE STUB FOR CONNECTION TO EXISTING DRAINAGE FACILITIES. IF ADDITIONAL PIPE IS NEEDED IT IS THE RESPONSIBILITY OF THE CONTRACTOR.
- BAND TYPE TO BE DETERMINED UPON FINAL DESIGN.
- THE PROJECT SUMMARY IS REFLECTIVE OF THE DYODS DESIGN, QUANTITIES ARE APPROX. AND SHOULD BE VERIFIED UPON FINAL DESIGN AND APPROVAL. FOR EXAMPLE, TOTAL EXCAVATION DOES NOT CONSIDER ALL VARIABLES SUCH AS SHORING AND ONLY ACCOUNTS FOR MATERIAL WITHIN THE ESTIMATED EXCAVATION FOOTPRINT.
- THESE DRAWINGS ARE FOR CONCEPTUAL PURPOSES AND DO NOT REFLECT ANY LOCAL PREFERENCES OR REGULATIONS. PLEASE CONTACT YOUR LOCAL CONTECH REP FOR MODIFICATIONS.

PROJECT SUMMARY

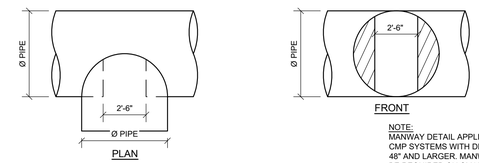
CALCULATION DETAILS
- LOADING = HS20/HS25
- APPROX. LINEAR FOOTAGE = 150 LF

STORAGE SUMMARY
- PIPE STORAGE VOLUME = 1,885 CF
- BACKFILL STORAGE VOLUME = 0 CF
- TOTAL STORAGE PROVIDED = 1,885 CF

BACKFILL DETAILS
- WIDTH AT ENDS = 12"
- ABOVE PIPE = 0"
- WIDTH AT SIDES = 12"
- BELOW PIPE = 0"

PIPE DETAILS
- DIAMETER = 48"
- CORRUGATION = 2 2/3x1/2
- GAGE = 16
- COATING = ALT2
- WALL TYPE = SOLID
- BARREL SPACING = 24"

CONTECH 48" CMP DETENTION SYSTEM
NOT TO SCALE



NOTE:
MANWAY DETAIL APPLICABLE FOR CMP SYSTEMS WITH DIAMETERS 48" AND LARGER. MANWAYS MAY BE REQUIRED ON SMALLER SYSTEMS DEPENDING ON ACTUAL SITE SPECIFIC CONDITIONS.

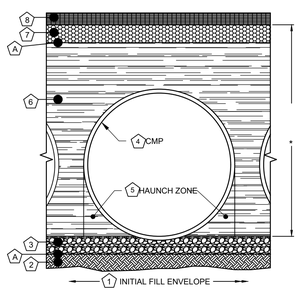
TYPICAL MANWAY DETAIL
NOT TO SCALE

ELEVATION

END

NOTE:
LADDERS ARE OPTIONAL AND ARE NOT REQUIRED FOR ALL SYSTEMS.

TYPICAL RISER DETAIL
NOT TO SCALE



	DETENTION SYSTEMS - CMP DETENTION / CMP DRAINAGE			
	Material Location	Description	Material Designation	Designation
8	Rigid or Flexible Pavement (if applicable)			
7	Road Base (if applicable)			
A	Geotextile Layer	Non-Woven Geotextile	CONTECH C-40 or C-45	Engineer Decision for consideration to prevent soil migration into varying soil types
6	Backfill	Well graded granular material which may contain small amounts of silt or clay.	AASHTO M 145- A-1, A-2, A-3	Placed in 8" +/- loose lifts and compacted to 90% Standard Proctor Per AASHTO T 99
3	Bedding Stone	Well graded granular bedding material w/maximum particle size of 3"	AASHTO M43 - 3,357,4,467, 5, 56, 57	Engineer to determine if bedding is required. Pipe may be placed on the trench bottom of a relatively loose, native suitable well graded & granular material. For Arch pipes it is recommended to be shaped to a relatively flat bottom or fine-grade the foundation to a slight v-shape. Unsuitable material should be over-excavated and re-placed with a 4"-6" layer of well graded & granular stone per the material designation. See AASHTO 26.3.8.1 / 26.5.3 Bedding info.
A	Geotextile Layer	Non-Woven Geotextile	CONTECH C-40 or C-45	Engineer Decision for consideration to prevent soil migration into varying soil types
*	*Note: Backfill using controlled low-strength material CLSM, "flash fill" or "flowable fill") when the spacing between the pipes will not allow for placement and adequate compaction of the backfill.*			

1 MINIMUM WIDTH DEPENDS ON SITE CONDITIONS AND ENGINEERING JUDGEMENT

FOUNDATION/BEDDING PREPARATION

2 PRIOR TO PLACING THE BEDDING, THE FOUNDATION MUST BE CONSTRUCTED TO A UNIFORM AND STABLE GRADE. IN THE EVENT THAT UNSUITABLE FOUNDATION MATERIALS ARE ENCOUNTERED DURING EXCAVATION, THEY SHALL BE REMOVED AND BROUGHT BACK TO THE GRADE WITH A FILL MATERIAL AS APPROVED BY THE ENGINEER.

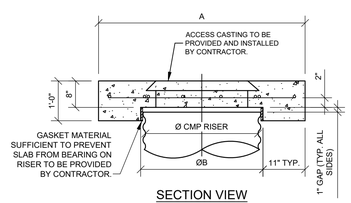
5 HAUNCH ZONE MATERIAL SHALL BE PLACED AND UNIFORMALLY COMPACTED WITHOUT SOFT SPOTS.

BACKFILL

WHEN PLACING THE FIRST LIFTS OF BACKFILL IT IS IMPORTANT TO MAKE SURE THAT THE BACKFILL IS PROPERLY COMPACTED UNDER AND AROUND THE PIPE HAUNCHES. BACKFILL SHALL BE PLACED SUCH THAT THERE IS NO MORE THAN A TWO LIFT (16") DIFFERENTIAL BETWEEN ANY OF THE PIPES AT ANY TIME DURING THE BACKFILL PROCESS. THE BACKFILL SHALL BE ADVANCED ALONG THE LENGTH OF THE DETENTION SYSTEM AT THE SAME RATE TO AVOID DIFFERENTIAL LOADING ON THE PIPE.

OTHER ALTERNATE BACKFILL MATERIAL MAY BE ALLOWED DEPENDING ON SITE SPECIFIC CONDITIONS, AS APPROVED BY SITE ENGINEER.

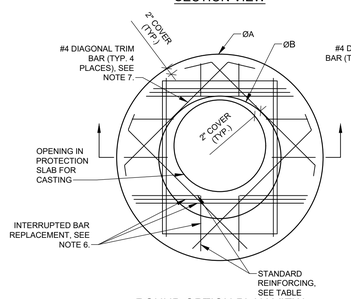
TYPICAL SECTION VIEW - 48" CMP DETENTION SYSTEM
NOT TO SCALE



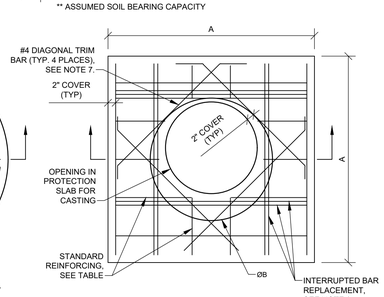
SECTION VIEW

REINFORCING TABLE				
Ø CMP RISER	A	Ø B	REINFORCING	**BEARING PRESSURE (PSF)
24"	Ø 4' 4'X4'	26"	#5 @ 12" OCEW #5 @ 12" OCEW	2,410 1,780
30"	Ø 4'-6" 4'-6" X 4'-6"	32"	#5 @ 12" OCEW #5 @ 12" OCEW	2,120 1,530
36"	Ø 5' 5' X 5'	38"	#5 @ 10" OCEW #5 @ 10" OCEW	1,890 1,350
42"	Ø 5'-6" 5'-6" X 5'-6"	44"	#5 @ 10" OCEW #5 @ 9" OCEW	1,720 1,210
48"	Ø 6' 6' X 6'	50"	#5 @ 9" OCEW #5 @ 8" OCEW	1,600 1,100

** ASSUMED SOIL BEARING CAPACITY



ROUND OPTION PLAN VIEW

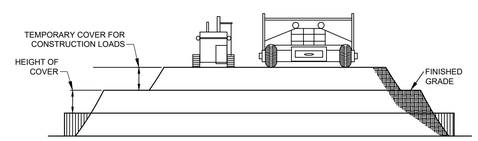


SQUARE OPTION PLAN VIEW

NOTES:

1. DESIGN IN ACCORDANCE WITH AASHTO, 17th EDITION.
2. DESIGN LOAD HS25.
3. EARTH COVER = 1' MAX.
4. CONCRETE STRENGTH = 3,500 psi
5. REINFORCING STEEL = ASTM A615, GRADE 60.
6. PROVIDE ADDITIONAL REINFORCING AROUND OPENINGS EQUAL TO THE BARS INTERRUPTED, HALF EACH SIDE. ADDITIONAL BARS TO BE IN THE SAME PLANE.
7. TRIM OPENING WITH DIAGONAL #4 BARS, EXTEND BARS A MINIMUM OF 12" BEYOND OPENING, BEND BARS AS REQUIRED TO MAINTAIN BAR COVER.
8. PROTECTION SLAB AND ALL MATERIALS TO BE PROVIDED AND INSTALLED BY CONTRACTOR.
9. DETAIL DESIGN BY DELTA ENGINEERING, BINGHAMTON, NY.

MANHOLE CAP DETAIL
NOT TO SCALE



CONSTRUCTION LOADS

FOR TEMPORARY CONSTRUCTION VEHICLE LOADS, AN EXTRA AMOUNT OF COMPACTED COVER MAY BE REQUIRED OVER THE TOP OF THE PIPE. THE HEIGHT-OF-COVER SHALL MEET THE MINIMUM REQUIREMENTS SHOWN IN THE TABLE BELOW. THE USE OF HEAVY CONSTRUCTION EQUIPMENT NECESSITATES GREATER PROTECTION FOR THE PIPE THAN FINISHED GRADE COVER MINIMUMS FOR NORMAL HIGHWAY TRAFFIC.

PIPE SPAN, INCHES	AXLE LOADS (kips)			
	18-50	50-75	75-110	110-150
	MINIMUM COVER (FT)			
12-42	2.0	2.5	3.0	3.0
48-72	3.0	3.0	3.5	4.0
78-120	3.0	3.5	4.0	4.0
126-144	3.5	4.0	4.5	4.5

*MINIMUM COVER MAY VARY, DEPENDING ON LOCAL CONDITIONS. THE CONTRACTOR MUST PROVIDE THE ADDITIONAL COVER REQUIRED TO AVOID DAMAGE TO THE PIPE. MINIMUM COVER IS MEASURED FROM THE TOP OF THE PIPE TO THE TOP OF THE MAINTAINED CONSTRUCTION ROADWAY SURFACE.

SPECIFICATION FOR DESIGNED DETENTION SYSTEM:

SCOPE
THIS SPECIFICATION COVERS THE MANUFACTURE AND INSTALLATION OF THE DESIGNED DETENTION SYSTEM DETAILED IN THE PROJECT PLANS.

MATERIAL
THE MATERIAL SHALL CONFORM TO THE APPLICABLE REQUIREMENTS LISTED BELOW:

ALUMINIZED TYPE 2 STEEL COILS SHALL CONFORM TO THE APPLICABLE REQUIREMENTS OF AASHTO M-274 OR ASTM A-92.

THE GALVANIZED STEEL COILS SHALL CONFORM TO THE APPLICABLE REQUIREMENTS OF AASHTO M-218 OR ASTM A-929.

THE POLYMER COATED STEEL COILS SHALL CONFORM TO THE APPLICABLE REQUIREMENTS OF AASHTO M-246 OR ASTM A-742.

THE ALUMINUM COILS SHALL CONFORM TO THE APPLICABLE REQUIREMENTS OF AASHTO M-197 OR ASTM B-744.

CONSTRUCTION LOADS
CONSTRUCTION LOADS MAY BE HIGHER THAN FINAL LOADS. FOLLOW THE MANUFACTURER'S OR NCSPA GUIDELINES.

NOTE:
THESE DRAWINGS ARE FOR CONCEPTUAL PURPOSES AND DO NOT REFLECT ANY LOCAL PREFERENCES OR REGULATIONS. PLEASE CONTACT YOUR LOCAL CONTECH REP FOR MODIFICATIONS.

PIPE
THE PIPE SHALL BE MANUFACTURED IN ACCORDANCE TO THE APPLICABLE REQUIREMENTS LISTED BELOW:

ALUMINIZED TYPE 2: AASHTO M-36 OR ASTM A-760

GALVANIZED: AASHTO M-36 OR ASTM A-760

POLYMER COATED: AASHTO M-245 OR ASTM A-762

ALUMINUM: AASHTO M-196 OR ASTM B-745

HANDLING AND ASSEMBLY
SHALL BE IN ACCORDANCE WITH NCSP'S (NATIONAL CORRUGATED STEEL PIPE ASSOCIATION) FOR ALUMINIZED TYPE 2, GALVANIZED OR POLYMER COATED STEEL. SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS FOR ALUMINUM PIPE.

INSTALLATION
SHALL BE IN ACCORDANCE WITH AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, SECTION 26, DIVISION II DIVISION II OR ASTM A-798 (FOR ALUMINIZED TYPE 2, GALVANIZED OR POLYMER COATED STEEL) OR ASTM B-788 (FOR ALUMINUM PIPE) AND IN CONFORMANCE WITH THE PROJECT PLANS AND SPECIFICATIONS. IF THERE ARE ANY INCONSISTENCIES OR CONFLICTS THE CONTRACTOR SHOULD DISCUSS AND RESOLVE WITH THE SITE ENGINEER.

IT IS ALWAYS THE RESPONSIBILITY OF THE CONTRACTOR TO FOLLOW OSHA GUIDELINES FOR SAFE PRACTICES.

CONSTRUCTION LOADING DIAGRAM
NOT TO SCALE

NOT FOR CONSTRUCTION

STATE OF MAINE
DANIEL L. RILEY
PROGRESS PRINT
PROFESSIONAL ENGINEER
DANIEL L RILEY, PE 9967
01/08/2024

REV.	BY	DATE	STATUS
A	DLR	01/08/2024	ISSUED FOR SITE PLAN REVIEW

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SEBAGO TECHNICS
WWW.SEBAGOTECHNICS.COM
75 John Roberts Rd.
Suite 4
South Portland, ME 04106
Tel. 207-200-2100

DETAILS 5
OF:
THE LOFTS AT CUMBERLAND
365 CONGRESS STREET
PORTLAND, MAINE
FOR:
LINCOLN AVENUE CAPITAL NORTHEAST DEVELOPERS, LLC
14 HARVEST WAY
NEW MARKET, NH 03857

DESIGNED	DJS
DRAWN	MRS
CHECKED	DLR
DATE	01/08/2024
SCALE	N.T.S.
PROJECT	19371-04

DRAWING C-505

19371-04 D.dwg; TAB:C-505 DETAILS 5

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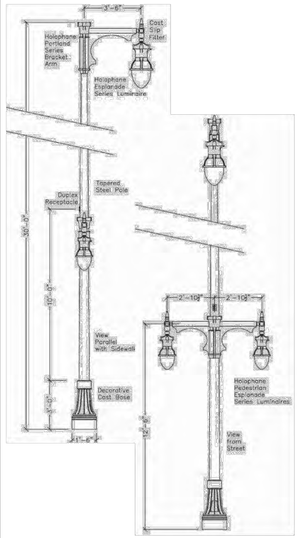
PORTLAND | me

Street & Sidewalk Lighting
DECORATIVE LIGHT - DOWNTOWN



LUMINAIRE
Holophane Esplanade LED II
Model:
ESL2-P20S-30K-AS-CMC-TG3-S-P7-NL2X2-BHDF13-200CMC

Cast aluminum housing with stainless steel hardware. Dropped refractor shall be thermal resistant borosilicate glass. Internal reflector and prismatic diffuser shall provide an IES Type IV distribution pattern. Luminaire shall include an integral ballast with modular wiring connectors and multi-volatage taps. Provide an internal receptacle type photocell control. LED 3000K color temperature

BRACKET ARM
Holophane Portland Series steel (custom)
Top Bracket Arm: Steel crossarm with a post-top fitting for a 3 1/2" by 8" tenon
Model: PD42-CA-RAL6012
Lower Bracket Arm: Steel dual crossarm
Model: PD69-CA-RAL6012

SLIP FITTER
Holophane
Model: WLLF200S-CA-RAL6012
2-3/8" O.D. with swivel cast fitter.

LIGHTING POLE
Holophane
Model: PM-18-CSB-CA-RAL6012

Tapered steel pole smooth shaft rated for a 90mph wind load with a 1.3 gust factor. Provide four hot-dipped galvanized steel L-type anchor bolts. Lighting pole shall be hot dip galvanized prior to powder coat paint.

DECORATIVE BASE
Holophane
Model: PM18CSB-CA-RAL6012
Decorative clamshell cast aluminum base. Hardware shall be stainless steel.

DIMENSIONS
Overall Height = 30' 0"
Upper Bracket Arm Length = 3' 6"
Lower Bracket Arm Length = 2' 10 1/2"
Base Diameter = 18"

FINISH
Dark Green: RAL-6012 (custom)

APPLICATION
Street/pedestrian lighting combination.
Spacing:
One side: 90' - 100' on center
Alternating sides: 175' - 225' on center
Double-arm bracket arms parallel to sidewalk.

Date: **March, 2019**	**CITY OF PORTLAND, MAINE** TECHNICAL MANUAL	**MUNICIPAL STREET LIGHTING STANDARDS** SECTION 10	Figure: **X-5F**
Revised Date:	**DOWNTOWN COMBO**		

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NOT FOR CONSTRUCTION

DANIEL L RILEY, PE 9967

STATE OF MAINE
DANIEL L. RILEY
PROGRESS
PROFESSIONAL ENGINEER
01/08/2024

REV	BY	DATE	STATUS
A	DLR	01/08/2024	ISSUED FOR SITE PLAN REVIEW

THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM SEBAGO TECHNICS, INC. ANY ALTERATIONS, MODIFICATIONS OR OTHER USES SHALL BE AT THE USERS SOLE RISK AND WITHOUT LIABILITY TO SEBAGO TECHNICS, INC.

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DETAILS 6
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FOR:
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DATE	01/08/2024
SCALE	N.T.S.
PROJECT	19371-04

19371-04 D.dwg, TAB C-506 DETAILS 6

DRAWING C-506

GENERAL NOTES:

1. THE RECORD OWNER OF THE PARCEL IS 385 CONGRESS LLC BY DEED DATED OCTOBER 20, 2017 AND RECORDED AT THE CUMBERLAND COUNTY REGISTRY OF DEEDS (CCRD) IN BOOK 34401, PAGE 214.
2. THE PROPERTY IS SHOWN AS LOT D3 ON THE CITY OF PORTLAND TAX MAP 27 AND IS LOCATED IN THE B3 DOWNTOWN BUSINESS DISTRICT.
3. SPACE AND BULK CRITERIA FOR THE B3 DISTRICT ARE AS FOLLOWS:

MINIMUM LOT SIZE:	N/A
MINIMUM STREET FRONTAGE:	15 FEET
MINIMUM FRONT YARD:	N/A
MINIMUM SIDE YARD:	N/A
MINIMUM REAR YARD:	N/A
MAXIMUM BUILDING HEIGHT:	150 FEET, SUBJECT TO STEP BACK PROVISIONS
MAXIMUM LOT COVERAGE:	100%

* SEE ORDINANCE FOR MORE PARTICULAR INFORMATION.

4. TOTAL AREA OF PARCEL IS APPROXIMATELY 2.26 ACRES.
5. THE BOUNDARY IS BASED ON PLAN REFERENCE 7F. SEBAGO TECHNICS INC. UPDATED RECORDS RESEARCH FROM 2009 TO DATE REGARDING THE BOUNDARY INFORMATION.
6. IMPROVEMENTS ON THE SITE ARE NOT SHOWN HEREON. FOR SITE INFORMATION SEE PLAN REFERENCE 7F.
7. PLAN REFERENCES:
   - A. PLAN OF CITY BUILDING LOT, PORTLAND, ME, DATED AUGUST 1908 BY THE CITY OF PORTLAND ENGINEER, AND ON FILE WITH THE PORTLAND DEPARTMENT OF PUBLIC WORKS AS 159/5.
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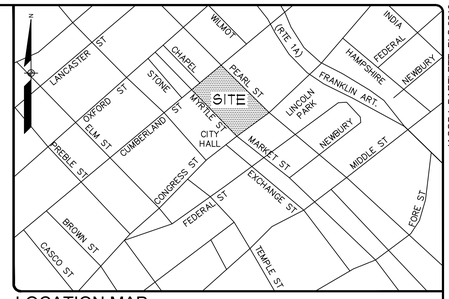
   - G. SUBDIVISION PLAN OF 385 CONGRESS STREET MADE FOR 385 CONGRESS STREE, LLC DATED JANUARY 11, 2023 BY SEBAGO TECHNICS, INC. PROJECT NUMBER 19371 AND RECORDED IN THE CUMBERLAND COUNTY REGISTREY OF DEEDS IN PLAN BOOK 223 PAGE 32.
8. PLAN ORIENTATION IS GRID NORTH, MAINE STATE PLANE COORDINATE SYSTEM, WEST ZONE 1802-NAD83, ELEVATIONS DEPICTED HEREON ARE NGVD29 PER CITY STANDARDS AS VERIFIED BY A UNITED STATES COAST & GEODETIC SURVEY BRASS DISK LOCATED IN A GRANITE BLOCK OF THE CITY HALL BUILDING HAVING A PUBLISHED ELEVATION OF 69.66' (NAVD88 68.95')
9. THE CITY OF PORTLAND DISCONTINUED THAT PORTION OF CHAPEL STREET THAT FORMERLY RAN TROUGH THE SURVEYED PREMISES INCLUDING ALL UTILITY RIGHTS THEREIN "RUNNING FROM CONGRESS STREET TO CUMBERLAND STREET" BY ORDER OF CITY COUNCIL ON FEBRUARY 5, 1973 AND RECORDED AT THE CITY OF PORTLAND RECORDS IN VOLUME 89, PAGE 61.
10. PURSUANT TO A CONVERSATION BETWEEN SEBAGO TECHNICS, INC. AND THE PORTLAND WATER DISTRICT, THE WATER LINE SHOWN AS BEING LOCATED IN THE DISCONTINUED PORTION OF CHAPEL STREET HAS BEEN REMOVED AND NO LONGER EXISTS.
11. UTILITY INFORMATION DEPICTED HEREON, UNLESS OTHERWISE NOTED, IS OF QUALITY LEVEL D PER AMERICAN SOCIETY OF CIVIL ENGINEERS (ASCE) STANDARD CI/ASCE 38-02. UTILITIES DEPICTED HEREON MAY NOT NECESSARILY REPRESENT ALL EXISTING UTILITIES. CONTRACTORS AND/OR DESIGNERS NEED TO CONTACT DIG-SAFE SYSTEMS, INC. (1-888-DIG-SAFE) AND FIELD VERIFY EXISTING UTILITIES WITHIN THE PROJECT AREA PRIOR TO CONSTRUCTION AND/OR EXCAVATION.
12. THE LOCUS PROPERTY AS DEPICTED HEREON DOES NOT FALL WITHIN A SPECIAL FLOOD HAZARD AREA AS DELINEATED ON THE FLOOD INSURANCE RATE MAP FOR PORTLAND, MAINE, CUMBERLAND COUNTY, COMMUNITY-PANEL NUMBER 230051 0013 B, HAVING AN EFFECTIVE DATE OF JULY 17 1986. THE LOCUS FALLS WITHIN AN AREA IDENTIFIED AS ZONE C, AREAS OF AREAS OF MINIMAL FLOODING.
13. BENCHMARK:

    BM-1 EASTERLY BOLT AT BASE OF UTILITY POLE ELEVATION: 61.55 (NGVD29)
14. PROPOSED UNITS LOT 1:

    PROPOSED HOTEL : 156 ROOMS
    PROPOSED RESIDENTIAL CONDOMINIUMS: 9 UNITS
15. PROPOSED UNITS LOT 3

    55 AFFORDABLE HOUSING RESIDENTIAL UNITS

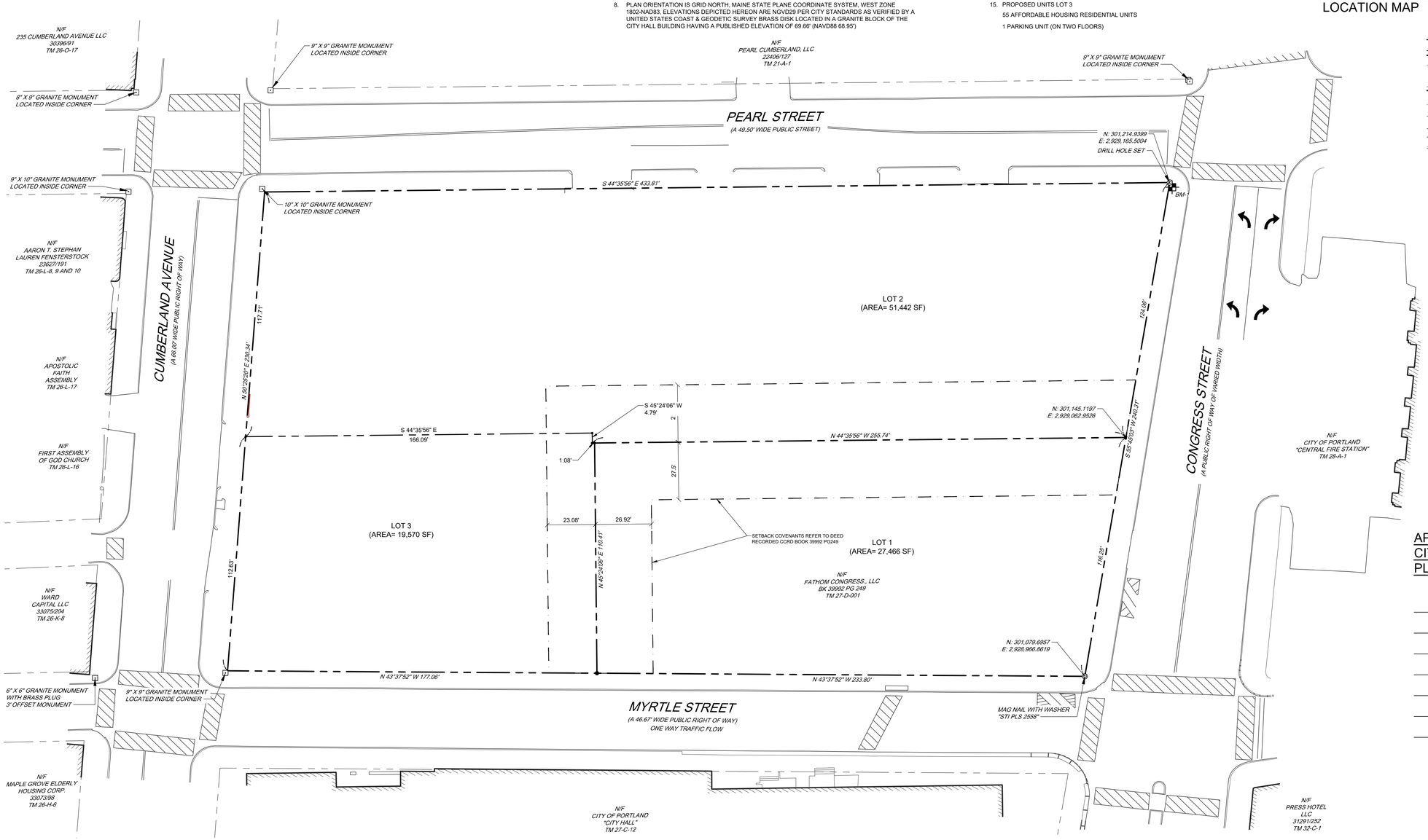
    1 PARKING UNIT (ON TWO FLOORS)



LOCATION MAP N.T.S.

LEGEND

EXISTING		PROPOSED
	PROPERTY LINE/R.O.W.	
	ABUTTER LINE/R.O.W.	
N/F	NOW OR FORMERLY	
	BUILDING	
	DECK/STEPS/ OVERHANG	
	EDGE PAVEMENT	
	EDGE CONCRETE	
	PAVEMENT PAINT	
	CURB LINE	
BM-1	BENCHMARK	
	GRANITE MONUMENT	■
	IRON PIPE/ROD	•
	DRILL HOLE	◉
	DECIDUOUS TREE	



GRAPHIC SCALE

25 0 12 25 50

(IN FEET)
1 INCH = 25 FT.

CONDITIONS OF APPROVAL:

PRIOR TO THE SUBMISSION OF THE PLAT FOR PLANNING BOARD SIGNATURE

1. THE SUBDIVISION PLAT SHALL BE FINALIZED TO THE SATISFACTION OF THE PLANNING AUTHORITY, DEPARTMENT OF PUBLIC WORKS, AND CORPORATION COUNSEL PRIOR TO SIGNATURE BY THE PLANNING BOARD; AND

PRIOR TO ISSUANCE OF A BUILDING PERMIT ASSOCIATED THE DEVELOPMENT OF LOT 3

2. EASEMENTS AND LICENSES: THAT SIDEWALK & PUBLIC ACCESS EASEMENTS ALONG CUMBERLAND AVENUE AND MYRTLE STREET SHALL BE FINALIZED TO THE SATISFACTION OF THE PLANNING AUTHORITY, DEPARTMENT OF PUBLIC WORKS, AND CORPORATION COUNSEL.

PROJECT BENCHMARK
USC&G BRASS DISK SET IN GRANITE STEP
DESIGNATION: TIDAL 38 STA 84
STAMPED "1919:38"
NAVD 88 ELEVATION = 68.95'
NGVD29 ELEVATION = 69.66'

SURVEYOR'S STATEMENT

THIS SURVEY WAS PERFORMED UNDER MY DIRECT SUPERVISION AND TO THE BEST OF MY KNOWLEDGE AND BELIEF, IT WAS DONE IN ACCORDANCE WITH CHAPTER 90, PART 1 (PROFESSIONAL STANDARDS OF PRACTICE) AND PART 2 (TECHNICAL STANDARDS OF PRACTICE) OF THE MAINE BOARD OF LICENSURE FOR PROFESSIONAL LAND SURVEYORS.

JACOB I. BARTLETT, PLS 2513 02/01/2023

APPROVAL- CITY OF PORTLAND PLANNING BOARD

DATE

CHAIRPERSON

IN ACCORDANCE WITH TITLE 33 MRSA §652, SECTION 3, THE PROFESSIONAL SIGNATURE BELOW WILL BE ADDED AFTER THE PLANNING BOARD HAS SIGNED, AS AN ORIGINAL SIGNATURE, FOR RECORDING STANDARDS.

STATE OF MAINE, CUMBERLAND COUNTY SS, REGISTRY OF DEEDS

RECEIVED _____, 20_____
AT ____H ____M _____M AND
RECORDED IN
PLAN BOOK _____ PAGE _____
ATTEST: _____ REGISTER

JACOB I. BARTLETT, PLS 2513

REV	BY	DATE	STATUS
A	DLR	01/05/2024	SUBMITTED FOR AMENDED SUBDIVISION REVIEW

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FIRST AMENDED SUBDIVISION PLAN
OF:
LOFTS AT CUMBERLAND
CONGRESS STREET AND PEARL STREET
PORTLAND, MAINE
FOR:
385 CONGRESS STREET LLC

RECORD OWNER:
385 CONGRESS LLC
2730 TRANSIT ROAD
WEST SENECA, NY 14224

19371-04 SB FIRST AMENDED.dwg, TAB-FIRST AMENDED SUBDIVISION PLAN

DESIGNED	DJS
DRAWN	DAB
CHECKED	DLR
DATE	01/06/2024
SCALE	1" = 25'
PROJECT	19371

SHEET 1 OF 1

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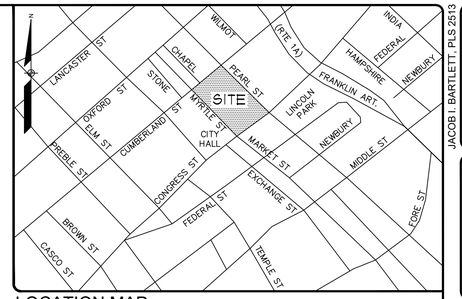
12. BENCHMARK:

    BM-1 EASTERLY BOLT AT BASE OF UTILITY POLE ELEVATION: 61.55 (NGVD29)



LOCATION MAP N.T.S.

LEGEND

EXISTING		PROPOSED
	PROPERTY LINE/R.O.W.	
	ABUTTER LINE/R.O.W.	
N/F	NOW OR FORMERLY	
	BUILDING	
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	EDGE CONCRETE	
	PAVEMENT PAINT	
	CURB LINE	
BM-1	BENCHMARK	
	GRANITE MONUMENT	■
	IRON PIPE/ROD	•
	DRILL HOLE	◉
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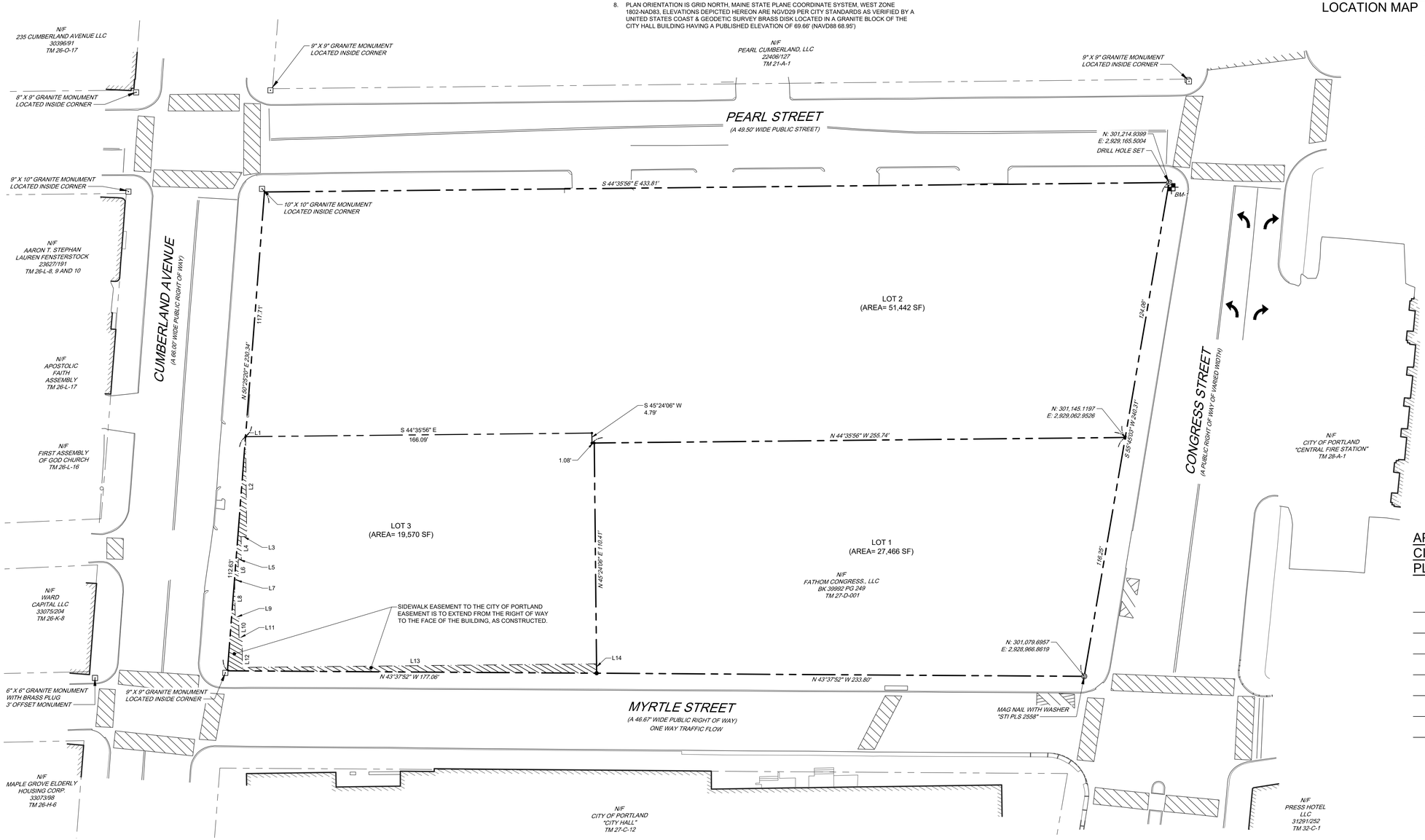

GRAPHIC SCALE

25 0 12 25 50

(IN FEET)
1 INCH = 25 FT.

PROJECT BENCHMARK
USC&G BRASS DISK SET IN GRANITE STEP.
DESIGNATION: TIDAL 38 STA 84
STAMPED ``1919/38"
NAVD 88 ELEVATION = 68.95'
NGVD29 ELEVATION = 69.66'

EASEMENT LINE TABLE

LINE	DIRECTION	DISTANCE
L1	N 44°35'56" W	0.04'
L2	S 45°24'06" W	47.91'
L3	N 44°35'54" W	2.69'
L4	S 45°24'06" W	11.05'
L5	N 44°35'54" W	1.50'
L6	S 45°24'06" W	9.84'
L7	N 44°35'54" W	1.74'
L8	S 45°24'06" W	17.66'
L9	S 44°35'54" E	1.74'
L10	S 45°24'06" W	9.89'
L11	S 44°35'54" E	1.50'
L12	S 45°38'26" W	14.32'
L13	S 44°35'05" E	169.88'
L14	S 45°24'06" W	4.16'

APPROVAL- CITY OF PORTLAND PLANNING BOARD

DATE

CHAIRPERSON

SURVEYOR'S STATEMENT

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JACOB I. BARTLETT, PLS 2513 02/01/2023

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STATE OF MAINE, CUMBERLAND COUNTY SS, REGISTRY OF DEEDS

RECEIVED _____, 20_____
AT ____H _____M _____M AND
RECORDED IN
PLAN BOOK _____ PAGE _____
ATTEST: _____ REGISTER

JACOB I. BARTLETT, PLS 2513

STATE OF MAINE
DANIEL L. RILEY
No. 999
PROFESSIONAL SURVEYOR
01/08/2024

REV	BY	DATE	STATUS
A	DLR	01/05/2024	SUBMITTED FOR AMENDED SUBDIVISION REVIEW

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EASEMENT PLAN LOT 3
OF:
LOFTS AT CUMBERLAND
CONGRESS STREET AND PEARL STREET
PORTLAND, MAINE
FOR:
385 CONGRESS STREET LLC
2730 SENECA ROAD
WEST SENECA, NY 14224

RECORD OWNER:
385 CONGRESS LLC
2730 TRANSIT ROAD
WEST SENECA, NY 14224

DESIGNED	DJS
DRAWN	DAB
CHECKED	DLR
DATE	01/06/2024
SCALE	1" = 25'
PROJECT	19371

SHEET 1 OF 1

19371-04 SB FIRST AMENDED.dwg, TAB: 1 OF 1 EASEMENT PLAN LOT 3

PROPOSED INDICATIONS

P1-P8

NOTES:

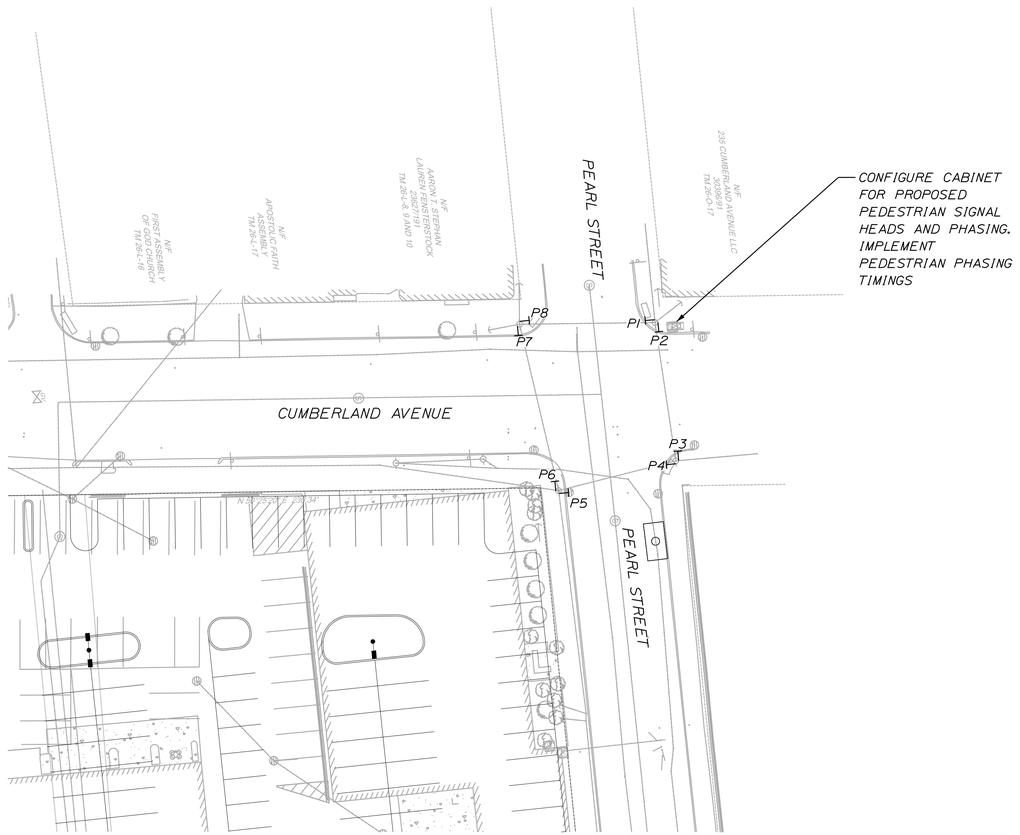
1. INSTALL PROPOSED PEDESTRIAN SIGNAL HEADS ON EXISTING UTILITY POLES

2. IMPLEMENT PROPOSED PEDESTRIAN PHASING AND TIMINGS INCLUDE ALL NECESSARY ANCILLARY EQUIPMENT, MATERIALS, AND WIRING

PROPOSED PEDESTRIAN PHASING & TIMING

PHASE 1 - CONCURRENT W/ CUMBERLAND AVENUE =
7 SEC. WALK & 8 SEC. FLASHING DW.
PED. RECALL ON

PHASE 2 - CONCURRENT W/ PEARL STREET =
7 SEC. WALK & 8 SEC. FLASHING DW
PED RECALL ON



PLAN

25 0 25 50
Scale of Feet

LIST OF MAJOR ITEMS

EQUIPMENT AND WORK ITEMS	QTY.
FURNISH AND INSTALL ONE-WAY, 16 X 18-INCH LED, SIDE OF POLE MOUNTED, BLACK PEDESTRIAN SIGNAL HEAD WITH COUNTDOWN INDICATION MOUNTED ON EXISTING UTILITY POLES	8
IMPLEMENT PROPOSED PEDESTRIAN PHASING AND TIMINGS	1

THE LISTED QUANTITITES ARE APPROXIMATE AND ARE PROVIDED FOR INFORMATION ONLY

PLS OR PE

NOT FOR CONSTRUCTION

PLS OR PE

STATE OF MAINE
DANIEL L. RAY
PROFESSIONAL ENGINEER
No. 9991
01/08/2024

REV	BY:	DATE:	STATUS:
1	SCK	12/19/23	SKETCH

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South Portland, ME 04106
Tel. 207-200-2100

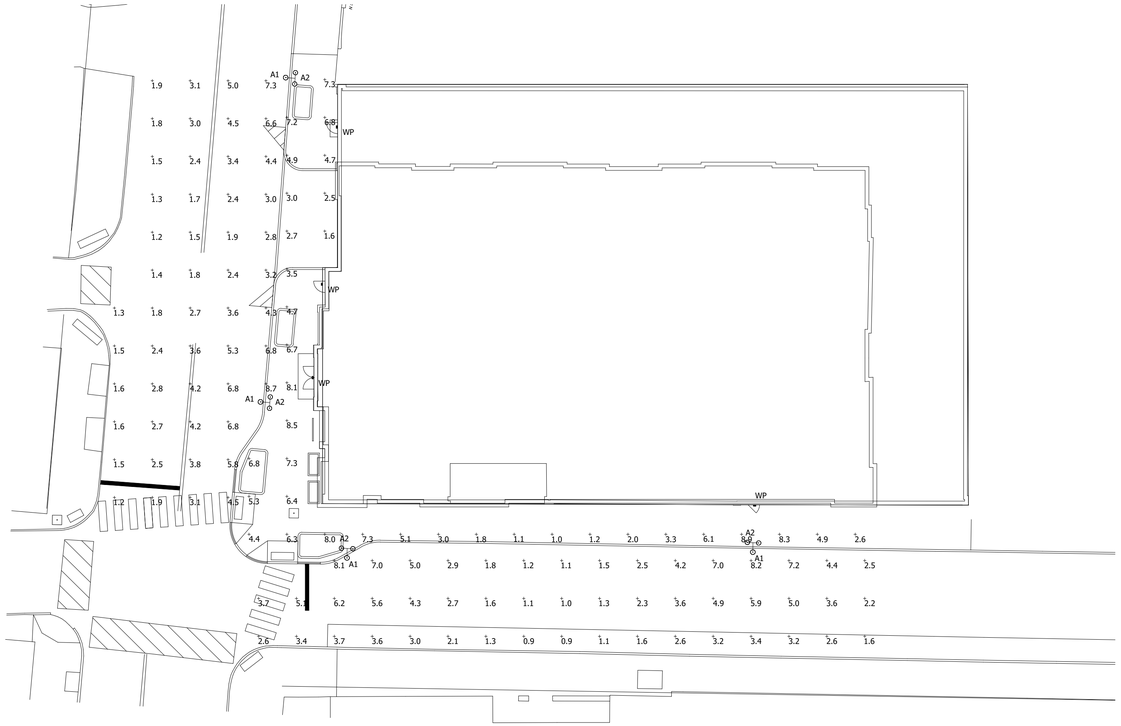
TRAFFIC SIGNAL PLAN OF CUMBERLAND AVE AT PEARL ST

OF:
HERALD SQUARE
385 CONGRESS STREET
PORTLAND, MAINE

FOR:
LINCOLN AVENUE CAPITAL
14 HARVEST WAY
NEW MARKET, NH 03857

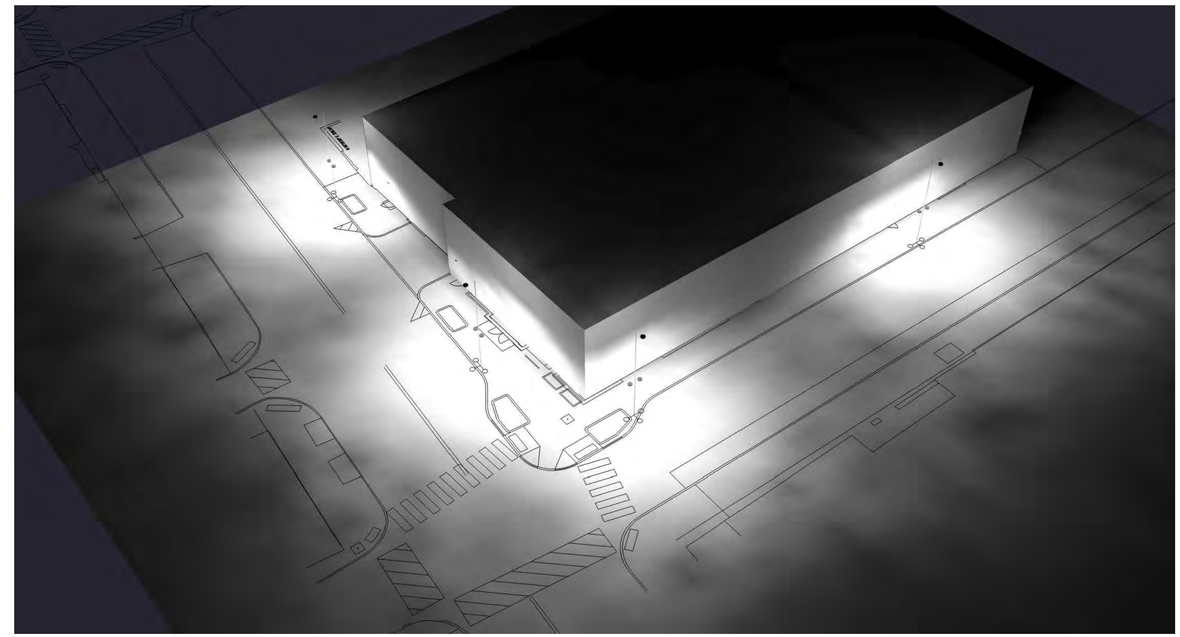
DESIGNED	DHC
DRAWN	DHC
CHECKED	DLR
DATE	12/19/2023
SCALE	1" = 25'
PROJECT	19371-01

DRAWING T-100



Luminaire Schedule							
Symbol	Qty	Label	Mounting Height	LLF	Lum. Lumens	Lum. Watts	Description
	4	A1	30' - 0" AFG	0.900	7772	80	MET30-NL-36L-80-3K7-DIR3
	4	A2	12' - 6" AFG	0.900	8435	80	MET30-NL-36L-80-3K7-DIR5
	4	WP	8' - 0" AFG	0.900	849	13	LNC-5LU-3K-4

Calculation Summary							
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
Cumberland Ave	Illuminance	Fc	3.26	8.7	1.2	2.72	7.25
Myrtle Street	Illuminance	Fc	3.38	8.2	0.9	3.76	9.11
Sidewalk Area	Illuminance	Fc	4.95	8.9	1.0	4.95	8.90



GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 - FT.

1. THIS LIGHTING DESIGN IS BASED ON LIMITED INFORMATION SUPPLIED BY OTHERS TO CURRENT. SITE DETAILS PROVIDED HEREON ARE REPRODUCED ONLY AS A VISUALIZATION AID. FIELD DEVIATIONS MAY SIGNIFICANTLY AFFECT PREDICTED PERFORMANCE. PRIOR TO INSTALLATION, CRITICAL SITE INFORMATION (POLE LOCATIONS, ORIENTATION, MOUNTING HEIGHT, ETC.) SHOULD BE COORDINATED WITH THE CONTRACTOR AND/OR SPECIFIER RESPONSIBLE FOR THE PROJECT.
2. LUMINAIRE DATA IS TESTED TO INDUSTRY STANDARDS UNDER LABORATORY CONDITIONS. OPERATING VOLTAGE AND NORMAL MANUFACTURING TOLERANCES OF LAMP, BALLAST, AND LUMINAIRE MAY AFFECT FIELD RESULTS.
3. CONFORMANCE TO FACILITY CODE AND OTHER LOCAL REQUIREMENTS IS THE RESPONSIBILITY OF THE OWNER AND/OR THE OWNER'S REPRESENTATIVE.

TITLE:

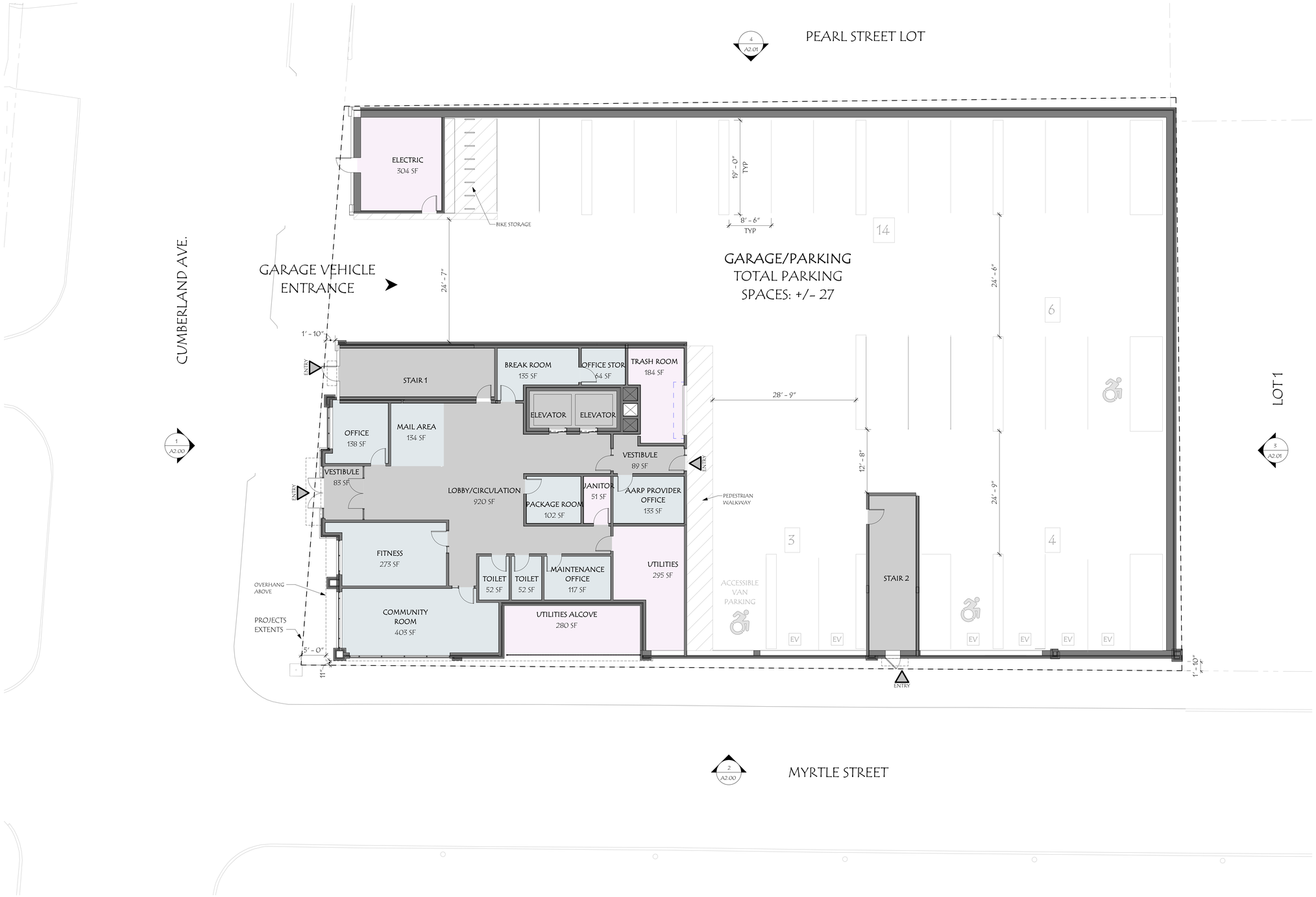
HERALD SQUARE
PORTLAND, ME
MYRTLE ST. & CUMBERLAND AVE. LIGHTING PLAN

REVISED FROM DRAWING NUMBER(S):

Current

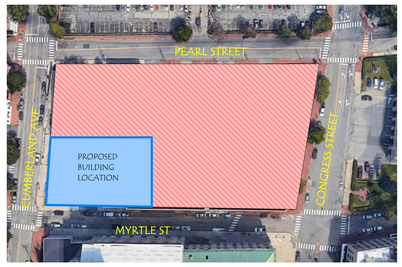
DN BY:	DATE:	CHK BY:
DHK	01/02/24	N/A
REV. BY:	DATE:	SCALE: AS NOTED
QUOTE: N/A	DRAWING / DESIGN NO.: A232461	

SUBMITTED PLANS AND ELEVATIONS ARE CONCEPTUAL AND SUBJECT TO CHANGE DURING CONSTRUCTION DOCUMENT DEVELOPMENT



DEPARTMENT LEGEND

- GARGAE LEVEL PARKING
- CIRCULATION
- UTILITY
- AMENITY/OFFICE



LOCATION KEY
NTS

1 G1 - LOWER AMENITY/GARAGE

SCALE: 1/8" = 1'-0"

PROJECT NO. 2023034

The Lofts on Cumberland

OWNER:
LAC Northeast Developer LLC.
Scott Shaw
VP & Regional Project Partner/New England
Lincoln Avenue Capital
319 Lincoln Street, Ste 442 Hingham, MA 02043

A1.01

OVERALL G1 - LOWER AMENITY/GARAGE LEVEL

01.09.2024

MARKET SQUARE ARCHITECTS

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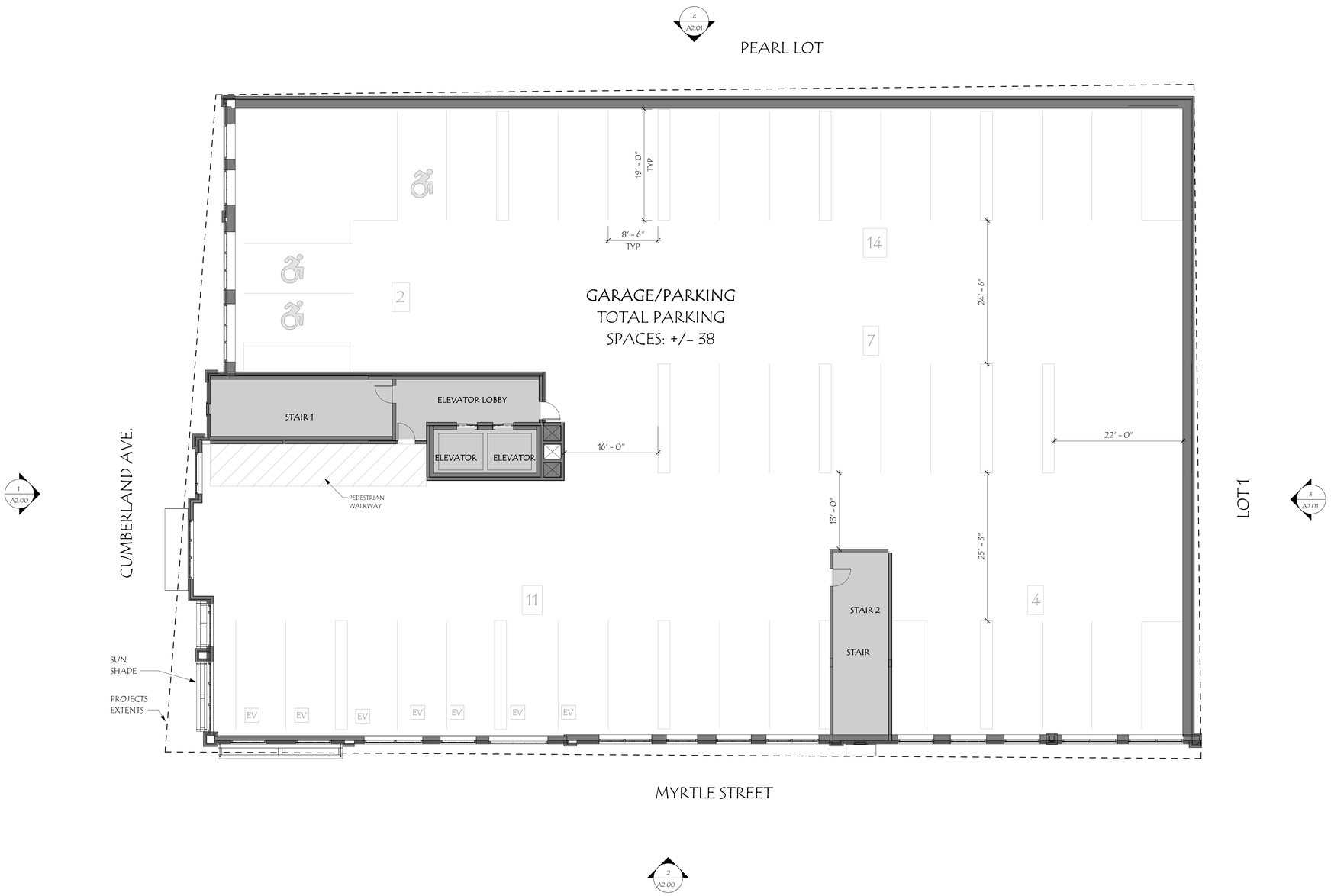
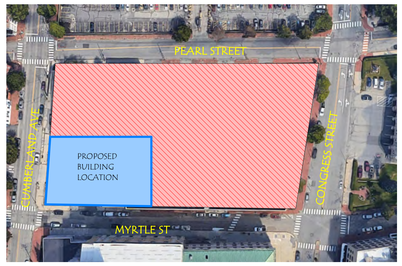
PH: 603.501.0202

SUBMITTED PLANS AND ELEVATIONS ARE CONCEPTUAL AND SUBJECT TO CHANGE DURING CONSTRUCTION DOCUMENT DEVELOPMENT



DEPARTMENT LEGEND

- GARGAE LEVEL PARKING
- CIRCULATION
- UTILITY
- AMENITY/OFFICE



LOCATION KEY
NTS

1 G2 - GARAGE
SCALE: 1/8" = 1'-0"

PROJECT NO. 2023034

The Lofts on Cumberland

OWNER:
LAC Northeast Developer LLC.
Scott Shaw
VP & Regional Project Partner/New England
Lincoln Avenue Capital
319 Lincoln Street, Ste 442 Hingham, MA 02043

A1.02

OVERALL G2 - GARAGE

01.09.2024

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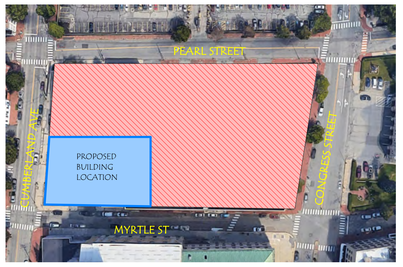
SUBMITTED PLANS AND ELEVATIONS ARE CONCEPTUAL AND SUBJECT TO CHANGE DURING CONSTRUCTION DOCUMENT DEVELOPMENT

DEPARTMENT LEGEND

- COURTYARD
- CIRCULATION
- UTILITY
- AMENITY
- 1-BEDROOM
- 2-BEDROOM

UNIT COUNT	
1-BEDROOM	35
2-BEDROOM	20
TOTAL UNITS:	55



LOCATION KEY
NTS

1 LEVEL 1 - RESIDENTIAL

SCALE: 1/8" = 1'-0"

PROJECT NO. 2023034

The Lofts on Cumberland

OWNER:
LAC Northeast Developer LLC.
Scott Shaw
VP & Regional Project Partner/New England
Lincoln Avenue Capital
319 Lincoln Street, Ste 442 Hingham, MA 02043

A1.03

OVERALL LEVEL 1 - RESIDENTIAL UNITS

01.09.2024

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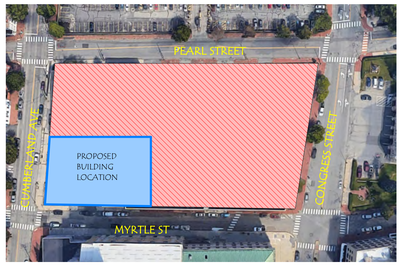
SUBMITTED PLANS AND ELEVATIONS ARE CONCEPTUAL AND SUBJECT TO CHANGE DURING CONSTRUCTION DOCUMENT DEVELOPMENT

DEPARTMENT LEGEND

- COURTYARD
- CIRCULATION
- UTILITY
- AMENITY
- 1-BEDROOM
- 2-BEDROOM

UNIT COUNT	
1-BEDROOM	35
2-BEDROOM	20
TOTAL UNITS:	55



LOCATION KEY
NTS

1 LEVEL 2 - RESIDENTIAL
SCALE: 1/8" = 1'-0"

PROJECT NO. 2023034

The Lofts on Cumberland

OWNER:
LAC Northeast Developer LLC.
Scott Shaw
VP & Regional Project Partner/New England
Lincoln Avenue Capital
319 Lincoln Street, Ste 442 Hingham, MA 02043

A1.04

OVERALL LEVEL 2 - RESIDENTIAL UNITS

01.09.2024

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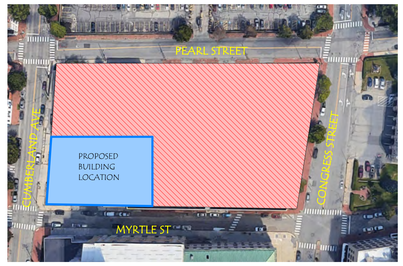
DEPARTMENT LEGEND

- COURTYARD
- CIRCULATION
- UTILITY
- AMENITY
- 1-BEDROOM
- 2-BEDROOM

UNIT COUNT	
1-BEDROOM	35
2-BEDROOM	20
TOTAL UNITS:	55



LOCATION KEY
NTS

1 LEVEL 3 -RESIDENTIAL
SCALE: 1/8" = 1'-0"

PROJECT NO. 2023034

The Lofts on Cumberland

OWNER:
LAC Northeast Developer LLC.
Scott Shaw
VP & Regional Project Partner/New England
Lincoln Avenue Capital
319 Lincoln Street, Ste 442 Hingham, MA 02043

A1.05

OVERALL LEVEL 3 - RESIDENTIAL UNITS

01.09.2024

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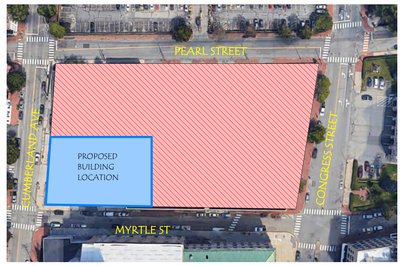
DEPARTMENT LEGEND

- COURTYARD
- CIRCULATION
- UTILITY
- AMENITY
- 1-BEDROOM
- 2-BEDROOM

UNIT COUNT	
1-BEDROOM	35
2-BEDROOM	20
TOTAL UNITS:	55



LOCATION KEY
NTS

1 LEVEL 4 - RESIDENTIAL
SCALE: 1/8" = 1'-0"

PROJECT NO. 2023034

The Lofts on Cumberland

OWNER:
LAC Northeast Developer LLC.
Scott Shaw
VP & Regional Project Partner/New England
Lincoln Avenue Capital
319 Lincoln Street, Ste 442 Hingham, MA 02043

A1.06

OVERALL LEVEL 4 - RESIDENTIAL UNITS

01.09.2024

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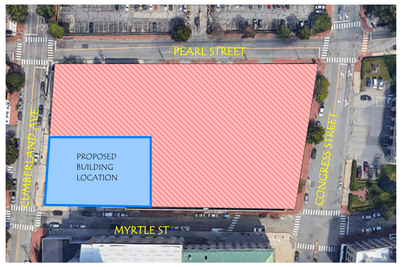
SUBMITTED PLANS AND ELEVATIONS ARE CONCEPTUAL AND SUBJECT TO CHANGE DURING CONSTRUCTION DOCUMENT DEVELOPMENT

DEPARTMENT LEGEND

- COURTYARD
- CIRCULATION
- UTILITY
- AMENITY
- 1-BEDROOM
- 2-BEDROOM

UNIT COUNT	
1-BEDROOM	35
2-BEDROOM	20
TOTAL UNITS:	55



LOCATION KEY
NTS

1 LEVEL 5 - RESIDENTIAL
SCALE: 1/8" = 1'-0"

PROJECT NO. 2023034

The Lofts on Cumberland

OWNER:
LAC Northeast Developer LLC.
Scott Shaw
VP & Regional Project Partner/New England
Lincoln Avenue Capital
319 Lincoln Street, Ste 442 Hingham, MA 02043

A1.07

OVERALL LEVEL 5 - RESIDENTIAL UNITS

01.09.2024

MARKET SQUARE ARCHITECTS

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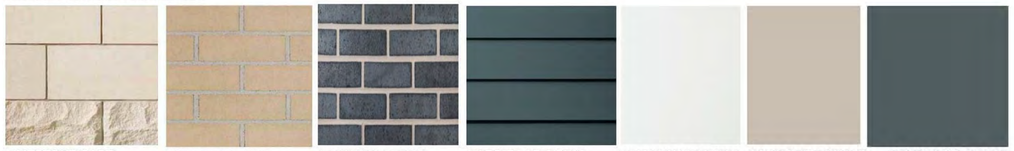
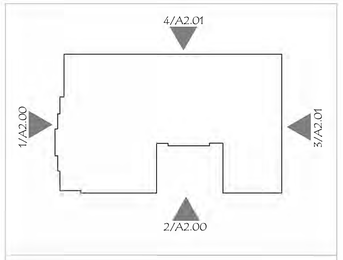
BUILDING EXTERIOR MATERIALS:



LIMESTONE BASE	MODULAR BRICK	IRONSPOT BRICK	HARDIE LAP SIDING	COMPOSITE SIDING	COMPOSITE SIDING	COMPOSITE SIDING
MA- 01	MA- 02	MA- 03	ES- 01	ES- 02	ES- 03	ES- 04



KEY PLAN

SUBMITTED PLANS AND ELEVATIONS ARE CONCEPTUAL AND SUBJECT TO CHANGE DURING CONSTRUCTION DOCUMENT DEVELOPMENT

1 WEST ELEVATION - CUMBERLAND AVE

SCALE: 1/8" = 1'-0"

2 SOUTH ELEVATION - MYRTLE STREET

SCALE: 1/8" = 1'-0"

PROJECT NO. 2023034

The Lofts on Cumberland

OWNER:
LAC Northeast Developer LLC.
Scott Shaw
VP & Regional Project Partner/New England
Lincoln Avenue Capital
319 Lincoln Street, Ste 442 Hingham, MA 02043

A2.00

EXTERIOR ELEVATIONS

01.09.2024

MARKET SQUARE ARCHITECTS

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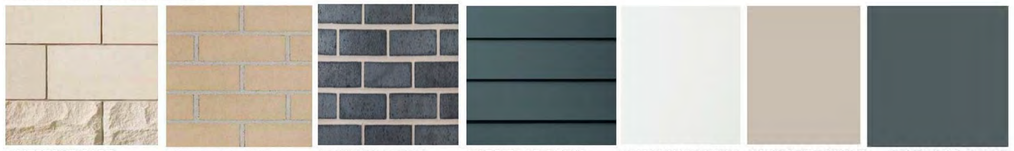
BUILDING EXTERIOR MATERIALS:



LIMESTONE BASE
MA- 01

MODULAR BRICK
MA- 02

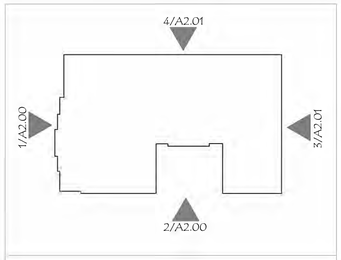
IRONSPOT BRICK
MA- 03

HARDIE LAP SIDING
ES- 01

COMPOSITE SIDING
ES- 02

COMPOSITE SIDING
ES- 03

COMPOSITE SIDING
ES- 04



KEY PLAN

SUBMITTED PLANS AND ELEVATIONS ARE CONCEPTUAL AND SUBJECT TO CHANGE DURING CONSTRUCTION DOCUMENT DEVELOPMENT

3 EAST ELEVATION - CONGRESS STREET

SCALE: 1/8" = 1'-0"

4 NORTH ELEVATION - PEARL STREET

SCALE: 1/8" = 1'-0"

PROJECT NO. 2023034

The Lofts on Cumberland

OWNER:
LAC Northeast Developer LLC.
Scott Shaw
VP & Regional Project Partner/New England
Lincoln Avenue Capital
319 Lincoln Street, Ste 442 Hingham, MA 02043

A2.01

EXTERIOR ELEVATIONS

01.09.2024

MARKET SQUARE ARCHITECTS

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PH: 603.501.0202

PERSPECTIVE FROM MYRTLE ST
1/08/2024
LINCOLN AVENUE COMMUNITIES
MARKET SQUARE ARCHITECTS

ENTRY AT CUMBERLAND AVE
1/08/2024

Greater Portland Landmarks

Historic character enriches our lives

PO Box 17533, Portland, ME 04112

11 March 2024

RE: PL-002779-2024 244 CUMBERLAND AVENUE

Chair Mazer and Members of the Planning Board,

Greater Portland Landmarks supports comments in the planning staff's design review report requesting the applicant enhance the pedestrian-level of the proposed design and to present a more unified approach to the overall façade composition. While the visual character of the Congress Street Historic District is varied, the buildings within the district generally have cohesive facades with regular fenestration patterns, prominent entrances, and glazing at the street level that supports commercial or public activities. The proposed building appears to present more of a form-follows-function approach to its design rather than an overall design scheme like City Hall, the Central Fire Station, and the Press Hotel building, its nearest neighbors in the historic district.

Cumberland Avenue is a significantly traveled corridor on the peninsula and Myrtle Street experiences a great deal of pedestrian activity, particularly during events at Merrill Auditorium. Elements like the utility alcove and views of the parking garage interior are not pedestrian friendly and should be reduced, mitigated, or eliminated from the design to the greatest extent possible.

We also support the staff request for additional information on rooftop mechanicals and encourage the applicant to utilize screening of any rooftop mechanicals, due to the rooftop's visibility from adjacent buildings. We encourage the Planning Board to request additional information on the phasing of the project and what interim elements are planned by the applicant to mitigate the short-term appearance of walls that are planned to be obscured by future development on the parcel.

Thank you for considering our views,

Carol De Tine

Carol De Tine
Vice President of the Board of Trustees
Greater Portland Landmarks

Planning and Urban Development
Kevin Kraft, AICP
Deputy Director

To: Portland Planning Board
From: Kevin Kraft, AICP
Date: March 8, 2024
Re: 58 Fore Street – 3rd Party Geotechnical Agreement Communication

On September 12, 2023, the Planning Board approved a Level III Site Plan Application for a mixed-use development at 58 Fore Street (Blocks 4, 5, and 6) (PL-002202-2022). The Board approved the application with the condition that the applicant provide a final geotechnical report prepared and signed by a licensed Geotechnical Engineer that assesses the existing Fore Street retaining wall conditions as outlined in the Recommended Investigation Scope of Work provided by SGH in September 2023.

The City and SGH, Inc. entered into an agreement for third party reviewer and engineering consulting services for the proposed development at 58 Fore Street dated December 7, 2023 (Attachment 1). The City and SGH, Inc. amended their agreement in February 2024 to extend the services until May 1, 2024.

In response to Board and public Input, staff agreed to upload the City's agreement with third party consultant SGH, Inc. and notify the Board via a communication when materials were available for the public to view.

The agreement can be viewed by visiting the City's Citizen Self Service Portal (CSS), searching by project # PL-002202-2022, and navigating to the attachments tab. The file is labeled as "SGH Inc. – 58 Fore St 3rd Party Agreement.pdf"

389 Congress Street, Portland, Maine 04101 | ph: 207.874.8430 | kkraft@portlandmaine.gov

Attachment 1

AGREEMENT BETWEEN THE
CITY OF PORTLAND
AND
SIMPSON GUMPERTZ & HEGER, INC

THIS AGREEMENT is entered into this 7th day of December, 2023, by and between the **CITY OF PORTLAND**, a body politic and corporate (hereinafter the "**CITY**"), and **SIMPSON GUMPERTZ & HEGER, INC,** a Massachusetts corporation with a mailing address of 480 Totten Pond Road, Waltham, MA 02451 (hereinafter the "**CONSULTANT**").

W I T N E S S E T H:

WHEREAS, the CITY is in need of third party reviewer and engineering consulting services for proposed development at 58 Fore Street; and

WHEREAS, the CONSULTANT has the requisite knowledge and technical ability to perform the required services and has submitted a proposal dated September 6, 2023, a copy of which is attached as Exhibit A and made a part hereof (hereinafter "Proposal"); and

WHEREAS, after due consideration, the CITY decided to award this contract to CONSULTANT;

NOW, THEREFORE, in consideration of the mutual promises made by each party to the other, the parties covenant and agree as follows:

1. The CONSULTANT will furnish the personnel, supervision, services, materials, supplies and labor (hereinafter the "Work") in accordance with the specifications contained in the CONSULTANT's Proposal.

   The restatement in this document of any term of the Proposal shall not be deemed to waive any term not so restated. If any disagreement is found between the Proposal and this document, then this document shall govern; provided, however, that this document and its attachments shall be construed to be supplemental to one another to the extent possible.

2. The CONSULTANT agrees that all Work performed and furnished hereunder shall be in accordance with all applicable professional standards ordinarily provided by professionals practicing in the same or similar locality under the same or similar circumstances (the "Standard of Care").

3. Prior to the execution of this Agreement, the CONSULTANT shall, at its own expense, procure and maintain:

- Claims-made based Professional Liability Insurance for errors, omissions and negligence, in the amount of One Million Dollars ($1,000,000.00) per claim and in the aggregate. CONSULTANT shall maintain such Professional Liability Insurance coverage in full force and effect for a period of no less than ten (10) years after the termination of this Agreement unless coverage becomes commercially unavailable for reasons outside the CONSULTANT'S control and not merely at the CONSULTANT's option or for the CONSULTANT'S convenience or financial benefit.
- Occurrence-based Commercial General Liability Insurance coverage in amounts of not less than One Million Dollars ($1,000,000.00) per occurrence for bodily injury, death and property damage, including completed operations coverage for no less than two years following completion of the Work;
- Occurrence-based Automobile Liability Insurance coverage in amounts of not less than One Million Dollars ($1,000,000.00) per occurrence for bodily injury, death and property damage;
- Workers' Compensation Insurance coverage to the extent required by law, which shall include an endorsement waiving all rights of subrogation against the City of Portland, its officers or employees;

With respect to the Commercial General Liability and Automobile Liability Insurance, the CONSULTANT shall name, or include, the CITY as an additional insured for coverage for claims for which the City does not have governmental immunity, including, without limitation, those areas where government immunity has been expressly waived as set forth in 14 M.R.S. A. § 8104-A, as limited by § 8104-B, and § 8111. This provision shall not be deemed a waiver of any defenses, immunities or limitations of liability or damages available to the CITY under the Maine Tort Claims Act, other Maine statutory law, judicial precedent, common law, or any other defenses, immunities or limitations of liability available to the CITY. Prior to execution of this Agreement, or shortly thereafter, the CONSULTANT shall furnish the CITY and thereafter maintain certificates evidencing all such coverages, which certificates shall guarantee thirty (30) days' notice to the CITY of termination of insurance from the insurance provider or agent. CONSULTANT shall also provide a copy of any endorsement naming the CITY as additional insured. A certificate that merely has a box checked under "Addl Insr," or the like, or that merely states the City of Portland is named as an Additional Insured, will not be acceptable. The Workers' Compensation insurance shall include an endorsement waiving all rights of subrogation against the City of Portland, its officers or employees.CONSULTANT shall be responsible for any and all deductibles and/or self-insured retentions (not to exceed $10,000.00 without prior written approval of Corporation Counsel). CITY's acceptance or lack of acceptance of CONSULTANT's Certificate of Insurance or other evidence of insurance shall not be construed as a waiver of the CONSULTANT's obligation to obtain and maintain such insurance as required by this agreement.

4. To the fullest extent permitted by law, CONSULTANT shall defend, indemnify and hold the CITY, its officers, and employees, harmless at all times from any claims, liability, losses, costs, expenses (including, reasonable attorney's fees) fines, damages or judgments to the extent caused by any negligent act or omission of CONSULTANT, its partners or members, agents, invitees, contractors, subcontractors, or employees, which claims arise out of or result from the performance of services hereunder, said claims to include, without being limited to, claims for personal injury, death, or property damage, including injury or damage to CITY employees or property; and claims based upon violation of any environmental law. Such obligation of indemnification shall not be construed to negate or abridge any other obligation of indemnification running to the CITY which otherwise exists. The extent of the indemnification provision shall not be limited by the provision for insurance in this Agreement, except in accordance with Section 5 herein. CONSULTANT's obligations under this paragraph shall survive termination of this Agreement. Notwithstanding anything to the contrary herein, CONSULTANT shall have no upfront duty to defend the CITY, other than for claims covered through CONSULTANT's General Liability and Automobile Liability policies, but CONSULTANT shall reimburse the CITY for all of its reasonable attorneys' fees and costs of defense to the extent of CONSULTANT's indemnity obligation herein, whether or not such fees and costs are covered by available insurance.

5. The CITY agrees that CONSULTANT's total liability to the CITY and the total liability to the CITY of CONSULTANT's principals, officers, agents, and employees, for any and all injuries, claims, losses, expenses, or damages whatsoever, including attorney's fees, arising out of or in any way related to the Work or this Agreement from any cause or causes, including, but not limited to, CONSULTANT's negligence, errors, omissions, strict liability, breach of contract, or breach of warranty shall not exceed CONSULTANT's total fee under this Agreement or $50,000, whichever is greater. In no event shall CONSULTANT be liable to CITY for any indirect, incidental, special or consequential damages whatsoever (including but not limited to lost profits or interruption of business) arising out of or related to the services provided under the Agreement. EXCEPTIONS: Notwithstanding anything herein to the contrary, this limitation of liability shall not apply to: 1) damages attributable to the CONSULTANT'S gross negligence or knowful, willful or intentional breach of its obligations under this agreement; or 2) claims or losses that are subject to the CONSULTANT'S indemnification obligations set forth in Paragraph 4 which will instead be limited to the amount the CITY is not otherwise immune from under the Maine Tort Claims Act 14 M.R.S.A. § 8101 et seq., other Maine statutory law, judicial precedent, common law or any other defenses, immunities or limitations of liability available to the CITY (the "Non-Immune Amount"); provided that if such Non-Immune Amount exceeds $50,000, CONSULTANT's total aggregate liability shall be limited to the insurance coverage limits set forth in this Agreement.

   Nothing herein shall be deemed a waiver of any defenses, immunities or limitations of liability or damages available to the CITY under the Maine Tort Claims Act, other Maine

statutory law, judicial precedent, common law, or any other defenses, immunities or limitations of liability available to the CITY.

6. The CONSULTANT shall perform the work to the satisfaction of the Director of the Department of Planning and Urban Development (hereinafter, the "Director") who will have the right of inspection at all times, and whose approval and acceptance of the work will be a condition precedent to payments by the CITY under this Contract. The CONSULTANT acknowledges and agrees that such inspection is for purposes of approving payment alone and such inspection shall not be deemed to impose any duty or liability upon the CITY to supervise any aspect of or approve the quality of the Work.

7. Time is of the essence in the performance of this Agreement as consistent with the Standard of Care. Upon receipt of executed contracts and insurance as required, the CITY will promptly send an executed contract to the CONSULTANT, which will commence work as soon as reasonably possible. The CONSULTANT agrees to complete the entire work by January 31, 2024. The time set for such completion may be extended only by written consent of the Director.

8. In the event of any dispute as to the amount, nature or scope of the work required under this Contract, the design and judgment of the Director or designee will be final and binding.

9. For performance of all the terms and conditions of this Agreement, the CITY will pay the CONSULTANT an amount not to exceed Eleven Thousand, Five Hundred Dollars ($11,500.00) according to the prices set forth in the Proposal which will include any expenses.

10. The CONSULTANT shall keep accurate records of all services performed under this Agreement and shall submit such information to the CITY on a monthly basis. Payment for such Work shall be made to the CONSULTANT not more than thirty (30) days after receipt of an invoice and acceptance of the Work by the Director or designee.

11. The CITY agrees to furnish or provide access to the CONSULTANT to any information or material in its possession which is relevant to the CONSULTANT's performance hereunder and CITY staff will cooperate with CONSULTANT. The CONSULTANT will not, without the CITY's written consent, disclose, or permit disclosure, by any officer, employee, or agent or subcontractor of CONSULTANT, of any information or material furnished or generated under this Agreement. The CONSULTANT shall be entitled to rely upon the accuracy of such information. The provisions of this Article shall not apply to information which is published or comes into the public domain through no fault of the CONSULTANT or is required to be disclosed by law.

    The following shall be requirements of this Agreement:

    (a) All data collected shall be treated as confidential material and shall be disclosed *only* to authorized CITY representatives;

(b) The CONSULTANT shall not disclose or permit disclosure of any information or material furnished and/or generated under this Agreement without the CITY's prior written consent; and

(c) All documents, data, studies, estimates, summaries and any other work or material developed under this Agreement shall be the property of the CITY and shall be promptly delivered to the appropriate Department Contact person upon completion of a particular service/assignment or upon the request of the CITY.

(d) The CITY agrees not to use the CONSULTANT-generated documents for marketing purposes or for projects other than the project for which the documents were prepared by CONSULTANT without CONSULTANT's prior written permission. Any reuse or disbursement to third parties without such express written permission or project-specific adaptation by CONSULTANT will be at the CITY's sole risk and without liability to CONSULTANT or its subsidiaries, independent professional associates, subconsultants, and subcontractors

12. The CITY may terminate this Agreement for cause by written Notice to the CONSULTANT. In the event of such termination, the CONSULTANT shall not be entitled to any further payment under this Agreement from the date of receipt of said Notice.

13. The CITY shall have the right to terminate this Agreement at any time for its convenience with prior written Notice to the CONSULTANT. If the Agreement is terminated by the CITY for convenience, the CITY shall pay the CONSULTANT for all Work performed and all materials purchased pursuant to this Agreement prior to receipt of such Notice.

14. Out of concern for the public, CITY employees and the CONSULTANT's employees, all work performed by the CONSULTANT shall be in conformance with applicable local, state, and federal laws, ordinances, rules and regulations.

15. CONSULTANT agrees to adhere to a policy of non-discrimination in all employment actions, practices, policies, procedures, phases, and conditions of employment. This shall include compliance with the Workforce Innovation and Opportunity Act; titles VI and VII of the Civil Rights Act of 1964, as amended; section 504 of the Rehabilitation Act of 1973, as amended; the Age Discrimination Act of 1975, as amended; title IX of the Education Amendments of 1972, as amended; and with all applicable requirements imposed by or pursuant to regulations implementing those laws, including but not limited to 29 CFR part 37 and all other applicable laws, including the Maine Human Rights Act, ordinances and regulations regarding equal opportunity and equal treatment. CONSULTANT specifically agrees that all employment-related decisions (including but not limited to hiring, discharge, transfers, promotions, discipline, training, job opportunities, and wage and salary levels) will be made without discrimination based on an individual's race or color, religion, age, sex (including

pregnancy), sexual orientation, gender identity or expression, ancestry or national origin, physical or mental disability, veteran status, genetic information, previous assertion of a claim or right under Maine's Workers' Compensation Act, previous actions taken protected under Maine's Whistleblowers' Protection Act, or any other protected group status as defined by applicable law. Provisions in applicable laws providing for bona fide occupational qualifications, business necessity, or age limitations will be adhered to by CONSULTANT where appropriate.

16. No waiver of any breach of any one or more of the conditions of this Agreement by the CITY shall be deemed to imply or constitute a waiver of any succeeding or other breach hereunder.

17. This Agreement and its attachments represents the entire and complete agreement and understanding between the parties and supersedes any prior agreement or understanding, written or oral, between the parties with respect to the subject matter of this Agreement. This Agreement cannot be amended except by written instrument executed by the CITY and CONSULTANT.

18. This Agreement shall be construed in all respects in accordance with, and governed by, the laws of the State of Maine. All parties hereto hereby consent to the exclusive jurisdiction of the Superior Court for the County of Cumberland in the State of Maine, for all actions, proceedings and litigation arising from or relating directly or indirectly to this Agreement or any of the obligations hereunder, and any dispute not otherwise resolved as provided herein shall be litigated solely in said Court.

19. This Agreement may be executed in any number of counterparts and by different parties in separate counterparts. Each counterpart when so executed shall be deemed to be an original and all of which together shall constitute one and the same agreement. A signature in a pdf or electronic document shall be considered the equivalent of an original signature.

20. CONSULTANT warrants and represents that it has the full right and authority to enter into this Agreement, that there is no impediment that would inhibit its ability to perform its obligations under this Agreement, and that the person signing this Agreement on behalf of CONSULTANT has the authority to do so.

21. CONSULTANT may not assign its rights or obligations under this Agreement without the CITY's prior written consent.

Signatures follow on the next page.

IN WITNESS WHEREOF, the parties have caused this Agreement to be executed by their duly authorized representatives as of the date first set forth above.

WITNESS:

_____

CITY OF PORTLAND

By: Danielle P. West
Danielle P. West
Its City Manager

WITNESS:

_____

SIMPSON GUMPERTZ & HEGER, INC

By: _____
Giuliana Zeleda-Tumialan
Its: Associate Principal

Approved as to form:

Amy McNally
City Corporation Counsel's Office

Approved as to funds:

Brendan T. O'Connell
City Finance Director

6 September 2023
(Revised 5 October 2023)

Christine Grimando, AICP
Director
Planning & Urban Development Department
City of Portland
389 Congress Street
Portland, Maine 04101

Re: Third Party Reviewer and Consulting Services for the Proposed Foreside Development, 58 Fore Street, Portland, ME

Dear Ms. Grimando:

We shall be pleased to provide consulting services to assess potential impacts to your infrastructure, including the existing stone retaining wall located adjacent to the proposed new development at 58 Fore Street.

1. INTRODUCTION

The proposed Foreside Development located at 58 Fore Street consists of renovations to existing buildings and construction of at least four new buildings (Blocks 3 through 6). Block 4 is located adjacent to Fore Street and an existing 150-year old stone retaining wall which is currently owned and maintained by the City of Portland (the City). Original and repair construction drawings dated 1873 and 1896 show that the stone retaining wall is approximately 280 ft long and up to approximately 30 ft tall. The existing ground surface at the toe of the wall slopes steeply downward to the southeast, with a vertical relief of 20 ft to 40 ft. The proposed development for Block 4 includes installation of soil nail slope stabilization and construction of a foundation wall abutting the existing stone retaining wall.

You requested that Simpson Gumpertz & Heger Inc. (SGH) prepare a proposal to provide third-party review and consulting services to assess the impacts of the proposed development on the existing stone retaining wall and other adjacent properties. This third-party review includes geotechnical aspects of the Developer's proposed work at the northern and eastern portions of

Block 4, the northern and eastern portions of Block 6, all proposed retaining walls at the perimeter of the development, and proposed earthwork and blasting.

2. SCOPE OF WORK

Based on the documents we have received to date; we propose the following initial scope of work:

- Attend an initial virtual meeting with you and visit the site to observe the existing site conditions and meet with your staff (completed).
- Review documents provided by the City and developer, including the geotechnical design report, geotechnical design memorandum, preliminary support of excavation drawings, and conceptual foundation drawings for the Foreside Development. We will also review the historic stone retaining wall plans provided by the City.
- Prepare a memorandum summarizing our recommended scope of work (SOW) for the developer to investigate the condition of the existing wall (completed). We assume that we will attend one virtual meeting with the City and the Developer to discuss the SOW for the retaining wall condition assessment.
- Prepare a letter summarizing our review of documents received to date and our initial assessment of potential impacts of the proposed development on the existing stone retaining wall and other adjacent structures and City infrastructure on Fore Street and properties located immediately north and east of Blocks 4 and 6. We will attend one virtual meeting with the City to discuss the letter.

We anticipate that we will complete the letter within two weeks of receiving notice to proceed. We understand that the developer may provide additional information at a future date.

3. BUDGET

We recommend that you establish a budget of $11,500 for our fees for the services described above on this project. This is not an upset limit, but we will notify you before exceeding the budgeted amount.

4. TERMS AND CONDITIONS

Our fees are computed on an hourly basis as shown on the attached Fee Schedule and Payment Terms. Travel time is charged at full rates from 8:00 a.m. to 6:00 p.m. and at half rates during other periods. SGH will bill direct expenses at actual cost plus 10%. Direct expenses are out-of-pocket expenses and include, but are not limited to, subconsultants, travel, outside

services, copying, and charges for the use of SGH field and laboratory equipment and specialized computer software.

This proposal is valid for sixty days. Our proposed agreement consists of this proposal and the enclosed Contract Provisions and Fee Schedule and Payment Terms. If acceptable, please sign and return one copy of this letter.

Sincerely yours,
SIMPSON GUMPERTZ & HEGER INC.

Giuliana A. Zelada-Tumialan
Associate Principal
ME License No. PE16168

Steven F. Keppel

Accepted: CITY OF PORTLAND

Signature: _____

Printed Name: _____

Title: _____

Date: _____

GAZ/ras (BO23-0002979R-GAZ)
0101C23 010617-CP-2
Encls.

SIMPSON GUMPERTZ & HEGER INC.
FEE SCHEDULE AND PAYMENT TERMS

Personnel Category	Hourly Billing Rate
Senior Principal	$375
Principal	$355
Associate Principal	$315 – $335
Project/Technical Director	$275 – $325
Senior Technical Manager	$250
Senior Project Manager	$285 – $310
Senior Project Supervisor	$255 – $280
Senior Consulting Architect/Engineer	$235 – $260
Consulting Architect/Engineer	$195 – $220
Senior Project Consultant	$240 – $245
Project Consultant II	$200
Project Consultant	$175 – $190
Associate Project Consultant	$155
Technical Aide	$100
Senior Laboratory Technician	$155 – $185
Laboratory Technician	$145
Senior Graphics Specialist	$260
Graphics Specialist II	$195
Graphics Specialist	$145
Senior BIM Technician II/Senior Project Drafter	$200
Senior BIM Technician I/Senior Project Drafter	$180
BIM Technician II/Senior Drafter	$160
BIM Technician I/Drafter	$130
Non-Technical	$120 – $140

Rates are in US dollars. Where ranges of hourly rates are shown for a single title, they reflect the varying rates of the particular individuals with that title. An annual rate adjustment, based upon salary increases, will apply on 1 January each year.

FORM 0101C23 1 January 2023

BlueInk Bundle ID: BbhjkJKI7a

FIRST AMENDMENT TO
AGREEMENT BETWEEN THE
CITY OF PORTLAND
AND
SIMPSON GUMPERTZ & HEGER, INC.

THIS FIRST AMENDMENT is made as of this _____ day of February, 2024, to the **AGREEMENT** dated December 7, 2023 by and between the **CITY OF PORTLAND**, a body politic and corporate, located in Cumberland County and State of Maine, (hereinafter the "**CITY**"), and **SIMPSON GUMPERTZ & HEGER, INC.,** a Massachusetts corporation with a mailing address of 480 Totten Pond Road, Waltham, Massachusetts 02451 (hereinafter the "**CONSULTANT**").

W I T N E S S E T H:

WHEREAS, the **CITY** and the **CONSULTANT** entered into an agreement for third party reviewer and engineering consulting services for proposed development at 58 Fore Street dated December 7, 2023 (the "Agreement"); and

WHEREAS, the parties desire to amend the Agreement;

NOW, THEREFORE, for valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the parties agree to amend the Agreement as follows:

1. Unless otherwise defined in this Amendment, capitalized terms used in this Amendment have the same meaning as those terms have in the Agreement.

2. TERM. The term of the services shall be through May 1, 2024.

3. SURVIVING TERMS. Any and all terms of the Agreement not herein amended shall remain in full force and effect for the duration of the Agreement as amended hereby and are hereby ratified. In the event of any conflict between the terms of this Amendment and the terms of the Agreement and any exhibits thereto, the terms of this Amendment shall govern and control so long as this Amendment is in effect.

IN WITNESS WHEREOF, the parties have caused this Amendment to be executed by their duly authorized representatives as of the date first set forth above.

Signatures are on the following page.

CITY OF PORTLAND

By:_____

Danielle P. West

City Manager

SIMPSON GUMPERTZ & HEGER, INC.

By:_____

Print or type name: Giuliana A. Zelada-Tumialan

Its: Vice President

Approved as to form:

_____

City Corporation Counsel's Office

Approved as to funds:

_____

City Finance Director

CITY OF PORTLAND, MAINE

PLANNING BOARD

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

February 27, 2024

Patrick Carroll
Developers Collaborative
631 Stevens Ave
Portland, Maine 04103

Project Name:	Major Site Plan	**Project ID:**	PL-002733-2023
Address:	56 Cumberland Ave.	**CBL:**	013 L004001
Applicant:	Fafnir Cumberland LLC		
Planner:	Eric Freeman		

Dear Patrick,

On February 24, 2024, the Planning Board approved a major site plan application for a three-story, five-unit multi-family residential building located at 56 Cumberland Avenue in the R-6 Residential zone. The decision is based upon the application, documents and plans as submitted. The Planning Board reviewed the proposal for conformance with the standards of the Site Plan Ordinance, Ch. 14, Article 14, Section 14.6. based on the information provided to the Board in the application, plans, and reports through testimony and other information submitted by the applicant, the Planning Board adopted the findings, conclusions and recommendations contained in the Planning Board Report for the public hearing on December 12, 2023, which is attached hereto and incorporated herein by reference. Based upon those findings, conclusions and recommendations, the Planning Board found that the application met all relevant standards and voted (X-X) to approve the application with the following conditions as presented below.

Site Plan Review

On the basis of the application, plans, reports and other information submitted by the Applicant; findings and recommendations contained in the Planning Board Report for the public hearing on February 27, 2024 for application # PL-002733-2023 relevant to the site plan regulations; and the testimony presented at the Planning Board hearing, the Planning Board voted (X-X) to find that the plan is in conformance with the site plan standards of the Land Use Code, subject to the following conditions of approval:

PRIOR TO APPLYING FOR A BUILDING PERMIT

1. The applicant shall provide an ability to serve letter from Central Maine Power and the Portland Water District.

PRIOR TO ISSUANCE OF A CERTIFICATE OF OCCUPANCY

2. The applicant shall contribute $1,200 into the City's tree fund in order to account for three of the five required street trees, which are not being planted along the property's frontage.

PLANNING BOARD DECISION

On the basis of the findings, conclusions and recommendations contained in the Planning Board report for the public hearing on February 27, 2024 related to application PL-002733-2023 for 56 Cumberland Avenue, which is attached to the draft approval letter and incorporated therein, the Planning Board [adopts/does not adopt] the approval letter as drafted as the Planning Board's decision for application PL-002733, and authorizes the Planning Board Chair to sign the approval letter as drafted.

Standard Procedures

Note: The following standard procedures and requirements apply to all approved site plans:

1. Site Plan Expiration The site plan approval will be deemed to have expired unless work has commenced within one (1) year of the approval or within a time period up to three (3) years from the approval date as agreed upon in writing by the City and the applicant. Requests to extend approvals must be received before the one (1) year expiration date.

2. Separate Building Permits Are Required This approval does not constitute approval of building plans, which must be reviewed and approved by the City of Portland's Permitting and Inspections Department.

3. Performance Guarantee and Inspection Fees A performance guarantee covering the site improvements and an inspection fee payment of 2.0% of the guarantee amount and three (3) final sets of plans must be submitted to and approved by the Planning and Urban Development Department and Public Works Department prior to the release of a building permit, street opening permit or certificate of occupancy for site plans.

4. Construction Management Plans The applicant, contractor and subcontractors are required to conform to the approved Construction Management Plan, and all conditions contained within the project's approval, for the entire duration of the project. Any amendments to the approved Construction Management Plan shall be reviewed and approved by the Department of Public Works prior to the execution. The Planning Authority and the Department of Public Works have the right to seek revisions to an approved Construction Management Plan. The applicant shall coordinate the project's construction schedule with the timing of nearby construction activities to avoid cumulative impacts on a neighborhood and prevent unsafe vehicle and pedestrian movements. Accordingly, nearby construction activities could involve a delay in the

commencement of construction.

5. Preconstruction Meeting Prior to the release of a building permit and scheduling of a preconstruction meeting, a hard copy set of approved plans shall be submitted to the Development Review Coordinator. A pre-construction meeting shall be held at the project site with the contractor, Development Review Coordinator, Public Works representative, and owner to review the construction schedule and critical aspects of the site work. At that time, the Development Review Coordinator will confirm that the contractor is working from the approved site plan and the approved Construction Management Plan. The site/building contractor shall provide one (1) copy of a detailed construction schedule to the attending City representative. It shall be the contractor's responsibility to arrange a mutually agreeable time for the pre-construction meeting.

6. Department of Public Works Permits If work or obstructions will occur within the public right-of-way, such as utilities, curb, sidewalk, driveway construction, site deliveries and equipment siting, a Street Opening and/or Occupancy Permits are required for your site. Please contact the Department of Public Works Permit Clerk at (207) 874-8300, ext. 8828. (Only excavators licensed by the City of Portland are eligible.)

7. Develop Site According to Plan The site shall be developed and maintained as depicted on the site plan and in the written submission of the applicant. Any modifications of an approved site plan or alteration of a parcel, or of any approved exterior elevations, which were the subject of site plan approval after May 20, 1974, shall require the prior approval of an amended site plan by the Planning Board or Planning Authority pursuant to the terms of Chapter 14, Land Use, of the Portland City Code.

8. Stormwater Management The owner/operator of an approved stormwater management system, and all assigns shall comply with the conditions of Chapter 32, Stormwater including Article III, Post Construction Stormwater Management, which specifies the annual inspections and reporting requirements.

   A maintenance agreement for the stormwater drainage system, as attached, or in substantially the same form, shall be submitted for review by Corporation Counsel. Once approved, the document shall be signed and recorded at the Cumberland County Registry of Deeds prior to the issuance of a building permit. Final copies shall be submitted to both the Department of Planning and Urban Development and the Department of Public Works.

9. Defect Guarantee A defect guarantee, consisting of 10% of the performance guarantee, must be posted before the performance guarantee will be released.

10. As-Built Final Plans Final sets of as-built plans shall be submitted digitally to the Planning and Urban Development Department, on a CD or DVD, in AutoCAD format (.dwg), release AutoCAD 2005 or greater. Please provide one hard copy of the mylar.

11. Mylar Copies Mylar copies of the as-built drawings for the public streets and other public infrastructure in the subdivision must be submitted to Public Works prior to the issuance of a certificate of occupancy.

12. Impact Fees New development or changes of use that result in net new residential dwelling units, non- residential building square footage, or water meters, are subject to the City of Portland's impact fee ordinance (Chapter 14, Article XVII). Impact fees are calculated at the time of building permit and must be paid prior to the certificate of occupancy. For more information, visit https://www.portlandmaine.gov/2409/Impact-Fees

The Development Review Coordinator must be notified five (5) working days prior to the date required for final site inspection. The Development Review Coordinator can be reached at the Planning and Urban Development Department at drc@portlandmaine.gov or (207)874-8984. All site plan requirements must be completed and approved by the Development Review Coordinator prior to issuance of a Certificate of Occupancy. Please schedule any property closing with these requirements in mind.

If there are any questions, please contact Eric Freeman at (207)874-8724 or via email at efreeman@portlandmaine.gov

Sincerely,

Brandon Mazer, Planning Board Chair

Attachments:
1. Planning Board Report
2. Portland City Code: Chapter 32
3. Sample Stormwater Maintenance Agreement
4. Performance Guarantee Packet

CITY OF PORTLAND, MAINE

PLANNING BOARD

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

RECOMMENDATION OF PLANNING BOARD

Applicant: Portland Museum of Art
Property: 142 Free Street, CBL: 039 B003001

Proposed Historical District Amendment – Reclassification of 142 Free Street

INTRODUCTION

The Portland Museum of Art ("PMA") submitted a request to reclassify its building at 142 Free Street, located within the Congress Street Historic District, from a contributing structure to a non-contributing structure. Pursuant to Section 17.5 of the City's Land Use Code, amendments or rescissions of designations follow a three-step review process. The Historical Preservation Board first reviews the request and makes a recommendation to this Board and the City Council. From there, this Board shall conduct a public hearing and make a recommendation to the City Council as to whether the property meets the criteria for designation. The City Council will issue the final decision on PMA's request.

On November 1, 2023, the Historic Preservation Board voted unanimously (5-0) to recommend that the Planning Board and the City Council vote to retain the contributing classification for the building at 142 Free Street within the Congress Street Historic District.

Pursuant to Section 17.5.9, this Board considered the standards outlined in Subsections 17.4.1 (A) and 17.4.2 in making this recommendation.[1]

[1] During its deliberations, the Board raised a question about whether Section 17.5.9 applied to PMA's request or whether this proposal was an amendment to the list contemplated under Section 17.5.8. In response, Associate Corporation Counsel provided a memorandum to the Board dated February 23, 2024 recommending that the Board apply Section 17.5.9 to PMA's proposal. Two members expressly disagreed with the opinion of Associate Corporation Counsel, but nonetheless indicated that the applicability of the Comprehensive Plan would not have impacted their vote on the ultimate recommendation. The Board's findings and conclusions contained herein do not include express consideration of the effect of the 142 Free Street designation on other aspects of the Comprehensive Plan of the City pursuant Section 17.4.1(C).

389 Congress Street, Portland, Maine 04101 | c: 207.874.8719

FINDINGS

The Planning Board held a public hearing on February 13, 2024 and February 27, 2024. The Board received and reviewed the November 1, 2023 recommendation of the Historic Preservation Board in addition to materials and testimony submitted by PMA, City staff and members of the public. After careful review and consideration of all of the material and testimony provided, the Board finds as follows:

1. The building at 142 Free Street was originally constructed in 1830 as a theater building. Shortly thereafter, in 1836, the structure was renovated into a Romanesque style church by the Free Street Baptist Church. In 1926, the building was sold to the Portland Chamber of Commerce who retained architect John Calvin Stevens to complete renovations to the structure. At that time, the building was renovated to its current Greek or colonial revival temple-fronted form.

2. In 1976, the Spring Street Historic District was added to the National Register of Historic Places. In 2020 the National Register listing was updated with an expanded period of significance (1800-1943), at which point the 142 Free Street building was listed as a contributing resource within the National Register District.

3. In 2009, the building located at 142 Free Street was identified as a contributing structure within the local Congress Street Historic District.

4. The description of the Congress Street Historic District includes a history of the development of Congress Street and its evolution from a residential corridor at the edge of town to a commercial one. The description emphasizes the district's importance as the city's eventual "Main Street." The visual character of the Congress Street Historic District is described as rich and varied, with structures exhibiting architectural styles and types from across three centuries as well as differing scales and uses including small-scale residential, medium-scale civic and institutional buildings, and large-scale commercial and mixed-use structures. The 142 Free Street description notes the building's evolution from a theater, to a church, and then its civic/commercial use by the Chamber of Commerce.

5. The building has not been substantially changed since it was originally designated.

6. The building has been reviewed many times and changes to its classification have been rejected.

7. The building portrays a layering of historic preservations which gives it character and makes it unique.

8. The building remains in its historic location and in good structural condition. The integrity of the building is intact and is worthy of preservation.

9. The essential character of the building is the same as the building designed by John Calvin Stevens, an architect whose individual work is significant to the history of the development of Portland and the state of Maine.

10. Although the building has undergone some alterations over the years, including the replacement of doors and windows, it has retained a high degree of integrity relative to the 1926 redesign by John Calvin Stevens. Any alterations have not irretrievably destroyed the character of the building.

11. The building at 142 Free Street was appropriately designated in 2009. The Board rejects PMA's argument that it was improperly designated originally.

12. The unique character and architectural significance of 142 Free Street building meets the definition of "contributing" in Section 17.2 of the Land Use Code because it "contributes generally to the qualities that give the historic district cultural, historic, architectural, or archaeological significance as embodied in the criteria for designating a historic district."

CONCLUSION

Based on the foregoing, the Planning Board finds that the building at 142 Free Street meets the applicable minimum criteria for designation in Section 17.4.1(A) and demonstrates sufficient integrity pursuant to Section 17.4.2. Therefore, the Planning Board recommends to the City Council that the building at 142 Free Street not be reclassified from a contributing to a noncontributing structure within the Congress Street Historic District.

_____

Brandon Mazer, Planning Board Chair

Planning and Urban Development
Matthew Grooms, AICP
Development Review Services Manager

From: Matthew Grooms, AICP – Development Review Services Manager
To: Chair Mazer and the Portland Planning Board
Date: 3/8/2024
Subject: Article 3 and Article 12 (Floodplain Amendments) – Text Amendments - Tabling

The City is requesting that the public hearing for the proposed text amendments to Articles 3 and 12 of the Land Use Code, which relate to revisions to the State of Maine's model floodplain ordinance and the adoption of the new Flood Insurance Rate Maps (FIRMs) in Cumberland County, be removed from the March 12, 2024 Planning Board agenda, in order to give State agencies additional time to review the City's proposed amendments. Staff recommend that the Planning Board table this item until March 26, 2024.

389 Congress Street, Portland, Maine 04101 | ph: 207.874.8430 | kkraft@portlandmaine.gov

Planning Board Report
Planning & Urban Development Department

International Marine Terminal Refrigerated Storage Racks
2 West Commercial Street
Major Site Plan
PL-002443-2023
Maine Port Authority, Applicant

Submitted to:	Portland Planning Board	**Prepared By:**	Eric Freeman
Public Hearing Date:	March 12, 2024	**Date:**	March 6, 2024

I. INTRODUCTION

The Maine Port Authority and the Maine Department of Transportation have submitted a Major Site Plan application to construct refrigerated container racks (reefer racks) and other upgrades to the western International Marine Terminal (IMT) lot including pile supported foundations, heavy duty pavement, and additions to the site drainage system. This application is being referred to the Planning Board for compliance with the City of Portland's Land Use Code Site Plan Standards, section 14.6.

The Planning and Urban Development Department mailed 72 notices advertising this meeting to property owners within 500 feet of the site. A legal advertisement ran in the March 2, 2024 and March 5, 2024 editions of the Portland Press Herald.

Applicant: Maine Port Authority, Maine Department of Transportation

Applicant Representatives: Winton Scott Architects, Jacobs Engineering Group, Schonewald Engineering Associates, Owen Haskell Surveyor, Swiftcurrent Engineering Services,

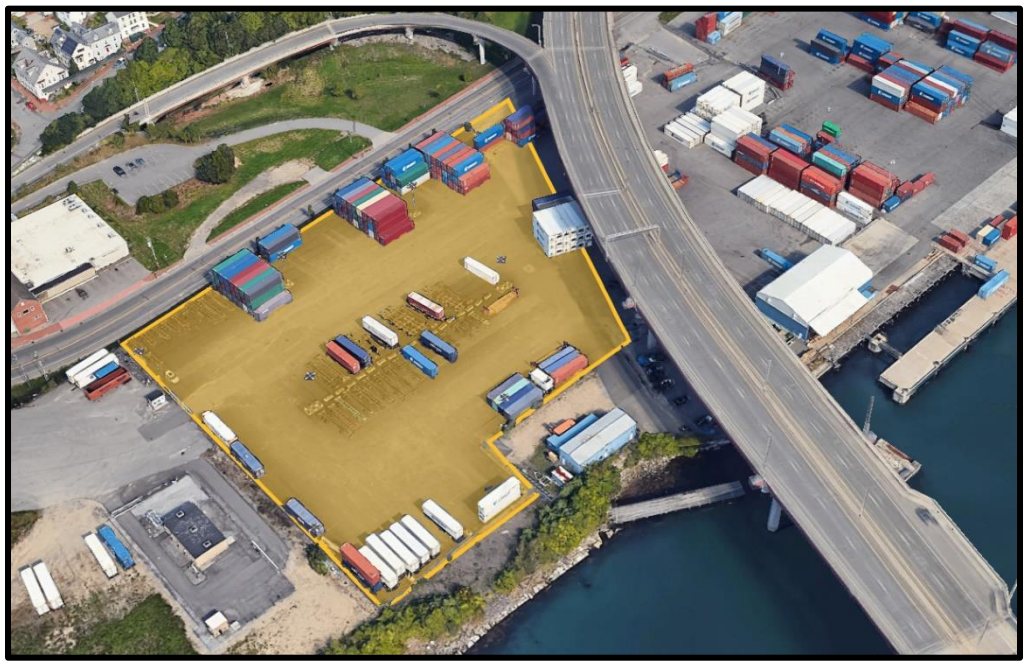

Figure 1: The existing site and proposed limit of work

II. REQUIRED REVIEWS

Review	*Applicable Standards*
Site Plan	Section 14.6
Shoreland Zone	Section 11.5.1

III. PROJECT DATA

Existing Zoning	WPDZ – Waterfront Port Development
Property Size	810,216 SF
Existing Use	Impervious asphalt, container yard and trailer storage
Proposed Development Program	Installation of racks for refrigerated shipping containers.

IV. BACKGROUND

As part of a multi-year initiative aimed at improving capacity and operations at the International Marine Terminal, The Maine Port Authority has submitted a Major Site Plan application for the construction of refrigerated storage racks for intermodal shipping containers, known as "reefer racks", along with other associated site improvements. The proposed racks will allow the International Marine Terminal to accommodate increased volume of refrigerated intermodal containers associated with the completion of the adjacent cold storage facility. The IMT is Maine's largest port, and was rebuilt in 2010 by the State of Maine and the Maine Port Authority to support its continued growth. To date the state and the IMT's primary shipping line Eimskip have invested upwards of $20 million to expand capacity and improve operations at the IMT.

V. EXISTING CONDITIONS AND SURROUNDING AREA

The existing site sits immediately to the west of the Casco Bay Bridge bordered to the north by West Commercial Street, and to the south by the Fore River. The proposed site lies between the existing International marine Terminal (IMT) and the new cold storage facility. The site consists entirely of porous asphalt surface and is used by the adjacent International Marine Terminal (IMT) for storage of intermodal shipping containers and truck trailers.

VI. PROPOSED DEVELOPMENT

The proposed development involves the installation of refrigerated storage racks supported on concrete slabs. Upgraded drainage and electrical systems will also be installed. Each rack would be approximately 50 feet in height and would accommodate the vertical stacking of up to five shipping containers. In total, the proposed racks would be capable of accommodating approximately 420 refrigerated shipping containers. Each rack would accommodate electrical utilities and elevated walkways for access. The proposed development also involves the upgrading of electrical and stormwater utilities on the site, as well as change to internal vehicular circulation to allow for loading and offloading of containers from trucks via gantry crane.

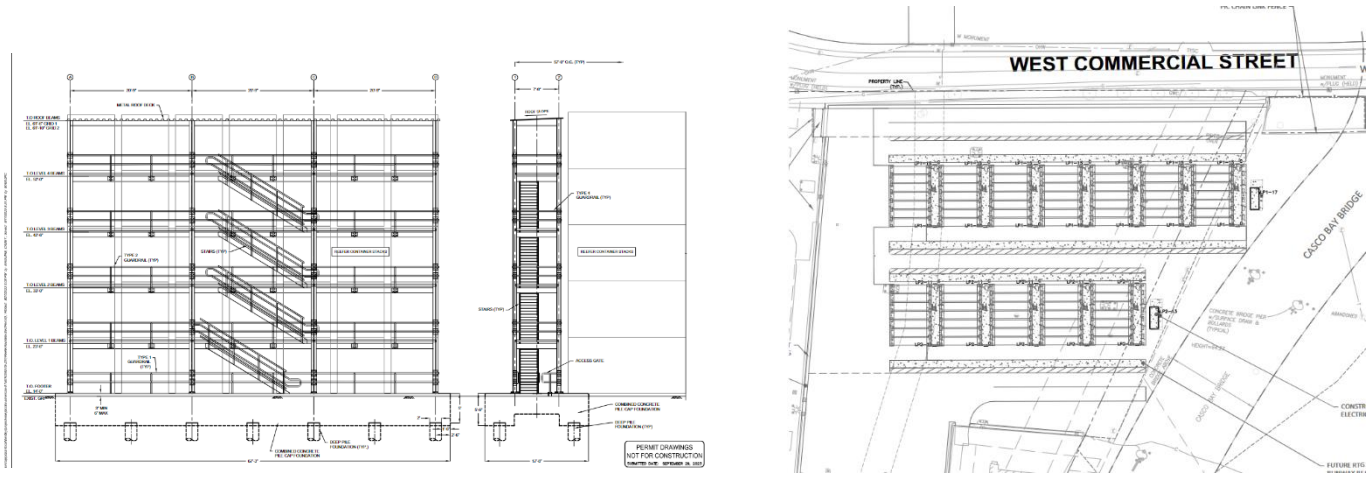

Figure 2: Profile views of the refrigerated racks

VII. RIGHT, TITLE, & INTEREST

The subject property was part of a land exchange agreement between the Maine Department of Transportation and the City of Portland which occurred on the July 1, 2021. The details of this transfer are recorded as Council Order 278-20/21 from a meeting of the Portland City Council held on June 21, 2021. The Maine Department of Transportation has demonstrated sufficient Right, Title and Interest for the subject property. (Attachment S)

VIII. FINANCIAL & TECHNICAL CAPACITY

The Maine Port Authority along with the MaineDOT has the financial capability to perform this project. The project will be fully funded through a combination of state and federal funds as follows: MaineDOT, Capital Work Plan budgeted funding. Port Infrastructure Development Program grant from the US Department of Transportation Maritime Administration. $2,000,000 received in 2020 (Attachment T).

The design and engineering team for this application have demonstrated technical capacity and experience working with MaineDoT and other waterfront entities throughout the coast of Maine. (Attachment T)

IX. ZONING ANALYSIS

The subject properties lies within the Waterfront Port Development Zone (WPDZ) and within the Shoreland overlay. The proposed use is a use permitted by right within the WPDZ. and is also subject to shoreland and floodplain regulations under Article 11 of the City's land use code.

This proposal does not involve the construction of a building, and thus many of the dimensional standards of the WPDZ do not apply to this project.

	Required	Proposed
Maximum Building Length	300'	64'
Maximum Height (ft)	50 ft.	~48 ft.
Maximum Lot Coverage (%)	50%	29%
Maximum Impervious Area	100%	143,000 Sq. Ft

Figure 3: Site Zoning

The proposed use is a permitted use within the WPDZ as established in 10-A of Section 10.4 of the City's Land Use Code. This use is classified as:

"Marine cargo handling facilities, including docking, loading and related storage"

WPDZ Purpose Statement

"Transport of goods by water to and from Portland is an important component of both the local and regional economy. *This commerce is dependent upon land with direct access to the dredged deep-water channel of the Fore River and Portland Harbor.*"

"The Port of Portland is integral to the city's economic, cultural and fiscal health. *This zone exists to ensure the continued viability of the Port of Portland.* Uses in the port development zone, while governed by the similar performance standards as other industrial zones, are primarily limited to those uses which are dependent upon deep water and which contribute to port activity."

1. Waterfront Port Development Zone Performance Standards (Section 10.4.8)
   A. Outdoor storage of materials
      This application involves the storage of shipping containers stacked up to 48 ft. in height, which is identical to the height of the racks themselves.

   B. Noise
      The applicant has demonstrated that anticipated noise levels will not be above what is permitted under table 6-G of the City of Portland's Land Use Code. The full acoustic survey is included as attachment P

C. Vibration
See acoustic survey included as attachment P

D. Federal and State environmental regulations
The applicant has demonstrated compliance with State and Federal regulations.

E. Discharge into harbor areas
Stormwater drainage on the site is split between multiple drainage areas. All site stormwater is captured and directed into an existing CSO that traverses the site and discharges into the Fore River.

F. Storage of vehicles
No long-term vehicle storage is anticipated with this application.

G. Landfill of docking and berthing areas
This application does not involve landfill of docking or berthing areas.

H. Off-street parking
This application does not involve the creation of any new off-street parking.

I. Shoreland and flood plain management regulations
The Proposed project is located within the overall IMT site which has been previously vetted for meeting Shoreland and Flood Plain Management Regulations.

J. Lighting
See above.

K. Signs
This application does not involve the installation of any new signage.

L. Storage of pollutants and oily wastes.
This application does not involve the storage of pollutants or oily wastes.

M. Compatibility of non-marine uses with marine uses.
This application involves the construction of internal vehicular accessways which are necessary to accommodate the storage of refrigerated containers.

X. SITE PLAN STANDARDS (Section 14.6)

The proposed development has been reviewed by staff for conformance with the relevant review standards of the City of Portland's Site Plan Ordinance, Section 14.6. Staff comments are below.

2. Transportation Standards (Section 14.6.1

A. Impact on surrounding street systems
This project is not anticipated to have any notable impact on Commercial Street. There is an anticipated increase in commercial vehicle traffic utilizing the intersection of Commercial and

Beech Street, which has previously been upgraded in anticipation of additional growth at the IMT and at present is underutilized.
Staff consider this standard to be met.

B. Access and circulation
This project is within the existing secured freight handling yard and does not propose any changes to existing site access or surrounding streets. This application proposes changes to internal vehicular circulation for trucks with a series of one-way loading and unloading lanes located between the refer racks.
Staff consider this standard to be met

C. Public transit access
This standard is not applicable to this application.

D. Parking
This standard is not applicable to this application. No new parking is proposed as part of this application.

E. Transportation demand management (TDM)
This standard is not applicable to this application.

3. Environmental Quality Standards (Section 14.6.2)

A. Preservation of significant natural features
This standard is not applicable to this application. The existing site is already developed and does not include any significant natural features as defined in Sec. 14.6.2.

B. Landscape preservation
This project is not anticipated to have any notable impacts on existing landscapes. The proposed scope of work is entirely within the existing IMT container yard area. Existing landscaping along West Commercial Street will not be impacted during construction. Staff consider this standard to be met.

C. Site landscaping and buffers
The proposed scope of work lies within an already developed area which was originally designed to meet landscaping requirements laid out in the City's Land Use Code.

D. Water quality/storm water management/erosion control
The applicant has submitted an erosion and sedimentation control plan. This project is required to provide stormwater management in accordance with Maine DEP Chapter 500 and City of Portland Technical Manual Section 5 standards for stormwater management. This application is classified as a redevelopment project under the existing General Standards. The stormwater design follows City of Portland regulations as well as the guidelines outlined in the Memorandum of Agreement (MOA) Stormwater Management between the MaineDOT, Maine Turnpike Authority and Maine Department of Environmental Protection (MaineDEP) dated 06/27/2017 as well as the MaineDEP Site Location of Development Act General Permit (MaineDEP GP) for the MaineDOT dated 08/18/2021. Both of these guidance documents outline the requirements for MaineDOT projects in

order to meet the standards of the MaineDEP's Chapter 500 Stormwater Management Rules.

The proposed stormwater system was designed to maintain existing drainage patterns, meet stormwater regulations, and maximize water quality to the greatest extent practical. The existing 24-inch combined sewer overflow (CSO) outfall pipe will be upsized to 48" and relocated outside of the proposed freezer container storage area while being maintained within the Maine Port Authority property. The reason to relocate the existing CSO outfall is to mitigate potential impacts to the CSO outfall pipe due to pile driving activities.

4. Public Infrastructure and Community Safety Standards (Section 14.6.3)

A. Consistency with City Master Plans

Portland's *Plan 2030* identifies goals and strategies related to preserving and growing marine-dependent uses within the City's working waterfront:

Waterfront:

The Waterfront Policy chapter supports the distinct roles of the Eastern, Central, and Western Waterfronts and of preserving port capabilities, and recognizes the unique regulatory framework that allows for both water dependent and non-marine uses along Portland's waterfront. It also includes the following strategies:

- "*Prioritize and promote Portland's unique mix of water-dependent, marine-related uses and compatible non-marine uses.*"
- *"Maintain and modernize infrastructure to support the working waterfront and port capabilities."*
- *"Ensure the future of the marine economy through support for emerging marine industries and mitigation of market trends that could compromise the balance between marine industries and competing development."*
- *"Recognize and reinforce waterborne transport of goods and people as foundational to our community."*

Staff consider this standard to be met as this project directly benefits marine shipping and transportation in conjunction with other port projects.

B. Public safety and fire prevention

This project is consistent with applicable public safety standards related to fire hydrant proximity, vehicle turning radiuses and pavement loading standards. Staff consider this standard to be met.

C. Availability and capacity of public utilities

Central Maine Power (CMP) has provided an ability to serve letter stating that they will be able to accommodate the anticipated increased electrical demand generated by this project (Attachment Z)

5. Site Design Standards (Section 14.6.4)

A. Massing, ventilation, and wind impact

This standard is not applicable to this application.

B. Shadows

This standard is not applicable to this application.

C. Snow and ice loading

The proposed reefer racks are the only infrastructure (building) proposed as part of this project. These structures have been designed according to Maine Building Code, IBC 2015 and ASCE 7-10 for snow and ice loading. The structures are far enough away from existing property lines that they will not shed snow onto adjacent properties or public ways. Staff consider this standard to be met.

D. View corridors

Although there are no view corridor impacts associated with this project, the applicant has provided renderings showing the anticipated massing of the refer racks and containers as seen from Harbor View Park.

Figure 4: Proposed massing of refer racks and shipping containers seen from Harbor View Park.

E. Historic resources

This site does is not within a historic district.

The Maine Historic Preservation commission issued a letter dated June 2, 2014 finding that the current site of the International Marine Terminal does not have any significant historical or archaeological features.

F. Exterior lighting

The site lighting design focuses on the loading and unloading lanes around the reefer racks which prevents light trespass beyond the site property lines.

In addition, all proposed fixtures have cutoff optics preventing light being cast beyond 90 degrees. The proposed lighting on the reefer racks will be at the top of the structures approximately 50 feet above grade.
A full photometric plan is included as attachment P8

G. Noise and vibration
The reefer racks being proposed as part of this project do not contain any noise generating equipment. However, the racks will be used to store self-contained refrigerated containers that are outfitted with refrigeration units that will cycle on and off while the containers are stored until they are transported to their destination offsite.

An acoustic engineer, Cavanaugh Tocci Associates, was hired to conduct a full acoustic survey which demonstrated that the anticipated level of noise generated by the proposed refer racks would be within allowable noise levels defined in table 6-G of the City's Land Use Code, which states that the maximum allowable decibel level (dBA) within the WPDZ is 55 dBA between the hours of 7PM and 7AM, with no limit during daytime hours. The full acoustic survey is included as attachment P

H. Signage and wayfinding
No signage is proposed as part of this project as it is entirely within the secured freight handling area that is not accessible to the public.

I. Zoning-related design standards
The Maine Port Authority and Maine DoT have worked to address concerns from the public and Staff regarding noise from the proposed racks, and have submitted an environmental sound study conducted by Cavanaugh Tocci, which demonstrates that proposed refrigerated storage racks would not generate noise beyond levels that are permissible within the WPDZ as stated in Section 10.4.8 of the City's Land Use Code.
The Proposed project is located within the overall IMT site which has been previously vetted for meeting Shoreland and Flood Plain Management Regulations.

XI. NEIGHBORHOOD MEETING & PUBLIC COMMENT

The applicant team held a neighborhood meeting on June 7th, 2023 at 5:30 PM. The meeting took place at the IMT Maintenance and Operations Facility located at 454 Commercial Street. Five members of the public attended this meeting. Questions and comments from members of the public in attendance centered around noise, vibration and lighting impacts.

Five items of written public comment have been received and are included as attachment 4

XII. STAFF RECOMMENDATION

Subject to the proposed motions and conditions of approval listed below, Planning & Urban Development Department staff recommends that the Planning Board find that the proposed refrigerated storage racks and related site improvements at 2 West Commercial St. (PL-002433-2022) meets the applicable standards of Portland's Land Use Code.

XIII. PROPOSED MOTIONS

A. SITE PLAN REVIEW

On the basis of the application, plans, reports and other information submitted by the applicant; findings and recommendations contained in the Planning Board Report for the public hearing on March 12, 2024 for application PL-002433-2022 relevant to the site plan regulations; and the testimony presented at the Planning Board hearing, the Planning Board [finds/does not find] that the plan is in conformance with the site plan standards of the land use code subject to the following conditions of approval:

PRIOR TO APPLYING FOR A BUILDING PERMIT

- The applicant shall work with the City of Portland's Public Works Department to finalize easement language for the relocated CSO.

XIV. ATTACHMENTS

Staff Materials

1. Final Site Plan Report
2. Public meeting notice and certification
3. Notification sign certification
4. Approval letter

Applicants Submittal

A. Project Cover letter
B. Major Site Plan checklist
C. Impact on surrounding street systems
D. Access and circulation
E. Preservation of natural features
F. Landscape preservation
G. Site landscaping & buffers
H. Water quality, stormwater management and erosion control
I. Consistency with City Master Plans
J. Public safety & Fire prevention
K. Availability of public utilities
L. Snow & ice loading
M. View corridors
N. Historic resources
O. Exterior Lighting
P. Noise & Vibration (Acoustic Survey)

Q. Signage
R. Impact mitigation summary
S. Evidence of Right, Title and Interest
T. Financial and Technical Capacity
U. Evidence of State and Federal approvals
V. Zoning Analysis
W. Summary of easements and covenants
X. Review comment response – January 11, 2024
Y. Review comment response – August 30, 2023
Z. Central Maine Power letter

Plans:

P1. Title Sheet
P2. General Notes
P3. Boundary survey
P4.. Rack Elevations
P4. Duct bank detail
P5. Demolition plan
P6. Site layout plan
P7. Grading and drainage plan
P8. Utilities plan
P9. Soil erosion and sediment control plan
P10. Detail sheets
P11. Refer Rack structural notes
P12. Refer rack slab layout plan
P13. Refer rack foundation and framing
P14. Floor plans
P15. Electrical site plan
P16. Electrical site lighting schedule and parts
P17. 3D views

Planning Board Report
Planning & Urban Development Department

International Marine Terminal Refrigerated Storage Racks
2 West Commercial Street
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Maine Port Authority, Applicant

Submitted to:	Portland Planning Board	**Prepared By:**	Eric Freeman
Public Hearing Date:	March 12, 2024	**Date:**	March 6, 2024

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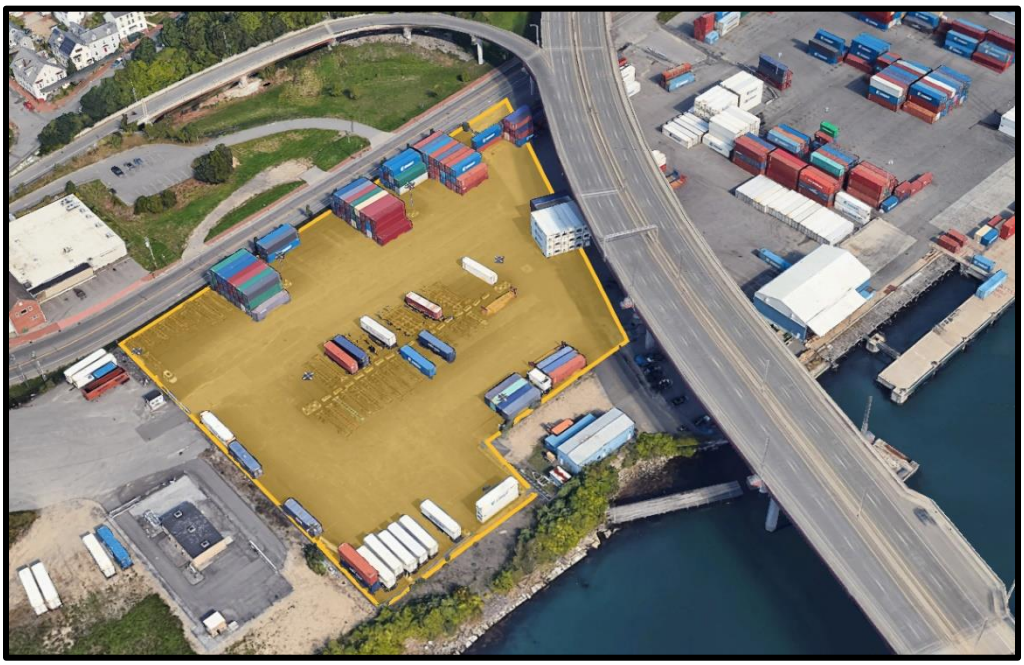

Figure 1: The existing site and proposed limit of work

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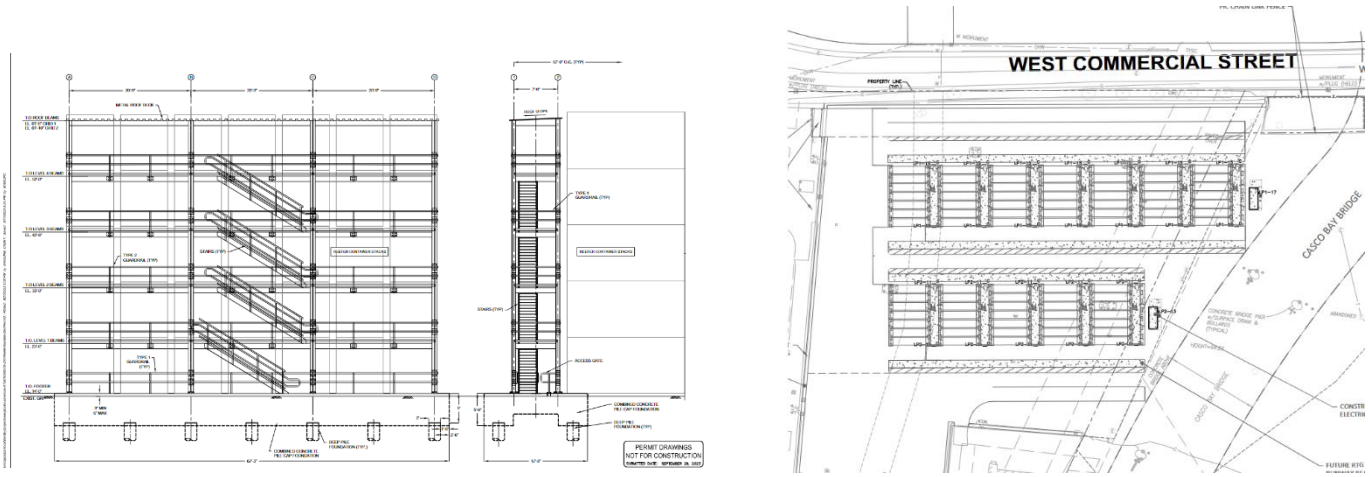

Figure 2: Profile views of the refrigerated racks

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C. Vibration
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F. Storage of vehicles
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G. Landfill of docking and berthing areas
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H. Off-street parking
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J. Lighting
See above.

K. Signs
This application does not involve the installation of any new signage.

L. Storage of pollutants and oily wastes.
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C. Availability and capacity of public utilities

Central Maine Power (CMP) has provided an ability to serve letter stating that they will be able to accommodate the anticipated increased electrical demand generated by this project (Attachment Z)

5. Site Design Standards (Section 14.6.4)

A. Massing, ventilation, and wind impact

This standard is not applicable to this application.

B. Shadows

This standard is not applicable to this application.

C. Snow and ice loading

The proposed reefer racks are the only infrastructure (building) proposed as part of this project. These structures have been designed according to Maine Building Code, IBC 2015 and ASCE 7-10 for snow and ice loading. The structures are far enough away from existing property lines that they will not shed snow onto adjacent properties or public ways. Staff consider this standard to be met.

D. View corridors

Although there are no view corridor impacts associated with this project, the applicant has provided renderings showing the anticipated massing of the refer racks and containers as seen from Harbor View Park.

Figure 4: Proposed massing of refer racks and shipping containers seen from Harbor View Park.

E. Historic resources

This site does is not within a historic district.

The Maine Historic Preservation commission issued a letter dated June 2, 2014 finding that the current site of the International Marine Terminal does not have any significant historical or archaeological features.

F. Exterior lighting

The site lighting design focuses on the loading and unloading lanes around the reefer racks which prevents light trespass beyond the site property lines.

In addition, all proposed fixtures have cutoff optics preventing light being cast beyond 90 degrees. The proposed lighting on the reefer racks will be at the top of the structures approximately 50 feet above grade.
A full photometric plan is included as attachment P8

G. Noise and vibration
The reefer racks being proposed as part of this project do not contain any noise generating equipment. However, the racks will be used to store self-contained refrigerated containers that are outfitted with refrigeration units that will cycle on and off while the containers are stored until they are transported to their destination offsite.

An acoustic engineer, Cavanaugh Tocci Associates, was hired to conduct a full acoustic survey which demonstrated that the anticipated level of noise generated by the proposed refer racks would be within allowable noise levels defined in table 6-G of the City's Land Use Code, which states that the maximum allowable decibel level (dBA) within the WPDZ is 55 dBA between the hours of 7PM and 7AM, with no limit during daytime hours. The full acoustic survey is included as attachment P

H. Signage and wayfinding
No signage is proposed as part of this project as it is entirely within the secured freight handling area that is not accessible to the public.

I. Zoning-related design standards
The Maine Port Authority and Maine DoT have worked to address concerns from the public and Staff regarding noise from the proposed racks, and have submitted an environmental sound study conducted by Cavanaugh Tocci, which demonstrates that proposed refrigerated storage racks would not generate noise beyond levels that are permissible within the WPDZ as stated in Section 10.4.8 of the City's Land Use Code.
The Proposed project is located within the overall IMT site which has been previously vetted for meeting Shoreland and Flood Plain Management Regulations.

XI. NEIGHBORHOOD MEETING & PUBLIC COMMENT

The applicant team held a neighborhood meeting on June 7th, 2023 at 5:30 PM. The meeting took place at the IMT Maintenance and Operations Facility located at 454 Commercial Street. Five members of the public attended this meeting. Questions and comments from members of the public in attendance centered around noise, vibration and lighting impacts.

Five items of written public comment have been received and are included as attachment 4

XII. STAFF RECOMMENDATION

Subject to the proposed motions and conditions of approval listed below, Planning & Urban Development Department staff recommends that the Planning Board find that the proposed refrigerated storage racks and related site improvements at 2 West Commercial St. (PL-002433-2022) meets the applicable standards of Portland's Land Use Code.

XIII. PROPOSED MOTIONS

A. SITE PLAN REVIEW

On the basis of the application, plans, reports and other information submitted by the applicant; findings and recommendations contained in the Planning Board Report for the public hearing on March 12, 2024 for application PL-002433-2022 relevant to the site plan regulations; and the testimony presented at the Planning Board hearing, the Planning Board [finds/does not find] that the plan is in conformance with the site plan standards of the land use code subject to the following conditions of approval:

PRIOR TO APPLYING FOR A BUILDING PERMIT

- The applicant shall work with the City of Portland's Public Works Department to finalize easement language for the relocated CSO.

XIV. ATTACHMENTS

Staff Materials

1. Final Site Plan Report
2. Public meeting notice and certification
3. Notification sign certification
4. Approval letter

Applicants Submittal

A. Project Cover letter
B. Major Site Plan checklist
C. Impact on surrounding street systems
D. Access and circulation
E. Preservation of natural features
F. Landscape preservation
G. Site landscaping & buffers
H. Water quality, stormwater management and erosion control
I. Consistency with City Master Plans
J. Public safety & Fire prevention
K. Availability of public utilities
L. Snow & ice loading
M. View corridors
N. Historic resources
O. Exterior Lighting
P. Noise & Vibration (Acoustic Survey)

Q. Signage
R. Impact mitigation summary
S. Evidence of Right, Title and Interest
T. Financial and Technical Capacity
U. Evidence of State and Federal approvals
V. Zoning Analysis
W. Summary of easements and covenants
X. Review comment response – January 11, 2024
Y. Review comment response – August 30, 2023
Z. Central Maine Power letter

Plans:

P1. Title Sheet
P2. General Notes
P3. Boundary survey
P4.. Rack Elevations
P4. Duct bank detail
P5. Demolition plan
P6. Site layout plan
P7. Grading and drainage plan
P8. Utilities plan
P9. Soil erosion and sediment control plan
P10. Detail sheets
P11. Refer Rack structural notes
P12. Refer rack slab layout plan
P13. Refer rack foundation and framing
P14. Floor plans
P15. Electrical site plan
P16. Electrical site lighting schedule and parts
P17. 3D views

Winton Scott
Architects

217 Commercial St, Suite 200
Portland, ME 04101
207.774.4811

June 9, 2023

City of Portland, Maine
Planning Division
Portland City Hall
389 Congress Street
Portland, ME 04101

I, Stephen Weatherhead of Winton Scott Architects hereby certify that a neighborhood meeting was held on Wednesday, June 7, 2023 at 5:30 PM at the training room of the IMT Maintenance and Operations Facility located at the IMT site. The meeting was in support of a Major Site Plan Development Application for 2 West Commercial Street (Upgrades to the West Lot of IMT Property).

I also certify that on Friday, May 26, 2023, notices were mailed to the following:

1. All addresses on the mailing list provided by the Planning Division which includes property owners within 500 feet of the proposed development (1,000 feet for subdivisions within an industrial zone or industrial zone changes).
2. Residents on the “interested parties” list.

Signed,

Stephen Weatherhead

Principal, Winton Scott Architects

Attachments

1. Copy of the notice sent
2. Sign-in sheet
3. Record of feedback

Winton Scott
Architects

217 Commercial St, Suite 200
Portland, ME 04101
207.774.4811

May 26, 2023

Dear Neighbor:

Please join us for a neighborhood meeting to discuss our plans for construction of refrigerated container racks (reefer racks) at the west lot of the IMT property. The racks are open steel framed structures with stairs and walking platforms that provide plug in points for adjacent stacked refrigerated containers to be plugged in while awaiting transport.

Meeting Location: Training room at 454 Commercial Street
(located in the eastern-most building fronting Commercial Street
at the International Marine Terminal property)

Meeting Date: Wednesday, June 7th, 2023

Meeting Time: 5:30 PM

(The Land Use Code requires that neighboring property owners and residents on an "interested parties list" be invited to participate in this neighborhood meeting. A sign-in sheet will be circulated and a record of the meeting will be taken. Both the sign-in sheet and record will be submitted to the Planning Board.)

If you have any questions, please call:
Steve Weatherhead at Winton Scott Architects 207-774-4811, Ext. 3

Signed,

Note:
Under the City of Portland land use code, an applicant for a major site plan, master development plan, subdivision of over five lots, or zoning map amendment is required to hold a neighborhood meeting within 30 days of an application being deemed complete and no less than seven calendar days before a public hearing. Should you wish to offer additional comments on this proposed development, you may forward them by e-mail to planning@portlandmaine.gov or by mail to the Planning and Urban Development Department, Planning Division, 4th Floor, 389 Congress Street Portland, ME 04101.

MAINE PORT AUTHORITY

Neighborhood Meeting Sign-In Sheet

Jacobs

Date of Meeting: June 7, 2023

Time of Meeting: 5:30 pm

Location of Meeting: 460 West Commercial Street, Portland, Maine 04102

Project Name: Portland International Marine Terminal

Refrigerated Container Yard Development

Members of the Public in Attendance

Name	Email
Suzanne Martin	Yougotthis57@gmail.com
Jonathan Moore	jonprestonmoore@gmail.com
Leslie Pohl	leslienpohl@gmail.com (N like nancy)
Bonnie MATTOZZI	bdmattozzi@yahoo.com
Domenico Mattozzi	bdmattozzi2@yahoo.com

Date of Meeting: June 07, 2023

Time of Meeting: 5:30 pm

Location of Meeting: 460 West Commercial Street, Portland, Maine 04102

Project Name: Portland International Marine Terminal Refrigerated Container Yard Development

Members of the Public in Attendance

Name	Email
Suzanne Martin	Yougotthis57@gmail.com
Jonethon Moore	joneprestonmoore@gmail.com
Leslie Pohl	leslienpohl@gmail.com
Bonnie Mattozzi	bdmattozzi@yahoo.com
Domenico Mattozzi	bdmattozzi@yahoo.com

Development and Consultant Team in Attendance

Name	Email
Matthew Burns	matthew.burns@maineports.com
Chelsea Pettengill	chelsea.pettengill@maineports.com
Steve Weatherhead	sweatherhead@wintonscott.com
Craig Morin	Craig.Morin@Jacobs.com
Tristan Donovan	Tristan.Donovan@Jacobs.com
Gareth Rowe	Gareth.Rowe@Jacobs.com

Concern	Question	Who	Actions
Vibrational from piling driving and other works	How are we going to control the vibrational effects from works to housing nearby	Jonethon Moore	
Electrical Draw	How are we going to mitigate/eliminate the increase of electrical draw from the grid? (Concern there will be continuous blackouts)	Bonnie Mattozzi	
Noise	What will be the decibel level in total from the reefer racks during operation? (Compared to the hospital)	Bonnie Mattozzi/ Suzanne Martin	Provide city ordinances and previous noise study
Noise	What are the zoning requirements for noise and city ordinances for acceptable noise levels in a commercial zone vs residential?	Bonnie Mattozzi	
Noise	Will noise travel from the worksite to Residential housing? If yes, what is that level?	Bonnie Mattozzi	
Lighting	Will there be issues of the lighting shining into residents' houses? If yes, how do you plan to eliminate that from occurring?	Jonethon Moore	
Dust	What are the dust control measures in place? Will dust reach residents housing which are over 300ft away?	Bonnie Mattozzi/ Suzanne Martin	
Views…	How will the reefer racks impact the waterfront view?	Suzanne Martin	Provide a rendered image of the reefer racks from the view from Harbor View Memorial Park

Important Links
https://www.portland.gov/bds/noise/about/title-18-noise-code
https://www.portland.gov/bds/noise/construction-noise-and-regulations

Winton Scott
Architects

217 Commercial St, Suite 200
Portland, ME 04101
207.774.4811

March 1, 2024

City of Portland
Planning & Urban Development Department

RE: Major Site Plan Review Submission - International Marine Terminal Refrigerated Container Yard Development Project, 460 Commercial Street. Application PL-002443

I, Stephen Weatherhead hereby certify that a Notice Of Planning Board Meeting Sign was posted in front of the project site visible from the public right of way on Tuesday, February 27, 2024. It will be monitored daily and remain in place until the scheduled Planning Board Meeting Date of March 12, 2024.

Pictures of the sign design and the signs in situ are attached on the following page.

Signed,

Stephen Weatherhead, Principal

Winton Scott Architects

EIMSKIP
NOTICE OF
PUBLIC MEETING
CITY OF PORTLAND
PLANNING BOARD

469 COMMERCIAL ST
MEETING DATE:
03/12/2024
APP. ID #: PL-002443
NOTICE OF
PUBLIC MEETING
CITY OF PORTLAND
PLANNING BOARD

460 COMMERCIAL ST

APP. ID #: PL-002443

MEETING DATE:

03/12/2024

NOTICE OF PUBLIC MEETING

CITY OF PORTLAND PLANNING BOARD

Find agenda at: www.portlandmaine.gov/agendas

For more information, call (207) 874-8719

CITY OF PORTLAND, MAINE

PLANNING BOARD

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

March 12, 2024

Stephen Weatherhead
Winton Scott Architects
217 Commercial St, Suite 200
Portland, Maine 0411

Project Name:	Major Site Plan	**Project ID:**	PL-002443-2023
Address:	2 West Commercial Street	**CBL:**	059 A001
Applicant:	Maine Port Authority		
Planner:	Eric Freeman		

Dear Stephen,

On March 12, 2024, the Planning Board approved a major site plan application for the Maine Port Authority to construct refrigerated container racks with associated site improvements located at 2 West Commercial street in the Waterfront Port Development Zone. The decision is based upon the application, documents and plans as submitted. The Planning Board reviewed the proposal for conformance with the standards of the Site Plan Ordinance, Ch. 14, Article 14, Section 14.6 and the Waterfront Port Development Zone Standards, Ch. 10 Article 4.8.
Based on the information provided to the Board in the application, plans, and reports through testimony and other information submitted by the applicant, the Planning Board adopted the findings, conclusions and recommendations contained in the Planning Board Report for the public hearing on March 12, 2024 which is attached hereto and incorporated herein by reference. Based upon those findings, conclusions and recommendations, the Planning Board found that the application met all relevant standards and voted (X-X) to approve the application with the following conditions as presented below.

Site Plan Review

On the basis of the application, plans, reports and other information submitted by the Applicant; findings and recommendations contained in the Planning Board Report for the public hearing on March 12, 2024 for application # PL-002443-2023 relevant to the site plan regulations; and the testimony presented at the Planning Board hearing, the Planning Board voted (X-X) to find that the plan is in conformance with the site plan standards of the Land Use Code, subject to the following conditions of approval:

PRIOR TO APPLYING FOR A BUILDING PERMIT

1. The applicant shall provide an ability to serve letter from Central Maine Power and the Portland Water District.

Standard Procedures

Note: The following standard procedures and requirements apply to all approved site plans:

1. Site Plan Expiration The site plan approval will be deemed to have expired unless work has commenced within one (1) year of the approval or within a time period up to three (3) years from the approval date as agreed upon in writing by the City and the applicant. Requests to extend approvals must be received before the one (1) year expiration date.

2. Separate Building Permits Are Required This approval does not constitute approval of building plans, which must be reviewed and approved by the City of Portland's Permitting and Inspections Department.

3. Performance Guarantee and Inspection Fees A performance guarantee covering the site improvements and an inspection fee payment of 2.0% of the guarantee amount and three (3) final sets of plans must be submitted to and approved by the Planning and Urban Development Department and Public Works Department prior to the release of a building permit, street opening permit or certificate of occupancy for site plans.

4. Construction Management Plans The applicant, contractor and subcontractors are required to conform to the approved Construction Management Plan, and all conditions contained within the project's approval, for the entire duration of the project. Any amendments to the approved Construction Management Plan shall be reviewed and approved by the Department of Public Works prior to the execution. The Planning Authority and the Department of Public Works have the right to seek revisions to an approved Construction Management Plan. The applicant shall coordinate the project's construction schedule with the timing of nearby construction activities to avoid cumulative impacts on a neighborhood and prevent unsafe vehicle and pedestrian movements. Accordingly, nearby construction activities could involve a delay in the commencement of construction.

5. Preconstruction Meeting Prior to the release of a building permit and scheduling of a preconstruction meeting, a hard copy set of approved plans shall be submitted to the Development Review Coordinator. A pre-construction meeting shall be held at the project site

with the contractor, Development Review Coordinator, Public Works representative, and owner to review the construction schedule and critical aspects of the site work. At that time, the Development Review Coordinator will confirm that the contractor is working from the approved site plan and the approved Construction Management Plan. The site/building contractor shall provide one (1) copy of a detailed construction schedule to the attending City representative. It shall be the contractor's responsibility to arrange a mutually agreeable time for the pre-construction meeting.

6. Department of Public Works Permits If work or obstructions will occur within the public right-of-way, such as utilities, curb, sidewalk, driveway construction, site deliveries and equipment siting, a Street Opening and/or Occupancy Permits are required for your site. Please contact the Department of Public Works Permit Clerk at (207) 874-8300, ext. 8828. (Only excavators licensed by the City of Portland are eligible.)

7. Develop Site According to Plan The site shall be developed and maintained as depicted on the site plan and in the written submission of the applicant. Any modifications of an approved site plan or alteration of a parcel, or of any approved exterior elevations, which were the subject of site plan approval after May 20, 1974, shall require the prior approval of an amended site plan by the Planning Board or Planning Authority pursuant to the terms of Chapter 14, Land Use, of the Portland City Code.

8. Stormwater Management The owner/operator of an approved stormwater management system, and all assigns shall comply with the conditions of Chapter 32, Stormwater including Article III, Post Construction Stormwater Management, which specifies the annual inspections and reporting requirements.

   A maintenance agreement for the stormwater drainage system, as attached, or in substantially the same form, shall be submitted for review by Corporation Counsel. Once approved, the document shall be signed and recorded at the Cumberland County Registry of Deeds prior to the issuance of a building permit. Final copies shall be submitted to both the Department of Planning and Urban Development and the Department of Public Works.

9. Defect Guarantee A defect guarantee, consisting of 10% of the performance guarantee, must be posted before the performance guarantee will be released.

10. As-Built Final Plans Final sets of as-built plans shall be submitted digitally to the Planning and Urban Development Department, on a CD or DVD, in AutoCAD format (.dwg), release AutoCAD 2005 or greater. Please provide one hard copy of the mylar.

11. Mylar Copies Mylar copies of the as-built drawings for the public streets and other public infrastructure in the subdivision must be submitted to Public Works prior to the issuance of a certificate of occupancy.

12. Impact Fees New development or changes of use that result in net new residential dwelling units, non- residential building square footage, or water meters, are subject to the City of Portland's impact fee ordinance (Chapter 14, Article XVII). Impact fees are calculated at the

time of building permit and must be paid prior to the certificate of occupancy. For more information, visit https://www.portlandmaine.gov/2409/Impact-Fees

The Development Review Coordinator must be notified five (5) working days prior to the date required for final site inspection. The Development Review Coordinator can be reached at the Planning and Urban Development Department at drc@portlandmaine.gov or (207)874-8984. All site plan requirements must be completed and approved by the Development Review Coordinator prior to issuance of a Certificate of Occupancy. Please schedule any property closing with these requirements in mind.

If there are any questions, please contact Eric Freeman at (207)874-8724 or via email at efreeman@portlandmaine.gov

Sincerely,

Brandon Mazer, Planning Board Chair

Attachments:
1. Planning Board Report
2. Portland City Code: Chapter 32
3. Sample Stormwater Maintenance Agreement
4. Performance Guarantee Packet

Winton Scott
Architects

217 Commercial St, Suite 200
Portland, ME 04101
207.774.4811

April 4, 2023

Permitting & Inspections Department
City of Portland
389 Congress Street
Portland, ME 04101

RE: Major Site Plan Review Submission - International Marine Terminal Refrigerated Container Yard Development Project, 460 Commercial Street.

To Whom it May Concern:

Attached please find submission materials in support of the Major Site Plan Review process for the project listed above. The project falls within the WPDZ and Shoreland Overlay Zones.

The project involves upgrades to the west lot of the IMT property, including construction of refrigerated container racks (reefer racks), pile supported foundations, heavy duty pavement, and additions to the site drainage system. The reefer racks are steel frames with staircases connecting the floors. Each floor has outlets where the stacked refrigerated containers can be plugged in. The containers will be stacked 5 high for a total height of approximately 50 feet.

The reefer racks will be supported on pile supported concrete slabs, which will also provide support for the containers. The west lot is currently paved with porous asphalt, which will be replaced by a heavy duty pavement section to accommodate the heavier traffic loads. Currently, the porous asphalt provides the drainage system for the site, but with its removal, a new drainage system will be constructed. The gate at the southwestern end of the site will be moved to provide better traffic flow in and out of the site.

We look forward to working with Planning staff and the Board and stand ready to address any questions and/or provide additional information deemed necessary in support of the project review process.

Sincerely,

Stephen Weatherhead, Principal
Winton Scott Architects

CITY OF PORTLAND
Planning & Urban Development Department

EXHIBIT 2- GENERAL DOCUMENT AND DRAWING CHECKLIST

MAJOR SITE PLAN
GENERAL DOCUMENT AND DRAWINGS CHECKLIST

Please submit each document as a separate PDF file.
Please confirm by electronically checking the boxes in the left-hand column.

**** PLEASE FILL OUT AND UPLOAD THE ZONING ASSESSMENT TABLE AND WAIVER TABLE SEPARATELY AS NOTED BELOW ****

At the time of application submission, please contact the Department of Public Works regarding E-911 addressing for your project.

EXHIBIT	GENERAL APPLICATION DOCUMENTS		
1	Yes	NA	**Project Description** • Cover letter with detailed project description
2	Yes	NA	**Completed Checklist** (this document)
3	Yes	NA	**Evidence of Right, Title, and Interest** • Deeds, leases, or purchase and sales agreements
4	Yes	NA	**Evidence of State or Federal Approvals** • Permits or letters of non-jurisdiction, if applicable
5	Yes	NA	**Zoning Assessment** (see Zoning Assessment Table) Summary of compliance with use and dimensional standards of the land use code
6	Yes	NA	**Site Plan Standards Assessment** (see Section 14.6 of the land use code) • Summary of project compliance with site plan standards of the land use code
7	Yes	NA	**Summary of Existing and/or Proposed Easements or Covenants, applicable.** • Evidence of existing easements and any proposed easements, covenants, public or private rights-of-way
—	Yes	NA	**Waiver Requests** (see Waiver Table) • Written request for waiver describing request and compliance with applicable waiver standards
8	Yes	NA	**Financial Capability** • Letter or evidence from a financial institution or third party verifying financial capacity to undertake project
9	Yes	NA	**Technical Capability** • Evidence of technical capability of applicant and consultants – resumes and/or examples of past projects

MAJOR SITE PLAN
STANDARDS AND SUBMISSION CHECKLIST

Provide assessment of compliance with standards and include supplemental documentation, as applicable.
Please submit each document as a separate PDF file.

EXHIBIT	TRANSPORTATION	
10	Yes NA	**Impact on Surrounding Street Systems (14-14.6.1(A))** ● Describe incremental volume of traffic impacts and mitigation measures. If needed
11	Yes NA	**Access and Circulation (14-14.6.1(B))** Identify and describe the following: ● Site access and internal circulation, including ADA access ● Drive-up features, if applicable ● Loading and servicing needs, routes, and geometry, providing turning templates for delivery vehicles, if applicable ● Sidewalks and condition along street frontages and internal walkways ● Engineered details for ADA ramps and public sidewalks, meeting sidewalk material policy and construction requirements (Technical Manual, Section 1)
—	Yes NA	**Public Transit (14-14.6.1(C)), if applicable** Identify and describe the following: ● Existing available transit service and proposed transit improvements, including design details, such as easement, pad base, and shelter
—	Yes NA	**Off-Street Parking (14-14.6.1(D)), if applicable** Identify and describe the following: ● Proposed vehicular and bicycle parking supply (including ADA-compliant parking) in relation to applicable parking requirements in Article 19 of the land use code ● Curb cut separation and parking layout (Technical Manual, Section 1) ● Construction details for bicycle racks ● Management plan for snow storage and removal
—	Yes NA	**Transportation Demand Management (TDM) (14-14.6.1(E)), if applicable** ● Provide TDM plan drafted in accordance with Technical Manual Section 1 requirements

EXHIBIT	ENVIRONMENTAL		
12	Yes	NA	**Preservation of Significant Natural Features (14-14.6.2(A)), if applicable** Identify and describe the following: ● High and moderate value waterfowl and wading habitat ● Aquifers (for Casco Bay Islands) ● Waterbodies (including wetlands, watercourses, significant vernal pools and floodplains) ● Proposed preservation areas and protection measures ● Documentation from environmental compliance consultants and determinations from applicable state and federal agencies
13	Yes	NA	**Landscape Preservation (14-14.6.2(B))** Identify and describe the following: ● Measures to preserve trees, including within required zoning setbacks (Technical Manual, Section 4) ● Measures to protect existing vegetation during construction
14	Yes	NA	**Site Landscaping and Buffers (14-14.6.2(C))** Identify and describe the following: ● Overall landscaping approach and consistency with standards ● The use of screening and buffering of service areas and between non-residential and residential uses ● Existing Heritage or Feature Trees on site and measures to preserve ● Compliance with street tree requirements
15	Yes	NA	**Water Quality, Stormwater Management, and Erosion Control (14-14.6.2(D))** Identify and describe the following: ● Erosion and sedimentation control plan and measures ● Evidence of compliance with Urban Impaired Stream Standards pursuant to DEP Chapter 500 stormwater law, as applicable ● Subsurface sanitary sewage disposal and groundwater protection measures

	PUBLIC INFRASTRUCTURE AND COMMUNITY SAFETY		
16	**Yes**	**NA**	**Consistency with City Master Plans (14-14.6.3(A))** ● Describe proposed easements, rights and improvements to connect or continue off-premises public infrastructure, as applicable
17	**Yes**	**NA**	**Public Safety and Fire Prevention (14-14.6.3(B))** Identify and describe the following: ● Compliance with Crime Prevention through Environmental Design (CPTED) requirements (Technical Manual, Section 3) ● Emergency vehicle access ● Consistency with public safety standards (Technical Manual, Section 3)
18	**Yes**	**NA**	**Availability and Adequacy of Public Utilities (14-14.6.3(C)) (Technical Manual, Sections 2 & 9)** Identify and describe the following: ● Electrical services, including providing underground services ● Existing and proposed connections for public utilities and required public utility upgrades ● Sewer line connections
	SITE DESIGN		
—	**Yes**	**NA**	**Massing, Ventilations and Wind Impact (14-14.6.4(A))** Identify and describe the following: ● Wind and ventilation impacts on adjoining structures and/or adjacent public spaces, including wind study, if applicable ● Bulk, location, or height impacts on adjoining structures
—	**Yes**	**NA**	**Shadows (14-14.6.4(B)), if applicable** ● Provide shadow analysis of impacts on publicly accessible open space (Technical Manual, Section 11)
19	**Yes**	**NA**	**Snow and Ice Loading (14-14.6.4(C))** ● Describe building design measures to prevent snow and ice from loading or falling onto adjacent properties or public ways
20	**Yes**	**NA**	**View Corridors (14-14.6.4(D)), if applicable** ● Describe any protection of designated view corridors (Portland Design Manual, Appendix. 1)
21	**Yes**	**NA**	**Historic Resources (14-14.6.4(E)), if applicable** Identify and describe the following: ● The site's status as a designated landmark, within a historic district or historic landscape district, or within 100 feet of any designated landmark, historic district, or historic landscape district ● Compliance with standards for preservation and documentation of archaeological resources

22	Yes	NA	**Exterior Lighting (14-14.6.4(F))** ● Describe how the proposed site lighting will adhere to photometrics requirements as it relates to light trespass and full cutoff fixture design, pursuant to Technical Manual Section 12
23	Yes	NA	**Noise and Vibration (14-14.6.4(G))** ● Provide data on noise levels for HVAC and other mechanical equipment, such as design specifications, to demonstrate consistency with state and federal noise emissions requirements as well as City code
24	Yes	NA	**Signage and Wayfinding (14-14.6.4(H)), if applicable** ● Provide signage plan showing the location, dimensions, height and setback of all existing and proposed signs ● Provide drawings of all commercial and directional signage on site
25	Yes	NA	**Zone-Related Design Standards (14-14.6.4(I))** ● Address any applicable design review standards by zone, including compliance with Design Manual

NOT LISTED ON THE GENERAL DOCUMENT AND DRAWING CHECKLIST BUT REQUIRED BY SECTION 10.4.8 - PERFORMANCE STANDARDS:

Impact Mitigation Narrative

26 • Summarize how the project meets applicable performance standards for the Waterfron Development Zone

MAJOR SITE PLAN
DRAWINGS CHECKLIST

Please upload the following DRAWINGS with the listed details into e-Plan as separate pdfs.

All drawings must be submitted in a 24 x 36 sheet size.

BOUNDARY SURVEY (stamped by a Maine Licensed Surveyor and drawn as per Technical Manual Sec. 13)

SITE PLAN(s) (stamped by a Maine Licensed Professional Engineer) including:

All sheets – Include a title block with project title and the following information:

- Project street address
- Name and address of property owner & applicant
- Licensed design professional, incl firm that produced plans
- North arrow
- Date of preparation and revision history block
- Tax parcel (chart, block, and lot) number

Existing Conditions Plan with the following:

- Existing structures, with distance from primary building façade(s) to the property line
- Approximate location of structures on abutting properties
- All streets and intersections adjacent to the site
- Existing driveways, pedestrian ways, and bicycle infrastructure, including dimensions and materials
- Existing public transit infrastructure
- Existing vehicle & bicycle parking areas
- Existing utilities on site and within adjacent rights-of-way
- Existing grades (two-foot contours preferred)
- Location of water courses, wetlands, and vegetation, or other significant natural features
- Existing soil conditions and location of test pits and borings
- Zoning boundary lines, including overlays
- Location of all existing easements and rights-of-way

Proposed Site Plan with the following:

- Proposed structures, including distance from primary building façade(s) to property lines
- Ground floor area, and finished floor elevations for all buildings
- Any proposed geometric modifications to streets and intersections adjacent to site
- Location, dimensions and materials of all proposed driveways, vehicle, bicycle, & pedestrian access ways with corresponding curb lines
- Engineered specifications/ cross-sections for proposed driveways, sidewalks & paved areas
- Location and dimensions of proposed loading areas, including turning templates
- Proposed transit infrastructure with dimensions/ engineering specifications
- Location of vehicle and bicycle parking with dimensions and engineering specifications
- Location of all snow storage areas
- Exterior lighting (please see Technical Manual Sec. 12 for photometrics requirements)

• Location of fire hydrants • Location of solid waste management receptacles • Location of all proposed HVAC and mechanical equipment, including proposed screening, where applicable • Location of proposed easements and rights-of-way, including dimensions • Please utilize color-coding and/or hatches and shading to delineate changes between the pre and post development condition as needed
UTILITY PLAN including:
• Proposed electrical infrastructure • Location, sizing and directional flows of all proposed sewer and stormwater infrastructure • Location and dimensions of off-premises public or publicly accessible infrastructure adjacent to site • Electric utility infrastructure
GRADING AND DRAINAGE PLAN including:
• Proposed grades • Proposed stormwater management measures meeting Technical Manual (Section 5) standards • Any proposed alteration of a watercourse or wetlands • Any groundwater protection measures • Proposed buffers and preservation measures for wetlands or significant natural features
LANDSCAPE PLAN including:
• Existing vegetation to be preserved and preservation measures • Proposed landscaping, screening, and street trees, including caliper widths for trees • Planting schedule, including street trees
ARCHITECTURAL PLANS AND RENDERINGS including:
• Exterior building elevations, color renderings, illustrations of all sides • Axonometric and street-level views for structures greater than three stories in height • Provide context drawings, if applicable (Design Manual, page 1) • Floor plans
CONSTRUCTION MANAGEMENT PLAN including:
• Specifics on traffic control, sidewalk sheds, and pedestrian rerouting • Include a drawing and written narrative
OTHER
• Details and cross-sections, as necessary

Winton Scott
Architects

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Portland, ME 04101
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EXHIBIT 10 - TRANSPORTATION STANDARDS 14.6.1

See attached document immediately following this page.

Impact On Surrounding Street Systems

This project will not increase traffic on Commercial Street. Earlier projects at the Portland International Marine Terminal since 2016 included in-depth traffic studies and subsequent engineered designs which upgraded the local roadway and improved traffic flow along West Commercial Street. Those designs captured the future truck traffic anticipated by utilization of the western portions of the Terminal. Currently, the signalized intersection of West Commercial Street and Beech Street is underutilized and will now have the opportunity to fulfill its functionality with this project.

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EXHIBIT 11 - TRANSPORTATION STANDARDS 14.6.1

14.6.1 - Transportation Standards

B. Access & Circulation

This project will not create the need for any changes to existing points of access to the site. The project is located within the secured existing freight handling yard where there is no public pedestrian or vehicular access allowed. The yard is configured to handle the cranes and transport vehicles that operate there managing the flow of incoming and outgoing storage containers only.

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EXHIBIT 12 - ENVIRONMENTAL QUALITY STANDARDS 14.6.2

14.6.2 - Environmental Quality Standards:

A. Preservation of Significant Natural Features

See attached document immediately following this page.

Preservation of Significant Natural Features

This project will have no impact on natural features. The site is currently fully developed and paved. The limits of development and paving will not be changed as part of this project, and no natural features will be disturbed. Sediment and erosion control and stormwater management best management practices have been proposed in accordance with Maine DEP Chapter 500 regulations. Additionally, the container yard operations will be conducted within the limits of paving.

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EXHIBIT 13 - ENVIRONMENTAL QUALITY STANDARDS 14.6.2

14.6.2 - Environmental Quality Standards:

B. Landscape Preservation

See attached document immediately following this page.

Landscape Preservation

This project will have no impact on the existing landscape. All proposed development is occurring within areas of the Terminal that are already supporting container operations. Containers will continue to be stacked within this area, but will be stacked in an efficient manner with an orderly layout conducive to port industry standards. The existing landscaping along West Commercial Street will not be affected during construction. Any damage to existing landscaping will be replaced in-kind by the contractor.

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EXHIBIT 14 - ENVIRONMENTAL QUALITY STANDARDS 14.6.2

14.6.2 - Environmental Quality Standards:

C. Site Landscaping and Buffers

See attached document immediately following this page.

Site Landscaping and Buffers

Since this project is a redevelopment of an already developed area which was originally designed to meet the Chapter 14 landscaping requirements, no landscaping is proposed. Existing landscaping within the buffer along West Commercial Street will be maintained and protected during construction. Any vegetation within the buffer that is damaged during construction will be replaced in-kind.

Att. H

Jacobs

Port Of Portland
International Marine Terminal (IMT)

Stormwater Management Report

Revision no: 0

Freezer Container Area Renovation Project
Port Infrastructure Development Program (PIDP)
January 11, 2024

Executive summary

This Stormwater Management Report has been prepared on behalf of the Maine Port Authority (MPA) for the renovation of the Freezer Container Area at the International Marine Terminal (IMT) located on Commercial Street, adjacent to Fore River. The purpose of the report is to demonstrate compliance with the Maine DEP Stormwater Management Laws. MPA is a part of the Maine Department of Transportation (MaineDOT), and therefore is covered under the MaineDOT General Permit.

The following activities were performed to prepare the report including site visits, reviewing reports from the U.S. Geological Survey (USGS); the Natural Resources Conservation Service (NCRS); the Federal Emergency Management Agency (FEMA); Maine DEP; review of environmentally sensitive resource areas within the project limits and surrounding properties; review of total station and geographic position system (GPS) survey; and, the analysis of pre- and post-construction conditions using the computer modeling Autodesk Storm and Sanitary Sewer Analysis (SSA) application.

Contents

Executive summary i
1. Introduction 1
2. Existing Conditions 4
3. Proposed Conditions 6
4. Stormwater Management 8

Appendices

Appendix A. Figures .....
Appendix B. Stormwater Resources .....
Appendix C. Stormwater Analysis .....

1. Introduction

Jacobs has prepared this Stormwater Management Report to provide an analysis of the stormwater drainage design associated with the Freezer Container Area Renovation project located on Commercial Street in Portland, Maine. The proposed stormwater system was designed to maintain existing drainage patterns, meet stormwater regulations, and maximize water quality to the greatest extent practical. The existing 24-inch combined sewer overflow (CSO) outfall pipe will be upsized to 48" and relocated outside of the proposed freezer container storage area while being maintained within the Maine Port Authority property. The reason to relocate the existing CSO outfall is to mitigate potential impacts to the CSO outfall pipe due to pile driving activities.

The stormwater design, to the greatest extent practical, follows the City of Portland regulations as well as the guidelines outlined in the Memorandum of Agreement (MOA) Stormwater Management between the MaineDOT, Maine Turnpike Authority and Maine Department of Environmental Protection (MaineDEP) dated 06/27/2017 as well as the MaineDEP Site Location of Development Act General Permit (MaineDEP GP) for the MaineDOT dated 08/18/2021. Both of these guidance documents outline the requirements for MaineDOT projects in order to meet the standards of the MaineDEP's Chapter 500 Stormwater Management Rules.

In doing so Jacobs will eliminate ponding within the site area, upsize pipes as required to prevent surcharge, install stormwater treatment systems, and stabilize existing pipe outfalls as part of the proposed work for this project.

A. Site History

The present parcel historically served as extensive railroad, industrial and marine operations as can be seen in the aerial photo below. Over the last 30 to 40 years, rail activity along this parcel has decreased. Currently, rail service terminates prior to entering the site at a loading pad utilized by IMT and the remaining portion of the site is primarily used as storage yards, with the western parcel being undeveloped.

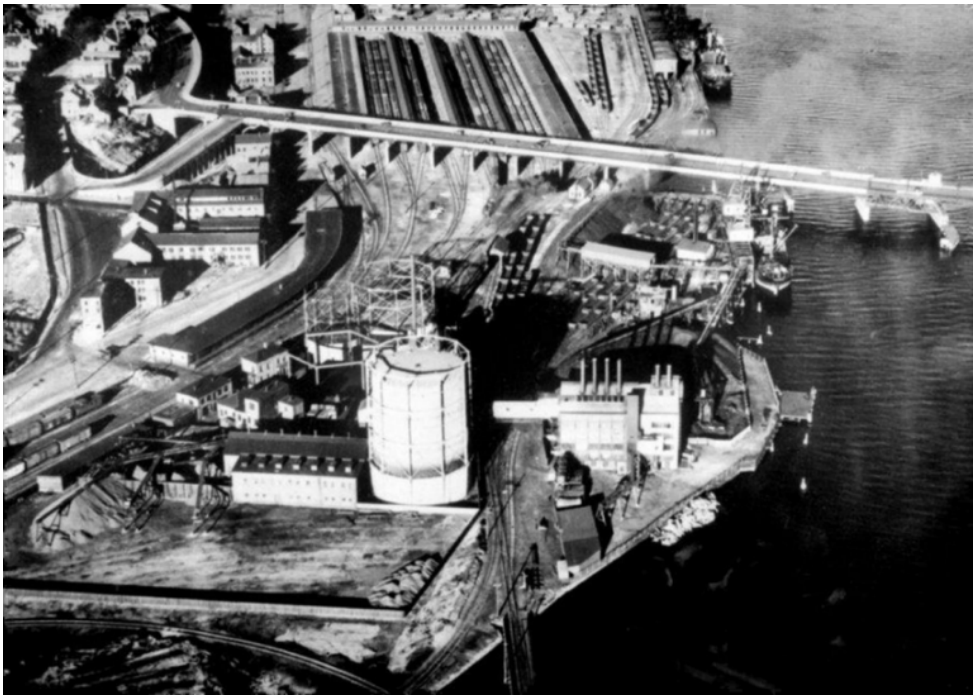


Image 1 – Historic Photo, showing Industrial & Rail use (circa 1940)

B. Site Visit

Currently, the western portion of the site is undeveloped with tracts of rail whereas the eastern portion is developed and used by IMT today. Since the project only plans to modify a portion of the existing lot, this analysis will only factor in the changes associated with the proposed limit of work. The proposed limit of work is shown on the Site Layout Plan included in Appendix E.

The existing portion of the site to be modified is approximately 5.10 acres and is comprised of the following ground covers:

- 0.05 acres Grass
- 0.05 acres Gravel
- 1.80 acres Pavement
- 3.20 acres Porous Pavement

Below are recent photos of the site which depict the above allocated areas.

Image 2 – Recent Photo, Gravel & Pervious Pavement Areas

Image 3 – Recent Photo, Pavement Area

Image 4 – Recent Photo, Grass Areas

2. Existing Conditions

A. Existing Site Features

The project site is located on Commercial Street in Portland, Maine. The portion of the site under investigation is approximately 5.10 acres and shared with MaineDOT & the IMT – Eimskip Warehouse. The site is bound by Commercial Street to the North, Maine Port Authority to the East, Fore River to the South and an undeveloped property to the West. The property to the West will become the location of a cold storage facility which is currently under construction. For more information about the site, refer to Figure 1, Site Map, in Appendix A.

The project site develops currentlydeveloped as an open lot used for chassis and empty container storage. The site shares access with a MaineDOT Facility which operates beneath the Casco Bay Overpass for maintenance and inspection purposes as well as the IMT – Eimskip Warehouse building for its port operations.

According to the FEMA Flood Insurance Rate Map, Map Number 2300510013B, the project is within a special flood hazard area subject to inundation by the 1% annual chance flood (100-year flood). A portion of the site, along Fore River, is within the 0.2% annual chance flood plain (500-year flood). For more information regarding the flood plains, refer to Figure 2, FEMA Flood Map, in Appendix A.

B. Existing Drainage Features

<u>Commercial Street</u>

Drainage flows to a series of catch basins located along the edge of pavement and in the gravel shoulder. Basins are connected via an 18" closed brick drainage system located within the Commercial Street Right of Way. The closed drainage system ties into the 24" Combined Sewer Overflow (CSO) which in turn traverses the IMT site and discharges into the Fore River.

<u>Undeveloped Area</u> (future cold storage building and parking)

The portion of the site has no known drainage infrastructure and surface runoff infiltrates into the existing ground.

<u>Existing Operating Yard</u>

The existing operating yard, which resides on the paved portion of the lot on the eastern side of the Casco Bay Overpass directs sheet flow runoff into a low-lying area beneath the bridge. It is then captured by existing catch basin structures and directed through two parallel drainage networks which eventually outfall into the Fore River.

<u>Existing Container Yard</u>

The container yard portion of the site utilizes the porous pavement infiltration design from the original project back in 2014 and its associated underdrain system. The design captures stormwater as it infiltrates and directs it into the existing CSO that traverses the site and discharges into the Fore River. The existing porous pavement limit, underdrains and CSO are shown on the survey provided by Owen Haskell and the Site Layout Plan included in Appendix E.

C. Existing Soil Features

The site was originally inspected on January 21, 2014, to determine evidence of ecological communities that could indicate potential presence of state or federal jurisdictional wetlands. It was determined that wetlands do not exist on the site (other than the bank of the Fore River) and that the existing soils are well drained.

The soils on the project site are cut and fill lands with moderately well drained drainage class. No surface waters other than the adjacent Fore River occur at the site. From the former land use indicators at the site, the entire area is appropriately identified on the USGS Web Soil Survey, and is included as Figure 3 in Appendix A.

D. Existing Catchment Areas

For the existing conditions hydrologic analysis, the site was divided into multiple drainage areas that discharge runoff into the three (3) existing outfalls. Existing Catchment Area 1 (ECA-1) contributes to the CSO systems that are to be relocated. Existing Catchment Area 2 (ECA-2) has potential to contribute flows to the existing Casco Bay Overpass system or the Eimskip system. Therefore, our analysis will look to analyze only the CSO system and prove a reduction in contribution to the Casco Bay Overpass & Eimskip systems. For more detailed information please see the existing drainage area map included in Appendix B.

Existing Catchment Area 1 (ECA-1)

This area is located at the western portion of the Container Yard. The area is made up of all porous pavement, however, in this scenario, it will be treated as impervious due to compaction and use of the lot over time. All runoff is captured via two catch basins at low lying areas or the underdrains below the surface, and introduced to the CSO main line where it will outfall along Fore River.

Existing Catchment Area 2 (ECA-2)

This area is located at the eastern portion of the Container Yard. The area is a mix of existing porous pavement and existing bituminous concrete pavement. The areas will be treated as all impervious. All runoff is captured through multiple catch basins within the low-lying area below the Casco Bay Overpass. This low-lying area collects not only the project site, but a portion of the Casco Bay Overpass as well as the Eimskip operating yard further west. The runoff is then introduced to the two parallel stormwater main lines where they will outfall along Fore River.

Table 1 – Existing Drainage Areas

DESCRIPTION	AREA (AC)
Existing Catchment Area 1 (ECA-1)	1.72
Existing Catchment Area 2 (ECA-2)	3.38
Total Drainage Area	5.10

3. Proposed Conditions

A. Proposed Site Features

The project includes the construction of an updated refrigerated container rack system which will allow for a more organized and operational site within the property limits. The updated system will be able to provide approximately 420 reefer outlets, which increases the number of outlets by 300 from the 120 currently present. The proposed development plans to utilize as much of the existing site, drainage, and utility features as possible, while taking into consideration any residual effects of the updates to the existing site.

The existing porous pavement and underdrain system will be removed and replaced with gravel base course, HMA base, intermediate and surface HMA courses which will be able to withstand the anticipated vehicle loading of the container yard in the proposed conditions.

The proposed stormwater system for the project was designed to accommodate the operational needs of the facility, while improving upon the quality of stormwater discharged from the site. The protective measures taken are to ensure adequate removal of suspended solids produced from runoff which will ultimately leave the project area.

B. Proposed Drainage Features

Proposed Container Yard

Since the project limits are only within the container yard portion of the site, all stormwater related improvements to this area are noted here.

The proposed grading for the site will maintain similar drainage patterns to that of existing, while removing the potential for sheet flow offsite with the addition of bituminous concrete curbing. The addition of curbing will ensure the runoff associated with the container yard is maintained onsite, within a closed drainage system, and further protects the surrounding area from any possibility of unnecessary erosion, ponding, or untreated stormwater outfalls.

The project proposes new deep sump catch basins, additional drainage manholes and adequately sized drainage pipe to help alleviate any new or existing stormwater concerns. The project will also provide two JellyfishFilters prior to connections to the CSO network to ensure adequate TSS removal prior to entering the system.

Since a portion of the existing CSO main line is located within the envelope of the proposed reefer rack piles and foundations, the proposed drainage design offers to relocate the CSO main line outside of its influence. Due to the relocation, new piping and associated structures will be provided within the main line.

C. Proposed Catchment Areas

For the proposed conditions hydrologic analysis, the site was divided into multiple drainage areas that discharge runoff into three (3) existing outfalls. Three drainage areas contribute to the CSO system, and one drainage area contributes to the other existing stormwater systems below Casco Bay Overpass. Both networks were analyzed as a part of this analysis. The proposed drainage area map can be found in Appendix B.

Proposed Catchment Area 1a (PCA-1a)

This area is located at the southwestern portion of the Container Yard. The area is all impervious due to the proposed paving and curbing of the site. All runoff is captured via deep sump catch basins at the corner of the lot, directed through a water quality structure prior to being introduced to the CSO main line where it will outfall at the existing headwall along Fore River.

Proposed Catchment Area 1b (PCA-1b)

This area is located at the northwestern portion of the Container Yard. The area is all impervious due to the proposed paving and curbing of the site. All runoff is captured via deep sump catch basins along the frontage of the property. The runoff is then directed through a water quality structure prior to being introduced to the CSO main line where it will outfall at the existing headwall along Fore River.

Proposed Catchment Area 2a (PCA-2a)

This area is located at the eastern portion of the Container Yard. The area is all impervious due to the proposed paving and curbing of the site. All runoff is captured via multiple existing and proposed catch basins withing the low-lying portion of the paved area. The runoff is then introduced to either of the parallel running stormwater systems (depending which catch basin the runoff enters) below the Casco Bay Overpass where it will outfall at the existing headwall along Fore River.

Table 1 – Proposed Drainage Areas

DESCRIPTION	AREA (AC)
Proposed Catchment Area 1a (PCA-1a)	1.35
Proposed Catchment Area 1b (PCA-1b)	1.32
Proposed Catchment Area 2a (PCA-2a)	2.43
Total Drainage Area	5.10

4. Stormwater Management

The stormwater management plan and design for the proposed Refrigerator (Freezer) container storage area is intended to follow all City of Portland Regulations and MaineDEP Stormwater Management Laws.

A. Basic Standards

As noted in the MOA for Stormwater Management (2017), all MaineDOT transportation projects shall comply with the Basic Standards of Chapter 500 through implementation of best management practices described in the MaineDOT's Best Management Practices for Erosion and Sedimentation Control (MaineDOT Manual).

B. Methodology

Stormwater runoff analysis for both pre and post conditions is performed using Stormwater Analysis software HydroCAD. The application uses the SCS_TR-55 method to solve for volumes and rates of stormwater runoff. The watershed, rainfall depths and intensity, curve number and time of concentration factors used to influence the results come from national resources or manual computation.

For this analysis, rainfall depths & intensities have been taken from NOAA Atlas 14 documents for the proposed flow analysis (Latitude: 43.6466°, Longitude: -70.2595°) and are seen in Appendix B, Stormwater Resources.

The SCS_TR-55 method uses Curve Number (CN) to estimate runoff, a factor which is determined based on Soil Type and Ground Cover Conditions. See Appendix A, Figure 3 for the Soil Survey Map, Appendix B, Stormwater Resources, for the Existing & Proposed Drainage Area Maps and Appendix C, Stormwater Analysis for the Curve number information.

The SCS_TR-55 method also utilizes time of concentration to understand time of travel for runoff to traverse a watershed to a point of interest. See Appendix C, Stormwater Analysis for more information.

C. Strategy

The stormwater network onsite is existing and collects runoff for a portion of the Portland area. The flow data for the 25-year storm event is unavailable for all three existing stormwater networks which traverse the site, therefore a different analysis approach was used.

Since the project will be reducing the amount of impervious area that once contributed to the Casco Bay Overpass System and the Eimskip System adjacent to it, no analysis is required as the existing system will remain the same and will not be modified during construction.

An adequate stormwater analysis is provided for the existing CSO system, which we plan to relocate. We assume the existing capacity of the pipe to be flowing 95% full. Sizing of the CSO pipe has been coordinated with the City of Portland and the Portland Water District.

The report will analyze the change in additional flow added to the system during the defined 2-year, 10-year and 25-year 24-hour storm events and determine whether further stormwater mitigation is required for the associated site improvements.

D. Existing Peak Flows

As stated previously, peak flows for the existing stormwater system are not available, the design approach taken will be to assume the existing system is at full capacity or approximately 95% full.

To determine this, we created a model in the AutoCAD Civil 3D, Hydraflow Express application to help determine the 95% flow capacity of the existing 24" CSO main line. The analysis for the existing hydrology can be found in Appendix C, Stormwater Analysis.

After further investigation, the 95% flow capacity of the existing stormwater system is 27.17cfs. This number will be utilized during the proposed analysis and help determine if the additional flow will put the existing system over capacity and whether the system will need to be upsized.

E. Proposed Peak Flows

Proposed peak flows for all analyzed storm events are summarized in Table 2. Calculations for the proposed hydrology can be found in Appendix C.

Table 2 – Proposed Peak Flows Contributing to the CSO Outfall

DESCRIPTION	PEAK FLOWS (cfs)		
	2YR	10YR	25YR
Proposed	8.13	12.80	15.72

F. Stormwater Conclusion

After further review the proposed stormwater design is adequate for the associated project.

<u>Flooding Requirements:</u>

Due to the limitation of space and overall use of the site, stormwater detention, retention or infiltration is not feasible. Based on the proposed site improvements, the project will request a "Waiver of the Flooding Standard" seen in Chapter 500.F. 3a, as the existing outfall location is to be maintained as a direct, pipe outfall into the Fore River which is considered a major river.

The above stormwater analysis performed proves the upgraded system has the capacity for the additional flow. The information provided in Appendix C, Stormwater Analysis, from the Hydraflow Express Ext. Model, provides the 95% capacity flow of the existing 24" CSO main line which is 27.17cfs. The information provided in Appendix C, Stormwater Analysis, from the Existing Stormwater System Review of the 24" CSO Main Line, shows the existing system can adequately handle the 95% capacity flow derived from the Hydraflow Express model.

A series of tests were performed to verify if the existing system could handle the additional flow added from the proposed site improvements. The existing system could not handle the influx of water, and the relocated 24" CSO main line was upsized to a 30" main line. For more information see the Grading & Drainage Plan included in Appendix E of this report.

Based on the HydroCAD Report findings, the increase in flow to the CSO system is approximately 15.72cfs during the 25-year storm event. The 15.72cfs in addition to the 27.17cfs (95% Capacity flow) which is assumed to already be in the system was input into the 30" CSO main line, and its performance was reviewed. The proposed 30" main line system was able to adequately handle the overall flow. See Appendix C, Stormwater Analysis, Proposed Stormwater System Review of 30" CSO Main Line.

<u>Treatment Requirements:</u>

To meet treatment requirements found in Chapter 500.C.2, the project has proposed the installation of two (2) in-line hydrodynamic separators prior to entering the proposed 30" CSO. Each hydrodynamic separator will be placed prior to connecting into the proposed CSO main line to ensure adequate water quality treatment prior to influencing the stormwater network. Each

proposed Jellyfish Filter will meet the standard minimum requirement of 80% TSS removal and the system has been approved for primary treatment by Maine DEP.

Based on Table 2, in Chapter 500.C.2d, the existing and proposed use pollutant ranking is a 4. The existing use and proposed uses are relatively similar, therefore the Ranked Impact Change Due to Redevelopment, as shown in Table 3 of Chapter 500.C.2d, would be 0, making the Percentage of Developed areas that must be treated be 50% minimum. The proposed project will treat approx. 2.67acres out of the 5.10acres disturbed, 52% of the re-developed area, see the grading and drainage plan located in Appendix E of this report.

Appendix A. Figures

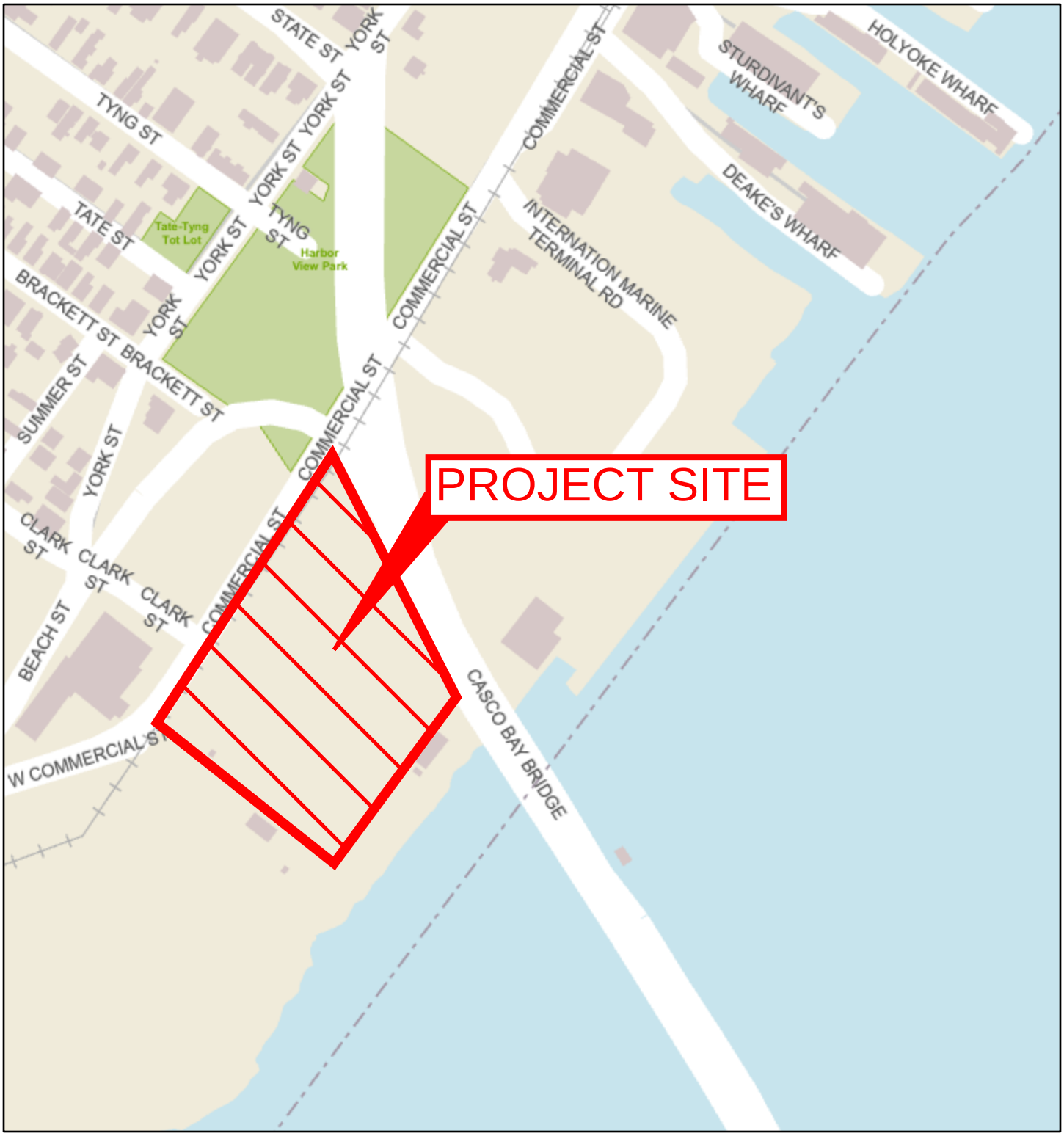
Figure 1 – Site Location Map

Figure 2 – FEMA Flood Map

Figure 3 – Soil Survey Map & Assoc. Information

Figure 1 – Site Location Map

Site Map



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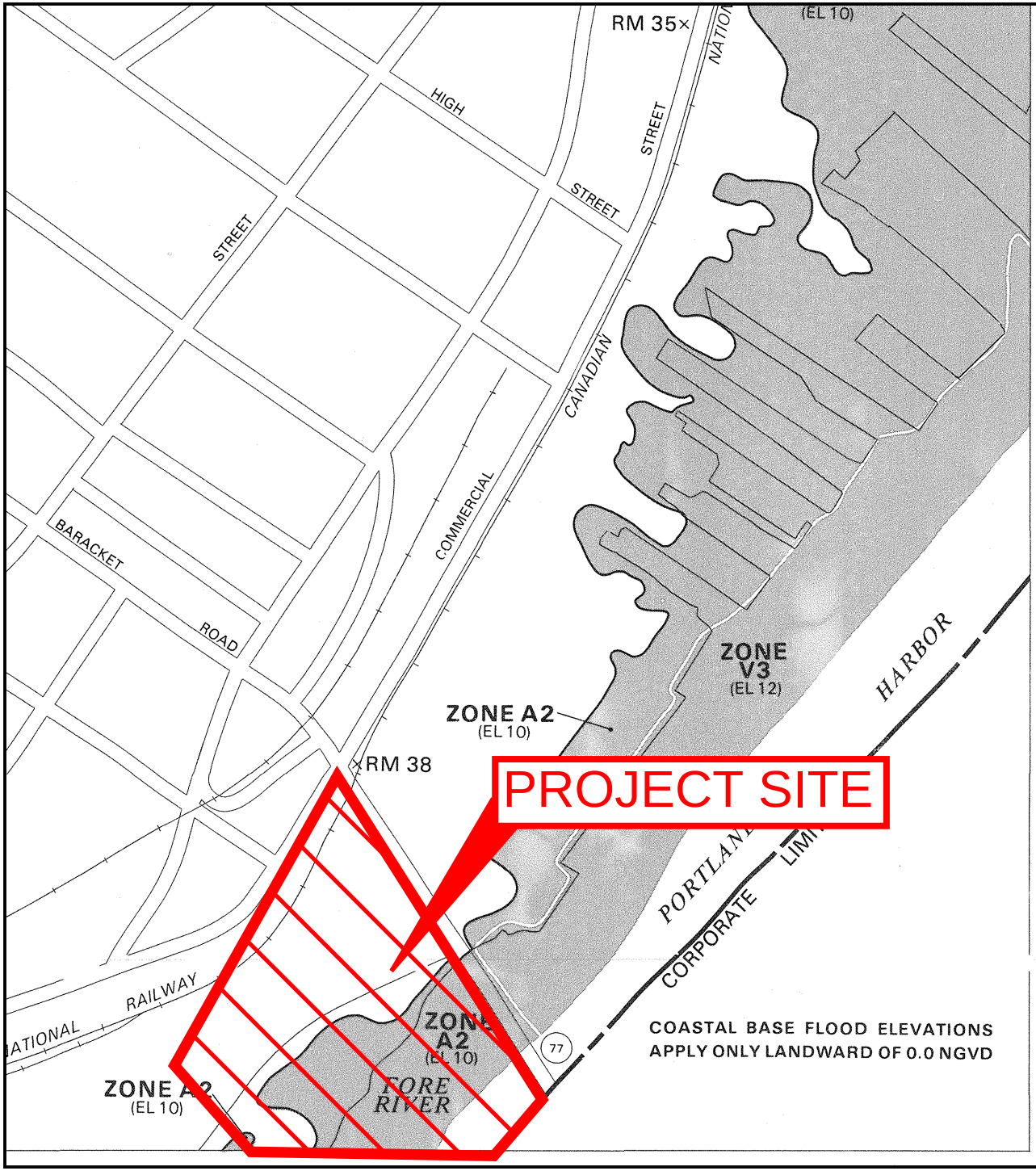
0 0.03 0.05 0.1 mi

0 0.04 0.08 0.16 km

City of Portland, DPS

Web AppBuilder for ArcGIS
City of Portland, Maine

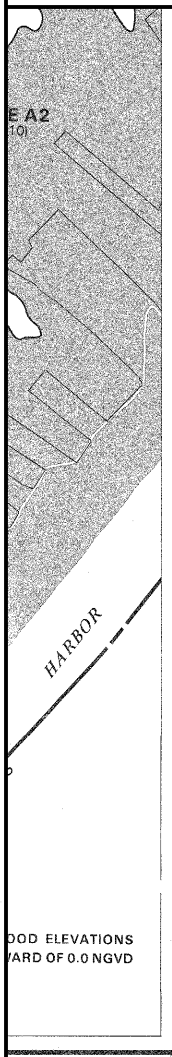
Figure 2 – FEMA Flood Map



rogram, at (800) 638-6620.

APPROXIMATE SCALE

400 0 400 FEET



NATIONAL FLOOD INSURANCE PROGRAM

FIRM
FLOOD INSURANCE RATE MAP

CITY OF
PORTLAND, MAINE
CUMBERLAND COUNTY

PANEL 13 OF 17
(SEE MAP INDEX FOR PANELS NOT PRINTED)

COMMUNITY-PANEL NUMBER
230051 0013 B

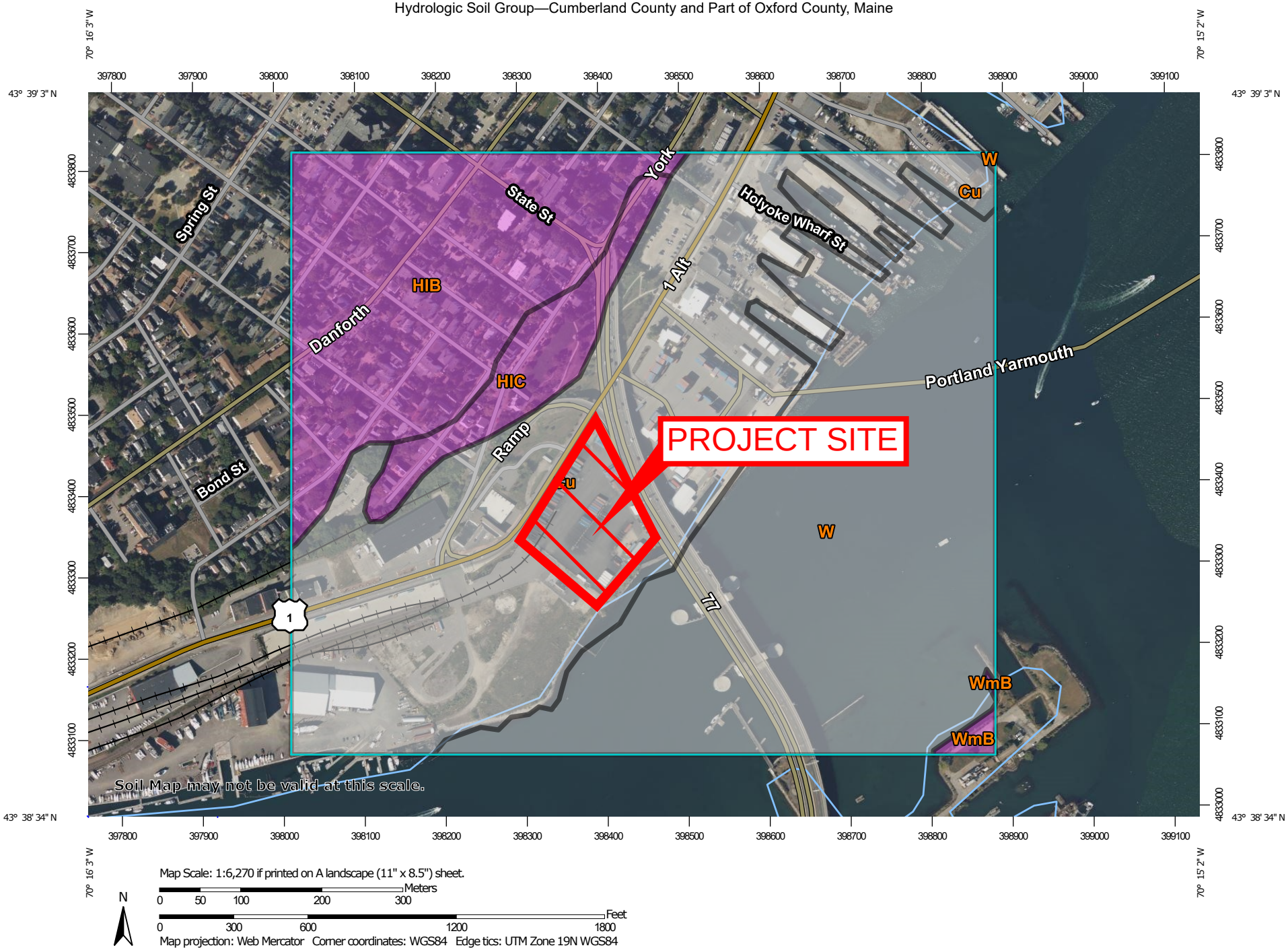
EFFECTIVE DATE:
JULY 17, 1986

Federal Emergency Management Agency

This is an official FIRMette showing a portion of the above-referenced flood map created from the MSC FIRMette Web tool. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For additional information about how to make sure the map is current, please see the Flood Hazard Mapping Updates Overview Fact Sheet available on the FEMA Flood Map Service Center home page at https://msc.fema.gov.

Figure 3 – Soil Survey Map & Assoc. Information

Hydrologic Soil Group—Cumberland County and Part of Oxford County, Maine



Map Scale: 1:6,270 if printed on A landscape (11" x 8.5") sheet.

Meters: 0 50 100 200 300

Feet: 0 300 600 1200 1800

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 19N WGS84

MAP LEGEND

Area of Interest (AOI)

Area of Interest (AOI)

Soils

Soil Rating Polygons

- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Soil Rating Lines

- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Soil Rating Points

- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Water Features

Streams and Canals

Transportation

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background

Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Cumberland County and Part of Oxford County, Maine
Survey Area Data: Version 19, Aug 30, 2022

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jun 19, 2020—Sep 20, 2020

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
Cu	Cut and fill land		61.5	38.5%
HlB	Hinckley loamy sand, 3 to 8 percent slopes	A	30.3	19.0%
HlC	Hinckley loamy sand, 8 to 15 percent slopes	A	7.1	4.4%
W	Water		60.3	37.7%
WmB	Windsor loamy sand, 0 to 8 percent slopes	A	0.7	0.4%
Totals for Area of Interest			**159.8**	**100.0%**

Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

Rating Options

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

Appendix B. Stormwater Resources

NOAA Atlas 14 Precipitation Data (Depth)

NOAA Atlas 14 Precipitation Data (Intensity)

Existing Drainage Area Map (EDA-1)

Proposed Drainage Area Map (PDA-1)

NOAA Atlas 14 Precipitation Data (Depth)

NOAA Atlas 14, Volume 10, Version 3
Location name: Portland, Maine, USA*
Latitude: 43.6466°, Longitude: -70.2595°
Elevation: m/ft**
* source: ESRI Maps
** source: USGS

POINT PRECIPITATION FREQUENCY ESTIMATES

Sanja Perica, Sandra Pavlovic, Michael St. Laurent, Carl Trypaluk, Dale Unruh, Orlan Wilhite

NOAA, National Weather Service, Silver Spring, Maryland

PF_tabular | PF_graphical | Maps_&_aerials

PF tabular

PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches)[1]

Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	0.307 (0.253-0.373)	0.371 (0.305-0.451)	0.475 (0.389-0.580)	0.561 (0.456-0.688)	0.679 (0.529-0.872)	0.768 (0.583-1.01)	0.862 (0.630-1.17)	0.967 (0.662-1.35)	1.12 (0.729-1.61)	1.24 (0.786-1.83)
10-min	0.435 (0.358-0.529)	0.525 (0.432-0.639)	0.672 (0.550-0.821)	0.794 (0.645-0.975)	0.962 (0.750-1.24)	1.09 (0.826-1.43)	1.22 (0.892-1.66)	1.37 (0.937-1.91)	1.58 (1.03-2.29)	1.76 (1.11-2.59)
15-min	0.512 (0.421-0.622)	0.618 (0.508-0.752)	0.791 (0.647-0.965)	0.934 (0.759-1.15)	1.13 (0.882-1.45)	1.28 (0.973-1.68)	1.44 (1.05-1.96)	1.61 (1.10-2.25)	1.86 (1.22-2.69)	2.07 (1.31-3.05)
30-min	0.658 (0.541-0.799)	0.799 (0.657-0.972)	1.03 (0.843-1.26)	1.22 (0.993-1.50)	1.49 (1.16-1.91)	1.69 (1.28-2.21)	1.89 (1.38-2.58)	2.13 (1.45-2.96)	2.46 (1.60-3.55)	2.73 (1.73-4.01)
60-min	0.803 (0.661-0.977)	0.980 (0.806-1.19)	1.27 (1.04-1.55)	1.51 (1.23-1.85)	1.84 (1.43-2.36)	2.09 (1.59-2.74)	2.35 (1.71-3.20)	2.64 (1.81-3.68)	3.05 (1.99-4.40)	3.38 (2.14-4.98)
2-hr	1.13 (0.936-1.36)	1.38 (1.14-1.67)	1.79 (1.47-2.17)	2.13 (1.74-2.59)	2.59 (2.03-3.31)	2.94 (2.25-3.84)	3.31 (2.43-4.49)	3.73 (2.56-5.16)	4.35 (2.84-6.23)	4.86 (3.08-7.10)
3-hr	1.36 (1.13-1.64)	1.66 (1.38-2.00)	2.15 (1.78-2.59)	2.55 (2.10-3.10)	3.11 (2.45-3.96)	3.53 (2.71-4.60)	3.97 (2.93-5.38)	4.49 (3.09-6.19)	5.24 (3.43-7.49)	5.87 (3.74-8.56)
6-hr	1.80 (1.50-2.15)	2.19 (1.83-2.62)	2.83 (2.35-3.39)	3.36 (2.77-4.05)	4.09 (3.24-5.18)	4.63 (3.58-6.00)	5.22 (3.88-7.03)	5.90 (4.07-8.08)	6.91 (4.54-9.80)	7.75 (4.95-11.2)
12-hr	2.25 (1.89-2.67)	2.74 (2.30-3.25)	3.54 (2.96-4.22)	4.20 (3.49-5.04)	5.12 (4.08-6.44)	5.80 (4.50-7.46)	6.53 (4.88-8.75)	7.39 (5.12-10.1)	8.67 (5.72-12.2)	9.74 (6.24-14.0)
24-hr	2.61 (2.21-3.07)	3.21 (2.72-3.79)	4.20 (3.54-4.97)	5.02 (4.20-5.98)	6.15 (4.93-7.70)	6.98 (5.46-8.95)	7.89 (5.94-10.5)	8.98 (6.25-12.1)	10.6 (7.04-14.9)	12.1 (7.74-17.2)
2-day	2.87 (2.45-3.36)	3.60 (3.06-4.22)	4.79 (4.06-5.63)	5.78 (4.86-6.83)	7.14 (5.77-8.91)	8.14 (6.41-10.4)	9.24 (7.04-12.4)	10.6 (7.41-14.3)	12.8 (8.49-17.8)	14.7 (9.47-20.9)
3-day	3.10 (2.66-3.62)	3.89 (3.33-4.54)	5.17 (4.40-6.06)	6.24 (5.27-7.35)	7.70 (6.25-9.58)	8.77 (6.94-11.2)	9.96 (7.62-13.3)	11.5 (8.02-15.4)	13.9 (9.23-19.3)	16.0 (10.3-22.6)
4-day	3.34 (2.87-3.88)	4.15 (3.56-4.83)	5.48 (4.68-6.40)	6.58 (5.57-7.73)	8.10 (6.59-10.0)	9.20 (7.31-11.7)	10.4 (8.01-13.9)	12.0 (8.42-16.1)	14.6 (9.69-20.1)	16.8 (10.9-23.7)
7-day	4.00 (3.45-4.63)	4.84 (4.18-5.61)	6.23 (5.35-7.23)	7.37 (6.28-8.62)	8.95 (7.32-11.0)	10.1 (8.06-12.8)	11.4 (8.78-15.1)	13.0 (9.17-17.3)	15.7 (10.5-21.6)	18.1 (11.7-25.3)
10-day	4.64 (4.02-5.35)	5.51 (4.77-6.36)	6.93 (5.97-8.02)	8.11 (6.93-9.44)	9.73 (7.98-11.9)	10.9 (8.72-13.7)	12.2 (9.42-16.1)	13.9 (9.80-18.4)	16.5 (11.1-22.6)	18.8 (12.2-26.3)
20-day	6.59 (5.75-7.55)	7.55 (6.57-8.65)	9.11 (7.90-10.5)	10.4 (8.95-12.0)	12.2 (10.0-14.7)	13.5 (10.8-16.7)	14.9 (11.4-19.1)	16.5 (11.7-21.7)	18.9 (12.7-25.6)	20.8 (13.5-28.8)
30-day	8.23 (7.21-9.38)	9.27 (8.11-10.6)	11.0 (9.54-12.5)	12.4 (10.7-14.2)	14.3 (11.8-17.1)	15.8 (12.6-19.3)	17.3 (13.1-21.8)	18.8 (13.4-24.6)	21.0 (14.2-28.3)	22.6 (14.8-31.2)
45-day	10.3 (9.05-11.7)	11.4 (10.0-13.0)	13.3 (11.6-15.2)	14.8 (12.9-17.0)	17.0 (14.0-20.1)	18.6 (14.9-22.5)	20.2 (15.3-25.2)	21.8 (15.6-28.3)	23.8 (16.2-32.1)	25.3 (16.5-34.8)
60-day	12.0 (10.6-13.6)	13.2 (11.7-15.0)	15.3 (13.4-17.3)	16.9 (14.7-19.3)	19.2 (15.9-22.7)	21.0 (16.8-25.3)	22.7 (17.3-28.2)	24.4 (17.5-31.5)	26.4 (18.0-35.4)	27.9 (18.2-38.2)

[1] Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS).

Numbers in parenthesis are PF estimates at lower and upper bounds of the 90% confidence interval. The probability that precipitation frequency estimates (for a given duration and average recurrence interval) will be greater than the upper bound (or less than the lower bound) is 5%. Estimates at upper bounds are not checked against probable maximum precipitation (PMP) estimates and may be higher than currently valid PMP values.

Please refer to NOAA Atlas 14 document for more information.

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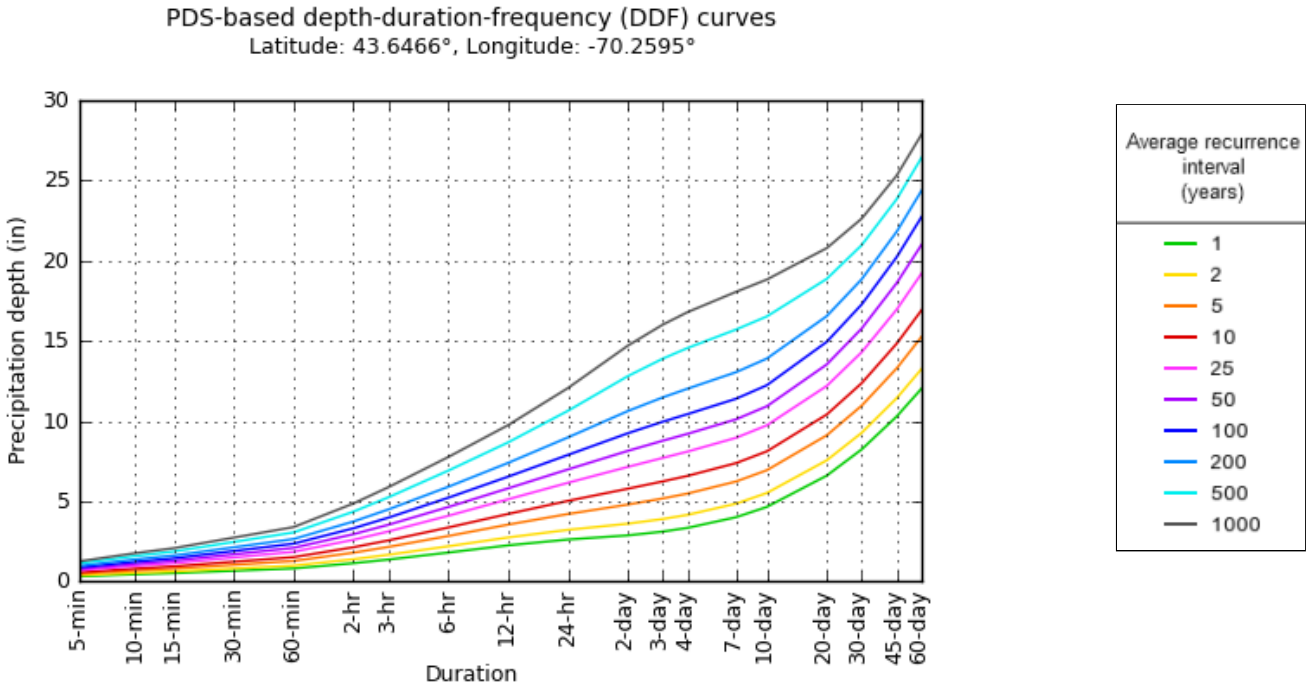
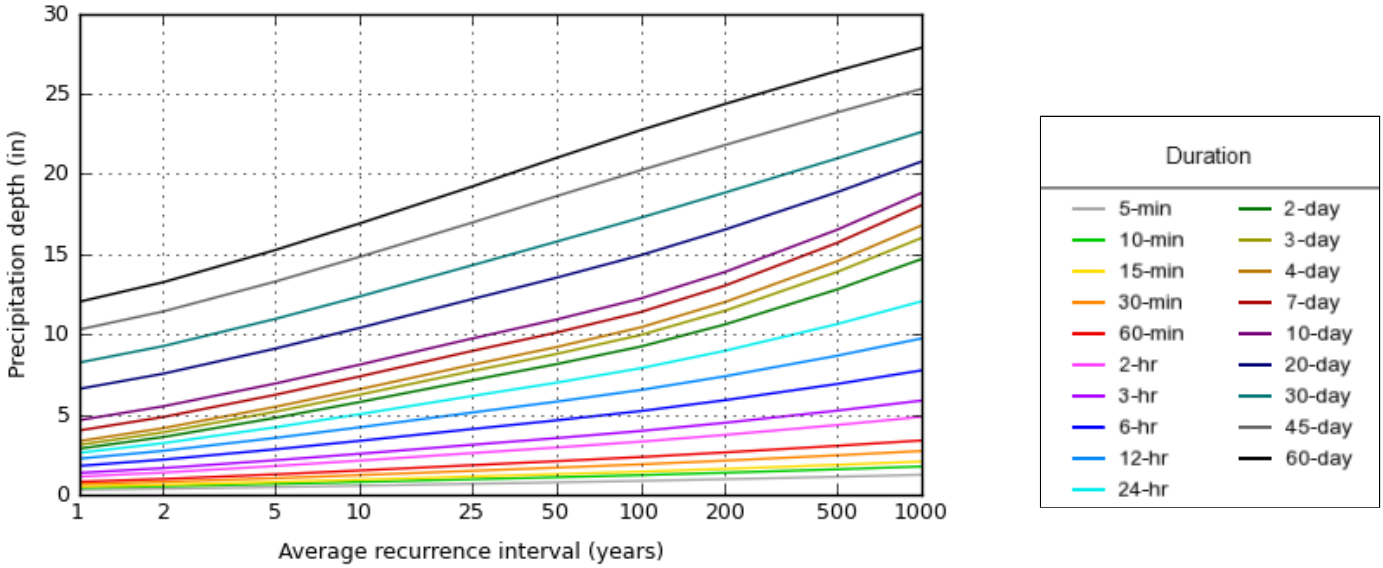
PF graphical





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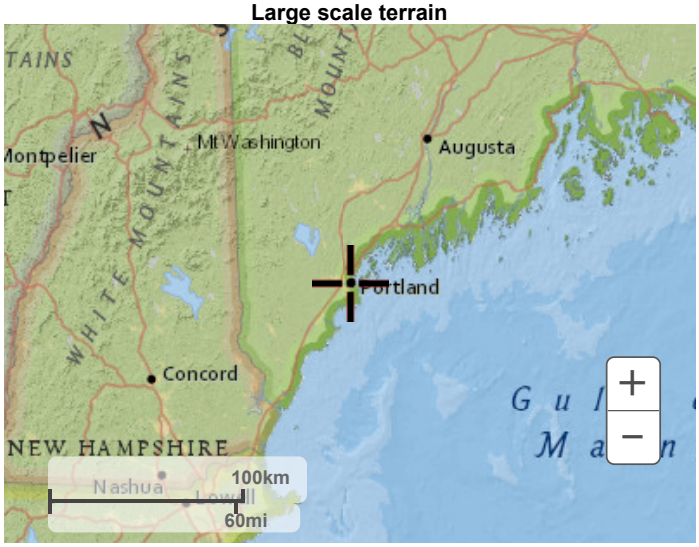
Maps & aerials

Small scale terrain

Large scale terrain



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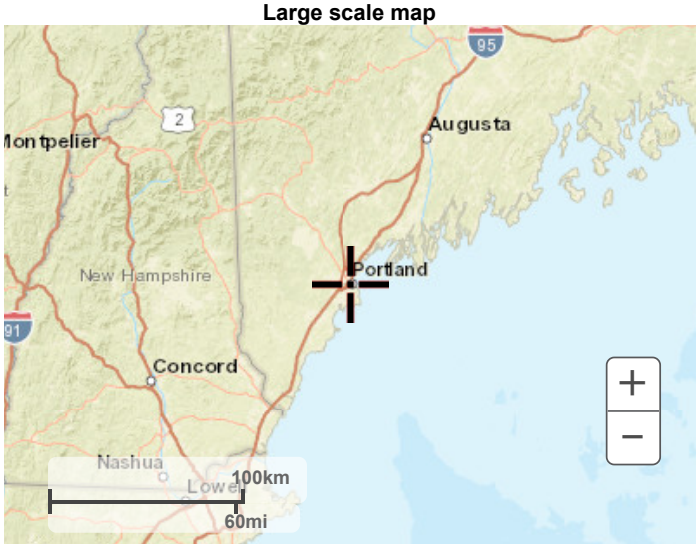

Large scale aerial

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Silver Spring, MD 20910
Questions?: HDSC.Questions@noaa.gov

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NOAA Atlas 14 Precipitation Data (Intensity)

NOAA Atlas 14, Volume 10, Version 3
Location name: Portland, Maine, USA*
Latitude: 43.6466°, Longitude: -70.2595°
Elevation: m/ft**
* source: ESRI Maps
** source: USGS

POINT PRECIPITATION FREQUENCY ESTIMATES

Sanja Perica, Sandra Pavlovic, Michael St. Laurent, Carl Trypaluk, Dale Unruh, Orlan Wilhite

NOAA, National Weather Service, Silver Spring, Maryland

PF_tabular | PF_graphical | Maps_&_aerials

PF tabular

PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches/hour)[1]

Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	3.68 (3.04-4.48)	4.45 (3.66-5.41)	5.70 (4.67-6.96)	6.73 (5.47-8.26)	8.15 (6.35-10.5)	9.22 (7.00-12.1)	10.3 (7.56-14.1)	11.6 (7.94-16.2)	13.4 (8.75-19.4)	14.9 (9.43-21.9)
10-min	2.61 (2.15-3.17)	3.15 (2.59-3.83)	4.03 (3.30-4.93)	4.76 (3.87-5.85)	5.77 (4.50-7.41)	6.53 (4.96-8.56)	7.33 (5.35-9.98)	8.22 (5.62-11.5)	9.50 (6.19-13.7)	10.6 (6.68-15.5)
15-min	2.05 (1.68-2.49)	2.47 (2.03-3.01)	3.16 (2.59-3.86)	3.74 (3.04-4.59)	4.53 (3.53-5.82)	5.12 (3.89-6.72)	5.75 (4.20-7.83)	6.45 (4.41-8.98)	7.45 (4.86-10.8)	8.28 (5.24-12.2)
30-min	1.32 (1.08-1.60)	1.60 (1.31-1.94)	2.06 (1.69-2.52)	2.44 (1.99-3.00)	2.97 (2.31-3.82)	3.37 (2.56-4.42)	3.79 (2.76-5.15)	4.25 (2.91-5.92)	4.91 (3.20-7.09)	5.45 (3.45-8.03)
60-min	0.803 (0.661-0.977)	0.980 (0.806-1.19)	1.27 (1.04-1.55)	1.51 (1.23-1.85)	1.84 (1.43-2.36)	2.09 (1.59-2.74)	2.35 (1.71-3.20)	2.64 (1.81-3.68)	3.05 (1.99-4.40)	3.38 (2.14-4.98)
2-hr	0.565 (0.468-0.682)	0.690 (0.570-0.834)	0.894 (0.736-1.08)	1.06 (0.869-1.30)	1.30 (1.02-1.66)	1.47 (1.12-1.92)	1.65 (1.22-2.25)	1.87 (1.28-2.58)	2.17 (1.42-3.12)	2.43 (1.54-3.55)
3-hr	0.453 (0.376-0.544)	0.552 (0.459-0.665)	0.715 (0.591-0.864)	0.850 (0.698-1.03)	1.04 (0.815-1.32)	1.18 (0.901-1.53)	1.32 (0.977-1.79)	1.49 (1.03-2.06)	1.75 (1.14-2.49)	1.96 (1.24-2.85)
6-hr	0.300 (0.251-0.358)	0.365 (0.305-0.437)	0.472 (0.393-0.567)	0.561 (0.463-0.677)	0.683 (0.541-0.864)	0.774 (0.597-1.00)	0.871 (0.647-1.17)	0.985 (0.680-1.35)	1.15 (0.758-1.64)	1.30 (0.826-1.88)
12-hr	0.186 (0.157-0.221)	0.227 (0.191-0.270)	0.294 (0.246-0.350)	0.349 (0.290-0.418)	0.425 (0.338-0.534)	0.481 (0.374-0.620)	0.542 (0.405-0.726)	0.613 (0.425-0.835)	0.719 (0.475-1.01)	0.809 (0.518-1.16)
24-hr	0.109 (0.092-0.128)	0.134 (0.113-0.158)	0.175 (0.148-0.207)	0.209 (0.175-0.249)	0.256 (0.205-0.321)	0.291 (0.227-0.373)	0.329 (0.248-0.439)	0.374 (0.260-0.506)	0.443 (0.293-0.621)	0.502 (0.323-0.718)
2-day	0.060 (0.051-0.070)	0.075 (0.064-0.088)	0.100 (0.085-0.117)	0.120 (0.101-0.142)	0.149 (0.120-0.186)	0.169 (0.134-0.217)	0.192 (0.147-0.258)	0.221 (0.154-0.298)	0.267 (0.177-0.371)	0.306 (0.197-0.434)
3-day	0.043 (0.037-0.050)	0.054 (0.046-0.063)	0.072 (0.061-0.084)	0.087 (0.073-0.102)	0.107 (0.087-0.133)	0.122 (0.096-0.156)	0.138 (0.106-0.185)	0.159 (0.111-0.214)	0.193 (0.128-0.268)	0.222 (0.144-0.314)
4-day	0.035 (0.030-0.040)	0.043 (0.037-0.050)	0.057 (0.049-0.067)	0.069 (0.058-0.081)	0.084 (0.069-0.105)	0.096 (0.076-0.122)	0.109 (0.083-0.145)	0.125 (0.088-0.167)	0.152 (0.101-0.210)	0.175 (0.113-0.247)
7-day	0.024 (0.021-0.028)	0.029 (0.025-0.033)	0.037 (0.032-0.043)	0.044 (0.037-0.051)	0.053 (0.044-0.066)	0.060 (0.048-0.076)	0.068 (0.052-0.090)	0.078 (0.055-0.103)	0.093 (0.062-0.129)	0.107 (0.070-0.151)
10-day	0.019 (0.017-0.022)	0.023 (0.020-0.026)	0.029 (0.025-0.033)	0.034 (0.029-0.039)	0.041 (0.033-0.050)	0.045 (0.036-0.057)	0.051 (0.039-0.067)	0.058 (0.041-0.077)	0.069 (0.046-0.094)	0.078 (0.051-0.110)
20-day	0.014 (0.012-0.016)	0.016 (0.014-0.018)	0.019 (0.016-0.022)	0.022 (0.019-0.025)	0.025 (0.021-0.031)	0.028 (0.022-0.035)	0.031 (0.024-0.040)	0.034 (0.024-0.045)	0.039 (0.026-0.053)	0.043 (0.028-0.060)
30-day	0.011 (0.010-0.013)	0.013 (0.011-0.015)	0.015 (0.013-0.017)	0.017 (0.015-0.020)	0.020 (0.016-0.024)	0.022 (0.017-0.027)	0.024 (0.018-0.030)	0.026 (0.019-0.034)	0.029 (0.020-0.039)	0.031 (0.020-0.043)
45-day	0.010 (0.008-0.011)	0.011 (0.009-0.012)	0.012 (0.011-0.014)	0.014 (0.012-0.016)	0.016 (0.013-0.019)	0.017 (0.014-0.021)	0.019 (0.014-0.023)	0.020 (0.014-0.026)	0.022 (0.015-0.030)	0.023 (0.015-0.032)
60-day	0.008 (0.007-0.009)	0.009 (0.008-0.010)	0.011 (0.009-0.012)	0.012 (0.010-0.013)	0.013 (0.011-0.016)	0.015 (0.012-0.018)	0.016 (0.012-0.020)	0.017 (0.012-0.022)	0.018 (0.012-0.025)	0.019 (0.013-0.027)

[1] Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS).

Numbers in parenthesis are PF estimates at lower and upper bounds of the 90% confidence interval. The probability that precipitation frequency estimates (for a given duration and average recurrence interval) will be greater than the upper bound (or less than the lower bound) is 5%. Estimates at upper bounds are not checked against probable maximum precipitation (PMP) estimates and may be higher than currently valid PMP values.

Please refer to NOAA Atlas 14 document for more information.

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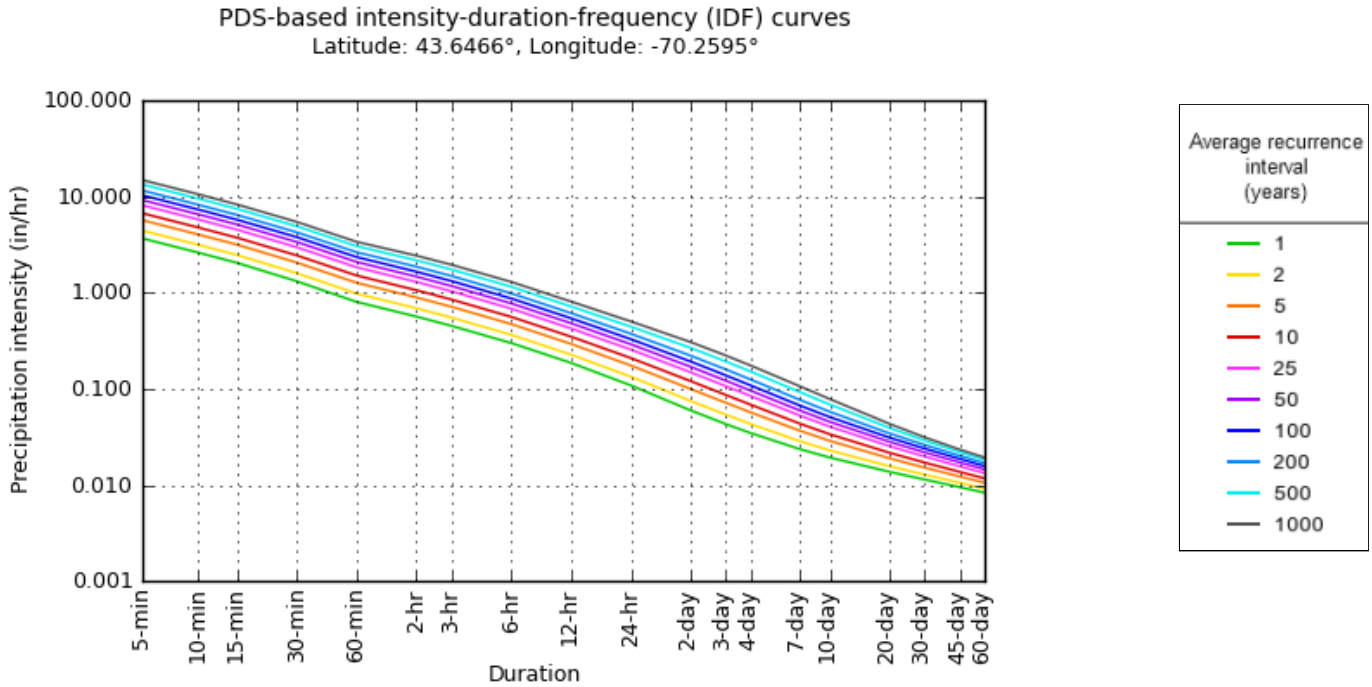
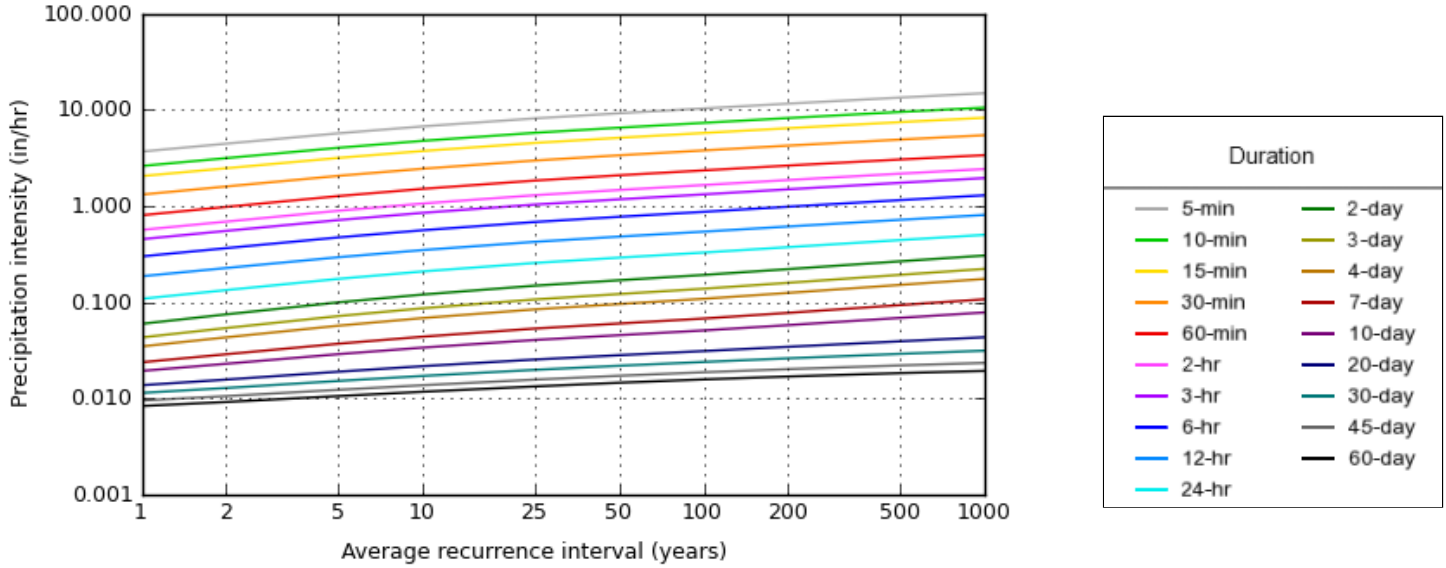
PF graphical





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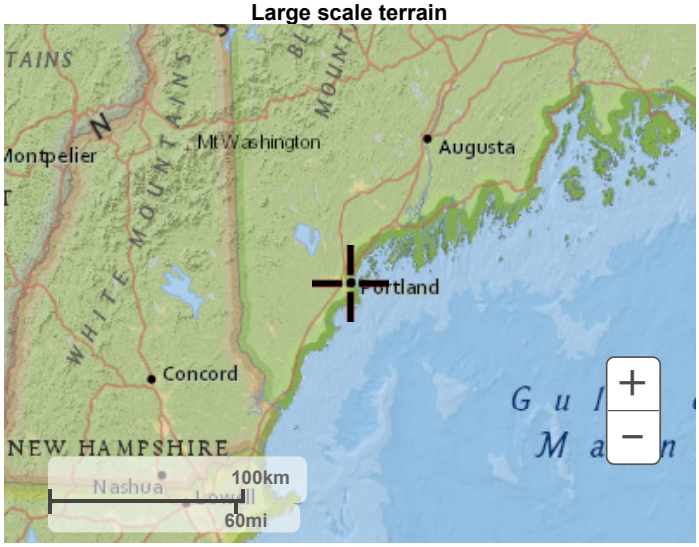
Maps & aerials

Small scale terrain

Large scale terrain



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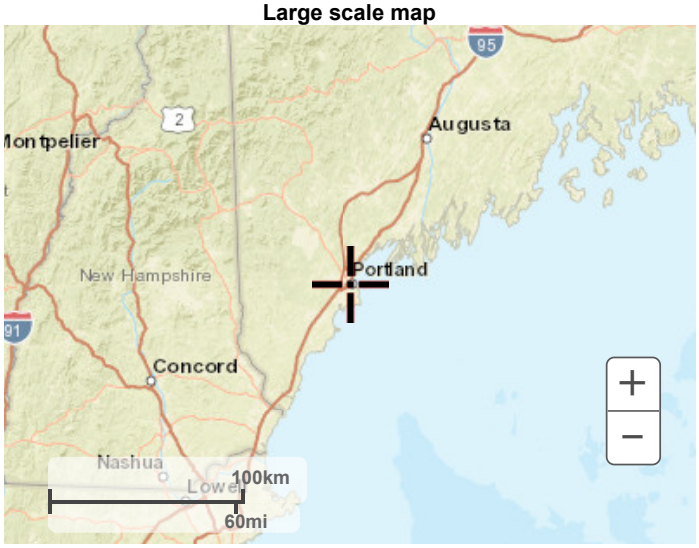

Large scale aerial

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National Weather Service
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Silver Spring, MD 20910
Questions?: HDSC.Questions@noaa.gov

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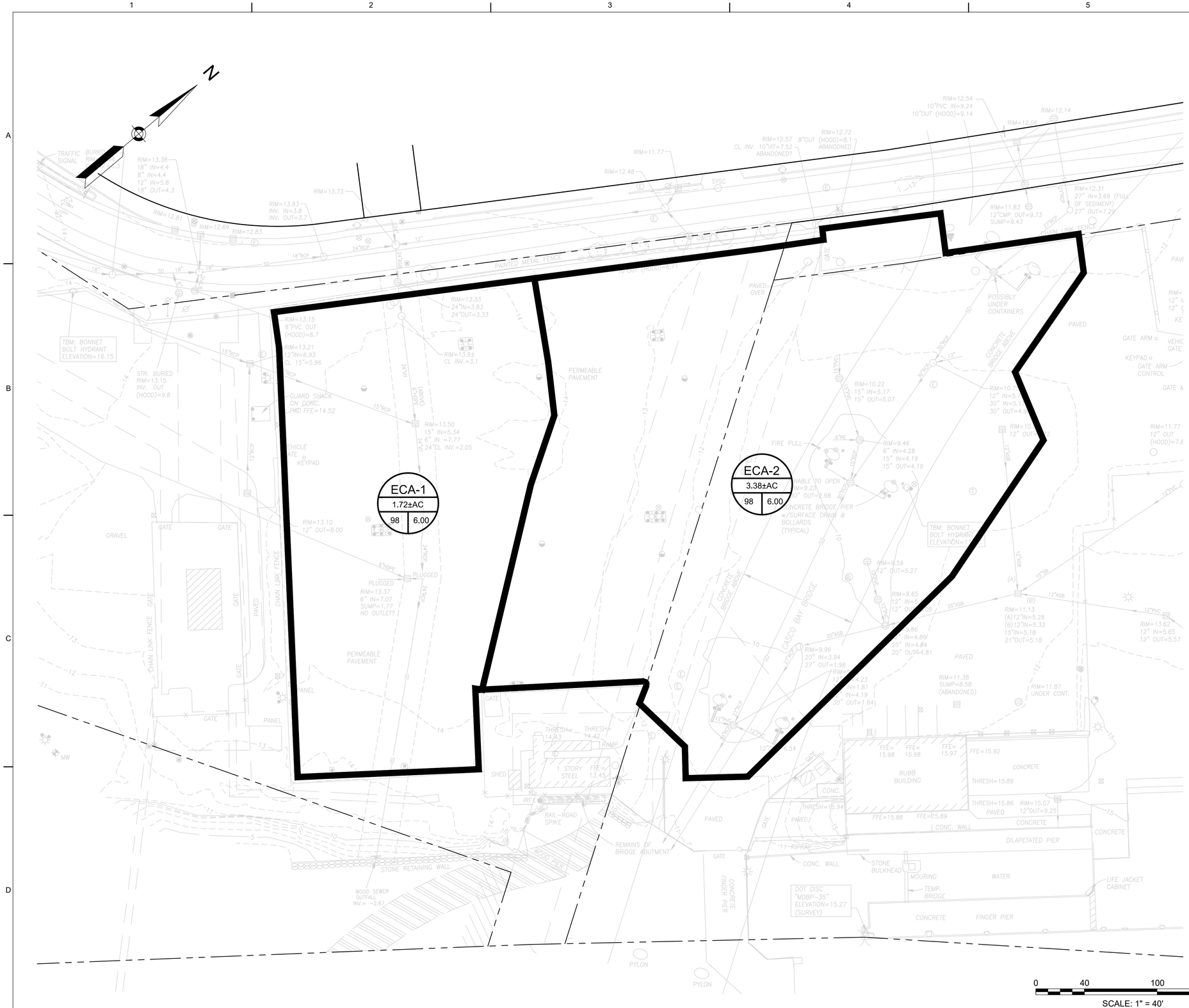
Existing Drainage Area Map (EDA-1)



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SUBMITTED DATE: MARCH 10, 2023

NO.	DATE	REVISION	BY	APVD

DSGN R. SAMMON | DR R. SAMMON | CHK B. MONTEJUNAS | APVD C. MORIN

Jacobs

PORT INFRASTRUCTURE DEVELOPMENT PROGRAM (PIDP) GRANT PRIORITY PROJECTS
DESIGN & CONSTRUCTION PHASE SERVICES
PORTLAND, MAINE

CIVIL
EXISTING DRAINAGE AREA MAP

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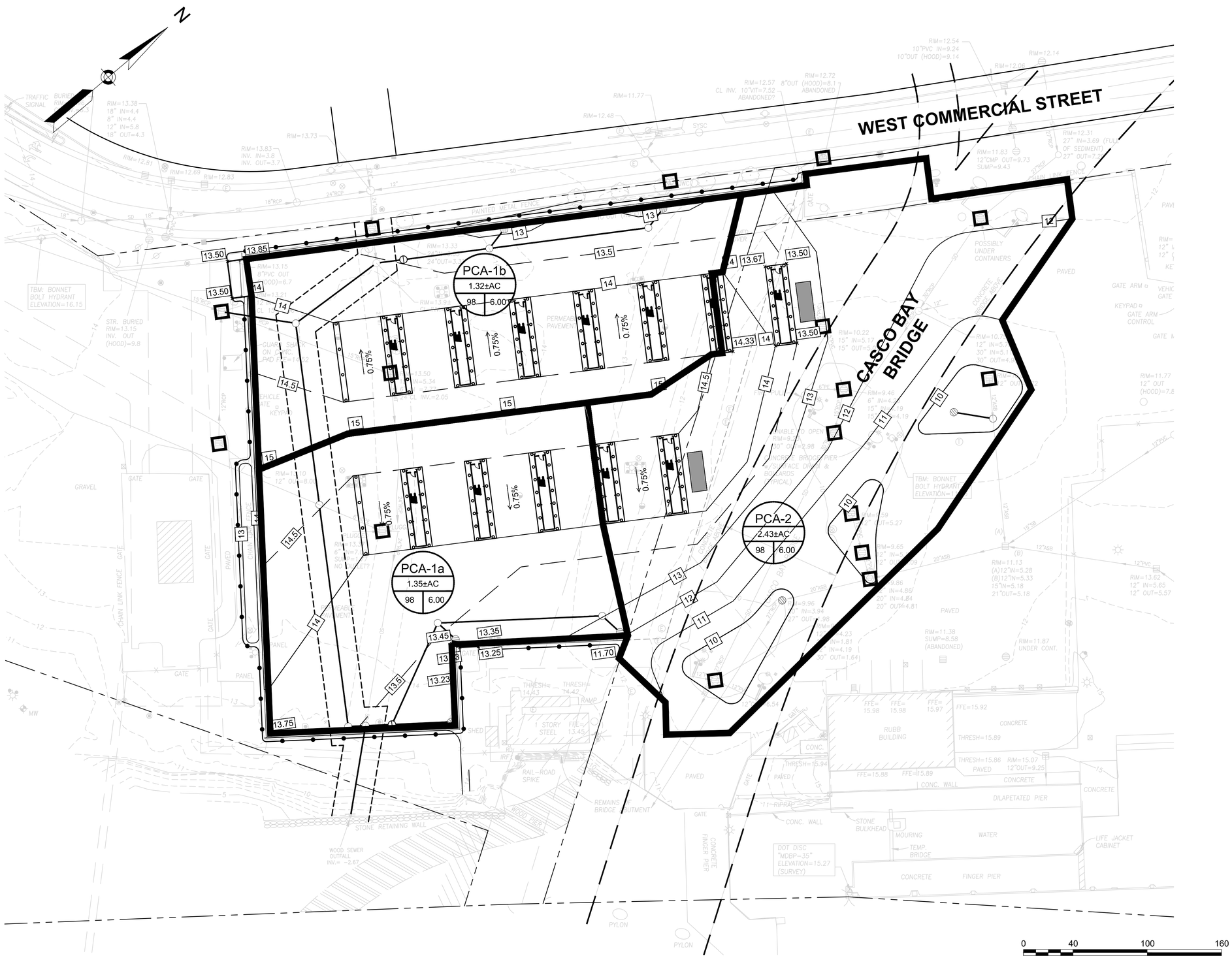
VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

DATE	03/10/23
PROJ	E2X93900
DWG	EDA-1
SHEET	1 of 1

FILENAME:
PLOT DATE: Mar 17. 2023 PLOT TIME: 8:32am

Proposed Drainage Area Map (PDA-1)



60% DRAFT
NOT FOR CONSTRUCTION
SUBMITTED DATE: MARCH 10, 2023

Jacobs

PORT INFRASTRUCTURE DEVELOPMENT
PROGRAM (PIDP) GRANT PRIORITY PROJECTS
DESIGN & CONSTRUCTION PHASE SERVICES
PORTLAND, MAINE

CIVIL
PROPOSED DRAINAGE AREA MAP

NO.	DATE	REVISION	BY	APVD

DSGN	R. SAMMON	DR	R. SAMMON
CHK	B. MONTEJUNAS	APVD	C. MORIN

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

DATE	03/10/23
PROJ	E2X93900
DWG	PDA-1
SHEET	1 of 1

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FILENAME:
PLOT DATE: Mar 17, 2023 PLOT TIME: 8:32am

Appendix C. Stormwater Analysis

HydroCAD Report

- Existing Hydrology Report
- Proposed Hydrology Report

Hydraflow Express Extension Model

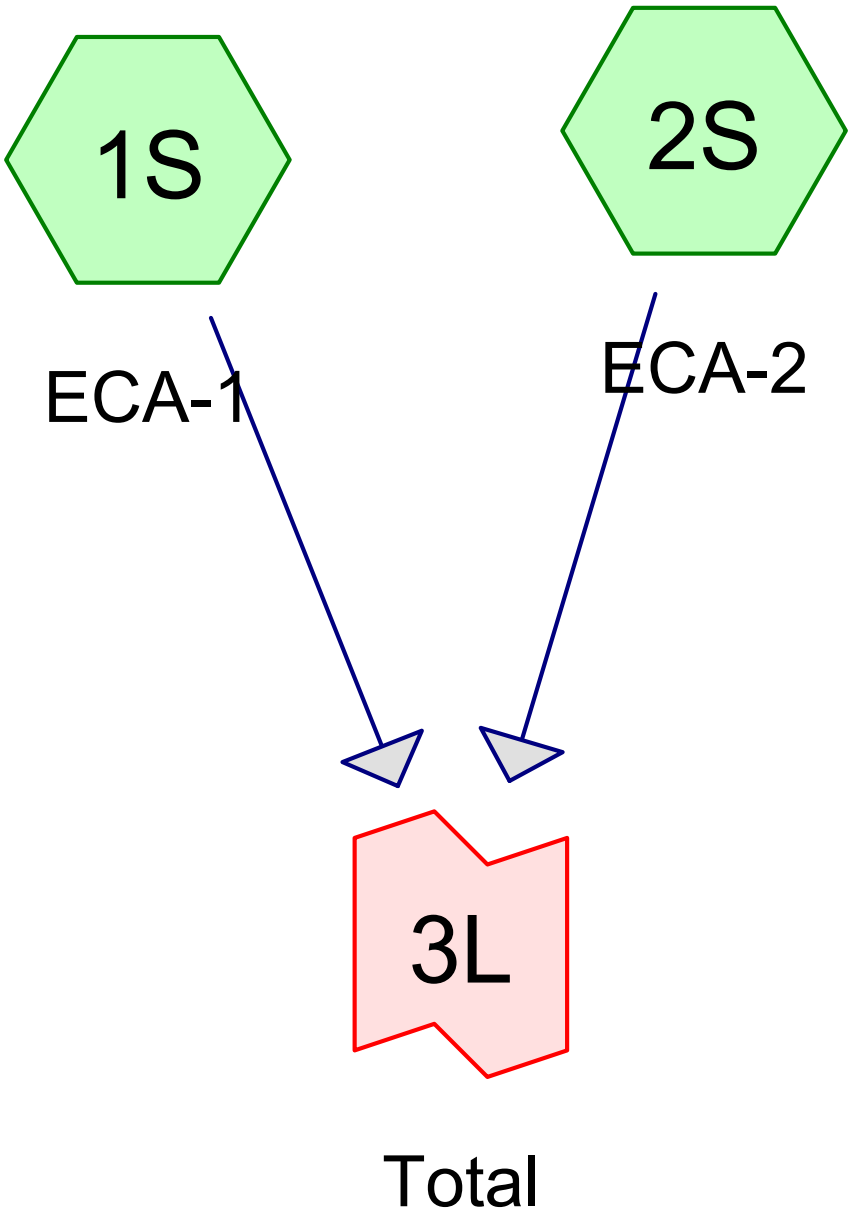
- Existing Stormwater System 24" CSO Main Line @ 95% Capacity Flow

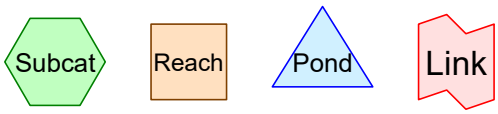
Hydraflow Storm Sewer Report

- Existing Stormwater System Review of 24" CSO Main Line
- Proposed Stormwater System Review of 30" CSO Main Line

HydroCAD Report

Existing Hydrology Report





Routing Diagram for IMT Ports Draianage- Existing - HydroCAD
Prepared by Jacobs, Printed 3/17/2023
HydroCAD® 10.00-25 s/n 00751 © 2019 HydroCAD Software Solutions LLC

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
1.720	98	ECA-1 (1S)
3.380	98	ECA-2 (2S)

Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment1S: ECA-1 Runoff Area=1.720 ac 100.00% Impervious Runoff Depth>2.78"
Tc=6.0 min CN=98 Runoff=5.23 cfs 0.399 af

Subcatchment2S: ECA-2 Runoff Area=3.380 ac 100.00% Impervious Runoff Depth>2.78"
Tc=6.0 min CN=98 Runoff=10.29 cfs 0.784 af

Link 3L: Total Inflow=15.52 cfs 1.183 af
Primary=15.52 cfs 1.183 af

Summary for Subcatchment 1S: ECA-1

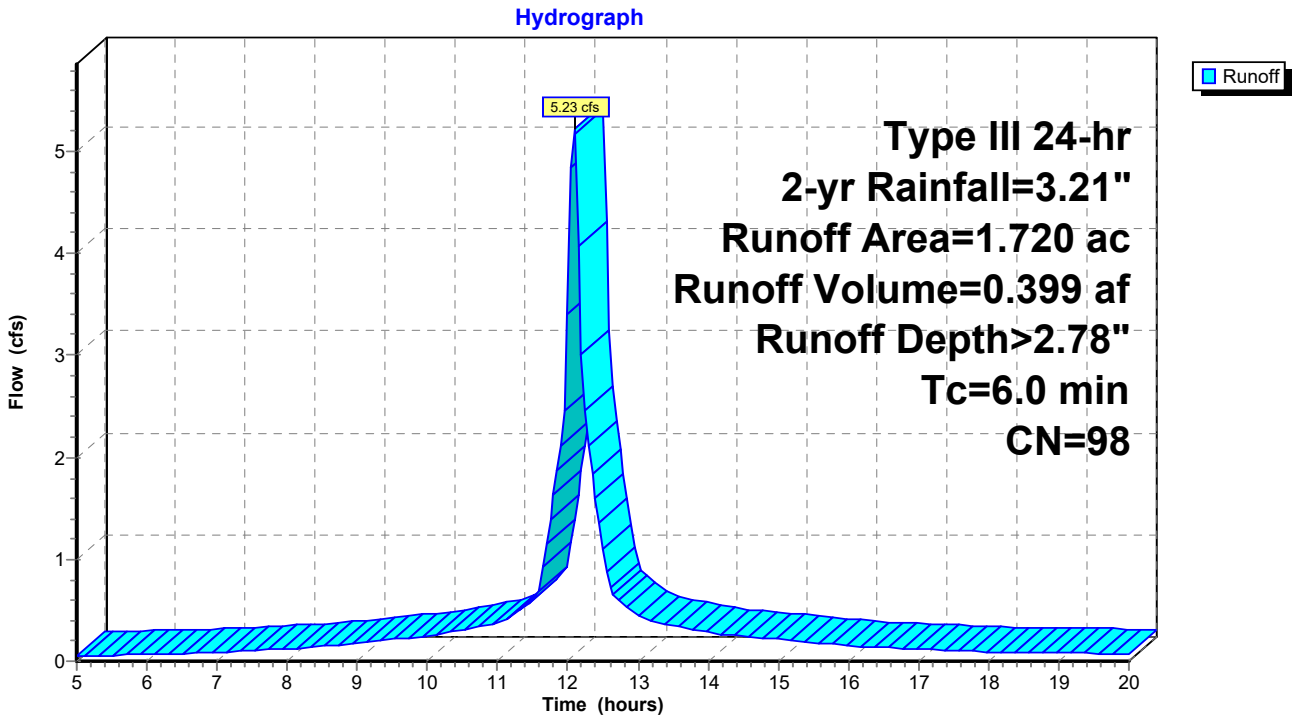
Runoff = 5.23 cfs @ 12.09 hrs, Volume= 0.399 af, Depth> 2.78"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-yr Rainfall=3.21"

	Area (ac)	CN	Description
*	1.720	98	ECA-1
	1.720		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, TOC**

Subcatchment 1S: ECA-1



Summary for Subcatchment 2S: ECA-2

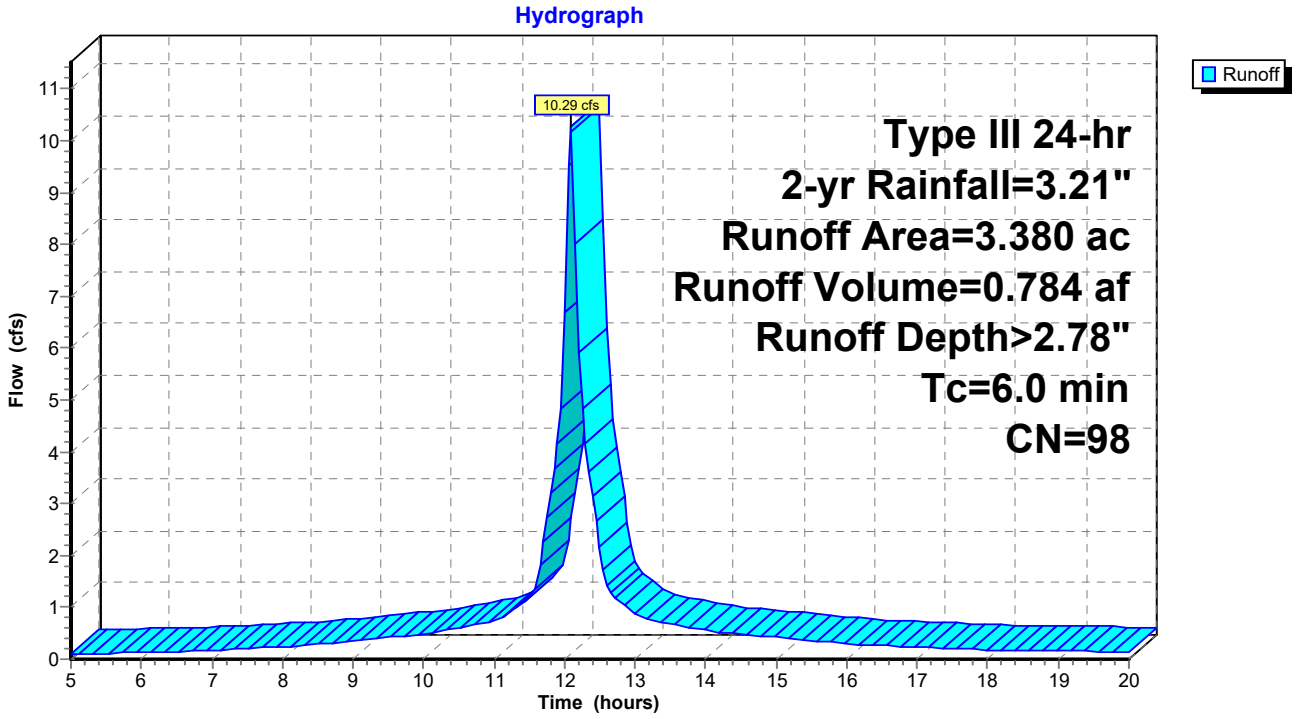
Runoff = 10.29 cfs @ 12.09 hrs, Volume= 0.784 af, Depth> 2.78"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-yr Rainfall=3.21"

	Area (ac)	CN	Description
*	3.380	98	ECA-2
	3.380		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, TOC**

Subcatchment 2S: ECA-2

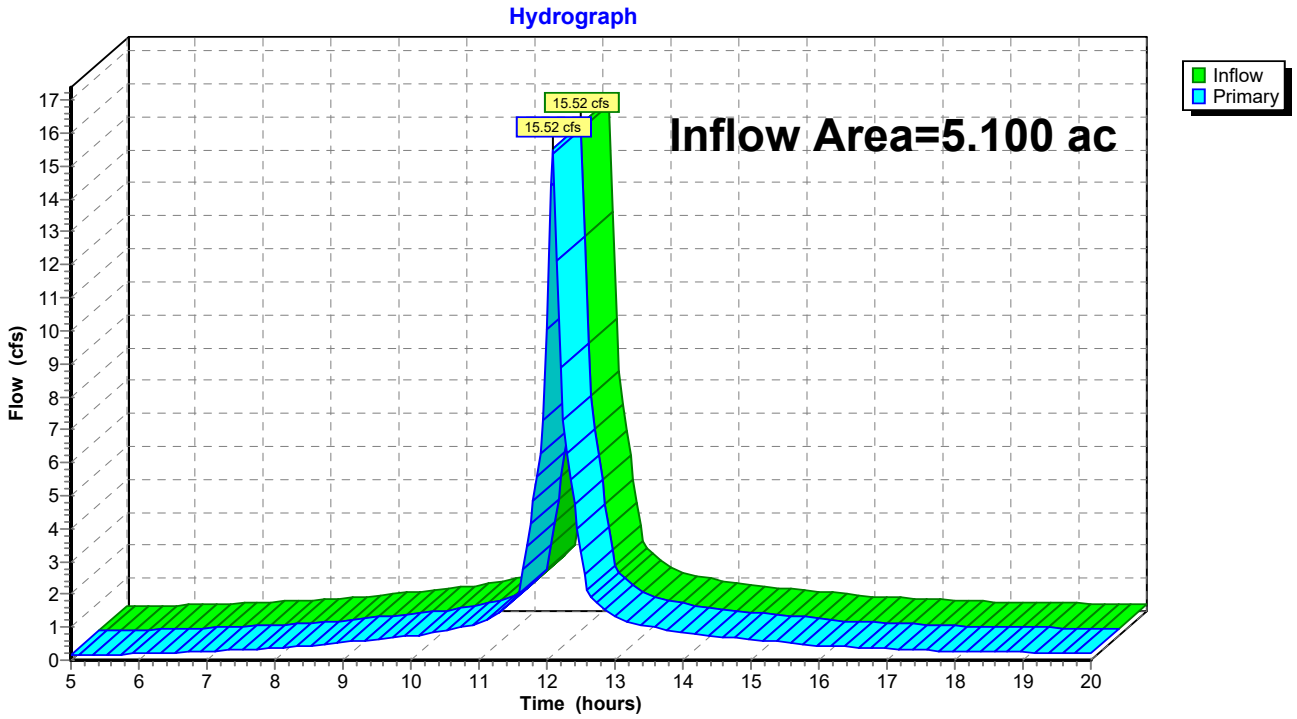


Summary for Link 3L: Total

Inflow Area = 5.100 ac,100.00% Impervious, Inflow Depth > 2.78" for 2-yr event
Inflow = 15.52 cfs @ 12.09 hrs, Volume= 1.183 af
Primary = 15.52 cfs @ 12.09 hrs, Volume= 1.183 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Link 3L: Total



Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment1S: ECA-1 Runoff Area=1.720 ac 100.00% Impervious Runoff Depth>4.44"
Tc=6.0 min CN=98 Runoff=8.25 cfs 0.636 af

Subcatchment2S: ECA-2 Runoff Area=3.380 ac 100.00% Impervious Runoff Depth>4.44"
Tc=6.0 min CN=98 Runoff=16.21 cfs 1.250 af

Link 3L: Total Inflow=24.46 cfs 1.886 af
Primary=24.46 cfs 1.886 af

Summary for Subcatchment 1S: ECA-1

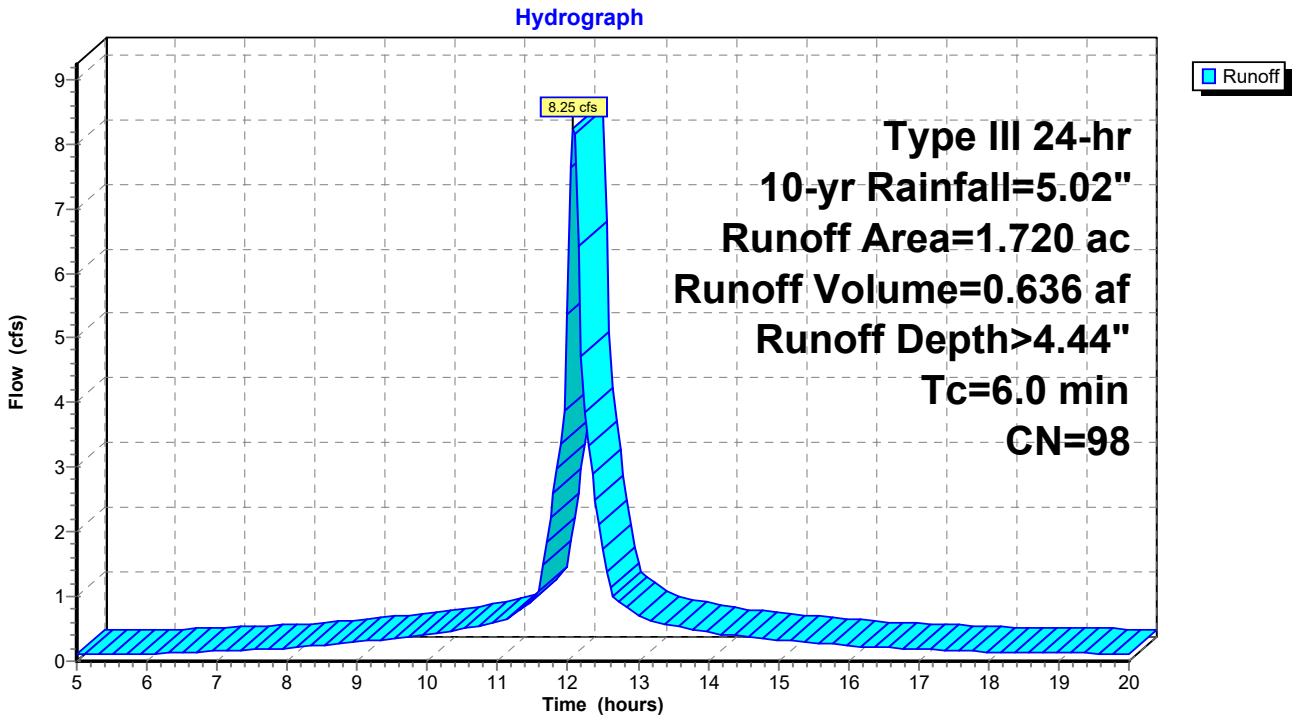
Runoff = 8.25 cfs @ 12.09 hrs, Volume= 0.636 af, Depth> 4.44"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-yr Rainfall=5.02"

	Area (ac)	CN	Description
*	1.720	98	ECA-1
	1.720		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, TOC**

Subcatchment 1S: ECA-1



Summary for Subcatchment 2S: ECA-2

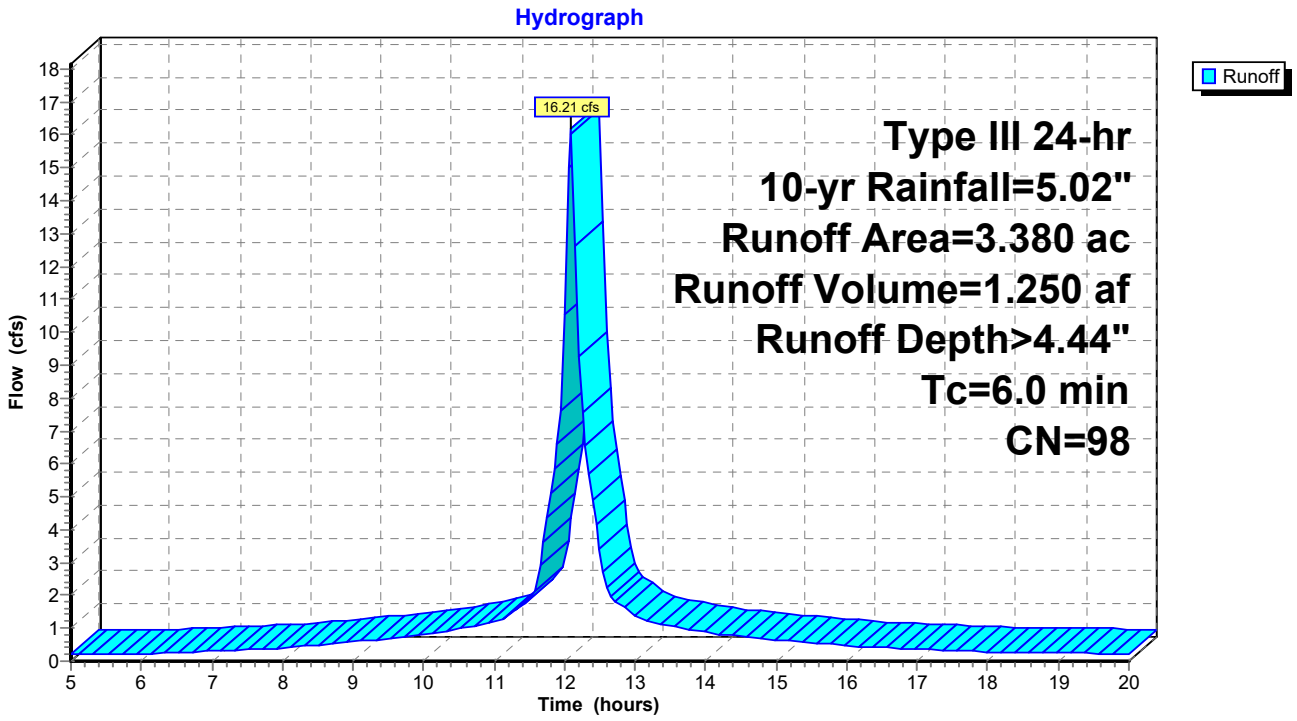
Runoff = 16.21 cfs @ 12.09 hrs, Volume= 1.250 af, Depth> 4.44"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-yr Rainfall=5.02"

	Area (ac)	CN	Description
*	3.380	98	ECA-2
	3.380		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, TOC**

Subcatchment 2S: ECA-2

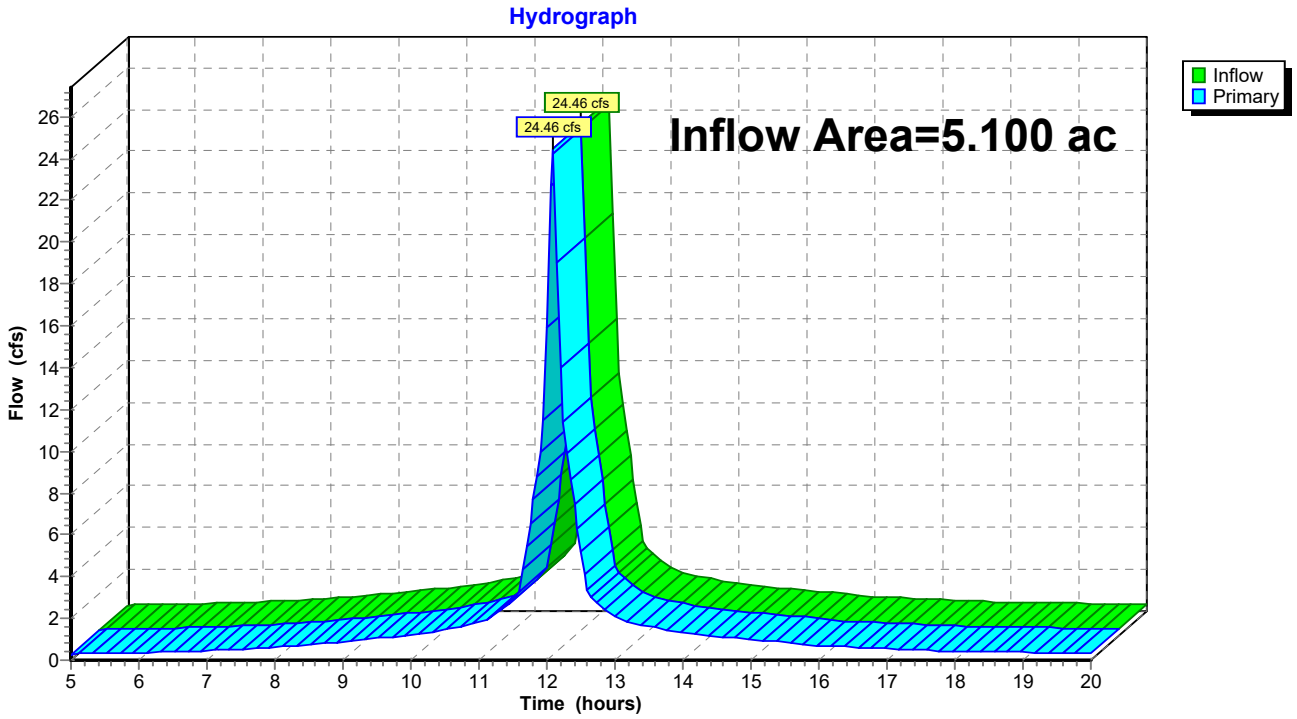


Summary for Link 3L: Total

Inflow Area = 5.100 ac,100.00% Impervious, Inflow Depth > 4.44" for 10-yr event
Inflow = 24.46 cfs @ 12.09 hrs, Volume= 1.886 af
Primary = 24.46 cfs @ 12.09 hrs, Volume= 1.886 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Link 3L: Total



Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment1S: ECA-1 Runoff Area=1.720 ac 100.00% Impervious Runoff Depth>5.47"
Tc=6.0 min CN=98 Runoff=10.12 cfs 0.783 af

Subcatchment2S: ECA-2 Runoff Area=3.380 ac 100.00% Impervious Runoff Depth>5.47"
Tc=6.0 min CN=98 Runoff=19.90 cfs 1.539 af

Link 3L: Total Inflow=30.02 cfs 2.323 af
Primary=30.02 cfs 2.323 af

Summary for Subcatchment 1S: ECA-1

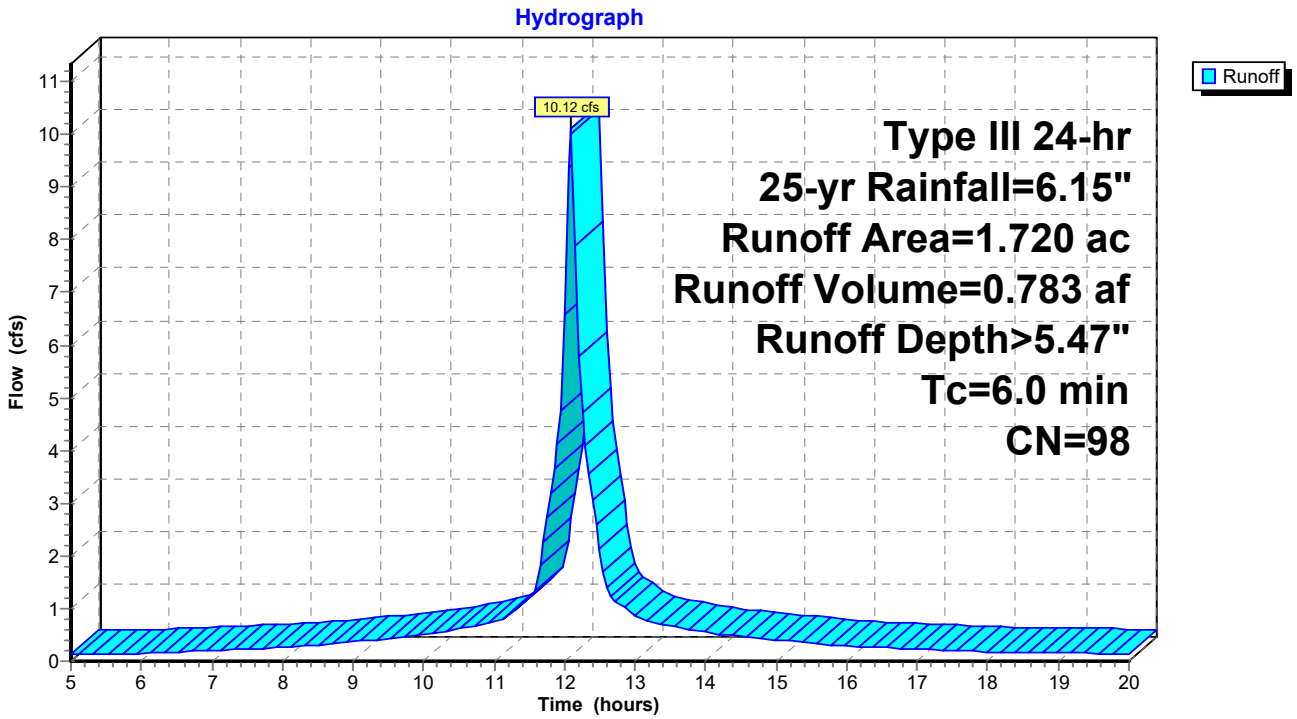
Runoff = 10.12 cfs @ 12.09 hrs, Volume= 0.783 af, Depth> 5.47"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-yr Rainfall=6.15"

	Area (ac)	CN	Description
*	1.720	98	ECA-1
	1.720		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, TOC**

Subcatchment 1S: ECA-1



Summary for Subcatchment 2S: ECA-2

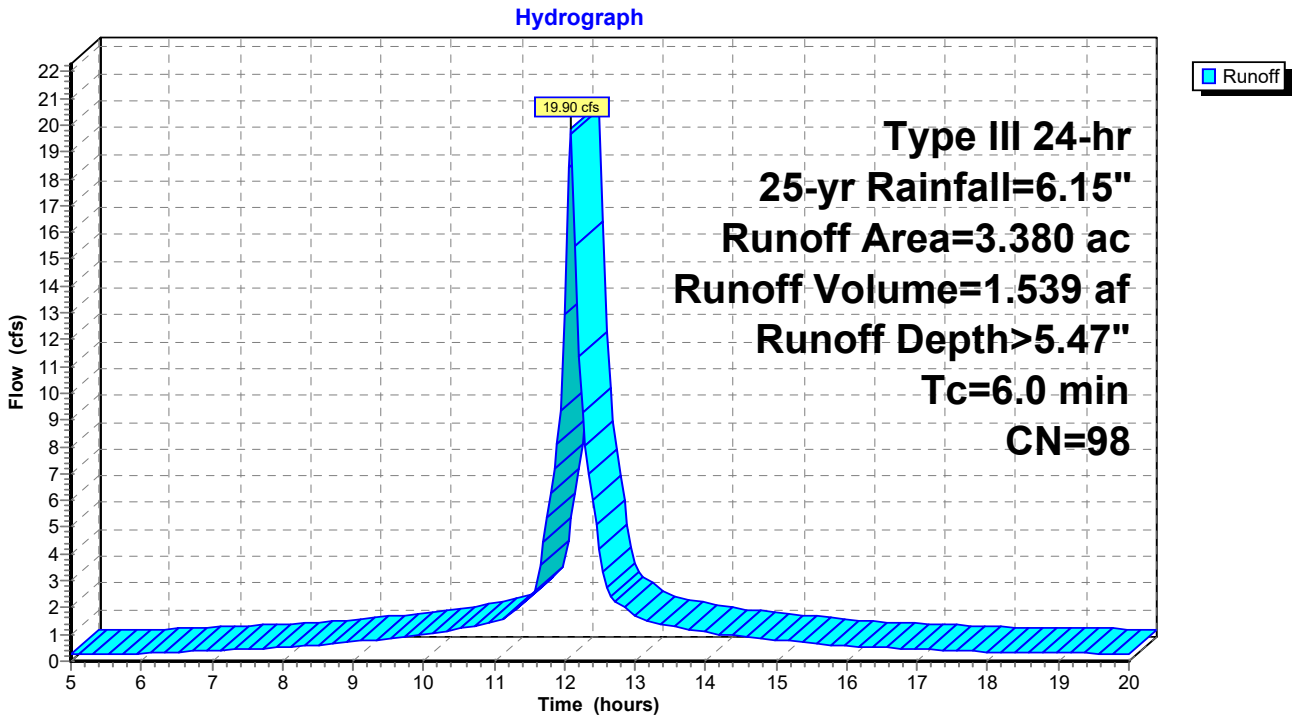
Runoff = 19.90 cfs @ 12.09 hrs, Volume= 1.539 af, Depth> 5.47"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-yr Rainfall=6.15"

	Area (ac)	CN	Description
*	3.380	98	ECA-2
	3.380		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, TOC**

Subcatchment 2S: ECA-2

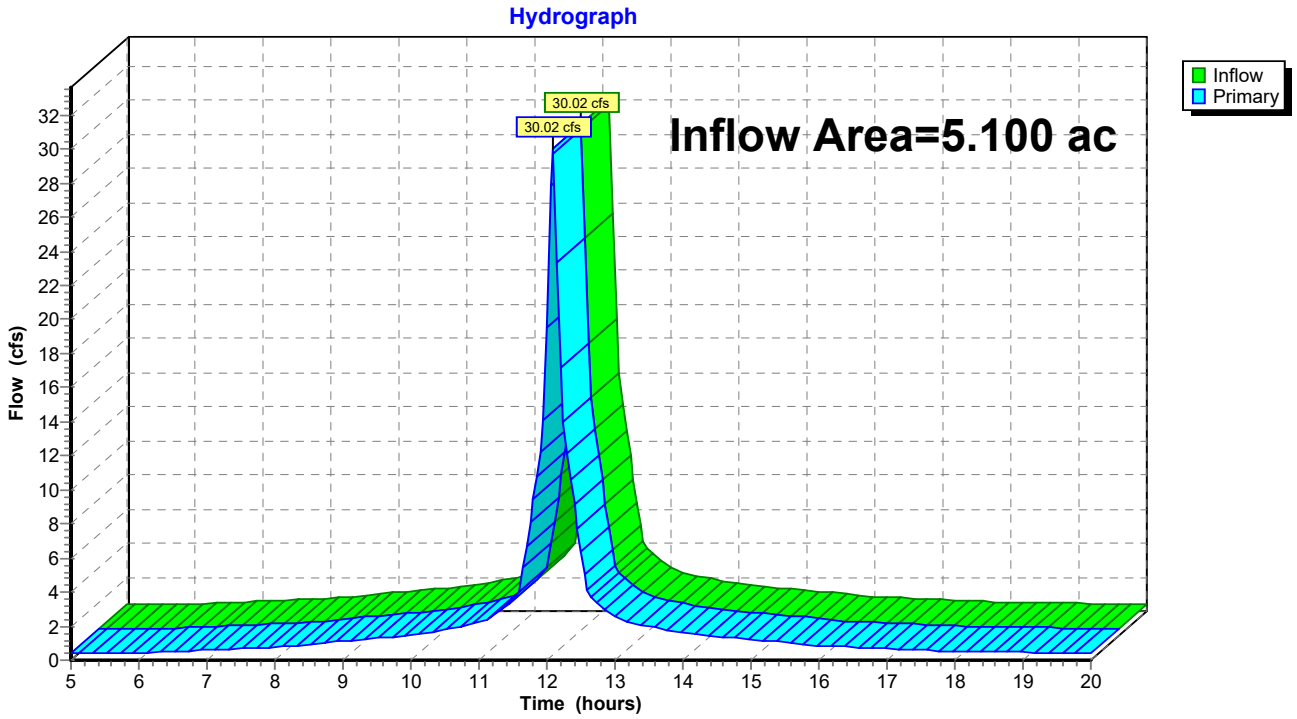


Summary for Link 3L: Total

Inflow Area = 5.100 ac,100.00% Impervious, Inflow Depth > 5.47" for 25-yr event
Inflow = 30.02 cfs @ 12.09 hrs, Volume= 2.323 af
Primary = 30.02 cfs @ 12.09 hrs, Volume= 2.323 af, Atten= 0%, Lag= 0.0 min

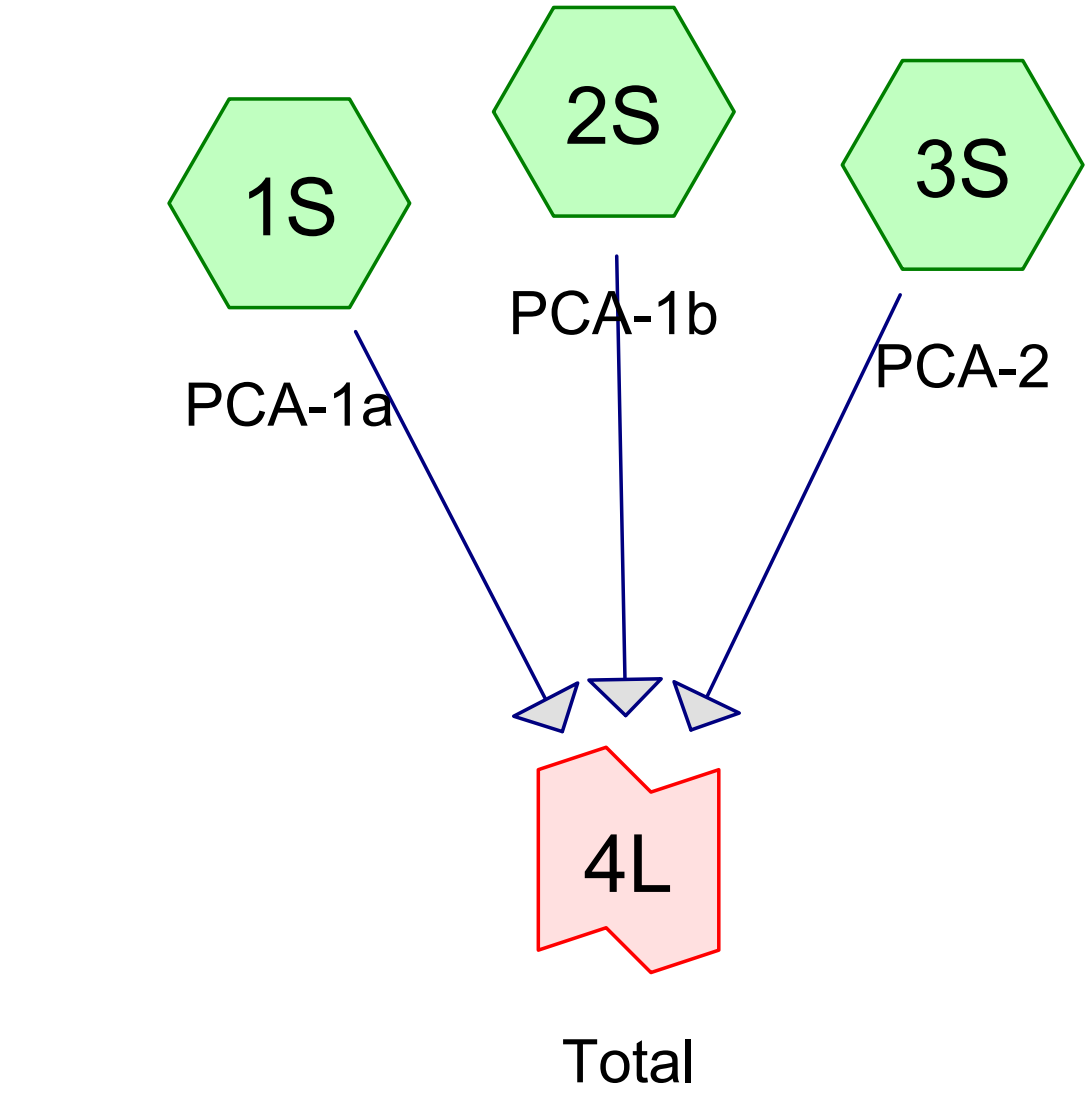
Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

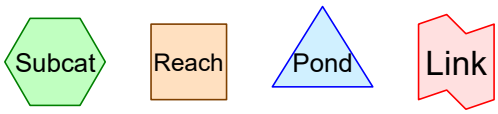
Link 3L: Total



HydroCAD Report

Proposed Hydrology Report





Routing Diagram for IMT Ports Draianage- Proposed - HydroCAD
Prepared by Jacobs, Printed 3/17/2023
HydroCAD® 10.00-25 s/n 00751 © 2019 HydroCAD Software Solutions LLC

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
1.350	98	PCA-1a (1S)
1.320	98	PCA-1b (2S)
2.430	98	PCA-2 (3S)

Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment1S: PCA-1a Runoff Area=1.350 ac 100.00% Impervious Runoff Depth>2.78"
Tc=6.0 min CN=98 Runoff=4.11 cfs 0.313 af

Subcatchment2S: PCA-1b Runoff Area=1.320 ac 100.00% Impervious Runoff Depth>2.78"
Tc=6.0 min CN=98 Runoff=4.02 cfs 0.306 af

Subcatchment3S: PCA-2 Runoff Area=2.430 ac 100.00% Impervious Runoff Depth>2.78"
Tc=6.0 min CN=98 Runoff=7.40 cfs 0.564 af

Link 4L: Total Inflow=15.52 cfs 1.183 af
Primary=15.52 cfs 1.183 af

Summary for Subcatchment 1S: PCA-1a

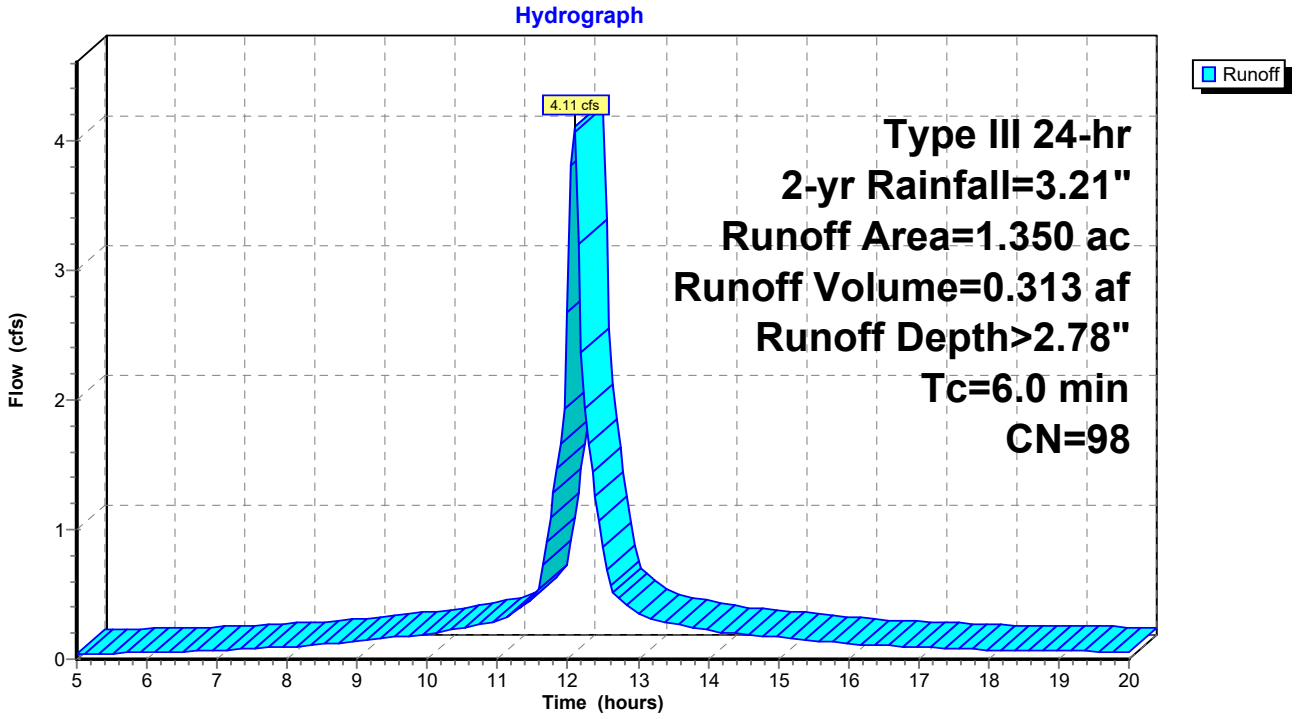
Runoff = 4.11 cfs @ 12.09 hrs, Volume= 0.313 af, Depth> 2.78"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-yr Rainfall=3.21"

	Area (ac)	CN	Description
*	1.350	98	PCA-1a
	1.350		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, TOC**

Subcatchment 1S: PCA-1a



Summary for Subcatchment 2S: PCA-1b

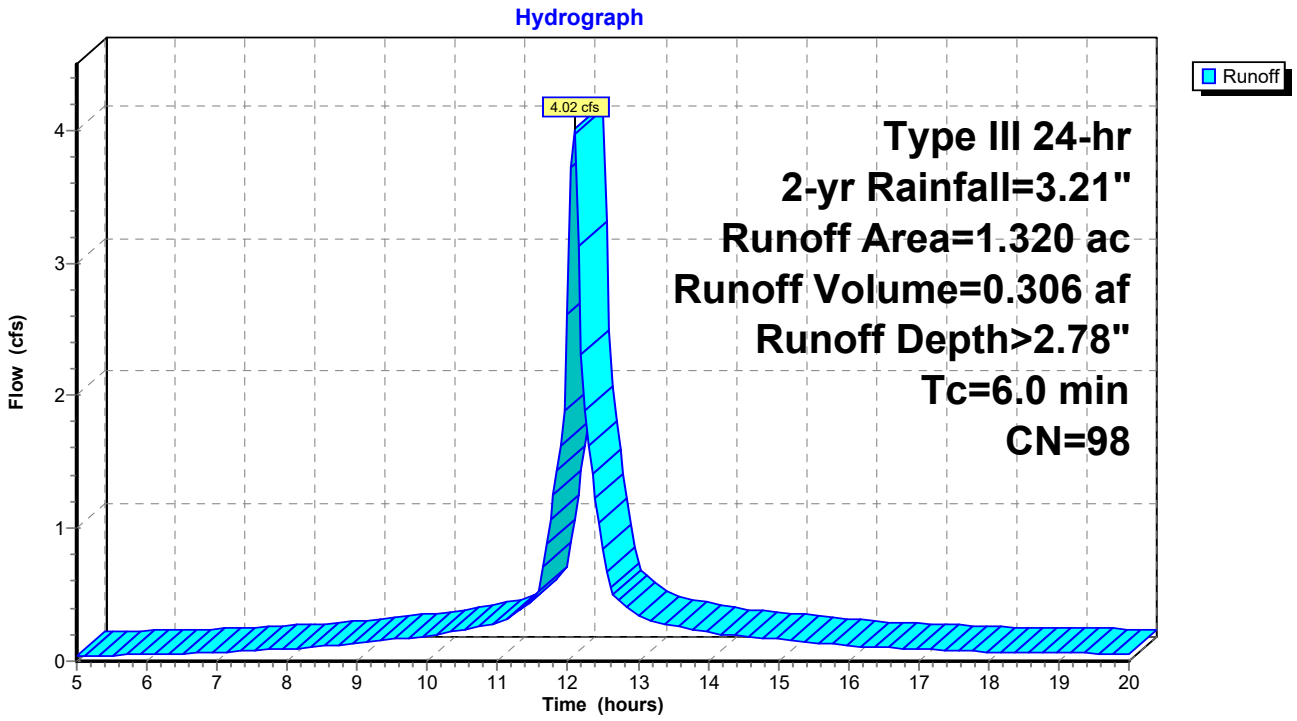
Runoff = 4.02 cfs @ 12.09 hrs, Volume= 0.306 af, Depth> 2.78"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-yr Rainfall=3.21"

	Area (ac)	CN	Description
*	1.320	98	PCA-1b
	1.320		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, TOC**

Subcatchment 2S: PCA-1b



Summary for Subcatchment 3S: PCA-2

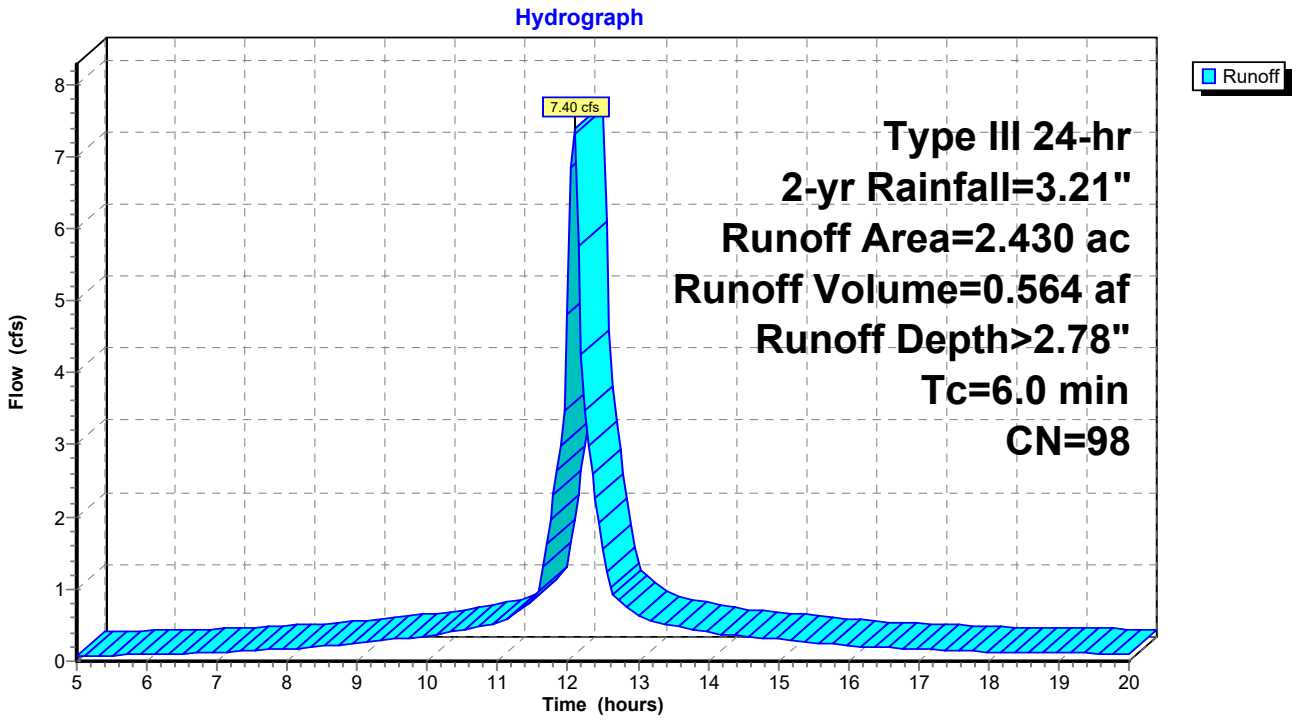
Runoff = 7.40 cfs @ 12.09 hrs, Volume= 0.564 af, Depth> 2.78"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-yr Rainfall=3.21"

	Area (ac)	CN	Description
*	2.430	98	PCA-2
	2.430		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, PCA-2**

Subcatchment 3S: PCA-2

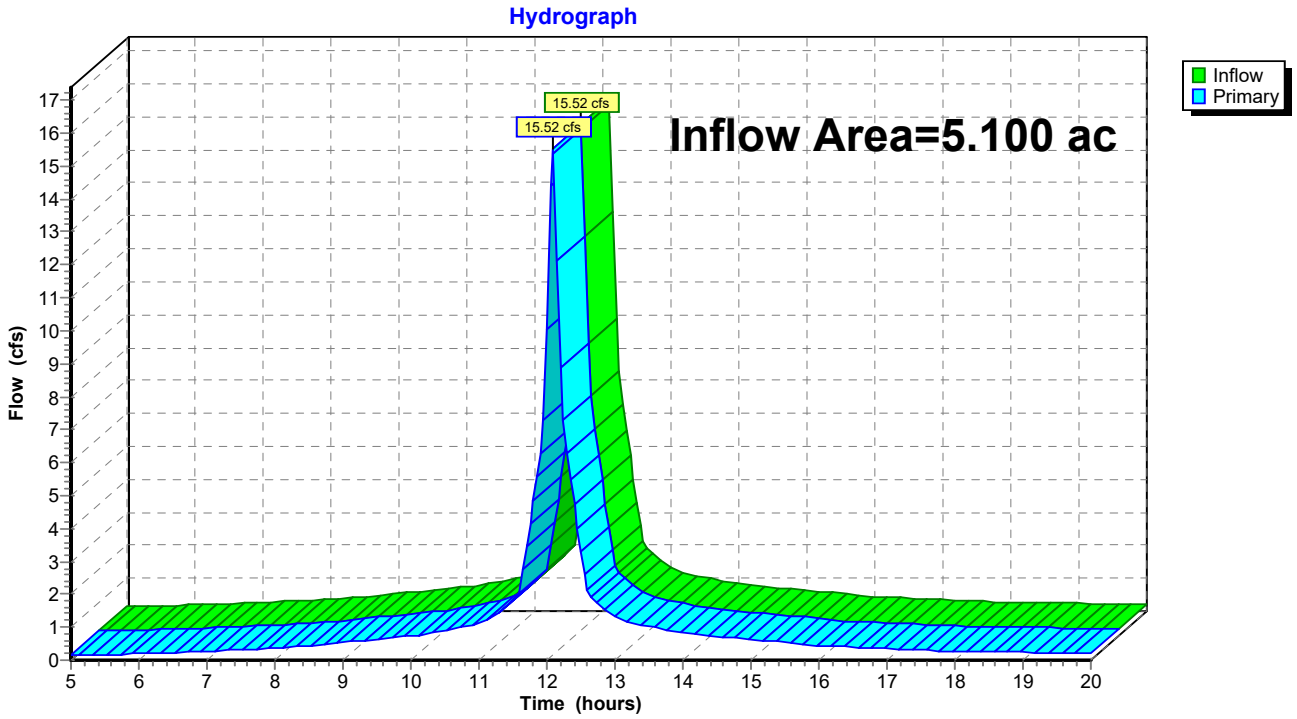


Summary for Link 4L: Total

Inflow Area = 5.100 ac,100.00% Impervious, Inflow Depth > 2.78" for 2-yr event
Inflow = 15.52 cfs @ 12.09 hrs, Volume= 1.183 af
Primary = 15.52 cfs @ 12.09 hrs, Volume= 1.183 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Link 4L: Total



Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment1S: PCA-1a Runoff Area=1.350 ac 100.00% Impervious Runoff Depth>4.44"
Tc=6.0 min CN=98 Runoff=6.47 cfs 0.499 af

Subcatchment2S: PCA-1b Runoff Area=1.320 ac 100.00% Impervious Runoff Depth>4.44"
Tc=6.0 min CN=98 Runoff=6.33 cfs 0.488 af

Subcatchment3S: PCA-2 Runoff Area=2.430 ac 100.00% Impervious Runoff Depth>4.44"
Tc=6.0 min CN=98 Runoff=11.65 cfs 0.898 af

Link 4L: Total Inflow=24.46 cfs 1.886 af
Primary=24.46 cfs 1.886 af

Summary for Subcatchment 1S: PCA-1a

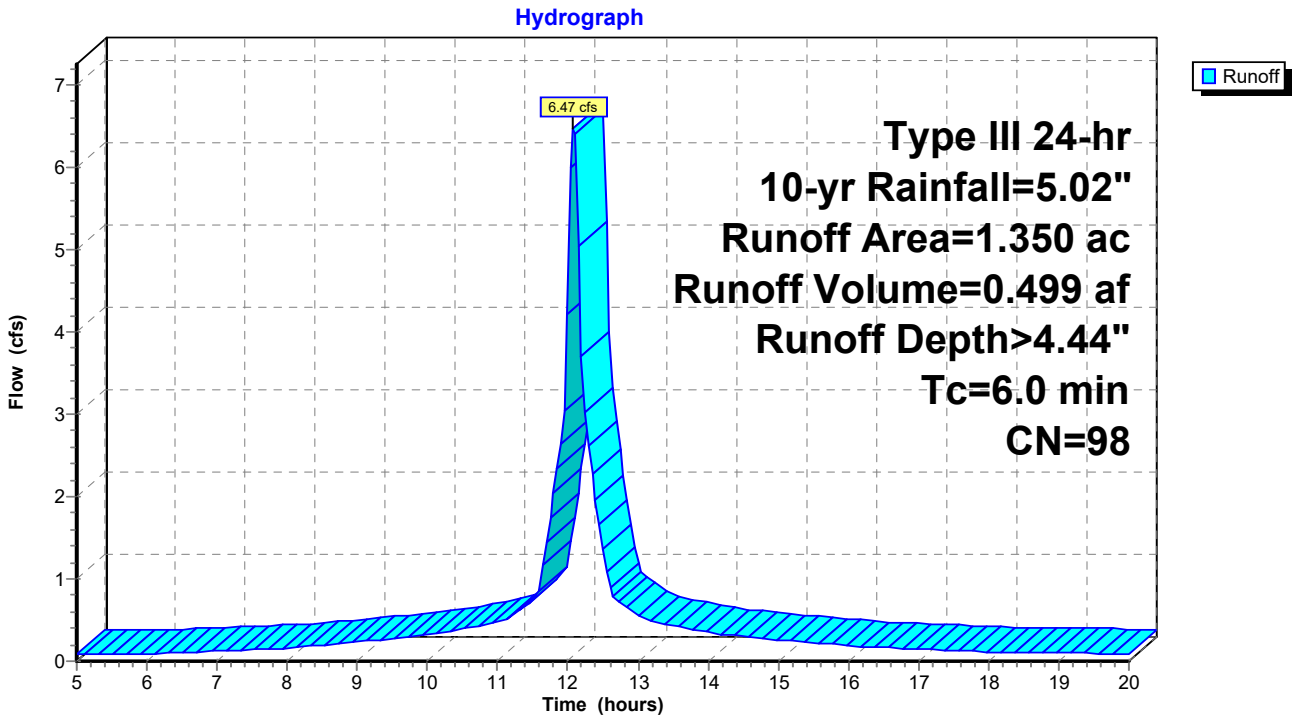
Runoff = 6.47 cfs @ 12.09 hrs, Volume= 0.499 af, Depth> 4.44"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-yr Rainfall=5.02"

	Area (ac)	CN	Description
*	1.350	98	PCA-1a
	1.350		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, TOC**

Subcatchment 1S: PCA-1a



Summary for Subcatchment 2S: PCA-1b

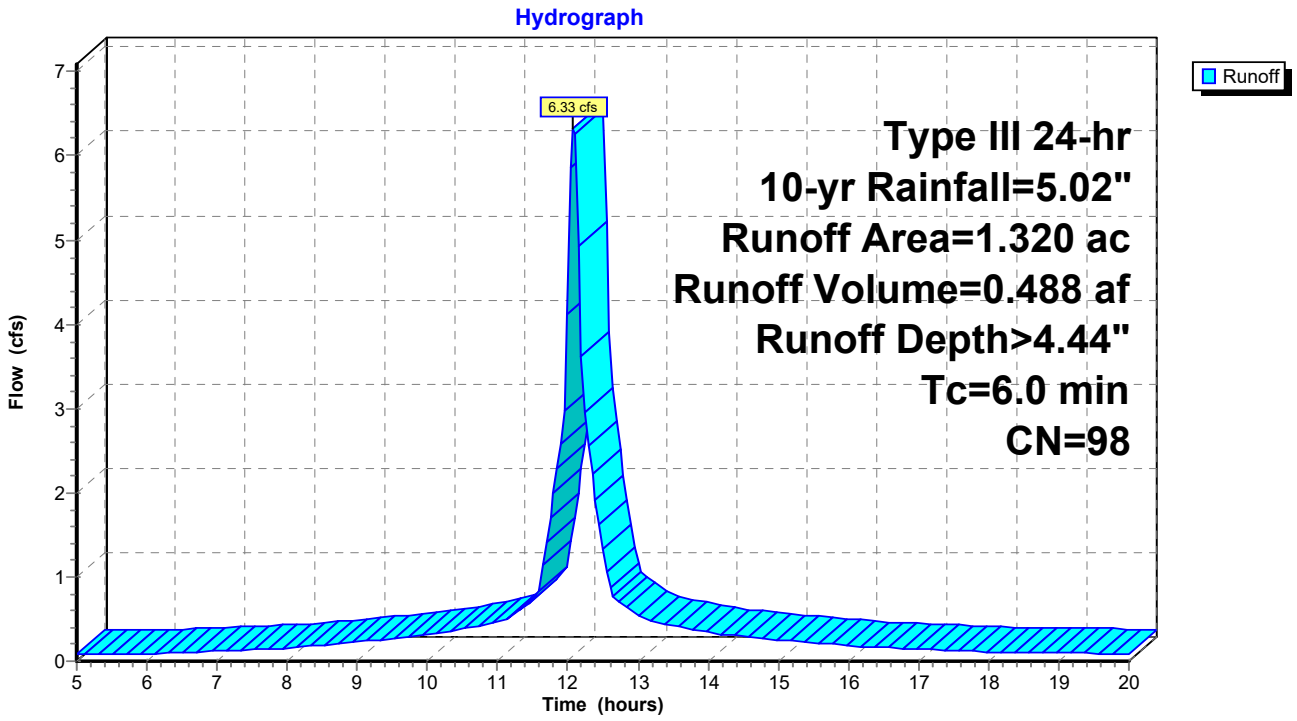
Runoff = 6.33 cfs @ 12.09 hrs, Volume= 0.488 af, Depth> 4.44"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-yr Rainfall=5.02"

	Area (ac)	CN	Description
*	1.320	98	PCA-1b
	1.320		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, TOC**

Subcatchment 2S: PCA-1b



Summary for Subcatchment 3S: PCA-2

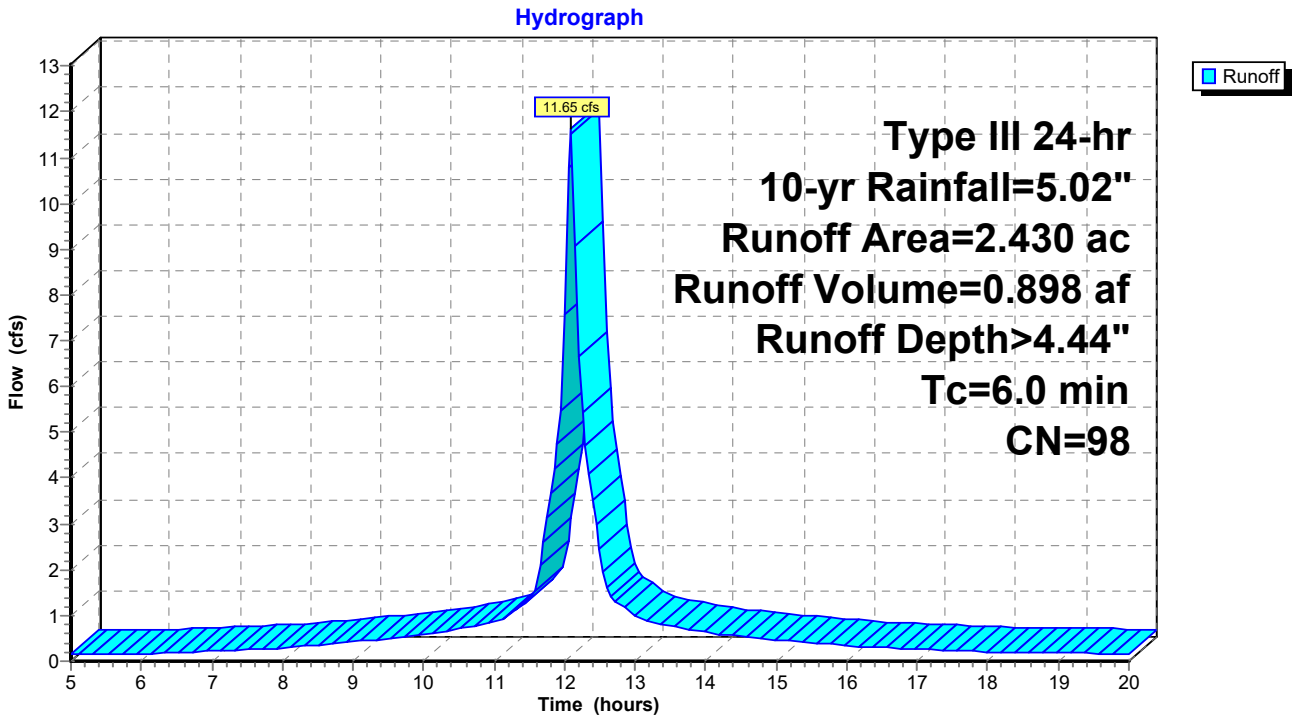
Runoff = 11.65 cfs @ 12.09 hrs, Volume= 0.898 af, Depth> 4.44"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-yr Rainfall=5.02"

	Area (ac)	CN	Description
*	2.430	98	PCA-2
	2.430		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, PCA-2**

Subcatchment 3S: PCA-2

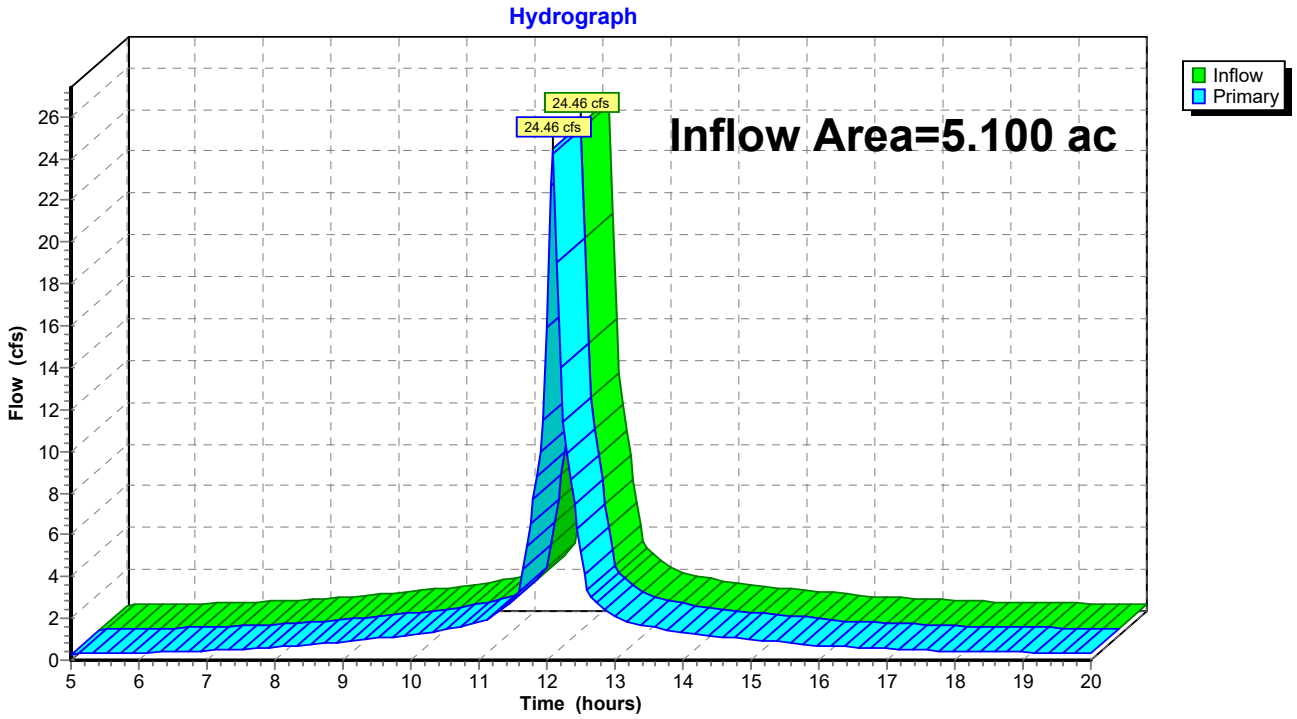


Summary for Link 4L: Total

Inflow Area = 5.100 ac,100.00% Impervious, Inflow Depth > 4.44" for 10-yr event
Inflow = 24.46 cfs @ 12.09 hrs, Volume= 1.886 af
Primary = 24.46 cfs @ 12.09 hrs, Volume= 1.886 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Link 4L: Total



Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment1S: PCA-1a Runoff Area=1.350 ac 100.00% Impervious Runoff Depth>5.47"
Tc=6.0 min CN=98 Runoff=7.95 cfs 0.615 af

Subcatchment2S: PCA-1b Runoff Area=1.320 ac 100.00% Impervious Runoff Depth>5.47"
Tc=6.0 min CN=98 Runoff=7.77 cfs 0.601 af

Subcatchment3S: PCA-2 Runoff Area=2.430 ac 100.00% Impervious Runoff Depth>5.47"
Tc=6.0 min CN=98 Runoff=14.30 cfs 1.107 af

Link 4L: Total Inflow=30.02 cfs 2.323 af
Primary=30.02 cfs 2.323 af

Summary for Subcatchment 1S: PCA-1a

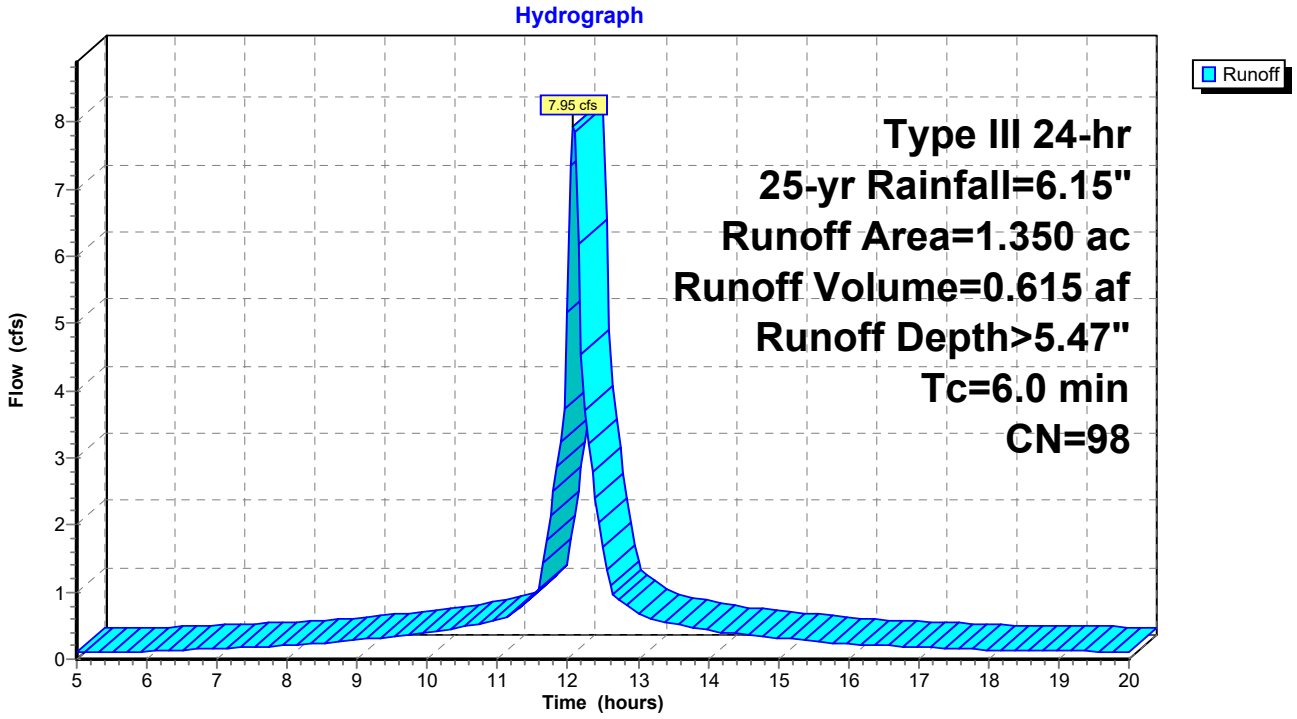
Runoff = 7.95 cfs @ 12.09 hrs, Volume= 0.615 af, Depth> 5.47"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-yr Rainfall=6.15"

	Area (ac)	CN	Description
*	1.350	98	PCA-1a
	1.350		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, TOC**

Subcatchment 1S: PCA-1a



Summary for Subcatchment 2S: PCA-1b

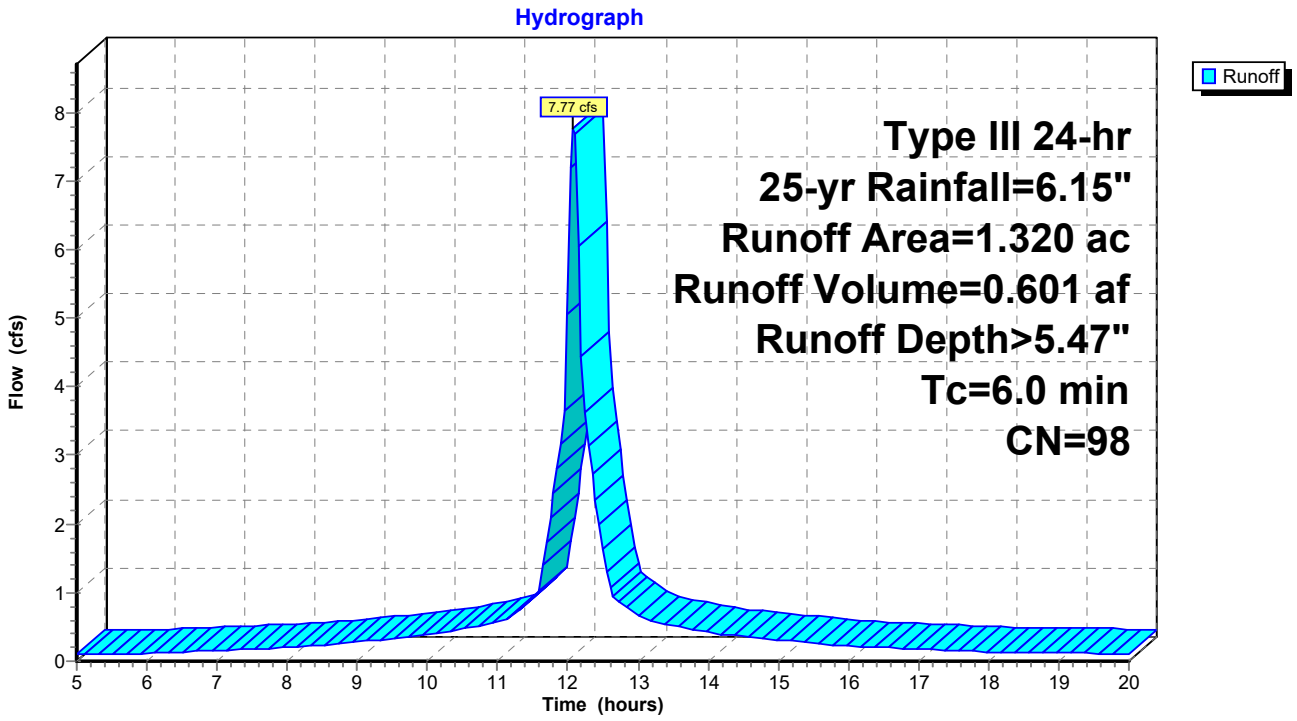
Runoff = 7.77 cfs @ 12.09 hrs, Volume= 0.601 af, Depth> 5.47"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-yr Rainfall=6.15"

	Area (ac)	CN	Description
*	1.320	98	PCA-1b
	1.320		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, TOC**

Subcatchment 2S: PCA-1b



Summary for Subcatchment 3S: PCA-2

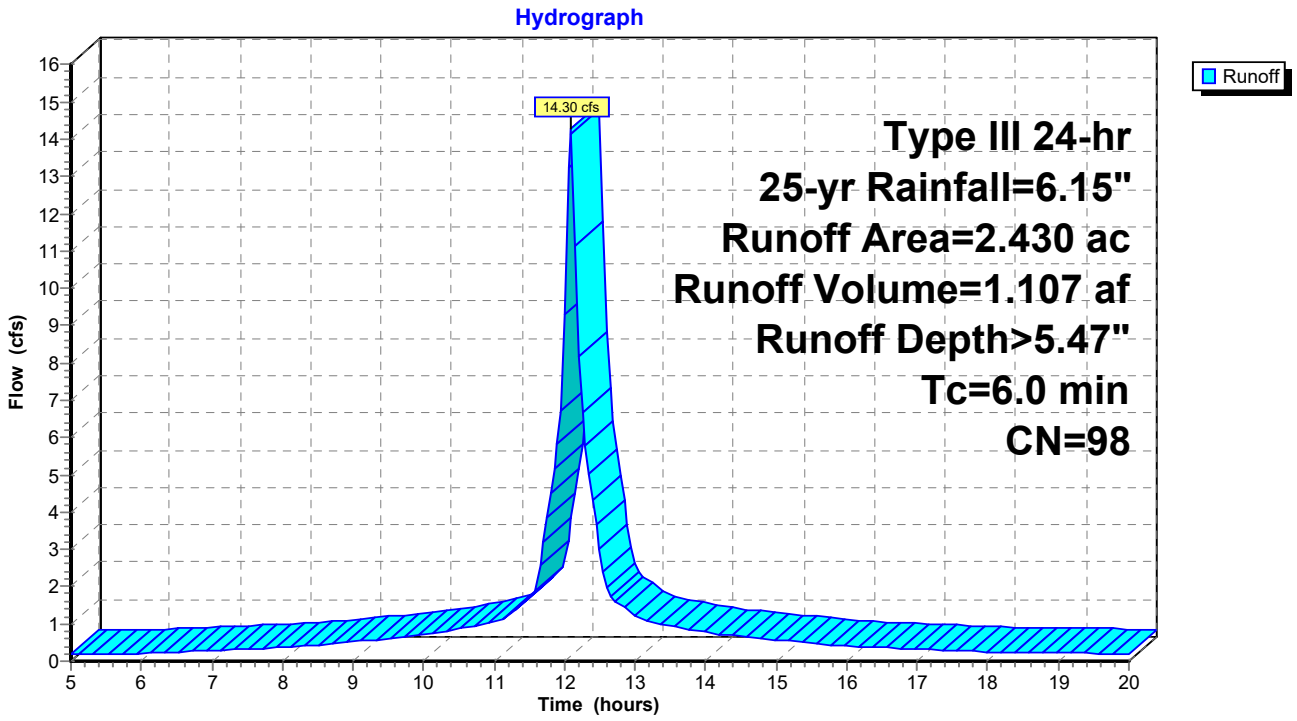
Runoff = 14.30 cfs @ 12.09 hrs, Volume= 1.107 af, Depth> 5.47"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-yr Rainfall=6.15"

	Area (ac)	CN	Description
*	2.430	98	PCA-2
	2.430		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, PCA-2**

Subcatchment 3S: PCA-2

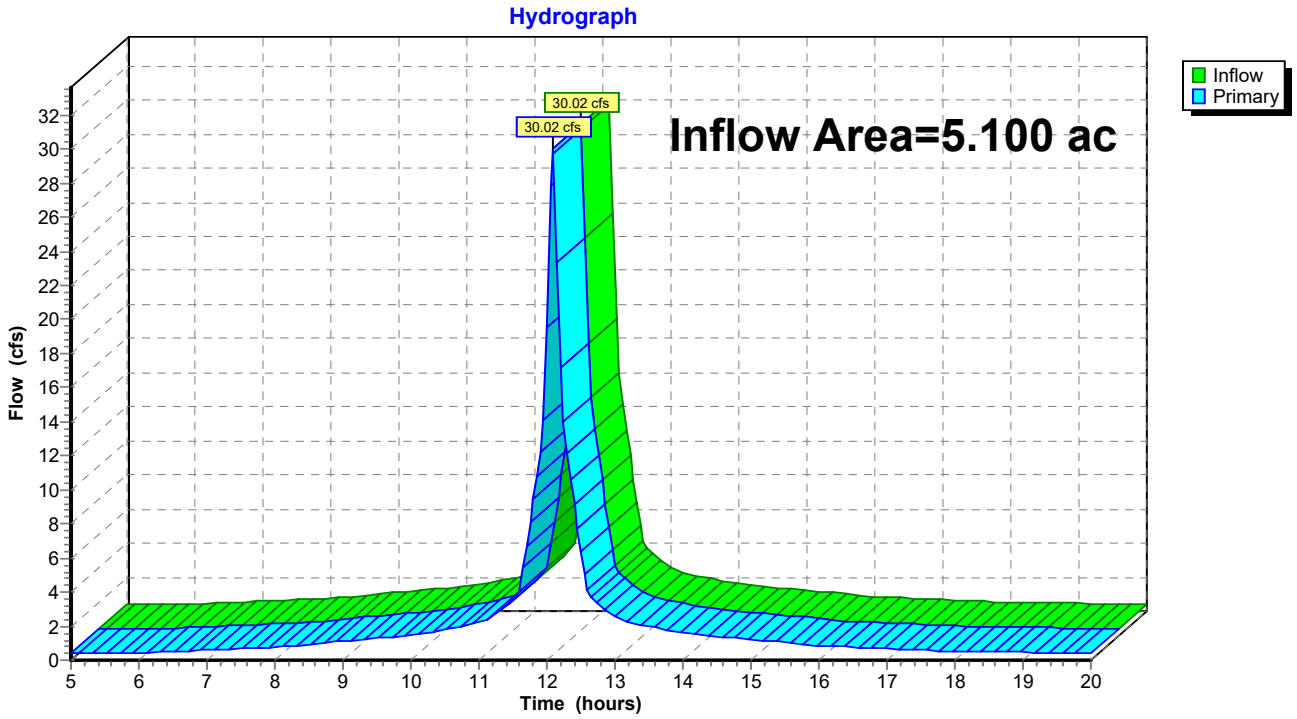


Summary for Link 4L: Total

Inflow Area = 5.100 ac,100.00% Impervious, Inflow Depth > 5.47" for 25-yr event
Inflow = 30.02 cfs @ 12.09 hrs, Volume= 2.323 af
Primary = 30.02 cfs @ 12.09 hrs, Volume= 2.323 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Link 4L: Total



Hydraflow Express Extension Model

Existing Stormwater System 24" CSO Main Line @ 95% Capacity Flow

Channel Report

Hydraflow Express Extension for Autodesk® AutoCAD® Civil 3D® by Autodesk, Inc. Friday, Mar 10 2023

<Name>

Circular

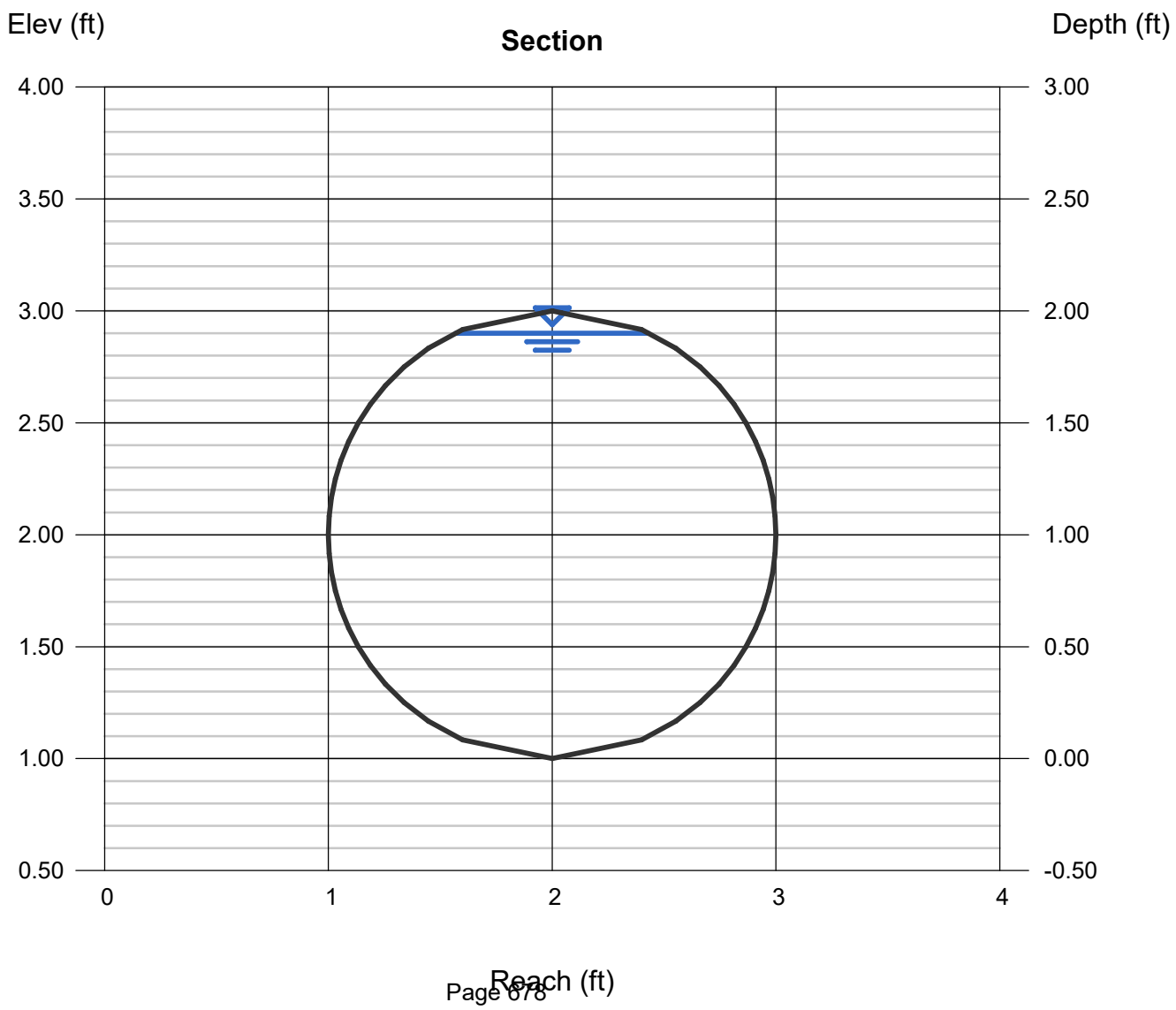
Diameter (ft)	=	2.00
Invert Elev (ft)	=	1.00
Slope (%)	=	1.25
N-Value	=	0.013

Calculations

Compute by:		Q vs Depth
No. Increments	=	20

Highlighted

Depth (ft)	=	1.90
Q (cfs)	=	27.17
Area (sqft)	=	3.08
Velocity (ft/s)	=	8.81
Wetted Perim (ft)	=	5.39
Crit Depth, Yc (ft)	=	1.82
Top Width (ft)	=	0.86
EGL (ft)	=	3.11



Hydraflow Storm Sewer Report

Existing Stormwater System Review of 24" CSO Main Line

Hydraflow Storm Sewers Extension for Autodesk® AutoCAD® Civil 3D® Plan

Project File: Existing Storm Sewer.stm	Number of lines: 2	Date: 3/10/2023

Storm Sewers v2018.30

Storm Sewer Tabulation

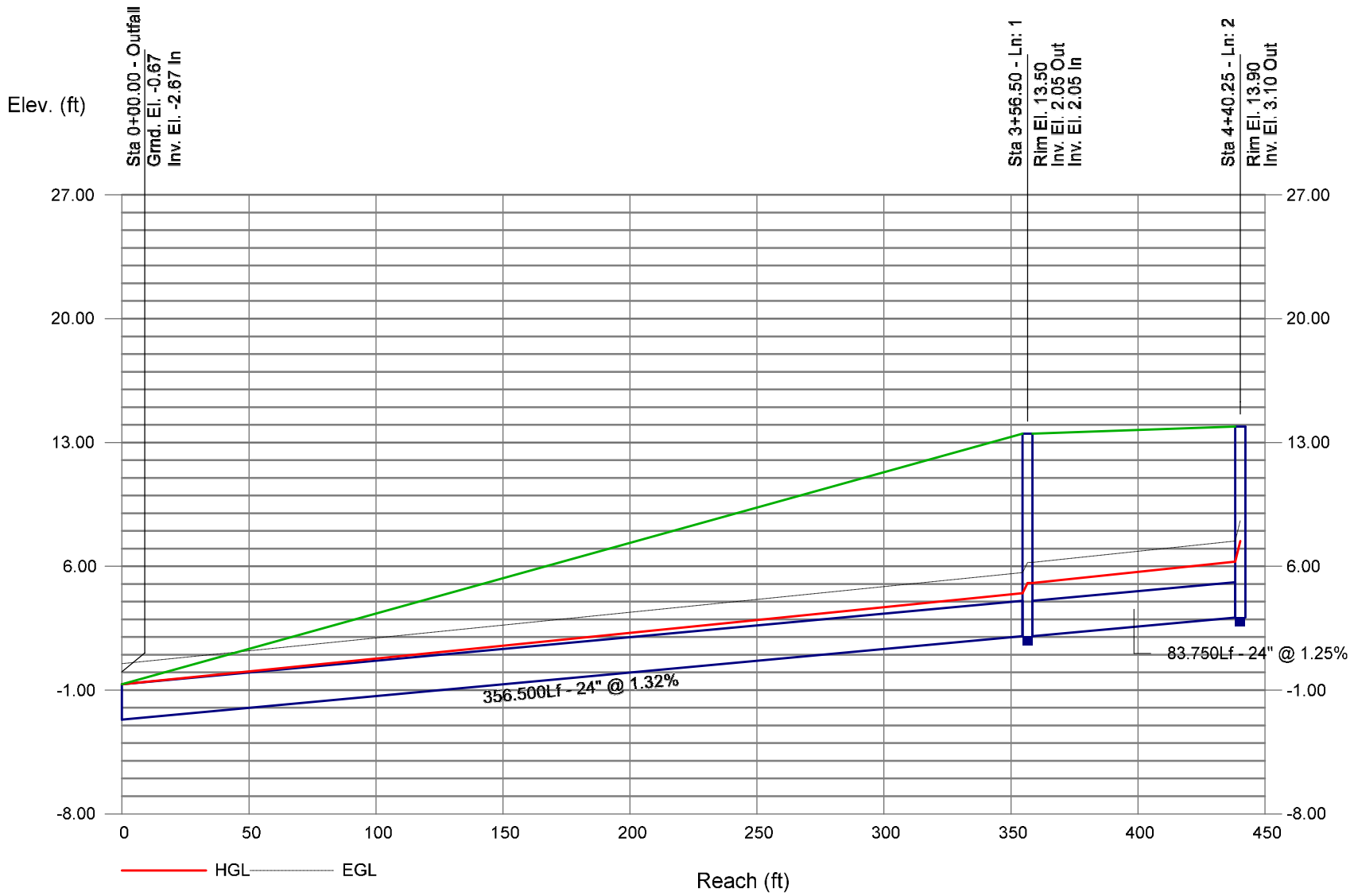
Station		Len	Drng Area		Rnoff coeff	Area x C		Tc		Rain (I)	Total flow	Cap full	Vel	Pipe		Invert Elev		HGL Elev		Grnd / Rim Elev		Line ID
Line	To Line	(ft)	Incr (ac)	Total (ac)	(C)	Incr	Total	Inlet (min)	Syst (min)	(in/hr)	(cfs)	(cfs)	(ft/s)	Size (in)	Slope (%)	Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	
1	End	356.500	0.00	0.00	0.00	0.00	0.00	5.0	5.2	0.0	27.17	26.03	8.65	24	1.32	-2.67	2.05	-0.67	4.48	-0.67	13.50	
2	1	83.750	0.00	0.00	0.00	0.00	0.00	5.0	5.0	0.0	27.17	25.33	8.65	24	1.25	2.05	3.10	5.06	6.27	13.50	13.90	

Project File: Existing Storm Sewer.stm | Number of lines: 2 | Run Date: 3/10/2023

NOTES:Intensity = 42.86 / (Inlet time + 4.00) ^ 0.76; Return period =Yrs. 25 ; c = cir e = ellip b = box

Storm Sewer Profile

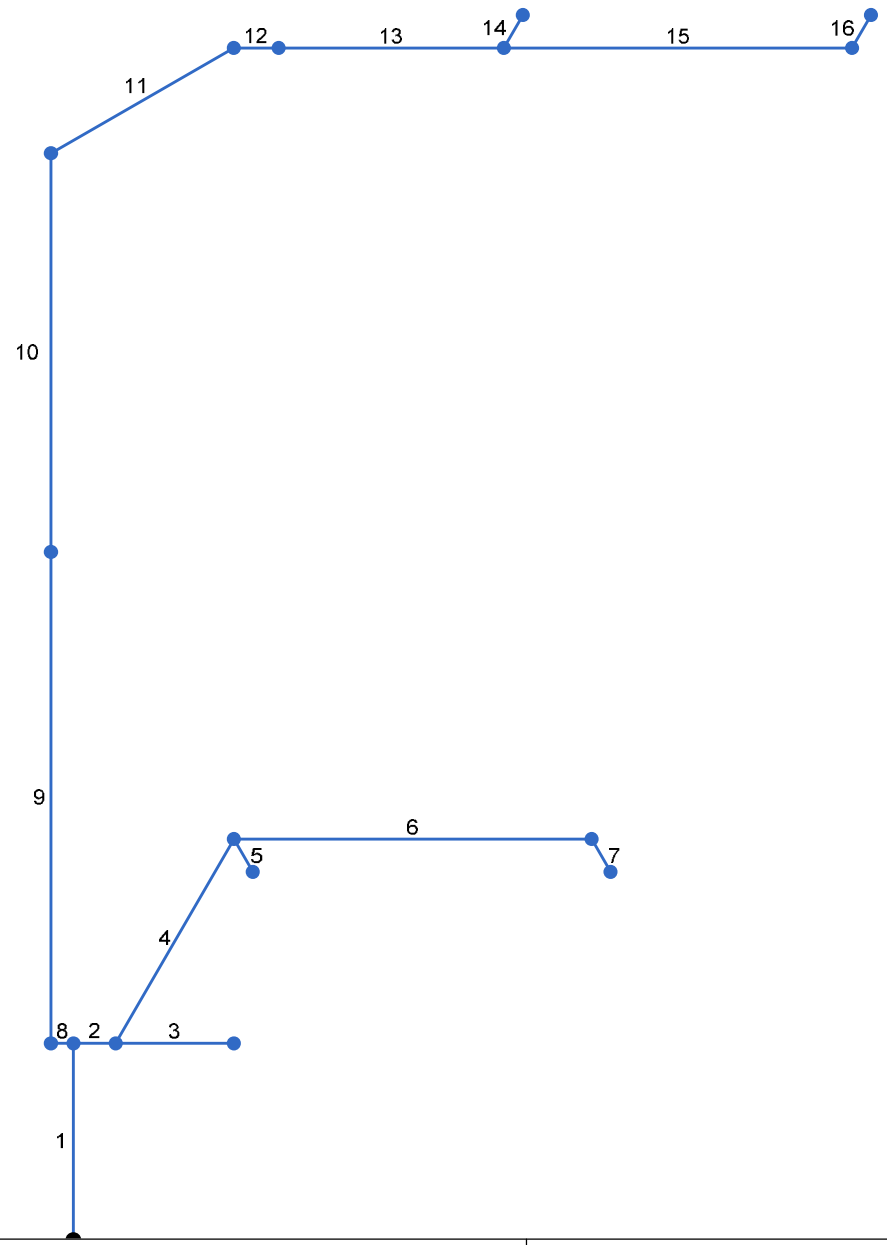
Proj. file: Existing Storm Sewer.stm



Hydraflow Storm Sewer Report

Proposed Stormwater System Review of 30" CSO Main Line

Hydraflow Storm Sewers Extension for Autodesk® AutoCAD® Civil 3D® Plan



Project File: Proposed Storm Sewer.stm	Number of lines: 16	Date: 3/17/2023

Storm Sewers v2018.30

Storm Sewer Tabulation

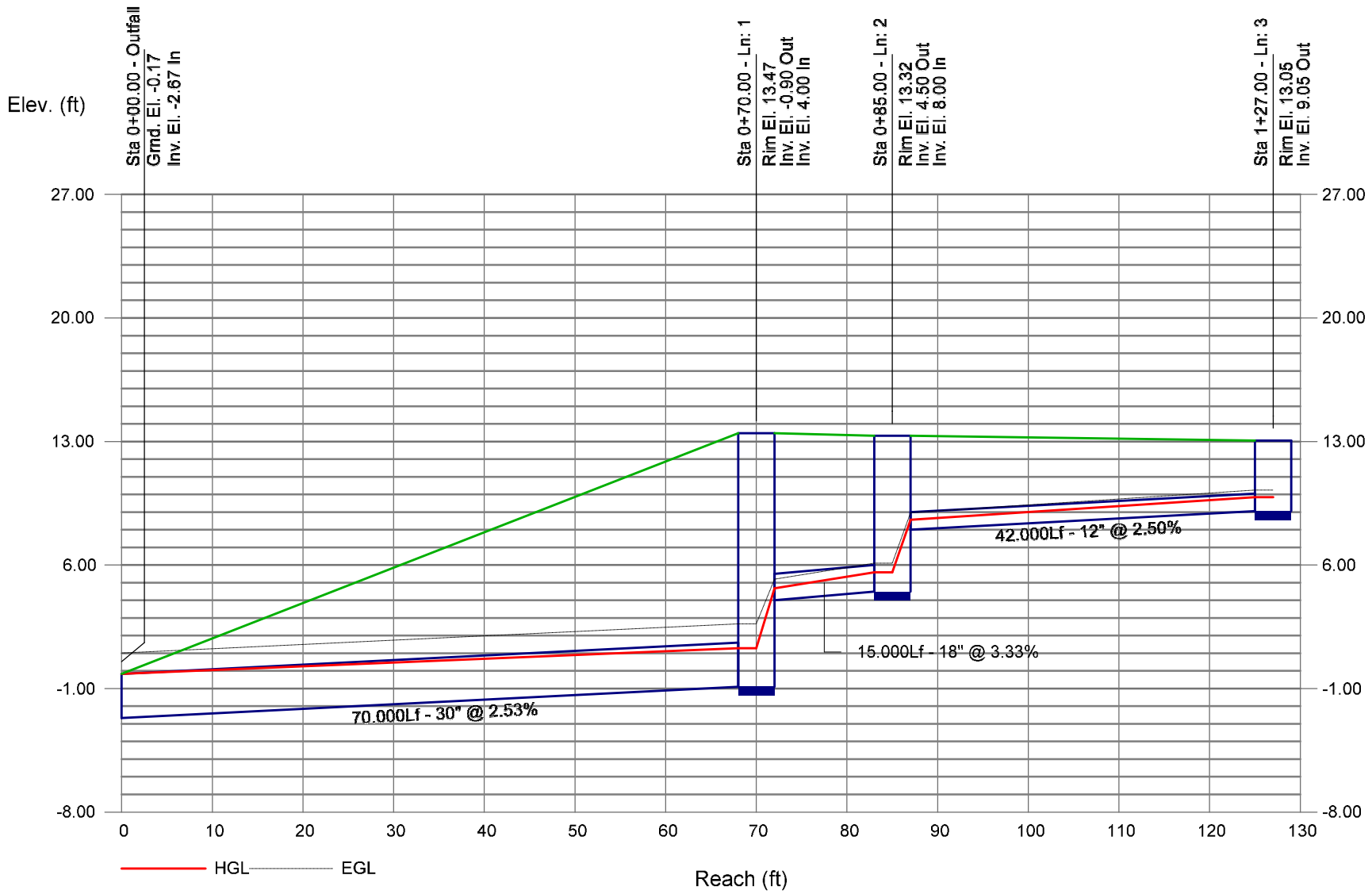
Station		Len	Drng Area		Rnoff coeff	Area x C		Tc		Rain (I)	Total flow	Cap full	Vel	Pipe		Invert Elev		HGL Elev		Grnd / Rim Elev		Line ID
Line	To Line	(ft)	Incr (ac)	Total (ac)	(C)	Incr	Total	Inlet (min)	Syst (min)	(in/hr)	(cfs)	(cfs)	(ft/s)	Size (in)	Slope (%)	Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	
1	End	70.000	0.00	0.00	0.00	0.00	0.00	6.0	8.2	0.0	42.85	65.21	9.07	30	2.53	-2.67	-0.90	-0.17	1.29	-0.17	13.47	EX-OF
2	1	15.000	0.00	0.00	0.00	0.00	0.00	6.0	6.8	0.0	7.95	19.17	8.06	18	3.33	4.00	4.50	4.67	5.59	13.47	13.32	PR-WQS 2
3	2	42.000	0.00	0.00	0.00	0.00	0.00	6.0	6.0	0.0	3.41	5.63	6.32	12	2.50	8.00	9.05	8.56	9.84	13.32	13.05	PR-CB 3
4	2	84.000	0.00	0.00	0.00	0.00	0.00	6.0	6.6	0.0	4.54	3.89	5.78	12	1.19	4.50	5.50	5.59	6.96	13.32	13.55	PR-MH 7
5	4	13.500	0.00	0.00	0.00	0.00	0.00	6.0	6.0	0.0	1.24	6.50	4.90	12	3.33	9.00	9.45	9.30	9.92	13.55	13.45	PR-CB 4
6	4	127.150	0.00	0.00	0.00	0.00	0.00	6.0	6.1	0.0	3.30	5.04	4.62	12	2.01	5.50	8.05	7.48	8.83	13.55	13.05	PR-MH 8
7	6	13.500	0.00	0.00	0.00	0.00	0.00	6.0	6.0	0.0	3.30	4.33	5.04	12	1.48	8.05	8.25	8.83	9.03	13.05	12.25	PR-CB 5
8	1	8.000	0.00	0.00	0.00	0.00	0.00	6.0	8.2	0.0	34.90	41.01	7.97	30	1.00	-0.90	-0.82	1.29	1.19	13.47	13.53	PR-MH 5
9	8	175.000	0.00	0.00	0.00	0.00	0.00	6.0	7.8	0.0	34.90	41.01	8.27	30	1.00	-0.82	0.93	1.19	2.94	13.53	14.50	PR-MH 4
10	9	142.000	0.00	0.00	0.00	0.00	0.00	6.0	7.4	0.0	34.90	41.01	8.27	30	1.00	0.93	2.35	2.94	4.36	14.50	14.10	PR-MH 3
11	10	75.000	0.00	0.00	0.00	0.00	0.00	6.0	7.3	0.0	34.90	41.01	8.27	30	1.00	2.35	3.10	4.36	5.11	14.10	13.55	EX-MH
12	11	16.000	0.00	0.00	0.00	0.00	0.00	6.0	7.2	0.0	7.73	16.60	4.37	18	2.50	3.10	3.50	5.11	5.19	13.55	13.45	PR-WQS 1
13	12	80.000	0.00	0.00	0.00	0.00	0.00	6.0	6.9	0.0	7.73	11.74	6.39	18	1.25	6.50	7.50	7.39	8.58	13.45	13.20	PR-MH 1
14	13	13.500	0.00	0.00	0.00	0.00	0.00	6.0	6.0	0.0	5.75	4.85	7.32	12	1.85	7.50	7.75	8.58	8.93	13.20	12.90	PR-CB 1
15	13	123.750	0.00	0.00	0.00	0.00	0.00	6.0	6.1	0.0	1.98	3.58	3.27	12	1.01	7.50	8.75	8.58	9.35	13.20	13.20	PR-MH 2
16	15	13.500	0.00	0.00	0.00	0.00	0.00	6.0	6.0	0.0	1.98	3.75	4.03	12	1.11	8.75	8.90	9.35	9.50	13.20	12.90	PR-CB 2

Project File: Proposed Storm Sewer.stm | Number of lines: 16 | Run Date: 3/17/2023

NOTES:Intensity = 42.86 / (Inlet time + 4.00) ^ 0.76; Return period =Yrs. 25 ; c = cir e = ellip b = box

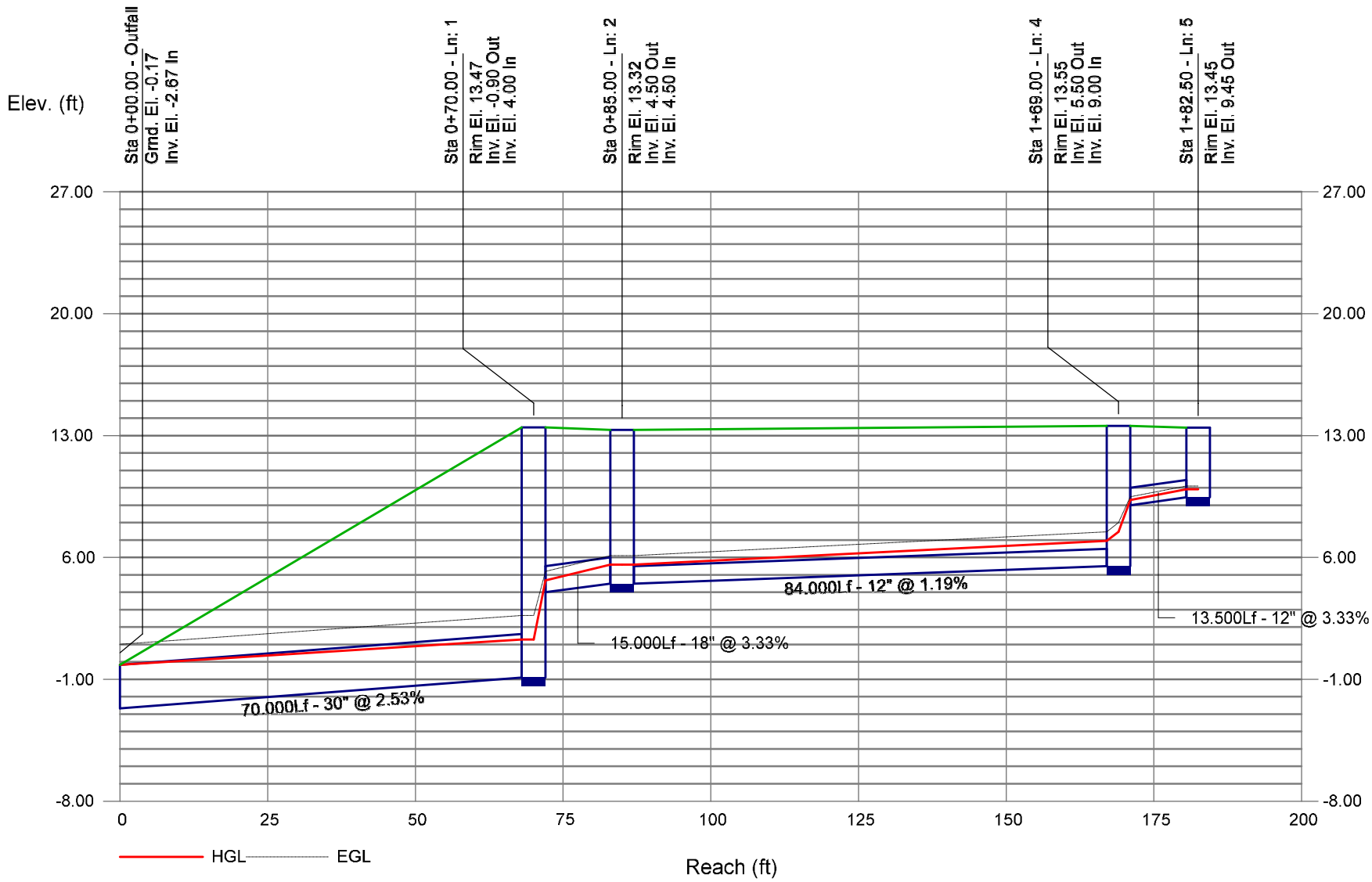
Storm Sewer Profile

Proj. file: Proposed Storm Sewer.stm



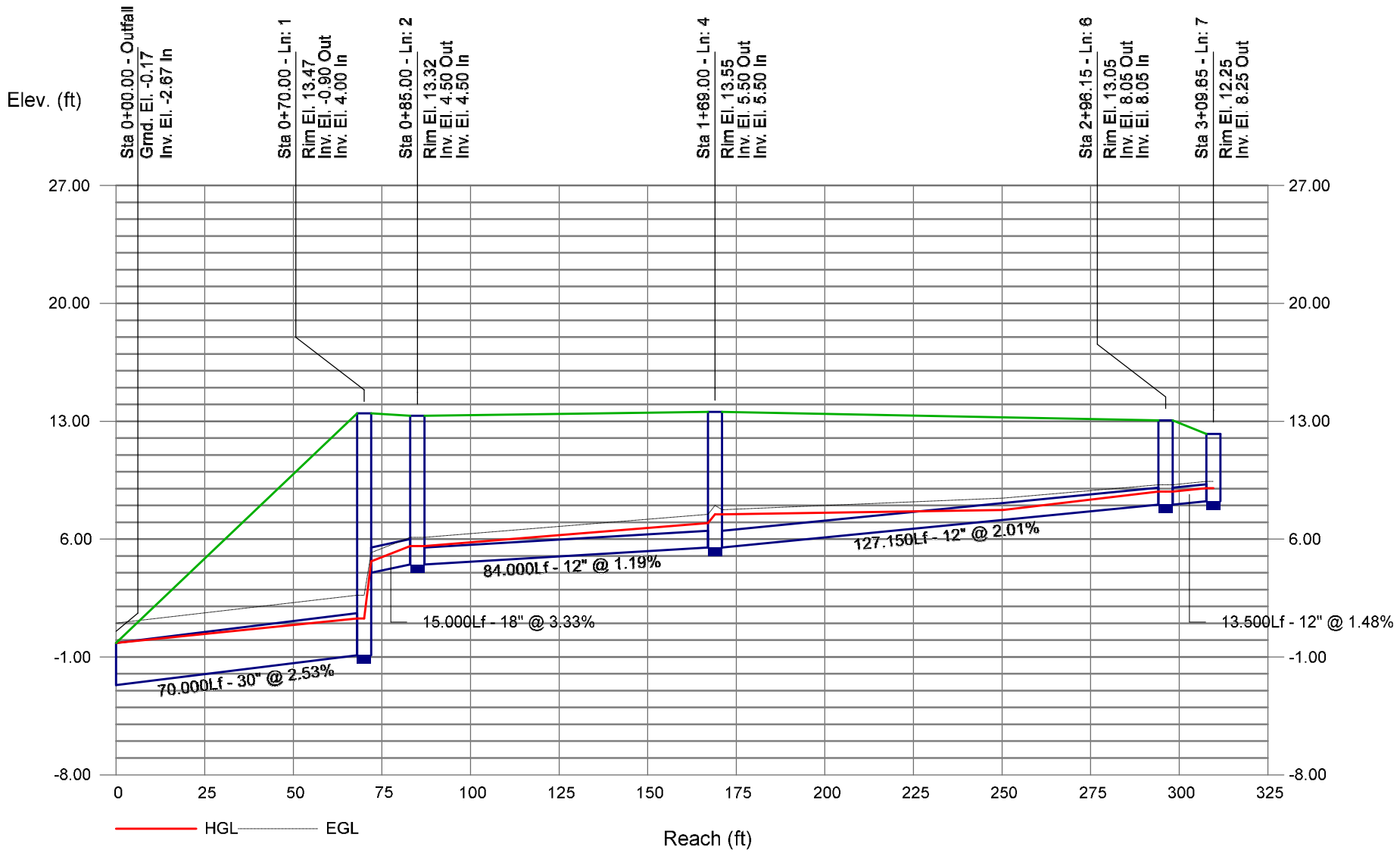
Storm Sewer Profile

Proj. file: Proposed Storm Sewer.stm



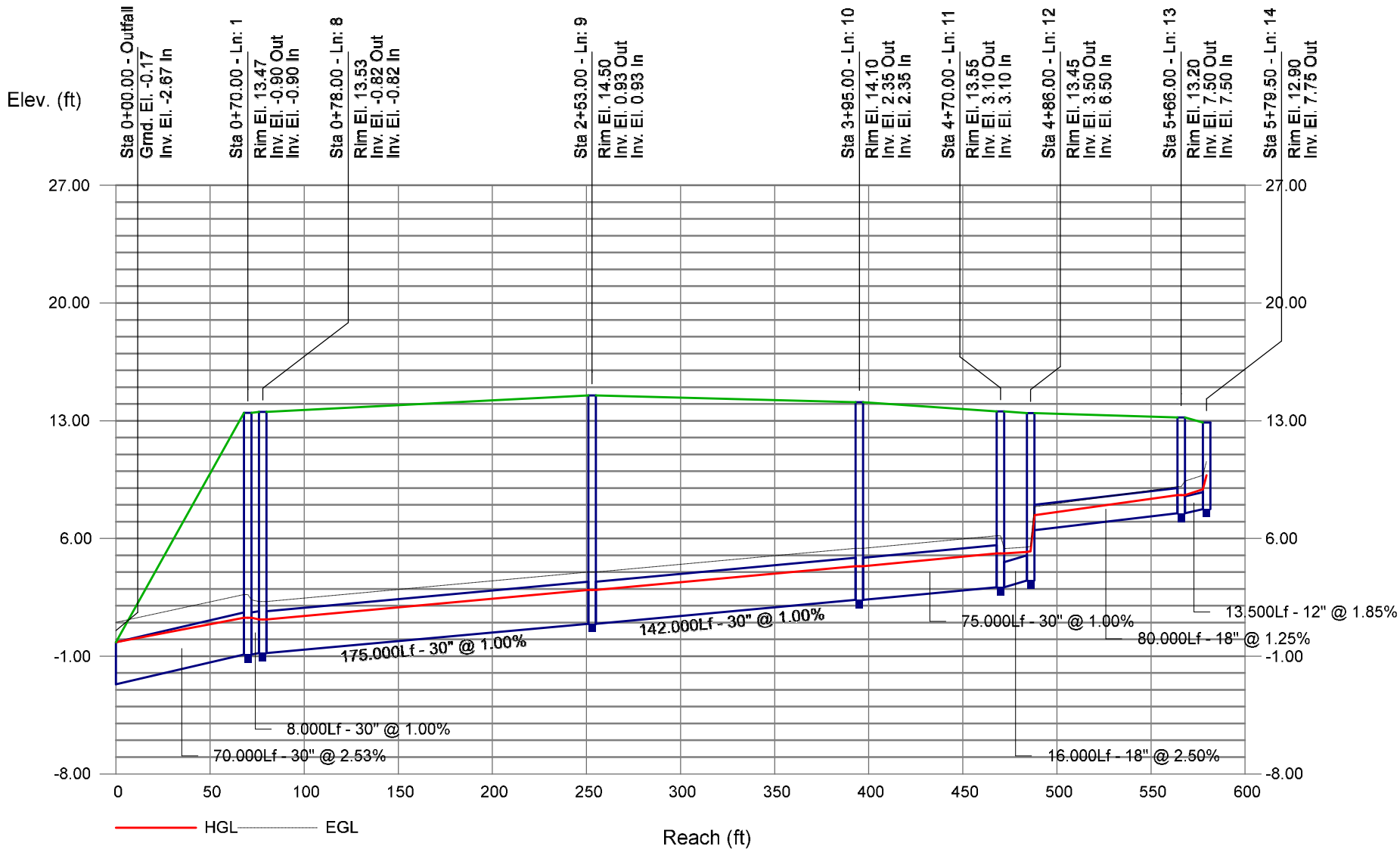
Storm Sewer Profile

Proj. file: Proposed Storm Sewer.stm



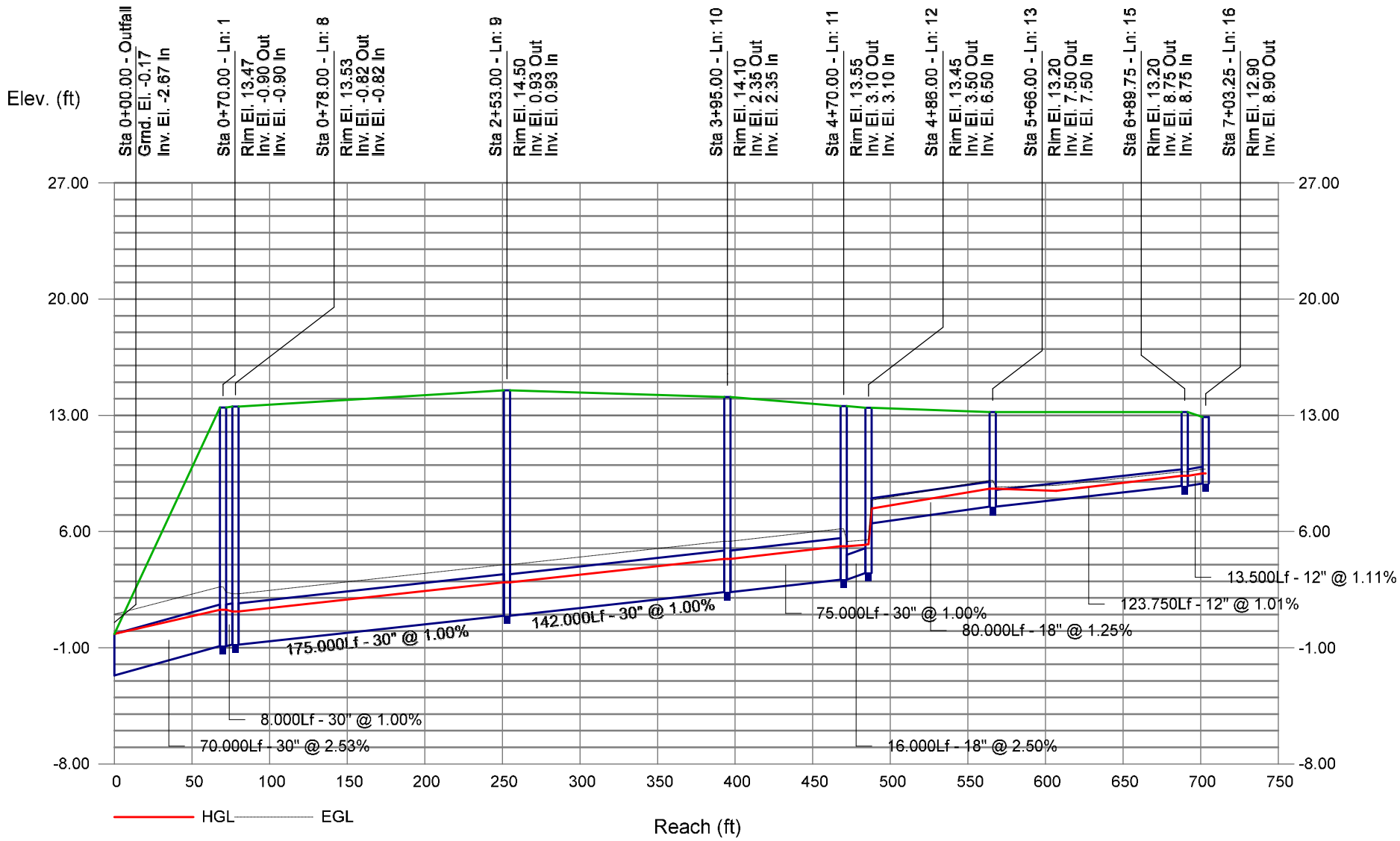
Storm Sewer Profile

Proj. file: Proposed Storm Sewer.stm



Storm Sewer Profile

Proj. file: Proposed Storm Sewer.stm



Winton Scott
Architects

217 Commercial St, Suite 200
Portland, ME 04101
207.774.4811

EXHIBIT 16 - PUBLIC INFRASTRUCTURE & COMMUNITY SAFETY STANDARDS 14.6.3

14.6.3 - Public Infrastructure & Community Safety Standards:

A. Consistency with City Master plans

There are no adopted City Master Plans that apply to this project.

Winton Scott
Architects

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Portland, ME 04101
207.774.4811

EXHIBIT 17 - PUBLIC INFRASTRUCTURE & COMMUNITY SAFETY STANDARDS 14.6.3

14.6.3 - Public Infrastructure & Community Safety Standards:

B. Public Safety and Fire Prevention

1. Compliance with Crime Prevention through Environmental Design requirements (CPTED) is not applicable to this project as the project location is within the secured marine freight yard that is not accessible to the public.
2. The only change to site access is moving the gate on the western end of the site closer to Commercial Street. The size of the gate will be maintained.
3. The project is consistent with applicable public safety standards. There are existing compliant private fire hydrants located on the project site within 500' of the proposed Reefer Rack structures.
4. The pavement is designed for reach stackers which have a wheel load of 150 psf, considerably higher than any wheel loads on a standard street-going vehicle, usually around 100 psf.
5. Proposed and existing vehicle lanes are not 16' wide, however there are several lanes next to each other with no physical barriers. There is a minimum of 60' between the container stacks and perimeter fencing, as well as between the two rows of container stacks.
6. The site was designed for a turning radius of a WB-65 truck, which exceeds the size of emergency vehicles.

Winton Scott
Architects

217 Commercial St, Suite 200
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EXHIBIT 18 - PUBLIC INFRASTRUCTURE & COMMUNITY SAFETY STANDARDS 14.6.3

14.6.3 - Public Infrastructure & Community Safety Standards:

C. Public Utilities

See attached documents immediately following this page.

Availability and Adequacy of Public Utilities

This project is only proposing upgrades to the site electrical system. A will serve letter from Central Maine Power is attached indicating the availability of their system to handle the additional load required at the site. Public utilities will not be impacted.

Subject: FW: CMP Three Phase Service Process and Ability to Serve Letter Portland IMT - SAP# 10300967876

From: COUGH, JAMES <jcough@cmpco.com>
Sent: Thursday, March 23, 2023 6:56 AM
To: Tim Matthews <tim@swiftcurrenteng.com>
Subject: CMP Three Phase Service Process and Ability to Serve Letter Portland IMT - SAP# 10300967876

RE: International Marine Terminal Refrigerated Storage
460 COMMERCIAL ST PORTLAND ME
Letter of Ability to Serve Request

SAP 10300967876

Project Description:
420 Refrigerated Trailer Units in Marine Terminal to be fed from receptacles mounted on 5-story open walled structures.

CMP has the ability to serve the proposed project in accordance with our CMP Handbook (web link below). We can provide you the desired pad or pole mounted transformers per your request and city approval, in accordance with our CMP Handbook of Standard Requirements. If you have any questions on the process, or need help in completion of the documents, please contact CMP at 800-565-3181.

Here is our typical process for getting your three phase or CT rated single phase service installed. If you have any questions, please let us know. The underlined links will redirect you to the appropriate site for additional information.

Service Milestones for Three Phase Services and CT Rated Single Phase Services. There are additional requirements for primary metered Solar Service Installations listed in the Chapter 324 Interconnections section below. Please refer to CMP Installation Checklists for other installations.

- Submit Load information. Please complete the attached EDET (excel file) using load information. Please complete this and email back to me. If the loads are over 500 kw, more in depth load studies may be required with our Distribution Planning and Transmission Planning Departments. Be advised that these will involve more detailed load information, a load study agreement (signed contract), as well as other items. This additional study process may add additional months to completion of the job.
- Submit the easement information worksheet, including where any CMP structures may be on ANY private property (Poles, Wires, Anchors). You are responsible for obtaining all information for all required easements. Please complete this form and either email or fax back to me.
- Submit any electronic drawings (PDF (preferred) or DWG files) of the site layout and proposed electrical connections.
- For Primary Metered installations (including PV), please have the access road in for pole staking.
- Preliminary meetings with CMP Advisor and Engineer to determine details of job (I will need to schedule with your electrician/contractor-please let me know who this is)
- Field planner design appointment scheduled once the preliminary information is complete. This will allow us to cost out the job and develop a CMP Invoice. The invoice is typically generated 5-6 weeks after the design appointment. This expires after 90 days from the invoice date.
- Submit completed W9 so that your bill can be properly processed. This is a new CMP process.
- CMP submits invoice to the customer for payment (typically via email). Payment received from customer.

- Easements (based on easement information worksheet) sent out, signed and originals returned to CMP.
- Job scheduled for completion after the electrical inspection has been received.

This process can take several months, depending upon several factors including transformer or materials delivery, return of completed paperwork, and other jobs in the system that may be ahead of yours. In addition, contact with the other utilities, including telephone and cable, should be commenced as soon as practical. They may have additional work or charges in addition to the CMP work required to bring your project on line.

As you may be aware, there are global supply chain issues impacting the utility industry. CMP is closely monitoring and managing their inventory in order to serve our customers. Larger padmount transformers may not be readily available for the date that you will need to be energized. Please consider this as part of your construction plan. The energy service advisor will continue to work closely with you and let you know as soon as the transformer becomes available. Should you have any questions or concerns throughout this process, please do not hesitate to contact your ESA directly at the number or email provided.

Please complete the attached forms (the specific instructions are on each form) and email them back to me at your earliest convenience.

For your convenience, here is a link to the CMP Website which contains our Handbook with details on most service requirements: CMP Handbook of Standard Requirements An additional resource is our Distribution Construction Standards: CMP Distribution Construction Standards CMP Distribution Construction Standards.

You will be responsible for installing the customer connections, conduits, and metering in accordance with the CMP Handbook of Standard Requirements The transformer will be sized based on your submitted load sheets.

Your deposit amount will be typically based on an estimated two month bill, calculated from your completed load sheet unless otherwise determined by CMP.

In addition, we have recently added on an online map that shows single phase and three phase power locations within CMP. Here is that link: CMP ArcGIS Information

Metering:

All metering (including locations) must be preapproved by CMP. If you have any questions, please consult the CMP Handbook of Standard Requirements

Chapter 324 Interconnections:

Please be advised that if you plan to install solar/wind/hydro generation, you must complete an application under the MPUC mandated Chapter 324 Interconnection Standards. If you go to Chapter 324 Interconnection Standards and follow the instructions for the Small Generator Interconnection Procedures, CMP can do this work in parallel to your service request that will be handled by me. If you project is under 660 KW You will be able to have a Customer Net Energy Billing contract. Information concerning Customer Net Energy Billing can be accessed thru the Chapter 324 website or by clicking here: Net Energy Billing

Reallocation/Line Extensions:

Recently, changes were made to the three-phase construction policy, which require CMP to reallocate construction costs paid by customers. If applicable, those projects identified as “developments” do not qualify for reallocation of funds. Please see this document at our website for details about the reallocation conditions. Any reallocation charges will be specifically denoted on your invoice. The website address for this is: PolyphaseLineExtension.

This line extension will be part of Central Maine Power's distribution system. In the event the property served under this Agreement is sold or otherwise conveyed, all rights and obligations of the Agreement shall stay with the property. Please note that if you rent or lease this property to another and you want to receive the reimbursement payments, you must make special arrangements with the Central Maine Power Company. Otherwise, any reimbursement payments will be sent to the "Customer" taking service at the service location.

Electricity Supplier Information:

Central Maine Power Company (CMP) will provide your facility with electric delivery service. If you don't already have a provider, you will need to make arrangements with a competitive electricity provider in order to receive electricity supply for your facility. In the event you fail to choose a competitive electricity provider, you will receive Standard Offer service arranged by the Maine Public Utilities Commission. If you wish to be served by a competitive electricity provider immediately upon establishment of delivery service, you must arrange for this service directly through your chosen competitive electricity provider, who must enroll your account no later than 5 PM on the business day prior initiation of delivery service by CMP. An up-to-date list of competitive suppliers can be found at the:

1. Maine Public Utilities Commission (MPUC) web site- Maine PUC
2. By calling the MPUC at (207) 287-3831

Attachments:

Excel Load Sheet (EDET)
Easement Worksheet and Sample Standard Easement
W9

Regards,

Jamie

Jamie Cough
Central Maine Power Company
162 Canco Road
Portland, ME 04103
207.629.1489

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Winton Scott
Architects

217 Commercial St, Suite 200
Portland, ME 04101
207.774.4811

EXHIBIT 19 - SITE DESIGN STANDARDS 14.6.4

14.6.4 - Site Design Standards:

C. Snow & Ice Loading

See attached document immediately following this page.

Snow and Ice Loading

The proposed reefer racks are the only infrastructure (buildings) proposed as part of this project. These structures have been designed according to Maine Building Code, IBC 2015 and ASCE 7-10 for snow and ice loading. The structures are far enough away from the property lines that they will not shed snow onto adjacent properties or public ways.

Winton Scott
Architects

217 Commercial St, Suite 200
Portland, ME 04101
207.774.4811

EXHIBIT 20 - SITE DESIGN STANDARDS 14.6.4

14.6.4 - Site Design Standards:

D. View Corridors

There are no designated view corridors in the vicinity of this project.

Winton Scott
Architects

217 Commercial St, Suite 200
Portland, ME 04101
207.774.4811

EXHIBIT 21 - SITE DESIGN STANDARDS 14.6.4

14.6.4 - Site Design Standards:

E. Historic Resources

See attached document immediately following this page.

Historic Resources

A letter was issued on June 2, 2014 by the Maine Historic Preservation Commission finding that there are no archaeological resources in the area that this project is proposed. This letter has been provided.

MAINE HISTORIC PRESERVATION COMMISSION
55 CAPITOL STREET
65 STATE HOUSE STATION
AUGUSTA, MAINE
04333

PAUL R. LEPAGE
GOVERNOR

EARLE G. SHETTLEWORTH, JR.
DIRECTOR

Preliminary Draft
Portland, Maine IMT Project
Archaeological Phase I and II Survey
Scope of Work
June 2, 2014

Project Background

The International Marine Terminal (IMT) on the West Commercial Street waterfront in Portland, Maine serves as a primary port for the offloading, storage and shipping of commercial containers. The facility is in the process of expanding to accommodate an increase in container shipping and handling. Plans call for the construction of a new loading dock and rail line that will simplify the transfer of containers between ships and the rail system. The proposed expansion was determined to have a potential negative impact on cultural resources that were an important component of Portland's industrial past.

The first resource consists of a section of the Cumberland and Oxford Canal (1830-1870) that provided a means of transporting goods from the Sebago Lakes region directly to Portland harbor. The canal and towpath ran along the Fore River shore and west harbor immediately south of present West Commercial Street and ended at Lock 27, roughly at the foot of Clark St. The section of the canal between Vaughan's Bridge and Lock 27 was sold by the C&O Canal Corporation after June 13, 1863. The canal bed was soon filled and the Portland and Kennebec Railroad was constructed in its place.

The second resource is the Portland Glass Company that operated between 1863 and 1873, also on the south side of West Commercial Street and immediately south of the canal. This was Maine's only glassworks and, thus, represents one of the most important industrial sites in the state. Because little is known of the factory's products or its role in the American glass industry, archaeological remains of the factory and deposits containing glass objects represent the only means of addressing many questions associated with this factory.

Scope of Work

Proposed Loading Dock

Assessment of historic maps of the project area show that the bed and towpath of the C&O Canal passed immediately south of West Commercial St. and potentially under a portion of the proposed loading dock. The timing of the opening of the glassworks and the filling of the canal bed in 1863 suggests a high probability for the presence of glassworks refuse in the canal bed. Collecting samples of this refuse is of high priority to document the types of products made at the factory. Archaeological testing will be performed by mechanical (backhoe) excavation of

PHONE: (207) 287-2132

FAX: (207) 287-2335

several north-south trenches to identify the location of the C&O Canal bed, document its construction and to examine and sample the bed fill if glass factory refuse is present.

Proposed Rail Lines

As presently planned the proposed rail lines will cross the north end of the glassworks parcel beginning as a single track to the east, and then dividing into two tracks toward the west. Historic maps suggest the set of parallel tracks pass through an area of the site that once contained the factory office and a shed. It is also possible that the C&O Canal bed passed through this area. Archaeological investigation of the proposed track ROW will be performed by mechanical scraping of the ground surface to identify architectural remains as well as potential deposits containing factory refuse. Encountered features will be cleared and documented, while overlying and associated soil will be examined for factory-related products. A few deeper tests will be made to search for evidence of the canal. If the canal is identified, details of its construction will be documented and the fill will be examined for the presence of glass factory related material.

Portland, Maine IMT Project
Archaeological Phase I and II Survey
Scope of Work
June 3, 2014

PRELIMINARY DRAFT BUDGET

Fieldwork

Museum Tech. III, 10 days@$310/day.....$3,100.00
Museum Tech I, 10 days @$260/day.....$2,600.00
Historic Preservationist, 10 days@$300/day.....$3,000.00
Lodging for 8 nights, 1 person@$85/day.....$680.00
Travel round trip from Augusta 22 x 120 mi @ 0.44.....$1,200.00
Backhoe rental, 2 weeks @ $1000/week.....$2,000.00
Fieldwork Total:.....$12,580.00

Documentary Research, Laboratory Work, Report Preparation

Museum Tech. III, 5 days @ $310/day.....$1,550.00
Museum Tech I, 20 days @ 260/day.....$5,200.00
Historic Preservationist, 10 days @ $300/day.....$3,000.00
Lab Work Total:.....$9,750.00

Subtotal.....$22,330.00
State Cap @ 8.1%.....$1,809.00
Total:.....$24,139.00

Exterior Lighting

The site lighting design focuses on the loading and unloading lanes around the reefer racks which prevents light trespass beyond the site property lines. In addition, all proposed fixtures have cutoff optics preventing light being cast beyond 90 degrees. The light within the travel lanes ranges from 1 to 9 footcandles, within the 20:1 uniformity limit. Lighting was previously approved to 60 feet above grade in order to accommodate the container stacks anticipated on site. The proposed lighting on the reefer racks will be at the top of the structures, approximately 50 feet above grade. The photometric plan has been provided as well as, fixture cut sheets.

The Type C fixture is the primary source of lighting mounted at the top of the structure and pointed straight down to illuminate roadways between the reefer racks only. The Type A fixture is utilized at each floor level of the structure to provide general and task lighting for workers. These fixtures are located at the center of the ceiling at each floor level pointing directly down. The Type B fixtures are mounted at the entry doors two the two small electrical switch gear rooms.

NOTES:

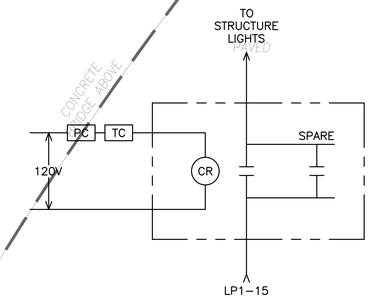
1. SEE E100 FOR GENERAL NOTES.
2. SEE SHEET E201 FOR LIGHTING SCHEDULE.

KEYED NOTES:

1 ***

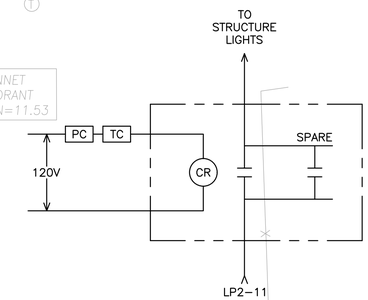
1 ELECTRICAL SITE LIGHTING PLAN

SCALE: 1" = 30'



3 EXTERIOR LIGHTING CONTROL DIAGRAM

SCALE: NOT TO SCALE



2 EXTERIOR LIGHTING CONTROL DIAGRAM

SCALE: NOT TO SCALE

SWIFTCURRENT
Engineering Services
10 Forest Falls Dr. Unit 4B
Yarmouth, ME 04096
Tel: (207) 847-9280

60% REVIEW
SUBMITTED DATE: FEBRUARY 24, 2023

NO.	DATE	DR	REVISION	CHK	BY	APVD
DSGN				APVD		

PORT INFRASTRUCTURE DEVELOPMENT PROGRAM (PIDP) GRANT PRIORITY PROJECTS
DESIGN & CONSTRUCTION PHASE SERVICES
PORTLAND, MAINE

Jacobs

ELECTRICAL SITE LIGHTING PLAN

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

DATE 2-24-23
PROJ PROJ
DWG E200
SHEET 26 of 29

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FILENAME:

Columbia LIGHTING

TYPE A FIXTURE

DATE:	LOCATION:
TYPE:	PROJECT:
CATALOG #:	

LXEM

ENCLOSED AND GASKETED FIBERGLASS EXTREME ENVIRONMENT

FEATURES

- Available in 2', 4', or 8' lengths
- IP65, IP67 and IP66 all models with standard polyacetal (POM) latches
- NEMA 4X housing
- Fiberglass housing with F1 weatherability rating, standard
- IK10 rated when ordered with polycarbonate lens
- Impact modified acrylic lens equivalent to 100% DR
- UL Sanitation Certified per NSF Standards
- Includes stainless steel surface mounting brackets
- -20°C up to +50°C ambient operation; see table provided for details

Built to UL 924 Standards

See Certification Specifications

SPECIFICATIONS

CONSTRUCTION

- Housing is formed from UL 5VA fiberglass
- F1 weatherability rating, suitable for indoor or outdoor use with respect to exposure to UV light
- Pour-in-place non-porous gasketing assures seal
- LED affixed to removable heat sinked gear tray
- 14 Latches per 8', 8 per 4', 6 per 2'
- Latches are provided tamper resistance ready, tamper resistant screws by others
- Latches are standard polyacetal (POM), optional in stainless steel
- Access openings are provided for electrical connection
- White painted parts are treated with a five-stage phosphate bonding process and finished with high reflectance baked enamel

OPTICS

- Lineal ribbed frosted acrylic lens impact modified equivalent to 100% DR; modification adds flexibility to reduce impact breakage compared to standard acrylic formulations
- Optional ribbed polycarbonate lens or deep acrylic
- All lenses available in clear or frost

ELECTRICAL

- Long life 60,000 hour LEDs at L80 for reduced maintenance
- Extra High Lumen packages (XL) rated L70 at 60,000 hours
- 80 CRI
- Driver options include fixed output for on/off function, step dimming (high/low/off) or continuous 0-10V dimming
- QR code label affixed to housing for easy traceability

CERTIFICATIONS

- All luminaires are built to UL 1598 and 2108 standards, and bear appropriate cCSAus labels
- CSA certified to UL 924 standards with battery pack or DTS (Dimming Bypass Module) options
- Wet Location label standard
- UL Sanitation certified to NSF standards
- Ingress protection IP65 and IP67 standard; IP66 on certain models

CERTIFICATIONS (CONTINUED)

- DLC® (DesignLights Consortium) Qualified, with some Premium Qualified configurations. Please refer to the DLC website for specific product qualifications at www.designlights.org
- The DTS, Dimming Bypass Module, is for emergency circuit control loads including sensors and wireless systems CSA certified to UL 924. See page 10 for wiring diagram.
- This product qualifies as a "designated country construction material" per FAR 52.225-11 Buy American-Construction Materials under Trade Agreements effective 06/01/2020.

WARRANTY

- 5 year warranty

KEY DATA	
Lumen Range	2145–22,473
Wattage Range	20-183
Efficacy Range (LPW)	99-147
Reported Life (Hours)	L80/60,000

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LXEM

ENCLOSED AND GASKETED FIBERGLASS EXTREME ENVIRONMENT

ORDERING GUIDE

Example: LXEM4–35HL–RFA–EDU

CATALOG # _____

LXEM –

Model	Size
LXEM LED Enclosed and Gasketed	**2** 2' [1,2,3,4] **4** 4' **8** 8'

–

Color Temp	Nominal Lumens	
30 3000K	**VW** 2' (2,145–2,708) 4' (2,802–3,433) 8' (6,078–6,866)	**HL** 2' (4,254–5,416) 4' (5,449–6,763) 8' (11,851–13,525)
35 3500K	**LW** 2' (2,738–3,529) 4' (3,726–4,922) 8' (8,095–9,276)	**VL** 4' (7,086–8,415) 8' (14,747–16,830)
40 4000K	**ML** 2' (3,862–4,921) 4' (4,533–5,646) 8' (9,844–11,293)	**XL** 4' (9,059–11,237) 8' (19,558–22,473)
50 5000K		

–

Shielding	
RFA	Ribbed Frosted Acrylic
RA	Ribbed Clear Acrylic [5]
DFA	Deep Frosted Acrylic
DCA	Deep Clear Acrylic [5]
RFP	Ribbed Frosted Polycarbonate [6]
RP	Ribbed Clear Polycarbonate [5,6]

–

Driver	
E	Fixed Output
ED	0–10V Dimming
ED1	0–10V 1% Dimming [7]
ESD	Step Dimming [7]

–

Voltage	
U	120–277V
347	347V

Options	
ELL14	Emergency Battery Pack Installed, 1400 Lumens [3,7,8]
GLR	Fast Blow Fuse
DTS	Dimming Bypass Module [3,8,9]
OCM	Microwave Occupancy Sensor [8,13]
SSL	Stainless Steel Tamper Resistance Ready Latches
TP	Tamper Proof Latches
F3C8W	3-Wire 8' Wet Cord
F3C15W	3-Wire 15' Wet Cord
F4C8W	4-Wire 8' Wet Cord
F4C15W	4-Wire 15' Wet Cord
F5C8W	5-Wire 8' Wet Cord
F5C15W	5-Wire 15' Wet Cord
F6C6W	6-Wire 6' Wet Cord
SWH	Single Wet Hub ½" NPT Hub
DWH	Dual Wet Hub ½" NPT Hub
ZRE	ControlScope® compatible [8,10]

Accessories	
☐ **XEDPM**	Dual Pendant Brackets (pendant by others) [11]
☐ **XEHC**	Chain Hanger Kit (Includes 14" Chain)
☐ **XE45MB**	45° Mounting Bracket [12]
☐ **XE45MBSS**	45° Stainless Steel Mounting Bracket [12]

Sensor kits (Order Separately)
All sensor kits include On/Off Occupancy & Daylight.
Daylight activation requires setting of dip-switches on site.

	Catalog #	# Relays	Lens Type	Voltage	Wet Label
120V/277V	☐ **OS1360WLK**	1	360°	120/277	Yes
	☐ **OS2360WLK**	2	360°	120/277	Yes
	☐ **OS1AWLK**	1	Aisle	120/277	Yes
	☐ **OS2AWLK**	2	Aisle	120/277	Yes

Notes:

1 VL and XL not available in 2' size
2 Not available with battery pack or DTS
3 Not available with XL lumen package
4 Not available with VL lumen package
5 Clear lenses (RA, DCA and RP) may cause noticeable light patterns on lit surfaces. See ies files for exact distribution
6 2' and 4' only. 8' not available
7 See table for availability
8 Not available in 347V
9 For emergency circuit control loads including sensors and wireless systems listed to UL924. Only available with 0–10V drivers. See page 10 for wiring diagram
10 Registered trademark of Daintree Networks, used by permission
11 Requires ⅜" OD threaded rod by others
12 2 required for 8' fixture
13 OCM option uses Wattstopper FM-105

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PRODUCT EXCEPTIONS & DETAILS

Options listed below are available for the outputs as shown.

DRIVER AVAILABILITY TABLE							
Length	Output	Nominal Lumen Range	ESD Available	ED1 Available	347V Available	347V with ESD Available	347V with ED1 Available
2'	VW	2,145–2,708	Y	Y	Y	N/A	Y
	LW	2,738–3,529	Y	Y	Y	N/A	Y
	ML	3,862–4,921	Y	Y	Y	N/A	Y
	HL	4,254–5,416	Y	Y	Y	N/A	Y
4'	VW	2,802–3,433	Y	Y	Y	N/A	Y
	LW	3,726–4,922	Y	Y	Y	N/A	Y
	ML	4,533–5,646	Y	Y	Y	N/A	Y
	HL	5,449–6,763	Y	Y	Y	N/A	Y
	VL	7,086–8,415	Y	Y	Y	N/A	N/A
	XL	9,059–11,237	N/A	Y	Y	N/A	N/A
8'	VW	6,078–6,866	Y	Y	Y	N/A	Y
	LW	8,095–9,276	Y	Y	Y	N/A	Y
	ML	9,844–11,293	Y	Y	Y	N/A	Y
	HL	11,851–13,525	Y	Y	Y	N/A	Y
	VL	14,747–16,830	Y	Y	Y	N/A	N/A
	XL	19,558–22,473	N/A	Y	Y	N/A	N/A

MAX. AMBIENT OPERATING TEMP.							
Length	Output	Nominal Lumen Range	Watts	LPW	Max Ambient Operating Temperature (C°) (Universal Voltage)	ELL14 (with Universal Voltage)	347V
2'	VW	2,145–2,708	21	102–130	40	NA	35
	LW	2,738–3,529	26	105–135	40	NA	35
	ML	3,862–4,921	39	100–128	40	NA	35
	HL	4,254–5,416	44	97–123	35	NA	30
4'	VW	2,802–3,433	25	114–141	50	45	45
	LW	3,726–4,922	33	112–139	50	45	45
	ML	4,533–5,646	42	108–134	50	45	45
	HL	5,449–6,763	47	115–143	45	45	35
	VL	7,086–8,415	62	115–136	40	40	35
	XL	9,059–11,237	92	99–123	30	NA	25
8'	VW	6,078–6,866	49	124–141	50	45	45
	LW	8,095–9,276	67	122–139	50	45	45
	ML	9,844–11,293	84	117–134	50	45	45
	HL	11,851–13,525	95	125–143	45	45	35
	VL	14,747–16,830	123	120–136	40	40	35
	XL	19,558–22,473	183	107–123	30	NA	25

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LXEM

ENCLOSED AND GASKETED FIBERGLASS EXTREME ENVIRONMENT

DELIVERED LUMENS

PRODUCT AVAILABILITY 80 CRI							
Lumen Package	Output	Color	Lens	Lumens	Watts	LPW	Max Ambient Operating Temp
LXEM2-30VW-RFP-EDU	Very Low Watt	30K	RFP	2,145	21.1	101.6	40°C
LXEM2-30VW-RA-EDU			RA	2,365	20.8	113.7	40°C
LXEM2-30VW-RP-EDU			RP	2,373	20.8	114.1	40°C
LXEM2-30VW-RFA-EDU			RFA	2,448	20.8	117.7	40°C
LXEM2-30VW-DFA-EDU			DFA	2,467	20.8	118.6	40°C
LXEM2-30VW-DCA-EDU			DCA	2,512	20.8	120.8	40°C
LXEM2-35VW-RFP-EDU		35K	RFP	2,217	21.1	105.1	40°C
LXEM2-35VW-RA-EDU			RA	2,446	20.8	117.6	40°C
LXEM2-35VW-RP-EDU			RP	2,454	20.8	118	40°C
LXEM2-35VW-RFA-EDU			RFA	2,531	20.8	121.7	40°C
LXEM2-35VW-DFA-EDU			DFA	2,551	20.8	122.6	40°C
LXEM2-35VW-DCA-EDU			DCA	2,598	20.8	124.9	40°C
LXEM2-40VW-RFP-EDU		40K	RFP	2,252	21.1	106.7	40°C
LXEM2-40VW-RA-EDU			RA	2,484	20.8	119.4	40°C
LXEM2-40VW-RP-EDU			RP	2,492	20.8	119.8	40°C
LXEM2-40VW-RFA-EDU			RFA	2,571	20.8	123.6	40°C
LXEM2-40VW-DFA-EDU			DFA	2,590	20.8	124.5	40°C
LXEM2-40VW-DCA-EDU			DCA	2,638	20.8	126.8	40°C
LXEM2-50VW-RFP-EDU		50K	RFP	2,312	21.1	109.6	40°C
LXEM2-50VW-RA-EDU			RA	2,550	20.8	122.6	40°C
LXEM2-50VW-RP-EDU			RP	2,558	20.8	123	40°C
LXEM2-50VW-RFA-EDU			RFA	2,639	20.8	126.9	40°C
LXEM2-50VW-DFA-EDU			DFA	2,659	20.8	127.8	40°C
LXEM2-50VW-DCA-EDU			DCA	2,708	20.8	130.2	40°C
LXEM2-30LW-RFP-EDU	Low Watt	30K	RFP	2,738	26	105.3	40°C
LXEM2-30LW-RP-EDU			RP	3,049	26.1	116.8	40°C
LXEM2-30LW-RA-EDU			RA	3,144	26	120.9	40°C
LXEM2-30LW-RFA-EDU			RFA	3,180	26.2	121.4	40°C
LXEM2-30LW-DFA-EDU			DFA	3,239	26.1	124.1	40°C
LXEM2-30LW-DCA-EDU			DCA	3,273	26.1	125.4	40°C
LXEM2-35LW-RFP-EDU		35K	RFP	2,831	26	108.9	40°C
LXEM2-35LW-RP-EDU			RP	3,153	26.1	120.8	40°C
LXEM2-35LW-RA-EDU			RA	3,251	26	125	40°C
LXEM2-35LW-RFA-EDU			RFA	3,289	26.2	125.5	40°C
LXEM2-35LW-DFA-EDU			DFA	3,349	26.1	128.3	40°C
LXEM2-35LW-DCA-EDU			DCA	3,385	26.1	129.7	40°C
LXEM2-40LW-RFP-EDU		40K	RFP	2,875	26	110.6	40°C
LXEM2-40LW-RP-EDU			RP	3,202	26.1	122.7	40°C
LXEM2-40LW-RA-EDU			RA	3,302	26	127	40°C
LXEM2-40LW-RFA-EDU			RFA	3,339	26.2	127.5	40°C
LXEM2-40LW-DFA-EDU			DFA	3,401	26.1	130.3	40°C
LXEM2-40LW-DCA-EDU			DCA	3,437	26.1	131.7	40°C
LXEM2-50LW-RFP-EDU		50K	RFP	2,951	26	113.5	40°C
LXEM2-50LW-RP-EDU			RP	3,287	26.1	125.9	40°C
LXEM2-50LW-RA-EDU			RA	3,390	26	130.4	40°C
LXEM2-50LW-RFA-EDU			RFA	3,428	26.2	130.9	40°C
LXEM2-50LW-DFA-EDU			DFA	3,492	26.1	133.8	40°C
LXEM2-50LW-DCA-EDU			DCA	3,529	26.1	135.2	40°C
LXEM2-30ML-RFP-EDU	Medium Lumen	30K	RFP	3,862	38.5	100.3	40°C
LXEM2-30ML-RP-EDU			RP	4,228	38.5	109.8	40°C
LXEM2-30ML-RFA-EDU			RFA	4,343	38.5	112.8	40°C
LXEM2-30ML-RA-EDU			RA	4,446	38.5	115.5	40°C
LXEM2-30ML-DFA-EDU			DFA	4,526	38.5	117.5	40°C
LXEM2-30ML-DCA-EDU			DCA	4,565	38.5	118.6	40°C
LXEM2-35ML-RFP-EDU		35K	RFP	3,993	38.5	103.7	40°C
LXEM2-35ML-RP-EDU			RP	4,371	38.5	113.5	40°C
LXEM2-35ML-RFA-EDU			RFA	4,490	38.5	116.6	40°C
LXEM2-35ML-RA-EDU			RA	4,597	38.5	119.4	40°C
LXEM2-35ML-DFA-EDU			DFA	4,680	38.5	121.5	40°C
LXEM2-35ML-DCA-EDU			DCA	4,720	38.5	122.6	40°C
LXEM2-40ML-RFP-EDU		40K	RFP	4,055	38.5	105.3	40°C
LXEM2-40ML-RP-EDU			RP	4,439	38.5	115.3	40°C
LXEM2-40ML-RFA-EDU			RFA	4,560	38.5	118.4	40°C
LXEM2-40ML-RA-EDU			RA	4,668	38.5	121.3	40°C
LXEM2-40ML-DFA-EDU			DFA	4,752	38.5	123.4	40°C
LXEM2-40ML-DCA-EDU			DCA	4,793	38.5	124.5	40°C
LXEM2-50ML-RFP-EDU		50K	RFP	4,163	38.5	108.1	40°C
LXEM2-50ML-RP-EDU			RP	4,558	38.5	118.4	40°C
LXEM2-50ML-RFA-EDU			RFA	4,682	38.5	121.6	40°C
LXEM2-50ML-RA-EDU			RA	4,793	38.5	124.5	40°C
LXEM2-50ML-DFA-EDU			DFA	4,879	38.5	126.7	40°C
LXEM2-50ML-DCA-EDU			DCA	4,921	38.5	127.8	40°C

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LXEM

ENCLOSED AND GASKETED FIBERGLASS EXTREME ENVIRONMENT

DELIVERED LUMENS (CONTINUED)

PRODUCT AVAILABILITY 80 CRI							
Lumen Package	Output	Color	Lens	Lumens	Watts	LPW	Max Ambient Operating Temp
LXEM2-30HL-RFP-EDU	High Lumen	30K	RFP	4,254	44.1	96.5	35°C
LXEM2-30HL-RP-EDU			RP	4,700	44.1	106.6	35°C
LXEM2-30HL-RA-EDU			RA	4,868	44.1	110.4	35°C
LXEM2-30HL-RFA-EDU			RFA	4,874	44.1	110.5	35°C
LXEM2-30HL-DFA-EDU			DFA	5,008	44.1	113.6	35°C
LXEM2-30HL-DCA-EDU			DCA	5,024	44.1	113.9	35°C
LXEM2-35HL-RFP-EDU		35K	RFP	4,399	44.1	99.7	35°C
LXEM2-35HL-RP-EDU			RP	4,860	44.1	110.2	35°C
LXEM2-35HL-RA-EDU			RA	5,033	44.1	114.1	35°C
LXEM2-35HL-RFA-EDU			RFA	5,040	44.1	114.3	35°C
LXEM2-35HL-DFA-EDU			DFA	5,179	44.1	117.4	35°C
LXEM2-35HL-DCA-EDU			DCA	5,195	44.1	117.8	35°C
LXEM2-40HL-RFP-EDU		40K	RFP	4,467	44.1	101.3	35°C
LXEM2-40HL-RP-EDU			RP	4,935	44.1	111.9	35°C
LXEM2-40HL-RA-EDU			RA	5,111	44.1	115.9	35°C
LXEM2-40HL-RFA-EDU			RFA	5,117	44.1	116	35°C
LXEM2-40HL-DFA-EDU			DFA	5,259	44.1	119.2	35°C
LXEM2-40HL-DCA-EDU			DCA	5,275	44.1	119.6	35°C
LXEM2-50HL-RFP-EDU		50K	RFP	4,586	44.1	104	35°C
LXEM2-50HL-RP-EDU			RP	5,066	44.1	114.9	35°C
LXEM2-50HL-RA-EDU			RA	5,248	44.1	119	35°C
LXEM2-50HL-RFA-EDU			RFA	5,254	44.1	119.1	35°C
LXEM2-50HL-DFA-EDU			DFA	5,399	44.1	122.4	35°C
LXEM2-50HL-DCA-EDU			DCA	5,416	44.1	122.8	35°C
LXEM4-30VW-RFP-EDU	Very Low Watt	30K	RFP	2,802	24.5	114.4	50°C
LXEM4-30VW-RP-EDU			RP	2,938	24.4	120.4	50°C
LXEM4-30VW-RA-EDU			RA	3,039	24.4	124.6	50°C
LXEM4-30VW-RFA-EDU			RFA	3,048	24.5	124.4	50°C
LXEM4-30VW-DCA-EDU			DCA	3,180	24.4	130.3	50°C
LXEM4-30VW-DFA-EDU			DFA	3,184	24.4	130.5	50°C
LXEM4-35VW-RFP-EDU		35K	RFP	2,897	24.5	118.2	50°C
LXEM4-35VW-RP-EDU			RP	3,038	24.4	124.5	50°C
LXEM4-35VW-RA-EDU			RA	3,143	24.4	128.8	50°C
LXEM4-35VW-RFA-EDU			RFA	3,151	24.5	128.6	50°C
LXEM4-35VW-DCA-EDU			DCA	3,288	24.4	134.8	50°C
LXEM4-35VW-DFA-EDU			DFA	3,293	24.4	134.9	50°C
LXEM4-40VW-RFP-EDU		40K	RFP	2,942	24.5	120.1	50°C
LXEM4-40VW-RP-EDU			RP	3,085	24.4	126.4	50°C
LXEM4-40VW-RA-EDU			RA	3,191	24.4	130.8	50°C
LXEM4-40VW-RFA-EDU			RFA	3,200	24.5	130.6	50°C
LXEM4-40VW-DCA-EDU			DCA	3,339	24.4	136.8	50°C
LXEM4-40VW-DFA-EDU			DFA	3,344	24.4	137	50°C
LXEM4-50VW-RFP-EDU		50K	RFP	3,020	24.5	123.3	50°C
LXEM4-50VW-RP-EDU			RP	3,168	24.4	129.8	50°C
LXEM4-50VW-RA-EDU			RA	3,276	24.4	134.3	50°C
LXEM4-50VW-RFA-EDU			RFA	3,285	24.5	134.1	50°C
LXEM4-50VW-DCA-EDU			DCA	3,428	24.4	140.5	50°C
LXEM4-50VW-DFA-EDU			DFA	3,433	24.4	140.7	50°C
LXEM4-30LW-RFP-EDU	Low Watt	30K	RFP	3,726	33.3	111.9	50°C
LXEM4-30LW-RP-EDU			RP	3,872	33.3	116.3	50°C
LXEM4-30LW-RFA-EDU			RFA	4,048	33.3	121.5	50°C
LXEM4-30LW-RA-EDU			RA	4,054	33.3	121.8	50°C
LXEM4-30LW-DFA-EDU			DFA	4,241	33.3	127.4	50°C
LXEM4-30LW-DCA-EDU			DCA	4,303	33.3	129.2	50°C
LXEM4-35LW-RFP-EDU		35K	RFP	3,853	33.3	115.7	50°C
LXEM4-35LW-RP-EDU			RP	4,004	33.3	120.2	50°C
LXEM4-35LW-RFA-EDU			RFA	4,185	33.3	125.7	50°C
LXEM4-35LW-RA-EDU			RA	4,192	33.3	125.9	50°C
LXEM4-35LW-DFA-EDU			DFA	4,385	33.3	131.7	50°C
LXEM4-35LW-DCA-EDU			DCA	4,449	33.3	133.6	50°C
LXEM4-40LW-RFP-EDU		40K	RFP	3,912	33.3	117.5	50°C
LXEM4-40LW-RP-EDU			RP	4,066	33.3	122.1	50°C
LXEM4-40LW-RFA-EDU			RFA	4,250	33.3	127.6	50°C
LXEM4-40LW-RA-EDU			RA	4,257	33.3	127.8	50°C
LXEM4-40LW-DFA-EDU			DFA	4,453	33.3	133.7	50°C
LXEM4-40LW-DCA-EDU			DCA	4,518	33.3	135.7	50°C
LXEM4-50LW-RFP-EDU		50K	RFP	4,017	33.3	120.6	50°C
LXEM4-50LW-RP-EDU			RP	4,174	33.3	125.3	50°C
LXEM4-50LW-RFA-EDU			RFA	4,363	33.3	131	50°C
LXEM4-50LW-RA-EDU			RA	4,371	33.3	131.3	50°C
LXEM4-50LW-DFA-EDU			DFA	4,572	33.3	137.3	50°C
LXEM4-50LW-DCA-EDU			DCA	4,638	33.3	139.3	50°C

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LXEM

ENCLOSED AND GASKETED FIBERGLASS EXTREME ENVIRONMENT

DELIVERED LUMENS (CONTINUED)

PRODUCT AVAILABILITY 80 CRI							
Lumen Package	Output	Color	Lens	Lumens	Watts	LPW	Max Ambient Operating Temp
LXEM4-30ML-RFP-EDU	Medium Lumen	30K	RFP	4,533	41.9	108.2	50°C
LXEM4-30ML-RP-EDU			RP	4,714	41.9	112.5	50°C
LXEM4-30ML-RFA-EDU			RFA	4,922	42	117.2	50°C
LXEM4-30ML-RA-EDU			RA	4,924	42	117.2	50°C
LXEM4-30ML-DFA-EDU			DFA	5,160	42	122.9	50°C
LXEM4-30ML-DCA-EDU			DCA	5,238	42	124.7	50°C
LXEM4-35ML-RFP-EDU		35K	RFP	4,688	41.9	111.9	50°C
LXEM4-35ML-RP-EDU			RP	4,875	41.9	116.3	50°C
LXEM4-35ML-RFA-EDU			RFA	5,089	42	121.2	50°C
LXEM4-35ML-RA-EDU			RA	5,091	42	121.2	50°C
LXEM4-35ML-DFA-EDU			DFA	5,336	42	127	50°C
LXEM4-35ML-DCA-EDU			DCA	5,416	42	128.9	50°C
LXEM4-40ML-RFP-EDU		40K	RFP	4,760	41.9	113.6	50°C
LXEM4-40ML-RP-EDU			RP	4,950	41.9	118.1	50°C
LXEM4-40ML-RFA-EDU			RFA	5,168	42	123.1	50°C
LXEM4-40ML-RA-EDU			RA	5,170	42	123.1	50°C
LXEM4-40ML-DFA-EDU			DFA	5,418	42	129	50°C
LXEM4-40ML-DCA-EDU			DCA	5,500	42	130.9	50°C
LXEM4-50ML-RFP-EDU		50K	RFP	4,887	41.9	116.6	50°C
LXEM4-50ML-RP-EDU			RP	5,082	41.9	121.3	50°C
LXEM4-50ML-RFA-EDU			RFA	5,306	42	126.3	50°C
LXEM4-50ML-RA-EDU			RA	5,308	42	126.4	50°C
LXEM4-50ML-DFA-EDU			DFA	5,563	42	132.4	50°C
LXEM4-50ML-DCA-EDU			DCA	5,646	42	134.4	50°C
LXEM4-30HL-RFP-EDU	High Lumen	30K	RFP	5,449	47.4	115	45°C
LXEM4-30HL-RP-EDU			RP	5,648	47.2	119.7	45°C
LXEM4-30HL-RFA-EDU			RFA	5,926	47.4	125	45°C
LXEM4-30HL-RA-EDU			RA	5,932	47.3	125.4	45°C
LXEM4-30HL-DFA-EDU			DFA	6,214	47.3	131.4	45°C
LXEM4-30HL-DCA-EDU			DCA	6,273	47.4	132.4	45°C
LXEM4-35HL-RFP-EDU		35K	RFP	5,634	47.4	118.9	45°C
LXEM4-35HL-RP-EDU			RP	5,840	47.2	123.7	45°C
LXEM4-35HL-RFA-EDU			RFA	6,127	47.4	129.3	45°C
LXEM4-35HL-RA-EDU			RA	6,133	47.3	129.7	45°C
LXEM4-35HL-DFA-EDU			DFA	6,425	47.3	135.8	45°C
LXEM4-35HL-DCA-EDU			DCA	6,487	47.4	136.9	45°C
LXEM4-40HL-RFP-EDU		40K	RFP	5,721	47.4	120.7	45°C
LXEM4-40HL-RP-EDU			RP	5,931	47.2	125.7	45°C
LXEM4-40HL-RFA-EDU			RFA	6,222	47.4	131.3	45°C
LXEM4-40HL-RA-EDU			RA	6,228	47.3	131.7	45°C
LXEM4-40HL-DFA-EDU			DFA	6,525	47.3	137.9	45°C
LXEM4-40HL-DCA-EDU			DCA	6,587	47.4	139	45°C
LXEM4-50HL-RFP-EDU		50K	RFP	5,874	47.4	123.9	45°C
LXEM4-50HL-RP-EDU			RP	6,089	47.2	129	45°C
LXEM4-50HL-RFA-EDU			RFA	6,388	47.4	134.8	45°C
LXEM4-50HL-RA-EDU			RA	6,394	47.3	135.2	45°C
LXEM4-50HL-DFA-EDU			DFA	6,699	47.3	141.6	45°C
LXEM4-50HL-DCA-EDU			DCA	6,763	47.4	142.7	45°C
LXEM4-30VL-RP-EDU	Very High Lumen	30K	RP	7,086	61.6	115	40°C
LXEM4-30VL-RA-EDU			RA	7,373	61.7	119.5	40°C
LXEM4-30VL-RFP-EDU			RFP	7,388	61.6	119.9	40°C
LXEM4-30VL-RFA-EDU			RFA	7,395	61.6	120	40°C
LXEM4-30VL-DFA-EDU			DFA	7,756	61.7	125.7	40°C
LXEM4-30VL-DCA-EDU			DCA	7,806	61.7	126.5	40°C
LXEM4-35VL-RP-EDU		35K	RP	7,327	61.6	118.9	40°C
LXEM4-35VL-RA-EDU			RA	7,624	61.7	123.6	40°C
LXEM4-35VL-RFP-EDU			RFP	7,639	61.6	124	40°C
LXEM4-35VL-RFA-EDU			RFA	7,646	61.6	124.1	40°C
LXEM4-35VL-DFA-EDU			DFA	8,020	61.7	130	40°C
LXEM4-35VL-DCA-EDU			DCA	8,072	61.7	130.8	40°C
LXEM4-40VL-RP-EDU		40K	RP	7,440	61.6	120.8	40°C
LXEM4-40VL-RA-EDU			RA	7,742	61.7	125.5	40°C
LXEM4-40VL-RFP-EDU			RFP	7,757	61.6	125.9	40°C
LXEM4-40VL-RFA-EDU			RFA	7,764	61.6	126	40°C
LXEM4-40VL-DFA-EDU			DFA	8,144	61.7	132	40°C
LXEM4-40VL-DCA-EDU			DCA	8,197	61.7	132.8	40°C
LXEM4-50VL-RP-EDU		50K	RP	7,639	61.6	124	40°C
LXEM4-50VL-RA-EDU			RA	7,948	61.7	128.8	40°C
LXEM4-50VL-RFP-EDU			RFP	7,964	61.6	129.3	40°C
LXEM4-50VL-RFA-EDU			RFA	7,971	61.6	129.4	40°C
LXEM4-50VL-DFA-EDU			DFA	8,361	61.7	135.5	40°C
LXEM4-50VL-DCA-EDU			DCA	8,415	61.7	136.4	40°C

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LXEM

ENCLOSED AND GASKETED FIBERGLASS EXTREME ENVIRONMENT

DELIVERED LUMENS (CONTINUED)

PRODUCT AVAILABILITY 80 CRI							
Lumen Package	Output	Color	Lens	Lumens	Watts	LPW	Max Ambient Operating Temp
LXEM4-30XL-RFP-EDU	Xtra High Lumen	30K	RFP	9,059	91.3	99.2	30°C
LXEM4-30XL-RP-EDU			RP	9,448	91.2	103.6	30°C
LXEM4-30XL-RFA-EDU			RFA	9,779	91.2	107.2	30°C
LXEM4-30XL-RA-EDU			RA	9,839	91.4	107.7	30°C
LXEM4-30XL-DFA-EDU			DFA	10,358	91.4	113.3	30°C
LXEM4-30XL-DCA-EDU			DCA	10,424	91.5	113.9	30°C
LXEM4-35XL-RFP-EDU		35K	RFP	9,367	91.3	102.6	30°C
LXEM4-35XL-RP-EDU			RP	9,769	91.2	107.1	30°C
LXEM4-35XL-RFA-EDU			RFA	10,111	91.2	110.9	30°C
LXEM4-35XL-RA-EDU			RA	10,174	91.4	111.3	30°C
LXEM4-35XL-DFA-EDU			DFA	10,710	91.4	117.2	30°C
LXEM4-35XL-DCA-EDU			DCA	10,778	91.5	117.8	30°C
LXEM4-40XL-RFP-EDU		40K	RFP	9,512	91.3	104.2	30°C
LXEM4-40XL-RP-EDU			RP	9,920	91.2	108.8	30°C
LXEM4-40XL-RFA-EDU			RFA	10,268	91.2	112.6	30°C
LXEM4-40XL-RA-EDU			RA	10,331	91.4	113	30°C
LXEM4-40XL-DFA-EDU			DFA	10,876	91.4	119	30°C
LXEM4-40XL-DCA-EDU			DCA	10,945	91.5	119.6	30°C
LXEM4-50XL-RFP-EDU		50K	RFP	9,765	91.3	107	30°C
LXEM4-50XL-RP-EDU			RP	10,184	91.2	111.7	30°C
LXEM4-50XL-RFA-EDU			RFA	10,542	91.2	115.6	30°C
LXEM4-50XL-RA-EDU			RA	10,607	91.4	116	30°C
LXEM4-50XL-DFA-EDU			DFA	11,166	91.4	122.2	30°C
LXEM4-50XL-DCA-EDU			DCA	11,237	91.5	122.8	30°C
LXEM8-30VW-RA-EDU	Very Low Watt	30K	RA	6,078	48.8	124.6	50°C
LXEM8-30VW-RFA-EDU			RFA	6,096	49	124.4	50°C
LXEM8-30VW-DCA-EDU			DCA	6,360	48.8	130.3	50°C
LXEM8-30VW-DFA-EDU			DFA	6,369	48.8	130.5	50°C
LXEM8-35VW-RA-EDU		35K	RA	6,285	48.8	128.8	50°C
LXEM8-35VW-RFA-EDU			RFA	6,303	49	128.6	50°C
LXEM8-35VW-DCA-EDU			DCA	6,576	48.8	134.8	50°C
LXEM8-35VW-DFA-EDU			DFA	6,585	48.8	134.9	50°C
LXEM8-40VW-RA-EDU		40K	RA	6,382	48.8	130.8	50°C
LXEM8-40VW-RFA-EDU			RFA	6,400	49	130.6	50°C
LXEM8-40VW-DCA-EDU			DCA	6,678	48.8	136.8	50°C
LXEM8-40VW-DFA-EDU			DFA	6,687	48.8	137	50°C
LXEM8-50VW-RA-EDU		50K	RA	6,553	48.8	134.3	50°C
LXEM8-50VW-RFA-EDU			RFA	6,571	49	134.1	50°C
LXEM8-50VW-DCA-EDU			DCA	6,856	48.8	140.5	50°C
LXEM8-50VW-DFA-EDU			DFA	6,866	48.8	140.7	50°C
LXEM8-30LW-RFA-EDU	Low Watt	30K	RFA	8,095	66.6	121.5	50°C
LXEM8-30LW-RA-EDU			RA	8,109	66.6	121.8	50°C
LXEM8-30LW-DFA-EDU			DFA	8,482	66.6	127.4	50°C
LXEM8-30LW-DCA-EDU			DCA	8,605	66.6	129.2	50°C
LXEM8-35LW-RFA-EDU		35K	RFA	8,370	66.6	125.7	50°C
LXEM8-35LW-RA-EDU			RA	8,385	66.6	125.9	50°C
LXEM8-35LW-DFA-EDU			DFA	8,770	66.6	131.7	50°C
LXEM8-35LW-DCA-EDU			DCA	8,898	66.6	133.6	50°C
LXEM8-40LW-RFA-EDU		40K	RFA	8,500	66.6	127.6	50°C
LXEM8-40LW-RA-EDU			RA	8,514	66.6	127.8	50°C
LXEM8-40LW-DFA-EDU			DFA	8,906	66.6	133.7	50°C
LXEM8-40LW-DCA-EDU			DCA	9,035	66.6	135.7	50°C
LXEM8-50LW-RFA-EDU		50K	RFA	8,727	66.6	131	50°C
LXEM8-50LW-RA-EDU			RA	8,741	66.6	131.3	50°C
LXEM8-50LW-DFA-EDU			DFA	9,143	66.6	137.3	50°C
LXEM8-50LW-DCA-EDU			DCA	9,276	66.6	139.3	50°C
LXEM8-30ML-RFA-EDU	Medium Lumen	30K	RFA	9,844	84	117.2	50°C
LXEM8-30ML-RA-EDU			RA	9,847	84	117.2	50°C
LXEM8-30ML-DFA-EDU			DFA	10,320	84	122.9	50°C
LXEM8-30ML-DCA-EDU			DCA	10,476	84	124.7	50°C
LXEM8-35ML-RFA-EDU		35K	RFA	10,179	84	121.2	50°C
LXEM8-35ML-RA-EDU			RA	10,182	84	121.2	50°C
LXEM8-35ML-DFA-EDU			DFA	10,671	84	127	50°C
LXEM8-35ML-DCA-EDU			DCA	10,832	84	128.9	50°C
LXEM8-40ML-RFA-EDU		40K	RFA	10,336	84	123.1	50°C
LXEM8-40ML-RA-EDU			RA	10,340	84	123.1	50°C
LXEM8-40ML-DFA-EDU			DFA	10,836	84	129	50°C
LXEM8-40ML-DCA-EDU			DCA	10,999	84	130.9	50°C
LXEM8-50ML-RFA-EDU		50K	RFA	10,612	84	126.3	50°C
LXEM8-50ML-RA-EDU			RA	10,616	84	126.4	50°C
LXEM8-50ML-DFA-EDU			DFA	11,125	84	132.4	50°C
LXEM8-50ML-DCA-EDU			DCA	11,293	84	134.4	50°C

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LXEM

ENCLOSED AND GASKETED FIBERGLASS EXTREME ENVIRONMENT

DELIVERED LUMENS (CONTINUED)

PRODUCT AVAILABILITY 80 CRI							
Lumen Package	Output	Color	Lens	Lumens	Watts	LPW	Max Ambient Operating Temp
LXEM8-30HL-RFA-EDU	High Lumen	30K	RFA	11,851	94.8	125	45°C
LXEM8-30HL-RA-EDU			RA	11,863	94.6	125.4	45°C
LXEM8-30HL-DFA-EDU			DFA	12,428	94.6	131.4	45°C
LXEM8-30HL-DCA-EDU			DCA	12,547	94.8	132.4	45°C
LXEM8-35HL-RFA-EDU		35K	RFA	12,254	94.8	129.3	45°C
LXEM8-35HL-RA-EDU			RA	12,267	94.6	129.7	45°C
LXEM8-35HL-DFA-EDU			DFA	12,851	94.6	135.8	45°C
LXEM8-35HL-DCA-EDU			DCA	12,973	94.8	136.9	45°C
LXEM8-40HL-RFA-EDU		40K	RFA	12,444	94.8	131.3	45°C
LXEM8-40HL-RA-EDU			RA	12,456	94.6	131.7	45°C
LXEM8-40HL-DFA-EDU			DFA	13,049	94.6	137.9	45°C
LXEM8-40HL-DCA-EDU			DCA	13,174	94.8	139	45°C
LXEM8-50HL-RFA-EDU		50K	RFA	12,776	94.8	134.8	45°C
LXEM8-50HL-RA-EDU			RA	12,789	94.6	135.2	45°C
LXEM8-50HL-DFA-EDU			DFA	13,397	94.6	141.6	45°C
LXEM8-50HL-DCA-EDU			DCA	13,525	94.8	142.7	45°C
LXEM8-30VL-RA-EDU	Very High Lumen	30K	RA	14,747	123.4	119.5	40°C
LXEM8-30VL-RFA-EDU			RFA	14,789	123.2	120	40°C
LXEM8-30VL-DFA-EDU			DFA	15,512	123.4	125.7	40°C
LXEM8-30VL-DCA-EDU			DCA	15,613	123.4	126.5	40°C
LXEM8-35VL-RA-EDU		35K	RA	15,248	123.4	123.6	40°C
LXEM8-35VL-RFA-EDU			RFA	15,292	123.2	124.1	40°C
LXEM8-35VL-DFA-EDU			DFA	16,040	123.4	130	40°C
LXEM8-35VL-DCA-EDU			DCA	16,143	123.4	130.8	40°C
LXEM8-40VL-RA-EDU		40K	RA	15,484	123.4	125.5	40°C
LXEM8-40VL-RFA-EDU			RFA	15,529	123.2	126	40°C
LXEM8-40VL-DFA-EDU			DFA	16,288	123.4	132	40°C
LXEM8-40VL-DCA-EDU			DCA	16,393	123.4	132.8	40°C
LXEM8-50VL-RA-EDU		50K	RA	15,897	123.4	128.8	40°C
LXEM8-50VL-RFA-EDU			RFA	15,943	123.2	129.4	40°C
LXEM8-50VL-DFA-EDU			DFA	16,722	123.4	135.5	40°C
LXEM8-50VL-DCA-EDU			DCA	16,830	123.4	136.4	40°C
LXEM8-30XL-RFA-EDU	Xtra High Lumen	30K	RFA	19,558	182.4	107.2	30°C
LXEM8-30XL-RA-EDU			RA	19,678	182.8	107.7	30°C
LXEM8-30XL-DFA-EDU			DFA	20,716	182.8	113.3	30°C
LXEM8-30XL-DCA-EDU			DCA	20,847	183	113.9	30°C
LXEM8-35XL-RFA-EDU		35K	RFA	20,223	182.4	110.9	30°C
LXEM8-35XL-RA-EDU			RA	20,348	182.8	111.3	30°C
LXEM8-35XL-DFA-EDU			DFA	21,420	182.8	117.2	30°C
LXEM8-35XL-DCA-EDU			DCA	21,556	183	117.8	30°C
LXEM8-40XL-RFA-EDU		40K	RFA	20,536	182.4	112.6	30°C
LXEM8-40XL-RA-EDU			RA	20,662	182.8	113	30°C
LXEM8-40XL-DFA-EDU			DFA	21,752	182.8	119	30°C
LXEM8-40XL-DCA-EDU			DCA	21,889	183	119.6	30°C
LXEM8-50XL-RFA-EDU		50K	RFA	21,083	182.4	115.6	30°C
LXEM8-50XL-RA-EDU			RA	21,213	182.8	116	30°C
LXEM8-50XL-DFA-EDU			DFA	22,332	182.8	122.2	30°C
LXEM8-50XL-DCA-EDU			DCA	22,473	183	122.8	30°C

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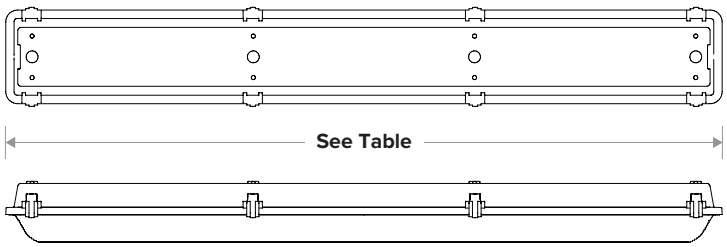
LXEM

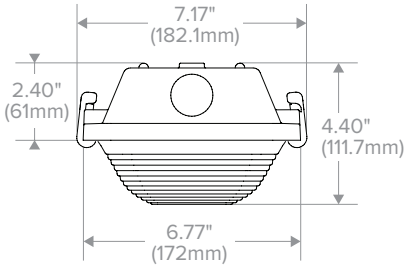
ENCLOSED AND GASKETED FIBERGLASS EXTREME ENVIRONMENT

DIMENSIONS

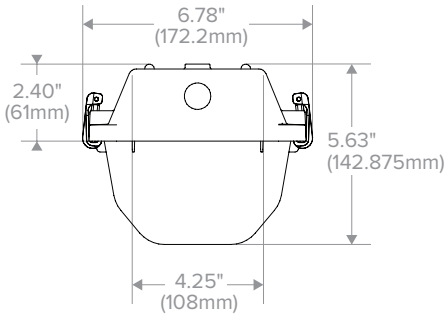


LXEM LENGTH DIMENSIONS								
Size	Lens	Length	Size	Lens	Length	Size	Lens	Length
2'	RFA	27⅔"	4'	RFA	51⅔"	8'	RFA	100"
	RA	27⅔"		RA	51⅔"		RA	N/A
	DFA	27⅔"		DFA	51⅔"		DFA	100"
	DCA	27⅔"		DCA	51⅔"		DCA	100"
	RFP	27⅔"		RFP	51⅔"		RFP	N/A
	RP	27⅔"		RP	51⅔"		RP	N/A

RFA Lens: 2', 4', 8', RFP Lens: 2', 4'



DFA or DCA Lens: 2', 4', 8'



NOTE: All dimensions are in inches; dimensions and specifications are subject to change without notice. Please consult factory or check sample for verification.

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LXEM

ENCLOSED AND GASKETED FIBERGLASS EXTREME ENVIRONMENT

PHOTOMETRY

LXEM4-50ML-RFA-EDU

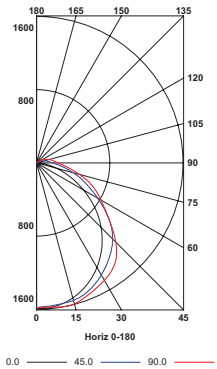
LUMINAIRE DATA

Test No.	**17905**
Description	**LXEM LED Enclosed and Gasketed, Extreme Environment 7" x 51" LED with frosted ribbed acrylic lens**
Delivered Lumens	**5306**
Watts	**42.00**
Efficacy	**126**
Mounting	**Surface**
Spacing Criterion	**0° = 1.24 90° = 1.40**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
0–30	1268	23.9
0–40	2105	39.7
0–60	3766	71.0
0–90	5025	94.7
0–180	5306	100.0

POLAR GRAPH



LXEM4-40HL-DFA-EDU

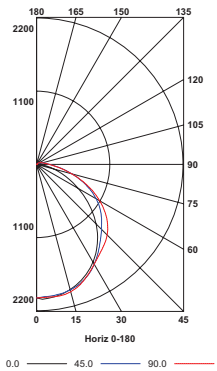
LUMINAIRE DATA

Test No.	**17989**
Description	**LXEM LED Enclosed and Gasketed, Extreme Environment 7" x 51" LED with deep frosted acrylic lens**
Delivered Lumens	**6525**
Watts	**47.30**
Efficacy	**138**
Mounting	**Surface**
Spacing Criterion	**0° = 1.25 90° = 1.28**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
0–30	1583	24.3
0–40	2594	39.8
0–60	4661	71.4
0–90	6235	95.6
0–180	6525	100.0

POLAR GRAPH



LXEM4-50XL-RA-EDU

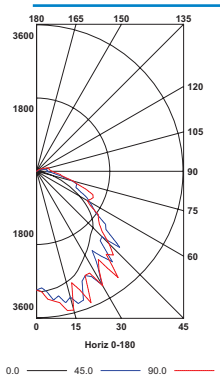
LUMINAIRE DATA

Test No.	**18012**
Description	**LXEM LED Enclosed and Gasketed, Extreme Environment 7" x 51" LED with ribbed clear acrylic lens**
Delivered Lumens	**10607**
Watts	**91.40**
Efficacy	**116**
Mounting	**Surface**
Spacing Criterion	**0° = 1.21 90° = 1.38**

ZONAL LUMEN SUMMARY

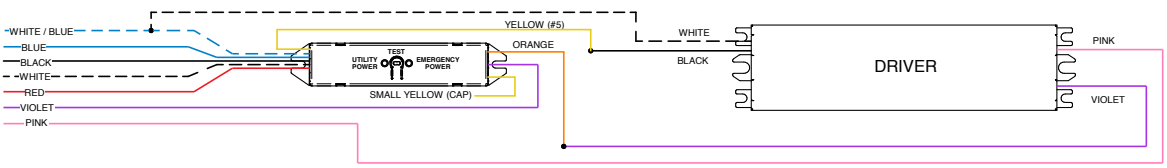
Zone	Lumens	% Luminaire
0–30	2547	24
0–40	4252	40.1
0–60	7643	72.1
0–90	10073	95
0–180	10607	100.0

POLAR GRAPH



ADDITIONAL INFORMATION

DTS WIRING DIAGRAM (0–10V DIMMING DRIVER SHOWN)



WHITE/BLUE	Emergency Neutral
BLUE	Emergency Line
BLACK	Utility Line (Unswitched Hot)
WHITE	Utility Neutral
RED	Switched Hot
VIOLET	Dimming
PINK	Dimming

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EXO OUTDOOR LIGHTING

TYPE B FIXTURE

DATE:	LOCATION:
TYPE:	PROJECT:
CATALOG #:	

SLING Series

SLENDER WALLPACK

tradeSELECT®

FEATURES

- Two sizes for a variety of applications
- Ranges from 21W to 80W with up to 8000 lumens
- SG1 Series replaces from 100W-150W HID; SG2 Series replaces from 150W-250W HID
- Comfort lens available as an option or accessory provides glare control and enhanced uniformity
- Knuckle and trunnion accessory mounting kits available for flood applications
- IP65 and certified to UL 1598 for use in wet locations up to 40°C ambient

C US IP65

SPECIFICATIONS

HOUSING

- Rugged die-cast aluminum housing with corrosion resistant powder coat finish
- Heating dissipating fins provide superior thermal performance extending the life of the electronic components
- Impact resistant tempered glass offers zero uplight
- Comfort lens available as an option or accessory to reduce glare (7-10% lumen reduction) and provide better uniformity

OPTICS

- 3000K, 4000K and 5000K CCT nominal with 70 CRI
- Smaller SG1 housing has 2 LEDs, larger SG2 housing has 3 LEDs

INSTALLATION

- Side hinge allows for easy installation and wiring
- Side movement avoids damage to the lens and helps prevent injury common in drop down hinge designs
- Mounts to 4" junction box and includes a gasket to help seal electrical connections
- Four 1/2" threaded conduits hubs for surface conduit provided

ELECTRICAL

- 120-277V, 50/60Hz electronic drivers
- 347V and 480V available in large SG2 housing
- 10KA surge protection included

OPTIONS/CONTROLS

- Button photocontrol for dusk to dawn energy savings. Stock versions include 120V-277V PC with a cover which provides a choice to engage photocontrol or not. PC is installed in top hub
- Occupancy sensor available for on/off and dimming control in larger SG2 housing
- Battery backup options available in larger SG2 housing rated for either 0° C or -30° C. Performance exceeds NEC requirement providing 1 fc minimum over 10'x10' at 11' mounting height

CERTIFICATIONS

- Listed to UL1598 for use in wet location, listed for -40°C to 40°C applications
- Complies with IDA standards with zero uplight for 3000K and warmer CCT's
- IP65

WARRANTY

- 5 year warranty

KEY DATA	
Lumen Range	2263-8079
Wattage Range	21-80
Efficacy Range (LPW)	101-113
Weights lbs. (kg)	4.3-11 (2.0-5.0)

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EXO OUTDOOR LIGHTING

SLING SERIES

SLENDER WALLPACK

DATE: LOCATION:

TYPE: PROJECT:

CATALOG #:

ORDERING GUIDE

Example: SG1-20-3K7-FT-UNV-DBT-PCU-CS

CATALOG #

ORDERING INFORMATION

Housing		CCT/CRI		Distribution		Voltage		Color/Finish		Control Options		Options	
SG1-10	Size 1, 10W	**3K7**	3000K, 70 CRI	**FT**	Fwd Throw	**UNV**	120V-277V	**BLT**	Black Matte Textured	**PCU**	Universal Button Photocontrol (120-277V)	**CS**	Comfort Lens
SG1-20	Size 1, 20W	**4K7**	4000K, 70 CRI			**120**	120V	**BLS**	Black Gloss Smooth	**SCP**[1,2,3]	Occupancy Sensor Programmable (Dim)	**E**[1,2]	Battery 0°C
SG1-30	Size 1, 30W	**5K7**	5000K, 70 CRI			**277**	277V	**DBT**	Dark Bronze Matte Textured	**Specify MTG HT for OCC Sensor**		**EH**[1,2]	Battery w/ heater -20°
SG1-40	Size 1, 40W					**UHV**	347V-480V	**DBS**	Dark Brone Gloss Smooth	**8F**	Up to 8'		
SG2-50	Size 2, 50W							**GTT**	Graphite Matte Textured	**20F**	Up to 20'		
SG2-80	Size 2, 80W							**LGS**	Light Grey Gloss Smooth				
								PSS	Platinum Silver Smooth				
								WHT	White Matte Textured				
								WHS	White Gloss Smooth				
								VGT	Verde Green Textured				
								Color Option					
								CC	Custom Color				

Notes:

1 Available in SG2 only, UHV available in SG2-50 only

2 Sensor controls & battery backup can not be used with flood accessory or kit or for inverted/up mounting, 120-227V only for SCO/SCP, 120 or 277 only for SWP, SWPM, E & EH

3 Must order minimum of one remote control to program dimming setttings, 0-10V fully adjustable dimming with automatic daylight calibration and different time delay settings, 120-277V only

STOCK ORDERING INFORMATION

Catalog Number	CCT/CRI	Wattage	Mounting Height	Color	Color	Delivered Lumens	LPW	Weight lbs. (kg)
SG1-10-PCU	5000K/70	11W	8–12ft	120–277V	Dark Bronze	1349	122	4.3 (2.0)
SG1-10-4K-PCU	4000K/70	11W	8–12ft	120–277V	Dark Bronze	1424	129	4.3 (2.0)
SG1-20-PCU	5000K/70	21W	8–12ft	120–277V	Dark Bronze	2263	108	4.3 (2.0)
SG1-20-4K-PCU	4000K/70	21W	8–12ft	120–277V	Dark Bronze	2310	110	4.3 (2.0)
SG1-30-PCU	5000K/70	29W	10–15ft	120–277V	Dark Bronze	3270	113	4.3 (2.0)
SG1-30-4K-PCU	4000K/70	29W	10–15ft	120–277V	Dark Bronze	3060	105	4.3 (2.0)
SG1-40-PCU	5000K/70	38W	10–15ft	120–277V	Dark Bronze	4008	105	4.3 (2.0)
SG1-40-4K-PCU	4000K/70	38W	10–15ft	120–277V	Dark Bronze	4070	106	4.3 (2.0)
SG2-50-PCU	5000K/70	51W	12–18ft	120–277V	Dark Bronze	5548	110	11 (5.0)
SG2-50-4K-PCU	4000K/70	51W	12–18ft	120–277V	Dark Bronze	5526	109	11 (5.0)
SG2-80-PCU	5000K/70	80W	15–25ft	120–277V	Dark Bronze	8061	101	11 (5.0)
SG2-80-4K-PCU	4000K/70	80W	15–25ft	120–277V	Dark Bronze	8079	101	11 (5.0)

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DATE: LOCATION:

TYPE: PROJECT:

CATALOG #:

ORDERING GUIDE

OPTIONS AND ACCESSORIES

	Catalog Number	Description	Weight lbs. (kg)
☐	**SG1-YOKE**	SG1 Series Yoke/Floodlight mount kit, includes visor	2.0 (1.0)
☐	**SG1-KNUCKLE**	SG1 Series Knuckle/Floodlight mount kit, includes visor	2.0 (1.0)
☐	**SG2-YOKE**	SG2 Series Yoke/Floodlight mount kit, includes visor	2.0 (1.0)
☐	**SG2-KNUCKLE**	SG2 Series Knuckle/Floodlight mount kit, includes visor	2.0 (1.0)
☐	**SCP-REMOTE***	Remote control for SCP option. Order at least one per project to program and control fixtures	1 (.45)

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SLING SERIES

SLENDER WALLPACK

PERFORMANCE DATA

Description	# of LEDs	Drive Current	System Watts	5K (5000K NOMINAL 70 CRI)					4K (4000K NOMINAL 70 CRI)					3K (3000K NOMINAL 80 CRI)				
				Lumens	LPW	B	U	G	Lumens	LPW	B	U	G	Lumens	LPW	B	U	G
SG1-10	2	140mA	11	1349	122	1	0	0	1424	129	1	0	0	1003	91	1	0	0
SG1-20	2	250mA	21	2449	115	1	0	0	2310	110	1	0	0	2054	95	1	0	0
SG1-30	2	350mA	29	3332	117	2	0	0	3060	106	1	0	0	2913	100	1	0	0
SG-40	2	450mA	38	4008	105	2	0	0	4070	106	2	0	0	3845	100	2	0	0
SG2-50-UHV	3	350mA	44	4633	106	2	0	0	4609	105	2	0	0	3895	90	2	0	0
SG2-50	3	415mA	51	5548	109	2	0	0	5526	107	2	0	0	4700	92	2	0	0
SG2-80	3	650mA	80	7851	98	2	0	1	8079	103	2	0	1	6721	86	2	0	1

*347 and 480 VAC input Lumen values are from photometric test performed in accordance with IESNA LM-79-08. Data is considered to be representative of the configurations shown. Actual performance may differ as a result of end-user environment application and inherent performance balances of the electrical components.

ELECTRICAL DATA

Catalog number	# of Drivers	Input Voltage	Current (AMPS)	System Power
SG1-10	1	120	0.09	11.0
	1	277	0.04	11.0
SG1-20	1	120	0.18	21.0
	1	277	0.08	21.0
SG1-30	1	120	0.24	28.9
	1	277	0.10	28.9
SG2-40	1	120	0.32	38.3
	1	277	0.14	38.3
SG-50-UHV	1	347	0.13	43.5
	1	480	0.18	43.5
SG2-50	1	120	0.42	50.6
	1	277	0.18	50.6
SG2-80	1	120	0.68	79.8
	1	277	0.29	79.8

PROJECTED LUMEN MAINTENANCE

Ambient Temperature	OPERATING HOURS					
	0	25,000	50,000	TM-21-11[1] L96 60,000	100,000	L70 (Hours)
25°C / 77°F	1.00	0.98	0.97	0.96	0.95	>791,000
40°C / 104°F	0.99	0.98	0.96	0.96	0.94	>635,000

1. Projected per IESNA TM-21-11 * (Nichia 219B, 700mA, 85°C Ts, 10,000hrs) Data references the extrapolated performance projections for the base model in a 40°C ambient, based on 10,000 hours of LED testing per IESNA LM-80-08

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DATE: LOCATION:

TYPE: PROJECT:

CATALOG #:

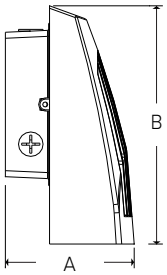
LUMINAIRE AMBIENT TEMPERATURE FACTOR (LATF)

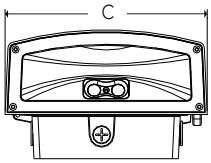
Ambient Temperature		Lumen Multiplier
0˚ C	32˚ F	1.02
10˚ C	50˚ F	1.01
20˚ C	68˚ F	1.00
25˚ C	77˚ F	1.00
30˚ C	86˚ F	1.00
40˚ C	104˚ F	0.99
50˚ C	122˚ F	0.96

Use these factors to determine relative lumen output for average ambient temperatures from 0-40°C (32-104°F).

DIMENSIONS

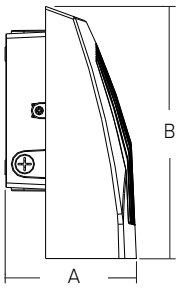
SG1

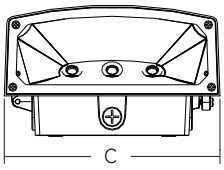




A	B	C	Weight
4.19" (107mm)	7.80" (198mm)	6.61" (168mm)	4.4lbs (2kg)

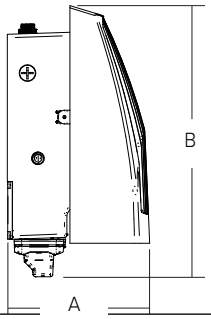
SG2

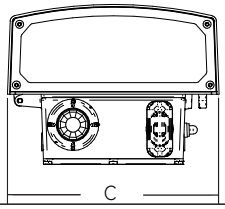




A	B	C	Weight
5.80" (147mm)	11.14" (283mm)	9.52" (242mm)	11lbs (5kg)

SG2 with occupancy sensor and battery options





A	B	C	Weight
7.26" (184mm)	13.64" (342mm)	9.52" (242mm)	11lbs (5kg)

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PHOTOMETRY

SG1-10-4K7

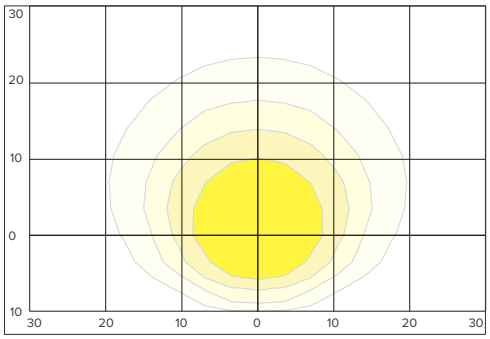
LUMINAIRE DATA

Description	**4000 Kelvin, 70 CRI**
Distribution Type	**Forward Throw**
Delivered Lumens	**1424**
Watts	**11.4**
Efficacy	**125**
Mounting	**Wall**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	996.6	70.0
Downward House Side	427.8	30.0
Downward Total	1424.4	100.0
Upward Street Side	0.0	0.0
Upward House Side	0.0	0.0
Upward Total	0.0	0.0
Total Flux	1424.4	100.0

ISOMETRIC FOOTCANDLE



10' Mounting Height
5.0 FC
2.0 FC
1.0 FC
0.5 FC

SG1-20-4K7

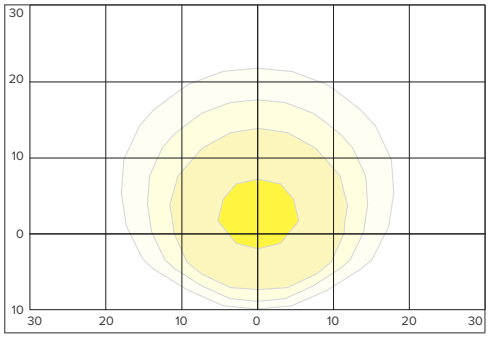
LUMINAIRE DATA

Description	**4000 Kelvin, 70 CRI**
Distribution Type	**Foward Throw**
Delivered Lumens	**2310**
Watts	**20.9**
Efficacy	**111**
Mounting	**Wall**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	1618	70.0
Downward House Side	692.1	30
Downward Total	2310	100.0
Upward Street Side	0.0	0.0
Upward House Side	0.0	0.0
Upward Total	0.0	0.0
Total Flux	2310.3	100.0

ISOMETRIC FOOTCANDLE



10' Mounting Height
5.0 FC
2.0 FC
1.0 FC
0.5 FC

SG1-30

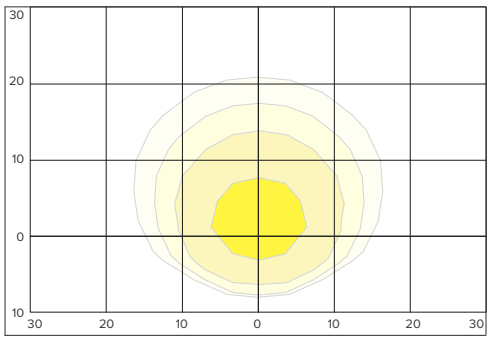
LUMINAIRE DATA

Description	**4000 Kelvin, 70 CRI**
Distribution Type	**Forward Throw**
Delivered Lumens	**3060**
Watts	**29.1**
Efficacy	**105**
Mounting	**Wall**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	2619.4	70.9
Downward House Side	890.4	29.1
Downward Total	3059.8	100.0
Upward Street Side	0.0	0.0
Upward House Side	0.0	0.0
Upward Total	0.0	0.0
Total Flux	3059.8	100.0

ISOMETRIC FOOTCANDLE



10' Mounting Height
5.0 FC
2.0 FC
1.0 FC
0.5 FC

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PHOTOMETRY

SG1-40-4K7

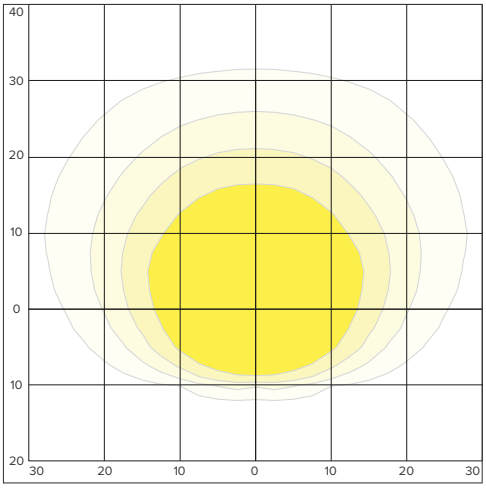
LUMINAIRE DATA

Description	**4000 Kelvin, 70 CRI**
Distribution Type	**Foward Throw**
Delivered Lumens	**4070**
Watts	**38.1**
Efficacy	**107**
Mounting	**Wall**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	2857.7	70.2
Downward House Side	1215.5	29.8
Downward Total	4070.2	100.0
Upward Street Side	0.0	0.0
Upward House Side	0.0	0.0
Upward Total	0.0	0.0
Total Flux	4070.2	100.0

ISOMETRIC FOOTCANDLE



10' Mounting Height
5.0 FC
1.0 FC
2.0 FC
0.5 FC

SG2-50-4K7

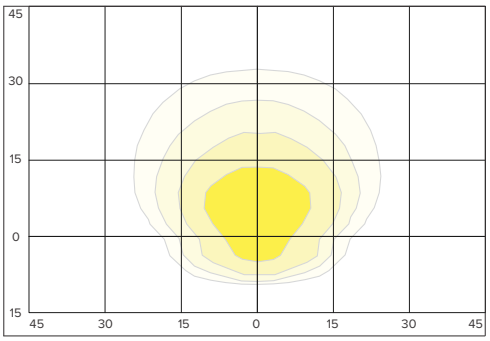
LUMINAIRE DATA

Description	**4000 Kelvin, 70 CRI**
Distribution Type	**Foward Throw**
Delivered Lumens	**5525.7**
Watts	**51.7**
Efficacy	**107**
Mounting	**Wall**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	4611.8	83.5
Downward House Side	913.9	16.5
Downward Total	5525.7	100.0
Upward Street Side	0.0	0.0
Upward House Side	0.0	0.0
Upward Total	0.0	0.0
Total Flux	5525.7	100.0

ISOMETRIC FOOTCANDLE



15' Mounting Height
5.0 FC
1.0 FC
2.0 FC
0.5 FC

SG2-80-4K7

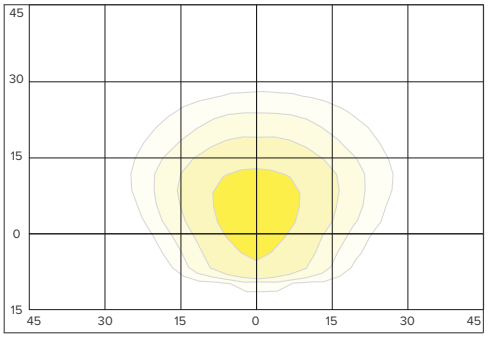
LUMINAIRE DATA

Description	**4000 Kelvin, 70 CRI**
Distribution Type	**Foward Throw**
Delivered Lumens	**8453**
Watts	**78.5**
Efficacy	**108**
Mounting	**Wall**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	6677.7	79.0
Downward House Side	1775.5	21.0
Downward Total	8453.2	100.0
Upward Street Side	0.0	0.0
Upward House Side	0.0	0.0
Upward Total	0.0	0.0
Total Flux	8453.2	100.0

ISOMETRIC FOOTCANDLE



15' Mounting Height
5.0 FC
1.0 FC
2.0 FC
0.5 FC

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ADDITIONAL INFORMATION

Shipping Information

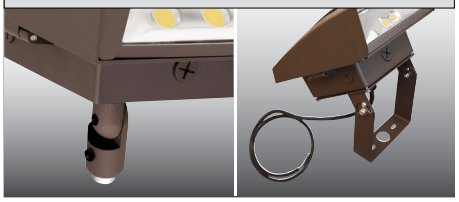
Catalog Number	G.W(kg)/ CTN	Carton Dimensions			Carton Qty. per Master Pack	Pallet Qty.
		Length Inch (cm)	Width Inch (cm)	Height Inch (cm)		
SG1	4.35lbs (2kg)	9.5 (24)	8.25 (21)	5.25 (13)	6	98
SG2	11lbs (5kg)	14 (36)	11.5 (29)	8 (20)	2	64

Accessories and Services

Visor

Visor accessory included with mounting accessory kits

Mounting Options

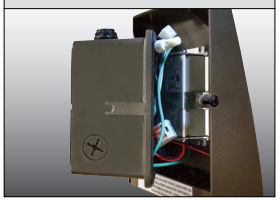


Flood mounting accessories - 1/2" threaded knuckle or yoke (includes grommet and 3' SO cord)

Photocontrol

Photocontrol option available for energy-saving dusk-to-dawn operation

Hinged Housing Door



Side hinged for easy installation and wiring access, single screw secures housing closure

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KIM LIGHTING®

TYPE C FIXTURE

DATE:	LOCATION:
TYPE:	PROJECT:
CATALOG #:	

INT White

FLOODLIGHT LUMINAIRE

intent

FEATURES

- Architectural linear product for wall and ground mounting applications such as sign lighting, wall washing, wall grazing, and building accent lighting
- Linear run capabilities for even, uniform light distribution with no scalloping effect
- Lumen range from 2,803 to 15,162 lm
- UL/cUL listed for wet locations, IP66 and 3G vibration rated

Intent

c UL us LISTED IP66 IK07 IK08

CONTROL TECHNOLOGY

NX DISTRIBUTED™ INTELLIGENCE

RELATED PRODUCTS

KFL LTV8 (RGBW) INT (RGBW COLOR)

SPECIFICATIONS

CONSTRUCTION

- Extruded housing, low copper (<0.1% Cu) Aluminum Alloy 6063-T6 and .160" minimum wall thickness.
- Extrusion includes an integral visor.
- Die-cast driver compartment and end caps, low copper (<0.6% Cu) Aluminum Alloy 360 and .100" minimum wall thickness.
- LED and driver compartment rated for IP66 ingress protection.
- Finish: fade and abrasion resistant, electrostatically applied, thermally cured, triglycidal isocyanurate (TGIC) polyester powdercoat.
- Lens is impact resistant 0.157" tempered glass with anti-reflective coating.
- Lens is sealed in with Reactive Back Bedding Sealant.
- Driver compartment has a one-piece molded silicone gasket.
- All external fasteners are stainless steel.

OPTICS

- LEDs mount to a metal printed circuit board assembly (MCPCB).
- Optical lenses are clear injection molded PMMA acrylic.

INSTALLATION

- Fixtures must be grounded in accordance with national, state and/or local electrical codes. Failure to do so may result in serious personal injury

ELECTRICAL

- Universal voltage, 120 through 277V with a ±10% tolerance. Driver is Underwriters Laboratories listed.
- High voltage configurations, 347/480. Driver is Underwriters Laboratories listed.
- Dimming range from 10% to 100% through the use of standard 0-10V interface on the programmable driver.
- Drivers have greater than a 0.9 power factor, less than 20% harmonic distortion, and be suitable for operation in -40°C to 55°C ambient environments.
- Standard configuration has dimming leads pulled off the fixture.
- Optional factory programmed dimming profile.
- "Thermal Shield", secondary side, thermistor provides protection for the sustainable life of LED module and electronic components.
- Luminaire capable of operating at 100% brightness in a 40°C environment. Both driver and optical array have integral thermal protection that will dim the luminaire upon detection of temperatures in excess of 85°C.
- Surge protection: 20,000A in series.
- SF for 120, 277, 347 Line Volts, DF for 208, 240, 480 Line Volts.
- Wiring: No. 18AWM rated 150°C.
- External cable connections are IP68 rated

CERTIFICATIONS AND LISTINGS.

- Listed to UL1598 and CSA C22.2#250.0-24 for wet locations and 40˚C ambient temperatures.
- IP66 certified.
- RoHS compliant.
- ANSI C136.31-2010 Vibration tested and compliant 3G
- IEC 66262 Mechanical Impact Code IK07 three and four foot fixture
- IEC 66262 Mechanical Impact Code IK08 two foot fixture

WARRANTY

- 5 year warranty.

KEY DATA	
LUMEN RANGE	2,803-15,162
WATTAGE RANGE	28.6-123.4
EFFICACY RANGE (LPW)	94.4-135
REPORTED LIFE (HOURS)	L70/60,000

Notes:
[1] IK08 two foot fixture
[2] IK07 three and four foot fixtures

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KIM LIGHTING®

DATE:	LOCATION:
TYPE:	PROJECT:
CATALOG #:	

INT White

FLOODLIGHT LUMINAIRE

ORDERING GUIDE

Example: INT-2-24L-60-4K9-WF-UNV-A6-CR-MB-GTT-MGF-PC

CATALOG #

HOUSING

INTENT

Housing	Length	#L-Nom. Watts	CCT/CRI	Beam Spread	Voltage	Mounting
INT Flood Luminaire	**2** 2 Foot	**24L-30** 24LED, 30W, 3,000 lm	**5K7** 5000K, 70 CRI	**N** Narrow	**UNV** Universal 120–277V	**K** Threaded Knuckle
		24L-35 24LED, 40W, 4,000 lm	**5K8** 5000K, 80 CRI	**NM** Narrow Medium	**347** 347V	**A3** [6] 3" Adjustable arm
		24L-60 24LED, 60W, 6,000 lm	**5K9** 5000K, 90 CRI	**MF** Medium Flood	**480** 480V	**A6** [6] 6" Adjustable arm
	3 3 Foot	**36L-40** 36LED, 40W, 4,500 lm	**4K7** 4000K, 70 CRI	**WF** Wide Flood		**A12** 12" Adjustable arm
		36L-60 36LED, 60W, 6,000 lm	**4K8** 4000K, 80 CRI	**HF** Horizontal Flood		
		36L-95 36LED, 95W, 9,000 lm	**4K9** 4000K, 90 CRI	**WG** Wall Graze		
	4 4 Foot	**48L-55** 48LED, 55W, 6,000 lm	**3K7** 3000K, 70 CRI	**WW** Asymmetric Wall Wash		
		48L-80 48LED, 80W, 8,000 lm	**3K8** 3000K, 80 CRI			
		48L-125 48LED, 125W, 12,000 lm	**3K9** 3000K, 90 CRI			

Cable Ready	Input Wiring	Color		Options
CR Cable Ready	**LM** Left Mounting (Default)	**BLS** Black Gloss Smooth	**LGT** Light Grey Matte Textured	**SF** Single Fuse (120/277/347)
NCR Non Cable Ready	**RM** Right Mounting	**BLT** Black Matte Textured	**PSS** Platinum Silver Gloss Smooth	**DF** Double Fuse (208/240/480)
	MB [1] Mounting Bracket	**DBS** Dark Bronze Gloss Smooth	**VGT** Verde Green Matte Textured	**DL** Diffused Lens [2]
		DBT Dark Bronze Matte Textured	**WHS** White Gloss Smooth	**LVR** Louver
		GTT Graphite Matte Textured	**WHT** White Matte Textured	**MGF** Marine Grade
		LGS Light Grey Gloss Smooth	**Color Option**	**PC** Button Photocontrol
			CC [3] Custom Color	

Mounting Accessories

Mounting Accessories			
J-25N [4]	Stake	**INTKIT/ INT-C2FT**	2ft Connector Cable
JB1 [4]	Architectural Junction Box	**INTKIT/ INT-C3FT**	3ft Connector Cable
JBR [4]	Composite In-grade Architectural Junction Box	**INTKIT/ INT-C4FT**	4ft Connector Cable
SM18 [4]	Stanchion Mount	**INTKIT/ INT-C5FT**	5ft Connector Cable
INT-WMT-A	Wall Mounting Template	**INTKIT/ INT-C10FT**	10ft Connector Cable
		INTKIT/ INT-CK23 [5]	2ft-3ft Connector Kit
		INTKIT/ INT-CK24 [5]	2ft-4ft Connector Kit
		INTKIT/ INT-CK33 [5]	3ft-3ft Connector Kit
		INTKIT/ INT-CK34 [5]	3ft-4ft Connector Kit
		INTKIT/ INT-CK44 [5]	4ft-4ft Connector Kit

The number of cables will be one less than the number of fixtures in continuous row (i.e. 1 cable required for 2 fixtures)

Accessory Colors			
BLS Black Gloss Smooth	**LGT** Light Grey Matte Textured		
BLT Black Matte Textured	**PSS** Platinum Silver Gloss Smooth		
DBS Dark Bronze Gloss Smooth	**VGT** Verde Green Matte Textured		
DBT Dark Bronze Matte Textured	**WHS** White Gloss Smooth		
GTT Graphite Matte Textured	**WHT** White Matte Textured		
LGS Light Grey Gloss Smooth	**Color Option**		
	CC [3] Custom Color		

Notes:

1. 2ft Intent with adjustable arm input wiring only
2. Only available with WF on Static White configuration
3. Consult factory for custom color, marine and corrosive finish options
4. Order in set of 2 per fixture
5. Connector Kit will have Decorative Cover Included. Color is needed for the decorative cover
6. 3G rated

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INT White

FLOODLIGHT LUMINAIRE

DELIVERED LUMENS

SECTION LENGTH: 2ft

LED COUNT: 24L

Drive Current (mA)	Nominal Lumen Package	Nominal Watts	Beam Spread		Lens Option	Beam Angles (H x V)	NEMA Type	3K7			4K7			5K7		
								Lumens	Max Candela	LPW	Lumens	Max Candela	LPW	Lumens	Max Candela	LPW
350	3,000	30	N	Narrow	Clear	17° H x 17°V	3H x 3V	3319	26327	116.1	3490	27683	122	3563	28263	124.6
			NM	Narrow Medium	Clear	30°H x 30°V	4H x 4V	3332	10737	116.5	3504	11291	123	3577	11527	125.1
			MF	Medium Flood	Clear	63°H x 63°V	5H x 5V	3226	3491	112.8	3391	3670	119	3462	3746	121.0
			WF	Wide Flood	Clear	80°H x 80°V	6H x 6V	3392	2541	118.6	3566	2671	125	3640	2727	127.3
					Diffused	77°H x 77°V	7H x 6V	2803	1651	98.0	2947	1735	103	3009	1772	105.2
			HF	Horizontal Flood	Clear	54°H x 22°V	5H x 5V	3061	5269	107.0	3218	5539	113	3285	5655	114.9
			WG	Wall Graze	Clear	52° H x 12 °V	5H x 3V	3385	11687	118.3	3559	12288	124	3632	12540	127.0
			WW	Wall Wash	Clear	30°H x 20°V	4H x 3V	3136	11883	109.6	3297	12493	115	3365	12751	117.7
500	4,000	35	N	Narrow	Clear	17° H x 17°V	3H x 3V	4608	36552	115.5	4845	38432	121	4945	39226	123.9
			NM	Narrow Medium	Clear	30°H x 30°V	4H x 4V	4626	14908	115.9	4864	15674	122	4965	15999	124.4
			MF	Medium Flood	Clear	63°H x 63°V	5H x 5V	4478	4846	112.2	4708	5096	118	4805	5201	120.4
			WF	Wide Flood	Clear	80°H x 80°V	6H x 6V	4708	3527	118.0	4950	3708	124	5053	3785	126.6
					Diffused	77°H x 77°V	7H x 6V	3891	2291	97.5	4091	2409	103	4176	2459	104.7
			HF	Horizontal Flood	Clear	54°H x 22°V	5H x 5V	4249	7314	106.5	4467	7690	112	4560	7850	114.3
			WG	Wall Graze	Clear	52° H x 12 °V	5H x 3V	4698	16221	117.8	4940	17057	124	5042	17409	126.4
			WW	Wall Wash	Clear	30°H x 20°V	4H x 3V	4353	16495	109.1	4577	17344	115	4672	17704	117.1
800	6,000	60	N	Narrow	Clear	17° H x 17°V	3H x 3V	6797	53916	109.1	7146	56685	115	7294	57859	117.0
			NM	Narrow Medium	Clear	30°H x 30°V	4H x 4V	6823	21987	109.5	7174	23119	115	7323	23599	117.5
			MF	Medium Flood	Clear	63°H x 63°V	5H x 5V	6604	7148	106.0	6944	7515	111	7088	7671	113.7
			WF	Wide Flood	Clear	80°H x 80°V	6H x 6V	6945	5204	111.4	7302	5471	117	7453	5584	119.6
					Diffused	77°H x 77°V	7H x 6V	5740	3380	92.1	6035	3554	97	6160	3627	98.8
			HF	Horizontal Flood	Clear	54°H x 22°V	5H x 5V	6267	10789	100.8	6589	11296	105.5	6726	11593	107.8
			WG	Wall Graze	Clear	52° H x 12 °V	5H x 3V	6930	23928	111.2	7286	25157	116.9	7437	25679	119.3
			WW	Wall Wash	Clear	30°H x 20°V	4H x 3V	6421	24331	103.0	6750	25578	108.3	6891	26112	110.6

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INT White

FLOODLIGHT LUMINAIRE

DELIVERED LUMENS

SECTION LENGTH: 3ft

LED COUNT: 36L

Drive Current (mA)	Nominal Lumen Package	Nominal Watts	Beam Spread		Lens Option	Beam Angles (H x V)	NEMA Type	3K7			4K7			5K7		
								Lumens	Max Candela	LPW	Lumens	Max Candela	LPW	Lumens	Max Candela	LPW
350	4,500	40	N	Narrow	Clear	17° H x 17°V	3H x 3V	5038	39964	119.9	5297	42018	126.1	5407	42890	128.7
			NM	Narrow Medium	Clear	30°H x 30°V	4H x 4V	5058	16300	120.4	5318	17137	126.6	5429	17495	129.2
			MF	Medium Flood	Clear	63°H x 63°V	5H x 5V	4896	5299	116.5	5147	5570	122.5	5254	5686	125.0
			WF	Wide Flood	Clear	80°H x 80°V	6H x 6V	5148	3857	122.5	5413	4056	128.8	5525	4140	131.5
					Diffused	77°H x 77°V	7H x 6V	4255	2506	101.3	4473	2634	106.5	4566	2689	108.7
			HF	Horizontal Flood	Clear	54°H x 22°V	5H x 5V	4646	7873	110.6	4884	8277	116.2	4986	8529	118.7
			WG	Wall Graze	Clear	52° H x 12 °V	5H x 3V	5137	17737	122.3	5401	18649	128.5	5513	19036	131.2
			WW	Wall Wash	Clear	30°H x 20°V	4H x 3V	4760	18037	113.3	5004	18962	119.1	5108	19356	121.6
500	6,000	60	N	Narrow	Clear	17° H x 17°V	3H x 3V	6912	54829	116.2	7267	57645	122.1	7418	58843	124.7
			NM	Narrow Medium	Clear	30°H x 30°V	4H x 4V	6939	22361	116.6	7295	23508	122.6	7447	23998	125.2
			MF	Medium Flood	Clear	63°H x 63°V	5H x 5V	6716	7269	112.9	7061	7642	118.7	7208	7801	121.1
			WF	Wide Flood	Clear	80°H x 80°V	6H x 6V	7062	5291	118.7	7425	5563	124.8	7580	5679	127.4
					Diffused	77°H x 77°V	7H x 6V	5837	3437	98.1	6137	3614	103.1	6264	3689	105.3
			HF	Horizontal Flood	Clear	54°H x 22°V	5H x 5V	6373	10799	107.1	6701	11355	112.6	6840	11591	115.0
			WG	Wall Graze	Clear	52° H x 12 °V	5H x 3V	7047	24332	118.4	7409	25582	124.5	7564	26118	127.1
			WW	Wall Wash	Clear	30°H x 20°V	4H x 3V	6529	24740	109.7	6865	26013	115.4	7008	26556	117.8
800	9,000	95	N	Narrow	Clear	17° H x 17°V	3H x 3V	10475	83092	111.8	11013	87360	117.5	11242	89177	119.9
			NM	Narrow Medium	Clear	30°H x 30°V	4H x 4V	10516	33888	112.2	11056	35629	118.0	11286	36370	120.2
			MF	Medium Flood	Clear	63°H x 63°V	5H x 5V	10179	11017	108.6	10701	11582	114.2	10924	11823	116.5
			WF	Wide Flood	Clear	80°H x 80°V	6H x 6V	10703	8020	114.2	11253	8432	120.1	11487	8607	122.6
					Diffused	77°H x 77°V	7H x 6V	8846	5209	94.4	9300	5476	99.2	9494	5591	101.3
			HF	Horizontal Flood	Clear	54°H x 22°V	5H x 5V	9659	16369	103.1	10155	17209	108.4	10366	17567	110.7
			WG	Wall Graze	Clear	52° H x 12 °V	5H x 3V	10680	36877	114.0	11229	38772	119.8	11463	39580	122.3
			WW	Wall Wash	Clear	30°H x 20°V	4H x 3V	9895	37496	105.6	10404	39425	111.0	10620	40243	113.6

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INT White

FLOODLIGHT LUMINAIRE

DELIVERED LUMENS

SECTION LENGTH: 4ft

LED COUNT: 48L

Drive Current (mA)	Nominal Lumen Package	Nominal Watts	Beam Spread		Lens Option	Beam Angles (H x V)	NEMA Type	3K7			4K7			5K7		
								Lumens	Max Candela	LPW	Lumens	Max Candela	LPW	Lumens	Max Candela	LPW
350	6,000	55	N	Narrow	Clear	17° H x 17°V	3H x 3V	6642	52687	123.1	6983	55392	129.4	7128	56543	132.1
			NM	Narrow Medium	Clear	30°H x 30°V	4H x 4V	6668	21488	123.6	7011	22594	129.9	7156	23061	132.6
			MF	Medium Flood	Clear	63°H x 63°V	5H x 5V	6454	6986	119.6	6786	7345	125.8	6927	7497	128.4
			WF	Wide Flood	Clear	80°H x 80°V	6H x 6V	6787	5152	125.8	7135	5416	132.2	7284	5530	135.0
					Diffused	77°H x 77°V	7H x 6V	5609	3303	103.9	5897	3473	109.3	6020	3545	111.6
			HF	Horizontal Flood	Clear	54°H x 22°V	5H x 5V	6124	10652	113.5	6439	11200	119.3	6573	11385	121.8
			WG	Wall Graze	Clear	52° H x 12 °V	5H x 3V	6772	23382	125.5	7120	24584	132.0	7268	25095	134.7
			WW	Wall Wash	Clear	30°H x 20°V	4H x 3V	6275	23778	116.3	6597	24998	122.3	6734	25517	124.8
500	8,000	80	N	Narrow	Clear	17° H x 17°V	3H x 3V	9217	73114	117.3	9690	76865	123.3	9892	78468	125.8
			NM	Narrow Medium	Clear	30°H x 30°V	4H x 4V	9253	29818	117.7	9728	31349	123.8	9931	32003	126.3
			MF	Medium Flood	Clear	63°H x 63°V	5H x 5V	8956	9693	113.9	9416	10191	119.8	9612	10403	122.3
			WF	Wide Flood	Clear	80°H x 80°V	6H x 6V	9418	7149	119.8	9901	7516	126.0	10107	7672	128.6
					Diffused	77°H x 77°V	7H x 6V	7783	4583	99.0	8183	4819	104.1	8353	4919	106.3
			HF	Horizontal Flood	Clear	54°H x 22°V	5H x 5V	8499	14783	108.1	8935	15541	113.7	9121	15864	116.0
			WG	Wall Graze	Clear	52° H x 12 °V	5H x 3V	9398	32450	119.6	9880	34115	125.7	10086	34825	128.3
			WW	Wall Wash	Clear	30°H x 20°V	4H x 3V	8707	32994	110.8	9154	34688	116.5	9344	35408	118.9
800	12,000	125	N	Narrow	Clear	17° H x 17°V	3H x 3V	13627	108096	110.5	14327	113648	116.1	14625	116012	118.6
			NM	Narrow Medium	Clear	30°H x 30°V	4H x 4V	13680	44085	110.9	14383	46350	116.6	14682	47314	119.0
			MF	Medium Flood	Clear	63°H x 63°V	5H x 5V	13241	14331	107.3	13921	15068	112.9	14211	15381	115.2
			WF	Wide Flood	Clear	80°H x 80°V	6H x 6V	14127	10724	114.5	14853	11275	120.4	15162	11510	122.6
					Diffused	77°H x 77°V	7H x 6V	11676	6876	94.7	12276	7230	99.5	12531	7380	101.8
			HF	Horizontal Flood	Clear	54°H x 22°V	5H x 5V	12565	21855	101.9	13210	22977	107.1	13485	23456	109.4
			WG	Wall Graze	Clear	52° H x 12 °V	5H x 3V	13894	47974	112.6	14608	50439	118.4	14911	51486	120.9
			WW	Wall Wash	Clear	30°H x 20°V	4H x 3V	12873	48781	104.4	13534	51285	109.7	13815	52350	112.0

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INT White

FLOODLIGHT LUMINAIRE

PHOTOMETRY

INT-4-48L-125-4K7-N

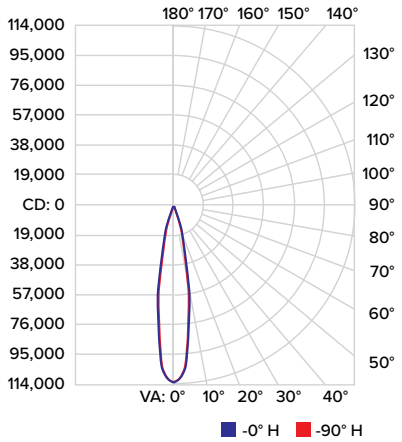
LUMINAIRE DATA

Description	**4000K, 70CRI**
Delivered Lumens	**14327**
Watts	**123.35**
Efficacy	**116.15**
Beam Angls (HxV)	**17.6° x 18°**
Center Beam Candlepower	**113,648**

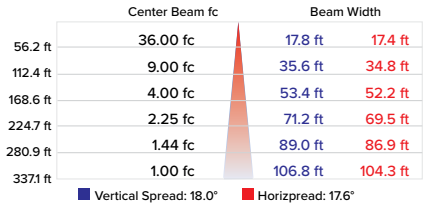
LUMENS PER ZONE

	Efficiency	Lumens	Horizontal Spread	Vertical Spread
Field (10%)	77.60%	11,111.90	33.3	33
Beam (50%)	38.40%	5,495.80	17.6	18
Total	100%	14,326.80		

ISOFOOT CANDLE PLOT



ILLUMINANCE AT A DISTANCE



INT-4-48L-125-4K7-NM

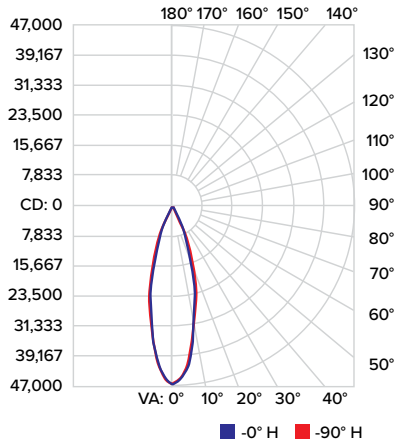
LUMINAIRE DATA

Description	**4000K, 70CRI**
Delivered Lumens	**14383**
Watts	**123.35**
Efficacy	**116.60**
Beam Angls (HxV)	**30.1° x 28.6°**
Center Beam Candlepower	**46,350**

LUMENS PER ZONE

	Efficiency	Lumens	Horizontal Spread	Vertical Spread
Field (10%)	85.50%	12,298.30	54.2	53.4
Beam (50%)	46.10%	6,627.50	30.1	28.6
Total	100%	14,383.20		

ISOFOOT CANDLE PLOT



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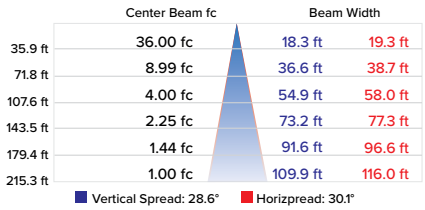

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INT White

FLOODLIGHT LUMINAIRE

PHOTOMETRY CONTINUED

INT-4-48L-125-4K7-MF

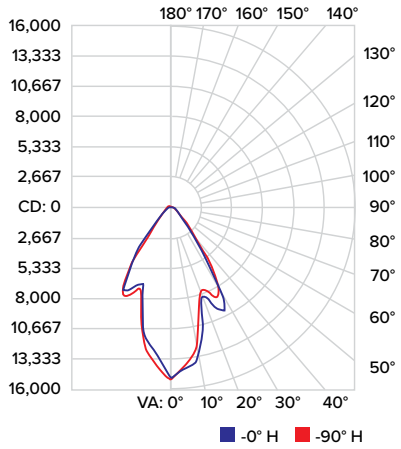
LUMINAIRE DATA

Description	**4000K, 70CRI**
Delivered Lumens	**13921**
Watts	**123.35**
Efficacy	**112.86**
Beam Angls (HxV)	**63.8° x 63.5°**
Center Beam Candlepower	**15,068**

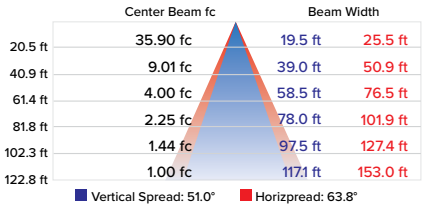
LUMENS PER ZONE

	Efficiency	Lumens	Horizontal Spread	Vertical Spread
Field (10%)	90.10%	12,541.60	90.9	92.1
Beam (50%)	65.80%	9,158.90	63.8	51
Total	100%	13,921.10		

ISOFOOT CANDLE PLOT



ILLUMINANCE AT A DISTANCE



INT-4-48L-125-4K7-WF

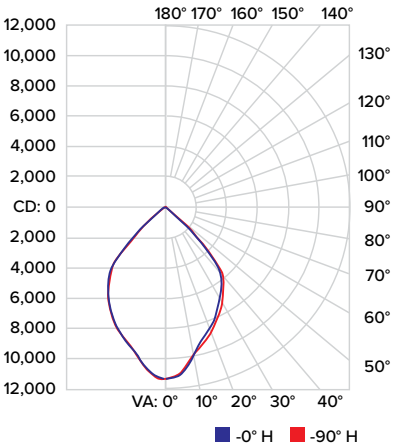
LUMINAIRE DATA

Description	**4000K, 70CRI**
Delivered Lumens	**14853**
Watts	**123.72**
Efficacy	**120.05**
Beam Angls (HxV)	**80.4° x 79.8°**
Center Beam Candlepower	**11,275**

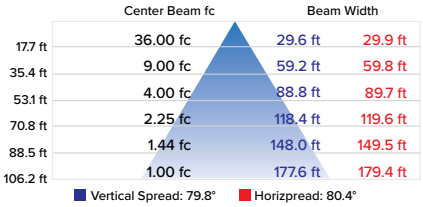
LUMENS PER ZONE

	Efficiency	Lumens	Horizontal Spread	Vertical Spread
Field (10%)	97.00%	14,415.80	104.2	100.7
Beam (50%)	77.60%	11,525.90	80.4	79.8
Total	100%	14,853.10		

ISOFOOT CANDLE PLOT



ILLUMINANCE AT A DISTANCE



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INT White

FLOODLIGHT LUMINAIRE

PHOTOMETRY CONTINUED

INT-4-48L-125-4K7-HF

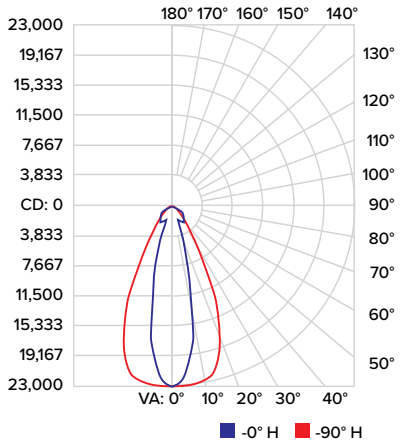
LUMINAIRE DATA

Description	**4000K, 70CRI**
Delivered Lumens	**13210**
Watts	**123.35**
Efficacy	**107.09**
Beam Angls (HxV)	**53.3° x 24.2°**
Center Beam Candlepower	**22,977**

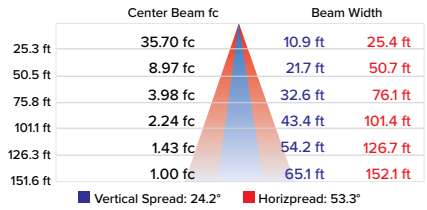
LUMENS PER ZONE

	Efficiency	Lumens	Horizontal Spread	Vertical Spread
Field (10%)	72.30%	9,564.50	86.9	47.1
Beam (50%)	39.00%	5,151.80	53.3	24.2
Total	100%	13,209.80		

ISOFOOT CANDLE PLOT



ILLUMINANCE AT A DISTANCE



INT-4-48L-125-4K7-WG

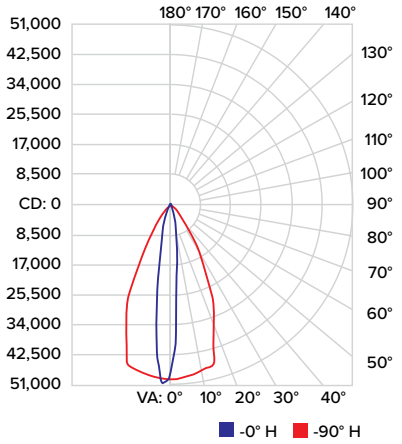
LUMINAIRE DATA

Description	**4000K, 70CRI**
Delivered Lumens	**14608**
Watts	**123.35**
Efficacy	**118.43**
Beam Angls (HxV)	**52.4° x 13.2°**
Center Beam Candlepower	**50,439**

LUMENS PER ZONE

	Efficiency	Lumens	Horizontal Spread	Vertical Spread
Field (10%)	78.10%	11,434.00	78.5	34.4
Beam (50%)	43.90%	6,424.80	52.4	13.2
Total	100%	14,608.40		

ISOFOOT CANDLE PLOT



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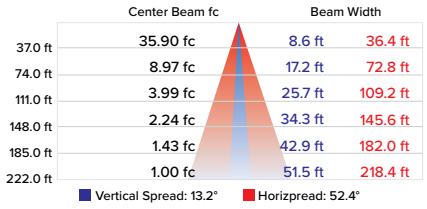


INT-4-48L-125-4K7-WW

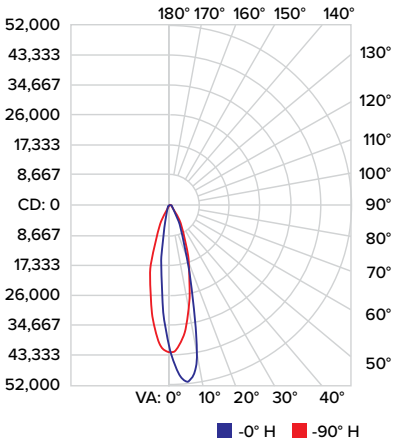
LUMINAIRE DATA

Description	**4000K, 70CRI**
Delivered Lumens	**13534**
Watts	**123.35**
Efficacy	**109.72**
Beam Angls (HxV)	**29.4° x 19.6°**
Center Beam Candlepower	**51,285**

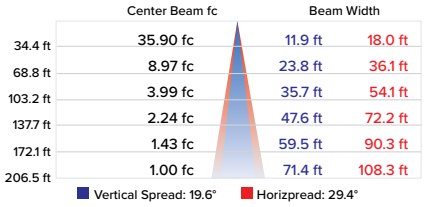
LUMENS PER ZONE

	Efficiency	Lumens	Horizontal Spread	Vertical Spread
Field (10%)	79.90%	10,831.10	59.4	44.8
Beam (50%)	36.60%	4,956.70	29.4	19.6
Total	100%	13,534.60		

ISOFOOT CANDLE PLOT



ILLUMINANCE AT A DISTANCE



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KIM LIGHTING®

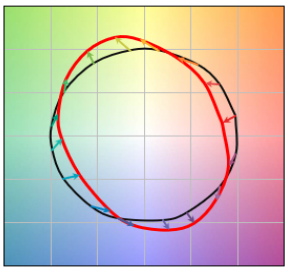
DATE:	LOCATION:
TYPE:	PROJECT:
CATALOG #:	

INT White

FLOODLIGHT LUMINAIRE

TM-30 DATA

COLOR VECTOR GRAPHIC

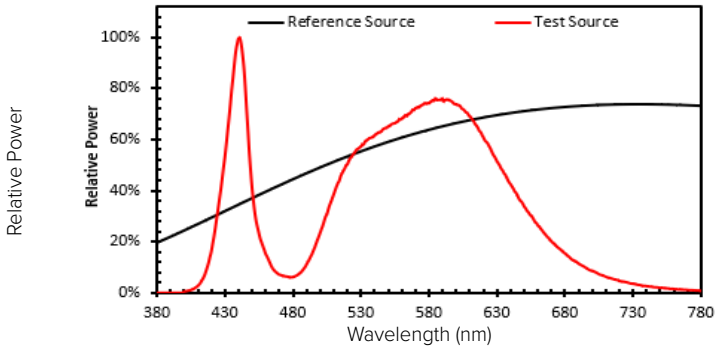


Reference Illuminant — Test Source

TEST SOURCE

R_f	68
R_g	99
CCT(K)	3947
D_{UV}	0.0004
x	0.3831
y	0.3793
CIE R_a	72

SPECTRAL POWER DISTRIBUTION COMPARISON



ELECTRICAL DATA

Size	Current	System Watts	Line Voltage		Amps AC						Min Power Factor	Max. THD (%)	Dimming				
			VAC	HZ	120	208	240	277	347	480			Dimming Range	Source Current Out		Absolute Voltage	
														Min	Max	Min	Max
2 ft	350 mA	28.6	120-480	50/60	0.24	0.14	0.12	0.10	0.08	0.06	>0.9	20	10% to 100%	0mA	1mA	0V	10V
	500 mA	39.9			0.33	0.19	0.17	0.14	0.11	0.08							
	800 mA	62.3			0.52	0.30	0.26	0.22	0.18	0.13							
3 ft	350 mA	42.0	120-480	50/60	0.35	0.20	0.18	0.15	0.12	0.09	>0.9	20	10% to 100%	0mA	1mA	0V	10V
	500 mA	59.5			0.50	0.29	0.25	0.21	0.17	0.12							
	800 mA	93.7			0.78	0.45	0.39	0.34	0.27	0.20							
4 ft	350 mA	54.0	120-480	50/60	0.45	0.26	0.22	0.19	0.16	0.11	>0.9	20	10% to 100%	0mA	1mA	0V	10V
	500 mA	78.6			0.66	0.38	0.33	0.28	0.23	0.16							
	800 mA	123.4			1.03	0.59	0.51	0.45	0.36	0.26							

POWER LOAD MATRIX (10A MAX AMPERAGE)

Verion	Size (ft)	Driver Wattage (W)	Driver Qty	Primary Voltage (V)	Programmed Current (mA)	Power Factor	%ATHD	Load (A)	System Power (W)	Max Mated Units	Total Feet
Static White	2	30	1	120	350	0.99	6.5	0.249	28.6	40	80
		40	1	120	500	0.98	5.2	0.365	39.9	27	54
		60	1	120	800	0.99	3.1	0.555	62.3	18	36
	3	40	1	120	350	0.98	4.5	0.37	42.0	27	81
		60	1	120	500	0.99	3.29	0.511	59.5	19	57
		95	1	120	800	0.99	2.9	0.818	93.7	12	36
	4	55	1	120	350	0.99	6.5	0.474	54.0	21	84
		80	1	120	500	0.99	52	0.669	78.6	14	56
		125	1	120	800	0.99	3.2	1.09	123.4	9	36

CRI LUMEN MULTIPLIER	
CCT	80 CRI
3000K	0.9119
4000K	0.8941
5000K	0.8625

TM-21 LIFETIME CALCULATION- PROJECTED LUMEN MAINTENANCE (25°C / 77°F)						
AMBIENT TEMP.	0	25,000	36,000	50,000	100,000	Reported L70
25°c / 77°F	100%	97.6%	96.3%	94.8%	89.3%	>60,000 hrs

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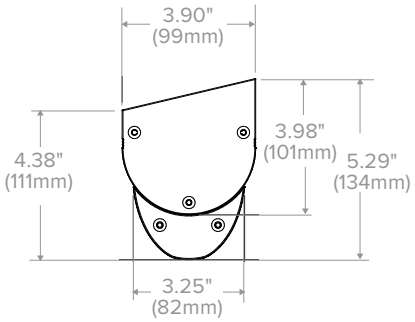
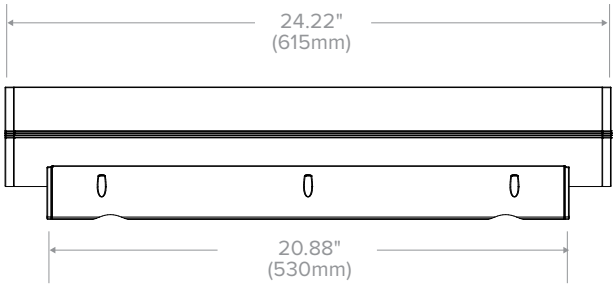
INT White

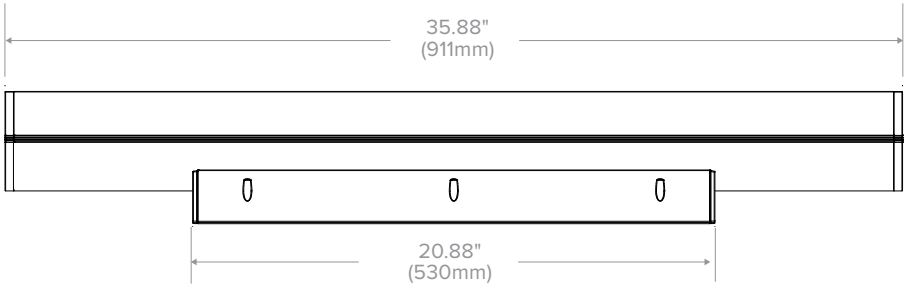
FLOODLIGHT LUMINAIRE

DIMENSIONS

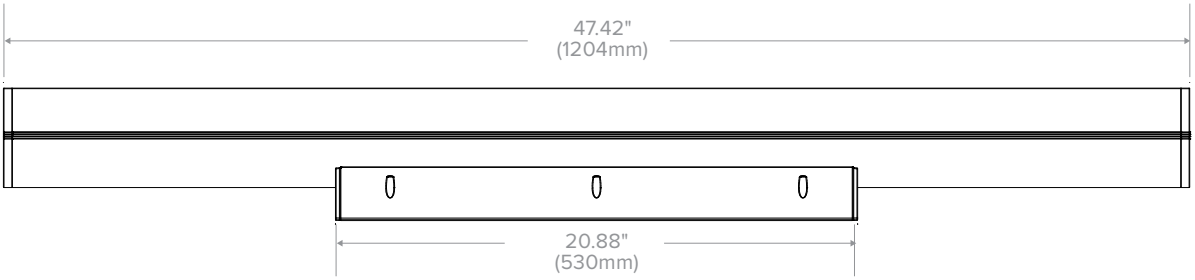




2 FT Fixture



3 FT Fixture



4 FT Fixture

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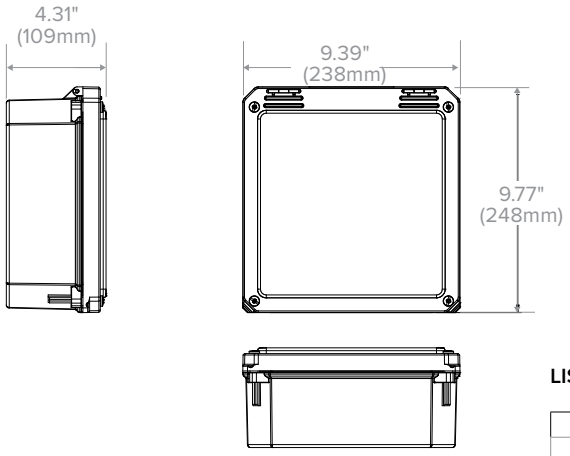
INT White

FLOODLIGHT LUMINAIRE

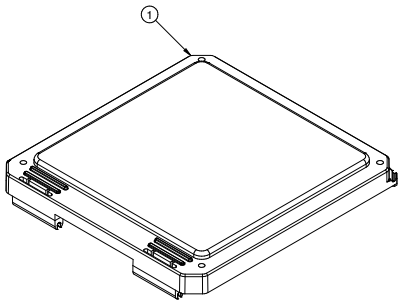
ADDITIONAL INFORMATION CONTINUED

NX BOX



LIST COMPONENTS AND WIRING DIAGRAM

		Description	Quantity	
1	HW-80804CHSC	N4X Screw Cover 8x8x4 FGL-OPAQ	1	
2	93111068	PLT Remote NX	1	
3	SC	NX Module	1	Table 2
4*	NXCBL-0-6	NXCBL-O-6	1	
5	93074109	Terminal Block 3PT, WAGO CE	2	
6	93054384	SRGPRTR-LITTELFUSE 120-277V	1	
7	0874070B	CONN WAGO 2-WIRE 221-412	2	
8*	A74106	Wire Terminal	3	
9*	80105-6E	Wire #18 AWM (150c) WHT	1	
10	93005881	SCR 4-40X1.o PHH SS	4	
11	A84135	SCR-8-32X5/16 PHH PHMS SS	9	
12	88348	#10 Ring Terminal	3	
13	NXFM-1R2D-O-UNV	NXFM-1R2D-O-UNV	1	
14*	80106-6E	Wire #18 AWM (150c) Green	2	



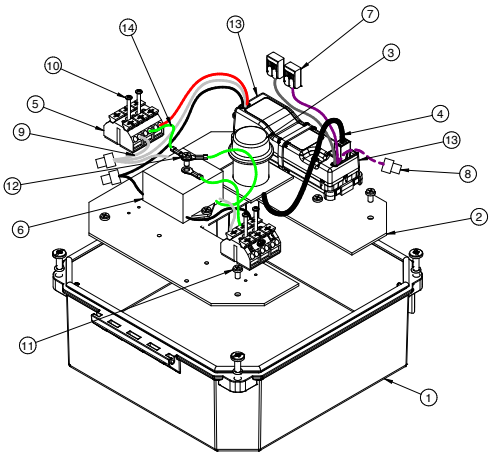
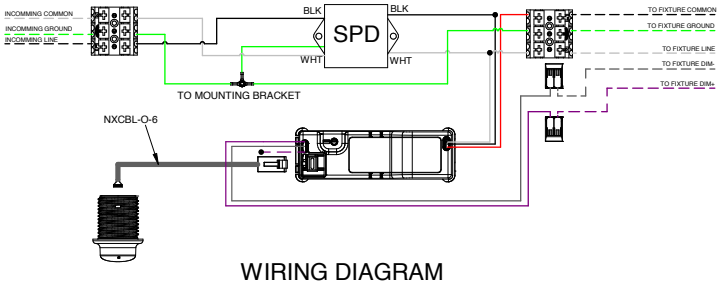
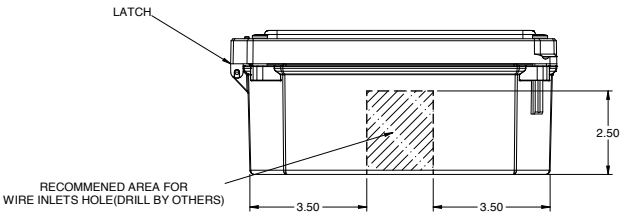


Table 2 Item #3 P/N	
Option	#3
NXWE-RME	NXRM-H
NXS-RME	NXSMP-LMI



WIRING DIAGRAM



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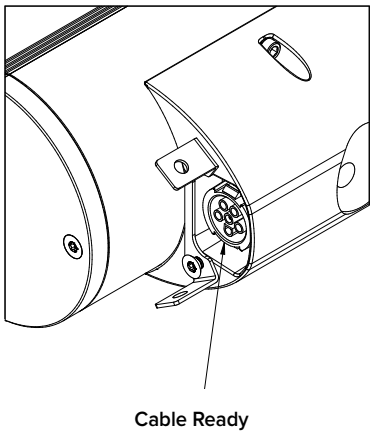
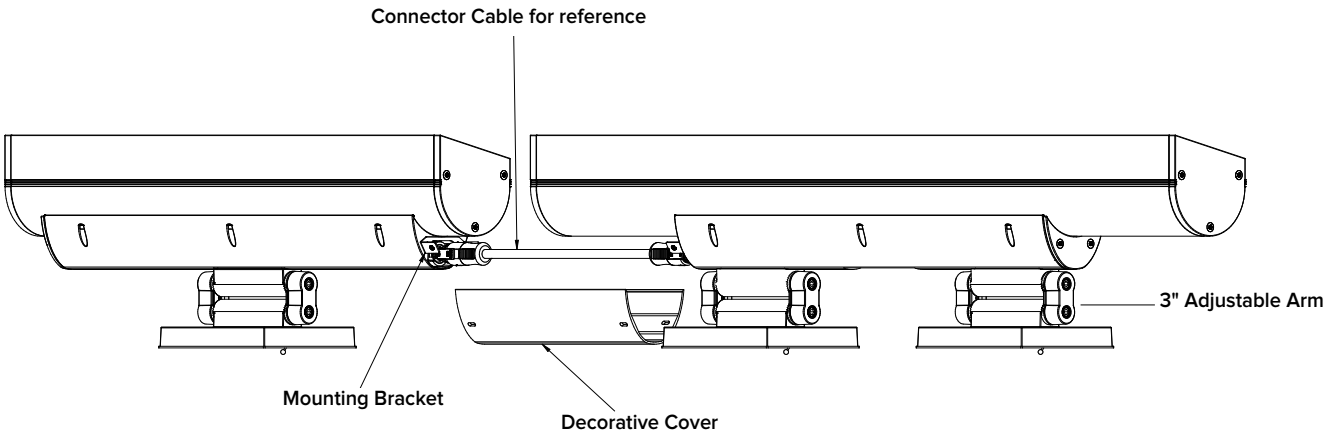
INT White

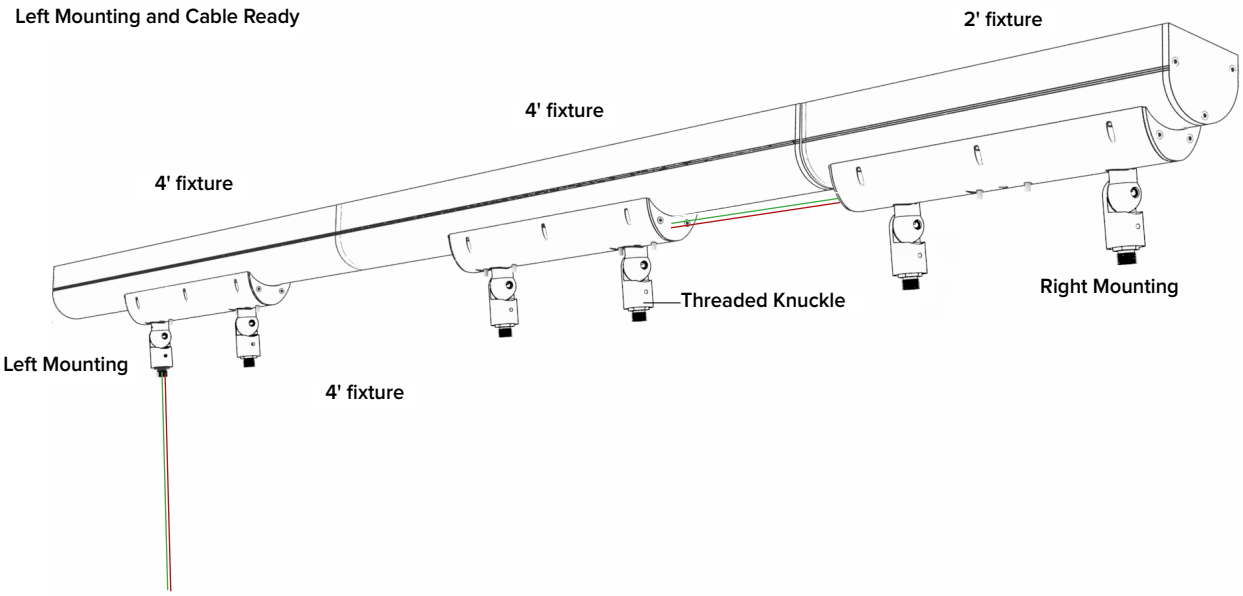
FLOODLIGHT LUMINAIRE

MOUNTING

- **Cable Ready**
  Wiring can be mounted through a cable on the side of the driver compartment. If this option is chosen, fixture will automatically come cable ready on both sides of the fixture.







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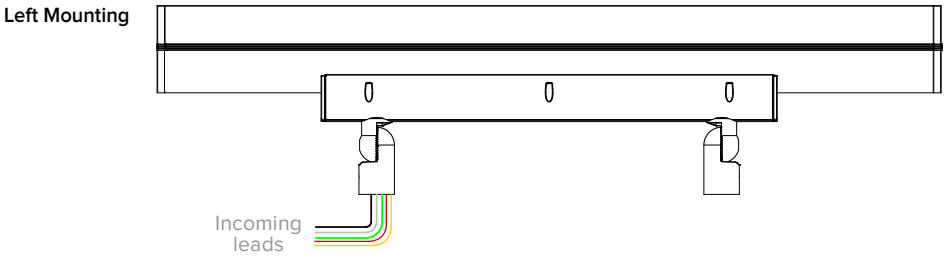
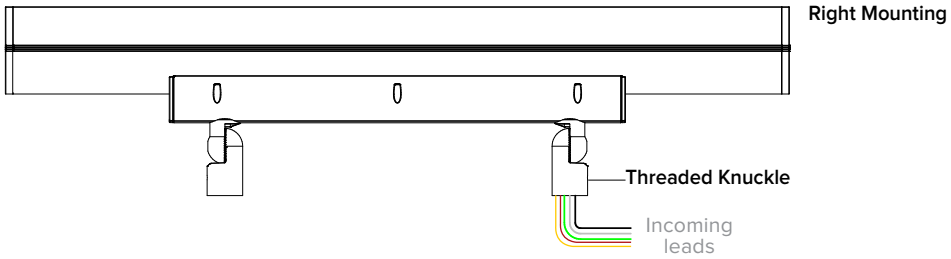
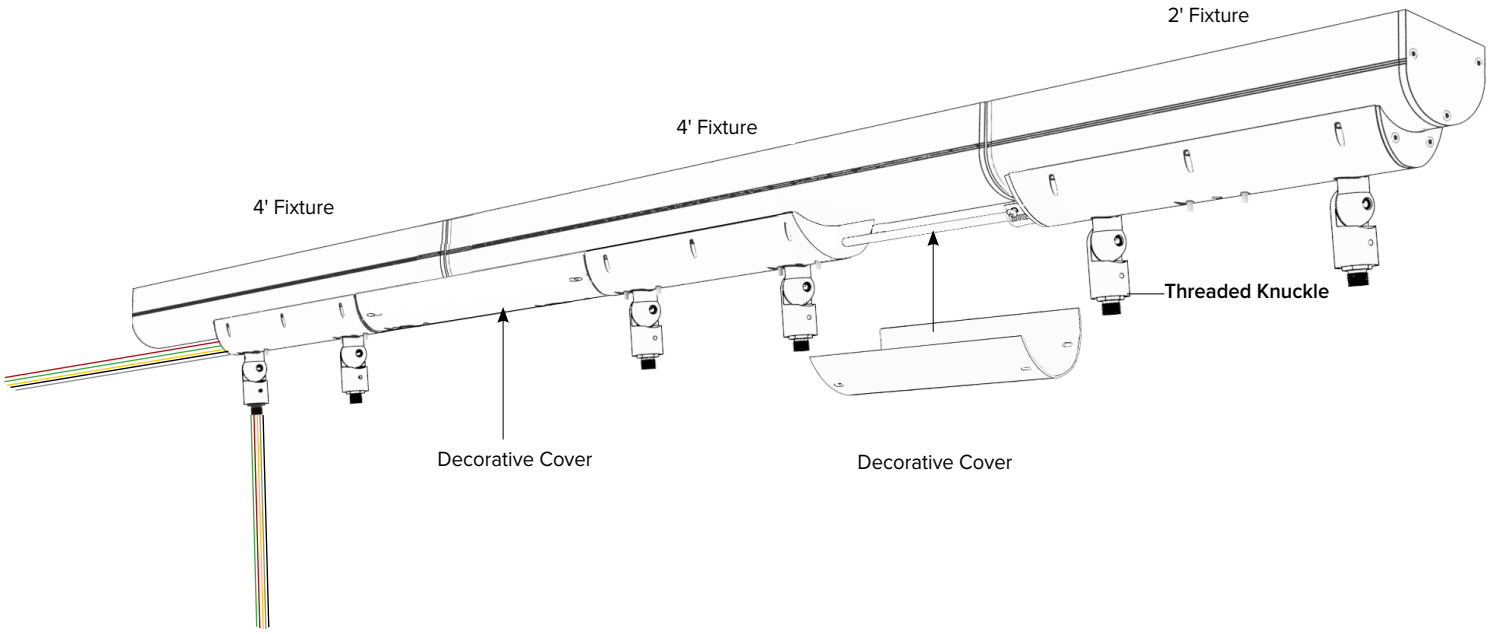
FLOODLIGHT LUMINAIRE

MOUNTING CONT'D

- **Left Mounting and Cable Ready**
  Both above wiring configurations can be combined to create to configuration shown here.







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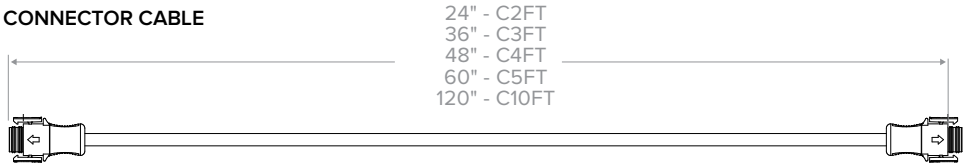
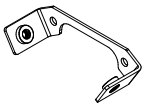
FLOODLIGHT LUMINAIRE

MOUNTING CONT'D

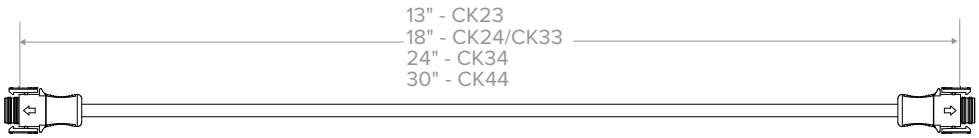
CONNECTOR CABLE



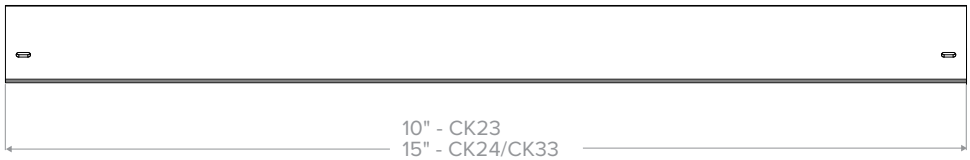
CONNECTOR KITS



Bracket x2



Cable x1



Cover x1

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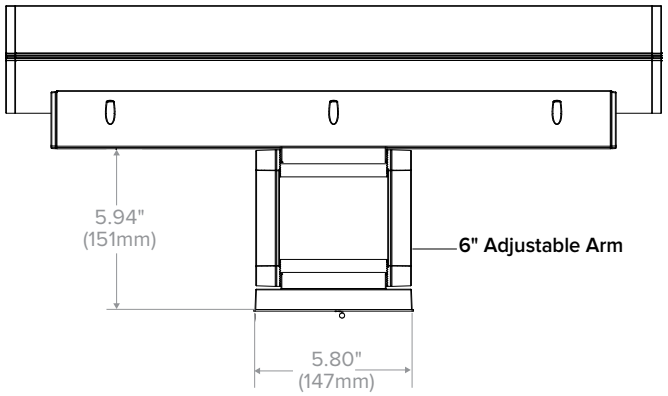
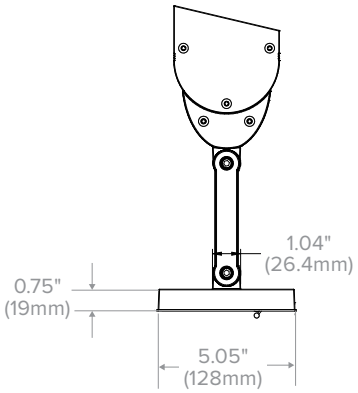
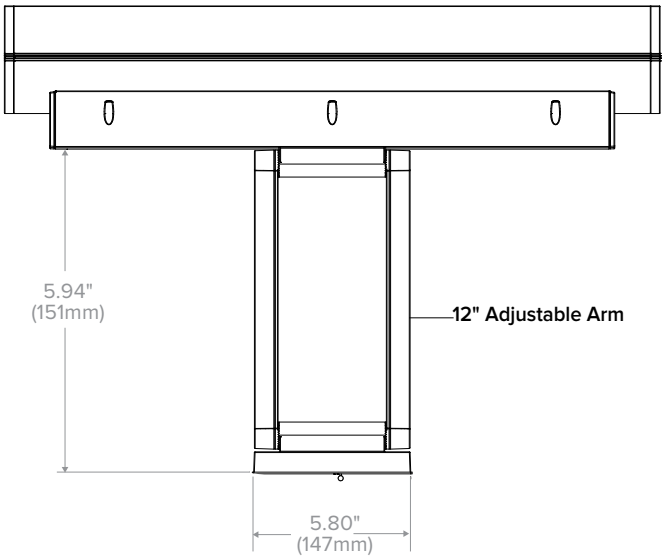
FLOODLIGHT LUMINAIRE

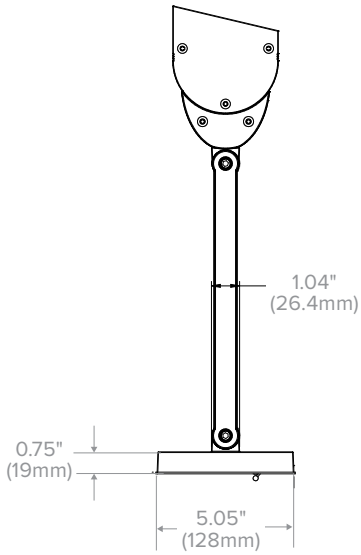
MOUNTING CONT'D

MOUNTING OPTIONS - 2 FT









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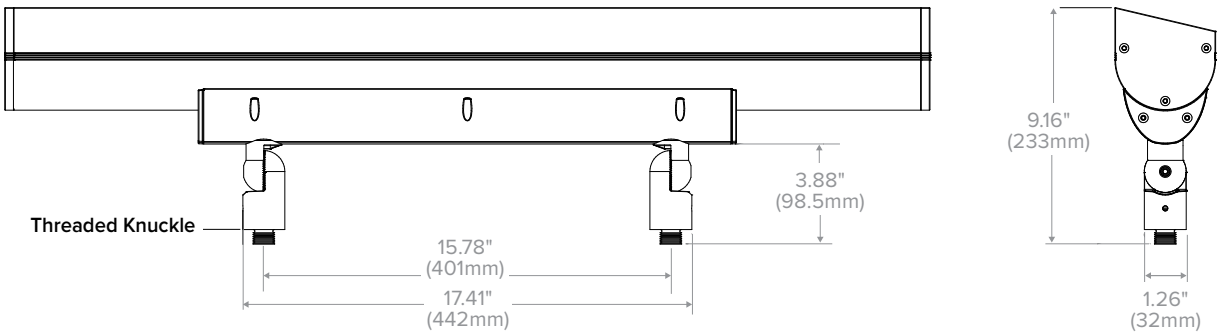
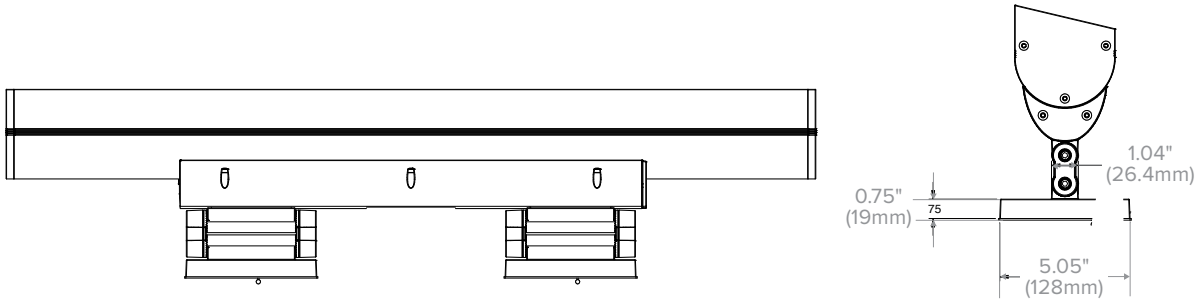
FLOODLIGHT LUMINAIRE

MOUNTING CONT'D

MOUNTING OPTIONS - 3 FT





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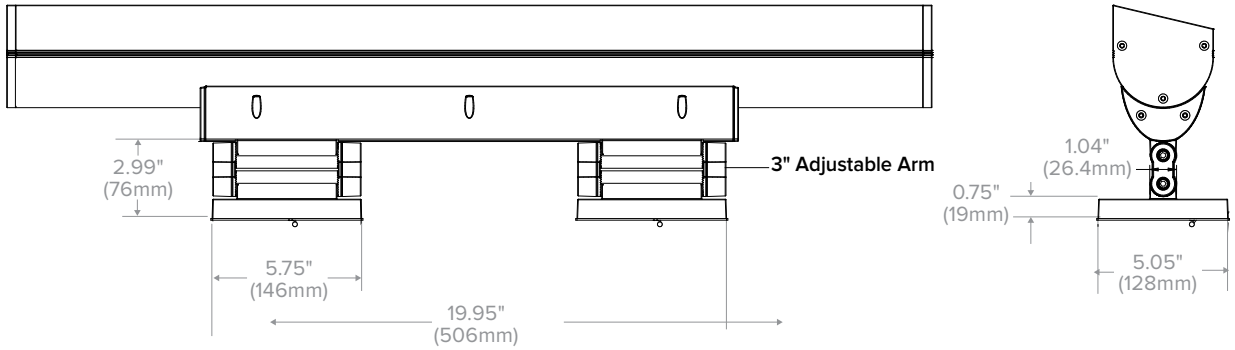
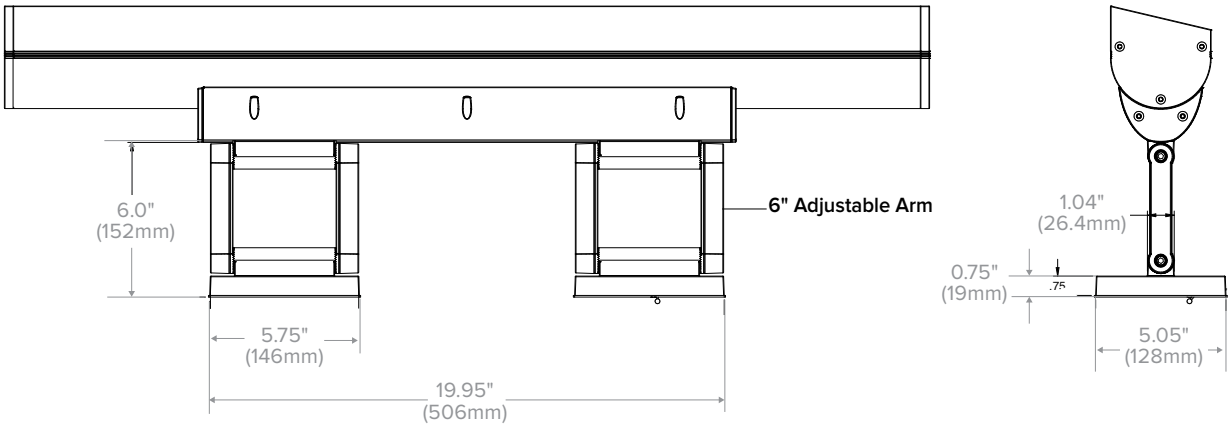
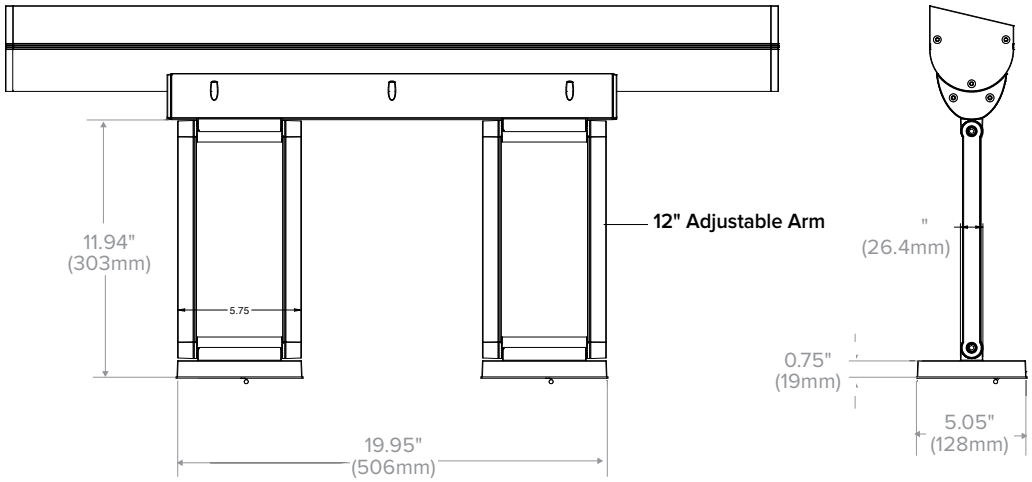
FLOODLIGHT LUMINAIRE

MOUNTING CONT'D

MOUNTING OPTIONS - 4 FT







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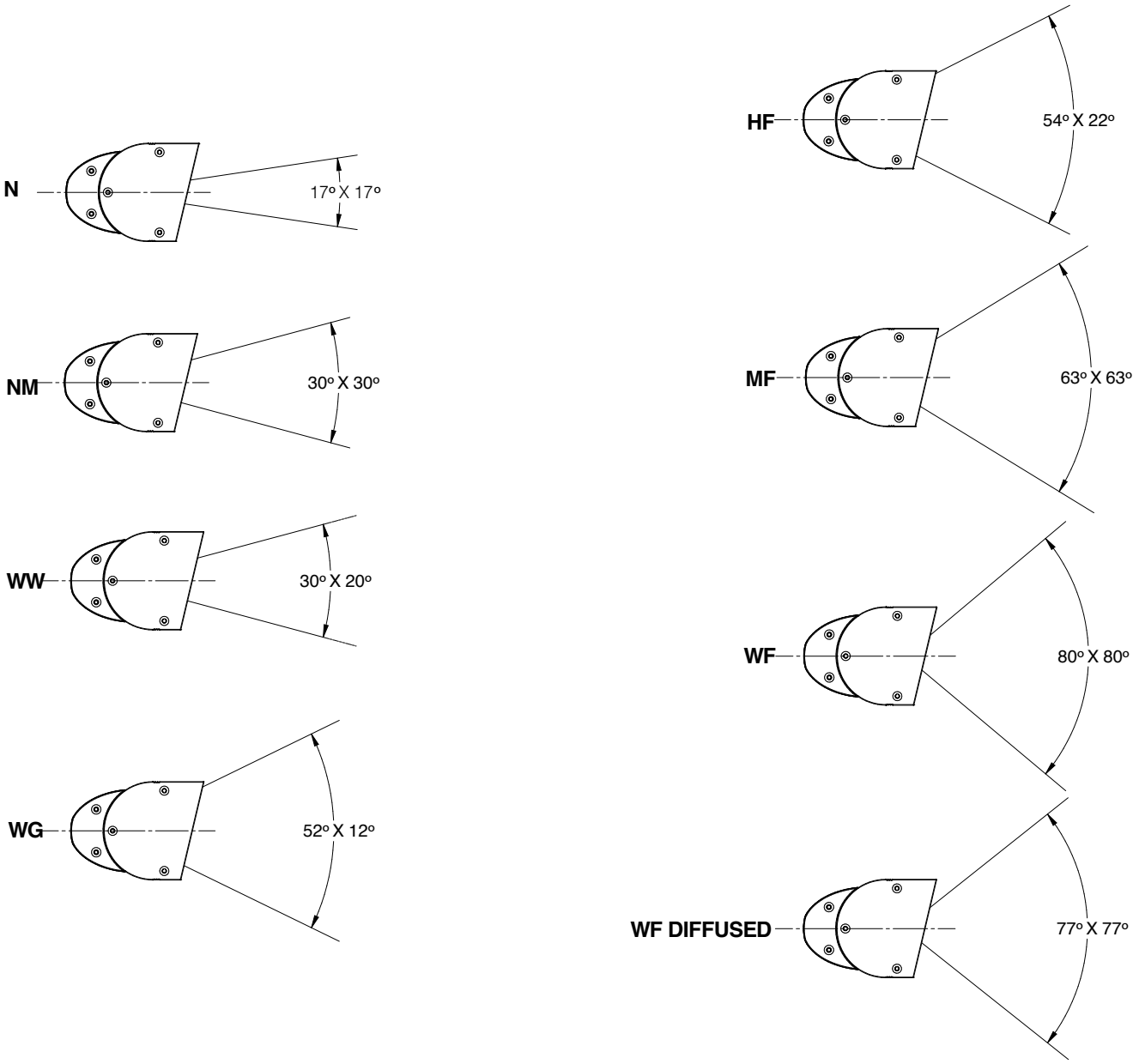
FLOODLIGHT LUMINAIRE

AIMING

BEAM SPREAD



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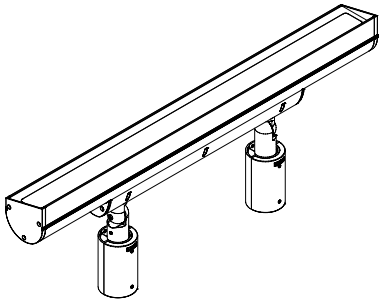
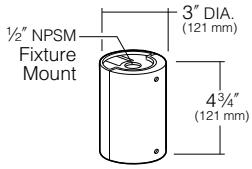
FLOODLIGHT LUMINAIRE

MOUNTING ACCESSORIES

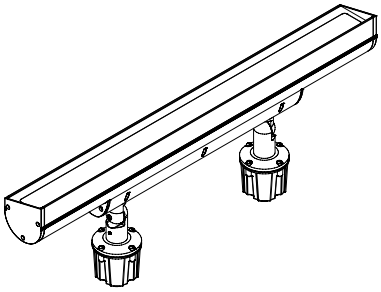


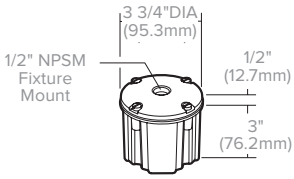


Cat. No. JB1

ARCHITECTURAL JUNCTION BOX

- Die-cast aluminum with 1⁄2" NPSM fixture mount. Internal set screw provided for locking position. Two 1⁄2" NPSM in bottom, 17 cu in. internal volume.
- Specify finish: BL - Black, DB - Dark Bronze, GT - Graphite
  Example: JB1/GT
- Used with 120V & HID: Micro-Flood, Scarab, Spun Copper Bullet, Sign/Wall Lighter, Ravenna, Bell Stem, Traditional, Traditional Floral, Path Pilot

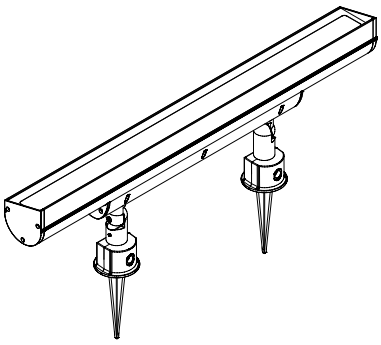


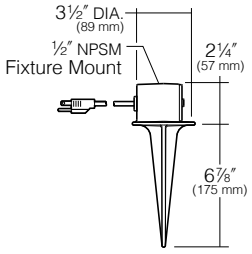


Cat. No. JBR

BRASS IN-GRADE ARCHITECTURAL JUNCTION BOX (THREADED KNUCKLE MOUNT ONLY)

- JBR-2 (2) 1/2" NPT in bottom JBR-3 (2) 3/4" NPT in bottom JBR-21 (2) 1/2" NPT in sides, (2) 1/2" NPT in bottom JBR-24 (4) 1/2" NPT in sides, (4) 1/2" NPT in bottom
- Die-cast brass with 1/2" NPSM fixture mount and die-cast cover. Internal set screw provided for locking position. 21 cu in. Internal volume. NOTE: All side taps provided with plugs.
- Creates a flush-mounted appearance.
- May be cast in concrete for increased stability.
- CAUTION: Fixture stem and swivel must not contact soil or standing water. Provide drainage away from junction box.

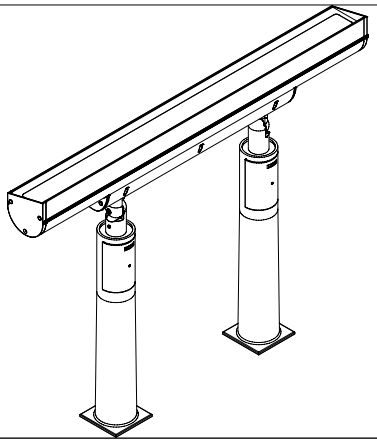


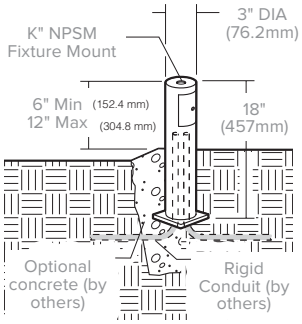


Cat. No. J-25N

PORTABLE SPEAR MOUNT

- Cast iron with 1⁄2" NPSM fixture mount. Hot dip galvanized finish. 5.5 cu in. splice compartment. (SJTW-A) 3 wire cord and plug. Supplied with (3) wire nuts and (3) mastic seals for waterproofing connections. 9' cord length
- Used with 120V: Micro-Flood, Scarab, Spun Copper Bullet, Sign/Wall Lighter, Ravenna, Bell Stem, Traditional, Traditional Floral, Path Pilot4L





Cat. No. SM18

STANCHION MOUNT (THREADED KNUCKLE MOUNT ONLY)

- 3" O.D. by .188" wall cast low copper (<0.6% Cu) aluminum with 1/2" NPSM fixture mount and hand hole with flush cover. Internal set screw fixture lock accessible through hand hole. Internal ground lug supplied with installed lead.
- CAUTION: To assure a rigid installation, stanchion must be set in concrete (by others).

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December 22, 2023

Mr. Tristan Donovan
Jacobs
Senior Stuctural Engineer
120 St. James Aveue, 5th Floor
Boston, MA 02116

Email: Tristan.donovan@jacobs.com

SUBJECT: Maine Port Authority IMT PIDP
Environmental Sound Study

Dear Mr. Donovan,

As requested, Cavanaugh Tocci has completed a study of environmental sound produced the proposed reefer rack facility located along W Commercial Street just south of the Casco Bay Bridge in Portland, ME. This report discusses applicable noise regulations and presents our sound impact assessment. Appendix A presents a glossary of acoustical terminology used in this report.

Baseline Sound Survey

Sound is a feature of all environments. Sound is only objectionable when it is inconsistent with its environment; by being either too loud or by being distinctive in character (i.e. tonally or temporally varying). The goal of acoustical design is to render facility noise consistent with the level and character of other sounds in the environment. To this end, the following environmental noise analysis evaluates sound produced by the proposed rooftop mechanical equipment in light of existing environmental sound levels.

An environmental sound survey was conducted to quantify and characterize the existing acoustic environment in the vicinity of the project site. In order to document typical background sound levels in the project area, the sound monitoring program consisted of continuous sound monitoring for a 7-day period (Friday October 20, 2023 to Friday October 27, 2023). The results of the survey allow both quantitative and qualitative analyses of the acoustic environment surrounding the Project. For this survey the sound monitor was located near the residences along York Street, as shown in Figure 1.

Figure 2 presents the results of the environmental sound survey. The acoustic environment in this area is dominated by traffic noise produced by vehicles on the Casco Bay ridge, local roads and other indigenous sounds in the area. The measured hourly ambient L90 levels ranged between 45 and 60 dBA. The best conservative estimate of the existing ambient sound is the average of the lowest hourly L90 from each of the six full days of measurements, which is 46 dBA.

Noise Criteria and Acoustic Design Goal

The Portland City Code[1] contains regulations that are pertinent with respect to sound produced by the proposed Project. The Project is zoned Waterfront Port Development Zone (WPDZ) according to the Portland Zoning Map[2]. Section 10.4.8 of the City Land Use Code sets performance standards for the WPDZ zone, including the limits on noise listed below.

> **10.4.8 Performance standards**
>
> Proposals in the Waterfront Port Development Zone that qualify for site plan review shall submit, in addition to site plan submission requirements (if applicable), an impact mitigation narrative summarizing how the project meets the applicable performance standards. All uses in the Waterfront Port Development Zone shall comply with the following standards:
>
> B. Noise.
>
> 1. The level of sound, measured by a sound level meter with frequency weighting network (manufactured according to standards prescribed by the American National Standards Institute, Inc.), inherently and recurrently generated within the Waterfront Port Development Zone between the hours of 7:00 p.m. and 7:00 a.m. from industrial facilities or operation commenced on or after July 1, 1988, shall not exceed 55 decibels on the A scale at or within the boundaries of any residential zone, except for sound from construction activities, sound from traffic on public streets, sound from temporary activities such as festivals, and sound created as a result of, or relating to, an emergency, including sound from emergency warning signal devices.
>
> 2. In measuring sound levels under this subsection, sounds with a continuous duration of less than 60 seconds shall be measured by the maximum reading on a sound level meter set to the A weighted scale and the fast meter response (L maxfast). Sounds with a continuous duration of 60 seconds or more shall be measured on the basis of the energy average sound level over a period of 60 seconds (LEQ1).
>
> 3. In addition to the sound level standards otherwise established, facilities or operations established or built in the Waterfront Port Development Zone on or after July 1, 1988, shall employ best practicable sound abatement techniques to prevent tonal sounds and impulse sounds or, if such tonal and impulse sounds cannot be prevented, to minimize the impact of such sounds in residential zones. Tonal sound is defined as a sound wave usually perceived as a hum or which because its instantaneous sound pressure varies essentially as a simple sinusoidal function of time. Impulse sounds are defined as sound events characterized by brief excursions of sound pressure, each with a duration of less than one second.

Sound from the proposed Project, which will operate 24 hours a day, 7 days a week, is limited to 55 dBA during the hours from 7:00 PM to 7:00 AM.

[1] https://www.portlandmaine.gov/734/City-Code
[2] https://portlandme.maps.arcgis.com/home/index.html

Facility Description

The proposed reefer rack facility will be located just south of the Casco Bay Bridge along W Commercial Street. Twelve racks are proposed with each rack having the capacity to store up to 35 containers: 7 wide by 5 tall, for a total capacity of 420 containers. The Project will be structured with the following operational restrictions:

- Daytime Operations – 7:00 AM to 7:00 PM
  - No operational restrictions for reefer containers
  - Analysis based on a total of 420 reefer containers operating at 70% capacity
- Nighttime Operations – 7:00 PM to 7:00 AM
  - An automated system will be implemented to limit the number of operating reefer containers to 60 total containers

Project Sound Analysis

Facility related sound impacts that are associated with equipment at the proposed Project have been calculated using CadnaA environmental sound modeling software (Version 2023 MR2 DataKustic GmbH). The CadnaA sound modeling software uses algorithms and procedures described in International Standard ISO 9613-2:1996 "Acoustics- Attenuation of sound during propagation outdoors – Part 2: General method of calculation". This standard and its associated methodology are the most universally accepted approach for environmental sound modeling of industrial and transit sound sources. The methodology described in this standard provides estimates of A-weighted and octave band sound levels for meteorological conditions that are favorable for the propagation of sound (downwind with a wind speed of 1-5 meters/sec). This methodology is also valid for sound propagation under well-developed moderate ground-based temperature profile inversions, which commonly occur on clear calm nights.

The analysis is based on source sound emission data derived from reefer container measurements performed at the Maine Port Authority in October 2023. The computer model has been calibrated based on a set of reefer containers operating under normal operating conditions. Results are presented for daytime and nighttime operations as described in the previous section.

Figure 3 presents the results of daytime operation (full capacity) sound sources acoustic modeling at the nearest residential receptors (R1-R10) and Figure 4 presents the results of nighttime operation (60 reefer containers operating). Table 1 provides a summary of the results along with appropriate limits from the City of Portland noise ordinance.

Table 1 – Estimate of Facility Sound Levels (dBA) for Daytime and Nighttime Operations

Receptor Location	City of Portland WPDZ Limit	Estimated Sound Level (dBA)	
		Daytime Operation	Nighttime Operation
R1	Daytime – No Limit Nighttime – 55 dBA	49	43
R2		54	47
R3		58	51
R4		59	53
R5		62	55
R6		59	53
R7		57	51
R8		56	49
R9		51	45
R10		50	44

Conclusion

Based on our review, it is our opinion that sound produced by proposed by reefer containers associated with the Maine Port Authority IMT PIDP project along W Commercial Street in Portland ME will comply with the Portland City Code limits on sound. Furthermore, sound emitted by the project will not produce a noticeable impact on the acoustic environment and will not have an unreasonable adverse effect at any surrounding properties.

Please do not hesitate to contact us with any questions.

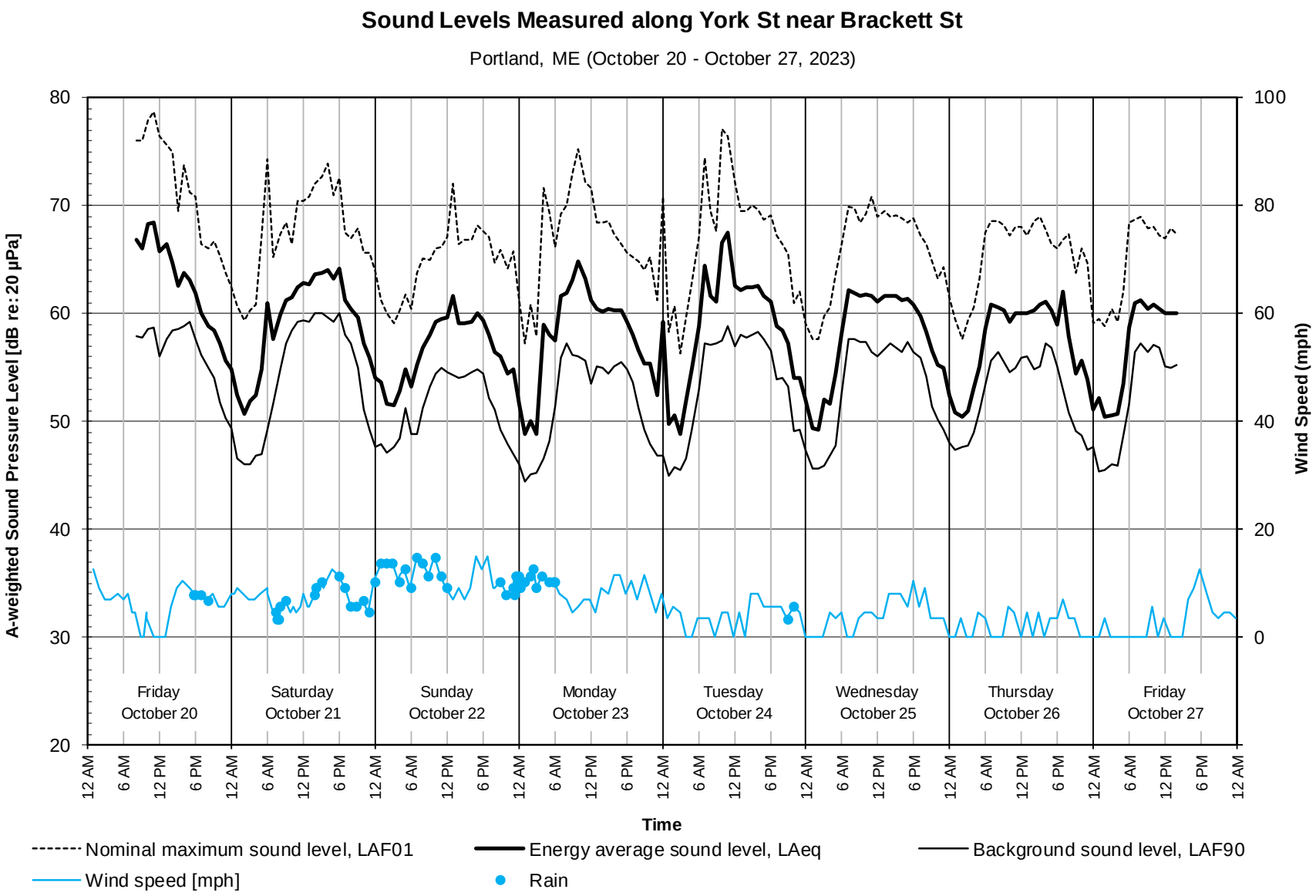
Sincerely,
CAVANAUGH TOCCI

Aaron M. Farbo, *Associate Principal Consultant*
afarbo@cavtocci.com
23249/Maine Port Authority IMT PIDP Environmental Sound Study Report 1c.docx

FIGURES

Aerial Photograph Indicating Sound Monitoring Location and Project Site

Figure 1



S15

Figure 2

CAVANAUGHTOCCI

Aerial Photograph Presenting Daytime Operation (Full Capacity)
Sound Levels at Residential Receptor Locations R1-R10

Figure 3

CAVANAUGHTOCCI

Aerial Photograph Presenting Nighttime Operation (60 Reefer Containers Operating)
Sound Levels at Residential Receptor Locations R1-R10

Figure 4

CAVANAUGHTOCCI

APPENDIX A

Sound Measurement Terminology

SOUND MEASUREMENT TERMINOLOGY

In order to quantify the amplitude, frequency, and temporal characteristics of sound, various acoustical descriptors are used. The following is an introduction to acoustic terminology that is used in this report.

Sound Level

Sound levels are typically quantified using a logarithmic decibel (dB) scale. The use of a logarithmic scale helps to compress the wide range of human sensitivity to sound amplitude into a scale that ranges from approximately 0 to 180 dB. Note however, that the use of the logarithmic scale prevents simple arithmetic operations when combining the cumulative impact of sources. For example, two sources of equal sound level operated simultaneously results in a combined sound level that is only 3 dB higher than if only one source was operated alone. An important feature of the human perception of continuous sound is that an increase or decrease in sound pressure level by 3 dB or less is barely perceptible, and an increase or decrease by 10 dB is perceived as a doubling or halving of noise level.

A-weighting

Generally, the sensitivity of human hearing is restricted to the frequency range of 20 Hz to 20,000 Hz. However, the human ear is most sensitive to sound in the 500 Hz to 5,000 Hz frequency range. Above and below this range, the ear becomes progressively less sensitive. To account for this feature of human hearing, sound level meters incorporate filtering of acoustic signals that corresponds to the varying sensitivity of the human ear to sound at different frequencies. This filtering is called A-weighting. Sound level measurements that are obtained using this filtering are referred to as A-weighted sound levels and are signified by the identifier, dBA. A-weighted sound levels are widely used for evaluating human exposure to environmental sounds. To help place A-weighted sound levels in perspective, Figure A-1 contains a scale showing typical sound levels for common interior and environmental sound sources.

Spectral Characteristics – Octave and 1/3 Octave Band Sound Levels

To characterize a sound, it is often necessary to evaluate the frequency distribution of the sound energy. As mentioned before, the frequencies of most interest where human exposure is concerned range between 20 Hz and 20,000 Hz. This frequency range is commonly divided into octave bands, where an octave band is a range of frequencies. Each octave band is referred to by its center frequency and has a bandwidth of one octave (a doubling of frequency). To cover the full range of human hearing, it is necessary to measure sound in 10 separate octave bands. Typically, the lowest frequency band measured has a center frequency of 31.5 Hz. The next frequency band has a center frequency of 63 Hz. This geometric series continues to the highest frequency band that has a center frequency of 16,000 Hz. A set of octave band sound levels to describe a particular sound is called an octave band spectrum. Covering the full range of hearing, an octave band spectrum would have 10 values, one for each band. Under certain

circumstances, more frequency resolution in acoustical data is needed to identify the presence of tonal sounds. A 1/3 octave band spectrum uses filters that divide each octave band into 3 separate frequency bands. Note that octave band and 1/3 octave band sound levels are not usually A-weighted, with their units being dB.

Environmental Noise Descriptors

Sound levels in the environment are continuously fluctuating and it is difficult to quantify these time-varying levels with single number descriptors. Statistical approaches, which use *percentile sound levels* and *equivalent sound levels*, are often used to quantify the temporal characteristics of environmental sound.

Percentile sound levels (L_n) are the A-weighted sound levels that are exceeded for specific percentages of time within a noise measurement interval. For example, if a measurement interval is one hour long, the 50th percentile sound level (L_{50}) is the A-weighted sound level that is exceeded for 30 minutes of that interval.

- L_{90} is the sound level in dBA exceeded 90 percent of the time during the measurement period. The 90th percentile sound level represents the nominally lowest level reached during the monitoring interval and is typically influenced by sound of relatively low level, but nearly constant duration, such as distant traffic or continuously operating industrial equipment. The L_{90} is often used in standards to quantify the existing background or residual sound level.

- L_{50} is the median sound level: the sound level in dBA exceeded 50 percent of the time during the measurement period.

- L_{10} is the sound level exceeded only 10 percent of the time. It is close to the maximum level observed during the measurement period. The L_{10} is sometimes called the intrusive sound level because it is caused by occasional louder noises like those from passing motor vehicles or aircraft.

By using percentile sound levels, it is possible to characterize the sound environment in terms of the steady-state background sound (L_{90}) and occasional transient sound (L_{10}).

The equivalent sound level (L_{eq}) is the energy average of the A weighted sound level for the measurement interval. Sounds of low level and long duration, as well as sounds of high level and short duration influence this sound level descriptor.

Noise levels at night generally produce greater annoyance than do the same levels which occur during the day. It is generally agreed that a given level of environmental noise during the day would appear to be 10 dBA louder at night – at least in terms of potential for causing community concern. The day night average sound level (Ldn) is a 24 hour average A-weighted sound level where a 10 dB “penalty” is applied to sound occurring between the hours of 10:00 p.m. and 7:00 a.m. The 10 dB penalty accounts for the heightened sensitivity of a community to noise occurring at night.

When a steady continuous sound is measured, the L_{10}, L_{50}, L_{90} and L_{eq} are all equal. For a constant sound level, such as from a power plant operating continuously for a 24-hour period, the L_{dn} is approximately 6 dBA higher than the directly measured sound level.

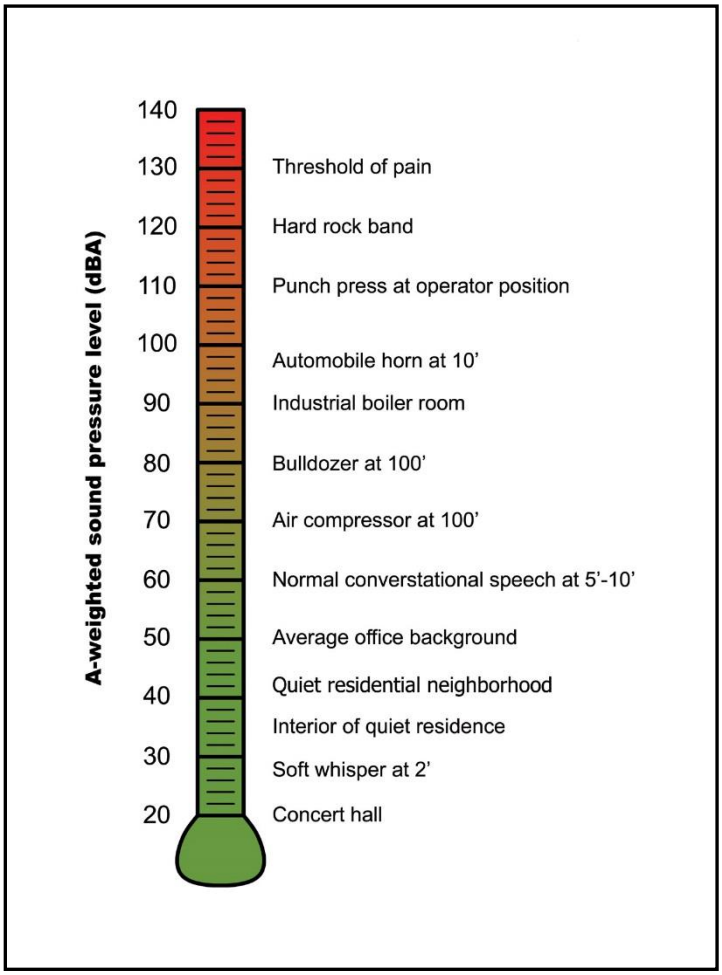


Figure A-1
Typical Sound Levels for Common Interior and Environmental Source

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EXHIBIT 24 - SITE DESIGN STANDARDS 14.6.4

14.6.4 - Site Design Standards:

H. Signage & Wayfaring

No signage is proposed as part of this project as the entirety of the project is located within the secured freight processing yard that is not accessible to the public.

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WPDZ -Impact Mitigation Narrative

(Per City of Portland Land Use Code -Section 10.4.8)

A. Outdoor Storage of Materials:

Outdoor storage of materials on the IMT site consists primarily of stacked shipping containers. The proposed reefer racks are designed to serve refrigerated shipping containers stacked up to 5 containers high. See attached email correspondence with the Zoning Administrator regarding the height of stacked containers and her interpretation of zoning provisions that apply.

B. Noise:

This project essentially addresses how refrigerated containers already accommodated on the site are stored. The project replaces refrigerated container storage areas scattered across the site into one location for better efficiency and ease of operations. No new noise generating equipment is being proposed and any noise generated by current operation of freight processing vehicles is unchanged from current conditions.

C. Vibration:

The project will not generate any perceptible vibration.

D. Federal & State Environmental Regulations:

This project does not propose any new equipment that produces emissions into the air.

E. Discharges into Harbor Areas:

Not Applicable to this project

F. Storage of Vehicles:

Not Applicable to this project

G. Landfill of Docking and Berthing Areas:

Not Applicable to this project

H. Off-street Parking:

The project does not generate any new parking demand for the site.

I. Shoreland & Flood Plain Management Regulations:

The Proposed project is located within the overall IMT site which has been previously vetted for meeting Shoreland and Flood Plain Management Regulations. Furthermore, operational activities associated with the completed project are unchanged from current operations already taking place on the site. The proposed reefer rack structures are not subject to any setbacks from the water as setbacks do not apply within the WPDZ and other issues such as erosion and sedimentation control during construction and storm water runoff management have al been described in other sections of this submission.

According to the FEMA FIRM, the site is out of the floodplain. However, we have calculated the DFE for the site as approximately 17.5' NGVD29. This takes into account the adjacent BFE from the FEMA map (11' NAVD88), approximately 4' of sea level rise, and 2' of freeboard. The electrical equipment is designed to be above this elevation, meaning 3-4' of elevation over existing grade.

J. Lighting:

The site lighting included within the scope of this project makes use of full cut off shielded light fixtures. A site photometrics plan and proposed fixture cut sheets are included in the Exterior Lighting section of this submission.

K. Signs:

No signage is proposed as part of this project.

L. Storage of Pollutants & Oily Wastes:

Not Applicable to this project

M. Compatibility of Non-marine Uses with Marine Uses:

Not Applicable to this project

N. Design:

The project proposes construction of open air, framed, scaffolding type structures that provide access platforms for workers to connect stacked refrigerated containers to power while being stored. The structures are not enclosed and their inherent nature is such that the intent of the building design standards do not apply.

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EXHIBIT 3 - EVIDENCE OF RIGHT, TITLE, & INTEREST

See attached document immediately following this page.

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EXHIBIT 9 - TECHNICAL CAPABILITY

See attached document immediately following this page.

Technical Capability

The applicant has assembled a highly qualified team of professionals in the preparation of this project. All members of this team have significant experience with waterfront port planning and terminal designs, and many have worked together on similar projects. The project is being designed by a multi-disciplinary team of design professionals led by Jacobs; one of the top engineering firm worldwide . All members of the design team have proven experience working on projects for the Maine Port Authority, the MaineDOT, and other waterfront entities along the Fore River and throughout the coast of Maine. See enclosed Project Directory for list of professionals involved with the project.

Client

Maine Department of Transportation
Maine Port Authority
16 State House Station
Augusta, Maine 04333-0016

Matthew Burns, Executive Director
matthew.burns@maineports.com

Port Operator

Soli DG
P.O. Box 2881
South Portland, Maine 04116

Michael Carter, Chief Terminal Operations Officer
(207) 200-2430
mcarter@solidg.com

Prime Consultant

Jacobs Engineering Group
120 St. James Avenue, 5th Floor
Boston, MA 02116

Craig Morin, PE, Program Manager (Structural/Marine Engineer licensed in Maine)
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Tristan Donovan, PE, Project Manager/Discipline Lead (Structural)
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Alistair Hart, PE, Discipline Lead (Port Planning)
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Brian Montejunas, PE, Discipline Lead (Site/Civil)
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Sam Nauss, PE, Discipline Lead (Geotechnical Design)
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Craig Wood, Discipline Lead (State & Federal Permitting)
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Samuel Glidden, PLS (Survey)
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Swiftcurrent Engineering Services
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Tim Matthews, PE (Electrical)
(207) 947-9280
tim@swiftcurrenteng.com

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EXHIBIT 8 - FINANCIAL CAPABILITY

See attached document immediately following this page.

Financial Capability

The Maine Port Authority along with the MaineDOT has the financial capability to perform this project. The project will be fully funded through a combination of state and federal funds as follows:

- ***MaineDOT, Capital Work Plan budgeted funding.***
- ***Port Infrastructure Development Program grant from the US Department of Transportation Maritime Administration. $2,000,000 received in 2020.***

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EXHIBIT 4 - EVIDENCE OF STATE OR FEDERAL APPROVALS

See attached document immediately following this page.

Evidence of State or Federal Approvals

The following table summarizes the state and federal approvals required for this project.

Law/Regulation	Citation	Regulatory Agency	Status
Site Location of Development Law	2018 General Permit	MEDEP	In Progress
Stormwater Management Law	Chapter 500	MEDEP/City of Portland	In Progress
Waste Discharge Law	Chapter 529	MEDEP/City of Portland	In Progress
Natural Resources Protection Act	Chapter 305	MEDP	In Progress
Rivers and Harbors Act/Clean Water Act	Section 10/Section 404	USACE	In Progress

Portland, Maine Yes. Life's good here.

Planning & Urban Development Department

EXHIBIT 5 - ZONING ANALYSIS TABLE

ZONING ANALYSIS Relevant Zone(s) WPDZ / Shoreland Overlay

All Projects:

	Required	Proposed
Lot Size	N/A	
Area Per Dwelling Unit	N/A	
Minimum Street Frontage	N/A	
Front Yard Minimum	N/A	
Front Yard Maximum	N/A	
Rear Yard	N/A	
Yard Right	N/A	
Yard Left	N/A	
Side Street Setback	N/A	
Step Back	N/A	
Maximum Lot Coverage	50%	29%
Minimum Lot Coverage	N/A	
Maximum Height	50'	48'
Open Space	N/A	
Maximum Impervious Area	100%	143,000 s.f.
Pavement Setback	N/A	
Floor Area Ratio	N/A	
Off Street Parking Spaces	N/A	
Loading Bays	N/A	
Other 1 Max Building Length	300'	64'
Other 2		
Other 3		

Planned Residential Unit Developments (PRUD) Requirements

	Required	Proposed
Minimum Lot Size		
Minimum Lot Area per Dwelling		
Maximum # Units per Building		
Maximum Building Length	NOT APPLICABLE	
Maximum Accessory Building Length		
Minimum Setbacks		
Minimum Building Separation		
Minimum Open Space		

Affordable Housing Density Bonuses (if applicable)

	Bonus Increase or Decrease	Maximum Allowable With Bonus	Proposed
Density			
Height			
Setback Reduction			
Recreation Space			
Maximum Accessory Building Length			
Minimum Setbacks	NOT APPLICABLE		
Minimum Building Separation			
Minimum Open Space			
Explanatory Text 1 (optional):			
Explanatory Text 2 (optional):			
Explanatory Text 3 (optional):			

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Architects

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EXHIBIT 7 - SUMMARY OF EXISTING AND/OR PROPOSED EASEMENTS OF COVENANTS

See attached document immediately following this page.

Summary of Existing and/or Proposed Easements or Covenants

All existing easements are shown on the "Boundary and Topographic Survey, International Marine Terminal" by Owen Haskell, Inc. dated October 21, 2022.

The existing 30' wide Sewer Easement to the City of Portland for the existing 24" CSO pipe will be abandoned modified and a new easement will be created to follow the relocation and upsizing of this pipe. This Modification to the easement will be coordinated with the Portland Water District and the City of Portland.

To: *Charles Tetelman, City of Portland*

From: *Tristan Donovan, PE, Jacobs*
Craig Morin, PE, Jacobs
Steve Weatherhead, Winton Scott Architects

Subject: *Response to City of Portland Comments, Major Site Plan Application*
Portland IMT West Lot Redevelopment
2 West Commercial Street

*The following are responses to City comments received on July 13th, 2023. Comments are in **bold** text and the responses are in regular text.*

General

- ***Please describe how snow storage will be handled on site or is currently handled on site.***

  Response: A drawing has been included which illustrates snow storage within the subject parcel. This illustration was also presented in 2014 during the original expansion of the terminal. Snow storage has been successfully executed by the Maine Port Authority using this approach and no changes are anticipated.

- ***Will the proposed development be creating excessive noise?***

  Response: No. See the second bullet in the Zoning section below for a full description of our response.

Zoning

- ***Under Table 10-B, the maximum lot coverage allowed is 50%. The zoning analysis sheet states it is 29%. Can they provide more information on how they calculated this figure. Lot coverage is defined as: the proportion of lot area covered by building footprint and the footprint of accessory detached structures.***

  Response: The lot coverage number originally provided was incorrectly calculated to include the paved areas. When calculated correctly including only building and structure footprints, the lot coverage is 1.9%. The zoning analysis sheet has been updated with the correct number.

- ***The application states that no new equipment is proposed to be used as part of this project. The site currently meets the noise and vibration requirements, and will continue to do so. Section 10.4.8(B) outlines the permissible noise levels. Are the refrigerated containers going to meet this standard?***

  Response: Previous noise studies performed indicate the site meets the permissible noise levels, but do not address the number of refrigerated containers proposed. An environmental acoustic study will be completed to assess the noise levels caused by the refrigerated containers. This study will be provided once complete.

- ***Article 3 defines a building as: a roofed and walled structure built for permanent use. It defines a structure as: anything constructed or erected of more than one member having a permanent or semi-permanent location on another structure or in or on the ground, including without limitation buildings, fences, gazebos, signs, antennas, satellite sending or receiving dishes, and swimming pools. Stockpiles shall be considered structures for the purposes of dimensional requirements. Based on these two definitions, the reefer rack systems are structures. Since they are not a building, they do not need to meet the building length requirement outlined in Table 10-B.***

  Response: Noted, no action necessary.

- ***Under Table 10-B the maximum height for a building within 100' of Commercial St. is 50 feet. Although the reefer rack systems are not buildings, they meet the maximum height requirement since the top of the racks are 48 feet from grade.***

  Response: Noted, no action necessary.

Transportation

- ***Please confirm that the site plan application will not impact the Commercial Street bike trail.***

  Response: All work associated with this project is being performed within the existing storage yard. The bike trail will not be impacted.

- ***Will the proposed development connect to the haul road or operate through the intersection associated with 40 W. Commercial Street?***

  Response: The proposed development will use the intersection at Beach Street (40 W. Commercial Street) as its primary route for operations. The intersection was originally designed to accommodate the operational activities of the cold storage building and the container yard. The proposed development will also connect to the heavy haul road via the existing concrete loading pad as a supplemental means of moving containers and heavy-haul components to Merrill's Terminal thereby bypassing Commercial Street for oversized items.

Water Quality, Stormwater, & Infrastructure

- ***Per previous discussions with the applicant, DPW would request that the CSO outflow line be upsized to a 48" pipe from the northerly most manhole to the outfall point. DPW would also request that the new outflow line be equipped with an inline tide valve.***

  Response: The drawings have been updated to show the CSO pipe as a 48" pipe, a duck bill one-way tide valve has been provided just downstream of the last manhole, and the existing 30' wide easement will be adjusted and granted to the City of Portland.

Landscaping & Environmental Quality

- ***The applicant must ensure that they are following the Technical Manual's tree protection guidelines to ensure that the existing street trees along West Commercial Street are protected.***

  Response: The drawings have been updated to note that the trees along West Commercial Street shall be protected and that in the event a tree is damaged, it will be replaced in-kind.

- ***Standards for preservation of existing vegetation are outlined in section 4.3 of the Technical Manual. The applicant should especially take note that tree protection fencing should align to the street tree's canopy "drip line". Where demolition of pavement must take place within the drip line, extra care must be taken to avoid damaging roots that may have extended beneath that pavement. If the street trees are insufficiently protected and show signs of deterioration and damage resulting from construction activities within a year of construction completion (as determined by the City arborist), the applicant will be required to replace the street tree.***

  Response: Notes have been added to the General Notes sheet indicating that tree protection fencing shall be erected at the drip line of the existing trees, extra care shall be taken to protect trees if construction activity is to encroach within the drip line, and that damage trees shall be replaced.

To: *Charles Tetelman, City of Portland*

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Donovan, Tristan

Subject: FW: CMP Three Phase Service Process and Ability to Serve Letter Portland IMT - SAP# 10300967876

From: COUGH, JAMES <jcough@cmpco.com>
Sent: Thursday, March 23, 2023 6:56 AM
To: Tim Matthews <tim@swiftcurrenteng.com>
Subject: CMP Three Phase Service Process and Ability to Serve Letter Portland IMT - SAP# 10300967876

RE: International Marine Terminal Refrigerated Storage
460 COMMERCIAL ST PORTLAND ME
Letter of Ability to Serve Request

SAP 10300967876

Project Description:
420 Refrigerated Trailer Units in Marine Terminal to be fed from receptacles mounted on 5-story open walled structures.

CMP has the ability to serve the proposed project in accordance with our CMP Handbook (web link below). We can provide you the desired pad or pole mounted transformers per your request and city approval, in accordance with our CMP Handbook of Standard Requirements. If you have any questions on the process, or need help in completion of the documents, please contact CMP at 800-565-3181.

Here is our typical process for getting your three phase or CT rated single phase service installed. If you have any questions, please let us know. The underlined links will redirect you to the appropriate site for additional information.

Service Milestones for Three Phase Services and CT Rated Single Phase Services. There are additional requirements for primary metered Solar Service Installations listed in the Chapter 324 Interconnections section below. Please refer to CMP Installation Checklists for other installations.

- Submit Load information. Please complete the attached EDET (excel file) using load information. Please complete this and email back to me. If the loads are over 500 kw, more in depth load studies may be required with our Distribution Planning and Transmission Planning Departments. Be advised that these will involve more detailed load information, a load study agreement (signed contract), as well as other items. This additional study process may add additional months to completion of the job.
- Submit the easement information worksheet, including where any CMP structures may be on ANY private property (Poles, Wires, Anchors). You are responsible for obtaining all information for all required easements. Please complete this form and either email or fax back to me.
- Submit any electronic drawings (PDF (preferred) or DWG files) of the site layout and proposed electrical connections.
- For Primary Metered installations (including PV), please have the access road in for pole staking.
- Preliminary meetings with CMP Advisor and Engineer to determine details of job (I will need to schedule with your electrician/contractor-please let me know who this is)
- Field planner design appointment scheduled once the preliminary information is complete. This will allow us to cost out the job and develop a CMP Invoice. The invoice is typically generated 5-6 weeks after the design appointment. This expires after 90 days from the invoice date.
- Submit completed W9 so that your bill can be properly processed. This is a new CMP process.
- CMP submits invoice to the customer for payment (typically via email). Payment received from customer.

- Easements (based on easement information worksheet) sent out, signed and originals returned to CMP.
- Job scheduled for completion after the electrical inspection has been received.

This process can take several months, depending upon several factors including transformer or materials delivery, return of completed paperwork, and other jobs in the system that may be ahead of yours. In addition, contact with the other utilities, including telephone and cable, should be commenced as soon as practical. They may have additional work or charges in addition to the CMP work required to bring your project on line.

As you may be aware, there are global supply chain issues impacting the utility industry. CMP is closely monitoring and managing their inventory in order to serve our customers. Larger padmount transformers may not be readily available for the date that you will need to be energized. Please consider this as part of your construction plan. The energy service advisor will continue to work closely with you and let you know as soon as the transformer becomes available. Should you have any questions or concerns throughout this process, please do not hesitate to contact your ESA directly at the number or email provided.

Please complete the attached forms (the specific instructions are on each form) and email them back to me at your earliest convenience.

For your convenience, here is a link to the CMP Website which contains our Handbook with details on most service requirements: CMP Handbook of Standard Requirements An additional resource is our Distribution Construction Standards: CMP Distribution Construction Standards CMP Distribution Construction Standards.

You will be responsible for installing the customer connections, conduits, and metering in accordance with the CMP Handbook of Standard Requirements The transformer will be sized based on your submitted load sheets.

Your deposit amount will be typically based on an estimated two month bill, calculated from your completed load sheet unless otherwise determined by CMP.

In addition, we have recently added on an online map that shows single phase and three phase power locations within CMP. Here is that link: CMP ArcGIS Information

Metering:

All metering (including locations) must be preapproved by CMP. If you have any questions, please consult the CMP Handbook of Standard Requirements

Chapter 324 Interconnections:

Please be advised that if you plan to install solar/wind/hydro generation, you must complete an application under the MPUC mandated Chapter 324 Interconnection Standards. If you go to Chapter 324 Interconnection Standards and follow the instructions for the Small Generator Interconnection Procedures, CMP can do this work in parallel to your service request that will be handled by me. If you project is under 660 KW You will be able to have a Customer Net Energy Billing contract. Information concerning Customer Net Energy Billing can be accessed thru the Chapter 324 website or by clicking here: Net Energy Billing

Reallocation/Line Extensions:

Recently, changes were made to the three-phase construction policy, which require CMP to reallocate construction costs paid by customers. If applicable, those projects identified as “developments” do not qualify for reallocation of funds. Please see this document at our website for details about the reallocation conditions. Any reallocation charges will be specifically denoted on your invoice. The website address for this is: PolyphaseLineExtension.

This line extension will be part of Central Maine Power's distribution system. In the event the property served under this Agreement is sold or otherwise conveyed, all rights and obligations of the Agreement shall stay with the property. Please note that if you rent or lease this property to another and you want to receive the reimbursement payments, you must make special arrangements with the Central Maine Power Company. Otherwise, any reimbursement payments will be sent to the "Customer" taking service at the service location.

Electricity Supplier Information:

Central Maine Power Company (CMP) will provide your facility with electric delivery service. If you don't already have a provider, you will need to make arrangements with a competitive electricity provider in order to receive electricity supply for your facility. In the event you fail to choose a competitive electricity provider, you will receive Standard Offer service arranged by the Maine Public Utilities Commission. If you wish to be served by a competitive electricity provider immediately upon establishment of delivery service, you must arrange for this service directly through your chosen competitive electricity provider, who must enroll your account no later than 5 PM on the business day prior initiation of delivery service by CMP. An up-to-date list of competitive suppliers can be found at the:

1. Maine Public Utilities Commission (MPUC) web site- Maine PUC
2. By calling the MPUC at (207) 287-3831

Attachments:

Excel Load Sheet (EDET)
Easement Worksheet and Sample Standard Easement
W9

Regards,

Jamie

Jamie Cough
Central Maine Power Company
162 Canco Road
Portland, ME 04103
207.629.1489

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Eimskip Refrigerator Racks 1 view

Subscribe

Bonnie Mattozzi <bdmattozzi@yahoo.com> Nov 27, 2023, 10:01:30 AM (yesterday)
to planning@portlandmaine.gov, Matthew Grooms, Rosanne Graef, planningboard@portlandmaine.gov

To Whom It May Concern:

This is in regard to the proposed increase in size and quantity of the refrigerator racks to be located at 2 West Commercial Street.

1) Some of our neighbors have been living here for decades, some for generations and even worked on the "waterfront".
2) Waterfront is not another word for "sacred ground".
3) Eimpskip is a FOREIGN CORPORATION and they have proved over and over again they do not give a damn about this neighborhood.
4) Eimpskip is a relatively "newcomer business", they have not been on this waterfront for a long time like they want us to believe. They have done NOTHING to improve the quality of the area and/or trying to improve relationships with the people living here before they took over the empty base of the old bridge and train terminal.

We are extremely concerned about the planned installation by Eimskip of "racks" containing hundred of reefers (refrigerator containers) stacked up to five at the time (about 50 feet high) . We are concerned about the massive illumination that will be needed and the unbearable noise level that will be generated by hundred of reefers refrigerator's fans going at the same time. The architects, the engineers responsible for this project and the representative of the Maine State Port Authority present at the last meeting bluntly refused to acknowledge and tell us the amount of decibels produced by each reefers. We are aware that each reefer noise emission can range from around 60 dB(A) to 80 dB(A). Within the proximity of a residential area it should not exceed 45 to 55 decibel, preferably lower. When multiple reefer containers are stacked or placed close together, the noise generated by the containers can increase due to the cumulative effect of multiple refrigeration units running simultaneously. If this initial proposal project is approved it will open up the construction of more racks containing thousand of reefers, the sky is the limit. They also told us that the fan's motor units of these hundreds of reefers will be directed, for convenience (to save time and money not for workers safety) towards (under) the bridge which will surely produce a sound chamber effect further increasing the noise, the humming and vibration levels. They have been adamant in telling us that there is no planning of mitigation of any sort included in their budget proposal.

We are asking for an independent, third party feasibility study on the light and sound impact on the adjacent neighbors and all the measures to be taken to mitigate all the new adverse conditions generated by this project.

Thank you.

Bonnie and Domenico Mattozzi
9 Tate Street, apt 2

Portland, Maine 04102

21 June 2023

I am a resident of Portland who lives at 13 Tate Street. I have been informed by neighbors on Next Door (a community blog) that the Maine State Port Authority has been given clearance to build and amass a 50+ feet high refer storage unit on Commercial Street.

The sound and lighting operations of this structure will affect the neighborhoods of my street and neighboring streets -or so I have been informed by my neighbors.

I have also been informed that the City meetings that were held on this matter were attended by many of my neighbors. Further I was told that City officials, architects of the project, and the Maine State Port Authority were dismissive of the concerns tax paying Portland Residents had to say. Nor did they address their concerns about the operational aspects of this project.

I am looking to you for help in this matter and to work for us rather than against our best interest.

The massive illumination, unbearable noise level generated by a hundred or more refer generator fans going on at the same time will indeed affect our neighborhood and the quality of life in Portland. I have been told that the architects and engineers of the project refuse to acknowledge or inform residents of the decibels produced by each refer and whether it exceeds the safe (and livable) standards or a residential area. It has been reported that these fans will be directed towards the bridge that will only create an echo chamber increasing noise pollution into our neighborhoods. The light pollution is another matter that has not been addressed to the satisfaction of the residents of these neighborhoods.

I ask that you help address this matter by requesting a third-party feasibility study on the sound and light impact on the adjacent neighborhoods. All measures to mitigate these adverse conditions generated by this project need to be taken.

I am counting on your help in this matter. There is so much talk about how City Officials and government do not care about the people in this City. I am very tired of this and the inaction, as it appears, from city and elected officials that care more about the dollar and big corporations and nothing about people who live and work in this City.

Thank you in advance for the help you can give on this matter.

Daniel Marlowe
13 Tate Street
Portland, ME 04102

Eli Dale <elidaleportland@gmail.com> 10:50 AM (15 minutes ago)
to planningboard@portlandmaine.gov

Hi Planning Board,

Does this plan for refrigerated container racking mean that we will have diesel engines running all day and night?

What kind of noise and fume mitigation will be used?

What kind of shoreland environmental protections will be put in place during the resurfacing?

Is this property outside of the area that was rezoned to allow structures over 45' high?

Does stacking up containers over 45' constitute a violation of that height limit, or are we pretending that containers don't have mass and won't block water views?

Why is this sponsored by the Port Authority?

Is it really Eimskip? Who is really in charge here?

Thanks for any answers. We live uphill from this installation and don't want to breathe stinky air.

Elizabeth (Eli) Dale

40 Salem Street, Portland

Bonner, Jay <bonnerj@ashevilleschool.org> Sep 19, 2023, 6:53:24 AM (2 days ago)
to planning@portlandmaine.gov, Pam Shelton, Bonnie Mattozzi

Dear Portland Planning Board Members,

As someone who enjoys the Portland waterfront's mix of commercial and recreational variety, I am writing to express some concerns about the Elmskip refrigeration rack construction. On the one hand, I suspect the City is delighted to be gaining tax revenue. (I hope the City is gaining tax revenue. If not, why allow this project?) On the other hand, I am concerned that there are other potential issues connected to this project than its height in its location by businesses and residences: that is, there may be noise pollution that would be of such significance as to reduce the enjoyment of and therefore future tax revenue of the residences and citizens of Portland in the neighborhood's vicinity, one that includes a public park (Harbor View) and playground (Tate/Tyng). It seems odd to me that there may be preference given to a foreign corporation over the needs of Portland's own citizens and business owners. What noise studies have been conducted to assure residents and business owners that there need be no concern? What noise mitigation efforts have been required of Elmskip, if any? Will the City compensate local residents if the noise should prove untenable? What about the ear drums of the children who frequent the playground and park?

My concerns may be unwarranted, but I have seen no information from the City that addresses these matters. Is this information available? Are contingency plans in place in the event that the noise pollution does prove to be at best a nuisance and at worst a medical liability? Given the false assurances of tobacco and oil companies, with plenty of evidence these companies knew in fact the pernicious consequences of their decisions, which have led to billions and billions of dollars in settlements and/or litigation, it would behoove the City and Elmkip to make sure that studies have been done that are authentic and scientifically reviewed, as opposed to false marketing measures—studies that document, via third party review, that there are no health and/or noise concerns connected to this construction. Otherwise, it would seem to me that both City Government and Elmkip are setting themselves up for class action suits in the future. Again, what is the risk assessment that has been conducted by the City of Portland to assess these matters—and thereby to assure local, tax paying property owners that we need have no concerns?

Many thanks for your attention and consideration.

Sincerely yours,

Jack W Bonner IV and Jessica M Bayer

DEMOLITION PLAN NOTES

1. NO WORK ON THIS SITE SHALL BE INITIATED BY THE CONTRACTOR UNTIL A PRE-CONSTRUCTION MEETING WITH OWNER AND THE CIVIL ENGINEER IS PERFORMED.

2. THE CONTRACTOR SHOULD BE AWARE OF ANY SITE INFORMATION AVAILABLE SUCH AS GEOTECHNICAL AND ENVIRONMENTAL REPORTS. THE CONTRACTOR SHALL HAVE MARK OUTS OF EXISTING UTILITIES COMPLETED PRIOR TO MEETING.

3. THE CONTRACTOR SHALL SECURE ALL PERMITS FOR DEMOLITION AND DISPOSAL OF DEMOLITION MATERIAL TO BE REMOVED FROM THE SITE. THE CONTRACTOR SHALL POST BONDS AND PAY PERMIT FEES AS REQUIRED.

4. THE CONTRACTOR SHALL PROTECT ALL IRON PINS, MONUMENTS AND PROPERTY CORNERS DURING DEMOLITION ACTIVITIES. ANY CONTRACTOR DISTURBED PINS, MONUMENTS, AND OR PROPERTY CORNERS, ETC. SHALL BE RESET BY A LICENSED LAND SURVEYOR AT THE EXPENSE OF THE CONTRACTOR.

5. THE ENGINEER IS NOT RESPONSIBLE FOR SITE SAFETY MEASURES TO BE EMPLOYED DURING CONSTRUCTION. THE ENGINEER HAS NO CONTRACTUAL DUTY TO CONTROL THE SAFEST METHODS OR MEANS OF THE WORK, JOBSITE RESPONSIBILITIES, SUPERVISION OR TO SUPERVISE SAFETY, AND DOES NOT VOLUNTARILY ASSUME ANY SUCH DUTY OR RESPONSIBILITY.

6. EROSION CONTROLS AS SHOWN SHALL BE INSTALLED BY THE CONTRACTOR PRIOR TO START OF DEMOLITION, CLEARING, GRUBBING OR ANY CONSTRUCTION ACTIVITY ONSITE.

7. THE CONTRACTOR SHALL NOT COMMENCE DEMOLITION OR UTILITY DISCONNECTIONS UNTIL AUTHORIZED TO DO SO BY THE OWNER.

8. THE CONTRACTOR SHALL PROVIDE DISCONNECT NOTIFICATION TO THE CITY OF PORTLAND'S ENGINEERING DEPARTMENT, PUBLIC WORKS DEPARTMENT AND OTHER UTILITY COMPANIES PROVIDING SERVICES TO THE SITE AT LEAST THREE WEEKS PRIOR TO BEGINNING DEMOLITION.

9. INFORMATION ON EXISTING UTILITIES AND STORMWATER HAS BEEN COMPILED FROM AVAILABLE INFORMATION INCLUDING UTILITY PROVIDER AND MUNICIPAL RECORD MAPS AND/OR FIELD SURVEY AND IS NOT GUARANTEED CORRECT OR COMPLETE. UTILITIES AND STORMWATER SYSTEMS ARE SHOWN TO ALERT THE CONTRACTOR TO THEIR PRESENCE AND THE CONTRACTOR IS SOLELY RESPONSIBLE FOR DETERMINING ACTUAL LOCATIONS AND ELEVATIONS OF ALL UTILITIES INCLUDING SERVICES AND STORMWATER SYSTEMS.

10. PRIOR TO DEMOLITION OR CONSTRUCTION THE CONTRACTOR SHALL CONTACT DIG SAFE 72 HOURS BEFORE COMMENCEMENT OF WORK AND VERIFY ALL UTILITY AND STORMWATER SYSTEM LOCATIONS.

11. THE CONTRACTOR SHALL CUT AND PLUG, OR ARRANGE FOR THE APPROPRIATE UTILITY PROVIDER TO CUT AND PLUG, ALL SERVICE UTILITIES AS REQUIRED BY THE UTILITY PROVIDER, OR AS OTHERWISE NOTED OR SHOWN ON THE CONTRACT DRAWINGS.

12. THE CONTRACTOR SHALL ADHERE TO ALL OSHA FEDERAL STATE AND LOCAL REGULATIONS WHEN OPERATING CRANES, BOOMS, HOISTS, ETC. IN PROXIMITY OF OVERHEAD ELECTRIC LINES. IF CONTRACTOR MUST OPERATE EQUIPMENT CLOSE TO ELECTRIC LINES CONTACT POWER COMPANY TO MAKE ARRANGEMENTS FOR PROPER SAFEGUARDS. ANY UTILITY PROVIDER FEES SHALL BE PAID BY THE CONTRACTOR.

13. THE CONTRACTOR SHALL RESTORE ANY UTILITY STRUCTURE, PIPE, UTILITY, PAVEMENT, CURBS, SIDEWALKS, DRAINAGE STRUCTURE, SWALE OR LANDSCAPED AREAS DISTURBED DURING DEMOLITION TO THEIR ORIGINAL CONDITION OR BETTER TO THE SATISFACTION OF THE OWNER, THE CITY OF PORTLAND, OR THE STATE OF MAINE.

14. TREE PROTECTION FENCING SHALL BE ERECTED AT THE DRIP LINE OF THE EXISTING TREES. EXTRA CARE SHALL BE TAKEN TO PROTECT TREES IF CONSTRUCTION ACTIVITY IS TO ENCROACH WITHIN THE DRIP LINE ANY DAMAGED TRESS SHALL BE REPLACED.

GENERAL NOTES

1. EXISTING SITE CONDITIONS TAKEN FROM A PLAN ENTITLED "BOUNDARY AND TOPOGRAPHIC SURVEY, INTERNATIONAL MARINE TERMINAL, 460 COMMERCIAL STREET, PORTLAND, MAINE, MADE FOR JACOBS" DATED 10/21/2022; SCALE 1"=50'; PREPARED BY OWN HASKELL, INC.

2. THESE PLANS ARE FOR CONCEPTUAL PURPOSES ONLY AND ARE NOT FOR CONSTRUCTION.

SITE PLAN NOTES

1. EXISTING SITE CONDITIONS TAKEN FROM A PLAN ENTITLED "BOUNDARY AND TOPOGRAPHIC SURVEY, INTERNATIONAL MARINE TERMINAL, 460 COMMERCIAL STREET, PORTLAND, MAINE, MADE FOR JACOBS" DATED 10/21/2022; SCALE 1"=50'; PREPARED BY OWN HASKELL, INC.

2. ALL SITE DIMENSIONS ARE REFERENCED TO THE FACE OF CURBS OR EDGE OF PAVING AS APPLICABLE UNLESS OTHERWISE NOTED.

PAVEMENT NOTES

PROPOSED HEAVY-DUTY PAVEMENT

SURFACE: 2.00" OF TYPE 12.5MM HMA OVER ASPHALT EMULSION FOR TACK COAT OVER

INTERMEDIATE: 3.00" OF TYPE 19MM HMA, PLACED IN TWO 1.5" LIFTS OVER ASPHALT EMULSION FOR TACK COAT OVER

BASE: 5.00" OF TYPE 25MM HMA, PLACED IN TWO 2.5" LIFTS OVER

SUBBBASE: 8" DENSE GRADED CRUSHED STONE OVER 14" GRAVEL BORROW

GRADING & DRAINAGE NOTES

1. INFORMATION ON EXISTING UTILITIES AND STORM DRAINAGE SYSTEMS HAS BEEN COMPILED FROM AVAILABLE INFORMATION INCLUDING UTILITY PROVIDER AND MUNICIPAL RECORD MAPS AND/OR FIELD SURVEY AND IS NOT GUARANTEED CORRECT OR COMPLETE. UTILITIES AND STORM DRAINAGE SYSTEMS ARE SHOWN TO ALERT THE CONTRACTOR TO THEIR PRESENCE AND THE CONTRACTOR IS SOLELY RESPONSIBLE FOR DETERMINING ACTUAL LOCATIONS AND ELEVATIONS OF ALL UTILITIES AND STORM DRAINAGE SYSTEMS INCLUDING SERVICES. PRIOR TO DEMOLITION OR CONSTRUCTION, THE CONTRACTOR SHALL CONTACT "DIG SAFE" 72 HOURS BEFORE COMMENCEMENT OF WORK AND VERIFY ALL UTILITY AND STORM DRAINAGE SYSTEM LOCATIONS.

2. THIS DRAWING IS INTENDED TO DESCRIBE GRADING AND DRAINAGE INFORMATION ONLY. REFER TO SITE LAYOUT PLAN FOR GENERAL INFORMATION.

3. THE CONTRACTOR SHALL PRESERVE EXISTING VEGETATION WHERE POSSIBLE AND/OR AS NOTED ON DRAWINGS.

4. THE CONTRACTOR SHALL COMPACT FILL TO THICKNESS PER THE GEOTECHNICAL ENGEER'S SPECIFICATIONS . MAXIMUM LIFTS UNDER ALL PARKING, BUILDING, AND DRIVE AREAS TO 95% OF THE MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D1557 (MODIFIED PROCTOR TEST), OR AS DIRECTED BY THE GEOTECHNICAL ENGINEER.

5. IF IMPACTED OR CONTAMINATED SOIL IS ENCOUNTERED BY THE CONTRACTOR, THE CONTRACTOR SHALL SUSPEND EXCAVATION WORK OF IMPACTED SOIL AND NOTIFY THE OWNER AND/OR OWNER'S ENVIRONMENTAL CONSULTANT PRIOR TO PROCEEDING WITH FURTHER WORK IN THE IMPACTED SOIL LOCATION UNTIL FURTHER INSTRUCTED BY THE OWNER AND/OR OWNER'S ENVIRONMENTAL CONSULTANT.

6. ALL PROPOSED DRAINAGE STRUCTURE RIM AND PIPE INVERT ELEVATIONS ARE TO BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION.

7. ALL DRAINAGE STRUCTURES TO BE ABANDONED SHALL BE FILLED WITH GRAVEL AND ALL CONNECTIONS SHALL BE PLUGGED AT THE PIPE LOCATIONS WITH A CEMENT CONCRETE MASONRY PLUG.

8. ALL PROPOSED DRAINAGE PIPES, NOT USED TO REPLACE EXISTING PIPES, SHALL BE INSTALLED WITH A MINIMUM SLOPE OF 0.5%, UNLESS OTHERWISE NOTED.

9. ANY CROSSINGS BETWEEN PROPOSED DRAINAGE & UTILITIES SHOULD BE CHECKED AND VERIFIED FOR CONSTRUCTION FEASIBILITY.

GENERAL SOIL EROSION & SEDIMENT CONTROL NOTES

1. THE CONTRACTOR MUST COMPLY WITH ALL FEDERAL, STATE, AND LOCAL LAWS AND REGULATIONS CONTROLLING POLLUTION AND DISCHARGE OF STORMWATER FROM THE SITE. THE CONTRACTOR SHALL IMPLEMENT ALL EROSION CONTROL MEASURES IN ACCORDANCE WITH THE BEST MANAGEMENT PRACTICES DESCRIBED IN THE MAINE DOT'S BEST MANAGEMENT PRACTICES FOR EROSION AND SEDIMENTATION CONTROL (MAINE DOT MANUAL).

2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLIANCE WITH THE EROSION CONTROL PLAN, NOTES AND DETAILS. ANY DEVIATION TO THE EROSION CONTROL PLAN MUST BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL PRIOR TO IMPLEMENTATION IN THE FIELD.

3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONSTRUCTION CONTROL AND MAINTENANCE OF SOIL EROSION AND SEDIMENT CONTROL FACILITIES TO INSURE PROPER FUNCTIONING OF SAID FACILITIES DURING CONSTRUCTION.

4 THE CONTRACTOR SHALL KEEP THE STREET CLEAR OF DIRT AND BE RESPONSIBLE FOR ANY STREET CLEANING NECESSARY DURING THE COURSE OF THE PROJECT. ALL SOIL WASHED, DROPPED, SPILLED OR TRACKED OUTSIDE THE LIMIT OF DISTURBANCE OR ONTO PUBLIC RIGHT-OF-WAYS, WILL BE REMOVED IMMEDIATELY. PAVED ROADWAYS MUST BE KEPT CLEAN AT ALL TIMES.

5. DUST SHALL BE CONTROLLED VIA THE APPLICATION OF WATER.

6. THE SITE SHALL AT ALL TIMES BE GRADED AND MAINTAINED SUCH THAT ALL STORMWATER RUNOFF IS DIVERTED TO SOIL EROSION AND SEDIMENT CONTROL FACILITIES.

7. MAXIMUM SIDE SLOPES OF ALL EXPOSED SURFACES SHALL NOT EXCEED 3:1 UNLESS OTHERWISE APPROVED BY THE ENGINEER. EROSION CONTROL MATS SHALL BE INSTALLED TO STABILIZE STEEPER SLOPES AS DIRECTED BY THE ENGINEER.

8. A STABILIZED CONSTRUCTION ENTRANCE SHALL BE INSTALLED WHEREVER THE CONSTRUCTION HAUL ROUTE INTERSECTS EXISTING PAVED SURFACES.

PERMIT DRAWINGS
NOT FOR CONSTRUCTION
SUBMITTED DATE: AUGUST 18, 2023

Jacobs

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

APPROVED | DATE
COMMISSIONER:
CHIEF ENGINEER:

PROJECT INFORMATION

PROGRAM		SIGNATURE
PROJECT MANAGER	C. MORIN	
DESIGNER	C. MAGUIRE	P.E. NUMBER
CONSULTANT		
PROJECT RESIDENT		DATE
CONTRACTOR		
PROJECT COMPLETION DATE		

PORT INFRASTRUCTURE DEVELOPMENT PROGRAM (PIDP) GRANT
PRIORITY PROJECTS DESIGN & CONSTRUCTION PHASE SERVICES
PORTLAND, ME
CUMBERLAND, COUNTY

GENERAL NOTES

SHEET NUMBER
G-002

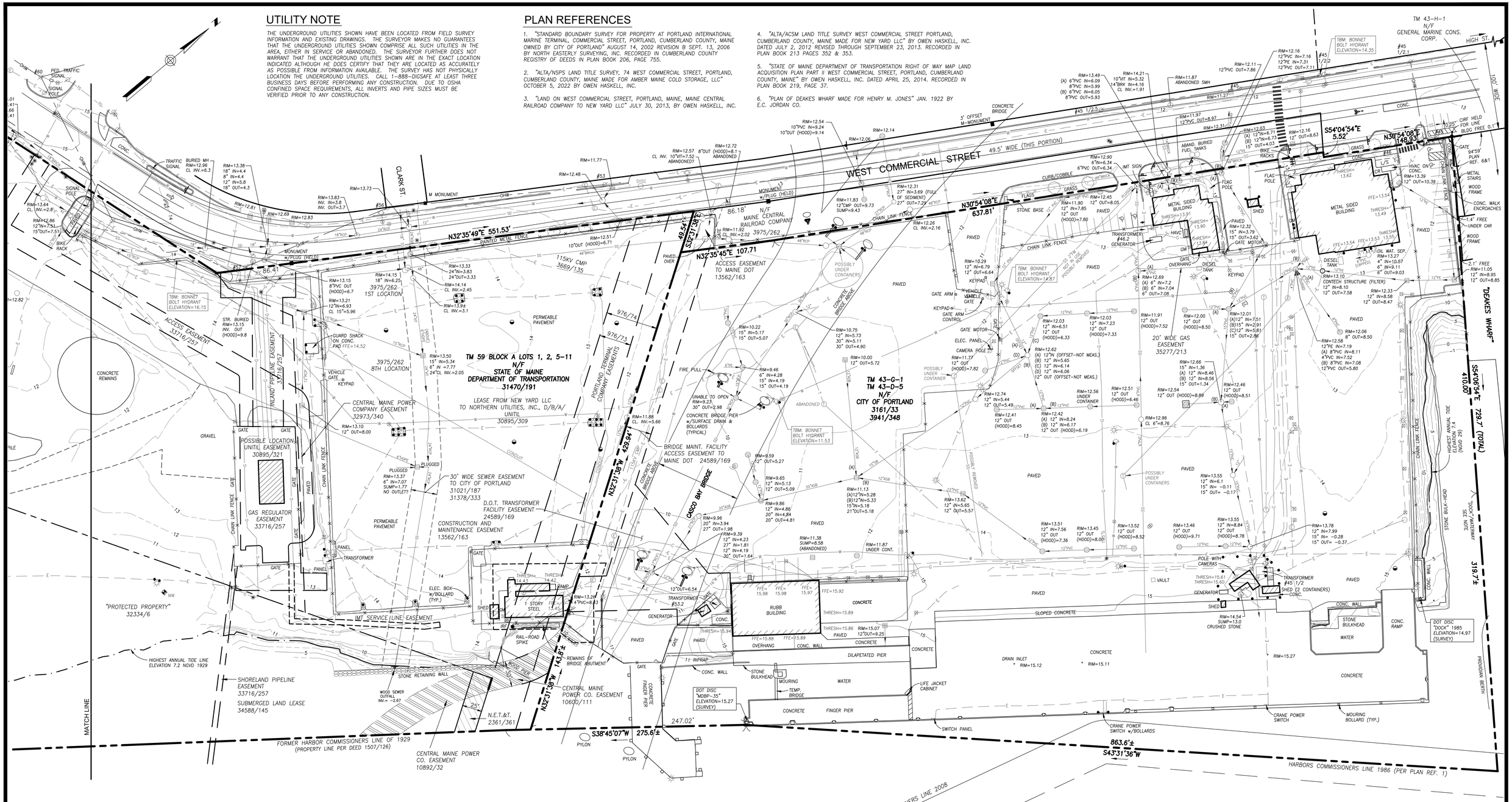
File: C:\users\maguirctappdata\local\bentley\projectwise\jacobs-americas-01\d0105753\G-002(GeneralNotes) ; Plotted: 8/17/2023 4:04 PM by MAGUIRE, CASEY ; Saved: 8/9/2023 4:38 PM by MAGUIRC

UTILITY NOTE

THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING DRAWINGS. THE SURVEYOR MAKES NO GUARANTEES THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH HE DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. THE SURVEY HAS NOT PHYSICALLY LOCATION THE UNDERGROUND UTILITIES. CALL 1-888-DIGSAFE AT LEAST THREE BUSINESS DAYS BEFORE PERFORMING ANY CONSTRUCTION. DUE TO OSHA CONFINED SPACE REQUIREMENTS, ALL INVERTS AND PIPE SIZES MUST BE VERIFIED PRIOR TO ANY CONSTRUCTION.

PLAN REFERENCES

1. "STANDARD BOUNDARY SURVEY FOR PROPERTY AT PORTLAND INTERNATIONAL MARINE TERMINAL, COMMERCIAL STREET, PORTLAND, CUMBERLAND COUNTY, MAINE OWNED BY CITY OF PORTLAND" AUGUST 14, 2002 REVISION B SEPT. 13, 2006 BY NORTH EASTERLY SURVEYING, INC. RECORDED IN CUMBERLAND COUNTY REGISTRY OF DEEDS IN PLAN BOOK 206, PAGE 755.
2. "ALTA/NSPS LAND TITLE SURVEY, 74 WEST COMMERCIAL STREET, PORTLAND, CUMBERLAND COUNTY, MAINE MADE FOR AMBER MAINE COLD STORAGE, LLC" OCTOBER 5, 2022 BY OWEN HASKELL, INC.
3. "LAND ON WEST COMMERCIAL STREET, PORTLAND, MAINE, MAINE CENTRAL RAILROAD COMPANY TO NEW YARD LLC" JULY 30, 2013, BY OWEN HASKELL, INC.
4. "ALTA/ACSM LAND TITLE SURVEY WEST COMMERCIAL STREET PORTLAND, CUMBERLAND COUNTY, MAINE MADE FOR NEW YARD LLC" BY OWEN HASKELL, INC. DATED JULY 2, 2012 REVISED THROUGH SEPTEMBER 23, 2013. RECORDED IN PLAN BOOK 213 PAGES 352 & 353.
5. "STATE OF MAINE DEPARTMENT OF TRANSPORTATION RIGHT OF WAY MAP LAND ACQUISITION PLAN PART II WEST COMMERCIAL STREET, PORTLAND, CUMBERLAND COUNTY, MAINE" BY OWEN HASKELL, INC. DATED APRIL 25, 2014. RECORDED IN PLAN BOOK 219, PAGE 37.
6. "PLAN OF DEAKES WHARF MADE FOR HENRY M. JONES" JAN. 1922 BY E.C. JORDAN CO.



LEGEND

IRON PIPE OR ROD FOUND	FENCE
MONUMENT FOUND	GUARDRAIL
UTILITY POLE	CURB
MANHOLE	OVERHEAD WIRES
EM/GM ELECTRIC/GAS METER	UGE UNDERGROUND POWER
TP TELEPHONE PEDESTAL	W WATER LINE
ELECTRIC BOX	G GAS LINE
SIGN	T TELEPHONE
CATCH BASIN	SD STORM DRAIN
HYDRANT	SS SANITARY SEWER
WATER VALVE OR SHUTOFF	14 1' CONTOUR
LIGHT POLE	IPF/IRF IRON PIPE/ROD FOUND
SPRINKLER	N/F NOW OR FORMERLY
GAS VALVE	000/000 DEED BOOK / PAGE
BOLLARD	L/S LANDSCAPED AREA
DECIDUOUS TREE	CONC. CONCRETE
BORING	CR CRUSHED STONE

CERTIFICATE

OWEN HASKELL, INC. HEREBY CERTIFIES THAT THIS PLAN IS BASED ON, AND THE RESULT OF, AN ON THE GROUND FIELD SURVEY AND THAT TO THE BEST OF OUR KNOWLEDGE, INFORMATION AND BELIEF, IT CONFORMS TO THE BOARD OF LICENSURE FOR PROFESSIONAL LAND SURVEYORS CURRENT STANDARDS OF PRACTICE.

10-21-22
DATE

SAMUEL D. GLIDDEN, PLS #2520

STATE OF MAINE SAMUEL D. GLIDDEN 2520 PROFESSIONAL LAND SURVEYOR

GENERAL NOTES

1. OWNERS OF RECORD:

   CITY OF PORTLAND:
   TAX MAP 43-D-5
   C.C.R.D. 3161/33
   TAX MAP 43-G-1
   C.C.R.D. 3941/348

   STATE OF MAINE DEPT. OF TRANSPORTATION
   TAX MAP 59-A-1,2,5-11
   C.C.R.D. BOOK 31470/191

2. BEARINGS ARE BASED ON MAINE STATE PLANE COORDINATE SYSTEM, MAINE WEST NAD83.
3. ELEVATIONS ARE BASED ON CITY OF PORTLAND DATUM.
4. THE FEDERAL CHANNEL LINE AS PROVIDED BY ARMY CORP OF ENGINEERS.
5. BY GRAPHIC PLOTTING ONLY, THIS PROPERTY IS IN ZONE C & ZONE A2 (ELEV. 10) OF THE FLOOD INSURANCE RATE MAP, COMMUNITY PANEL NO. 230051 0016B, WHICH BEARS AN EFFECTIVE DATE OF JULY 17, 1986.
6. DOCK AREA OR WATERWAY BETWEEN THE STONE BULKHEAD ON THE SUBJECT PARCEL AND DEAKE'S WHARF MAY BE SUBJECT TO THE RIGHTS OF OTHERS.

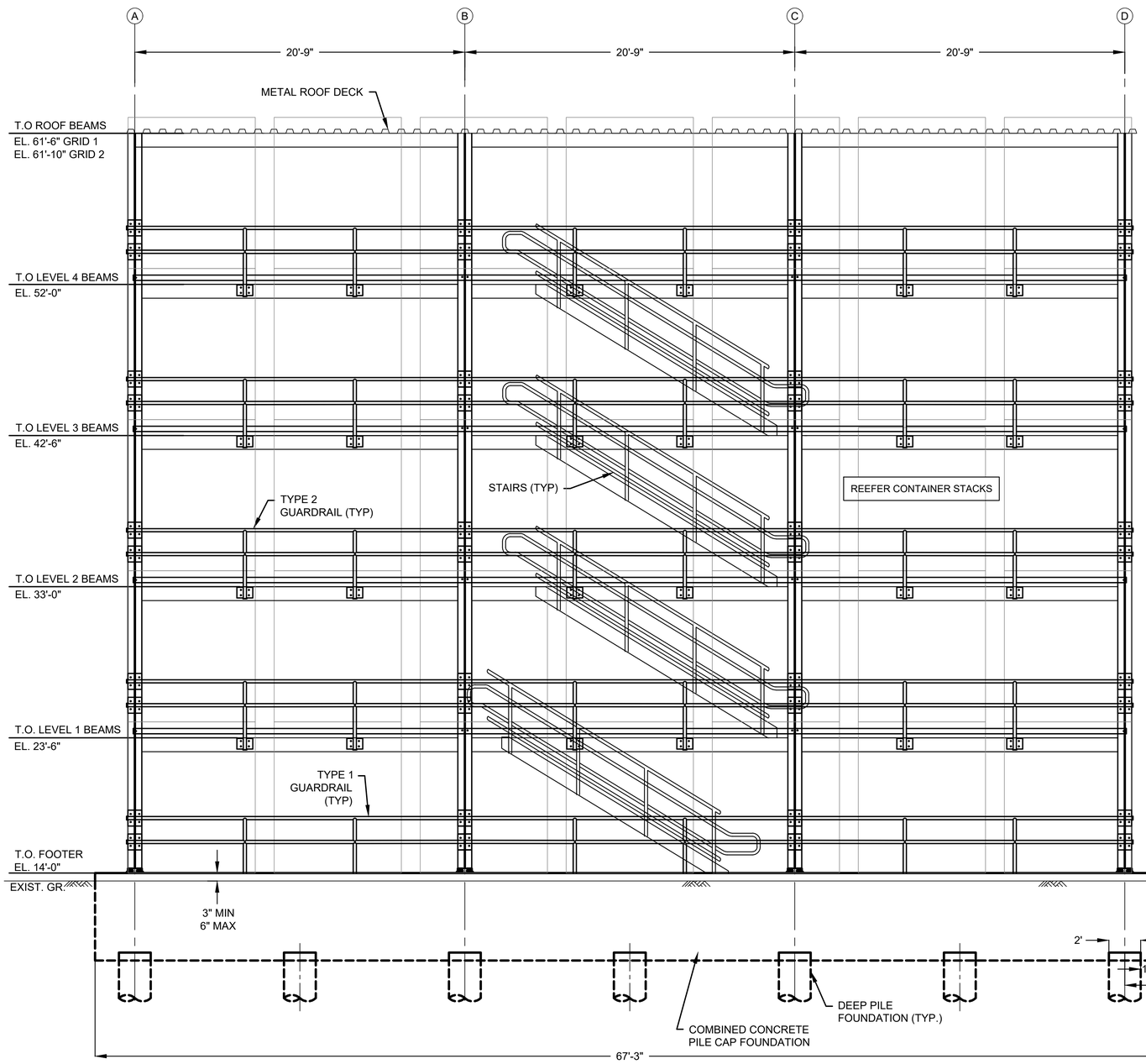
Boundary and Topographic Survey
International Marine Terminal
460 Commercial Street, Portland, Maine
Made for
Jacobs
120 St. James Ave., 5th Floor, Boston, MA

OWEN HASKELL, INC.
PROFESSIONAL LAND SURVEYORS
390 US ROUTE 1, UNIT 10, FALMOUTH, ME 04105 TEL. 207-774-0424

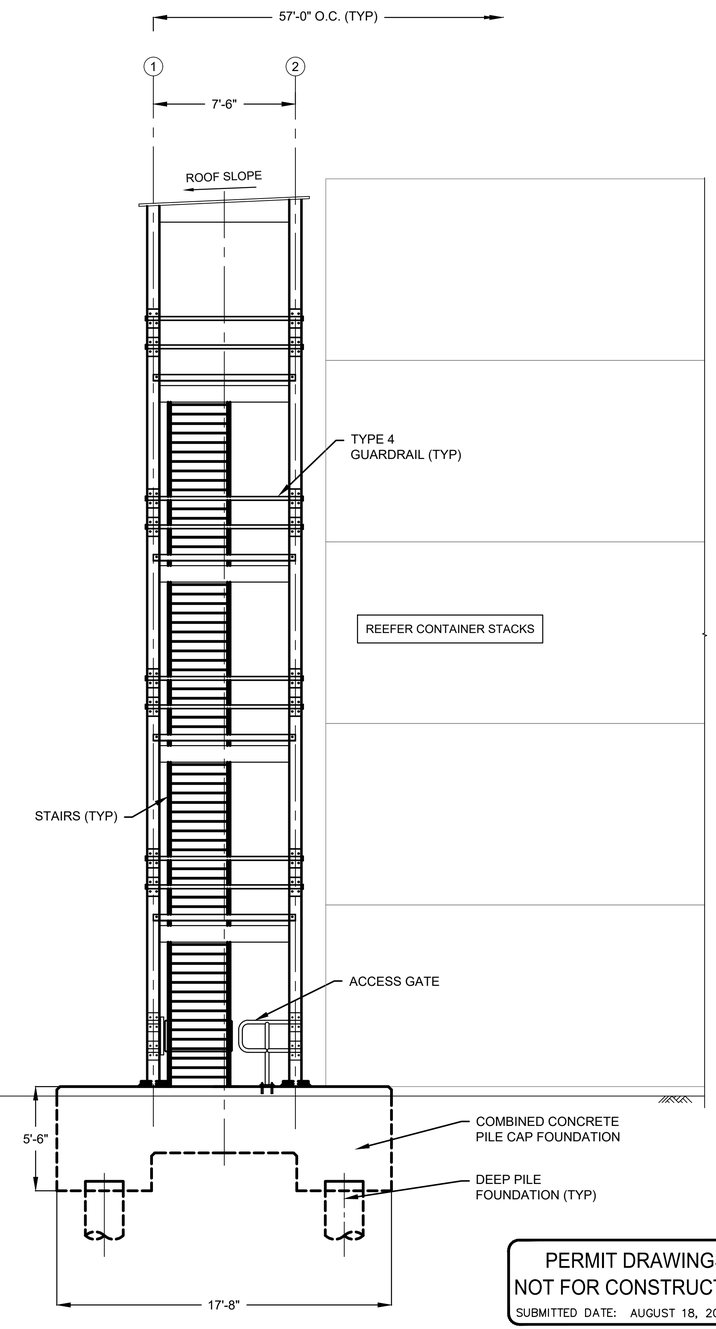
DRAWN BY: JLW	DATE: OCT. 21, 2022	JOB NO. 2022-210 P	
CHECKED BY: SDG	SCALE: 1" = 50'	DRWG. NO. 1	

GENERAL NOTES

1. REFER TO DRAWING S-001 FOR GENERAL NOTES AND DESIGN CRITERIA.
2. TOP OF FOOTER ELEVATION IS FOR REFERENCE ONLY. SET TOP OF FOOTER TO 3" MIN TO 6" MAX ABOVE EXISTING GRADE.



1 S-103 REEFER RACK FRONT ELEVATION
1/4" = 1'-0"



2 S-103 REEFER RACK SIDE ELEVATION
1/4" = 1'-0"

PERMIT DRAWINGS
NOT FOR CONSTRUCTION
SUBMITTED DATE: AUGUST 18, 2023

Jacobs

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

APPROVED | DATE
COMMISSIONER:
CHIEF ENGINEER:

PROJECT INFORMATION		SIGNATURE
PROGRAM		
PROJECT MANAGER	C. MORIN	P.E. NUMBER
DESIGNER	C. MAGUIRE	
CONSULTANT		DATE
PROJECT RESIDENT		
CONTRACTOR		
PROJECT COMPLETION DATE		

PORT INFRASTRUCTURE DEVELOPMENT PROGRAM (PIDP) GRANT
PRIORITY PROJECTS DESIGN & CONSTRUCTION PHASE SERVICES
PORTLAND, ME
CUMBERLAND, COUNTY

REEFER RACK
ELEVATION AND SECTION

SHEET NUMBER
S-201

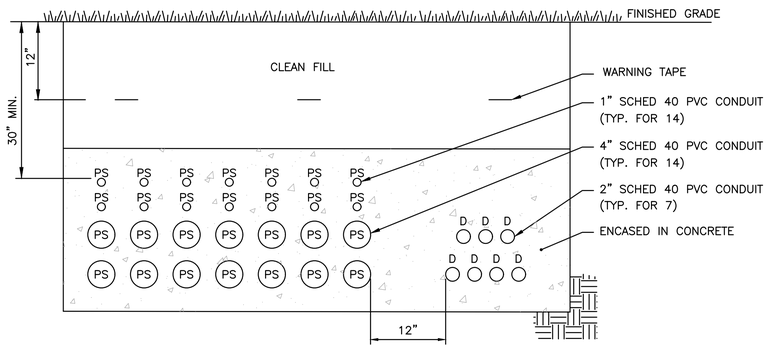
File: C:\Users\maguirc\AppData\Local\Bentley\projectwise\jacobs-americas-01\d0100924\S-201(ReeferRackElevSectPermit) ; Plotted: 8/17/2023 5:19 PM by MAGUIRE, CASEY ; Saved: 8/17/2023 3:47 PM by MAGUIRC

DUCT BANK LEGEND:

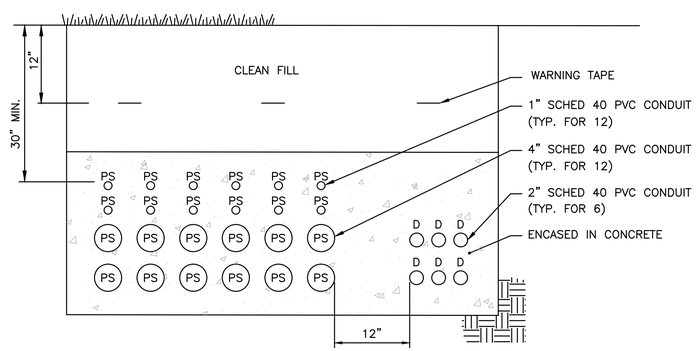
PP – POWER (PRIMARY)
PS – POWER (SECONDARY)
SP – SPARE
PG – GENERATOR AUX. POWER CKTS
PR – GENERATOR REMOTE ANNUNCIATOR WIRING
C – CABLE
T – TELEPHONE
D – DATA

NOTES:

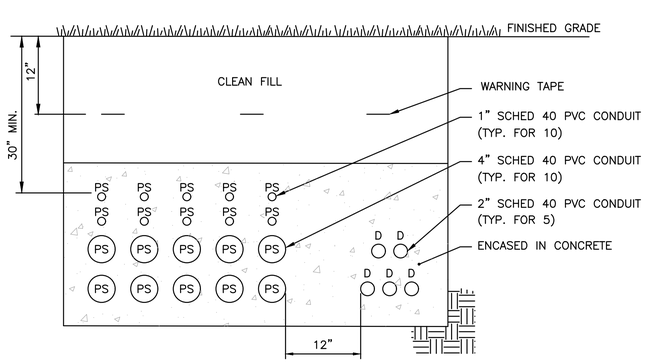
1. SEE E100 FOR GENERAL NOTES.



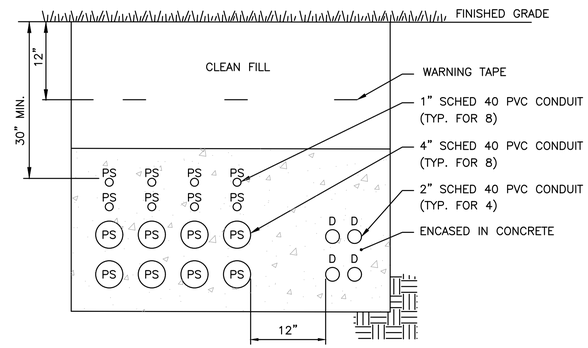
1 DUCT BANK DETAIL A–A
SCALE: NOT TO SCALE



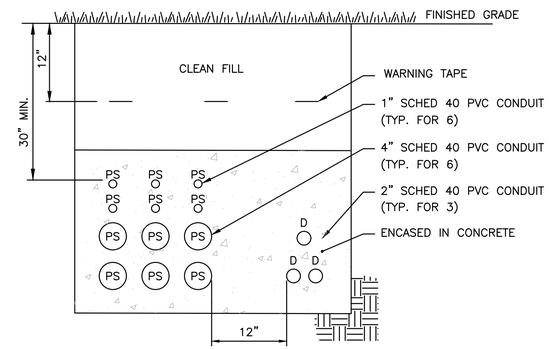
2 DUCT BANK DETAIL B–B
SCALE: NOT TO SCALE



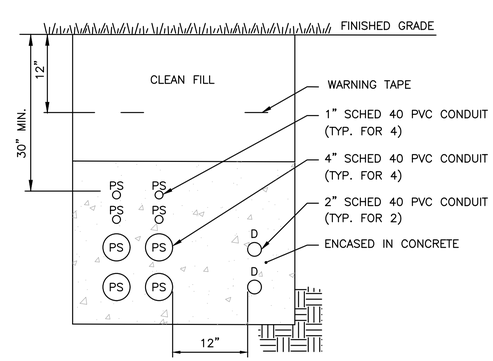
3 DUCT BANK DETAIL C–C
SCALE: NOT TO SCALE



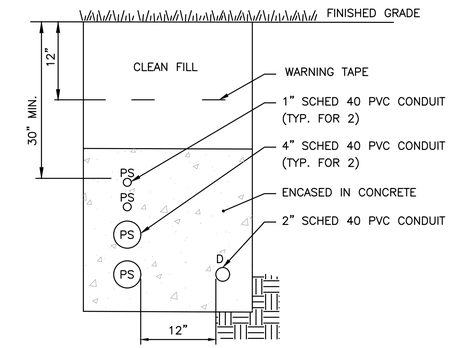
4 DUCT BANK DETAIL D–D
SCALE: NOT TO SCALE



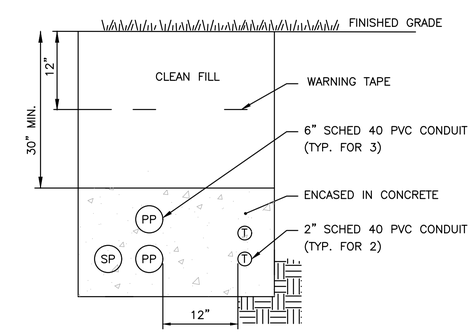
5 DUCT BANK DETAIL E–E
SCALE: NOT TO SCALE



6 DUCT BANK DETAIL F–F
SCALE: NOT TO SCALE



7 DUCT BANK DETAIL G–G
SCALE: NOT TO SCALE



8 DUCT BANK DETAIL H–H
SCALE: NOT TO SCALE

80% DRAFT
SUBMITTED DATE: MAY 26, 2023

Jacobs

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

APPROVED	DATE
COMMISSIONER:	
CHIEF ENGINEER:	

	SIGNATURE	P.E. NUMBER	DATE

PROJECT INFORMATION

PROGRAM	
PROJECT MANAGER	
DESIGNER	
CONSULTANT	
PROJECT RESIDENT	
CONTRACTOR	
PROJECT COMPLETION DATE	

PORT INFRASTRUCTURE DEVELOPMENT PROGRAM (PIDP) GRANT
PRIORITY PROJECTS DESIGN & CONSTRUCTION PHASE SERVICES
PORTLAND, ME
CUMBERLAND, COUNTY

DUCT BANK DETAILS

SHEET NUMBER
E101

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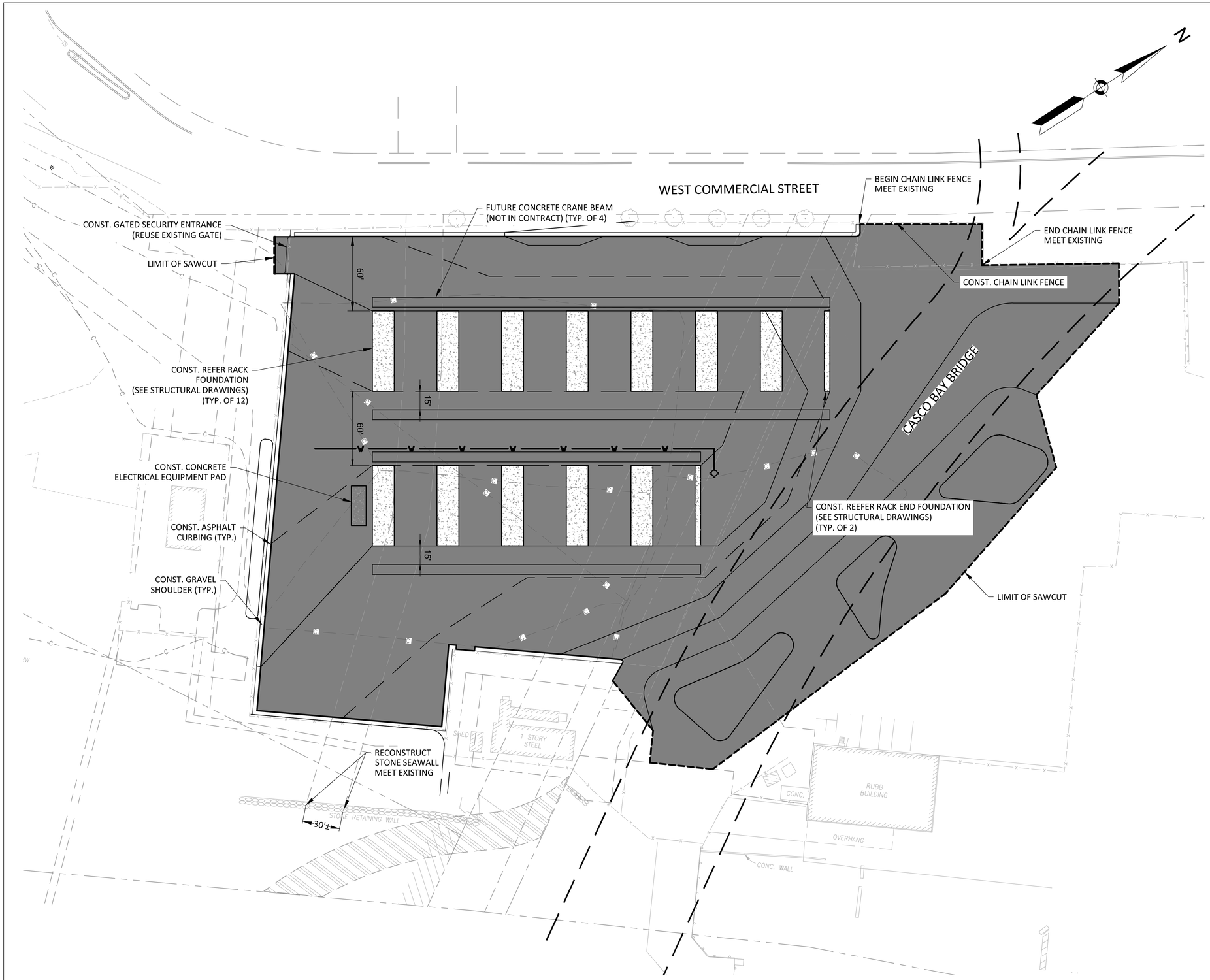

PERMIT DRAWINGS
NOT FOR CONSTRUCTION
SUBMITTED DATE: AUGUST 18, 2023

Jacobs

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

APPROVED | DATE
COMMISSIONER:
CHIEF ENGINEER:

SIGNATURE
P.E. NUMBER
DATE

PROJECT INFORMATION
PROGRAM
PROJECT MANAGER: C. MORIN
DESIGNER: C. MAGUIRE
CONSULTANT
PROJECT RESIDENT
CONTRACTOR
PROJECT COMPLETION DATE

PORT INFRASTRUCTURE DEVELOPMENT PROGRAM (PIDP) GRANT
PRIORITY PROJECTS DESIGN & CONSTRUCTION PHASE SERVICES
PORTLAND, ME
CUMBERLAND, COUNTY

SITE LAYOUT PLAN

SHEET NUMBER
C-102
7 0F 24

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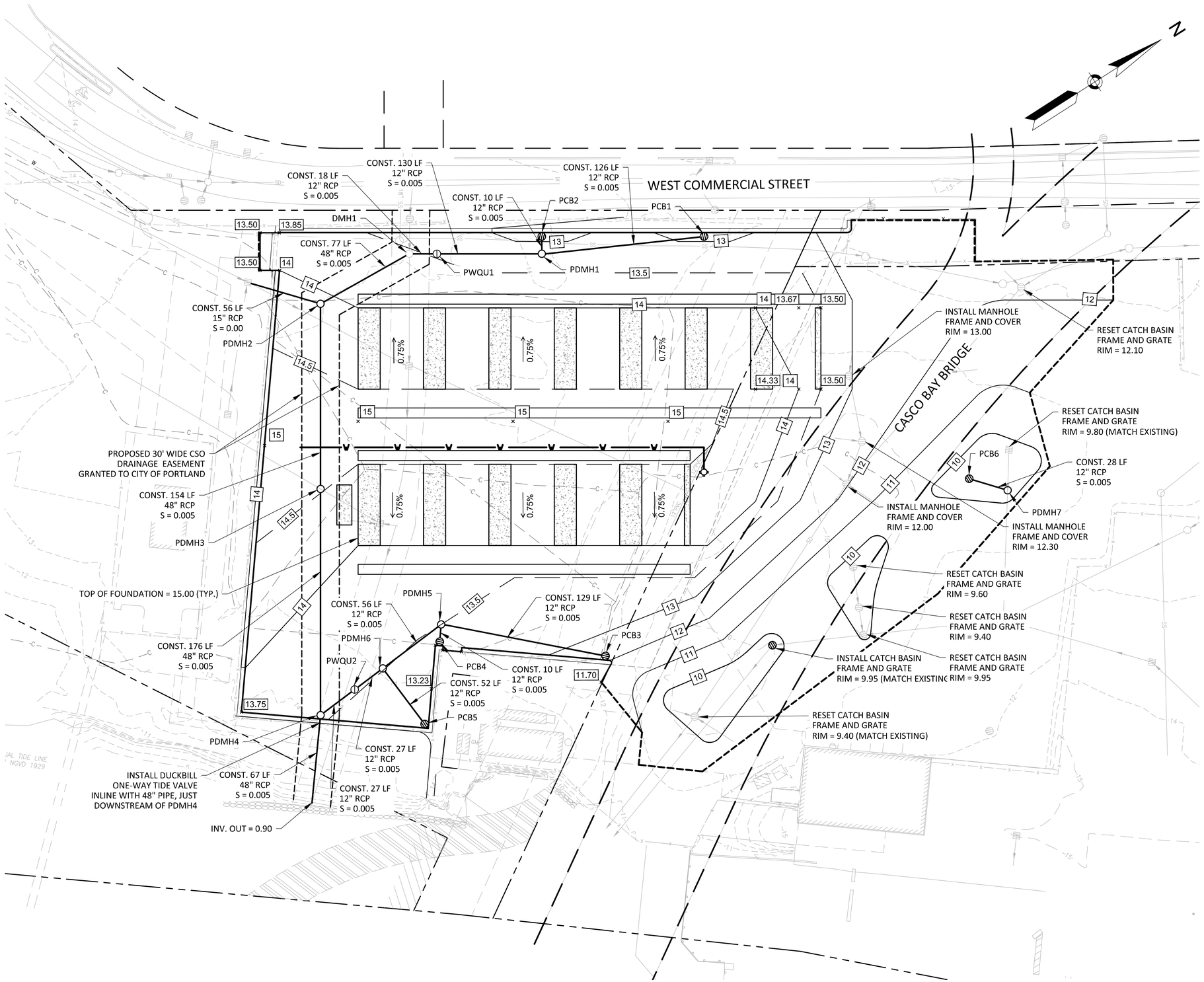


DRAINAGE STRUCTURE SCHEDULE

PCB1
RIM = 12.90
INV. OUT = 7.90 (PDMH1)

PCB2
RIM = 12.90
INV. OUT = 7.90

PDMH1
RIM = 13.20
INV. IN = 7.25 (PCB1)
INV. OUT = 7.85 (PCB2)
INV. OUT = 7.75 (PWQU1)

PWQU1 (SEE DETAIL, SHEET C-502)
RIM = 13.45
INV. IN = 7.10 (PDMH1)
INV. OUT = 7.00 (DMH1)

DMH1
RIM = 13.55
INV. IN = 3.20 (24" VC)
INV. IN = 6.90 (PWQU1)
INV. OUT = 3.10 (PDMH3)

PDMH2
RIM = 14.10
INV. IN = 5.55 (15" RCP)
INV. IN = 2.70 (48" RCP)

PDMH3
RIM = 14.50
INV. IN = 2.35 (DMH1)
INV. OUT = 2.25 (PDMH4)

PDMH4
RIM = 13.55
INV. IN = 1.35 (PDMH3)
INV. IN = 5.55 (WQU2)
INV. OUT = 1.25
(EQUIPPED WITH DUCKBILL ONE-WAY TIDE VALVE)

PCB3
RIM = 12.10
INV. OUT = 7.10 (PDMH5)

PCB4
RIM = 13.40
INV. OUT = 8.40 (PDMH5)

PDMH5
RIM = 13.50
INV. IN = 6.45 (PCB3)
INV. IN = 8.35 (PCB4)
INV. OUT = 6.35 (PWQU2)

PCB5
RIM = 13.05
INV. OUT = 8.05 (PDMH6)

PDMH6
RIM = 13.50
INV. IN = 7.80 (PCB5)
INV. IN = 6.05 (PDMH5)
INV. OUT = 5.95 (PWQU2)

PWQU2 (SEE DETAIL, SHEET C-502)
RIM = 13.55
INV. IN = 5.80 (PDMH6)
INV. OUT = 5.70 (PDMH4)

PCB6
RIM = 9.85
INV. OUT = 5.75 (12" RCP)

PDMH7 (DOGHOUSE)
RIM = 9.90
INV. IN = 5.60 (12" ASB)
INV. IN = 5.60 (PCB6)
INV.OUT=4.60 (12" ASB)

PERMIT DRAWINGS
NOT FOR CONSTRUCTION
SUBMITTED DATE: AUGUST 18, 2023

Jacobs

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

APPROVED | DATE
COMMISSIONER:
CHIEF ENGINEER:

PROJECT INFORMATION

PROGRAM	
PROJECT MANAGER	C. MORIN
DESIGNER	C. MAGUIRE
CONSULTANT	
PROJECT RESIDENT	
CONTRACTOR	
PROJECT COMPLETION DATE	

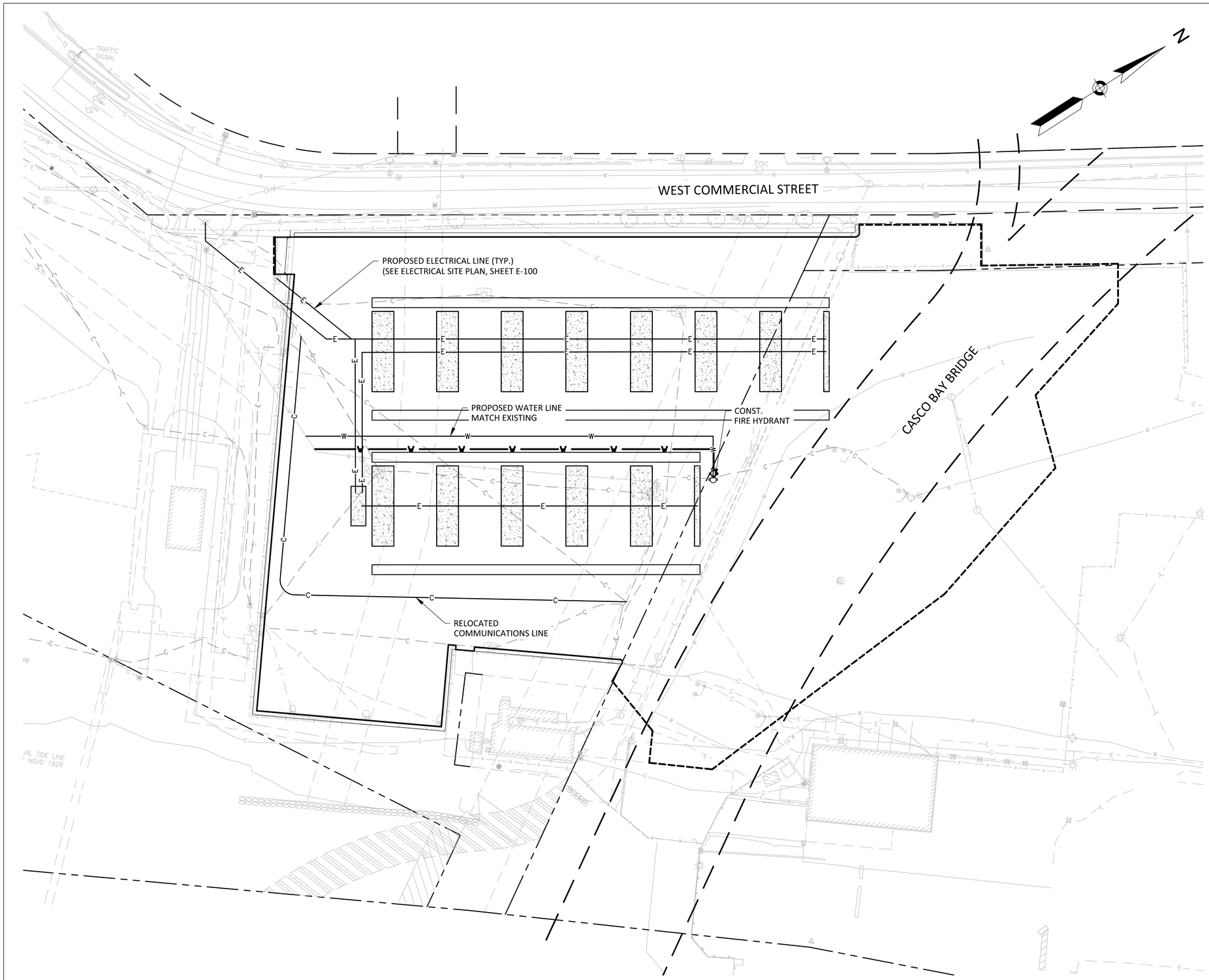
SIGNATURE
P.E. NUMBER
DATE

PORT INFRASTRUCTURE DEVELOPMENT PROGRAM (PIDP) GRANT
PRIORITY PROJECTS DESIGN & CONSTRUCTION PHASE SERVICES
PORTLAND, ME
CUMBERLAND, COUNTY

GRADING & DRAINAGE PLAN

SHEET NUMBER
C-103
8 0F 24

File: C:\users\maguirc\appdata\local\bentley\projectwise\jacobs-americas-01\d0105917\E2\93900_C-103(Grading&DrainagePlanPermit) ; Plotted: 8/17/2023 4:27 PM by MAGUIRE, CASEY ; Saved: 8/16/2023 1:13 PM by MAGUIRC



0 40 100 160

SCALE: 1" = 40'

PERMIT DRAWINGS
NOT FOR CONSTRUCTION
SUBMITTED DATE: AUGUST 18, 2023

Jacobs

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

APPROVED | DATE

COMMISSIONER:

CHIEF ENGINEER:

PROJECT INFORMATION		
PROGRAM		
PROJECT MANAGER	C. MORIN	SIGNATURE
DESIGNER	C. MAGUIRE	P.E. NUMBER
CONSULTANT		
PROJECT RESIDENT		DATE
CONTRACTOR		
PROJECT COMPLETION DATE		

PORT INFRASTRUCTURE DEVELOPMENT PROGRAM (PIDP) GRANT
PRIORITY PROJECTS DESIGN & CONSTRUCTION PHASE SERVICES
PORTLAND, ME
CUMBERLAND, COUNTY

UTILITIES PLAN

SHEET NUMBER

C-104

9 0F 24

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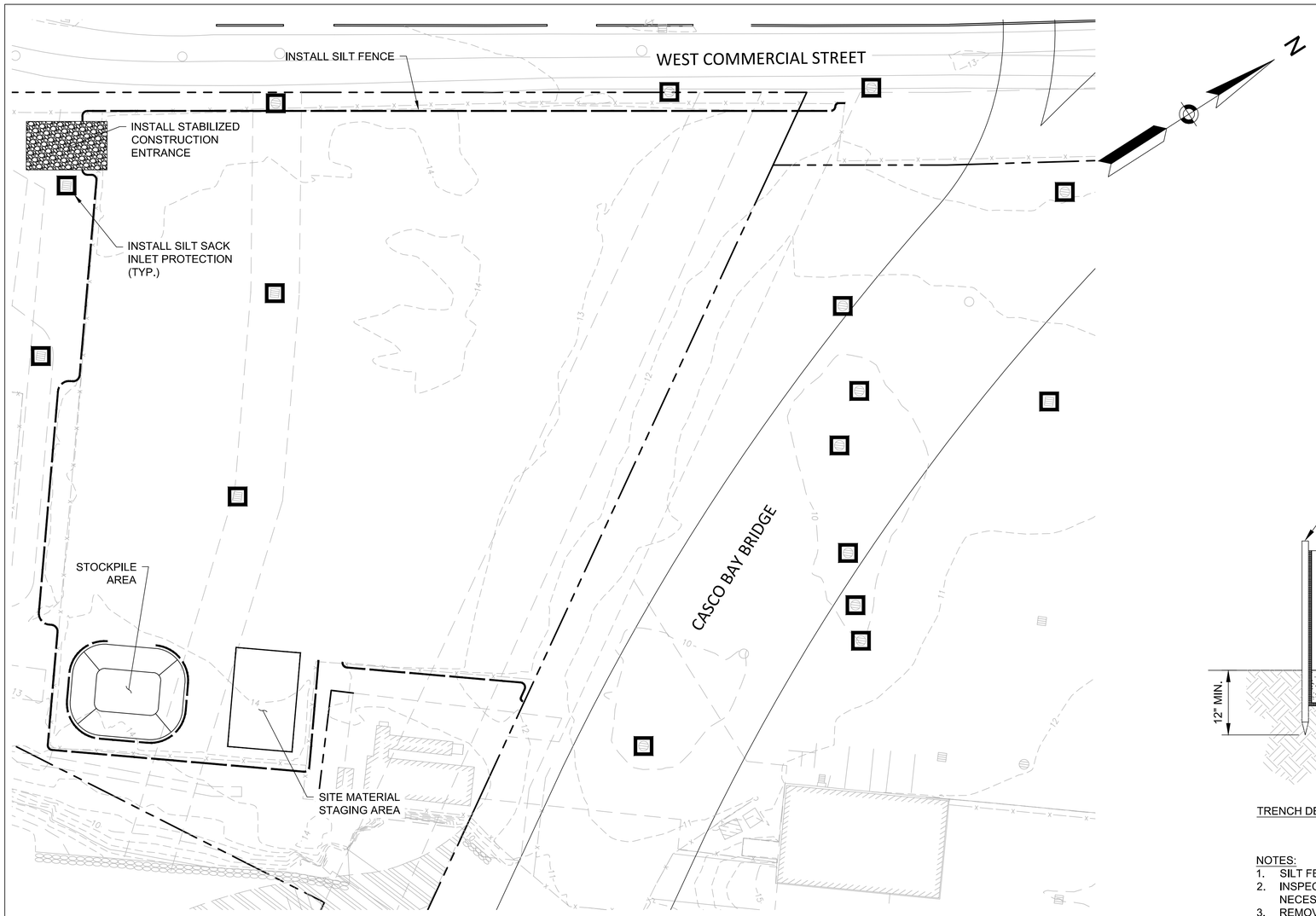
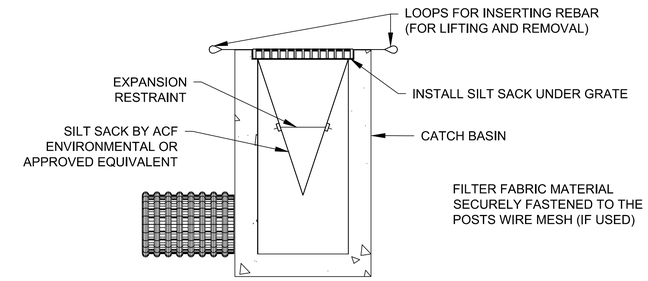
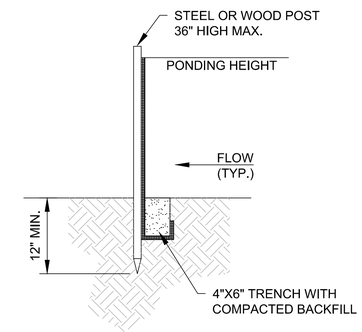




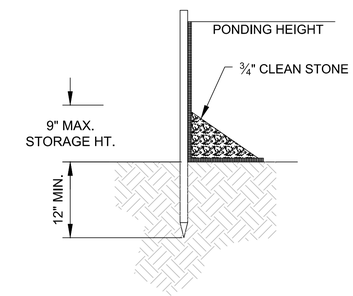
NOTES:
1. INSTALL SILTSACK PER MANUFACTUREER'S RECOMENDATIONS.
2. SILTSACKS SHALL BE CHECKED FOR SEDIMENT LEVEL AND OVERALL CONDITION IMMEDIATELY AFTER EVERY RAIN EVENT AND AT LEAST EVERY DAY DURING PROLONGED RAINFALL.
3. SEDIMENT SHALL BE REMOVED WHEN THE SEDIMENT HAS ACCUMULATED TO 1/2 THE DESIGN DEPTH OF THE SILTSACK. REMOVED SEDIMENT SHALL BE DISPOSITED IN A SUITABLE AREA AND IN SUCH A MANNER THAT WILL NOT ERODE.
4. SEDIMENT SHALL ONLY BE REMOVED BY REMOVING THE SILTSACKS FROM THE CATCH BASINS ACCORDING TO MANUFACTUREER RECOMENDATIONS.
5. CARE SHALL BE TAKEN TO AVOID SPILLING SEDIMENT WHILE REMOVING THE SILTSACK.
6. ANY DAMAGED SILTSACK SHALL BE REPLACED WITH A NEW SILTSACK.

INLET PROTECTION - SILTSACK

NOT TO SCALE



TRENCH DETAIL

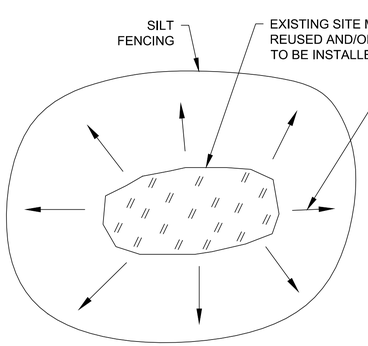


LEDGE, FROZEN GROUND, HEAVY ROOTS
INSTALLATION WITHOUT TRENCHING

NOTES:
1. SILT FENCE SHALL BE PLACED ON SLOPE CONTOURS TO MAXIMIZE PONDING EFFICIENCY.
2. INSPECT AND REPAIR FENCE AFTER EACH STORM EVENT AND REMOVE SEDIMENT WHEN NECESSARY. 9" MAXIMUM RECOMMENDED STORAGE HEIGHT.
3. REMOVED SEDIMENT SHALL BE DEPOSITED TO AN AREA THAT WILL NOT CONTRIBUTE SEDIMENT OFF-SITE AND CAN BE PERMANENTLY STABILIZED.
4. DO NOT PLACE SILT FENCE IN STREAMS OR CONCENTRATED FLOW CONDITIONS.

SILT FENCE DETAIL

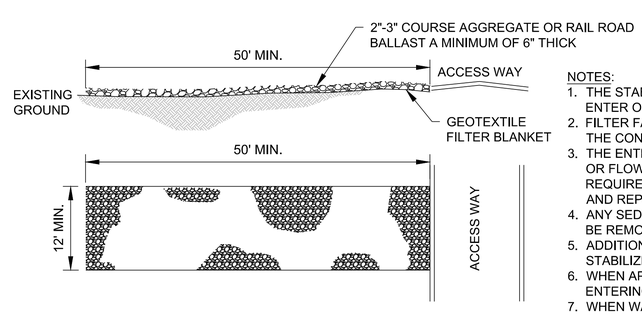
NOT TO SCALE



NOTES:
1. ALL EXISTING EXCAVATED MATERIAL THAT IS NOT TO BE REUSED IN THE WORK IS TO BE IMMEDIATELY REMOVED FROM THE SITE AND PROPERLY DISPOSED OF.
2. SOIL/AGGREGATE STOCKPILE SITES TO BE WHERE SHOWN ON THE DRAWINGS.
3. RESTORE STOCKPILE SITES TO PRE-EXISTING PROJECT CONDITION AND RESEED AS REQUIRED.
4. STOCKPILE HEIGHTS MUST NOT EXCEED 35'. STOCKPILE SLOPES MUST BE 2:1 OR FLATTER.

STOCKPILE AREA DETAIL

NOT TO SCALE



NOTES:
1. THE STABILIZED CONSTRUCTION ENTRANCE SHALL BE LOCATED WHERE TRAFFIC WILL ENTER OR LEAVE THE CONSTRUCTION SITE ONTO A PUBLIC STREET.
2. FILTER FABRIC OR COMPACTED CRUSHER RUN STONE SHALL BE USED AS A BASE FOR THE CONSTRUCTION ENTRANCE.
3. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC STREETS OR EXISTING PAVEMENT. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS WARRANT AND REPAIR OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.
4. ANY SEDIMENT SPILLED, DROPPED, WASHED, OR TRACKED ONTO PUBLIC STREETS MUST BE REMOVED IMMEDIATELY.
5. ADDITIONAL EROSION CONTROL MEASURES SHALL BE INSTALLED IN ORDER TO TRAP AND STABILIZE ANY SEDIMENT THAT RUNS OFF OF THE STABILIZED CONSTRUCTION ENTRANCE.
6. WHEN APPROPRIATE, WHEELS MUST BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTERING A PUBLIC STREET.
7. WHEN WASHING IS REQUIRED, IT SHALL BE DONE IN AN AREA STABILIZED WITH CRUSHED STONE WHICH DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN.

STABILIZED CONSTRUCTION ENTRANCE DETAIL

NOT TO SCALE

0 40 100 160
SCALE: 1" = 40'

PERMIT DRAWINGS
NOT FOR CONSTRUCTION
SUBMITTED DATE: AUGUST 18, 2023

Jacobs

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

APPROVED | DATE
COMMISSIONER:
CHIEF ENGINEER:

PROJECT INFORMATION

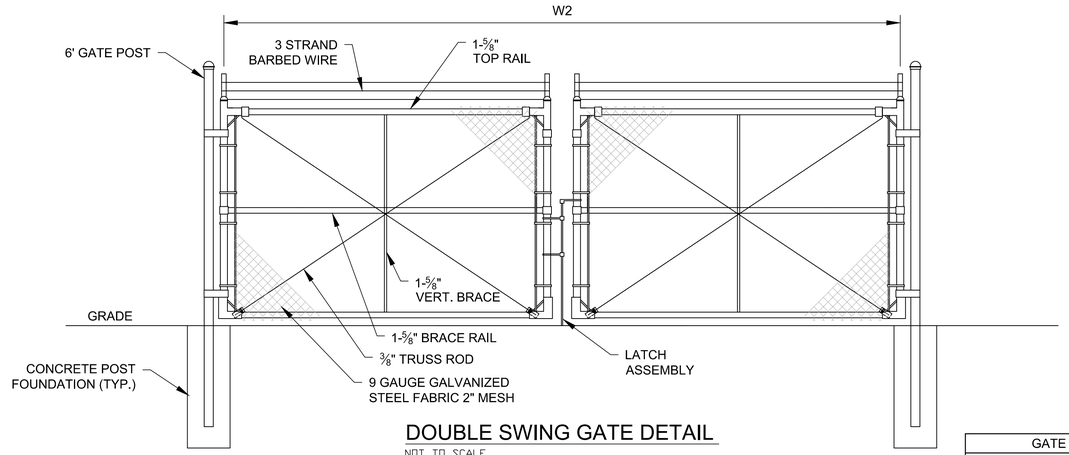
PROGRAM		SIGNATURE	
PROJECT MANAGER	C. MORIN	P.E. NUMBER	
DESIGNER	C. MAGUIRE		
CONSULTANT		DATE	
PROJECT RESIDENT			
CONTRACTOR			
PROJECT COMPLETION DATE			

PORT INFRASTRUCTURE DEVELOPMENT PROGRAM (PIDP) GRANT
PRIORITY PROJECTS DESIGN & CONSTRUCTION PHASE SERVICES
PORTLAND, ME CUMBERLAND, COUNTY

SOIL EROSION & SEDIMENT CONTROL PLAN

SHEET NUMBER
C-501
10 0F 24

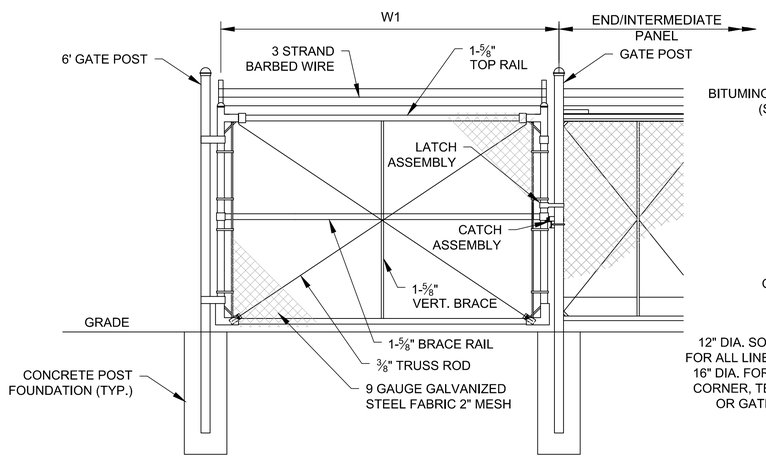
File: C:\users\maguirc\appdata\local\bentley\projectwise\jacobs-americas-01\a010591\7E2X93900_C-501(SEC PlanPermit) ; Plotted: 8/17/2023 4:32 PM by MAGUIRE, CASEY ; Saved: 8/17/2023 10:13 AM by MAGUIRC



DOUBLE SWING GATE DETAIL

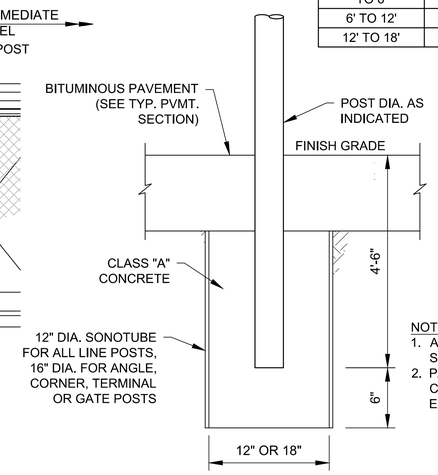
NOT TO SCALE

GATE WIDTH		GATE POST O.D.
W1	W2	
TO 6'	TO 12'	3"
6' TO 12'	12' TO 24'	4"
12' TO 18'	24' TO 36'	6"



SINGLE SWING GATE DETAIL

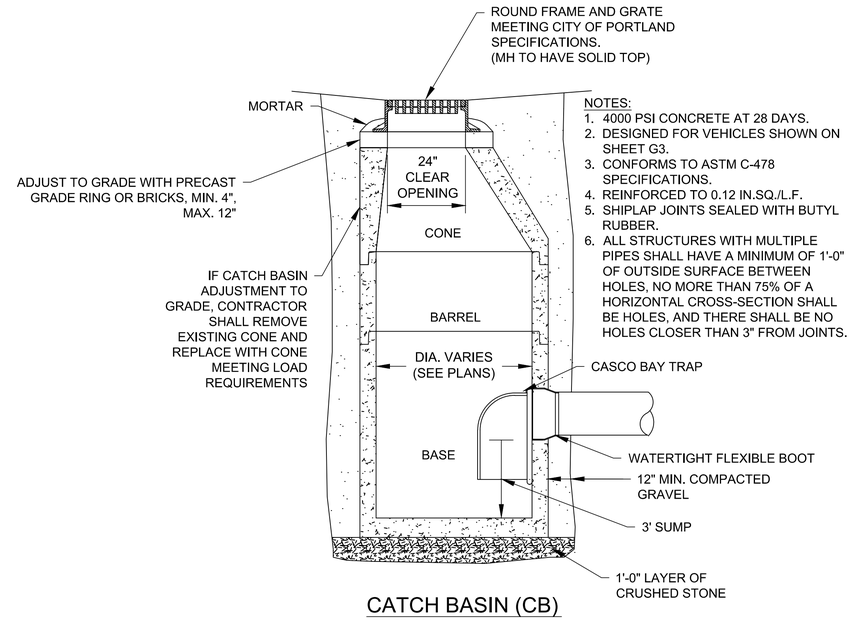
NOT TO SCALE



NOTES:
1. ALL POSTS ARE NOMINAL PIPE SIZE, SCHEDULE 40, GALVANIZED STEEL.
2. PATCH ALL PAVEMENT (FOLLOWING CURING OF CONCRETE BASES) TO MATCH EXISTING MATERIAL AND THICKNESS.

FENCE/GATE POST DETAIL

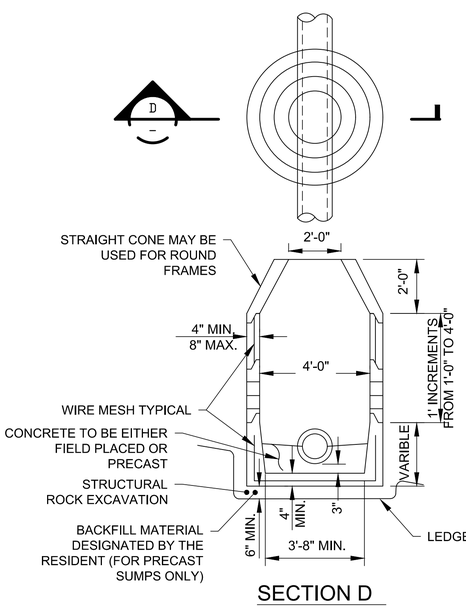
NOT TO SCALE



NOTES:
1. 4000 PSI CONCRETE AT 28 DAYS.
2. DESIGNED FOR VEHICLES SHOWN ON SHEET G3.
3. CONFORMS TO ASTM C-478 SPECIFICATIONS.
4. REINFORCED TO 0.12 IN.SQ./L.F.
5. SHIPLAP JOINTS SEALED WITH BUTYL RUBBER.
6. ALL STRUCTURES WITH MULTIPLE PIPES SHALL HAVE A MINIMUM OF 1'-0" OF OUTSIDE SURFACE BETWEEN HOLES, NO MORE THAN 75% OF A HORIZONTAL CROSS-SECTION SHALL BE HOLES, AND THERE SHALL BE NO HOLES CLOSER THAN 3" FROM JOINTS.

CATCH BASIN (CB)

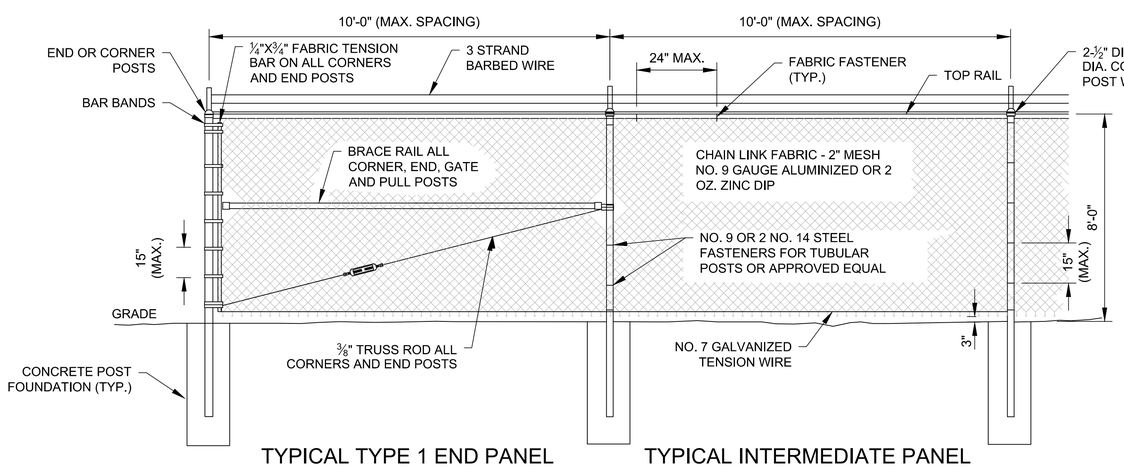
NOT TO SCALE



SECTION D

TYPICAL DRAINAGE MANHOLE DETAIL

NOT TO SCALE



NOTES:
1. TYPE I BRACING WILL BE USED AT CORNER AND END POSTS.
2. CONCRETE FOR POST FOUNDATIONS SHALL BE CLASS "A".
3. ALL POSTS SHALL BE SET IN CONCRETE.
4. CHAIN LINK FENCE SHALL BE INSTALLED WITH BARBS DOWN.
5. ALL COMPONENTS OF CHAIN LINK FENCE SHALL BE HDG STEEL IN ACCORDANCE WITH AASHTO M181.
6. FASTEN STEEL FABRIC FROM EXISTING FENCE TO NEW POST WHERE REQUIRED.

TYPICAL TYPE 1 END PANEL

TYPICAL INTERMEDIATE PANEL

TYPICAL CHAIN LINK FENCE

NOT TO SCALE

PERMIT DRAWINGS
NOT FOR CONSTRUCTION
SUBMITTED DATE: AUGUST 18, 2023

Jacobs

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

APPROVED | DATE
COMMISSIONER:
CHIEF ENGINEER:

PROJECT INFORMATION		SIGNATURE	DATE
PROGRAM			
PROJECT MANAGER	C. MORIN	P.E. NUMBER	
DESIGNER	C. MAGUIRE		
CONSULTANT			
PROJECT RESIDENT			
CONTRACTOR			
PROJECT COMPLETION DATE			

PORT INFRASTRUCTURE DEVELOPMENT PROGRAM (PIDP) GRANT
PRIORITY PROJECTS DESIGN & CONSTRUCTION PHASE SERVICES
PORTLAND, ME CUMBERLAND, COUNTY

DETAIL SHEET - 1

SHEET NUMBER
C-502

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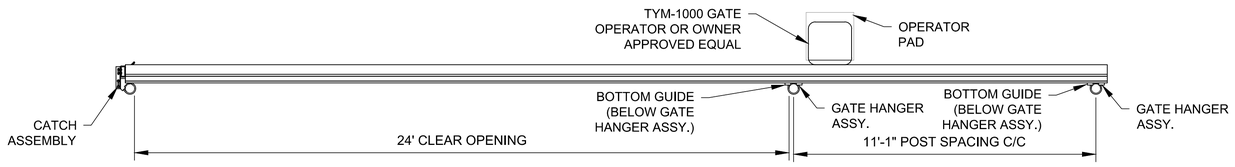
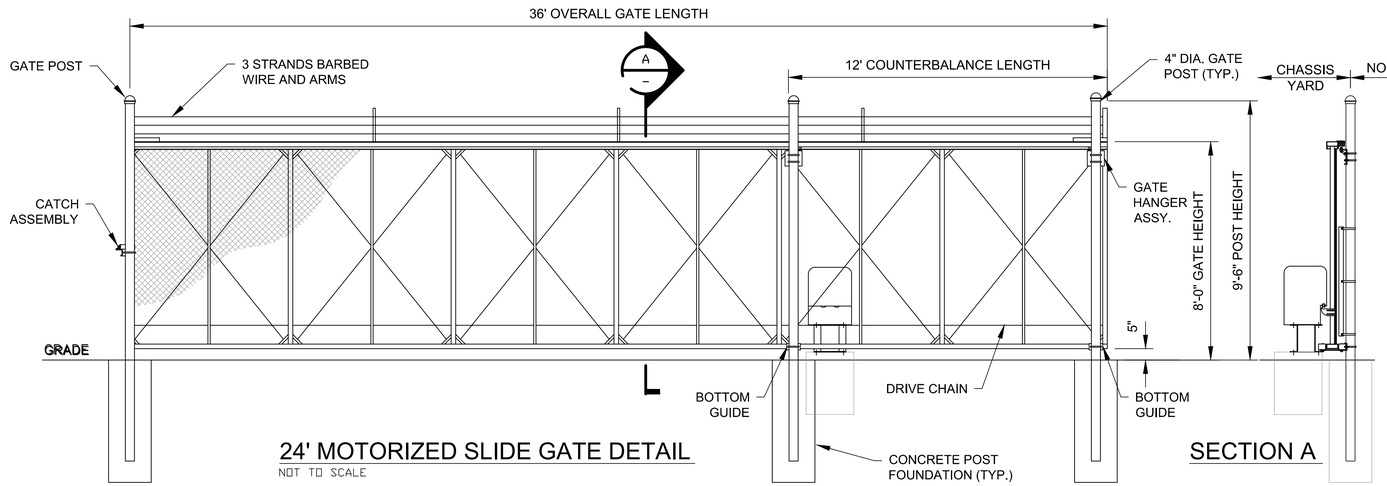


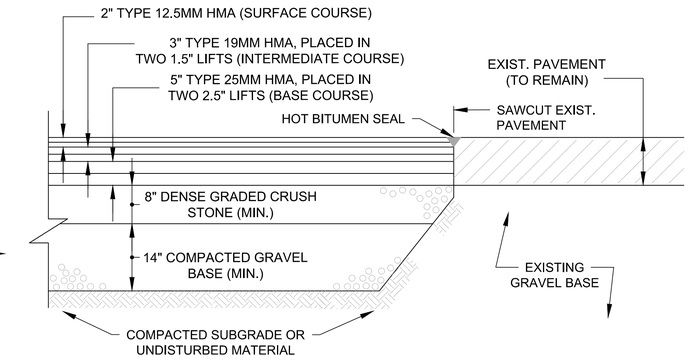
PLAN



24' MOTORIZED SLIDE GATE DETAIL

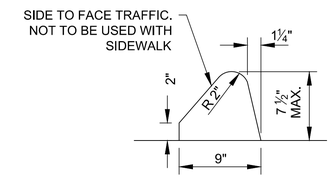
NOT TO SCALE

SECTION A



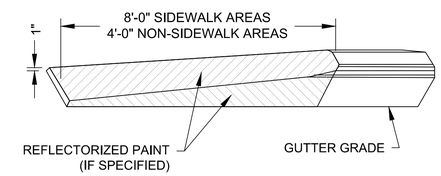
BITUMINOUS CONCRETE PAVEMENT DETAIL

NOT TO SCALE



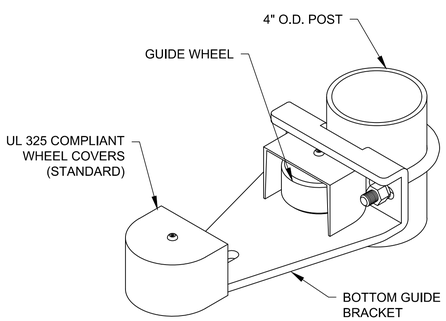
BIT. CONC. CURB DETAIL

NOT TO SCALE



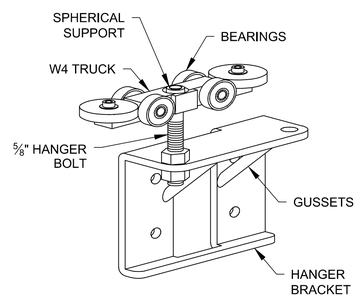
TRANSITION CURB DETAIL

NOT TO SCALE



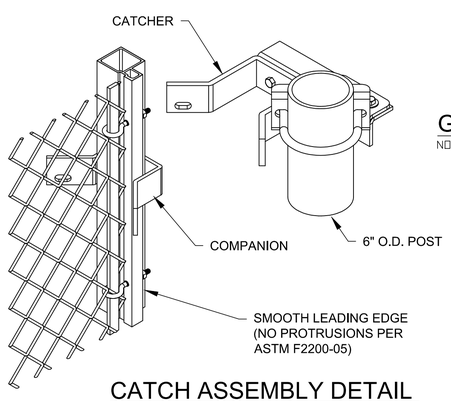
BOTTOM GUIDE DETAIL

NOT TO SCALE



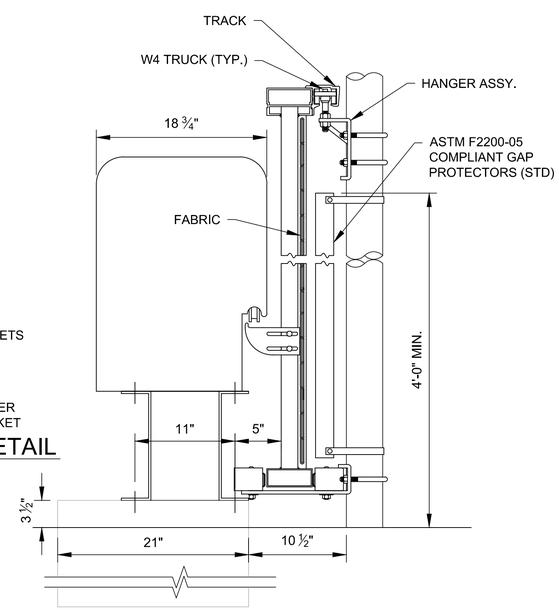
GATE HANGER ASSEMBLY DETAIL

NOT TO SCALE



CATCH ASSEMBLY DETAIL

NOT TO SCALE



ENLARGED SECTION

NOT TO SCALE

PERMIT DRAWINGS
NOT FOR CONSTRUCTION
SUBMITTED DATE: AUGUST 18, 2023

Jacobs

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

APPROVED | DATE
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CHIEF ENGINEER:

PROJECT INFORMATION

PROGRAM		SIGNATURE	
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DESIGNER	C. MAGUIRE	P.E. NUMBER	
CONSULTANT			
PROJECT RESIDENT		DATE	
CONTRACTOR			
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PORT INFRASTRUCTURE DEVELOPMENT PROGRAM (PIDP) GRANT
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CUMBERLAND, COUNTY
PORTLAND, ME

DETAIL SHEET - 2

SHEET NUMBER
C-503

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DESIGN CRITERIA:

1. DESIGN CODE AND STANDARDS:
   MAINE UNIFORM BUILDING CODE (MUBC)
   2015 INTERNATIONAL BUILDING CODE
   ASCE 7-10: MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES
2. DEAD LOAD:
   SELF WEIGHT:
   - STRUCTURAL STEEL — 490 PCF
   - CONCRETE — 150 PCF
   - GRATING — 10 PSF
3. LIVE LOAD:
   - ROOF — 20 PSF
   - ELEVATED FLOORS — 60 PSF
   - FIRST FLOOR (SLAB-ON-GRADE) — 100 PSF
   - STAIRS:
     - UNIFORM — 100 PSF
     - CONCENTRATED — 300 LB
   - RAILINGS (APPLIED IN ANY DIRECTION):
     - CONCENTRATED — 200 LB
     - DISTRIBUTED — 50 LB/FT
     - INTERMEDIATE RAILS — 50 LB/FT
4. SNOW LOAD:
   - Is — 1
   - Pg — 50 PSF
   - Ce — 0.8
   - Ct — 1.2
   - Pf — 34 PSF
5. ICE LOAD:
   APPLIED PER ASCE 7-10 SECTION 10.8
6. WIND LOAD:
   - BASIC WIND SPEED (3-SECOND GUST) — 120 MPH
   - BUILDING RISK CATEGORY — II
   - EXPOSURE CATEGORY — D
7. SEISMIC LOAD
   - Ie — 1
   - SITE CLASS — D
   - Ss — 0.241
   - S1 — 0.078
8. IMPACT LOAD (PER "A RATIONAL METHOD TO DESIGN VEHICLE BARRIERS")
   - ASSUMED GANTRY SPEED — 1.4 MPH (2.0 FPS)
   - ASSUMED TOTAL WEIGHT — 119 KIPS

GENERAL CONSTRUCTION:

1. PRIOR TO FABRICATION AND CONSTRUCTION, THE CONTRACTOR SHALL VERIFY EXISTING ELEVATIONS AND DIMENSIONS ASSOCIATED WITH THE WORK. ALL OMISSIONS OR CONFLICTS BETWEEN VARIOUS ELEMENTS OF THE CONTRACT DRAWINGS AND/OR SPECIFICATIONS SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE OWNER PRIOR TO PROCEEDING WITH RELATED WORK.
2. THE CONTRACTOR SHALL COORDINATE WITH THE OWNER TO LOCATE ALL EXISTING UNDERGROUND UTILITIES AND BURIED ITEMS PRIOR TO CONSTRUCTING FOUNDATIONS.
3. THE STRUCTURAL DRAWINGS REPRESENT THE FINISHED STRUCTURE AND DO NOT INDICATE THE METHOD OF CONSTRUCTION. CONSTRUCTION LOADS SHALL NOT EXCEED THE DESIGN LIVE LOADS.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL WORK RELATED TO CONSTRUCTION, ERECTION METHODS, BRACING, SHORING, RIGGING, GUYS, SCAFFOLDING, FORMWORK, ETC. REQUIRED TO SAFELY PERFORM THE WORK.
5. STRUCTURAL MEMBERS SHALL NOT BE CUT (FOR CONDUITS, PIPES, ETC.) UNLESS NOTED OTHEREWISE OR APPROVED IN WRITING BY THE ENGINEER.

DIMENSIONS:

1. STRUCTURAL DRAWINGS SHALL NOT BE SCALED. REFERENCE SCALES INDICATED ON THE DRAWINGS ARE INTENDED FOR INFORMATION USE ONLY AND SHALL NOT BE USED TO DETERMINE SPECIFIC DIMENSIONS OR QUANTITY OF MATERIALS.
2. ALL COLUMNS, FOOTINGS, OR OTHER FOUNDATION ELEMENTS SHALL BE CENTERED ON GRID LINES, UNLESS NOTED OTHERWISE.
3. DIMENSIONS SHOWN ARE TO THE CENTERLINE OF MEMBERS OR EDGE OF FLOORS, UNLESS NOTED OTHERWISE.

CONCRETE:

1. ALL CONCRETE MUST CONFORM TO THE REQUIREMENTS OF THE FOLLOWING, UNLESS OTHERWISE SPECIFIED:

   ACI 301: SPECIFICATIONS FOR STRUCTURAL CONCRETE
   ACI 318; BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE

2. CONCRETE: f_c = 5,000 PSI AT 28 DAYS, NORMAL WEIGHT

   2.1. TYPE II LOW ALKALI CEMENT, MINIMUM 674 POUNDS PER CUBIC YARD OF CEMENTITIOUS MATERIAL.
   2.2. FLY ASH CLASS F MUST COMPRISE NO LESS THAN 15-PERCENT AND NO MORE THAN 25-PERCENT OF THE TOTAL WEIGHT OF THE CEMENTITIOUS MATERIAL.
   2.3. GROUND GRANULATED BLAST-FURNACE SLAB MAY BE USED IN LIEU OF FLY ASH, UP TO 50-PERCENT OF TOTAL CEMENTITIOUS CONTENT BY WEIGHT.
   2.4. COURSE AGGREGATE: 1½-INCH MAXIMUM, UNIFORMLY GRADED, NON-SILICA REACTIVE.
   2.5. WATER/CEMENT RATIO: 0.40 MAXIMUM
   2.6. AIR CONTENT: 5.5-PERCENT ± 1.5-PERCENT

3. EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED 3/4 X 3/4 INCH, UNLESS NOTED OTHERWISE.
4. ROUGHEN AND SATURATE SURFACE DRY CONSTRUCTION JOINTS PRIOR TO PLACING ADJACENT CONCRETE.
5. THE CONTRACTOR SHALL COORDINATE SIZE AND LOCATION OF EMBEDDED ITEMS, OPENINGS, SLEEVES, INSERTS, DOWELS, DEPRESSIONS, CURBS, PITS, CONDUITS, ETC. WITH MECHANICAL AND ELECTRICAL DRAWINGS, AND EQUIPMENT FURNISHED PRIOR TO PLACEMENT OF CONCRETE.
6. CONDUITS, PIPES, DUCTS, OR SLEEVES SHALL NOT BE EMBEDDED WITHIN SLABS, UNLESS SPECIFICALLY INDICATED ON THE DRAWINGS. EMBEDDED ALUMINUM CONDUITS AND PIPES SHALL NOT BE PERMITTED.

REINFORCING STEEL:

1. REINFORCING MUST BE DETAILED, FABRICATED, AND PLACED IN ACCORDANCE WITH THE FOLLOWING:

   ACI SP-66: ACI DETAILING MANUAL
   CRSI MSP-1: MANUAL OF STANDARD PRACTICE.

2. REINFORCING STEEL MUST CONFORM TO ASTM A615, GRADE 60 (F_y = 60,000 PSI), DEFORMED AND EPOXY COATED PER ASTM A775.
3. PROVIDE NO LESS THAN 3-INCHES CONCRETE COVER OVER REINFORCING STEEL, UNLESS NOTED OTHERWISE.
4. REINFORCING BAR HOOKS INDICATED ON THE DRAWINGS MUST CONFORM TO ACI STANDARD HOOKS REQUIREMENTS OF ACI 318, UNLESS NOTED OTHERWISE.
5. THE CONTRACTOR MUST NOT CUT OR FIELD BEND REINFORCING STEEL UNLESS NOTED OTHERWISE.

   5.1. AT LOCATIONS OF CONFLICT, SPREAD THE REINFORCEMENT TO ACCOMMODATE PLACEMENT. ADD ADDITIONAL BARS IF NECESSARY TO MAINTAIN SPACING REQUIREMENTS.

6. WELDING OF REINFORCING STEEL IS NOT PERMITTED.
7. REINFORCING STEEL LAP SPLICES SHALL BE IN ACCORDANCE WITH THE FOLLOWING TABLES, UNLESS NOTED OTHERWISE.

   7.1. NO MORE THAN 50-PERCENT OF REINFORCING STEEL BARS ARE ALLOWED TO BE SPLICED AT ANY ONE LOCATION. STAGGER SPLICES OF ADJACENT BARS NO LESS THAN ONE LAP LENGTH CENTER TO CENTER.
   7.2. BARS IN A LAP SPLICE MUST BE SECURELY TIED TOGETHER.

BAR SIZE	LAP LENGTH
#4	28"
#5	34"
#6	41"
#7	59"
#8	84"
#9	94"
#10	106"
#11	117"

GRATING

1. GRATING SHALL CONSIST OF PULTRUDED FIBERGLASS, I-BAR OR T-BAR, WITH 1/2" CLEAR MAXIMUM OPENINGS BETWEEN BEARING BARS, MEDIUM GRIT SURFACE
2. LANDINGS GRATING: 2" HEIGHT, COLOR GRAY
3. STAIR TREADS: 1½" HEIGHT, COLOR YELLOW
4. ATTACH TO FRAMING WITH STAINLESS STEEL FASTENERS.
5. EXTEND GRATING TO 6-INCHES BEYOND CENTERLINE OF SUPPORTING BEAM FLANGES, UNLESS NOTED OTHERWISE.
6. SEE DESIGN CRITERIA FOR LIVE LOAD.

STRUCTURAL STEEL:

1. ALL STRUCTURAL STEEL SHALL BE DETAILED, FABRICATED, AND ERECTED IN ACCORDANCE WITH THE FOLLOWING, UNLESS OTHERWISE SPECIFIED:

   1.1. AISC 360: SPECIFICATIONS FOR STRUCTURAL STEEL BUILDINGS;
   1.2. AISC 303: CODE OF STANDARD PRACTICE FOR STEEL BUILDING AND BRIDGES;
   1.3. RCSC: SPECIFICATION FOR STRUCTURAL JOINTS USING HIGH-STRENGTH BOLTS;
   1.4. AWS D1.1: STRUCTURAL WELDING CODED -STEEL

2. STRUCTURAL SHAPES AND PLATES:

W-SHAPES	ASTM A992	50 KSI
ANGLES AND CHANNELS	ASTM A36	36 KSI
PIPES	ASTM A53, GRADE B	35 KSI
PLATES	ASTM A36	36 KSI

   ALL STRUCTURAL STEEL SHALL BE HOT-DIPPED GALVANIZED PER ASTM A123.

3. FASTENERS:
   - HIGH-STRENGTH BOLTS — ASTM F3125, GRADE A325
   - TWIST-OFF TENSION CONTROL (TC) BOLTS — ASTM F1852, TYPE 1
   - DIRECT TENSION INDICATORS (DTIs) — ASTM F959
   - NUTS — ASTM A563
   - WASHERS — ASTM F436
   - ANCHOR BOLTS/RODS — ASTM F1554, GRADE 55
   - WELDING FILLER METAL — E70XX

   ALL FASTENERS SHALL BE HOT-DIPPED GALVANIZED HARDWARE PER ASTM A153.

4. UNLESS NOTED OTHERWISE SNUG-TIGHTEN ALL CONNECTIONS IN ACCORDANCE WITH RCSC SPECIFIATION FOR STRUCTURAL JOINTS USING HIGH-STRENGH BOLTS.

   4.1. PRETENSION ALL BOLTS UNLESS NOTED OTHERWISE.

5. WELDING:

   5.1. WELDING MUST BE PERFORMED IN ACCORDANCE WITH AWS D1.1, WELDING PROCEDURE SPECIFICATION (WPS). WPS NOT PREQUALIFIED BY AWS SHALL BE QUALIFIED IN ACCORDANCE WITH AWS D1.1 PRIOR TO USE ON THE PROJECT. WELDERS SHALL BE QUALIFIED FOR EACH WPS USED ON THE PROJECT BY AN AWS CERTIFIED TESTING AGENCY AND IN ACCORDANCE WITH AWS D1.1.

   5.2. WELDING MUST BE PERFORMED IN THE FABRICATION SHOP TO THE MAXIMUM EXTENT POSSIBLE. SHOP DRAWINGS MUST CLEARLY DISTINGUISH BETWEEN SHOP AND FIELD WELDS.

   5.3. ALL WELDS MUST BE VISUALLY INSPECTED BY A CERTIFIED WELDING INSPECTOR. NONDESTRUCTIVE EXAMINATION MUST BE PERFORMED ON NO LESS THAN 10-PERCENT OF WELDS AS SPECIFIED.

6. ALL BEAMS MSUT BE ERECTED WITH THE NATURAL CAMBER UPWARDS.
7. OPEN ENDS OF PIPE AND HSS MEMBERS MUST HAVE CLOSURE PLATES, SEAL WELDED ALL AROUND.
8. HOLES OR OPENINGS SHALL NOT BE CUT IN ANY STRUCTURAL MEMBER UNLESS SPECIFICALLY DETAILED OR APPROVED IN WRITING BY THE ENGINEER.
9. BASE PLATE HOLES AND PLATE WASHERS FOR ANCHOR RODS MUST BE IN ACCORDANCE WITH TABLE 14-2 OF AISC 360.
10. THE CONTRACTOR MSUT PROVIDE ALL TEMPORARY GUYING AND BRACING NECESSARY TO ERECT, STABILIZE, AND MAINTAIN ALL STEEL MEMBERS IN PROPER ALIGNMENT UNTIL ALL DECK, PERMANENT BRACING, WELDED CONNECTIONS, ETC. ARE IN PLACE. COLUMN ANCHOR BOLTS ARE NOT DESIGNED TO PROVIDE TEMPORARY STABILITY FOR COLUMNS DURING STEEL ERECTION. PLACE NON-SHRINK GROUT BELOW ALL COLUMN BASE PLATES BEFORE OR APPLYING LOAD TO THE STRUCTURE.
11. ALL STRUCTURAL STEEL MUST BE HOT-DIPPED GALVANIZED, APPLIED AFTER FABRICATION.

    11.1. PAINT THE OUTER FACE/FLANGE OF THE COLUMNS WITH 1-COAT POLYAMIDOAMINE EPOXY, COLOR YELLOW, AFTER GALVANIZING.

SUSPENDED LOADS:

1. SUSPENDED LOADS ATTACHED TO A BOTTOM BEAM FLANGE MAY BE ACCOMPLISHED USING BEAM "C-CLAMPS" FOR LOADS LESS THAN 400 POUNDS. FOR LOADS GREATER THAN 400 POUNDS, SUSPENDED LOADS SHALL BE APPLIED IN A MANNER THAT DOES NOT IMPOSE ECCENTRIC LOADS UPON THE BEAM BY USING CONCENTRIC STEEL BEAM CLAMPS, WELDED PLATES, OR SIMILAR ATTACHMENT METHODS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CONNECTION SYSTEM. PROPRIETARY CONNECTIONS SHALL BE INSTALLED IN COMPLETE ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

STEEL ROOF DECK:

1. ALL STEEL ROOF DECK SHALL BE DETAILED, FABRICATED, AND ERECTED IN ACCORDANCE WITH THE FOLLOWING, UNLESS OTHERWISE SPECIFIED:

   SDI; DESIGN MANUAL FOR COMPOSITE DECKS, FORM DECKS, AND ROOF DECKS, NOVEMBER 2007
   SDI; DIAPHRAGM DESIGN MANUAL THIRD EDITION, SEPTEMBER 2004
   ANSI/SDI RD1.0-2006; STANDARD FOR STEEL ROOF DECK
   AWS D1.3-98; STRUCTURAL WELDING CODE - SHEET STEEL

2. MINIMUM ROOF DECK PROPERTIES:
   - DEPTH — 1½"
   - DECK TYPE — TYPE B
   - GAGE — 20
   - YIELD STRENGTH, MINIMUM — 33 KSI
   - I (in^4 / ft) — 0.201 MINIMUM
   - S_p (in^3 / ft) — 0.234
   - S_n (in^3 / ft) — 0.247
   - FINISH — GALVANIZED, G60
3. ROOF DECK ATTACHMENT:

   ALLOWABLE SUPPORT FASTENERS:

   POWER-ACTUATED FASTENERS
   5/8-INCH DIAMETER ARC PUDDLE WELDS, VISIBLE

   - SUPPORTS — 36 / 4 PATTERN
   - SUPPORTS PARALLEL TO DECK — 12" MAXIMUM
   - SIDE LAPS — #10 SCREWS AT 12" MAXIMUM OC
   - ALLOWABLE DIAPHRAGM SHEAR — 350 PLF
4. LOADS SUSPENDED FORM THE ROOF DECK WILL NOT BE PERMITTED
5. ROOF DECK SHEETS MUST HAVE LAPPED ENDS AND EDGES, 2-INCHES MINIMUM.
6. ROOF DECK BEARING MUST BE NO LESS THAN 2-INCHES ON SUPPORTS.

CODE ANALYSIS: - REEFER RACK

1. RISK CATEGORY (ASCE TABLE 1.5-1/IBC TABLE 1604.5) — I
2. OCCUPANCY GROUP CLASSIFICATION (MUBC 312.1) — U - UTILITY AND MISCELLANEOUS (REEFER RACKS)
3. TYPE OF CONSTRUCTION (MUBC 602.2): — IIB (NON-COMBUSTIBLE)
4. ALLOWABLE BUILDING HEIGHT (MUBC TABLE 504.3): — 55 FT
   ACTUAL BUILDING HEIGHT: — 48 FT
5. ALLOWABLE NUMBER OF STORIES (MUBC TABLE 504.4): — 2
   PROVIDED: — 5
6. ALLOWABLE BUILDING AREA (IBC TABLE 506.2): — 8,500 SF
   AREA MODIFICATION INCREASE: — N/A
   ACTUAL BUILDING AREA: — 467 SF / LEVEL
   2,334 SF TOTAL
7. FIRE RESISTANCE RATING (MUBC TABLES 601 & 602): — 0 HOURS
8. OCCUPANT LOAD (MUBC TABLE 1004.1.2):
   INDUSTRIAL AREAS - (REEFER RACKS) - (100 SF / PERSON, GROSS): 30 OCCUPANTS
   ACTUAL NUMBER OF OCCUPANTS: NOT OCCUPIED, TEMPORARY ACCESS ONLY FOR SERVICE AND MAINTENANCE OF CONTAINERS
9. EXIT REQUIREMENTS (MUBC CH. 10):

	REQUIRED	PROVIDED
NUMBER OF EXITS REQUIRED:	1	1
EGRESS WIDTH: - STAIRS:	36"	36"

10. MAX EXIT ACCESS TRAVEL DISTANCE: — 300 FT
    MAX COMMON PATH OF TRAVEL: — 100 FT
    MAX DEAD END CORRIDOR: — 20 FT
    MIN CORRIDOR WIDTH: — 32 IN

SPECIAL INSPECTION

SPECIAL INSPECTIONS MUST BE PERFORMED AND WITNESSED BY THE SPECIAL INSPECTOR. THE CONTRACTOR SHALL MAINTAIN ON SITE COPY OF THE SPECIAL INSPECTION LOG FOR EACH STRUCTURE. UPON COMPLETION OF EACH STRUCTURE, THE REPORTS MUST BE SUBMITTED TO OWNER AND THE MARYLAND PORTS ADMINISTRATION. THE CONTRACTOR MUST COORDINATE WITH THE PROJECT REPRESENTATIVE FOR THE INSPECTIONS AND SHALL PROVIDE ACCESS AND SUPPORT TO THE SPECIAL INSPECTOR TO PERFORM THE INSPECTIONS.

SPECIAL INSPECTIONS MUST BE PERFORMED IN ACCORDANCE WITH THE INTERNATIONAL BUILDING CODE AND THE SPECIFICATIONS FOR NO LESS THAN THE FOLLOWING ITEMS:

a. SOILS:
   - SUBGRADE PREPARATION
   - BASE PREPARATION
b. CONCRETE:
   - FORMS
   - REINFORCING STEEL
   - CONCRETE
c. STRUCTURAL STEEL:
   - FABRICATION
   - WELDING
   - ERECTIONS AND BOLTED CONNECTIONS
d. DRIVEN-DEEP FOUNDATIONS

PERMIT DRAWINGS
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PORT INFRASTRUCTURE DEVELOPMENT PROGRAM (PIDP) GRANT
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PORTLAND, ME — CUMBERLAND, COUNTY

REEFER RACK STRUCTURAL NOTES - 1

SHEET NUMBER
S-001

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EARTHWORK

1. SUBSURFACE GEOTECHNICAL DATA FOR THE SITE IS PROVIDED IN THE REPORT, "GEOTECHNICAL DATA REPORT, REEFER RACK DESIGN - INTERNATIONAL MARINE TERMINAL, PORTLAND MAINE," DATED DECEMBER 2022, AND PREPARED BY SCHONEWALD ENGINEERING ASSOCIATES, INC.

2. ALL FOUNDATION BEARING SURFACES SHALL BE OBSERVED BY A GEOTECHNICAL ENGINEER, OR DESIGNEE, TO VERIFY CONFORMANCE WITH THE CONTRACT DOCUMENTS. THE OBSERVATIONS SHALL BE MADE PRIOR TO PLACEMENT OF FORMS AND REINFORCING STEEL.

3. EXCAVATED MATERIALS MEETING THE REQUIREMENTS FOR MAINE DOT GRANULAR BORROW MAY BE STOCKPILED ON-SITE FOR REUSE IN BACKFILLING AND GRADING OPERATIONS.

4. GRANULAR BORROW SHALL BE FREE FROM TOPSOIL, ORGANIC CONTAMINATED SOIL, AND ROCK FRAGMENTS OR CONSTRUCTION DEBRIS HAVING A MAXIMUM SIZE GREATER THAN 4 INCHES. MATERIAL SHALL BE WELL GRADED SAND AND GRAVEL WITH NO MORE THAN 70% PASSING THE NO. 40 SIEVE AND NO MORE THAN 20% FINES (MATERIALS PASSING THE NO. 200 SIEVE).

5. GRANULAR BORROW SHALL BE PLACED IN LIFTS NOT EXCEEDING 10 INCHES IN THICKNESS AND COMPACTED TO 95% OF THE DRY DENSITY AS DETERMINED BY THE MODIFIED PROCTOR, ASTM D1557. IN CONFINED AREAS WHERE HAND COMPACTION EQUIPMENT IS USED, THE PLACED LIFTS' THICKNESS SHALL NOT EXCEED 6 INCHES.

6. THE UPPER 1-FOOT OF SUBGRADE SHALL BE PROOF ROLLED BY NO LESS THAN SIX (6) PASSES OF A 10 TON VIBRATORY ROLLER.

7. IF CONTAMINATED SOIL IS ENCOUNTERED, PERFORM SOIL SAMPLING AND TESTING AS REQUIRED FOR OFF-SITE REUSE OR DISPOSAL. SUBMIT A COPY OF THE LABORATORY REPORT CONTAINING ALL ANALYTICAL DATA AND A CONTAMINATED SOIL MANAGEMENT PLAN TO THE OWNER. MANAGEMENT, STOCKPILING, AND TRANSPORTING OF CONTAMINATED MATERIALS SHALL BE BY APPROPRIATELY TRAINED PERSONNEL AND IN ACCORDANCE WITH ALL APPLICABLE FEDERAL, STATE, AND LOCAL REGULATIONS. TRANSPORTER MANIFESTS AND APPROVED FACILITY DOCUMENTATION SHALL ALSO BE SUBMITTED TO THE CONTRACTING OFFICER.

STEEL PIPE PILES

1. ALL STEEL PIPE PILES SHALL BE CLOSE ENDED, AND CONFORM TO THE REQUIREMENTS OF ASTM A252, GRADE 3 (MOD), WITH A MINIMUM YIELD STRENGTH OF 50 KSI.

2. PILES SHALL BE FITTED WITH A CONICAL PILE CLOSURE.

3. CONTRACTOR SHALL PERFORM A WAVE EQUATION ANALYSIS (WEAP) FOR THE HAMMER PROPOSED FOR THE INSTALLATION OF THE PILES. THE HAMMER MUST BE CAPABLE OF DRIVING THE PILES TO ACHIEVE THE REQUIRED CAPACITY WITHOUT RESULTING IN OVERSTRESSING OF THE PILES DURING DRIVING. THE PROPOSED DRIVING CRITERIA AND HAMMER TYPE/SIZE, AS WELL AS THE WEAP ANALYSIS CALCULATIONS AE SUBJECT TO ENGINEER'S APPROVAL.

4. THE TEST PILES SHALL BE DRIVEN TO THE MINIMUM TIP ELEVATION OR REFUSAL, CONSISTING OF A DRIVING RESISTANCE THAT DOES NOT EXCEED 20 BLOW PER INCH FOR TWO CONSECUTIVE INCHES. DRIVING CRITERIA FOR PRODUCTION PILES SHALL BE DETERMINED BY THE ENGINEER FOLLOWING THE PILE LOAD TEST PROGRAM.

5. PILES AT CUT-OFF ELEVATIONS SHALL NOT DEVIATE LATERALLY FROM THE PLAN SHOWN ON THESE DRAWINGS BY MORE THAN 3 IN. MAXIMUM ALIGNMENT TOLERANCE AT PILES AXIS SHALL BE TWO PERCENT OF THE PILE LENGTH.

6. PIPE PILE EXTERIORS SHALL BE COATED WITH TWO 8-MIL COATS OF BITUMASTIC 300 M, BY CAROBLINE, WESTFIELD, NJ, OR APPROVED EQUAL. SURFACE PREPARATION - SSPC SP 10 NEAR WHITE BLAST CLEANING. PILE COATING SHALL BE APPLIED ON THE TOP 30 FT OF THE PILES.

7. TOUCH UP ALL COATING DAMAGE. DAMAGE WHICH WILL BE COVERED BY CONCRETE NEED NOT BE TOUCHED UP. THE COATING SHALL BE CONSIDERED DAMAGED WITHIN 2 INCHES OF ANY FIELD WELD, AND SHALL BE REPLACED EVEN IF NO DAMAGE IS APPARENT.

8. ALL SPLICES SHALL BE FULL PENETRATION BUTT WELDS, DEVELOPING THE FULL STRENGTH OF THE PILE IN AXIAL LOAD AND BENDING. NO FIELD SPLICES ARE PERMITTED, UNLESS CONTRACTOR IS DIRECTED OTHERWISE BY THE ENGINEER.

9. PULLING PILES INTO POSITION IS PROHIBITED.

10. JETTING OF PILES FOR INSTALLATION SHALL NOT BE PERMITTED.

PILE DYNAMIC LOAD TESTING

1. PRIOR TO PRODUCTION PILE DRIVING, CONTRACTOR SHALL PERFORM DYNAMIC LOAD TESTING, AS INDICATED ON THE DRAWINGS. THE LOAD TESTING PROCEDURES SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF ASTM D4945.

2. DYNAMIC PILE TESTING SHALL CONSIST OF PDA (CASE METHOD) / CAPWAP ANALYSES FOR INITIAL DRIVING AND RESTRIKING OF THE PILES. ALL DYNAMIC TEST PILES SHALL BE RESTRIKED.

3. THE MINIMUM ULTIMATE PILE CAPACITY BASED ON THE DYNAMIC TESTING RESULTS (PDA PER THE CASE METHOD AND CAPWAP ANALYSIS) SHALL BE 2 TIMES THE WORKING LOAD AS SHOWN ON THE PILE SCHEDULE.

PERMIT DRAWINGS
NOT FOR CONSTRUCTION
SUBMITTED DATE: AUGUST 18, 2023

Jacobs

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

APPROVED | DATE

COMMISSIONER:

CHIEF ENGINEER:

SIGNATURE

P.E. NUMBER

DATE

PROJECT INFORMATION

PROGRAM	
PROJECT MANAGER	C. MORIN
DESIGNER	C. MAGUIRE
CONSULTANT	
PROJECT RESIDENT	
CONTRACTOR	
PROJECT COMPLETION DATE	

PORT INFRASTRUCTURE DEVELOPMENT PROGRAM (PIDP) GRANT
PRIORITY PROJECTS DESIGN & CONSTRUCTION PHASE SERVICES
PORTLAND, ME CUMBERLAND, COUNTY

REEFER RACK STRUCTURAL NOTES - 2

SHEET NUMBER

S-002

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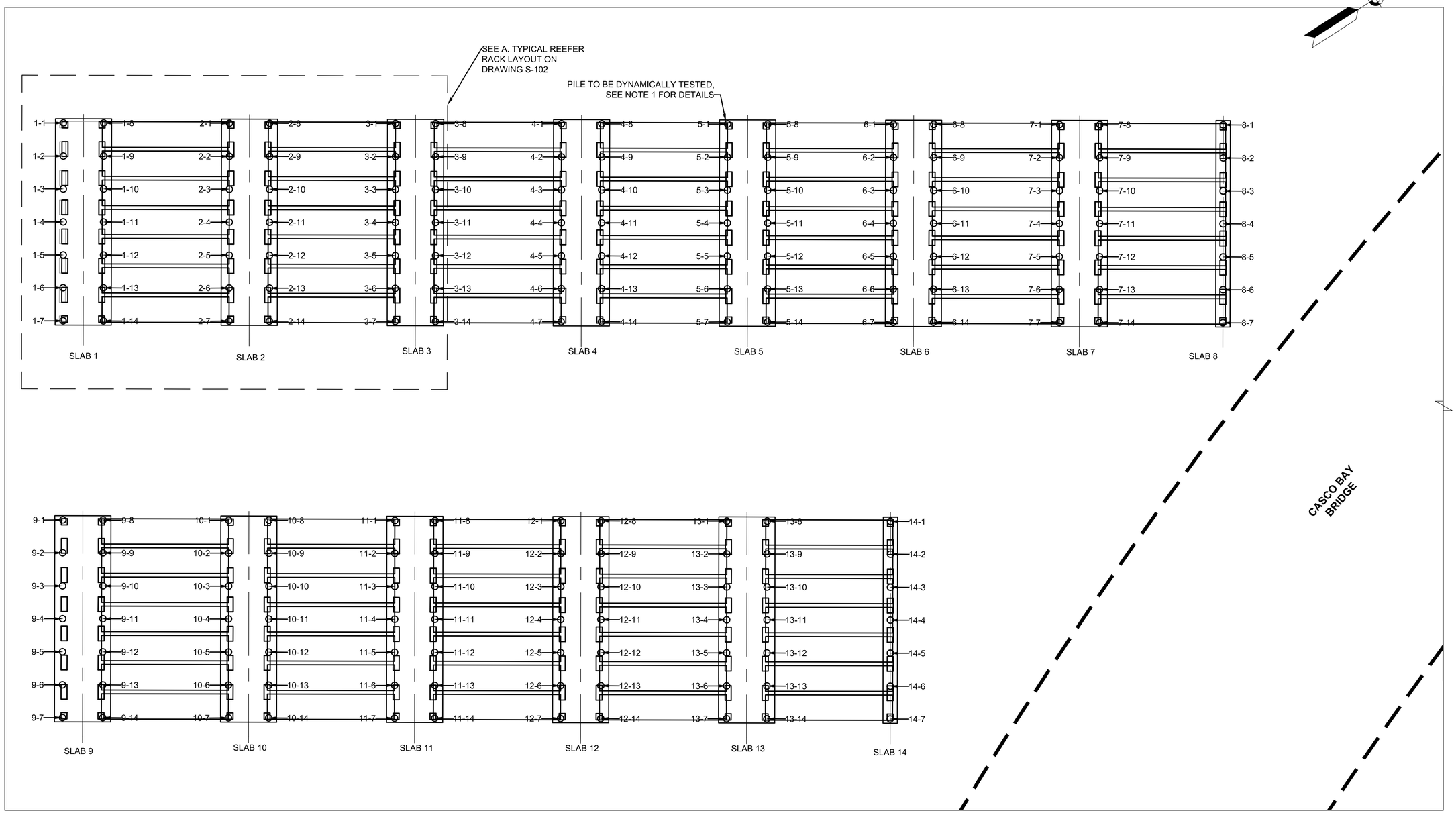

PERMIT DRAWINGS
NOT FOR CONSTRUCTION
SUBMITTED DATE: AUGUST 18, 2023

Jacobs

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

APPROVED | DATE
COMMISSIONER:
CHIEF ENGINEER:

PROJECT INFORMATION

PROGRAM		SIGNATURE
PROJECT MANAGER	C. MORIN	
DESIGNER	C. MAGUIRE	P.E. NUMBER
CONSULTANT		
PROJECT RESIDENT		DATE
CONTRACTOR		
PROJECT COMPLETION DATE		

PORT INFRASTRUCTURE DEVELOPMENT PROGRAM (PIDP) GRANT
PRIORITY PROJECTS DESIGN & CONSTRUCTION PHASE SERVICES
PORTLAND, ME
CUMBERLAND, COUNTY

REEFER RACK SLAB LAYOUT PLAN - 1

SHEET NUMBER
S-101

15 0F 24

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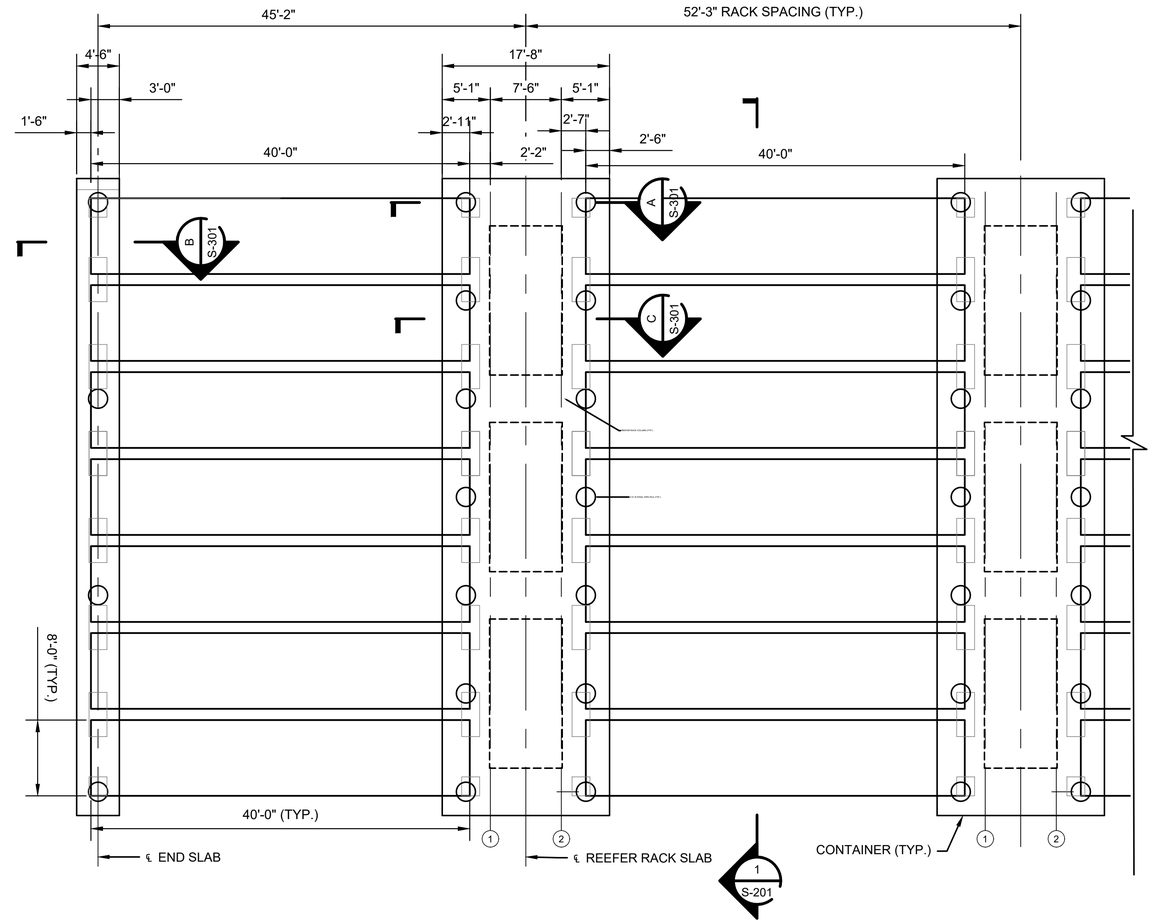
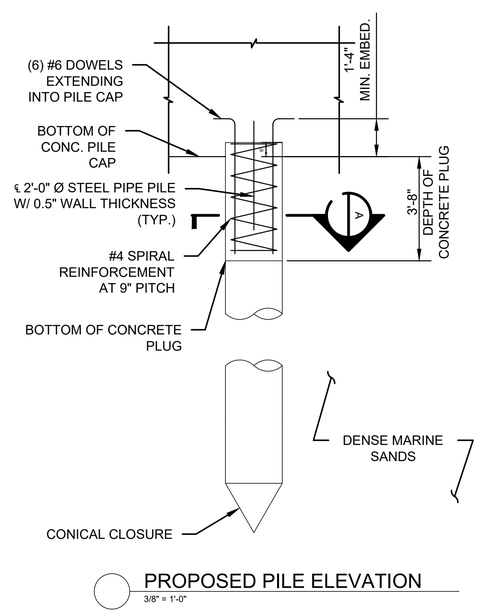
PILE SCHEDULE				
PILE NO	NORTHING	EASTING	ALLOWABLE PILE LOAD COMPRESSION (TONS)	TIP ELEVATION
1-1	296280.36	2927872.59	160	-36
1-2	296274.77	2927881.33	160	-36
1-3	296269.18	2927890.07	160	-36
1-4	296263.59	2927898.82	160	-36
1-5	296258.00	2927907.56	160	-36
1-6	296252.41	2927916.30	160	-36
1-7	296246.82	2927925.04	160	-36
1-8	296291.03	2927879.42	160	-36
1-9	296285.44	2927888.16	160	-36
1-10	296279.85	2927896.90	160	-36
1-11	296274.26	2927905.64	160	-36
1-12	296268.67	2927914.38	160	-36
1-13	296263.08	2927923.12	160	-36
1-14	296257.49	2927931.86	160	-36
2-1	296324.38	2927900.74	160	-36
2-2	296318.79	2927909.48	160	-36
2-3	296313.20	2927918.22	160	-36
2-4	296307.61	2927926.96	160	-36
2-5	296302.02	2927935.70	160	-36
2-6	296296.43	2927944.45	160	-36
2-7	296290.84	2927953.19	160	-36
2-8	296335.05	2927907.57	160	-36
2-9	296329.46	2927916.31	160	-36
2-10	296323.87	2927925.05	160	-36
2-11	296318.28	2927933.79	160	-36
2-12	296312.69	2927942.53	160	-36
2-13	296307.10	2927951.27	160	-36
2-14	296301.51	2927960.01	160	-36
3-1	296368.40	2927928.89	160	-36
3-2	296362.81	2927937.63	160	-36
3-3	296357.22	2927946.37	160	-36
3-4	296351.63	2927955.11	160	-36
3-5	296346.04	2927963.85	160	-36
3-6	296340.45	2927972.59	160	-36
3-7	296334.86	2927981.33	160	-36
3-8	296379.07	2927935.71	160	-36
3-9	296373.48	2927944.45	160	-36
3-10	296367.89	2927953.20	160	-36
3-11	296362.30	2927961.94	160	-36
3-12	296356.71	2927970.68	160	-36
3-13	296351.12	2927979.42	160	-36
3-14	296345.53	2927988.16	160	-36
4-1	296412.42	2927957.04	160	-36
4-2	296406.83	2927965.78	160	-36
4-3	296401.24	2927974.52	160	-36
4-4	296395.65	2927983.26	160	-36
4-5	296390.06	2927992.00	160	-36
4-6	296384.47	2928000.74	160	-36
4-7	296378.88	2928009.48	160	-36
4-8	296423.09	2927963.86	160	-30
4-9	296417.50	2927972.60	160	-30
4-10	296411.91	2927981.34	160	-30
4-11	296406.32	2927990.08	160	-30
4-12	296400.73	2927998.83	160	-30
4-13	296395.14	2928007.57	160	-30
4-14	296389.55	2928016.31	160	-30
5-1	296456.44	2927985.19	160	-30
5-2	296450.85	2927993.93	160	-30
5-3	296445.26	2928002.67	160	-30
5-4	296439.67	2928011.41	160	-30
5-5	296434.08	2928020.15	160	-30
5-6	296428.49	2928028.89	160	-30
5-7	296422.90	2928037.63	160	-30
5-8	296467.11	2927992.01	160	-30
5-9	296461.52	2928000.75	160	-30
5-10	296455.93	2928009.49	160	-30
5-11	296450.34	2928018.23	160	-30
5-12	296444.75	2928026.97	160	-30
5-13	296439.16	2928035.71	160	-30
5-14	296433.57	2928044.46	160	-30
6-1	296500.46	2928013.34	160	-30
6-2	296494.87	2928022.08	160	-30
6-3	296489.28	2928030.82	160	-30
6-4	296483.69	2928039.56	160	-30
6-5	296472.51	2928048.30	160	-30
6-6	296472.51	2928057.04	160	-30
6-7	296466.92	2928065.78	160	-30
6-8	296511.13	2928020.16	160	-20
6-9	296505.54	2928028.90	160	-20
6-10	296499.95	2928037.64	160	-20
6-11	296494.36	2928046.38	160	-20
6-12	296488.77	2928055.12	160	-20
6-13	296483.18	2928063.86	160	-20
6-14	296477.59	2928072.60	160	-20
7-1	296544.48	2928041.48	160	-20
7-2	296538.89	2928050.22	160	-20
7-3	296533.30	2928058.97	160	-20
7-4	296527.71	2928067.71	160	-20
7-5	296522.12	2928076.45	160	-20
7-6	296516.53	2928085.19	160	-20
7-7	296510.94	2928093.93	160	-20

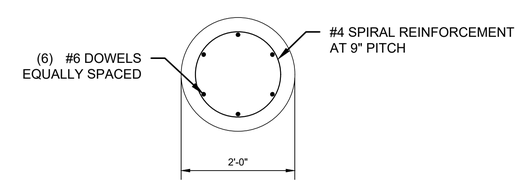
PILE SCHEDULE				
PILE NO	NORTHING	EASTING	ALLOWABLE PILE LOAD COMPRESSION (TONS)	TIP ELEVATION
7-8	296555.15	2928048.31	160	-20
7-9	296549.56	2928057.05	160	-20
7-10	296543.97	2928065.79	160	-20
7-11	296538.38	2928074.53	160	-20
7-12	296532.79	2928083.27	160	-20
7-13	296527.20	2928092.01	160	-20
7-14	296521.61	2928100.75	160	-20
8-1	296587.86	2928069.23	160	-20
8-2	296582.28	2928077.97	160	-20
8-3	296576.69	2928086.71	160	-20
8-4	296571.10	2928095.45	160	-20
8-5	296565.51	2928104.19	160	-20
8-6	296559.92	2928112.93	160	-20
8-7	296554.33	2928121.67	160	-20
9-1	296213.06	2927977.83	160	-40
9-2	296207.47	2927986.57	160	-40
9-3	296201.88	2927995.31	160	-40
9-4	296196.29	2928004.06	160	-40
9-5	296190.71	2928012.80	160	-40
9-6	296185.12	2928021.54	160	-40
9-7	296179.53	2928030.28	160	-40
9-8	296223.73	2927984.66	160	-40
9-9	296218.14	2927993.40	160	-40
9-10	296212.56	2928010.88	160	-40
9-11	296206.97	2928010.88	160	-40
9-12	296201.38	2928019.62	160	-40
9-13	296195.79	2928028.36	160	-40
9-14	296190.20	2928037.10	160	-40
10-1	296257.08	2928005.98	160	-40
10-2	296251.49	2928014.72	160	-40
10-3	296245.90	2928023.46	160	-40
10-4	296240.31	2928032.20	160	-40
10-5	296234.73	2928040.94	160	-40
10-6	296229.14	2928049.69	160	-40
10-7	296223.55	2928058.43	160	-40
10-8	296267.75	2928012.81	160	-40
10-9	296262.16	2928021.55	160	-40
10-10	296256.58	2928030.29	160	-40
10-11	296250.99	2928039.03	160	-40
10-12	296245.40	2928047.77	160	-40
10-13	296239.81	2928056.51	160	-40
10-14	296234.22	2928065.25	160	-40
11-1	296301.10	2928034.13	160	-40
11-2	296295.51	2928042.87	160	-40
11-3	296289.92	2928051.61	160	-40
11-4	296284.33	2928060.35	160	-40
11-5	296278.75	2928069.09	160	-40
11-6	296273.16	2928077.83	160	-40
11-7	296267.57	2928086.57	160	-40
11-8	296311.77	2928040.95	160	-40
11-9	296306.18	2928049.69	160	-40
11-10	296300.60	2928058.44	160	-40
11-11	296295.01	2928067.18	160	-40
11-12	296289.42	2928075.92	160	-40
11-13	296283.83	2928084.66	160	-40
11-14	296278.24	2928093.40	160	-40
12-1	296345.12	2928062.28	160	-40
12-2	296339.53	2928071.02	160	-40
12-3	296333.94	2928079.76	160	-40
12-4	296328.35	2928088.50	160	-40
12-5	296322.76	2928097.24	160	-40
12-6	296317.18	2928105.98	160	-40
12-7	296311.59	2928114.72	160	-40
12-8	296355.79	2928069.10	160	-35
12-9	296350.20	2928077.84	160	-35
12-10	296344.61	2928086.58	160	-35
12-11	296339.03	2928095.32	160	-35
12-12	296333.44	2928104.07	160	-35
12-13	296327.85	2928112.81	160	-35
12-14	296322.26	2928121.55	160	-35
13-1	296389.14	2928090.43	160	-35
13-2	296383.55	2928099.17	160	-35
13-3	296377.96	2928107.91	160	-35
13-4	296372.37	2928116.65	160	-35
13-5	296366.78	2928125.39	160	-35
13-6	296361.20	2928134.13	160	-35
13-7	296355.61	2928142.87	160	-35
13-8	296399.81	2928097.25	160	-35
13-9	296394.22	2928105.99	160	-35
13-10	296388.63	2928114.73	160	-35
13-11	296383.05	2928123.47	160	-35
13-12	296377.46	2928132.21	160	-35
13-13	296371.87	2928140.95	160	-35
13-14	296366.28	2928149.70	160	-35
14-1	296432.53	2928118.17	160	-35
14-2	296426.94	2928126.91	160	-35
14-3	296421.35	2928135.65	160	-35
14-4	296415.76	2928144.39	160	-35
14-5	296410.17	2928153.13	160	-35
14-6	296404.58	2928161.87	160	-35
14-7	296398.99	2928170.62	160	-35



A TYPICAL REEFER RACK LAYOUT
1/8" = 1'-0"



PROPOSED PILE ELEVATION
3/8" = 1'-0"



A PROPOSED PILE SECTION
3/4" = 1'-0"

PERMIT DRAWINGS
NOT FOR CONSTRUCTION
SUBMITTED DATE: AUGUST 18, 2023

Jacobs

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

APPROVED | DATE
COMMISSIONER:
CHIEF ENGINEER:

PROJECT INFORMATION

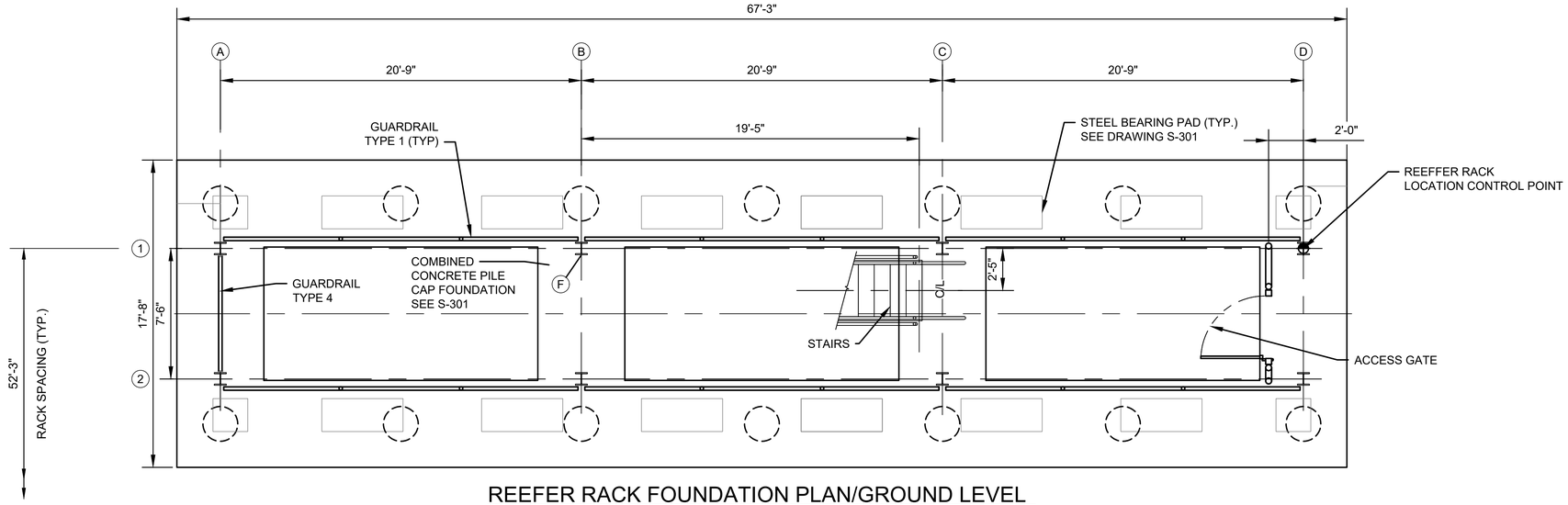
PROGRAM		SIGNATURE
PROJECT MANAGER	C. MORIN	
DESIGNER	C. MAGUIRE	P.E. NUMBER
CONSULTANT		
PROJECT RESIDENT		DATE
CONTRACTOR		
PROJECT COMPLETION DATE		

PORT INFRASTRUCTURE DEVELOPMENT PROGRAM (PIDP) GRANT
PRIORITY PROJECTS DESIGN & CONSTRUCTION PHASE SERVICES
CUMBERLAND, COUNTY
PORTLAND, ME

REEFER RACK SLAB LAYOUT PLAN - 2

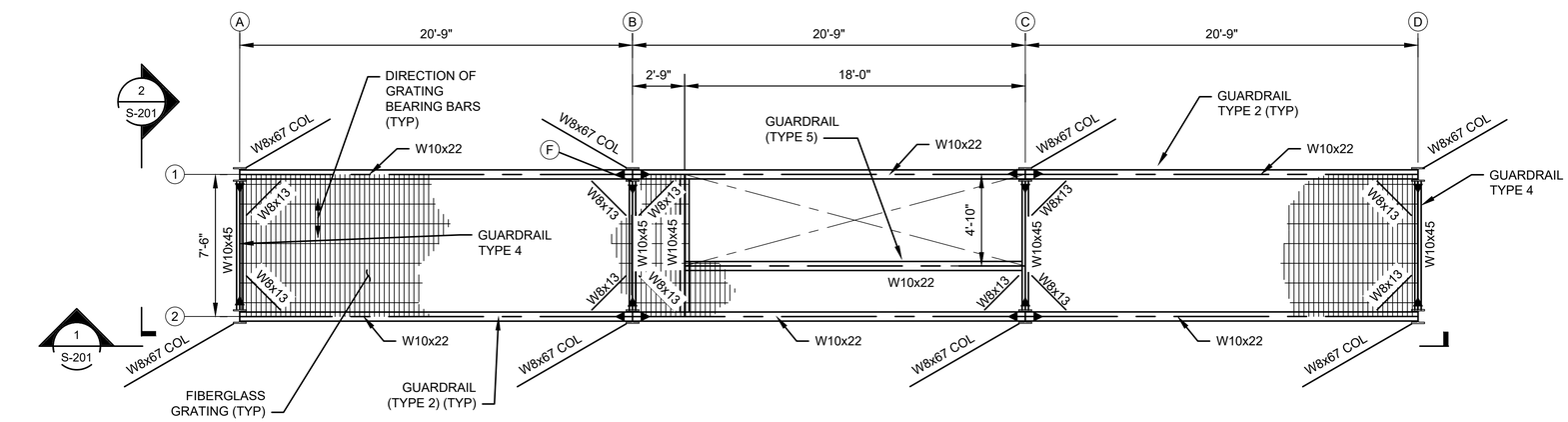
SHEET NUMBER
S-102

File: C:\Users\maguirc\AppData\Local\Bentley\projectwise\jacobs-americas-01\d0103924\S-101, S-102 (ReeferRackSlabLayoutPermit - Plotted: 8/17/2023 5:31 PM by MAGUIRE, CASEY; Saved: 8/17/2023 5:03 PM by SITM1



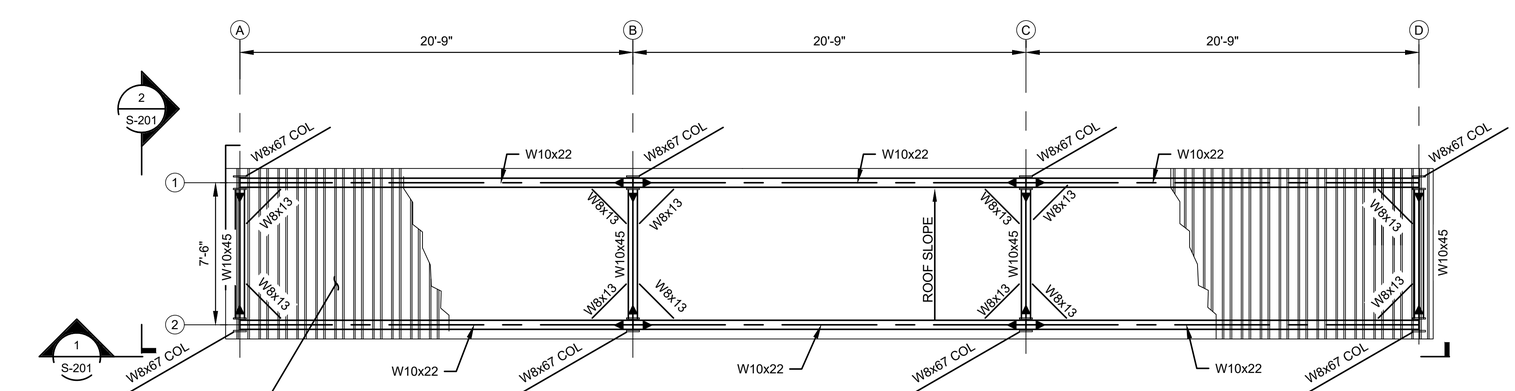
REEFER RACK FOUNDATION PLAN/GROUND LEVEL

1/4" = 1'-0"



REEFER RACK FRAMING PLAN - LEVELS 1, 2, 3, AND 4

1/4" = 1'-0"



REEFER RACK FRAMING PLAN - ROOF LEVEL 5

1/4" = 1'-0"

GENERAL NOTES

1. REFER TO DRAWING S-001 FOR GENERAL NOTES AND DESIGN CRITERIA.
2. → INDICATES MOMENT CONNECTION.
3. UNLESS NOTED OTHERWISE ALL STEEL MUST BE HOT DIPPED GALVANIZED AFTER FABRICATION.
4. ORIENT THE REEFER RACK SUCH THAT THE ACCESS GATE OPENS TOWARD THE TRUCK TRANSFER/LOADING LANE AND COLUMN ROW 2 IS TOWARD REEFER PLUGS.
5. PROVIDE PORTABLE FIRE EXTINGUISHER, CLASS A-B-C, 35-POUND, IN CABINET, AT EACH LEVEL. LOCATION INDICATED BY (F).
6. PAINT OUTSIDE FACE OF COLUMNS WITH 1-COAT POLYAMIDOAMINE EPOXY, COLOR YELLOW.

GRAPHIC SCALE

0 4 8 12

1/4"=1'-0"

N

PERMIT DRAWINGS
NOT FOR CONSTRUCTION
SUBMITTED DATE: AUGUST 18, 2023

Jacobs

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

APPROVED

DATE

COMMISSIONER:

CHIEF ENGINEER:

SIGNATURE

P.E. NUMBER

DATE

PROJECT INFORMATION

PROGRAM	
PROJECT MANAGER	C. MORIN
DESIGNER	C. MAGUIRE
CONSULTANT	
PROJECT RESIDENT	
CONTRACTOR	
PROJECT COMPLETION DATE	

PORT INFRASTRUCTURE DEVELOPMENT PROGRAM (PIDP) GRANT
PRIORITY PROJECTS DESIGN & CONSTRUCTION PHASE SERVICES
PORTLAND, ME
CUMBERLAND, COUNTY

REEFER RACK FOUNDATION AND FRAMING PLANS

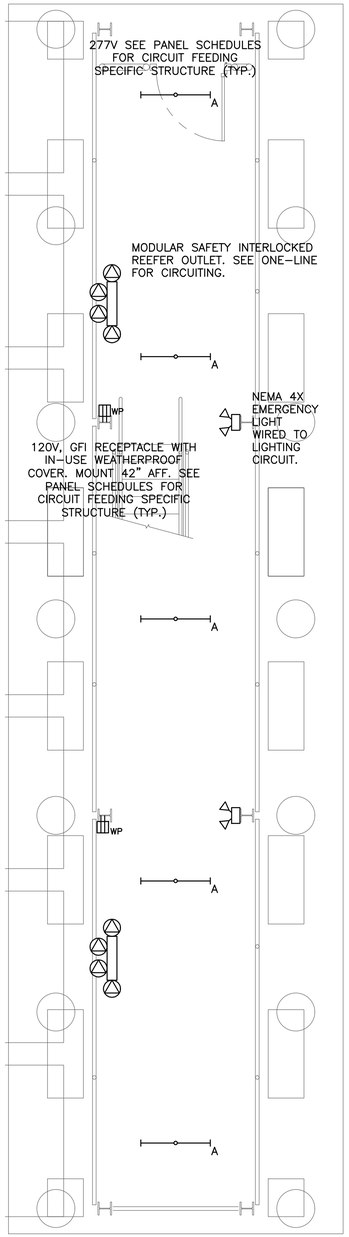
SHEET NUMBER

S-103

File: C:\Users\maguirc\AppData\Local\Bentley\projectwise\jacobs-americas-01\d0103924\S-103 (ReeferRackFoundationFramingPlans) ; Plotted: 8/17/2023 5:17 PM by MAGUIRE, CASEY ; Saved: 8/17/2023 3:31 PM by MAGUIRC

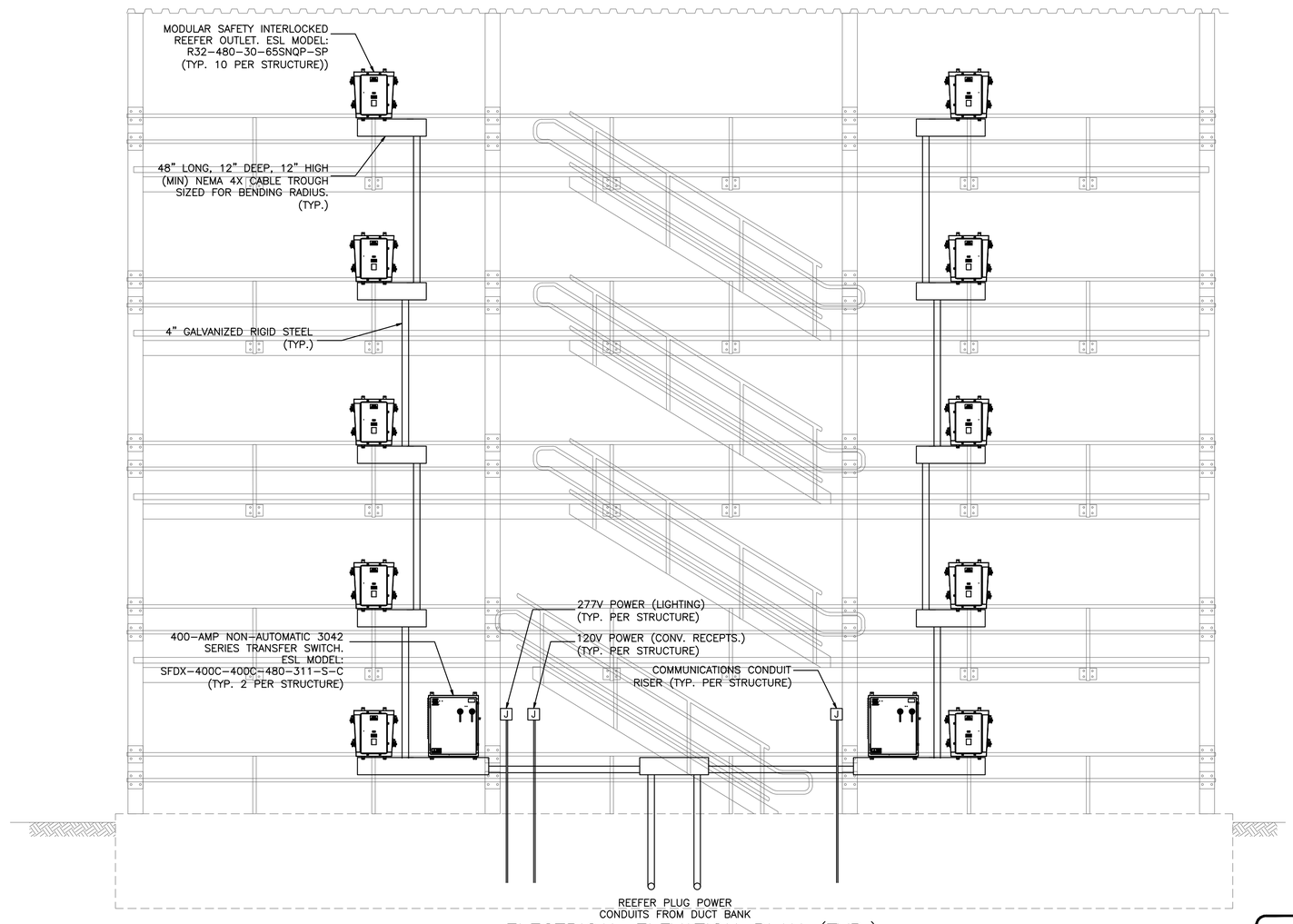
NOTES:

1. SEE E100 FOR GENERAL NOTES.
2. SEE SHEET E201 FOR LIGHTING SCHEDULE



1 ELECTRICAL FLOOR PLAN (TYP.)

SCALE: 1/4" = 1'



2 ELECTRICAL ELEVATION PLAN (TYP.)

SCALE: 1/4" = 1'

80% DRAFT

SUBMITTED DATE: MAY 26, 2023

Jacobs

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

APPROVED	DATE
COMMISSIONER:	
CHIEF ENGINEER:	

SIGNATURE	
P.E. NUMBER	
DATE	

PROJECT INFORMATION

PROGRAM	
PROJECT MANAGER	
DESIGNER	
CONSULTANT	
PROJECT RESIDENT	
CONTRACTOR	
PROJECT COMPLETION DATE	

PORT INFRASTRUCTURE DEVELOPMENT PROGRAM (PIDP) GRANT
PRIORITY PROJECTS DESIGN & CONSTRUCTION PHASE SERVICES
PORTLAND, ME
CUMBERLAND, COUNTY

TYPICAL ELEVATION AND FLOOR PLAN

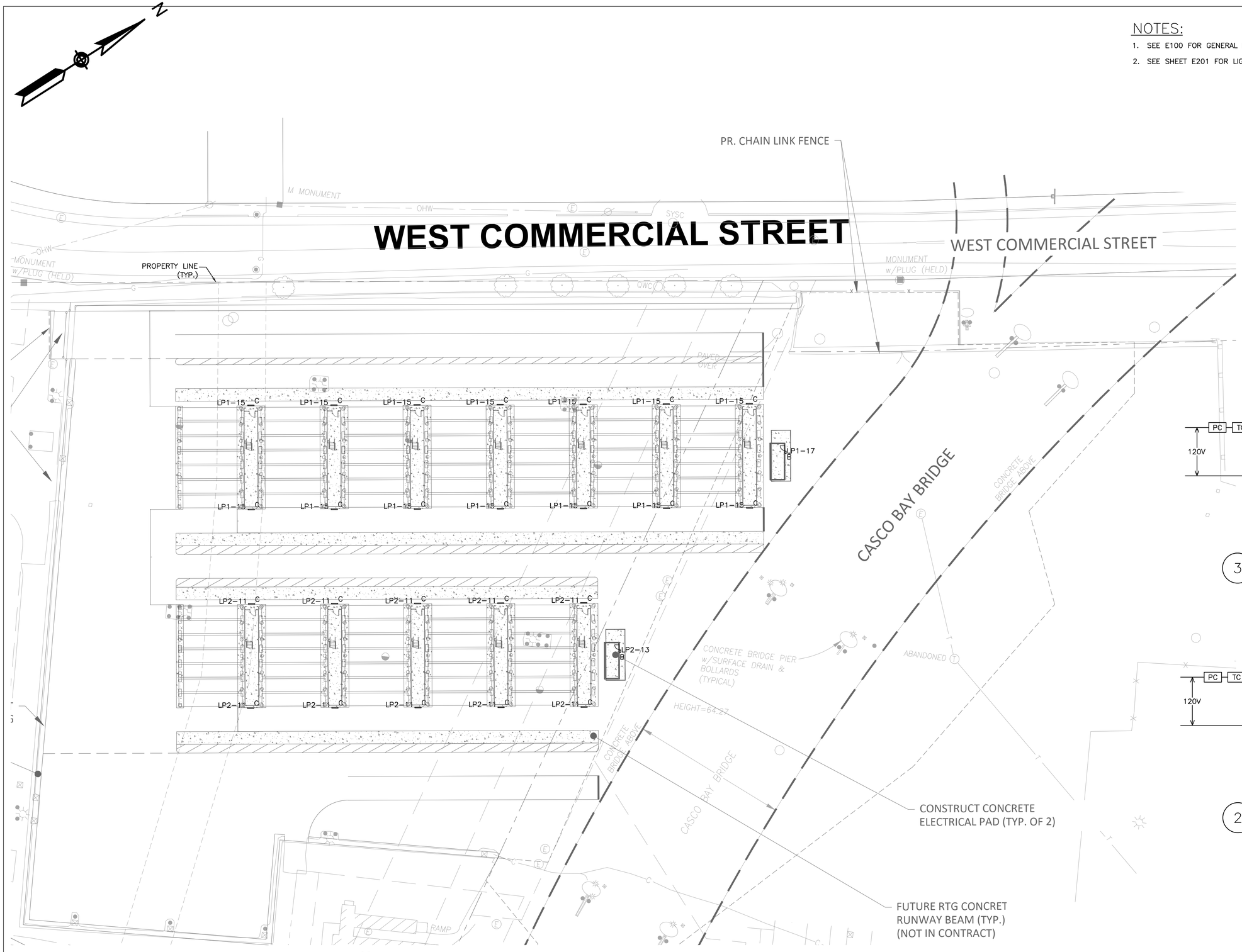
SHEET NUMBER

E150

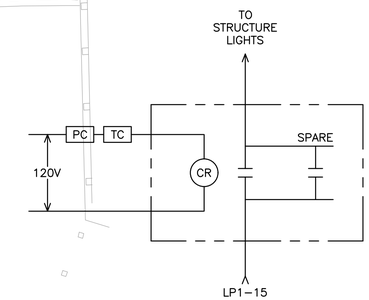
File: Z:\Projects 2022\22009 Portland IMT\Drawings\E150, Plotted: 5/26/2023 8:36 AM by TIM MATTHEWS , Saved: 5/18/2023 11:03 AM by TIM

NOTES:

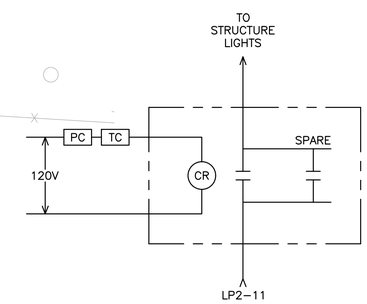
1. SEE E100 FOR GENERAL NOTES.
2. SEE SHEET E201 FOR LIGHTING SCHEDULE.



1 ELECTRICAL SITE LIGHTING PLAN
SCALE: 1" = 30'



3 EXTERIOR LIGHTING CONTROL DIAGRAM
SCALE: NOT TO SCALE



2 EXTERIOR LIGHTING CONTROL DIAGRAM
SCALE: NOT TO SCALE

80% DRAFT
SUBMITTED DATE: MAY 26, 2023

Jacobs

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

APPROVED | DATE
COMMISSIONER:
CHIEF ENGINEER:

SIGNATURE
P.E. NUMBER
DATE

PROJECT INFORMATION
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DESIGNER
CONSULTANT
PROJECT RESIDENT
CONTRACTOR
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PORT INFRASTRUCTURE DEVELOPMENT PROGRAM (PIDP) GRANT
PRIORITY PROJECTS DESIGN & CONSTRUCTION PHASE SERVICES
PORTLAND, ME
CUMBERLAND, COUNTY

ELECTRICAL SITE LIGHTING PLAN

SHEET NUMBER
E200

File: Z:\Projects 2022\22009 Portland MT\Xref\TITLEBLOCK ; Plotted: 5/26/2023 8:37 AM by TIM MATTHEWS ; Saved: 5/26/2023 8:22 AM by TIM

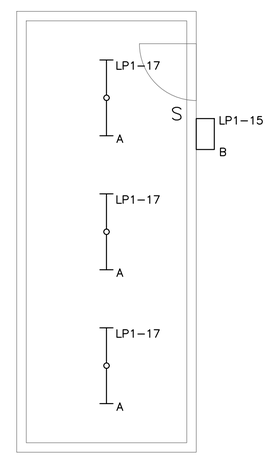
LIGHTING SCHEDULE

TYPE	DESCRIPTION	MANFACTURER	LAMPS	MOUNTING	NOTES
A	4' ENCLOSED AND GASKETED NEMA 4X LED LIGHTING FIXTURE WITH FIBERGLASS HOUSING. STAINLESS STEEL LATCHES. RIBBED CLEAR POLY CARBONATE LENS. 120V	COLUMBIA LIGHTING	42W LED 3000K 4714 LUMENS	CEILING SURFACE	MODEL #: LXEM-30ML-RP-EU
B	SMALL LED DOOR LIGHT . 120V	EXO OUTDOOR LIGHTING	21W LED 3000K 2054 LUMENS	WALL SURFACE	MODEL #: SG1-20-3K7-FT-UNV-DBT-EH
C	4' LED FLOOD LIGHT. MOUNTED IN FULL CUTOFF POSITION. 120V	KIM LIGHTING	124W LED 3000K 12,565 LUMENS	BEAM MOUNTED 50' AFF	MODEL #: INT-4-48L-125-3K7-HF-UNV-DBT-MGF
	NEMA 4X EMERGENCY BATTERY UNIT 120V	DUAL-LITE	8W LED	WALL SURFACE	MODEL #: DYNHL-12I-4X

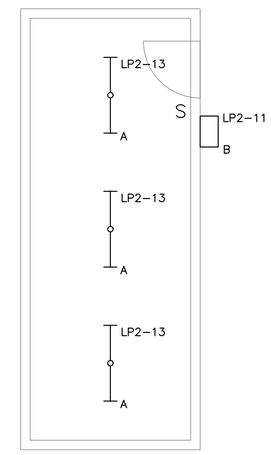
1 LIGHTING SCHEDULE
SCALE: NOT TO SCALE

NOTES:

1. SEE E100 FOR GENERAL NOTES.



2 ELECTRICAL ROOM-1 LIGHTING DETAIL
SCALE: 1/4" = 1'



3 ELECTRICAL ROOM-2 LIGHTING DETAIL
SCALE: 1/4" = 1'

80% DRAFT
SUBMITTED DATE: MAY 26, 2023

Jacobs

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

APPROVED | DATE
COMMISSIONER:
CHIEF ENGINEER:

SIGNATURE
P.E. NUMBER
DATE

PROJECT INFORMATION
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CONSULTANT
PROJECT RESIDENT
CONTRACTOR
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PORT INFRASTRUCTURE DEVELOPMENT PROGRAM (PIDP) GRANT
PRIORITY PROJECTS DESIGN & CONSTRUCTION PHASE SERVICES
PORTLAND, ME
CUMBERLAND, COUNTY

ELECTRICAL LIGHTING
SCHEDULE & PART PLANS

SHEET NUMBER
E201

File: Z:\Projects 2022\22009 Portland IMT\Xref\TITLEBLOCK ; Plotted: 5/26/2023 8:40 AM by TIM MATTHEWS ; Saved: 5/26/2023 8:22 AM by TIM

Screenshot
2D

Public Comment - 2 West Commercial Street: What is going on here???

Subscribe

0 views

George Rheault <george.rheault@gmail.com> 11:44 AM (13 minutes ago)
to Planning Board, Abigail Reed, jmy

The major site plan application for this project has been stewing since last spring and has taken space up now on at least 3 different planning board meeting agendas (i.e., added to agenda and publicly noticed). It has, without any substantive explanation, been "tabled" at least twice (October 10, 2023 meeting as well as at the February 27, 2023 meeting) unless I missed even another tabling that I forgot about.

There are only a handful of emails in the public record complaining about this project, so it seems strange to understand why this project would be controversial and thus require repeated last-minute delays on the eve of two separate public hearing dates.

The massive public subsidies (including via the Opportunity Zone tax credit legislation) given to make the IMT viable (barely) are predicated on there being an intense industrial freight operation on the premises which already includes a lot of current reefer activity and future easily anticipated activity. Who exactly is the tail wagging this dog and why is the tail surprised that a "working waterfront" is actually a noisy and rambunctious place that may need flexibility to expand and take advantage of lower cost storage solutions already in widespread use in terminal freight operations?

So, why did the staff and the applicant believe this was ready for a public hearing twice before only to have it tabled WITHOUT just converting it to a workshop session? A workshop would have daylighted the problematic outstanding issues and at least be vetted in public and hopefully isolated and sharpened so that a public hearing would occur at an appropriate time rather than being constantly canceled and rescheduled?

The public deserves to understand how badly the review of this project was botched and why valuable public space was WASTED.

The Planning Board and public lost two big agenda slots in which other projects could have been advanced including long-delayed RECODE discussions among other things.

The "western waterfront" area of Portland remains highly contested ground in the Portland NIMBY wars. If unnamed NIMBYs are having a big say in the

conduct of this project review, they should have to come to the Planning Board like the rest of the public and air their concerns where everyone can hear and understand them rather than using back-door channels to distract and slow down an applicant.

Portland's planning process currently is a cesspool of probably illegal ex parte discussions conducted sight unseen by planning board members with applicants and well-connected project opponents with all the revolving door politics and back-room dealing such conduct breeds.

This application only makes it clear that we are not getting transparency or fairness in our land use regulation and planning efforts in our community.

The Planning Board needs to do better or else they will continue to erode and devalue the public trust in their work and the work of the planning staff. All of which casts shade on everyone who must do business with them.